CITY OF PORTLAND, MAINE
PLANNING BOARD

Brandon Mazer, Chair
Maggie Stanley, Vice Chair
Marpheen Chann
Sean Dundon
Bob Dunfey
David Silk
Austin Smith

AGENDA
PORTLAND PLANNING BOARD MEETING

The Planning Board will hold a remote meeting on August 11, 2020 at 4:30 p.m. This meeting will take place using Zoom.

Virtual meetings are allowed using emergency legislation approved by LD 2167; 1 M.R.S. §403-A, that authorizes cities and towns to conduct meetings online.

Allow your computer to install the free Zoom app to get the best meeting experience.

ZOOM MEETING INSTRUCTIONS

You are invited to a Zoom webinar.
When: Aug 11, 2020 04:30 PM Eastern Time (US and Canada)
Topic: Planning Board Workshop and Public Hearing 08/11/2020

Please click the link below to join the webinar:
https://us02web.zoom.us/j/86765147325

For public comment, you will need to use the "raise your hand" feature. To raise your hand via the telephone, please hit *9. You will be un-muted by the host when it is time for public comment.

Or iPhone one-tap :
US: +13017158592,,86765147325# or +13126266799,,86765147325#

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Webinar ID: 867 6514 7325
International numbers available: https://us02web.zoom.us/u/kbJzSwaEov

For more information on how to use Zoom, please go to:

https://www.portlandmaine.gov/remotePUD

Public comments will be taken for each item on the agenda and written comments should be submitted to planningboard@portlandmaine.gov or hp@portlandmaine.gov

WORKSHOP - 4:30 PM

i. Level III Site Plan; 25 Bedford Street; The University of Southern Maine, Applicant. (estimated time 4:30 – 6:00 p.m.) The Planning board will hold a workshop to consider a new 60,000 square foot student center, a new 580-bed, 220,000 square foot residence hall, and associated campus improvements. The subject property is 673,075 square feet in size, is zoned B-2, and is located within the USM overlay zone. The proposed project is subject to the City's Site Plan and Site Location of Development standards.

PUBLIC HEARING - 6:00 PM

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATION AND REPORTS

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON JULY 28, 2020

Evening Hearing
148 Newbury Street: Chann, Dundon, Dunfey, Mazer, Silk, Smith, and Stanley present.
ReCode: Chann, Dundon, Dunfey, Mazer, Silk, Smith, and Stanley present.

4. REPORTS OF DECISIONS AT THE MEETING HELD ON JULY 28, 2020

i. Level III Subdivision; 148 Newbury Street; Stephen and Sarah Roop, Applicant. Stanley moved and Silk seconded a motion to find the plan in conformance with the subdivision standards of the Land Use Code with five conditions of approval. Vote 7-0.

ii. ReCode: Stanley moved and Chann seconded a motion to find the amended land use code and associated height overlay maps consistent with the City of Portland's Comprehensive Plan and recommend adoption of these actions to the City Council. Vote 7-0.

5. NEW BUSINESS

i. Munjoy Hill Historic District (estimated time 6:00 p.m.) The Planning Board will hold a continued public hearing for deliberations and action on a recommendation of the Historic Preservation Board to designate a certain area on Munjoy Hill as a local historic district. Following deliberations, the Board is expected to vote on a recommendation to be forwarded to the City Council, which has final designation authority. **Please note that public comment will not be taken on August 11th, as the public comment portion of the meeting concluded on March 10th.**

USM CAREER AND STUDENT SUCCESS CENTER AND RESIDENCE HALL

LEVEL III SITE PLAN

Portland, ME

41 Hutchins Drive
Portland, ME 04102
800-426-4262

woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

0232656.00
University of Southern Maine
March 2020

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1. APPLICATION CHECKLIST

[Attached separately]

CITY OF PORTLAND
Planning & Urban Development Department

LEVEL II and LEVEL III SITE PLAN
GENERAL DOCUMENT AND DRAWINGS CHECKLIST

* Please upload each document and drawing as a separate PDF file
* Please upload all drawings in a 24 x 36 sheet size
* Please confirm each item by electronically checking the boxes to the left for each document/drawing
* Please fill out and upload separately the zoning assessment table and waiver table

(At the time of application submission, please contact the Department of Public Works regarding E-911 addressing of your project)

GENERAL APPLICATION DOCUMENTS	
Yes ☑ NA ☐	**Project Description** • Cover Letter with detailed project description
Yes ☑ NA ☐	**Completed Checklist – Level II and Level III Site Plan** (this document)
Yes ☑ NA ☐	**Right, Title and Interest** • Deeds, leases, or purchase and sales agreements
Yes ☑ NA ☐	**Evidence of State or Federal Approvals** • Permits or letters of non-jurisdiction, if applicable
Yes ☑ NA ☐	**Zoning Assessment** • Table listing required and proposed uses and dimensional standards Zoning Assessment Table
Yes ☑ NA ☐	**Existing and/or Proposed Easements or Covenants, applicable.** • Evidence of existing easements and any proposed easements
Yes ☑ NA ☐	**Waiver Requests** • Written request for waiver describing request and reason Waiver Table
Yes ☑ NA ☐	**Financial Capability** • Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
Yes ☑ NA ☐	**Technical Capability** • Evidence of technical capability of applicant and consultants – resumes and/or examples of past projects

LEVEL II AND LEVEL III SITE PLAN
STANDARDS AND SUBMISSION CHECKLIST

* Please provide assessment of compliance with standards and include supplemental documentation, as applicable
* Please upload each document as a separate PDF file

TRANSPORTATION

Yes	NA	
☑	☐	**Transportation Analysis- Traffic Impact (14-526 (a) 1)** • Provisions for pedestrian, bicycle, vehicle, and loading circulation and incremental volume of traffic impacts • Traffic Impact Study (Technical Manual, Section 1) if applicable
☑	☐	**Access and Circulation (14-526 (a) 2 a)** • Access and internal circulation, addressing ADA access • Access and egress impacts on traffic flows • Description and use of drive-up features, if applicable
☑	☐	**Loading and Servicing (14-526 (a) 2 b)** • Loading and servicing needs, route and travel way geometrics for deliveries • Turning templates for delivery vehicles, if applicable
☑	☐	**Sidewalks (14-526 (a) 2 c)** • Sidewalks and condition along street frontages and internal walkways • Engineered details for ADA ramps and public sidewalk details meeting sidewalk materials policy and ADA ramp construction details as applicable (Technical Manual, Section 1)
☑	☐	**Public Transit (14-526 (a) 3), if applicable** • Existing available transit services • Proposed site plan design details, such as easement, pad base, and shelter
☑	☐	**Off-Street Parking: Vehicle & Motorcycle/Scooter) (14-526 (a) 4 a and c)** • Expected parking demand, proposed parking supply, ADA parking, and applicable Zoning Requirements • Address Technical Manual standards (Section 1) for curb cut separation and parking lot layout and locate on site plan
☑	☐	**Bicycle Parking (14-526 (a) 4 b)** • Address bicycle parking requirements and identify locations on-site • Construction details for bike racks (Technical Manual, Section 1)
☑	☐	**Snow Storage (14-526 (a) 4 d)** • Management plan for snow removal and locate snow storage areas on plan
☑	☐	**Traffic Demand Management (TDM) (14-526 (a) 5), if applicable** • Develop TDM with Trip Reduction Targets and Strategies

ENVIRONMENTAL AND LANDSCAPE FEATURES	
Yes ☐ NA ☑	**Preservation of Significant Natural Features (14-526 (b) 1), if applicable** • Trees, plants, habitats listed on State or Federal list of endangered or threatened • High and moderate value waterfowl and wading habitat • Aquifers on Casco Bay Islands • Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) • Proposed preservation areas and protection measures • Documentation from environmental consultants, determinations from applicable state agencies
Yes ☑ NA ☐	**Landscaping and Landscape Preservation (14-526 (b) 2 a)** • Preservation of trees and preservation within required zoning setbacks (Technical Manual, Section 4) • Protection measures of existing vegetation during construction • Protection measures within Shoreland Zone, if applicable
Yes ☑ NA ☐	**Site Landscaping (14-526 (b) 2 b)** • Screening and buffering of service areas and between non-residential and residential uses • Planting plans with plant schedule and sizes (Technical Manual, Section 4)
Yes ☐ NA ☑	**Parking Lot Landscaping (14-526 (b) 2 b ii), if applicable** • Landscaped islands within parking areas (Technical Manual, Section 4)
Yes ☑ NA ☐	**Street Trees (14-526 (b) 2 b iii)** • Existing Heritage or Feature Trees on site and measures to preserve • Identify street trees on the plan meeting the site plan and Technical Manual standards (Section 4) or identify alternative measures, if applicable
ENVIRONMENTAL AND STORMWATER	
Yes ☑ NA ☐	**Water Quality, Stormwater Management and Erosion Control (14-526 (b)3 a)** • Stormwater report in compliance with Section 5 of Technical Manual and DEP Chapter 500 stormwater for basic, general and flooding standards, as applicable • Erosion control plan and measures • Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater, as applicable • Subsurface sanitary sewage disposal and groundwater protection

PUBLIC INFRASTRUCTURE AND SAFETY	
Yes ☑ NA ☐	**Consistency with City Master Plans (14-526 (c) 1)** • Identify consistency with master plans • Proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes ☑ NA ☐	**Public Safety and Fire Prevention (14-526 (c))** • Address Crime Prevention through Environmental Design (CPTED) (Technical Manual, Section 3) • Emergency vehicle access • Address consistency with public safety standards (Technical Manual, Section 3) • Submit a code summary referring NFPA 1 and all Fire Department standards (Technical Manual, Section 3) – Fire Checklist
Yes ☑ NA ☐	**Availability and Adequacy of Public Utilities (14-526 (c) 3) (Technical Manual, Sections 2 & 9)** • Electrical services, including providing underground services • Identify existing and proposed connections for public utilities and required public utility upgrades • Sewer line connections are required, if there is a main within 200 feet • Proposed solid waste management facilities on-site and management for the site • Written evidence of the ability to serve from utility companies, as applicable
SITE DESIGN	
Yes ☑ NA ☐	**Massing, Ventilations and Wind Impact (14-526 (d) 1)** • Wind and ventilation impacts on adjoining structures and/or adjacent public spaces. Wind study, if applicable • Bulk, location or height impacts on adjoining structures • Identify and locate HVAC equipment and venting away from public spaces and residential properties • Identify screening and manufacturing specifications for noise, if applicable
Yes ☑ NA ☐	**Shadows (14-526 (d) 2), if applicable** • Shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes ☑ NA ☐	**Snow and Ice Loading (14-526 (d) 3)** • Building design to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes ☐ NA ☑	**View Corridors (14-526 (d) 4), if applicable** • Protection of designated view corridors (Portland Design Manual, Appen. 1)

Yes	NA	
☐	☑	**Historic Resources (14-526 (d) 5), if applicable** • Identify developments within Historic Districts or affecting Designated Landmarks • Certificate of Appropriateness or other evidence • Identify Developments within 100 feet of Historic Districts or affecting Designated Landmarks. Advisory HP review may be required • Address preservation and documentation of Archaeological Resources
☑	☐	**Exterior Lighting (14-526 (d) 6)** • Cut sheets of on-site light fixtures and any architectural or specialty lights (Technical Manual, Section 12) • Engineered details for any lights proposed in street right-of-way (Technical Manual, Section 10)
☑	☐	**Noise and Vibration (14-526 (d) 7)** • Evidence of noise levels for equipment, such as equipment specifications, to demonstrate consistency with zoning requirements
☑	☐	**Signage and Wayfinding (14-526 (d) 8), if applicable** • Signage plan showing the location, dimensions, height and setback of all existing and proposed signs. Signs in Historic Districts are reviewed by Historic Preservation staff • Proposed commercial and directional signage on site
☑	☐	**Zone Related Design Standards (14-526 (d) 5)** • Address Historic Preservation Design Review, if applicable • Address any applicable design review standards by zone • Address submission requirements from Design Manual, page 1, addressing neighborhood context • Description of exterior materials, color, finish, and samples
Construction Management Plan		
☑	☐	**Construction Management Plan** • Construction Management Document and Plan

LEVEL II AND LEVEL III SITE PLAN DRAWINGS CHECKLIST

*** Please upload the following drawings with the listed details as separate pdfs**

(ALL drawings must be uploaded in a 24 x 36 sheet size)

RECENT BOUNDARY SURVEY (stamped by Maine Licensed Surveyor)

- [x] Must be in compliance with Technical Manual, Section 13

SITE PLAN(s) (stamped by Maine Licensed Engineer) including:

Existing Conditions

- [x] Approximate location of structures on abutting property
- [x] Topography
- [ ] Locate water courses
- [ ] Delineate wetlands
- [x] Zone lines

Proposed Site Plan

- [x] Ground floor area, and grade elevations for all buildings

Access, Circulation, and Parking

- [x] Streets and intersections adjacent to site, any proposed geometric modifications
- [x] Location, dimensions and materials of all existing and proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- [x] Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- [x] Location and dimensions of proposed loading areas
- [x] Existing and proposed transit infrastructure with dimensions/ engineering specifications
- [x] Location of vehicle and bicycle parking with dimensions and engineering specifications

Site Considerations

- [x] Identify snow storage areas
- [x] Location of fire hydrants
- [x] Location of solid waste management facilities

UTILITY PLAN including:

- [x] Existing utilities on site and within public streets
- [x] Location, sizing and directional flows of all existing and proposed utilities
- [x] Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- [x] Electric utility infrastructure

GRADING AND DRAINAGE PLAN including:

- [x] Existing grades and drainage
- [x] Proposed grades
- [x] Proposed stormwater management meeting Technical Manual (Section 5), standards
- [ ] Location and proposed alteration of a water course
- [ ] Preservation or alteration of wetlands

EROSION CONTROL

- [x] Must be in compliance with Technical Manual, Section 5

LANDSCAPE PLAN including:

- [x] Existing vegetation to be preserved and preservation measures
- [x] Proposed landscaping and buffers
- [x] Planting schedule

RECORDING PLAT, if applicable
☐ If Subdivision, must be in compliance with requirements of Section 14-496 (b)
ARCHITECTURAL PLANS AND RENDERINGS including:
☑ Exterior building elevations, color renderings, illustrations of all sides
☑ Location and dimensions of all existing and proposed HVAC and mechanical equipment, all proposed screening
☑ Provide context drawings, if applicable (Design Manual, page 1)
☑ Floor plans

2. APPLICATION FEES

A check for the required application fee(s) will be provided to the Planning Department. It is our understanding that the application fee includes:

• Level III Site Plan 200,000 to 300,000 SF	$7,000
• Site Location of Development Permit	$3,500
TOTAL:	$8,500

3. PROJECT SUMMARY

On behalf of the University of Southern Maine (USM), Woodard & Curran (W&C) is pleased to submit applications for a Level III Site Plan Review and a Site Location of Development (SLOD) Amendment for a new Career and Student Success Center ("CSSC") and a new Residence Hall to be located at 23-29 Bedford Street. The project represents a significant implementation of the USM Facilities Master Plan. In addition to the approximately 60,000 SF Student Success Center and the 580-bed Residence Hall (approximately 220,000 SF) the project will include: a new Campus Quad; pedestrian connections; integrated hardscape and landscape; a new service and loading area; stormwater management; new utility services; site lighting; and other site amenities. The proposed work is shown on the drawings and renderings included with this application and is detailed below.

3.1 Introduction

The proposed CSSC and Residence Hall project is located on the Portland Campus of USM, at approximately the corner of Bedford Street and Durham Street in Portland, Maine (Site). The attached Location Map and Tax Maps show the project location. The project is located within two underlying City Zones. Most of the project is in the R-5 Residential Zone, with a small portion on the eastern side in B-2 Community Business Zone. The entirety of the project is in the USM Overlay Zone. The purpose of the USM Overlay zone is to allow the University to continue and reasonably expand within defined boundaries, and to recognize the unique qualities of a university campus while at the same time protecting the value and integrity of established neighborhoods. This project is in alignment with that purpose. University buildings and structures are subject to the requirements of the underlying zoning districts, except as modified by the USM Overlay Zone.

The site is currently developed with the Facilities Building, the Woodbury Student Center, and several paved parking lots. The proposed project includes redevelopment of the site for a new Career and Student Success Center, Residence Hall, and Campus Quad. The project will also include reconstruction of the sidewalks along the project's frontages, and the addition of street trees and streetlights.

3.2 Project Purpose and Need

The University of Southern Maine comprises three campus locations in central and southern Maine, a region that is viewed nationally as among the most livable and desirable in the country. The three campuses, located in Portland, Gorham, and Lewiston, have different physical features and dynamics, and each offers a variety of educational, cultural, and recreational opportunities to USM students.

In fall 2019, USM enrolled 8,429 students across its three campuses[1]. The growing student body is the most diverse in the state of Maine, and one of the most diverse in New England. USM's student enrollment has grown since 2015, and USM aims to grow to a total of 10,000 students in the near future.

Further details are provided in the table below regarding USM's fall 2019 student enrollment:

[1] Online students are not included in this figure

Table 1. USM's Population by Classification

Classification	Fall 2019 Enrollment
First-year undergraduate students	1,053
Second-year undergraduate students	1,043
Third-year undergraduate students	1,238
Fourth-year undergraduate students	1,887
Graduate and law students	1,754
Non-degree seeking students	1,454
Total	**8,429**

In fall 2019, 25% of USM's undergraduate students resided in residence halls on the Gorham campus. Almost all graduate and law students are accommodated in the off-campus market, with many living in the Portland area. The design capacity of the Gorham campus housing portfolio is 1,180 beds as of fall 2019. The housing portfolio is typically occupied beyond its design capacity, with fall 2019 occupancy at 119% of capacity.

USM has several strategic objectives and guiding principles for the planning, design and development of the new residential and student life community. Specifically, USM's priorities are as follows:

- To provide a safe, high quality and affordable student life environment that supports the overall well-being of its diverse student community
- To create a residential community for upper-division (third- and fourth-year) undergraduate, graduate and law students that is highly proximate to academic resources and support
- To construct a housing development that maintains affordability for students while assuring the financial sustainability of USM
- To design an iconic community that serves as a campus gateway, that is inviting to off-campus visitors while maintaining a safe and secure campus
- To create a development that serves as a catalyst for community development and connection between USM and Portland and elevates the presence of USM in the community
- To create a vibrant, connected student center environment to service both on-campus and off-campus student populations and sharing facilities infrastructure with the residence hall
- To demonstrate fiscal and environmental responsibility by striving for the sustainability goals outlined in USM's Facilities Master Plan[1]

USM completed a student housing market analysis in 2019 with Brailsford & Dunlavey (B&D), Inc. The analysis includes the following key findings[2]:

- The private housing market is very tight and rental rates are above what students can afford to pay. In B&D's student survey, 71% of USM students who live off campus indicated finding and securing housing accommodations to be at least somewhat difficult.

[1] The USM Facilities Master Plan is an internal plan and is not subject to review and approval by the City. Because this proposed project complies with the existing USM Overlay Zone, USM is not seeking an Institutional Overlay Zone at this time. The full Master Plan document can be viewed here: https://usm.maine.edu/president/master-plan.

[2] From "Housing Survey Market Analysis" - Brailsford & Dunlavey – August 2019

- In B&D's survey, 64% of USM students considered affordability to be the primary factor in their current housing decision. According to the survey, 63% of USM students who live off campus live outside of Portland and have an average one-way commute to campus of 28 minutes.
- B&D surveyed 7,083 rental housing units in the Portland market, the majority of which were not student focused units. The average reported rent was $1,296 per month without utilities, whereas 70% of the students who live off campus indicated paying less than $700 per month for housing, excluding utilities. As 58% of these students don't share a bedroom with another person, this further indicates students rely on the market outside the Portland area to find affordable living accommodations that offer the privacy they desire.
- Proximity to campus was also identified as a critical housing preference for upper-division, graduate, and law students. Forty-six percent (46%) of these students selected proximity to campus and on-campus resources as the second greatest factor which contributed to their decision where to live during the 2018-19 academic year. As these students are more likely to have the majority of classes on the Portland campus, this suggests a strong likelihood that students will prioritize any potential new on-campus housing offered on the Portland campus.
- B&D's survey of USM students tested a variety of unit types at varying rental rates. The survey specifically tested unit types at the rental rates that are comparable to the housing market in the City of Portland. B&D's proprietary demand-based programming model focused on the demand from upper-division, graduate and law students most likely to choose on-campus housing. B&D identified approximately 674 beds of demand for housing at the Portland campus for the current academic year (2018-19).
- Based on the demand analysis, B&D found that USM students seek the most affordable housing options while maintaining their privacy. This was demonstrated through students' unit-type preferences, in which they prioritized private (single bedroom) options with the least cost. Thirty-five percent (35%) of the demand for on-campus housing on the Portland campus was for the single bedroom with en-suite bathroom unit (the cheapest available option), and 40% of the demand was for a single bedroom in a two- or four-bedroom apartment.
- It is clear that USM students desire to maintain their privacy while maximizing affordability. Therefore, minimizing the size of residential units and out-of-unit programming space is paramount to ensuring affordability. As a result, residential support spaces must be limited, and alternative methods of fostering a vibrant, community-oriented atmosphere should be explored.

The multi-family housing market in the immediate area is primarily focused on accommodating the residential needs of the general (non-student) population. With no student housing available on its Portland campus, and limited student-friendly off-campus housing options in close proximity, USM needs to increase its capacity to house students and provide an appropriate and affordable residential experience for multiple class years. USM views the provision of dedicated housing on campus as an important mission-driven goal.

USM completed a Facilities Master Plan in January 2019, which was approved by the Board of Trustees for the University of Maine System. The Facilities Master Plan includes a new residence hall and student center on the Portland campus. The projects support USM's goals and objectives with respect to advancing student development, providing needed space for student activities, and strengthening of the USM community of residential and commuter students.

The University has instituted several strategic objectives and guiding principles for the planning, design and development of the new residential and student life community on the Portland Campus. The new Career and Student Success Center and Residence Hall represent significant advancement towards that vision. The following sections and attached plans and renderings describe the proposed project in more detail.

3.3 Existing Conditions

The Existing Conditions Plan, included in the drawings submitted with this application, depicts the existing conditions of the project area, based on a ground-level survey and site observations completed by SurveyWorks, Inc in February 2020. The Site is currently fully developed with buildings and surface parking lots. There are no significant natural features or wetlands due to the intense level of existing development. Topography slopes generally from west to east towards the intersection of Bedford and Durham Streets, from approximate elevation 50' down to 23'.

3.4 Proposed Development

Siting of the Career and Student Success Center and the Residence Hall generally follows the concepts established in the USM Facilities Master Plan (2019). The new 580-bed, approximately 220,000 SF Residence Hall will anchor the project at the corner of Durham and Bedford Streets. The approximately 60,000 SF Career and Student Success Center will be set back at a slight incline from Bedford Street and works in concert with Masterton Hall to the West and the new Residence Hall to the east to establish the edges of a new Campus Quad. In addition to the Career and Student Success Center and the Residence Hall the project will include: a new Campus Quad; pedestrian connections; integrated hardscape and landscape; a new service and loading area; stormwater management; new utility services and site lighting; and other site amenities.

3.5 Civil Engineering Approach

General Siting of Buildings

The proposed project will significantly alter approximately 3.6 acres of the Portland campus of the University of Southern Maine. The project area is the easterly corner of the block defined by Falmouth, Durham, and Bedford Streets which presently includes a large public parking lot, the Woodbury Student Center (approx. 21,701 sf), the Facilities Management building (8,950 sf), and associated service areas, parking, and infrastructure. While these functions are important to the campus operation, the siting of these features does not reflect a planned approach that identified a highest and best purpose for this part of the campus. Consistent with the Facilities Master Plan, the existing features are proposed to be replaced with a new Career and Student Success Center and a Residence Hall to more fully provide a campus experience with a higher functioning and aesthetic site layout. This project will remove all features in the project area and essential services, infrastructure, and offices will be relocated on campus prior to commencing demolition.

The project will replace the Woodbury Center with an updated and properly sized student activity center to be known as the Career and Student Success Center. The Career and Student Success Center will be an approximately 60,000 sf building with three stories to accommodate multiple campus uses including dining, bookstore, student activities, formal mass gatherings, and informal collaboration spaces. It has been sited to generally establish a center of the campus population with the intention that students will commonly use its amenities on a daily basis. The building is generally in the center of the block between Bedford and Falmouth Streets, and located amid three primary academic buildings, a physical recreation building, and the other new building, a residence hall. It was sited in the interior of the campus to establish a central connection to these buildings and emphasize that it be accessed by multiple adjacent pedestrian ways. The new Residence Hall will be approximately 220,000 sf and has been sited on the corner of Durham and Bedford Streets to establish a prominent, singular structure that will improve the campus gateway image. The building will be an approximately 31,000 sf footprint in a "C" shape with wings of 5- and 8-stories and provide housing for approximately 580 students in multiple dwelling unit layouts. The building will be set at 10' from the property line on Bedford Street and 4' from the property line on Durham Street to create an urban streetscape consistent with its mass and provide for hardscape and landscaping amenities for pedestrians. The residence hall will provide residential amenities

including informal gathering spaces, laundry, storage, and support spaces. A public main entrance on the ground floor will be located on Bedford Street and provide access to Residential Life offices and services. The other entrances and building areas including an interior courtyard will be secured for residents only. This is the first residence hall on the Portland campus and represents an important improvement in student services and campus experience.

The two buildings have been sited consistent with a Facilities Master Plan and in accordance with the University Overlay District in order to be consistent with existing building massing. The Residence Hall has been sited at the lowest grade on the campus to de-emphasis its eight-story height in addition to massing the eight-story portion of the building away from Bedford Street. The existing Glickman Library with 7 stories is across Bedford Street from the Residence Hall and the two buildings will be complimentary in their size and height. The Student Success Center was sited to be generally the center of campus and will be a similar height or lower than adjacent buildings such as the Science Building and Masterton Hall.

Site Layout (pedestrian and vehicular accesses, service areas)

Pedestrian access has been provided to both buildings through a combination of public and campus pedestrian ways. The existing sidewalk on Bedford Street will be reconstructed and widened to accommodate higher use by resident students. A new sidewalk will be constructed on Durham Street. Existing campus sidewalks will be maintained or improved to support the new buildings. Vehicle access to the Career and Student Success Center will be provided by expanding the existing service area adjacent to the Central Heating building. It will include a formal loading dock area facing Durham Street and this area will also include parking for dining and service vehicles. Student "move-in and move-out" activities are anticipated to be conducted along Durham Street where the existing one-way pattern will accommodate loading/unloading vehicles along the residence hall frontage. The crosswalks on Bedford Street will be unaltered by this project.

The campus is presently connected to City of Portland mass transit and the project will maintain and capitalize on these routes. The bus stop with shelter structures on Bedford Street will be unaltered by this project and allows for convenient access by resident students.

An associated project is anticipated to be a future parking garage to be constructed in the existing parking lot between Sullivan Hall and the Science Building. This garage is intended to replace the parking lost by the demolition for this project and include student resident parking. Garage access would be from Falmouth Street and allow for access through the garage to the parking lot between Luther Bonney and Masterton Halls. This function would allow for the existing access drive along Masterton Hall to be modified to a primary pedestrian way. The Masterton access drive will continue in service throughout the project construction period and the garage project will be addressed under separate submission to the City of Portland.

Site Grading

The new buildings have been sited to generally maintain and complement the existing topography of the project area. The residence hall ground floor has been set at a finish floor elevation that will complement the elevations along Bedford and Durham Streets. The second-floor finish floor elevation of the residence hall matches the ground floor of the Career and Student Success Center and allows for a potential bridge structure between the residence hall 3rd floor and the 2nd floor of the Career and Student Success Center. The grades between the Career and Student Success Center and Bedford Street will be generally flattened to be appropriate for a lawn while maintaining connection with the area in front of Masterton Hall. The service area grading near the Central Heating building will be generally unchanged with a retaining wall extending from the Career and Student Success Center loading dock to allow for an access ramp and maintain sidewalk grades near Sullivan Hall.

Site Utilities

Existing utility services to the demolished buildings will be abandoned and new services established from Durham Street to the Residence Hall and Career and Student Success Center. Utility services from the public right of way will include sanitary sewer, water, gas, and storm drain. Electrical, telecom, and steam service will be provided from internal campus infrastructure.

Other Site Features

The project provides several site improvements to enhance the campus experience for all student populations. The area between the front of the Career and Student Success Center and Bedford Street will be converted from paved parking to a lawn mall with landscaping and park amenities. This area will allow for both formal mass gathering use and informal recreational use and provide an aesthetic connection between campus buildings. The Career and Student Success Center will include a covered front porch for exterior student gathering and the residence hall courtyard will have landscaping and hardscape for resident recreation. Landscaping is provided adjacent to the new buildings and other frontage and accent areas.

A set of project design plans is attached to this application. The set includes site, utility, grading and drainage plans, and details to support the site design.

3.6 Architectural Approach

Architectural design plans have been provided and reflect the design approach described below.

3.6.1 Building Organization

Description of spaces

The programming at the ground floor of the Residence Hall is designed to enhance the gateway to the campus along Bedford Street and augment the boulevard and campus environment the University has been developing with other development projects.

The Bedford Street Ground floor uses include various meeting spaces, a large multipurpose room, a common kitchen, student lounge/living room, and direct access to the inner courtyard. Transparency is to be utilized to create a visual connection from Bedford Street through the ground floor and into the courtyard. The Student lounge/living room with an adjacent common use kitchen is located at the corner to celebrate student life and to create a welcoming gateway into the campus.

The bicycle storage room is also located along Bedford to encourage multimodal means of transportation.

The Durham Street side of the building contains ground floor residences with a planted buffer between the building and sidewalk to create privacy and separation. As the building returns perpendicular to Durham, maintenance and utility spaces have been located to keep them off street frontages and create a direct connection to the service yard.

The Career and Student Success Center is designed to be an open, permeable building inviting students and faculty to engage in ad-hoc collaboration and spontaneous interaction. A central place of gathering, it is envisaged to be a bustling hub at the core of the USM campus. The southern elevation of the student center fronts the new campus quad with a two-story lobby / lounge. There is a university store, café/pub and satellite radio station in the main lobby on level 1. The student dining center is located north of the lobby with a pedestrian connection to a second entrance enhancing campus connectivity. Level 2 contains a multi-purpose room and student career center. Level 3 contains the USM radio station and other administrative and student service spaces.

Heights, Grades

The Residence hall is situated on the corner of Bedford and Durham Streets. The site grading rises up along Bedford and continues to rise as it wraps around the building parallel with the new Quad towards the student center. We have utilized the site grade to allow for the active and social functions to occur on Bedford street, residences along Durham, and all service and maintenance space to occur back within the parcel, most of which is below grade.

The building form compromises two distinct wings: a five-story wing along Bedford and the new Quad, and an eight-story wing along Durham Street that returns into the heart of the campus. The design intent is for the building adjacent to Bedford to be similar in size—or volume— to the Osher Map Library, Muski School, Hannaford Hall, and Masterton Hall. This volume is also intended to be of brick construction and glass to maintain a look and feel consistent with the nearby buildings.

The shorter five-story wing allows more natural light to reach the courtyard and creates a larger amount of south facing windows within the eight-story wing, which help us meet our Passive House goals. In addition to increasing southern exposure, the eight-story wing is intended to align with building heights allowed along the Forest Avenue Corridor. The building components get smaller at the heart of the site before shifting into more residential aesthetic along Falmouth Street.

The Career and Student Success Center is three stories tall with a mechanical penthouse and an array of solar panels on the roof. The grades rise from the southeast corner of the large open porch to the northwest entry. The front of the building sits several steps above the quad which slopes gently southeast toward the Residence Hall.

Entrances and Egresses

The primary public entrance to the Residence Hall is located on Bedford Street in the middle of the building. This is the only access into the building from Bedford Street other than into the bicycle storage room, which has its own entrance but connects through the primary vestibule to gain access to the building. The only other “public” entrance is located between the CSSC and Residence Hall, which allows ADA accessible elevator access to the courtyard. There are doors located at each stairwell on the exterior of the building for emergency egress only. An additional egress point in the eight-story wing facing Sullivan gym can be used only for move-in/move-out days and emergency egress. There will also be access doors to the mechanical and utility spaces that face the service yard. The student center has a main entrance facing the new campus quad and a second ‘front door’ at the northwest corner of the building connecting to the larger campus context and the new proposed parking structure to the North.

The Career and Student Success Center has a large open porch across the entire front which faces the quad. There are several walks that lead up to the porch and the main entrance vestibule sits slightly to the right of center on the porch. There is another entrance at the northwest corner of the building.

3.7 Landscaping Approach

Landscaping for the new Career and Student Success Center and Residence Hall will be consistent with other campus landscaping improvements including landscape treatments associated with the Wishcamper Building. Landscaping will consist of street trees, accent trees, perennials and shrubs and lawn areas. The main landscape feature of the project will be a large open lawn area in front of the CSSC to create a Campus Quad. Landscaping will be provided to augment campus aesthetics, screen discordant uses (service area and residence hall), manage stormwater and provide recreation areas. The CSSC is intended to be a LEED certified building and as such plant species will be selected to be native or adaptive native plants that require minimal maintenance and be appropriate for the Portland climate.

3.7.1 The Public Streetscape

Proposed sidewalk improvements are provided for both the Durham Street and Bedford Street frontages. A new sidewalk within the street R.O.W is proposed on Durham Street where currently one does not exist. A new, detached sidewalk is proposed on Durham Street to create separation for pedestrians from the travel way and reflect the existing detached sidewalk across the street at the Wishcamper Building.

Existing crosswalks on Bedford Street and at the corner of Bedford St. and Durham Street will be maintained and pedestrian circulation to these locations will be reinforced by layout of campus walk connections.

Existing streetlights on Bedford St. and Durham Street will be maintained. Additional site lighting will be provided to provide safe and secure pathways to campus building structures and public ways.

Street trees are proposed along Bedford Street to meet City requirements and reinforce the existing landscape treatments in from of the Wishcamper Building.

The existing Bus stop on Bedford Street will be maintained and pedestrian access from the proposed project will be enhanced by new walk connections.

3.7.2 The Campus Quad

Hardscape within the quad consists of concrete walks of varying width to provide direct connections to crosswalks and building entrances. All walks will be ADA compliant and of sufficient width to accommodate university maintenance operations.

Landscape on the Quad primarily consist of lawn with accent trees along the edges to transition the building massing to pedestrian/human scale and to frame views to the CSSC. The University envisions that the Quad will be a focal point for student activities due to its central location, solar orientation and flexible space. Accent landscaping along the sides of the Quad include shrubs and perennials in areas where grades are steeper or as buffers between pedestrian walks and building bases.

Site walls will be required to achieve the maximum size of the Quad and to achieve ADA accessible routes. The site walls are also intended to become a landscape amenity for seating and impromptu gatherings and as such all walls have been designed to be a maximum of 3' high and most are proposed to be approximately 18-24" high for ease of seating. Materials for walls will be durable and aesthetically appropriate within the campus vernacular.

The Campus Quad has been located at the front of the CSSC . This location acts as the front yard of the Center and will complement the building uses as the main gathering space for the USM Portland Campus. The Quad is intended for impromptu and planned student activities and gatherings.

3.7.3 The Courtyard

The Courtyard within the Residence Hall Building is designed primarily for use by residents. The courtyard will provide more private outdoor use for the residents of the building and act as a backyard for those living on campus.

Primary access to the courtyard is from the more public spaces within the Residence Hall Building with secure restricted access from outside the building. This reinforces the intended more private use of the courtyard by the residents but allows for special events held within the Residence Hall common spaces to break out into the courtyard.

Landscaping within the Courtyard includes hardscape and softscape areas. Hardscapes (walks and patio) allow for year-round use. Softscape (trees, shrubs and lawn) allow for visual aesthetics, delineation of public and private spaces and buffering of Career and Student Success Center units from more public space.

3.7.4 Materials

Selection of trees, shrubs and ground covers will be appropriate for the Portland climate and site microclimates, maintenance capabilities of the University and intention of LEED standards.

Street trees will be appropriate for the Portland climate and site microclimates along with City requirements.

We anticipate working closely with the City Arborist on the final selection of these plant species.

3.8 Permit Summary

As noted above, this project is being submitted for Site Plan Approval from the City of Portland. The project's size and scale qualify it for a Level III Site Plan that will be reviewed and approved by the Planning Board. The project site is under an existing Maine Department of Environmental Protection (DEP) Site Location of Development Act (SLOD), or Site Law Permit, No. L-20438-22-D-A. An amendment to this permit is required, and it is our understanding that the project will be reviewed by the City of Portland under their Delegated Review Authority. A separate SLOD permit amendment application has been provided with this Site Plan Application, and 3 paper copies have also been provided for the City to supply to the Maine DEP.

3.9 Attachments

- Agent Letter
- Location Map
- Tax Map
- Student Housing Analysis by Brailsford & Dunleavy (Uploaded Separately to Eplan)
- Civil, Landscape, & Architecture Design Plans (uploaded to Drawings folder in Eplan)
- Architectural Renderings (uploaded to Drawings folder in Eplan)

Maine's Public Universities
UNIVERSITY OF MAINE SYSTEM

UNIVERSITY OF SOUTHERN MAINE
PORTLAND • GORHAM • LEWISTON • ONLINE

February 27, 2020

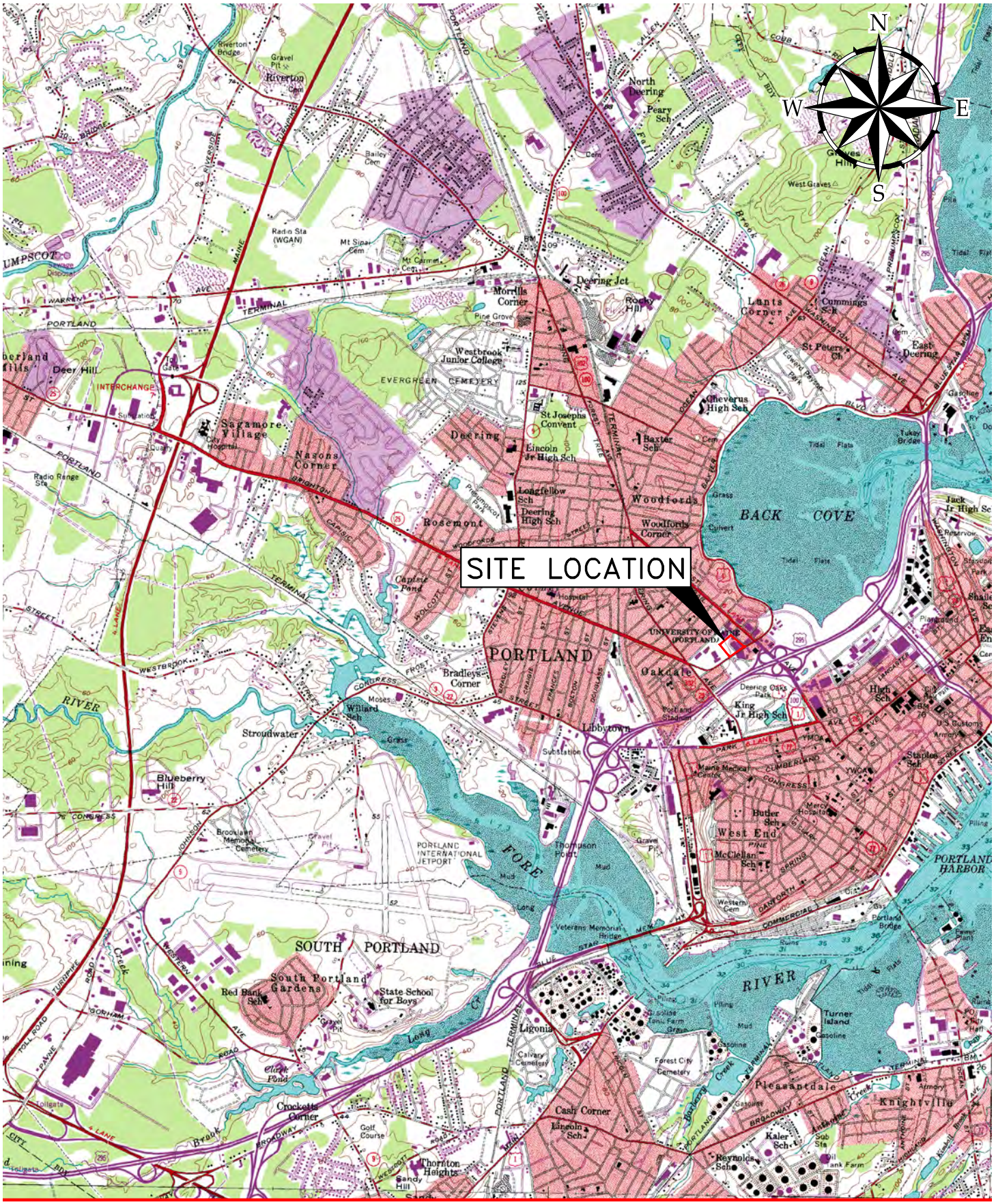
To: Local, State, and Federal Review Officials

The University of Southern Maine, a member of the University of Maine System, is preparing plans for the Career and Student Success Center (CSSC) at the University of Southern Maine, Portland, ME. The University has retained Woodard & Curran, Inc. to assist in the preparation of the applications associated with permitting approvals for this project. When necessary, Woodard & Curran, Inc. is authorized as its agent to represent the University in addressing questions on the plans, or applicable applications, for this project.

Sincerely,

John M. Souther,
Executive Director of Facilities Management,
University of Southern Maine for the
University of Maine System

Facilities Management
P.O. Box 9300, Portland, ME 04104-9300
(207) 780-4160, TTY (207) 780-5646, FAX (207) 780-4538
www.usm.maine.edu
A member of the University of Maine System



WOODARD &CURRAN
41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

LOCATION MAP

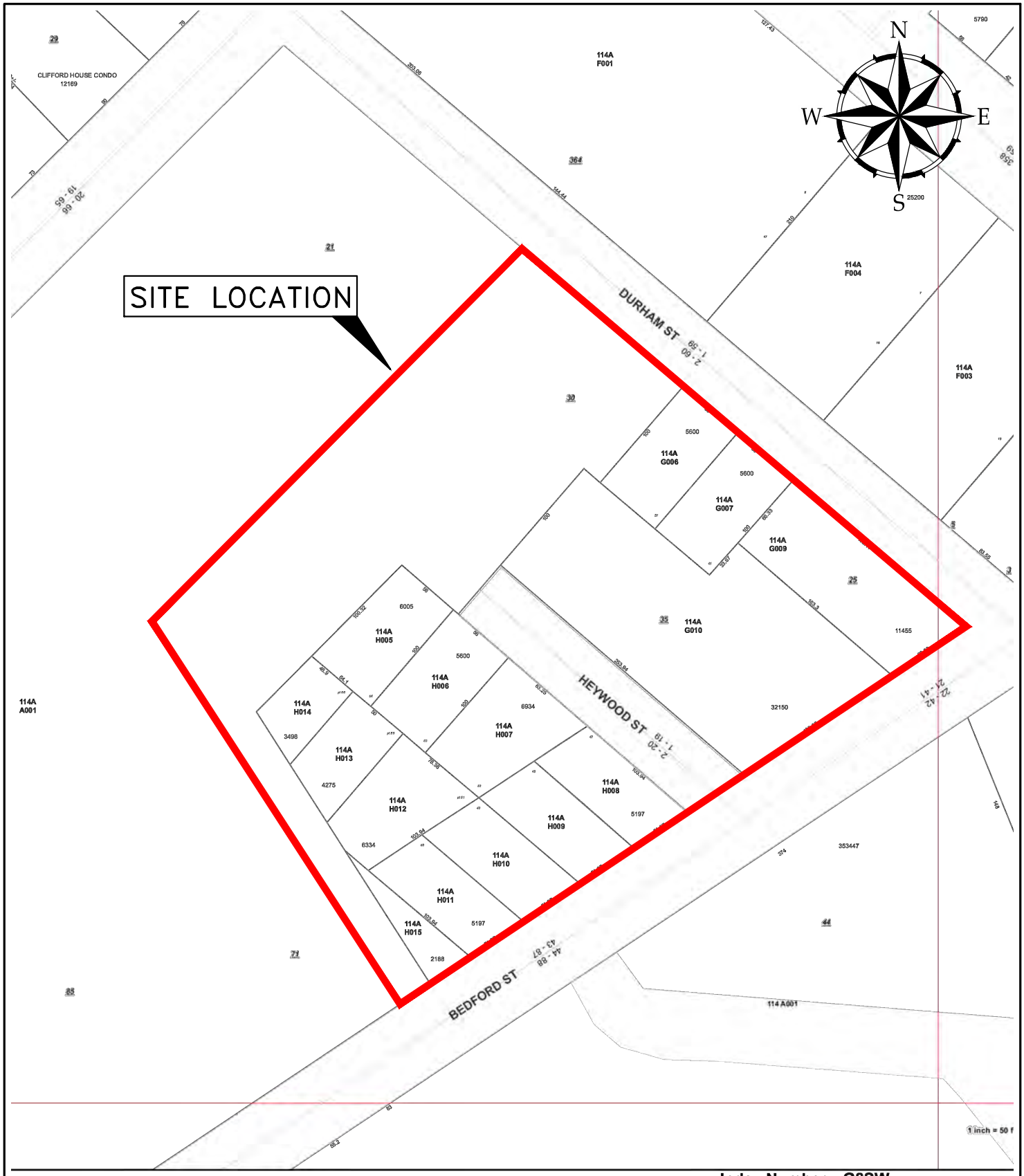
DESIGNED BY: DS	CHECKED BY: DS
DRAWN BY: DS	0232656.00 LOCATION MAP*.dwg

UNIVERSITY OF SOUTHERN MAINE
PO BOX 9300
PORTLAND, ME

CAMPUS STUDENT SUCCESS CENTER
& STUDENT RESIDENTIAL
PORTLAND, MAINE

JOB NO: 0232656.00
DATE: March 2020
SCALE: 1" = 1000'

Location Map



Index Number - G8SW

50' 0 50' 100'

WOODARD &CURRAN

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COMMITMENT & INTEGRITY DRIVE RESULTS

TAX MAP

DESIGNED BY: DS	CHECKED BY: DS
DRAWN BY: DS	0232656.00 TAX MAP.dwg

UNIVERSITY OF SOUTHERN MAINE
PO BOX 9300
PORTLAND, ME

CAMPUS STUDENT SUCCESS CENTER
& STUDENT RESIDENTIAL
PORTLAND, MAINE

JOB NO: 0232656.00
DATE: February 2020
SCALE: 1" = 50'

Tax Map

4. WAIVER REQUESTS

At this time, we are requesting only one waiver related to the fiber cement panels. Per the City of Portland Design Manual - (e) University of Southern Maine Overlay Zone, Appendix 3 Standard D-7 "Low Grade Materials" such as fiber cement siding shall not be used on facades visible from the public rights of way. In the intervening years since the design standard was written, the quality of these materials has improved significantly, and they may now be considered long lasting. Fiber cement is currently seen in many high-quality projects throughout Portland.

4.1 Attachments

- City of Portland Waiver Table

Standard to be Waived: Cite Ordinance or Technical Manual Standard	Cite Standard Language: Cite specific language of applicable Ordinance or Technical Manual Standard	Waiver Being Sought: Describe waiver being sought. Ex. – We are requesting a two-way parking lot drive aisle width of 20' feet.	Justification for Waiver: Address specific waiver criteria, if applicable, and document reasons for the waiver request.
City of Portland Design Manual - (e) University of Southern Maine Overlay Zone, Appendix 3 Standard D-7 Materials	Paraphrased: Facades visible from public rights of way shall use natural building materials that are considered to be permanent for 100 years. .... Low grade materials such as panelized "thin brick", fiber-cement or cementitious panel siding, shall not be used on facades visible from public rights of way.	Requesting a waiver for the use of materials listed as "low grade".	In the intervening years since the design standard was written, the quality of these materials has improved significantly and they may now be considered long lasting. Fiber cement is currently seen in many high quality projects throughout Portland.

5. EVIDENCE OF RIGHT, TITLE & INTEREST

The proposed development is located on properties owned by the Applicant and identified as Tax Map 114, Lots G-6 thru G-10; and Map 114A, lots H-5 thru H-15. Attached are copies of the deeds associated with these properties.

5.1 Attachments

- Deed, dated August 28, 1957, Cumberland County Registry of Deeds, Book 2370, Pg 135.
- Deed, dated December 24, 1964, Cumberland County Registry of Deeds, Book 2873, Pg 133.
- Deed, dated March 28, 1970, Cumberland County Registry of Deeds, Book 3121, Pg 878.
- Deed, dated October 14, 1999, Cumberland County Registry of Deeds, Book 15109, Pg 33.

(90) 135

Know all Men by these Presents,

That Portland Junior College ~~Company~~,

a corporation organized and existing under the laws of the State of Maine and located at Portland in the County of Cumberland and State of Maine in consideration of one dollar and other valuable considerations

paid by University of Maine, a corporation organized and existing under the laws of the State of Maine and located at Orono in the County of Penobscot and State of Maine

the receipt whereof it does hereby acknowledge, does hereby give, grant, bargain, sell and convey, unto the said University of Maine its successors ~~heirs~~ and assigns forever,

a certain lot or parcel of land with the buildings thereon situated in Portland aforesaid bounded and described as follows:

Beginning at a pipe set in the ground at the corner formed by the intersection of the easterly side of Brighton Avenue and the southerly side of Falmouth Street; thence by said southerly side of Falmouth Street in an easterly direction nine hundred eighty-two and sixty-seven hundredths (982.67) feet to a pipe set in the ground on said southerly side of Falmouth Street; thence southerly with an included angle of ninety-four degrees thirty-eight minutes (94° 38') three hundred fifty-two and eighty-nine hundredths (352.89) feet to a pipe; thence westerly on a line parallel with Falmouth Street and at an included angle of eighty-five degrees twenty-two minutes (85° 22') one hundred sixty-four and sixty-five hundredths (164.65) feet to a point, said point being on the line of a row of trees running approximately north and south; thence southwardly along the line of said row of trees two hundred forty-five (245) feet more or less to the northerly side of Bedford Street; thence westerly along the northerly side of said Bedford Street six hundred (600) feet more or less to the easterly side of Brighton Avenue; thence along the easterly side of Brighton Avenue four hundred eighty-seven and thirty-eight hundredths (487.38) feet more or less to the point of beginning.

Reference is made to three deeds to Portland University Extension Courses, Inc., the name of which, subsequently, by act of the Legislature has been changed to Portland Junior College, and a fourth deed to Portland Junior College, all from Edward Deering Noyes dated and recorded as follows: December 28, 1946, Book 1854 Page 424, June 30, 1947, Book 1875 Page 227, July 1, 1948, Book 1916 Page 364, and December 31, 1956, Book 2332 Page 151.

Portland Junior College to University of Maine -- War

Vogel

to

University of Maine

-

War

Know all Men by these Presents, That

I, BEATRICE N. VOGEL, of Falmouth, County of Cumberland and State of Maine, formerly known as Beatrice M. Noyes,

in consideration of one dollar and other valuable consideration s paid by UNIVERSITY OF MAINE, an educational corporation organized and existing under the laws of the State of Maine,

the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said University of Maine, its successors and assigns forever, a one-third (1/3) interest in common and undivided in and to a certain lot or parcel of land situated on the southwesterly side of Durham Street, City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning on the southwesterly side of Durham Street at the most northerly corner of land now or formerly of Allan G. Ballard, et al, which corner is situated one hundred eighty-two and eleven hundredths (182.11) feet, northwesterly of Bedford Street as measured along said southwesterly side of Durham Street; thence southwesterly by land of said Ballard and by land of International Harvester Co. a distance of one hundred (100) feet, more or less, to other land of said International Harvester Co.; thence northwesterly by said other land of international Harvester Co. a distance of one hundred twelve (112) feet, more or less, to land now of the University of Maine; thence northeasterly by land of the University of Maine one hundred (100) feet, more or less, to Durham Street; thence southeasterly by Durham Street a distance of one hundred twelve (112) feet, more or less, to the point of beginning.

Being a portion of the premises conveyed by James D. Fessenden, et al, to Nathaniel Deering, et als, dated January 21, 1879, recorded in the Cumberland County Registry of Deeds, Book 455, Page 49.

This conveyance is made subject to and with the benefit of a lease of the above described premises from Edward Deering Noyes, Jr., as Lessor to International Harvester Co. as Lessee dated September 9, 1947.

To Have and to Hold the aforegranted and bargained premises, with all the privileges and appurtenances thereof, to the said University of Maine, its successors and assigns, to its and their use and behoof forever. And I do covenant with the said Grantee, its successors and assigns, that I am lawfully seized in fee of the premises; that they are free of all incumbrances except as aforesaid, that I ha ve good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my heirs and assigns shall and will warrant and defend the same to the said Grantee, its successors and assigns forever, against the lawful claims and demands of all persons, except as aforesaid.

In Witness Whereof, I, Beatrice N. Vogel, and I, Leo G. Vogel, husband of the said Beatrice N. Vogel, joining in this deed as Grantor, and relinquishing and conveying my rights by descent and all other rights in the above described premises, have hereunto set our hands and seals this 24th day of December in the year of our Lord one thousand nine hundred and sixty-four

Signed, Sealed and Delivered in presence of

Robert B Long
Robert B Long

Beatrice N Vogel
Leo G Vogel

State of Maine, CUMBERLAND ss. December 24, 1964.

Personally appeared the above named Beatrice N. Vogel and acknowledged the foregoing instrument to be her free act and deed.

Before me, H. Dawson Osgood
NOTARY PUBLIC.
MY COMMISSION EXPIRES SEPTEMBER 6, 1968

STATE OF MAINE, CUMBERLAND COUNTY, SS. *REGISTRY OF DEEDS*

Received DEC 30 1964 *at* 3 o'clock 30 *m.* *M., and recorded in BOOK* 2873 *PAGE* 133 *Attest:* Edward P. Thyson *Register.*

378

4111 (90)

Know all Men by these Presents,

That FOREST CITY CHEVROLET ~~COMPANY~~ Company

a corporation organized and existing under the laws of the State of Maine and located at Portland in the County of Cumberland and State of Maine in consideration of One Dollar ($1.00) and other valuable considerations,

paid by UNIVERSITY OF MAINE, a body politic and corporate, organized under the laws of the State of Maine,

the receipt whereof it does hereby acknowledge, does hereby give, grant, bargain, sell and convey, unto the said University of Maine, its successors ~~heirs~~ and assigns forever,

a certain lot or parcel of land together with any improvements thereon situated on the northwesterly side of Bedford Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at the intersection of the northwesterly side of Bedford Street with the southwesterly side of Heywood Street; thence southwesterly by Bedford Street two hundred forty-three (243) feet, more or less, to land of University of Maine, being the land conveyed by Edward D. Noyes to Portland Junior College by deed dated December 31, 1956 and recorded in the Cumberland County Registry of Deeds, Book 2332, Page 151; thence northwesterly by said land of University of Maine two hundred forty-five (245) feet, more or less, to other land of University of Maine, being the land conveyed by Edward D. Noyes to Portland University Extension Courses, Inc. by deed dated July 1, 1948 and recorded in said Registry of Deeds, Book 1916, Page 364; thence northeasterly by said other land of University of Maine one hundred sixty-three (163) feet, more or less, to land of University of Maine, being the same land conveyed by Edward D. Noyes to it by deed dated April 9, 1958 and recorded in said Registry of Deeds, Book 2404, Page 15; thence southeasterly by said land and by an extension southeasterly of the line of said land which is the southwesterly side of Heywood Street three hundred (300) feet, more or less, to Bedford Street and the point of beginning.

Being the same premises conveyed to Forest City Motor Co. by deed of Beatrice M. Noyes and by deed of Canal National Bank, et al, as Trustees under the Will of Edward Deering Noyes, Jr. both deeds dated May 18, 1964, recorded in Cumberland County Registry of Deeds, Book 2821, Pages 354 and 346 respectively. The grantor herein is the successor in interest to said Forest City Motor Co. by change of corporate name duly recorded in said Registry of Deeds.

0075689 BK15109PG033

WARRANTY DEED
Maine Statutory Short Form

Know all Men by these presents,

That **Gary T. Gervais**, of Portland, Cumberland County, Maine, for consideration paid, grants to **University of Maine System**, a body politic and corporate, organized and existing under the laws of the State of Maine, with a mailing address of 107 Main Avenue, Bangor, Maine 04401, with Warranty Covenants, a certain lot or parcel of land, together with the buildings thereon, situated in Portland, Cumberland County, Maine, and situated at the northwesterly corner of Bedford Street and Durham Street and bounded and described as follows:

Beginning at the intersection formed by the northerly side of Bedford Street and the westerly side of Durham Street; thence southwesterly and along the northerly line of Bedford Street 68.93 feet to an iron pipe; thence northwesterly and parallel to the westerly line of Durham Street 163.20 feet to an iron pipe; thence northeasterly and at right angles to the last course 66.33 feet to an iron pipe in the westerly line of Durham Street; thence southeasterly and along the westerly line of Durham Street 182.11 feet to the point of beginning.

Being the same premises described in a deed from Mildred L. Cohen to Robert R. Gervais, Jr., and Gary T. Gervais, dated July 25, 1980, recorded in Cumberland County Registry of Deeds, Book 4637, Page 155, and from Robert R. Gervais, Jr., to Gary T. Gervais dated March 29, 1985, recorded in said Registry, Book 6719, Page 321.

This conveyance is made subject to a lease, as may be amended, between Gary T. Gervais and University of Maine System, dated November 8, 1989, as evidenced by a Memorandum of Lease dated February 28, 1990, recorded in Cumberland County Registry of Deeds, Book 9102, Page 319. Said lease is hereby terminated.

Also hereby conveying all rights, easements, privileges, and appurtenances belonging to the premises hereinabove described.

Witness my hand this 14th day of October 1999.

Signed and Delivered in
the presence of:

Gary T. Gervais

MAINE REAL ESTATE TAX PAID

STATE OF MAINE
CUMBERLAND, SS.

October 14, 1999

Then personally appeared the above named Gary T. Gervais and acknowledged the foregoing instrument to be his free act and deed.

Before me,

Thomas S Leahy

~~Notary Public~~/Attorney at Law

Printed Name: Thomas S. Leahy

KJT\TGL\GERVAIS\Warranty Deed.doc

RECEIVED
RECORDED REGISTRY OF DEEDS
1999 OCT 15 AM 10:44
CUMBERLAND COUNTY
John B O'Brien

To have and to hold, the aforegranted and bargained premises with all the privileges and appurtenances thereof to the said University of Maine, its successors

~~heirs~~ and assigns, to its and their use and behoof forever.

And the said Grantor Corporation does hereby COVENANT with the said Grantee, its/ successors ~~heirs~~ and assigns, that it is lawfully seized in fee of the premises, that they are free of all incumbrances;

that it has good right to sell and convey the same to the said Grantee to hold as aforesaid; and that it and its successors, shall and will WARRANT AND DEFEND the same to the said Grantee, its/ successors ~~heirs~~ and assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, the said Forest City Chevrolet ~~Company~~ has caused this instrument to be sealed with its corporate seal and signed in its corporate name by Philip Gemmer, its President, ~~its Treasurer~~ thereunto duly authorized, this 28 TH day of MARCH in the year one thousand nine hundred and seventy.

Signed, Sealed and Delivered in presence of

Helen A. Pinder

Forest City Chevrolet

~~Company~~

By Philip Gemmer

President ~~Treasurer~~

(CORPORATE SEAL)

State of Maine

County of Cumberland **ss.** 19 70

Then personally appeared the above named

Philip Gemmer, President ~~Treasurer~~ **of said Grantor Corporation as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act**

135

To have and to hold, the aforegranted and bargained premises with all the privileges and appurtenances thereof to the said

University of Maine, its successors

~~heirs~~ and assigns, to its and their use and behoof forever.

And the said Grantor Corporation does hereby COVENANT with the said Grantee , its successors ~~heirs~~ and assigns, that it is lawfully seized in fee of the premises, that they are free of all incumbrances;
that it has good right to sell and convey the same to the said Grantee to hold as aforesaid; and that if and its successors, shall and will WARRANT AND DEFEND the same to the said Grantee , its successors ~~heirs~~ and assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, the said Portland Junior College ~~Company~~ has caused this instrument to be sealed with its corporate seal and signed in its corporate name by Philip I. Milliken , its Treasurer, thereunto duly authorized, this 28th day of August in the year one thousand nine hundred and fifty-seven.

Signed, Sealed and Delivered
in presence of

Jane C. Magnusson

PORTLAND JUNIOR COLLEGE
~~Company~~.

By Philip I. Milliken
Treasurer.

Countersigned
Raymond S. Rracy
President

(CORPORATE SEAL)

State of Maine

County of Cumberland ss. August 28, 1957

Then personally appeared the above named Philip I. Milliken Treasurer of said Grantor Corporation as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of said corporation.

Before me,

Jane C. Magnusson Justice of the Peace.
~~Notary Public~~

AUG 28 1957
REGISTRY OF DEEDS, CUMBERLAND COUNTY, MAINE
Received at 12 H 27 M P.M., and recorded in
BOOK 2370 PAGE 135 Register

6. EASEMENTS AND OTHER BURDENS

There are is a bus shelter easement located on the project Site on Bedford Street, as well as a discontinued ROW for a street formerly known as Heywood Street. The easement is shown on survey prepared by SurveyWorks, Inc., and a copy of the easement is attached. The Heywood Street ROW was discontinued on My 7, 1984 and as recorded in the City of Portland Road Book, Volume 2, Page 392.

6.1 Attachments

- Easements

378

4111 (90)

Know all Men by these Presents,

That FOREST CITY CHEVROLET ~~COMPANY~~ Company

a corporation organized and existing under the laws of the State of Maine and located at Portland in the County of Cumberland and State of Maine in consideration of One Dollar ($1.00) and other valuable considerations,

paid by UNIVERSITY OF MAINE, a body politic and corporate, organized under the laws of the State of Maine,

the receipt whereof it does hereby acknowledge, does hereby give, grant, bargain, sell and convey, unto the said University of Maine, its successors ~~heirs~~ and assigns forever,

a certain lot or parcel of land together with any improvements thereon situated on the northwesterly side of Bedford Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at the intersection of the northwesterly side of Bedford Street with the southwesterly side of Heywood Street; thence southwesterly by Bedford Street two hundred forty-three (243) feet, more or less, to land of University of Maine, being the land conveyed by Edward D. Noyes to Portland Junior College by deed dated December 31, 1956 and recorded in the Cumberland County Registry of Deeds, Book 2332, Page 151; thence northwesterly by said land of University of Maine two hundred forty-five (245) feet, more or less, to other land of University of Maine, being the land conveyed by Edward D. Noyes to Portland University Extension Courses, Inc. by deed dated July 1, 1948 and recorded in said Registry of Deeds, Book 1916, Page 364; thence northeasterly by said other land of University of Maine one hundred sixty-three (163) feet, more or less, to land of University of Maine, being the same land conveyed by Edward D. Noyes to it by deed dated April 9, 1958 and recorded in said Registry of Deeds, Book 2404, Page 15; thence southeasterly by said land and by an extension southeasterly of the line of said land which is the southwesterly side of Heywood Street three hundred (300) feet, more or less, to Bedford Street and the point of beginning.

Being the same premises conveyed to Forest City Motor Co. by deed of Beatrice M. Noyes and by deed of Canal National Bank, et al, as Trustees under the Will of Edward Deering Noyes, Jr. both deeds dated May 18, 1964, recorded in Cumberland County Registry of Deeds, Book 2821, Pages 354 and 346 respectively. The grantor herein is the successor in interest to said Forest City Motor Co. by change of corporate name duly recorded in said Registry of Deeds.

To have and to hold, the aforegranted and bargained premises with all the privileges and appurtenances thereof to the said University of Maine, its successors

~~heirs~~ and assigns, to its and their use and behoof forever.

And the said Grantor Corporation does hereby COVENANT with the said Grantee, its/ successors ~~heirs~~ and assigns, that it is lawfully seized in fee of the premises, that they are free of all incumbrances;

that it has good right to sell and convey the same to the said Grantee to hold as aforesaid; and that it and its successors, shall and will WARRANT AND DEFEND the same to the said Grantee, its/ successors ~~heirs~~ and assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, the said Forest City Chevrolet ~~Company~~ has caused this instrument to be sealed with its corporate seal and signed in its corporate name by Philip Gemmer, its President, ~~its Treasurer~~ thereunto duly authorized, this 28 TH day of MARCH in the year one thousand nine hundred and seventy.

Signed, Sealed and Delivered in presence of

Helen A. Pinder

Forest City Chevrolet

~~Company~~

By Philip Gemmer

President ~~Treasurer~~

(CORPORATE SEAL)

State of Maine

County of Cumberland **ss.** 19 70

Then personally appeared the above named

Philip Gemmer, President ~~Treasurer~~ **of said Grantor Corporation as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act**

7. EVIDENCE OF STATE AND/OR FEDERAL APPROVALS

The following state and federal permits will be required for the proposed work:

- MaineDEP Site Location of Development Act Permit (reviewed by City of Portland under Delegated Review Authority);
- Maine Construction General Permit Notice of Intent; and
- FAA Notice of Proposed Construction.

Copies of these permit approvals can be provided to the City of Portland upon receipt.

8. EVIDENCE OF FINANCIAL & TECHNICAL CAPABILITY

8.1 Financial Capability

Attached is a copy of a letter verifying the Applicant's financial capacity to undertake the project.

8.2 Technical Capability

The University of Southern Maine (USM) is a public university with over 8,000 undergraduate and graduate students taking courses online and at campuses in Portland, Gorham and Lewiston. Known for its academic excellence, student focus and engagement with the community, USM provides students with hands-on experience that complements classroom learning and leads to employment opportunities in one of the nation's most desirable places to live. USM is a member of the University of Maine System (UMS), the State's largest educational enterprise that includes seven universities and an annual enrollment of nearly 30,000 students.

Capstone Development Partners (CDP) is a student housing real estate development company exclusively focused on working with colleges and universities in public private partnerships. The Principals of CDP have a combined experience of more than 40 years helping colleges and universities overcome real estate development and housing challenges. Their mission is unique to the student housing industry in that they focus on projects where they are in partnership with the university— rather than simply building apartments in a community with little regard for its plans, its institutional objectives or its long and short-term goals. They have built a reputation on collaborating with schools and respecting and burnishing the unique campus culture of its partners. They work hard every day to establish creative solutions that align the interests of the municipal, private and university project stakeholders, inclusive of housing and student life professionals, finance executives, presidents, facilities personnel, and the many others involved in development on or near a college campus.

Woodard & Curran (W&C), a 1,000-person Portland-based firm, has provided engineering services to the public and private sector for over 40 years, including permitting, civil/site engineering, stormwater and construction management services. W&C has completed projects for colleges, universities, and healthcare institutions that build strong, sustainable infrastructure and environmental programs serving both their business needs and the communities that make them so vibrant. With extensive experience in design and permitting for site development projects, W&C has completed many projects within the City of Portland and for the University of Maine System.

SMRT is a full-service firm of architects, engineers, planners and professionals committed to solving problems through design. Based in Portland, Maine, SMRT specializes in creating complex, 24-7 facilities for clients with challenges in education, healthcare, science/technology/industry, justice, government and workplace environments. Through collaboration, the project focus is to deliver buildings that further owner's business objectives through strong design, sustainable infrastructure and high functionality. SMRT has broad experience with projects for higher education including multiple projects for the University of Maine.

Elkus Manfredi Architects (EMA) is a full-service design firm providing architecture, master planning, urban design, interior architecture, historic preservation, space planning, programming, and experiential graphic design. EMA's portfolio of work includes a diversity of projects, including community-building higher education campus plans and facilities that create places for living, learning and innovating. The firm is at the forefront of sustainable design, with 8 of its 60 LEED projects at the Platinum-certified level. Elkus Manfredi has also signed on to the AIA's 2030 Commitment and has a rigorous process of early performance modeling to optimize design.

PC Construction (PCC) shares over half a century of industry-leading excellence with every client we meet. They offer general contracting, construction management, and design-build services to private and public companies for projects of all sizes — from a single office fit-up to water supply programs valued at over $300 million. With

headquarters in Vermont and a network of locations in Georgia, Maine, New Hampshire, New York and North Carolina, PCC manage project offices up and down the east coast and boast an annual volume average of $500 million.

Copies of resumes and project references can be provided upon request.

8.3 Attachments

- Financial Capacity Letter

UNIVERSITY OF
SOUTHERN MAINE
Finance and Administration

March 5, 2020

Mr. Darrin Stairs
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Dear Mr. Stairs:

The University of Southern Maine expects the Career and Student Success Center (CSSC) and residence hall projects to cost approximately $96 million combined.

To fund the project, the University would utilize the following resources:

(1) For the CSSC project ($31 million), USM has at its disposal $19 million in voter-approved general obligation debt and $1 million in philanthropic contributions.

(2) For the remaining $11 million in funding required for the CSSC, as well as the $65 million total cost of the residence hall, the University of Maine System would issue revenue bonds.

Thank you for your consideration.

Sincerely,

Alexander E. Porteous
Chief Business Officer

P.O. Box 9300, Portland, ME 04104-9300
(207) 780-4484 TTY (207) 780-5646, FAX (207) 780-4549
www.usm.maine.edu
A member of the University of Maine System

9. CONSISTENCY WITH PORTLAND DESIGN STANDARDS

Section 14-526 of the City of Portland's Land Use Code outlines the site plan standards that must be met by Level III Site Plan projects. The proposed development will follow the City's design standards as described in the following section.

9.1 Transportation

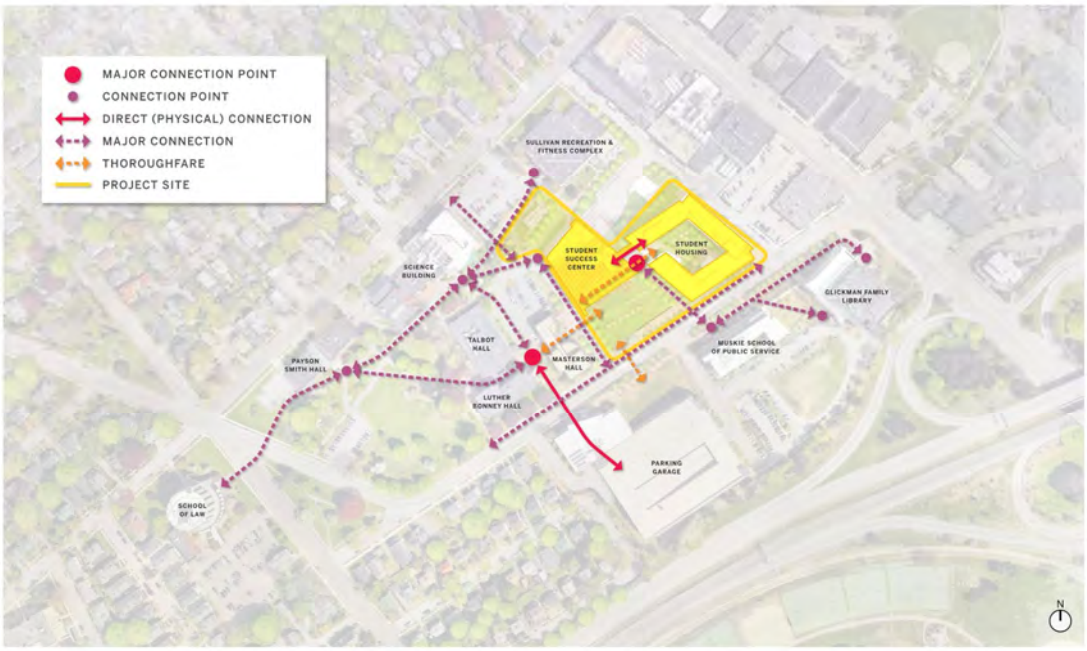
1. *Impact on Surrounding Street Systems*
   A Traffic Impact Study (TIS) was prepared by VHB for the proposed project and is attached. This study included an analysis for the proposed CSSC and the Residence Hall. Although a planned parking garage is not part of this application, the impacts from the garage were included. The analysis also incorporates the proposed Deering's Corner Roundabout, which will be constructed by the City in the next two years.

   The addition of the dormitory beds to the campus is anticipated to reduce vehicle trips as commuters convert to on-campus residences. The student center is expected to better serve the existing student population and is not expected to increase trips to the campus except perhaps for special events. In the future, with optimistic enrollment increases, and conservative methodology, vehicular trips are anticipated to increase between 163 and 174 during the weekday AM and PM peak hours. With these trips added to the roadway network, delay increases will be minimal at the signalized intersections along Forest Avenue and at the proposed roundabout at Falmouth Street and Brighton and Deering Avenues. Overall, this proposed project is not intended to adversely impact traffic operations in the vicinity of the USM campus.

2. *Access and Circulation*

   Pedestrian circulation on the USM campus is a priority and this project will maintain existing patterns and establish new circulation from its new uses. Pedestrian access along Bedford Street will be maintained through reconstruction of the existing sidewalk and a new sidewalk is proposed along Durham Street. The sites selected for the two new buildings were intended to enhance circulation and avoid pedestrian impacts. The site for the Residence Hall was previously covered by service areas that were non-student related and consequently avoids impacts to existing pedestrian corridors. The Career and Student Success Center is intended to be a building that students can conveniently and frequently access and subsequently its site is centrally located adjacent to several existing pedestrian corridors. Campus circulation is shown in the diagram below.

Campus Circulation Diagram



The University of Maine System is a Title II entity for ADA compliance and is committed to serving all campus populations. ADA accessibility will be provided for all pedestrian corridors associated with the project and access to the two new buildings. ADA parking specifically for the CSSC and Residence Hall will be provided in a future parking garage. There will continue to be ADA parking available in the Luther Bonney/Masterton Lot. It is noted that the courtyard of the Residence Hall is not intended as a public area and accommodated, controlled access will be provided through the building.

Vehicle access to the project areas is generally unchanged or improved by the project. Vehicle accesses to the service areas at the corner of Bedford and Durham will be removed and the existing vehicle access to the Central Heating Facility from Durham will be used to provide service areas to the CSSC. Access to the fuel tank off Durham will be maintained for fueling and maintenance and serve a dual-purpose to access mechanical areas on the ground floor of the Residence Hall.

There are no drive-up features associated with this project.

3. *Loading & Servicing*

An existing service area adjacent to the Central Heating Plant will be expanded to include new access to the CSSC and associated utilities. The CSSC will include a formal loading dock area facing Durham Street and include internal receiving and storage areas to support its bookstore, dining areas, and other student gathering uses. Typical delivery vehicles are anticipated to be food and beverage vehicles, shipping and delivery vehicles (i.e. USPS and UPS), and campus catering vehicles. Two solid waste compactors with removable dumpsters will be relocated from an existing facility off Durham Street to the loading dock area and will continue to serve as the Portland campus collector. During construction the solid waste compactors will be temporarily located on the NE corner of the Sullivan building, as described in the Construction Management Plan in Section 13. The new service area will also include parking for dining and facilities management vehicles and provide access to utility infrastructure including electric,

telecom, and emergency power. A new service access to an existing fuel tank will be created from Durham Street adjacent to a Residence Hall entrance that will also serve as an emergency and service access.

A truck turning area of 65-foot radius will be provided at the head of the loading area which is anticipated to accommodate single unit trucks up to 40 ft in length including the dumpster vehicles. Larger vehicles (i.e. dual unit trucks with 30 to 40 ft trailers) will back in from Durham Street which is consistent with existing large vehicle access to the Central Heating building and adjacent Oakhurst Dairy operations. Sketches created with AutoTurn software are enclosed as the basis of design.

4. *Sidewalks*

The project area that fronts on Bedford Street presently has a 6' bituminous sidewalk in poor condition. There is presently no formal sidewalk for the project area that fronts on Durham Street. The new Residence Hall will be located at a 10-foot setback from the property line on Bedford St. and 4' on Durham Street. A new 10' foot wide concrete sidewalk will be constructed along the face of the residence hall along Bedford to foster a streetscape/boulevard setting consistent with the public offices on the ground floor. A 10' wide esplanade will be constructed along the curb with a bioretention cell and street trees. A new 6-foot concrete sidewalk will be constructed along the Durham Street frontage in the right of way with a 6-foot landscaping buffer between the sidewalk and the building. This layout is consistent with establishing separation to the residents' rooms on the ground floor.

Existing crosswalks for Bedford and Durham Streets will be maintained and new ADA ramps and features will be constructed consistent with the City's Technical Manual at existing crosswalks and street corners.

Sidewalks in the interior of the site will range from 8 to 16 feet in width depending upon anticipated traffic and will be constructed of concrete.

5. *Public Transit Access*

No changes to public transit access are proposed as part of this project. There is an existing Metro stop located on Bedford Street near the southwest corner of the project that will be maintained in its current location during construction.

6. *Parking*

There are no proposed parking areas included in this project. The existing parking in the vicinity of the Central Heating Plant will be reconfigured and maintained.

To address parking on a campus-wide basis, the University commissioned a Parking Assessment in late 2019, and the study was completed in January of 2020. A copy of the Assessment is attached. The study was developed to provide a comprehensive profile of the current on-campus parking conditions and estimate future parking demand based on projections in student enrollment, employment growth, and changes to campus activities. It specifically included the completion of the Career and Student Success Center and the new Residence Hall in 2022 in its analysis.

Summarized findings of the Parking Analysis are as follows:

- The current (2019) parking capacity is 1,701
- The current peak parking hour is at 1pm and is 1,587 spaces, or 93%

- With construction of the Career and Student Success Center and Residence Hall, new parking capacity will be needed. See the attached parking analysis for the estimated demand for parking compared to supply over the course of future years.
- A moderately aggressive Transportation Demand Management (TDM) program could result in reductions of up to twelve percent for USM. The TDM is described in more detail in item (8) below.
- The expansion of the Wishcamper Parking Lot in 2020[1] will offset the anticipated loss of parking spaces in the Woodbury lot where the new Campus Quad will be located.

As evidenced in the Parking Analysis, additional parking will be required on campus to accommodate the needs of the new Residence Hall which is planned for occupancy in August of 2022. The University had a second study completed by Platz Associates to look at options to provide new structured parking on campus. This study considered two options: (1) a new parking structure located in the existing Sullivan Gym parking area on 68 Falmouth Street; and (2) expansion of the existing parking garage located on Bedford Street. There were several scenarios evaluated for each site.

The University has reviewed the options and will be pursuing a structured parking solution on the 68 Falmouth Street lot. It will be a multi-level structure and include primary access from Falmouth Street. It is expected that the new garage will provide approximately 400-500 parking spaces and may include a pedestrian skybridge to the new Career and Student Success Center, although the skybridge is not part of this project. The option of locating Campus Safety services within the garage is also being considered. It is anticipated that the new garage on Falmouth Street would be primarily used by residence hall students, so that the impacts of day to day trip generation will be significantly less than the garage located on Bedford Street. The new parking garage will require a Level III Site Plan approval from the City of Portland. The Site Plan Approvals for the garage will be pursued separately from this project.

The University is currently seeking approval from the Board of Trustees (BOT) in March of 2020 to solicit proposals for the design and permitting of the new structured parking. The anticipated schedule for development and construction of the project includes submitting for Site Plan Approval in mid-2020, anticipated approvals by late 2020, and construction of the garage being completed by the summer of 2022, and fully operational by August of 2022, before the new Residence Hall is occupied. A more thorough analysis of the proposed parking garage will be included with the Level III Site Plan application. We expect that a condition of the Certificate of Occupancy for the Residence Hall will be occupancy of the parking structure.

Bike Parking

The project will restore existing bicycle parking in the vicinity of the Woodbury Center and accommodate residents who bring bikes to campus. Exterior bike racks will be provided at the Student Success Center to accommodate student commuters. These racks, accommodating 35-60 bicycles, will be provided on hardscape surfaces and be "lockable" City-approved DERO Bike Hitch model. The residence hall will include an internal bike storage room for storage of resident bikes with direct access from the Bedford Street sidewalk. The bike storage room will be secured and allow for residents to secure their bikes in racks.

[1] A Level III Site Olan application for the expansion of the Wishcamper Parking Lot is currently under review by the City.

7. Snow Storage

   A snow management plan has been prepared through coordination with the USM Office of Facilities Management (OFM). The OFM is responsible for snow removal clearing on campus and this plan reflects campus priorities and resources. Snow storage areas are indicated on the site layout drawing. These snow storage areas are commonly short-term as the campus actively manages the amount of snow received and periodically removes snow from campus areas to retain capacity for future storms When necessary, snow is removed from campus by commercial contractor for lawful disposal.

8. *Transportation Demand Management (TDM)*
   The University of Southern Maine (USM) has recently developed a Transportation Demand Management (TDM) plan that provides a cohesive strategy for establishing and implementing a successful TDM program for the Portland campus. The TDM plan seeks to enhance multimodal accessibility, ensure the use of non-vehicular modes, and discourage the use of driving through parking management, to achieve and build upon the university's parking demand reduction goals for the campus. The TDM Plan presents a suite of strategies and timeframe for when USM intends to implement the various strategies. The strategies aim at promoting walking and bicycling, improving transit service to promote ridership, promoting carpooling, changing time-of-day travel demands to eliminate or reduce vehicle trips, and managing parking demand via changes to USM's pricing and permit policies. The implementation of the TDM will reduce the vehicle trips to the site and reduce delays at area intersections. The draft TDM Plan prepared by VHB is attached.

9.2 Environmental & Landscape Features

1. *Preservation of Significant Natural Features*
   The Site has been previously developed and there are no known areas of significant natural features, including unusual natural areas, rare or endangered botanical features, areas of significant wildlife habitats, or wetland areas. The attached Official Species List identifies the northern long-eared bat, which has been listed as a Federally Threatened Species, in association with the project area (a common designation across the state); however, there are no critical habitat areas located within the project area.

2. *Landscaping & Landscape Preservation*
   This project does not impact any trees greater than ten (10) inches DBH or greater within any required zoning setback area.

3. *Site Landscaping & Street Trees*
   Landscaping for the new CSSC and Residence Hall will be consistent with other campus landscaping improvements including landscape treatments associated with the Wishcamper Building. Landscaping will consist of street trees, accent trees, perennials and shrubs and lawn areas. The main landscape feature of the project will be a large open lawn area in front of the CSSC to create a Campus Quad. Landscaping will be provided to augment campus aesthetics, screen discordant uses (service area and residence hall), manage stormwater and provide recreation areas. The CSSC is intended to be a LEED certified building and as such plant species will be selected to be native or adaptive native plants that require minimal maintenance and be appropriate for the Portland climate.

   Landscaping features and vegetation will be used to improve site aesthetics and accent the new buildings. Planting plans with plant schedules and sizes have been provided consistent with the City's Technical Manual.

There are presently no heritage or feature trees on the project site to preserve. Street trees will be provided along the Bedford frontages in accordance with City requirements. The esplanade along Bedford Street will be constructed to contain sufficient planting soil to provide supportive growth conditions for proposed street trees.

Landscaping Plans are included in the drawings referenced in Section 3 of this Report.

9.3 Environmental & Stormwater

1. *Water Quality, Stormwater Management & Erosion Control*
   The project must comply with the water quality, stormwater management, and erosion control standards identified by the City of Portland in the Land Use Chapter of the Code of Ordinances, as well as the MaineDEP Chapter 500 Stormwater Standards associated with Site Location of Development Act Permit requirements. The Stormwater Management Plan included with this application demonstrates that the proposed development meets the applicable standards.

   The project has been designed to minimize the impact of stormwater leaving the site. The project will not result in the flooding of adjacent lots or City property. Additionally, the project is not located within the watershed of an Urban Impaired Stream and is not anticipated to pose a risk of groundwater contamination during or after construction. Erosion and sediment control measures are described in the attached Stormwater Management Plan and detailed on the drawings. The project has also been designed to provide for the adequate and sanitary disposal of sewage, as further described in Section 14 of this Report.

9.4 Public Infrastructure & Safety

1. *Consistency with City Master Plan*
   The development's consistency with City Master Plan is described in Section 11 of this Report.

2. *Public Safety and Fire Prevention*

   The project has considered public safety and fire prevention measures in its design. The concept of Crime Prevention Through Environmental Design (CPTED) has been incorporated by maximizing visibility, eliminating escape routes, avoiding concealment near pedestrian areas, and associated lighting. Landscaping plant varieties and locations have been selected to maintain visual corridors and view ways.

   Emergency vehicle access to the two new buildings has been provided and existing access to other buildings maintained.

   Compliance with the Portland Fire Department Site Review Checklist is described in Section 16 of this Report.

3. *Availability and Adequate Capacity of Public Utilities*
   The availability and adequate capacity of public utilities is described in Section 15 of this Report.

9.5 Site Design

1. *Massing, ventilation, and wind impact*

The two buildings have been sited consistent with the USM Facilities Master Plan and in accordance with the USM Overlay District and design standards in order to be consistent with existing building massing. The Residence Hall has been sited at the lowest grade on the campus to de-emphasis its 8-story height in addition to massing the 8-story portion of the building away from Bedford Street. The existing Glickman Library with 7 stories is across Bedford Street from the Residence Hall and the two buildings will be complimentary in their size and height. The CSSC was sited to be generally the center of campus and will be a similar height or lower than adjacent buildings such as the Science Building and Masterton Hall. Mechanical units for the Career and Student Success Center will be located primarily in the penthouse with some equipment located on the rear roof. In the Residence Hall, the equipment will be on the roofs of both wings centered in the middle of the bar. There are no residential properties in the vicinity of the new buildings and there are no permanent noise sources proposed on the ground.

2. *Shadows*

A preliminary shadow analysis, identified in the Technical Manual, has been prepared due to the creation of two structures greater than 45 feet in height above grade. The attached preliminary shadow analysis shows the required shadow length calculation based upon the building designs and existing site conditions. The Career and Student Success Center shadow length was calculated to generally be on campus with some extension into the Durham Street right of way. The Residence Hall shadow length is approximately half on campus and half on other parcels northerly of the campus, including portions of the Durham Street, Bedford Street, and Forest Avenue right of ways. This analysis shows that there are no "significant public resource" areas impacted by the proposed project. No further analysis is required.

3. Snow and ice loading

The project has been designed to avoid snow and ice from loading or falling onto adjacent properties or public ways. The two new buildings will have flat roofs and will not shed snow or ice directly to the ground. Building entrances are designed to allow for egress and access safe from falling snow or ice.

4. View corridors

This project is not located within the limits of the Downtown Vision View Corridor Protection Plan, and therefore the massing, location, and height of the development does not substantially obstruct any view corridors identified in said Plan.

5. *Historic Resources*

This project is not located within, or within 100 feet, of any City Historic District. There are no known Historic Resources located within or within 100 feet of the project limits.

6. Exterior Lighting

Site lighting has been designed to support pedestrian ways, accent building entrances and provide security. Cut-off style lighting fixtures will be used to limit light intrusion off site.

The proposed exterior lighting is shown on the drawings. A lighting schedule, cut sheets, and photometric plan are attached.

7. Noise and Vibration

The proposed buildings will have a combination of roof-mounted and interior-located mechanical equipment for heating, ventilation, and air conditioning (HVAC). Two new generators with sound attenuating enclosures will be located in the service area near the existing generator, which is to remain.

Noise levels at present are minimal and are not known to have created an unreasonably adverse impact on the surrounding campus and industrial (Oakhurst) areas. Proposed noise levels are anticipated to be similar. The generators will be exercised weekly and not run continuously unless there is a power outage. Note that the generators are located within the service core and flanked by existing and proposed buildings, providing partial shielding of the sound. Cut sheets for the proposed generators and enclosures are attached

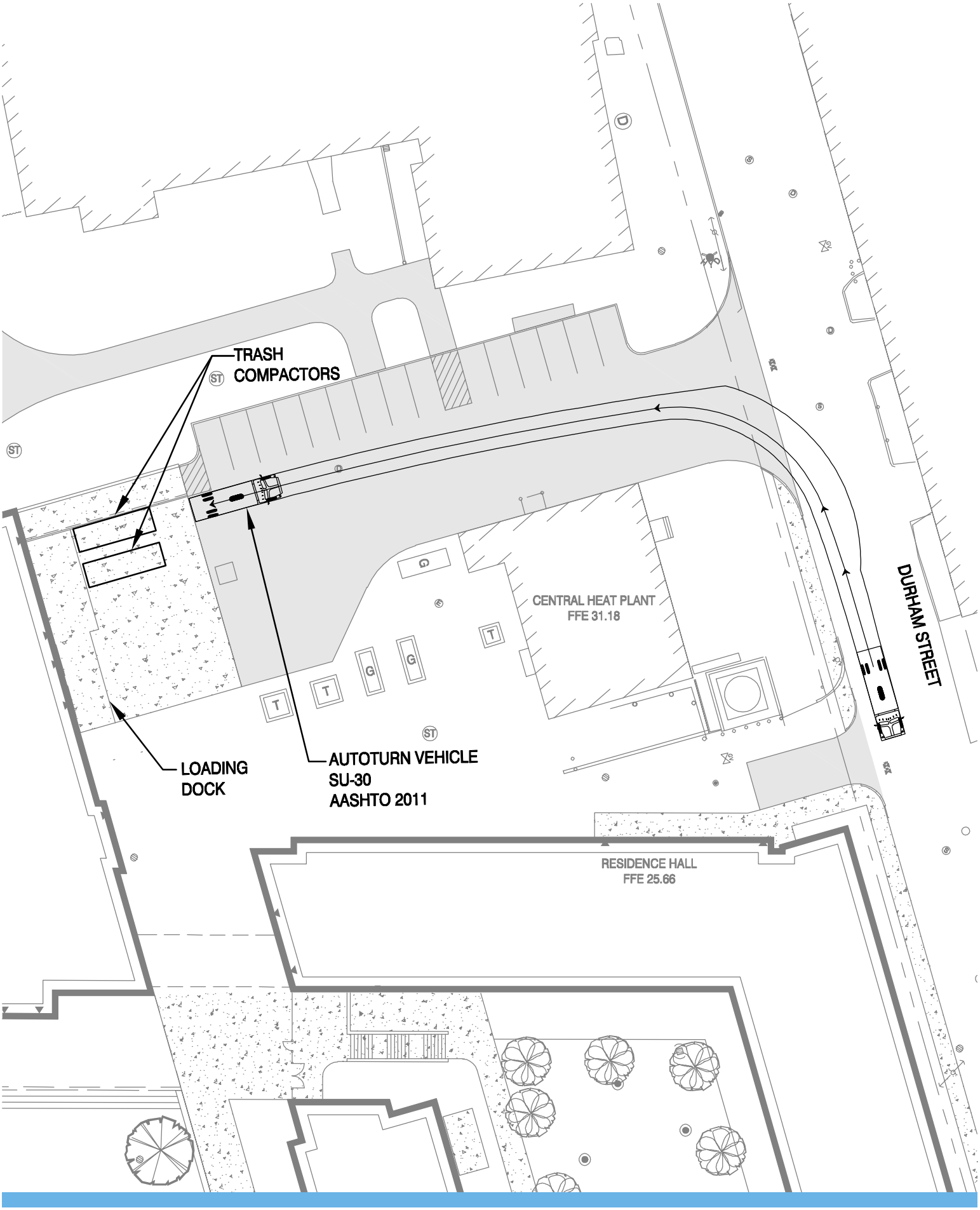
8. *Signage and Wayfinding*

   Campus signage and wayfinding has been provided on the drawings. The new signage will be related to the new buildings. The two new buildings will likely receive the ground or building mounted signs consistent with the campus standard that identifies all campus buildings at the street level.

9. *Zoning Related Design Standards*
   An assessment of the City Zoning requirements is provided in Section 11 of this Report.

9.6 Attachments

- Traffic Impact Analysis prepared by VHB (uploaded separately in Eplan)
- Truck Turning Movement Diagram
- Parking Analysis prepared by VHB (Uploaded separately to Eplan)
- Parking Feasibility Study by Platz Associates (Uploaded separately to Eplan)
- TDM Plan prepared by VHB (uploaded separately in Eplan)
- Official Species List
- Lighting Schedule, Photometric Plans & Cut Sheets
- Stormwater Management Plan (uploaded separately in Eplan)
- Preliminary Shadow Study
- Generator and Sound Enclosure Cut sheets



Truck Access-30' Box Truck

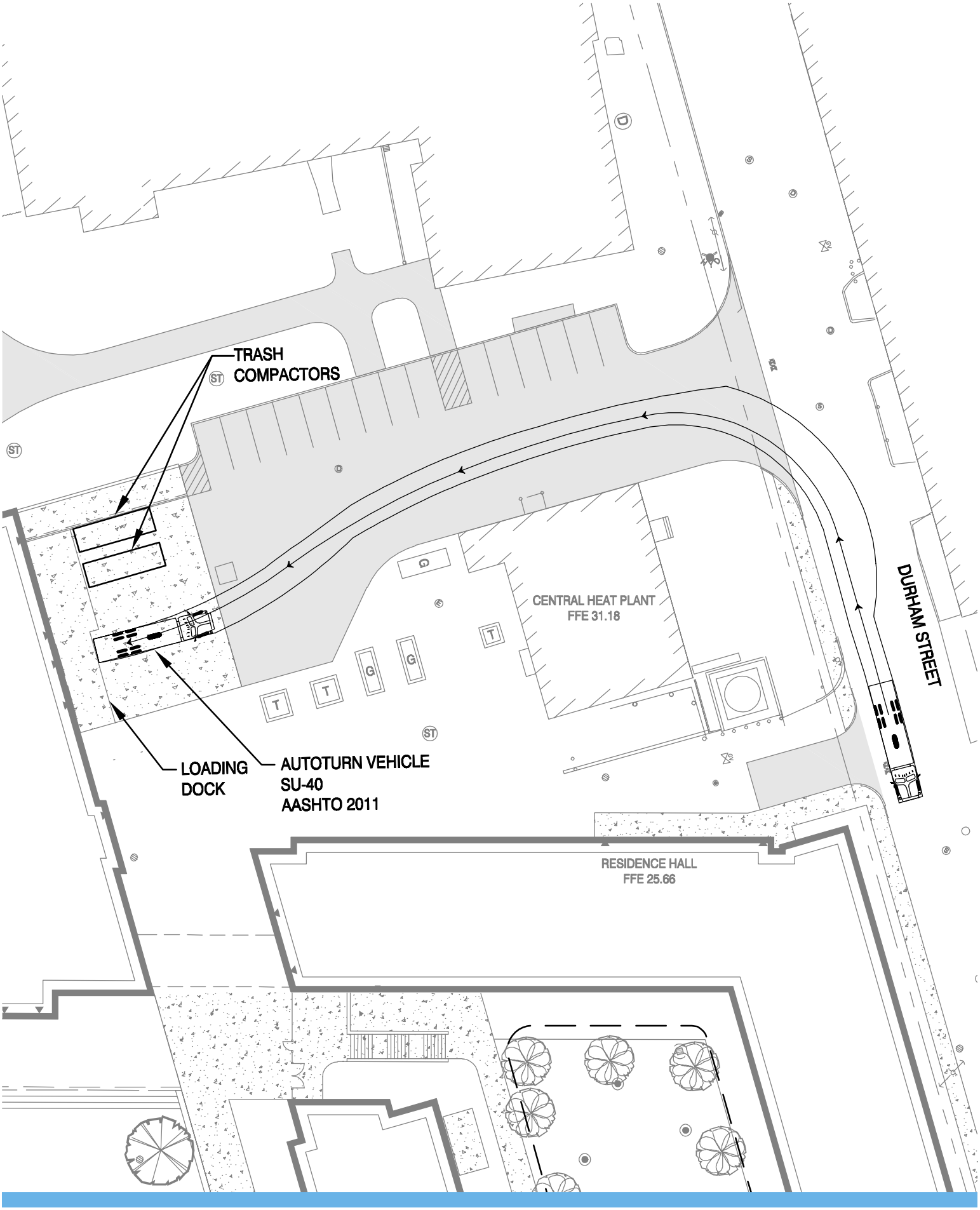
University of Southern Maine Reisdence Hall

March, 2020

SMRT PROJECT NO. 19206

0 40' 80' 160' 320'

SMRT



Truck Access-40' Trailer/Double Unit

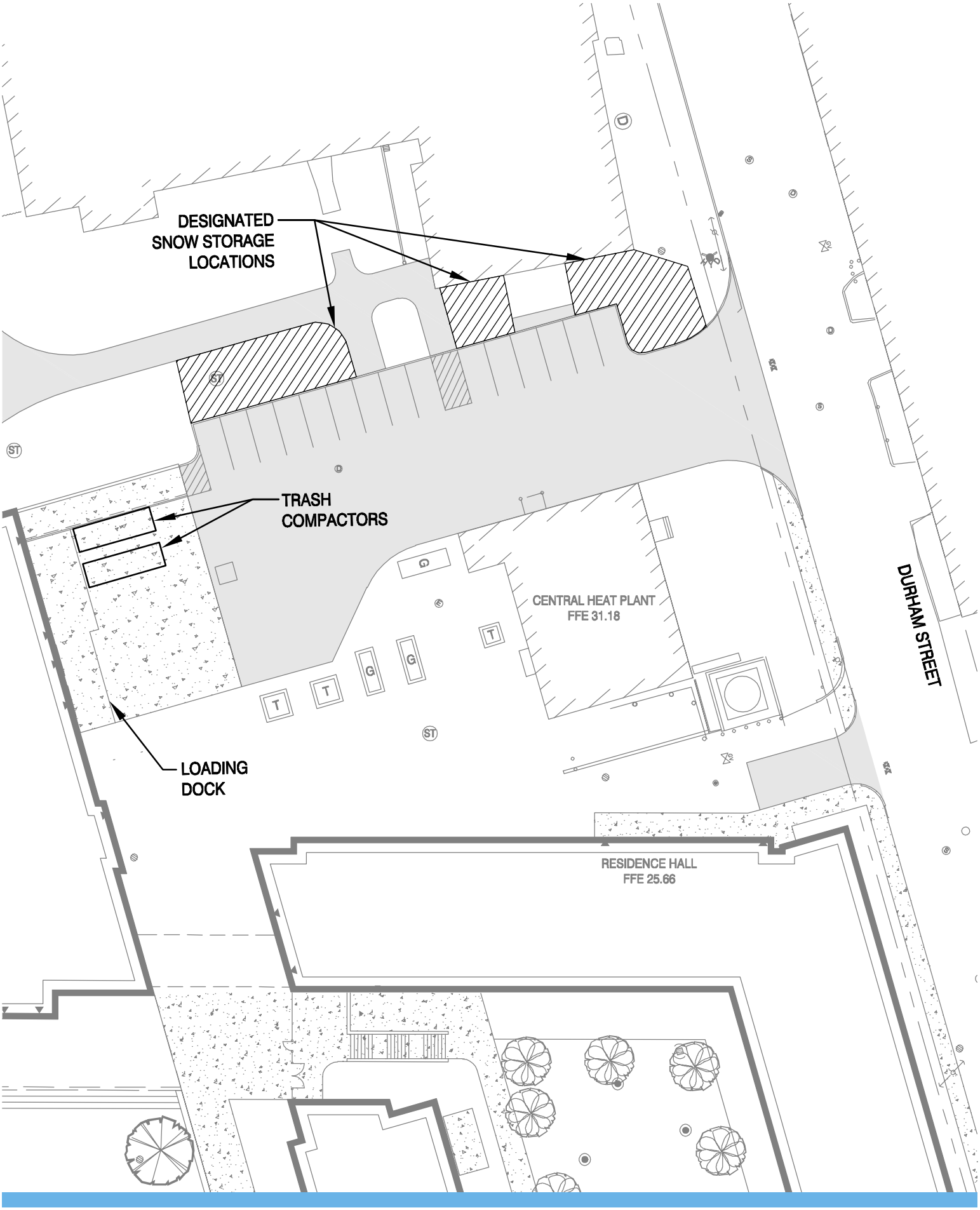
University of Southern Maine Reisdence Hall

March, 2020

SMRT PROJECT NO. 19206

0 40' 80' 160' 320'

SMRT



Snow Storage Sketch

University of Southern Maine Reisdence Hall

March, 2020

SMRT PROJECT NO. 19206

0 40' 80' 160' 320'

SMRT

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
Phone: (207) 469-7300 Fax: (207) 902-1588
http://www.fws.gov/mainefieldoffice/index.html

In Reply Refer To: February 24, 2020
Consultation Code: 05E1ME00-2020-SLI-0740
Event Code: 05E1ME00-2020-E-02458
Project Name: USM Portland Student Housing

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies the threatened, endangered, candidate, and proposed species and designated or proposed critical habitat that may occur within the boundary of your proposed project or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC Web site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

This species list also identifies candidate species under review for listing and those species that the Service considers species of concern. Candidate species have no protection under the Act but are included for consideration because they could be listed prior to completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (i.e., species previously known as Category 2 candidates), but for which further information is needed.

If a proposed project may affect only candidate species or species of concern, you are not required to prepare a Biological Assessment or biological evaluation or to consult with the Service. However, the Service recommends minimizing effects to these species to prevent future conflicts. Therefore, if early evaluation indicates that a project will affect a candidate species or species of concern, you may wish to request technical assistance from this office to identify appropriate minimization measures.

Please be aware that bald and golden eagles are not protected under the Endangered Species Act but are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may require development of an eagle conservation plan: http://www.fws.gov/windenergy/eagle_guidance.html Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: http://www.fws.gov/mainefieldoffice/Project%20review4.html

Additionally, wind energy projects should follow the wind energy guidelines: http://www.fws.gov/windenergy/ for minimizing impacts to migratory birds and bats. Projects may require development of an avian and bat protection plan.

Migratory birds are also a Service trust resource. Under the Migratory Bird Treaty Act, construction activities in grassland, wetland, stream, woodland, and other habitats that would result in the take of migratory birds, eggs, young, or active nests should be avoided. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g.,

cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm and at: http://www.towerkill.com; and at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
(207) 469-7300

Project Summary

Consultation Code: 05E1ME00-2020-SLI-0740

Event Code: 05E1ME00-2020-E-02458

Project Name: USM Portland Student Housing

Project Type: DEVELOPMENT

Project Description: Proposed development on the USM Portland campus on the corner of Bedford Street and Durham Street in Portland, ME

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/43.6628773524905N70.27456771513867W

Counties: Cumberland, ME

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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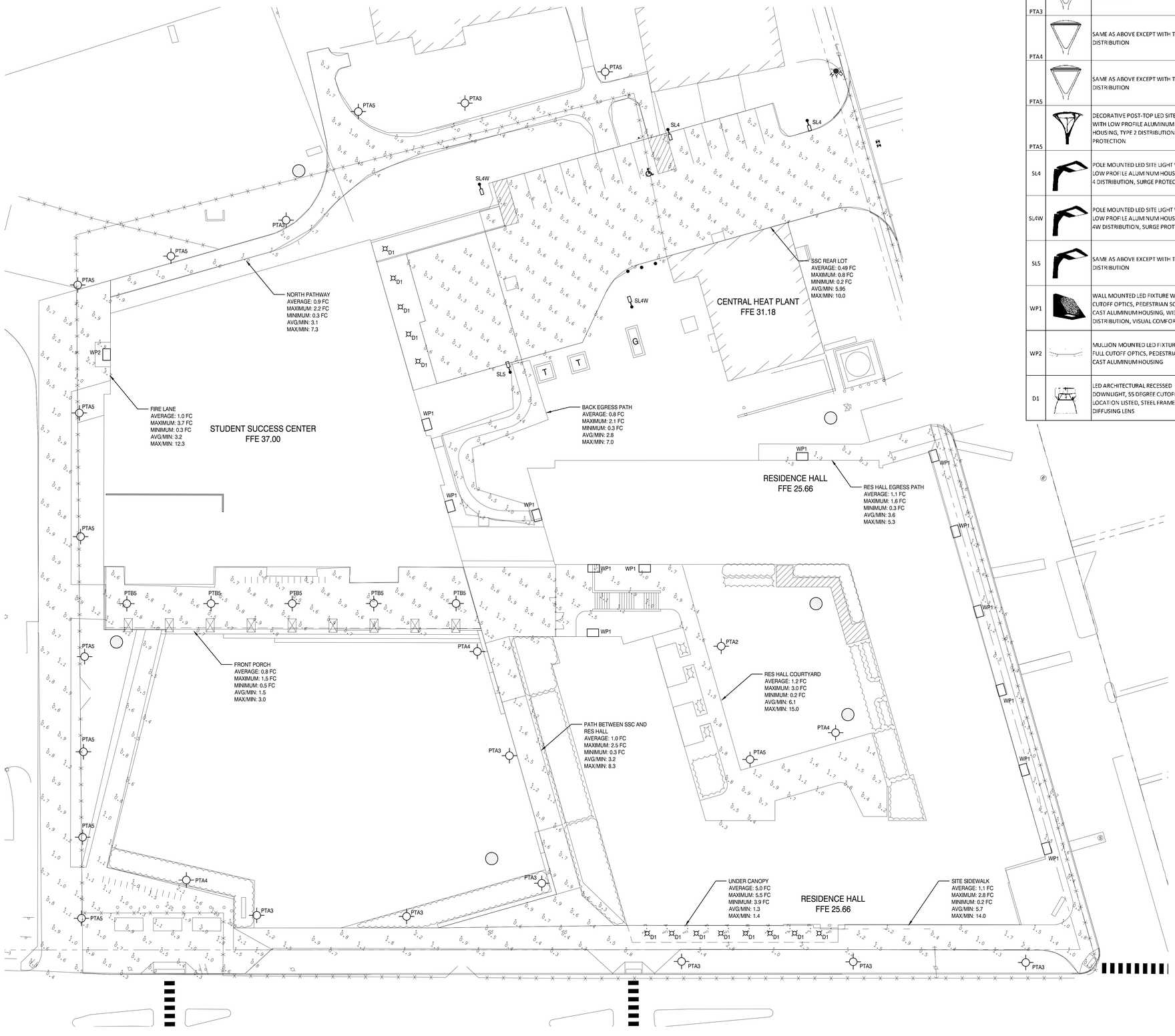
1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



SITE & LANDSCAPE LIGHTING SCHEDULE

LABEL	IMAGE	DESCRIPTION	MANUFACTURER & MODEL NUMBER	QUANTITY	BUG RATING	FULL CUTOFF?	WATTAGE	OUTPUT	CONTROL METHOD	MOUNTING	NOTES
PTA2		POST-TOP LED SITE LIGHT WITH LOW PROFILE ALUMINUM HOUSING, TYPE 2 DISTRIBUTION, SURGE PROTECTION	KIM LIGHTING UR20-24L-25-3K7-2-PT-UNV-BLT-SF	1	B1-U0-G1	YES	25 W	3,000 LUMENS	TIME CLOCK	12' TALL ROUND 4" OD ALUMINUM POLE	
PTA3		SAME AS ABOVE EXCEPT WITH TYPE 3 DISTRIBUTION	KIM LIGHTING UR20-24L-25-3K7-3-PT-UNV-BLT-SF	8	B1-U0-G1	YES	25 W	3,000 LUMENS	TIME CLOCK	ROUND 12' X 4" ALUMINUM POLE	
PTA4		SAME AS ABOVE EXCEPT WITH TYPE 4 DISTRIBUTION	KIM LIGHTING UR20-24L-25-3K7-4W-PT-UNV-BLT-SF	3	B1-U0-G2	YES	25 W	3,000 LUMENS	TIME CLOCK	ROUND 12' X 4" ALUMINUM POLE	
PTA5		SAME AS ABOVE EXCEPT WITH TYPE 5 DISTRIBUTION	KIM LIGHTING UR20-24L-25-3K7-5W-PT-UNV-BLT-WSP-40F1-SF	12	B2-U0-G1	YES	25 W	3,000 LUMENS	TIME CLOCK & MOTION SENSOR	ROUND 12' X 4" ALUMINUM POLE	
PTA5		DECORATIVE POST-TOP LED SITE LIGHT WITH LOW PROFILE ALUMINUM HOUSING, TYPE 2 DISTRIBUTION, SURGE PROTECTION	EATON LIGHTING ARB B1 LED D1 T5 DP	5	B2-U1-G1	NO	24 W	2,300 LUMENS	TIME CLOCK & MOTION SENSOR	DECORATIVE WOOD POLE	THIS FIXTURE HAS A SMALL UPLIGHT COMPONENT BUT IS MOUNTED UNDER A HIGH CANOPY
SL4		POLE MOUNTED LED SITE LIGHT WITH LOW PROFILE ALUMINUM HOUSING, TYPE 4 DISTRIBUTION, SURGE PROTECTION	KIM LIGHTING ALT1-28L-20-3K7-4-UNV-A34-BLT-NXSP30F-SF	2	B1-U0-G1	YES	20 W	3,000 LUMENS	TIME CLOCK & MOTION SENSOR	ROUND 20' X 4" ALUMINUM POLE	
SL4W		POLE MOUNTED LED SITE LIGHT WITH LOW PROFILE ALUMINUM HOUSING, TYPE 4W DISTRIBUTION, SURGE PROTECTION	KIM LIGHTING ALT1-28L-20-3K7-4W-UNV-A34-BLT-NXSP30F-SF	2	B1-U0-G1	YES	20 W	3,000 LUMENS	TIME CLOCK & MOTION SENSOR	ROUND 20' X 4" ALUMINUM POLE	
SL5		SAME AS ABOVE EXCEPT WITH TYPE 5 DISTRIBUTION	KIM LIGHTING ALT1-28L-20-3K7-5R-UNV-A34-BLT-NXSP30F-SF	1	B2-U0-G2	YES	20 W	3,000 LUMENS	TIME CLOCK & MOTION SENSOR	ROUND 20' X 4" ALUMINUM POLE	
WP1		WALL MOUNTED LED FIXTURE WITH FULL CUTOFF OPTICS, PEDESTRIAN SCALE, CAST ALUMINUM HOUSING, WIDE DISTRIBUTION, VISUAL COMFORT LENS	LITHONIA WDGE2-LED-P1-30K-80CRI-VW-MVOLT-PIRH-DBLBXD	14	B0-U0-G0	YES	10 W	1,200 LUMENS	TIME CLOCK & MOTION SENSOR	SURFACE, 12' AFG	
WP2		MULLION MOUNTED LED FIXTURE WITH FULL CUTOFF OPTICS, PEDESTRIAN SCALE, CAST ALUMINUM HOUSING	LUMINAIRE LED BLD 36-15W 3000K BLK OCC	1	B0-U0-G0	YES	15 W	1,500 LUMENS	TIME CLOCK & MOTION SENSOR	SURFACE, 8' AFG	
D1		LED ARCHITECTURAL RECESSED DOWNLIGHT, 55 DEGREE CUTOFF, WET LOCATION LISTED, STEEL FRAME, DIFFUSING LENS	LITHONIA LDN4-30-05-LO4AR-LSS-MVOLT-EZ1	13	NA	YES	6 W	500 LUMENS	TIME CLOCK	RECESSED	

REV	DESCRIPTION	DATE
0	ISSUED FOR SD AND PERMITTING	3-6-20

ISSUED FOR SD AND PERMITTING
3-6-20

CURRENT ISSUE STATUS:

TRUE NORTH:

WILLIAM R. HALL No. 7860 LICENSED PROFESSIONAL ENGINEER STATE OF MAINE

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SMRT Architecture • Engineering • Planning

UNIVERSITY OF SOUTHERN MAINE
CAREER AND STUDENT SUCCESS CENTER & RESIDENCE HALL

PORTLAND, MAINE

PHOTOMETRIC PLAN

SHEET TITLE:

0 10' 20' 40' 30'

SCALE: 1" = 20'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	WRH		
JOB CAPTAIN:	SDL		ES103
DRAWN BY:	RBB		
SMRT FILE:	ES103-19206	SHEET No.	

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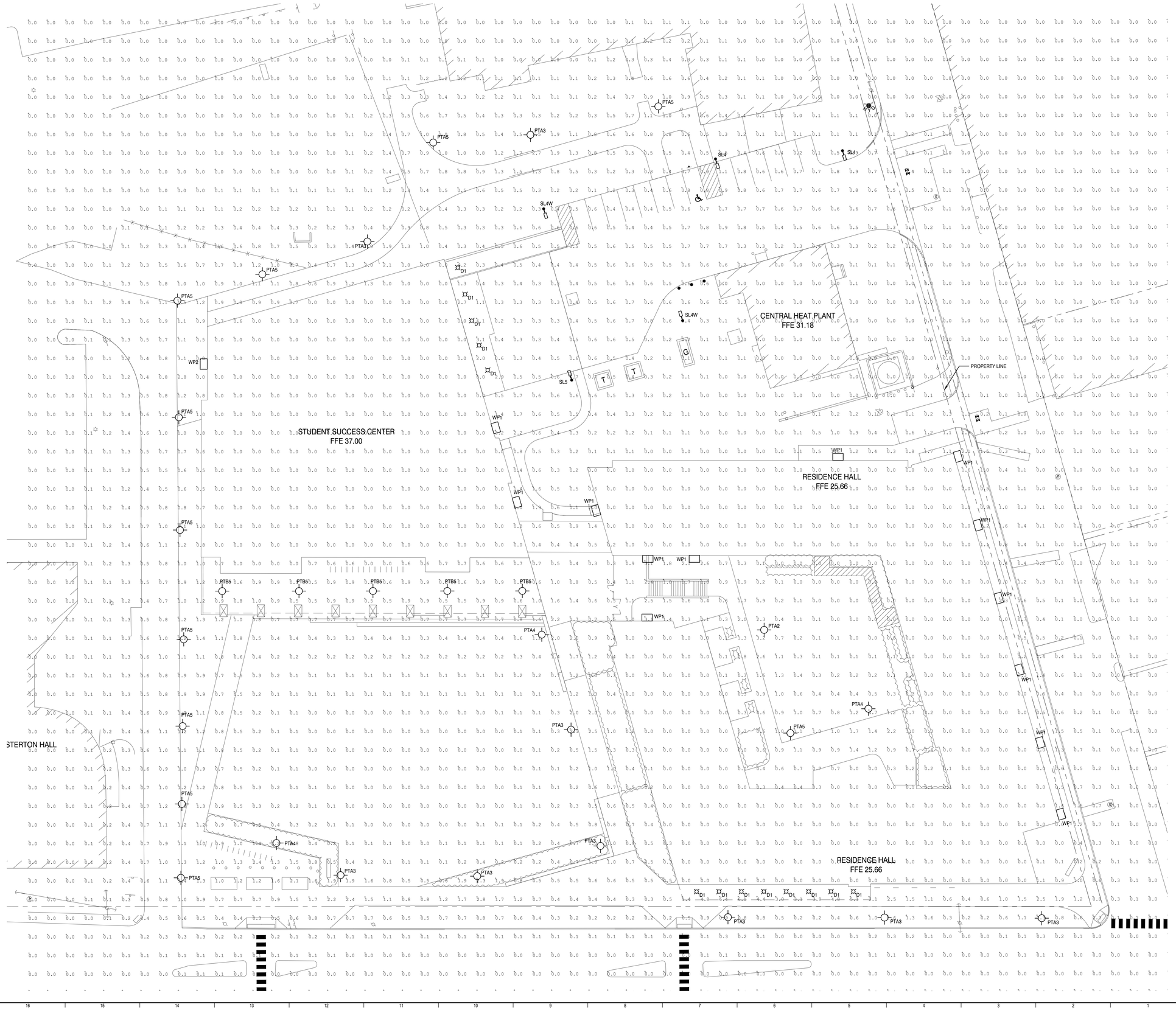
NOT FOR CONSTRUCTION

30x42



REV	DESCRIPTION	DATE
0	ISSUED FOR SD AND PERMITTING	3-6-20

ISSUED FOR SD AND PERMITTING
3-6-20

CURRENT ISSUE STATUS:

TRUE NORTH:

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WILLIAM R. HIEL
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CENTER & RESIDENCE HALL

PORTLAND, MAINE

PHOTOMETRIC PLAN

SHEET TITLE:

0 10' 20' 40' 30'

SCALE: 1" = 20'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	WRH		
JOB CAPTAIN:	SDL		
DRAWN BY:	RBB		
SMRT FILE:	ES104-19206	SHEET No.	ES104

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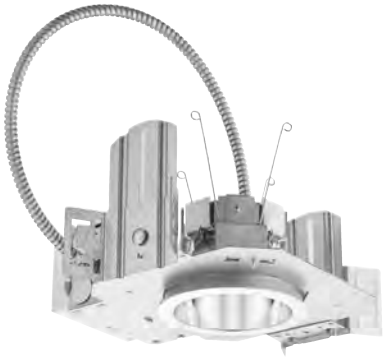
LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

LDN4

4" OPEN
Non-IC
New Construction Downlight



FEATURES & SPECIFICATIONS

INTENDED USE — Typical applications include corridors, lobbies, conference rooms and private offices.

CONSTRUCTION — Galvanized steel mounting/plaster frame; galvanized steel junction box with bottom-hinged access covers and spring latches. Reflectors are retained by torsion springs.

Vertically adjustable mounting brackets with commercial bar hangers provide 3-3/4" total adjustment.

Two combination 1/2"-3/4" and four 1/2" knockouts for straight-through conduit runs. Capacity: 8 (4 in, 4 out). No. 12 AWG conductors, rated for 90°C.

Accommodates 12"-24" joist spacing.

Passive cooling thermal management for 25°C standard; high ambient (40°C) option available. Light engine and drivers are accessible from above or below ceiling.

Max ceiling thickness 1-1/2".

OPTICS — LEDs are binned to a 3-step SDCM; 80 CRI minimum. 90 CRI optional.

LED light source concealed with diffusing optical lens.

General illumination lighting with 1.0 S/MH and 55° cutoff to source and source image.

Self-flanged anodized reflectors in specular, semi-specular, or matte diffuse finishes. Also available in white and black painted reflectors.

ELECTRICAL — Multi-volt (120-277V, 50/60Hz) 0-10V dimming drivers mounted to junction box, 10% or 1% minimum dimming level available.

0-10V dimming fixture requires two (2) additional low-voltage wires to be pulled.

70% lumen maintenance at 60,000 hours.

LISTINGS — Certified to US and Canadian safety standards. Wet location standard (covered ceiling). IP55 rated. ENERGY STAR® certified product.

WARRANTY — 5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

battery pack

A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: LDN4 35/15 LO4AR LSS MVOLT EZ1

LDN4													
Series		**Color temperature**		**Lumens**[1]		**Aperture/Trim Color**				**Finish**		**Voltage**	
LDN4	4" round	27/	2700K	05	500 lumens	LO4	Downlight	AR	Clear	LSS	Semi-specular	MVOLT	Multi-volt
		30/	3000K	07	750 lumens	LW4	Wallwash	WR[2]	White	LD	Matte diffuse	120	120V
		35/	3500K	10	1000 lumens			BR[2]	Black	LS	Specular	277	277V
		40/	4000K	15	1500 lumens							347[3]	347V
		50/	5000K	20	2000 lumens								
				25	2500 lumens								
				30	3000 lumens								
				40	4000 lumens								

Driver		**Options**			
GZ10	0-10V driver dims to 10%	SF[4]	Single fuse	N80[8]	nLight™ Lumen Compensation
GZ1	0-10V driver dims to 1%	TRW[6]	White painted flange	NPS80EZ[7,10]	nLight® dimming pack controls 0-10V eldoLED drivers (EZ10, EZ1).
EZ10	0-10V eldoLED driver with smooth and flicker-free deep dimming performance down to 10%	TRBL[6]	Black painted flange	NPS80EZER[7,10]	nLight® dimming pack controls 0-10V eldoLED drivers (EZ10, EZ1). ER controls fixtures on emergency circuit.
EZ1	0-10V eldoLED driver with smooth and flicker-free deep dimming performance down to 1%	EL[5]	Emergency battery pack with integral test switch. 10W Constant Power, Not Certified in CA Title 20 MAEDBS	HAO[11]	High ambient option (40°C)
		ELR[5]	Emergency battery pack with remote test switch. 10W Constant Power, Not Certified in CA Title 20 MAEDBS	CP[12]	Chicago Plenum
		ELSD[5]	Emergency battery pack with self-diagnostics, 10W Constant Power, integral test switch. Not Certified in CA Title 20 MAEDBS	RRL__	RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature. Available only in RRLA, RRLB, RRLAE, and RRLC12S.
		ELRSD[5]	Emergency battery pack with self-diagnostics, 10W Constant Power, remote test switch. Not Certified in CA Title 20 MAEDBS	NLTAIR2[8,9]	nLight® Air enabled
		E10WCP[5]	Emergency battery pack, 10W Constant Power with integral test switch. Certified in CA Title 20 MAEDBS	NLTAIRER2[9,10]	nLight® AIR Dimming Pack Wireless Controls. Controls fixtures on emergency circuit, not available with battery pack options
		E10WCPR[5]	Emergency battery pack, 10W Constant Power with remote test switch. Certified in CA Title 20 MAEDBS	USPOM	US point of manufacture
		NPP16D[7,10]	nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1).	90CRI	High CRI (90+)
		NPP16DER[7,10]	nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1). ER controls fixtures on emergency circuit.		

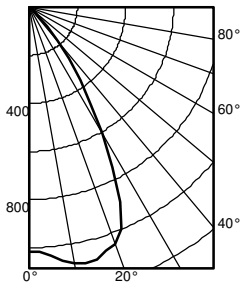
Notes

1 Overall height varies based on lumen package; refer to dimensional chart on page 3.
2 Not available with finishes.
3 Not available with emergency options.
4 Must specify voltage 120V or 277V.
5 12.5" of plenum depth or top access required for battery pack maintenance.
6 Available with clear (AR) reflector only.
7 Specify voltage. ER for use with generator supply EM power. Will require an emergency hot feed and normal hot feed.
8 Fixture begins at 80% light level. Must be specified with NPS80EZ or NPS80EZ ER. Only available with EZ10 and EZ1 drivers.
9 Not available with CP, NPS80EZ, NPS80EZER, NPP16D, NPP16DER or N80 options.
10 NLTAIR2 and NLTAIRER2 not recommended for metal ceiling installations.
11 Fixture height is 5-11/16" for all lumen packages with HAO.
12 Must specify voltage for 3000lm. Not available with emergency battery pack option.

PHOTOMETRY

Distribution Curve | **Distribution Data** | **Output Data** | **Coefficient of Utilization** | **Illuminance Data at 30" Above Floor for a Single Luminaire**

LDN4 35/10 LO4AR, input watts: 10.58, delivered lumens: 1085.2, LM/W = 102.57, spacing criterion at 0= 1.04, test no. ISF 30712P229.



	Ave	Lumens
0	1017	
5	1039	101
15	1084	304
25	895	395
35	369	232
45	52	51
55	1	2
65	1	1
75	0	0
85	0	0
90	0	

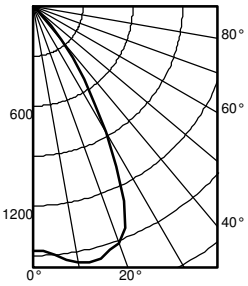
Zone	Lumens	% Lamp
0° - 30°	799.7	73.7
0° - 40°	1031.5	95.1
0° - 60°	1084.7	100.0
0° - 90°	1085.2	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	1085.2	*100.0

*Efficiency

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	111	108	106	109	107	105	105	103	101
2	103	99	96	102	98	95	98	95	93
3	96	92	88	95	91	87	92	89	86
4	90	85	81	89	84	80	87	83	79
5	85	79	75	84	78	74	82	77	74
6	79	73	69	79	73	69	77	72	68
7	75	69	64	74	68	64	73	68	64
8	70	64	60	70	64	60	69	63	60
9	66	60	56	66	60	56	65	60	56
10	63	57	53	62	57	53	61	56	53

		50% beam - 55.6°		10% beam - 78.0°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	33.6	5.8	16.8	8.9	3.4
10.0	18.1	7.9	9.0	12.2	1.8
12.0	11.3	10.0	5.6	15.4	1.1
14.0	7.7	12.1	3.8	18.6	0.8
16.0	5.6	14.2	2.8	21.9	0.6

LDN4 35/15 LO4AR, input watts: 17.5, delivered lumens: 1570.1, LM/W = 89.72, spacing criterion at 0= 1.04, test no. ISF 30712P234.



	Ave	Lumens
0	1472	
5	1503	146
15	1569	440
25	1295	571
35	534	335
45	75	74
55	1	3
65	1	1
75	0	0
85	0	0
90	0	

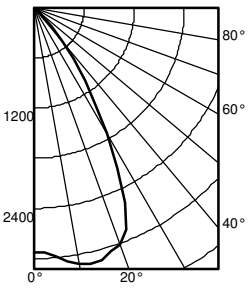
Zone	Lumens	% Lamp
0° - 30°	1157.1	73.7
0° - 40°	1492.5	95.1
0° - 60°	1569.4	100.0
0° - 90°	1570.1	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	1570.1	*100.0

*Efficiency

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	111	108	106	109	107	105	105	103	101
2	103	99	96	102	98	95	98	95	93
3	96	92	88	95	91	87	92	89	86
4	90	85	81	89	84	80	87	83	79
5	85	79	75	84	78	74	82	77	74
6	79	73	69	79	73	69	77	72	68
7	75	69	64	74	68	64	73	68	64
8	70	64	60	70	64	60	69	63	60
9	66	60	56	66	60	56	65	60	56
10	63	57	53	62	57	53	61	56	53

		50% beam - 55.6°		10% beam - 78.0°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	48.7	5.8	24.3	8.9	4.9
10.0	26.2	7.9	13.1	12.2	2.6
12.0	16.3	10.0	8.2	15.4	1.6
14.0	11.1	12.1	5.6	18.6	1.1
16.0	8.1	14.2	4.0	21.9	0.8

LDN4 35/30 LO4AR, input watts: 32.1, delivered lumens: 3122.6, LM/W = 88.52, spacing criterion at 0= 1.04, test no. ISF 30712P249.



	Ave	Lumens
0	2927	
5	2989	290
15	3120	875
25	2575	1136
35	1062	667
45	149	148
55	3	5
65	2	1
75	0	0
85	0	0
90	0	

Zone	Lumens	% Lamp
0° - 30°	2301.2	73.7
0° - 40°	2968.2	95.1
0° - 60°	3121.1	100.0
0° - 90°	3122.6	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	3122.6	*100.0

*Efficiency

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	111	108	106	109	107	105	105	103	101
2	103	99	96	102	98	95	98	95	93
3	96	92	88	95	91	87	92	89	86
4	90	85	81	89	84	80	87	83	79
5	85	79	75	84	78	74	82	77	74
6	79	73	69	79	73	69	77	72	68
7	75	69	64	74	68	64	73	68	64
8	70	64	60	70	64	60	69	63	60
9	66	60	56	66	60	56	65	60	56
10	63	57	53	62	57	53	61	56	53

		50% beam - 55.6°		10% beam - 78.0°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	96.8	5.8	48.4	8.9	9.7
10.0	52.0	7.9	26.0	12.2	5.2
12.0	32.4	10.0	16.2	15.4	3.2
14.0	22.1	12.1	11.1	18.6	2.2
16.0	16.1	14.2	8.0	21.9	1.6

Accessories: *Order as separate catalog numbers (shipped separately).*

SCA4	Sloped ceiling adapter. Degree of slope must be specified (5D, 10D, 15D, 20D, 25D, 30D). Refer to TECH-190.

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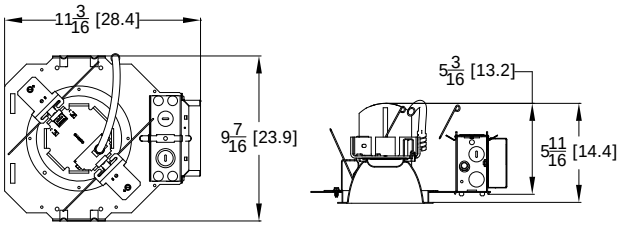
LDN4

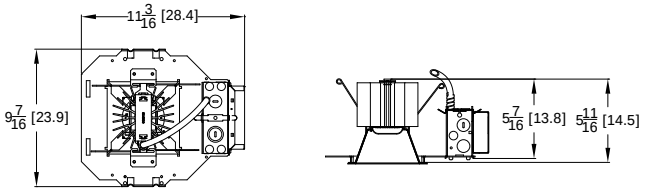
* All dimensions are inches (centimeters) unless otherwise noted.

LDN4 500-1500 LUMEN



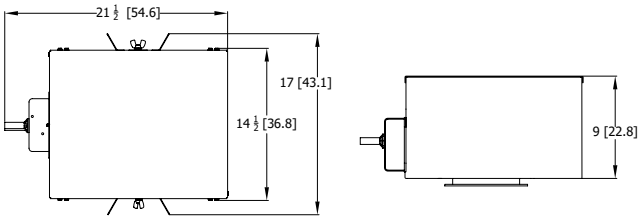
Aperture: 4-5/16 (11)
Ceiling Opening: 5-1/8 (13)
Overlap trim: 5-7/16 (13.8)

LDN4 2000-3000 LUMEN



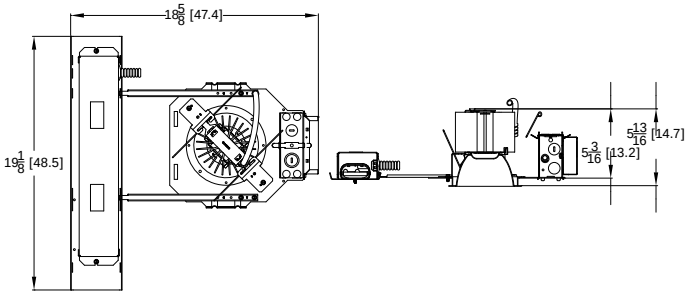
Aperture: 4-5/16 (11) Square
Ceiling Opening: 5-1/8 (13) Square
Overlap trim: 5-7/16 (13.8) Square

LDN4 CP



Aperture: 4-5/16? (11)
Ceiling Opening: 5-1/8? (13)
Overlap trim: 5-7/16? (13.8)

LDN4 EL-ELR



Aperture: 4-5/16 (11)
Ceiling Opening: 5-1/8 (13)
Overlap trim: 5-7/16 (13.8)

LDN4			
Nominal	**Lumens**	**Wattage**	**Lm/W**
500	523.6	5.74	91.2
750	751.1	8.6	87.3
1000	1045	10.58	98.8
1500	1512	17.5	86.4
2000	2006	22.12	90.7
2500	2551	26.1	97.7
3000	3007	32.1	93.7
4000	4212	43	98.0

LUMEN OUTPUT MULTIPLIERS - CCT					
	2700K	**3000K**	**3500K**	**4000K**	**5000K**
80CRI	0.950	0.966	1.000	1.025	1.101

HOW TO ESTIMATE DELIVERED LUMENS IN EMERGENCY MODE

Use the formula below to estimate the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

P = Ouput power of emergency driver. P = 10W for PS1055CP

LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.
The LPW rating is also available at Designlight Consortium.

LUMEN OUTPUT MULTIPLIERS - FINISH			
	Clear (AR)	**White (WR)**	**Black (BR)**
Specular (LS)	1.0	N/A	N/A
Semi-specular (LSS)	0.950	N/A	N/A
Matte diffuse (LD)	0.85	N/A	N/A
Painted	N/A	0.87	0.73

Notes

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 80 typical.

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ADDITIONAL DATA

COMPATIBLE 0-10V WALL-MOUNT DIMMERS		
MANUFACTURER	PART NO.	POWER BOOSTER AVAILABLE
Lutron®	Diva® DVTV	
	Diva® DVSCTV	
	Nova T® NTFTV	
	Nova® NFTV	
Leviton®	AWSMT-7DW	CN100
	AWSMG-7DW	PE300
	AMRMG-7DW	
	Leviton Centura Fluorescent Control System	
	IllumaTech® IP7 Series	
Synergy®	ISD BC	RDMFC
	SLD LPCS	
	Digital Equinox (DEQ BC)	
Douglas Lighting Controls	WPC-5721	
Entertainment Technology	Tap Glide TG600FAM120 (120V)	
	Tap Glide Heatsink TGH1500FAM120 (120V)	
	Oasis 0A2000FAMU	
Honeywell	EL7315A1019	EL7305A1010 (optional)
	EL7315A1009	
HUNT Dimming	Preset slide: PS-010-IV and PS-010-WH	
	Preset slide: PS-010-3W-IV and PS-010-3W-WH	
	Preset slide, controls FD-010: PS-IFC-010-IV and PS-IFC-010-WH-120/277V	
	Preset slide, controls FD-010: PS-IFC-010-3W-IV and PS-IFC-010-3W-WH-120/277V	
	Remote mounted unit: FD-010	
Lehigh Electronic Products	Solitaire	PBX
PDM Electrical Products	WPC-5721	
Starfield Controls	TR61 with DALI interface port	RT03 DALInet Router
WattStopper®	LS-4 used with LCD-101 and LCD-103	

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a shaded background*
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

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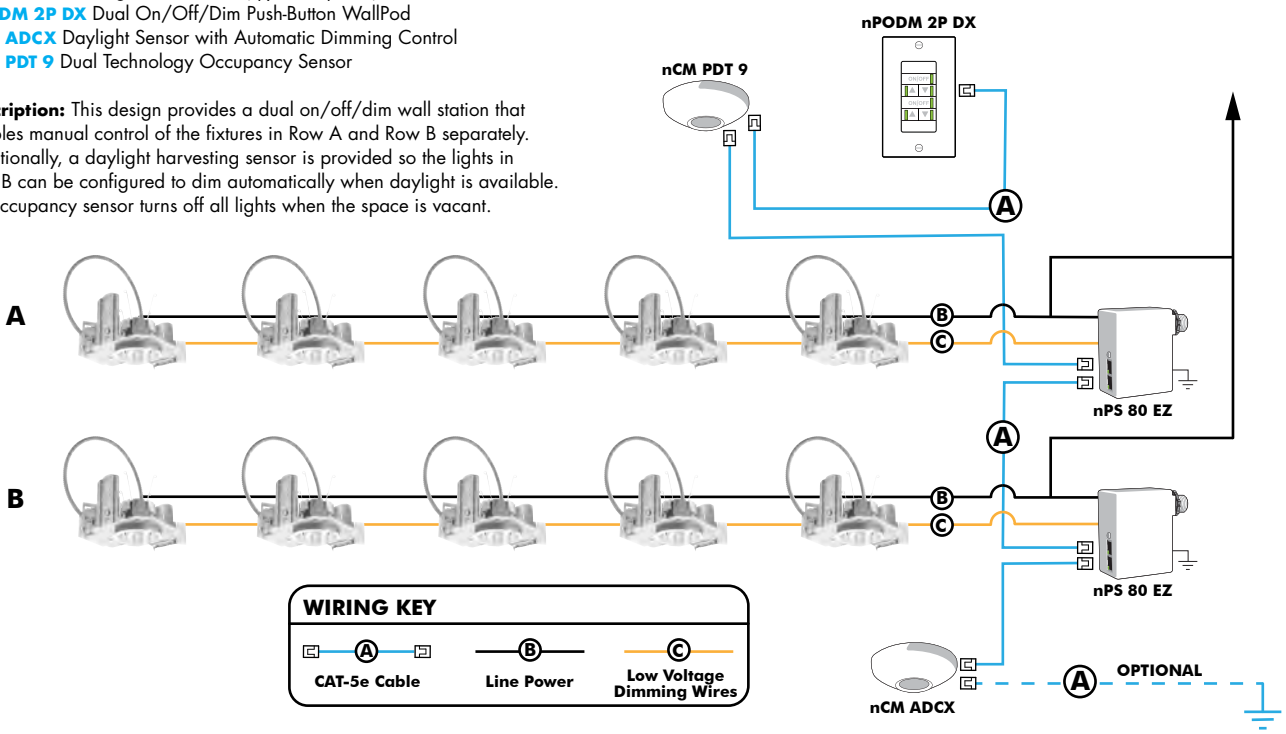
LDN4

EXAMPLE
Group Fixture Control*
*Appiication diagram applies for fixtures with eldoLED drivers only.

nPS 80 EZ Dimming/Control Pack (qty: 2 required)
nPODM 2P DX Dual On/Off/Dim Push-Button WallPod
nCM ADCX Daylight Sensor with Automatic Dimming Control
nCM PDT 9 Dual Technology Occupancy Sensor

Description: This design provides a dual on/off/dim wall station that enables manual control of the fixtures in Row A and Row B separately. Additionally, a daylight harvesting sensor is provided so the lights in Row B can be configured to dim automatically when daylight is available. An occupancy sensor turns off all lights when the space is vacant.



Choose Wall Controls
nLight offers multiple styles of wall controls - each with varying features and user experience.

Push-Button Wallpod
Traditional tactile buttons and LED user feedback

Graphic Wallpod
Full color touch screen provides a sophisticated look and feel

nLight® Wired Controls Accessories:			
Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlight for complete listing of nLight controls.			
WallPod Stations	**Model number**	**Occupancy sensors**	**Model Number**
On/Off	nPODM (Color)	Small motion 360º, ceiling (PIR/dual Tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPOD DX (Color)	Large motion 360º, ceiling (PIR/dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX (Color)	Wide View (PIR/dual tech)	nWV 16 / nWV PDT 16
Photocell controls	**Model Number**	Wall Switch w/ Raise/Lower (PIR/dual tech)	nWSX LV DX / nWSX PDT LV DX
Dimming	nCM ADCX	**Cat-5 cables (plenum rated)**	**Model Number**
		10', CAT5 10FT	CAT5 10FT J1
		15, CAT5 15FT	CAT5 15FT J1

nLight® AIR Control Accessories: *Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlightair.*	
Wall switches	**Model number**
On/Off single pole	rPODB [color]
On/Off two pole	rPODB 2P [color]
On/Off & raise/lower single pole	rPODB DX [color]
On/Off & raise/lower two pole	rPODB 2P DX [color]
On/Off & raise/lower single pole	rPODBZ DX WH[1]

Notes
1 Can only be ordered with the RES7Z zone control sensor version.

nLight AIR
nLight AIR is the ideal solution for retrofit or new construction spaces where adding communication is cost prohibitive. The integrated nLight AIR rPP20 Power Pack is part of each Lithonia LDN Luminaire. These individually addressable controls offer the ultimate in flexibility during initial setup and for space repurposing.

Simple as 1,2,3

1. Install the nLight® AIR fixtures with embedded smart sensor
2. Install the wireless battery-powered wall switch
3. With CLAIRITY app, pair the fixtures with the wall switch and if desired, customize the sensor settings for the desired outcome

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JOB _____ TYPE _____

NOTES _____ APPROVALS _____

FEATURES

- 20" size in post top, pole and wall mount
- High performance optics up to 17,000 delivered lumens
- Elegant form factor
- Diffusion lens option
- SiteSync™ wireless control options

CERTIFICATIONS

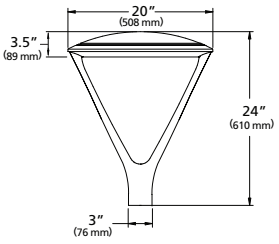
c UL us LISTED

3000K and warmer CCTs only

SPECIFICATIONS

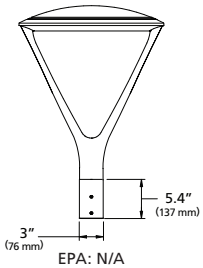
Weight: 35 lbs

FM33



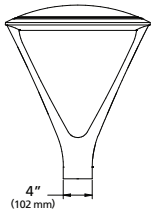
EPA: .512

PT23



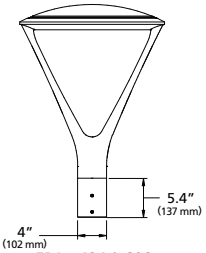
EPA: N/A

FM44



EPA: .534

PT24 / PT34



EPA: .424 / .608

ORDERING CODE

Series	LED Engine	CCT	Distribution	Rotation	Voltage	Mounting
UR20 Ouro	No Lens or Clear Lens	**AM** Amber	No Lens or Clear Lens	Blank for no rotation	**UNV** 120-277V	**FM33** Flush mt 3.0" OD pole, 3" fixture base
	24L-25 3,000 lm	**3K7** 3000K, 70 CRI	**FR** Type 1/Front Row	**L**[1] Optic rotation left	**347** 347V	**FM44** Flush mt 3.6" to 4.0" OD pole, 4" fixture base
	24L-65 7,000 lm	**3K8** 3000K, 80 CRI	**2** Type II	**R**[1] Optic rotation right	**480** 480V	**PT23** 3" Post Top mount for 2 3/8" OD Tenon
	56L-75 10,000 lm	**3K9** 3000K, 90 CRI	**3** Type III		**DALI** 120-277V†	**PT24** 4" Post Top mount for 2 3/8" OD Tenon
	56L-110 15,000 lm	**4K7** 4000K, 70 CRI	**4** Type IV		†Consult factory	**PT34** 4" Post Top mount for 2 7/8" OD Tenon
	56L-140 17,000 lm	**4K8** 4000K, 80 CRI	**4W** Type IV Wide			
	HDL - High Diffusion Lens	**5K7** 5000K, 70 CRI	**5QM** Type V Square Medium			
	28L-30 3,000 lm		**5QN** Type V Square Narrow			
	28L-70 7,000 lm		**5R** Type V Rectangular			
	68L-80 9,000 lm		**5W** Type V Wide (Round)			
	68L-115 13,000 lm		HDL - High Diffusion Lens			
	68L-150 15,000 lm		**3** Type III/Asymmetric			
			5W Type V/Symmetric			

Fixture Finish	Control Options		Options	Control Accessories^
BL Black	**7PR-TL** 7 pin PCR with twist lock photocontrol	**SWPM-40F**[2,3,4,5] SiteSync with Sensor 9' to 40' MH	**BC**[6] Back-light Control	**SW7PR**[2,3] SiteSync with 7 pin PCR
DB Dark Bronze	**7PR-SC** 7 pin PCR with shorting cap	**WSP-40F-1**[2,5] Dimming Occ. Sensor for up to 40' MH, 120/277/347V	**SF** Single Fuse	**SWUSB** SiteSync Software on USB
LG Light Gray	**7PR** 7 pin PCR, wireless control enabled	**WSP-40F-2**[2,5] Dimming Occ. Sensor for up to 40' MH, 208/240V	**DF** Double Fuse	**SWTAB** SiteSync Windows® Tablet
GT Graphite	**AD-01**[2] AstroDIM: 50% output at midnight	**WSP-40F-3**[2,5] Dimming Occ. Sensor for up to 40' MH, 480V	**TB** Terminal Block	**SWBRG** SiteSync Wireless Bridge Node
PS Platinum Silver	**AD-02**[2] AstroDIM: 50% output midnight to 4 AM	**NXSPW14F**[2,5] NX Wireless, PIR Sensor, 14'	**CLR**[5] Clear Lens	**WIR-RME-L** wiSCAPE External Fixture Module
TT Titanium	**AD-03**[2] AstroDIM: 50% output 10PM	**NXSPW30F**[2,5] NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30'.	**TL** Tamper proof latch	**SCL-R** Occ. Sensor for Round Pole (up to 16' MH)
WH White	**AD-04**[2] AstroDIM: 50% output 10PM to 4AM	**NXSP14F**[2,5] NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14'		**SCL -S** Occ. Sensor for Square Pole (up to 16' MH)
CC Custom Color†	**NXWE** NX Wireless Enabled	**NXSP30F**[2,5] NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30'		**SCH-R** Occ. Sensor for Round Pole (16' to 30' MH)
†Consult factory	**SWP**[2,3,4] SiteSync Pre commission			**SCH-S** Occ. Sensor for Square Pole (16' to 30' MH)
				NXOFM-1R1D-UNV NX 7-pin Module
				^ Please refer to page 8 for ordering details

1 Not available with 5QM, 5QN, and 5W distributions.
2 Not available with other sensor or wireless control options.
3 Specify group and zone at time of order. See www.hubbelllighting.com/sitesync for more details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node.
4 Not available with 347V and 480V
5 24L & 56L only.
6 Not available with Type V distributions or HDL option.

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Kim Lighting reserves the right to change specifications without notice.

LUMINAIRE PERFORMANCE

LED #	Nominal Lumen Package	Nominal Wattage	Lens Options	Distribution	3000K					4000K					5000K				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
24L	3,000	25	No Lens	FR	2932	0	0	1	115	3119	0	0	1	123	3098	0	0	1	124
				FR-BC	1994	0	0	0	78	2121	0	0	0	83	2107	0	0	0	83
				2	2943	1	0	1	116	3099	1	0	1	122	3110	1	0	1	124
				2-BC	1724	0	0	1	68	1834	0	0	1	72	1822	0	0	1	72
				3	3007	1	0	1	118	3200	1	0	1	126	3178	1	0	1	127
				3-BC	1830	0	0	1	73	1947	0	0	1	78	1934	0	0	1	77
				4	3056	0	0	1	120	3251	0	0	1	128	3229	0	0	1	129
				4-BC	2235	0	0	1	88	2377	0	0	1	93	2362	0	0	1	93
				4W	3078	1	0	2	121	3276	1	0	2	129	3253	1	0	2	130
				4W-BC	1855	0	0	1	73	1975	0	0	1	78	1961	0	0	1	77
				5QM	2931	2	0	1	115	3119	2	0	1	123	3098	2	0	1	124
				5QN	2694	2	0	1	106	2866	2	0	1	113	2847	2	0	1	114
				5R	3054	2	0	2	120	3250	2	0	2	128	3228	2	0	2	129
				5W	3043	2	0	1	120	3237	2	0	1	127	3216	2	0	1	129
			Clear Lens	FR	2773	0	0	1	109	2951	0	0	1	116	2930	0	0	1	117
				FR-BC	1886	0	0	1	74	2007	0	0	1	79	1993	0	0	1	78
				2	2784	1	0	1	109	2963	1	0	1	116	2942	1	0	1	118
				2-BC	1631	0	0	1	64	1736	0	0	1	68	1723	0	0	1	67
				3	2845	1	0	1	111	3028	1	0	1	119	3007	1	0	1	120
				3BC	1806	0	0	1	72	1922	0	0	1	77	1909	0	0	1	76
				4	2891	0	0	1	113	3076	0	0	1	120	3055	0	0	1	122
				4-BC	2114	0	0	1	83	2250	0	0	1	88	2234	0	0	1	88
				4W	2912	1	0	1	114	3099	1	0	2	121	3077	1	0	2	123
				4W-BC	1755	0	0	1	69	1868	0	0	1	73	1855	0	0	1	5
				5QM	2773	1	0	1	109	2950	2	0	1	116	2931	2	0	1	117
				5QN	2549	1	0	0	100	2712	2	0	1	106	2693	2	0	1	108
				5R	2890	2	0	2	113	3075	2	0	2	120	3054	2	0	2	122
				5W	2879	2	0	1	113	3064	2	0	1	120	3042	2	0	1	122
28L		30	HDL Lens	3	2816	1	0	1	96	2997	1	0	1	102	3020	1	0	1	101
				5W	2917	1	0	1	100	3105	1	0	1	106	3084	1	0	1	103

Kim Lighting reserves the right to change specifications without notice.

LUMINAIRE PERFORMANCE

LED #	Nominal Lumen Package	Nominal Wattage	Lens Options	Distribution	3000K					4000K					5000K				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
24L	7,000	65	No Lens	FR	6754	1	0	1	104	7187	1	0	1	111	7138	1	0	1	110
				FR-BC	4392	0	0	1	68	4673	0	0	1	72	4641	0	0	1	71
				2	6571	1	0	2	101	6992	1	0	2	108	6944	1	0	2	107
				2-BC	3799	0	0	1	58	4042	0	0	1	62	4014	0	0	1	62
				3	6625	1	0	2	102	7051	1	0	2	108	7002	1	0	2	108
				3BC	4032	0	0	1	62	4291	0	0	1	66	4261	0	0	1	66
				4	6788	1	0	2	104	7223	1	0	2	111	7174	1	0	2	110
				4-BC	4924	0	0	2	76	5239	0	0	2	81	5203	0	0	2	80
				4W	6699	1	0	2	103	7128	1	0	3	110	7079	1	0	3	109
				4W-BC	4088	0	0	2	63	4350	0	0	2	67	4321	0	0	2	66
				5QM	7025	3	0	1	108	7477	3	0	1	115	7425	3	0	1	114
				5QN	6964	3	0	1	107	7410	3	0	1	114	7323	3	0	1	113
				5R	7038	3	0	3	108	7489	3	0	3	115	7437	3	0	3	114
				5W	7011	3	0	2	108	7460	3	0	2	115	7409	3	0	2	114
			Clear Lens	FR	6432	1	0	1	97	6844	1	0	1	104	6798	1	0	1	105
				FR-BC	4182	0	0	1	63	4450	0	0	1	67	4420	0	0	1	67
				2	6258	1	0	1	95	6659	1	0	2	101	6613	1	0	2	102
				2-BC	3617	0	0	1	55	3849	0	0	1	58	3823	0	0	1	58
				3	6310	1	0	2	96	6714	1	0	2	102	6668	1	0	2	103
				3-BC	3599	0	0	1	55	3829	0	0	1	59	3803	0	0	1	59
				4	6465	1	0	2	98	6879	1	0	2	104	6832	1	0	2	105
				4-BC	4688	0	0	2	71	4990	0	0	2	76	4955	0	0	2	75
				4W	6380	1	0	2	97	6789	1	0	2	103	6742	1	0	2	104
				4W-BC	3893	0	0	2	59	4143	0	0	2	63	4115	0	0	2	62
				5QM	6691	3	0	1	101	7119	3	0	1	108	7070	3	0	1	109
				5QN	6632	2	0	1	100	7058	3	0	1	107	7009	3	0	1	108
				5R	6702	3	0	3	102	7131	3	0	3	108	7082	3	0	3	109
				5W	6676	3	0	2	101	7104	3	0	2	108	7055	3	0	2	109
28L		70	HDL Lens	3	6047	2	0	2	92	6047	2	0	2	92	6236	2	0	2	89
				5W	6221	2	0	1	94	6619	2	0	1	100	6525	2	0	1	93

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LUMINAIRE PERFORMANCE

LED #	Nominal Lumen Package	Nominal Published Wattage	Lens Options	Distribution	3000K					4000K					5000K				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
56L	10,000	75	No Lens	FR	9315	1	0	1	124	9913	1	0	1	132	9845	1	0	1	131
				FR-BC	6058	0	0	1	81	6445	0	0	1	86	6402	0	0	1	85
				2	9063	2	0	2	120	9644	2	0	2	128	9578	2	0	2	128
				2-BC	5239	0	0	1	70	5575	0	0	1	74	5536	0	0	1	74
				3	9139	2	0	2	125	9725	2	0	2	134	9657	2	0	2	129
				3-BC	5561	0	0	2	74	5877	0	0	2	78	5561	0	0	2	74
				4	9362	1	0	2	124	9362	1	0	2	124	9876	1	0	2	132
				4-BC	6791	0	0	2	90	7226	0	0	2	96	7168	0	0	2	96
				4W	9240	2	0	3	123	9832	2	0	3	131	9765	2	0	3	130
				4W-BC	5639	0	0	2	75	6001	0	0	2	80	5959	0	0	2	79
				5QM	9691	3	0	1	129	10312	3	0	1	137	10240	3	0	1	137
				5QN	9606	3	0	1	128	10222	3	0	1	136	10151	3	0	1	135
				5R	9706	3	0	3	129	10328	3	0	3	137	10258	3	0	3	137
				5W	9669	4	0	2	129	10289	4	0	2	137	10217	4	0	2	136
			Clear Lens	FR	8871	1	0	1	117	9760	1	0	1	129	9374	1	0	1	125
				FR-BC	5769	0	0	1	76	6138	0	0	1	81	6096	0	0	1	81
				2	8631	2	0	2	114	9183	2	0	2	121	9121	2	0	2	122
				2-BC	4989	0	0	1	67	5309	0	0	1	71	5272	0	0	1	62
				3	8703	1	0	2	115	9260	2	0	2	122	9197	2	0	2	123
				3-BC	4964	1	0	1	66	5282	1	0	2	70	5245	1	0	2	69
				4	8916	1	0	2	118	9487	1	0	2	125	9423	1	0	2	126
				4-BC	6467	0	0	2	85	6881	0	0	2	91	6834	0	0	2	90
				4W	8799	2	0	3	116	9363	2	0	3	124	9300	2	0	3	124
				4W-BC	5370	0	0	2	72	5714	1	0	2	76	5675	0	0	2	76
				5QM	9228	3	0	1	122	9820	3	0	1	130	9752	3	0	1	130
				5QN	9147	3	0	1	121	9734	3	0	1	129	9668	3	0	1	129
				5R	9244	3	0	3	122	9836	3	0	3	130	9769	3	0	3	130
				5W	9208	4	0	2	122	9798	4	0	2	130	9732	4	0	2	130
68L		80	HD Lens	3	7853	2	0	2	99	8356	2	0	2	106	8299	2	0	2	104
				5W	8080	2	0	2	102	8684	3	0	2	110	8684	3	0	2	109

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LUMINAIRE PERFORMANCE

LED #	Nominal Lumen Package	Nominal Published Wattage	Lens Options	Distribution	3000K					4000K					5000K				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
56L	15,000	110	No Lens	FR	13533	1	0	1	125	14399	1	0	2	133	14301	1	0	2	130
				FR-BC	8799	1	0	1	81	9363	1	0	1	86	9300	1	0	1	85
				2	13165	2	0	2	121	14009	2	0	2	129	13913	2	0	2	126
				2-BC	7611	1	0	2	70	8098	1	0	2	75	8042	1	0	2	74
				3	13275	2	0	3	122	14126	2	0	3	130	14030	2	0	3	128
				3-BC	8079	1	0	2	73	8596	1	0	2	78	8538	1	0	2	78
				4	13601	1	0	3	125	14472	1	0	3	133	14373	1	0	3	131
				4-BC	9865	1	0	2	91	10497	1	0	3	97	10425	1	0	3	96
				4W	13422	2	0	3	124	14283	2	0	3	132	14185	2	0	3	129
				4W-BC	8191	1	0	3	75	8715	1	0	3	80	8656	1	0	3	80
				5QM	14077	4	0	2	130	14979	4	0	2	138	14876	4	0	2	135
				5QN	13953	4	0	1	129	14848	4	0	1	137	14747	4	0	1	134
				5R	14100	4	0	4	130	15004	4	0	4	138	14901	4	0	4	135
				5W	14046	4	0	2	129	14946	4	0	2	138	14844	4	0	3	135
			Clear Lens	FR	12803	1	0	1	118	13624	1	0	1	126	13531	1	0	1	123
				FR-BC	9298	1	0	1	86	8325	1	0	1	77	8798	1	0	1	81
				2	12455	2	0	2	115	13254	2	0	2	123	13164	2	0	2	120
				2-BC	7200	1	0	1	67	7661	1	0	2	71	7610	1	0	2	70
				3	12560	2	0	3	116	13365	2	0	3	124	13273	2	0	3	121
				3-BC	7163	1	0	2	65	7622	1	0	2	69	7570	1	0	2	69
				4	12868	1	0	3	119	13692	1	0	3	127	13599	1	0	3	124
				4-BC	9333	1	0	2	86	9931	1	0	2	92	9864	1	0	2	90
				4W	12699	2	0	3	117	13513	2	0	3	125	13420	2	0	3	122
				4W-BC	7750	1	0	3	72	8246	1	0	3	76	8190	1	0	3	76
				5QM	13318	3	0	2	123	14172	4	0	2	131	14075	4	0	2	128
				5QN	13202	3	0	1	122	14048	4	0	1	130	13951	4	0	1	127
				5R	13341	4	0	4	123	14195	4	0	4	131	14099	4	0	4	128
				5W	13290	4	0	2	123	14141	4	0	2	131	14044	4	0	2	128
68L		115	HD Lens	3	11577	2	0	2	102	12320	2	0	2	109	12236	2	0	2	106
				5W	11912	3	0	2	105	12676	3	0	2	112	12588	3	0	2	109

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LUMINAIRE PERFORMANCE

LED #	Nominal Lumen Package	Nominal Published Wattage	Lens Options	Distribution	3000K					4000K					5000K				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
56L	17,000	140	No Lens	FR	15323	2	0	2	111	16306	2	0	2	118	16194	2	0	2	116
				FR-BC	9964	1	0	1	72	10603	1	0	1	77	10530	1	0	1	76
				2	14897	2	0	2	108	15852	2	0	2	115	15743	2	0	2	112
				2-BC	8618	1	0	2	63	9169	1	0	2	67	9107	1	0	2	66
				3	15032	2	0	3	109	15996	2	0	3	116	15886	2	0	3	113
				3-BC	9147	1	0	2	65	9733	1	0	2	70	9667	1	0	2	69
				4	15400	1	0	3	112	16387	1	0	4	119	16275	1	0	4	116
				4-BC	11170	1	0	3	81	11886	1	0	3	86	11804	1	0	3	86
				4W	15198	2	0	4	110	16173	3	0	4	117	16062	3	0	4	115
				4W-BC	9275	1	0	3	67	9869	1	0	3	72	9801	1	0	3	71
				5QM	15939	4	0	2	116	16962	4	0	2	123	16845	4	0	2	120
				5QN	15801	4	0	1	115	16813	4	0	1	122	16698	4	0	1	119
				5R	15966	4	0	4	116	16990	4	0	4	123	16874	4	0	4	121
				5W	15906	4	0	3	115	16925	4	0	3	123	16808	4	0	3	120
			Clear Lens	FR	14541	1	0	2	105	15473	2	0	2	111	15367	2	0	2	110
				FR-BC	9456	1	0	1	68	10061	1	0	1	72	9993	1	0	1	72
				2	14146	2	0	2	102	15053	2	0	2	108	14950	2	0	2	107
				2-BC	8178	1	0	2	59	8702	1	0	2	63	8642	1	0	2	62
				3	14265	2	0	3	103	15179	2	0	3	109	15076	2	0	3	108
				3BC	8136	1	0	2	58	8657	1	0	2	62	8598	1	0	2	61
				4	14614	1	0	3	105	15551	1	0	3	112	15445	1	0	3	110
				4-BC	10600	1	0	3	76	11279	1	0	3	81	11203	1	0	3	81
				4W	14423	2	0	3	104	15347	2	0	4	111	15243	2	0	4	109
				4W-BC	8802	1	0	3	63	9365	1	0	3	67	9302	1	0	3	67
				5QM	15126	4	0	2	109	16095	4	0	2	116	15985	4	0	2	114
				5QN	14994	4	0	1	108	15955	4	0	1	115	15846	4	0	1	113
				5R	15152	4	0	4	109	16122	4	0	4	116	16012	4	0	4	114
				5W	15094	4	0	3	109	16061	4	0	3	116	15951	4	0	3	114
68L		115	HD Lens	3	13240	2	0	2	89	13992	3	0	3	95	13897	3	0	3	93
				5W	13623	3	0	2	92	14396	3	0	2	97	14298	3	0	2	95

Electrical Characteristics												Dimming				
System Watts	Drive Current	Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming Range	Source current out		Absolute voltage	
		VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
25	298mA	120-480	50/60	0.21	0.12	0.10	0.09	0.07	0.05	>0.9	20	10% to 100%	0mA	1mA	0V	10V
30	298mA			0.25	0.14	0.13	0.11	0.09	0.06							
65	800mA			0.54	0.31	0.27	0.23	0.19	0.14							
70	700mA			0.58	0.34	0.29	0.25	0.20	0.15							
75	420mA			0.63	0.36	0.31	0.27	0.22	0.16							
80	350mA			0.67	0.38	0.33	0.29	0.23	0.17							
110	600mA			0.92	0.53	0.46	0.40	0.32	0.23							
115	500mA			0.96	0.55	0.48	0.42	0.33	0.24							
140	750mA			1.17	0.67	0.58	0.51	0.40	0.29							
150	625mA			1.25	0.72	0.63	0.54	0.43	0.31							

TM-21 LIFETIME CALCULATION

Projected Lumen Maintenance (25°C / 77°F)						
HOURS	0	25,000	36,000	50,000	100,000	Reported L70
Projected Lumen Maintenance	100%	97%	95%	93%	87%	> 60,000 hrs

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SPECIFICATIONS

Housing:

- Low copper aluminum alloy die-casting is designed as one-piece with internal cooling fins.
- Solid, cast aluminum wall creates a thermal barrier between the optical and electrical compartments.
- Molded silicone gasket throughout insures the sealing between the two compartments and provides ingress protection.
- Housing is designed with integral LED heat sink utilized for thermal transfer and for securing the location of each LED module.
- IK09 rated enclosure protects electrical equipment against external mechanical impacts.

Lens Frame:

- One-piece low copper aluminum alloy die-cast is secured to housing with 6 screws.

Backlight Control

- Optional Backlight Control on each LED module to completely control unwanted backlight.

Lens

One-piece flat glass lens slips secure with clips. Extra silicone gasketing is provided to retain a clear optical compartment.

Optical Module:

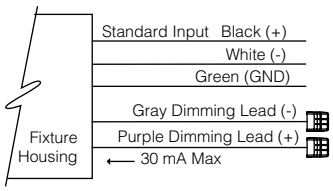
- LEDs shall be mounted to a metal printed circuit board assembly (MCPCB).
- Optical lenses shall be clear injection molded PMMA acrylic.
- Each MCPCB and optic shall be sealed to the diecast housing and sealed with a continuous one piece injection molded silicone rubber gasket.
- Patent Pending design of optical array shall independently shield each LED optic across the length of the aperture.
- Optional fixture finish optical surfaces shall not exceed BUG ratings of the standard white finish and shall be greater than or equal to the delivered lumens of the optional matte black optical surface finish.

Electrical Components

- Standard programmable driver allows for programmable drive current settings.
- Electrical components are stategically located in the driver gear compartment with a molded silicon grommet seal to provide separation from the optical chamber.
- Maximum lightning surge current 20KA with thermally protected varistor technology. Surge suppression is series circuited preventing total fixture failure. ANSI/IEEE C62.41 Category C High.
- Open circuit fault will turn off the luminaire in order to protect the sensitive electronics and acts as a signal for maintenance.
- Programmable Driver is rated for -40°C starting.
- "Thermal Shield", primary side, thermister provides protection for the sustainable life of electronic components.

Dimming:

- Dimming range from 100% to 10% through the use of the standard 0-10V interface on the programmable driver.
- Modular wiring harness in the service area provides user access to the dimming circuitry.
- Dimming circuitry compatible with 0-10V, user-defined control devices.
- Optional factory programmed dimming profile.



Fusing:

SF for 120, 277, and 347 Line volts

DF for 208, 240, and 480 Line volts

Hight temperature fuse holders factory installed inside the fixture housing.

Fuse is included.

Finish:

Fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat.

Standard colors include (BLS) Black Gloss Smooth, (BLT) Black Matte Textured, (DBS) Dark Bronze Smooth, (GTT) Graphite Matte Textured, (LGS) Light Gray Smooth, (PSS) Platinum Silver Smooth, (VGS) Verde Green Smooth, (WHS) White Gloss Smooth, and (CC) Custom Color (Include RAL#).

Certifications and Listings:

- IUL 1598 Standard for Luminaires.
- IUL 8750 Standard for Safety for Light
- IEmitting Diode (LED) Equipment for use in Lighting Products.
- ICSA C22.2#250.0 Luminaires.
- ANSI C136.31-2010 Vibration tested and compliant 1.5G and 4G reference page 9
- IRoHS compliant.
- IIP66 rated.
- IIEC 66262 Mechanical Impact Code IK09.
- IDA approved, 3000K and warmer CCTs only.

CAUTION:

Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

WARRANTY:

For full warranty see: http://www.hubbelllighting.com/resources/warranty

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CONTROLS

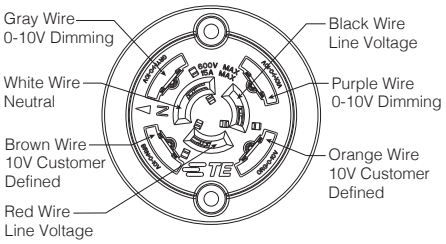
Photocell Receptacle

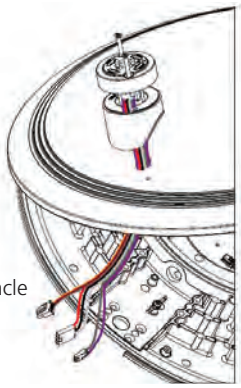
7PR

Fully gasketed and wired 7-pin receptacle option. Easy access location above the electrical compartment. 7-pin construction allows for a user-defined interface and provides a controlled definition of operational performance. ANSI twist-lock control module by-others.

Standard customer operation modes:

1. Traditional on/off photoelectric control.
2. 5-pin wireless photoelectric control for added dimming feature.
3. 7-pin wireless photoelectric control for dimming and additional I/O connections for customer use.





7-Pin receptacle placement

Wireless Controls

wiSCAPE™

Hubbell Control Solution's wiSCAPE™ wireless control modules allow an individual fixture to managed, monitored and measured. The modules communicate securely over a robust certified meshed radio signal. The wiSCAPE modules provide on/off/dim control, external device input, alerts and metering.

WIR-RME-L

wiSCAPE External Module,120-480V, 1000ft range (LOS), Internal Photocell, 1 Digital Input, Compatible with the A-25-7H option

SiteSync™[1]

SiteSync™ wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit www.hubbelllighting.com/products/sitesync for more details.

Dimming WASP Occupancy Sensor

WSP

The Dimming WASP Outdoor Occupancy Sensor is specifically designed to provide 0-10VDC output for the control of dimmable fixtures. Easy to use dipswitches allow the user to adjust sensor time delay and sensitivity as well as set unoccupied and occupied dimming levels. Sensors also feature a daylight sensor for ON/OFF control of fixtures when there is sufficient natural light. Visit https://hubbellcdn.com/installationmanuals/2102B_Dimming_WASP_Install.pdf for more details.

Pole Mounted

Round Pole-Mounted Occupancy Sensor up to 16'. Select voltage and finish color.

SCL-R

Round Pole-Mounted Occupancy Sensor up to 16' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for round pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.

Ordering Example: SCL-R44/277[2]/BL[3]

Square Pole-Mounted Occupancy Sensor up to 16'. Select voltage and finish color.

SCL-S

Square Pole-Mounted Occupancy Sensor up to 16' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for square pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.

Ordering Example: SCL-L/277[2]/BL[3]

Round Pole-Mounted Occupancy Sensor 16' to 30'. Select voltage and finish color.

SCH-R

Round Pole-Mounted Occupancy Sensor: 16' to 30' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for round pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.

Ordering Example: SCH-R4[4]/277[2]/BL[3]

Square Pole-Mounted Occupancy Sensor 16' to 30'. Select voltage and finish color.

SCH-S

Square Pole-Mounted Occupancy Sensor: 16 to 30' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for round pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.

Ordering Example: SCH-S/277[2]/BL[3]

AstroDIM

AstroDIM provides multi-stage night-time power reduction based on an internal timer referenced to the power on/off time. There is no need for an external control infrastructure. The unit automatically performs a dimming profile based on the predefined scheduled reference to the midpoint, which is calculated based on the power on/off times.

[1]PRECOMMISSIONED SITESYNC ORDERING INFORMATION: When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project location, Group information, and Operating schedules. For more detailed information please visit www.HubbellLighting.com/products/sitesync or contact Hubbell Lighting tech support at (800) 345-4928.

SiteSync fixtures with occupancy sensor (SWPM) require the mounting height of the fixture for selection of the lens.

Examples:

SiteSync only : UR20/56L-75/3K7/UNV/ASQ/BL/SWP

SiteSync with Motion Control: UR20/56L-75/3K7/UNV/ASQ/BL/SWPM-40F

[2]Voltage, [3]Color, [4]Pole Diameter,

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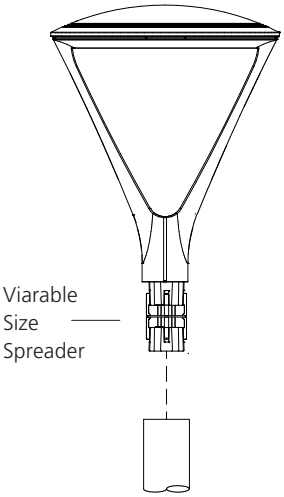
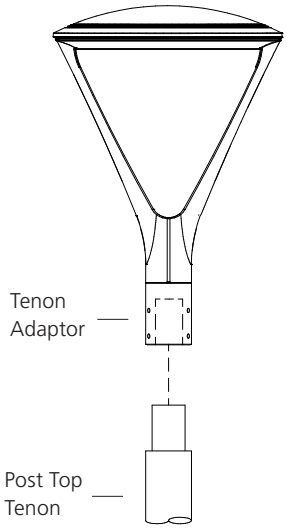
MOUNTING INSTALLATION

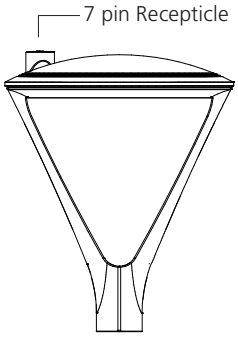


Flush Mount
FM33/44

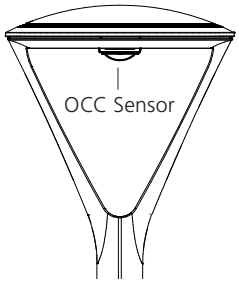


Post Top
PT23/24/34

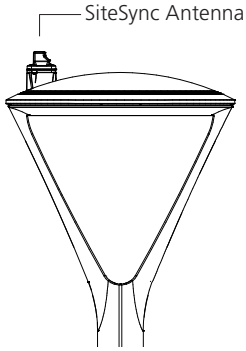
SENSOR PLACEMENT



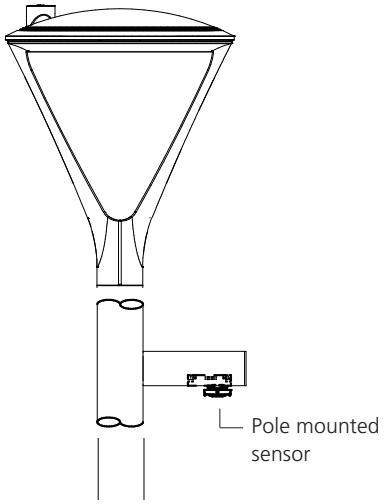
7 pin PCR
7PR



OCC Sensor
NX or WSP



SiteSync
SW7PR



Pole Mounted Sensor
SCL-R, SCL-S, SCH-R,
SCH-S

MOUNTING VIBRATION RATINGS

UR 20 Arm		UR28 Arm		UR 20 Post Top		UR 28 Post Top	
Ordering Code	Rating	Ordering Code	Rating	Ordering Code	Rating	Ordering Code	Rating
ASQ	4G	**ASQ**	4G	**FM33**	4G	**FM44**	1.5G
A34	4G	**A34**	4G	**FM44**	1.5G	**FM45**	1.5G
A46	4G	**A46**	4G	**PT23**	4G	**PT24**	1.5G
MAF	4G	**MAF**	4G	**PT24**	4G	**PT34**	1.5G
				PT34	1.5G	**PT25**	1.5G
						PT35	1.5G

For the 4 G test, ANSI C136.31-2010 Vibration is tested to comply with Vibration Test Level 1 Normal Applications, Vibration Test Level 2 Bridge/Overpass Applications, and Vibration Test Level 3

For the 1.5G test, ANSI C136.31-2010 Vibration is tested to comply with Vibration Level 1 Bridge/Overpass Applications

Kim Lighting reserves the right to change specifications without notice.

DESCRIPTION

The Invue Arbor post top brings architectural style to area/site and pedestrian scale applications. Its dayform appearance brings a desired organic look into the urban environment. WaveStream™ LED Optics provide a uniform pixelation free image, managing glare while providing high levels of visibility.

Catalog #		**Type**
Project		
Comments		**Date**
Prepared by		

SPECIFICATION FEATURES

Construction
Two-piece IP66 rated housing is cast from low copper content corrosion resistant aluminum, maintaining strength and precision to sustain long term dayform appearance. ANSI C136.31 testing compliance prevents damage from installation generated vibration. External hardware and casting seams are minimized to enhance appearance.

Optics
Specifically designed for pedestrian applications, WaveStream LED optical waveguide technology produces both symmetric NEMA type V and asymmetric NEMA II, III, IV distributions. The waveguide is manufactured from precision injection molded acrylic resulting in a pixelation free optical image for improved glare control and visual comfort. Luminaire efficacy's measure up to 100 lm/w for 4000K (+/- 275K) CCT at 70 CRI (min), optional 3000K CCT at 80 CRI is also available.

Electrical
LED driver(s) are directly mounted to upper housing thermal pad for optimal thermal performance. Standard 0-10V dimming drivers and Eaton's proprietary surge protection module are designed to withstand 10kV of transient line surge. Drivers operate at 120-277V 50/60Hz with 347V/60Hz or 480V/60Hz operation optional. Suitable for ambient temperature applications as low as -40°C (40°F) to 40°C (104°F). Limited high ambient options allow for 50°C operation.

Controls
The Arbor LED luminaire control options are designed to be simple and cost-effective ASHRAE and California Title 24 compliant solutions. The ANSI C136.41 compliant NEMA 7-PIN receptacle enables wireless dimming when used with compatible photocontrol. An integrated dimming and occupancy sensor is a standalone control option available in on/off (MS) and bi-level dimming (MS/DIM) operation. The optional LumaWatt Pro™ system is best described as a peer-to-peer wireless network of luminaire-integral sensors that operate in accordance with programmable profiles. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. See control options page for more details.

Mounting
Fitter assembly mounts over 2-3/8" O.D. tenon and is secured via six concealed stainless steel set screws. Design of fitter provides seamless transition to 3" O.D. round pole top. Additional mounting accessories include a single fixture arm mount, twin fixture arm mount and wall mount arm. Additional pole mount accessories mount to a 3" x 4" long tenon for 4" - 5" O.D. poles tops. For existing 2-3/8" tenons an adapter is shipped standard.

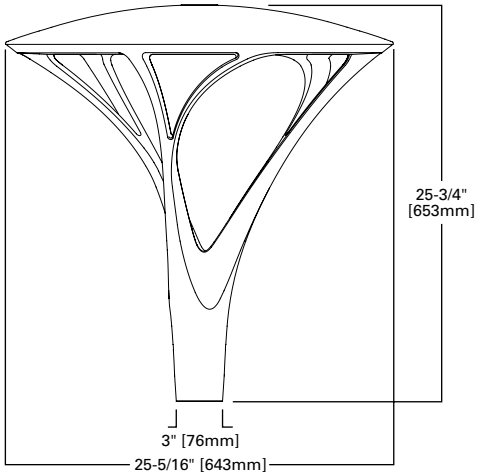
Finish
Eaton utilizes premium ultra-weatherable TGIC based polyester powder coatings that are specifically formulated to withstand extended outdoor exposure. The powders are formulated exclusively for Eaton to serve functionally as well as decorative. Good film appearance combinded with excellent mechanical an exterior exposure qualities display greater than twice as much gloss retention. RAL and custom color matches available. Finish is compliant with ASTM B117 3000hr salt spray standard.

Warranty
Five-year warranty.

ARB ARBOR POSTTOP

DECORATIVE LUMINAIRE

DIMENSIONS



CERTIFICATION DATA

UL/cUL Listed
ANSI C136.31 1.5G Vibration Tested
IEG 60529 IP66 Housing
ASTM B117 SaH Spray Tested
ASTM A3560 Low Cooper Alloy
RoHS
ISO 9001
Dark Sky Approved (3000K CCT and warmer only)

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V 50/60Hz, 347V/60Hz, 480V/60Hz
40°C Ambient Temperature Rating
As low as -40°C (-40°F) minimum temperature
*See MINIMUM TEMPERATURE table

EPA

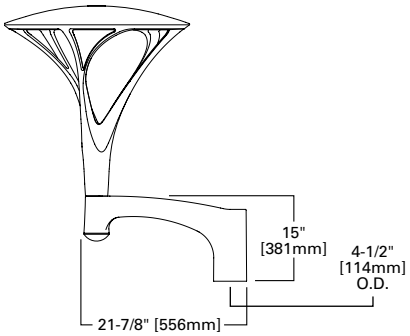
Effective Projected Area: (Sq. Ft.) 0.9

Approximate Net Weight:
37 lbs. [16.8 kgs.]

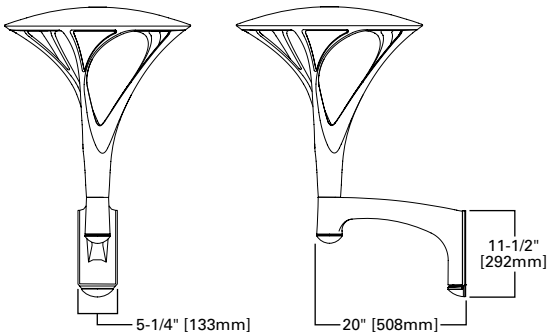
Powering Business Worldwide

MOUNTING CONFIGURATIONS (WEIGHT AND EPAS INCLUDES FIXTURE)

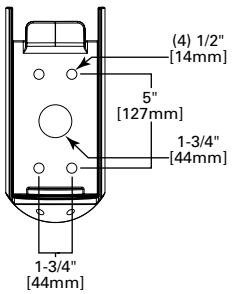
Single Arm Mount (ARSA-XX)
Weight: 56 lbs. [25.45 kgs.]
EPA: 1.7 Sq. Ft.



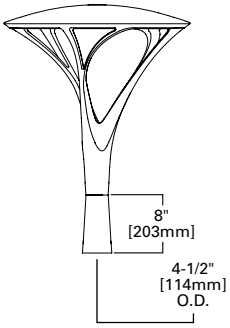
Wall Mount Arm (ARWM-XX)
Weight: 57 lbs. [25.91 kgs.]
EPA: 1.8 Sq. Ft.



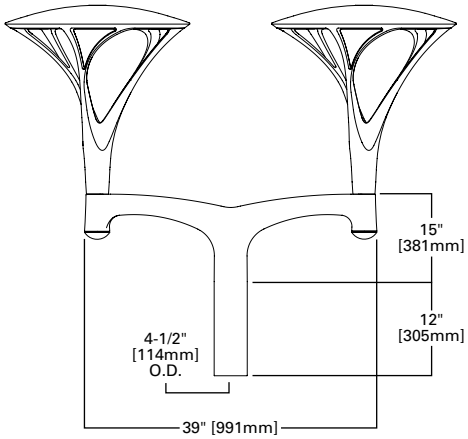
Wall Mount Arm Drill Pattern



Post Top Adapter (ARPA4-XX)
Weight: 41 lbs. [18.63 kgs.]
EPA: 1.2 Sq. Ft.



Twin Arm Mount (ARTA15-XX)
Weight: 114 lbs. [51.81 kgs.]
EPA: 3.45 Sq. Ft.

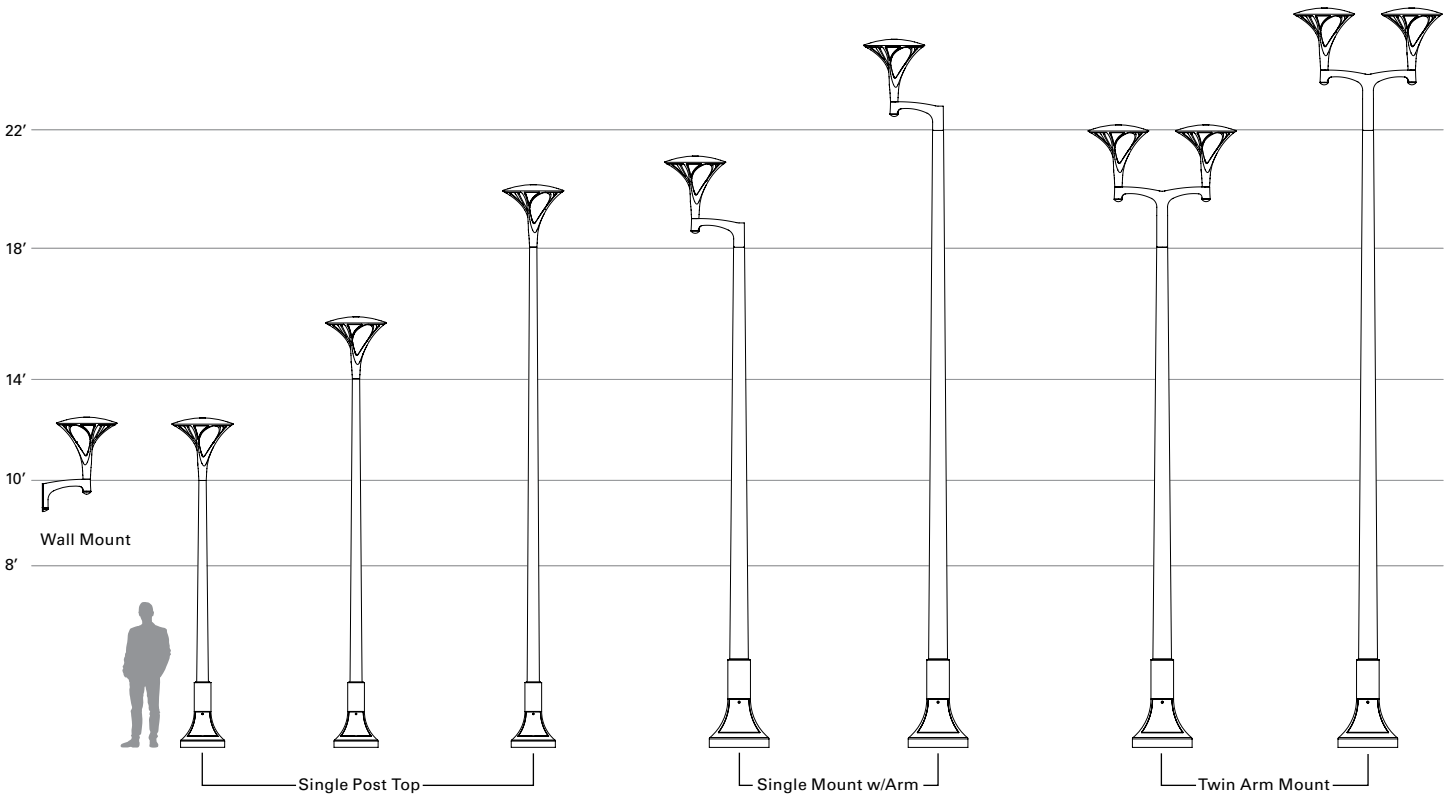


MOUNTING REQUIREMENTS CHART

Tenon O.D. (Inches)	**2-3/8" Tenon**		
Pole Top O.D. (Inches)	**3"**	**4"**	**5"**
Post Top	Standard	Spacer (Provided) & ARPA4-XX (Order Separately)	Spacer (Provided) & ARPA4-XX (Order Separately)
Single Arm Mount	Spacer (Provided)	Spacer (Provided)	Spacer (Provided)

Tenon O.D. (Inches)	**3" Tenon**		
Pole Top O.D. (Inches)		**4"**	**5"**
Post Top		ARPA4-XX (Order Separately)	ARPA4-XX (Order Separately)
Single Arm Mount		Standard	Standard
Twin Mount		Standard	Standard

POLE CONFIGURATIONS (ARP DECORATIVE POLE SHOWN)



Powering Business Worldwide

Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

CONTROL OPTIONS

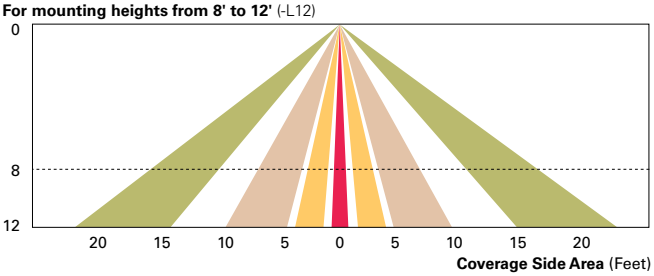
0-10V (D) The dimming option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (PER and PER7) Photocontrol receptacles provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

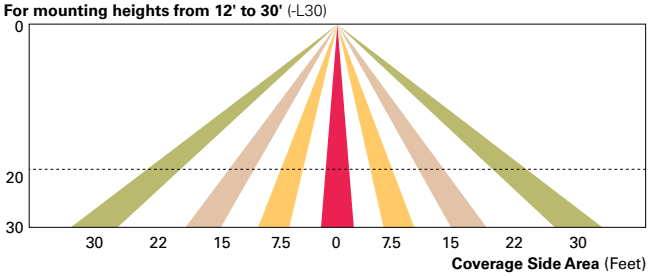
Dimming Occupancy Sensor (MS) These sensors are factory installed in the luminaire housing. When a sensor for dimming operation (/DIM) option is selected, the luminaire will dim down to approximately 50 percent power after five minutes of no activity detected. When activity is detected, the luminaire returns to full light output. When a sensor for ON/OFF operation is selected, the luminaire will turn off after five minutes of no activity.

These occupancy sensors include an integral photocell that can be activated or inactivated with the programming remote / configuration tool for "dusk-to-dawn" control or "daylight harvesting". Note: For MS sensors, the factory preset is OFF (Disabled). The programming remote / tool is a wireless tool that can be utilized to change the dimming level, time delay, sensitivity and other parameters. A variety of sensor lenses are available to optimize the coverage pattern for mounting heights from 8'-40'.

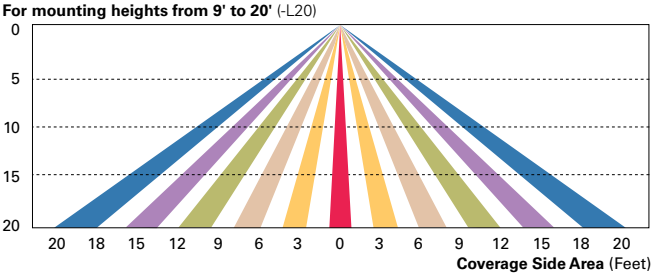
For mounting heights from 8' to 12' (-L12)



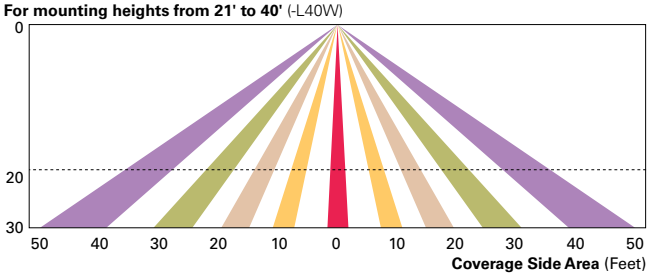
For mounting heights from 12' to 30' (-L30)



For mounting heights from 9' to 20' (-L20)



For mounting heights from 21' to 40' (-L40W)

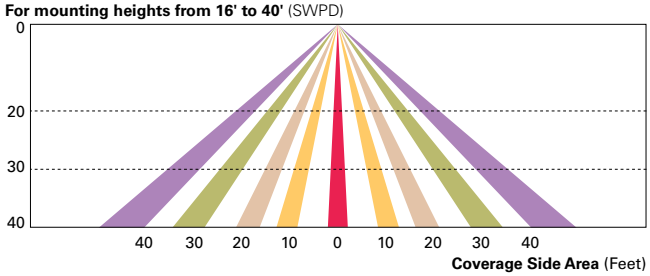


WaveLinx Wireless Control and Monitoring System Available in 7-PIN or 4-PIN configurations, the WaveLinx Outdoor control platform operates on a wireless mesh network based on IEEE 802.15.4 standards enabling wireless control of outdoor lighting. Use the WaveLinx Mobile application for set-up and configuration. At least one Wireless Area Controller (WAC) is required for full functionality and remote communication (including adjustment of any factory pre-sets).

WaveLinx Outdoor Control Module (WOLC-7P-10A) A photocontrol that enables astronomic or time-based schedules to provide ON, OFF and dimming control of fixtures utilizing a 7-PIN receptacle. The out-of-box functionality is ON at dusk and OFF at dawn.

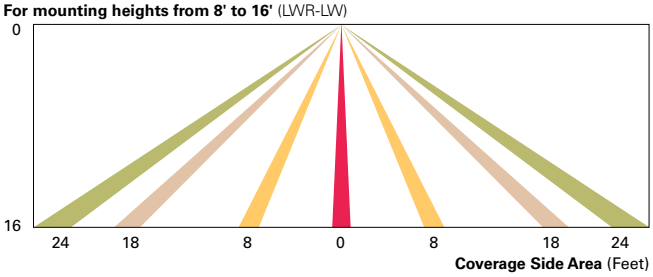
WaveLinx Wireless Sensor (SWPD4 and SWPD5) These outdoor sensors offer passive infrared (PIR) occupancy and a photocell for closed loop daylight sensing. These sensors can be factory installed or field-installed via simple, tool-less integration into luminaires equipped with the Zhaga Book 18 compliant 4-PIN receptacle (ZW). These sensors are factory preset to dim down to approximately 50 percent power after 15 minutes of no activity detected. These occupancy sensors include an integral photocell for "dusk-to-dawn" control or daylight harvesting that is factory-enabled. A variety of sensor lenses are available to optimize the coverage pattern for mounting heights from 7'-40'.

For mounting heights from 16' to 40' (SWPD)

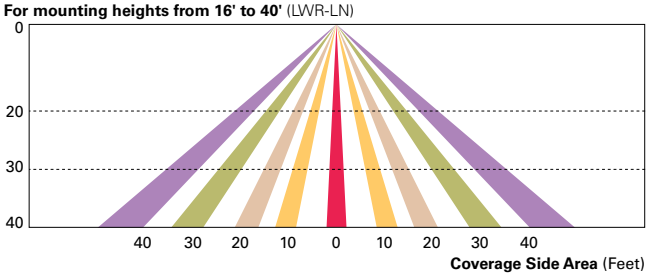


LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN) The Eaton's LumaWatt Pro powered by Enlighted is a connected lighting solution that combines LED luminaires with an integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of other resources beyond lighting.

For mounting heights from 8' to 16' (LWR-LW)



For mounting heights from 16' to 40' (LWR-LN)



POWER AND LUMENS

Lumen Package		B1	B2	B3	B4
Drive Current					
Power Wattage (Watts)		24W	48W	96W	99W
Input Current (mA) @ 120V		200	400	800	830
Input Current (mA) @ 208V		120	240	470	480
Input Current (mA) @ 240V		100	200	400	420
Input Current (mA) @ 277V		90	180	350	360
Power Wattage (Watts)		26W	53W	107W	108W
Input Current (mA) @ 347V		79	161	325	328
Input Current (mA) @ 480V		58	117	235	237
Optics					
Type II	Lumens	2,045	3,994	7,362	--
	BUG Rating	B1-U1-G1	B1-U2-G2	B3-U2-G3	--
Type III	Lumens	2,324	4,534	8,451	--
	BUG Rating	B1-U1-G1	B1-U2-G2	B2-U2-G3	--
Type IV	Lumens	2,408	4,691	8,740	--
	BUG Rating	B1-U1-G1	B1-U2-G2	B2-U2-G3	--
Type V	Lumens	2,311	4,529	8,511	9,464
	BUG Rating	B2-U1-G1	B3-U2-G2	B3-U2-G3	B3-U2-G3

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Calculated L70 (Hours)
25°C	>91%	>230,000
40°C	>88%	>172,000
50°C	>86%	>142,000

NOTE: Maintenance data applies to the highest drive current and represents the worst case at the highest wattage.

COLOR TEMPERATURE

Color Temperature (CCT)	CRI (Nominal)	Multiplier
4000	70	1.00
3000	80	0.91

MINIMUM AMBIENT TEMPERATURE

Lumen Package	Temperature
B1	-40°C
B2	-35°C
B3	-35°C
B4	-40°C
All DALI powered lumen packages	-20°C

ORDERING INFORMATION

Sample Number: ARB-B2-LED-D1-T2-GM

Product Family [1, 2]	Lumens [3]	Lamp Type	Voltage	Distribution	Color
ARB=Arbor Post Top	**B1**=Nominal 2,300 Lumens **B2**=Nominal 4,500 Lumens **B3**=Nominal 8,500 Lumens **B4**=Nominal 9,500 Lumens [4]	**LED**=Solid State Light Emitting Diodes	**D1**=Dimming Driver (120-277V) **347**=347V [5] **480**=480V [5, 6]	**T2**=Type II **T3**=Type III **T4**=Type IV **T5**=Type V	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White **CC**=Custom Color [7]

Options (Add as Suffix)

7030=70 CRI / 3000K CCT [8]
8030=80 CRI / 3000K CCT [8]
PC=Button Type Photocontrol
PER=NEMA 3-PIN Twistlock Photocontrol Receptacle
PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle
HA=50°C High Ambient Temperature [9]
MS-L08=Photo/Motion Sensor for ON/OFF Operation, Maximum 8' Mounting Height [10, 11]
MS-L20= Photo/Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height [10, 11]
MS-L40W=Photo/Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height [10, 11]
MS/DIM-L08=Photo/Motion Sensor for Dimming Operation, Maximum 8' Mounting Height [10, 11]
MS/DIM-L20=Photo/Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [10, 11]
MS/DIM-L40W=Photo/Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [10, 11]
ZW=Wavelinx-enabled 4-PIN Twistlock Receptacle [10, 11, 12, 13]
ZW-SWPD4WH=Wavelinx Wireless Sensor, 7' - 15' Mounting Height, White [10, 11, 12, 13]
ZW-SWPD5WH=Wavelinx Wireless Sensor, 15' - 40' Mounting Height, White [10, 11, 12, 13]
LWR-LW= LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height [10, 14]
LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height [10, 14]
5LTD=Fifth Light Dali Driver [10, 15]
DIM=0-10V External Dimming Leads [10, 16]
VS=Tempered Glass Vandal Shield

Accessories (Order Separately) [17]

ARSA-XX=Single Pole Mount Arm [18]
ARWM-XX=Wall Mount Arm
ARTA15-XX=Twin Mount Bracket [18]
ARPA4-XX=Pole Adapter 4" O.D. Pole
FSIR-100=Wireless Configuration Tool for Occupancy Sensor [19]
SWPD4-WH=Wavelinx Wireless Sensor, 7' - 15' Mounting Height, White [13, 20]
SWPD5-WH=Wavelinx Wireless Sensor, 16' - 40' Mounting Height, White [13, 20]
WOLC-7P-10A=Wavelinx Outdoor Control Module (7-PIN) [10, 21]

NOTES:
1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional information.
2. Fixture slipfits over standard 2-3/8" tenon. 3" O.D. tenon when used with a ARPA4-XX 4" O.D. pole adapter.
3. Standard 4000K CCT, nominal 70CRI.
4. B4 only available with Type V distribution.
5. Requires the use of a step down transformer.
6. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
7. Custom and RAL color matching available upon request. Consult your lighting representative at Eaton for more information.
8. Extended lead times apply. Use dedicated IES files when performing layouts. These files are published on the Arbor luminaire product page on the website.
9. Not available with B3 lumen package in Type II, III, or IV distributions.
10. Controls system is not available with photocontrol (PC), photocontrol receptacle (PER or PER7), or other controls systems (MS, ZW, LWR, 5LTD, or DIM).
11. Not available with HA option.
12. Sensor passive infrared (PIR) may be overly sensitive below -20°C (-4°F).
13. In order for device to be field-configurable, requires WAC Gateway components WAC-POE and WPOE-120 in appropriate quantities. Only compatible with WaveLinx system and software and requires system components to be installed for operation. See website for more WaveLinx application information.
14. LumaWatt Pro wireless sensors are factory installed and require network components LWP-EM-1, LWP-GW-1, and LWP-PoE8 in appropriate quantities. See website for LumaWatt Pro application information.
15. Only available in B1 and B2 lumen packages.
16. Low voltage control leads brought 18" outside fixture.
17. Replace XX with paint color.
18. Fits on 3" O.D. x 4" long tenon for nominal 4-1/2" O.D. pole top.
19. This tool enables adjustment to Motion Sensor (MS) parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative for more information.
20. Requires Wavelinx-enabled 4-PIN twistlock receptacle (ZW) option.
21. Requires 7-PIN NEMA twistlock photocontrol receptacle (PER7) option.

KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

ALT1

ARCHITECTURAL AREA/SITE

Altitude®

FEATURES

- Elegant form factor
- High performance optics up to 17,500 delivered lumens
- Diffusion lens for low glare comfort
- NX™ wireless control options

Altitude

c UL us LISTED

3000K and warmer CCTs only

CONTROL TECHNOLOGY

NX DISTRIBUTED INTELLIGENCE

RELATED PRODUCTS

Ouro Pavilion PGL8

SPECIFICATIONS

CONSTRUCTION

- One piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 with vents and .100" minimum wall thickness
- Separate internal driver compartment rated for IP66 ingress protection
- Finish: fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat
- Standard colors include (BLS) Black Gloss Smooth, (BLT) Black Matte Textured, (DBS) Dark Bronze Gloss Smooth, (GTT) Graphite Matte Textured, (LGS) Light Gray Gloss Smooth, (PSS) Platinum Silver Smooth, (VGS) Verde Green Smooth, (WH) White, and (CC) Custom Color (Include RAL#)
- Lens is impact resistant 1/8" tempered glass with anti-reflective coating
- Lens has a one-piece extruded vulcanized silicone gasket
- Lens frame one piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 and .100" minimum wall thickness
- Lens frame has a one-piece O-ring extruded vulcanized silicone gasket
- Mid-frame one piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 and .100" minimum wall thickness
- Mid-frame secures to Lens Frame and housing by stainless steel recessed Allen-head screws
- Silicone gaskets throughout
- All external fasteners are stainless steel

OPTICS

- LEDs mount to a metal printed circuit board assembly (MCPCB)
- Optical lenses are clear injection molded PMMA acrylic

INSTALLATION

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury

ELECTRICAL

- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories recognized
- High voltage configurations, 347/480. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories recognized
- "Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components
- Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments
- Luminaire shall be capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C

ELECTRICAL (CONTINUED)

- Dimming range from 10% to 100% through the use of standard 0-10V interface on the programmable driver
- Modular wiring harness in the service area provides user access to the dimming circuitry
- Optional factory programmed dimming profile
- Surge protection: 10,000k in parallel, 20,000k in series
- SF for 120, 277, 347 Line volts
  DF for 208, 240, 480 Line volts
- Wiring: No. 18AWM rated 105°C, wet rating.

CERTIFICATIONS AND LISTINGS

- UL 1598 Standard for Luminaires
- IP66 certified
- RoHS compliant

WARRANTY

- 5 year warranty
- See HLI Standard Warranty for additional information

KEY DATA	
Lumen Range	1,673–18,452
Wattage Range	22–156
Efficacy Range (LPW)	56–137
Reported Life (Hours)	L70/60,000
Weight	21.5 lbs 9.75 kg
EPS Front View / Side View	.37 / .64

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KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

ALT1

ARCHITECTURAL AREA/SITE

ORDERING GUIDE

Example: ALT1-54L-120-3K8-3-UNV-A34-GT-NXSPW30F-CLR

CATALOG #

HOUSING

ALT1

Housing		LED Engine		CCT/CRI		Distribution		Rotation		Voltage	
ALT1	Architectural Area/Site	**28L-20**	20W, 3,000 lm	**AM**	Amber[9]	**FR**	Type I/Front Row		Blank for no rotation	**UNV**	Universal 120–277V
		28L-40	40W, 5,000 lm	**3K7**	3000K, 70 CRI	**2**	Type II	**L**	Optic rotation left[1]	**347**	347V
		28L-60	60W, 7,500 lm	**3K8**	3000K, 80 CRI	**3**	Type III	**R**	Optic rotation right[1]	**480**	480V
		28L-85	85W, 10,000 lm	**3K9**	3000K, 90 CRI	**4**	Type IV				
		54L-95	95W, 12,500 lm	**4K7**	4000K, 70 CRI	**4W**	Type IV Wide				
		54L-120	120W, 15,000 lm	**4K8**	4000K, 80 CRI	**5QM**	Type V Square Medium				
		54L-155	155W, 17,500 lm	**5K7**	5000K, 70 CRI	**5QN**	Type V Square Narrow				
				5K8	5000K, 80 CRI	**5R**	Type V Rectangular				
						5W	Type V Wide (Round)				

Mounting		Fixture Finish		Control Options		Options		Control Accessories	
ASQ	Arm Square pole	**BL**	Black	**7PR**	7 pin PCR, wireless control enabled	**BC**	Backlight Control[6]	**SCPREMOTE**	Remote control for SCP option. Order at least one per project to program and control the occupancy sensor
A34	Arm mt 3.3–4.2" OD pole	**DB**	Dark Bronze	**7PR-TL**	7 pin PCR with twist lock photocontrol	**SF**	Single Fuse	**SW7PR**	SiteSync™ on fixture module via 7PR
A46	Arm mt 4.5–6.0" OD pole	**GT**	Graphite	**7PR-SC**	7 pin PCR with shorting cap	**DF**	Double Fuse	**SWUSB**	SiteSync™ Software on USB
MAF	Horizontal Slipfitter 2.375" OD arm	**LG**	Light Grey	**AD-012**	AstroDIM: 50% output at midnight[10]	**TB**	Terminal Block	**SWTAB**	SiteSync™ Windows Tablet[8]
SVSF	Vertical Slipfitter Mount square for 2" pipe tenon, (2.375" OD)	**PS**	Platinum Silver	**AD-022**	AstroDIM: 50% output midnight to 4 AM[10]	**CLR**	Clear Lens	**SWBRG**	SiteSync™ Wireless Bridge Node
VSF	Vertical Slipfitter Mount for 2" pipe tenon, (2.375" OD)	**TT**	Titanium	**AD-032**	AstroDIM: 50% output 10PM[10]	**HDL**	Diffuse Lens[7]	**SWFC**	SiteSync™ Field Commission Service
WB	Wall Bracket for area wall mount	**WH**	White	**AD-042**	AstroDIM: 50% output 10PM to 4AM[10]			**WIR-RME-L**	wiSCAPE™ External Fixture Module
		CC	Custom Color[2]	**NXSP14F**	Wired NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14' [3,4]			**NXOFM-1R1D-UNV**	NX External Contol Node
				NXSP30F	Wired NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30' [3,4]				
				NXSPW14F	NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14' [3,4]				
				NXSPW30F	NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30' [3,4]				
				NXWE	NX Wireless Enabled				
				SCL-8F	Low voltage sensor for 3rd party wireless controls via 7PR. For mounting heights up to 8'				
				SCL-40F	Low voltage sensor for 3rd party wireless controls via 7PR. For mounting heights 9' to 40'				
				SCP-8F	Remote control programable line voltage sensor, use with SCPREMOTE				
				SCP-40F	Remote control programable line voltage sensor, use with SCPREMOTE				
				SWP	Site Sync™ Pre Commission Wireless Module[3,4,5]				
				SWPM-40F	Site Sync with Sensor 9' to 40' MH[3,4,5]				

Notes:

1 Not available with 5QM and 5W distributions

2 Consult factory

3 Not available with other sensor or wireless control options

4 Not available in 480V

5 Specify group and zone at time of order, See www.hubbelllighting.com/sitesync for more details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node

6 Not available with Type 5 distributions, CLR, or HDL option

7 Only available in Type 3 or Type 5W

8 Microsoft, Encarta, MSN, and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries

9 Wildlife friendly

10 Not available for 28L-20 engine and sensor options

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DATE: LOCATION:

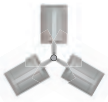
TYPE: PROJECT:

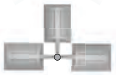
CATALOG #:

ALT1

ARCHITECTURAL AREA/SITE

PRODUCT EXCEPTIONS & DETAILS

Configuration			EPA
	1SA	1 Arm Side Mount	0.98
	2SB	2 Arm Side Mount	1.48
	2SL	2 Arm Side Mount	1.96
	3ST	3 Arm Side Mount	2.20

Configuration			EPA
	3SY*	3 Arm Side Mount	2.46
	4SC	4 Arm Side Mount	2.46
	1W	Single Wall Mount	n/a
	HSF	Horizontal Slipfitter	n/a

DELIVERED LUMENS

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
28L	20	3,000	No Lens	FR	3110	0	0	0	141	3274	0	0	0	149	3318	1	0	0	148
				FR-BC	2036	0	0	0	93	2143	0	0	0	97	2172	0	0	0	97
				2	2903	1	0	1	132	3056	1	0	1	139	3097	1	0	1	138
				2-BC	1771	0	0	0	80	1864	0	0	0	85	1889	0	0	0	84
				3	2945	1	0	1	131	3100	1	0	1	138	3141	1	0	1	140
				3-BC	1779	0	0	1	81	1873	0	0	1	85	1898	0	0	1	85
				4	2943	0	0	1	134	3098	0	0	1	141	3139	0	0	1	141
				4-BC	2189	0	0	1	100	2304	0	0	1	105	2335	0	0	1	104
				4W	2927	1	0	1	133	3081	1	0	1	140	3122	1	0	1	139
				4W-BC	1673	0	0	1	76	1761	0	0	1	80	1785	0	0	1	80
				5R	3025	2	0	2	137	3184	2	0	2	145	3227	2	0	2	144
				5QM	3069	2	0	0	139	3230	2	0	0	147	3273	2	0	0	146
				5QN	3051	2	0	0	139	3211	2	0	0	146	3254	2	0	0	145
				5W	3024	2	0	1	137	3183	2	0	1	145	3226	2	0	1	144
			Clear Lens	FR	2909	0	0	0	132	3062	0	0	0	139	3103	0	0	0	141
				2	2715	1	0	1	123	2858	1	0	1	130	2896	1	0	1	132
				3	2754	1	0	1	125	2899	1	0	1	132	2938	1	0	1	134
				4	2752	0	0	1	125	2897	0	0	1	132	2936	0	0	1	133
				4W	2738	1	0	1	124	2882	1	0	1	131	2920	1	0	1	133
				5R	2829	2	0	2	129	2978	2	0	2	135	3018	2	0	2	137
				5QM	2870	2	0	0	130	3021	2	0	0	137	3062	2	0	0	139
				5QN	2853	2	0	0	130	3003	2	0	0	137	3044	2	0	0	138
				5W	2829	2	0	1	129	2977	2	0	1	135	3017	2	0	1	137
			HDL Lens	3	2341	1	0	1	106	2464	1	0	1	112	2497	1	0	1	114
				5W	2405	1	0	1	109	2531	1	0	1	115	2565	1	0	1	117

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ARCHITECTURAL AREA/SITE

DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
28L	40	5,000	No Lens	FR	4870	1	0	0	128	5127	1	0	0	135	5195	1	0	0	137
				FR-BC	3189	0	0	0	84	3356	0	0	0	88	3401	0	0	0	90
				2	4546	1	0	1	120	4785	1	0	1	126	4849	1	0	1	128
				2-BC	2773	0	0	1	73	2919	0	0	1	77	2958	0	0	1	78
				3	4611	1	0	2	121	4854	1	0	2	128	4919	1	0	2	129
				3-BC	2786	0	0	1	73	2933	0	0	1	77	2972	0	0	1	78
				4	4608	1	0	2	121	4851	1	0	2	128	4915	1	0	2	129
				4-BC	3428	0	0	1	90	3608	0	0	1	95	3656	0	0	1	96
				4W	4584	1	0	2	121	4825	1	0	2	127	4889	1	0	2	129
				4W-BC	2621	0	0	1	69	2758	0	0	1	73	2795	0	0	1	74
				5R	4737	2	0	2	125	4986	3	0	1	131	5053	3	0	3	133
				5QM	4806	2	0	1	126	5058	2	0	1	133	5126	2	0	1	135
				5QN	4777	2	0	0	126	5028	2	0	0	132	5096	2	0	0	134
				5W	4736	3	0	1	125	4985	2	0	2	131	5052	3	0	1	133
			Clear Lens	FR	4555	1	0	0	120	4795	1	0	0	126	4859	1	0	0	128
				2	4252	1	0	1	112	4476	1	0	1	118	4536	1	0	1	119
				3	4333	1	0	1	114	4561	1	0	1	120	4622	1	0	1	121
				4	4310	0	0	2	113	4537	1	0	2	119	4598	1	0	2	121
				4W	4287	1	0	2	113	4513	1	0	2	119	4573	1	0	2	120
				5R	4431	2	0	2	117	4663	2	0	2	123	4726	2	0	2	124
				5QM	4495	2	0	1	118	4731	2	0	1	125	4794	2	0	1	126
				5QN	4468	2	0	0	118	4703	2	0	0	124	4766	2	0	0	125
				5W	4430	3	0	1	117	4663	3	0	1	123	4725	3	0	1	124
			HDL Lens	3	3741	1	0	1	98	3937	1	0	1	104	3990	1	0	1	105
				5W	3891	2	0	1	102	4095	2	0	1	108	4150	2	0	1	109

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ARCHITECTURAL AREA/SITE

DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
28L	60	7,500	No Lens	FR	7347	1	0	1	122	7733	1	0	1	129	7837	1	0	1	131
				FR-BC	4810	0	0	0	80	5063	0	0	0	84	5131	0	0	0	86
				2	6858	1	0	2	114	7218	1	0	2	120	7315	1	0	2	122
				2-BC	4183	0	0	1	70	4403	0	0	1	73	4462	0	0	1	74
				3	6956	1	0	2	116	7322	1	0	2	122	7420	1	0	2	123
				3-BC	4203	0	0	1	70	4424	0	0	1	74	4483	0	0	1	75
				4	6951	1	0	2	116	7317	1	0	2	122	7415	1	0	2	124
				4-BC	5171	0	0	2	86	5443	0	0	2	91	5516	0	0	2	92
				4W	6915	1	0	2	115	7278	1	0	2	121	7376	1	0	2	123
				4W-BC	3953	0	0	2	66	4161	0	0	2	69	4216	0	0	2	70
				5R	7145	3	0	3	119	7521	3	0	3	125	7622	3	0	3	127
				5QM	7249	3	0	1	121	7630	3	0	1	127	7732	3	0	1	129
				5QN	7206	3	0	0	120	7585	3	0	0	126	7687	3	0	0	128
				5W	7144	3	0	2	119	7520	3	0	2	125	7620	3	0	2	127
			Clear Lens	FR	6872	1	0	1	115	7233	1	0	1	121	7330	1	0	1	122
				2	6414	1	0	2	107	6751	1	0	2	113	6842	1	0	2	114
				3	6506	1	0	2	108	6848	1	0	2	114	6940	1	0	2	116
				4	6502	1	0	2	108	6844	1	0	2	114	6935	1	0	2	116
				4W	6468	1	0	2	108	6807	1	0	2	113	6899	1	0	2	115
				5R	6683	3	0	3	111	7035	3	0	3	117	7129	3	0	3	119
				5QM	6780	3	0	1	113	7137	3	0	1	119	7232	3	0	1	121
				5QN	6740	2	0	0	112	7094	3	0	0	118	7189	3	0	0	120
				5W	6682	3	0	2	111	7033	3	0	2	117	7128	3	0	2	119
			HDL Lens	3	5531	2	0	1	92	5821	2	0	1	97	5899	2	0	1	98
				5W	5680	2	0	1	95	5979	2	0	1	100	6059	2	0	1	101

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ARCHITECTURAL AREA/SITE

DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
28L	85	10,000	No Lens	FR	9699	1	0	1	113	10209	1	0	1	119	10346	1	0	1	120
				FR-BC	6350	0	0	1	74	6684	0	0	1	78	6773	0	0	1	79
				2	9054	1	0	2	105	9530	2	0	2	111	9657	2	0	2	112
				2-BC	5523	0	0	1	64	5813	0	0	1	68	5891	0	0	1	68
				3	9183	1	0	2	107	9666	1	0	2	112	9795	1	0	2	114
				3-BC	5549	0	0	2	65	5841	0	0	2	68	5919	0	0	2	69
				4	9177	1	0	2	107	9660	1	0	2	112	9789	1	0	2	114
				4-BC	6827	0	0	2	79	7186	0	0	2	84	7282	0	0	2	85
				4W	9129	1	0	3	106	9609	1	0	3	112	9737	1	0	3	113
				4W-BC	5219	0	0	2	61	5493	0	0	2	64	5567	0	0	2	65
				5R	9433	3	0	3	110	9929	3	0	3	115	10062	3	0	3	117
				5QM	9570	3	0	1	111	10073	3	0	1	117	10208	3	0	1	119
				5QN	9514	3	0	0	111	10014	3	0	0	116	10148	3	0	0	118
				5W	9432	4	0	2	110	9927	4	0	2	115	10060	4	0	2	117
			Clear Lens	FR	9072	1	0	1	105	9549	1	0	1	111	9677	1	0	1	113
				2	8468	1	0	2	98	8913	1	0	2	104	9033	1	0	2	105
				3	8589	1	0	2	100	9041	1	0	2	105	9162	1	0	2	107
				4	8584	1	0	2	100	9035	1	0	2	105	9156	1	0	2	106
				4W	8538	1	0	2	99	8987	1	0	3	105	9108	1	0	3	106
				5R	8823	3	0	3	103	9287	3	0	3	108	9411	3	0	3	109
				5QM	8951	3	0	1	104	9422	3	0	1	110	9548	3	0	1	111
				5QN	8898	3	0	0	103	9366	3	0	0	109	9491	3	0	0	110
				5W	8822	3	0	2	103	9285	4	0	2	108	9410	4	0	2	109
			HDL Lens	3	7302	2	0	2	85	7685	2	0	2	89	7788	2	0	2	91
				5W	7499	2	0	1	87	7893	2	0	1	92	7999	2	0	1	93

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ARCHITECTURAL AREA/SITE

DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
54L	95	12,500	No Lens	FR	11792	1	0	1	125	12412	1	0	1	132	12578	1	0	1	134
				FR-BC	7848	0	0	1	83	8260	0	0	1	88	8371	0	0	1	90
				2	11210	2	0	2	119	11800	2	0	2	126	11958	2	0	2	126
				2-BC	5993	0	0	1	64	6308	0	0	1	67	6392	0	0	1	69
				3	11225	1	0	2	119	11815	2	0	2	126	11974	2	0	2	127
				3-BC	6273	0	0	2	67	6603	0	0	2	70	6691	0	0	2	72
				4	11311	1	0	2	120	11906	1	0	3	127	12065	1	0	3	128
				4-BC	7291	0	0	2	78	7674	0	0	2	82	7777	0	0	2	84
				4W	11203	2	0	3	119	11792	2	0	3	125	11950	2	0	3	127
				4W-BC	5603	0	0	2	60	5898	0	0	2	63	5977	0	0	2	65
				5R	11623	3	0	3	124	12234	3	0	3	130	12398	3	0	3	131
				5QM	11770	3	0	2	125	12389	3	0	2	132	12555	3	0	2	133
				5QN	11799	3	0	0	126	12420	3	0	0	132	12586	3	0	0	133
				5W	11594	4	0	2	123	12204	4	0	2	130	12367	4	0	2	131
			Clear Lens	FR	11029	1	0	1	117	11609	1	0	1	124	11765	1	0	1	125
				2	10485	2	0	2	112	11036	2	0	2	117	11184	2	0	2	119
				3	10555	1	0	2	112	11110	1	0	2	118	11259	1	0	2	120
				4	10579	1	0	2	113	11136	1	0	2	118	11285	1	0	2	120
				4W	10479	1	0	3	111	11029	2	0	3	117	11177	2	0	3	119
				5R	10871	3	0	3	116	11443	3	0	3	122	11596	3	0	3	123
				5QM	11009	3	0	2	117	11588	3	0	2	123	11743	3	0	2	125
				5QN	11036	3	0	0	117	11616	3	0	0	124	11772	3	0	0	125
				5W	10845	4	0	2	115	11415	4	0	2	121	11568	4	0	2	123
			HDL Lens	3	8736	2	0	2	93	9195	2	0	2	98	9318	2	0	2	100
				5W	9152	3	0	1	97	9633	3	0	1	102	9762	3	0	1	104

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ALT1

ARCHITECTURAL AREA/SITE

DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
54L	120	15,000	No Lens	FR	14390	1	0	1	118	15146	1	0	1	124	15349	1	0	1	125
				FR-BC	9577	1	0	1	78	10080	1	0	1	83	10215	1	0	1	84
				2	13680	2	0	2	112	14399	2	0	2	118	14592	2	0	2	120
				2-BC	7313	0	0	1	60	7697	0	0	2	63	7800	0	0	2	64
				3	13698	2	0	3	112	14418	2	0	3	118	14611	2	0	3	120
				3-BC	7655	0	0	2	63	8057	0	0	2	66	8165	0	0	2	67
				4	13803	1	0	3	113	14528	1	0	3	119	14723	1	0	3	121
				4-BC	8897	0	0	2	73	9365	0	0	2	77	9490	0	0	2	78
				4W	13671	2	0	3	112	14390	2	0	3	118	14583	2	0	4	120
				4W-BC	6838	1	0	2	56	7197	1	0	2	59	7294	1	0	2	60
				5R	14184	4	0	4	116	14929	4	0	4	122	15129	4	0	4	124
				5QM	14363	3	0	2	118	15118	4	0	2	124	15321	4	0	2	126
				5QN	14399	4	0	4	118	15156	4	0	1	124	15359	4	0	1	126
				5W	14149	4	0	2	116	14893	4	0	2	122	15092	4	0	2	124
			Clear Lens	FR	13459	1	0	1	110	14167	1	0	1	116	14356	1	0	2	118
				2	12795	2	0	2	105	13468	2	0	2	110	13648	2	0	2	112
				3	12812	2	0	2	105	13486	2	0	2	111	13666	2	0	2	112
				4	12910	1	0	3	106	13589	1	0	3	111	13771	1	0	3	113
				4W	12787	2	0	3	105	13459	2	0	3	110	13640	2	0	3	112
				5R	13266	4	0	4	109	13964	4	0	4	114	14151	4	0	4	116
				5QM	13434	3	0	2	110	14140	3	0	2	116	14330	3	0	2	117
				5QN	13467	4	0	0	110	14175	4	0	0	116	14365	4	0	0	118
				5W	13234	4	0	2	108	13929	4	0	2	114	14116	4	0	2	116
			HDL Lens	3	10892	3	0	2	89	11464	3	0	2	94	11618	3	0	2	95
				5W	11250	3	0	1	92	11841	3	0	2	97	12000	3	0	2	98

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ARCHITECTURAL AREA/SITE

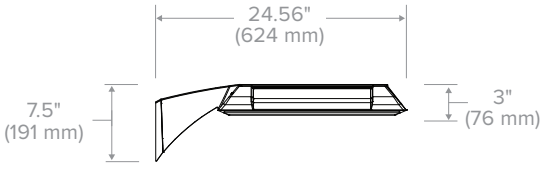
DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
54L	155	17,500	No Lens	FR	17299	2	0	2	111	18208	2	0	2	117	18452	2	0	2	119
				FR-BC	11513	1	0	1	74	12118	1	0	1	78	12280	1	0	1	79
				2	16445	2	0	2	105	17310	2	0	3	111	17542	2	0	3	112
				2-BC	8791	0	0	2	56	9253	0	0	2	59	9377	0	0	2	60
				3	16467	2	0	3	106	17333	2	0	3	111	17565	2	0	3	113
				3-BC	9202	1	0	2	59	9686	1	0	2	62	9816	1	0	2	63
				4	16593	1	0	3	106	17465	1	0	3	112	17699	1	0	4	113
				4-BC	10696	0	0	2	69	11258	1	0	2	72	11409	1	0	2	73
				4W	16435	2	0	4	105	17299	2	0	4	111	17531	2	0	4	112
				4W-BC	8220	1	0	2	53	8652	1	0	2	55	8768	1	0	2	56
				5R	17051	4	0	4	109	17947	4	0	4	115	18188	4	0	4	117
				5QM	17267	4	0	2	111	18174	4	0	2	117	18418	4	0	2	118
				5QN	17309	4	0	1	111	18219	4	0	1	117	18463	4	0	1	118
				5W	17009	4	0	2	109	17903	4	0	2	115	18143	4	0	2	116
			Clear Lens	FR	16180	1	0	2	104	17030	1	0	2	109	17258	1	0	2	111
				2	15382	2	0	2	99	16190	2	0	2	104	16407	2	0	2	105
				3	15402	2	0	3	99	16212	2	0	3	104	16429	2	0	3	105
				4	15520	1	0	3	99	16336	1	0	3	105	16555	1	0	3	106
				4W	15372	2	0	4	99	16180	2	0	4	104	16397	2	0	4	105
				5R	15948	4	0	4	102	16787	4	0	4	108	17011	4	0	4	109
				5QM	16150	4	0	2	104	16999	4	0	2	109	17227	4	0	2	110
				5QN	16190	4	0	1	104	17041	4	0	1	109	17269	4	0	1	111
				5W	15909	4	0	2	102	16745	4	0	2	107	16969	4	0	2	109
			HDL Lens	3	13093	3	0	2	84	13782	3	0	2	88	13966	3	0	2	90
				5W	13524	3	0	2	87	14235	3	0	2	91	14426	3	0	2	92

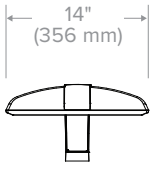
CRI Lumen Multiplier		
CCT	80 CRI	90 CRI
3000K	0.9119	0.7033
4000K	0.8941	N/A

Amber Multiplier	
CCT	Multiplier
5000K	1
AM	0.1727

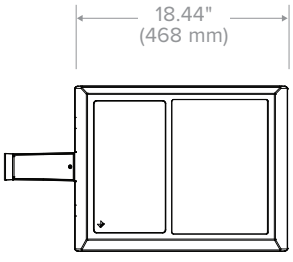
DIMENSIONS



Side View



Front View



Top View

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ALT1

ARCHITECTURAL AREA/SITE

PHOTOMETRY

ALT1-54L-155-4k7-FR

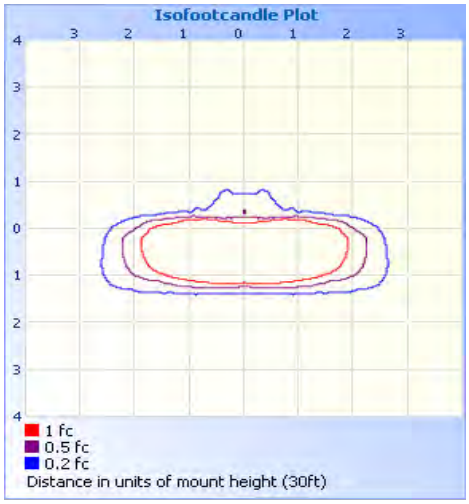
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**18208**
Watts	**156**
Efficacy	**116.7**
IES Type	**I**
BUG Rating	**B2-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	16101	88.4%
Downward House Side	2107	11.6%
Downward Total	18208	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	18208	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-2

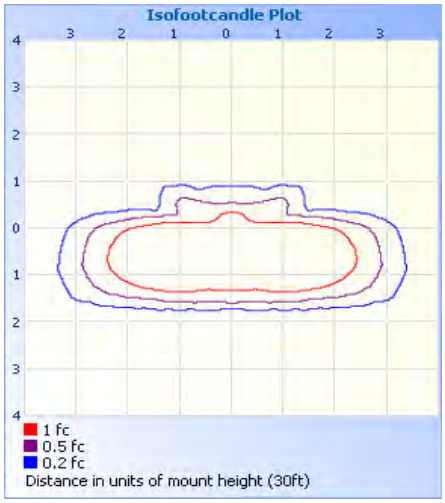
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17309**
Watts	**156**
Efficacy	**111.0**
IES Type	**II**
BUG Rating	**B2-U0-G3**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	14323	82.7%
Downward House Side	2986	17.3%
Downward Total	17309	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17309	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-3

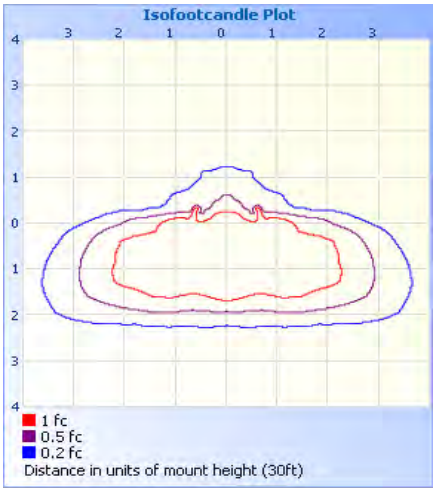
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17332**
Watts	**156**
Efficacy	**111.1**
IES Type	**III**
BUG Rating	**B2-U0-G3**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	14911	86.0%
Downward House Side	2421	14.0%
Downward Total	17332	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17332	100%

ISOFOOT CANDLE PLOT



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ARCHITECTURAL AREA/SITE

PHOTOMETRY

ALT1-54L-155-4k7-4

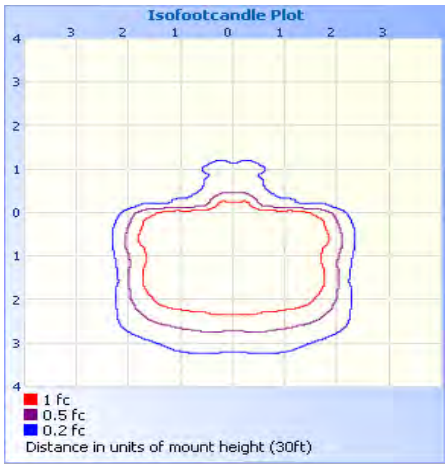
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17465**
Watts	**156**
Efficacy	**112.0**
IES Type	**IV**
BUG Rating	**B1-U0-G3**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	15757	90.2%
Downward House Side	1708	9.8%
Downward Total	17465	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17465	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-4W

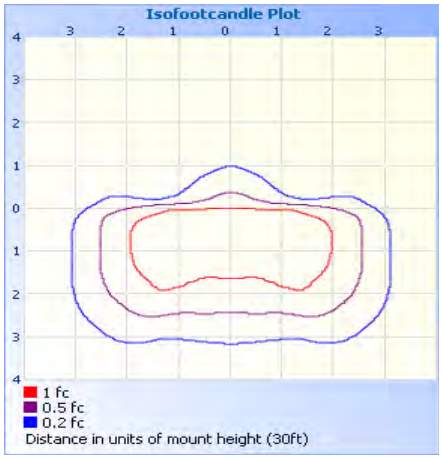
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17299**
Watts	**156**
Efficacy	**110.9**
IES Type	**IV**
BUG Rating	**B2-U0-G4**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	15320	88.6%
Downward House Side	1979	11.4%
Downward Total	17299	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17299	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-5R

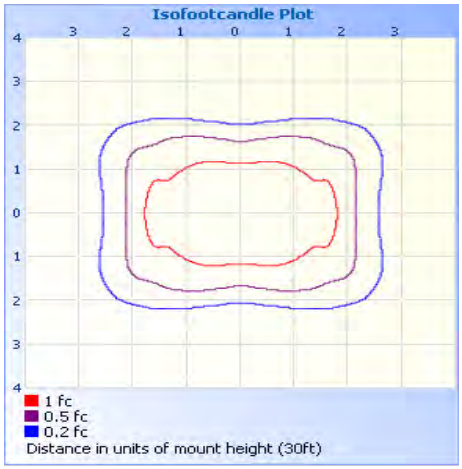
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17947**
Watts	**156**
Efficacy	**115.0**
IES Type	**III**
BUG Rating	**B4-U0-G4**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8974	50.0%
Downward House Side	8974	50.0%
Downward Total	17947	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17947	100%

ISOFOOT CANDLE PLOT



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ALT1

ARCHITECTURAL AREA/SITE

PHOTOMETRY

ALT1-54L-155-4k7-5QM

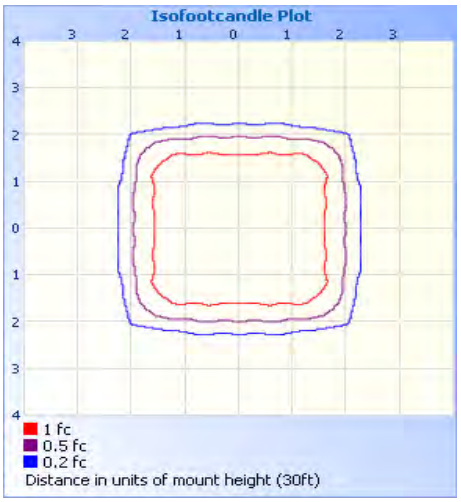
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**18173**
Watts	**156**
Efficacy	**116.5**
IES Type	**V**
BUG Rating	**B4-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	9087	50.0%
Downward House Side	9087	50.0%
Downward Total	18173	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	18173	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-5QN

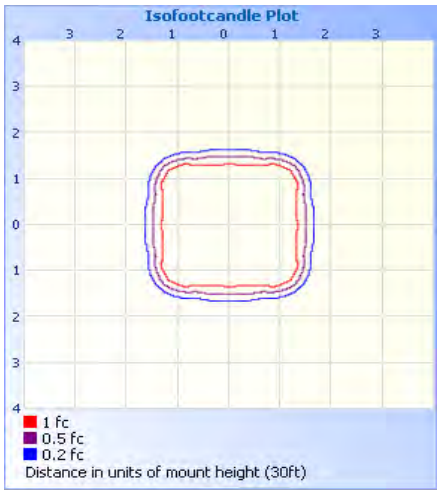
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**18219**
Watts	**156**
Efficacy	**116.8**
IES Type	**V**
BUG Rating	**B4-U0-G1**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	9110	50.0%
Downward House Side	9110	50.0%
Downward Total	18219	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	18219	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-5W

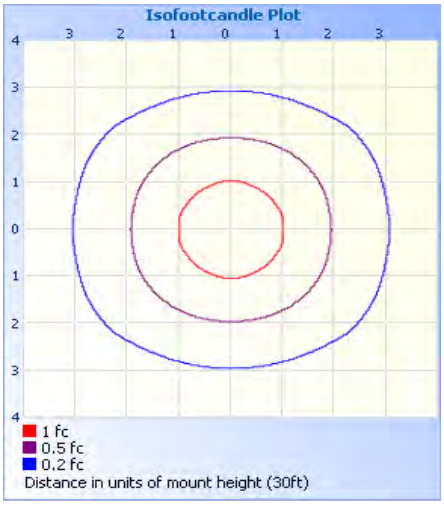
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17904**
Watts	**156**
Efficacy	**114.8**
IES Type	**V**
BUG Rating	**B4-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8952	50.0%
Downward House Side	8952	50.0%
Downward Total	17904	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17904	100%

ISOFOOT CANDLE PLOT



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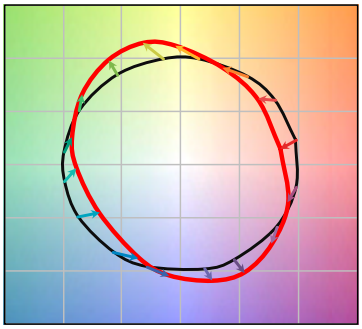
ARCHITECTURAL AREA/SITE

TM-30 DATA

COLOR VECTOR GRAPHIC

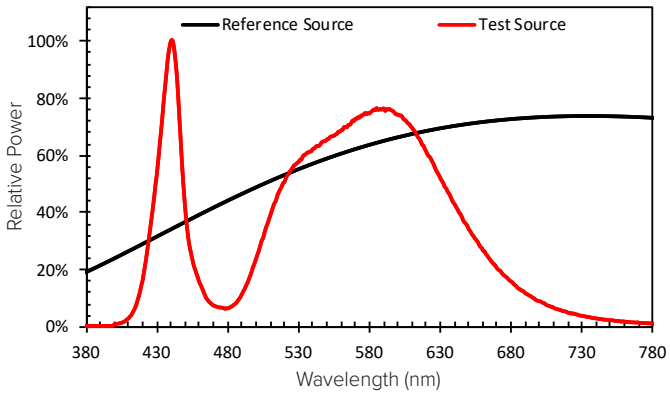


Reference Illuminant — Test Source

TEST SOURCE

R_f	68
R_g	99
CCT(K)	3947
D_{UV}	0.0004
x	0.3831
y	0.3793
CIE R_a	72

SPECTRAL POWER DISTRIBUTION COMPARISON



ELECTRICAL DATA

Electrical													Dimming			
# LED	System Watts	Drive Current	Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming Range	Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
28	22	250 mA	120-480	50/60	0.18	0.11	0.09	0.08	0.06	0.05	>0.9	20	10% to 100%	0mA	1mA	0V	10V
	38	400 mA			0.32	0.18	0.16	0.14	0.11	0.08							
	60	650 mA			0.50	0.29	0.25	0.22	0.17	0.13							
	86	950 mA			0.72	0.41	0.36	0.31	0.25	0.18							
54	94	550 mA			0.78	0.45	0.39	0.34	0.27	0.20							
	122	700 mA			1	0.59	0.51	0.44	0.35	0.25							
	156	900 mA			1.30	0.75	0.65	0.56	0.45	0.33							

TM-21 Lifetime Calculation - Projected Lumen Maintenance (25°C / 77°C)						
Hours	0	25,000	36,000	50,000	100,000	Reported L70
Projected Lumen Maintenance	100%	96.9%	95.3%	93.3%	86.6%	> 60,000

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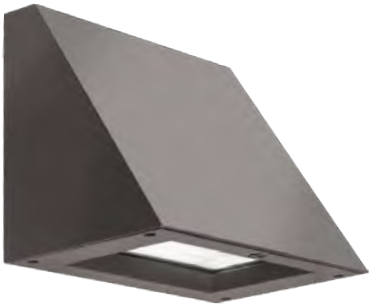


WDGE2 LED
Architectural Wall Sconce

Catalog Number

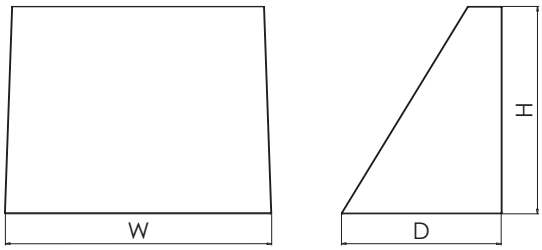
Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth: 7″
Height: 9″
Width: 11.5″
Weight: (without options) 13.5 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE2 delivers up to 6,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

WDGE LED Family Overview

Luminaire	Standard EM, 0°C	Cold EM, -20°C	Sensor	Lumens (4000K)					
				P1	P2	P3	P4	P5	P6
WDGE1 LED	4W	--	--	1,200	2,000	--	--	--	--
WDGE2 LED	10W	18W	Standalone / nLight	1,200	2,000	3,000	4,500	6,000	--
WDGE3 LED	15W	18W	Standalone / nLight	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	--	--	Standalone / nLight	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE2 LED P3 40K 80CRI VF MVOLT DDBXD

Series	Package		Color Temperature		CRI	Distribution		Voltage	Mounting	
WDGE2 LED	P1[1]	P1SW	27K	2700K	80CRI	VF	Visual comfort forward throw	MVOLT	**Shipped included**	**Shipped separately**
	P2[1]	P2SW	30K	3000K	90CRI	VW	Visual comfort wide	347[3]	SRM Surface mounting bracket	AWS 3/8inch Architectural wall spacer
	P3[1]	P3SW	35K	3500K				480[3]		BBW Surface-mounted back box
	P4[1]	Door with small window (SW) is required to accommodate sensors. See page 2 for more details.	40K	4000K						PBBW Premium surface-mounted back box (top, left, right conduit entry)
	P5[1]		50K[2]	5000K						

Options

E4WH	Emergency battery backup, CEC compliant (4W, 0°C min)
E10WH	Emergency battery backup, CEC compliant (10W, 5°C min)
E20WC	Emergency battery backup, CEC compliant (18W, -20°C min)
PE[4]	Photocell, Button Type
DS[5]	Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)
DMG[6]	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)
BCE	Bottom conduit entry for premium back box (PBBW). Total of 4 entry points.

Standalone Sensors/Controls (only available with P1SW, P2SW & P3SW)

PIR	Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.
PIRH	Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching
PIR1FC3V	Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.
PIRH1FC3V	Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.

Networked Sensors/Controls (only available with P1SW, P2SW & P3SW)

NLTAIR2 PIR	nLightAIR Wireless enabled bi-level motion/ambient sensor for 8-15' mounting heights.
NLTAIR2 PIRH	nLightAIR Wireless enabled bi-level motion/ambient sensor for 15-30' mounting heights.

See page 4 for out of box functionality

Finish

DDBXD	Dark bronze
DBLXD	Black
DNAXD	Natural aluminum
DWHXD	White
DSSXD	Sandstone
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white
DSSTXD	Textured sandstone

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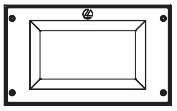
Accessories

Ordered and shipped separately.

WDGEAWS DDBXD U	WDGE 3/8inch Architectural Wall Spacer (specify finish)
WDGE2PBBW DDBXD U	WDGE2 Premium surface-mounted back box (specify finish)
WSBBW DDBXD U	Surface - mounted back box (specify finish)

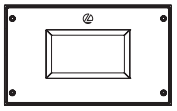
NOTES

1 P1-P5 not available with sensors/controls. Sensors/controls only available with P1SW, P2SW and P3SW.
2 50K not available in 90CRI
3 347V and 480V not available with E4WH, E10WH, E20WC or DS.
4 PE not available in 480V or with sensors/controls
5 DS option not available with E4WH, E10WH, E20WC or sensors/controls.
6 DMG option not available with sensors/controls



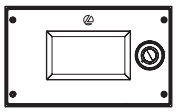
Default configuration with no sensors/controls.

Power Packages: P1, P2, P3, P4, P5



Small Window (SW) configuration

Power Packages: P1SW, P2SW, P3SW



Configuration with sensors/controls

Power Packages: P1SW, P2SW, P3SW

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	27K (2700K, 80 CRI)		30K (3000K, 80 CRI)		35K (3500K, 80 CRI)		40K (4000K, 80 CRI)		50K (5000K, 80 CRI)	
			Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
P1 / P1SW	10W	VF	1,166	119	1,209	123	1,251	128	1,256	128	1,254	128
		VW	1,197	122	1,241	126	1,284	131	1,289	131	1,286	131
P2 / P2SW	15W	VF	1,878	129	1,947	134	2,015	139	2,023	139	2,019	139
		VW	1,927	133	1,997	137	2,067	142	2,075	143	2,071	143
P3 / P3SW	23W	VF	2,908	129	3,015	134	3,119	138	3,132	139	3,126	139
		VW	2,983	132	3,093	137	3,200	142	3,213	143	3,206	142
P4	35W	VF	4,096	117	4,247	121	4,394	126	4,412	126	4,403	126
		VW	4,202	120	4,357	125	4,508	129	4,526	129	4,517	129
P5	48W	VF	5,567	115	5,772	119	5,972	123	5,996	124	5,984	124
		VW	5,711	118	5,921	122	6,127	126	6,151	127	6,139	127

Electrical Load

Performance Package	System Watts	Current (A)					
		120V	208V	240V	277V	347V	480V
P1 / P1SW	10W	0.082	0.049	0.043	0.038	--	--
	13W	--	--	--	--	0.046	0.033
P2 / P2SW	15W	0.132	0.081	0.072	0.064	--	--
	18W	--	--	--	--	0.056	0.041
P3 / P3SW	23W	0.195	0.114	0.100	0.088	--	--
	26W	--	--	--	--	0.079	0.058
P4	35W	0.302	0.175	0.152	0.134	--	--
	38W	--	--	--	--	0.115	0.086
P5	48W	0.434	0.241	0.211	0.184	--	--
	52W	--	--	--	--	0.157	0.119

Lumen Multiplier for 90CRI

CCT	Multiplier
27K	0.845
30K	0.867
35K	0.845
40K	0.885
50K	0.898

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.96	>0.95	>0.91

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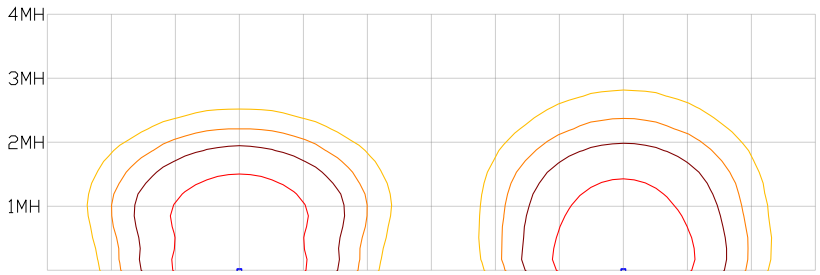
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting WDGE LED homepage. Tested in accordance with IESNA LM-79 and LM-80 standards.

LEGEND
- 0.25 fc
- 0.5 fc
- 1.0 fc
- 3.0 fc

MH = 10ft
Grid = 10ft x 10ft



WDGE2 LED P3 40K 80CRI VW

WDGE2 LED P3 40K 80CRI VF

Emergency Egress Options

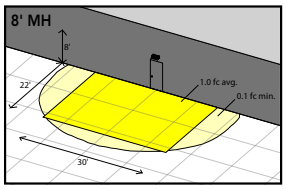
Emergency Battery Backup

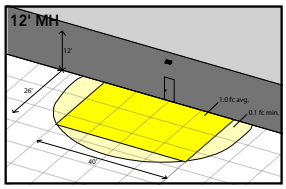
The emergency battery backup is integral to the luminaire — no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product. All emergency battery backup configurations include an independent secondary driver with an integral relay to immediately detect loss of normal power and automatically energize the luminaire. The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time normal power is lost and maintain a minimum of 60% of the light output at the end of 90minutes.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9

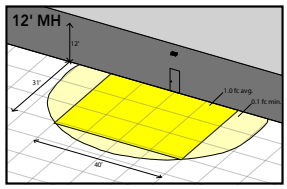
The examples below show illuminance of 1 fc average and 0.1 fc minimum in emergency mode with E10WH or E20WC and VF distribution.

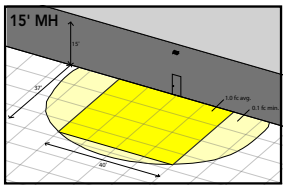
Grid = 10ft x 10ft





WDGE2 LED xx 40K 80CRI VF MVOLT E10WH



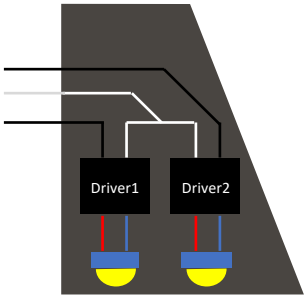


WDGE2 LED xx 40K 80CRI VF MVOLT E20WC

Dual Switching (DS) Option

The dual switching option offers operational redundancy that certain codes require. With this option the luminaire comes integrated with two drivers and two light engines. These work completely independent to each other so that a failure of any individual component does not cause the whole luminaire to go dark. This option is typically used with a back generator or inverter providing emergency power.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9



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Control / Sensor Options

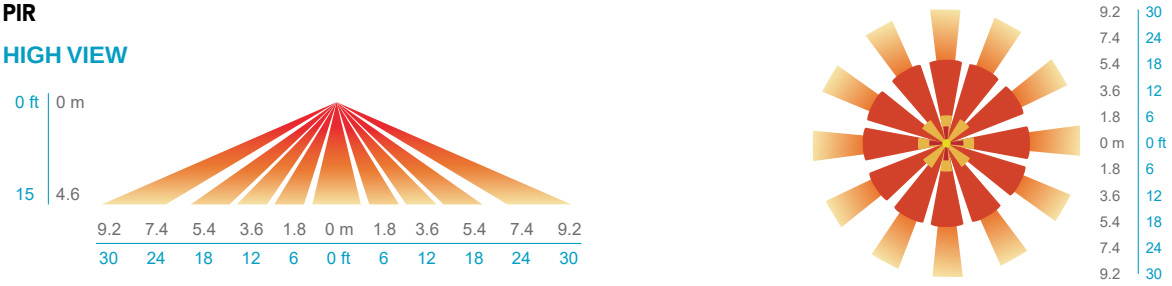
Motion/Ambient Sensor (PIR_, PIRH_)

Motion/Ambeint sensor (Sensor Switch MSOD) is integrated into the the luminaire. The sensor provides both Motion and Daylight based dimming of the luminaire. For motion detection, the sensor utilizes 100% Digital Passive Infrared (PIR) technology that is tuned for walking size motion while preventing false tripping from the environment. The integrated photocell enables additional energy savings during daytime periods when there is sufficient daylight. Optimize sensor coverage by either selecting PIR or PIRH option. PIR option comes with a sensor lens that is optimized to provide maximum coverage for mounting heights between 8-15ft, while PIRH is optimized for 15-40ft mounting height.

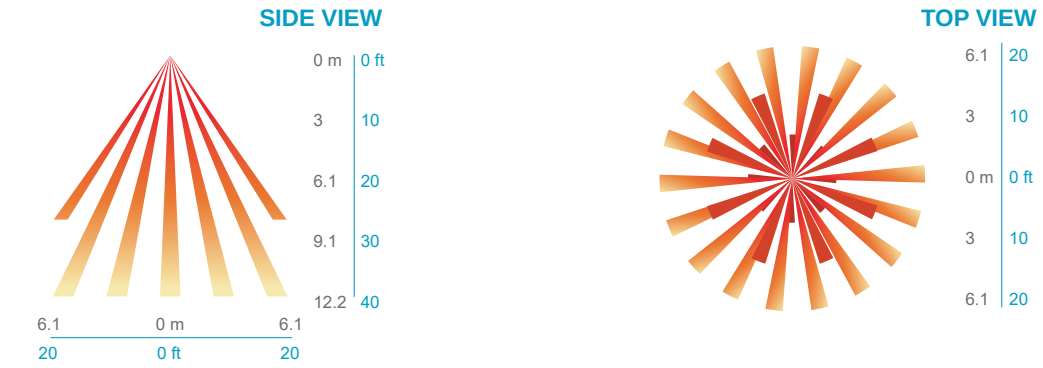
Networked Control (NLTAIR2)

nLight® AIR is a wireless lighting controls platform that allows for seamless integration of both indoor and outdoor luminaires. Five-tier security architecture, 900 MHz wireless communication and app (CLAIRITY™ Pro) based configurability combined together make nLight® AIR a secure, reliable and easy to use platform.

PIR



PIRH



Option	Dim Level	High Level (when triggered	Photocell Operation	Motion Time Delay	Ramp-down Time	Ramp-up Time
PIR or PIRH	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 5fc	5 min	5 min	Motion - 3 sec Photocell - 45 sec
PIR1FC3V, PIRH1FC3V	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 1fc	5 min	5 min	Motion - 3 sec Photocell - 45 sec
NLTAIR2 PIR, NLTAIR2 PIRH (out of box)	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 5fc	7.5 min	5 min	Motion - 3 sec Photocell - 45 sec

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Mounting, Options & Accessories

NLTAIR2 PIR – nLight AIR Motion/Ambient Sensor

D = 7″

H = 11″

W = 11.5″

PBBW – Premium Back Box

D = 1.75″

H = 9″

W = 11.5″

BBW – Standard Back Box

D = 1.5″

H = 4″

W = 5.5″

AWS – 3/8inch Architectural Wall Spacer

D = 0.38″

H = 4.4″

W = 7.5″

FEATURES & SPECIFICATIONS

INTENDED USE
Common architectural look, with clean rectilinear shape, of the WDGE LED was designed to blend with any type of construction, whether it be tilt-up, frame or brick. Applications include commercial offices, warehouses, hospitals, schools, malls, restaurants, and other commercial buildings.

CONSTRUCTION
The single-piece die-cast aluminum housing integrates secondary heat sinks to optimize thermal transfer from the internal light engine heat sinks and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP66 rating for the luminaire.

FINISH
Exterior painted parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS
Well crafted reflector optics allow the light engine to be recessed within the luminaire, providing visual comfort, superior distribution, uniformity, and spacing in wall-mount applications. The WDGE LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine consists of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L91/100,000 hours at 25°C). The electronic driver has a power factor of >90%, THD <20%. Luminaire comes with built in 6kV surge protection, which meets a minimum Category C low exposure (per ANSI/IEEE C62.41.2).

INSTALLATION
A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The 3/8″ Architectural Wall Spacer (AWS) can be used to create a floating appearance or to accommodate small imperfections in the wall surface.

LISTINGS
CSA certified to U.S. and Canadian standards. Luminaire is IP66 rated. PIR options are rated for wet location. Rated for -40°C minimum ambient.
DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY
5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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BLADE

Vandal Resistant

BLD LED

WALL MOUNT /
MULLION MOUNT LED

Fixture Type

Date

Job Name

Approved By

Catalog Number

SPECIFICATIONS

Description The Blade combines a sleek, patent pending design shaped with high performance, full cut off optics to achieve unobtrusive illumination of a space or path of egress. When mounted overa doorway or mullion, the fixture is perceived as an element of the building structure, and, additionally, provides water protection in the form of a drip cap over the entranceway. Multiple lengths are available to match a given door opening and our quick-mount system facilitates installation and maintenance.

Housing Marine grade heat treated extruded aluminum.
Chemically primed and finished with robotically applied polyester powder coat.

Wall Mount Marine grade heat treated extruded aluminum. Chemically primed and finished with robotically applied polyester powder coat. Designed to provide quick mounting to housing and secured with (2) captive stainless steel TORX® head screws.

Lens Frame Marine grade heat treated extruded aluminum.
Secured to fixture (4) captive stainless steel TORX® head screws.

Lens UV stabilized diffused extruded polycarbonate.

End Plate Die-cast marine grade aluminum.
Chemically primed and finished with robotically applied polyester powder coat.

Drivers Constant current drivers at 700mA.

LED Samsung LM561B+ Series @ 2700K, 3000K, 3500K, 4000K, or 5000K and 82 CRI wired in parallel-series. L_{70} projected life of 130,000 hours at 50ºC. Tested in accordance with LM-80. Ten year warranty on LED boards against operational defects.

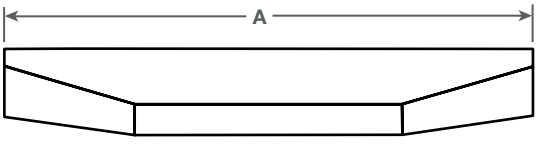
Gaskets Closed cell self-adhesive neoprene to provide watertight seal between fixture and mounting surface.

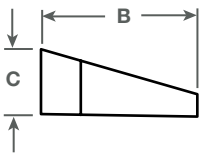
UL Listing U.L., C.UL., Wet standard.

Lifetime Warranty Luminaire LED Incorporated will repair or replace any fixture damaged due to vandalism for the lifetime of the installation.

DIMENSIONAL DATA

	A	B	C
BLD 12	20.0”	5.6”	2.4”
BLD 24	30.8”	5.6”	2.4”
BLD 36	41.6”	5.6”	2.4”
BLD 48	52.4”	5.6”	2.4”
BLD 72	74.0”	5.6”	2.4”





Luminaire Led
a division of the LUMINAIRES GROUP

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www.luminaireled.net
P. 732.549.0056

Luminaire LED Incorporated products are manufactured in the USA with components purchased from USA suppliers, and meet the Buy American requirements under the ARRA. Content of specification sheets is subject to change; please consult our website for current product information.

Rev: 03/19+

ORDERING INFORMATION

SERIES	LED	CCT	VOLTS	DRIVER	LENS	COLOR	OPTIONS		TX/SD
									TX/SD
BLD 12	5W	2700K	120-277	CC	DP	BLK	DIM	EMB10ST	
	10W	3000K		DIM		BRZ	2B	EMB310	
BLD 24	10W	3500K		PRD		SIL	PC	EMB310ST	
	20W	4000K				WHT	PC BT	EMB20R	
BLD 36	15W	5000K				CUST	GLR	EMB125R	
	30W						OCC	EMB250R	
BLD 48	20W						OCC50	EMBDA	
	35W						KO	ST/SC	
BLD 72	30W								
	55W								
	PRD - Specify Watts or Lumens Above								

CC = Constant Current (Standard)
DIM = 0-10V Dimming, 10% at lowest level
PRD = Programmable driver. Specify Watts or Lumens under "LED" in Ordering Information. N/A with BLD 12.

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OPTIONS

LENS	DP = Diffused Polycarbonate.
COLORS	BLK = Black BRZ = Bronze SIL = Silver WHT = White CUST = Custom Color (Consult Factory)
DIM	0-10V dimming driver. 10% at lowest level. N/A with BLD 12.
PC	Photoelectric switch. N/A with 2B option or any EMB options.
PC BT	Bluetooth connected daylight harvesting photocell mounted in machine hole in lens frame. Optional passive infrared occupancy sensor. N/A with EMB options in BLD 12, BLD24, and BLD36.
2B	(2) LED drivers for independent LED board operation. N/A with BLD 12, N/A with OCC options, N/A with EMB310, N/A with EMB310ST.
GLR	Fuse and fuse holder.
OCC	Passive infrared sensor mounted in machine hole in lens frame for on/off operation. Maximum coverage of 10' radius from 8' height. N/A with BLD 12.
OCC50	Passive infrared sensor mounted in machine hole in lens frame. 50% of LED's constantly on and 50% sensored. N/A with BLD 12 and BLD 24.
KO	1/2" knock out in both end plates.
EMB10ST	1000 lumen self-testing, self-contained, 90 minute emergency battery pack. 0ºC (32ºF) to 55ºC (131ºF). Not available in 347V. Available for BLD24, BLD36, BLD48, and BLD72 lengths only. N/A with 2B option in BLD24. Meets CA Title 20 Standards.
EMB310	1000 lumen self-contained, 90 minute emergency battery pack. 0ºC (32ºF) to 55ºC (131ºF). Available for BLD36, BLD48, and BLD72 lengths only. Meets CA Title 20 standards.
EMB310ST	1000 lumen self-testing, self-contained, 90 minute emergency battery pack. 0ºC (32ºF) to 55ºC (131ºF). Available for BLD36, BLD48, and BLD72 lengths only. Meets CA Title 20 Standards.
EMB20R	Remote mounted micro inverter that will operate a 25W maximum load for 90 minutes. 0ºC (32ºF) to 45ºC (113ºF).
EMB125R	Remote inverter that will operate a 125W maximum load for 90 minutes. 20ºC (68ºF) to 30ºC (86ºF). Not available in 347V.
EMB250R	Remote inverter that will operate a 250W maximum load for 90 minutes. 20ºC(68ºF) to 30ºC (86ºF). Not available in 347V.
EMBDA	Two drivers and two emergency battery packs self-contained within fixture for independent light engine operation. Each battery pack will operate each light engine for a minimum of 90 minutes. Available in the BLD 72 only.
ST/SC	Slotted screws instead of TORX® head.
TX/SD	TORX® head bit.

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5 Sutton Place
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Edison, NJ 08818

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P. 732.549.0056

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PHOTOMETRIC DATA

Model	Watts	Input Watts		Delivered Lumens									
				2700K		3000K		3500K		4000K		5000K	
BLD 12	5W	6.5W		447		452		461		476		490	
BLD 12	10W	11.8W		875		885		903		931		958	
BLD 24	10W	10.6W		962		973		993		1024		1055	
BLD 24	20W	21.3W		1885		1907		1946		2006		2066	
BLD 36	15W	14.7W		1444		1461		1491		1537		1583	
BLD 36	30W	29.6W		2828		2860		2919		3009		3099	
BLD 48	20W	19.6W		1926		1948		1987		2049		2111	
BLD 48	35W	36.4W		3770		3812		3890		4011		4132	
BLD 72	30W	29.4W		2969		3003		3064		3159		3254	
BLD 72	55W	57.1W		5789		5855		5974		6184		6345	
BLD xx	PRD			Programmable Driver. Must specify Watts or Lumens in Ordering Information.									

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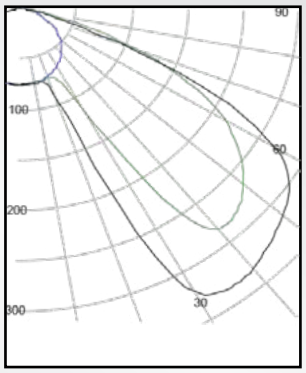
MODEL: BLD12-5W-4000K
Delivered Lumens: 476 Lumens

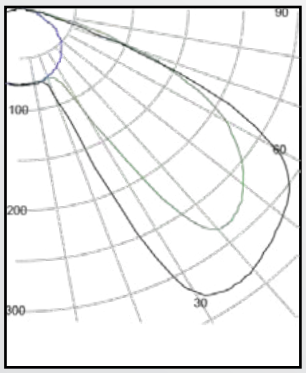


IES FILE: BLD12-5W-4000K
Total Power: 7W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B0U0G1

Zone	Lumens	% Luminaire
0 - 30	69	14.5
0 - 40	149	31.1
0 - 60	359	75.5
60 - 90	117	24.5
0 - 90	476	100.0
90 -180	0	0.0
0 - 180	476	100.0

MODEL: BLD36-15W-4000K
Delivered Lumens: 1537 Lumens

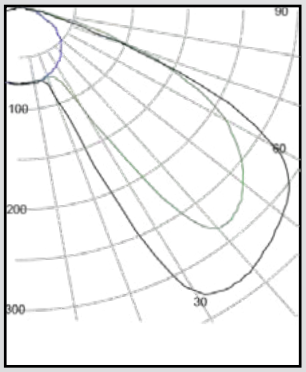


IES FILE: BLD36-15W-4000K
Total Power: 14.7W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B0U0G1

Zone	Lumens	% Luminaire
0 - 30	377	124.5
0 - 40	640	41.6
0 - 60	1219	79.3
60 - 90	317	20.7
0 - 90	1537	100.0
90 -180	0	0.0
0 - 180	1537	100.0

MODEL: BLD36-30W-4000K
Delivered Lumens: 3009 Lumens



IES FILE: BLD36-30W-4000K
Total Power: 29.6W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B1U0G1

Zone	Lumens	% Luminaire
0 - 30	739	24.6
0 - 40	1253	41.6
0 - 60	2387	79.3
60 - 90	622	20.7
0 - 90	3009	100.0
90 -180	0	0.0
0 - 180	3009	100.0

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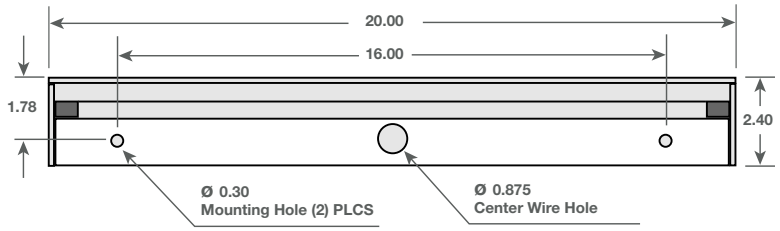
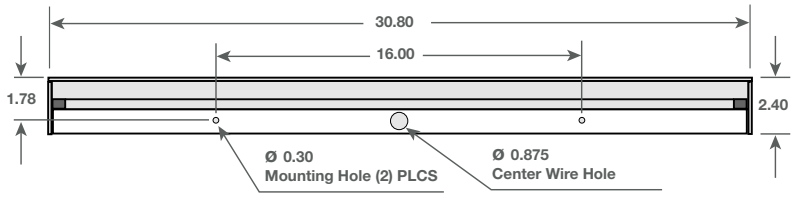
MOUNTING DETAIL

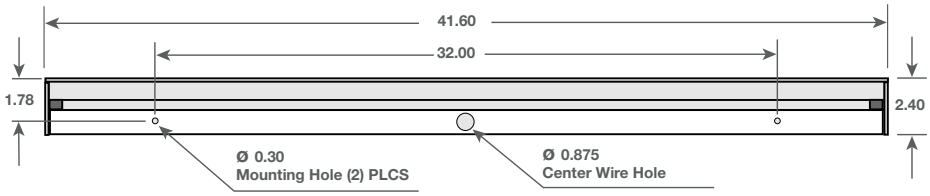
BLD12



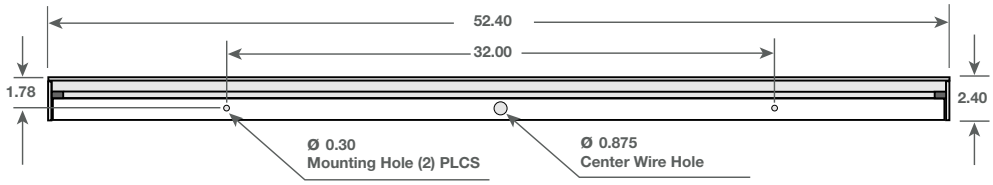
BLD24



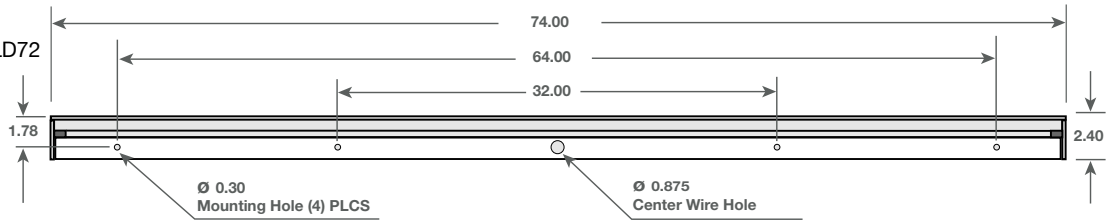
BLD36



BLD48



BLD72



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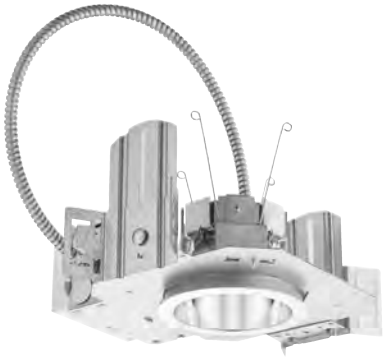
Rev: 03/19+

LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

LDN4

4" OPEN
Non-IC
New Construction Downlight



FEATURES & SPECIFICATIONS

INTENDED USE — Typical applications include corridors, lobbies, conference rooms and private offices.

CONSTRUCTION — Galvanized steel mounting/plaster frame; galvanized steel junction box with bottom-hinged access covers and spring latches. Reflectors are retained by torsion springs.

Vertically adjustable mounting brackets with commercial bar hangers provide 3-3/4" total adjustment.

Two combination 1/2"-3/4" and four 1/2" knockouts for straight-through conduit runs. Capacity: 8 (4 in, 4 out). No. 12 AWG conductors, rated for 90°C.

Accommodates 12"-24" joist spacing.

Passive cooling thermal management for 25°C standard; high ambient (40°C) option available. Light engine and drivers are accessible from above or below ceiling.

Max ceiling thickness 1-1/2".

OPTICS — LEDs are binned to a 3-step SDCM; 80 CRI minimum. 90 CRI optional.

LED light source concealed with diffusing optical lens.

General illumination lighting with 1.0 S/MH and 55° cutoff to source and source image.

Self-flanged anodized reflectors in specular, semi-specular, or matte diffuse finishes. Also available in white and black painted reflectors.

ELECTRICAL — Multi-volt (120-277V, 50/60Hz) 0-10V dimming drivers mounted to junction box, 10% or 1% minimum dimming level available.

0-10V dimming fixture requires two (2) additional low-voltage wires to be pulled.

70% lumen maintenance at 60,000 hours.

LISTINGS — Certified to US and Canadian safety standards. Wet location standard (covered ceiling). IP55 rated. ENERGY STAR® certified product.

WARRANTY — 5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

battery pack

A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: LDN4 35/15 LO4AR LSS MVOLT EZ1

LDN4													
Series		**Color temperature**		**Lumens**[1]		**Aperture/Trim Color**				**Finish**		**Voltage**	
LDN4	4" round	27/	2700K	05	500 lumens	LO4	Downlight	AR	Clear	LSS	Semi-specular	MVOLT	Multi-volt
		30/	3000K	07	750 lumens	LW4	Wallwash	WR[2]	White	LD	Matte diffuse	120	120V
		35/	3500K	10	1000 lumens			BR[2]	Black	LS	Specular	277	277V
		40/	4000K	15	1500 lumens							347[3]	347V
		50/	5000K	20	2000 lumens								
				25	2500 lumens								
				30	3000 lumens								
				40	4000 lumens								

Driver		**Options**			
GZ10	0-10V driver dims to 10%	SF[4]	Single fuse	N80[8]	nLight™ Lumen Compensation
GZ1	0-10V driver dims to 1%	TRW[6]	White painted flange	NPS80EZ[7,10]	nLight® dimming pack controls 0-10V eldoLED drivers (EZ10, EZ1).
EZ10	0-10V eldoLED driver with smooth and flicker-free deep dimming performance down to 10%	TRBL[6]	Black painted flange	NPS80EZER[7,10]	nLight® dimming pack controls 0-10V eldoLED drivers (EZ10, EZ1). ER controls fixtures on emergency circuit.
EZ1	0-10V eldoLED driver with smooth and flicker-free deep dimming performance down to 1%	EL[5]	Emergency battery pack with integral test switch. 10W Constant Power, Not Certified in CA Title 20 MAEDBS	HAO[11]	High ambient option (40°C)
		ELR[5]	Emergency battery pack with remote test switch. 10W Constant Power, Not Certified in CA Title 20 MAEDBS	CP[12]	Chicago Plenum
		ELSD[5]	Emergency battery pack with self-diagnostics, 10W Constant Power, integral test switch. Not Certified in CA Title 20 MAEDBS	RRL__	RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature. Available only in RRLA, RRLB, RRLAE, and RRLC12S.
		ELRSD[5]	Emergency battery pack with self-diagnostics, 10W Constant Power, remote test switch. Not Certified in CA Title 20 MAEDBS	NLTAIR2[8,9]	nLight® Air enabled
		E10WCP[5]	Emergency battery pack, 10W Constant Power with integral test switch. Certified in CA Title 20 MAEDBS	NLTAIRER2[9,10]	nLight® AIR Dimming Pack Wireless Controls. Controls fixtures on emergency circuit, not available with battery pack options
		E10WCPR[5]	Emergency battery pack, 10W Constant Power with remote test switch. Certified in CA Title 20 MAEDBS	USPOM	US point of manufacture
		NPP16D[7,10]	nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1).	90CRI	High CRI (90+)
		NPP16DER[7,10]	nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1). ER controls fixtures on emergency circuit.		

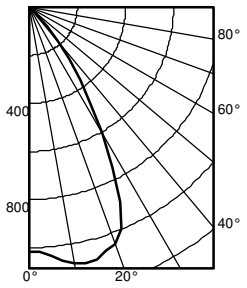
Notes

1 Overall height varies based on lumen package; refer to dimensional chart on page 3.
2 Not available with finishes.
3 Not available with emergency options.
4 Must specify voltage 120V or 277V.
5 12.5" of plenum depth or top access required for battery pack maintenance.
6 Available with clear (AR) reflector only.
7 Specify voltage. ER for use with generator supply EM power. Will require an emergency hot feed and normal hot feed.
8 Fixture begins at 80% light level. Must be specified with NPS80EZ or NPS80EZ ER. Only available with EZ10 and EZ1 drivers.
9 Not available with CP, NPS80EZ, NPS80EZER, NPP16D, NPP16DER or N80 options.
10 NLTAIR2 and NLTAIRER2 not recommended for metal ceiling installations.
11 Fixture height is 5-11/16" for all lumen packages with HAO.
12 Must specify voltage for 3000lm. Not available with emergency battery pack option.

PHOTOMETRY

Distribution Curve | **Distribution Data** | **Output Data** | **Coefficient of Utilization** | **Illuminance Data at 30" Above Floor for a Single Luminaire**

LDN4 35/10 LO4AR, input watts: 10.58, delivered lumens: 1085.2, LM/W = 102.57, spacing criterion at 0= 1.04, test no. ISF 30712P229.



	Ave	Lumens
0	1017	
5	1039	101
15	1084	304
25	895	395
35	369	232
45	52	51
55	1	2
65	1	1
75	0	0
85	0	0
90	0	

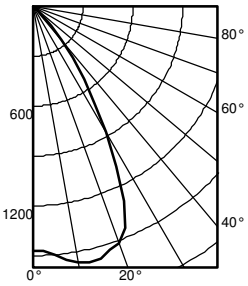
Zone	Lumens	% Lamp
0° - 30°	799.7	73.7
0° - 40°	1031.5	95.1
0° - 60°	1084.7	100.0
0° - 90°	1085.2	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	1085.2	*100.0

*Efficiency

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	111	108	106	109	107	105	105	103	101
2	103	99	96	102	98	95	98	95	93
3	96	92	88	95	91	87	92	89	86
4	90	85	81	89	84	80	87	83	79
5	85	79	75	84	78	74	82	77	74
6	79	73	69	79	73	69	77	72	68
7	75	69	64	74	68	64	73	68	64
8	70	64	60	70	64	60	69	63	60
9	66	60	56	66	60	56	65	60	56
10	63	57	53	62	57	53	61	56	53

		50% beam - 55.6°		10% beam - 78.0°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	33.6	5.8	16.8	8.9	3.4
10.0	18.1	7.9	9.0	12.2	1.8
12.0	11.3	10.0	5.6	15.4	1.1
14.0	7.7	12.1	3.8	18.6	0.8
16.0	5.6	14.2	2.8	21.9	0.6

LDN4 35/15 LO4AR, input watts: 17.5, delivered lumens: 1570.1, LM/W = 89.72, spacing criterion at 0= 1.04, test no. ISF 30712P234.



	Ave	Lumens
0	1472	
5	1503	146
15	1569	440
25	1295	571
35	534	335
45	75	74
55	1	3
65	1	1
75	0	0
85	0	0
90	0	

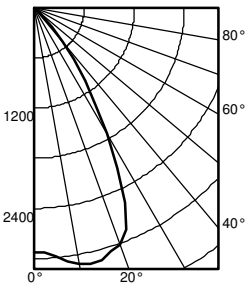
Zone	Lumens	% Lamp
0° - 30°	1157.1	73.7
0° - 40°	1492.5	95.1
0° - 60°	1569.4	100.0
0° - 90°	1570.1	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	1570.1	*100.0

*Efficiency

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	111	108	106	109	107	105	105	103	101
2	103	99	96	102	98	95	98	95	93
3	96	92	88	95	91	87	92	89	86
4	90	85	81	89	84	80	87	83	79
5	85	79	75	84	78	74	82	77	74
6	79	73	69	79	73	69	77	72	68
7	75	69	64	74	68	64	73	68	64
8	70	64	60	70	64	60	69	63	60
9	66	60	56	66	60	56	65	60	56
10	63	57	53	62	57	53	61	56	53

		50% beam - 55.6°		10% beam - 78.0°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	48.7	5.8	24.3	8.9	4.9
10.0	26.2	7.9	13.1	12.2	2.6
12.0	16.3	10.0	8.2	15.4	1.6
14.0	11.1	12.1	5.6	18.6	1.1
16.0	8.1	14.2	4.0	21.9	0.8

LDN4 35/30 LO4AR, input watts: 32.1, delivered lumens: 3122.6, LM/W = 88.52, spacing criterion at 0= 1.04, test no. ISF 30712P249.



	Ave	Lumens
0	2927	
5	2989	290
15	3120	875
25	2575	1136
35	1062	667
45	149	148
55	3	5
65	2	1
75	0	0
85	0	0
90	0	

Zone	Lumens	% Lamp
0° - 30°	2301.2	73.7
0° - 40°	2968.2	95.1
0° - 60°	3121.1	100.0
0° - 90°	3122.6	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	3122.6	*100.0

*Efficiency

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	111	108	106	109	107	105	105	103	101
2	103	99	96	102	98	95	98	95	93
3	96	92	88	95	91	87	92	89	86
4	90	85	81	89	84	80	87	83	79
5	85	79	75	84	78	74	82	77	74
6	79	73	69	79	73	69	77	72	68
7	75	69	64	74	68	64	73	68	64
8	70	64	60	70	64	60	69	63	60
9	66	60	56	66	60	56	65	60	56
10	63	57	53	62	57	53	61	56	53

		50% beam - 55.6°		10% beam - 78.0°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	96.8	5.8	48.4	8.9	9.7
10.0	52.0	7.9	26.0	12.2	5.2
12.0	32.4	10.0	16.2	15.4	3.2
14.0	22.1	12.1	11.1	18.6	2.2
16.0	16.1	14.2	8.0	21.9	1.6

Accessories: *Order as separate catalog numbers (shipped separately).*

SCA4	Sloped ceiling adapter. Degree of slope must be specified (5D, 10D, 15D, 20D, 25D, 30D). Refer to TECH-190.

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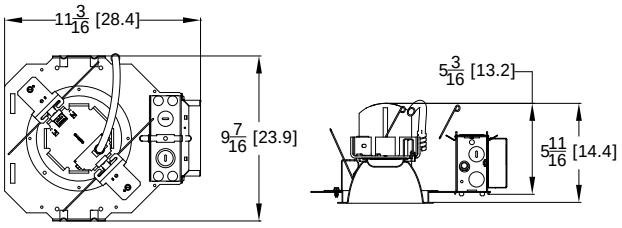
LDN4

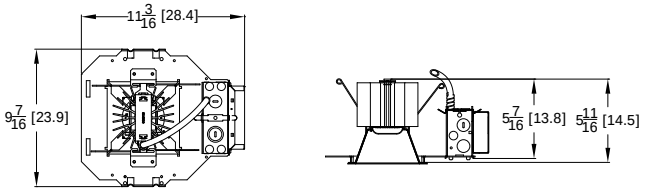
* All dimensions are inches (centimeters) unless otherwise noted.

LDN4 500-1500 LUMEN



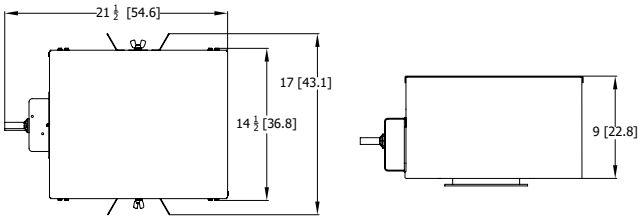
Aperture: 4-5/16 (11)
Ceiling Opening: 5-1/8 (13)
Overlap trim: 5-7/16 (13.8)

LDN4 2000-3000 LUMEN



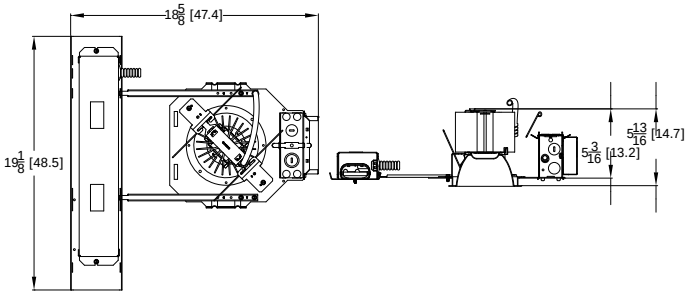
Aperture: 4-5/16 (11) Square
Ceiling Opening: 5-1/8 (13) Square
Overlap trim: 5-7/16 (13.8) Square

LDN4 CP



Aperture: 4-5/16? (11)
Ceiling Opening: 5-1/8? (13)
Overlap trim: 5-7/16? (13.8)

LDN4 EL-ELR



Aperture: 4-5/16 (11)
Ceiling Opening: 5-1/8 (13)
Overlap trim: 5-7/16 (13.8)

LDN4			
Nominal	**Lumens**	**Wattage**	**Lm/W**
500	523.6	5.74	91.2
750	751.1	8.6	87.3
1000	1045	10.58	98.8
1500	1512	17.5	86.4
2000	2006	22.12	90.7
2500	2551	26.1	97.7
3000	3007	32.1	93.7
4000	4212	43	98.0

LUMEN OUTPUT MULTIPLIERS - CCT					
	2700K	**3000K**	**3500K**	**4000K**	**5000K**
80CRI	0.950	0.966	1.000	1.025	1.101

HOW TO ESTIMATE DELIVERED LUMENS IN EMERGENCY MODE

Use the formula below to estimate the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

P = Ouput power of emergency driver. P = 10W for PS1055CP

LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.
The LPW rating is also available at Designlight Consortium.

LUMEN OUTPUT MULTIPLIERS - FINISH			
	Clear (AR)	**White (WR)**	**Black (BR)**
Specular (LS)	1.0	N/A	N/A
Semi-specular (LSS)	0.950	N/A	N/A
Matte diffuse (LD)	0.85	N/A	N/A
Painted	N/A	0.87	0.73

Notes

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 80 typical.

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ADDITIONAL DATA

COMPATIBLE 0-10V WALL-MOUNT DIMMERS		
MANUFACTURER	PART NO.	POWER BOOSTER AVAILABLE
Lutron®	Diva® DVTV	
	Diva® DVSCTV	
	Nova T® NTFTV	
	Nova® NFTV	
Leviton®	AWSMT-7DW	CN100
	AWSMG-7DW	PE300
	AMRMG-7DW	
	Leviton Centura Fluorescent Control System	
	IllumaTech® IP7 Series	
Synergy®	ISD BC	RDMFC
	SLD LPCS	
	Digital Equinox (DEQ BC)	
Douglas Lighting Controls	WPC-5721	
Entertainment Technology	Tap Glide TG600FAM120 (120V)	
	Tap Glide Heatsink TGH1500FAM120 (120V)	
	Oasis 0A2000FAMU	
Honeywell	EL7315A1019	EL7305A1010 (optional)
	EL7315A1009	
HUNT Dimming	Preset slide: PS-010-IV and PS-010-WH	
	Preset slide: PS-010-3W-IV and PS-010-3W-WH	
	Preset slide, controls FD-010: PS-IFC-010-IV and PS-IFC-010-WH-120/277V	
	Preset slide, controls FD-010: PS-IFC-010-3W-IV and PS-IFC-010-3W-WH-120/277V	
	Remote mounted unit: FD-010	
Lehigh Electronic Products	Solitaire	PBX
PDM Electrical Products	WPC-5721	
Starfield Controls	TR61 with DALI interface port	RT03 DALInet Router
WattStopper®	LS-4 used with LCD-101 and LCD-103	

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a shaded background*
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

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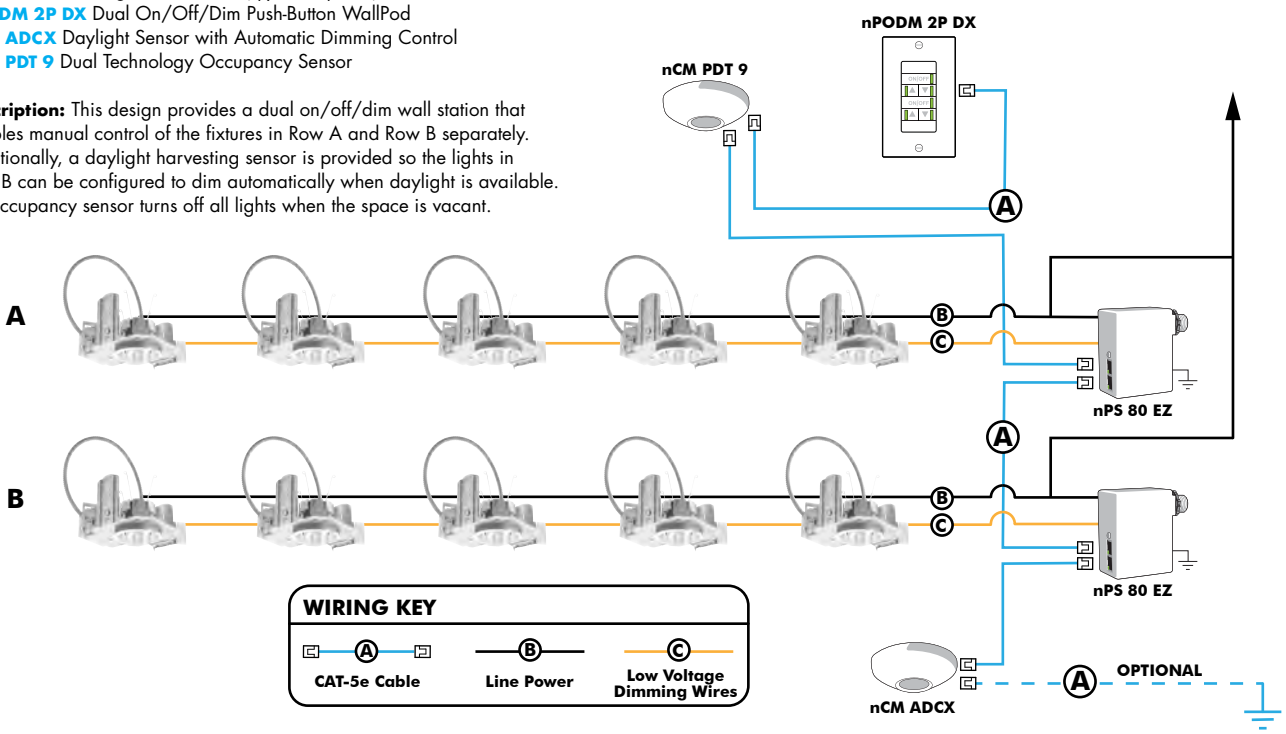
LDN4

EXAMPLE
Group Fixture Control*
*Appiication diagram applies for fixtures with eldoLED drivers only.

nPS 80 EZ Dimming/Control Pack (qty: 2 required)
nPODM 2P DX Dual On/Off/Dim Push-Button WallPod
nCM ADCX Daylight Sensor with Automatic Dimming Control
nCM PDT 9 Dual Technology Occupancy Sensor

Description: This design provides a dual on/off/dim wall station that enables manual control of the fixtures in Row A and Row B separately. Additionally, a daylight harvesting sensor is provided so the lights in Row B can be configured to dim automatically when daylight is available. An occupancy sensor turns off all lights when the space is vacant.



Choose Wall Controls
nLight offers multiple styles of wall controls - each with varying features and user experience.

Push-Button Wallpod
Traditional tactile buttons and LED user feedback

Graphic Wallpod
Full color touch screen provides a sophisticated look and feel

nLight® Wired Controls Accessories:			
Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlight for complete listing of nLight controls.			
WallPod Stations	**Model number**	**Occupancy sensors**	**Model Number**
On/Off	nPODM (Color)	Small motion 360º, ceiling (PIR/dual Tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPOD DX (Color)	Large motion 360º, ceiling (PIR/dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX (Color)	Wide View (PIR/dual tech)	nWV 16 / nWV PDT 16
Photocell controls	**Model Number**	Wall Switch w/ Raise/Lower (PIR/dual tech)	nWSX LV DX / nWSX PDT LV DX
Dimming	nCM ADCX	**Cat-5 cables (plenum rated)**	**Model Number**
		10', CAT5 10FT	CAT5 10FT J1
		15, CAT5 15FT	CAT5 15FT J1

nLight® AIR Control Accessories: *Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlightair.*	
Wall switches	**Model number**
On/Off single pole	rPODB [color]
On/Off two pole	rPODB 2P [color]
On/Off & raise/lower single pole	rPODB DX [color]
On/Off & raise/lower two pole	rPODB 2P DX [color]
On/Off & raise/lower single pole	rPODBZ DX WH[1]

Notes
1 Can only be ordered with the RES7Z zone control sensor version.

nLight AIR
nLight AIR is the ideal solution for retrofit or new construction spaces where adding communication is cost prohibitive. The integrated nLight AIR rPP20 Power Pack is part of each Lithonia LDN Luminaire. These individually addressable controls offer the ultimate in flexibility during initial setup and for space repurposing.

Simple as 1,2,3

1. Install the nLight® AIR fixtures with embedded smart sensor
2. Install the wireless battery-powered wall switch
3. With CLAIRITY app, pair the fixtures with the wall switch and if desired, customize the sensor settings for the desired outcome

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JOB _____ TYPE _____

NOTES _____ APPROVALS _____

FEATURES

- 20" size in post top, pole and wall mount
- High performance optics up to 17,000 delivered lumens
- Elegant form factor
- Diffusion lens option
- SiteSync™ wireless control options

CERTIFICATIONS

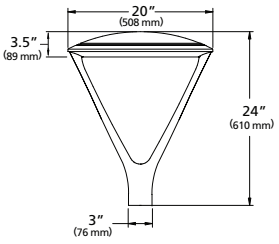
c UL us LISTED

3000K and warmer CCTs only

SPECIFICATIONS

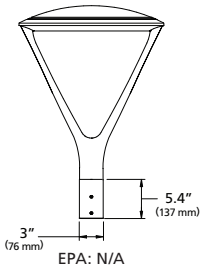
Weight: 35 lbs

FM33



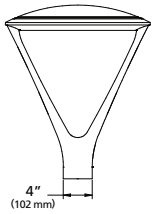
EPA: .512

PT23



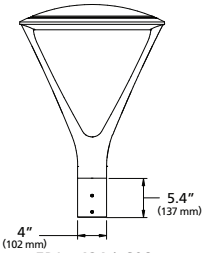
EPA: N/A

FM44



EPA: .534

PT24 / PT34



EPA: .424 / .608

ORDERING CODE

Series	LED Engine	CCT	Distribution	Rotation	Voltage	Mounting
UR20 Ouro	No Lens or Clear Lens	**AM** Amber	No Lens or Clear Lens	Blank for no rotation	**UNV** 120-277V	**FM33** Flush mt 3.0" OD pole, 3" fixture base
	24L-25 3,000 lm	**3K7** 3000K, 70 CRI	**FR** Type 1/Front Row	**L**[1] Optic rotation left	**347** 347V	**FM44** Flush mt 3.6" to 4.0" OD pole, 4" fixture base
	24L-65 7,000 lm	**3K8** 3000K, 80 CRI	**2** Type II	**R**[1] Optic rotation right	**480** 480V	**PT23** 3" Post Top mount for 2 3/8" OD Tenon
	56L-75 10,000 lm	**3K9** 3000K, 90 CRI	**3** Type III		**DALI** 120-277V†	**PT24** 4" Post Top mount for 2 3/8" OD Tenon
	56L-110 15,000 lm	**4K7** 4000K, 70 CRI	**4** Type IV		†Consult factory	**PT34** 4" Post Top mount for 2 7/8" OD Tenon
	56L-140 17,000 lm	**4K8** 4000K, 80 CRI	**4W** Type IV Wide			
	HDL - High Diffusion Lens	**5K7** 5000K, 70 CRI	**5QM** Type V Square Medium			
	28L-30 3,000 lm		**5QN** Type V Square Narrow			
	28L-70 7,000 lm		**5R** Type V Rectangular			
	68L-80 9,000 lm		**5W** Type V Wide (Round)			
	68L-115 13,000 lm		HDL - High Diffusion Lens			
	68L-150 15,000 lm		**3** Type III/Asymmetric			
			5W Type V/Symmetric			

Fixture Finish	Control Options		Options	Control Accessories^
BL Black	**7PR-TL** 7 pin PCR with twist lock photocontrol	**SWPM-40F**[2,3,4,5] SiteSync with Sensor 9' to 40' MH	**BC**[6] Back-light Control	**SW7PR**[2,3] SiteSync with 7 pin PCR
DB Dark Bronze	**7PR-SC** 7 pin PCR with shorting cap	**WSP-40F-1**[2,5] Dimming Occ. Sensor for up to 40' MH, 120/277/347V	**SF** Single Fuse	**SWUSB** SiteSync Software on USB
LG Light Gray	**7PR** 7 pin PCR, wireless control enabled	**WSP-40F-2**[2,5] Dimming Occ. Sensor for up to 40' MH, 208/240V	**DF** Double Fuse	**SWTAB** SiteSync Windows® Tablet
GT Graphite	**AD-01**[2] AstroDIM: 50% output at midnight	**WSP-40F-3**[2,5] Dimming Occ. Sensor for up to 40' MH, 480V	**TB** Terminal Block	**SWBRG** SiteSync Wireless Bridge Node
PS Platinum Silver	**AD-02**[2] AstroDIM: 50% output midnight to 4 AM	**NXSPW14F**[2,5] NX Wireless, PIR Sensor, 14'	**CLR**[5] Clear Lens	**WIR-RME-L** wiSCAPE External Fixture Module
TT Titanium	**AD-03**[2] AstroDIM: 50% output 10PM	**NXSPW30F**[2,5] NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30'.	**TL** Tamper proof latch	**SCL-R** Occ. Sensor for Round Pole (up to 16' MH)
WH White	**AD-04**[2] AstroDIM: 50% output 10PM to 4AM	**NXSP14F**[2,5] NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14'		**SCL -S** Occ. Sensor for Square Pole (up to 16' MH)
CC Custom Color†	**NXWE** NX Wireless Enabled	**NXSP30F**[2,5] NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30'		**SCH-R** Occ. Sensor for Round Pole (16' to 30' MH)
†Consult factory	**SWP**[2,3,4] SiteSync Pre commission			**SCH-S** Occ. Sensor for Square Pole (16' to 30' MH)
				NXOFM-1R1D-UNV NX 7-pin Module
				^ Please refer to page 8 for ordering details

1 Not available with 5QM, 5QN, and 5W distributions.
2 Not available with other sensor or wireless control options.
3 Specify group and zone at time of order. See www.hubbelllighting.com/sitesync for more details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node.
4 Not available with 347V and 480V
5 24L & 56L only.
6 Not available with Type V distributions or HDL option.

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LUMINAIRE PERFORMANCE

LED #	Nominal Lumen Package	Nominal Wattage	Lens Options	Distribution	3000K					4000K					5000K				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
24L	3,000	25	No Lens	FR	2932	0	0	1	115	3119	0	0	1	123	3098	0	0	1	124
				FR-BC	1994	0	0	0	78	2121	0	0	0	83	2107	0	0	0	83
				2	2943	1	0	1	116	3099	1	0	1	122	3110	1	0	1	124
				2-BC	1724	0	0	1	68	1834	0	0	1	72	1822	0	0	1	72
				3	3007	1	0	1	118	3200	1	0	1	126	3178	1	0	1	127
				3-BC	1830	0	0	1	73	1947	0	0	1	78	1934	0	0	1	77
				4	3056	0	0	1	120	3251	0	0	1	128	3229	0	0	1	129
				4-BC	2235	0	0	1	88	2377	0	0	1	93	2362	0	0	1	93
				4W	3078	1	0	2	121	3276	1	0	2	129	3253	1	0	2	130
				4W-BC	1855	0	0	1	73	1975	0	0	1	78	1961	0	0	1	77
				5QM	2931	2	0	1	115	3119	2	0	1	123	3098	2	0	1	124
				5QN	2694	2	0	1	106	2866	2	0	1	113	2847	2	0	1	114
				5R	3054	2	0	2	120	3250	2	0	2	128	3228	2	0	2	129
				5W	3043	2	0	1	120	3237	2	0	1	127	3216	2	0	1	129
			Clear Lens	FR	2773	0	0	1	109	2951	0	0	1	116	2930	0	0	1	117
				FR-BC	1886	0	0	1	74	2007	0	0	1	79	1993	0	0	1	78
				2	2784	1	0	1	109	2963	1	0	1	116	2942	1	0	1	118
				2-BC	1631	0	0	1	64	1736	0	0	1	68	1723	0	0	1	67
				3	2845	1	0	1	111	3028	1	0	1	119	3007	1	0	1	120
				3BC	1806	0	0	1	72	1922	0	0	1	77	1909	0	0	1	76
				4	2891	0	0	1	113	3076	0	0	1	120	3055	0	0	1	122
				4-BC	2114	0	0	1	83	2250	0	0	1	88	2234	0	0	1	88
				4W	2912	1	0	1	114	3099	1	0	2	121	3077	1	0	2	123
				4W-BC	1755	0	0	1	69	1868	0	0	1	73	1855	0	0	1	5
				5QM	2773	1	0	1	109	2950	2	0	1	116	2931	2	0	1	117
				5QN	2549	1	0	0	100	2712	2	0	1	106	2693	2	0	1	108
				5R	2890	2	0	2	113	3075	2	0	2	120	3054	2	0	2	122
				5W	2879	2	0	1	113	3064	2	0	1	120	3042	2	0	1	122
28L		30	HDL Lens	3	2816	1	0	1	96	2997	1	0	1	102	3020	1	0	1	101
				5W	2917	1	0	1	100	3105	1	0	1	106	3084	1	0	1	103

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LUMINAIRE PERFORMANCE

LED #	Nominal Lumen Package	Nominal Wattage	Lens Options	Distribution	3000K					4000K					5000K				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
24L	7,000	65	No Lens	FR	6754	1	0	1	104	7187	1	0	1	111	7138	1	0	1	110
				FR-BC	4392	0	0	1	68	4673	0	0	1	72	4641	0	0	1	71
				2	6571	1	0	2	101	6992	1	0	2	108	6944	1	0	2	107
				2-BC	3799	0	0	1	58	4042	0	0	1	62	4014	0	0	1	62
				3	6625	1	0	2	102	7051	1	0	2	108	7002	1	0	2	108
				3BC	4032	0	0	1	62	4291	0	0	1	66	4261	0	0	1	66
				4	6788	1	0	2	104	7223	1	0	2	111	7174	1	0	2	110
				4-BC	4924	0	0	2	76	5239	0	0	2	81	5203	0	0	2	80
				4W	6699	1	0	2	103	7128	1	0	3	110	7079	1	0	3	109
				4W-BC	4088	0	0	2	63	4350	0	0	2	67	4321	0	0	2	66
				5QM	7025	3	0	1	108	7477	3	0	1	115	7425	3	0	1	114
				5QN	6964	3	0	1	107	7410	3	0	1	114	7323	3	0	1	113
				5R	7038	3	0	3	108	7489	3	0	3	115	7437	3	0	3	114
				5W	7011	3	0	2	108	7460	3	0	2	115	7409	3	0	2	114
			Clear Lens	FR	6432	1	0	1	97	6844	1	0	1	104	6798	1	0	1	105
				FR-BC	4182	0	0	1	63	4450	0	0	1	67	4420	0	0	1	67
				2	6258	1	0	1	95	6659	1	0	2	101	6613	1	0	2	102
				2-BC	3617	0	0	1	55	3849	0	0	1	58	3823	0	0	1	58
				3	6310	1	0	2	96	6714	1	0	2	102	6668	1	0	2	103
				3-BC	3599	0	0	1	55	3829	0	0	1	59	3803	0	0	1	59
				4	6465	1	0	2	98	6879	1	0	2	104	6832	1	0	2	105
				4-BC	4688	0	0	2	71	4990	0	0	2	76	4955	0	0	2	75
				4W	6380	1	0	2	97	6789	1	0	2	103	6742	1	0	2	104
				4W-BC	3893	0	0	2	59	4143	0	0	2	63	4115	0	0	2	62
				5QM	6691	3	0	1	101	7119	3	0	1	108	7070	3	0	1	109
				5QN	6632	2	0	1	100	7058	3	0	1	107	7009	3	0	1	108
				5R	6702	3	0	3	102	7131	3	0	3	108	7082	3	0	3	109
				5W	6676	3	0	2	101	7104	3	0	2	108	7055	3	0	2	109
28L		70	HDL Lens	3	6047	2	0	2	92	6047	2	0	2	92	6236	2	0	2	89
				5W	6221	2	0	1	94	6619	2	0	1	100	6525	2	0	1	93

Kim Lighting reserves the right to change specifications without notice.

LUMINAIRE PERFORMANCE

LED #	Nominal Lumen Package	Nominal Published Wattage	Lens Options	Distribution	3000K					4000K					5000K				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
56L	10,000	75	No Lens	FR	9315	1	0	1	124	9913	1	0	1	132	9845	1	0	1	131
				FR-BC	6058	0	0	1	81	6445	0	0	1	86	6402	0	0	1	85
				2	9063	2	0	2	120	9644	2	0	2	128	9578	2	0	2	128
				2-BC	5239	0	0	1	70	5575	0	0	1	74	5536	0	0	1	74
				3	9139	2	0	2	125	9725	2	0	2	134	9657	2	0	2	129
				3-BC	5561	0	0	2	74	5877	0	0	2	78	5561	0	0	2	74
				4	9362	1	0	2	124	9362	1	0	2	124	9876	1	0	2	132
				4-BC	6791	0	0	2	90	7226	0	0	2	96	7168	0	0	2	96
				4W	9240	2	0	3	123	9832	2	0	3	131	9765	2	0	3	130
				4W-BC	5639	0	0	2	75	6001	0	0	2	80	5959	0	0	2	79
				5QM	9691	3	0	1	129	10312	3	0	1	137	10240	3	0	1	137
				5QN	9606	3	0	1	128	10222	3	0	1	136	10151	3	0	1	135
				5R	9706	3	0	3	129	10328	3	0	3	137	10258	3	0	3	137
				5W	9669	4	0	2	129	10289	4	0	2	137	10217	4	0	2	136
			Clear Lens	FR	8871	1	0	1	117	9760	1	0	1	129	9374	1	0	1	125
				FR-BC	5769	0	0	1	76	6138	0	0	1	81	6096	0	0	1	81
				2	8631	2	0	2	114	9183	2	0	2	121	9121	2	0	2	122
				2-BC	4989	0	0	1	67	5309	0	0	1	71	5272	0	0	1	62
				3	8703	1	0	2	115	9260	2	0	2	122	9197	2	0	2	123
				3-BC	4964	1	0	1	66	5282	1	0	2	70	5245	1	0	2	69
				4	8916	1	0	2	118	9487	1	0	2	125	9423	1	0	2	126
				4-BC	6467	0	0	2	85	6881	0	0	2	91	6834	0	0	2	90
				4W	8799	2	0	3	116	9363	2	0	3	124	9300	2	0	3	124
				4W-BC	5370	0	0	2	72	5714	1	0	2	76	5675	0	0	2	76
				5QM	9228	3	0	1	122	9820	3	0	1	130	9752	3	0	1	130
				5QN	9147	3	0	1	121	9734	3	0	1	129	9668	3	0	1	129
				5R	9244	3	0	3	122	9836	3	0	3	130	9769	3	0	3	130
				5W	9208	4	0	2	122	9798	4	0	2	130	9732	4	0	2	130
68L		80	HD Lens	3	7853	2	0	2	99	8356	2	0	2	106	8299	2	0	2	104
				5W	8080	2	0	2	102	8684	3	0	2	110	8684	3	0	2	109

Kim Lighting reserves the right to change specifications without notice.

LUMINAIRE PERFORMANCE

LED #	Nominal Lumen Package	Nominal Published Wattage	Lens Options	Distribution	3000K					4000K					5000K				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
56L	15,000	110	No Lens	FR	13533	1	0	1	125	14399	1	0	2	133	14301	1	0	2	130
				FR-BC	8799	1	0	1	81	9363	1	0	1	86	9300	1	0	1	85
				2	13165	2	0	2	121	14009	2	0	2	129	13913	2	0	2	126
				2-BC	7611	1	0	2	70	8098	1	0	2	75	8042	1	0	2	74
				3	13275	2	0	3	122	14126	2	0	3	130	14030	2	0	3	128
				3-BC	8079	1	0	2	73	8596	1	0	2	78	8538	1	0	2	78
				4	13601	1	0	3	125	14472	1	0	3	133	14373	1	0	3	131
				4-BC	9865	1	0	2	91	10497	1	0	3	97	10425	1	0	3	96
				4W	13422	2	0	3	124	14283	2	0	3	132	14185	2	0	3	129
				4W-BC	8191	1	0	3	75	8715	1	0	3	80	8656	1	0	3	80
				5QM	14077	4	0	2	130	14979	4	0	2	138	14876	4	0	2	135
				5QN	13953	4	0	1	129	14848	4	0	1	137	14747	4	0	1	134
				5R	14100	4	0	4	130	15004	4	0	4	138	14901	4	0	4	135
				5W	14046	4	0	2	129	14946	4	0	2	138	14844	4	0	3	135
			Clear Lens	FR	12803	1	0	1	118	13624	1	0	1	126	13531	1	0	1	123
				FR-BC	9298	1	0	1	86	8325	1	0	1	77	8798	1	0	1	81
				2	12455	2	0	2	115	13254	2	0	2	123	13164	2	0	2	120
				2-BC	7200	1	0	1	67	7661	1	0	2	71	7610	1	0	2	70
				3	12560	2	0	3	116	13365	2	0	3	124	13273	2	0	3	121
				3-BC	7163	1	0	2	65	7622	1	0	2	69	7570	1	0	2	69
				4	12868	1	0	3	119	13692	1	0	3	127	13599	1	0	3	124
				4-BC	9333	1	0	2	86	9931	1	0	2	92	9864	1	0	2	90
				4W	12699	2	0	3	117	13513	2	0	3	125	13420	2	0	3	122
				4W-BC	7750	1	0	3	72	8246	1	0	3	76	8190	1	0	3	76
				5QM	13318	3	0	2	123	14172	4	0	2	131	14075	4	0	2	128
				5QN	13202	3	0	1	122	14048	4	0	1	130	13951	4	0	1	127
				5R	13341	4	0	4	123	14195	4	0	4	131	14099	4	0	4	128
				5W	13290	4	0	2	123	14141	4	0	2	131	14044	4	0	2	128
68L		115	HD Lens	3	11577	2	0	2	102	12320	2	0	2	109	12236	2	0	2	106
				5W	11912	3	0	2	105	12676	3	0	2	112	12588	3	0	2	109

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LUMINAIRE PERFORMANCE

LED #	Nominal Lumen Package	Nominal Published Wattage	Lens Options	Distribution	3000K					4000K					5000K				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
56L	17,000	140	No Lens	FR	15323	2	0	2	111	16306	2	0	2	118	16194	2	0	2	116
				FR-BC	9964	1	0	1	72	10603	1	0	1	77	10530	1	0	1	76
				2	14897	2	0	2	108	15852	2	0	2	115	15743	2	0	2	112
				2-BC	8618	1	0	2	63	9169	1	0	2	67	9107	1	0	2	66
				3	15032	2	0	3	109	15996	2	0	3	116	15886	2	0	3	113
				3-BC	9147	1	0	2	65	9733	1	0	2	70	9667	1	0	2	69
				4	15400	1	0	3	112	16387	1	0	4	119	16275	1	0	4	116
				4-BC	11170	1	0	3	81	11886	1	0	3	86	11804	1	0	3	86
				4W	15198	2	0	4	110	16173	3	0	4	117	16062	3	0	4	115
				4W-BC	9275	1	0	3	67	9869	1	0	3	72	9801	1	0	3	71
				5QM	15939	4	0	2	116	16962	4	0	2	123	16845	4	0	2	120
				5QN	15801	4	0	1	115	16813	4	0	1	122	16698	4	0	1	119
				5R	15966	4	0	4	116	16990	4	0	4	123	16874	4	0	4	121
				5W	15906	4	0	3	115	16925	4	0	3	123	16808	4	0	3	120
			Clear Lens	FR	14541	1	0	2	105	15473	2	0	2	111	15367	2	0	2	110
				FR-BC	9456	1	0	1	68	10061	1	0	1	72	9993	1	0	1	72
				2	14146	2	0	2	102	15053	2	0	2	108	14950	2	0	2	107
				2-BC	8178	1	0	2	59	8702	1	0	2	63	8642	1	0	2	62
				3	14265	2	0	3	103	15179	2	0	3	109	15076	2	0	3	108
				3BC	8136	1	0	2	58	8657	1	0	2	62	8598	1	0	2	61
				4	14614	1	0	3	105	15551	1	0	3	112	15445	1	0	3	110
				4-BC	10600	1	0	3	76	11279	1	0	3	81	11203	1	0	3	81
				4W	14423	2	0	3	104	15347	2	0	4	111	15243	2	0	4	109
				4W-BC	8802	1	0	3	63	9365	1	0	3	67	9302	1	0	3	67
				5QM	15126	4	0	2	109	16095	4	0	2	116	15985	4	0	2	114
				5QN	14994	4	0	1	108	15955	4	0	1	115	15846	4	0	1	113
				5R	15152	4	0	4	109	16122	4	0	4	116	16012	4	0	4	114
				5W	15094	4	0	3	109	16061	4	0	3	116	15951	4	0	3	114
68L		115	HD Lens	3	13240	2	0	2	89	13992	3	0	3	95	13897	3	0	3	93
				5W	13623	3	0	2	92	14396	3	0	2	97	14298	3	0	2	95

Electrical Characteristics												Dimming				
System Watts	Drive Current	Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming Range	Source current out		Absolute voltage	
		VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
25	298mA	120-480	50/60	0.21	0.12	0.10	0.09	0.07	0.05	>0.9	20	10% to 100%	0mA	1mA	0V	10V
30	298mA			0.25	0.14	0.13	0.11	0.09	0.06							
65	800mA			0.54	0.31	0.27	0.23	0.19	0.14							
70	700mA			0.58	0.34	0.29	0.25	0.20	0.15							
75	420mA			0.63	0.36	0.31	0.27	0.22	0.16							
80	350mA			0.67	0.38	0.33	0.29	0.23	0.17							
110	600mA			0.92	0.53	0.46	0.40	0.32	0.23							
115	500mA			0.96	0.55	0.48	0.42	0.33	0.24							
140	750mA			1.17	0.67	0.58	0.51	0.40	0.29							
150	625mA			1.25	0.72	0.63	0.54	0.43	0.31							

TM-21 LIFETIME CALCULATION

Projected Lumen Maintenance (25°C / 77°F)						
HOURS	0	25,000	36,000	50,000	100,000	Reported L70
Projected Lumen Maintenance	100%	97%	95%	93%	87%	> 60,000 hrs

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SPECIFICATIONS

Housing:

- Low copper aluminum alloy die-casting is designed as one-piece with internal cooling fins.
- Solid, cast aluminum wall creates a thermal barrier between the optical and electrical compartments.
- Molded silicone gasket throughout insures the sealing between the two compartments and provides ingress protection.
- Housing is designed with integral LED heat sink utilized for thermal transfer and for securing the location of each LED module.
- IK09 rated enclosure protects electrical equipment against external mechanical impacts.

Lens Frame:

- One-piece low copper aluminum alloy die-cast is secured to housing with 6 screws.

Backlight Control

- Optional Backlight Control on each LED module to completely control unwanted backlight.

Lens

One-piece flat glass lens slips secure with clips. Extra silicone gasketing is provided to retain a clear optical compartment.

Optical Module:

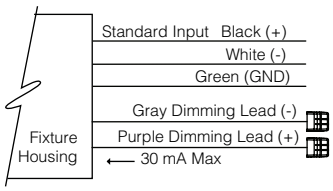
- LEDs shall be mounted to a metal printed circuit board assembly (MCPCB).
- Optical lenses shall be clear injection molded PMMA acrylic.
- Each MCPCB and optic shall be sealed to the diecast housing and sealed with a continuous one piece injection molded silicone rubber gasket.
- Patent Pending design of optical array shall independently shield each LED optic across the length of the aperture.
- Optional fixture finish optical surfaces shall not exceed BUG ratings of the standard white finish and shall be greater than or equal to the delivered lumens of the optional matte black optical surface finish.

Electrical Components

- Standard programmable driver allows for programmable drive current settings.
- Electrical components are stategically located in the driver gear compartment with a molded silicon grommet seal to provide separation from the optical chamber.
- Maximum lightning surge current 20KA with thermally protected varistor technology. Surge suppression is series circuited preventing total fixture failure. ANSI/IEEE C62.41 Category C High.
- Open circuit fault will turn off the luminaire in order to protect the sensitive electronics and acts as a signal for maintenance.
- Programmable Driver is rated for -40°C starting.
- "Thermal Shield", primary side, thermister provides protection for the sustainable life of electronic components.

Dimming:

- Dimming range from 100% to 10% through the use of the standard 0-10V interface on the programmable driver.
- Modular wiring harness in the service area provides user access to the dimming circuitry.
- Dimming circuitry compatible with 0-10V, user-defined control devices.
- Optional factory programmed dimming profile.



Fusing:

SF for 120, 277, and 347 Line volts

DF for 208, 240, and 480 Line volts

Hight temperature fuse holders factory installed inside the fixture housing.

Fuse is included.

Finish:

Fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat.

Standard colors include (BLS) Black Gloss Smooth, (BLT) Black Matte Textured, (DBS) Dark Bronze Smooth, (GTT) Graphite Matte Textured, (LGS) Light Gray Smooth, (PSS) Platinum Silver Smooth, (VGS) Verde Green Smooth, (WHS) White Gloss Smooth, and (CC) Custom Color (Include RAL#).

Certifications and Listings:

- IUL 1598 Standard for Luminaires.
- IUL 8750 Standard for Safety for Light
- IEmitting Diode (LED) Equipment for use in Lighting Products.
- ICSA C22.2#250.0 Luminaires.
- ANSI C136.31-2010 Vibration tested and compliant 1.5G and 4G reference page 9
- IRoHS compliant.
- IIP66 rated.
- IIEC 66262 Mechanical Impact Code IK09.
- IDA approved, 3000K and warmer CCTs only.

CAUTION:

Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

WARRANTY:

For full warranty see: http://www.hubbelllighting.com/resources/warranty

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CONTROLS

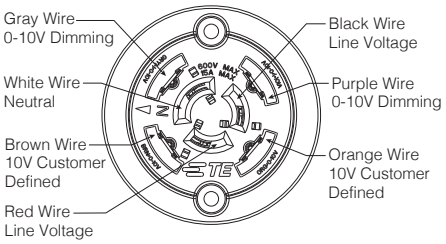
Photocell Receptacle

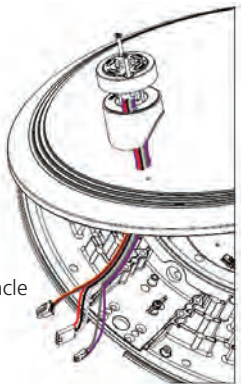
7PR

Fully gasketed and wired 7-pin receptacle option. Easy access location above the electrical compartment. 7-pin construction allows for a user-defined interface and provides a controlled definition of operational performance. ANSI twist-lock control module by-others.

Standard customer operation modes:

1. Traditional on/off photoelectric control.
2. 5-pin wireless photoelectric control for added dimming feature.
3. 7-pin wireless photoelectric control for dimming and additional I/O connections for customer use.





7-Pin receptacle placement

Wireless Controls

wiSCAPE™

Hubbell Control Solution's wiSCAPE™ wireless control modules allow an individual fixture to managed, monitored and measured. The modules communicate securely over a robust certified meshed radio signal. The wiSCAPE modules provide on/off/dim control, external device input, alerts and metering.

WIR-RME-L

wiSCAPE External Module,120-480V, 1000ft range (LOS), Internal Photocell, 1 Digital Input, Compatible with the A-25-7H option

SiteSync™[1]

SiteSync™ wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit www.hubbelllighting.com/products/sitesync for more details.

Dimming WASP Occupancy Sensor

WSP

The Dimming WASP Outdoor Occupancy Sensor is specifically designed to provide 0-10VDC output for the control of dimmable fixtures. Easy to use dipswitches allow the user to adjust sensor time delay and sensitivity as well as set unoccupied and occupied dimming levels. Sensors also feature a daylight sensor for ON/OFF control of fixtures when there is sufficient natural light. Visit https://hubbellcdn.com/installationmanuals/2102B_Dimming_WASP_Install.pdf for more details.

Pole Mounted

Round Pole-Mounted Occupancy Sensor up to 16'. Select voltage and finish color.

SCL-R

Round Pole-Mounted Occupancy Sensor up to 16' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for round pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.

Ordering Example: SCL-R44/277[2]/BL[3]

Square Pole-Mounted Occupancy Sensor up to 16'. Select voltage and finish color.

SCL-S

Square Pole-Mounted Occupancy Sensor up to 16' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for square pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.

Ordering Example: SCL-L/277[2]/BL[3]

Round Pole-Mounted Occupancy Sensor 16' to 30'. Select voltage and finish color.

SCH-R

Round Pole-Mounted Occupancy Sensor: 16' to 30' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for round pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.

Ordering Example: SCH-R4[4]/277[2]/BL[3]

Square Pole-Mounted Occupancy Sensor 16' to 30'. Select voltage and finish color.

SCH-S

Square Pole-Mounted Occupancy Sensor: 16 to 30' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for round pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.

Ordering Example: SCH-S/277[2]/BL[3]

AstroDIM

AstroDIM provides multi-stage night-time power reduction based on an internal timer referenced to the power on/off time. There is no need for an external control infrastructure. The unit automatically performs a dimming profile based on the predefined scheduled reference to the midpoint, which is calculated based on the power on/off times.

[1]PRECOMMISSIONED SITESYNC ORDERING INFORMATION: When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project location, Group information, and Operating schedules. For more detailed information please visit www.HubbellLighting.com/products/sitesync or contact Hubbell Lighting tech support at (800) 345-4928.

SiteSync fixtures with occupancy sensor (SWPM) require the mounting height of the fixture for selection of the lens.

Examples:

SiteSync only : UR20/56L-75/3K7/UNV/ASQ/BL/SWP

SiteSync with Motion Control: UR20/56L-75/3K7/UNV/ASQ/BL/SWPM-40F

[2]Voltage, [3]Color, [4]Pole Diameter,

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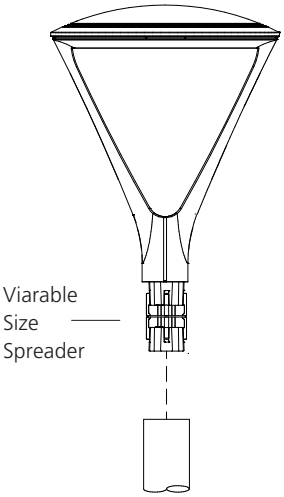
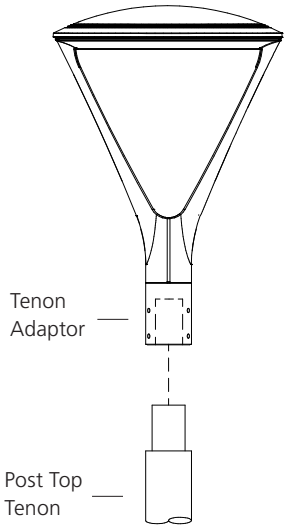
MOUNTING INSTALLATION

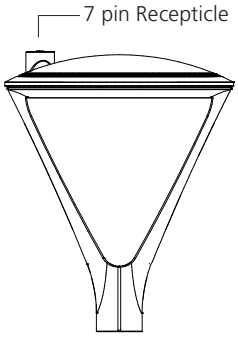


Flush Mount
FM33/44

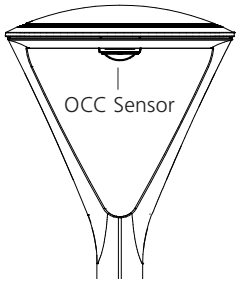


Post Top
PT23/24/34

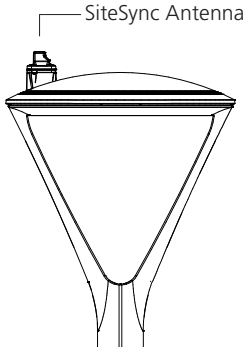
SENSOR PLACEMENT



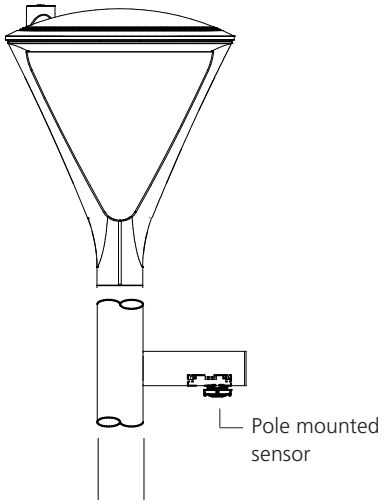
7 pin PCR
7PR



OCC Sensor
NX or WSP



SiteSync
SW7PR



Pole Mounted Sensor
SCL-R, SCL-S, SCH-R,
SCH-S

MOUNTING VIBRATION RATINGS

UR 20 Arm		UR28 Arm		UR 20 Post Top		UR 28 Post Top	
Ordering Code	Rating	Ordering Code	Rating	Ordering Code	Rating	Ordering Code	Rating
ASQ	4G	**ASQ**	4G	**FM33**	4G	**FM44**	1.5G
A34	4G	**A34**	4G	**FM44**	1.5G	**FM45**	1.5G
A46	4G	**A46**	4G	**PT23**	4G	**PT24**	1.5G
MAF	4G	**MAF**	4G	**PT24**	4G	**PT34**	1.5G
				PT34	1.5G	**PT25**	1.5G
						PT35	1.5G

For the 4 G test, ANSI C136.31-2010 Vibration is tested to comply with Vibration Test Level 1 Normal Applications, Vibration Test Level 2 Bridge/Overpass Applications, and Vibration Test Level 3

For the 1.5G test, ANSI C136.31-2010 Vibration is tested to comply with Vibration Level 1 Bridge/Overpass Applications

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DESCRIPTION

The Invue Arbor post top brings architectural style to area/site and pedestrian scale applications. Its dayform appearance brings a desired organic look into the urban environment. WaveStream™ LED Optics provide a uniform pixelation free image, managing glare while providing high levels of visibility.

Catalog #		**Type**
Project		
Comments		**Date**
Prepared by		

SPECIFICATION FEATURES

Construction
Two-piece IP66 rated housing is cast from low copper content corrosion resistant aluminum, maintaining strength and precision to sustain long term dayform appearance. ANSI C136.31 testing compliance prevents damage from installation generated vibration. External hardware and casting seams are minimized to enhance appearance.

Optics
Specifically designed for pedestrian applications, WaveStream LED optical waveguide technology produces both symmetric NEMA type V and asymmetric NEMA II, III, IV distributions. The waveguide is manufactured from precision injection molded acrylic resulting in a pixelation free optical image for improved glare control and visual comfort. Luminaire efficacy's measure up to 100 lm/w for 4000K (+/- 275K) CCT at 70 CRI (min), optional 3000K CCT at 80 CRI is also available.

Electrical
LED driver(s) are directly mounted to upper housing thermal pad for optimal thermal performance. Standard 0-10V dimming drivers and Eaton's proprietary surge protection module are designed to withstand 10kV of transient line surge. Drivers operate at 120-277V 50/60Hz with 347V/60Hz or 480V/60Hz operation optional. Suitable for ambient temperature applications as low as -40°C (40°F) to 40°C (104°F). Limited high ambient options allow for 50°C operation.

Controls
The Arbor LED luminaire control options are designed to be simple and cost-effective ASHRAE and California Title 24 compliant solutions. The ANSI C136.41 compliant NEMA 7-PIN receptacle enables wireless dimming when used with compatible photocontrol. An integrated dimming and occupancy sensor is a standalone control option available in on/off (MS) and bi-level dimming (MS/DIM) operation. The optional LumaWatt Pro™ system is best described as a peer-to-peer wireless network of luminaire-integral sensors that operate in accordance with programmable profiles. Each sensor is capable of motion and photo sensing, metering power consumption and wireless communication. See control options page for more details.

Mounting
Fitter assembly mounts over 2-3/8" O.D. tenon and is secured via six concealed stainless steel set screws. Design of fitter provides seamless transition to 3" O.D. round pole top. Additional mounting accessories include a single fixture arm mount, twin fixture arm mount and wall mount arm. Additional pole mount accessories mount to a 3" x 4" long tenon for 4" - 5" O.D. poles tops. For existing 2-3/8" tenons an adapter is shipped standard.

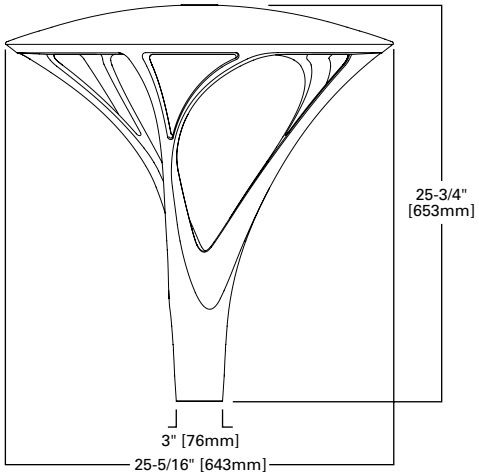
Finish
Eaton utilizes premium ultra-weatherable TGIC based polyester powder coatings that are specifically formulated to withstand extended outdoor exposure. The powders are formulated exclusively for Eaton to serve functionally as well as decorative. Good film appearance combinded with excellent mechanical an exterior exposure qualities display greater than twice as much gloss retention. RAL and custom color matches available. Finish is compliant with ASTM B117 3000hr salt spray standard.

Warranty
Five-year warranty.

ARB ARBOR POSTTOP

DECORATIVE LUMINAIRE

DIMENSIONS



CERTIFICATION DATA

UL/cUL Listed
ANSI C136.31 1.5G Vibration Tested
IEG 60529 IP66 Housing
ASTM B117 SaH Spray Tested
ASTM A3560 Low Cooper Alloy
RoHS
ISO 9001
Dark Sky Approved (3000K CCT and warmer only)

ENERGY DATA

Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V 50/60Hz, 347V/60Hz, 480V/60Hz
40°C Ambient Temperature Rating
As low as -40°C (-40°F) minimum temperature
*See MINIMUM TEMPERATURE table

EPA

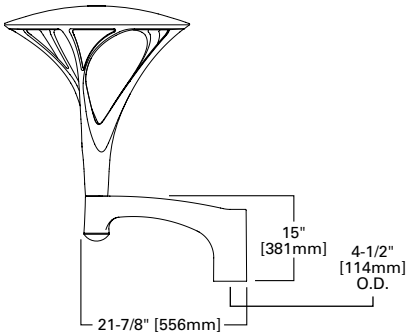
Effective Projected Area: (Sq. Ft.) 0.9

Approximate Net Weight:
37 lbs. [16.8 kgs.]

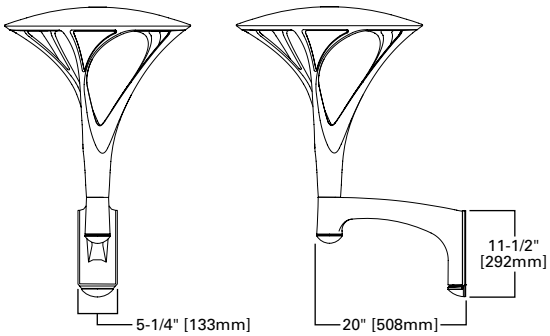
Powering Business Worldwide

MOUNTING CONFIGURATIONS (WEIGHT AND EPAS INCLUDES FIXTURE)

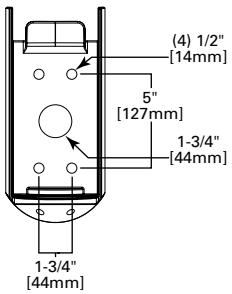
Single Arm Mount (ARSA-XX)
Weight: 56 lbs. [25.45 kgs.]
EPA: 1.7 Sq. Ft.



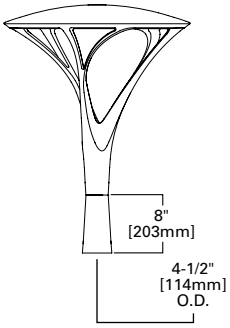
Wall Mount Arm (ARWM-XX)
Weight: 57 lbs. [25.91 kgs.]
EPA: 1.8 Sq. Ft.



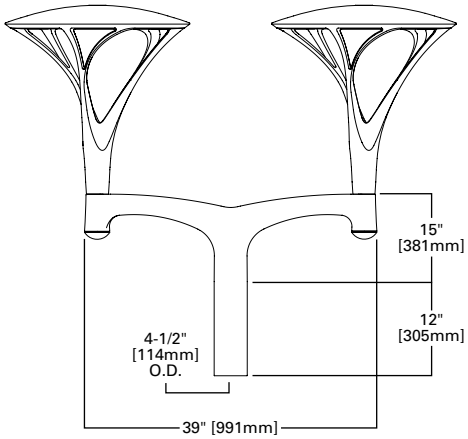
Wall Mount Arm Drill Pattern



Post Top Adapter (ARPA4-XX)
Weight: 41 lbs. [18.63 kgs.]
EPA: 1.2 Sq. Ft.



Twin Arm Mount (ARTA15-XX)
Weight: 114 lbs. [51.81 kgs.]
EPA: 3.45 Sq. Ft.

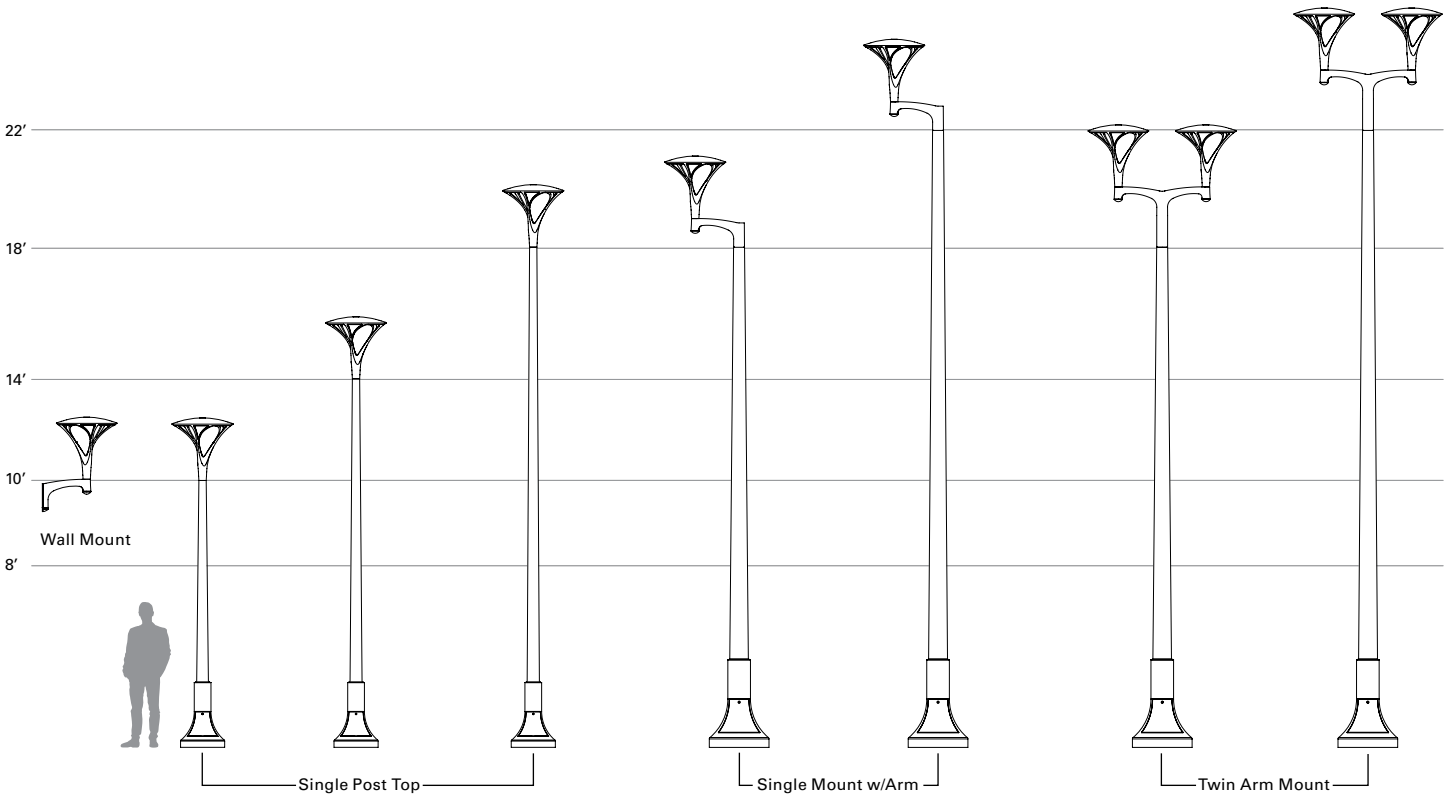


MOUNTING REQUIREMENTS CHART

Tenon O.D. (Inches)	**2-3/8" Tenon**		
Pole Top O.D. (Inches)	**3"**	**4"**	**5"**
Post Top	Standard	Spacer (Provided) & ARPA4-XX (Order Separately)	Spacer (Provided) & ARPA4-XX (Order Separately)
Single Arm Mount	Spacer (Provided)	Spacer (Provided)	Spacer (Provided)

Tenon O.D. (Inches)	**3" Tenon**		
Pole Top O.D. (Inches)		**4"**	**5"**
Post Top		ARPA4-XX (Order Separately)	ARPA4-XX (Order Separately)
Single Arm Mount		Standard	Standard
Twin Mount		Standard	Standard

POLE CONFIGURATIONS (ARP DECORATIVE POLE SHOWN)



Powering Business Worldwide

Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

CONTROL OPTIONS

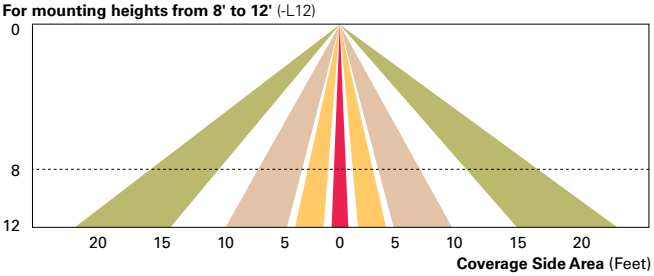
0-10V (D) The dimming option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (PER and PER7) Photocontrol receptacles provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

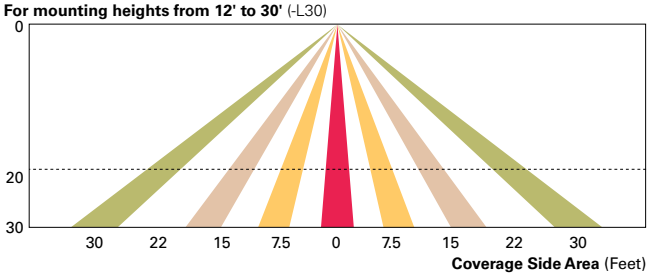
Dimming Occupancy Sensor (MS) These sensors are factory installed in the luminaire housing. When a sensor for dimming operation (/DIM) option is selected, the luminaire will dim down to approximately 50 percent power after five minutes of no activity detected. When activity is detected, the luminaire returns to full light output. When a sensor for ON/OFF operation is selected, the luminaire will turn off after five minutes of no activity.

These occupancy sensors include an integral photocell that can be activated or inactivated with the programming remote / configuration tool for "dusk-to-dawn" control or "daylight harvesting". Note: For MS sensors, the factory preset is OFF (Disabled). The programming remote / tool is a wireless tool that can be utilized to change the dimming level, time delay, sensitivity and other parameters. A variety of sensor lenses are available to optimize the coverage pattern for mounting heights from 8'-40'.

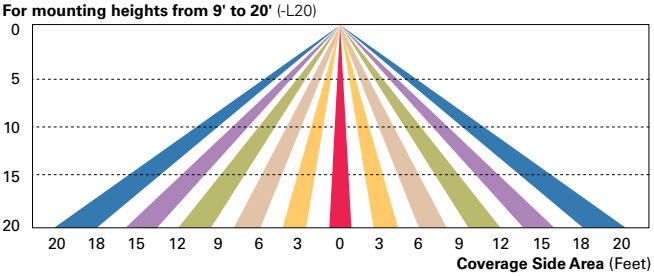
For mounting heights from 8' to 12' (-L12)



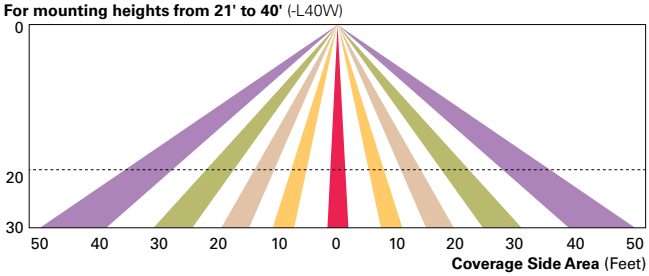
For mounting heights from 12' to 30' (-L30)



For mounting heights from 9' to 20' (-L20)



For mounting heights from 21' to 40' (-L40W)

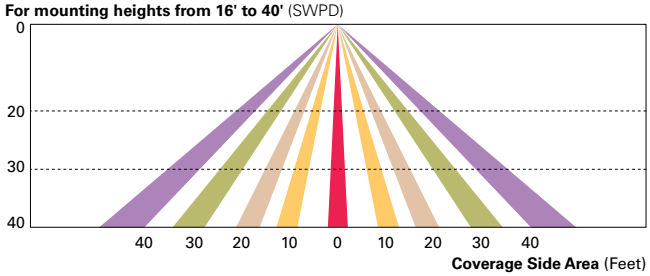


WaveLinx Wireless Control and Monitoring System Available in 7-PIN or 4-PIN configurations, the WaveLinx Outdoor control platform operates on a wireless mesh network based on IEEE 802.15.4 standards enabling wireless control of outdoor lighting. Use the WaveLinx Mobile application for set-up and configuration. At least one Wireless Area Controller (WAC) is required for full functionality and remote communication (including adjustment of any factory pre-sets).

WaveLinx Outdoor Control Module (WOLC-7P-10A) A photocontrol that enables astronomic or time-based schedules to provide ON, OFF and dimming control of fixtures utilizing a 7-PIN receptacle. The out-of-box functionality is ON at dusk and OFF at dawn.

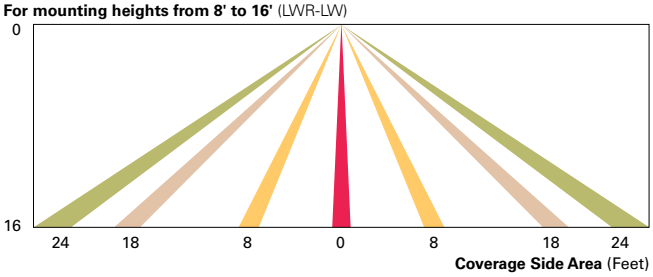
WaveLinx Wireless Sensor (SWPD4 and SWPD5) These outdoor sensors offer passive infrared (PIR) occupancy and a photocell for closed loop daylight sensing. These sensors can be factory installed or field-installed via simple, tool-less integration into luminaires equipped with the Zhaga Book 18 compliant 4-PIN receptacle (ZW). These sensors are factory preset to dim down to approximately 50 percent power after 15 minutes of no activity detected. These occupancy sensors include an integral photocell for "dusk-to-dawn" control or daylight harvesting that is factory-enabled. A variety of sensor lenses are available to optimize the coverage pattern for mounting heights from 7'-40'.

For mounting heights from 16' to 40' (SWPD)

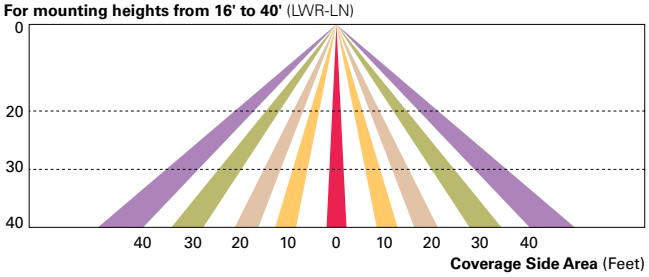


LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN) The Eaton's LumaWatt Pro powered by Enlighted is a connected lighting solution that combines LED luminaires with an integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of other resources beyond lighting.

For mounting heights from 8' to 16' (LWR-LW)



For mounting heights from 16' to 40' (LWR-LN)



POWER AND LUMENS

Lumen Package		B1	B2	B3	B4
Drive Current					
Power Wattage (Watts)		24W	48W	96W	99W
Input Current (mA) @ 120V		200	400	800	830
Input Current (mA) @ 208V		120	240	470	480
Input Current (mA) @ 240V		100	200	400	420
Input Current (mA) @ 277V		90	180	350	360
Power Wattage (Watts)		26W	53W	107W	108W
Input Current (mA) @ 347V		79	161	325	328
Input Current (mA) @ 480V		58	117	235	237
Optics					
Type II	Lumens	2,045	3,994	7,362	--
	BUG Rating	B1-U1-G1	B1-U2-G2	B3-U2-G3	--
Type III	Lumens	2,324	4,534	8,451	--
	BUG Rating	B1-U1-G1	B1-U2-G2	B2-U2-G3	--
Type IV	Lumens	2,408	4,691	8,740	--
	BUG Rating	B1-U1-G1	B1-U2-G2	B2-U2-G3	--
Type V	Lumens	2,311	4,529	8,511	9,464
	BUG Rating	B2-U1-G1	B3-U2-G2	B3-U2-G3	B3-U2-G3

LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Calculated L70 (Hours)
25°C	>91%	>230,000
40°C	>88%	>172,000
50°C	>86%	>142,000

NOTE: Maintenance data applies to the highest drive current and represents the worst case at the highest wattage.

COLOR TEMPERATURE

Color Temperature (CCT)	CRI (Nominal)	Multiplier
4000	70	1.00
3000	80	0.91

MINIMUM AMBIENT TEMPERATURE

Lumen Package	Temperature
B1	-40°C
B2	-35°C
B3	-35°C
B4	-40°C
All DALI powered lumen packages	-20°C

ORDERING INFORMATION

Sample Number: ARB-B2-LED-D1-T2-GM

Product Family [1, 2]	Lumens [3]	Lamp Type	Voltage	Distribution	Color
ARB=Arbor Post Top	**B1**=Nominal 2,300 Lumens **B2**=Nominal 4,500 Lumens **B3**=Nominal 8,500 Lumens **B4**=Nominal 9,500 Lumens [4]	**LED**=Solid State Light Emitting Diodes	**D1**=Dimming Driver (120-277V) **347**=347V [5] **480**=480V [5, 6]	**T2**=Type II **T3**=Type III **T4**=Type IV **T5**=Type V	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White **CC**=Custom Color [7]

Options (Add as Suffix)

7030=70 CRI / 3000K CCT [8]
8030=80 CRI / 3000K CCT [8]
PC=Button Type Photocontrol
PER=NEMA 3-PIN Twistlock Photocontrol Receptacle
PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle
HA=50°C High Ambient Temperature [9]
MS-L08=Photo/Motion Sensor for ON/OFF Operation, Maximum 8' Mounting Height [10, 11]
MS-L20= Photo/Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height [10, 11]
MS-L40W=Photo/Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height [10, 11]
MS/DIM-L08=Photo/Motion Sensor for Dimming Operation, Maximum 8' Mounting Height [10, 11]
MS/DIM-L20=Photo/Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [10, 11]
MS/DIM-L40W=Photo/Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [10, 11]
ZW=Wavelinx-enabled 4-PIN Twistlock Receptacle [10, 11, 12, 13]
ZW-SWPD4WH=Wavelinx Wireless Sensor, 7' - 15' Mounting Height, White [10, 11, 12, 13]
ZW-SWPD5WH=Wavelinx Wireless Sensor, 15' - 40' Mounting Height, White [10, 11, 12, 13]
LWR-LW= LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height [10, 14]
LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height [10, 14]
5LTD=Fifth Light Dali Driver [10, 15]
DIM=0-10V External Dimming Leads [10, 16]
VS=Tempered Glass Vandal Shield

Accessories (Order Separately) [17]

ARSA-XX=Single Pole Mount Arm [18]
ARWM-XX=Wall Mount Arm
ARTA15-XX=Twin Mount Bracket [18]
ARPA4-XX=Pole Adapter 4" O.D. Pole
FSIR-100=Wireless Configuration Tool for Occupancy Sensor [19]
SWPD4-WH=Wavelinx Wireless Sensor, 7' - 15' Mounting Height, White [13, 20]
SWPD5-WH=Wavelinx Wireless Sensor, 16' - 40' Mounting Height, White [13, 20]
WOLC-7P-10A=Wavelinx Outdoor Control Module (7-PIN) [10, 21]

NOTES:
1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional information.
2. Fixture slipfits over standard 2-3/8" tenon. 3" O.D. tenon when used with a ARPA4-XX 4" O.D. pole adapter.
3. Standard 4000K CCT, nominal 70CRI.
4. B4 only available with Type V distribution.
5. Requires the use of a step down transformer.
6. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
7. Custom and RAL color matching available upon request. Consult your lighting representative at Eaton for more information.
8. Extended lead times apply. Use dedicated IES files when performing layouts. These files are published on the Arbor luminaire product page on the website.
9. Not available with B3 lumen package in Type II, III, or IV distributions.
10. Controls system is not available with photocontrol (PC), photocontrol receptacle (PER or PER7), or other controls systems (MS, ZW, LWR, 5LTD, or DIM).
11. Not available with HA option.
12. Sensor passive infrared (PIR) may be overly sensitive below -20°C (-4°F).
13. In order for device to be field-configurable, requires WAC Gateway components WAC-POE and WPOE-120 in appropriate quantities. Only compatible with WaveLinx system and software and requires system components to be installed for operation. See website for more WaveLinx application information.
14. LumaWatt Pro wireless sensors are factory installed and require network components LWP-EM-1, LWP-GW-1, and LWP-PoE8 in appropriate quantities. See website for LumaWatt Pro application information.
15. Only available in B1 and B2 lumen packages.
16. Low voltage control leads brought 18" outside fixture.
17. Replace XX with paint color.
18. Fits on 3" O.D. x 4" long tenon for nominal 4-1/2" O.D. pole top.
19. This tool enables adjustment to Motion Sensor (MS) parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative for more information.
20. Requires Wavelinx-enabled 4-PIN twistlock receptacle (ZW) option.
21. Requires 7-PIN NEMA twistlock photocontrol receptacle (PER7) option.

KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

ALT1

ARCHITECTURAL AREA/SITE

Altitude®

FEATURES

- Elegant form factor
- High performance optics up to 17,500 delivered lumens
- Diffusion lens for low glare comfort
- NX™ wireless control options

Altitude

c UL us LISTED

3000K and warmer CCTs only

CONTROL TECHNOLOGY

NX DISTRIBUTED INTELLIGENCE

RELATED PRODUCTS

Ouro Pavilion PGL8

SPECIFICATIONS

CONSTRUCTION

- One piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 with vents and .100" minimum wall thickness
- Separate internal driver compartment rated for IP66 ingress protection
- Finish: fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat
- Standard colors include (BLS) Black Gloss Smooth, (BLT) Black Matte Textured, (DBS) Dark Bronze Gloss Smooth, (GTT) Graphite Matte Textured, (LGS) Light Gray Gloss Smooth, (PSS) Platinum Silver Smooth, (VGS) Verde Green Smooth, (WH) White, and (CC) Custom Color (Include RAL#)
- Lens is impact resistant 1/8" tempered glass with anti-reflective coating
- Lens has a one-piece extruded vulcanized silicone gasket
- Lens frame one piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 and .100" minimum wall thickness
- Lens frame has a one-piece O-ring extruded vulcanized silicone gasket
- Mid-frame one piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 and .100" minimum wall thickness
- Mid-frame secures to Lens Frame and housing by stainless steel recessed Allen-head screws
- Silicone gaskets throughout
- All external fasteners are stainless steel

OPTICS

- LEDs mount to a metal printed circuit board assembly (MCPCB)
- Optical lenses are clear injection molded PMMA acrylic

INSTALLATION

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury

ELECTRICAL

- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories recognized
- High voltage configurations, 347/480. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories recognized
- "Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components
- Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments
- Luminaire shall be capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C

ELECTRICAL (CONTINUED)

- Dimming range from 10% to 100% through the use of standard 0-10V interface on the programmable driver
- Modular wiring harness in the service area provides user access to the dimming circuitry
- Optional factory programmed dimming profile
- Surge protection: 10,000k in parallel, 20,000k in series
- SF for 120, 277, 347 Line volts
  DF for 208, 240, 480 Line volts
- Wiring: No. 18AWM rated 105°C, wet rating.

CERTIFICATIONS AND LISTINGS

- UL 1598 Standard for Luminaires
- IP66 certified
- RoHS compliant

WARRANTY

- 5 year warranty
- See HLI Standard Warranty for additional information

KEY DATA	
Lumen Range	1,673–18,452
Wattage Range	22–156
Efficacy Range (LPW)	56–137
Reported Life (Hours)	L70/60,000
Weight	21.5 lbs 9.75 kg
EPS Front View / Side View	.37 / .64

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701 Millennium Blvd • Greenville, SC 29607 / Tel 888.678.1000 / Website www.kimlighting.com

HUBBELL® HUBBELL Lighting

KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

ALT1

ARCHITECTURAL AREA/SITE

ORDERING GUIDE

Example: ALT1-54L-120-3K8-3-UNV-A34-GT-NXSPW30F-CLR

CATALOG #

HOUSING

ALT1

Housing		LED Engine		CCT/CRI		Distribution		Rotation		Voltage	
ALT1	Architectural Area/Site	**28L-20**	20W, 3,000 lm	**AM**	Amber[9]	**FR**	Type I/Front Row		Blank for no rotation	**UNV**	Universal 120–277V
		28L-40	40W, 5,000 lm	**3K7**	3000K, 70 CRI	**2**	Type II	**L**	Optic rotation left[1]	**347**	347V
		28L-60	60W, 7,500 lm	**3K8**	3000K, 80 CRI	**3**	Type III	**R**	Optic rotation right[1]	**480**	480V
		28L-85	85W, 10,000 lm	**3K9**	3000K, 90 CRI	**4**	Type IV				
		54L-95	95W, 12,500 lm	**4K7**	4000K, 70 CRI	**4W**	Type IV Wide				
		54L-120	120W, 15,000 lm	**4K8**	4000K, 80 CRI	**5QM**	Type V Square Medium				
		54L-155	155W, 17,500 lm	**5K7**	5000K, 70 CRI	**5QN**	Type V Square Narrow				
				5K8	5000K, 80 CRI	**5R**	Type V Rectangular				
						5W	Type V Wide (Round)				

Mounting		Fixture Finish		Control Options		Options		Control Accessories	
ASQ	Arm Square pole	**BL**	Black	**7PR**	7 pin PCR, wireless control enabled	**BC**	Backlight Control[6]	**SCPREMOTE**	Remote control for SCP option. Order at least one per project to program and control the occupancy sensor
A34	Arm mt 3.3–4.2" OD pole	**DB**	Dark Bronze	**7PR-TL**	7 pin PCR with twist lock photocontrol	**SF**	Single Fuse	**SW7PR**	SiteSync™ on fixture module via 7PR
A46	Arm mt 4.5–6.0" OD pole	**GT**	Graphite	**7PR-SC**	7 pin PCR with shorting cap	**DF**	Double Fuse	**SWUSB**	SiteSync™ Software on USB
MAF	Horizontal Slipfitter 2.375" OD arm	**LG**	Light Grey	**AD-012**	AstroDIM: 50% output at midnight[10]	**TB**	Terminal Block	**SWTAB**	SiteSync™ Windows Tablet[8]
SVSF	Vertical Slipfitter Mount square for 2" pipe tenon, (2.375" OD)	**PS**	Platinum Silver	**AD-022**	AstroDIM: 50% output midnight to 4 AM[10]	**CLR**	Clear Lens	**SWBRG**	SiteSync™ Wireless Bridge Node
VSF	Vertical Slipfitter Mount for 2" pipe tenon, (2.375" OD)	**TT**	Titanium	**AD-032**	AstroDIM: 50% output 10PM[10]	**HDL**	Diffuse Lens[7]	**SWFC**	SiteSync™ Field Commission Service
WB	Wall Bracket for area wall mount	**WH**	White	**AD-042**	AstroDIM: 50% output 10PM to 4AM[10]			**WIR-RME-L**	wiSCAPE™ External Fixture Module
		CC	Custom Color[2]	**NXSP14F**	Wired NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14' [3,4]			**NXOFM-1R1D-UNV**	NX External Contol Node
				NXSP30F	Wired NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30' [3,4]				
				NXSPW14F	NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14' [3,4]				
				NXSPW30F	NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30' [3,4]				
				NXWE	NX Wireless Enabled				
				SCL-8F	Low voltage sensor for 3rd party wireless controls via 7PR. For mounting heights up to 8'				
				SCL-40F	Low voltage sensor for 3rd party wireless controls via 7PR. For mounting heights 9' to 40'				
				SCP-8F	Remote control programable line voltage sensor, use with SCPREMOTE				
				SCP-40F	Remote control programable line voltage sensor, use with SCPREMOTE				
				SWP	Site Sync™ Pre Commission Wireless Module[3,4,5]				
				SWPM-40F	Site Sync with Sensor 9' to 40' MH[3,4,5]				

Notes:

1 Not available with 5QM and 5W distributions

2 Consult factory

3 Not available with other sensor or wireless control options

4 Not available in 480V

5 Specify group and zone at time of order, See www.hubbelllighting.com/sitesync for more details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node

6 Not available with Type 5 distributions, CLR, or HDL option

7 Only available in Type 3 or Type 5W

8 Microsoft, Encarta, MSN, and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries

9 Wildlife friendly

10 Not available for 28L-20 engine and sensor options

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DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

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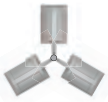
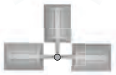
PRODUCT EXCEPTIONS & DETAILS

Configuration			EPA
	1SA	1 Arm Side Mount	0.98
	2SB	2 Arm Side Mount	1.48
	2SL	2 Arm Side Mount	1.96
	3ST	3 Arm Side Mount	2.20

Configuration			EPA
	3SY*	3 Arm Side Mount	2.46
	4SC	4 Arm Side Mount	2.46
	1W	Single Wall Mount	n/a
	HSF	Horizontal Slipfitter	n/a

DELIVERED LUMENS

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
28L	20	3,000	No Lens	FR	3110	0	0	0	141	3274	0	0	0	149	3318	1	0	0	148
				FR-BC	2036	0	0	0	93	2143	0	0	0	97	2172	0	0	0	97
				2	2903	1	0	1	132	3056	1	0	1	139	3097	1	0	1	138
				2-BC	1771	0	0	0	80	1864	0	0	0	85	1889	0	0	0	84
				3	2945	1	0	1	131	3100	1	0	1	138	3141	1	0	1	140
				3-BC	1779	0	0	1	81	1873	0	0	1	85	1898	0	0	1	85
				4	2943	0	0	1	134	3098	0	0	1	141	3139	0	0	1	141
				4-BC	2189	0	0	1	100	2304	0	0	1	105	2335	0	0	1	104
				4W	2927	1	0	1	133	3081	1	0	1	140	3122	1	0	1	139
				4W-BC	1673	0	0	1	76	1761	0	0	1	80	1785	0	0	1	80
				5R	3025	2	0	2	137	3184	2	0	2	145	3227	2	0	2	144
				5QM	3069	2	0	0	139	3230	2	0	0	147	3273	2	0	0	146
				5QN	3051	2	0	0	139	3211	2	0	0	146	3254	2	0	0	145
				5W	3024	2	0	1	137	3183	2	0	1	145	3226	2	0	1	144
			Clear Lens	FR	2909	0	0	0	132	3062	0	0	0	139	3103	0	0	0	141
				2	2715	1	0	1	123	2858	1	0	1	130	2896	1	0	1	132
				3	2754	1	0	1	125	2899	1	0	1	132	2938	1	0	1	134
				4	2752	0	0	1	125	2897	0	0	1	132	2936	0	0	1	133
				4W	2738	1	0	1	124	2882	1	0	1	131	2920	1	0	1	133
				5R	2829	2	0	2	129	2978	2	0	2	135	3018	2	0	2	137
				5QM	2870	2	0	0	130	3021	2	0	0	137	3062	2	0	0	139
				5QN	2853	2	0	0	130	3003	2	0	0	137	3044	2	0	0	138
				5W	2829	2	0	1	129	2977	2	0	1	135	3017	2	0	1	137
			HDL Lens	3	2341	1	0	1	106	2464	1	0	1	112	2497	1	0	1	114
				5W	2405	1	0	1	109	2531	1	0	1	115	2565	1	0	1	117

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DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
28L	40	5,000	No Lens	FR	4870	1	0	0	128	5127	1	0	0	135	5195	1	0	0	137
				FR-BC	3189	0	0	0	84	3356	0	0	0	88	3401	0	0	0	90
				2	4546	1	0	1	120	4785	1	0	1	126	4849	1	0	1	128
				2-BC	2773	0	0	1	73	2919	0	0	1	77	2958	0	0	1	78
				3	4611	1	0	2	121	4854	1	0	2	128	4919	1	0	2	129
				3-BC	2786	0	0	1	73	2933	0	0	1	77	2972	0	0	1	78
				4	4608	1	0	2	121	4851	1	0	2	128	4915	1	0	2	129
				4-BC	3428	0	0	1	90	3608	0	0	1	95	3656	0	0	1	96
				4W	4584	1	0	2	121	4825	1	0	2	127	4889	1	0	2	129
				4W-BC	2621	0	0	1	69	2758	0	0	1	73	2795	0	0	1	74
				5R	4737	2	0	2	125	4986	3	0	1	131	5053	3	0	3	133
				5QM	4806	2	0	1	126	5058	2	0	1	133	5126	2	0	1	135
				5QN	4777	2	0	0	126	5028	2	0	0	132	5096	2	0	0	134
				5W	4736	3	0	1	125	4985	2	0	2	131	5052	3	0	1	133
			Clear Lens	FR	4555	1	0	0	120	4795	1	0	0	126	4859	1	0	0	128
				2	4252	1	0	1	112	4476	1	0	1	118	4536	1	0	1	119
				3	4333	1	0	1	114	4561	1	0	1	120	4622	1	0	1	121
				4	4310	0	0	2	113	4537	1	0	2	119	4598	1	0	2	121
				4W	4287	1	0	2	113	4513	1	0	2	119	4573	1	0	2	120
				5R	4431	2	0	2	117	4663	2	0	2	123	4726	2	0	2	124
				5QM	4495	2	0	1	118	4731	2	0	1	125	4794	2	0	1	126
				5QN	4468	2	0	0	118	4703	2	0	0	124	4766	2	0	0	125
				5W	4430	3	0	1	117	4663	3	0	1	123	4725	3	0	1	124
			HDL Lens	3	3741	1	0	1	98	3937	1	0	1	104	3990	1	0	1	105
				5W	3891	2	0	1	102	4095	2	0	1	108	4150	2	0	1	109

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DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
28L	60	7,500	No Lens	FR	7347	1	0	1	122	7733	1	0	1	129	7837	1	0	1	131
				FR-BC	4810	0	0	0	80	5063	0	0	0	84	5131	0	0	0	86
				2	6858	1	0	2	114	7218	1	0	2	120	7315	1	0	2	122
				2-BC	4183	0	0	1	70	4403	0	0	1	73	4462	0	0	1	74
				3	6956	1	0	2	116	7322	1	0	2	122	7420	1	0	2	123
				3-BC	4203	0	0	1	70	4424	0	0	1	74	4483	0	0	1	75
				4	6951	1	0	2	116	7317	1	0	2	122	7415	1	0	2	124
				4-BC	5171	0	0	2	86	5443	0	0	2	91	5516	0	0	2	92
				4W	6915	1	0	2	115	7278	1	0	2	121	7376	1	0	2	123
				4W-BC	3953	0	0	2	66	4161	0	0	2	69	4216	0	0	2	70
				5R	7145	3	0	3	119	7521	3	0	3	125	7622	3	0	3	127
				5QM	7249	3	0	1	121	7630	3	0	1	127	7732	3	0	1	129
				5QN	7206	3	0	0	120	7585	3	0	0	126	7687	3	0	0	128
				5W	7144	3	0	2	119	7520	3	0	2	125	7620	3	0	2	127
			Clear Lens	FR	6872	1	0	1	115	7233	1	0	1	121	7330	1	0	1	122
				2	6414	1	0	2	107	6751	1	0	2	113	6842	1	0	2	114
				3	6506	1	0	2	108	6848	1	0	2	114	6940	1	0	2	116
				4	6502	1	0	2	108	6844	1	0	2	114	6935	1	0	2	116
				4W	6468	1	0	2	108	6807	1	0	2	113	6899	1	0	2	115
				5R	6683	3	0	3	111	7035	3	0	3	117	7129	3	0	3	119
				5QM	6780	3	0	1	113	7137	3	0	1	119	7232	3	0	1	121
				5QN	6740	2	0	0	112	7094	3	0	0	118	7189	3	0	0	120
				5W	6682	3	0	2	111	7033	3	0	2	117	7128	3	0	2	119
			HDL Lens	3	5531	2	0	1	92	5821	2	0	1	97	5899	2	0	1	98
				5W	5680	2	0	1	95	5979	2	0	1	100	6059	2	0	1	101

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DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
28L	85	10,000	No Lens	FR	9699	1	0	1	113	10209	1	0	1	119	10346	1	0	1	120
				FR-BC	6350	0	0	1	74	6684	0	0	1	78	6773	0	0	1	79
				2	9054	1	0	2	105	9530	2	0	2	111	9657	2	0	2	112
				2-BC	5523	0	0	1	64	5813	0	0	1	68	5891	0	0	1	68
				3	9183	1	0	2	107	9666	1	0	2	112	9795	1	0	2	114
				3-BC	5549	0	0	2	65	5841	0	0	2	68	5919	0	0	2	69
				4	9177	1	0	2	107	9660	1	0	2	112	9789	1	0	2	114
				4-BC	6827	0	0	2	79	7186	0	0	2	84	7282	0	0	2	85
				4W	9129	1	0	3	106	9609	1	0	3	112	9737	1	0	3	113
				4W-BC	5219	0	0	2	61	5493	0	0	2	64	5567	0	0	2	65
				5R	9433	3	0	3	110	9929	3	0	3	115	10062	3	0	3	117
				5QM	9570	3	0	1	111	10073	3	0	1	117	10208	3	0	1	119
				5QN	9514	3	0	0	111	10014	3	0	0	116	10148	3	0	0	118
				5W	9432	4	0	2	110	9927	4	0	2	115	10060	4	0	2	117
			Clear Lens	FR	9072	1	0	1	105	9549	1	0	1	111	9677	1	0	1	113
				2	8468	1	0	2	98	8913	1	0	2	104	9033	1	0	2	105
				3	8589	1	0	2	100	9041	1	0	2	105	9162	1	0	2	107
				4	8584	1	0	2	100	9035	1	0	2	105	9156	1	0	2	106
				4W	8538	1	0	2	99	8987	1	0	3	105	9108	1	0	3	106
				5R	8823	3	0	3	103	9287	3	0	3	108	9411	3	0	3	109
				5QM	8951	3	0	1	104	9422	3	0	1	110	9548	3	0	1	111
				5QN	8898	3	0	0	103	9366	3	0	0	109	9491	3	0	0	110
				5W	8822	3	0	2	103	9285	4	0	2	108	9410	4	0	2	109
			HDL Lens	3	7302	2	0	2	85	7685	2	0	2	89	7788	2	0	2	91
				5W	7499	2	0	1	87	7893	2	0	1	92	7999	2	0	1	93

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DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
54L	95	12,500	No Lens	FR	11792	1	0	1	125	12412	1	0	1	132	12578	1	0	1	134
				FR-BC	7848	0	0	1	83	8260	0	0	1	88	8371	0	0	1	90
				2	11210	2	0	2	119	11800	2	0	2	126	11958	2	0	2	126
				2-BC	5993	0	0	1	64	6308	0	0	1	67	6392	0	0	1	69
				3	11225	1	0	2	119	11815	2	0	2	126	11974	2	0	2	127
				3-BC	6273	0	0	2	67	6603	0	0	2	70	6691	0	0	2	72
				4	11311	1	0	2	120	11906	1	0	3	127	12065	1	0	3	128
				4-BC	7291	0	0	2	78	7674	0	0	2	82	7777	0	0	2	84
				4W	11203	2	0	3	119	11792	2	0	3	125	11950	2	0	3	127
				4W-BC	5603	0	0	2	60	5898	0	0	2	63	5977	0	0	2	65
				5R	11623	3	0	3	124	12234	3	0	3	130	12398	3	0	3	131
				5QM	11770	3	0	2	125	12389	3	0	2	132	12555	3	0	2	133
				5QN	11799	3	0	0	126	12420	3	0	0	132	12586	3	0	0	133
				5W	11594	4	0	2	123	12204	4	0	2	130	12367	4	0	2	131
			Clear Lens	FR	11029	1	0	1	117	11609	1	0	1	124	11765	1	0	1	125
				2	10485	2	0	2	112	11036	2	0	2	117	11184	2	0	2	119
				3	10555	1	0	2	112	11110	1	0	2	118	11259	1	0	2	120
				4	10579	1	0	2	113	11136	1	0	2	118	11285	1	0	2	120
				4W	10479	1	0	3	111	11029	2	0	3	117	11177	2	0	3	119
				5R	10871	3	0	3	116	11443	3	0	3	122	11596	3	0	3	123
				5QM	11009	3	0	2	117	11588	3	0	2	123	11743	3	0	2	125
				5QN	11036	3	0	0	117	11616	3	0	0	124	11772	3	0	0	125
				5W	10845	4	0	2	115	11415	4	0	2	121	11568	4	0	2	123
			HDL Lens	3	8736	2	0	2	93	9195	2	0	2	98	9318	2	0	2	100
				5W	9152	3	0	1	97	9633	3	0	1	102	9762	3	0	1	104

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DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
54L	120	15,000	No Lens	FR	14390	1	0	1	118	15146	1	0	1	124	15349	1	0	1	125
				FR-BC	9577	1	0	1	78	10080	1	0	1	83	10215	1	0	1	84
				2	13680	2	0	2	112	14399	2	0	2	118	14592	2	0	2	120
				2-BC	7313	0	0	1	60	7697	0	0	2	63	7800	0	0	2	64
				3	13698	2	0	3	112	14418	2	0	3	118	14611	2	0	3	120
				3-BC	7655	0	0	2	63	8057	0	0	2	66	8165	0	0	2	67
				4	13803	1	0	3	113	14528	1	0	3	119	14723	1	0	3	121
				4-BC	8897	0	0	2	73	9365	0	0	2	77	9490	0	0	2	78
				4W	13671	2	0	3	112	14390	2	0	3	118	14583	2	0	4	120
				4W-BC	6838	1	0	2	56	7197	1	0	2	59	7294	1	0	2	60
				5R	14184	4	0	4	116	14929	4	0	4	122	15129	4	0	4	124
				5QM	14363	3	0	2	118	15118	4	0	2	124	15321	4	0	2	126
				5QN	14399	4	0	4	118	15156	4	0	1	124	15359	4	0	1	126
				5W	14149	4	0	2	116	14893	4	0	2	122	15092	4	0	2	124
			Clear Lens	FR	13459	1	0	1	110	14167	1	0	1	116	14356	1	0	2	118
				2	12795	2	0	2	105	13468	2	0	2	110	13648	2	0	2	112
				3	12812	2	0	2	105	13486	2	0	2	111	13666	2	0	2	112
				4	12910	1	0	3	106	13589	1	0	3	111	13771	1	0	3	113
				4W	12787	2	0	3	105	13459	2	0	3	110	13640	2	0	3	112
				5R	13266	4	0	4	109	13964	4	0	4	114	14151	4	0	4	116
				5QM	13434	3	0	2	110	14140	3	0	2	116	14330	3	0	2	117
				5QN	13467	4	0	0	110	14175	4	0	0	116	14365	4	0	0	118
				5W	13234	4	0	2	108	13929	4	0	2	114	14116	4	0	2	116
			HDL Lens	3	10892	3	0	2	89	11464	3	0	2	94	11618	3	0	2	95
				5W	11250	3	0	1	92	11841	3	0	2	97	12000	3	0	2	98

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ARCHITECTURAL AREA/SITE

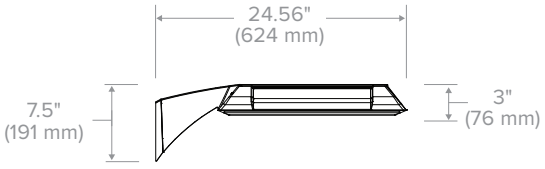
DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
54L	155	17,500	No Lens	FR	17299	2	0	2	111	18208	2	0	2	117	18452	2	0	2	119
				FR-BC	11513	1	0	1	74	12118	1	0	1	78	12280	1	0	1	79
				2	16445	2	0	2	105	17310	2	0	3	111	17542	2	0	3	112
				2-BC	8791	0	0	2	56	9253	0	0	2	59	9377	0	0	2	60
				3	16467	2	0	3	106	17333	2	0	3	111	17565	2	0	3	113
				3-BC	9202	1	0	2	59	9686	1	0	2	62	9816	1	0	2	63
				4	16593	1	0	3	106	17465	1	0	3	112	17699	1	0	4	113
				4-BC	10696	0	0	2	69	11258	1	0	2	72	11409	1	0	2	73
				4W	16435	2	0	4	105	17299	2	0	4	111	17531	2	0	4	112
				4W-BC	8220	1	0	2	53	8652	1	0	2	55	8768	1	0	2	56
				5R	17051	4	0	4	109	17947	4	0	4	115	18188	4	0	4	117
				5QM	17267	4	0	2	111	18174	4	0	2	117	18418	4	0	2	118
				5QN	17309	4	0	1	111	18219	4	0	1	117	18463	4	0	1	118
				5W	17009	4	0	2	109	17903	4	0	2	115	18143	4	0	2	116
			Clear Lens	FR	16180	1	0	2	104	17030	1	0	2	109	17258	1	0	2	111
				2	15382	2	0	2	99	16190	2	0	2	104	16407	2	0	2	105
				3	15402	2	0	3	99	16212	2	0	3	104	16429	2	0	3	105
				4	15520	1	0	3	99	16336	1	0	3	105	16555	1	0	3	106
				4W	15372	2	0	4	99	16180	2	0	4	104	16397	2	0	4	105
				5R	15948	4	0	4	102	16787	4	0	4	108	17011	4	0	4	109
				5QM	16150	4	0	2	104	16999	4	0	2	109	17227	4	0	2	110
				5QN	16190	4	0	1	104	17041	4	0	1	109	17269	4	0	1	111
				5W	15909	4	0	2	102	16745	4	0	2	107	16969	4	0	2	109
			HDL Lens	3	13093	3	0	2	84	13782	3	0	2	88	13966	3	0	2	90
				5W	13524	3	0	2	87	14235	3	0	2	91	14426	3	0	2	92

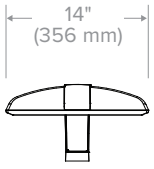
CRI Lumen Multiplier		
CCT	80 CRI	90 CRI
3000K	0.9119	0.7033
4000K	0.8941	N/A

Amber Multiplier	
CCT	Multiplier
5000K	1
AM	0.1727

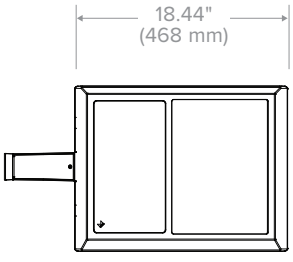
DIMENSIONS



Side View



Front View



Top View

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ALT1

ARCHITECTURAL AREA/SITE

PHOTOMETRY

ALT1-54L-155-4k7-FR

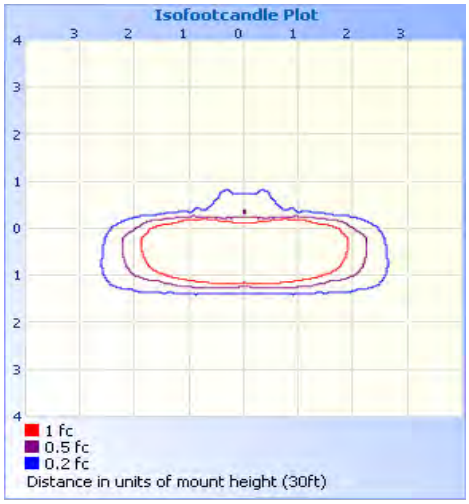
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**18208**
Watts	**156**
Efficacy	**116.7**
IES Type	**I**
BUG Rating	**B2-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	16101	88.4%
Downward House Side	2107	11.6%
Downward Total	18208	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	18208	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-2

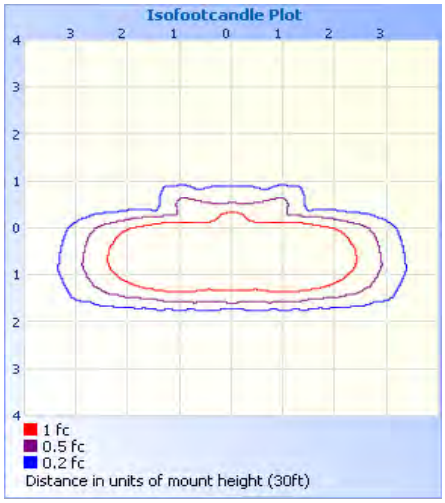
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17309**
Watts	**156**
Efficacy	**111.0**
IES Type	**II**
BUG Rating	**B2-U0-G3**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	14323	82.7%
Downward House Side	2986	17.3%
Downward Total	17309	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17309	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-3

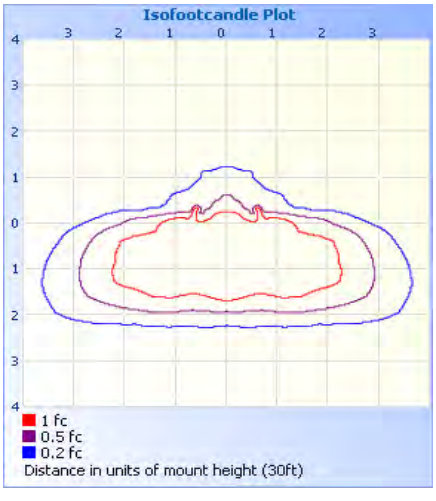
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17332**
Watts	**156**
Efficacy	**111.1**
IES Type	**III**
BUG Rating	**B2-U0-G3**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	14911	86.0%
Downward House Side	2421	14.0%
Downward Total	17332	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17332	100%

ISOFOOT CANDLE PLOT



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ALT1

ARCHITECTURAL AREA/SITE

PHOTOMETRY

ALT1-54L-155-4k7-4

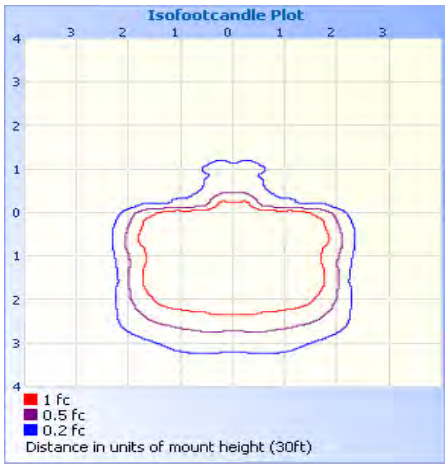
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17465**
Watts	**156**
Efficacy	**112.0**
IES Type	**IV**
BUG Rating	**B1-U0-G3**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	15757	90.2%
Downward House Side	1708	9.8%
Downward Total	17465	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17465	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-4W

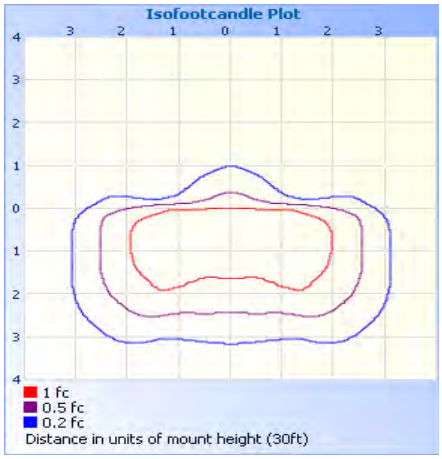
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17299**
Watts	**156**
Efficacy	**110.9**
IES Type	**IV**
BUG Rating	**B2-U0-G4**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	15320	88.6%
Downward House Side	1979	11.4%
Downward Total	17299	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17299	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-5R

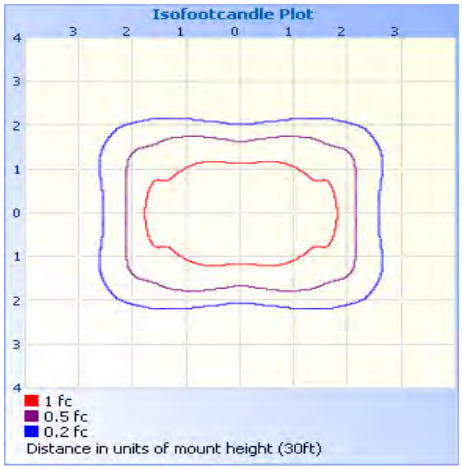
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17947**
Watts	**156**
Efficacy	**115.0**
IES Type	**III**
BUG Rating	**B4-U0-G4**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8974	50.0%
Downward House Side	8974	50.0%
Downward Total	17947	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17947	100%

ISOFOOT CANDLE PLOT



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ALT1

ARCHITECTURAL AREA/SITE

PHOTOMETRY

ALT1-54L-155-4k7-5QM

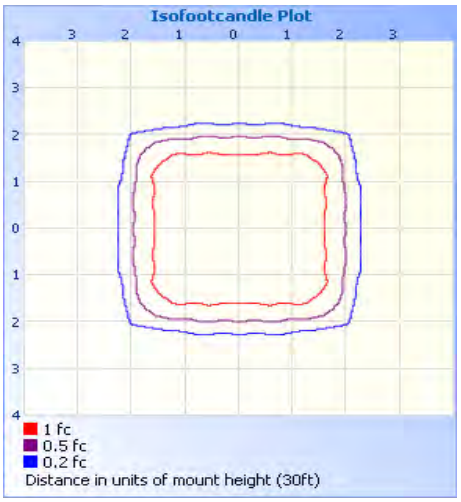
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**18173**
Watts	**156**
Efficacy	**116.5**
IES Type	**V**
BUG Rating	**B4-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	9087	50.0%
Downward House Side	9087	50.0%
Downward Total	18173	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	18173	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-5QN

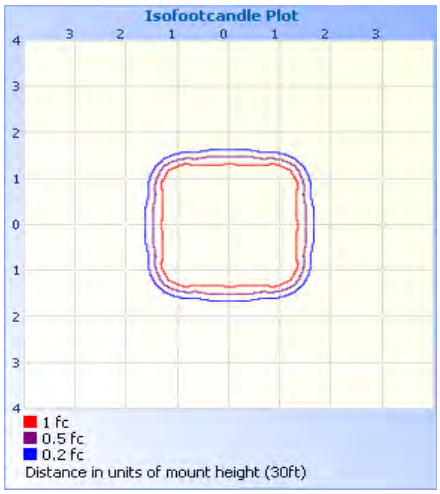
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**18219**
Watts	**156**
Efficacy	**116.8**
IES Type	**V**
BUG Rating	**B4-U0-G1**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	9110	50.0%
Downward House Side	9110	50.0%
Downward Total	18219	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	18219	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-5W

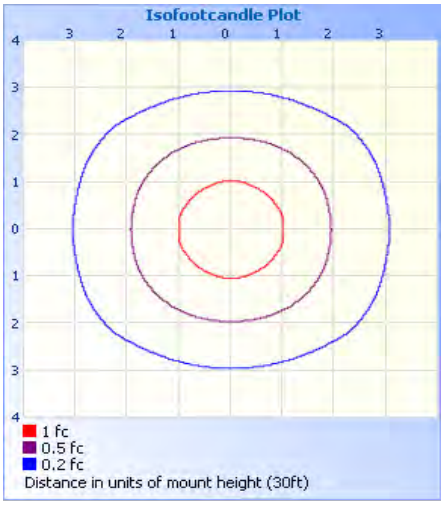
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17904**
Watts	**156**
Efficacy	**114.8**
IES Type	**V**
BUG Rating	**B4-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8952	50.0%
Downward House Side	8952	50.0%
Downward Total	17904	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17904	100%

ISOFOOT CANDLE PLOT



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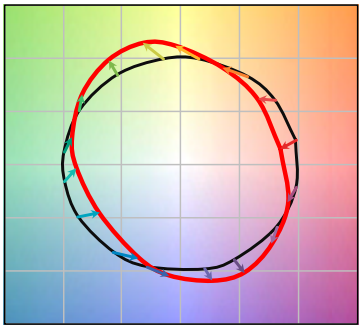
TM-30 DATA

COLOR VECTOR GRAPHIC

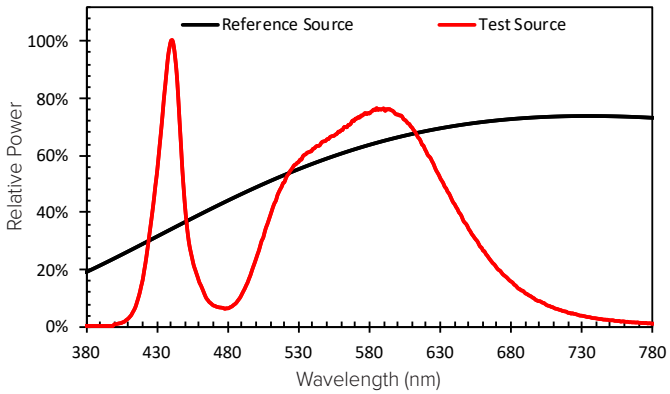


Reference Illuminant — Test Source

TEST SOURCE

R_f	68
R_g	99
CCT(K)	3947
D_{UV}	0.0004
x	0.3831
y	0.3793
CIE R_a	72

SPECTRAL POWER DISTRIBUTION COMPARISON



ELECTRICAL DATA

Electrical													Dimming			
# LED	System Watts	Drive Current	Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming Range	Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
28	22	250 mA	120-480	50/60	0.18	0.11	0.09	0.08	0.06	0.05	>0.9	20	10% to 100%	0mA	1mA	0V	10V
	38	400 mA			0.32	0.18	0.16	0.14	0.11	0.08							
	60	650 mA			0.50	0.29	0.25	0.22	0.17	0.13							
	86	950 mA			0.72	0.41	0.36	0.31	0.25	0.18							
54	94	550 mA			0.78	0.45	0.39	0.34	0.27	0.20							
	122	700 mA			1	0.59	0.51	0.44	0.35	0.25							
	156	900 mA			1.30	0.75	0.65	0.56	0.45	0.33							

TM-21 Lifetime Calculation - Projected Lumen Maintenance (25°C / 77°C)						
Hours	0	25,000	36,000	50,000	100,000	Reported L70
Projected Lumen Maintenance	100%	96.9%	95.3%	93.3%	86.6%	> 60,000

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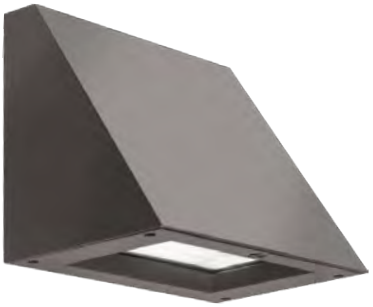


WDGE2 LED
Architectural Wall Sconce

Catalog Number

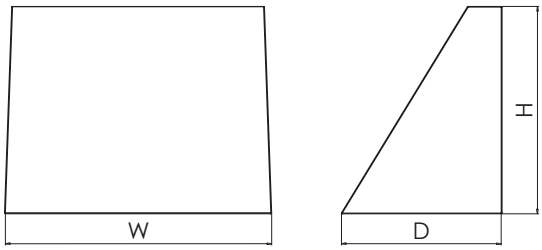
Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth: 7″
Height: 9″
Width: 11.5″
Weight: (without options) 13.5 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE2 delivers up to 6,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

WDGE LED Family Overview

Luminaire	Standard EM, 0°C	Cold EM, -20°C	Sensor	Lumens (4000K)					
				P1	P2	P3	P4	P5	P6
WDGE1 LED	4W	--	--	1,200	2,000	--	--	--	--
WDGE2 LED	10W	18W	Standalone / nLight	1,200	2,000	3,000	4,500	6,000	--
WDGE3 LED	15W	18W	Standalone / nLight	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	--	--	Standalone / nLight	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE2 LED P3 40K 80CRI VF MVOLT DDBXD

Series	Package		Color Temperature		CRI	Distribution		Voltage	Mounting	
WDGE2 LED	P1[1]	P1SW	27K	2700K	80CRI	VF	Visual comfort forward throw	MVOLT	**Shipped included**	**Shipped separately**
	P2[1]	P2SW	30K	3000K	90CRI	VW	Visual comfort wide	347[3]	SRM Surface mounting bracket	AWS 3/8inch Architectural wall spacer
	P3[1]	P3SW	35K	3500K				480[3]		BBW Surface-mounted back box
	P4[1]	Door with small window (SW) is required to accommodate sensors. See page 2 for more details.	40K	4000K						PBBW Premium surface-mounted back box (top, left, right conduit entry)
	P5[1]		50K[2]	5000K						

Options

E4WH	Emergency battery backup, CEC compliant (4W, 0°C min)
E10WH	Emergency battery backup, CEC compliant (10W, 5°C min)
E20WC	Emergency battery backup, CEC compliant (18W, -20°C min)
PE[4]	Photocell, Button Type
DS[5]	Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)
DMG[6]	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)
BCE	Bottom conduit entry for premium back box (PBBW). Total of 4 entry points.

Standalone Sensors/Controls (only available with P1SW, P2SW & P3SW)

PIR	Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.
PIRH	Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching
PIR1FC3V	Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.
PIRH1FC3V	Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.

Networked Sensors/Controls (only available with P1SW, P2SW & P3SW)

NLTAIR2 PIR	nLightAIR Wireless enabled bi-level motion/ambient sensor for 8-15' mounting heights.
NLTAIR2 PIRH	nLightAIR Wireless enabled bi-level motion/ambient sensor for 15-30' mounting heights.

See page 4 for out of box functionality

Finish

DDBXD	Dark bronze
DBLXD	Black
DNAXD	Natural aluminum
DWHXD	White
DSSXD	Sandstone
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white
DSSTXD	Textured sandstone

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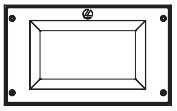
Accessories

Ordered and shipped separately.

WDGEAWS DDBXD U	WDGE 3/8inch Architectural Wall Spacer (specify finish)
WDGE2PBBW DDBXD U	WDGE2 Premium surface-mounted back box (specify finish)
WSBBW DDBXD U	Surface - mounted back box (specify finish)

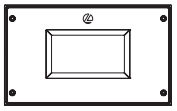
NOTES

1 P1-P5 not available with sensors/controls. Sensors/controls only available with P1SW, P2SW and P3SW.
2 50K not available in 90CRI
3 347V and 480V not available with E4WH, E10WH, E20WC or DS.
4 PE not available in 480V or with sensors/controls
5 DS option not available with E4WH, E10WH, E20WC or sensors/controls.
6 DMG option not available with sensors/controls



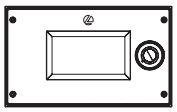
Default configuration with no sensors/controls.

Power Packages: P1, P2, P3, P4, P5



Small Window (SW) configuration

Power Packages: P1SW, P2SW, P3SW



Configuration with sensors/controls

Power Packages: P1SW, P2SW, P3SW

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	27K (2700K, 80 CRI)		30K (3000K, 80 CRI)		35K (3500K, 80 CRI)		40K (4000K, 80 CRI)		50K (5000K, 80 CRI)	
			Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
P1 / P1SW	10W	VF	1,166	119	1,209	123	1,251	128	1,256	128	1,254	128
		VW	1,197	122	1,241	126	1,284	131	1,289	131	1,286	131
P2 / P2SW	15W	VF	1,878	129	1,947	134	2,015	139	2,023	139	2,019	139
		VW	1,927	133	1,997	137	2,067	142	2,075	143	2,071	143
P3 / P3SW	23W	VF	2,908	129	3,015	134	3,119	138	3,132	139	3,126	139
		VW	2,983	132	3,093	137	3,200	142	3,213	143	3,206	142
P4	35W	VF	4,096	117	4,247	121	4,394	126	4,412	126	4,403	126
		VW	4,202	120	4,357	125	4,508	129	4,526	129	4,517	129
P5	48W	VF	5,567	115	5,772	119	5,972	123	5,996	124	5,984	124
		VW	5,711	118	5,921	122	6,127	126	6,151	127	6,139	127

Electrical Load

Performance Package	System Watts	Current (A)					
		120V	208V	240V	277V	347V	480V
P1 / P1SW	10W	0.082	0.049	0.043	0.038	--	--
	13W	--	--	--	--	0.046	0.033
P2 / P2SW	15W	0.132	0.081	0.072	0.064	--	--
	18W	--	--	--	--	0.056	0.041
P3 / P3SW	23W	0.195	0.114	0.100	0.088	--	--
	26W	--	--	--	--	0.079	0.058
P4	35W	0.302	0.175	0.152	0.134	--	--
	38W	--	--	--	--	0.115	0.086
P5	48W	0.434	0.241	0.211	0.184	--	--
	52W	--	--	--	--	0.157	0.119

Lumen Multiplier for 90CRI

CCT	Multiplier
27K	0.845
30K	0.867
35K	0.845
40K	0.885
50K	0.898

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.96	>0.95	>0.91

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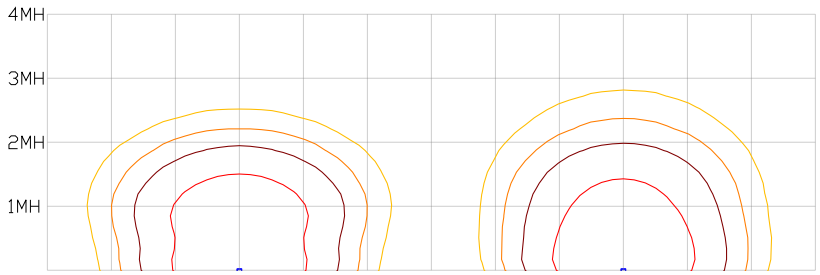
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting WDGE LED homepage. Tested in accordance with IESNA LM-79 and LM-80 standards.

LEGEND
- 0.25 fc
- 0.5 fc
- 1.0 fc
- 3.0 fc

MH = 10ft
Grid = 10ft x 10ft



WDGE2 LED P3 40K 80CRI VW

WDGE2 LED P3 40K 80CRI VF

Emergency Egress Options

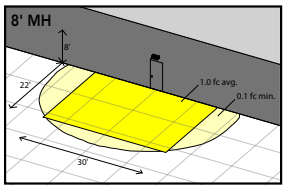
Emergency Battery Backup

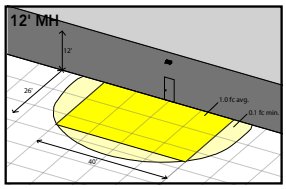
The emergency battery backup is integral to the luminaire — no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product. All emergency battery backup configurations include an independent secondary driver with an integral relay to immediately detect loss of normal power and automatically energize the luminaire. The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time normal power is lost and maintain a minimum of 60% of the light output at the end of 90minutes.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9

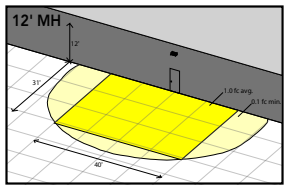
The examples below show illuminance of 1 fc average and 0.1 fc minimum in emergency mode with E10WH or E20WC and VF distribution.

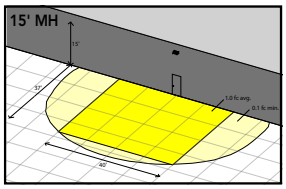
Grid = 10ft x 10ft





WDGE2 LED xx 40K 80CRI VF MVOLT E10WH



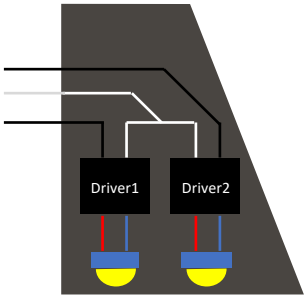


WDGE2 LED xx 40K 80CRI VF MVOLT E20WC

Dual Switching (DS) Option

The dual switching option offers operational redundancy that certain codes require. With this option the luminaire comes integrated with two drivers and two light engines. These work completely independent to each other so that a failure of any individual component does not cause the whole luminaire to go dark. This option is typically used with a back generator or inverter providing emergency power.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9



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Control / Sensor Options

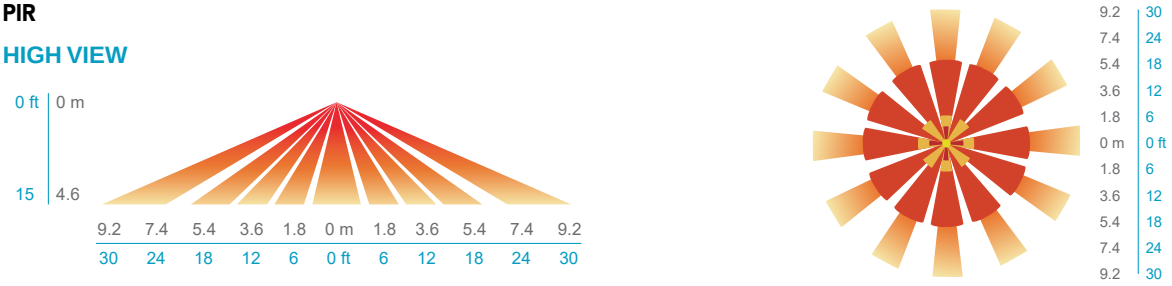
Motion/Ambient Sensor (PIR_, PIRH_)

Motion/Ambeint sensor (Sensor Switch MSOD) is integrated into the the luminaire. The sensor provides both Motion and Daylight based dimming of the luminaire. For motion detection, the sensor utilizes 100% Digital Passive Infrared (PIR) technology that is tuned for walking size motion while preventing false tripping from the environment. The integrated photocell enables additional energy savings during daytime periods when there is sufficient daylight. Optimize sensor coverage by either selecting PIR or PIRH option. PIR option comes with a sensor lens that is optimized to provide maximum coverage for mounting heights between 8-15ft, while PIRH is optimized for 15-40ft mounting height.

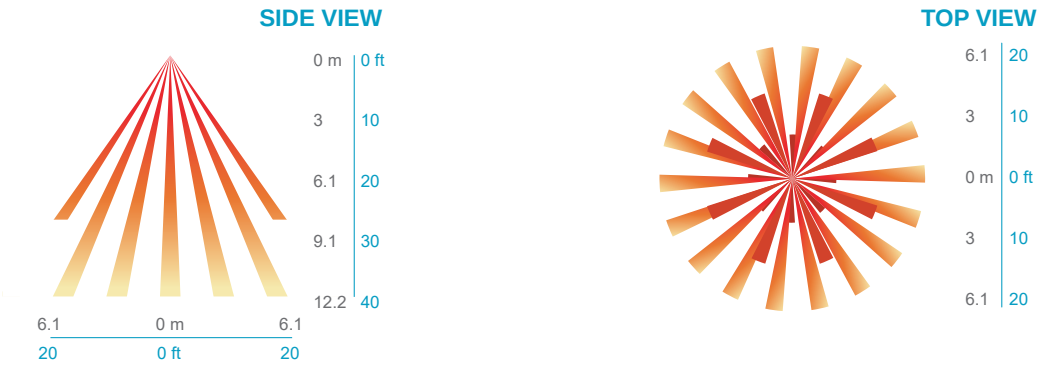
Networked Control (NLTAIR2)

nLight® AIR is a wireless lighting controls platform that allows for seamless integration of both indoor and outdoor luminaires. Five-tier security architecture, 900 MHz wireless communication and app (CLAIRITY™ Pro) based configurability combined together make nLight® AIR a secure, reliable and easy to use platform.

PIR



PIRH



Option	Dim Level	High Level (when triggered	Photocell Operation	Motion Time Delay	Ramp-down Time	Ramp-up Time
PIR or PIRH	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 5fc	5 min	5 min	Motion - 3 sec Photocell - 45 sec
PIR1FC3V, PIRH1FC3V	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 1fc	5 min	5 min	Motion - 3 sec Photocell - 45 sec
NLTAIR2 PIR, NLTAIR2 PIRH (out of box)	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 5fc	7.5 min	5 min	Motion - 3 sec Photocell - 45 sec

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Mounting, Options & Accessories

NLTAIR2 PIR – nLight AIR Motion/Ambient Sensor

D = 7″

H = 11″

W = 11.5″

PBBW – Premium Back Box

D = 1.75″

H = 9″

W = 11.5″

BBW – Standard Back Box

D = 1.5″

H = 4″

W = 5.5″

AWS – 3/8inch Architectural Wall Spacer

D = 0.38″

H = 4.4″

W = 7.5″

FEATURES & SPECIFICATIONS

INTENDED USE
Common architectural look, with clean rectilinear shape, of the WDGE LED was designed to blend with any type of construction, whether it be tilt-up, frame or brick. Applications include commercial offices, warehouses, hospitals, schools, malls, restaurants, and other commercial buildings.

CONSTRUCTION
The single-piece die-cast aluminum housing integrates secondary heat sinks to optimize thermal transfer from the internal light engine heat sinks and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP66 rating for the luminaire.

FINISH
Exterior painted parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS
Well crafted reflector optics allow the light engine to be recessed within the luminaire, providing visual comfort, superior distribution, uniformity, and spacing in wall-mount applications. The WDGE LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine consists of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L91/100,000 hours at 25°C). The electronic driver has a power factor of >90%, THD <20%. Luminaire comes with built in 6kV surge protection, which meets a minimum Category C low exposure (per ANSI/IEEE C62.41.2).

INSTALLATION
A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The 3/8″ Architectural Wall Spacer (AWS) can be used to create a floating appearance or to accommodate small imperfections in the wall surface.

LISTINGS
CSA certified to U.S. and Canadian standards. Luminaire is IP66 rated. PIR options are rated for wet location. Rated for -40°C minimum ambient.
DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY
5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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BLADE

Vandal Resistant

BLD LED

WALL MOUNT /
MULLION MOUNT LED

Fixture Type

Date

Job Name

Approved By

Catalog Number

SPECIFICATIONS

Description The Blade combines a sleek, patent pending design shaped with high performance, full cut off optics to achieve unobtrusive illumination of a space or path of egress. When mounted overa doorway or mullion, the fixture is perceived as an element of the building structure, and, additionally, provides water protection in the form of a drip cap over the entranceway. Multiple lengths are available to match a given door opening and our quick-mount system facilitates installation and maintenance.

Housing Marine grade heat treated extruded aluminum.
Chemically primed and finished with robotically applied polyester powder coat.

Wall Mount Marine grade heat treated extruded aluminum. Chemically primed and finished with robotically applied polyester powder coat. Designed to provide quick mounting to housing and secured with (2) captive stainless steel TORX® head screws.

Lens Frame Marine grade heat treated extruded aluminum.
Secured to fixture (4) captive stainless steel TORX® head screws.

Lens UV stabilized diffused extruded polycarbonate.

End Plate Die-cast marine grade aluminum.
Chemically primed and finished with robotically applied polyester powder coat.

Drivers Constant current drivers at 700mA.

LED Samsung LM561B+ Series @ 2700K, 3000K, 3500K, 4000K, or 5000K and 82 CRI wired in parallel-series. L_{70} projected life of 130,000 hours at 50ºC. Tested in accordance with LM-80. Ten year warranty on LED boards against operational defects.

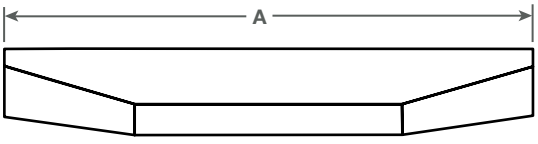
Gaskets Closed cell self-adhesive neoprene to provide watertight seal between fixture and mounting surface.

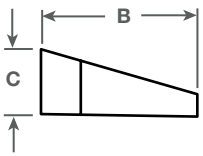
UL Listing U.L., C.UL., Wet standard.

Lifetime Warranty Luminaire LED Incorporated will repair or replace any fixture damaged due to vandalism for the lifetime of the installation.

DIMENSIONAL DATA

	A	B	C
BLD 12	20.0”	5.6”	2.4”
BLD 24	30.8”	5.6”	2.4”
BLD 36	41.6”	5.6”	2.4”
BLD 48	52.4”	5.6”	2.4”
BLD 72	74.0”	5.6”	2.4”





Luminaire Led
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P. 732.549.0056

Luminaire LED Incorporated products are manufactured in the USA with components purchased from USA suppliers, and meet the Buy American requirements under the ARRA. Content of specification sheets is subject to change; please consult our website for current product information.

Rev: 03/19+

ORDERING INFORMATION

SERIES	LED	CCT	VOLTS	DRIVER	LENS	COLOR	OPTIONS		TX/SD
									TX/SD
BLD 12	5W	2700K	120-277	CC	DP	BLK	DIM	EMB10ST	
	10W	3000K		DIM		BRZ	2B	EMB310	
BLD 24	10W	3500K		PRD		SIL	PC	EMB310ST	
	20W	4000K				WHT	PC BT	EMB20R	
BLD 36	15W	5000K				CUST	GLR	EMB125R	
	30W						OCC	EMB250R	
BLD 48	20W						OCC50	EMBDA	
	35W						KO	ST/SC	
BLD 72	30W								
	55W								
	PRD - Specify Watts or Lumens Above								

CC = Constant Current (Standard)
DIM = 0-10V Dimming, 10% at lowest level
PRD = Programmable driver. Specify Watts or Lumens under "LED" in Ordering Information. N/A with BLD 12.

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OPTIONS

LENS	DP = Diffused Polycarbonate.
COLORS	BLK = Black BRZ = Bronze SIL = Silver WHT = White CUST = Custom Color (Consult Factory)
DIM	0-10V dimming driver. 10% at lowest level. N/A with BLD 12.
PC	Photoelectric switch. N/A with 2B option or any EMB options.
PC BT	Bluetooth connected daylight harvesting photocell mounted in machine hole in lens frame. Optional passive infrared occupancy sensor. N/A with EMB options in BLD 12, BLD24, and BLD36.
2B	(2) LED drivers for independent LED board operation. N/A with BLD 12, N/A with OCC options, N/A with EMB310, N/A with EMB310ST.
GLR	Fuse and fuse holder.
OCC	Passive infrared sensor mounted in machine hole in lens frame for on/off operation. Maximum coverage of 10' radius from 8' height. N/A with BLD 12.
OCC50	Passive infrared sensor mounted in machine hole in lens frame. 50% of LED's constantly on and 50% sensored. N/A with BLD 12 and BLD 24.
KO	1/2" knock out in both end plates.
EMB10ST	1000 lumen self-testing, self-contained, 90 minute emergency battery pack. 0ºC (32ºF) to 55ºC (131ºF). Not available in 347V. Available for BLD24, BLD36, BLD48, and BLD72 lengths only. N/A with 2B option in BLD24. Meets CA Title 20 Standards.
EMB310	1000 lumen self-contained, 90 minute emergency battery pack. 0ºC (32ºF) to 55ºC (131ºF). Available for BLD36, BLD48, and BLD72 lengths only. Meets CA Title 20 standards.
EMB310ST	1000 lumen self-testing, self-contained, 90 minute emergency battery pack. 0ºC (32ºF) to 55ºC (131ºF). Available for BLD36, BLD48, and BLD72 lengths only. Meets CA Title 20 Standards.
EMB20R	Remote mounted micro inverter that will operate a 25W maximum load for 90 minutes. 0ºC (32ºF) to 45ºC (113ºF).
EMB125R	Remote inverter that will operate a 125W maximum load for 90 minutes. 20ºC (68ºF) to 30ºC (86ºF). Not available in 347V.
EMB250R	Remote inverter that will operate a 250W maximum load for 90 minutes. 20ºC(68ºF) to 30ºC (86ºF). Not available in 347V.
EMBDA	Two drivers and two emergency battery packs self-contained within fixture for independent light engine operation. Each battery pack will operate each light engine for a minimum of 90 minutes. Available in the BLD 72 only.
ST/SC	Slotted screws instead of TORX® head.
TX/SD	TORX® head bit.

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PHOTOMETRIC DATA

Model	Watts	Input Watts		Delivered Lumens									
				2700K		3000K		3500K		4000K		5000K	
BLD 12	5W	6.5W		447		452		461		476		490	
BLD 12	10W	11.8W		875		885		903		931		958	
BLD 24	10W	10.6W		962		973		993		1024		1055	
BLD 24	20W	21.3W		1885		1907		1946		2006		2066	
BLD 36	15W	14.7W		1444		1461		1491		1537		1583	
BLD 36	30W	29.6W		2828		2860		2919		3009		3099	
BLD 48	20W	19.6W		1926		1948		1987		2049		2111	
BLD 48	35W	36.4W		3770		3812		3890		4011		4132	
BLD 72	30W	29.4W		2969		3003		3064		3159		3254	
BLD 72	55W	57.1W		5789		5855		5974		6184		6345	
BLD xx	PRD			Programmable Driver. Must specify Watts or Lumens in Ordering Information.									

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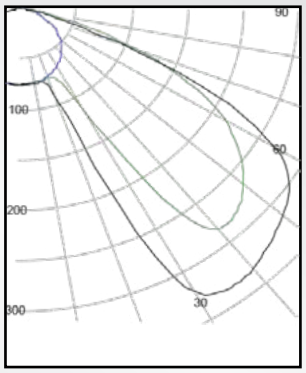
MODEL: BLD12-5W-4000K
Delivered Lumens: 476 Lumens

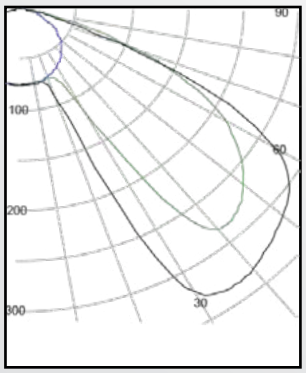


IES FILE: BLD12-5W-4000K
Total Power: 7W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B0U0G1

Zone	Lumens	% Luminaire
0 - 30	69	14.5
0 - 40	149	31.1
0 - 60	359	75.5
60 - 90	117	24.5
0 - 90	476	100.0
90 -180	0	0.0
0 - 180	476	100.0

MODEL: BLD36-15W-4000K
Delivered Lumens: 1537 Lumens

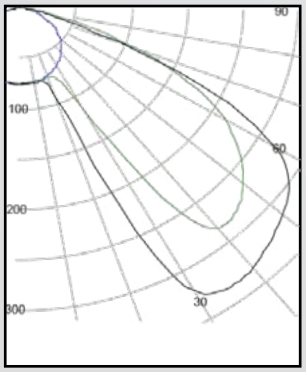


IES FILE: BLD36-15W-4000K
Total Power: 14.7W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B0U0G1

Zone	Lumens	% Luminaire
0 - 30	377	124.5
0 - 40	640	41.6
0 - 60	1219	79.3
60 - 90	317	20.7
0 - 90	1537	100.0
90 -180	0	0.0
0 - 180	1537	100.0

MODEL: BLD36-30W-4000K
Delivered Lumens: 3009 Lumens



IES FILE: BLD36-30W-4000K
Total Power: 29.6W

Testing was performed in accordance with IES LM-79-08
Bug Rating: B1U0G1

Zone	Lumens	% Luminaire
0 - 30	739	24.6
0 - 40	1253	41.6
0 - 60	2387	79.3
60 - 90	622	20.7
0 - 90	3009	100.0
90 -180	0	0.0
0 - 180	3009	100.0

Luminaire Led
a division of the LUMINAIRES GROUP

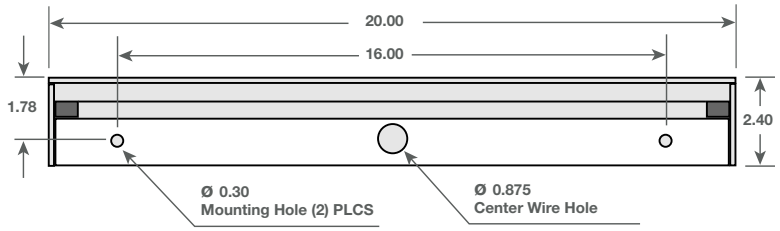
5 Sutton Place
P.O. Box 2162
Edison, NJ 08818

www.luminaireled.net
P. 732.549.0056

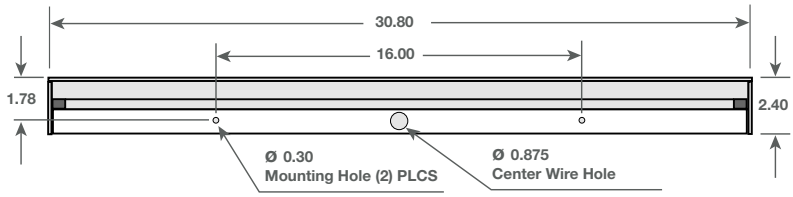
Luminaire LED Incorporated products are manufactured in the USA with components purchased from USA suppliers, and meet the Buy American requirements under the ARRA. Content of specification sheets is subject to change; please consult our website for current product information.

MOUNTING DETAIL

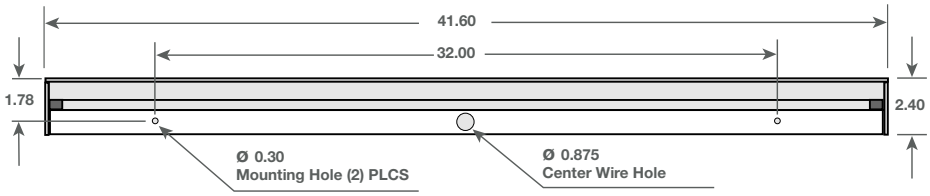
BLD12



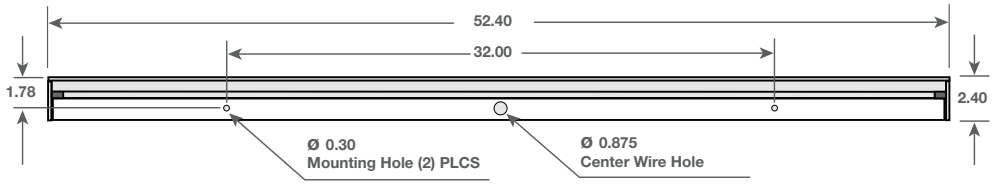
BLD24



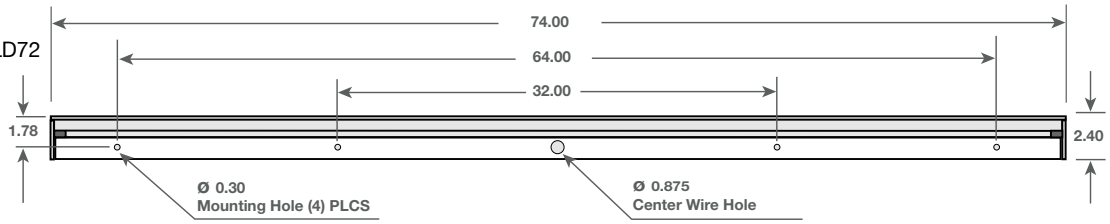
BLD36



BLD48



BLD72



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Rev: 03/19+

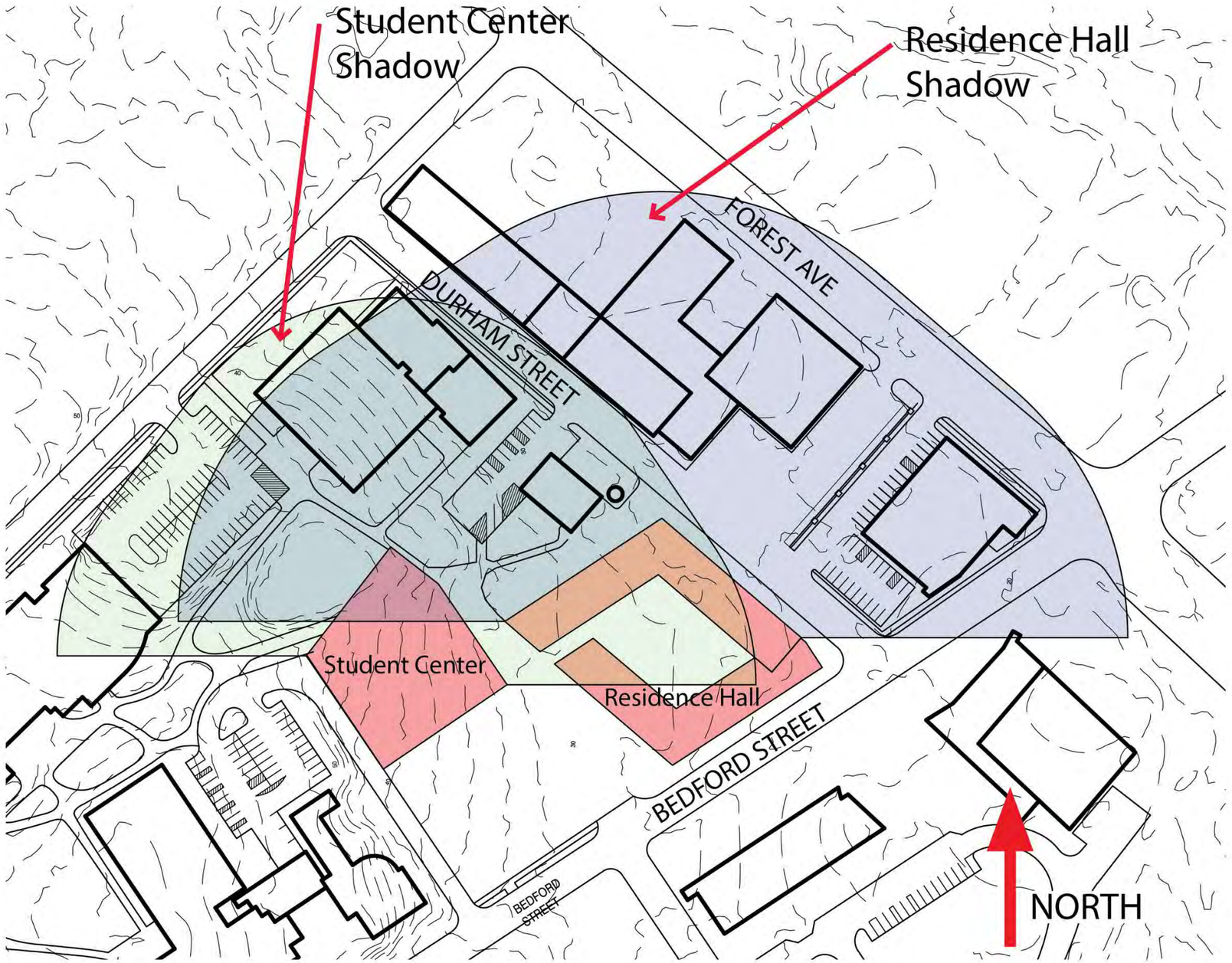
Preliminary Shadow Analysis: A preliminary shadow analysis shall be require for all Level II or Level III Developments or additions to structures greater than 45 ft tall, in order to determine if additional shadow analysis is required.

a) Shadow Length: The longest shadow that any structure will cast in Portland, Maine during the year (except within an hour of sunrise or sunset) is 4.26 times its height. To conduct a preliminary analysis multiply this factor by height of each proposed structure.

85' @ Residence Hall (tallest allowed)
85x 4.26 = 362.1'

65' @ Student Center (as designed)
65x4.26 = 276.9'

Shadows shown reflect solid masses at heights indicated. Actual design will be stepped and reduce shadow impacts.



PRELIMINARY SHADOW STUDY

USM RESIDENCE HALL &
STUDENT CENTER

PORTLAND, MAINE

01/27/2020

UNIVERSITY OF SOUTHERN MAINE
CAPSTONE DEVELOPMENT PARTNERS LLC
WOODARD &CURRAN
ELKUS | MANFREDI ARCHITECTS
SMRT

C4.4 Generator Set

Electric Power

Image shown may not reflect actual configuration

Caterpillar is leading the power generation marketplace with Power Solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost-effectiveness.

Specifications

Generator Set Specifications	
Rating	80 ekW (100 kVA)
Voltage	480 Volts
Frequency	60 Hz
Speed	1800 rpm

Generator Set Configurations	
Emissions/Fuel Strategy	U.S. EPA Certified for Stationary Emergency Application (Tier 3 Nonroad Equivalent Emission Standards)

Engine Specifications		
Engine Model	C4.4 Vertical In-line 4, 4-cycle diesel	
Bore	105.0 mm	4.13 in
Displacement	4.4 L	268.5 in³
Stroke	127.0 mm	5.0 in
Compression Ratio	16.7:1	
Aspiration	Turbocharged Air-to-Air-Aftercooled	
Governor Type	Electronic	
Fuel System	Common Rail	

Package Dimensions*		
Length	2362 mm	93 in
Width	1110 mm	44 in
Height	1304 mm	51 in
Weight†	1130 kg	2491 lb

*Note: For reference only – do not use for installation design. Please contact your local dealer for exact weight and dimensions.

†Weight includes: Oversize generator, skid base, circuit breaker, oil, and coolant.

Benefits & Features

Cat® Diesel Engine

- Reliable, rugged, durable design
- Field-proven in thousands of applications worldwide
- Four-stroke cycle diesel engine combines consistent performance and excellent fuel economy with minimum weight
- Electronic engine control

Generator

- Matched to the performance and output characteristics of Cat engines
- Industry-leading mechanical and electrical design
- Industry-leading motor starting capabilities
- High efficiency

Cat EMCP Control Panel

The EMCP controller features the reliability and durability you have come to expect from your Cat equipment. EMCP 4 is a scalable control platform designed to ensure reliable generator set operation, providing extensive information about power output and engine operation. EMCP 4 systems can be further customized to meet your needs through programming and expansion modules.

Seismic Certification

- Seismic certification available.
- Anchoring details are site specific, and are dependent on many factors such as generator set size, weight, and concrete strength.
- IBC certification requires that the anchoring system used is reviewed and approved by a professional engineer.
- Seismic certification per applicable building codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, CBC 2007, CBC 2010.

Design Criteria

- The generator set accepts 100% rated load in one step per NFPA 110 and meets ISO 8528-5 transient response.
- Cooling system designed to operate in 50°C/122°F ambient temperatures with an air flow restriction of 0.5 in. water.

UL 2200/CSA – Optional

- UL 2200 Listed
- CSA Certified

Certain restrictions may apply. Consult with your Cat dealer.

Single-Source Supplier

Fully prototype tested with certified torsional vibration analysis.

Worldwide Product Support

Cat dealers provide extensive post-sale support including maintenance and repair agreements. Cat dealers have over 1,800 dealer branch stores operating in 200 countries. The Cat S•O•S℠ program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products.

Standard Equipment

Air Inlet

- Single element Air filter

Cooling

- Radiator and cooling fan complete with protective guards
- Standard ambient temperatures up to 50°C (122°F)

Exhaust

- Exhaust flange outlet

Fuel

- Primary and secondary fuel filters
- Fuel priming pump
- Flexible fuel lines

Generator

- Matched to the performance and output characteristics of Cat engines
- Load adjustment module provides engine relief upon load impact and improves load acceptance and recovery time
- IP23 protection
- Integrated Voltage Regulation

Governor

- Electronic governor – ADEM™ A4

Control Panels

- EMCP 4.2 Series generator set controller

Mounting

- Rubber vibration isolators

Starting/Charging

- 12 volt starting motor
- Battery with rack and cables

General

- Paint – Caterpillar Yellow except rails and radiators gloss black

Optional Equipment

Exhaust

- Industrial, residential, critical mufflers

Generator

- Excitation: [ ] Permanent Magnet Excited (PM) [ ] Internally Excited (IE)
- Anti-condensation heater
- Oversize and premium generators

Starting/Charging

- Battery charger – UL 10 amp
- Battery disconnect switch
- Jacket water heater

General

- UL 2200
- CSA Certification
- Enclosures: sound attenuated, weather protective
- Sub-base dual wall UL Listed fuel tanks
- Automatic transfer switches (ATS)

C4.4
80 ekW/ 100 kVA/ 60 Hz/ 1800 rpm/ 480V/ 0.8 Power Factor

Rating Type: STANDBY

Emissions: U.S. EPA Certified for Stationary Emergency Application (Tier 3 Nonroad Equivalent Emission Standards)

Image shown may not reflect actual configuration

D80-8
80 ekW/ 100 kVA
60Hz/ 1800 rpm/ 480V

Package Performance	
Generator Set Power Rating with Fan @ 0.8 Power Factor	80 ekW
Generator Set Power Rating	100 kVA

Fuel Consumption		
100% Load With Fan	23.7 L/hr	6.3 gal/hr
75% Load With Fan	19.0 L/hr	5.0 gal/hr
50% Load With Fan	13.9 L/hr	3.7 gal/hr

Cooling System[1]		
Engine Coolant Capacity	7.0 L	1.8 gal
Radiator Coolant Capacity	10.0 L	2.6 gal
Engine Coolant Capacity with Radiator/Exp Tank	17.0 L	4.5 gal
Air Flow Restriction (System)	0.12 kPa	0.48 in. water

Inlet Air		
Combustion Air Inlet Flow Rate	7.8 m^3/min	275 cfm

Exhaust System		
Exhaust Stack Gas Temperature	630°C	1166°F
Exhaust Gas Flow Rate	17.6 m^3/min	620 cfm
Exhaust System Backpressure (maximum allowable)	15.0 kPa	60.2 in. water
Exhaust Flange Size (internal diameter)	64 mm	2.5 in

C4.4
80 ekW/ 100 kVA/ 60 Hz/ 1800 rpm/ 480V/ 0.8 Power Factor

Rating Type: STANDBY

Emissions: U.S. EPA Certified for Stationary Emergency Application (Tier 3 Nonroad Equivalent Emission Standards)

Heat Rejection		
Heat Rejection to Coolant (total)	47.9 kW	2724 Btu/min
Heat Rejection to Exhaust (total)	77.7 kW	4419 Btu/min
Heat Rejection to Atmosphere from Engine	13.5 kW	768 Btu/min
Heat Rejection to Atmosphere from Generator	7.1 kW	404 Btu/min

Alternator[2]		
Motor Starting Capability @ 30% Voltage Dip	215 skVA	
Frame	LC3114D	
Temperature Rise	105°C	189°F
Excitation	Self Excited	

Lube System		
Sump Refill with Filter	8.4 L	2.2 gal

Emissions (Nominal)[3]	
NOx + HC	3.6 g/kW-hr
CO	0.9 g/kW-hr
PM	0.12 g/kW-hr

[1] For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to the existing restriction from the factory.

[2] Generator temperature rise is based on a 40°C (104°F) ambient per NEMA MG1-32.

[3] The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations. Emissions data is based on 100% Prime load. This information should not be used for permitting purposes and is subject to change without notice. Contact your Cat dealer for further details.

ELECTRIC POWER – Technical Spec Sheet
STANDARD

C4.4

80 ekW/ 100 kVA/ 60 Hz/ 1800 rpm/ 480V/ 0.8 Power Factor

Rating Type: STANDBY

Emissions: U.S. EPA Certified for Stationary Emergency Application (Tier 3 Nonroad Equivalent Emission Standards)

DEFINITIONS AND CONDITIONS

Applicable Codes and Standards:
AS1359, CSA C22.2 No 100-04, UL142, UL489, UL601, UL869, UL2200, NFPA 37, NFPA 70, NFPA 99, NFPA 110, IBC,IEC60034-1, ISO3046, ISO8528, NEMA MG 1-22, NEMA MG 1-33, 72/23/EEC, 98/37/EC, 2004/108/EC.

STANDBY: Output available with varying load for the duration of the interruption of the normal source power. Averagepower output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

Fuel Rates are based on fuel oil to specification EPA 2D 89.330-96 with a density of 0.845 – 0.850 kg/L (7.052 – 7.094 lbs/U.S. gal.) @ 15°C (59°F) and fuel inlet temperature 40°C (104°F).

Additional ratings may be available for specific customer requirements, contact your Cat representative for details.

Performance No.: P4510A
Feature Code: NAC222P
Generator Arrangement: 4518416
Date: 03/24/2016
Source Country: U.S.

LEHE1041-00

www.Cat-ElectricPower.com
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The International System of Units (SI) is used in this publication.

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Weather Protective and Sound Attenuated Enclosures

D40 to D60
D80 to D100
D125 to D200

Features

Highly Corrosion Resistant construction

- tested and proven to withstand extreme conditions of corrosion
- Zinc plated or stainless steel fastener

Excellent Access

- Single side access for service and controls
- All non-service sides have removable doors and/or panels
-
- Lube oil and coolant drains piped to the exterior of the enclosure base
- Large cable entry area for installation ease
- Double doors on both sides
- Vertically hinged doors with solid bar door stays to hold doors in place when open

Security and Safety

- Lockable access doors which give full access to control panel and breaker
- Cooling fan and battery charging alternator fully guarded
- via lockable access
- Stub-up area is rodent proof

Transportability

- These enclosures are of extremely rugged construction to withstand outdoor exposure and rough handling common on many construction sites. The sound deadening material is of a self-extinguishing design
- This range of enclosures are designed on modular principles with many interchangeable components permitting on site repair

Options

- Weather Protective - constructed with 16 gauge steel; industrial silencer mounted within the main enclosure body
- Sound Attenuated Level 1 - constructed with 16 gauge steel; weather protective with critical silencer - silencer mounted in separate upward discharging radiator hood
- Sound Attenuated Level 2 - constructed with 16 gauge steel; weather protective with critical silencer and 100% lined with sound deadening material – silencer mounted in separate upward discharging radiator hood
- Sound Attenuated Aluminum constructed with 14 gauge Aluminum 5052 grade. Weather protective with critical silencer and 100% lined with sound deadening material – silencer mounted in separate upward discharging radiator hood
- Caterpillar Yellow* or white paint
- UL Listed sub base tanks
- Externally mounted emergency stop button
- codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, IBC 2012, CBC 2007, CBC 2010
-

*Not available with Aluminium enclosures

Enclosure Sound Pressure Levels (SPL) at 100%

Weather Protective Enclosure		Cooling Air Flow Rate		SPL @7m (23ft)
Model	Standby eKW	m^3/s	cfm	dBA
D40 (2/4)	40	1.7	3602	85
D50 (2/4)	50	1.7	3602	86
D60 (2/4)	60	1.9	4026	88
D80-8	80	3.2	6696	79
D100-8	100	3.6	7564	81
D125-8	125	4.6	9676	78
D150-10	150	4.6	9676	79
D175-4	175	5.9	12431	84
D200-2	200	5.9	12431	89

SA Level 1 Enclosure		Cooling Air Flow Rate		SPL @7m (23ft)
Model	Standby eKW	m^3/s	cfm	dBA
D40 (2/4)	40	1.7	3602	66
D50 (2/4)	50	1.7	3602	66
D60 (2/4)	60	1.8	3899	71
D80-8	80	3.2	6696	78
D100-8	100	3.2	6696	79
D125-8	125	4.2	8899	74
D150-10	150	4.2	8899	74
D175-4	175	5.6	11830	78
D200-2	200	5.5	11654	81

SA Level 2 Enclosure		Cooling Air Flow Rate		SPL @7m (23ft)
Model	Standby eKW	m^3/s	cfm	dBA
D80-8	80	3.2	6696	75
D100-8	100	3.2	6696	76
D125-8	125	4.2	8899	74
D150-10	150	4.2	8899	74
D175-4	175	5.2	11018	74
D200-2	200	5.1	10806	75

Enclosures

SA Aluminum Enclosure		Cooling Air Flow Rate		SPL @7m (23ft)
Model	Standby eKW	m^3/s	cfm	dBA
D80-2	80	3.2	6696	73
D100-8	100	3.2	6696	74
D125-8	125	4.2	8899	74
D150-10	150	4.2	8899	75
D175-4	175	5.2	11018	75
D200-2	200	5.1	10806	75

The sound pressure level data shown above is quoted as free eld and is forguidance only. Actual levels produced may vary according to site conditions.

Enclosure Dimensions and Weights

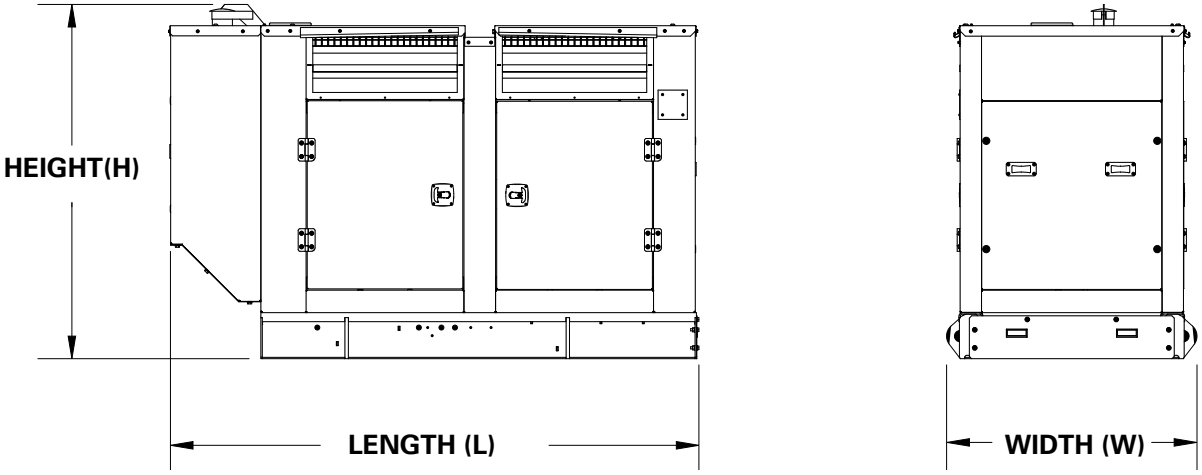

Image represents SA Level 1, SA Level 2 and SA Aluminum enclosures on skid base only

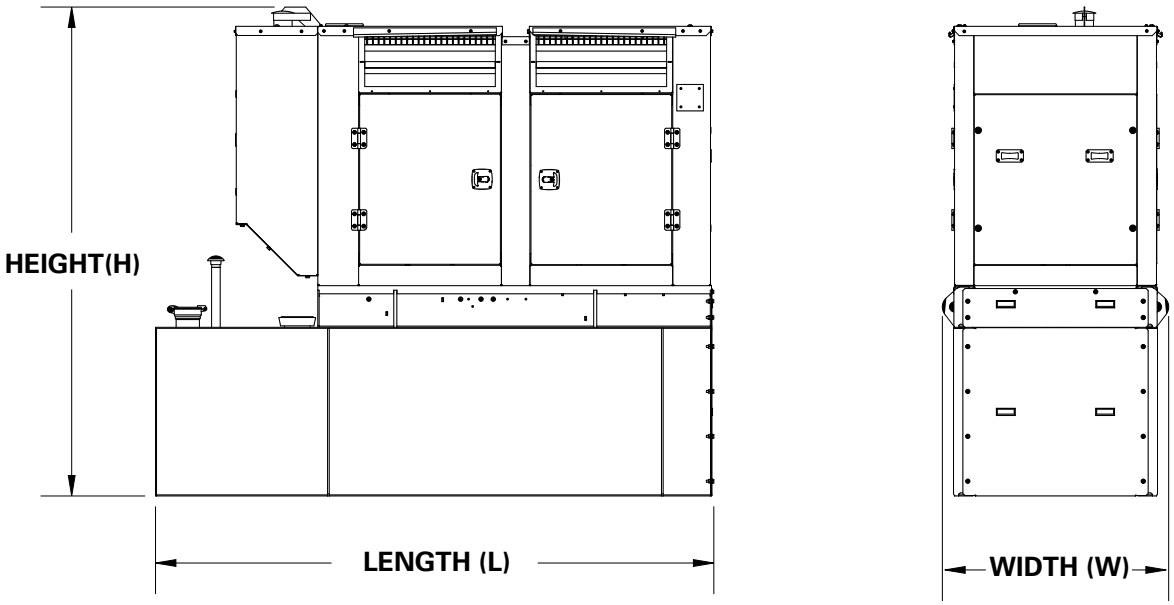

Image represents SA Level 1, SA Level 2 and SA Aluminum enclosures mounted on optional UL listed sub base tank

Model	Standby eKW	WP Industrial		SA Level 1		SA Level 2		SA Aluminum	
		kg	lb	kg	lb	kg	lb	kg	lb
D40-2	40	121	267	137	302	NA	NA	NA	NA
D50-2	50								
D60-2	60								
D80-8	80	263	580	313	690	321	708	142	312
D100-8	100								
D125-8	125	348	768	393	867	406	896	176	387
D150-10	150								
D175-4	175								
D200-2	200								

Enclosure weights (includes muffler)

Enclosure Dimensions Skid Bases

Engine Model	Generator Set Rating ekW	Enclosure	Width 'W'		Length 'L'		Height 'H'	
			mm	in	mm	in	mm	in
C4.4	40	WP	1075	42.3	1972	77.6	1378	54.3
	50							
	60							
	40	SA Level 1, SA Level 2 and SA Aluminum	1075	42.3	1972	77.6	1378	54.3
	50							
	60							
C4.4	80	WP	1110	43.7	2523	99.3	1773	69.8
	100							
	80	SA Level 1, SA Level 2 and SA Aluminum	1110	43.7	2891	113.8	1852	72.9
	100							
C7.1	125	WP	1110	43.7	3204	126.1	1773	69.8
	150							
	175							
	200							
	125	SA Level 1, SA Level 2 and SA Aluminum	1110	43.7	3659	144.1	1852	72.9
	150							
	175							
	200							

Enclosure Dimensions on UL Listed Sub Base Tanks

Engine Model	Generator Set Rating ekW	Enclosure	137 Gallon Sub Base Tank				255 Gallon Sub Base Tank			
			Length 'L'		Height 'H'		Length 'L'		Height 'H'	
			mm	in	mm	in	mm	in	mm	in
C4.4	40	WP	2503	98.5	1912	75.3	2503	98.5	2241	88.2
	50									
	60									
	40	SA Level 1, SA Level 2 and SA Aluminum	2503	98.5	1912	75.3	2503	98.5	2241	88.2
	50									
	60									

Engine Model	Generator Set Rating ekW	Enclosure	209 Gallon Sub Base Tank				394 Gallon Sub Base Tank			
			Length 'L'		Height 'H'		Length 'L'		Height 'H'	
			mm	in	mm	in	mm	in	mm	in
C4.4	80	WP	3447	135.7	2258	88.9	3447	135.7	2608	102.7
	100									
	80	SA Level 1, SA Level 2 and SA Aluminum	3447	135.7	2337	92.0	3447	135.7	2687	105.8
	100									

Engine Model	Generator Set Rating ekW	Enclosure	402 Gallon Sub Base Tank				777 Gallon Sub Base Tank			
			Length 'L'		Height 'H'		Length 'L'		Height 'H'	
			mm	in	mm	in	mm	in	mm	in
C7.1	125	WP	4035	158.9	2420	95.3	5035	198.2	2706	106.5
	150									
	175									
	200									
	125	SA Level 1, SA Level 2 and SA Aluminum	4035	158.9	2499	98.4	5035	198.2	2785	106.5
	150									
	175									
	200									

Note: Weight includes oil and coolant but not fuel

Ref: WPIA, WPIB, WPIC, SATCBA, SATCBB, SAT, CBC, SATFBA, SATFBB, SATFBC, ENCAL02, ENCAL03, ENCAL04.

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10. CONSISTENCY WITH USM DESIGN PRINCIPLES AND STANDARDS

The *University of Southern Maine Campus and Design Principles and Standards* were created in recognition of the need of the university to grow in a vibrant, aesthetic, and sustainable manner that provides a strong sense of place and conveys an identity as a high-quality institution of learning.

All new buildings shall be designed to create a visual connection with existing campus buildings with a goal of achieving a cohesive campus appearance. New development shall be characterized by excellence in architectural design, craftsmanship, materials, streetscape and landscape improvements, signage and lighting appropriate for a university in an urban setting in the Northeast.

These principles and standards were intended to regulate the future build out of the institution while ensuring that new development is sensitive to adjacent residential neighborhoods and commercial areas and is successfully integrated with the City as a whole.

10.1 Applicability

The principles and standards apply to all development on the University of Southern Maine Portland campus. The following summarizes how the proposed project addresses each of the principles and standards found in the USM Campus and Design Principles and Standards.

10.2 Principles and Standards

Principle A Campus Design

Standard A-1: Campus Edges.

The Residence Hall is designed to coordinate with the existing buildings on campus and context by utilizing a 5-story portion along Bedford Street and an 8-story portion on Durham Street. The 5-story portion relates to the Osher Map Library, Muskie School, and Masterson Hall in Scale and Proportion. The 8-story portion, which returns into USM's Campus half way up Durham Street, creates a transition point for the campus to scale down towards the residential structures on Falmouth street while at the same time acknowledging the development of Forest Avenue and allowed building heights of future development. Career and Student Success Center is located in the heart of the campus and only defines internal campus edges.

Standard A-2: Building Orientation

The Career and Student Success Center and Residence Hall are designed to create a new Campus Quad along Bedford street as well as a courtyard within the Residence Hall. The five-story portion of the building along Bedford street allows for natural light from the south to enter the courtyard of the Residence Hall. This also allows the quad to feel more open and bright at all times of day.

Standard A-3: Pedestrian Environment

The Residence Hall's primary entrance is located on Bedford Street and will have a high level of transparency into the inner courtyard. We have brought the sidewalk up to the edge of the building to allow for more plantings and trees between the street and pedestrian sidewalk. The sidewalk transitions into the pedestrian pathways along the periphery of the quad and feeds into the campus. The Student Center faces the new quad with a formal covered portico that runs the entire length of the building, facing south. The portico stitches together pre-established campus circulation patterns from the west through Masterton Hall and terminates in the courtyard of the new Residence Hall to the east. Additional circulation patterns at the east

and west edges of the new residential quad will provide an appealing approach to the Student Center. In addition to providing protection from the weather the portico shields the large glass wall of the southern façade from solar heat gain. Framed with a mass timber and cross laminated timber structural system, the portico and large interior spaces are visually warm and inviting. Driven by ambitious sustainability goals, the aesthetic of the building - board formed concrete, large steel-framed walls of glass, corrugated metal and fiber cement siding - is rooted in the material palette of the campus and the nature of Maine in the broader context.

Standard A-4: Gateways

The Residence Hall is at the corner of Bedford and Durham Street and is designed to enhance the gateway into the campus. This is achieved through relating to the context buildings across the street and the use of different materials on the facade to create a more distinct "Gateway".

Standard A-5: Views and Landmarks

The five-story portion of the Residence Hall along Bedford Street utilizes the same size and scale of the existing buildings which will help maintain the views and feel of the street. The replacement of the surface parking lot with green space highlights views in and out of campus by creating a space that allows engagement with the surrounding context. The Career and Student Success Center is establishing itself as a new landmark in the heart of campus.

Principle B Access and Circulation

Standard B-1: Connectivity

The CSSC, Residence Hall, and new Campus Quad enhance and add to the existing connectivity within the campus and relates to the goals of the USM Facilities Masterplan.

Standard B-2: Circulation

The entrances and exits of both buildings highlight existing access points within the USM circulation system as well as define new spaces with a higher level of clarity and safety than the previous surface parking lot did.

Standard B-3: Multi-modality

The circulation plan is pedestrian oriented at all levels and measures have been taken to eliminate pedestrian and vehicular crossings within the campus. The existing bus stop will remain and is integrated into the new Quad with accessible routes accessing the new buildings.

New bike storage areas for both buildings will be provided to enhance biking to and around campus.

Standard B-4: Traffic Calming

The pedestrian environment is the focus of this design and measures have been taken to enhance this and create a higher level of safety for pedestrians by limiting pedestrian and vehicular interaction.

Standard B-5: Sidewalks

New sidewalks will be installed along Bedford Street and are greater than 8' in width. Durham Street is not as heavily travelled and will utilize a 6' sidewalk.

Standard B-6: Street Lights

Streetlights will be in line with what has been recently installed on Bedford Street.

Principle C Parking, Loading and Service Areas

Standard C-1,C-2,C-3: Parking Structures

There are no parking structures included with this application. A separate Level III Site Plan application will be submitted for a parking structure on campus.

Standard C-4: Surface Lots

The existing Surface Lot off of Durham street will be repaved and expanded for the new service area.

Standard C-5: Loading and Service Areas

All loading and service areas are consolidated behind the CSSC and Residence Hall and accessed via Durham Street. The goal of centrally locating these facilities was to create clear and distinct separation from the pedestrian circulation within campus and concealed from public view.

Standard C-6: Utility Services

All utilities are located adjacent to the loading and service areas out of public view and access.

Principle D Architectural Design

Standard D1: Height

The Residence Hall building is broken down into two distinct wings, a five-story portion along Bedford Street and an eight-story portion along Durham Street with both wings returning into the campus. The eight-story portion of the building will be in accordance to the USM Overlay Map of 85' in height or less. The CSSC is located in the heart of the campus and will be three stories tall and under the allowed height per USM Overlay map.

Standard D-2: Setbacks

The Residence Hall is set back 10' from the Property Line on Bedford Street and 4' from Durham Street.

Standard D-3: Stepbacks

We understand that this is not applicable to these projects based on initial conversations with the City.

Standard D-4: Massing

Facades along Bedford and Durham Street of the Residence Hall utilize a Masonry and glass base. The Bedford portion transitions to a primarily masonry/brick façade with portions of cementitious panel inlays to gang windows together. This breaks down the scale of the facade and relates to the vertical fenestration of the Osher Map Library and Muski School Across the street. The eight-story portion along Durham Street Transitions to a metal and cementitious panel cladding system that runs primarily in a horizontal pattern to help mitigate the height of the building. The horizontal bands gang windows and units to help reduce the perception of the horizontal length of the building. The CSSC helps transition the eight-story massing of the Residence Hall to the existing Buildings on campus.

The programming along the ground floors allow for no more than 20 consecutive linear feet of blank walls along public ways.

Standard D-5: Entrances

The Residence Hall's primary entrance is located off of Bedford Street with limited entrances other than for emergency egress for security purposes along the perimeter. The primary entrance for the CSSC faces Bedford street and overlooks the Quad. This entrance is connected to the new and existing pedestrian circulation paths. There is another entrance to the CSSC located on the north west corner that connects with the central pedestrian path within the campus.

Standard D-6: Windows

Unit Windows within the residence Hall will likely meet Passive House Standards with a U-value of .14-.11, surpassing most high-performance window systems. The storefront systems will be upgraded to triple pane to meet Passive House standards as well. We have utilized transparency along Bedford street, but less on Durham since these are residential units. We are coordinating the percentage of window opening with our Passive House consultant since this directly impacts the sustainability goals of the project.

The windows for the Career and Student Success Center will perform to LEED Silver requirements. There is significantly more glass in this building due to the program that open out to the new Quad.

Standard D-7: Materials

One of the goals of the project is to create a new vision for USM while keeping ties to the existing campus materials.

The Residence Hall is one building with two distinct wings: the five-story Bedford Wing and the eight-story Durham Wing. Both wings have a two-story masonry base which relates to several of the existing buildings on campus. The Bedford Wing will have more glazing to allow light into the common spaces and to activate the streetscape. The upper, streetside face of the Bedford wing is also masonry with metal infill panels between the windows. The courtyard side of the Bedford Wing will be a combination of cementitious and metal panels. The top six floors of the Durham Wing elevations will be cementitious and metal panels; both the streetside and the courtyard elevations.

We have reviewed the cementitious panel option with the city previously since cementitious panels have improved significantly since the design manual was written and are utilized in many LEED projects and the durability has improved significantly.

The Career and Student Success Center will utilize a similar palette with the addition of exposed heavy timber structure.

Standard D-8: Signage

Signage is still under review

Standard D-9: Historic Structures

Not applicable

Standard D-10 Original Residential Structures

Not applicable

11. ZONING ASSESSMENT

The project is located within two underlying City Zones. Most of the project is in the R-5 Residential Zone, with a small portion on the eastern side in B-2 Community Business Zone. The entirety of the project is in the USM Overlay Zone. The purpose of the USM Overlay zone is to allow the University to continue and reasonably expand within defined boundaries, and to recognize the unique qualities of a university campus while at the same time protecting the value and integrity of established neighborhoods. University buildings and structures are subject to the requirements of the underlying zoning districts, except as modified by the USM Overlay Zone. The Overlay Zone provides for an 85-foot building height in the portion of the campus where the new Career and Student Success Center and Residence Hall will be located, and yard setbacks of 10 feet from Bedford Street; 0 feet from Durham Street; and 20 feet from Falmouth Street.

The uses proposed for this project, generally classified as "University Uses", are permitted within the USM Overlay zone. The allowed uses include: Classrooms; Student Unions; Dining Halls; Bookstores; Auditoriums; Outdoor Use areas, such as quads and greens; student housing, Administrative and Faculty offices, and other buildings, structures and uses customarily incidental to a university.

The attached Zoning Assessment Table shows the project complies with dimensional requirements specified in the City's Land Use Ordinance.

11.1 Attachments

- City of Portland Zoning Assessment Table

ZONING ANALYSIS Relevant Zone(s) B2, R5, USM Overlay Zone

All Projects:

	Required	Proposed
Lot Size	N/A	N/A
Area Per Dwelling Unit	N/A	N/A
Minimum Street Frontage	N/A	N/A
Front Yard Minimum	Bedford St -10'	10'
Front Yard Maximum	N/A	N/A
Rear Yard	N/A	N/A
Yard Right	Durham St - 0'	0'
Yard Left	N/A	N/A
Side Street Setback	N/A	N/A
Step Back	N/A	N/A
Maximum Lot Coverage	40% (Campus)	~29% (Campus)
Minimum Lot Coverage	N/A	N/A
Maximum Height	Zone C, 85 feet	82 feet
Open Space	N/A	N/A
Maximum Impervious Area	66% (Campus)	~53% (Campus)
Pavement Setback	N/A	N/A
Floor Area Ratio	N/A	N/A
Off Street Parking Spaces	See Campus Plan	See Campus Plan
Loading Bays	determined by PB	3
Other 1		
Other 2		
Other 3		

Planned Residential Unit Developments (PRUD) Requirements (Not applicable)

	Required	Proposed
Minimum Lot Size		
Minimum Lot Area per Dwelling		
Maximum # Units per Building		
Maximum Building Length		
Maximum Accessory Building Length		
Minimum Setbacks		
Minimum Building Separation		
Minimum Open Space		

Affordable Housing Density Bonuses (if applicable) (Not applicable)

	Bonus Increase or Decrease	Maximum Allowable With Bonus	Proposed
Density			
Height			
Setback Reduction			
Recreation Space			
Maximum Accessory Building Length			
Minimum Setbacks			
Minimum Building Separation			
Minimum Open Space			
Explanatory Text 1 (optional):			
Explanatory Text 2 (optional):			
Explanatory Text 3 (optional):			

12. CONSISTENCY WITH CITY COMPREHENSIVE PLAN

The City's current Comprehensive Plan (Portland's Plan 2030) completed in 2017 articulates a vision of Portland's values and provides a framework for decision making revolving around the values, goals, and strategies of the City over the next decade. The proposed project is consistent with with Portland's Plan 2030.

12.1 Comprehensive Plan Vision Statement

Portland's Plan 2030 is guided by a vision statement for the City that includes six interconnected themes, which provide the foundation for focusing City policies and priorities identified for gauging success. The goals and implementation strategies in the Plan support the vision statement.

Figure 12-1: *Six Interconnected Themes Identified During Portland's Comprehensive Planning Process*

The Career and Student Success Center and Residence Hall projects align with all six themes of the vision statement, with focus on many of the specific points (listed below in italics) highlighted within those themes.

Equitable – *We (City) will remain an open and inclusive city, celebrating diversity and providing a welcoming and safe place for residents and visitors alike.*

The Career and Student Success Center and Residence Hall project provides connectivity to neighboring uses, welcoming residents of surrounding neighborhood. The proposed site features a Campus Quad, plaza areas, and pedestrian connections that create permeability, are welcoming to pedestrians, and provide important public access.

Sustainable – *Portland has been built and rebuilt to endure; we will balance our historic fabric, sound infrastructure, and the best of new technology and design for the future.*

Portland will grow in order to sustain our community, infrastructure, and economy.

Growth should respect and seek to preserve our spectacular natural resources.

Sustainability at the University of Southern Maine means environmental responsibility and sensitivity as well as a focus on wellbeing. Across three campuses the University strives to implement sustainable solutions that serve not only the planet locally and globally, but also the diverse university community. From careful and innovative waste management practices to energy and water conservation, from engaging students, staff, and the outside community with creative programming to integrating sustainability into the curriculum, and from responsible procurement to careful planning and execution of projects and initiatives, USM strives to lighten its carbon footprint while simultaneously enriching the learning experience for all of our students in all majors.

The University has a Strategic Sustainability Plan, developed in 2017 that was endorsed by Student Senate and the Master Planning Committee.

USM also recognizes its role in advancing regional and state economics. Through its research, academic programs, and training, the University responds to the workforce and economic prosperity imperatives of Maine's business, nonprofit organizations, and government agencies.

Dynamic – *We will embrace innovation in order for our community to thrive.*

We will welcome new residents into our community because they enrich and sustain our city

We will support healthy schools as essential to maintaining a dynamic community.

Portland will plan for a built environment that encourages an active citizenry.

Located less than one mile from the heart of downtown Portland, the Portland campus provides excellent access to social, cultural and internship opportunities. The USM Facilities Master Plan outlines the following vision for the Portland Campus: “To building a sustainable, iconic academic campus in the heart of Portland enhancing the commuter experience while creating a welcoming residential community”. USM embraces academic freedom for students, faculty, and staff, and advocates diversity in all aspects of its campus life and academic work.

Secure – *We will be committed to accessible housing and healthy food for all our residents.*

We will strive to create a resilient economy through innovation, investment, and commitment to diversity.

While Portland is a desirable place to live, competitive market conditions have created a barrier to entry for many students. USM envisions expanding its on-campus housing portfolio on the Portland campus to support students’ academic and career aspirations as well as ensure a robust student life experience. It is strategically focused on providing this student housing for upper-division (third- and fourth-year) undergraduate, graduate,

and law students. The new Career and Student Success Center and Residence Hall are instrumental in achieving this goal.

The University is committed to building a campus community where all students can fully participate and feel valued, in an educational environment that is inclusive and safe. It encourages its students to engage in the rich education and growth found through active exchange across cultures and identities. Research is a vital way for faculty and students to bridge academic scholarship and learning with helping communities create real world solutions. Through a broad range of USM research initiatives, faculty, staff, and students aim to produce results that will be usable, practical, and sustainable in the community.

Authentic – *We (City) will celebrate our city's incredible history.*

The uniqueness and integrity of our neighborhoods will be maintained and enhanced.

We will invest in and support our local economy.

We will maintain our character through preservation, innovation, and excellence in design for the built environment.

The proposed development realizes a substantial investment in the Portland campus, that will create new housing opportunities for students as well as create new welcoming space that will enhance the campus and neighborhood experience. The Career and Student Success Center, Residence Hall, and new Quad enhance and add to the existing connectivity within the campus and incorporates the goals of the USM Facilities Masterplan. The new CSSC will be a LEED certified building and the Residence Hall will be pursuing Passive House Certification. The University campus is a valuable asset to the local economy - as an employer; as a destination for students; and as a gathering place for professionals and community events.

Connected – *Our success will be tied to our connections to each other, our state, and our region.*

Diverse forums for community engagement will remain essential to a strong civil society.

We will foster accessible linkages between where we live, work, shop, and play.

This project will remain physically connected to the rest of the City and surrounding areas through street connections and pedestrian connections. The projects will enhance the campus experience, while also remaining connected to the adjacent neighborhood. The new CSSC will include opportunities for dining, events, Career placement, Veterans Affairs, Intercultural and Student Affairs, and a radio station.

12.2 Comprehensive Plan Policy Guides

The City of Portland Comprehensive Plan includes eight specific policy guides focused on the topics of environment, historic resources, waterfront, economy, housing, recreation and open space, facilities and services and transportation. The discussion below emphasizes how the proposed development is consistent with the following applicable policies of environment; economy; housing; recreation and open space; facilities and services; and transportation.

Environment Policy Guide

- Within the Environment Policy Guide, one of the local goals is to develop climate resilience through specific carbon reduction goals, comprehensive climate adaptation strategies, and protections for the City's most vulnerable infrastructure. The design team has specifically considered resiliency as part of the proposed development through building design and site layout.

- Develop climate resilience through specific carbon reduction goals, comprehensive climate adaptation strategies, and protections for the city's most vulnerable infrastructure. The University has a number of

sustainability initiatives, including Alternative Transportation; Sustainable Landscapes; Water, Stormwater, and Pollution; and Dining Services. The University signed the President's Carbon Commitment in 2007 which commits the University to achieving carbon neutrality by year 2040.

- The Policy Guide also has a local goal to adopt sustainable land use and transportation policies that support connectivity, walkable neighborhoods, and multi-modal transportation. The proposed project continues to emphasize the Facilities Master Plan's ideas of connectivity and walkability. The project will prioritize pedestrian movements through the site, and to throughout the campus.

- The University has a Strategic Sustainability Plan, developed in 2017 that was endorsed by Student Senate and the Master Planning Committee. The Plan has the goal of carbon neutrality by 2040 as its overarching focus. And, there are three pillars in the plan: Energy, Material Resources, and Education & Outreach. Collectively, the three pillars encompass over 120 specific initiatives. Progress on the plan is reported every two years, and the University just published its progress report

- One future strategy is improving water quality. As described by the Stormwater Management Plan attached to this application, stormwater best management practices will be incorporated into the Site to provide water quality treatment. The project also incorporates several Low Impact Development (LID) water quality facilities.

The Career and Student Success Center and Residence Hall project aligns with the many of the goals of the City's environmental policy.

Economy Policy Guide

The proposed development directly supports the goals and future strategies within the Economy Policy Guide including:

- Support sustainable growth in our educational, medical and cultural institutions

- Invest, attract and retain human capital to support a growing economy.

- Support job creation and business growth through public initiatives and private, institutional and regional partnerships.

- Prepare our current and future residents to compete in an increasingly knowledge-based economy

- Invest in educational institutions and training as a means of attracting, developing, and retaining an educated workforce.

- Promote the orderly expansion of institutional uses, such as educational, cultural, and hospital campuses, which are central to workforce development, employment, and the health of the local and regional economies.

- Ensure that the growth of Portland's educational, medical, and cultural institutions is integrated into Portland's urban fabric through the use of high-quality design, management of impacts, community partnerships, and innovative planning.

- Sustain and strengthen relationships between local organizations and our anchor institutions to capitalize on their unique value to the well-being and future success of Portland and the region.

Established in 1968, the University of Maine System is the state's largest educational enterprise. It has an annual enrollment of nearly 30,000 students and positively impacts the lives of hundreds of thousands of Mainers each year through its educational and cultural offerings as well as outreach and public service to individuals, businesses,

organizations and policymakers. The System has an estimated $1.5 billion total statewide economy impact each year, a return of $7.50 for every dollar of State appropriation. Two-thirds of its alumni—approximately 120,000 people—live in Maine.

The University of Southern Maine, northern New England's outstanding public, regional, comprehensive university, is dedicated to providing students with a high-quality, accessible, affordable education. Through its undergraduate, graduate, and professional programs, USM faculty members educate future leaders in the liberal arts and sciences, engineering and technology, health and social services, education, business, law, and public service. Distinguished for their teaching, research, scholarly publication, and creative activity, the faculty are committed to fostering a spirit of critical inquiry and civic participation. USM embraces academic freedom for students, faculty, and staff, and advocates diversity in all aspects of its campus life and academic work. It supports sustainable development, environmental stewardship, and community involvement. As a center for discovery, scholarship, and creativity, USM provides resources for the state, the nation, and the world.

Housing Policy Guide

The proposed project includes student housing and supports the goals of the City's Housing Policy Guide, including:

- Increase, preserve, and modify the overall supply of housing city-wide to meet the needs, preferences and financial capabilities of all Portland residents.

- Encourage quality, sustainable design in new housing development.

The University is committed to creating a safe, high quality and affordable student life environment that supports the overall well-being of its diverse community. It seeks to create a residential community for upper-division (third- and fourth-year) undergraduate, graduate, and law students that is proximate to academic resources and support. It is important to the University that the housing development maintains housing affordability for students while assuring financial and environmental sustainability.

Recreation and Open Space Policy Guide

The proposed project will create new open spaces on the campus, which align with several of the goals of the City Recreation and Open Space Policy Guide, including:

- Sustain and build our system of parks, trails, and open spaces to enhance our quality of life, protect our environment, and promote the economic well-being of our remarkable city by the sea.

- Provide high-quality, well-designed, well-maintained, safe, and integrated parks, trails, public open spaces, and recreational opportunities accessible to all residents.

The transformation of the Woodbury Campus Center parking lot into the proposed Campus Quad will create new outdoor space to accommodate a variety of programs, from special events like graduation, to a place to congregate, relax, or study between classes.

Facilities and Services Policy Guide

While the Portland Facilities and Services Policy Guide focuses on City provided infrastructure and public school, this project echoes several of the goals and future strategies in the Guide:

- Maintain and support a quality educational system that is responsive to the educational needs of our community.

- Make strategic investments in school facilities to modernize and update buildings and grounds, ensure student safety, and preserve and enhance neighborhood connections.
- Leverage State, local, and private funding to allow a comprehensive approach to sustain excellence in the school system.
- Continue to provide continuing education and job training for adults and new residents.
- Pursue public/private partnerships to fund needed projects and services.

Transportation Policy Guide

The proposed project will build on the University's commitment to efficient use of public facilities and services to accommodate anticipated growth and development. It aligns with the following Goals and Future Strategies contained in the Transportation Policy Guide:

- Promote multi-modal accessibility, enabling residents and visitors of all ages and abilities to participate fully in the social and economic life of the community.
- Support livability by improving the quality of life in neighborhoods and improving the public health of residents.
- Support sustainability by reducing energy consumption, greenhouse gas emissions, and stormwater impacts.
- Identify, plan, and zone for parking needs, particularly downtown, on the waterfront, and in conjunction with large institutions.
- Develop robust, integrated parking management strategies to reduce parking demand.
- Invest in a walkable city through sidewalk maintenance, accessibility improvements, trail and path connections, snow clearance, lighting, landscaping, traffic calming, enhanced street crossings, strong urban design, artistic elements, and wayfinding.
- Expand Transportation Demand Management (TDM) initiatives for large development sites and institutions, building upon the recent implementation of TDM plans for individual employers and sites.

The project supports pedestrian, bicycle, shuttle bus, and the metro public transit systems, that looks beyond the private vehicle parking needs of the campus community. The University has developed a draft TDM, which is attached.

14. BOUNDARY SURVEY

A boundary and topographic survey of the Site was completed by SurveyWorks, Inc. Professional Land Surveyors. The survey was completed in February of 2020. The survey is included with the project drawings.

14.1 Attachments

- Boundary & Topographic Survey, prepared by SurveyWorks, Inc. (uploaded to Drawings folder in Eplan)

15. AVAILABILITY & ADEQUACY OF PUBLIC UTILITIES

The proposed project will be serviced by public water, sewer, gas, and electric utilities. The proposed locations of the utility services are shown on the Utility Plan included in the Design Drawings attached to Section 3. The proposed development will also generate waste as a result of construction and post-construction operations.

15.1 Water

The water services for the proposed development will be provided as shown on the drawings via connections to the public water main on Durham Street. Separate domestic and fire protection services will be provided to both the CSSC and Residence Hall. Existing services to the demolished buildings identified as #25 and #35 Bedford Street will be abandoned. Preliminary calculations indicate that available flow and pressure is adequate for fire service such that a separate fire pump is not necessary. SMRT has been working directly with the Portland Water District (PWD) to determine the appropriate design for this work. Based on the results of these meetings, we are in the process of designing the water system services, and we will be scheduling a meeting with PWD to review our system design. An ability to serve determination will be provided upon receipt.

15.2 Sewer

The proposed development will be provided with sanitary sewer services as shown on the drawings. The services from the proposed buildings will be gravity sewer that will discharge to the public sanitary sewer on Durham Street. Existing services to the demolished buildings identified as #25 and #35 Bedford Street will be abandoned. The CSSC includes dining and commercial kitchen uses and an external grease trap will be provided as shown on the drawings. The attached letter is provided to request confirmation of ability to serve the proposed development; the Wastewater Capacity Application was submitted with this letter. A copy of the City's determination will be provided upon receipt.

15.3 Gas

The proposed development will utilize natural gas service provided by Unitil. New services for both buildings will be brought from an existing gas main in Durham Street as shown on the Utility Plan. The location and size of the gas service is being coordinated with Unitil. We have met with Unitil to review the project needs. With final meter locations selected, the utility plan will be provided to Unitil for their review. An ability to serve determination will be provided upon receipt.

15.4 Electric

The proposed development will utilize underground electric service through connection to the existing campus infrastructure. Proposed electric services will extend from the existing transformer near the Central Heating building to two adjacent transformers. Proposed infrastructure is shown on the Utility Plan. The design of the electric service is being coordinated with Central Maine Power (CMP). We met with CMP to review the proposed work. We also met with CMP and the City of Portland Department of Public Works to discuss possible opportunities to collaborate with the City on utility infrastructure. Final electric layouts will be provided to CMP for their review and an ability to serve determination will be provided upon receipt.

15.5 Solid Waste

Adequate provisions for recycling and solid waste disposal have been made. The campus presently collects solid waste at two compactors adjacent to #25 Durham Street where dumpsters are managed by a commercial waste hauler. This management will continue with the compactors being relocated to the CSSC loading dock. All solid waste materials and recyclables generated by the proposed project will be transported and disposed of or recycled in accordance with applicable laws and regulations. Solid waste will be managed in full accordance with all applicable laws and regulations.

In addition, the University will maintain their composting program related to the dining facilities, to be relocated to the CSSC, which is managed through a third-party contractor.

During Construction of this project, the recycling and solid waste dumpsters currently located behind the facilities building will be temporarily located to the north of the Sullivan Gym. The temporary location will be accessed from Durham Street as shown on the logistics plan included in Section 13. The area will be prepared with a gravel or paved surface, and privacy fence. Upon completion of the project and location of the permanent solid waste area to the north of the new CSSC, the temporary location at the corner of Durham and Falmouth Streets will be returned to its current landscaped condition.

15.6 Construction & Demolition Debris

The proposed development will generate construction waste and demolition debris (CDD). The Contractor will be responsible for properly disposing of the CDD. The Contractor will be responsible for handling, managing, and disposing of all waste generated by construction in accordance with the Maine Solid Waste Management Regulations and all other applicable local, state, and federal regulations.

15.7 Special & Hazardous Waste

The proposed development is not anticipated to produce any hazardous waste. Environmental assessments of the Site and existing buildings are in the process of being conducted and the University, the Developer, and the Contractor will adhere to all Federal, State, and Local regulations concerning the handling and disposal of special or hazardous wastes.

15.8 Attachments

- Portland Department of Public Works Request for Ability to Serve Letter and Wastewater Capacity Application
- Portland Water District Ability to Serve Letter

March 5, 2020
Job No.: 19206

Brad Roland, Senior Engineer
City of Portland Public Works – Water Resources Group
212 Canco Road Suite B
Portland, ME 04103

RE: Request for Ability to Serve
Proposed Career and Student Success Center & Residence Hall, University of Southern Maine

Dear Mr. Roland,

On behalf of Capstone Development, SMRT Architects & Engineers is submitting this request for Ability to Serve letter for a new project on the campus of the Univesrity of Southern Maine in Portland. The Ability to Serve letter is intended for Level III Site Plan application to the City of Portland.

Project Location

The University of Southern Maine (USM) is proposing to construct two new capital buildings on approximately 3.6 acres of the Portland campus of the University of Southern Maine. The project is known as the Career and Student Success Center (CSSC) & Residence Hall project. The project area is bounded by the easterly corner of the block defined by Falmouth, Durham, and Bedford Streets. This area presently includes a large public parking lot, the Woodbury Student Center (approx. 21,701 sf), the Facilities Management building (8,950 sf), and associated service areas, parking, and infrastructure. This project will remove all features in the project area and essential services, infrastructure, and offices will be relocated on campus prior to commencing demolition. Please see attached CD101, Existing Conditions and Demolition Plan for project location details.

Project Scope

The project consists of the construction of two primary buildings to replace two existing buildings on the campus. The Woodbury Center (#35 Bedford) and the Facilities Management building (#25 Bedford) will be demolished and the existing water services associated with these structures will be abandoned. A new residence hall will be constructed at the corner of Bedford Street and Durham Street including with five to eight stories and a footprint of approximately 31,200 s.f.footprint with a total gross floor space of approximately 220,000 sf. This building represents the first residence hall on the Portland campus and will house approximatey 580 students in units varying in occupancy from 1 to 3 residents. The second building will replace the funciton of the Woodbury Center and is titled the Career and Student Success Center (CSSC). This building will be located between Masterton and Sullivan Halls and adjacent to the westerly edge of the new residence hall. The CSSC will be a three story building with a footprint of approximately 30,000 s.f. with a total gross footprint of approximately 60,000 sf. The CSSC uses will include mass gathering spaces, the campus bookstore, a dining facility, and other student uses. Both buildings will have full sprinkler systems per code.

Existing Sewer Infrastructure

The site is bounded on two sides by Durham Street and Bedford Street. There is an existing 8" sewer main in Durham Street and an existing sewer main in Bedford Street that ranges up to 24" diameter. See CD101, Existing Conditions and Demolition Plan.

Proposed Services

It is proposed to establish new services for both buildings and preliminary design identifies that service from the existing 8" main in Durham Street is most feasible. The enclosed Utility Plan (CU101) shows a proposed service for the residence hall extending to a new sanitary manhole near the intersection of Bedford and Durham Streets. A proposed service for the CSSC will extend thru the service area to a new sanitary manhole near its entrance onto Durham Street. It is anticipated that there are no easements necessary for these services and this development will fully build-out this portion of campus.

Proposed Flows

The anticipated domestic water demand for the CSSC is estimated at 22,500 gpd based upon the mixture of uses. A peak flow of 120 gpm is estimated based on the number of fixtures. An external grease interceptor will be provided for the flows from the dining facility and the volume for this structure is estimated at 3,400 gallons. Please see attached Peak Flow Based On Fixture Count spreadsheet. (PWD)

The anticipated domestic water demand for the Residence Hall is estimated at 3590 gpd based upon approximately 580 student residents. A peak flow of 380 gpm is estimated based on the number of fixtures. Please see attached Peak Flow Based On Fixture Count spreadsheet. (PWD)

Preliminary Drawings

Please find attached the following Preliminary Drawings, dated March 6, 2020:

- CD101, Existing Conditions and Demolition Plan
- CU101, Site Utility Plan
- CU501, Utility Details

City of Portland Permitting

It is intented that this project was submitted to the City of Portland on March 6, 2020 under a Level III Site Plan application and Site Location of Development Act delegated review.

Please call with any questions or if you need additional information. Thank you for your assistance with this matter.

Sincerely,

Jeffrey T. Aceto, P.E.
Senior Civil Engineer

SMRT Architects and Engineers | 144 Fore Street | Portland, ME 04101
p 207.321.3829 | c 207.650.5674 | email: jaceto@smrtinc.com

CC:

Peak Flow Based on Fixture Count

Adapted from 2009 Maine State Internal Plumbing Code

Customer	USM SSC
Street Address	
City	Portland Maine

Fixture		**Fixture Value 60 psi**		**No. of Fixtures**		**Fixture Value**
Bathtub		4	x	0	=	0
Bidet		1	x	0	=	0
Dental Unit		1	x	0	=	0
Drinking Fountain - Public		0.5	x	3	=	1.5
Kitchen Sink		1.5	x	1	=	1.5
Bathroom Sink		1	x	12	=	12
Showerhead (Shower Only)		2	x	0	=	0
Service Sink		3	x	3	=	9
Toilet -Flushometer(high pressure)		5	x	24	=	120
-Tank Type		2.5	x	0	=	0
Urinal -Flushometer Valve		5	x	6	=	30
-Tank Type		2	x	0	=	0
Wash Sink (Each Set of Faucets)		2	x	0	=	0
Commercial Kitchen with Dishwasher		37	x	1	=	37
Washing Machine		4	x	0	=	0
Hose (outdoor spigot)	<3/4 in.	2.5	x	4	=	10
Combined Fixture Value Total						221

Customer Peak Demand From Fig. 4-2 or 4-3	
Pressure Factor From Table 4-1	

Fire Sprinkler System(Yes/No)?	Yes
Irrigation(Yes/No)?	Yes
If yes, gpm required by irrigation designer:	

Total Fixed Demand (Peak Flow) **0**

Customer only needs to complete the cells highlighted in blue

Peak Flow Based on Fixture Count

Adapted from 2009 Maine State Internal Plumbing Code

Customer	University of Southern Maine
Street Address	Corner of Bedford St and Durham St Portland, ME
City	Portland ME

Fixture		**Fixture Value 60 psi**		**No. of Fixtures**		**Fixture Value**
Bathtub		4	x	0	=	0
Bidet		1	x	0	=	0
Dental Unit		1	x	0	=	0
Drinking Fountain - Public		0.5	x	0	=	0
Kitchen Sink		1.5	x	162	=	243
Bathroom Sink		1	x	432	=	432
Showerhead (Shower Only)		2	x	432	=	864
Service Sink		3	x	8	=	24
Toilet -Flushometer(high pressure)		5	x	0	=	0
-Tank Type		2.5	x	432	=	1080
Urinal -Flushometer Valve		5	x	0	=	0
-Tank Type		2	x	0	=	0
Wash Sink (Each Set of Faucets)		2	x	0	=	0
Dishwasher		1.5	x	162	=	243
Washing Machine		4	x	176	=	704
Hose (outdoor spigot)	<3/4 in.	2.5	x	0	=	0
Combined Fixture Value Total						3590

Customer Peak Demand From Fig. 4-2 or 4-3	
Pressure Factor From Table 4-1	

Fire Sprinkler System(Yes/No)?	Yes
Irrigation(Yes/No)?	No
If yes, gpm required by irrigation designer:	-

Total Fixed Demand (Peak Flow) **380**

Customer only needs to complete the cells highlighted in blue

March 5, 2020
Job No.: 19206

Heather Smith
MEANS Group
Main Extensions and New Services
Portland Water District
225 Douglass Street
Portland, ME 04104-3553

RE: Request for Ability to Serve
Proposed Career and Student Success Center & Residence Hall, University of Southern Maine

Dear Ms. Smith,

On behalf of Capstone Development, SMRT Architects & Engineers is submitting this request for Ability to Serve letter for a new project on the campus of the Univesrity of Southern Maine in Portland. The Ability to Serve letter is intended for Level III Site Plan application to the City of Portland.

Project Location

The University of Southern Maine (USM) is proposing to construct two new capital buildings on approximately 3.6 acres of the Portland campus of the University of Southern Maine. The project is known as the Career and Student Success Center (CSSC) & Residence Hall project. The project area is bounded by the easterly corner of the block defined by Falmouth, Durham, and Bedford Streets. This area presently includes a large public parking lot, the Woodbury Student Center (approx. 21,701 sf), the Facilities Management building (8,950 sf), and associated service areas, parking, and infrastructure. This project will remove all features in the project area and essential services, infrastructure, and offices will be relocated on campus prior to commencing demolition. Please see attached CD101, Existing Conditions and Demolition Plan for project location details.

Project Scope

The project consists of the construction of two primary buildings to replace two existing buildings on the campus. The Woodbury Center (#35 Bedford) and the Facilities Management building (#25 Bedford) will be demolished and the existing water services associated with these structures will be abandoned. A new residence hall will be constructed at the corner of Bedford Street and Durham Street including with five to eight stories and a footprint of approximately 31,200 s.f.footprint with a total gross floor space of approximately 220,000 sf. This building represents the first residence hall on the Portland campus and will house approximatey 580 students in units varying in occupancy from 1 to 3 residents. The second building will replace the funciton of the Woodbury Center and is titled the Career and Student Success Center (CSSC). This building will be located between Masterton and Sullivan Halls and adjacent to the westerly edge of the new residence hall. The CSSC will be a three story building with a footprint of approximately 30,000 s.f. with a total gross footprint of approximately 60,000 sf. The CSSC uses will

include mass gathering spaces, the campus bookstore, a dining facility, and other student uses. Both buildings will have full sprinkler systems per code.

Existing Water Infrastructure

The site is bounded on two sides by Durham Street and Bedford Street. There is an existing 8" main in Durham Street including an existing hydrant between Sullivan Hall and the Central Heating building. See CD101, Existing Conditions and Demolition Plan. There is an existing 16" main in Bedford Street including an existing hydrant near the Glickman Family Library and another adjacent to the Wishcamper Center. There are also three hydrants along Falmouth Street in the vicinity of the campus parcel.

Proposed Services

It is proposed to establish new services for both buildings and preliminary design identifies that service from the existing 8" main in Durham Street is most feasible. The enclosed Utility Plan (CU101) shows proposed separate fire and domestic services for the residence hall extending from the main to a mechanical room along the northerly façade. It also shows proposed fire and domestic services for the CSSC extending from Durham Street in the loading dock area. Isolation valves will be installed at the property line for all services. The existing hydrant on Durham will remain and is apparently well-located to serve the two new buildings. It is anticipated that there are no easements necessary for these services and this development will fully build-out this portion of campus.

Proposed Flows

The anticipated domestic water demand for the CSSC is estimated at 22,500 gpd based upon the mixture of uses. A peak flow of 120 gpm is estimated based on the number of fixtures. An external grease interceptor will be provided for the flows from the dining facility and the volume for this structure is estimated at 3,400 gallons. Please see attached Peak Flow Based On Fixture Count spreadsheet. (PWD)

The anticipated domestic water demand for the Residence Hall is estimated at 3590 gpd based upon approximately 580 student residents. A peak flow of 380 gpm is estimated based on the number of fixtures. Please see attached Peak Flow Based On Fixture Count spreadsheet. (PWD)

Preliminary Drawings

Please find attached the following Preliminary Drawings, dated March 6, 2020:

- CD101, Existing Conditions and Demolition Plan
- CU101, Site Utility Plan
- CU501, Utility Details

City of Portland Permitting

It is intented that this project was submitted to the City of Portland on March 6, 2020 under a Level III Site Plan application and Site Location of Development Act delegated review.

Please call with any questions or if you need additional information. Thank you for your assistance with this matter.

Sincerely,

Jeffrey T. Aceto, P.E.
Senior Civil Engineer

SMRT Architects and Engineers | 144 Fore Street | Portland, ME 04101
p 207.321.3829 | c 207.650.5674 | email: jaceto@smrtinc.com

CC:

Peak Flow Based on Fixture Count

Adapted from 2009 Maine State Internal Plumbing Code

Customer	University of Southern Maine
Street Address	Corner of Bedford St and Durham St Portland, ME
City	Portland ME

Fixture		**Fixture Value 60 psi**		**No. of Fixtures**		**Fixture Value**
Bathtub		4	x	0	=	0
Bidet		1	x	0	=	0
Dental Unit		1	x	0	=	0
Drinking Fountain - Public		0.5	x	0	=	0
Kitchen Sink		1.5	x	162	=	243
Bathroom Sink		1	x	432	=	432
Showerhead (Shower Only)		2	x	432	=	864
Service Sink		3	x	8	=	24
Toilet -Flushometer(high pressure)		5	x	0	=	0
-Tank Type		2.5	x	432	=	1080
Urinal -Flushometer Valve		5	x	0	=	0
-Tank Type		2	x	0	=	0
Wash Sink (Each Set of Faucets)		2	x	0	=	0
Dishwasher		1.5	x	162	=	243
Washing Machine		4	x	176	=	704
Hose (outdoor spigot)	<3/4 in.	2.5	x	0	=	0
Combined Fixture Value Total						3590

Customer Peak Demand From Fig. 4-2 or 4-3	
Pressure Factor From Table 4-1	

Fire Sprinkler System(Yes/No)?	Yes
Irrigation(Yes/No)?	No
If yes, gpm required by irrigation designer:	-

Total Fixed Demand (Peak Flow) **380**

Customer only needs to complete the cells highlighted in blue

Peak Flow Based on Fixture Count

Adapted from 2009 Maine State Internal Plumbing Code

Customer	USM SSC
Street Address	
City	Portland Maine

Fixture		**Fixture Value 60 psi**		**No. of Fixtures**		**Fixture Value**
Bathtub		4	x	0	=	0
Bidet		1	x	0	=	0
Dental Unit		1	x	0	=	0
Drinking Fountain - Public		0.5	x	3	=	1.5
Kitchen Sink		1.5	x	1	=	1.5
Bathroom Sink		1	x	12	=	12
Showerhead (Shower Only)		2	x	0	=	0
Service Sink		3	x	3	=	9
Toilet -Flushometer(high pressure)		5	x	24	=	120
-Tank Type		2.5	x	0	=	0
Urinal -Flushometer Valve		5	x	6	=	30
-Tank Type		2	x	0	=	0
Wash Sink (Each Set of Faucets)		2	x	0	=	0
Commercial Kitchen with Dishwasher		37	x	1	=	37
Washing Machine		4	x	0	=	0
Hose (outdoor spigot)	<3/4 in.	2.5	x	4	=	10
Combined Fixture Value Total						221

Customer Peak Demand From Fig. 4-2 or 4-3	
Pressure Factor From Table 4-1	

Fire Sprinkler System(Yes/No)?	Yes
Irrigation(Yes/No)?	Yes
If yes, gpm required by irrigation designer:	

Total Fixed Demand (Peak Flow) **0**

Customer only needs to complete the cells highlighted in blue

Peak Flow Based on Fixture Count

Adapted from 2009 Maine State Internal Plumbing Code

Customer	USM SSC
Street Address	
City	Portland Maine

Fixture		**Fixture Value 60 psi**		**No. of Fixtures**		**Fixture Value**
Bathtub		4	x	0	=	0
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Dental Unit		1	x	0	=	0
Drinking Fountain - Public		0.5	x	3	=	1.5
Kitchen Sink		1.5	x	1	=	1.5
Bathroom Sink		1	x	12	=	12
Showerhead (Shower Only)		2	x	0	=	0
Service Sink		3	x	3	=	9
Toilet -Flushometer(high pressure)		5	x	24	=	120
-Tank Type		2.5	x	0	=	0
Urinal -Flushometer Valve		5	x	6	=	30
-Tank Type		2	x	0	=	0
Wash Sink (Each Set of Faucets)		2	x	0	=	0
Commercial Kitchen with Dishwasher		37	x	1	=	37
Washing Machine		4	x	0	=	0
Hose (outdoor spigot)	<3/4 in.	2.5	x	4	=	10
Combined Fixture Value Total						221

Customer Peak Demand From Fig. 4-2 or 4-3	
Pressure Factor From Table 4-1	

Fire Sprinkler System(Yes/No)?	Yes
Irrigation(Yes/No)?	Yes
If yes, gpm required by irrigation designer:	

Total Fixed Demand (Peak Flow) **0**

Customer only needs to complete the cells highlighted in blue

Peak Flow Based on Fixture Count

Adapted from 2009 Maine State Internal Plumbing Code

Customer	University of Southern Maine
Street Address	Corner of Bedford St and Durham St Portland, ME
City	Portland ME

Fixture		**Fixture Value 60 psi**		**No. of Fixtures**		**Fixture Value**
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Bidet		1	x	0	=	0
Dental Unit		1	x	0	=	0
Drinking Fountain - Public		0.5	x	0	=	0
Kitchen Sink		1.5	x	162	=	243
Bathroom Sink		1	x	432	=	432
Showerhead (Shower Only)		2	x	432	=	864
Service Sink		3	x	8	=	24
Toilet -Flushometer(high pressure)		5	x	0	=	0
-Tank Type		2.5	x	432	=	1080
Urinal -Flushometer Valve		5	x	0	=	0
-Tank Type		2	x	0	=	0
Wash Sink (Each Set of Faucets)		2	x	0	=	0
Dishwasher		1.5	x	162	=	243
Washing Machine		4	x	176	=	704
Hose (outdoor spigot)	<3/4 in.	2.5	x	0	=	0
Combined Fixture Value Total						3590

Customer Peak Demand From Fig. 4-2 or 4-3	
Pressure Factor From Table 4-1	

Fire Sprinkler System(Yes/No)?	Yes
Irrigation(Yes/No)?	No
If yes, gpm required by irrigation designer:	-

Total Fixed Demand (Peak Flow) **380**

Customer only needs to complete the cells highlighted in blue

16. PORTLAND FIRE DEPARTMENT SITE REVIEW CHECKLIST

The items in the Portland Fire Department Site Review Checklist are addressed as follows:

- Name, address, telephone number of applicant:
    - University of Southern Maine, c/o John Souther
    - 25 Bedford Street, Portland, ME 04104
    - (207) 780-4585
- Name, address, telephone number of architects:
    - SMRT, c/o Kristen Damuth, AIA, NCARB
        - 144 Fore Street, PO Box 618 Portland, ME 04104
        - 207.321.3847
- Proposed uses of any structures [NFPA and IBC classification]:
    - The structures are mixed-use and residential. Use classifications are provided on the code summaries attached.
- Square footage of all structures [total and per story]:
    - The square footage of all structures is provided on the architectural plans.
- Elevations of all structures:
    - The elevations of all structures are provided on the architectural plans.
- Proposed fire protection of all structures:
    - All structures will be sprinkled.
- Hydrant locations:
    - Hydrant locations are shown on the Utility Plan.
- Water main size and location:
    - Watermain locations and sizes are shown on the Utility Plan.
- Access to all structures [min. 2 sides]:
    - Access will be provided to a minimum of two sides of all structures.
- A code summary shall be included referencing NFPA 1 and all fire department technical standards:
    - The buildings will be compliant with requirements of NFPA 101: Uniform Fire Code. Automatic sprinkler systems and fire alarms will be provided as required by Use and Occupancy types. Code summaries are provided on the attached Code Reviews.

16.1 Attachments

- USM Career and Student Success Center Code Review
- USM Residence Hall Code Review

USM Residence Hall

Code CheckIist - Things you can know on Day One

References Based on IBC State Code 2015, unless noted otherwise.

Item	Code Reference	Calculation, or input	Notes		
Building Codes					
MUBEC	Current				
IBC - per MUBEC	2015	except chap 29 and appendices a-m, plus 7 pages of amendments			
IECC	2009	chap 6 updates			
NFPA 101	2018				
NFPA 1	2018				
ADA	2010				
NEC	2017				
IMC	2015				
ASHRAE 90.1	2013				
UPC	2015				
ZONING					
Check Zoning Requirements	Varies				
OCCUPANCY		calcs			
Occupancy classification	(302.1)	**R-2**			
Occupancy Description		*Residential Dormitory*			
Proposed Construction type	(602.1)	**TYPE IB**			
Sprinkler req'd	(903.2)	yes NFPA 13	not 13R it's too big.		
Stories Permited	(504.4)	12	R2-S		
Story Increase	(504.4)	n/a			
Max. Stories Permited		**12**			
Actual max. stories					
Max. height in Ft.		**180**	Building is NOT a high rise. Since highest occupiable floor is <75' from lowest level of fire apparatus		
Max. allowable area (SF)	Table 506.2	**UL**	R2-SM		
Sprinkler increase	(506.2)	n/a			
Frontage increase	(506.3)	n/a			
Total Allowable Area		**UL**			
Actual Overall Area		**215,000**			
Actual floor area 1-5		**31,797**	level 2		
Actual floor area 6-8		**18,722**	level 8		
# of Occupants		**4300**	50		GSF
Fire Apparatus Access	(F503.1) Fire Code				
Accessibility	(1101) and ANSI A117.1	yes			
Area of Refuge	(1009.3, & 1009.6)	not required	1009.3(5) exception for sprinklers		
CONSTRUCTION TYPE					
Proposed Construction type	Table 601	**TYPE IB**			
Bldg Element	-	Fire rating (hrs)'			
Structural frame, incl. columns, girders, trusses.	-	2a			a: fire rating of primary structural frame and bearing walls allowed to be reduced to 1 hour if supporting roof only
Bearing walls (exterior)	-	2			
Bearing walls (interior)	-	2a			
Non-bearing walls	-				
Exterior	-	See Table 602			
interior	-	0			
Floor construction, incl. supporting beams & joists	-	2			
Roof construction, incl. supporting beams & joists	-	1b,c			b: does not apply

Exterior Wall - fire separation distance		1 hr if < 30'			
Shafts	(713.4)	2 hour			
Firewalls (if req'd)	(706.4)	3			
Fire partitions	(420, 708)	1 hour	separation between sleeping rooms		
		30 min	at corridors		
Occupancy Separation (if req'd)	Table 508.4	1 hour	R2 to A or B		
Incidental Separation (if req'd)	Table 509				
EGRESS					NFPA 101
Stair Width	1005.3.1, & 1009.3	63"	.3"/pp		31,797 / 50 = 636 people. 636/ 3 stairs = 212 people/stair. 212 *.3= 63"
# of exits req'd	Table 1006.3.1	2 on 6-8, 3 on 1-5			
Common Path of Travel	Table (1006.2.1)	125'			
Accessible means of Egress	(1009.1)	yes	elevator per 1009.2.1 unless we add a horiz exit		
Area of Refuge		no	1009.3.5 & 8 not in R-2 or stairs when building sprinkled		
Max. travel distance	Table 1017.2	250'			
Corridor rating	Table (1020.1)	30 min			
Corridor width		44 min.	.2"/pp		
Dead End	(1020.4)	50'			
Exit Enclosure rating	Table 1023.2				
Ambulance Elevator Cab	3002.4	yes			
Fire extinguishers	F906.1 Fire Code				

USM Student Success Center (SSC)

Code Checklist - Things you can know on Day One

References Based on IBC State Code 2015, unless noted otherwise.

Item	Code Reference	Calculation, or input	Calculation, or input	Calculation, or input	Notes
Building Codes					
MUBEC	Current				
IBC - per MUBEC	2015	except chap 29 and appendices a-m, plus 7 pages of amendments	except chap 29 and appendices a-m, plus 7 pages of amendments	except chap 29 and appendices a-m, plus 7 pages of amendments	
IECC	2009	chap 6 updates	chap 6 updates	chap 6 updates	
NFPA 101	2018				
NFPA 1	2018				
ADA	2010				
NEC	2017				
IMC	2015				
ASHRAE 90.1	2013				
UPC	2015				
ZONING					
Check Zoning Requirements	Varies				
OCCUPANCY		calcs	calcs	calcs	
Occupancy classification	(302.1)	**B**	**A-2**	**A-3**	
Occupancy Description		*Business*	*Food related assembly*	*Misc Assembly*	
		level 2 & 3	*kitchen, servery dining*	*Multipurpose room*	
			level 1	*corner of level 2*	
Proposed Construction type	(602.1)	**TYPE IV-HT**	**TYPE IV-HT**	**TYPE IV-HT**	
Sprinkler req'd	(903.2)	no but provided	yes	yes not on level of exit discharge	
Stories Permited	(504.4)	6	4	4	
Story Increase	(504.4)	not needed	not needed	not needed	
Max. Stories Permited					
Actual max. stories					
Stories provided		**3 plus a penthouse**	**3 plus a penthouse**	**3 plus a penthouse**	penthouse must be less than 1/3 area of floor below and <18' high
Max. height in Ft.		**85'**	**85'**	**75'**	
Provided height in Ft.		**50' + 12' PH**	**50' + 12' PH**	**50' + 12' PH**	
Max. allowable area (SF)	Table 506.2	**108,000**	**45,000**	**28,500**	SM (sprinkled)
Sprinkler increase	(506.2)	n/a	n/a	n/a	
Frontage increase	(506.3)	n/a	n/a	n/a	
Total Allowable Area		**108,000**	**45,000**	**28,500**	
Actual FLOOR Area		**23518, 19209, 12798**	**22,468**	**4,000**	
# of Occupants		**192 level 2**	**1498 level 1 (15 sf pp)**	**266 (15 sf pp)**	200 gsf
Fire Apparatus Access	(F503.1) Fire Code				
Accessibility	(1101) and ANSI A117.1	yes	yes	yes	
Area of Refuge	(1009.3, & 1009.6)	not required	not required	not required	1009.3(5) exception for sprinklers
CONSTRUCTION TYPE					
Proposed Construction type	Table 601	**TYPE IV-HT**	**TYPE IV-HT**	**TYPE IV-HT**	
Bldg Element	-	Fire rating (hrs)'	Fire rating (hrs)'	Fire rating (hrs)'	
Structural frame, incl. columns, girders, trusses.	-	0	0	0	
Bearing walls (exterior)	-	0	0	0	
Bearing walls (interior)	-	0	0	0	
Non-bearing walls	-				
Exterior	-	See Table 602	See Table 602	See Table 602	
interior	-	0	0	0	
Floor construction, incl. supporting beams & joists	-	0	0	0	
Roof construction, incl. supporting beams & joists	-	0c	0c	0c	
Exterior Wall - fire separation distance		0 if between 10'-30'	0 if between 10'-30'	0 if between 10'-30'	
Shafts	(713.4)	**1 hour**	**1 hour**	**1 hour**	if connecting less than 4 stories
Firewalls (if req'd)	(706.4)	**2**	**2**	**2**	
Fire partitions	(708)	**n/a**	**n/a**	**n/a**	
Occupancy Separation (if req'd)	Table 508.4	**1 hour**	**1 hour**	**1 hour**	Assembly to Business
Incidental Separation (if req'd)	Table 509	**n/a**	**n/a**	**n/a**	
EGRESS					
Stair Width	1005.3.1, & 1009.3	**57"**	**n/a**		.3"/pp
# of exits req'd	Table 1006.3.1	**2**	**4**	**4 (if standing only)**	
Common Path of Travel	Table (1006.2.1)	**100**	**75'**	**75'**	
Accessible means of Egress	(1009.1)				
Max. travel distance	Table 1017.2	**300'**	**250'**	**250'**	
Corridor rating	Table (1020.1)	**0**	**0**	**0**	
Corridor width		**44" min**	**44" min**	**44" min**	
Dead End	(1020.4)	**50'**	**20'**	**20'**	
Exit Enclosure rating	Table 1023.2				
Ambulance Elevator Cab	3002.4	no	no	no	
Fire extinguishers	F906.1 Fire Code				

UNIVERSITY OF SOUTHERN MAINE

Student Housing Advisory Services

BRIEFING DOCUMENT // AUGUST 2019

BRAILSFORD & DUNLAVEY

INSPIRE. EMPOWER. ADVANCE.

PREFACE

In January 2019, the University of Maine System ("UMS") engaged Brailsford & Dunlavey, Inc. ("B&D") to provide development advisory services related to new student housing at the University of Southern Maine ("USM", the "University"). As part of this initiative, B&D assessed current and future student housing needs at USM and quantified demand for a new student housing project on USM's Portland Campus. In addition, B&D advised USM on a range of possible implementation strategies to enhance its student housing inventory in accordance with the University's Facilities Master Plan.

The following document summarizes the key market findings and strategic considerations that resulted from the assessment. The findings contained herein represent the professional opinions of B&D's personnel based on the assumptions and conditions detailed in this assessment.

The methodologies employed as a part of this assessment included the following:

- A ***Strategic Asset Value ("SAV") work session*** was conducted with University leadership to identify and prioritize the strategic objectives that the Student Housing Project must address in order to advance the University's broader mission and vision. The SAV served to guide all subsequent research and the results from this advanced planning effort.

- An ***off-campus housing market analysis*** was performed to better understand cost, amenities, competition, and other key metrics of the off-campus housing market proximate to USM's Portland campus. Understanding the dynamic rental market in the Portland area determined how the University must proceed to differentiate its housing from the private sector to better meet the needs of its upper-division (third- and fourth-year) undergraduate, graduate, and law students.

- An ***Internet-based survey*** was administered to USM's entire student population to assess their current housing patterns and future demand preferences. In total, 895 students, or 11% of the population, responded to the survey, which provided statistically reliable data with a 95% confidence interval and a 3.3% margin of error. B&D sorted survey responses by various demographic characteristics, including classification, primary campus, etc. to better understand the unique aspects of USM's Portland campus housing demand at a sub-demographic level. Insights generated by the student survey allowed the Project Team to identify a primary target market for the initiative as well as characterize the programmatic nature of the resulting demand projections.

- A ***student housing demand assessment*** was performed using B&D's proprietary demand-based programming ("DBP") methodology, which determined demand utilizing statistically significant survey responses and enrollment assumptions provided by the University. Demand figures for housing on USM's Portland campus were projected based on the target market's preferences for various unit types, bedroom occupancy arrangements, and room rates, which were all tested as a part of the survey. The room rates associated with the unit types tested in the survey were generated using market-based rent assumptions that would result in the delivery of a financially self-sufficient project.

- ***A project-specific programming effort and financial analysis*** were performed to identify the optimal project concept to advance the University's strategic objectives within the existing market context. The resulting project concept established a road map for how the University could most effectively address the housing needs of its students in a manner that responded to the target market's demonstrated rental rate sensitivity. This synthesis of strategic objectives, market

opportunities, and contextual realities also served as a way to communicate the University's expectations to potential third-party development partners in the form of required project outcomes.

B&D would like to thank the following administrators at UMS and USM for their leadership and support throughout the project process *(sorted alphabetically)*:

- Glenn Cummings, President
- Tracy Elliott, Director of Finance and Controller
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- Alexander Porteous, CFO
- David Roussel, Interim VP of Student Affairs
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- Justin Swift, Senior Finance Business Partner
- Adam Thibodeau, Assistant Director of Capital Planning and Project Management
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PROJECT INTRODUCTION

USM is one of the seven public universities which comprise the University of Maine System. USM has three campuses, located in Gorham, Portland and Lewiston-Auburn. The University enrolled 8,140 students across all three campuses in the fall of 2018 and anticipates future enrollment growth to reach 10,000 in the near future. While USM experienced an overall decline in enrollment over the last decade, enrollment has recently rebounded, increasing from 7,739 in fall 2015 to 8,140 by fall 2018.

USM's Portland campus is located in the heart of Portland, Maine, the state's largest city and economic and cultural center. Most USM students (64%) take the majority of their academic classes at the Portland campus. The Portland campus does not currently offer any student housing. USM envisions expanding its on-campus housing portfolio on this campus to support students' academic and career aspirations as well as ensure a robust student life experience. Located 11 miles away from the Portland campus, USM's Gorham campus is the only residential campus at the University. In fall 2018, the Gorham campus' housing inventory comprised 1,180 beds, available to all degree-seeking USM students. The housing portfolio is occupied beyond its design capacity, with fall 2018 occupancy at 112% of current capacity.

USM completed a Facilities Master Plan in January 2019. The Master Plan's vision for the Portland campus is "to build sustainable, iconic academic campus in the heart of Portland, enhancing the commuter experience while creating a welcoming residential community". Therefore, USM has been strategically focusing on providing student housing on its Portland campus for upper-division (third- and fourth-year) undergraduate, graduate, and law students.

KEY FINDINGS

B&D developed the following key findings, synthesized from the results of the aforementioned analyses, to characterize the market opportunity that exists for student housing to advance USM's identified strategic objectives for its Portland campus.

- Portland is a desirable place for students to live, but competitive market conditions have created a barrier to entry for many students. The private housing market is very tight and rental rates are above what students can afford to pay. In B&D's student survey, 71% of USM students who live off campus indicted finding and securing housing accommodations to be at least somewhat difficult.

- B&D's survey indicated that 64% of USM students considered affordability to be the primary factor in their current housing decision. As housing prices tend to be less expensive outside of downtown Portland, many students are widely dispersed throughout the city as well as outside of it. According to the student survey, 63% of USM students who live off campus live outside of Portland and have an average one-way commute to campus of 28 minutes.

- B&D surveyed 7,083 rental housing units in the Portland market, the majority of which were not student-focused units. The reported average rent per unit was $1,296 per month, without utilities, whereas 70% of USM students who live off campus indicated paying less than $700 per month for their housing accommodations, excluding utilities. As 58% of these students don't share a bedroom with another person, this further indicates students rely on the market outside the Portland area to find affordable living accommodations that offer the privacy they desire.

- Proximity to campus was also identified as a critical housing preference for upper-division, graduate, and law students. Forty-six percent (46%) of these students selected proximity to campus and on-campus resources as the second greatest factor which contributed to their decision where to live during the 2018-19 academic year. As these students are more likely to have the majority of classes on the Portland campus, this suggests a strong likelihood that students will prioritize any potential new on-campus housing offered on the Portland campus.

- B&D's survey of USM students tested a variety of unit types at varying rental rates. The survey specifically tested unit types at the rental rates that are comparable to the housing market in the city of Portland. B&D's proprietary demand-based programming model focused on the demand from upper-division, graduate and law students most likely to choose on-campus housing. B&D identified approximately 674 beds of demand for housing at the Portland campus for the current academic year (2018-19).

- Based on the demand analysis, B&D found that USM students seek the most affordable housing options while maintaining their privacy. This was demonstrated through students' unit-type preferences, in which they prioritized private (single bedroom) options with the least cost. Thirty-five percent (35%) of the demand for on-campus housing on the Portland campus was for the single bedroom with en-suite bathroom unit (the cheapest available option), and 40% of the demand was for a single bedroom in a two- or four-bedroom apartment.

- It is clear that USM students desire to maintain their privacy while maximizing affordability. Therefore, minimizing the size of residential units and out-of-unit programming space is paramount to ensuring affordability. As a result, residential support spaces must be limited, and alternative methods of fostering a vibrant, community-oriented atmosphere should be explored.

KEY FINDINGS

INTRODUCTION

Established in 1970, USM comprises three campus locations in central and southern Maine, a region that is viewed nationally as among the most livable and desirable in the country. The three campuses, located in Portland, Gorham, and Lewiston-Auburn, have substantially different physical features and dynamics, and each offers a variety of educational, cultural, and recreational opportunities for USM students.

Figure 1 - USM Campus Locations, Captured from the USM Facilities Master Plan.

USM's Portland campus is located at the heart of city of Portland, nationally known for its arts and culture, outdoor recreation, and dynamic food scene. Portland is the largest city in Maine and the economic center of the state. Approximately 64% of USM students take the majority of their courses at the Portland campus. The Portland campus offers a variety of programs to its students including business, law, nursing, biology, history, psychology, sociology, economics, political sciences, etc.

Located eleven (11) miles away from the city of Portland, the Gorham campus is located in a small town with a suburban setting. The Gorham campus is USM's only residential campus and the center of undergraduate life at USM. The primary academic areas residing in Gorham are industrial technologies, engineering, art, music, theater, counseling and education, anthropology, geography, environmental sciences, and geosciences.

The Lewiston-Auburn College (LAC) is located in Maine's second largest city which is known for its diversity, low cost of living, and substantial access to medical care. The LAC offers a small college atmosphere and provides programs that are responsive to workplace demand in the state of Maine, such as arts and humanities, leadership and organizational studies, natural and applied sciences, social and behavioral sciences, and occupational therapy.

EXISTING CONDITIONS

In fall 2018, USM enrolled 8,140 students, including 6,390 (79%) undergraduate students, 1,497 (18%) graduate students and 253 (3%) law students. Since fall 2016, the annual enrollment trend has improved,

and USM's enrollment has grown approximately 2% annually. According to the USM Facilities Master Plan, the University's goal is to increase headcount enrollment to 10,000 students in the short term. To achieve these goals, USM is pursuing the following strategies:

- Providing a variety of financial-aid packages including merit scholarships, loans, and stipends for graduate student to attract more students
- Enrolling students with high academic achievements and increasing Presidential Scholars to admit students who are more adequate for higher education
- Staying focused on keeping tuition affordable for all students, specifically students form New Hampshire and Massachusetts with the NEBHE out of state tuition program
- Increasing out-of-state and international student population
- Adding additional academic programs on the Portland campus

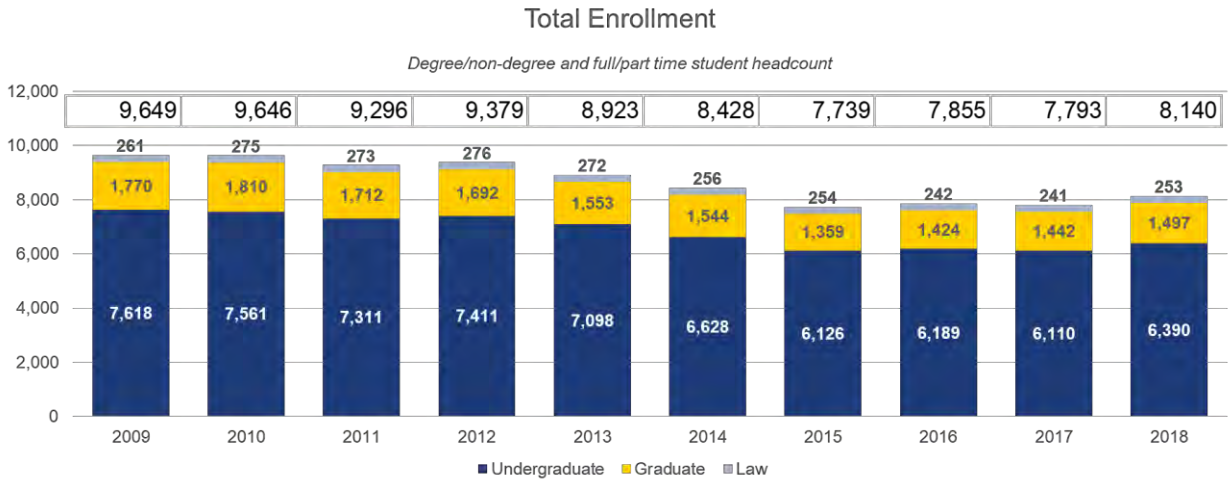


Figure 2 - USM Historical Enrollment, Fall 2009 to Fall 2018.

Since fall 2009, the percentage of out-of-state students has grown an average of 1% each year. USM has been committed to continue to grow this population of students through various initiatives including adding on-campus housing on the Portland campus.

USM currently offers student housing only on its Gorham campus. USM's 10 residence halls at Gorham primarily accommodate undergraduate students, though apartment beds in the Upperclass Hall also accommodate graduate and professional students. In fall 2018, 21% of USM's undergraduate students resided in residence halls on the Gorham campus. Almost all graduate and law students are accommodated in the off-campus market, with many living in the Portland area. In fall 2018, less than 1% of graduate students lived on the Gorham campus. The design capacity of the Gorham campus housing portfolio is 1,180 beds as of fall 2018. The housing portfolio is occupied beyond design capacity, with fall 2018 occupancy at 112% of capacity.

Residence Halls	Room Type	Room Occupancy	Specialty	Capacity	Year Built
Anderson Hall	Traditional	Double	First year	100	1963
Philippi Hall	Traditional, 3-/4-person suites	Single, double	Upperclass	200	2001
Robie Andrews Hall	Traditional	Single, double	Upperclass	200	1916; reno 1977
Upton Hastings Hall	Traditional	Double	First year	300	1960
Woodward Hall	Traditional	Double	First year	80	1955
Upperclass Hall	4-person suite, 4-person apt	Single (apt), double (suite)	Upperclass and graduate	300	2007
TOTAL RESIDENCE HALL CAPACITY				**1,180**	

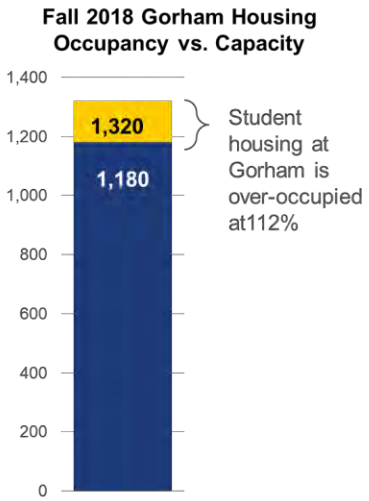


Figure 3 - USM Housing Inventory by Room Type and Occupancy.

USM's on-campus housing rental rate structure offers a variety of rates and options for students. Rental rates differ based on unit type and occupancy. In fall 2018, rental rates ranged from $555 per month ($2,500 per semester) for a double-occupancy traditional unit to $777 per month ($3,500 per semester) for a single-occupancy apartment in the newest housing available on campus. All students who are not living in apartments in Upperclass Hall, are required to have a meal plan. The least expensive meal plan, which provides 10 meals per week and $300 meal plan dollars per semester, cost approximately $2,300 per semester in fall 2018.

Despite aging conditions and maintenance issues facing several Gorham residence halls, students indicated relatively strong levels of satisfaction for the facilities, with apartment-style units driving the highest levels of satisfaction. USM students highly value the on-campus residential experience. According to student survey responses, 84% of USM undergraduate students and 80% of USM Graduate and Law students believe that on-campus housing is important in building a sense of community and culture on USM's campuses. This is further demonstrated by the housing inventory being over-subscribed at Gorham Campus.

STRATEGIC PRIORITIES & REQUIRED OUTCOMES

Providing student housing at USM's Portland campus is a mission-driven initiative to develop a robust collegiate environment within the larger Portland community. According to the Facilities Master Plan, USM's vision for the Portland campus is *"To build a sustainable, iconic academic campus in the heart of Portland, enhancing the commuter experience while creating a welcoming residential community".*

USM believes that this vision is critical to both supporting its students as well as the development of expanded professional relationships with the Portland community. The strategic drivers that support this vision were identified through a Strategic Asset Value ("SAV") work session with key University stakeholders representing a diverse range of campus functions and interests. The session developed a series of values that the on campus housing initiative must achieve.

Specifically, student housing at USM's Portland campus must:

- Provide a safe, high quality, and affordable student life environment that supports the well-being of USM's diverse student community;
- Create residences for upper-division (third- and fourth-year) undergraduate, graduate, and law students that is highly proximate to Portland campus academic resources and support;
- Construct housing that maintains affordability while assuring USM's continued financial sustainability;
- Design an iconic community that serves as a campus gateway, welcoming off-campus visitors while maintaining safety and security on the USM Portland campus;
- Create a development that not only elevates the presence of USM in the surrounding Portland community but also serves as a catalyst for community development and collaboration/connection between USM and Portland;
- Create a vibrant, connected student center environment that serves on- and off-campus student populations while maximizing efficiency through shared facilities infrastructure with student housing; and
- Demonstrate fiscal and environmental responsibility by striving towards sustainability goals outlined in USM's Facilities Master Plan.

In summary, the goal is creation of an affordable residential experience that meets these criteria will attract students to a dedicated gathering place that is proximate to on-campus activities and resources. Housing upper-division, graduate and law students closer to campus and to each other will create a dynamic, interdisciplinary residential atmosphere that will serve to comprehensively enhance collaboration, academic achievement, and the overall student experience at USM.

OFF-CAMPUS HOUSING MARKET CONTEXT

USM does not currently offer housing to its students on the Portland campus. Therefore, students who take the majority of their courses on the Portland campus either live on the Gorham campus or satisfy their housing needs by living off campus in Portland and its surrounding areas. Affordability is the top priority for USM students and the primary driver of their housing decisions. An analysis of survey responses found that 64% of USM students considered rental rate affordability to be the primary factor behind their current housing decision. Proximity to campus was also identified by students as a critical housing preference. Forty-six percent (46%) of USM students selected proximity to campus and on-campus resources as the second greatest factor which contributed to their decision of where to live during the 2018-19 academic year.

The Portland housing market is extremely dynamic and rapidly expanding. As an example, rental rates have become more expensive than what USM students feel they can afford. High rental rates have pushed students outside of downtown Portland to more affordable neighborhoods outside of the city. According to the student survey, 63% of USM students who live off campus live outside the Portland area and commute approximately 28 minutes to campus one way.

Based on the results of the survey, B&D analyzed USM students within three unique sub-demographic groups. The first group comprises on-campus students, who prioritize proximity to campus, student life and campus resources. Their strong desire to live near campus resources results in their decision to live on campus at Gorham campus. The second group consists of students who live off campus and in the Portland area. These students prioritize affordability as well as proximity to campus resources in deciding where to live off campus. Eighty-four percent (84%) of this sub-group take the majority of their courses on the

Portland campus. As a result, they seek housing options close to the Portland campus and in the Portland area. The third group are those students living outside the Portland area, who prioritize combined privacy and affordability. Proximity to campus is not their top priority in deciding where to live off campus. These students seem to care slightly more about unit-type configuration and they therefore seek accommodations outside of the Portland area to find their preferred unit types at a lower rental rate.

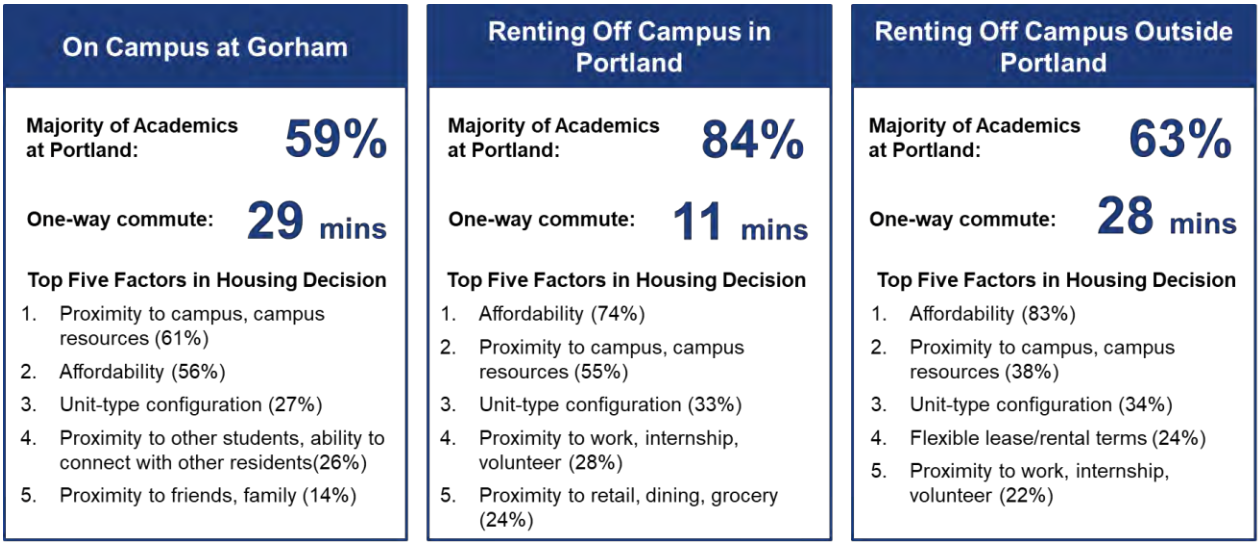


Figure 4 - USM Sub-Demographic Groups and Their Top Five Housing Decision Factors.

B&D conducted an analysis of the Portland multifamily rental market to quantitatively evaluate the options available to USM students. B&D surveyed 7,083 units in the Portland area. All data and rental rates are based on information provided by CoStar Group, Inc. and were evaluated using February 2019 data. In February 2019, the vacancy rate in Portland was 1.6% and had been decreasing consistently for the previous three months. There were zero properties under construction in the areas surveyed. There were two properties proposed (though not approved by the time of this analysis) to be built in the Downtown area, however, none of those units will be student focused.

B&D further identified Portland neighborhoods where students reported living based on the student survey. Approximately 40% of students who live in Portland reported living in neighborhoods located north of the 295 highway. An additional 4% of students were spread out between the East End, West End, Downtown, and Parkside neighborhoods. The other 12% lived among other Portland neighborhoods.

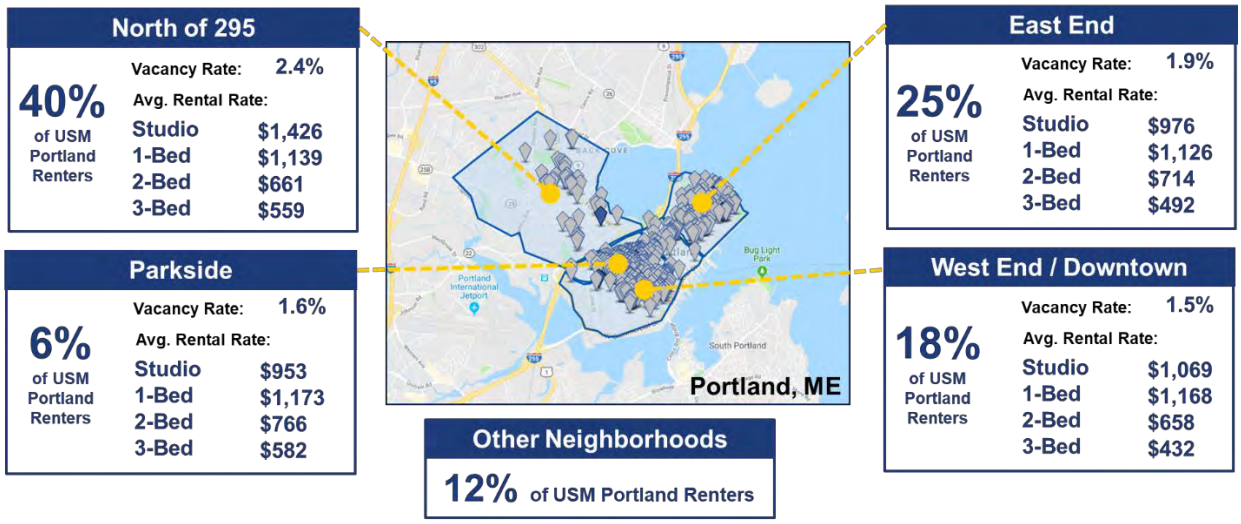


Figure 5 - Portland market average rental rates per person per month

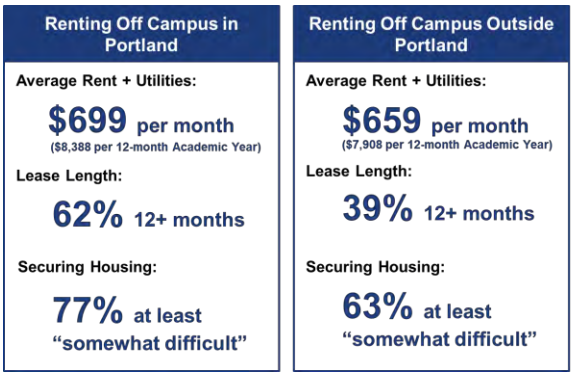
The average per-person rental rate in these neighborhoods varied by unit type. Excluding utilities, the average per-person monthly rent of each unit type is listed below:

- Studio apartment: $953 to $1,426
- One-bedroom apartment: $1,126 to $1,173
- Two-bedroom apartment: $658 to $766
- Three-bedroom apartment: $432 to $559

The overall average monthly rental rate per person as found through market research was $857 per month, excluding utilities.

In the survey, USM students reported paying $629 per person per month in rent (excluding utilities), over $200 less per month than the average found in the market. This suggests that students are finding units priced at the lower end of the market and are sharing bedrooms or units with roommates to further reduce costs. Additionally, students are relying on the market outside of the Portland area to find more affordable living accommodations.

B&D's analysis found significant differences between student renters that lived within Portland and those that lived outside of Portland. Those living in Portland were much more likely to rent a single bedroom (20%) and an apartment unit (76%) instead of a home (5%). They also were more likely to share spaces with non-family members; 74% shared a kitchen with a roommate and 70% shared a bathroom with a roommate. In addition, 3% shared a bedroom with a roommate. Those living outside of Portland prioritized affordability and unit type configuration over proximity to campus and campus resources. They were much more likely to rent a house (24%) instead of a bedroom (17%) or an apartment (59%). No student renters living outside of Portland indicated that they shared a bedroom with a non-family member, though 68% shared a kitchen and 53% shared a bathroom.



The survey also revealed a difference between the lease length and rental rates of students living within or outside of Portland. Sixty-two percent (62%) of students who rent in Portland were committed to 12-month or longer leases. Students renting off campus within Portland reported paying, on average, $622 in rent per month and $77 in utilities per month. Only 39% of students renting off campus outside of Portland reported a lease of 12 months or longer. Students outside of Portland paid a slightly lower average monthly cost of $588 in rent and $71 in utilities.

Figure 6 - Off-Campus Students' Housing Information by Location.

HOUSING DEMAND

Brailsford & Dunlavey developed a student housing demand model to quantify market demand for student housing at USM. The model derives demand from electronic survey responses as well as current and projected enrollment figures provided by the University.

By utilizing unit type (traditional, suite, and apartment) and occupancy (single room versus double room) preferences submitted by students in the electronic survey, B&D's demand-based programming model projects demand onto USM's 2018 as well as projected student enrollment. Enrollment was held flat in the model throughout the 10-year projection period.

Survey respondents were provided with a narrative description of hypothetical on-campus housing units that included sample floor plans along with their respective rental rates at the Gorham and Portland campuses. Students were informed that sample floor plans were for illustrative purposes only and were not drawn to scale. Estimated rental rates and unit floor plans based on market economics were provided in the survey. The survey rental rents were determined by assessing existing on-campus rates, rental rates in the off-campus market by unit type and identifying rates needed to support the potential cost of new construction at the Portland campus.

Following their review of the narrative, respondents were asked to indicate which unit type and occupancy option they would have selected to live in had it been available at the beginning of the current academic year (Fall 2018). In addition, a response option was provided to allow students to indicate whether they would have preferred off-campus housing over the proposed unit types.

The units and associated rental rates for the Portland Campus that were tested in the survey are illustrated below:

Figure 7 - Unit Types and Rental Rates Tested for the Portland Campus

Target Market

To project a realistic demand number, B&D developed a specific target market consisting of survey respondents who would likely be interested in leasing student housing on the Portland campus. A combination of survey data and B&D's expertise were used to develop the target market criteria. Only students satisfying the following criteria were included in projected demand:

- Were of degree-seeking status;
- Currently single with no dependents;
- Currently living on the Gorham campus OR;
- Contributing $500+/month to rent and not living with their spouse, dependent, or family members

All students who did not meet the aforementioned criteria were excluded from the demand analysis.

Demand Findings

This target market demand provided a baseline demand for additional filters, including USM policy, to be applied. With a few exceptions, USM prefers to accommodate all freshmen and sophomore students on the Gorham campus and reserve on-campus housing on the Portland campus for upper-division undergraduate (junior and senior) students, graduate students, and law students. B&D applied this policy overlay to determine housing demand on the Portland campus.

Total unmet demand for housing on the Portland campus during the 2018-2019 academic year at the rates for the target market above was 674 beds.

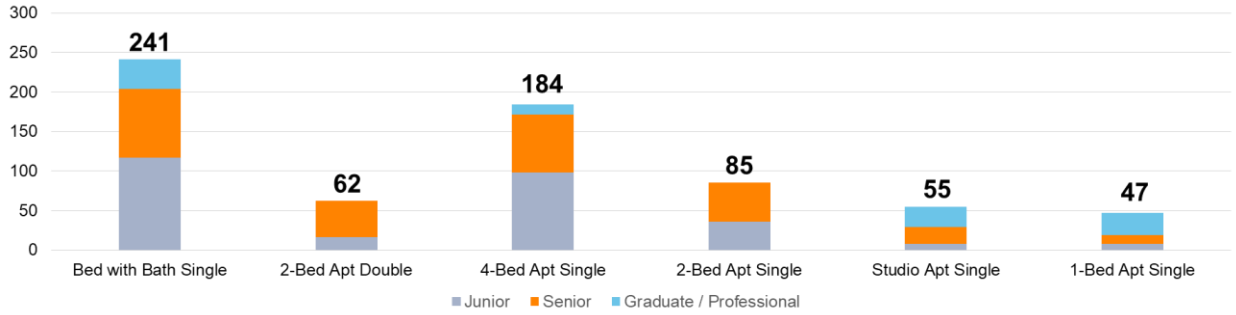


Figure 8 - Student Housing Demand for the Portland Campus

Market-driven demand determined by the results of the student survey demonstrated that students prioritized private options (single bedrooms) across the board, with only 10% of the students selecting a double-occupancy bedroom in a two-bedroom apartment. Furthermore, students mostly chose the least expensive option while maintaining privacy. Thirty-five percent (35%) of demand is for single bedrooms with en-suite bathrooms and 40% of the demand is for a single bedroom in a two- or four-bedroom apartment, all of which are among the less expensive single-occupancy housing options.

Future Housing Preferences

In the student survey, target market respondents indicated the most important building features/characteristics that should be considered in any new housing development, including overall affordability (92%), an in-building laundry facility (54%), parking (44%), desired unit-type configuration (41%), and a pet-friendly living arrangement (32%).

Further, the target market indicated a preference to be able to select their own roommate, retain the same unit from year to year, stay in their unit during breaks, and flexible lease terms. Factors that were less important included roommate matching service and fewer rules and regulations.

Five Most Important Building Features for Future On-Campus Housing	
1. Affordability	92%
2. In-Building Laundry	54%
3. Parking	44%
4. Desires Unit-Type Configuration	41%
5. Pet-Friendly Living Arrangement	32%

Figure 9 - Target Market Preferences for On-Campus Housing.

CONCLUSION

A dedicated Portland campus housing solution must be pursued in order for USM to effectively support the needs of its upper-division undergraduate, graduate, and law student community on the Portland campus. Maximizing participation from the target market, which is consistent with the USM's established strategic objectives, will require a development strategy that responds to the price sensitivity of these students, as highlighted above by the results of the analysis.

Creating an affordable housing solution that aligns with the USM's strategic objectives and responds to the associated market findings will help USM attract future students, as well as improve their access to the Portland community and its available resources.

Balancing demand for rental rate affordability and proximity to campus will limit the project's ability to include out-of-unit programmatic spaces that are deployed to build community within residence halls (i.e., lounges, game rooms, indoor recreation space, etc.). Choosing to include these kinds of dedicated programming spaces would result in additional square footage and therefore higher construction and operating costs that would ultimately be passed along to residents in the form of higher rental rates. Because maximizing affordability is paramount, programming spaces must be limited given the additional costs associated with these spaces, but yet identify creative ways to facilitate a dynamic, and interdisciplinary residential atmosphere taking advantage of co-location with the student center project that creatively advances USM towards its identified goals and vision.

University of Southern Maine
Student Housing Advisory Services
Exhibit A - Off-campus Market Data

Property Name	Property Address	City	Year Built	Vacancy %	Number Of Units	Avg Asking/Unit	Number Of Studios	Number Of 1 Bedrooms	Number Of 2 Bedrooms	Number Of 3 Bedrooms	Number Of 4 Bedrooms	Avg Unit SF	Studio Asking Rent/Unit	One Bedroom Asking Rent/Unit	Two Bedroom Asking Rent/Unit	Three Bedroom Asking Rent/Unit	Four Bedroom Asking Rent/Unit
Bayside Village	132 Marginal Way	Portland	2008	0.99	101	$2,636					101	1,200					$2,636
	17-25 Portland St	Portland	1900		9												
	8 Alder St	Portland	1949		10			10									
	10 Alder St	Portland	1910		2						2						
	38 Alder St	Portland			14												
89 Anderson	89 Anderson St	Portland	2016	1.89	53	$1,612	9	35	9			645	$1,430	$1,534	$2,097		
	131-139 Anderson St	Portland			5												
	55 Ashmont St	Portland			6												
Bayside Terrace	1 Bayside Ter	Portland	1980		24	$1,389			12	12		1,100			$1,299	$1,479	
	47 Boyd St	Portland	1915		9			3	6								
	14 Boynton St	Portland	1875		3	$803		2	1					$712	$985		
	55-57 Brackett St	Portland			6												
	59 Brackett St	Portland	1920		3												
	73 Brackett St	Portland			10												
	122-124 Brackett St	Portland			6												
	149 Brackett St	Portland			6			4	2								
West End Place	183 Brackett St	Portland	2015		39	$1,918		22	17			824		$1,652	$2,261		
	203 Brackett St	Portland	1889		6		2	4									
	262 Brackett St	Portland			6												
	285 Brackett St	Portland			14				14			1,000					
	299 Brackett St	Portland			6				4	2							
	303 Brackett St	Portland			5												
	311 Brackett St	Portland	1910		5			5									
	59 Bramhall St	Portland			9			9									
	25 Brattle St	Portland	1860		3					3							
PRINCETON VILLAGE APARTMENTS	220 Brighton Ave	Portland	1944	5.00	80	$1,044		80				466		$1,044			
	22 Carleton St	Portland			10												
	50-52 Carleton St	Portland			5		5										
	89-91 Carleton St	Portland	1900		6	$903		6						$903			
Shepley Apartments	18 Casco St	Portland	1900	1.61	62	$1,157	1	60	1			750	$1,004	$1,155	$1,458		
Ambassador Apartments	37 Casco St	Portland	1981	1.15	87	$875	87					503	$875				
	129-137 Chadwick St	Portland	1900	2.78	36												
	41 Chestnut St	Portland	1900		16			16				400					
	54 Chestnut St	Portland			11												
	92 Clark St	Portland	1864		4	$825		2	1	1				$716	$737	$1,133	
	146-148 Clark St	Portland			6												
	170-172 Clark St	Portland	1910		6	$963			6						$963		
Baxter Place	305 Commercial St	Portland	1903		62	$1,836		28	34			1,000		$2,282	$1,469		
	439 Congress St	Portland	1900	3.70	81	$1,094	41	40				644	$1,049	$1,140			
Congress Square	571-581 Congress St	Portland	1924		160	$1,253	7	136	17			656	$957	$1,249	$1,414		
Burnham Arms	633 Congress St	Portland	1900	2.22	45			45									
Lafayette Square	638-652 Congress St	Portland	1907	3.60	111			51	60			943					
645 Congress Apartments	643-649 Congress St	Portland	1963		56	$1,424	28	28				675	$1,244	$1,605			
Trelawny Building	655 Congress St	Portland		1.00	100	$1,082	40	30	30			732	$928	$1,128	$1,242		
Hiawatha	667 Congress St	Portland	2017	0.72	139	$1,651	34	97	8			588	$1,350	$1,690	$2,349		
	699 Congress St	Portland	1900		6			6									
	727 Congress St	Portland			8			2	6								
	773 Congress St	Portland	1910		5												
	775 Congress St	Portland			5												
	779 Congress St	Portland	1910		10			10									
	807 Congress St	Portland			6												
	817 Congress St	Portland			6												
	823 Congress St	Portland			6												
	829-831 Congress St	Portland	1910		6												
	835 Congress St	Portland			6												
	861 Congress St	Portland	1900		10	$728	1	7	2				$576	$704	$888		
	871-873 Congress St	Portland	1920		9				9								
	5 Crescent St	Portland			5												
Crescent Heights	25 Crescent St	Portland	2010		20					20		1,050					

University of Southern Maine
Student Housing Advisory Services
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	223-225 Cumberland Ave	Portland			8												
	227-229 Cumberland Ave	Portland			3												
	235 Cumberland Ave	Portland			11												
	251 Cumberland Ave	Portland	1915		10			10				1,000					
	255 Cumberland Ave	Portland			10												
	263 Cumberland Ave	Portland			6												
	273 Cumberland Ave	Portland	1910		29												
	289-291 Cumberland Ave	Portland			5			4	1								
Earl Apartments	341 Cumberland Ave	Portland	1939		29	$1,061	5	23	1			729	$1,051	$1,051	$1,365		
	361 Cumberland Ave	Portland			7			7									
	363 Cumberland Ave	Portland	1910														
	367 Cumberland Ave	Portland	1915														
	385 Cumberland Ave	Portland	1900		6			6									
Back Bay Tower	401 Cumberland Ave	Portland	1989		116	$1,907		6	93	17		1,053		$1,500	$1,926	$1,946	
	409 Cumberland Ave	Portland	2015	1.75	57	$727	21	32	4			524	$691	$735	$848		
Burnham Towers Apartments	419 Cumberland Ave	Portland	1907	3.13	32												
	446-448 Cumberland Ave	Portland			6												
Cumberland Park Place	447 Cumberland Ave	Portland	1988	2.33	43			43				788					
	469 Cumberland Ave	Portland			6			6									
	471 Cumberland Ave	Portland	1900		13												
	477 Cumberland Ave	Portland	1889		10	$840		10						$840			
	484 Cumberland Ave	Portland			10												
Copeley Apartments	485 Cumberland Ave	Portland	1900		25	$742	12	13				547	$735	$747			
	486-488 Cumberland Ave	Portland			5												
	493 Cumberland Ave	Portland			6												
	497 Cumberland Ave	Portland			12												
	503 Cumberland Ave	Portland	1900		9	$867	1	8					$770	$867			
Park, Cumberland & Woodford	507 Cumberland Ave	Portland	1910		14					14		1,100					
Deering Place	510 Cumberland Ave	Portland	2020		75		11	40	11	13							
	515 Cumberland Ave	Portland	1910		6												
	523 Cumberland Ave	Portland			6												
	528 Cumberland Ave	Portland			5	$734	2	2	1				$669	$759	$814		
	531 Cumberland Ave	Portland			5												
	535 Cumberland Ave	Portland			7												
	541 Cumberland Ave	Portland	1900		6	$909		4	2			817		$820	$1,088		
	546 Cumberland Ave	Portland			2												
	549 Cumberland Ave	Portland		12.50	8	$906	6	1	1			669	$852	$995	$1,138		
	553 Cumberland Ave	Portland	1910		27	$998		24	3			622		$978	$1,164		
	556 Cumberland Ave	Portland			8												
	563 Cumberland Ave	Portland			11												
	571 Cumberland Ave	Portland			12												
	28-30 Cushman St	Portland			4			4									
53 Danforth Street	53 Danforth St	Portland	2009		43	$1,398		21	22			772		$1,239	$1,549		
	63 Danforth St	Portland			7			4	3			857					
	67-69 Danforth St	Portland			7		1	2	2	2		914					
	71-73 Danforth St	Portland			7												
	77 Danforth St	Portland			9												
	78 Danforth St	Portland			8			7	1			781					
Danforth on High	81 Danforth St	Portland	2014		30	$678	6	24				580	$645	$686			
	92 Danforth St	Portland			12												
	130-132 Danforth St	Portland			6												
	156 Danforth St	Portland			4												
	158 Danforth St	Portland			5												
	171 Danforth St	Portland			7												
	180 Danforth St	Portland			6												
	206-208 Danforth St	Portland			6												
	214-216 Danforth St	Portland	1900		6	$965			6						$965		
William and Dartmouth	202 Dartmouth St	Portland	1910		22	$1,409	2	14	6			826	$1,056	$1,299	$1,785		
	9 Deering Ave	Portland			7												

University of Southern Maine
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	37 Deering Ave	Portland			5												
	46-48 Deering Ave	Portland			12			12									
	57 Deering Ave	Portland			6												
	514 Deering Ave	Portland			9			9									
	522 Deering Ave	Portland			5												
	528 Deering Ave	Portland			7												
	1-3 Deering St	Portland	1947		5												
	5-7 Deering St	Portland			6												
	9 Deering St	Portland			7												
	17 Deering St	Portland	1900		19												
	19 Deering St	Portland			5												
	26 Deering St	Portland			6												
	31 Deering St	Portland			7												
	33 Deering St	Portland			5												
	39 Deering St	Portland			5												
	44-46 Deering St	Portland	1900		5												
	47-49 Deering St	Portland			6												
	59 Deering St	Portland			6												
	64-66 Deering St	Portland			5												
	72-74 Deering St	Portland			7												
	9 Dow St	Portland			6												
	13 Dow St	Portland			8												
	17 Dow St	Portland			9												
	21 Dow St	Portland			6												
	25 Dow St	Portland			5												
	26 Dow St	Portland	1900		4	$684		2	1	1				$547	$711	$930	
	23 Ellsworth St	Portland			6												
	87 Emery St	Portland			6												
	91 Emery St	Portland			4												
	124 Emery St	Portland	1910		8			8									
	49 Falmouth St	Portland	1900														
Congress Square Plaza	12-18 Forest Ave	Portland	1900	1.25	160		7	136	17			566					
	100 Forest Ave	Portland	1910		5	$744	1	4					$649	$768			
Bayview Court Apartments	331-337 Forest Ave	Portland	1948		62	$909	30	30	2			685	$802	$978	$1,467		
	535 Forest Ave W	Portland			5												
Princeton on Back Cove	100 Forest Park	Portland	1944	5.00	220	$1,375		71	147	2		641		$1,200	$1,450	$2,027	
	12 Forest St	Portland			12												
	31-33 Frederic St	Portland	1910		5			4		1							
	10 Gilman St	Portland	1900		4			4									
	113 Gilman St	Portland			6												
	124 Glenwood Ave	Portland	1920														
	10-12 Grant St	Portland			11												
	11-13 Grant St	Portland	1900	9.09	11												
	17 Grant St	Portland			6												
	21 Grant St	Portland			6												
	24 Grant St	Portland			6												
	25 Grant St	Portland			7												
	27 Grant St	Portland			6												
	33 Grant St	Portland	1868		3					2	1						
	55 Grant St	Portland	1910		6			2	4								
	60 Grant St	Portland	1910		9		4	5				661					
	61-65 Grant St	Portland			9												
	69 Grant St	Portland			6												
	72 Grant St	Portland			6												
	72 A Grant St	Portland			12												
Prop Family Housing	77 Grant St	Portland	2005		16												
	80 Grant St	Portland	1910		13												
	84 Grant St	Portland	1998		6												
	85 Grant St	Portland	2005		16												

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	111-113 Grant St	Portland			6												
	122 Grant St	Portland			3												
	125 Grant St	Portland	1924		13			7	6			924					
	129 Grant St	Portland			6												
	133 Grant St	Portland	1900		19			15	4								
	141-143 Grant St	Portland	1910		22		2	10	10			673					
	142 Grant St	Portland			7												
	157-159 Grant St	Portland	1920	3.85	26	$993	10	8	8			769	$887	$901	$1,217		
	63-65 Gray St	Portland			10			10									
	11-15 Hanover St	Portland	1915		4			3		1							
	12 Hanover St	Portland			6												
	24 High St	Portland			14		14										
	28-30 High St	Portland	1910		7			7				1,464					
	40 High St	Portland			5												
	48 High St	Portland			10			10									
	51 High St	Portland			13		13										
	65 High St	Portland			9			7	2								
Elm Terrace	68 High St	Portland	1900		38	$755	6	22	10			695	$677	$723	$871		
	69 High St	Portland			11			11									
	78 High St	Portland			8												
	90 High St	Portland	1997		10												
	192 High St	Portland	1910		9			9									
	208-210 High St	Portland	1910		6	$1,078		2	4					$962	$1,136		
	212-214 High St	Portland	1900	10.00	10	$1,140		5	3	2		915		$1,007	$1,199	$1,381	
Ymca Apts	231 High St	Portland	2005	3.13	32												
	232 High St	Portland			6												
	236 High St	Portland	1915		6												
	237 High St	Portland	1850		11			6	2	3							
	241 High St	Portland			8		2	6									
	243-245 High St	Portland	1910		16			16									
	250 High St	Portland			11												
	138 Highland St	Portland	1910		6												
	4 Hill St	Portland	1900		16												
	7 Huntress St	Portland			10												
Kennedy Park	1 Kennedy Park	Portland	1971		178	$1,757			36	36	36	1,338			$1,287	$1,471	$1,698
	41 Mayo St	Portland															
Bayside Anchor	44 Mayo St	Portland	2017	2.08	48		48										
	24 Mellen St	Portland			8												
	30 Mellen St	Portland			7												
	83 Mellen St	Portland			6												
	90 Mellen St	Portland			6												
	44 Myrtle St	Portland			9												
	52 Myrtle St	Portland			6												
	53-55 Myrtle St	Portland	1947		5												
	137-139 Neal St	Portland	1910		17												
	161 Neal St	Portland			6												
Oak Street Lofts	70-82 Oak St	Portland	2012	2.70	37		37					400					
Bay View Apartments	104 Oak St	Portland	1940		20												
	255 Oxford St	Portland	1910		17	$615		15		2				$567		$974	
	22 Park Ave	Portland			8												
	76 Park Ave	Portland			6												
	82 Park Ave	Portland			6												
	84 Park Ave	Portland	1910		6				3	3		1,100					
Burnham Parkside Apartments	88 Park Ave	Portland			6	$1,306			6						$1,306		
Burnham Parkside Apartments	94 Park Ave	Portland	1900		16	$1,347		8	8					$1,208	$1,487		
	120 Park Ave	Portland	1914		21			18	3			629					
	122-124 Park Ave	Portland	1914		20			10	10			915					
	128 Park Ave	Portland	1900	5.00	20	$816	10	10				600	$809	$823			
	130 Park Ave	Portland			6												

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	138 Park Ave	Portland	1910		6					6							
Parkside Portland Apartments	142 Park Ave	Portland	1900		12				12			650					
	196 Park Ave	Portland	1874		11				11								
Iris Park	198 Park Ave	Portland	2006	3.33	30												
	198 Park Ave	Portland	1910		8	$772		2	6			800		$991	$699		
	200 Park Ave	Portland			6												
	208 Park Ave	Portland			4												
	216-218 Park Ave	Portland			14												
	274 Park Ave	Portland			6			6									
	278-280 Park Ave	Portland			6	$981			6			950			$981		
	22 Park St	Portland			7												
	51 Park St	Portland			12												
	85 Park St	Portland			5												
	100 Park St	Portland			8												
	112 Park St	Portland			5	$2,799		2	3			900		$2,512	$2,990		
	114 Park St	Portland			5												
	129-131 Park St	Portland	1900	1.82	55		20	35				590					
	140 Park St	Portland	1900		19												
	158 Pearl St	Portland			10												
	180 Pearl St	Portland	2007		60			20	25	15							
Pearl Place II	184 Pearl St	Portland	2013	1.85	54	$831		26	17	11		831		$729	$874	$1,006	
	20 Pine St	Portland			6												
	35 Pine St	Portland			3												
	59 Pine St	Portland	1915		12			12									
	68 Pine St	Portland	1905		6												
Butler Payson Apartments	77 Pine St	Portland	1900		39			19	20								
	114 Pine St	Portland			12												
	119 Pine St	Portland	1908		4			3		1							
	130 Pine St	Portland			6												
	138-140 Pine St	Portland			5												
	12 Pitt St	Portland	1910		12	$1,229			12			950			$1,229		
	35 Pleasant St	Portland	1910		8			4	4								
The Wadsworth	28-30 Preble St	Portland	1900	3.13	64	$992	30	34				419	$895	$1,079			
117 Lofts	117 Preble St	Portland		1.82	55	$1,192	55					420	$1,179	$1,560			
	479-481 Saint Johns St	Portland	1925		3												
	8 Salem St	Portland			9												
Danforth Heights	48 Salem St	Portland	1973		166	$1,173		25	111	20	10	761		$933	$1,134	$1,489	$1,565
	23 Saunders St	Portland	1910		5			5									
Shepley Street Housing	15 Shepley St	Portland	1910		20		10		10								
	1-3 Sherman St	Portland			10												
	8-10 Sherman St	Portland			5												
	11 Sherman St	Portland			10			10									
	22-24 Sherman St	Portland	1910		6			6									
	27 Sherman St	Portland			6												
	31 Sherman St	Portland			6												
	52 Sherman St	Portland		33.33	6	$1,097		4	2			782		$1,002	$1,287		
	55 Sherman St	Portland			5												
	56 Sherman St	Portland			7			7									
	60 Sherman St	Portland			6			6									
	66 Sherman St	Portland			5												
	69 Sherman St	Portland			12												
	75 Sherman St	Portland			9			7	2								
	77-79 Sherman St	Portland			6												
	108 Sherman St	Portland	1900		8			2	6								
	111 Sherman St	Portland	1900		25	$1,184		25				600		$1,184			
	115 Sherman St	Portland			6												
	119 Sherman St	Portland			13												
	123 Sherman St	Portland			13												
	131 Sherman St	Portland			6												

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	141 Sherman St	Portland			6												
Midtown	105 Somerset St	Portland	2021		450												
	120 Spring St	Portland	1910		3	$831			3						$831		
Carleton Court	145 Spring St	Portland	1900		21			5	10	6		999					
	197 Spring St	Portland			8												
	204 Spring St	Portland			4												
	257 Spring St	Portland			11												
	262 Spring St	Portland			7												
	265-267 Spring St	Portland			8												
	271 Spring St	Portland	1885		5	$831		5						$831			
	277 Spring St	Portland			5												
	291 Spring St	Portland			9												
	295 Spring St	Portland	1977		6												
Spring Street Apartments	314 Spring St	Portland	1900		19												
76 Spruce St, Portland, ME	76 Spruce St	Portland			6			6									
	460 St John St	Portland			6												
	463 St John St	Portland			5												
	548-550 St John St	Portland			1												
	21 State St	Portland	1923		7												
	27-29 State St	Portland	1800		10												
	31-35 State St	Portland	1920		10			10									
	32 State St	Portland	1900		8												
Casco Terrace	41 State St	Portland	2003		27	$1,653		18	9			397		$1,291	$2,375		
	45-47 State St	Portland	1900		7				7			1,041					
	51 State St	Portland	1900		15		8	7				618					
	54 State St	Portland			7												
	59 State St	Portland	1920	1.79	56	$1,360		56				800		$1,360			
	62 State St	Portland	1900		25		8	12	5			608					
	91 State St	Portland	1910		7		1	6									
100 State Street Apartments	100 State St	Portland	1978		169	$1,117		148	21			653		$1,095	$1,275		
	125 State St	Portland			9												
	131 State St	Portland			9												
	169-171 State St	Portland	1900		10				10								
	173 State St	Portland			10												
	177 State St	Portland			7												
	201 State St	Portland			6												
Longfellow Commons	206 State St	Portland	1970		20			10	10			915					
John W. Munger Block	207-209 State St	Portland			6												
	218 State St	Portland	1900		17			9	8			868					
Northgate Apartments	231 State St	Portland	1931		31	$969		31				600		$969			
	235 State St	Portland			6												
	261 State St	Portland	1910		7			7									
Charles Tobin House	264 State St	Portland	1887		13			13									
	272 State St	Portland			8												
	279 State St	Portland			7												
	286-288 State St	Portland	1908	3.85	26	$1,404		5	21			631		$1,272	$1,435		
	287-289 State St	Portland			6												
Unity Village at Bayside	6 Stone St	Portland	2000		23												
	210 Valley St	Portland	1899		4			4									
	5 Weymouth St	Portland			8												
	8 Weymouth St	Portland			7												
	12 Weymouth St	Portland	1910		26												
	16 Weymouth St	Portland			6												
	19 William St	Portland	1915		3				1	2							
	24 William St	Portland			5												
	48 Wilmot St	Portland			10		10										
	82 Winter St	Portland	1840		4	$888		3	1					$777	$1,221		
	86 Winter St	Portland			4			3	1								
	94 Winter St	Portland	1900		10			8	2								

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	117 Winter St	Portland			5												
	119 Winter St	Portland			5												
	102-106 Woodford St	Portland	1930		7	$1,043			6	1		1,077			$1,015	$1,213	
	165 Woodford St	Portland	1910		8					8		1,100					
	167 Woodford St	Portland	1910		6			6									
	168-170 Woodford St	Portland			9												
	180 Woodford St	Portland			8												
	221 Woodford St	Portland			9			9									
Plymouth Court Apartments	244 Woodford St	Portland	1920	5.26	19			19				750					
	252 Woodford St	Portland			7		4	3				664					
	278 Woodford St	Portland		7.14	14												
	286 Woodford St	Portland			3												
	296 Woodford St	Portland			3												
	127 York St	Portland			12												
	153-155 York St	Portland			4												
	191-193 York St	Portland			12		1	7	4								

University of Southern Maine - Spring 2019 - Student Housing Advisory Services

Description:
Date Created: 3/18/2019 9:25:02 AM
Date Range: 4/1/2019 12:00:00 AM - 4/21/2019 11:59:00 PM
Total Respondents: 895

Q1. What is your current enrollment status?

Count	Percent	
785	87.71%	Full time matriculated (taking 12 or more credit hours for undergrad students / 9 or more hours for grad students)
110	12.29%	Part time matriculated (fewer than 12 credit hours for undergrad students / fewer than 9 credit hours for grad students)
0	0.00%	Non-matriculated (a non-degree student; taking classes but not formally admitted to USM)
895	Respondents	

Q2. What degree are you pursuing?

Count	Percent	
747	83.46%	Bachelor
102	11.40%	Master/professional
35	3.91%	Law
5	0.56%	PhD
1	0.11%	Certificate
0	0.00%	I am not currently pursuing a degree
5	0.56%	Other (please specify)

Count	Percent	
1	20.00%	Accelerated Law Degree
1	20.00%	Associate
1	20.00%	Linguistics
1	20.00%	Tourism and Hospitality

895 Respondents

Q3. What is your current class standing?

Count	Percent	
161	22.33%	Freshman year of undergraduate program (completed fewer than 24 credit hours)
162	22.47%	Sophomore year of undergraduate program (completed 24 to 53 credit hours)
183	25.38%	Junior year of undergraduate program (completed 54 to 83 credit hours)
215	29.82%	Senior or fifth year of undergraduate program (completed 84 or more credit hours)
721	Respondents	

Q4. What is your current class standing?

Count	Percent	
60	43.48%	First year of graduate/professional/law/doctorate program
42	30.43%	Second year of graduate/professional/law/doctorate program
21	15.22%	Third year of graduate/professional/law/doctorate program
10	7.25%	Fourth year or beyond of graduate/professional/law/doctorate program
5	3.62%	Other (please specify)

Count	Percent	
1	20.00%	1L

1	20.00%		3rd year of bachelor
1	20.00%		ETEP 1 year intern
1	20.00%		Sophomore
1	20.00%		Third year of SBS undergraduate on the MOT track, starting graduate studies in the fall

138 Respondents

Q5. In which of the following colleges or schools are you enrolled?

Count	Respondent %	Response %	
84	9.88%	9.07%	College of Arts, Humanities, and Social Sciences - Fine Arts
68	8.00%	7.34%	College of Arts, Humanities, and Social Sciences -Humanities
97	11.41%	10.48%	College of Arts, Humanities, and Social Sciences -Social Sciences
8	0.94%	0.86%	College of Arts, Humanities, and Social Sciences - Interdisciplinary
94	11.06%	10.15%	College of Management and Human Service - Business
55	6.47%	5.94%	College of Management and Human Service - Education and Human Development
25	2.94%	2.70%	College of Management and Human Service - Muskie Public Service
39	4.59%	4.21%	College of Management and Human Service - Social Work
2	0.24%	0.22%	College of Management and Human Service - Interdisciplinary
97	11.41%	10.48%	College of Science, Technology, and Health - Life Sciences
108	12.71%	11.66%	College of Science, Technology, and Health - School of Nursing
80	9.41%	8.64%	College of Science, Technology, and Health - Physical Sciences
19	2.24%	2.05%	Lewiston-Auburn College - Lewiston-Auburn College
34	4.00%	3.67%	University of Maine School of Law - Law Degree Program
3	0.35%	0.32%	Women's Studies - Women's Studies Program
1	0.12%	0.11%	GO Program - GO Program
28	3.29%	3.02%	Undeclared - Undeclared Program
1	0.12%	0.11%	Non-Degree (excluding certificate programs) - Non-Degree
83	9.76%	8.96%	Other (please specify)

Count	Percent	
1	1.20%	Biology degree
1	1.20%	business administration
1	1.20%	CMS
1	1.20%	college of art, but in process of moving to exercise science
1	1.20%	College of Arts, Humanities, and Social Sciences - Criminology
1	1.20%	College of Business
1	1.20%	College of Music- Musical theater program
1	1.20%	College of Science, Technology and Health - Computer Science
1	1.20%	College of Science, Technology, and Health - Cyber Security
1	1.20%	Communication Major
1	1.20%	communications
3	3.61%	Communications
4	4.82%	Computer Science
1	1.20%	Department of Biological Sciences
1	1.20%	Don’t know
1	1.20%	Double major psych nursing and minor in bio

1	1.20%		Economics
1	1.20%		engineering
2	2.41%		Engineering
1	1.20%		Environmental policy
1	1.20%		ETEP
1	1.20%		Finance
1	1.20%		Health Sciences (Pre-Professional)
1	1.20%		IT
1	1.20%		IT program
2	2.41%		Leadership Studies
6	7.23%		Linguistics
1	1.20%		Media Communications
1	1.20%		MPPM
2	2.41%		Music Education
1	1.20%		Muskie School of Business
1	1.20%		occupational therapy
1	1.20%		Political science
1	1.20%		Political Science,
1	1.20%		psychology
4	4.82%		Psychology
1	1.20%		Public health
1	1.20%		Public Health
1	1.20%		Recreation and leisure studies
1	1.20%		School of Business - Accounting Major
4	4.82%		School of Music
1	1.20%		Social work
1	1.20%		STEM Self - Design K-8
2	2.41%		Stonecoast MFA
1	1.20%		TAH
1	1.20%		Technical Management in Precision Machining Technology
1	1.20%		Technology
1	1.20%		Undergraduate elementary education
2	2.41%		University of Southern Maine
1	1.20%		University of southern Maine
1	1.20%		Unsure which linguistics falls under
2	2.41%		USM
1	1.20%		USM- Matsters program in Leadership Studies
1	1.20%		USM- Media Studies
1	1.20%		USM School of Music
1	1.20%		USM special education Masters degree.

850 Respondents

926 Responses

Q6. Do you consider yourself a transfer student?

Count Percent

616	71.54%	No, I started pursuing my current degree at USM
109	12.66%	Yes, I started pursuing my current degree at a community or technical college
122	14.17%	Yes, I started pursuing my current degree at a 4-year college or university
14	1.63%	Other (please specify)

Count	Percent	
1	7.14%	2nd degree
1	7.14%	Both 4-year university & community college experience.
1	7.14%	Dual enrollment
1	7.14%	I finished a degree at a 4 yr university, this is my 2nd
1	7.14%	I have block credit from a degre at a 4-year college
1	7.14%	Military
1	7.14%	This is my second bachelors degree, I attended a private university previously
1	7.14%	Transfer back into the USM School
1	7.14%	undecided
1	7.14%	Went to UMaine, did first year of Law in Charleston, SC.
1	7.14%	Working professional w/ degrees from other universities, seeking another at USM.
1	7.14%	Yes, I started pursuing a different degree at a different university
1	7.14%	Yes, pursuing a second Bachelor's Degree
1	7.14%	Yes-transfer from USM to USM, I have one degree from USM that transferred into another 4-year degree at USM

861 Respondents

Q7. Which best describes your permanent residence prior to attending USM?

Count	Percent	
148	17.15%	Portland metropolitan area
240	27.81%	Elsewhere in Cumberland or York County (excluding Portland metro area)
271	31.40%	Elsewhere in Maine (excluding Cumberland and York County)
50	5.79%	New Hampshire
88	10.20%	Elsewhere in New England (excluding Maine and New Hampshire)
47	5.45%	Elsewhere in the United States (excluding New England)
19	2.20%	International

863 Respondents

Q8. What were the primary factors in your decision to attend USM?

Count	Percent	
206	24.73%	USM offered courses or programs specific to my academic interest(s)
84	10.08%	USM is close to where my family/parent(s) lives
72	8.64%	USM's proximity to my family/parent(s)'s home allows me to commute to campus and save money on housing
30	3.60%	USM is close to my work and allows me to take classes around my work schedule
50	6.00%	USM's proximity to the Portland metropolitan area
28	3.36%	USM was recommended to me by friends/family
19	2.28%	USM/my program/my academic advisor has a strong reputation
254	30.49%	The overall affordability of USM (including stipend/scholarships/grants)
9	1.08%	The residential and/or student life experience at USM
20	2.40%	The networking, internship, and job opportunities afforded by USM's location, faculty, and/or alumni

12	1.44%		I did not want to go to USM and anticipate transferring to another institution
49	5.88%		Other (please specify)

Count	Percent		
1	2.04%		Cheap
1	2.04%		"What were" specifies that you can select multiple choices. Either rephrase or change selection
1	2.04%		Affordability and close proximity to home.
1	2.04%		affordability plus radio station
1	2.04%		Army ROTC Program and Nursing Program
1	2.04%		Athletic
3	6.12%		Athletics
1	2.04%		because of sports
2	4.08%		Cheap
1	2.04%		Cheaper cost than the other schools I got accepted to
1	2.04%		close to home, affordable, and offered the degree that I'm pursuing
1	2.04%		close to my significant other
1	2.04%		Friends also go here
1	2.04%		Had my program and was somewhat affordable
1	2.04%		Had tennis team and I like snow
1	2.04%		Heidi's immense kindness and the general positivity I incurred when I visited the campus.
1	2.04%		home, in state tuition & specific degree, also accepted nearly all of my transfer credits from other institutions
1	2.04%		I am from Maine originally
1	2.04%		I just decided too
1	2.04%		Ice Hockey
2	4.08%		It was the cheapest
1	2.04%		Military transfer, closest available with degree offered
1	2.04%		Money
1	2.04%		My employer pays for my degree and my classes meet near my empoyer's district.
1	2.04%		My family has come to usm for 2/3 generations
1	2.04%		my wife was an employee of the UMaine system.
1	2.04%		NCAA
1	2.04%		Only law school in Maine
1	2.04%		Open Admissions
1	2.04%		opportunity to play a sport
1	2.04%		proximity to home, affordability and excellent degree program
1	2.04%		Rotc
1	2.04%		Small
3	6.12%		Sports
1	2.04%		Sports team
1	2.04%		strong military presence
1	2.04%		There are many, but this survey tool does not allow for multiple response entry.
1	2.04%		Tuition & Enrollment
1	2.04%		unable to get into the nursing program at a community college
1	2.04%		USM Athletics

1	2.04%		USM had the only law school in the state.
833	Respondents		

Q9. How important was the availability of on-campus housing in your decision to attend USM?

Count	Percent		
377	45.15%		Very important
131	15.69%		Important
186	22.28%		Unimportant
141	16.89%		Very unimportant
835	Respondents		

Q10. In the 2018-19 academic year, were you a student-athlete on any USM athletics teams?

Count	Percent		
704	85.85%		No
116	14.15%		Yes
820	Respondents		

Q11. Where were the majority of your academic activities (classes, labs, etc.) located during the 2018-19 academic year?

Count	Percent		
527	63.96%		USM Portland campus
196	23.79%		USM Gorham campus
14	1.70%		USM Lewiston-Auburn campus
57	6.92%		Primarily blended (at least 50% online as well as on-campus instruction)
30	3.64%		Primarily on-line
824	Respondents		

Q12. Where do you currently live?

Count	Percent		
343	43.09%		Student housing on USM's Gorham campus
453	56.91%		Off campus
796	Respondents		

Q13. Which of the following factors had the greatest influence on your decision of where to live during the 2018-19 academic year? (Select up to five responses)

Count	Respondent %	Response %		
509	64.35%	23.02%		Affordability (including the cost of rent, utilities, parking, and other housing-related expenses)
196	24.78%	8.86%		Availability of the unit-type configuration I desire (suite-style, studio apartment, 1-bed apartment, 2-bed apartment, etc.)
360	45.51%	16.28%		Proximity to campus and on-campus resources
87	11.00%	3.93%		Proximity to retail, dining, and grocery options
103	13.02%	4.66%		Proximity to other students/ability to informally connect with other residents
38	4.80%	1.72%		Proximity to local nightlife/entertainment
143	18.08%	6.47%		Proximity to my work/internship/volunteer position
149	18.84%	6.74%		Proximity to my friends or family
18	2.28%	0.81%		Availability of a child-friendly living arrangement
79	9.99%	3.57%		Availability of a pet-friendly living arrangement
39	4.93%	1.76%		Quality of community amenities (e.g. fitness center, parking garage, building

			laundry facilities, etc.)
74	9.36%	3.35%	Quality of unit amenities (e.g. in-unit laundry, walk-in closets, spacious layout, etc.)
45	5.69%	2.04%	Flexible lease/rental terms
98	12.39%	4.43%	Availability of a quiet place to study
75	9.48%	3.39%	Access to dedicated resident parking adjacent to my unit
39	4.93%	1.76%	Availability of safety and security features in my unit/building
28	3.54%	1.27%	Aesthetic architectural features (look or feel of interior and exterior spaces, newer building, historical building, etc.)
6	0.76%	0.27%	ADA accessibility
53	6.70%	2.40%	Desirability of the neighborhood/location
72	9.10%	3.26%	Other (please specify)

Count	Percent	
1	1.39%	Academic
1	1.39%	Already established at current residence
1	1.39%	already lived in Portland
1	1.39%	Already own a home in area
1	1.39%	Already own a home in topsham
1	1.39%	being a student athlete
1	1.39%	Being able to get a room. It was not a matter of any of these things the most influential thing for my living situation was being able to have a room and having options. It was a lot of stress to not be guarenteed a dorm room on-campus.
1	1.39%	Cheaper than living on campus
1	1.39%	Close to classes
1	1.39%	Close to my current home
1	1.39%	Close to my internship site
1	1.39%	Did not need campus housing due to owning home in Portland.
1	1.39%	Family
1	1.39%	Freshman housing, I didn’t have a choice where I ended up
1	1.39%	Honestly its all about balancing the price and the type of space students need. It's so sad to see students who are juniors and upperclassman being placed into triples and or not having the options to spaces. Triples are not good for mental health and its sad that many students go into triples to save money because housing on campus should be somewhat more desirable due to the fees payed etc. It would be nice to see the tripled rooms stop like apartments or and more spaces set up like suites put in. This would allow students a since of private space and the ability to prepare for later on renting experiences while being provided the affordability they should on campus. Its hard to see USM more looking into a name change then care about the mental health and idea from CURRENT students. We are the ones paying now yet we won't get to see the changes until we are gone.
1	1.39%	housing that accommodates my relationship
1	1.39%	I already own a home
1	1.39%	I am a non-traditional student. I live in my home that I purchased and continue to teach in my district.
1	1.39%	I didn’t apply in time to live on campus.
1	1.39%	I didn’t choose
1	1.39%	I have two kids and as far as I am aware that leaves me no option other thqn to live off-campus
1	1.39%	i live in Portland already, I'm a grad student
1	1.39%	I own a home
1	1.39%	I own a home and have a child. I am a nontraditional adult student
1	1.39%	I own a home and the location of school isn't out of the way

1	1.39%		I own a home, so that's where I had to live with my family
1	1.39%		I own a home.
1	1.39%		I own a house
1	1.39%		I own my home
1	1.39%		I own my home and don't want to sell.
1	1.39%		I owned a home
1	1.39%		I was unable to find my own apartment at the beginning of the 18-19 school year. Three months after the semester started, I was growing increasingly upset with the housing situation. I quickly moved out and found my own apartment.
1	1.39%		I'm from Colorado, so living on campus was a very good option
1	1.39%		I'm living on campus
1	1.39%		It was an emergency type situation: my previous roommate decided they didn’t want to live with me.
1	1.39%		It's a waste of time and money to be at the dorms in gorham when all my classes are in portland.
1	1.39%		It's my home, I went to USM so I didn't have to move
1	1.39%		It's my mother's house
1	1.39%		Limited housing on campus
1	1.39%		Live with parents, can't move out until I graduate due to affordability
1	1.39%		Living on campus was my ONLY option
1	1.39%		Married and already permanently housed
1	1.39%		money
1	1.39%		On campus does not offer Summer months so I dont wanted to move twice a year!!!
1	1.39%		On campus housing allows me to use financial aid for housing which is the only way that I could possibly afford it
1	1.39%		Only option
1	1.39%		Out of State
1	1.39%		Own a house, with kids that do and have attended a particular school system
1	1.39%		own home
1	1.39%		Own my home
1	1.39%		own my home nearby
1	1.39%		Owned home and did not want to move for a 15 month program
1	1.39%		RA
1	1.39%		Ra job
1	1.39%		RA role
1	1.39%		Restricted dining hall (I have celiacs, and the dorms are dated and communal showers gross me out
1	1.39%		Space away from home
1	1.39%		Sports
1	1.39%		Student Employee - LRA
1	1.39%		There were no available housing except another freshman dorm which I did not want to be in again
1	1.39%		Too far from home
1	1.39%		Transportation (Husky bus)
1	1.39%		USM doesn't offer graduate housing.
1	1.39%		USM was too crowded so I moved off campus. It was awful
1	1.39%		wanted to live with my partner

1	1.39%		wasn't many options
1	1.39%		Wasn’t excited to live on campus but couldn’t afford an apartment and wasn’t close enough to home to commute.
1	1.39%		Working professional, bought a house in a neighborhood I liked.
1	1.39%		Your housing is really bad though.

791 Respondents

2211 Responses

Q14. Which years have you lived on campus? (Select all that apply, including partial years)

Count	Respondent %	Response %		
307	39.26%	26.79%		None
392	50.13%	34.21%		Freshman year of undergraduate program (completed fewer than 24 credit hours)
257	32.86%	22.43%		Sophomore year of undergraduate program (completed 24 to 53 credit hours)
128	16.37%	11.17%		Junior year of undergraduate program (completed 54 to 83 credit hours)
50	6.39%	4.36%		Senior or fifth year of undergraduate program (completed 84 or more credit hours)
4	0.51%	0.35%		First year of graduate/professional/law/doctorate program
3	0.38%	0.26%		Second year of graduate/professional/law/doctorate program
2	0.26%	0.17%		Third year of graduate/professional/law/doctorate program
3	0.38%	0.26%		Fourth year or beyond of graduate/professional/law/doctorate program

782 Respondents

1146 Responses

Q15. Do you currently have a USM Meal Plan?

Count	Percent		
473	60.33%		No, I do not have a meal plan
159	20.28%		Yes, 10 Meal/$300 Husky Bucks Plan
125	15.94%		Yes, 14 Meal/$175 Husky Bucks Plan
27	3.44%		Yes, 19 Meal/$50 Husky Bucks Plan

784 Respondents

Q16. Where do you live on campus?

Count	Percent		
52	15.81%		Anderson Hall
64	19.45%		Philippi Hall
38	11.55%		Robie Andrews Hall
70	21.28%		Upton Hastings Hall
28	8.51%		Woodward Hall
77	23.40%		Upperclass Hall

329 Respondents

Q17. In what kind of housing configuration do you live?

Count	Percent	
211	63.17%	Traditional unit (combined bedroom and living area in one unit, shared floor bathroom - available in Anderson Hall, Philippi Hall, Robe Andrews Hall, Upton Hastings Hall, and Woodward Hall)
89	26.65%	Suite-style unit (one unit with two to four bedrooms and private living area and bathroom - available in Philippi Hall and Upperclass Hall)
34	10.18%	Apartment-style unit (one unit with four bedrooms, two private bathrooms, a living area, and a kitchen - available in Upperclass Hall)
334	Respondents	

Q18. What is your bedroom occupancy?

Count	Percent	
92	27.30%	Single (private bedroom)
165	48.96%	Double (bedroom shared with one other person)
80	23.74%	Triple (bedroom shared with two other people)
337	Respondents	

Q19. Please provide the zip code of your current residence while attending USM:

Count	Percent	
420	100.00%	

Count	Percent	
2	0.48%	03801
1	0.24%	03827
1	0.24%	03851
1	0.24%	03867
1	0.24%	03870
1	0.24%	03885
1	0.24%	03901
1	0.24%	03903
1	0.24%	03904
1	0.24%	03905
1	0.24%	03906
3	0.71%	04002
15	3.57%	04005
2	0.48%	04009
2	0.48%	04010
4	0.95%	04011
1	0.24%	04013
2	0.48%	04015
1	0.24%	04017
2	0.48%	04021
2	0.48%	04027
2	0.48%	04029
2	0.48%	04030
4	0.95%	04032
1	0.24%	04037

16	3.81%	04038
1	0.24%	04039
1	0.24%	04042
4	0.95%	04043
2	0.48%	04049
2	0.48%	04055
1	0.24%	04061
1	0.24%	04061-4733
6	1.43%	04062
1	0.24%	04063
13	3.10%	04064
1	0.24%	04068
3	0.71%	04071
17	4.05%	04072
1	0.24%	04073
23	5.48%	04074
1	0.24%	04074-8407
1	0.24%	04079
10	2.38%	04084
1	0.24%	04085
2	0.48%	04086
1	0.24%	04090
20	4.76%	04092
11	2.62%	04093
4	0.95%	04096
2	0.48%	04097
42	10.00%	04101
27	6.43%	04102
57	13.57%	04103
1	0.24%	04104
8	1.90%	04105
25	5.95%	04106
5	1.19%	04107
2	0.48%	04110
3	0.71%	04210
1	0.24%	04222
2	0.48%	04236
1	0.24%	04239
11	2.62%	04240
2	0.48%	04250
2	0.48%	04252
1	0.24%	04253
1	0.24%	04256
3	0.71%	04260

1	0.24%	04261
1	0.24%	04268
3	0.71%	04274
1	0.24%	04276
2	0.48%	04280
1	0.24%	04282
1	0.24%	04294
1	0.24%	04330
2	0.48%	04345
1	0.24%	04364
2	0.48%	04543
1	0.24%	04555
2	0.48%	04579
1	0.24%	04605
1	0.24%	04679
2	0.48%	04901
1	0.24%	04963
1	0.24%	12077

420 Respondents

Q20. Using the map provided below, which area of Portland best describes the location of your current housing situation?

Count	Percent	
276	62.73%	I live outside of the City of Portland boundary
11	2.50%	Back Cove
15	3.41%	Deering Center
6	1.36%	Downtown
7	1.59%	East Deering
6	1.36%	East Bayside
14	3.18%	East End
1	0.23%	India St.
5	1.14%	Libbytown
3	0.68%	Nason's Corner
13	2.95%	North Deering
13	2.95%	Oakdale
12	2.73%	Parkside
8	1.82%	Riverton
3	0.68%	Rosemont
3	0.68%	Stroudwater
2	0.45%	Valley St.
3	0.68%	West Bayside
13	2.95%	West End
26	5.91%	Other neighborhood within the boundary of the City of Portland (please specify)

Count	Percent	
1	3.85%	Biddeford

1	3.85%	Gardiner
1	3.85%	Gorham
1	3.85%	GORHAM
1	3.85%	I do not live in Ptld
1	3.85%	I don’t live in Portland.
1	3.85%	Naples
1	3.85%	Near Falmouth
1	3.85%	Old Orchard Beach
1	3.85%	poland
1	3.85%	Portsmouth
4	15.38%	Scarborough
1	3.85%	South Portland
1	3.85%	south portland- knightsville
1	3.85%	westbrook
4	15.38%	Westbrook
1	3.85%	Willard square area
1	3.85%	Windham
1	3.85%	Woodford Corner

440 Respondents

Q21. With whom do you currently live?

Count	Percent	
41	9.30%	I live alone
124	28.12%	I live with my parent(s) or other relative(s)
115	26.08%	I live with my spouse/partner
17	3.85%	I live with my child(ren)/dependent(s)
22	4.99%	I live with my spouse/partner and child(ren)/dependent(s)
55	12.47%	I live with other USM student(s)
43	9.75%	I live with roommate(s) who do not attend USM
19	4.31%	I live with both USM students and roommate(s) that do not attend USM
5	1.13%	Other (please specify)

Count	Percent	
1	20.00%	I live with my spouse and child
1	20.00%	My mother and girlfriend
1	20.00%	my sister
1	20.00%	rent a room out of a house
1	20.00%	spouse/usm student

441 Respondents

Q22. Which best describes your current housing situation?

Count	Percent	
44	10.00%	Rent individual bedroom within a house
182	41.36%	Rent apartment/condo unit within a house or complex
30	6.82%	Rent an entire house
6	1.36%	Don't pay rent for an apartment/condo unit owned by myself or spouse

16	3.64%	Don't pay rent for an apartment/condo unit owned by another person
36	8.18%	Don't pay rent for an entire house owned by myself or spouse/partner
82	18.64%	Don't pay rent for an entire house owned by another person
44	10.00%	Other (please specify)

Count	Percent	
1	2.27%	Contribute to mortgage for entire house owned by partner
1	2.27%	Do not pay rent, family lake house
1	2.27%	Don’t pay rent for apartment owned by parents
1	2.27%	Help my mom pay rent
1	2.27%	house with a mortgage
1	2.27%	I don't pay rent/live with parents
1	2.27%	i live in a room with my grandmother
1	2.27%	I live in a winter rental because its all I can afford and have to move out for the summer to my parents house.
1	2.27%	I own a home
1	2.27%	I own my own home
1	2.27%	I own my own house
1	2.27%	Live at home with parents
1	2.27%	Live at Saint Joseph’s Rehabilitation and Residence through their inter generational program
1	2.27%	live in owned home
1	2.27%	living with my parents
1	2.27%	mortgage
1	2.27%	Own
2	4.55%	Own a home
1	2.27%	Own a home with my spouse
1	2.27%	Own entire house
1	2.27%	own home
1	2.27%	Own home
1	2.27%	Own Home
1	2.27%	own house
1	2.27%	Own House
1	2.27%	Own my home
1	2.27%	Own my house
1	2.27%	Own my own home- mortgage free!
1	2.27%	own pay a mortgage
1	2.27%	owner-occupied three unit
1	2.27%	Pay a mortgage on a house loan
1	2.27%	Pay low rent to my aunt to live in her condo
1	2.27%	pay mortgage for our home
1	2.27%	Pay mortgage for the house
1	2.27%	Pay to live at home
1	2.27%	rent a room in a condo
1	2.27%	Rent an efficiency
1	2.27%	Rent apartment

1	2.27%		Share costs with family in single family house
1	2.27%		Spilit apartment rent w/ gf, techincally
1	2.27%		We pay a mortgage

440 Respondents

Q23. How do you think your current living experience compares to living on the Gorham campus?

Count	Percent		
234	53.18%		My off-campus experience is much better
64	14.55%		My off-campus experience is somewhat better
18	4.09%		My off-campus experience is about the same
13	2.95%		My off-campus experience is somewhat worse
5	1.14%		My off-campus experience is much worse
106	24.09%		Unsure
440	Respondents		

Q24. With how many people do you share your living unit?

Count	Percent		
120	48.58%		One person
62	25.10%		Two people
42	17.00%		Three people
23	9.31%		Four or more people
247	Respondents		

Q25. Do you share your bedroom with any other people?

Count	Percent		
149	58.20%		No
4	1.56%		Yes, with one or more non-familial people (roommate)
103	40.23%		Yes, with one or more members of my family and/or my significant other
256	Respondents		

Q26. Do you share your bathroom with any other people?

Count	Percent		
47	18.36%		No
97	37.89%		Yes, with one or more non-familial people (roommate)
112	43.75%		Yes, with one or more members of my family and/or my significant other
256	Respondents		

Q27. Do you share a kitchen with any other people?

Count	Percent		
29	11.42%		No
107	42.13%		Yes, with one or more non-familial people (roommate)
118	46.46%		Yes, with one or more members of my family and/or my significant other
254	Respondents		

Q28. What is your personal share of monthly rent/housing costs excluding utilities?		
Count	Percent	
6	2.34%	Not applicable; I do not pay rent
6	2.34%	Less than $200
10	3.91%	$200 - $299
19	7.42%	$300 - $399
45	17.58%	$400 - $499
53	20.70%	$500 - $599
47	18.36%	$600 - $699
25	9.77%	$700 - $799
15	5.86%	$800 - $899
8	3.13%	$900 - $999
5	1.95%	$1,000 - $1,099
4	1.56%	$1,100 - $1,199
4	1.56%	$1,200 - $1,299
2	0.78%	$1,300 - $1,399
1	0.39%	$1,400 - $1,499
2	0.78%	$1,500 - $1,599
2	0.78%	$1,600 - $1,699
1	0.39%	$1,700 - $1,799
0	0.00%	$1,800 - $1,899
0	0.00%	$1,900 - $1,999
0	0.00%	$2,000 or more
1	0.39%	I don't know
256	Respondents	

Q29. In addition to your rent, for which of the following utilities do you currently pay? (Select all that apply)			
Count	Respondent %	Response %	
0	0.00%	0.00%	Not applicable; I do not pay rent
39	15.42%	5.82%	None, utilities are included in the rent
66	26.09%	9.85%	Cable/satellite television
175	69.17%	26.12%	Electric
79	31.23%	11.79%	Gas
178	70.36%	26.57%	Internet
18	7.11%	2.69%	Parking
17	6.72%	2.54%	Sewer
61	24.11%	9.10%	Telephone
37	14.62%	5.52%	Water
253	Respondents		
670	Responses		

Q30. How much is your individual monthly cost for all the utilities selected in the previous question

Count	Percent	
15	6.88%	Less than $25
27	12.39%	$25 - $49
70	32.11%	$50 - $99
53	24.31%	$100 - $149
23	10.55%	$150 - $199
26	11.93%	$200 or more
4	1.83%	I don't know
218	Respondents	

Q31. Which best describes your current lease length?

Count	Percent	
43	17.06%	Not applicable; I have no lease
22	8.73%	More than 12 months
134	53.17%	12 months
19	7.54%	Academic year (approximately 9 months)
5	1.98%	Academic semester (approximately 4.5 months)
27	10.71%	Monthly
2	0.79%	Other (please specify)

Count	Percent	
1	50.00%	6 months
1	50.00%	Lease ended ext month to month

252 Respondents

Q32. How difficult was it for you to find and secure your current housing accommodations?

Count	Percent	
49	19.44%	Very difficult
54	21.43%	Difficult
77	30.56%	Somewhat difficult
72	28.57%	Not difficult
252	Respondents	

Q33. How would you describe your current living situation?

Count	Percent	
236	30.65%	Very satisfactory
375	48.70%	Satisfactory
120	15.58%	Unsatisfactory
39	5.06%	Very unsatisfactory
770	Respondents	

Q34. If you described your living conditions as "unsatisfactory" or "very unsatisfactory", please indicate why: (Select all that apply)

Count	Respondent %	Response %	
51	32.90%	5.84%	High total cost of housing
57	36.77%	6.52%	Meal plan cost/requirement
14	9.03%	1.60%	Lack of safety and security

39	25.16%	4.46%	Too many restrictive rules and regulations
36	23.23%	4.12%	Too loud
66	42.58%	7.55%	Poor physical condition of building/unit
71	45.81%	8.12%	Dislike unit type/room layout
63	40.65%	7.21%	Lack of private bathroom
54	34.84%	6.18%	Lack of private bedroom
85	54.84%	9.73%	Not enough living space
53	34.19%	6.06%	Lack of kitchen
27	17.42%	3.09%	Lack of convenient laundry facilities
17	10.97%	1.95%	Lack of community spaces
43	27.74%	4.92%	Dislike roommates
4	2.58%	0.46%	Lease length doesn't accommodate needs
41	26.45%	4.69%	Too far from classes/academic activities
19	12.26%	2.17%	Too far from job/internship/volunteer positions
13	8.39%	1.49%	Too far from other students
66	42.58%	7.55%	Lack of convenient parking or public transportation
13	8.39%	1.49%	Too far from student life facilities
22	14.19%	2.52%	Too far from off-campus resources
20	12.90%	2.29%	Other (please specify)

Count	Percent	
1	5.00%	6 people in a suite meant for 4 people is too many
1	5.00%	All of the above
1	5.00%	Always too hot in the dorms
1	5.00%	Bus could stop twice on campus to accommodate students who live farther away. In the winter its hard to know how much time it takes when the sidewalks are all ice.
1	5.00%	enhanced occupancy
1	5.00%	ferry schedule does not work with clinical schedule
1	5.00%	FLOODING BATHROOMS
1	5.00%	Forced tripple, Too little discount, ned more housing on campus, theres not enough room for what USM is trying to bring in!!
1	5.00%	I’ve lived here my whole live so I want a break from it.
1	5.00%	Just don’t want to be living at home but can’t afford to move out while in school.
1	5.00%	Kitchen is nasty and not stocked with anything useful! Parking in the rear but having to walk around is a huge pain, especially the hours of it. Our room is not insulated well cold air comes in through the window and floors, even the vent filter cleaners were surprised with how cold our floors are. The cold air doesn’t work and it’s heat at full blast or nothing. We fill out how we like to live every year but it is not used because we either pick our roommates or 2 people randomly pick the same room.
1	5.00%	lease terminated
1	5.00%	my family is incredibly stressful so so is the house. Also, living off campus has made it nearly impossible to make any friends
1	5.00%	No roommate got put in
1	5.00%	Rarely have hot water, and there are always bugs everywhere
1	5.00%	Rats and bugs in ceiling
1	5.00%	RD is neglectful to her duties and picks and chooses what to do she would rather get someone in trouble than aid them
1	5.00%	Still live with parents
1	5.00%	Too expensive per month

1	5.00%		Unclean, dirty
155	Respondents		
874	Responses		

Q35. Based on the above summary of available housing options and associated rates, on which campus would you have preferred to live as a: - Freshman

Count	Percent	
340	56.29%	Gorham Campus
109	18.05%	Portland Campus
88	14.57%	I would have chosen to live off campus
67	11.09%	Not applicable; I did not attend USM (or do not plan to attend USM) during this year
604	Respondents	

Q36. Based on the above summary of available housing options and associated rates, on which campus would you have preferred to live as a: - Sophomore

Count	Percent	
239	40.99%	Gorham Campus
180	30.87%	Portland Campus
116	19.90%	I would have chosen to live off campus
48	8.23%	Not applicable; I did not attend USM (or do not plan to attend USM) during this year
583	Respondents	

Q37. Based on the above summary of available housing options and associated rates, on which campus would you have preferred to live as a: - Junior

Count	Percent	
109	19.36%	Gorham Campus
249	44.23%	Portland Campus
178	31.62%	I would have chosen to live off campus
27	4.80%	Not applicable; I did not attend USM (or do not plan to attend USM) during this year
563	Respondents	

Q38. Based on the above summary of available housing options and associated rates, on which campus would you have preferred to live as a: - Senior or Fifth Year

Count	Percent	
85	14.99%	Gorham Campus
224	39.51%	Portland Campus
243	42.86%	I would have chosen to live off campus
15	2.65%	Not applicable; I did not attend USM (or do not plan to attend USM) during this year
567	Respondents	

Q39. If all the unit types described above were available on the Gorham campus at the assigned rental rates provided, what would have been your preferred housing choice as a FRESHMAN STUDENT?

Count	Percent	
52	16.20%	Unit Type A1: Single-Occupancy Bedroom in a Traditional Unit for $667 per month/$3,000 per semester/$6,000 per academic year
133	41.43%	Unit Type A2: Double-Occupancy Bedroom in a Traditional Unit for $556 per month/$2,500 per semester/$5,000 per academic year
62	19.31%	Unit Type B1: Single-Occupancy Bedroom in a Two-Bedroom Suite-Style Unit for $667 per month/$3,000 per semester/$6,000 per academic year
31	9.66%	Unit Type B2: Double-Occupancy Bedroom in a Two-Bedroom Suite-Style Unit for $667 per month/$3,000 per semester/$6,000 per academic year
39	12.15%	Unit Type C: Single-Occupancy Bedroom in a Four-Bedroom Apartment for $778 per month/$3,500 per semester/$7,000 per academic year
4	1.25%	I would not have chosen to live in any of the above unit types on the Gorham campus for my first year.
321	Respondents	

Q40. If all the unit types described above were available on the Gorham campus at the assigned rental rates provided, what would have been your preferred housing choice as a SOPHOMORE STUDENT?

Count	Percent	
34	14.98%	Unit Type A1: Single-Occupancy Bedroom in a Traditional Unit for $667 per month/$3,000 per semester/$6,000 per academic year
33	14.54%	Unit Type A2: Double-Occupancy Bedroom in a Traditional Unit for $556 per month/$2,500 per semester/$5,000 per academic year
60	26.43%	Unit Type B1: Single-Occupancy Bedroom in a Two-Bedroom Suite-Style Unit for $667 per month/$3,000 per semester/$6,000 per academic year
45	19.82%	Unit Type B2: Double-Occupancy Bedroom in a Two-Bedroom Suite-Style Unit for $667 per month/$3,000 per semester/$6,000 per academic year
50	22.03%	Unit Type C: Single-Occupancy Bedroom in a Four-Bedroom Apartment for $778 per month/$3,500 per semester/$7,000 per academic year
5	2.20%	I would not have chosen to live in any of the above unit types on the Gorham campus for my first year.
227	Respondents	

Q41. If all the unit types described above were available on the Gorham campus at the assigned rental rates provided, what would have been your preferred housing choice as a JUNIOR STUDENT?

Count	Percent	
14	13.59%	Unit Type A1: Single-Occupancy Bedroom in a Traditional Unit for $667 per month/$3,000 per semester/$6,000 per academic year
10	9.71%	Unit Type A2: Double-Occupancy Bedroom in a Traditional Unit for $556 per month/$2,500 per semester/$5,000 per academic year
24	23.30%	Unit Type B1: Single-Occupancy Bedroom in a Two-Bedroom Suite-Style Unit for $667 per month/$3,000 per semester/$6,000 per academic year
19	18.45%	Unit Type B2: Double-Occupancy Bedroom in a Two-Bedroom Suite-Style Unit for $667 per month/$3,000 per semester/$6,000 per academic year
34	33.01%	Unit Type C: Single-Occupancy Bedroom in a Four-Bedroom Apartment for $778 per month/$3,500 per semester/$7,000 per academic year
2	1.94%	I would not have chosen to live in any of the above unit types on the Gorham campus for my first year.
103	Respondents	

Q42. If all the unit types described above were available on the Gorham campus at the assigned rental rates provided, what would have been your preferred housing choice as a SENIOR STUDENT?		
Count	Percent	
14	16.87%	Unit Type A1: Single-Occupancy Bedroom in a Traditional Unit for $667 per month/$3,000 per semester/$6,000 per academic year
5	6.02%	Unit Type A2: Double-Occupancy Bedroom in a Traditional Unit for $556 per month/$2,500 per semester/$5,000 per academic year
16	19.28%	Unit Type B1: Single-Occupancy Bedroom in a Two-Bedroom Suite-Style Unit for $667 per month/$3,000 per semester/$6,000 per academic year
11	13.25%	Unit Type B2: Double-Occupancy Bedroom in a Two-Bedroom Suite-Style Unit for $667 per month/$3,000 per semester/$6,000 per academic year
34	40.96%	Unit Type C: Single-Occupancy Bedroom in a Four-Bedroom Apartment for $778 per month/$3,500 per semester/$7,000 per academic year
3	3.61%	I would not have chosen to live in any of the above unit types on the Gorham campus for my first year.
83	Respondents	

Q43. If all the unit types described above were available on the Portland campus at the assigned rental rates provided, what would have been your preferred housing choice as a FIRST-YEAR STUDENT?		
Count	Percent	
29	27.88%	Unit Type D: Single-Occupancy Bedroom in a Suite-Style Unit for $800 - $850 per month/$7,200 - $7,650 per academic year (9 months)/$9,600 - $10,200 per calendar year (12 months)
6	5.77%	Unit Type E: Single-Occupancy Bedroom in a Studio Apartment Unit for $1,200 - $1,300 per month/$11,250 - $11,700 per academic year (9 months)/$15,000 - $15,600 per calendar year (12 months)
2	1.92%	Unit Type F: Single-Occupancy Bedroom in a One-Bedroom Apartment Unit for $1,350 - $1,400 per month/$12,150 - $12,600 per academic year (9 months)/$16,200 - $16,800 per calendar year (12 months)
14	13.46%	Unit Type G1: Single-Occupancy Bedroom in a Two-Bedroom Apartment Unit for $1,120 - $1,170 per month/$10,080 - $10,530 per academic year (9 months)/$13,440 - $14,040 per calendar year (12 months)
22	21.15%	Unit Type G2: Double -Occupancy Bedroom in a Two-Bedroom Apartment Unit for $900 - $950 per month/$8,100 - $8,550 per academic year (9 months)/$10,800 - $11,400 per calendar year (12 months)
16	15.38%	Unit Type H1: Single-Occupancy Bedroom in a Four-Bedroom Apartment Unit for $1,050 - $1,100 per month/$9,450 - $9,900 per academic year (9 months)/$12,600 - $13,200 per calendar year (12 months)
15	14.42%	I would not have chosen to live in any of the above unit types on the Portland campus for my first year.
104	Respondents	

Q44. If all the unit types described above were available on the Portland campus at the assigned rental rates provided, what would have been your preferred housing choice as a SOPHOMORE STUDENT?

Count	Percent	
29	18.01%	Unit Type D: Single-Occupancy Bedroom in a Suite-Style Unit for $800 - $850 per month/$7,200 - $7,650 per academic year (9 months)/$9,600 - $10,200 per calendar year (12 months)
17	10.56%	Unit Type E: Single-Occupancy Bedroom in a Studio Apartment Unit for $1,200 - $1,300 per month/$11,250 - $11,700 per academic year (9 months)/$15,000 - $15,600 per calendar year (12 months)
8	4.97%	Unit Type F: Single-Occupancy Bedroom in a One-Bedroom Apartment Unit for $1,350 - $1,400 per month/$12,150 - $12,600 per academic year (9 months)/$16,200 - $16,800 per calendar year (12 months)
34	21.12%	Unit Type G1: Single-Occupancy Bedroom in a Two-Bedroom Apartment Unit for $1,120 - $1,170 per month/$10,080 - $10,530 per academic year (9 months)/$13,440 - $14,040 per calendar year (12 months)
33	20.50%	Unit Type G2: Double -Occupancy Bedroom in a Two-Bedroom Apartment Unit for $900 - $950 per month/$8,100 - $8,550 per academic year (9 months)/$10,800 - $11,400 per calendar year (12 months)
34	21.12%	Unit Type H1: Single-Occupancy Bedroom in a Four-Bedroom Apartment Unit for $1,050 - $1,100 per month/$9,450 - $9,900 per academic year (9 months)/$12,600 - $13,200 per calendar year (12 months)
6	3.73%	I would not have chosen to live in any of the above unit types on the Portland campus for my first year.
161	Respondents	

Q45. If all the unit types described above were available on the Portland campus at the assigned rental rates provided, what would have been your preferred housing choice as a JUNIOR STUDENT?

Count	Percent	
44	19.64%	Unit Type D: Single-Occupancy Bedroom in a Suite-Style Unit for $800 - $850 per month/$7,200 - $7,650 per academic year (9 months)/$9,600 - $10,200 per calendar year (12 months)
21	9.38%	Unit Type E: Single-Occupancy Bedroom in a Studio Apartment Unit for $1,200 - $1,300 per month/$11,250 - $11,700 per academic year (9 months)/$15,000 - $15,600 per calendar year (12 months)
12	5.36%	Unit Type F: Single-Occupancy Bedroom in a One-Bedroom Apartment Unit for $1,350 - $1,400 per month/$12,150 - $12,600 per academic year (9 months)/$16,200 - $16,800 per calendar year (12 months)
41	18.30%	Unit Type G1: Single-Occupancy Bedroom in a Two-Bedroom Apartment Unit for $1,120 - $1,170 per month/$10,080 - $10,530 per academic year (9 months)/$13,440 - $14,040 per calendar year (12 months)
40	17.86%	Unit Type G2: Double -Occupancy Bedroom in a Two-Bedroom Apartment Unit for $900 - $950 per month/$8,100 - $8,550 per academic year (9 months)/$10,800 - $11,400 per calendar year (12 months)
55	24.55%	Unit Type H1: Single-Occupancy Bedroom in a Four-Bedroom Apartment Unit for $1,050 - $1,100 per month/$9,450 - $9,900 per academic year (9 months)/$12,600 - $13,200 per calendar year (12 months)
11	4.91%	I would not have chosen to live in any of the above unit types on the Portland campus for my first year.
224	Respondents	

Q46. If all the unit types described above were available on the Portland campus at the assigned rental rates provided, what would have been your preferred housing choice as a SENIOR STUDENT?

Count	Percent	
35	17.33%	Unit Type D: Single-Occupancy Bedroom in a Suite-Style Unit for $800 - $850 per month/$7,200 - $7,650 per academic year (9 months)/$9,600 - $10,200 per calendar year (12 months)
30	14.85%	Unit Type E: Single-Occupancy Bedroom in a Studio Apartment Unit for $1,200 - $1,300 per month/$11,250 - $11,700 per academic year (9 months)/$15,000 - $15,600 per calendar year (12 months)
19	9.41%	Unit Type F: Single-Occupancy Bedroom in a One-Bedroom Apartment Unit for $1,350 - $1,400 per month/$12,150 - $12,600 per academic year (9 months)/$16,200 - $16,800 per calendar year (12 months)
34	16.83%	Unit Type G1: Single-Occupancy Bedroom in a Two-Bedroom Apartment Unit for $1,120 - $1,170 per month/$10,080 - $10,530 per academic year (9 months)/$13,440 - $14,040 per calendar year (12 months)
32	15.84%	Unit Type G2: Double -Occupancy Bedroom in a Two-Bedroom Apartment Unit for $900 - $950 per month/$8,100 - $8,550 per academic year (9 months)/$10,800 - $11,400 per calendar year (12 months)
41	20.30%	Unit Type H1: Single-Occupancy Bedroom in a Four-Bedroom Apartment Unit for $1,050 - $1,100 per month/$9,450 - $9,900 per academic year (9 months)/$12,600 - $13,200 per calendar year (12 months)
11	5.45%	I would not have chosen to live in any of the above unit types on the Portland campus for my first year.
202	Respondents	

Q47. If your preferred housing choice WAS NOT AVAILABLE on the Portland campus, what would have been your SECOND housing choice as a FIRST-YEAR STUDENT?

Count	Percent	
14	13.73%	Unit Type D: Single-Occupancy Bedroom in a Suite-Style Unit for $800 - $850 per month/$7,200 - $7,650 per academic year (9 months)/$9,600 - $10,200 per calendar year (12 months)
20	19.61%	Unit Type E: Single-Occupancy Bedroom in a Studio Apartment Unit for $1,200 - $1,300 per month/$11,250 - $11,700 per academic year (9 months)/$15,000 - $15,600 per calendar year (12 months)
5	4.90%	Unit Type F: Single-Occupancy Bedroom in a One-Bedroom Apartment Unit for $1,350 - $1,400 per month/$12,150 - $12,600 per academic year (9 months)/$16,200 - $16,800 per calendar year (12 months)
15	14.71%	Unit Type G1: Single-Occupancy Bedroom in a Two-Bedroom Apartment Unit for $1,120 - $1,170 per month/$10,080 - $10,530 per academic year (9 months)/$13,440 - $14,040 per calendar year (12 months)
22	21.57%	Unit Type G2: Double -Occupancy Bedroom in a Two-Bedroom Apartment Unit for $900 - $950 per month/$8,100 - $8,550 per academic year (9 months)/$10,800 - $11,400 per calendar year (12 months)
14	13.73%	Unit Type H1: Single-Occupancy Bedroom in a Four-Bedroom Apartment Unit for $1,050 - $1,100 per month/$9,450 - $9,900 per academic year (9 months)/$12,600 - $13,200 per calendar year (12 months)
12	11.76%	I would not have chosen to live in any of the above unit types on the Portland campus for my first year.
102	Respondents	

Q48. If your preferred housing choice WAS NOT AVAILABLE on the Portland campus, what would have been your SECOND housing choice as a SOPHOMORE STUDENT?

Count	Percent	
22	14.01%	Unit Type D: Single-Occupancy Bedroom in a Suite-Style Unit for $800 - $850 per month/$7,200 - $7,650 per academic year (9 months)/$9,600 - $10,200 per calendar year (12 months)
23	14.65%	Unit Type E: Single-Occupancy Bedroom in a Studio Apartment Unit for $1,200 - $1,300 per month/$11,250 - $11,700 per academic year (9 months)/$15,000 - $15,600 per calendar year (12 months)
21	13.38%	Unit Type F: Single-Occupancy Bedroom in a One-Bedroom Apartment Unit for $1,350 - $1,400 per month/$12,150 - $12,600 per academic year (9 months)/$16,200 - $16,800 per calendar year (12 months)
33	21.02%	Unit Type G1: Single-Occupancy Bedroom in a Two-Bedroom Apartment Unit for $1,120 - $1,170 per month/$10,080 - $10,530 per academic year (9 months)/$13,440 - $14,040 per calendar year (12 months)
21	13.38%	Unit Type G2: Double -Occupancy Bedroom in a Two-Bedroom Apartment Unit for $900 - $950 per month/$8,100 - $8,550 per academic year (9 months)/$10,800 - $11,400 per calendar year (12 months)
29	18.47%	Unit Type H1: Single-Occupancy Bedroom in a Four-Bedroom Apartment Unit for $1,050 - $1,100 per month/$9,450 - $9,900 per academic year (9 months)/$12,600 - $13,200 per calendar year (12 months)
8	5.10%	I would not have chosen to live in any of the above unit types on the Portland campus for my first year.
157	Respondents	

Q49. If your preferred housing choice WAS NOT AVAILABLE on the Portland campus, what would have been your SECOND housing choice as a JUNIOR STUDENT?

Count	Percent	
33	15.07%	Unit Type D: Single-Occupancy Bedroom in a Suite-Style Unit for $800 - $850 per month/$7,200 - $7,650 per academic year (9 months)/$9,600 - $10,200 per calendar year (12 months)
29	13.24%	Unit Type E: Single-Occupancy Bedroom in a Studio Apartment Unit for $1,200 - $1,300 per month/$11,250 - $11,700 per academic year (9 months)/$15,000 - $15,600 per calendar year (12 months)
20	9.13%	Unit Type F: Single-Occupancy Bedroom in a One-Bedroom Apartment Unit for $1,350 - $1,400 per month/$12,150 - $12,600 per academic year (9 months)/$16,200 - $16,800 per calendar year (12 months)
48	21.92%	Unit Type G1: Single-Occupancy Bedroom in a Two-Bedroom Apartment Unit for $1,120 - $1,170 per month/$10,080 - $10,530 per academic year (9 months)/$13,440 - $14,040 per calendar year (12 months)
24	10.96%	Unit Type G2: Double -Occupancy Bedroom in a Two-Bedroom Apartment Unit for $900 - $950 per month/$8,100 - $8,550 per academic year (9 months)/$10,800 - $11,400 per calendar year (12 months)
46	21.00%	Unit Type H1: Single-Occupancy Bedroom in a Four-Bedroom Apartment Unit for $1,050 - $1,100 per month/$9,450 - $9,900 per academic year (9 months)/$12,600 - $13,200 per calendar year (12 months)
19	8.68%	I would not have chosen to live in any of the above unit types on the Portland campus for my first year.
219	Respondents	

Q50. If your preferred housing choice WAS NOT AVAILABLE on the Portland campus, what would have been your SECOND housing choice as a SENIOR STUDENT?

Count	Percent	
24	12.18%	Unit Type D: Single-Occupancy Bedroom in a Suite-Style Unit for $800 - $850 per month/$7,200 - $7,650 per academic year (9 months)/$9,600 - $10,200 per calendar year (12 months)
36	18.27%	Unit Type E: Single-Occupancy Bedroom in a Studio Apartment Unit for $1,200 - $1,300 per month/$11,250 - $11,700 per academic year (9 months)/$15,000 - $15,600 per calendar year (12 months)
23	11.68%	Unit Type F: Single-Occupancy Bedroom in a One-Bedroom Apartment Unit for $1,350 - $1,400 per month/$12,150 - $12,600 per academic year (9 months)/$16,200 - $16,800 per calendar year (12 months)
35	17.77%	Unit Type G1: Single-Occupancy Bedroom in a Two-Bedroom Apartment Unit for $1,120 - $1,170 per month/$10,080 - $10,530 per academic year (9 months)/$13,440 - $14,040 per calendar year (12 months)
21	10.66%	Unit Type G2: Double -Occupancy Bedroom in a Two-Bedroom Apartment Unit for $900 - $950 per month/$8,100 - $8,550 per academic year (9 months)/$10,800 - $11,400 per calendar year (12 months)
44	22.34%	Unit Type H1: Single-Occupancy Bedroom in a Four-Bedroom Apartment Unit for $1,050 - $1,100 per month/$9,450 - $9,900 per academic year (9 months)/$12,600 - $13,200 per calendar year (12 months)
14	7.11%	I would not have chosen to live in any of the above unit types on the Portland campus for my first year.
197	Respondents	

Q51. Based on the above summary of available housing options and associated rates, on which campus would you have preferred to live during your: - First year of graduate / professional / law / doctorate program

Count	Percent	
18	15.52%	Gorham Campus
39	33.62%	Portland Campus
59	50.86%	I would have chosen to live off campus
0	0.00%	Not applicable; my program does not include this year
116	Respondents	

Q52. Based on the above summary of available housing options and associated rates, on which campus would you have preferred to live during your: - Second year of graduate / professional / law / doctorate program

Count	Percent	
12	10.53%	Gorham Campus
37	32.46%	Portland Campus
59	51.75%	I would have chosen to live off campus
6	5.26%	Not applicable; my program does not include this year
114	Respondents	

Q53. Based on the above summary of available housing options and associated rates, on which campus would you have preferred to live during your: - Third year of graduate / professional / law / doctorate program

Count	Percent	
6	5.41%	Gorham Campus
27	24.32%	Portland Campus
51	45.95%	I would have chosen to live off campus
27	24.32%	Not applicable; my program does not include this year
111	Respondents	

Q54. Based on the above summary of available housing options and associated rates, on which campus would you have preferred to live during your: - Fourth year and beyond of graduate / professional / law / doctorate program

Count	Percent	
3	2.78%	Gorham Campus
15	13.89%	Portland Campus
39	36.11%	I would have chosen to live off campus
51	47.22%	Not applicable; my program does not include this year
108	Respondents	

Q55. If all the unit types described above were available on the Gorham campus at the assigned rental rates provided, what would have been your preferred housing choice as a FIRST-YEAR GRADUATE / LAW / PROFESSIONAL / DOCTORATE STUDENT?

Count	Percent	
1	5.88%	Unit Type A1: Single-Occupancy Bedroom in a Traditional Unit for $667 per month/$3,000 per semester/$6,000 per academic year
3	17.65%	Unit Type A2: Double-Occupancy Bedroom in a Traditional Unit for $556 per month/$2,500 per semester/$5,000 per academic year
5	29.41%	Unit Type B1: Single-Occupancy Bedroom in a Two-Bedroom Suite-Style Unit for $667 per month/$3,000 per semester/$6,000 per academic year
3	17.65%	Unit Type B2: Double-Occupancy Bedroom in a Two-Bedroom Suite-Style Unit for $667 per month/$3,000 per semester/$6,000 per academic year
4	23.53%	Unit Type C: Single-Occupancy Bedroom in a Four-Bedroom Apartment for $778 per month/$3,500 per semester/$7,000 per academic year
1	5.88%	I would not have chosen to live in any of the above unit types on the Gorham campus for my first year.
17	Respondents	

Q56. If all the unit types described above were available on the Gorham campus at the assigned rental rates provided, what would have been your preferred housing choice as a SECOND-YEAR GRADUATE / LAW / PROFESSIONAL / DOCTORATE STUDENT?

Count	Percent	
0	0.00%	Unit Type A1: Single-Occupancy Bedroom in a Traditional Unit for $667 per month/$3,000 per semester/$6,000 per academic year
4	40.00%	Unit Type A2: Double-Occupancy Bedroom in a Traditional Unit for $556 per month/$2,500 per semester/$5,000 per academic year
1	10.00%	Unit Type B1: Single-Occupancy Bedroom in a Two-Bedroom Suite-Style Unit for $667 per month/$3,000 per semester/$6,000 per academic year
2	20.00%	Unit Type B2: Double-Occupancy Bedroom in a Two-Bedroom Suite-Style Unit for $667 per month/$3,000 per semester/$6,000 per academic year
2	20.00%	Unit Type C: Single-Occupancy Bedroom in a Four-Bedroom Apartment for $778 per month/$3,500 per semester/$7,000 per academic year
1	10.00%	I would not have chosen to live in any of the above unit types on the Gorham campus for my second year.
10	Respondents	

Q57. If all the unit types described above were available on the Gorham campus at the assigned rental rates provided, what would have been your preferred housing choice as a THIRD-YEAR GRADUATE / LAW / PROFESSIONAL / DOCTORATE STUDENT?

Count	Percent	
0	0.00%	Unit Type A1: Single-Occupancy Bedroom in a Traditional Unit for $667 per month/$3,000 per semester/$6,000 per academic year
2	40.00%	Unit Type A2: Double-Occupancy Bedroom in a Traditional Unit for $556 per month/$2,500 per semester/$5,000 per academic year
0	0.00%	Unit Type B1: Single-Occupancy Bedroom in a Two-Bedroom Suite-Style Unit for $667 per month/$3,000 per semester/$6,000 per academic year
0	0.00%	Unit Type B2: Double-Occupancy Bedroom in a Two-Bedroom Suite-Style Unit for $667 per month/$3,000 per semester/$6,000 per academic year
2	40.00%	Unit Type C: Single-Occupancy Bedroom in a Four-Bedroom Apartment for $778 per month/$3,500 per semester/$7,000 per academic year
1	20.00%	I would not have chosen to live in any of the above unit types on the Gorham campus for my third year.
5	Respondents	

Q58. If all the unit types described above were available on the Gorham campus at the assigned rental rates provided, what would have been your preferred housing choice as a FOURTH-YEAR GRADUATE / LAW / PROFESSIONAL / DOCTORATE STUDENT?

Count	Percent	
0	0.00%	Unit Type A1: Single-Occupancy Bedroom in a Traditional Unit for $667 per month/$3,000 per semester/$6,000 per academic year
1	50.00%	Unit Type A2: Double-Occupancy Bedroom in a Traditional Unit for $556 per month/$2,500 per semester/$5,000 per academic year
0	0.00%	Unit Type B1: Single-Occupancy Bedroom in a Two-Bedroom Suite-Style Unit for $667 per month/$3,000 per semester/$6,000 per academic year
0	0.00%	Unit Type B2: Double-Occupancy Bedroom in a Two-Bedroom Suite-Style Unit for $667 per month/$3,000 per semester/$6,000 per academic year
1	50.00%	Unit Type C: Single-Occupancy Bedroom in a Four-Bedroom Apartment for $778 per month/$3,500 per semester/$7,000 per academic year
0	0.00%	I would not have chosen to live in any of the above unit types on the Gorham campus for my fourth year and beyond.
2	Respondents	

Q59. If all the unit types described above were available on the Portland campus at the assigned rental rates provided, what would have been your preferred housing choice as a FIRST-YEAR GRADUATE / LAW / PROFESSIONAL / DOCTORATE STUDENT?

Count	Percent	
10	26.32%	Unit Type D: Single-Occupancy Bedroom in a Suite-Style Unit for $800 - $850 per month/$7,200 - $7,650 per academic year (9 months)/$9,600 - $10,200 per calendar year (12 months)
3	7.89%	Unit Type E: Single-Occupancy Bedroom in a Studio Apartment Unit for $1,200 - $1,300 per month/$11,250 - $11,700 per academic year (9 months)/$15,000 - $15,600 per calendar year (12 months)
6	15.79%	Unit Type F: Single-Occupancy Bedroom in a One-Bedroom Apartment Unit for $1,350 - $1,400 per month/$12,150 - $12,600 per academic year (9 months)/$16,200 - $16,800 per calendar year (12 months)
2	5.26%	Unit Type G1: Single-Occupancy Bedroom in a Two-Bedroom Apartment Unit for $1,120 - $1,170 per month/$10,080 - $10,530 per academic year (9 months)/$13,440 - $14,040 per calendar year (12 months)
5	13.16%	Unit Type G2:Double -Occupancy Bedroom in a Two-Bedroom Apartment Unit for $900 - $950 per month/$8,100 - $8,550 per academic year (9 months)/$10,800 - $11,400 per calendar year (12 months)
4	10.53%	Unit Type H: Single-Occupancy Bedroom in a Four-Bedroom Apartment Unit for $1,050 - $1,100 per month/$9,450 - $9,900 per academic year (9 months)/$12,600 - $13,200 per calendar year (12 months)
8	21.05%	I would not have chosen to live in any of the above unit types on the Portland campus for my first year.
38	Respondents	

Q60. If all the unit types described above were available on the Portland campus at the assigned rental rates provided, what would have been your preferred housing choice as a SECOND-YEAR GRADUATE / LAW / PROFESSIONAL / DOCTORATE STUDENT?

Count	Percent	
8	23.53%	Unit Type D: Single-Occupancy Bedroom in a Suite-Style Unit for $800 - $850 per month/$7,200 - $7,650 per academic year (9 months)/$9,600 - $10,200 per calendar year (12 months)
3	8.82%	Unit Type E: Single-Occupancy Bedroom in a Studio Apartment Unit for $1,200 - $1,300 per month/$11,250 - $11,700 per academic year (9 months)/$15,000 - $15,600 per calendar year (12 months)
4	11.76%	Unit Type F: Single-Occupancy Bedroom in a One-Bedroom Apartment Unit for $1,350 - $1,400 per month/$12,150 - $12,600 per academic year (9 months)/$16,200 - $16,800 per calendar year (12 months)
3	8.82%	Unit Type G1: Single-Occupancy Bedroom in a Two-Bedroom Apartment Unit for $1,120 - $1,170 per month/$10,080 - $10,530 per academic year (9 months)/$13,440 - $14,040 per calendar year (12 months)
5	14.71%	Unit Type G2:Double -Occupancy Bedroom in a Two-Bedroom Apartment Unit for $900 - $950 per month/$8,100 - $8,550 per academic year (9 months)/$10,800 - $11,400 per calendar year (12 months)
4	11.76%	Unit Type H: Single-Occupancy Bedroom in a Four-Bedroom Apartment Unit for $1,050 - $1,100 per month/$9,450 - $9,900 per academic year (9 months)/$12,600 - $13,200 per calendar year (12 months)
7	20.59%	I would not have chosen to live in any of the above unit types on the Portland campus for my second year.
34	Respondents	

Q61. If all the unit types described above were available on the Portland campus at the assigned rental rates provided, what would have been your preferred housing choice as a THIRD-YEAR GRADUATE / LAW / PROFESSIONAL / DOCTORATE STUDENT?

Count	Percent	
3	11.54%	Unit Type D: Single-Occupancy Bedroom in a Suite-Style Unit for $800 - $850 per month/$7,200 - $7,650 per academic year (9 months)/$9,600 - $10,200 per calendar year (12 months)
1	3.85%	Unit Type E: Single-Occupancy Bedroom in a Studio Apartment Unit for $1,200 - $1,300 per month/$11,250 - $11,700 per academic year (9 months)/$15,000 - $15,600 per calendar year (12 months)
6	23.08%	Unit Type F: Single-Occupancy Bedroom in a One-Bedroom Apartment Unit for $1,350 - $1,400 per month/$12,150 - $12,600 per academic year (9 months)/$16,200 - $16,800 per calendar year (12 months)
2	7.69%	Unit Type G1: Single-Occupancy Bedroom in a Two-Bedroom Apartment Unit for $1,120 - $1,170 per month/$10,080 - $10,530 per academic year (9 months)/$13,440 - $14,040 per calendar year (12 months)
4	15.38%	Unit Type G2:Double -Occupancy Bedroom in a Two-Bedroom Apartment Unit for $900 - $950 per month/$8,100 - $8,550 per academic year (9 months)/$10,800 - $11,400 per calendar year (12 months)
4	15.38%	Unit Type H: Single-Occupancy Bedroom in a Four-Bedroom Apartment Unit for $1,050 - $1,100 per month/$9,450 - $9,900 per academic year (9 months)/$12,600 - $13,200 per calendar year (12 months)
6	23.08%	I would not have chosen to live in any of the above unit types on the Portland campus for my third year.
26	Respondents	

Q62. If all the unit types described above were available on the Portland campus at the assigned rental rates provided, what would have been your preferred housing choice as a FOURTH-YEAR GRADUATE / LAW / PROFESSIONAL / DOCTORATE STUDENT?

Count	Percent	
0	0.00%	Unit Type D: Single-Occupancy Bedroom in a Suite-Style Unit for $800 - $850 per month/$7,200 - $7,650 per academic year (9 months)/$9,600 - $10,200 per calendar year (12 months)
0	0.00%	Unit Type E: Single-Occupancy Bedroom in a Studio Apartment Unit for $1,200 - $1,300 per month/$11,250 - $11,700 per academic year (9 months)/$15,000 - $15,600 per calendar year (12 months)
1	7.14%	Unit Type F: Single-Occupancy Bedroom in a One-Bedroom Apartment Unit for $1,350 - $1,400 per month/$12,150 - $12,600 per academic year (9 months)/$16,200 - $16,800 per calendar year (12 months)
2	14.29%	Unit Type G1: Single-Occupancy Bedroom in a Two-Bedroom Apartment Unit for $1,120 - $1,170 per month/$10,080 - $10,530 per academic year (9 months)/$13,440 - $14,040 per calendar year (12 months)
4	28.57%	Unit Type G2:Double -Occupancy Bedroom in a Two-Bedroom Apartment Unit for $900 - $950 per month/$8,100 - $8,550 per academic year (9 months)/$10,800 - $11,400 per calendar year (12 months)
4	28.57%	Unit Type H: Single-Occupancy Bedroom in a Four-Bedroom Apartment Unit for $1,050 - $1,100 per month/$9,450 - $9,900 per academic year (9 months)/$12,600 - $13,200 per calendar year (12 months)
3	21.43%	I would not have chosen to live in any of the above unit types on the Portland campus for my fourth year.
14	Respondents	

Q63. If your preferred housing choice WAS NOT AVAILABLE on the Portland campus, what would have been your SECOND housing choice as a FIRST-YEAR GRADUATE / LAW / PROFESSIONAL / DOCTORATE STUDENT?

Count	Percent	
7	18.92%	Unit Type D: Single-Occupancy Bedroom in a Suite-Style Unit for $800 - $850 per month/$7,200 - $7,650 per academic year (9 months)/$9,600 - $10,200 per calendar year (12 months)
8	21.62%	Unit Type E: Single-Occupancy Bedroom in a Studio Apartment Unit for $1,200 - $1,300 per month/$11,250 - $11,700 per academic year (9 months)/$15,000 - $15,600 per calendar year (12 months)
1	2.70%	Unit Type F: Single-Occupancy Bedroom in a One-Bedroom Apartment Unit for $1,350 - $1,400 per month/$12,150 - $12,600 per academic year (9 months)/$16,200 - $16,800 per calendar year (12 months)
5	13.51%	Unit Type G1: Single-Occupancy Bedroom in a Two-Bedroom Apartment Unit for $1,120 - $1,170 per month/$10,080 - $10,530 per academic year (9 months)/$13,440 - $14,040 per calendar year (12 months)
3	8.11%	Unit Type G2:Double -Occupancy Bedroom in a Two-Bedroom Apartment Unit for $900 - $950 per month/$8,100 - $8,550 per academic year (9 months)/$10,800 - $11,400 per calendar year (12 months)
5	13.51%	Unit Type H: Single-Occupancy Bedroom in a Four-Bedroom Apartment Unit for $1,050 - $1,100 per month/$9,450 - $9,900 per academic year (9 months)/$12,600 - $13,200 per calendar year (12 months)
8	21.62%	I would not have chosen to live in any of the above unit types on the Portland campus for my first year.
37	Respondents	

Q64. If your preferred housing choice WAS NOT AVAILABLE on the Portland campus, what would have been your SECOND housing choice as a SECOND-YEAR GRADUATE / LAW / PROFESSIONAL / DOCTORATE STUDENT?

Count	Percent	
7	20.00%	Unit Type D: Single-Occupancy Bedroom in a Suite-Style Unit for $800 - $850 per month/$7,200 - $7,650 per academic year (9 months)/$9,600 - $10,200 per calendar year (12 months)
5	14.29%	Unit Type E: Single-Occupancy Bedroom in a Studio Apartment Unit for $1,200 - $1,300 per month/$11,250 - $11,700 per academic year (9 months)/$15,000 - $15,600 per calendar year (12 months)
3	8.57%	Unit Type F: Single-Occupancy Bedroom in a One-Bedroom Apartment Unit for $1,350 - $1,400 per month/$12,150 - $12,600 per academic year (9 months)/$16,200 - $16,800 per calendar year (12 months)
4	11.43%	Unit Type G1: Single-Occupancy Bedroom in a Two-Bedroom Apartment Unit for $1,120 - $1,170 per month/$10,080 - $10,530 per academic year (9 months)/$13,440 - $14,040 per calendar year (12 months)
6	17.14%	Unit Type G2:Double -Occupancy Bedroom in a Two-Bedroom Apartment Unit for $900 - $950 per month/$8,100 - $8,550 per academic year (9 months)/$10,800 - $11,400 per calendar year (12 months)
2	5.71%	Unit Type H: Single-Occupancy Bedroom in a Four-Bedroom Apartment Unit for $1,050 - $1,100 per month/$9,450 - $9,900 per academic year (9 months)/$12,600 - $13,200 per calendar year (12 months)
8	22.86%	I would not have chosen to live in any of the above unit types on the Portland campus for my second year.
35	Respondents	

Q65. If your preferred housing choice WAS NOT AVAILABLE on the Portland campus, what would have been your SECOND housing choice as a THIRD-YEAR GRADUATE / LAW / PROFESSIONAL / DOCTORATE STUDENT?

Count	Percent	
3	11.54%	Unit Type D: Single-Occupancy Bedroom in a Suite-Style Unit for $800 - $850 per month/$7,200 - $7,650 per academic year (9 months)/$9,600 - $10,200 per calendar year (12 months)
4	15.38%	Unit Type E: Single-Occupancy Bedroom in a Studio Apartment Unit for $1,200 - $1,300 per month/$11,250 - $11,700 per academic year (9 months)/$15,000 - $15,600 per calendar year (12 months)
3	11.54%	Unit Type F: Single-Occupancy Bedroom in a One-Bedroom Apartment Unit for $1,350 - $1,400 per month/$12,150 - $12,600 per academic year (9 months)/$16,200 - $16,800 per calendar year (12 months)
5	19.23%	Unit Type G1: Single-Occupancy Bedroom in a Two-Bedroom Apartment Unit for $1,120 - $1,170 per month/$10,080 - $10,530 per academic year (9 months)/$13,440 - $14,040 per calendar year (12 months)
3	11.54%	Unit Type G2:Double -Occupancy Bedroom in a Two-Bedroom Apartment Unit for $900 - $950 per month/$8,100 - $8,550 per academic year (9 months)/$10,800 - $11,400 per calendar year (12 months)
2	7.69%	Unit Type H: Single-Occupancy Bedroom in a Four-Bedroom Apartment Unit for $1,050 - $1,100 per month/$9,450 - $9,900 per academic year (9 months)/$12,600 - $13,200 per calendar year (12 months)
6	23.08%	I would not have chosen to live in any of the above unit types on the Portland campus for my third year.
26	Respondents	

Q66. If your preferred housing choice WAS NOT AVAILABLE on the Portland campus, what would have been your SECOND housing choice as a FOURTH-YEAR GRADUATE / LAW / PROFESSIONAL / DOCTORATE STUDENT?

Count	Percent	
2	14.29%	Unit Type D: Single-Occupancy Bedroom in a Suite-Style Unit for $800 - $850 per month/$7,200 - $7,650 per academic year (9 months)/$9,600 - $10,200 per calendar year (12 months)
4	28.57%	Unit Type E: Single-Occupancy Bedroom in a Studio Apartment Unit for $1,200 - $1,300 per month/$11,250 - $11,700 per academic year (9 months)/$15,000 - $15,600 per calendar year (12 months)
1	7.14%	Unit Type F: Single-Occupancy Bedroom in a One-Bedroom Apartment Unit for $1,350 - $1,400 per month/$12,150 - $12,600 per academic year (9 months)/$16,200 - $16,800 per calendar year (12 months)
2	14.29%	Unit Type G1: Single-Occupancy Bedroom in a Two-Bedroom Apartment Unit for $1,120 - $1,170 per month/$10,080 - $10,530 per academic year (9 months)/$13,440 - $14,040 per calendar year (12 months)
2	14.29%	Unit Type G2:Double -Occupancy Bedroom in a Two-Bedroom Apartment Unit for $900 - $950 per month/$8,100 - $8,550 per academic year (9 months)/$10,800 - $11,400 per calendar year (12 months)
0	0.00%	Unit Type H: Single-Occupancy Bedroom in a Four-Bedroom Apartment Unit for $1,050 - $1,100 per month/$9,450 - $9,900 per academic year (9 months)/$12,600 - $13,200 per calendar year (12 months)
3	21.43%	I would not have chosen to live in any of the above unit types on the Portland campus for my fourth year.
14	Respondents	

Q67. Would you be willing to share living space with upperclass (junior and senior) undergraduate students?

Count	Percent	
12	10.08%	Yes, I would be willing to share my bedroom with an undergraduate student
25	21.01%	Yes, I would be willing to share my floor with undergraduate students if they did not share my unit
12	10.08%	Yes, I would be willing to share my building with undergraduate students if they did not live on the same floor
70	58.82%	No
119	Respondents	

Q68. If new housing is offered on the any USM campus, which building features/characteristics from the list provided below would be the most important to you? (Select up to five)

Count	Respondent %	Response %	
601	87.48%	21.85%	Overall affordability (including the cost of rent, utilities, parking, and other housing-related expenses)
333	48.47%	12.11%	Availability of the unit-type configuration I desire (suite-style, studio apartment, 1-bed apartment, 2-bed apartment, etc.)
32	4.66%	1.16%	Availability of a child-friendly living arrangement
190	27.66%	6.91%	Availability of a pet-friendly living arrangement
137	19.94%	4.98%	Availability of community-building/activity spaces (lounges, multipurpose rooms, meeting spaces, game rooms, fitness center, etc.)
188	27.37%	6.84%	Availability of a quiet place to study
131	19.07%	4.76%	Availability of dining/food service within the building
170	24.75%	6.18%	Quality of unit amenities (walk-in closets, spacious layout, etc.)
366	53.28%	13.31%	Availability of in-building laundry facilities
308	44.83%	11.20%	Access to dedicated resident parking adjacent to my unit
73	10.63%	2.65%	Access to public transportation/ride sharing stops
119	17.32%	4.33%	Availability of safety and security features in my unit/building
65	9.46%	2.36%	Aesthetic architectural features (look or feel of interior and exterior spaces, building, historical building, etc.)

13	1.89%	0.47%	ADA accessibility
24	3.49%	0.87%	Other (please specify)

Count	Percent	
1	4.17%	Ability to live with my partner who is not a USM student
1	4.17%	Ability to make my own food, in a non-shared space
1	4.17%	AVAILABILITY good god
1	4.17%	Being older, I would not live on campus, so I do not want to mess up data by answering.
1	4.17%	boobs
1	4.17%	housing for students who have a spouse/partner who is not a USM student; graduate student housing;
1	4.17%	I can find more affordable rent off-campus, than housing describing in the previous spreadsheet.
1	4.17%	I own a house, I'm not going to use any housing at USM, regardless of its amenities
1	4.17%	I would just like to re-iterate how important it is that the proposed new housing would be affordable. Some of the prices per month offered before are strikingly similar to what you would find in off campus housing. I feel that the biggest draw to on campus housing in Portland would be the prospect of living in a desirable location with reasonable amenities without the typical city of Portland price-tag. If I can share a whole apartment with a friend off Campus for $1200 a month or $600 each, why would I pay more to live on campus?
1	4.17%	I would not live on campus
1	4.17%	I wouldn't live on campus.
1	4.17%	In room kitchen
1	4.17%	n/a
1	4.17%	N/A
1	4.17%	na
1	4.17%	None. I like my own home.
1	4.17%	Non-student must be able to reside with me (my partner who does not attend USM)
1	4.17%	not applicable
1	4.17%	Personal bathroom and kitchen space
1	4.17%	Pet Friendly, Transportation
1	4.17%	proximity to portland center
1	4.17%	Safety

687 Respondents

2750 Responses

Q69. If new housing is offered on the any USM campus, which of the following services/programs/policies would be the most important to you? (Select up to three)

Count	Respondent %	Response %	
148	21.70%	7.99%	Roommate matching service
470	68.91%	25.38%	The ability to choose my own roommates
289	42.38%	15.60%	Flexible lease/rental terms
155	22.73%	8.37%	As few rules and regulations as possible
340	49.85%	18.36%	Ability to stay in my unit during breaks
420	61.58%	22.68%	Ability to retain the same unit from year to year
30	4.40%	1.62%	Other

682 Respondents

1852 Responses

Q70. If your housing preferences were met for each year, for how many years would you choose to live on any USM campus?

Count	Percent	
18	2.61%	For the first year of my program only
64	9.28%	Through the second year of my program
109	15.80%	Through the third year of my program
275	39.86%	Through the fourth year of my program
78	11.30%	Beyond the fourth year of my program
126	18.26%	I would not choose to live in housing on the Portland campus
20	2.90%	Other (please specify)

Count	Percent	
1	5.00%	Again, I'm an older law student who would not live on campus, so I'm not going to participate here.
1	5.00%	As long as it was most convenient
1	5.00%	as long as needed until completion of degree
1	5.00%	For financial reasons I would still live at home
1	5.00%	For my entire undergrad career
1	5.00%	I like having my own house
1	5.00%	I own a house
1	5.00%	I would consider living on campus if it was affordable. At this point in time, and with the proposed prices, it is much more reasonable to live off campus.
1	5.00%	I would not live on campus
1	5.00%	it would depend
1	5.00%	It's way too expensive. Off campus living is around $550 a month and you don't have to deal with parking and getting tickets from USM every night due to the lack of parking spots.
1	5.00%	Likely as long as necessary
2	10.00%	N/A
1	5.00%	na
1	5.00%	None - it's cheaper to live at home
1	5.00%	None. I like living in my own home.
1	5.00%	Unsure

690 Respondents

Q71. How important is on-campus housing in building a sense of community and culture on USM's campuses?

Count	Percent	
341	49.14%	Very important
263	37.90%	Important
60	8.65%	Unimportant
30	4.32%	Very unimportant

694 Respondents

Q72. Do you have regular access to a vehicle during the academic year?

Count	Percent	
572	82.90%	Yes, my personal car
9	1.30%	Yes, via car sharing (e.g. Zip Car)
109	15.80%	No

690 Respondents

Q73. How important in the proximity of available parking in your housing decision?

Count	Percent	
295	42.82%	Available parking must be immediately adjacent to my living facility in order for me to consider living there
292	42.38%	Available parking must within a 5-minute walk to my living facility in order for me to consider living there
22	3.19%	Available parking must be within a 10-minute walk to my living facility in order for me to consider living there
5	0.73%	Available parking must be within a 15-minute walk to my living facility in order for me to consider living there
75	10.89%	Parking does not play a significant role in my housing decision
689	Respondents	

Q74. How do you typically get to and from your primary academic campus?

Count	Percent	
78	11.30%	Walk
121	17.54%	Ride the METRO Husky Line
388	56.23%	Drive alone
83	12.03%	Drive/ride with others
5	0.72%	Take a taxi or rideshare
4	0.58%	Ride a bicycle
1	0.14%	Ride a motorcycle/moped/scooter
3	0.43%	Ride public transportation
7	1.01%	Other (please specify)

Count	Percent	
1	14.29%	I live there
1	14.29%	i ride the bus some, and drive some
1	14.29%	Is witch back and forth from my own vehicle and the METRO
1	14.29%	On line
1	14.29%	Online
1	14.29%	Online student
1	14.29%	Take online classes

690 Respondents

Q75. How long is your typical one-way commute to your primary academic campus?

Count	Percent	
90	13.04%	Less than 5 minutes
70	10.14%	5-10 minutes
106	15.36%	11-20 minutes
215	31.16%	21-30 minutes
116	16.81%	31-40 minutes
54	7.83%	41-50 minutes
39	5.65%	More than 50 minutes
690	Respondents	

Q76. How difficult is it for you to travel from where you live to your primary academic campus?

Count	Percent	
21	3.14%	Very difficult
46	6.89%	Difficult
217	32.49%	Somewhat difficult
384	57.49%	Not difficult
668	Respondents	

Q77. What is difficult about traveling between your residence and primary academic campus? (Select all that apply)

Count	Respondent %	Response %	
174	61.70%	25.93%	Cost of transportation/gas
37	13.12%	5.51%	Inaccurate transportation schedule
49	17.38%	7.30%	Infrequent or limited transportation schedule
196	69.50%	29.21%	Length of travel
31	10.99%	4.62%	Safety and security concerns
141	50.00%	21.01%	Inability to find available parking
17	6.03%	2.53%	Lack of transportation infrastructure
26	9.22%	3.87%	Other (please specify)

Count	Percent	
1	3.85%	bridge goes up causing delays
1	3.85%	Bus drivers are so slow and stop in Westbrook instead of using the highway
1	3.85%	Commuting in winter conditions
1	3.85%	I live on campus right now because I live almost 2 hours away. I'm not sure if you were asking for "permanent" residence or not.
1	3.85%	Lack of campus maintenance, mainly in the winter
1	3.85%	Lack of space on the bus and buses that leave earlier than scheduled
1	3.85%	mad potholes
1	3.85%	No bus
1	3.85%	Over crowded busses !!! Some students are not even able to get on the bus at certain times and it has not been fixed within the two years that I have been here.
1	3.85%	The buses are late, then late to the campus, theres a lot of general public (i.e middle schoolers/ high schoolers who ride the bus limiting seats for us and most of us try to eat our meals on the go due to schedules hence not wanting to ride the bus) its not good in the winter either. With custom coach they were there early and we were able to get a seat on the bus and relax until scheduled leaving time versus now we have to wait in the cold weather conditions in order to get a seat or not miss the bus.
1	3.85%	Time wasted by driving every day
1	3.85%	TOLLS
3	11.54%	traffic
2	7.69%	Traffic
1	3.85%	TRAFFIC
1	3.85%	Traffic in Portland
1	3.85%	Traffic!!!
1	3.85%	Unbelievably shitty roads and terrible drivers
1	3.85%	use of ferry
1	3.85%	weather
1	3.85%	Weather dangers in the winter
1	3.85%	Weather in the winter

1	3.85%		Where I live, I get a lot more snow than Portland and it is often difficult to and unsafe to travel to class. They should really take into consideration commuting students when determining if classes should be canceled.

282 Respondents

671 Responses

Q78. What is your perception of safety and security on the Gorham campus?

Count	Percent	
300	44.91%	The Gorham campus feels very safe and secure
280	41.92%	The Gorham campus feels mostly safe and secure
73	10.93%	The Gorham campus feels somewhat safe and secure
15	2.25%	The Gorham campus does not feel safe and secure
668	Respondents	

Q79. How safe do you feel on the Portland campus?

Count	Percent	
185	27.09%	The Portland campus feels very safe and secure
337	49.34%	The Portland campus feels mostly safe and secure
137	20.06%	The Portland campus feels somewhat safe and secure
24	3.51%	The Portland campus does not feel safe and secure
683	Respondents	

Q80. Where do you plan to live next year?

Count	Percent	
193	28.01%	On campus at the Gorham campus
30	4.35%	Off campus in or near Gorham
118	17.13%	Off campus in or near Portland
197	28.59%	In my existing housing situation
58	8.42%	Undecided
93	13.50%	Not applicable; I will not be attending USM next year
689	Respondents	

Q81. What are your primary reasons for not attending USM next year? (Select all that apply)

Count	Respondent %	Response %	
83	89.25%	74.77%	I will have graduated from my program
9	9.68%	8.11%	I will be transferring to another institution
1	1.08%	0.90%	I will be studying abroad
3	3.23%	2.70%	I will be leaving to pursue other endeavors
4	4.30%	3.60%	Cost of tuition
5	5.38%	4.50%	Cost of living expenses
4	4.30%	3.60%	Campus/student life reasons
2	2.15%	1.80%	Other
93	Respondents		
111	Responses		

Q82. What is your current employment status, including internships and volunteer positions? (Select all that apply)

Count	Respondent %	Response %	
123	17.93%	15.61%	I work/intern at part time at the Gorham campus or in Gorham
134	19.53%	17.01%	I work/intern part time at the Portland campus or in Portland
243	35.42%	30.84%	I work/intern part time elsewhere
8	1.17%	1.02%	I work/intern full time at the Gorham campus or in Gorham
27	3.94%	3.43%	I work/intern full time at the Portland campus or in Portland
133	19.39%	16.88%	I work/intern full time elsewhere
120	17.49%	15.23%	I do not currently have a job or paid internship
686	Respondents		
788	Responses		

Q83. What are the primary sources of funding for your academic (tuition, fees, books) and living expenses (housing, meals, etc.)? (Select all that apply)

Count	Respondent %	Response %	
379	55.01%	18.29%	Personal income
264	38.32%	12.74%	Personal savings
253	36.72%	12.21%	Family/spousal/parental support
430	62.41%	20.75%	Financial aid
371	53.85%	17.91%	Academic scholarship or stipend
343	49.78%	16.55%	Student loan(s)
32	4.64%	1.54%	Other (please specify)

Count	Percent	
1	3.13%	CH.35 VA benefits
1	3.13%	chapter 33, gi bill
1	3.13%	Credit card
1	3.13%	Disability income
1	3.13%	Employee Waiver
1	3.13%	employee waivers
1	3.13%	employer
1	3.13%	Employer
1	3.13%	Employer- MSAD44
1	3.13%	Employer payments
1	3.13%	For clarification, I get very very little financial aid. I struggle to pay out of pocket what is left after government loans. Family members will help me out as best they can.
1	3.13%	Full-Time Job
1	3.13%	G.I. Bill
1	3.13%	Gi Bill
3	9.38%	GI Bill
1	3.13%	Its hard to even afford in state tuition with scholarships due to them being very limited. I wish there were other ways to get higher level scholarships to help afford living on Gorham Campus.
1	3.13%	Military G.I. Bill
1	3.13%	Post 9-11 G.I. Bill
1	3.13%	Residential Assistant stipend
1	3.13%	some employer assistance

1	3.13%	special grant program
1	3.13%	Tuition Waiver
1	3.13%	tuition waiver/self
1	3.13%	Unemployment
1	3.13%	va
1	3.13%	VA
1	3.13%	VA benefits
1	3.13%	VA-Chap 31
1	3.13%	Work Reimbursement
1	3.13%	Work tuition reimbursement

689 Respondents

2072 Responses

Q84. What is your age?

Count	Percent	
3	0.44%	17 or under
190	27.66%	18 - 19
204	29.69%	20 - 21
120	17.47%	22 - 24
73	10.63%	25 - 29
66	9.61%	30 - 44
31	4.51%	45 and over

687 Respondents

Q85. What is your gender?

Count	Percent	
169	24.64%	Male
508	74.05%	Female
9	1.31%	Other

686 Respondents

Q86. What is your marital/family status?

Count	Percent	
553	80.73%	Single with no dependent(s)
29	4.23%	Single with dependent(s)
71	10.36%	Partnered/married with no dependent(s)
32	4.67%	Partnered/married with dependent(s)

685 Respondents

Q87. Which best describes your residency status?

Count	Percent	
527	76.71%	Domestic/U.S. citizen
129	18.78%	Permanent U.S. resident
17	2.47%	International
1	0.15%	Other (please specify)

Count	Percent

1	100.00%		Canadian
13	1.89%		Prefer not to answer
687	Respondents		

Q88. What is your ethnicity?

Count	Percent	
30	4.39%	Two or more races
5	0.73%	American Indian/Alaska Native
16	2.34%	Asian
15	2.19%	Black/African American
16	2.34%	Hispanic/Latino
0	0.00%	Native Hawaiian/Pacific Islander
0	0.00%	Nonresident Alien
594	86.84%	White
8	1.17%	Other
684	Respondents	

Q89. Are you a veteran?

Count	Percent	
27	3.93%	Yes
660	96.07%	No
687	Respondents	

Q90. Please feel free to provide additional comments and suggestions regarding future housing on USM's Portland campus.

Count	Percent
195	100.00%

Count	Percent	
1	0.51%	its a bad idea focus on what students we have now. Also building in Gorham would be much smarter, and cheaper. No name change
1	0.51%	$800 a month is a lot compared to other places in portland
1	0.51%	.
1	0.51%	Additional housing on the gorham campus for the current residents are more important than providing housing on the portland campus. Gorham is primarily a residential campus anyway and increasing the residency halls on the gorham campus would bring more people to the town and area. If Portland housing is to come about it needs to be done quickly and be affordable to students and can be used in conjunction with their current financial aid. Transportation between ALL THREE campuses would benefit the housing shortage in gorham and potential increased housing in portland in order for students to get back and forth freely between campuses. Portland housing should not be more than the apartment cost in an Upperclass apartment in gorham if the amenities are the same.
1	0.51%	Affordability is a big part of living on campus. Right now Gorham campus is too expensive for many when they are forced to have a meal plan as well. If the price stayed roughly the same, minus the forced meal plan, students would be able to willing to live on campus again. I remember living on campus having to pay $2400 a semester for food , when right now I pay about $500 for food for the whole semester by living off campus. Make backing out of a meal plan an option for Portland Campus students.
1	0.51%	Affordability is important.
1	0.51%	Affordable and enough housing to fit many individuals. DOES NOT need to get a food plan.
1	0.51%	Affordable student housing in Portland is a great idea, please do it
1	0.51%	Affordable studio, Can choose own roommate...,like wife/husband or girlfriend or one family member
1	0.51%	As a nursing major, all of my classes are on the Portland campus starting in my sophomore

			year. I would really like to be able to live on the Portland campus. Also for the prices listed monthly to actually live in one of the Portland campus apartments, it would be cheaper to get a single bedroom apartment with my boyfriend somewhere in Portland. If possible I would recommend any decrease in prices of those units.
1	0.51%		As it is student housing, making the apartments not as expensive as outside housing by even a small amount would be a real driver into whether a student, such as myself, would choose USM housing rather than outside housing.
1	0.51%		as nice as this would be, we also need housing on the Gorham campus.
1	0.51%		As someone who transferred into USM from a traditional, private 4-year college, I was not intending to attend USM for the "college experience." And I certainly did not have it--I describe my experience at USM more as "taking classes" than "going to college." That being said, I loved my experience living and working in Portland during my time at USM, and was able to create a network of both friends and professional connections within the Portland community. Going to school in a more urban environment, with more of an "open campus" being the city itself, there are lots of perks that you don't find at a traditional school situation. I believe that the addition of apartment-style housing on the USM Portland campus would certainly attract students from out of state, as well as foster a stronger sense of community that the Portland campus currently lacks (it's certainly a "commuter school"). I think that so long as the housing doesn't reflect traditional dorm-type living, it would be a successful and popular addition; I do not think dorm-style, shared room housing would be as popular as many USM students are not attending USM in search of a traditional college experience.
1	0.51%		Bayside Housing is a scam and not something USM should associate with
1	0.51%		Before I got my current job, I had to live at home in West Paris, Maine in order to make ends meet while attending USM/avoid racking up extreme student loan debt. During that time, I worked 41 hours per week in addition to attending school full time. Living in Portland or Gorham was not a reality for me as I would be paying too much to live on campus (plus I have pets) and it is way, way too expensive for students to live off campus with pets. Something that I really love about USM is the flexibility that it offers for students with their education. The blend of online classes versus on campus classes offered at a variety of times to meet everyone's schedules is fantastic and it has allowed me to continue to work and support myself while still attending school full time. For many Maine students, student loan debt and affordability of simple living is a severe burden that impacts both their education and their mental health/overall wellness. Offering more affordable, apartment style living in the heart of Portland would be great for such students, and everyone who is struggling to transition from student life to adulthood. Portland has an immense amount of part-time and full-time work opportunities for students allowing them to have less of an overall financial burden, and is in extreme proximity to a variety of entertainment options that help students relax. However, offering housing at the expenses of around $10,000 per year per student to those who already have trouble affording to attend college much less live, this would be either an added burden to their already existing troubles, or would single out students who don't have the same financial opportunities as others. So overall, I think the idea of adding more housing options in Portland would be fantastic for USM, but I think the price-tag is far too high for the average student.
1	0.51%		Build more housing. and making parking better.
1	0.51%		College is already expensive enough, no one is going to live in those Portland campus housing plans with the cost being that high when though the cost of living is high in Portland, there are plenty of apartments that are 600-800 a month, a rate of 1300 is absolutely ridiculous. People would rather have a smaller closet than pay that much.
1	0.51%		Definitely have options including regular dorms and suit style. And make sure you have enough room for incoming and current students.
1	0.51%		Definitely wanted
1	0.51%		Despite not living on campus due to my program being based out of LAC, I think on-campus housing is important for building the USM community.
1	0.51%		Do housing in Portland
1	0.51%		Doesn't matter where housing is, you need more housing period. Its terrible that there is no housing and people need to go off campus.
1	0.51%		Don't "enhance" it
1	0.51%		Don't make it super expensive, no ones going to want to live there when they could get housing in Gorham. Make sure there is off street parking.
1	0.51%		Due to the poor quality of Sodexo’s food on the Gorham campus alongside mislabeling of food that has led to allergic reactions and food poisoning, no student should be required to pay for a meal plan regardless of their living situation. As a student forced to pay for a meal plan myself, I hardly use it due to the lackluster food quality and mislabeling issues, often getting food elsewhere or making it myself utilizing the microwave in my suite as well as the hall’s kitchen. Forcing students to pay for poor dining services that they don’t use is a gross waste of money. No student should be forced to spend hundreds of dollars on a service they have no desire to use.

1	0.51%		For the possible Portland housing, $800 lowest price is too much. It's all fine and dandy that administration wants to "keep young people in Maine/attract more young people" but at this rate I will not be able to afford living in the Portland area even when I graduate with my MSW in 2020 from USM. I Don't want to leave Maine, but there are great places elsewhere that I can afford to live.
1	0.51%		Gender-inclusiveness should be a considered factor :)
1	0.51%		Get it, fast. I was told Gorham housing would be convienient and a great way to bond with students. I absolutely dislike almost everything about the way housing was handled this year. It's ridiculous that I was forced to chose between two of my best friends even though I'll be a junior next year living in Robbie Andrews. The worst dorm on campus. The facilities are always broken. Bathroom doors on 3rd Anderson were still broken from the previous academic year. I think it's ridiculous that because I couldn't find some way to apply to housing early, I had no option to live in upperclass housing or in any setting that I had hoped for. Now I am moving off campus and have to pay rent because housing has made me fee so hopeless that it's hurting my academics.
1	0.51%		Get Portland housing. Will attract a lot more students as Portland has a lot more than Gorham.
1	0.51%		Girls are too caddy I wouldn't want to live with them even if we had a suite of singles. A lot of my friends end up hating their roommate and it's awkward. Living with my boyfriend and our pets is more comfortable for sure.
1	0.51%		Given how expensive rent is becoming in Portland, it would be nice if there were affordable 1 bedroom apartment/studio style options for adult students who are too old to live in a dorm
1	0.51%		Good proximity to campus
1	0.51%		Had I known during my tour that housing will not be guaranteed, and especially on campus apartments for my sophomore year like I was told would be, I would've had more time to plan ahead for living off campus. Unfortunately, we have to move off campus.
1	0.51%		Have housing for current students rather than over accepting and forcing current students to not have living on campus.There is not enough room for all of us and many currents did not get a room for next year.
1	0.51%		Honestly I would really like to have housing on the Portland Campus; if it happens while I'm still attending USM I would definitely use it!
1	0.51%		Housing in Portland is key to building a stronger USM community. I think, however, it should be STRICTLY students only, no kids or families. I think that general "college experience" is more attainable in Gorham because that's where the athletic field is..I but as a 22 year old a dorm closer to the OldPort would be ideal for my 3rd and 4th year.
1	0.51%		Housing in Portland would encourage students to take part in more extracurriculars because most clubs are held late in Portland, meaning students now have to wait a while in Portland unless they want to make the trip back to Gorham, then to Portland again, then back. I think it would also increase admissions numbers, and at the very least reduce student upset over overcrowding in the dorms. For people who need to take late night classes, they wouldn't need to wait for the bus, since busses run less frequently the later it gets, and they could go directly home and get more sleep.
1	0.51%		Housing needs to be affordable.
1	0.51%		Housing on the Portland campus is a great idea for the students and the university and I think it definitely should be done
1	0.51%		Housing on the Portland campus is a necessity. As a freshman I take all of my classes in Portland until late at night and have to commute back to Gorham. The bus does not run frequently enough at night to be useful so I have to drive and spend money on gas. Living in Portland would make my life easier, as I would have no need to go to Gorham at all due to the fact I don't have a class there at all.
1	0.51%		Housing on the Portland Campus needs to happen - especially if the name change is happening. Kids don't want to come here thinking they are living in Portland and then being stuck in Gorham. Prioritize housing before the name change (nobody wants that anyways). I moved off campus because it was so crowded, and each year it only gets worse. IT'S A MESS, USM!
1	0.51%		Housing really doesn't seem to be an important factor for students deciding to pursue my program.
1	0.51%		Housing should be made available as soon as possible. Due to the lack of housing I have been forced into a housing situation that I am uncomfortable with and unhappy with. This is the third time that I will be in a room that will affect my ability to get my school work done, the ability to have my own schedule, the ability to have healthy food, and a safe space for myself and others. Housing at usm is extremely lacking in basic needs for students and I have been extremely disappointed. I have been forced into being required to live on campus as part of a scholarship and living like this has severely affected my schooling and my health both physically and mentally.

1	0.51%		I am a non traditional student so I really do not have an opinion. However, location and expenses are an issue from what I have heard from other students.
1	0.51%		I am appalled at the fact that USM is accepting so many students with the false pretenses that they will have a secured spot with on-campus housing the years following their first. Clearly this is not the case. I think more housing needs to exist immediately.
1	0.51%		I am really hoping for housing to come to Portland! It would be great for upperclass students to enjoy more of a city life in a new building! Housing in Portland would be great!
1	0.51%		I am worried about the impact on the intersection of Brighton/Falmouth/Bedford Streets and the surrounding park & residential areas. If a change is to be made at that intersection (i.e. roundabout) I hope it is thoroughly thought out and compared to other intersections so that it can operate successfully. I also don't find it aesthetically pleasing to build a large dorm on the Portland campus. I don't think adding housing is going to increase enrollment enough to offset the expenses. I also don't think the student housing will be any more affordable than local apartments. In my personal cost benefit analysis I don't think Portland campus student housing is a good idea. What about partnering with an already existing establishment to work on student housing? i.e. Bayside Village or similar
1	0.51%		I could see this feeling helpful to many students, though I personally am not interested in it. One of the main reasons I chose USM is because I could be a commuter student and in some ways separate my school, work, and home life.
1	0.51%		I dislike that I was put on a waiting list for housing before my day to apply even came, I wish I could live with the people I would have chosen to live with instead of forcing enhanced occupancy on people I don't know, and I feel like this could have been handled better
1	0.51%		I feel that the addition of on-campus housing on the Portland campus would have a very positive influence on the culture of USM. Although I do not want to live on campus, I would have strongly considered staying on campus during my undergraduate if there were housing options in Portland.
1	0.51%		I feel that USM needs to have more housing sooner rather than later. USM already has run out of housing availability for many students and is soon expecting a higher rate of applicants/acceptance while not having enough housing to live comfortably. I know there are many tripples and higher occupancy rooms on campus. I know that these situations are not ideal from personal experience and could not imagine having to stay in one of this rooms for more than a couple of month.
1	0.51%		I has to be cheaper then the cost of housing out side of the campus and closer to campus
1	0.51%		I have a unique and cheap housing situation that makes my studies possible. If it were not for that and my personal savings, I would need to have loans. Having a building for grad students might make more people try to go full-time though!
1	0.51%		I know some graduate students have a hard time looking for accommodations while attending grad school at USM. It didn't affect me, I already live here.
1	0.51%		I love the idea of having graduate student housing on the Portland campus. However, I understand that there may not be as much demand for graduate student housing, and that undergraduate housing is most likely a bit higher of a priority.
1	0.51%		I love the idea of Portland housing, and while it may be good for those who already live in Portland, the prices are just so much higher than Gorham it's not worth it to me to live there.
1	0.51%		I really enjoyed this survey!
1	0.51%		I think before we start worrying about having housing at the Portland campus let better Gorham dorms and cafeteria first. Thank you
1	0.51%		I think having housing in Portland is really important and helpful for the students. I personally choose to live at home because it saves money, but if I had to live on campus I would want the option to live on either campus
1	0.51%		I think having housing options in Portland would be good for students who are traditional age and their programs are based in Portland. If I had gone to school as a traditional age I might have lived on campus, but I have only ever had class in Gotham once. Traveling between would have been a huge annoyance. However, our Portland community seems to be mostly commuters, I'm not sure enough students would use on campus housing to be worth building expenses.
1	0.51%		I think housing on the Portland campus is a great idea, though I would not take advantage of this service (I own a home in Lewiston). By offering housing in Portland, you will attract new students to the area as well as help support the economy in the Portland area.
1	0.51%		I think it would be a good idea but I would choose to stay where I am and would not take advantage of the on campus housing in portland.
1	0.51%		I think it would be a great option!
1	0.51%		I think it would be good for people who have to take the bus everyday and have most classes in Portland. I also believe it would free up space in gorham for those who never go

			to Portland, like me.
1	0.51%		I think it would be great for USM to provide housing on the Portland campus. I think people would really like that option.
1	0.51%		I think it would be great if there would be housing on the USM Portland campus
1	0.51%		I think it's too expensive
1	0.51%		I think more singles should be available
1	0.51%		I think remodeling the housing at USM would make the school more attractive and desirable to go there for future students. It would build the community. It would also decrease the amount of students who commute and make them more involved if they spent more time on campus.
1	0.51%		I think that creating housing on the Portland Campus is a terrible idea. It will further clog an already overflowing area.
1	0.51%		I think that it is going to be way overpriced and it is much cheaper to live off campus. I also think parking is a huge deal because currently at the gorham campus they ticket non stop but there isn't enought spots to park and when you have a ton of stuff to carry you can't park down by the athletic fields and walk all the way to Woodward hall.
1	0.51%		I think that students would be mosh interested in the type of layout described in the meeting. For example living in a "pod" the highest values to students seem to be having their own bedroom and a space to cook food as to not require a meal plan. Other than that I do nothing think students would mind sharing a living space with others. The cost needs to be lowered as these rates are NOT competitive with other housing options in Portland. Most students would not be willing to pay much more than they would, for the same style on the gorham campus.
1	0.51%		I think that the hardest part is as a girl I don't like walking from all the way down the hill to my dorm. I work off campus and sometimes I would get back to campus at 11pm and it's veey creepy having to walk that far
1	0.51%		I think that the suggested rate for living in a dorm on Portland is way too expensive. I think you will run into trouble with too many people wanting to live in Gorham because it's cheaper. Let face it, we are broke, we can't afford and $1,000 rent. I see that as a huge deterrent. And I also think it is rediculous to have different prices for campuses. That in itself creates a segregation by how much money you have which is unfair. We already have community issues at USM and I feel that could separate us even more.
1	0.51%		I think that we should fix housing in Gorham, before we spend money to add more housing in Portland. Because the dorms in Gorham need fixing.
1	0.51%		I think the ideas you guys have for apartment layouts are great!
1	0.51%		I think the option of housing in Portland for upper class students is important, but parking in Portland is already an issue that needs to be addressed. I feel part of the parking issue on both campuses would be solved with a return to a no-car policy for first year students.
1	0.51%		I think there should also be a place for food in Upperclass Hall in Gorham. I know that has nothing to do with Portland housing but on days when the weather is awful (a.k.a all winter) and for those of us who have a meal plan because we're in a suite, it would be nice to not have to walk across campus to eat real food. Not all of us have money to stalk up on groceries either, that money goes to the school or towards textbooks etc.
1	0.51%		I think there should be a housing option for older returning students separate from regular dorms. As a returning/older student, I felt uneasy about relocating to Maine, I did not have connections or resources to live off campus when I first transferred. It would have been nice to have a housing complex dedicated to older people who are serious about their education coming to Maine for a specific degree program. Maybe a housing complex for people where if they have a young child there could also be an option. Maybe including a minimum age requirement of at least 23 years old to be considered for this type of housing. I was 27 when I moved into my double with my roommate who was 21 creating an unsafe and unstable environment for me to participate and learn fully... there were also many older students (not as old as I was) who lived in the building creating a strange environment for the children (17-20) who were fresh out of high school. IT was so strange that these interactions would happen in a dorm situation where we are supposed to be PROTECTING these kids. Also when I was accepted to USM I did not know I would be living in Gorham what a pain that was having my classes, work, internships and community in Portland but I am confined to Gorham campus with a terrible bus scheduale it felt very disempowering. I also know older students who lived at Bayside and took that as an option because of the awkwardness of being an older student in a dorm... their living situation was also terrible because they were not matched with other students and instead we're stuck in a year-long lease with terrible random roommates. I think if you want people to pursue a degree here and be taken seriously in the New England area than housing needs to accommodate all students not just the babies who are right out of high school. USM has more of a commuter school feel why not change the way you receive older students and maybe see a change in the community and don't promise people Portland if you are going to force them to live in another town 30 mins west.

1	0.51%		I think USM should do everything in its power to make the cost and quality of housing comparable between campuses. Charging more to live on the Portland campus could segregate the student population by class, rather than make it possible for students to live wherever is most convenient to their life and program of study.
1	0.51%		I think you need a better filter to your surveys. I attend school at a satellite site located in the MSAD17 central office. None of your questions applied to me and none of my answers were helpful to you.
1	0.51%		I want to live on campus, but I have to stress about being on the waitlist this year, which is ridiculous considering I'm a freshman who can't drive, and I couldn't even pick my dorm on my lottery date this year without all the available spaces being filled up already. It's ridiculous that I'm picked to go to this school, but then I might be possible kicked out of the dorms and have nowhere to live the next semester. Paying for a rented apartment is out of the question, my house is hours away, and my major is the only one offered at this college in Maine. There needs to be more housing if USM is really concerned with changing our name to UMP to bring in more students. More students means more housing, and we are already backed up, so please build more dorms STAT.
1	0.51%		I will be returning as a graduate student eventually and would look into living in the Portland area. The cost of tuition and the projected housing costs in Portland and the options outlined in this survey were VERY high, and would put myself (and other students) in significant debt with student loans.
1	0.51%		I wish there was access to more affordable housing and that you didn't have to pay a deposit if you don't end up living on campus, but still wanted to apply and have the option
1	0.51%		I wish USM had offered housing on the Portland campus in the first years of my career here. One of the biggest reasons I decided to attend USM was to get to know the city of Portland more, which I found very hard to do with the living situation being restricted to Gorham. I think students will have a chance to curate a community within USM as well as within the Portland area more efficiently if USM had housing in Portland.
1	0.51%		I would like to be in a single. I need my personal space to study, relax and be able to to have alone time. I found it difficult to always be around someone..
1	0.51%		I would LOVE to live on the portland campus, however, the rates provided are much to high and I do not want to be locked into a years contract when im in school for only 2/3 of that time. If there were apartments just like upperclass, i believe the rates should match as well as how long you have to pay for
1	0.51%		I would say to make sure there is a dining area where students can get food and parking for the students as well.
1	0.51%		I would very much like there to be Portland housing. I would however want laundry services to be available as it is much much more convenient and much less expensive if you don't have a car to drive to a laundromat. Having a kitchen is also very important to lots of people since it gives them much more control over their diet than they get relying on the school's food. I think that it is very important to have more housing. I believe that it is unacceptable for the school to displace current students who rely on on campus housing in favor of freshman simply to try to increase student enrollment. I would not be able to attend school if I were to be displaced.
1	0.51%		I'm not your typical student
1	0.51%		I'm glad that this survey is coming up because many of my friends did not receive housing and many live in different states and do not have a car and seem to be homeless for next year. If there was more housing and more options for the ones everyone wants then a lot of problems would be solved.
1	0.51%		If I had had the opportunity to live on campus in Portland I likely would have come to USM during my freshman/sophomore year(s). When applying to college during high school I didn't find living in gorham and commuting to the portland campus appealing, so I went elsewhere. I decided to transfer after moving back to maine and getting a job. Housing is incredibly difficult to find in the portland area, so I think dorms or affordable apartments is a great idea. Definitely a better use of money than changing the name of USM (again).
1	0.51%		If Portland will have a residence hall: Allow older students (21+) to choose into Portland residence with priority.
1	0.51%		If the university is going to try and sell "The University of Maine - Portland", instead of USM, then on-campus housing will be important, otherwise the name change is a fraud to increase possible enrollment of undergrads.
1	0.51%		If there were an option initially my first year, 2014, I would've lived on campus if there was housing on the portland campus but only if it was dorms right on campus. I personally don't think having apartments would be smart, it should be something like philipi or upperclass
1	0.51%		If this is really where you think money will be best spent, I do not know enough about the school to say otherwise. However, I would look to assure that you are making sure funds stay allocated to the law school, as the loss of professors as a result of not giving them tenure was a massive loss.

1	0.51%		If USM Nursing is going to limit spots in program for Portland campus it would be nice for them to offer us bus transportation between Portland and Lewiston campus
1	0.51%		If you are considering putting more housing anywhere, not just Portland, make sure there is parking, and that it is only for students living there. The Portland campus parking is THE WORST when someone decides to have an event and those people take up all of the parking. I have been late to multiple classes just because I had to spend 30 min searching for a parking spot that I didn't have to pay for. I already pay for parking here, I shouldn't have to pay for meter parking just because someone is having an event on my campus. The same is for Gorham. If more students keep being accepted, you really need to add both more housing as well as more parking. I was lucky enough to avoid the enhanced occupancy rooms my 4 years here, but I have moved multiple students into those rooms for the past 3 years, and none of those students were very happy about it.
1	0.51%		If you had graduate housing, specifically graduate apartments, I would seriously consider utilizing campus housing. Likewise, if the meal plan was a bit more commuter-friendly, I would use on-campus dining more, and I would definitely use it if I had on-campus (or near campus) graduate housing. I am in the process of selling my house because I couch-surf with friends to make it to my clinicals for my program since I cannot get to them from my island home. Graduate housing would be a HUGE benefit for me! In fact, I am looking at other schools to complete my DNP after my MSN where graduate apartments are an option.
1	0.51%		If you're going to change the USM name you need to provide Portland housing. It's deceiving and wrong that you're trying to market and brand a school that is mostly in Gorham. Name the school University of Maine in Gorham if you're going to change the name since that is where students will actually be living. This school has given lots of false hope about Portland housing over the past 4 years I've been involved with this school. The school seems to have their priorities mixed up. Forcing people into triples in the dorms is so messed up. I will never return to on campus housing. Over priced, over barring staff, and uncomfortable living space.
1	0.51%		Improvements in the cafe would have kept me on campus longer as well as better parking by the dorm you lived in. I also think having housing on portland campus would be ideal because most upperclassmen have classes in portland
1	0.51%		In the Gorham campus housing the bathrooms need SO much attention to create useful restrooms. The showers are so outdated that it is uncomfortable to take a shower. In Anderson Hall there is no changing room just a curtain, it can be uncomfortable for residents to use these showers if they feel self conscious or awkward. Please work on having efficient bathrooms for years to come! The space of the showers are so tiny very hard to shave legs with little room in a single standing stall! If there will be community bathrooms in Portland make sure to consider the future and how much the bathrooms would be used from people living on the floors. Make enough parking available for new residents in Portland, possibly making another parking garage would be great!
1	0.51%		Increase availability, stop accepting residential students when you can barely house the unreasonable amount you have now. Current returning students are considering dropping out because they cant get housing again for this fall.
1	0.51%		It seems the cheapest rent for the potential housing for Portland is still decently expensive. I live on East End and even when it was me and one other roommate, I payed less than what would potentially be offered through USM.
1	0.51%		It should be upperclassmen and be the same payment arrangements as gorham.
1	0.51%		It would be really good for there to be Portland housing. If there was housing in Portland, I would never have to be in gorham which would save me money on gas. I am only ever in gorham to sleep, because all of my classes are in Portland and have been since my first semester.
1	0.51%		It would have made life a lot easier if there was housing on the Portland campus. It really was a pain driving from Gorham everyday.
1	0.51%		It’s important to make it financially accessible, this is still a college and students are still poor. With occupancy rates in Gorham in their current state, it would suck for a student to have to pay more for a dorm/apartment in Portland just because there isn’t room in Gorham for them. Alternatively, people may flood Portland dorms and then picking who lives where could get tricky. Also, parking is one of the biggest reasons I moved off campus, please please give more parking options with these new dorms.
1	0.51%		LEED certified
1	0.51%		Looking forward to it.
1	0.51%		More housing on Gorham too
1	0.51%		More quiet study locations would a large plus!
1	0.51%		More single rooms! I am an adult and would prefer to have my own bedroom
1	0.51%		My apartment in downtown Portland is $650 per month, much cheaper than any of the housing options provided in this survey.

1	0.51%		My fiancé is not a USM student yet and we have a dog, so living on campus is not an option for me. Pet friendly rentals and the ability to have non usm students would be great for people in similar situations as we're currently paying way too much for rent. Portland is an expensive area and housing in Gorham is very limited
5	2.56%		N/A
1	0.51%		Na
2	1.03%		NA
1	0.51%		Native American tuition waiver specific housing/dorm floor
1	0.51%		Need more parking on Portland campus, and people like single apartments or studios
1	0.51%		Not all survey questions are applicable. For example, I have never taken a class on the Gorham campus and have never been to that campus. Also I own my home as opposed to renting and I know a number of others in my MBA program who work full-time also own their own homes..
1	0.51%		On campus housing would be fantastic for newer students coming into the school, but older students likely would like to try living on their own. I don't believe that living at the Gorham campus is necessarily the best option, academically - most of my resources are on the Portland campus, and I don't think that more limited access would have been conducive to success. That said, I have practically no experience with the Gorham campus (I've taken one class there during my three years here), and so I'm not entirely sure which additional resources are available over there. I'm talking about access to my professors, academic advisors, and the various departmental offices at USM, all of which are on the Portland campus.
1	0.51%		Opening up any type of housing in Portland would solve the housing crisis existing right now. Please make it happen.
1	0.51%		Parking is pretty much the thing that needs the most improvment. That can make or break my day every day I come home to campus.
1	0.51%		Please allow undergraduates to reside in Portland. Please build dorms on Portland!
1	0.51%		Please don't take away the entire availability of parking for off-campus/commuter students.
1	0.51%		Please fix parking. Thanks.
1	0.51%		Please get it built as soon as possible. You should see the amount of people from Freshman classes who don't come back. The "enhanced occupancy" is actively driving people away from USM, as is the asinine policy of admitting more students than USM has housing capacity for.
1	0.51%		Please get this housing. We need it!!
1	0.51%		Please keep campus green space in mind whenever new construction begins. It's already pretty lacking in Portland.
1	0.51%		Please make it more affordable!
1	0.51%		please please please consider an on campus bar! only if the direction is for upper class-graduate students. There used to be one, other campuses have them, and there are more benefits than disadvantages for them.
1	0.51%		Please take care of the mess USM has created for rooming in the past two years. USM is a good school but many current students are beginning to resent it because we didn't sign up for the Rooming Selection: Hunger Games edition. We are accepting a lot of students and its crammed in here already.
1	0.51%		Please, please, please provide more than enough parking for residents of you choose to add housing on the Portland campus. My current form is surrounded by teacher and computer parking and the woodward lot, which is very small. There isn't enough parking for the students who live in Anderson.
1	0.51%		Portland Housing is a great idea. I would have preferred living in Portland for the first 3 years of my time at USM
1	0.51%		Portland is not affordable at this point, especially if you have children or pets. I'm going to be forced to keep moving farther and farther away to be able to afford rent. Makes it so difficult when you're working full time 40hrs a week, have a part time internship of 20hrs/week, and then classes and school work too. How is there time to wast 2 hours a day driving too and from Portland campus to your home 20-40 miles from campus.
1	0.51%		portland's proposed housing costs seem to be quite expensive, apartments off campus are pretty comparable. if they want to attract more students, they should consider this
1	0.51%		Price should be the same as Gorham dorms
1	0.51%		Provide covered areas with places to lock a bike both on campus and near housing (Masterton breezeway?)

1	0.51%		Provide enough housing for every current student without over accepting more students. Give students housing on the campus that has there primary classes (music students on Gorham campus). DONT RUN OUT OF HOUSING FOR CURRENT STUDENTS.
1	0.51%		PROVIDE MORE PARKING!1
1	0.51%		Put more or even fix the housing on the Gorham campus before putting it on the Portland campus. It shouldn't be mixed up in two different places
1	0.51%		Put the Freshman there so we can actually have enough housing for the students who are already going.
1	0.51%		Since the majority of classes are in Portland, having housing options in Portland makes sense. Since Portland is a metro area there are a lot of opportunities for community building activities for Portland campus residents. I've found that the Gorham campus doesn't have a lot going on as far as activities and events, it's very boring and far away from where all of my classes and events are located.
1	0.51%		Something needs to be changed with housing. It is not fair to have returning students (who pay and have been paying to go here!) put on a wait list for housing. That's a great way to lose business, especially from out-of-state students. Also, if the amount of students is going to continue to increase, something needs to be done about the amount of parking on both campuses. There is simply not enough space for all of the students that have been accepted to this school.
1	0.51%		Stop offering housing when you dont have any. There is no room. Also the name change sucks. I really love upperclass but having overcapacity rooms is not okay.
1	0.51%		Students need their own bathrooms room and bedrooms; a studio with these two things is a must . Rent should not exceed 600$ per month; the aim of such projects should be helping students not raising funds Summer should be offered with lower rent; students should feel stability the whole year; they should not be expected to move under breaks and be homeless!!!
1	0.51%		Suggestion: apartments for 1 or two people, "efficiently" sized.
1	0.51%		Sure, let's solve our lack of housing by admitting even more students we can't house past freshman year and then eventually splitting up the campus community entirely between campuses
1	0.51%		The bathrooms in Anderson are great with one exception. The shower heads are angled (and unable to move) extremely close to the wall so you basically have to hug the wall to shower, and only 2/6 (one in each bathroom I've learned) is actually a good water pressure. Please, fix this for incoming students.
1	0.51%		The current configurations don't really meet the affordability needs of students. I understand that in order to build housing the prices need to go up but on-campus housing should be more affordable than off-campus housing. The configurations shown are the same price, if not more, than current off-campus housing.
1	0.51%		The fact that this school is trying to bring on more students BEFORE they fix the housing issue they have with their current students feels reckless, and quite frankly irresponsible. Myself, as well as many others I know, tell all prospective students about the terrible housing situation, the terrible parking situations, and how there are juniors on campus who still won't have housing next year because of the system you have in place. If the school wants to bring on more students, great. The school needs to be more appropriately driven in fixing these problems. As a member of the student body, I can tell you for certain we are all very agitated with how administration is handling the overcapacity. Your current students feel abandoned, forgotten, and that our voices do not matter. And this is all just about housing. Let's not get into how the majority of Gorham residents feel about the name change (which, was to bring on more students, right? How is the school going to handle even more when it can't appropriately handle what they have now?)
1	0.51%		The fact that this school, is asking us how the living situation is on campus, is honestly appalling to me. The lack of knowledge and observations that have been made by those in charge, especially the president, is shocking. At the beginning of this school year, Glenn Cummings sent out an email, happily proclaiming that we were at "127% capacity!" as if it was a great thing. It may be for him, and the staff, and all the money they rake in, but not for the students. People have been crammed into forced triples, quadruples, and MORE. Having situations where people need to be tripled up is common in college, but to this extent is insane, and honestly, unhealthy. Not to mention that the housing on the Gotham campus is sub-par at best, with outbreaks of bed bugs, uncleaned shower spaces, a lack of supervision (young adults attending college need that too!!) and just an overall untimely lay out. Housing in Portland is a good idea. It is. As a nursing student, all of my classes are in Portland, and it would be ideal- that being said for a lot of students. But we also need housing in Gorham, as well. How about we take away the idea of changing the name (which is only going to cause confusion. We have 3 campuses. The campus that is so important to be put into the title, doesn't even have rooms for students to live. Sounds poorly thought out, poorly budgeted, and honestly, irresponsible.) and put that money into restoring the two, perfectly good buildings that stand beside Philippi, and make them into more dorms? Doesn't that seem more practical. Lastly, I would like to point out that I, along with witnessing several other current students, persuaded prospective students that attended on

			Accepted Student's Day, to not come here. I wish someone had told me, sometimes. The housing is poorly managed, dirty, and unsustainable for the community already living there. I told them how we ran out of dorms for the students who already lived here, which is not only atrocious but embarrassing. I sincerely hope my comments, and the comments of other students, are taken to heart. This school claims to be the University of Everyone, yet a majority of the student body's thoughts and suggestions are ignored.
1	0.51%		The housing at USM is horrendous. Why the fuck would you accept more students than you have room for? I am a freshman and was looking forward to living in an upperclass hall, but before I was even able to access the lottery, housing was all filled up. I am now forced to live in an apartment next year, if I had known I wouldn't have a place to live, I would have transferred from USM.
1	0.51%		The housing at USM should at least be affordable to students of all races. Right now, oncampus housing is more relaiable to students living in states.
1	0.51%		The housing is nice on the Gorham campus, I just wish a lot of it was cheaper and it was available more. I barely got into Philippi for next year because so many students were trying to get in. It's so important to have enough housing for everyone.
1	0.51%		The housing USM has now is not sustainable, students resent the Maine School system, they resent Res Life and they resent President Cummings. The comments and complaints are not a joke, the memes are not harmless, students feel mistreated and robbed by the housing conditions and I agree. As a student and RA I can say with certainty that the housing crisis is pushing residents away, it's forcing students to settle for unacceptable living conditions that are in no way compensated with reduced costs.
1	0.51%		The majority of students that attend usm are commuters. Additionally, the majority of students that commute use Portland as their primary campus. If these individuals needed housing, they would currently live in a dorm. However, these students choose to commute- probably to save money and they live near by anyways. The students who primarily need housing are those who either live far away, play sports and need access to Costello, or both. So, a if a campus were to get housing, it should 100% be Gorham. Everyone who needs housing next year would agree, and they are upset that receiving a room next year has been extremely difficult with the influx of new students.
1	0.51%		The only deterrent from living on campus my junior and senior years (aside from financials) was the constant interference from USM residential life. I'm sure some students appreciated the regular checkups (husky huddles) and RA inspections and quiet-time, but for me it felt almost oppressive. As adults making important life decisions, we should have the option to live a more solitary lifestyle if we so choose. I understand the need to check for drugs and underage drinking, that was fine. But the mandatory floor meetings and the like became annoying. Even though it was less convenient and ultimately more expensive, living off campus became the only way to assume a social life without interference from Reslife. My apologies for sounding rude, I am just explaining my decision.
1	0.51%		The option for student housing on or near USM Portland campus is very appealing and would be easier than commuting from Gorham because most of my classes are on USM Portland campus. I can anticipate the lack of parking nearby bearing an issue as Portland is more limited in this sense.
1	0.51%		The prices mentioned earlier for Portland housing are pretty high.
1	0.51%		The rental prices are WAY too high. I am from Portland and I know that a four bedroom two bath with a tiny kitchen and living room does not cost 950-1050 per month per person unless you are in the east or west end. the oakland area near usm is probably 600-700 per month per person after utilities and Libbytown is cheaper. If you charge 950-1050 per month per person for anything other than a one bedroom in the Portland USM area, you will be ripping off your students.
1	0.51%		There has to be more housing available for students. As of right now there are students who will not have housing because the school over books and they plan to bring more students in by changing the name... lets spend that money on making more housing and parking for the students who are already here. Stop over booking, there isn't room for them. Also the meal plans... have a no meal plan option, and have a meal plan that actually allows students to have a meal three times a day for seven days. your max is 19... add two more meals, why wouldn't you.
1	0.51%		There need to be more housing and returning students should have priority over new students.
1	0.51%		There needs o be more Gorham housing and priority needs to be for freshman and sophomores not juniors and and seniors
1	0.51%		There needs to be more affordable housing and parking on both campuses
1	0.51%		There needs to be more parking available on the Portland campus. Or housing available to limit the amount of traffic in the area.
1	0.51%		There should also be a focus on renovating the current living quarters on the Gorham Campus.
1	0.51%		There should be more apartment style living options.

1	0.51%		Think it’s a good idea, and a good way to spend resources instead of changing a name that’s working fine.
1	0.51%		This is the most important thing USM could do to provide a better experience to students. The current over population in Gorham housing leads to more people moving off campus, more people not choosing to return to USM and not rproblems for reslife staff
1	0.51%		This survey was set up terribly. There is no reason to have 20 possible answers to a single question; it’s sloppy and inefficient. Add to that at least one question where “choose all that apply” only allowed for a single response. I do truly think that having housing on or near the Portland campus is important, but maybe instead of paying this consulting firm whatever fee they’re extracting from USM, the money could be used to build this needed facility - or better yet, maintain and update the existing academic buildings where the people who pay the administration’s paychecks earn their degrees.
1	0.51%		This survey was very long!
1	0.51%		This will be important especially for those who only have class in Portland.
1	0.51%		Tripples were awful and dorms were not worth the money. RAs were rude and too many rules. Also the parking is not good at all and required meal plans are annoying and a waste of money. There is not enough housing for returning students to get the housing on campus they want.
1	0.51%		USM lacks graduate living spaces. This really hurts USM compared to other universities.
1	0.51%		USM must have more housing. I know many people who do not have the ability to attend next year due to lack of housing, so they must change schools or drop out. Maybe fix the esbestos dorms until you can get portland housing if you have to, because this is not okay. This is bad for our school. Portland housing is a MUST, even if it costs more.
1	0.51%		USM needs GORHAM housing on the GORHAM campus. Portland is overpriced, not enough parking, and full of unsafe factors. The primary campus people spend the most at is GORHAM. The fact that the university is tripling students and/or kicking them out of the dorms because there isn’t any room left is absurd. And here we are changing our name for like a huge sum of money when USM can’t even focus on its students living. How are we to invite more people into USM when we can’t even provide housing for the current students? Thank GOD I didn’t have the deal with the bullshit housing system at USM or else I wouldn’t have gone there. Living off campus was the best and only choice for me but for others that’s not possible. GET MORE DORMS. GET MORE HOUSING IN GORHAM. That’s literally the the STUDENTS want at USM, and that is dorm rooms that aren’t packed in like section 8 housing.
1	0.51%		We need it.
1	0.51%		WE NEED MORE PARKIN EVERYWHERE!
1	0.51%		WE NEED PARKING CLOSER TO ANDERSON I GET BACK LATE FROM CLASSES AND FEEL UNSAFE WALKING FROM MY CAR THAT I HAVE TO PARK ACROSS CAMPUS. Also, I’m allergic to dust and mold and had a major asthma attack from being in Robie Andrews for a very short time, so that should probably be looked at. Not sure if this is the right place to put this but I’m gluten and dairy free and there’s no breakfast options on the Portland campus for me at all and that’s not okay either.
1	0.51%		Well considering I need on campus housing and I can’t get it for next year because of lack of housing I believe it is a good idea to have more housing
1	0.51%		When considering housing in Portland I think it should be important to consider teaching young people progressive ways to live in a city. There should be an intentional theme incorporated into the housing options. The building should manage waste in the most conservative way possible, ie recycling, composting, etc. There should be renewable energies utilized and highlighted as a means of teaching undergrad or grad. The building should incorporate public transportation, ride shares, and bike share models. There should be parking for only those with needs like commuting to jobs outside of walking distance.
1	0.51%		When is it coming?
1	0.51%		While I have no desire at my age to live on a college campus ever again. I will say that during my undergraduate studies I would not have gone to college that didn't provide on-campus living. At 17 years old I was not ready to live in an apartment, and couldn't afford a car to live off campus anyways. That being said, I was pretty surprised to find out that USM doesn't offer on-campus living at the Portland Campus. I wouldn't have been happy to commute from Gorham either. Half the fun of being a 17/18 year old is living on the campus where you go to school. Especially in downtown Portland area. I feel confident in saying that if you had Portland campus living available, the school would see an increase in students wanting to attend.
1	0.51%		While I selected two and four bedroom apartments as my preferred housing options for the second and third year of my program, the prices for those are just as high as other apartments I can't afford to rent in Portland. I realize there's a need to match market rates, but market rates in Portland have moved out of the price ranges of many students and working adults. $1100-1200 for a bedroom in an apartment is just too much for me, regardless of where it's located. If that is the total cost split between all roommates, that

			would be considerably more affordable, but it wasn't clear in the survey...
1	0.51%		Would be fantastic to have more student housing. Off campus housing is very scarce and expensive.
1	0.51%		would prefer commuter housing options as I don’t need on campus housing all the time just on an as needed basis or in emergencies when there are storms. I commute 2 hours 1 way from Winslow to gorham 2 days a week. There aren’t any hotels in Gorham that Im aware of, maybe there is air bnb.
1	0.51%		Wow, that was a lot of questions to get to this point of the survey. I'm going to be as candid as I can with my opinion. USM especially the Portland campus has a ton of commuter students. Some are older, some are straight from high school, heck I have had high schoolers in a few classes of mine! I originally attended USM immediately after graduation from high school. I commuted to the Portland campus 4 days a week for the first semester. This survey and proposed housing in Portland makes it seem like commuter students are undervalued. We pay tuition, we do our part, and then we leave campus so we don't need any RAs or extras. Setting up additional housing for students is going to cost a lot of start up money, and tie up a lot of money in housing long term. I don't think tuition rising much more will help the UMaine system. Most students I talk to come here because it is a good blend of affordable, a good education, and a good reputation. I can't imagine USM setting up housing near the USM campus and it going well in the short term, however if the school could wait until another downturn in the housing market perhaps they could capitalize on a bit cheaper of real estate in the area. Living in Portland is very expensive, and the dorms if they were built shouldn't be unreasonably priced. This survey must not be anonymous due to the "prizes", regardless I'm open to discussing possible ramifications, ideas, and solutions about this idea. (Ronald.Murray@maine.edu)
1	0.51%		You should fix Gorham living situations/ the buildings before attempting this mess

195 Respondents

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USM Parking Assessment: Existing and Future Conditions

Presented by
Lourenço Dantas, AICP
Federico Tallis, AICP

January 17, 2020

Contents

- Study Purpose
- Current Parking Supply
- Future Parking Supply
- Current Parking Demand
- Enrollment and Parking Demand Forecasts
- Future Parking Supply vs. Demand
- Key Takeaways
- Appendix
  - Parking Demand by Lot/Facility
  - Proposed USM TDM Strategies

Study Purpose

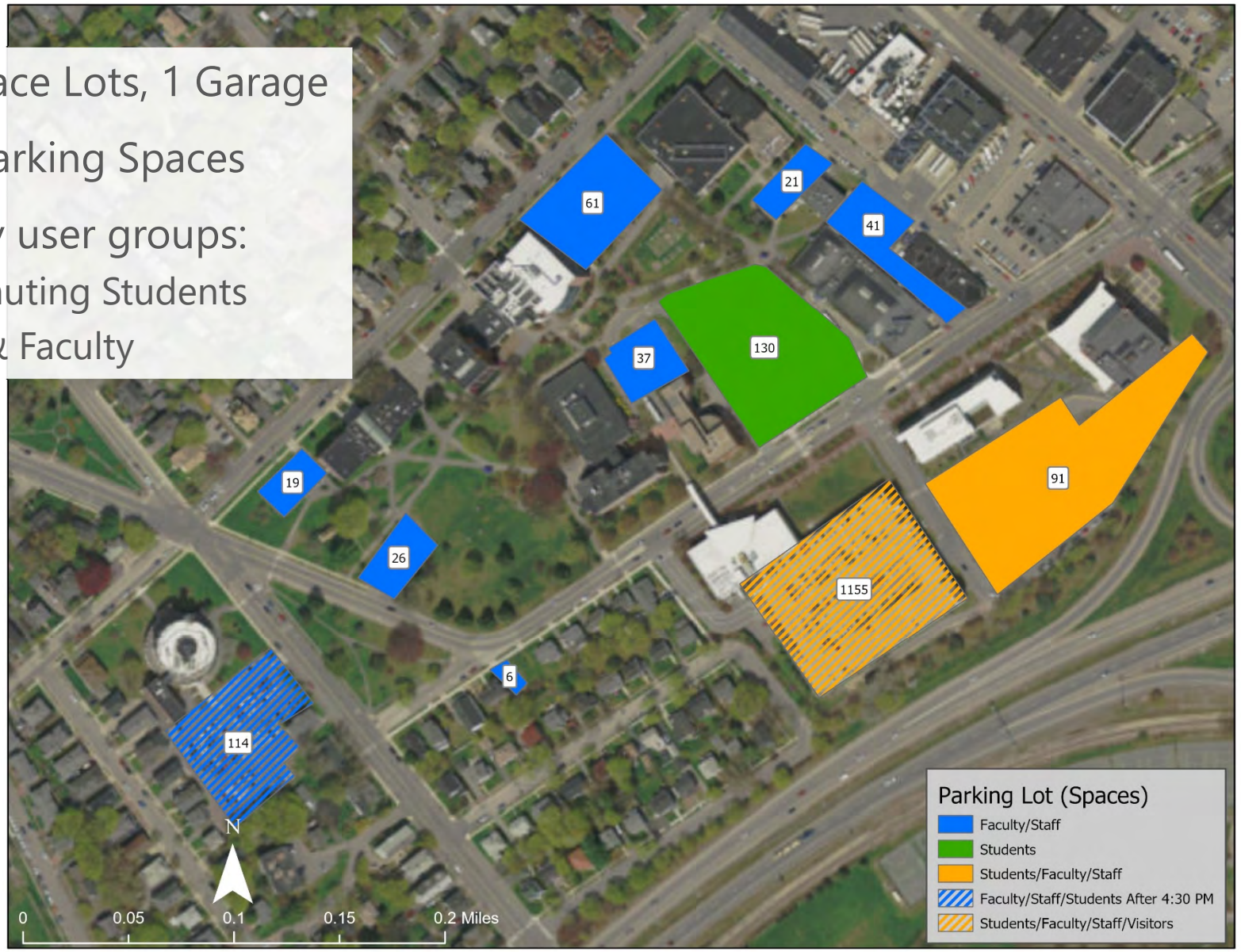
To develop a comprehensive profile of current on-campus parking conditions and to estimate future parking demand levels based upon projections of student enrollment, employment growth, and changes to campus activities.

Key milestones include:

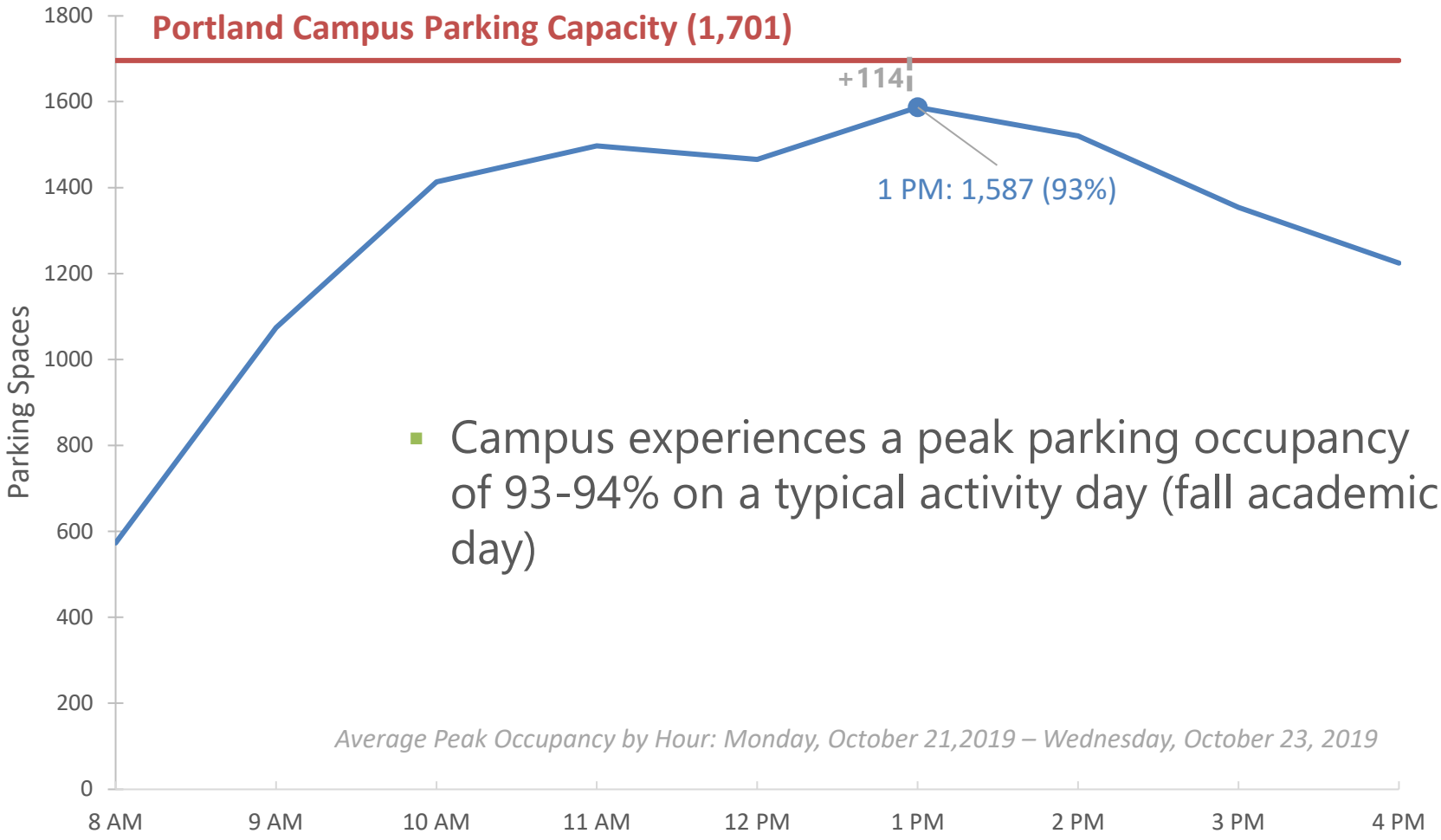
- 2022 – completion of student center & residence hall, including loss of Woodbury parking lot (P2)
- 2025 & 2030

Current Parking Supply

- 10 Surface Lots, 1 Garage
- 1,701 Parking Spaces
- Two key user groups:
  - Commuting Students
  - Staff & Faculty



Current Parking Demand

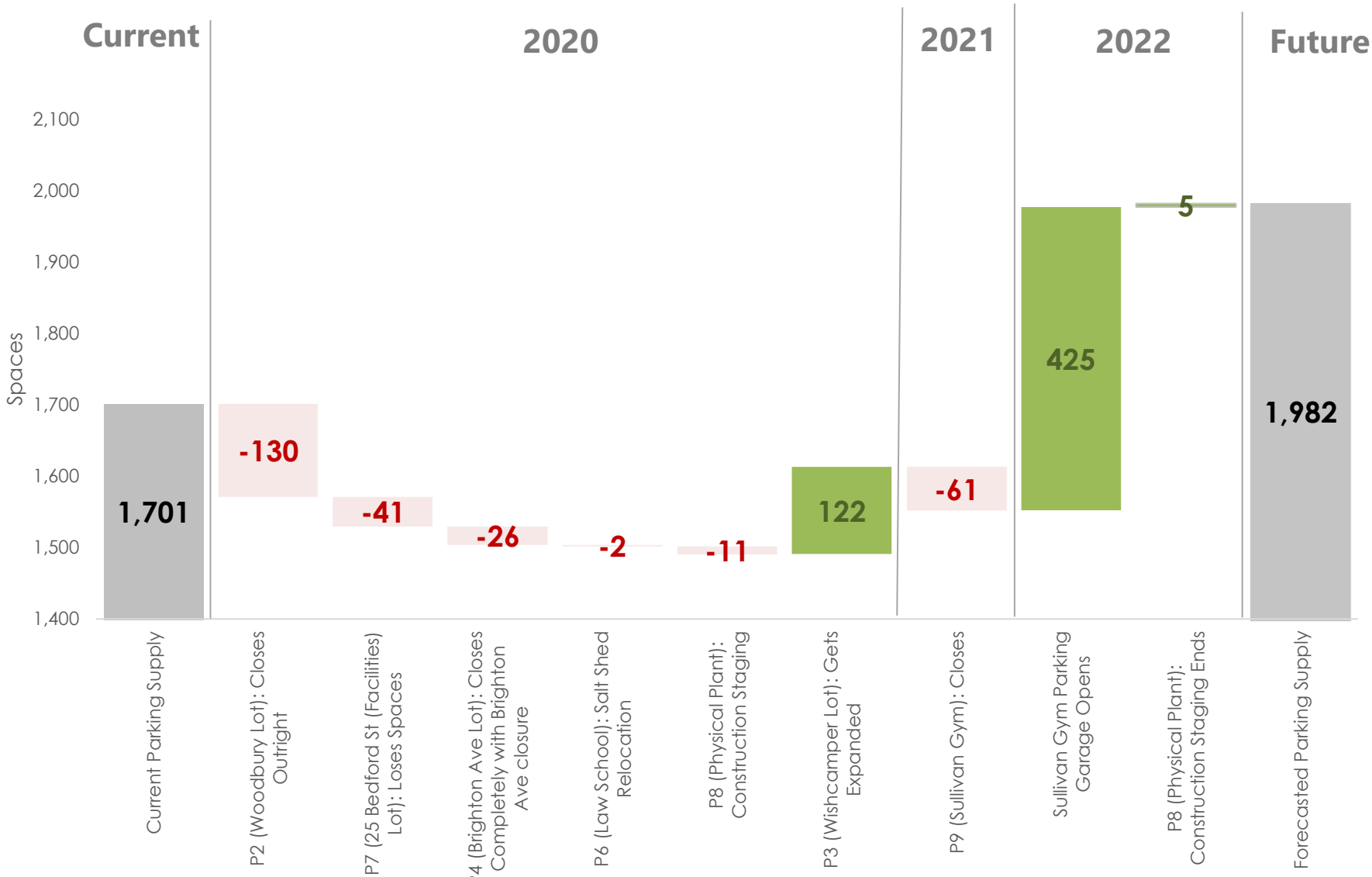


- Campus experiences a peak parking occupancy of 93-94% on a typical activity day (fall academic day)

Current Parking Demand

- Current Parking Peak Hour occurs at 1 PM
- Campus is currently at 93% occupancy during peak, typical activity day
- 5 of 11 lots noted occupancy beyond capacity (see details in appendix) including:
  - P2 Campus Center (Woodbury Parking Lot)
  - P3 Wishcamper Center/Library
  - P4 Off Brighton Ave
  - P5 92-120 Bedford
  - P10 Payson Smith

Future Parking Supply



Future Parking Supply

On-Campus	2019	2020	2021	2022	Milestone Notes (from USM)
Parking Garage	1155	1155	1155	1155	
P1 Luther Bonney & Masterton Halls	37	37	37	37	
P2 Campus Center (Woodbury Parking Lot)	130	0	0	0	Lose all of Woodbury parking lot permanently
P3 Wishcamper Center/Library	91	213	213	213	Wishcamper parking lot will be temporarily lost for the summer 2020 Gain 122 spots in new Wishcamper surface lot by September 2020
P4 Off Brighton Ave	26	0	0	0	Lose Brighton Ave extension parking lot by May 2020
P5 92-120 Bedford	6	6	6	6	
P6 Law Building	114	112	112	112	Salt shed being relocated to this lot to make way for construction of new buildings
P7 Facilities Building	41	0	0	0	Lose all of this lot, except access to oil fill in June of 2020
P8 Physical Plant	21	10	10	15	Lose half of this lot in 2020 and 2021 for use as a laydown/staging area for construction of new buildings and creation of service area
P9 Sullivan Recreation	61	61	0	0	Lose lot to construction zone for new parking garage
P10 Payson Smith	19	19	19	19	
USM Sullivan Lot Garage	0	0	0	425	Parking garage with 425 spaces
Total	**1,701**	**1,613**	**1,552**	**1,982**	

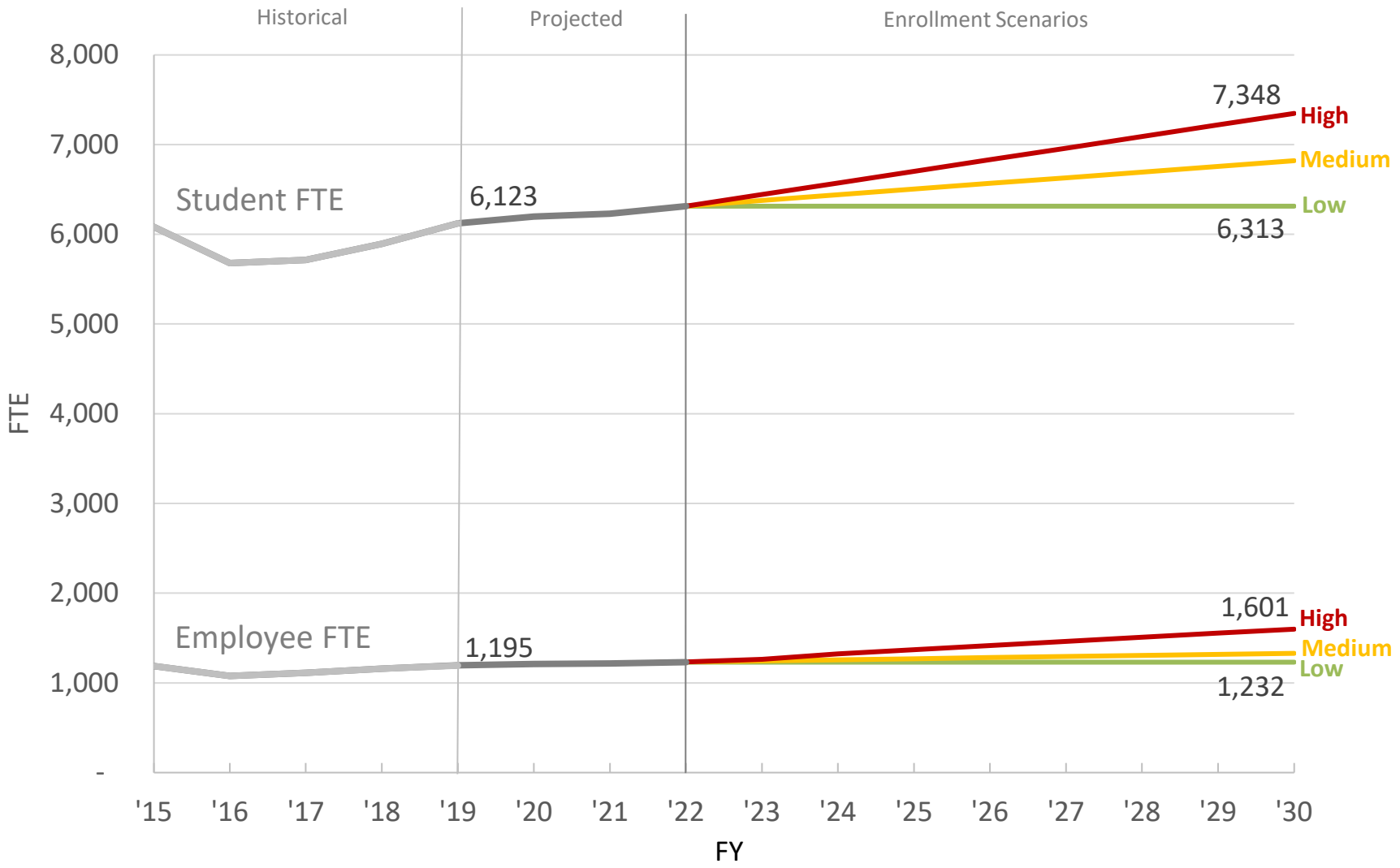
Enrollment Forecast Methodology

- What we know:
  - 2019 Student and Employee FTE
    - Student FTE: 6,123
    - Employee FTE: 1,195
  - Projected Student Growth Through 2022
    - 2020 Student FTE: 6,199
    - 2021 Student FTE: 6,230
    - 2022 Student FTE: 6,313
- What we don't know:
  - 2020 – 2022 Employee FTE
    - Employee FTE was grown proportionally to student enrollment using 2019 ratios for 2020 – 2022; could have a different growth rate
  - How USM will grow beyond 2022

Enrollment Forecast Methodology

- To determine demand beyond 2022 three scenarios were determined:
  - **Low:** Student enrollment and employment remains flat beyond 2022
    - Average Annual Growth Rate: 0%
  - **Mid:** Student enrollment continues to grow steadily based on growth from 2019 to 2022. Employment grows proportionally to student enrollment.
    - Average Annual Growth Rate: 1%
  - **High:** Student enrollment and employment grows back to peak enrollment, 2006 levels.
    - Average Annual Growth Rate: 2%

Student and Employee FTE Projections



Translating Enrollment to Parking Demand

- What we know:
  - Portland Campus Parking Demand
    - Peak hour demand: 1,587 (93%)
  - USM Portland Campus Headcount vs Total USM Enrollment
    - From Master Plan: Portland has 64% of total USM student headcount
  - Employee vs. Student Parking Demand
    - From parking count, 44% of Portland campus permits are from employees whereas 56% are from students
  - Residential Student Parking Permit Demand
    - From Master Plan 1,200 beds in Gorham and 815 registered permits from permit data = 0.68 parking space/bed.
    - Based on demographic of expected student population, a higher 0.75 parking space/bed rate was used.

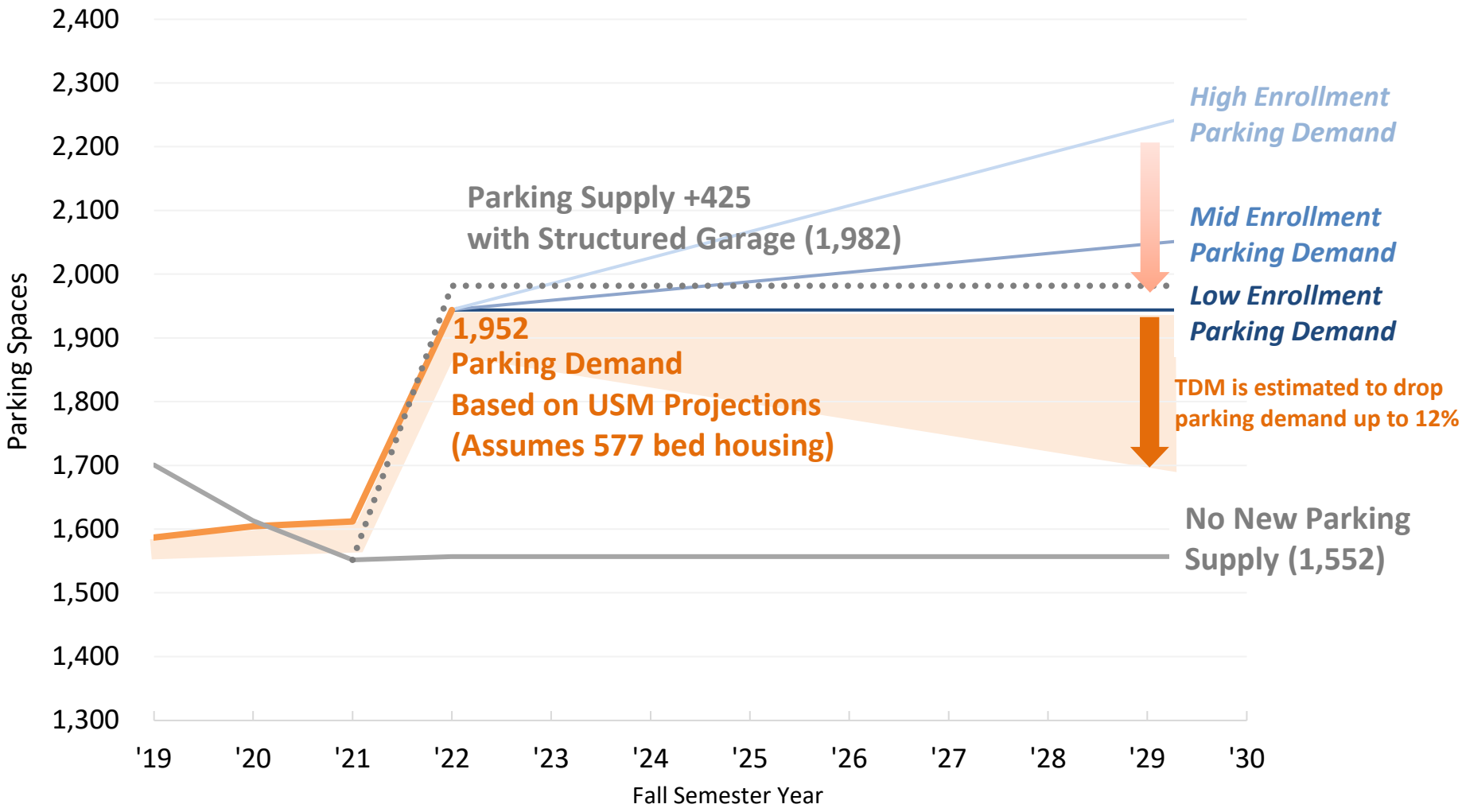
Translating Enrollment to Parking Demand

- To Calculate Parking Demand:
  1. USM Student Enrollment was translated to Portland Campus Student Enrollment
  2. For each forecasted year Portland student enrollment was split into two categories: Commuter student vs Residential student
     - 577 residents assumed on-campus from 2022 into the future.
     - Commuter students equal to total Portland headcount minus on-campus students
  3. Commuter student, residential student, employee, OLLI, and conference attendee parking rates were calculated:
     - Commuter student, employee, OLLI, and conference parking rates were calculated using existing permit demand data ratios
     - Residential student rates were calculated based on Gorham bed counts and resident student permits registered
  4. Calculated parking rates were multiplied by expected population for each year to determine final parking demand by group
  5. Final commuter student, residential student, and employee parking demand were summed to determine total parking demand

Calculating TDM Reduction

- To Calculate the impacts of a TDM program on USM:
  1. A laundry list of appropriate TDM strategies were chosen for USM based the peer review and the assessment of existing transportation conditions.
  2. Impact vs. cost of individual strategies were determined based on USM permit data sales and the transportation survey.
  3. USM narrowed laundry list from step 1 based on political and financial feasibility.
  4. VHB took final package of strategies and simulated potential mode split based on USM permit data and transportation survey.
  5. Mode split was translated to parking reduction based on existing mode split vs. parking demand patterns.
- A list of proposed TDM Strategies are contained in the appendix.

Future Parking Supply vs. Demand



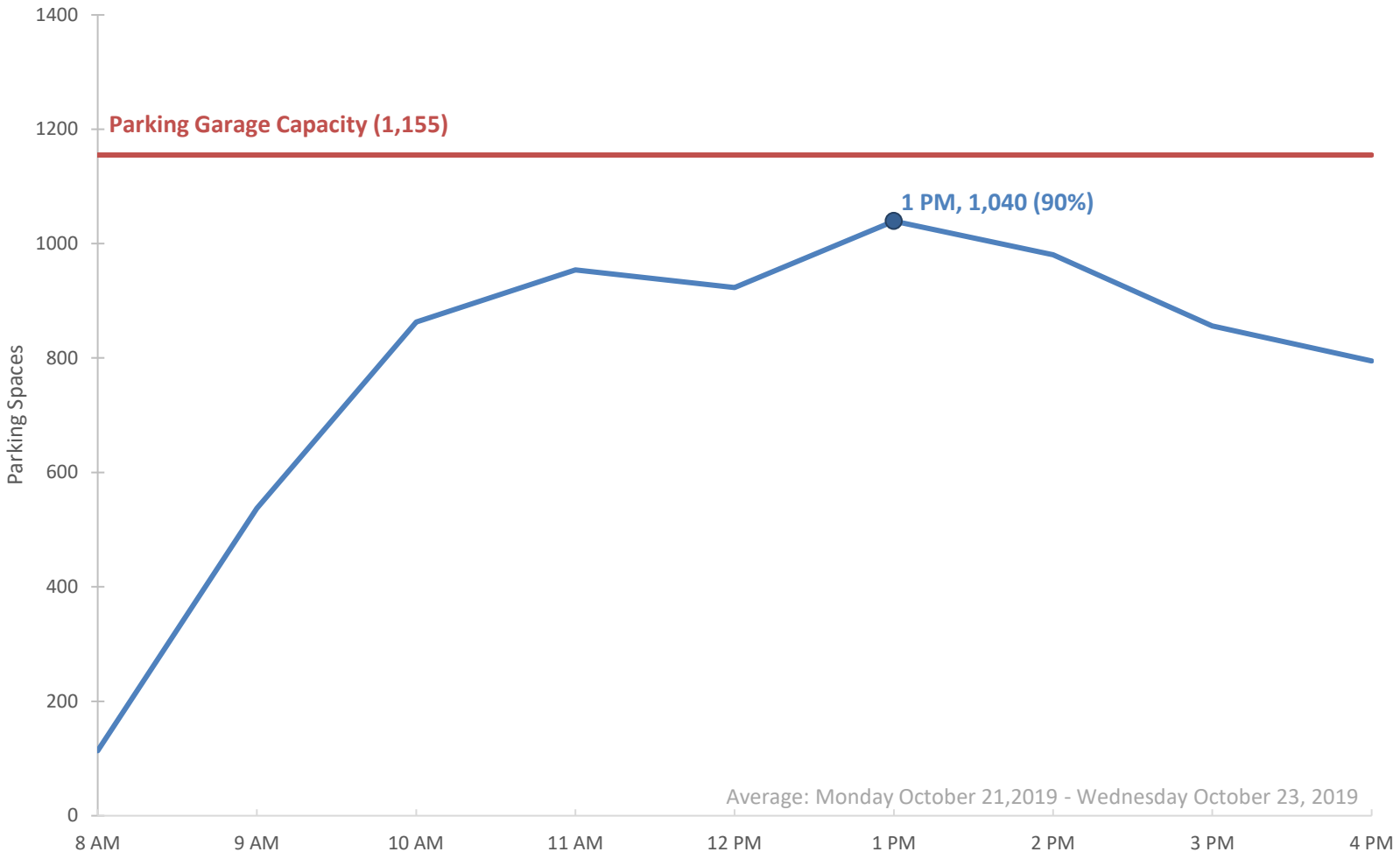
Takeaways

- With construction of a new residence hall and student center, new parking capacity is needed and/or parking demand needs to decrease
  - A moderately aggressive TDM program of strategies, including parking pricing and policy changes, could result in demand reductions of up to about 12 percent for USM
- Depending on enrollment projections, parking supply may not be adequate. USM would have to consider building more parking supply or further reducing parking demand
  - Not anticipated to be an issue until at least 2026 (under a modest 1 percent annual growth in student enrollment and without TDM implementation)
- Enrollment growth may not always directly contribute to growth during the peak demand hour:
  - E.g. Evening classes, distribution of classes among campuses, use of campus for conferences and at-large community events

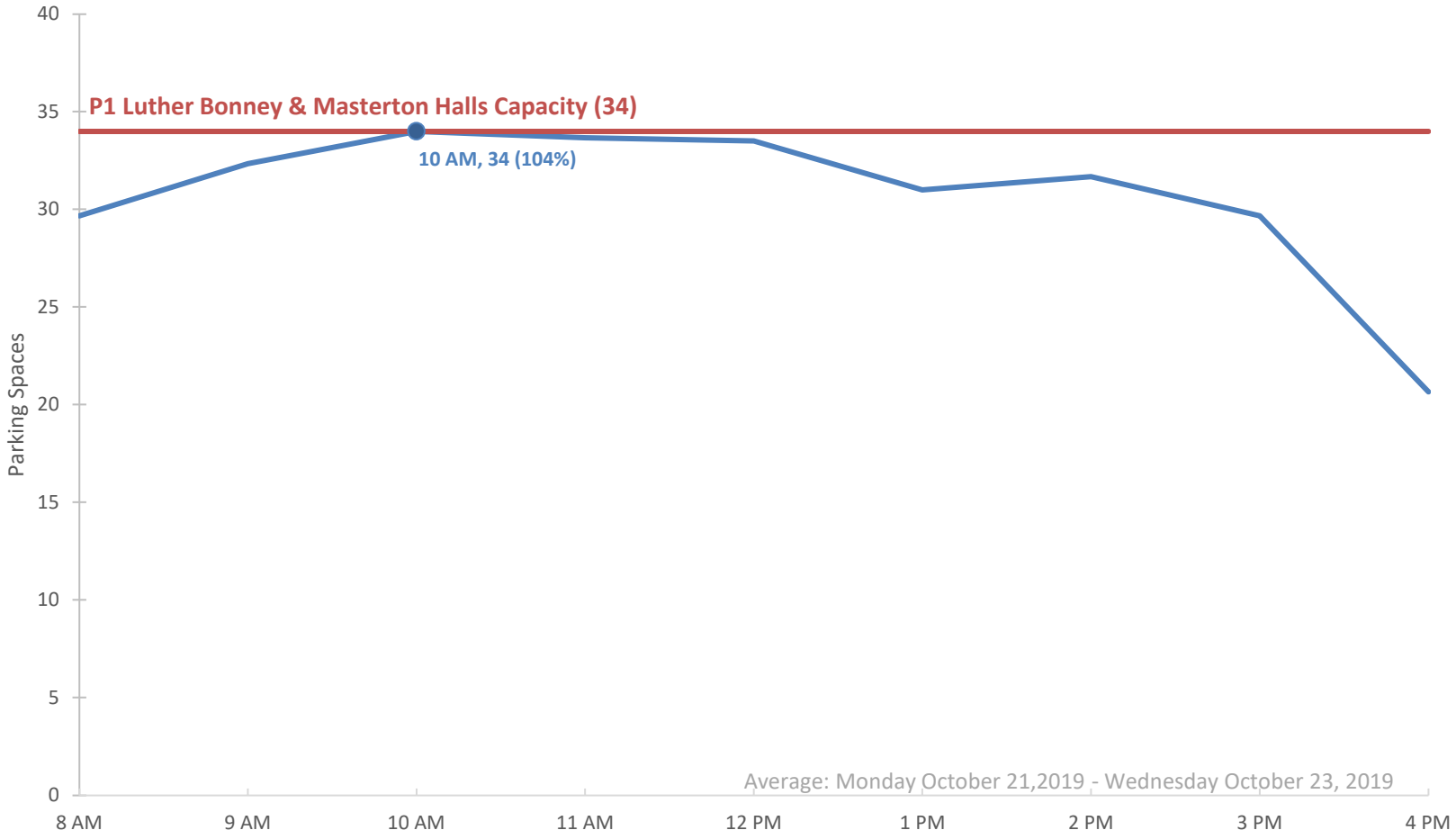
Appendix:
Hourly Demand Charts by Parking Facility

vhb®

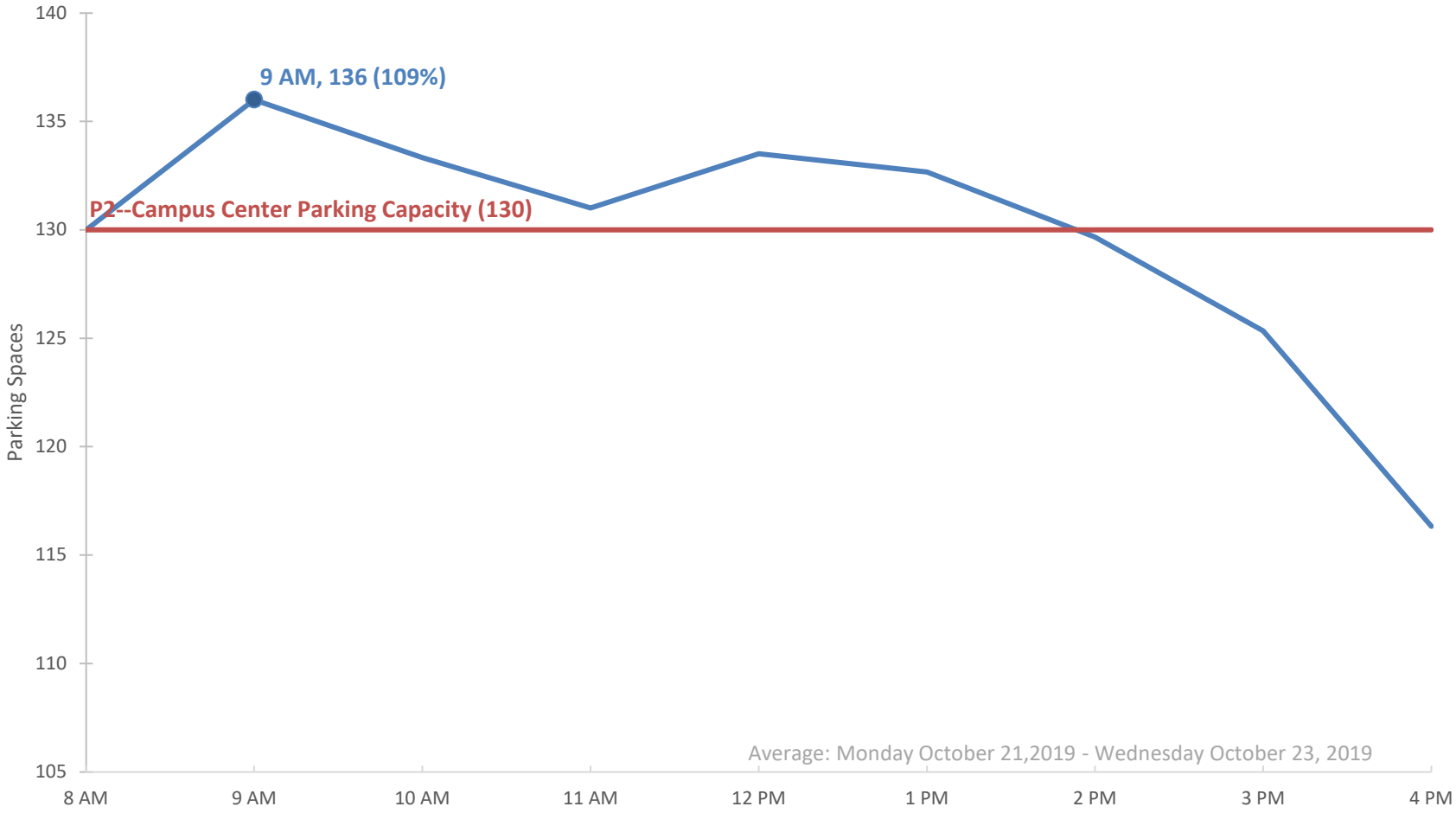
Parking Garage Demand



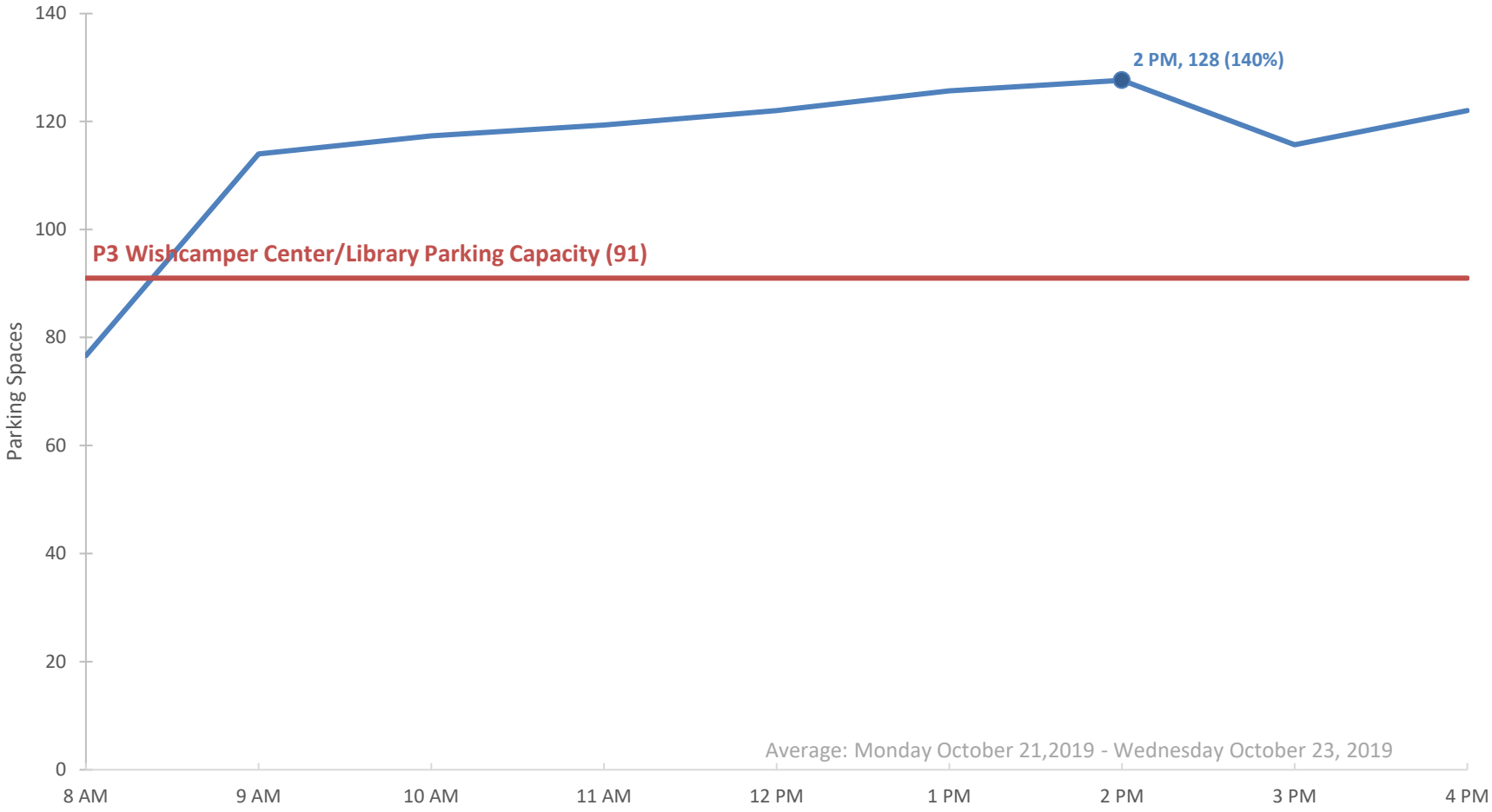
P1 Luther Bonney & Masterton Halls Parking Demand



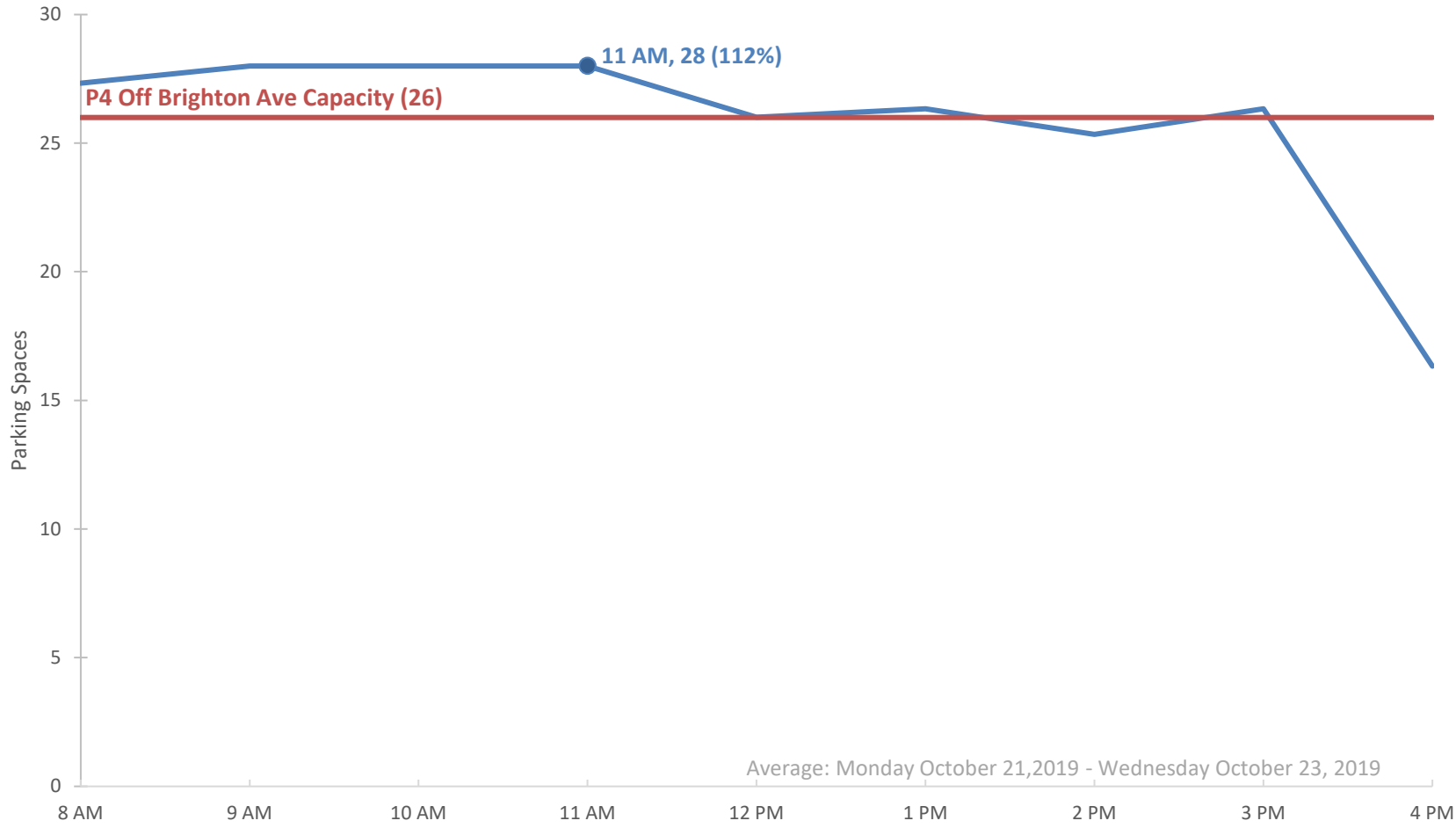
P2 Campus Center (Woodbury Parking Lot)



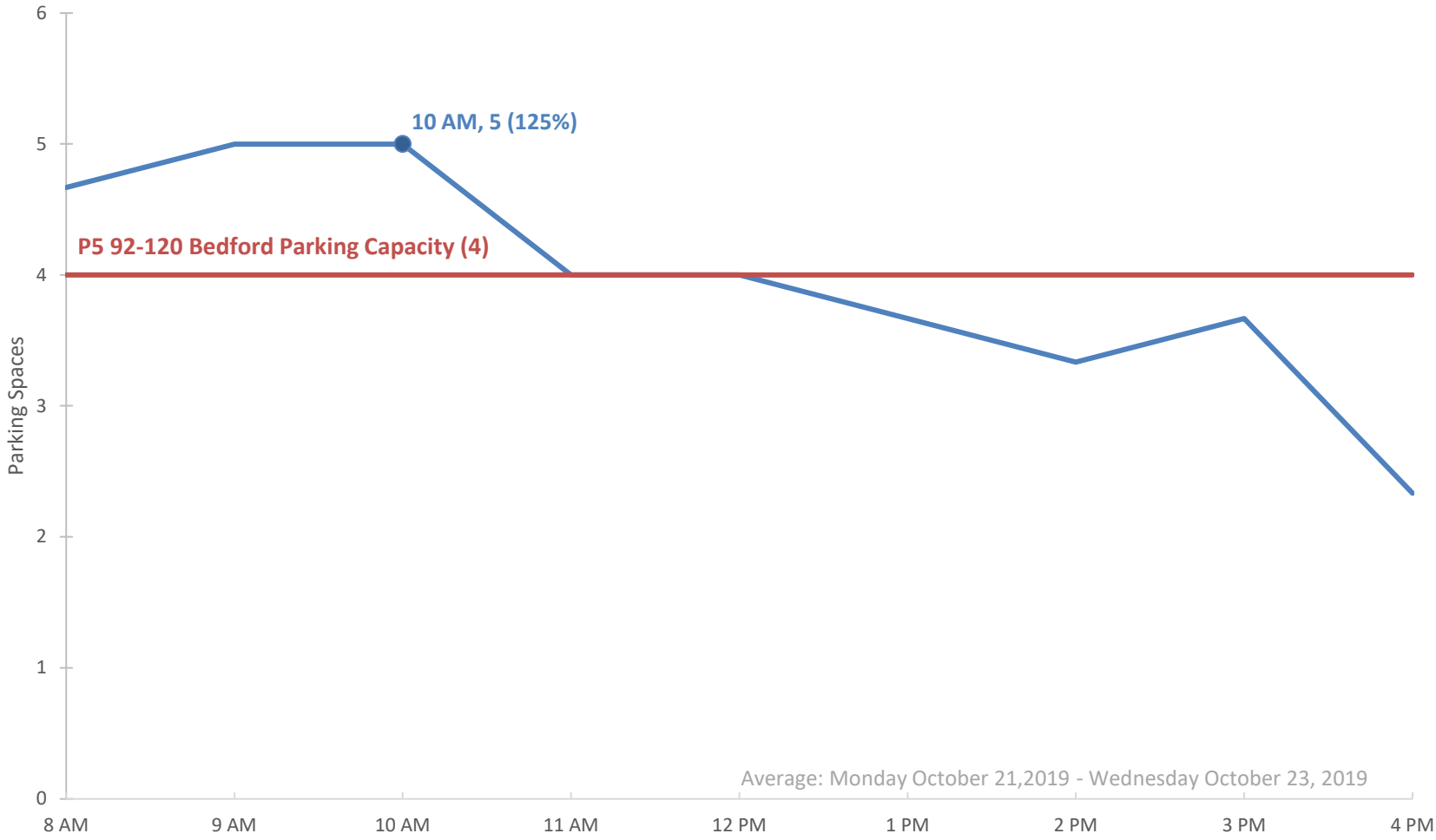
P3 Wishcamper Center/Library Parking Demand



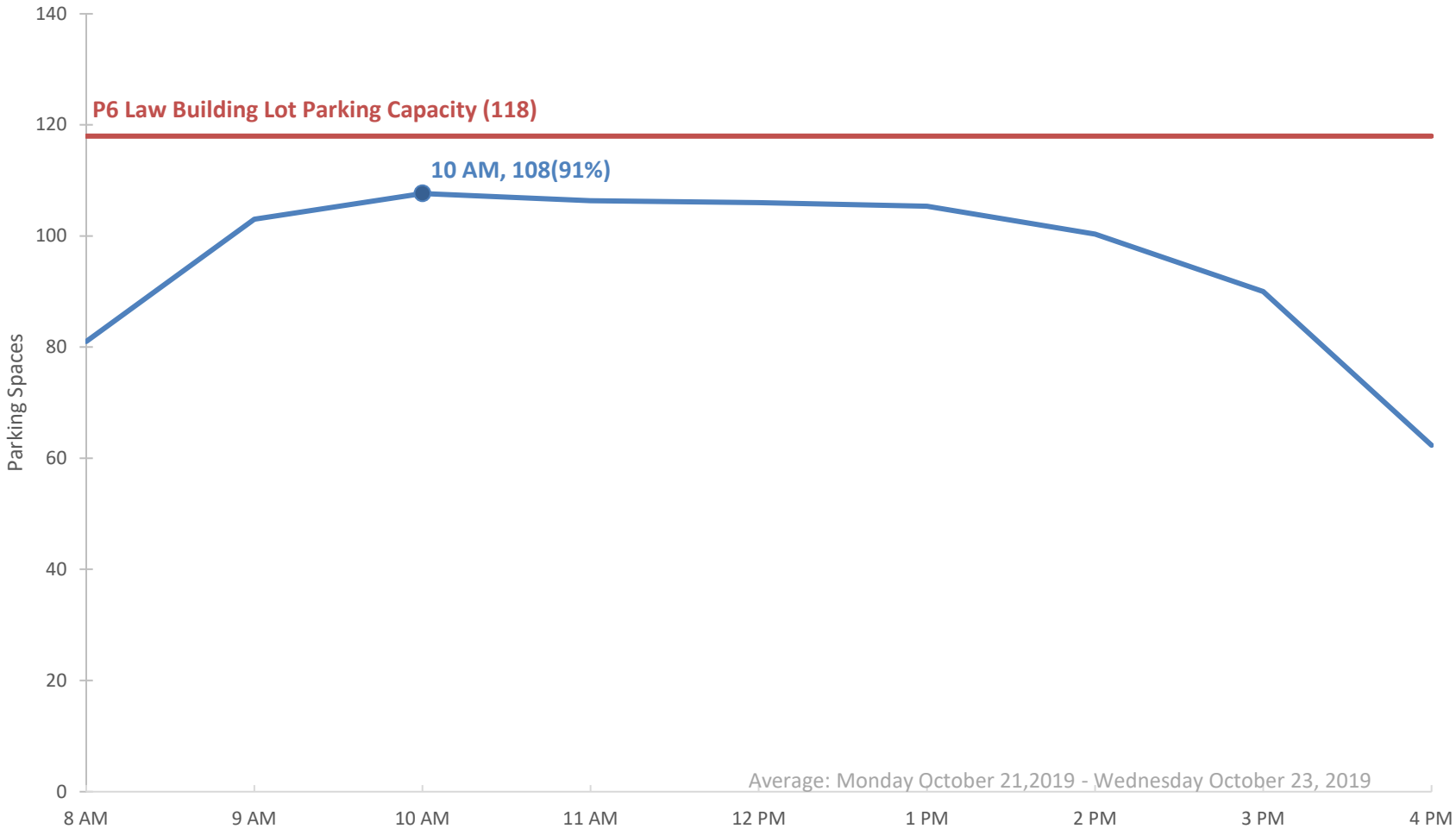
P4 Off Brighton Ave Parking Demand



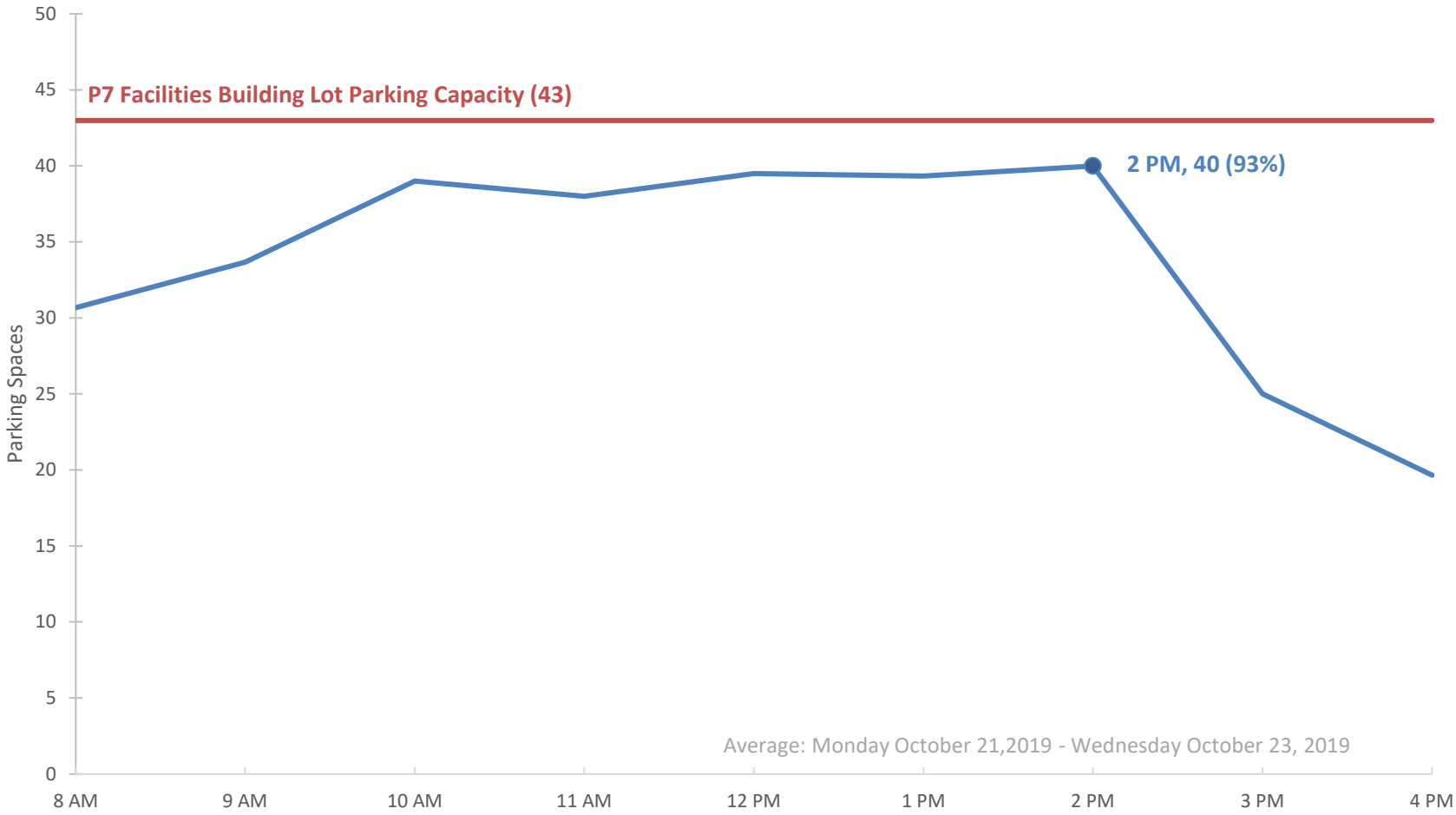
P5 92-120 Bedford Parking Demand



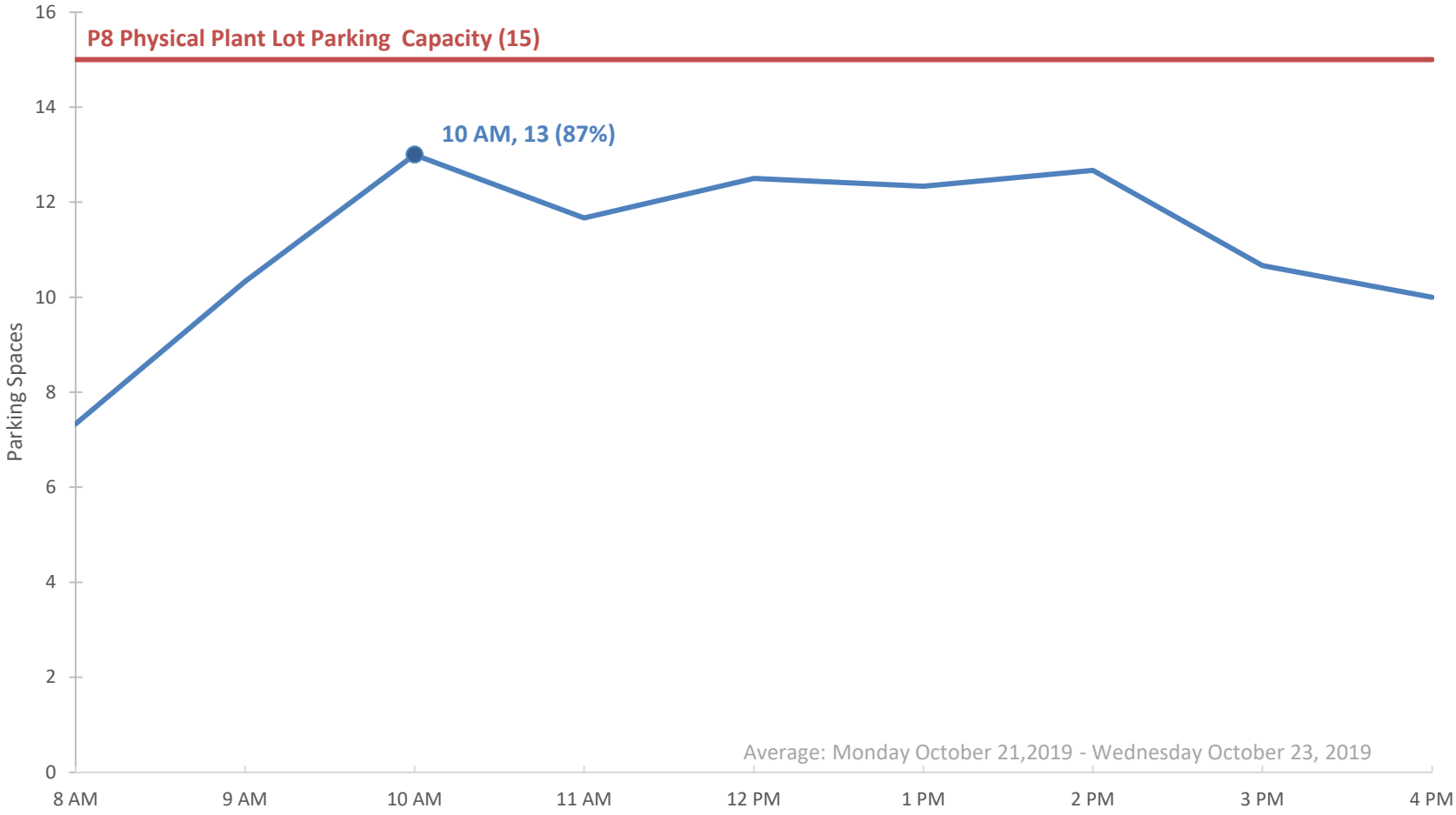
P6 Law Building Lot Parking Demand



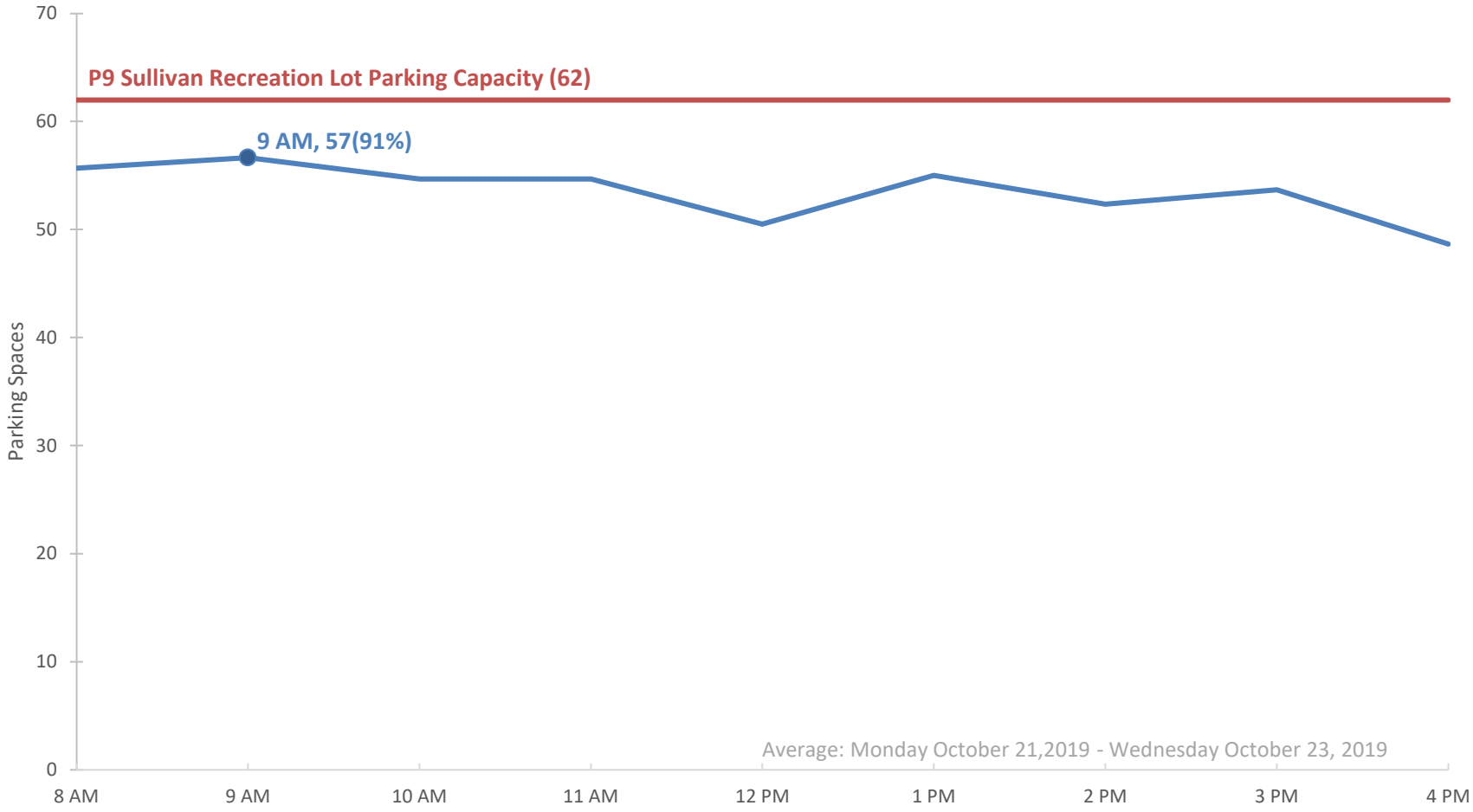
P7 Facilities Building Lot Parking Demand



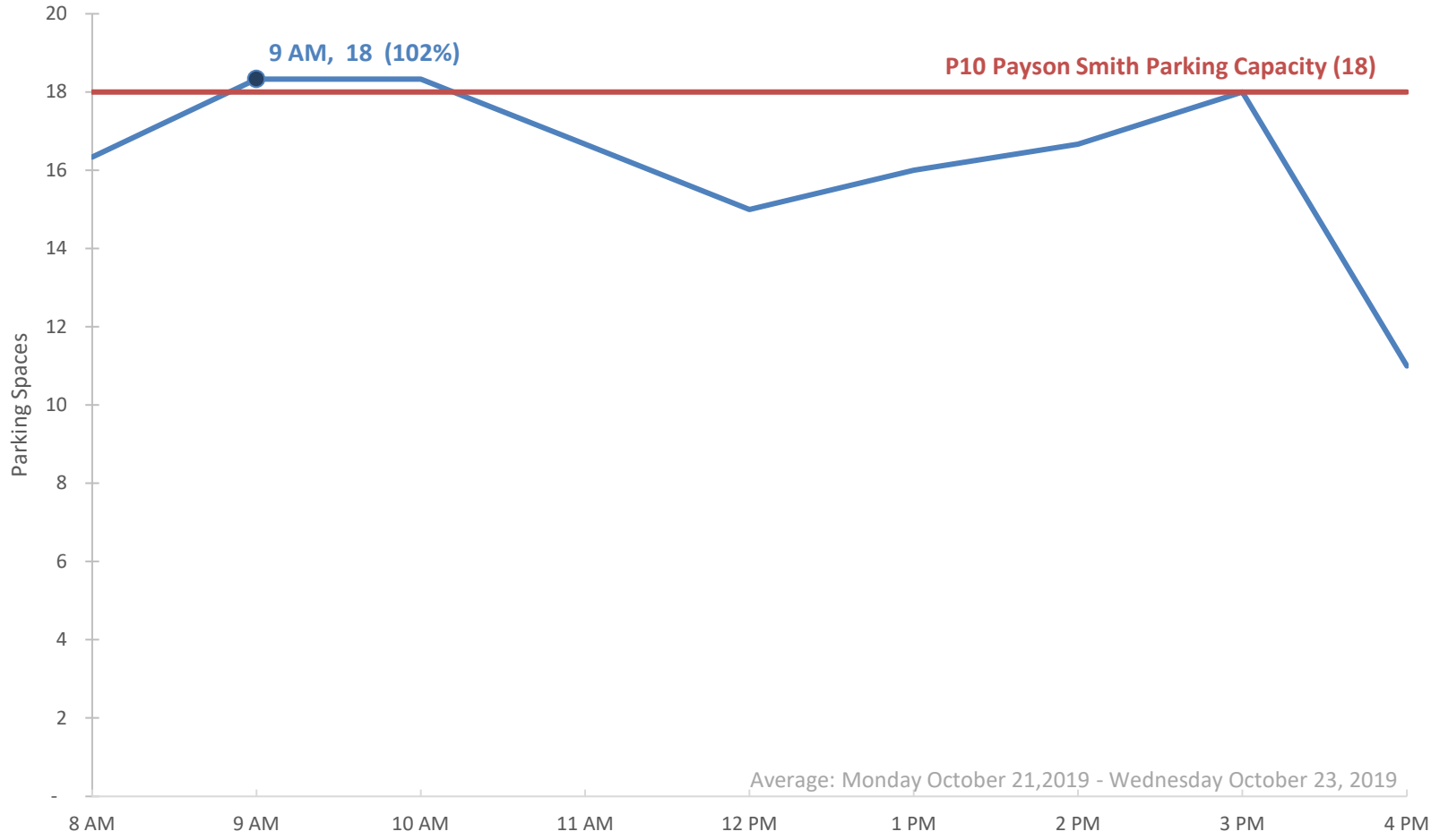
P8 Physical Plant Lot Parking Demand



P9 Sullivan Recreation Lot Parking Demand



P10 Payson Smith Parking Demand



UNIVERSITY OF SOUTHERN MAINE

FACILITIES MASTER PLAN

Final, BOT Approved
January 27, 2019

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EXECUTIVE SUMMARY

The Facilities Master Plan (The Plan) is a university-wide evaluation of the University of Southern Maine (USM) campuses at Portland, Gorham and Lewiston-Auburn. The plan incorporates the visions, goals, facilities assessments, and the campus space needs assessments into a set of campus physical development recommendations. These recommendations not only address today's needs but also establish the long-term development potential for each campus.

Established to better serve the students and communities of southern Maine, USM's three campuses are all important to serving a diverse student body.

History

On December 26, 1878, Corthell Hall, the first university building of what would later become USM, was dedicated to the education of teachers in the town of Gorham. In 1918, Portland University opened just off Monument Square in downtown Portland in response to the lack of educational opportunities for accountants and business professionals needed for the economic growth of the City and region. These two institutions became the keystones of the University of Southern Maine, which in 1988 opened Lewiston-Auburn College to serve the needs of the growing metropolitan area north of Portland.

Today, the Portland Campus has 839,000 GSF of facilities with a fall 2017 headcount of 5,277. Portland's enrollment is the largest of the three campuses. Many of the Portland students reside on the Gorham campus or from adjacent off-campus housing along with commuters from other southern Maine communities. Ten miles away, the Gorham Campus has 1,168,000 GSF of facilities with a fall 2017 headcount of 2,570. The only campus with residence halls, Gorham houses approximately 1,200 students. About 35 miles away from the other two campuses, the Lewiston-Auburn Campus has 450,000 GSF of facilities with a headcount of 374.

Process

The Plan is a result of an inclusive, comprehensive, and strategic process involving a broad community constituency including students, staff, administration, faculty, alumni and representatives from the City of Portland and Town of Gorham.

In June of 2017, President Cummings charged a Campus Master Plan Steering Committee (CMPSC) to create The Plan with the support of its consultant team lead by the Maine based architectural and engineering firm of Harriman Associates. A three-phase process implemented through monthly meetings created a framework in which important ideas and direction were provided by the CMPSC to the consultant team. In addition, the consultant team met with selected faculty and staff and the CMPSC hosted forums and open house events at each of the campuses. The final plan is a product of this process led by the CMPSC and informed by campus facilities and space needs analysis.

Goals and Guiding Principles

The Plan process was guided by President's Cummings Goals and Guiding Principles created by the CMPSC for the University's physical development.

PRESIDENT'S GOALS

- USM will be known for academic excellence with real-world experiences as a core part of its academic program.
- 80% of our students will state that at least one individual (staff or faculty) knows them well, supports them, and believes in them.
- 72% of our students will remain at USM between each school year.
- 10% of our alumni will give to USM annually.
- The USM Foundation will raise $50 million in scholarships, infrastructure,and investments for our students.
- USM headcount enrollment will reach 10,000.
- USM will be designated as a 'Great Colleges to Work For®'.
- 80% will recommend USM to others.
- USM will establish a sustainable financial model by attaining industry standards attributable to a financially healthy institution.

CMPSC GUIDING PRINCIPLES

- **Student Experience**—the process, plan and implementation focuses upon improving the student's academic, co-curricular and living experience on each of the campuses.
- **Inclusiveness**—the process, plan and implementation support the ability of any member of the community to feel safe participating and being included as a valuable member of the USM community.
- **Net Zero Building Policy**—the plan prioritizes the capital renewal of existing facilities that are capable of, with investment, meeting the academic mission over building new facilities.
- **Public Safety**—the plan and subsequent implementation seeks to provide the safest campus environment possible through physical, programmatic and operational improvements.
- **Mobility**—the plan supports robust pedestrian, bicycle, shuttle bus, ride share and metro regional public transit systems that look beyond private vehicular parking to meet the transportation needs of the campus community.
- **Sustainability**—the plan supports all existing sustainability policies of the University.
- **Neighbors**—the plan seeks to establish campuses and campus communities that are positive members of the neighborhoods, mitigating negative impact and providing a beautiful and inviting campus landscape for all neighborhood members to enjoy.
- **Aesthetics**—the visual quality of the campus facilities is important to creating an environment that meets the mission and goals of the University.

HALL

The Portland Plan

> "To build a sustainable, iconic academic campus in the heart of Portland enhancing the commuter experience while creating a welcoming residential community."

The Portland Plan envisions a transformational future for the campus. This vision is supported by the long-term framework of physical attributes and is assembled to create a dynamic and flexible campus.

The circulation "frame" around the campus consists of US 295, Forest Avenue, Falmouth and Deering Street. Gateways into the campus are Forest/US295 and Falmouth and Deering Ave. The framework illustrates the simplicity of two greens lined by campus buildings and connected by campus circulation. The beauty of this framework is its ability to provide a flexible and bold future.

To accomplish the vision and create transformational moves that improve experiences for both commuter students and the new residential population, the plan carefully sites the development program and other campus improvements. The placement of facilities creates a new campus heart and identifies iconic sites for new large projects and additional growth within the current campus land holdings. A new campus quadrangle is created by combining several near-term projects including a new Career and Student Success Center, residence halls and significant landscape improvement.

Beyond the new campus heart, the Portland Plan identifies prominent iconic sites for a Center for the Arts and a new Professional Graduate Center. The first iconic site is located between the Wishcamper Center and the interstate, and the second is located by what is currently the Brighton Avenue extension. The key difference between the two is that the site behind Wishcamper has more regional visibility and is adjacent to the existing parking deck, while the Brighton Avenue Extension site has prominent neighborhood visibility and is on the campus pedestrian spine; however, either site can be a home for transformative programs beyond the two that have been identified in the planning process.

The largest land area for future development becomes available once the Professional Graduate Center is built and the current law school is demolished. The law school site with the existing surface parking lot could also be thought of as an iconic site, although it is at the campus/neighborhood edge and across Deering Avenue. Other future development sites include a site in front of the parking deck, between the Science Building and the Sullivan Complex and a small site west of Masterson Hall.

400,000 GSF | *Site available for academic, housing, parking or athletic growth beyond current program*

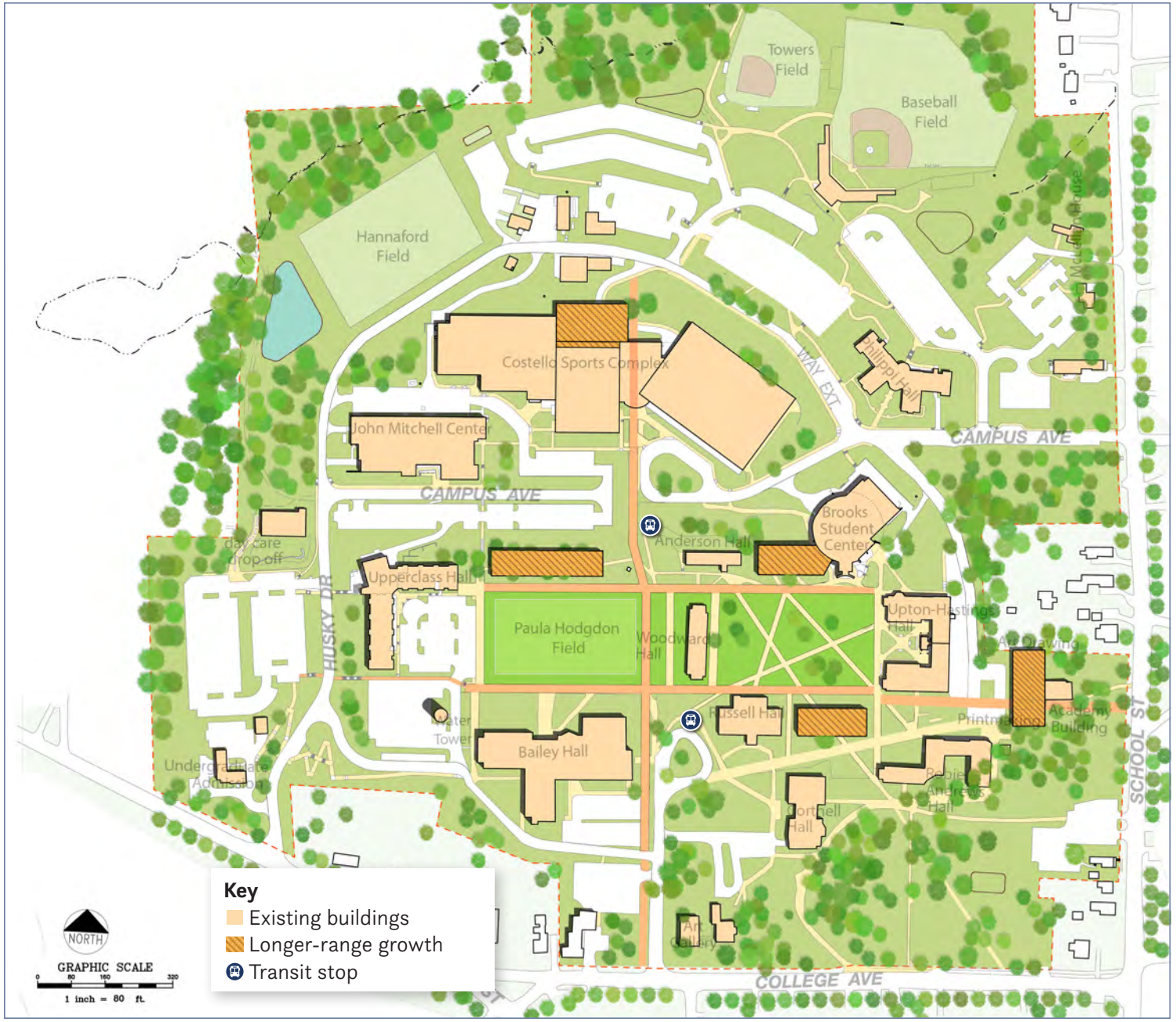
The Gorham Plan

> "To sustainably strengthen an iconic campus focused upon the academic experience with an emphasis on campus life."

The Gorham Plan is built upon reestablishing a campus heart and providing a clear and safe pedestrian circulation system. The campus will be supported by efficient vehicular circulation that does not dominate the campus landscape. Providing a flexible and bold framework for future development, the plan illustrates the simplicity of reestablishing the campus green and connecting it to the larger campus and the Town of Gorham.

To fulfill the vision and create transformational moves that improve the student experience, the Gorham Plan recommends renewal of the campus heart and identifies sites for additional housing and academic sites to be built as they are needed.

A place for the Gorham campus community to come together, the renewed campus quad would be located at the top and center of the campus. To begin re-establishing the campus heart, a surface parking lot behind Russell Theater would be removed, and University Drive would be redesigned to be more pedestrian friendly. Complementing these landscape improvements would be capital renewal projects including the Campus Center and historic core structures such as Russell Hall, Robie-Andrews Hall, and Corthell Hall.


Towers Field
Baseball Field
Hannaford Field
Costello Sports Complex
John Mitchell Center
CAMPUS AVE
WAY EXT.
Philippi Hall
McLellan House
Brooks Student Center
Anderson Hall
day care drop off
Upperclass Hall
HUSKY DR
Paula Hodgdon Field
Woodward Hall
Upton-Hastings Hall
Art Drawing
Water Tower
Bailey Hall
Russell Hall
Printmaking
Academy Building
Undergraduate Admission
Bepier Andrews Hall
Corthell Hall
SCHOOL ST
Art Gallery
COLLEGE AVE
Key
Existing buildings
Longer-range growth
Transit stop
NORTH
GRAPHIC SCALE
0 80 160 320
1 inch = 80 ft.

Lewiston-Auburn

In order to ensure alignment between academic offerings and a master plan, it was decided early in the process to postpone a master plan for the Lewiston-Auburn campus until a review of current and future academic programming for the campus was completed.

INTRODUCTION

USM Overview

The University of Southern Maine (USM) serves approximately 8,000 students at its campuses in Gorham, Portland and Lewiston-Auburn. The University of Maine School of Law, located on the USM Portland Campus, is also a part of the USM community.

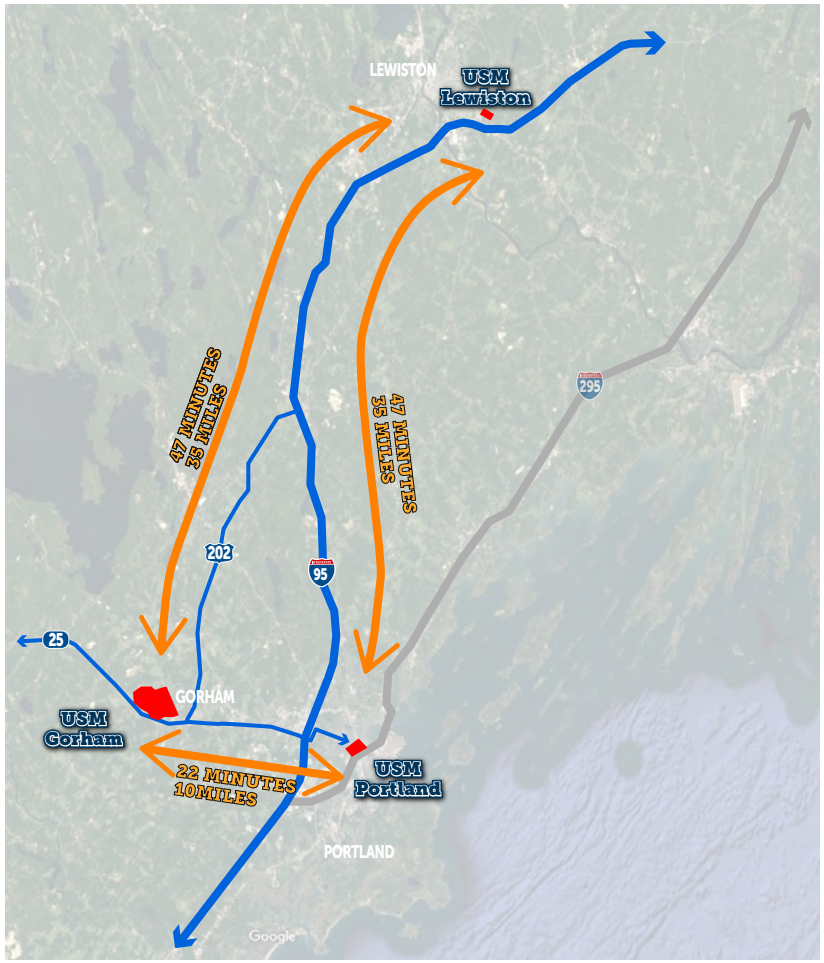
Over 87% of USM students are from Maine. Out-of-state students come principally from neighboring New England states.

The three campuses possess extremely different physical facilities:

- The Portland Campus, where most USM students attend their classes, is approximately 34 acres with 1,246,558 GSF of facilities.
- The historic Gorham campus sits on 96 acres, accommodating 1,168,000 GSF of buildings. The Gorham Campus Historic District includes 12 of the university's 125 acres and seven buildings added to the National Register of Historic Places in 1978.
- The Lewiston-Auburn campus sits on 10 acres and hosts 140,000 GSF in one building.

There is significant capacity at each campus for further development outside of what could be considered long-term strategic land acquisitions at each campus.

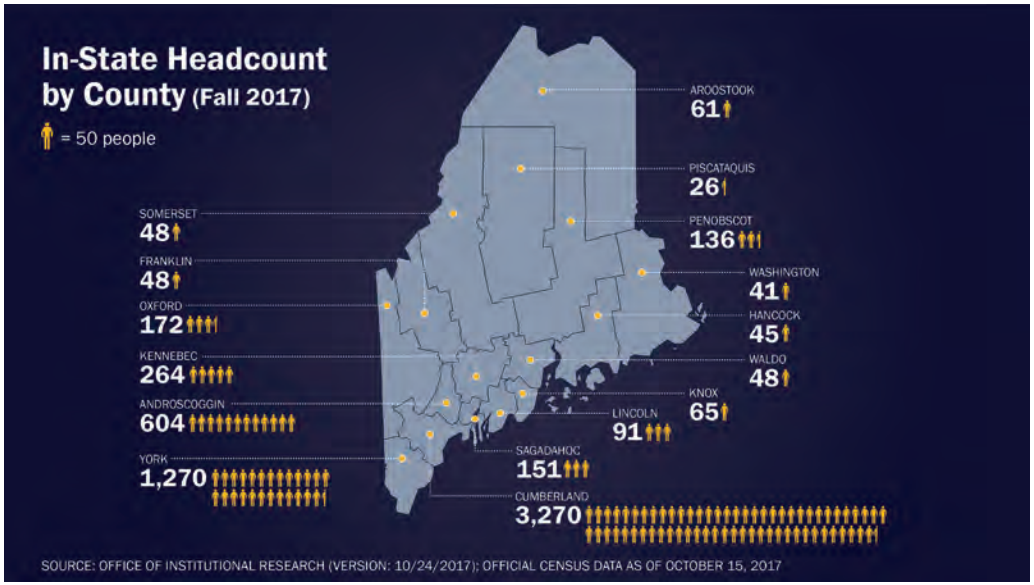
The University of Southern Maine, like its other University of Maine System counterparts, contends with the constant challenge of limited resources to address capital renewal and reinvestment. The lack of available funding has contributed to a growing backlog of deferred maintenance to campus buildings and grounds. Sightlines, a facilities management firm, estimates that USM campuses require $270 million to address maintenance and renewal.

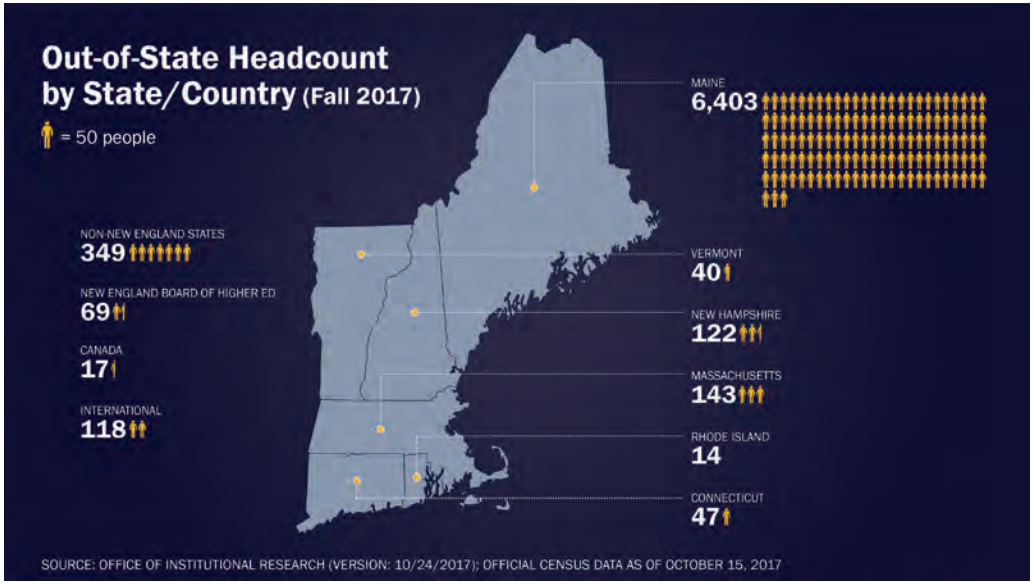


CAMPUS FACTS

USM CAMPUS	GROSS LAND AREA (AC)	BUILDING FLOOR AREA (SF)	FAR	PARKING SPACES
Portland	34	1,246,558	1.19	1,720
Gorham	96	1,168,000	0.28	1,600
Lewiston-Auburn	10	140,000	0.31	380

Note: The numbers are approximate.





Purpose

This Facilities Master Plan (The Plan) is a University-wide evaluation of the University of Southern Maine at Portland, Gorham and Lewiston-Auburn that combines detailed assessment, campus space needs assessments, and campus planning recommendations to address current, short-term and long-range needs. The Plan will be used to as an important policy document for state capital funding and the University's development efforts.

USM President's Goals

- USM will be known for academic excellence with real-world experiences as a core part of its academic program.
- 80% of our students will state that at least one individual (staff or faculty) knows them well, supports them, and believes in them.
- 72% of our students will remain at USM between each school year.
- 10% of our alumni will give to USM annually.
- The USM Foundation will raise $50 million in scholarships, infrastructure,and investments for our students.

- USM headcount enrollment will reach 10,000.
- USM will be designated as a 'Great Colleges to Work For®'.
- 80% will recommend USM to others.
- USM will establish a sustainable financial model by attaining industry standards attributable to a financially healthy institution.

Guiding Principles

- **Student Experience**—the process, plan and implementation focuses upon improving the student's academic, co-curricular and living experience on each of the campuses.
- **Inclusiveness**—the process, plan and implementation support the ability of any member of the community to feel safe participating and being included as a valuable member of the USM community.
- **Net Zero Building Policy**—the plan prioritizes the capital renewal of existing facilities that are capable of, with investment, meeting the academic mission over building new facilities.
- **Public Safety**—the plan and subsequent implementation seeks to provide the safest campus environment possible through physical, programmatic and operational improvements.
- **Mobility**—the plan supports robust pedestrian, bicycle, shuttle bus, ride share and metro regional public transit systems that look beyond private vehicular parking to meet the transportation needs of the campus community.
- **Sustainability**—the plan supports all existing sustainability policies of the University.
- **Neighbors**—the plan seeks to establish campuses and campus communities that are positive members of the neighborhoods, mitigating negative impact and providing a beautiful and inviting campus landscape for all neighborhood members to enjoy.
- **Aesthetics**—the visual quality of the campus facilities is important to creating an environment that meets the mission and goals of the University.

University Wide Sustainability

The facilities master plan envisions sustainability as a critical element underlying all new construction and considerations for renovations and renewal of existing buildings. As such, the Master Plan Steering Committee endorses the Campus Sustainability Strategic Plan, published in October of 2017.

- New buildings will support our Second Nature President's Carbon Commitment to be carbon neutral by 2040, following Portland's District 2030 benchmarks.
- We strive to achieve a 70% reduction in energy usage for each new building compared to the national average
- We strive to achieve a 50% reduction in water usage for each new building compared to the district average
- We strive for LEED silver certification or above
- We strive to incorporate innovative and sustainable local materials whenever possible, including elements like Cross Laminated Timber (CLT)
- We strive for a 35% reduction in heat and electricity emissions for existing buildings
- Transportation Demand Management (TDM) will be a subsequent study to help achieve the commitment of a 20% greenhouse gas reduction

Process

The Plan for USM is the result of an inclusive, comprehensive, and strategic process involving a broad community constituency including students, staff, administration faculty, alumni community leaders and representatives for the Towns of Portland and Gorham. Guided by the planning team of Harriman, Goody Clancy and Rickes Associates, the Campus Master Plan Steering Committee (CMPSC) provided important guidance, questions and feedback throughout the process. In addition to monthly steering committee meetings, members met with faculty, staff and students, as well as with neighborhood residents at meetings and open forums. There were thirteen steering committee meetings, 3 stakeholders meetings and 4 public forums over the past ten months. The final master plan derived from this process of community input, planning analyses and aspirational visioning.

The master planning process consisted of three phases: Analysis and Investigation, Concept Plan and Facilities Master Plan.

ANALYSIS AND INVESTIGATION

The existing Mission and a variety of institutional planning materials were reviewed for the planning team to gain an understanding of the needs, goals and institutional priorities at each of the USM campuses.

The planning team and CMPSC subsequently spent time on each campus to understand the current state of the campuses and their various features. Attention was paid to use patterns, building and site conditions, visual character, zoning and historic areas, and pedestrian and vehicular circulation. The planners analyzed the impact of regulatory requirements on the campus by reviewing state and local ordinance.

The team compiled capital improvement recommendations to inform planning decisions and short-term maintenance needs. The information was compiled and is incorporated into this report.

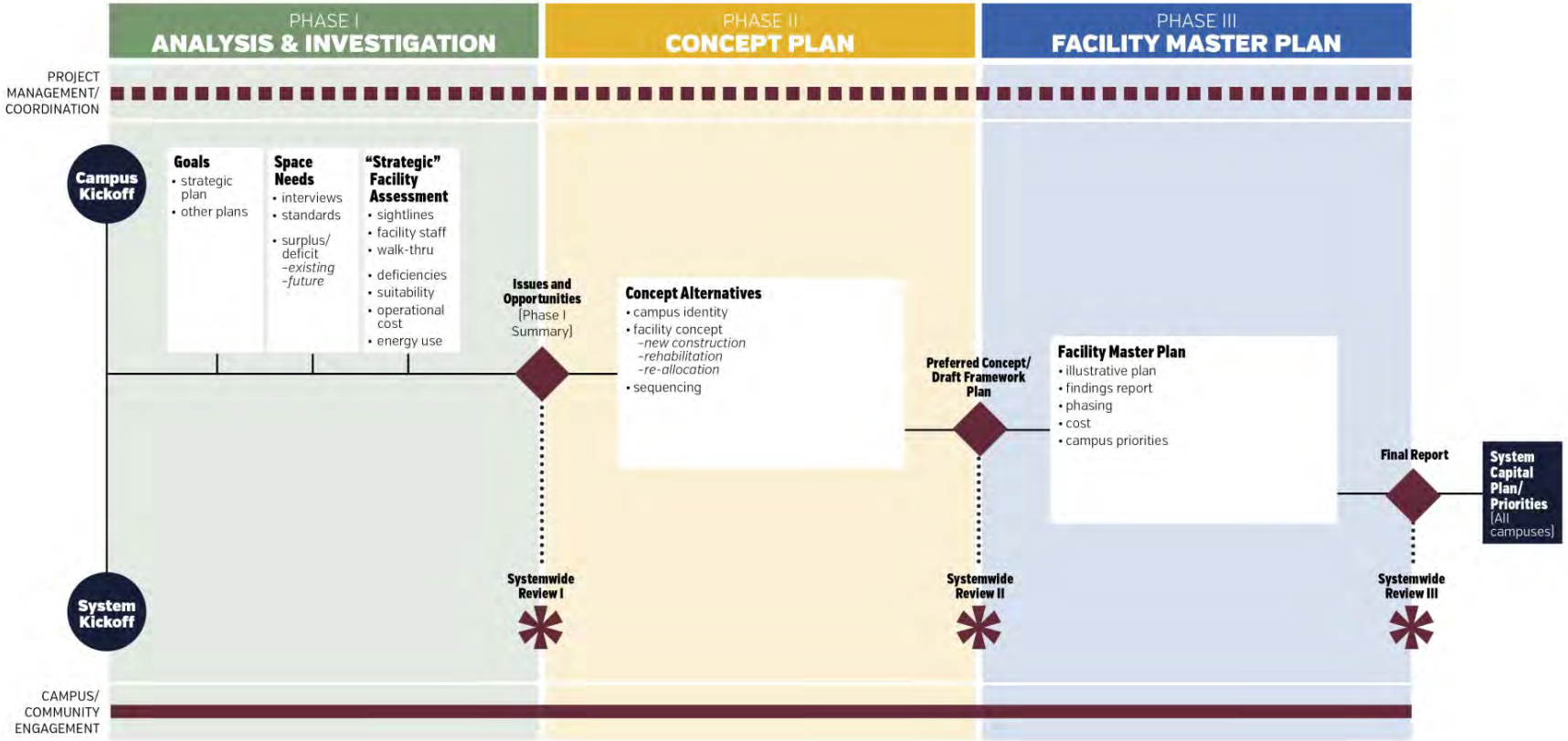
During this phase the team also met with academic and program leaders at each campus to ascertain current and future program needs and collected registration, class scheduling and personnel data to prepare the space utilization and needs analysis. The conclusions of this Space Needs Analysis for each campus are presented in an appendix at the end of this report.

CONCEPT PLAN

Using information gained during the Analysis and Investigation Phase, the Steering Committee with its consultants explored and developed conceptual options for the Portland and Gorham campuses. During this phase, options for the Lewiston-Auburn campus were postponed until a review of current and future academic programming for the campus is completed.

FACILITIES MASTER PLAN

Once the preferred concepts for the Portland and Gorham campuses were determined, the team developed and refined the campus plans in greater detail. The draft plan was shared with community members, USM employees and other interested parties through a series of 4 open forums. Capital renewal and new building projects were incorporated into the final master plan, with both short-term and long-term direction for capital investment and campus development. These initiatives, some of which were identified by previous studies, are integrated with current project priorities.

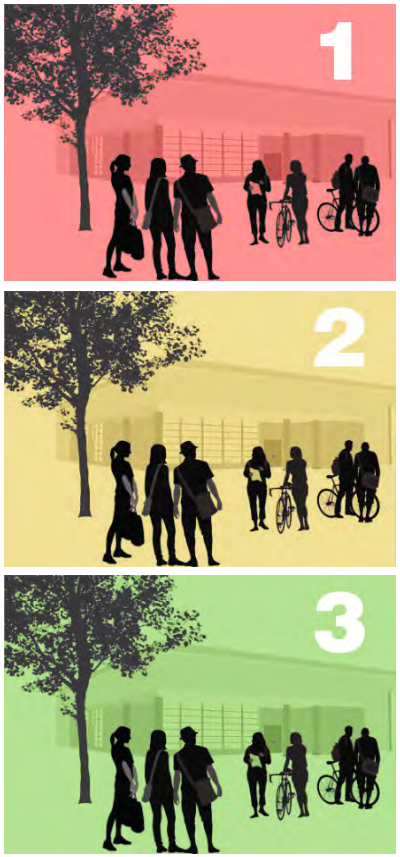


Planning Phasing Categories

To meet immediate facility needs and allow for aspirational visioning, three categories were created to organize the Master Plan Program Elements.

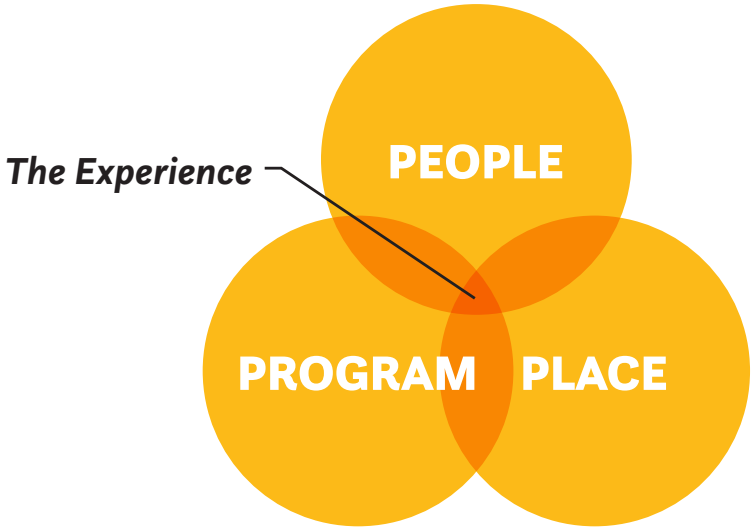
- The first category includes immediate facilities and space need deficiencies. Elements or items in category 1, immediate must-haves, are generally considered to be 'broken" and require immediate repair.
- The second category includes, short-term needs targeted within a 3- to 5-year window. The most transformational elements are designed to occur within the category 2 timeframe.
- The third category includes long-range needs based on the future growth in a 5- to 20-year timeframe. Items in category 3 are designed as placeholders to accommodate significant enrollment and or changes in academic needs.

1. **Immediate must-haves**
   - > Facilities issues
   - > Program exigencies
2. **Short-term—3-5 years**
   - > Facilities
   - > Program
   - > Campus
3. **Long-range— 5-20 years**
   - > Framework for aspirational planning
   - > Based on future growth



"Today's decisions create the long-range vision"

Scope of Master Plan



A successful Facilities Master Plan must integrate:

> **People**—students, faculty, staff and neighbors

> **Program**—teaching, research, campus life and outreach

> **Place**—buildings and infrastructure

The Campus Master Plan Steering Committee (CMPSC)

CO-CHAIRS

Jeannine Uzzi, Provost

Cyrus Hagge, USM Foundation

COMMITTEE MEMBERS

Cathy Clements, Classified Staff Senate Representative and Administrative Support Supervisor,Office of Admissions

David Cole, Gorham Community Representative and Former Gorham Town Manager

Ashley Collins, Professional Staff Senate Representative and Director of Prior Learning Assessment

Dean Joyce Gibson, LAC Campus Representative

Nancy Griffin, VP Enrollment Management and Student Affairs

Trevor Hustus, Chair of the Student Senate and UM System Trustee

Alan Kaschub, Director of School of Music

Professor Jerry LaSala, Department of Physics and Director of Southworth Planetarium

Joe Menard, Executive Chair of the Commuter Student Association

Buster Neel, Interim Chief Business Officer

Ed Suslovic, Portland Community Representative and Portland Metro Board Member, Former City Councilor and Legislator

Aaron Witham, Assistant Director for Sustainable Programs

Averi Varney, Student Government Senator

EX OFFICIO MEMBERS

Joan Cohen, USM President's Liaison

Jessica Picard, Assistant Director Finance & Administration for Facilities, Logistics for Committee

John Souther, Executive Director of Facilities Management

Bob Stein, Executive Director of Public Affairs

Consultant Team

Harriman is an integrated architecture, engineering and planning firm with offices in Maine, New Hampshire and Massachusetts. We collaborate with Colleges and Universities on a variety of infrastructure and building projects. Harriman has partnered with the University of Maine System on several projects including this USM Facilities Master Plan.

Goody Clancy is a Boston-based planning, architecture, and historic preservation firm. that creates achievable visions at all scales—from entire campuses to the smallest detail of a building.
In 2017 they were participating in 76 projects on 32 college campuses in 16 states.

Rickes Associates has worked with over 200 institutions on nearly 400 projects, in 25 states and internationally. Its client base is comprised of public and private higher education institutions in all sectors, including research universities, liberal arts colleges, community colleges, faith-based institutions, HBCU's, women's colleges, and system offices.

THE PORTLAND PLAN

Introduction

The USM Portland campus has the largest enrollment of the three campuses with a fall 2017 headcount of 5,277. All are commuter students.

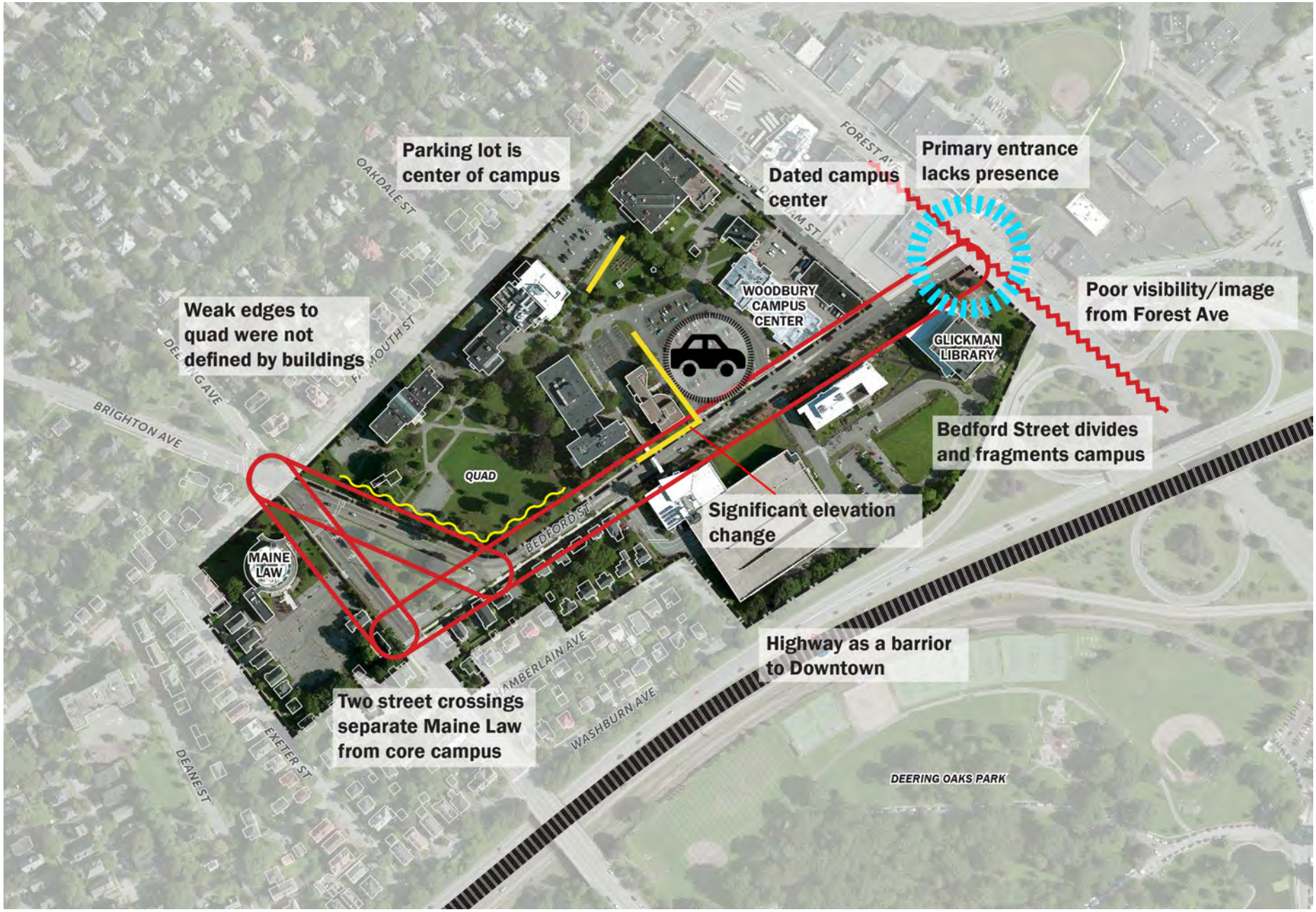
The Portland campus encompasses approximately 30 acres, with 27 buildings comprising 820,829 assignable square feet (ASF). The ASF, excluding the parking garage and unclassified space, is 425,729 ASF. This reflects the core campus space including classroom, laboratory, office, library, special and general use, health care, and central facilities.

Located less than one mile from the heart of downtown Portland, the Portland campus provides excellent access to social, cultural and internship opportunities. Linked to the Gorham campus ten miles to the west and the city center via frequent bus service, the Portland campus also has convenient access and visibility from Interstate-295, with Forest Avenue serving as the primary arrival point. A second important arrival point onto the campus is at the intersection of Deering, Brighton and Falmouth Streets, soon to be transformed into a roundabout. Bedford Street bisects the campus providing access to most of the parking supply for the campus.

The campus is in a completely developed urban neighborhood. The adjacent land consists of Interstate Highway 295 on the east, commercial uses on the north and residential uses on the west and south. The largest adjacent land use is the Oakhurst Dairy distribution center between the campus and Forest Ave. The adjacent residential areas provide housing for some of USM's students but are generally a set of very solid and cohesive neighborhoods.

The campus open space character is inconsistent in quality and design. The best open space on campus is currently defined by the Brighton Avenue Extension on the south, Bedford Street on the east, Luther Bonney on the north and Payson Smith Hall on the west. It is enhanced by several large deciduous trees dabbled through the space. Most of the other campus open spaces are interstitial spaces between buildings. The space with the most potential for campus transformation is the parking lot between Woodbury Campus Center and Masterton Hall.

The existing campus with a clear perimeter circulation, well-located gateways, and the arrangement of existing buildings all presents great opportunities for a strong campus framework capable of supporting considerable future growth.


Parking lot is center of campus
Dated campus center
Primary entrance lacks presence
Poor visibility/image from Forest Ave
Weak edges to quad were not defined by buildings
Bedford Street divides and fragments campus
Significant elevation change
Highway as a barrior to Downtown
Two street crossings separate Maine Law from core campus
WOODBURY CAMPUS CENTER
GLICKMAN LIBRARY
QUAD
MAINE LAW
DEERING OAKS PARK
FOREST AVE
OAKDALE ST
FALMOUTH ST
BRIGHTON AVE
BEDFORD ST
CUMBERLAIN AVE
WASHBURN AVE
EXETER ST
DEANE ST

The Portland Plan

The following sections describe the facilities master plan for the Portland campus. Recommendations were the result of the analytical work and the planning process conducted by the CMPSC and its consultants with feedback and input provided internal and external stakeholders.

VISION

The vision for the Portland campus is grounded in today while being aspirational toward the future.

> "To build a sustainable, iconic academic campus in the heart of Portland enhancing the commuter experience while creating a welcoming residential community."

SUSTAINABILITY

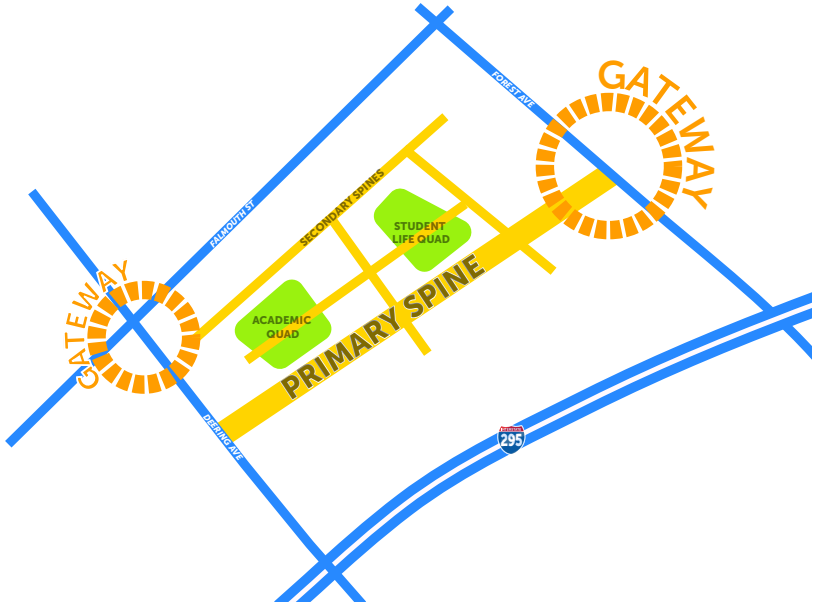
USM, as a 2007 signatory of the President's Carbon Commitment (formerly the American College and University Presidents' Climate Commitment), is working toward the goal of climate neutrality by 2040. The commitment requires the University to adopt several actions to reduce emissions of the six greenhouse gases addressed under the Kyoto Protocol, the most significant of which is carbon dioxide (CO_2). The Carbon Commitment also requires the University to develop a Climate Action Plan, establishing target dates for achieving climate neutrality; identify interim milestones; provide strategies for engaging the campus body in relevant research; and set out actions to make climate change and sustainability part of the curriculum. In October of 2017 USM's Climate Action Plan became part of the broader Campus Sustainability Strategic Plan structured on three content areas:

- **Energy** (energy reduction projects, minimum new construction benchmarks, increased sustainable transportation infrastructure and options)
- **Material Resources** (waste reduction and avoidance, recycling, and re-use efforts
- **Education and Outreach** (professional development for students, hands-on experiences improving campus, and increase eco-literacy)

To support the existing President's Carbon Commitment and to demonstrate sustainability leadership in the local community, the Master Plan Steering Committee recommends that the University sign the Portland 2030 District Commitment, whose benchmarking goals for new and existing buildings have been adopted in this Master Plan.

MASTER PLAN FRAMEWORK

The long-term framework describes the important physical attributes of the campus and how they are assembled to create a resilient and legible campus. The circulation "frame" around the campus consists of US 295, Forest Avenue, Falmouth Street and Deering. Gateways into the district remain unchanged. The framework illustrates the simplicity of two campus greens connected by campus circulation providing a flexible and bold framework for future development.



DEVELOPMENT PROGRAM

The Portland development program continues and expedites USM's capital renewal program and begins to build facilities that allow the campus to meet its vision. The program has been categorized into time periods in which the program requirements need to be developed.

Immediate (Now)

- **Continuing Capital Renewal**—This will be a continuation of the program the University has been managing over the past several years in which buildings and spaces in critical deferred maintenance are addressed. Payson Smith Hall, Luther Bonney Hall and the Science Building are all top candidates for investment as funding becomes available. The renovation of these buildings presents the opportunity through redesign of space to explore meeting some of the office and specialized classroom needs identified in the space needs analysis.

Short-Term (3-5 years)

- **Career and Student Success Center**—This building will replace the dining and cocurricular activity space currently in the Woodbury Campus Center. In addition, the vision for this building is to provide a common place for programs and functions which support both the academic success and long-term professional success of the USM student The building is anticipated to be approximately 40,000 GSF.
- **Student Housing**—The introduction of residence halls on the Portland campus is expected to be delivered in two phases: the first phase 400 beds and the second phase consisting of an additional 200 beds. It is anticipated that this will be built to accommodate upper class undergraduate students and graduate students.

PROGRAM ELEMENTS

Immediate

- Continuing Capital Renewal

Short-Term

- Career and Student Success Center
- Student Housing
- "Quad"
- Graduate Center for Professional Studies
- Center for the Arts
- Transportation

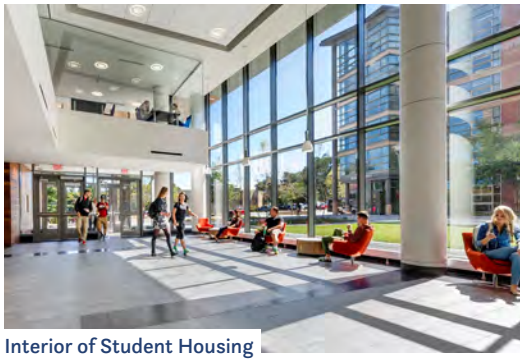
Long-Range

- Housing
- Academic

ILLUSTRATIVE IMAGES OF COMPARABLE PROGRAM ELEMENTS

Career and Student Success Center

Graduate Center



Interior of Student Housing

Quadrangle

Performance Space

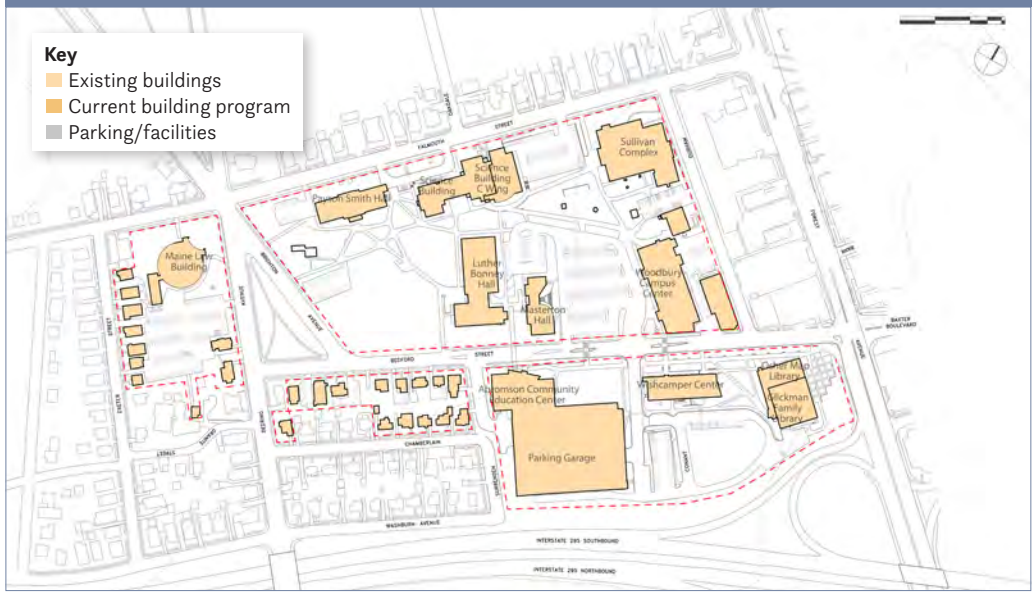
- **"Quad"**—A key component of the transformation of the Portland Campus is a second campus open space, located adjacent to the residence halls and the Career and Student Success Center.
- **Graduate Center for Professional Studies**— A new Graduate Center is anticipated to accommodate and integrate three primary programs: the University of Maine School of Law, a University of Maine MBA Program and possibly the Muskie School of Public Service. It is anticipated that the new facility will be in the range of approximately 160,000 gross square feet with a footprint of approximately 38,000-45,000 gross square feet.
- **Center for the Arts**—Serving both the needs of USM students and the community, this new facility will be a premier arts venue in Portland. It would include a 1,000-seat theatrical performance hall, 600-seat music theater, black box theater, and fine arts gallery space.

  USM has identified the need for a purpose-built performing arts building for decades. Currently, Theatre and Music perform on campus in small halls in retrofitted historical buildings with seating for no more than 182 audience members. Large ensembles and choral groups use off campus venues such as Gorham High School, Merrill Auditorium or churches in Portland for their concerts. USM also lacks a hall with an orchestra pit and lacks a theatre that has access to industry-standard technology. Creating a Center for the Arts in Portland will create the first ever purpose-built facility for the arts at USM. This will raise the profile of the arts at USM while providing a medium-sized performance center that is also needed by the greater Portland community. This Center for the Arts will not only showcase the work of USM's students, but will create a space for artistic collaboration in Portland.
- **Transportation**—The building plans for the Portland campus will affect parking, displacing current parking spaces, while creating new demands. The master plan accommodates 1,000 spaces, 600 displaced and 400 net new. It is anticipated that Metro passes for all students and employees will also help to address parking issues. To minimize the investment in parking supply, the system should be studied at each phase of the project, with a goal to encourage public, non auto centric transportation.

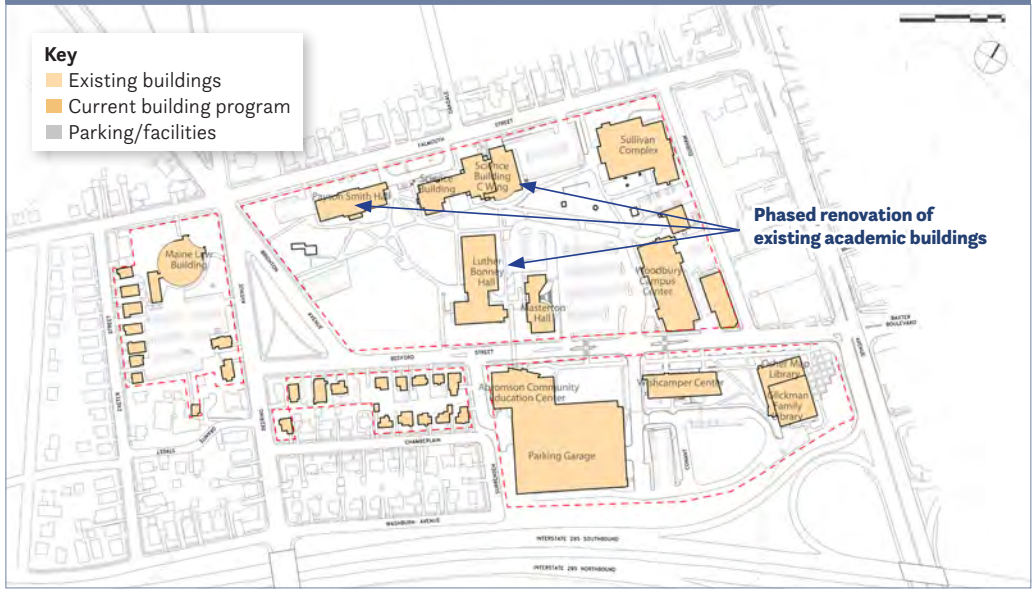
Long-Range

The plan looks to accommodate additional development that can become sites for a variety of uses, including housing, academics, and improvements to fitness and wellness by redeveloping Sullivan.

PHASING: THE CAMPUS TODAY



PHASING: IMMEDIATE



MASTER PLAN RECOMMENDATIONS

To accomplish the vision and transform the Portland campus, the master plan creates a new campus quad and identifies sites for the new large projects. The new campus quad will serve as the new campus heart, surrounded by a new residence hall and Career and Student Success Center.

Components of the plan:

- Building the new campus heart will need to be executed in phases. The first phase is to construct the Career and Student Success Center (CSSC). After looking at several alternative locations for the Center there was only one location that would be immediately available and centrally located on the campus. The selected location for the CSSC is in between the existing surface parking lot and the parking lot between the Sullivan Complex and Wing C of the Science building. Building on this site will help frame and create the new central quad; it will be visible from Bedford Street and can be connected to the Sullivan Complex.

  The second phase is to demolish the Woodbury Campus Center and make the site available for student housing. The plan recommends a 4-story building to accommodate 300 beds. The type and mix of units will be constructed to serve upper class undergraduates and graduate students. To capitalize on its location adjacent to the new quadrangle, the ground floor will be used to accommodate programs open to the whole campus community. In doing so, it will help activate and engage the new campus quad.

  The last step in completing the new campus heart is to construct the new quadrangle. This will require the relocation of the surface parking lot. The quad is seen as a place designed to accommodate a variety of programs, from special events like graduation to a place to congregate, relax or study between classes.

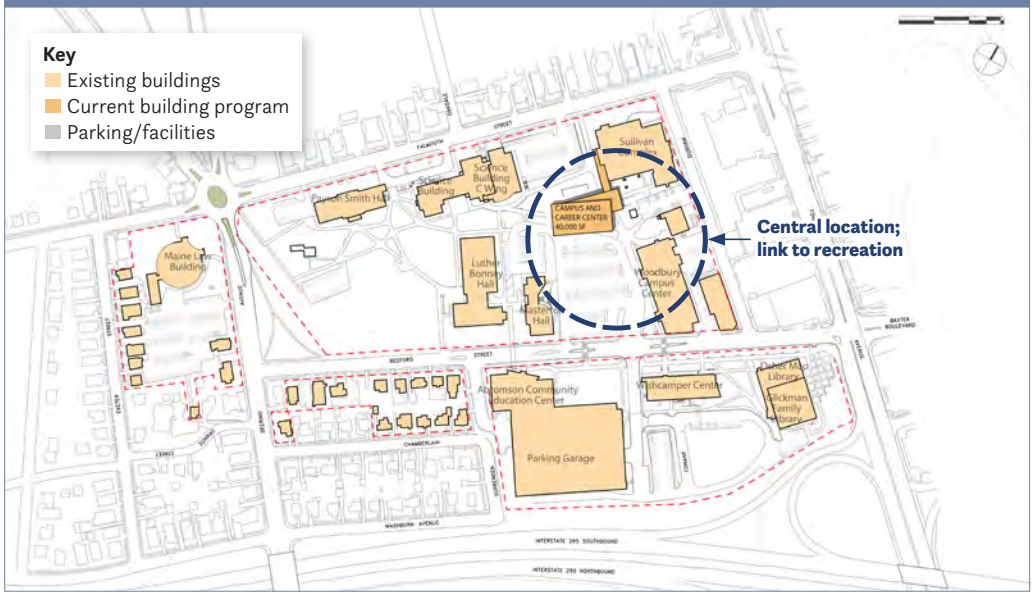
- The Center for the Arts will offer theater and fine arts gallery space, serving USM's Arts, Music and Theater programs, as well as community needs. After careful consideration of different

sites, the parking lot behind Wishcamper was selected as the best location for the Center.

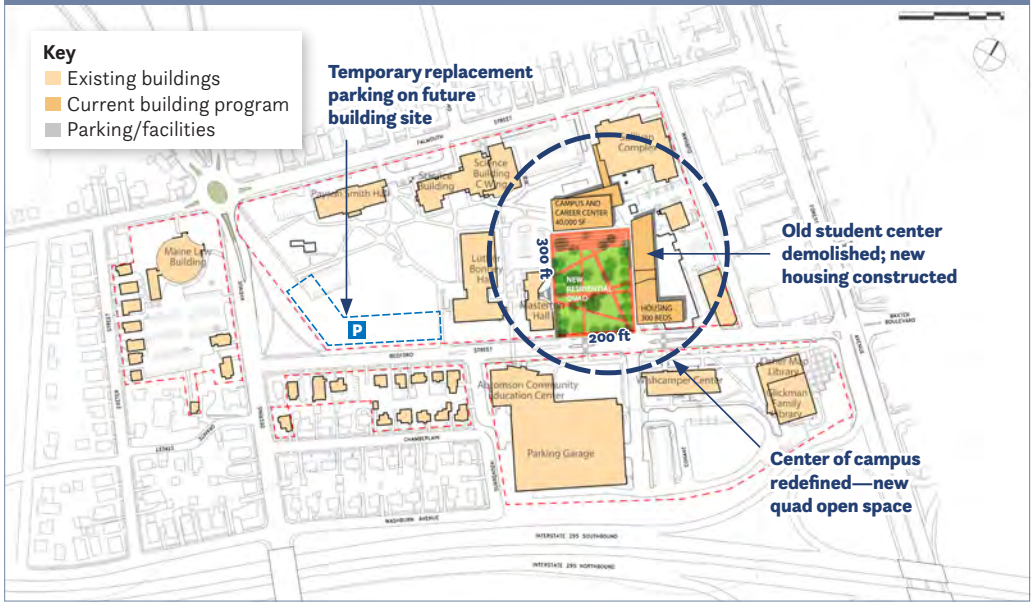
Key attributes of this site include highway visibility, adjacent parking and a campus edge location. The visibility from 295 of a stunningly designed building would provide USM an opportunity to enhance its image in the City and region and support its world-class music program. Given that the peak use of the Center will be primarily during off peak class times, the adjacent parking garage would provide a convenient location for patrons to park and attend events.

- The Graduate Center for Professional Studies will provide a single integrated space for the Law School, a new MBA program offered by the University of Maine, and USM's Muskie School of Public Service. Key attributes of a site for this building are visibility, immediate availability and ability to accommodate the estimated 160,000 GSF building. The preferred site for the Graduate Center is at the current Brighton Avenue Extension, which will be closed and given to USM once the City of Portland completes its roundabout project at the intersection of Brighton, Deering and Falmouth streets. This site's prominent location will help to further define the existing campus open space.
- After the development of the Graduate Center, the Law building can be demolished. The removal of the Law Building will open this site in the near term for additional surface parking and, in the long term, provide a site for future underdetermined campus uses.
- Additional sites were identified during the process that are not immediately needed for campus development. The sites are illustrated on figure x. Some of the sites are immediately available and could be used to accommodate student housing. The other sites will require some enabling projects to make them available for development. In total the plan identifies an additional 400,000 GSF of development potential above what is in the near-term program.
- Continued capital renewal of existing buildings will be addressed throughout all phases of the plan. During the replacement of aging

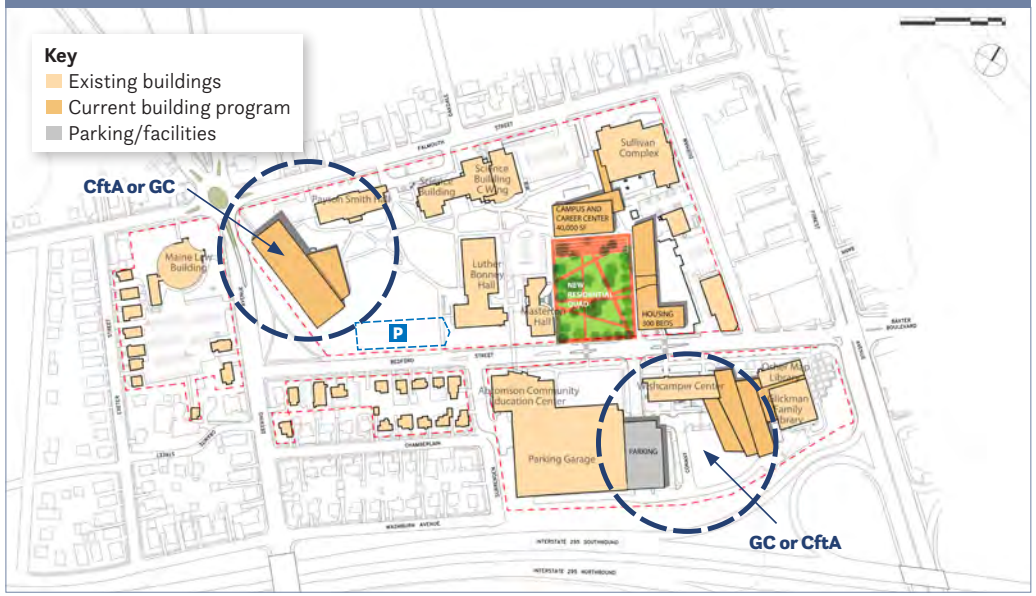
PHASING: SHORT-TERM—CAMPUS AND CAREER CENTER



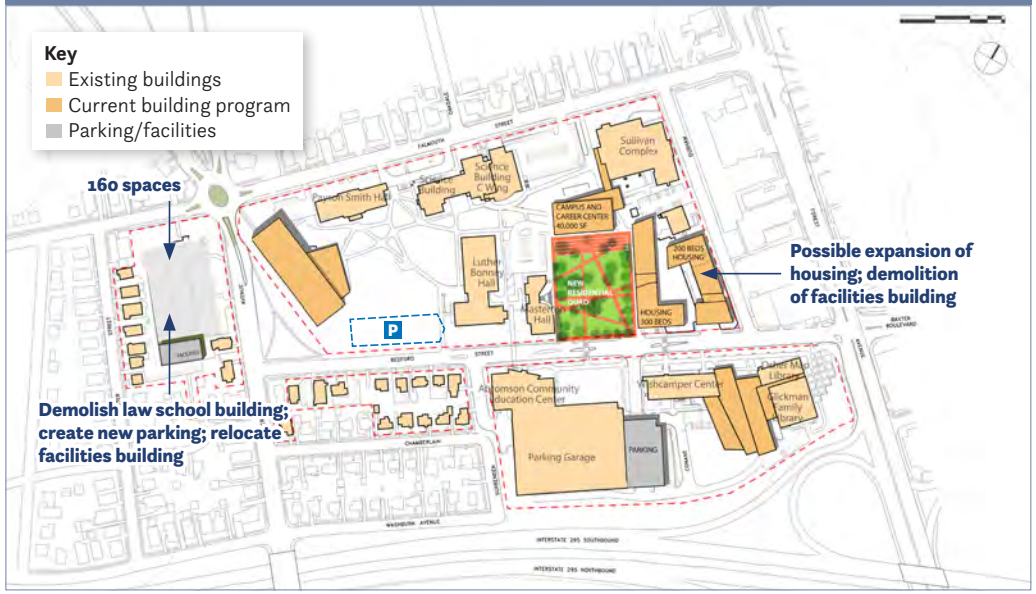
PHASING: SHORT-TERM—RESIDENTIAL AND QUAD



PHASING: SHORT-TERM—GRADUATE CENTER AND CENTER FOR THE ARTS



PHASING: PARKING AND ADDITIONAL HOUSING



infrastructure, these efforts should seek to efficiently add space to the campus. This can be accomplished by careful repurposing and reconfiguring spaces during the design and planning of the capital renewal projects. The existing capital renewal program will determine the priority of the buildings and spaces renovated throughout all phases of the plan.

The master plan recommendations do not violate any current restrictions in the City of Portland's overlay zone; however, they are seen as the basis to continue discussion with the City of Portland to update and create an institutional overlay district.

PHASING: SHORT-TERM—COMPLETION OF CORE ELEMENTS

PHASING: LONGER-RANGE—10 YEARS+

400,000 GSF | *Site available for academic, housing, parking or athletic growth beyond current program*

THE
GORHAM
PLAN

Introduction

The USM Gorham campus has the second largest enrollment of the three campuses with a fall 2017 headcount of 2,570. It is currently the only campus with residence halls, serving approximately 1,200 students.

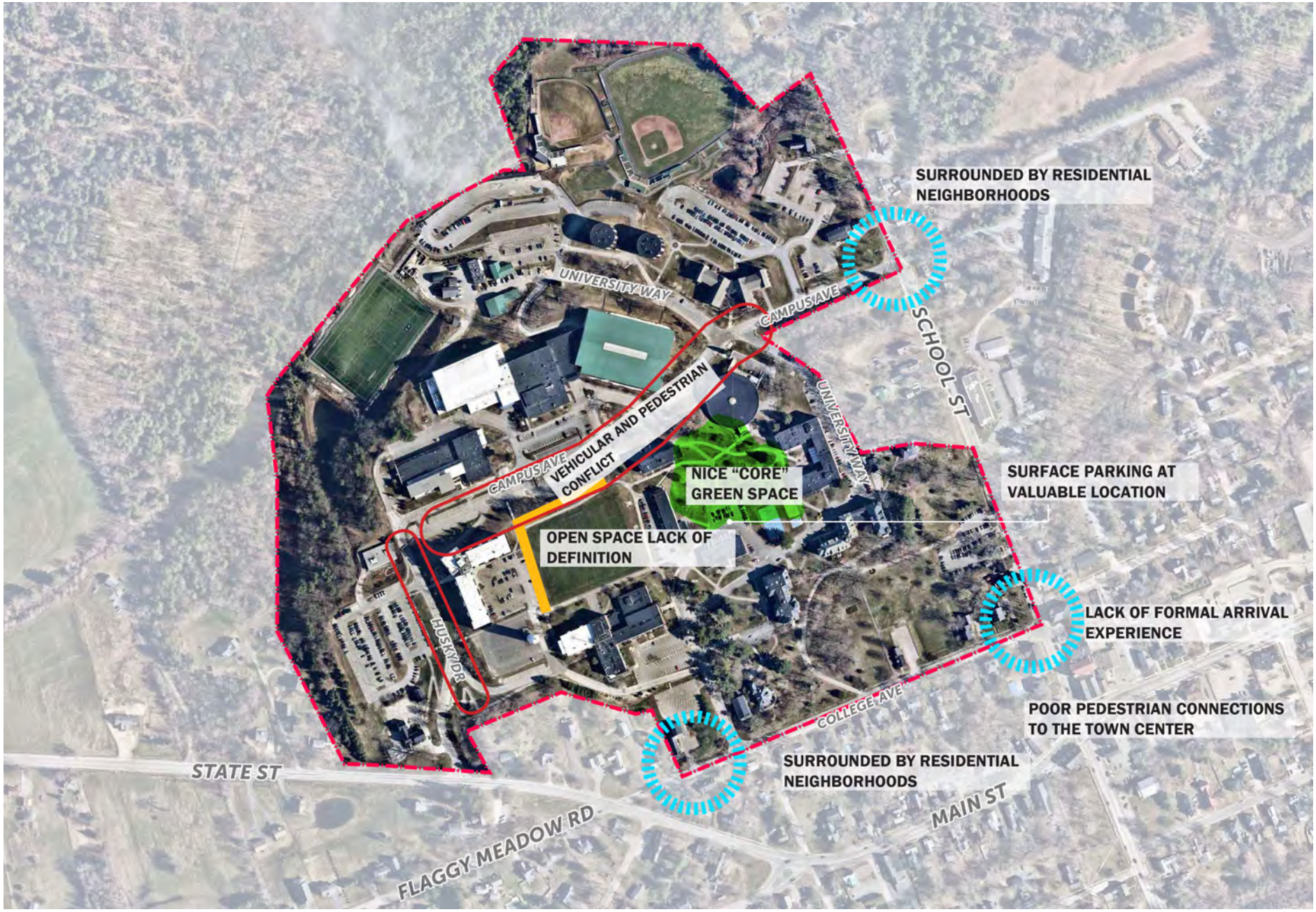
Encompassing approximately 96 acres at the west edge of the Town of Gorham, the Gorham campus provides the quintessential New England college experience. It is linked to the Portland campus and the City of Portland via frequent bus service and has convenient access from the regional roadway network. State Street is the primary campus gateway, with a second arrival point off School Street. Neither of the locations provides a consistent and positive first image of the campus.

There are 36 buildings comprising 641,997 assignable square feet (ASF). The ASF, excluding residential and unclassified space, is 442,905 ASF. This reflects the core campus space including classroom, laboratory, office, library, special and general use, health care, and central facilities. Dickie-Woods was excluded from this study as it is slated for demolition.

At the top of a ridge, the topography makes it difficult to get views into the campus from the Town of Gorham. It also makes direct pedestrian connection to the town center difficult. The adjacent land uses are predominately single-family residential homes and retail uses along Main and School Street. The western edge of the campus is defined by Tannery Brook.

The campus open space character is inconsistent in quality and design, with the campus pedestrian experience dominated by roadways built to serve numerous parking lots.

There is great potential for the Gorham campus by renewing the campus historic campus landscape. With historic Victorian educational architecture, NCAA athletic venues, and residential halls all located on a wooded hilltop, there are great opportunities to develop a strong campus framework that can have a considerable impact upon student life and success.


SURROUNDED BY RESIDENTIAL NEIGHBORHOODS
UNIVERSITY WAY
CAMPUS AVE
SCHOOL ST
VEHICULAR AND PEDESTRIAN CONFLICT
CAMPUS AVE
UNIVERSITY WAY
NICE "CORE" GREEN SPACE
SURFACE PARKING AT VALUABLE LOCATION
OPEN SPACE LACK OF DEFINITION
HUSKY DR
LACK OF FORMAL ARRIVAL EXPERIENCE
COLLEGE AVE
POOR PEDESTRIAN CONNECTIONS TO THE TOWN CENTER
STATE ST
SURROUNDED BY RESIDENTIAL NEIGHBORHOODS
MAIN ST
FLAGGY MEADOW RD

The Gorham Plan

The following sections describe the master plan recommendations for the Gorham campus.

VISION

The vision for the Gorham campus is grounded in today while being aspirational toward the future.

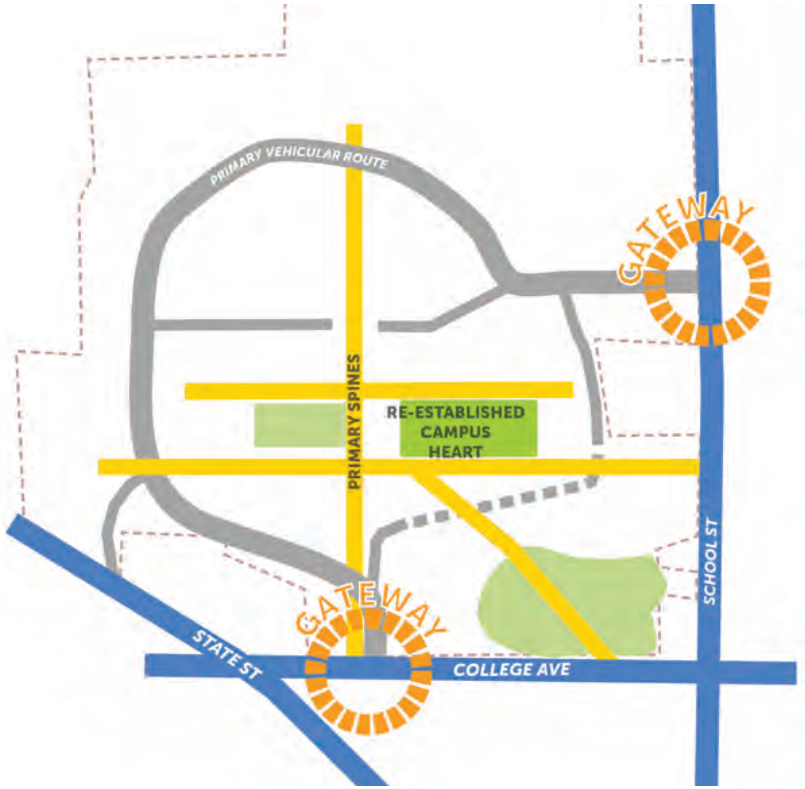
> "To sustainably strengthen an iconic campus focused upon the academic experience with an emphasis on campus life."

SUSTAINABILITY

USM's carbon neutrality goal for Second Nature's Presidents' Carbon Commitment also applies to the Gorham campus. The Campus Sustainability Strategic Plan aims for a 35% reduction in heat and electricity related emissions in existing buildings by the year 2025, as an interim target toward total neutrality by 2040. In order to achieve 35% reductions, significant investment in deferred maintenance is necessary to increase the energy efficiency of older buildings. Such an investment is also necessary to increase the comfort and quality of the spaces students use for learning, studying, eating, and sleeping. True sustainability addresses social, economic, and environmental dimensions of a University, and investing in deferred maintenance is a critical component of all three. To accomplish this, the Committee recommends allocating capital funds toward the Gorham campus' building stock, and additionally using an Energy Savings Performance Contract (ESPC) through an Energy Services Company (ESCO) to leverage private investment. In addition to building energy use, we also strive to increase access to sustainable transportation, reduce material resource waste, and increase hands-on student projects to benefit the Gorham campus.

MASTER PLAN FRAMEWORK

The Gorham campus plan is built upon reestablishing a campus heart, providing a clear pedestrian circulation framework supported by vehicular circulation that does not dominate the campus landscape. The plan, which reestablishes the campus green and connects it to the larger campus and the Town of Gorham, also provides a flexible and bold framework for future development.



DEVELOPMENT PROGRAM

The Gorham development program continues and expands USM's capital renewal program with a focus on the campus life facilities. The program has been categorized into time periods in which the program requirements need to be developed.

Immediate (Now)

- **Continuing Capital Renewal**—This will be a continuation of the program the University has been managing over the past several years in which buildings and spaces in critical deferred maintenance are addressed.

Short-Term (3-5 years)

- **Student Quad Renewal Phase One**—This project relocates the surface parking lot behind Russell Hall and closes University way to emergency and service vehicles only. As part of this project, Dickie-Wood will be demolished, and a surface parking lot will be built on the site. This additional parking will accommodate the parking removed as part of the Student Quad Renewal project.
- **Brooks Student Center**—A critical component of the success of the Gorham Campus will be the renovation of the Student Center.
- **Welcome Center**—The reuse of an appropriately sized and located space as a welcome center is a Gorham Plan recommendation.
- **New/Renewed Student Housing**—There is significant need for much of the housing supply to be renovated or replaced. The occupancy of Spring of 2018 was over capacity. Renovation of housing will require "swing beds" though new development in Portland may be able to accommodate that need.

Long-Range

The plan looks to accommodate additional development in the future that can become sites for a variety of uses, including housing, academic, athletics and fitness.

PROGRAM ELEMENTS

Immediate

- Continuing Capital Renewal

Short-Term

- Student Quad Renewal Phase One
- Brooks Student Center
- Welcome Center
- New/Renewed Student Housing

Long-Range

- Housing
- Academic
- Athletic/Fitness

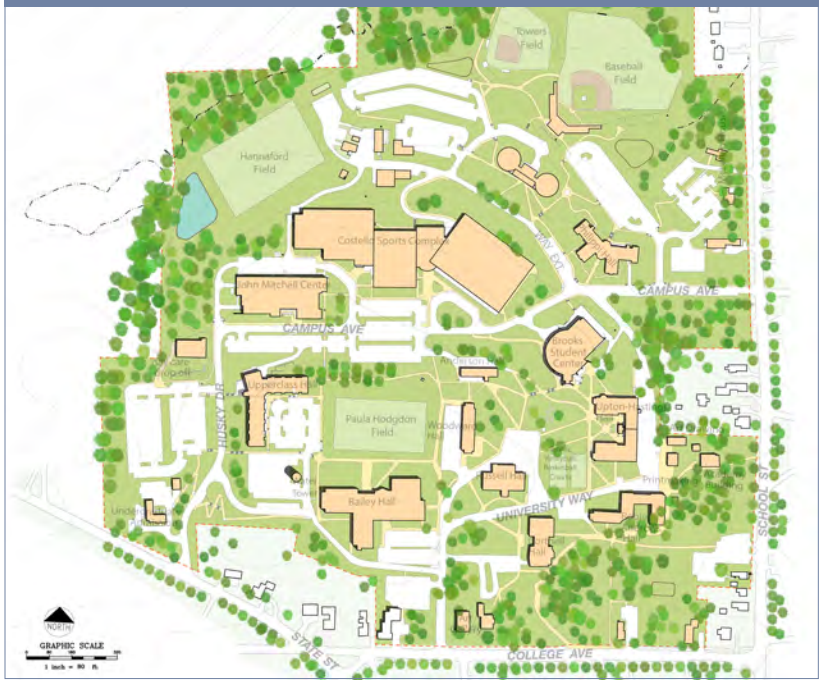
MASTER PLAN RECOMMENDATIONS

To accomplish the vision and create transformational moves that improve the student experience, the master plan recommends renewal of the Gorham campus heart and identifies sites for additional housing and academic sites as they are needed.

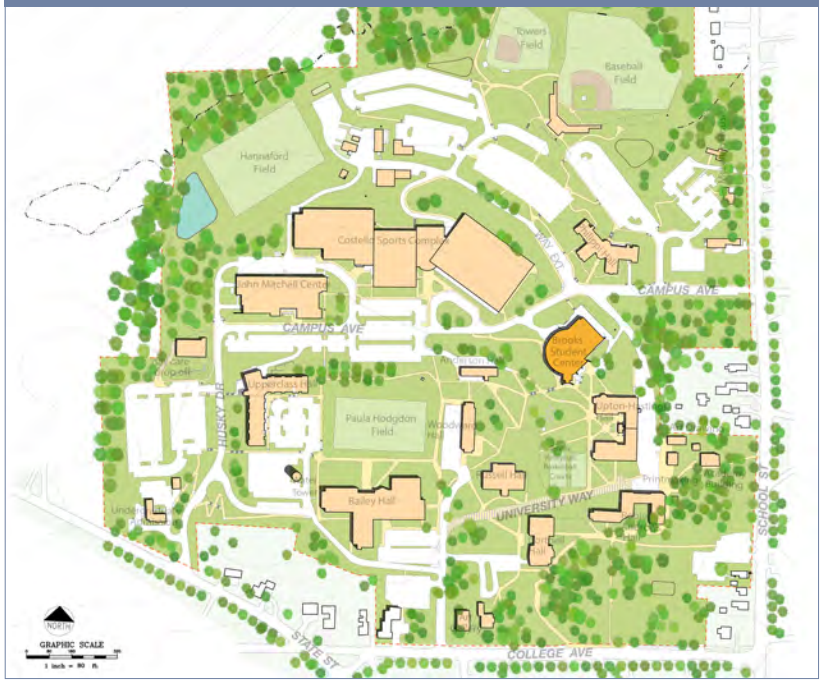
The immediate phase of redevelopment would be to re-establish the campus heart by removing the surface parking behind the Russell Theater and redesigning University Drive to be more pedestrian friendly. In doing so, it will also be less of a barrier between the historic buildings on the crown of the hill. The corridor will continue to accommodate emergency and service vehicles.

The next phase of development at the Gorham Campus is to focus upon the capital renewal of the historic core structures. Russell Hall, Robie-Andrews Hall, and Corthell Hall are all top candidates for investment as funding becomes available. The renovation program started in Bailey Hall should be continued. The renovation of these buildings presents the opportunity through redesign of space to meet some of the office and specialized classroom needs identified in the space needs analysis.

EXISTING CONDITIONS

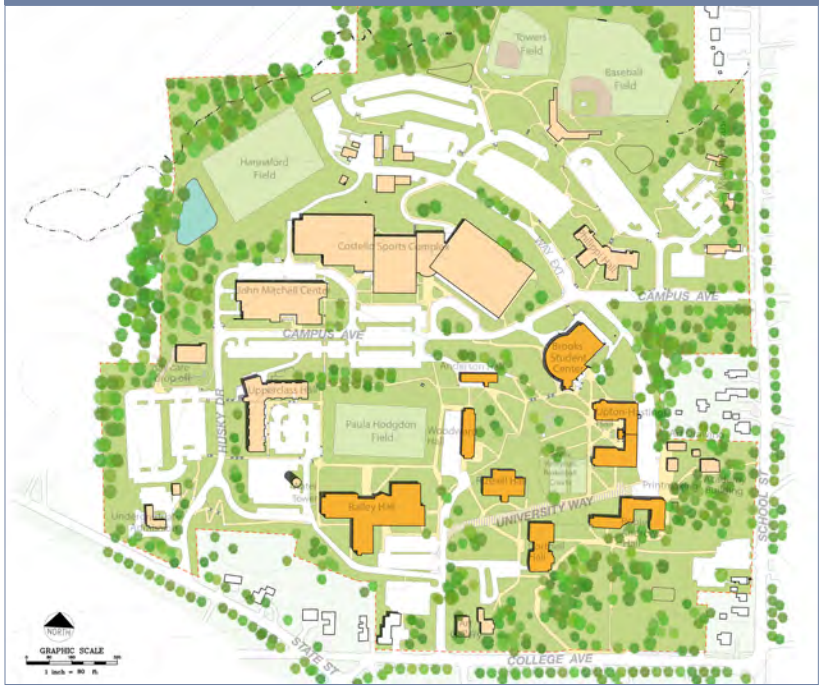


PHASING IMMEDIATE: REESTABLISH A CAMPUS HEART

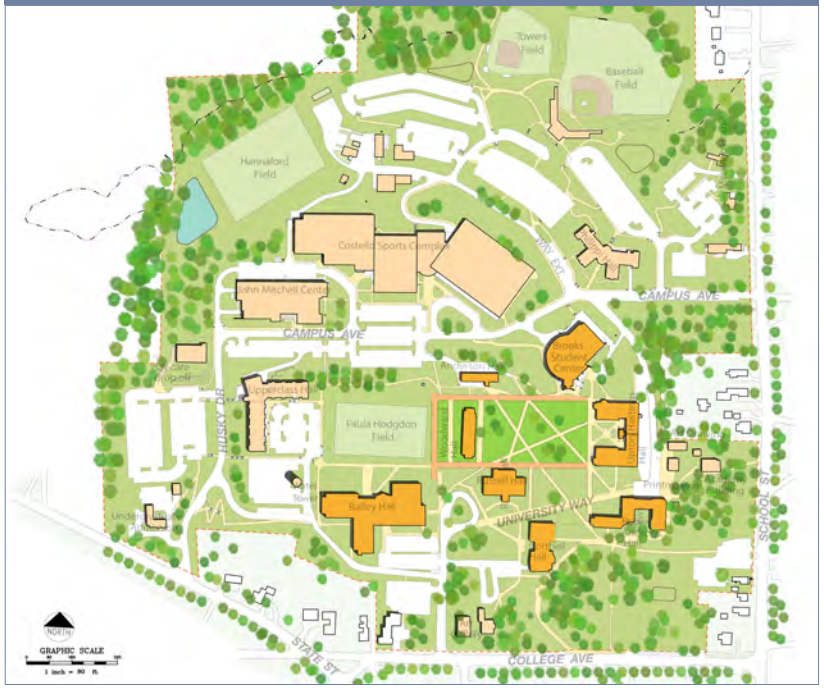


Brooks Student Center
Woodward Hall
Upton-Hastings Hall
Russell Hall
University Way
Robie-Andrews Hall

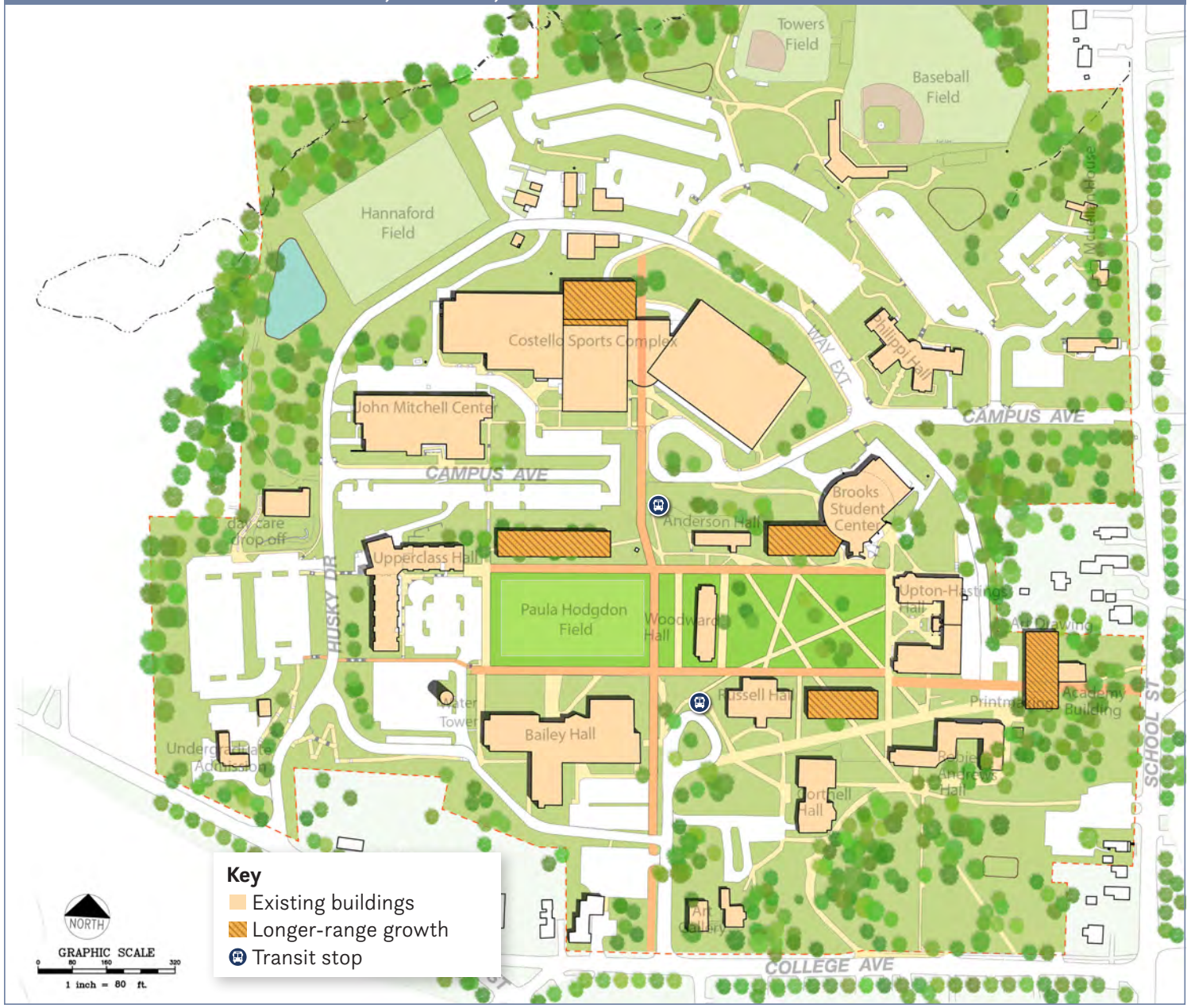
PHASING: IMMEDIATE—ONGOING CAPITAL RENEWAL



PHASING: SHORT-TERM—CAPITAL RENEWAL CAMPUS LANDSCAPE



PHASING: LONG-RANGE—ACADEMIC, HOUSING, AND ATHLETICS



LEWISTON-AUBURN

Introduction

The Lewiston-Auburn campus has the smallest enrollment of the three campuses with a fall 2017 headcount of 374. The campus encompasses approximately 20 acres and is located at the west edge of the Town of Lewiston. The location and character of the campus is completely determined by its location and development in an industrial park just off the Interstate

There is one campus building comprising 63,531 assignable square feet (ASF). The ASF, excluding unclassified space, is 62,908 ASF. This reflects the core campus space including classroom, laboratory, office, library, special and general use, health care, and central facilities.

Early in the process it was determined the University needed to complete an academic plan for the campus prior to engaging in the facilities master plan process.

APPENDIX

Portland Space Needs Analysis

The space needs analysis for the Portland campus was grounded in institutional strategic drivers of enrollment and personnel, supported by the space inventory, driven by nationally recognized space planning guidelines, and tempered by the specific needs of the University.

PLANNING METHODOLOGY

The outcome of the study is an order-of-magnitude space program organized according to the coding structure of the Facilities Inventory Classification Manual (FICM). A more detailed space needs analysis of instructional space was conducted by the consultant team to inform a finer-grained set of recommendations and is included at the end of this report. Space needs were quantified for Current Calculated, Current Adjusted, and one scenario, Projected Adjusted, using the FTE from the five-year high enrollment. The Current Adjusted, as well as the Projected Adjusted, includes adjustments to the mathematically calculated need. These adjustments are informed by trends in higher education and the interview findings, as well as the culture of the campus, which may not be accounted for in the calculations alone.

INTERVIEWS

From October 18, 2017, through October 30, 2017, the consultant team conducted interviews on the Portland, Gorham and Lewiston-Auburn campuses with senior administrators, faculty members, departmental and unit directors and managers, and administrative and academic staff members. These interviews provided the qualitative data related to the use of and demand for space on the campus; insights into programmatic and spatial relationships between departments; and ideas regarding what facility improvements were needed to meet current and future program and operational requirements.

Overall, the space deficits identified by the interviewees were supported by the quantitative analysis in terms of specialized instructional space, student life/services/club space, meeting and conference space, and athletics space needs, both now and in the future.

The thematic summary of findings is provided at the end of this report.

PORTLAND RECOMMENDATIONS

The space deficit for the campus, identified by FICM, totals 17,800 ASF for Current Adjusted and 61,600 ASF for Projected Adjusted. This finding is based on the proposed enrollment of 3,504.2 FTE, as well as maintaining the currently compressed scheduling window of 29 hours per week. To meet some calculated deficits an optional non-capital suggestion would be to expand the scheduling window from the compressed 29 hours a week, to a more normative 34 hour per week. This would eliminate the need for nine (9) classrooms and approximately 5,000 ASF. These could potentially be repurposed to meet deficits in other space types, such as student study areas. The expanded window would also allow for an opportunity to try new pedagogies and selectively renovate/repurpose low-use rooms.

If the desire is to maintain a compressed scheduling window, an area for more detailed review is the potential availability of the 22,000 ASF of unclassified space, particularly the almost 5,400 of vacant space in the Science B-Wing Basement. While, by the numbers, the ASF could meet select space needs, the existing areas were former animal facilities and may not be able to be re-purposed for teaching laboratory space. As the University continues to implement its Master Plan, care must be taken to critically examine available space and better define, repurpose and refurbish it for more collaborative and efficient use.

The following summarizes the space needs by category and identifies areas that may require specific additional review as the Plan is implemented.

Instructional (100)

At the time of this analysis, there were 44 spaces and 36,294 ASF identified as general-purpose classrooms available for scheduling. There are an additional 23 rooms and 17,833 ASF of classroom space that was dedicated to specific programs. The analysis was conducted on the 44 general-purpose classrooms and 36,294 ASF.

The figure on the following page presents the existing distribution and calculated need for classrooms at both the existing scheduling protocol of 29 hours, as well as applying the 34-hour daytime scheduling window for comparison. For both analyses, the need was calculated based on guidelines of 67 percent average weekly daytime hour utilization and average seat occupancy.

The table aligns the existing distribution of rooms by capacity (seat count) to the need. Using the existing stock of rooms, seat counts, and ASF, a theoretical exercise of "right-sizing" was conducted, which is mathematically calculating the appropriate capacity of the existing rooms.

While right-sizing does not change the total number of classrooms available, it can often bring the distribution of classroom capacities into better alignment with course section sizes. Portland is relatively below target for ASF/seat and so the re-alignment of rooms by capacity could provide some major changes, including providing more 21- to 30-seat classrooms for the campus. By adjusting the current room capacities, the existing rooms can be maintained and meet the necessary space requirement for current enrollment and course offerings. Under the majority of the window calculated and projected scenarios, the needs can be met strategically within the existing footprint of space.

Space Type	Current ASF	Current Adjusted 2,995.8 FTE	Surplus or (Deficit) to Current ASF	Projected Adjusted 3,504.2 FTE	Surplus or (Deficit) to Current ASF
100: Classroom	55,076	55,076	0	55,076	0
210/215: Class Laboratory	28,341	37,493	(9,152)	38,741	(10,400)
220/225: Open Laboratory	15,785	15,785	0	15,785	0
250/255: Research Laboratory	16,140	19,700	(3,560)	19,700	(3,560)
300: Office	144,419	144,419	0	144,419	0
400: Study/Library	66,417	70,984	(4,567)	73,618	(7,201)
500: Special Use, General	2,786	2,786	0	2,786	0
500: Athletics	26,671	26,671	0	26,671	0
600: General Use	42,101	42,101	0	82,101	(40,000)
700: Support*	27,476	27,476	0	27,476	0
800: Health Care	517	1,000	(483)	1,000	(483)
Total	**425,729**	**443,491**	**(17,762)**	**487,373**	**(61,644)**
Other Space (000's)	22,163	22,163	0	22,163	0

** Excludes 372,937 ASF of vehicle parking*

CLASSROOM NEED

CATEGORY	EXIST.	29-HOUR CALC. NEED	29-HOUR PROJ. CALC	34-HOUR CALC. NEED	34-HOUR PROJ. CALC	OPTIMIZE EXISTING SPACE RT.-SIZE EXIST.	OPTIMIZE EXISTING SPACE ADJ.
1 to 20	7	12	11	10	10	6	7
21 to 30	2	8	9	7	8	8	8
31 to 40	8	10	9	8	8	16	18
41 to 50	14	5	6	4	5	8	4
51 to 60	7	2	3	2	2	2	2
61 to 70	2	1	2	2	2	0	1
71 to 80	0	0	0	0	0	0	0
81 to 90	0	0	1	0	1	0	0
91 to 100	1	2	1	1	0	1	1
101+	3	1	2	1	1	3	3
Total	**44**	**41**	**44**	**35**	**37**	**44**	**44**
ASF	36,294	36,190	41,630	31,180	37,080	36,294	36,294
Seats	2,246	1,645	1,910	1,415	1,665	1,872	1,980

Specialized/Research (200/250)

Specialized Instructional

There are 24 spaces and 23,098 ASF assigned to instructional lab space, such as Biology, Art, Nursing, Linguistics, etc. Space needs for specialized instructional space are based on the number of hours by the discipline of the courses, as many courses/programs cannot share space. Where opportunities to continue shared use of the spaces between similar courses were possible, these were maintained. Using the rubrics of 80 percent occupancy, 50 percent utilization, and discipline-specific ASF per station, it is recommended that, beyond maintaining its current complement of SI spaces, Portland add five (5) additional labs, including one (1) Art–Drawing (1,440 ASF), one (1) Art–Studio (1,440 ASF), one (1) Biology–Anatomy and Physiology (1,440 ASF), one (1) Chemistry–General (1,440 ASF), and one (1) Nursing –Fundamentals Lab (1,280 ASF). The 29-hour and 34-hour windows show similar incremental need with the difference that the 34-hour window would eliminate the short-term need for an additional Art–Drawing lab, and the projected need for an additional multipurpose computer lab.

Research

There is a continued desire for this type of student/faculty engagement space on campuses throughout academia. Currently, Portland has 16,140 ASF of faculty research space. The calculated need for Portland is for 19,700 ASF that is then held for the Adjusted need to provide room for future expansion.

INCREMENTAL SI NEEDS

Discipline	29-Hour + Rooms	29-Hour + ASF	34-Hour + Rooms	34-Hour + ASF
INCREMENTAL CURRENT SI NEED (2,995.8 FTE)				
Art–Drawing	1	1,440	0	0
Art–Studio	1	1,440	1	1,440
Biology–Anatomy and Physiology	1	1,440	1	1,440
Chemistry–General	1	1,440	1	1,440
Nursing–Fundamentals	1	1,280	1	1,280
Total	**5**	**7,040**	**4**	**5,600**
INCREMENTAL PROJECTED SI NEED (3,504.2 FTE)				
Art–Drawing			1	1,440
Computer Lab–Multipurpose	1	960	0	0
Total	**1**	**960**	**1**	**1,440**
Grand Total–Current & Projected	**6**	**8,000**	**5**	**7,040**

Qualitative issues need to be identified and addressed.

Office (300)

Portland has 679.5 FTE (723 headcounts) faculty/staff on campus, housed within 144,419 ASF of office and associated support space. Office space ranges from a 30 ASF Political Science office in Payson Smith to a 3,669 ASF office in the Science building used by the Maine Cyber Security Cluster, with an overall average of 143 ASF across faculty, staff, and administrative spaces. The application of appropriate planning multipliers and assumptions that the spaces are properly outfitted and usable, result in the need for 133,000 ASF.

Those spaces that are less than 90 ASF should be reviewed for appropriateness in terms of assignment and use. As the campus moves forward with the master plan, putting office guidelines into effect should be considered to begin standardizing the size of offices across the campus.

Library/Study (400)

The library and study space category encompass almost 66,500 ASF and has an overall space needs deficit of about 4,500 ASF in the study category.

Library space has become the learning commons at many institutions and incorporates coffee bars, some social areas, group study rooms, etc. Portland has undergone numerous renovations that have produced some exemplary learning commons styled facilities.

Special Use (500)

The Special Use FICM space category consists of various space clusters including athletics, field buildings, and greenhouses, among others. These spaces are calculated based on the specialized need for the associated space types.

More often than not, the primary driver for campuses in this category is Athletics/Recreation space, which is the case for Portland. Athletics/Recreation encompasses 26,600 ASF located in Sullivan Gym. The base calculated ASF for athletics at a four-year institution is 50,000 ASF. Portland and Gorham share athletics resources, and as such the existing ASF between the two campuses meets the needs of the University. The challenge for Portland is Sullivan Gym, the main athletics building, no longer physically supports campus needs. The layout is not conducive to functions housed in the building, and there are concerns that space is subpar for the potential addition of residential life.

Two other space types in this category are Media Production and Greenhouses. The campus has a radio station located in Bedford 92, and some additional media support space located within Glickman Library, while the calculated need is for 5,000 ASF, the current 2,342 ASF appears to meet campus needs. The campus also has a greenhouse located in the top floor of Science A-Wing (444 ASF), while the calculated need exceeds the existing, the current space is underutilized.

General Use (600)

The General Use FICM space category consists of various clusters including assembly, exhibition, food service, and meeting rooms (student-centered services). Some of the highlights of this area:

- **Assembly:** Hannaford Hall, part of the Abromson building, is assigned to this category. 40,000 ASF has been incorporated into the Projected Adjusted for the Fine Arts Center that will serve both the Gorham and Portland communities
- **Dining:** Currently, the main dining service is located within the Woodbury Campus Center. Today's students are looking for more inviting and varied dining experiences, featuring specialty food stations, high top tables, booths, comfortable seating, and connectivity—spaces and furnishings that promote easy interaction. Although the overall ASF for dining has been maintained, location, function, and aesthetics may need to be refreshed.
- **Recreation:** This space type is often found in student centers and consists of game rooms, TV lounges, general fitness rooms, etc.

Sullivan Gym, quantitatively, meets the needs of the campus as a whole.

- **Meeting Rooms:** This type of space is generally available to internal and external groups such as study groups, board meetings, community groups, etc. There are multiple spaces and flexible rooms located throughout the campus that meet the calculated need. The challenge for these spaces is the lack of storage areas for tables, chairs, food, etc.

Central Facilities (700)

Central Facilities (27,476 ASF) support overall campus operations and include mail, receiving, general storage, and shop space, among others. The current ASF meets the overall needs of the campus. It should be noted that the unassigned space on campus is, in part, serving an additional role as storage, which will need to be addressed when the spaces are recaptured.

Health Services (800)

Health Services is currently located in Payson Smith, with an upcoming planned move to Sullivan Gym. 1,000 ASF has been held as a placeholder for the planned relocation ASF.

Residential (900)

There are currently no residential facilities on the Portland campus. Further discussion and planning are needed before calculating the impact of the housing on the overall campus space needs. The addition of housing will also impact a number of other space types on campus, including health services, as indicated above, as well as food service, student activities, and the staff and resources to support these functions.

SUMMARY

With competing needs for scarce funds, it is critical for the university to identify and implement a few key renovation and expansion projects for near-term consideration. These projects, however, should be planned and designed with a campus-wide and long-term perspective

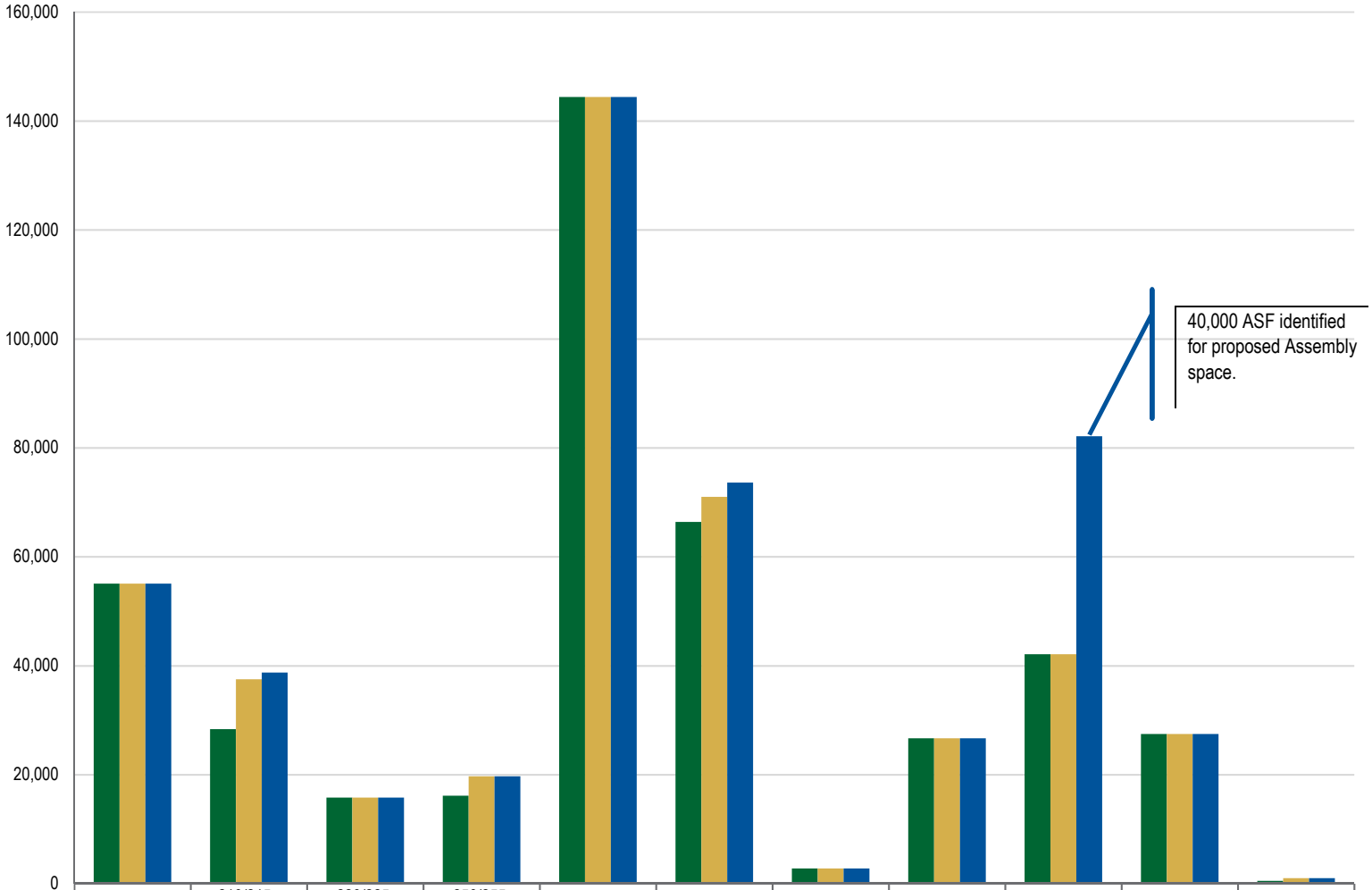
A select group of projects have been identified for capital renewal to set the course. The capital renewal list should includes:

- **Science:** There is currently 5,400 ASF of unassigned space and 2,000 ASF that is unfinished. The unassigned space consists primarily of vacant animal facilities and former space for the sunset Applied Medical Science program. This space will be recapturable to meet the teaching lab needs for the campus.
- **23 Brighton Ave:** This space can be repurposed to support a Welcome Center, swing space, or some other function not yet identified.

Regardless of renovation or new construction, continued thoughtful and purposeful planning is required to make the highest and best use of current facilities. New or renovated spaces should incorporate, where possible, the flexibility needed to accommodate the changes that will inevitably come in the future.

The following graphs summarize space needs by FICM category for Current, Calculated, Current Adjusted, and Projected Adjusted Need, as well as the categories with specific deficits.

SUMMARY OF SPACE NEEDS AND DEFICITS BY CATEGORY



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Current ASF	55,076	28,341	15,785	16,140	144,419	66,417	2,786	26,671	42,101	27,476	517
Current Adjusted	55,076	37,493	15,785	19,700	144,419	70,984	2,786	26,671	42,101	27,476	1,000
Proj. Adjusted 3,504.2 FTE	55,076	38,741	15,785	19,700	144,419	73,618	2,786	26,671	82,101	27,476	1,000

Portland Facilities and Resources

The Portland campus is comprised of 12 principal structures sited on 34 acres. A number of small former residential structures known as the "white houses" have been acquired on the perimeter of the campus. The average age of the primary building stock is 41 years old, half of which are over 50. Building systems have an expected usable life of 20–40 years, beyond which they become inefficient, obsolete or risk failure.

The Portland Plan promotes an overall facility strategy that prioritizes infill and redevelopment in support of a compact and pedestrian-oriented campus. Capital investment should leverage the limited available dollars to address critical building systems and improve the health, safety, function and appearance of existing structures. The Portland Plan suggests priority buildings for investment and identifies buildings that may be better suited to demolition and replacement based on several criteria: do they enhance the character of the campus, are they historically significant, do they require disproportionate investment in deferred maintenance costs, and do they represent the highest, best use of land resources? The following facilities are identified for possible demolition and replacement to make better use of campus land and infrastructure:

- **Woodbury Campus Center** (28,256 SF)
- **Law School Building** (92,824 SF)
- **25 Bedford Street** (9,744 SF)

Facilities Condition

A visual assessment of building facility conditions was conducted as part of the master plan. Buildings and their systems were evaluated on a scale of 0–5. Thirty different building systems were evaluated in eight major categories included the building exterior, interior construction, life safety systems, electrical, lighting, mechanical systems, plumbing, and visible structure.

A resulting building facility condition ranking is based on an average of the individual building system assessments. Buildings are grouped into the following condition categories:

Poor	Fair	Average	Good
0–1.99	2.0–2.99	3.0–3.99	4.0–5.0

This analysis reveals that the majority of the USM facilities are in the average to poor condition. Over half the buildings surveyed (8 out of 15) were in fair or poor condition. Four were in average condition and three were in good condition.

The master plan identifies the following facilities for reinvestment:

- **Luther Bonney Hall** (28,256 SF)
- **Science Buildings A and B**
- **Payson Smith** (52,606 SF)
- **Sullivan Gymnasium** (61,726 SF)

CAMPUS INFRASTRUCTURE

Storm Water

The Portland campus is permitted through the Maine Department of Environmental Protection Agency through the Site Location of Development Act as well as regulated by the Environmental Protection Agency (EPA) under the Phase II Storm Water Rules for a MS4 community. These storm water regulations became effective for the USM campus over the last two decades. As such, any new construction or redevelopment on the campus since the mid-1990's has been designed with formal storm drain collection and storm water quantity and quality control measures, which is recommended for inclusion with all future projects on the campus. All existing sewer systems within the campus appear to have adequate capacity for the extent of development (i.e. percent of impervious area) within each of the existing tributary drainage areas as well as adequate capacity for any potential expansion and development of additional buildings.

Sullivan
2.34
21 Durham
2.81
Central Heating
4.26
25 Bedford
3.30
Science C
3.24
Woodbury
2.27
Osher Addition
3.95
Science B
2.53
Glickman Library
2.76
Science A
2.16
Luther Bonney
2.44
Payson Smith
2.44
Masterton
3.06
Wishcamper
4.00
Abromson
3.63
Law Building
2.23

Domestic Water

The water mains in the streets surrounding the campus are utilized for domestic water, sprinkler systems and fire hydrants. The highest projected continuous draw on the water system at any one time is when it has to meet the design demand for a sprinkler system operation. The water system is capable of the proposed future expansion. Recorded flow hydrant tests indicate over 1,200 gallons per minute flow available with a 40-psi drop from static pressure.

Central Heat Plant

The existing boiler plant consists of two 500 HP boilers and one 150 HP boiler. All boilers are fired on natural gas as the primary fuel source with #2 heating oil as the backup fuel source. The current steam load for the Portland Campus is estimated at 15,100 pounds/hour of steam and can be met by operating one 500 HP boiler. The projected future load for the Portland Campus is estimated at 21,900 pounds/hour of steam which would allow for a net increase of 235,000 square feet of campus growth. This projected future load can be met by operating one 500 HP boiler along with the 150 HP boiler. The configuration of the plant allows for one 500 HP boiler as a backup while still meeting the projected future load.

Primary Power

The campus primary underground electrical distribution system consists of two separate and independent modified radial loop feed systems physically separated by Bedford Street. It is recommended that the northern and southern loops be interconnected to provide redundancy, increase the loop capacity and improve reliability. Based on historical demand growth, the northern radial-loop feed distribution system would have sufficient capacity for future growth. There is minimal space for potential building growth on the southern side of Bedford Street.

Campus Data

The existing fiber plant consists primarily of multi-mode fiber optic cabling between facilities. The Payson Smith Building acts as the central distribution point for the fiber. Most of the campus backbone cabling is installed in conduits with some direct burial cables in the Bedford Avenue and Chamberlain Avenue area. Most of the conduits are 4", equipped with innerduct, with varying space available for future expansion.

SUSTAINABILITY

USM, as a 2007 signatory of the Presidents' Climate Leadership Commitment (formerly the American College and University Presidents' Climate Commitment), is working toward the goal of climate neutrality and resiliency. The commitment requires the University to adopt several actions to reduce emissions of the six greenhouse gases addressed under the Kyoto Protocol, the most significant of which is carbon dioxide (CO_2). The ACUPCC also requires the University to develop a Climate Action Plan, establishing target dates for achieving climate neutrality; identify interim milestones; provide strategies for fulfilling the educational and research including descriptions of current education and research activities related to climate change and sustainability; and set out actions to make climate change and sustainability part of the curriculum. In April of 2017 the Climate Action Plan became part of a broader sustainability plan structured on three content areas:

- **Energy** (energy reduction projects, minimum new construction benchmarks, establish emissions goals)
- **Material Resources** (waste reduction and avoidance, recycling and re-use efforts)
- **Education and Outreach** (marketing, outreach, curriculum, educational and training forums)

Gorham Space Use Analysis

GORHAM RECOMMENDATIONS

The space deficit for the campus, identified by FICM, totals 6,000 ASF for Current Adjusted and 9,000 ASF for Projected Adjusted. This finding is based on the proposed enrollment of 1,502.8 FTE, as well as maintaining the currently compressed scheduling window of 23 hours per week. To meet the calculated deficit is an optional non-capital suggestion to expand the scheduling window from the compressed 23 hours a week, well below the level of a 4-year liberal arts institution, to a more normative 34 hour per week. This would eliminate the need entirely for additional teaching labs and would bring the campus back to alignment with similar institutions related to scheduling windows.

If the desire is to maintain a compressed scheduling window, an area for more detailed review is the potential availability of the 18,000 ASF of unclassified space, particularly the almost 6,000 of vacant space in 62 and 128 School Street. While, by the numbers, the ASF could meet the space needs, the existing areas were designed for office space, and may not be able to be re-purposed for teaching laboratory space.

The following summarizes the space needs by category and identifies areas that may require specific additional review.

Instructional (100)

At the time of this analysis, there were 18 spaces and 17,140 ASF identified as general-purpose classrooms available for scheduling. There are an additional 19 rooms and 15,720 ASF of classroom

Space Type	Current ASF	Current Adjusted 1,250.8 FTE	Surplus or (Deficit) to Current ASF	Projected Adjusted 1,502.8 FTE	Surplus or (Deficit) to Current ASF
100: Classroom	36,464	36,464	0	36,464	0
210/215: Class Laboratory	38,995	45,027	0 to (6,032)	48,147	0 to (9,152)
220/225: Open Laboratory	26,350	26,350	0	26,350	0
250/255: Research Laboratory	11,632	11,632	0	11,632	0
300: Office	77,804	77,804	0	77,804	0
400: Study/Library	22,345	22,345	0	22,345	0
500: Special Use, General	161	161	0	161	0
500: Athletics	123,201	123,201	0	123,201	0
600: General Use	72,270	72,270	0	72,270	0
700: Support	32,562	32,562	0	32,562	0
800: Health Care	1,121	1,121	0	1,121	0
Subtotal	**442,905**	**448,937**	**0 to (6,032)**	**452,057**	**0 to (9,152)**
900: Residential	180,921	180,921	0	180,921	0
Total 100 to 900	**623,826**	**629,858**		**632,978**	
Other Space (000's)	18,171	18,171	0	18,171	18,171

CLASSROOM NEED

CATEGORY	EXIST.	29-HOUR CALC. NEED	29-HOUR PROJ. CALC	34-HOUR CALC. NEED	34-HOUR PROJ. CALC	OPTIMIZE EXISTING SPACE RT.-SIZE EXIST.	OPTIMIZE EXISTING SPACE ADJ.
1 to 20	1	3	4	2	2	0	1
21 to 30	1	6	5	4	3	3	6
31 to 40	5	5	5	3	4	7	5
41 to 50	7	1	1	0	1	7	4
51 to 60	3	1	1	1	0	0	1
61 to 70	0	0	1	0	1	0	0
101+	1	1	1	1	1	1	1
Total	**18**	**17**	**18**	**11**	**12**	**18**	**18**
ASF	17,140	15,070	16,220	10,210	11,520	17,140	17,140
Seats	918	675	735	465	535	850	832

INCREMENTAL SI NEEDS

DISCIPLINE	29-HOUR + ROOMS	29-HOUR + ASF	34-HOUR + ROOMS	34-HOUR + ASF
INCREMENTAL CURRENT SI NEED (1,250.8 FTE)				
Computer Lab–Digital Arts	1	800	0	0
Computer Lab–Engineering	1	960	0	0
Music–Performance	1	1,440	0	0
Sports Medicine	1	1,440	0	0
Total	**4**	**4,650**	**0**	**0**
INCREMENTAL PROJECTED SI NEED (1,502.8 FTE)				
Art–Photography	1	960	0	0
Art–Sculpture	1	960	0	0
Art–Studio	1	960	0	0
Total	**3**	**2,880**	**0**	**0**
Grand Total–Current & Projected	**7**	**7,520**	**0**	**0**

Qualitative issues need to be identified and addressed.

space that was dedicated to specific programs. The analysis was conducted on the 18 general-purpose classrooms and 17,140 ASF. The figure below presents the existing distribution and calculated need for classrooms at both the existing scheduling protocol of 23 hours, as well as applying the 34-hour daytime scheduling window for comparison. For both analyses, the need was calculated based on guidelines of 67 percent average weekly daytime hour utilization and average seat occupancy.

The table aligns the existing distribution of rooms by capacity (seat count) to the need. Using the existing stock of rooms, seat counts, and ASF, a theoretical exercise of "right-sizing" was conducted, which is mathematically calculating the appropriate capacity of the existing rooms. While right-sizing does not change the total number of classrooms available, it can often bring the distribution of classroom capacities into better alignment with course section sizes. Gorham is relatively below target for ASF/seat and so the re-alignment of rooms by capacity could provide some major changes, including providing more 21- to 30-seat classrooms for the campus. By modifying the current room capacities, the existing rooms can be maintained and meet the necessary space requirement for current enrollment and course offerings.

Specialized/Research (200/250)

Specialized Instructional

There are 26 spaces and 32,733 ASF assigned to instructional lab space, such as Music, Theatre, Engineering, Sports Medicine, Art, etc. Space needs for specialized instructional space are based on the number of hours by the discipline of the courses as many courses/programs cannot share space. Where opportunities to continue shared use of the spaces between similar courses were possible, these were maintained. Using the rubrics of 80 percent occupancy, 50 percent utilization, and discipline-specific ASF per station there is a calculated need for up to four (4) additional labs, including one (1) Computer Lab–Digital Arts (800 ASF), one (1) Computer Lab–Engineering (960 ASF), one (1) Music–Performance, and one (1) Sports Medicine (1,440 ASF).

Utilizing the full 34-hour official scheduling window would eliminate any quantitative need for additional teaching labs both currently and in the future based on enrollment goals.

Research

There is a continued desire for this type of student/faculty engagement space on campuses throughout academia. Currently, USM-G has 11,632 ASF of faculty research space. The current ASF meets the needs of the campus as a whole and has been held for the Adjusted need, although, per the interviews, individual rooms should be renovated.

Office (300)

Gorham has 305 FTE (320 headcounts) faculty/staff on campus, housed within 77,804 ASF of office and associated support space. Office space ranges from two 43 ASF offices, one in Corthell Hall, and one in Anderson Hall, to a 1,616 ASF History office in Bailey Hall, with an overall average of 166 ASF across faculty, staff, and administrative spaces. The application of appropriate planning multipliers and assumptions that the spaces are properly outfitted and usable result in no need for additional space.

Those spaces that are less than 90 ASF should be reviewed for appropriateness in terms of assignment and use. As the campus moves forward with the master plan, putting office guidelines into effect should be considered to begin standardizing the size of offices across the campus. It is acknowledged, however, that the Gorham campus is comprised of historical buildings that significantly impact eh ability to apply these metrics.

Library/Study (400)

The library and study space category encompass almost 22,400 ASF and meets the needs of the campus, overall.

Library space has become the learning commons at many institutions and incorporates coffee bars, some social areas, group study rooms, etc. Gorham is undergoing numerous updates to provide a more learning commons centric library space.

Special Use (500)

The Special Use FICM space category consists of various space clusters including athletics, field buildings, greenhouses, among others. These spaces are calculated based on the specialized need for the associated space types. More often than not, the primary driver for campuses in this category is Athletics/Recreation space, which is the case for Gorham, but not in a quantitative manner. Athletics encompasses 123,201 ASF disaggregated between the Field House (62,467 ASF), Warren Hill Gymnasium (27,916 ASF), Ice Arena (25,955 ASF), and the Baseball Stadium (6,863 ASF). The base calculated ASF for athletics at a four-year institution is 50,000 ASF. The challenge for Gorham is that the athletics department feels that it is outgrowing its current space, and there were multiple suggestions to expand their offerings, particularly to add a swimming pool to the campus.

Another space type in this category is the greenhouse. Currently, the campus has a small greenhouse located in Bailey Hall (161 ASF). While the calculated need equates to more than the existing ASF, Gorham has recently renovated the existing area, and have no programmatic plans that would call for additional ASF.

General Use (600)

The General Use FICM space category consists of various clusters including assembly, exhibition, food service, and meeting rooms (student-centered services). Some of the highlights of this area: Assembly: Russell Auditorium is the main space assigned to this category. The ASF is appropriate for a campus of this size and will support a minimal uptick in enrollment.

- **Dining:** Currently, the main dining service is located in the Brooks Student Center. Today's students are looking for more inviting and varied dining experiences, featuring specialty food stations, high top tables, booths, comfortable seating, and connectivity—spaces

and furnishings that promote easy interaction. Although the overall ASF for dining has been maintained, location, function, and aesthetics may need to be refreshed.

- **Recreation:** This space type is often found in student centers and consists of game rooms, TV lounges, general fitness rooms, etc. This type of space, with the exception of the fitness aspect, is generally missing on campus; however, it is presumed that the athletics facilities (collectively referred to as the Costello Sports Complex) fulfill a majority of the student needs.
- **Meeting Rooms:** This type of space is generally available to internal and external groups such as study groups, board meetings, community groups, etc. There are multiple spaces and flexible rooms located throughout the campus that exceed the calculated need. The challenge for these spaces is the overall quality, lack of storage areas for tables, chairs, etc.

Central Facilities (700)

Central Facilities (32,562 ASF) support overall campus operations and include mail, receiving, general storage, and shop space, among others. The current ASF meets the overall needs of the campus. It should be noted that the unassigned space on campus is, in part, serving an additional role as storage, which will need to be addressed when the spaces are recaptured.

Health Services (800)

Health Services is currently located in Upton-Hastings Hall. Space has been held constant as it meets the needs of the campus, and there are nearby medical services.

Residential (900)

Gorham has eight residential buildings on campus: Anderson Hall, Philippi Hall, President's House, Robie-Andrews Hall, Upperclass Hall, Upton-Hastings Hall, and Woodward Hall. The on-campus residences are in need of upgrading. The campus has also planned the demolition of Dickie-Woods Hall for this year, and it is currently experiencing a shortage in available dormitory space.

SUMMARY

With competing needs for scarce funds, the Gorham Plan identifies a few key renovation projects for near-term consideration. These projects, however, should be planned and designed with a campus-wide and long-term perspective. The capital renewal project list should includes:

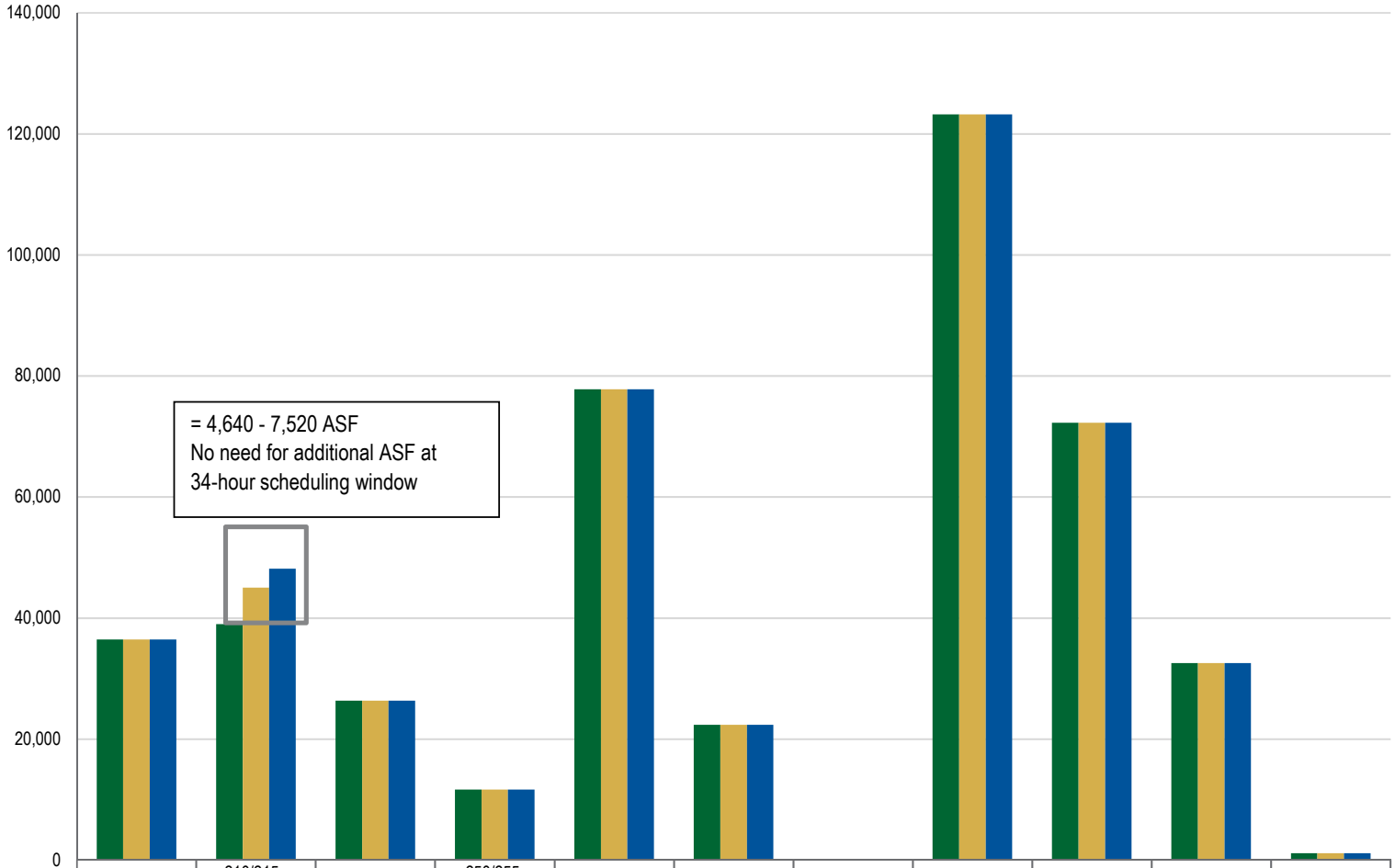
- **Art Facilities (Academy Building, Art Drawing Classroom, Art Gallery, Print Making Studio, Robie-Andrews Hall, and Welding Shop)**: Art is currently dispersed amongst six (6) buildings on the Gorham campus. Consideration was given to the future of the program to facilitate a collocation of the Art department. The department currently occupies 13,200 ASF in Robie-Andrews Hall that was described as "retrofit" and in poor quality for its current use.
- **School Street Houses:** Most of these houses are planned for demolition helping to balance the no new square feet policy.

The recommendations are based on the current culture and environment of the campus during The Gorham Plan process.

Regardless of renovation or new construction, in light of the budgeting climate today and for the foreseeable future, thoughtful and purposeful planning should continue to make the highest and best use of current facilities before advocating for new facilities and to serve the System's construction and sustainability policies. New or renovated spaces should incorporate, where possible, the flexibility needed to accommodate the changes that will inevitably come in the future.

The following graphs summarize space needs by FICM category for Current, Calculated, Current Adjusted, and Projected Adjusted Need, as well as the categories with specific deficits.

SUMMARY OF SPACE NEEDS AND DEFICITS BY CATEGORY



	100: Classroom	210/215: Class Laboratory	220/225: Open Laboratory	250/255: Research Laboratory	300: Office	400: Study / Library	500: Special Use	520/525: Athletics	600: General Use	700: Support	800: Health Care
Current ASF	36,464	38,995	26,350	11,632	77,804	22,345	161	123,201	72,270	32,562	1,121
Current Adjusted	36,464	45,027	26,350	11,632	77,804	22,345	161	123,201	72,270	32,562	1,121
Proj. Adjusted 1,502.8 FTE	36,464	48,147	26,350	11,632	77,804	22,345	161	123,201	72,270	32,562	1,121

Gorham Facilities and Resources

The Gorham campus is in 26 principal structures sited on 96 acres. A number of small former residential structures have been acquired on the perimeter of the campus along College and School Streets. The average age of the primary building stock is 71 years old, sixteen of which are over 50. Building systems have an expected usable life of 20-40 years, beyond which they become inefficient, obsolete or risk failure.

Many of the oldest buildings on the Gorham campus are contributing structures to the Gorham Campus Historic District listed on the National Register of Historic Places in 1978. These date back to the original Academy building constructed in 1806 while Maine was still a part of the Commonwealth of Massachusetts. Considerable diligence should be given when considering maintenance and renovations to ensure compliance with Department of Interior's guidelines for historic structures. The following buildings are part of this district:

- Academy Building (1807)
- Art Gallery (1821)
- Corthell Hall (1878)
- Robie Hall (1898)
- President's Residence (1906)
- Andrews Hall (1916)
- Russell Hall (1931)

The Gorham Plan suggests priority buildings for investment and identifies buildings that may be better suited to demolition, disposition, or replacement based on several criteria: do they enhance the character of the campus, are they historically significant, do they require disproportionate investment in deferred maintenance costs, and do they represent the highest, best use of land resources?

Residential properties acquired on the perimeter of the University provide land for future growth. These buildings front onto and contribute to residential neighborhoods. The following facilities are identified for possible demolition and replacement over the long-term to make better use of campus land and infrastructure:

- Dickey Wood (81,439 SF)
- Printmaking (1,555 SF)
- Drawing Studio (3,696 SF)
- 51 College Street (10,204 SF)
- 62 School Street (3,336 SF)
- 128 School Street (9,005 SF)
- 7 College Street (7,063 SF)
- 134 School Street (4,144 SF)
- 19 College Street (4,109 SF)

Facilities Condition

A visual assessment of building facility conditions was conducted as part of the master plan. Buildings and their systems were evaluated on a scale of 0–55. Thirty different building systems were evaluated in eight major categories included the building exterior, interior construction, life safety systems, electrical, lighting, mechanical systems, plumbing, and visible structure.

A resulting building facility condition ranking is based on an average of the individual building system assessments. Buildings are grouped into the following condition categories:

Poor	Fair	Average	Good
0–1.99	2.0–2.99	3.0–3.99	4.0–5.0

This analysis reveals that the majority of the USM facilities on the Gorham campus are in the average to poor condition. Two-thirds of

the buildings surveyed (21 out of 29) were in fair or poor condition. The remainder were in average to good condition.
The master plan identifies the following facilities for reinvestment in order to address the most acute needs on the Gorham campus.

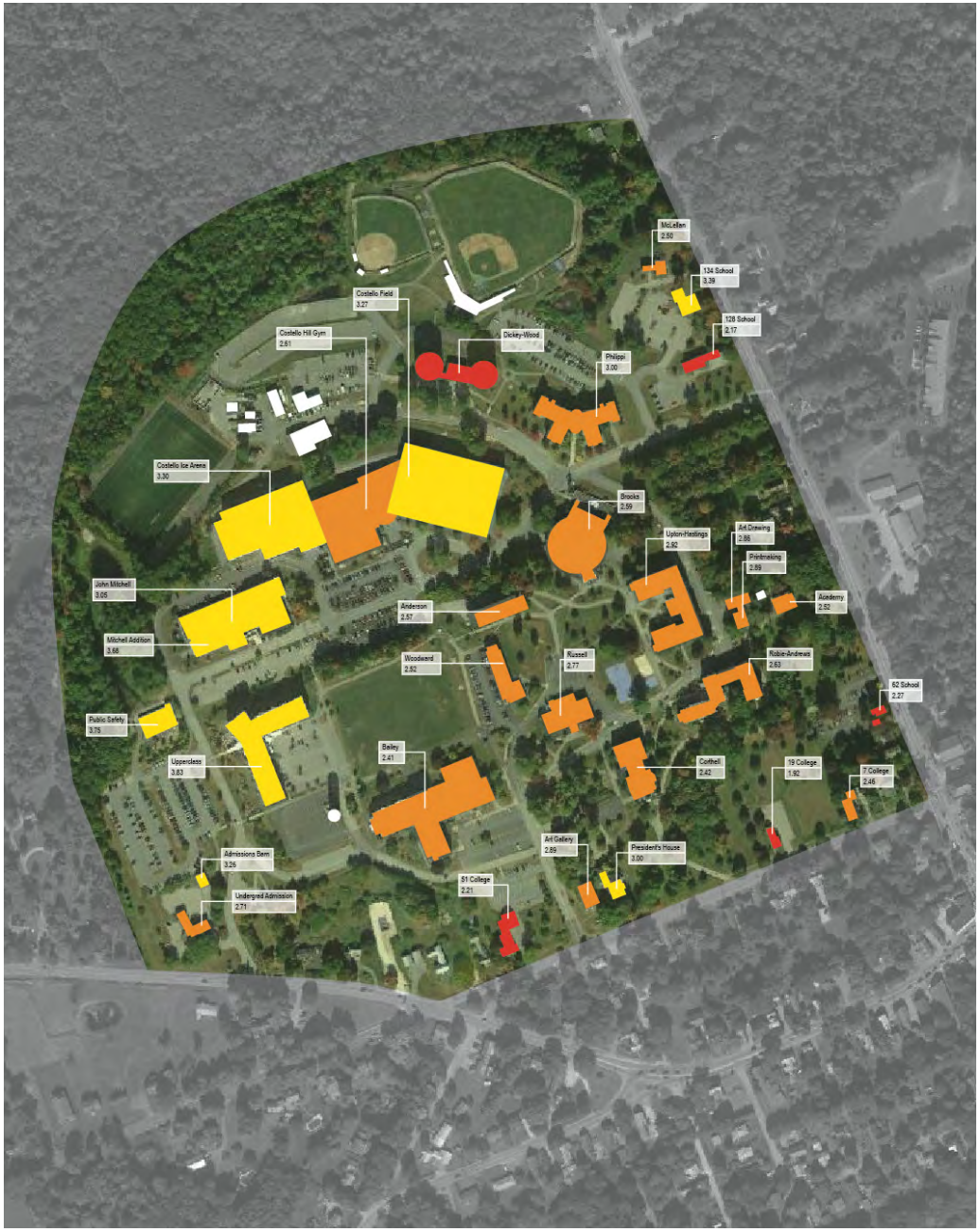
- Bailey Hall (144,374 SF)
- Woodward Hall (20,781 SF)
- Anderson Hall (29,293 SF)
- Brooks Student Center (45,700 SF)
- Corthell Hall (47,971 SF)
- Academy Building (7,126 SF)
- Robie-Andrews (76,859 SF)
- Russell Hall (29,467 SF)
- Upton-Hastings (102,656 SF)

CAMPUS INFRASTRUCTURE

Storm Water

The Gorham Campus is permitted through the Maine Department of Environmental Protection Agency through the Site Location of Development Act as well as regulated by the Environmental Protection Agency (EPA) under the Phase II Storm Water Rules as an institutional user with storm water discharges to a Municipal Separate Storm Sewer System (MS4). Any new construction or redevelopment on the campus since the mid 1990s has been designed with formal storm drain collection and storm water quantity and quality control measures.

Storm water runoff from the entire campus is tributary to a perennial stream known as Tannery Brook, which flows in an easterly direction away from the campus with eventual discharge into the Presumpscot River and Casco Bay. The Gorham campus contains approximately 105 acres of land, which is divided between two major drainage



watersheds. Approximately 82% (86 acres) of the campus is located within the northerly watershed that drains directly to Tannery Brook, which flows along the northeasterly boundary of the campus. The remaining 18% (19 acres) of the campus is located within the southeasterly watershed that discharges to the Town of Gorham municipal storm drain system within College Avenue and School Street.

The overall storm drain system contains approximately 18,200 linear feet of storm drain pipe, approximately 2,700 linear feet of open drainage swales, approximately 180 manhole or catch basin structures, 2 storm water quality dynamic separator units, 3 storm water quality wet ponds, 1 storm water quality bioretention basin, and 1 dry storm water detention basin. Any new or redevelopment that occurs within the older portion of the campus and particularly the southeasterly watershed area will likely require replacement and/or significant upgrade to the system in order to provide suitable storm drain connections as well as provide necessary water quality treatment required to meet the state and federal regulations. Any new or redevelopment that occurs within the newer portions of the campus can likely be supported with minimal upgrade or extension of the storm drain system. Incremental expansion of the existing water quality treatment systems and/or installation of new water quality treatment measures will need to be evaluated on a project-by-project basis.

Sanitary Sewer

The overall sewer system contains approximately 9,350 linear feet of gravity sewer pipe and approximately 49 sewer manhole structures. Sanitary sewer system materials throughout the campus range with the age of the installation. The older portion of the sanitary sewer (predating 1970) consists of brick or barrel block manhole structures with vitrified clay (VC) or asbestos cement (AC) pipe. The overall condition of these pipes is unknown and televised inspection of these lines should be performed to document the condition of these lines and identify any areas in need of repair. The newer portion of the sanitary sewer system (post 1970) consists of precast concrete manhole structures with polyvinyl chloride (PVC) pipe. The overall condition of these pipes is unknown; however, it is generally anticipated that the sanitary sewer system in the newer portions of the campus are in good condition. All existing sanitary sewer mains have adequate capacity to serve the campus and should have adequate capacity for any potential expansion and development of additional buildings.

Domestic Water

The campus water system is shared between domestic water, sprinkler systems and fire hydrants. Over 500,000 gallons of water is stored in the water storage tank on campus. The highest projected continuous draw on the campus water system at any one time is when it has to meet the design demand for a single sprinkler system operation. When the sprinkler system in a building is activated, the highest demand on campus is up to 450 gallons per minute with a fire hydrant allowance of 250 gallons per minute for a total of 700 gallons per minute.

The estimated maximum flow through the domestic water system in any single building may be up to 100 gallons per minute. In most buildings the maximum flow is estimated at 20 gallons per minute or less. The estimated flow of domestic water during a peak time of the day with all campus buildings combined could be up to 600 gallons per minute.

The water distribution system is adequately sized to handle the load of the domestic and sprinkler demands of the campus. 10” and 8” mains loop around the campus to provide good volume and pressure to the buildings. The only large building requiring pressure boosting is the Upperclass Residence Hall because of its building height and proximity on campus. The president’s house also has a small domestic water boosting system located in Corthell Hall, but it is not used due to the installation of a hydropneumatic tank in the president’s house.

The water system is capable of substantial expansion. Recorded hydrant flow tests indicate approximately 1,300 gallons per minute flow capacity with a 20 psi drop from static pressure. Because only one building is considered to flow during a fire event, adding buildings to the system does not increase the fire demand. The domestic water system could accept a 200% increase in domestic water demand and still be sufficient.

Central Heat Plant

The boiler plant consists of boilers #1 and #2—600 boiler horsepower (bhp) each—and #3 which is 200 bhp. The current boiler plant capacity could be retained to provide full redundancy for potential growth on campus pending the continued practice of shedding the domestic loads in an emergency failure mode.

Primary Power

The Campus primary underground electrical distribution system is a modified radial loop feed served from one riser pole by CMP Co. at 12,470 volts with a single primary billing meter. This master plan recommends adding a second Primary Service from CMP along State Street (Rt.25) or College Ave to provide redundancy, increase the loop capacity and improve reliability. The 12.47 kV equipment on campus ranges in age from five to more than 50 years old. Similarly, its condition can be described as excellent to fair. Reliable, expected life of medium voltage equipment and cable is 30 to 40 years. The biggest concern is the six transformer vaults on campus that have exposed live terminations in confined spaces. These cannot be maintained while energized. Also of concern are reports that the expulsion fuses in the Brooks Student Center vault serving Philippi Hall have blown on more than one occasion.

Based on historical demand growth, the campus loop feed distribution system would have sufficient capacity to increase for the foreseeable future.

Campus Data

The campus fiber backbone was installed over multiple phases beginning in the early 1990s and consists of a number of technologies including 50-micron multimode fiber, 62.5-micron multi-mode fiber, and single mode fiber optic cable. 62.5-micron multi-mode fiber optic cable is currently the primary means of inter-building campus connectivity. Corthell Hall acts as the primary distribution point. Most of the campus backbone cabling is installed in conduits. There is little room in the individual facilities with regard to dedicated space for technology closets, IDFs or MDFs. Some of the horizontal cabling is Category 3. The general recommendation is to eventually upgrade the fiber backbone to 50-micron and the horizontal cabling to Category 6 compliance.

Lewiston-Auburn Space Needs Analysis

LEWISTON-AUBURN RECOMMENDATIONS

There is currently no space deficit for the campus. If Lewiston-Auburn reaches the 347.8 FTE achieved in Fall 2013, then there would be a potential need for an additional 7,000 ASF in Class Laboratory space. This finding is based on the proposed enrollment of 347.8 FTE, as well as maintaining the currently compressed scheduling window of 25 hours per week. To meet the calculated deficit is an optional non-capital suggestion to expand the scheduling window from the compressed 25 hours a week to a more normative 34 hour per week. This would eliminate the need entirely for additional teaching labs and would bring the campus back to alignment with similar institutions related to scheduling windows.

If the desire is to maintain a compressed scheduling window, an area for more detailed review is the potential availability of 3,000 ASF of surplus office space. While, by the numbers, the ASF could meet the space needs, the existing areas may not be able to be re-purposed for teaching laboratory space. Before building another space, care must be taken to critically examine available space and better define, repurpose, and refurbish it for more collaborative and efficient use.

The following summarizes the space needs by category and identifies areas that may require specific additional review.

Instructional (100)

At the time of this analysis, there were nine (9) spaces and 6,987 ASF identified as general-purpose classrooms available for scheduling. One classroom was unscheduled in Fall 2017 (Lewiston-Auburn College 110–627 ASF) and has been excluded pending space type confirmation. There are an additional four rooms and 2,222 ASF

Space Type	Current ASF	Current Adjusted 244.6 FTE	Surplus or (Deficit) to Current ASF	Projected Adjusted 347.8 FTE	Surplus or (Deficit) to Current ASF
100: Classroom	9,209	9,209	0	9,209	0
210/215: Class Laboratory	8,900	8,900	0	15,764	0 to (6,864)
220/225: Open Laboratory	1,943	1,943	0	1,943	0
250/255: Research Laboratory	2,480	2,480	0	2,480	0
300: Office	12,517	9,271	3,246	9,271	3,246
400: Study/Library	7,233	7,233	0	7,233	0
500: Special Use, General	3,529	3,529	0	3,529	0
500: Athletics	0	0	0	0	0
600: General Use	10,862	10,862	0	10,862	0
700: Support	6,235	6,235	0	6,235	0
800: Health Care	0	0	0	0	0
Total	**62,908**	**59,662**	**3,246**	**66,526**	**0 to (6,864)**
Other Space (000's)	623	623	623	623	623

of classroom space that was dedicated to specific programs. The analysis was conducted on the eight (8) general-purpose classrooms and 6,360 ASF.

The figure on the following page presents the existing distribution and calculated need for classrooms at both the existing scheduling protocol of 25 hours, as well as applying the 34-hour daytime scheduling window for comparison. For both analyses, the need was calculated based on guidelines of 67 percent average weekly daytime hour utilization, and average seat occupancy.

The table aligns the existing distribution of rooms by capacity (seat count) to the need. Using the existing stock of rooms, seat counts, and ASF, a theoretical exercise of "right-sizing" was conducted, which is mathematically calculating the appropriate capacity of the existing rooms. While right-sizing does not change the total number of classrooms available, it can often bring the distribution of classroom capacities into better alignment with course section sizes.

Lewiston-Auburn is relatively on target for ASF/seat and so the re-alignment of rooms by capacity did not provide any major changes. As such, the existing rooms can be maintained and meet the necessary space requirement for current enrollment and course offerings. While there is a calculated need for a larger space, the largest enrollments are 40 to 42 students for three Occupational Therapy courses. Courses such as these could be taught in the large meeting room, Lewiston-Auburn College 285, vs. building a new space, unless there is a future goal to increase the enrollment in course sections and/or provide more cohort meeting spaces.

CLASSROOM NEED

CATEGORY	EXIST.	29-HOUR		34-HOUR		OPTIMIZE EXISTING SPACE	
		CALC. NEED	PROJ. CALC	CALC. NEED	PROJ. CALC	RT.-SIZE EXIST.	ADJ.
1 to 20	2	2	3	2	3	0	2
21 to 30	4	2	1	1	0	1	4
31 to 40	2	0	1	0	1	6	2
41 to 50	0	0	0	0	0	0	0
51 to 60	0	1	1	1	1	1	0
Total	**8**	**5**	**6**	**4**	**5**	**8**	**8**
ASF	6,360	3,820	4,450	3,070	3,700	6,360	6,360
Seats	219	140	190	130	160	293	219

Specialized/Research (200/250)

Specialized Instructional

There are seven (7) spaces and 7,715 ASF assigned to instructional lab space, such as Biology, Nursing, Occupational Therapy, etc. Space needs for specialized instructional space are based on the number of hours by the discipline of the courses as many courses/programs cannot share space. Where opportunities to continue shared use of the spaces between similar courses were possible, these were maintained. Using the rubrics of 80 percent occupancy, 50 percent utilization, and discipline-specific ASF per station, it is recommended that Lewiston-Auburn maintain its current complement of SI spaces. Specialized instructional space needs are presented in the table on the following page.

At the projected FTE, and compressed window, there would be a need for two additional Biology–Anatomy and Physiology Labs (2,880 ASF), and an additional Occupational Therapy Lab (2,400 ASF).

At the 34-hour window, there would be no need for additional teaching labs.

SPECIALIZED INSTRUCTIONAL SPACE NEED

DISCIPLINE	ADJUSTED				2017 EXISTING				INCREMENTAL			2017 EXISTING + INCREMENTAL			NOTES
	ROOMS	STATIONS PER SPACE	ASF PER STATION	TOTAL ASF	ROOMS	TOTALS STATIONS	ASF	ASF PER STATION	ROOMS	TOTAL STATIONS	ASF	ROOMS	TOTAL STATIONS	ASF	
Biology–Anatomy and Physiology	2	48	60	2,880	1	38	1,534	40.4	0	0	0	1	38	1,534	Maintain existing
Biology–General	1	24	60	1,440	1	25	983	39.3	0	0	0	1	25	983	Maintain existing
Chemistry–General	0	0	0	0	1	26	986	37.9	0	0	0	1	26	986	Unscheduled Fall 2017; Maintain existing for discussion
Nursing	2	16	80	2,560	2	42	1,394	33.2	0	0	0	2	42	1,394	Maintain existing
Occupational Therapy	2	40	60	4,800	2	64	2,818	44.0	0	0	0	2	64	2,818	Maintain existing
Grand Total	**7**	**128**		**11,680**	**7**	**195**	**7,715**	**39.6**	**0**	**0**	**0**	**7**	**195**	**7,715**	

Qualitative issues need to be identified and addressed.

Research

There is a continued desire for this type of student/faculty engagement space on campuses throughout academia. Currently, Lewiston-Auburn has 2,480 ASF of faculty research lab space, shared amongst Natural Sciences faculty. The current ASF meets the needs of the campus as a whole and has been held for the Adjusted need.

Office (300)

Lewiston-Auburn has 48 FTE (49 headcounts) faculty/staff on campus, housed within 12,517 ASF of office and associated support space. Office space ranges from 68 ASF in Lewiston-Auburn College 121A to 809 ASF in Lewiston-Auburn College 119 (both assigned to the Provost), with an overall average of 146 ASF across faculty, staff, and administrative spaces. The application of appropriate planning multipliers and assumptions that the spaces are properly outfitted and usable, result in the need for 9,271 ASF, which is about 3,000 ASF less than the current existing.

Those spaces that are less than 90 ASF should be reviewed for appropriateness in terms of assignment and use. As the campus moves forward with the master plan, putting office guidelines into effect should be considered to begin standardizing the size of offices across the campus. It is acknowledged however that there are some "oversized" spaces that may limit the ability to apply these metrics.

Library/Study (400)

The library and study space category encompasses almost 7,250 ASF and meets the needs of the campus, overall.

Library space has become the learning commons at many institutions and incorporates coffee bars, some social areas, group study rooms, etc. It is understood that many renovations are

underway to incorporate more tutoring space into the Lewiston-Auburn College library.

Special Use (500)

Lewiston-Auburn recently added a 3,203 ASF clinic space for the Masters of Occupational Therapy program. In addition, the campus has a small greenhouse located in LAC 209D (326 ASF). The existing spaces appear to meet campus needs and have been held as Adjusted.

General Use (600)

The General Use FICM space category consists of various clusters including assembly, exhibition, food service, and meeting rooms (student-centered services). Some of the highlights of this area: Assembly: Lewiston-Auburn College 170 is assigned to this category. The ASF is appropriate for a campus of this size and will support a minimal uptick in enrollment.

- **Dining:** Currently, the main dining service is the Lewiston-Auburn College Café located adjacent to the Library. Today's students are looking for more inviting and varied dining experiences, featuring specialty food stations, high top tables, booths, comfortable seating, and connectivity—spaces and furnishings that promote easy interaction. Although the overall ASF for dining has been maintained, location, function, and aesthetics may need to be refreshed.
- **Recreation:** This space type is often found in student centers and consists of game rooms, TV lounges, general fitness rooms, etc. Lewiston-Auburn has recently added a 778 ASF fitness center that meets this need.
- **Meeting Rooms:** This type of space is generally available to internal and external groups such as study groups, board meetings, community groups, etc. There are multiple spaces on campus that meet the calculated need. The challenge for these spaces is the lack of storage areas for food service, tables, chairs, etc.

Central Facilities (700)

Central Facilities (6,235 ASF) support overall campus operations and include mail, receiving, general storage, and shop space, among others. The current ASF, while below the calculated need, meets the requirements for the campus.

Health Services (800)

There are currently no health services facilities on campus and no plans for adding space in the foreseeable future.

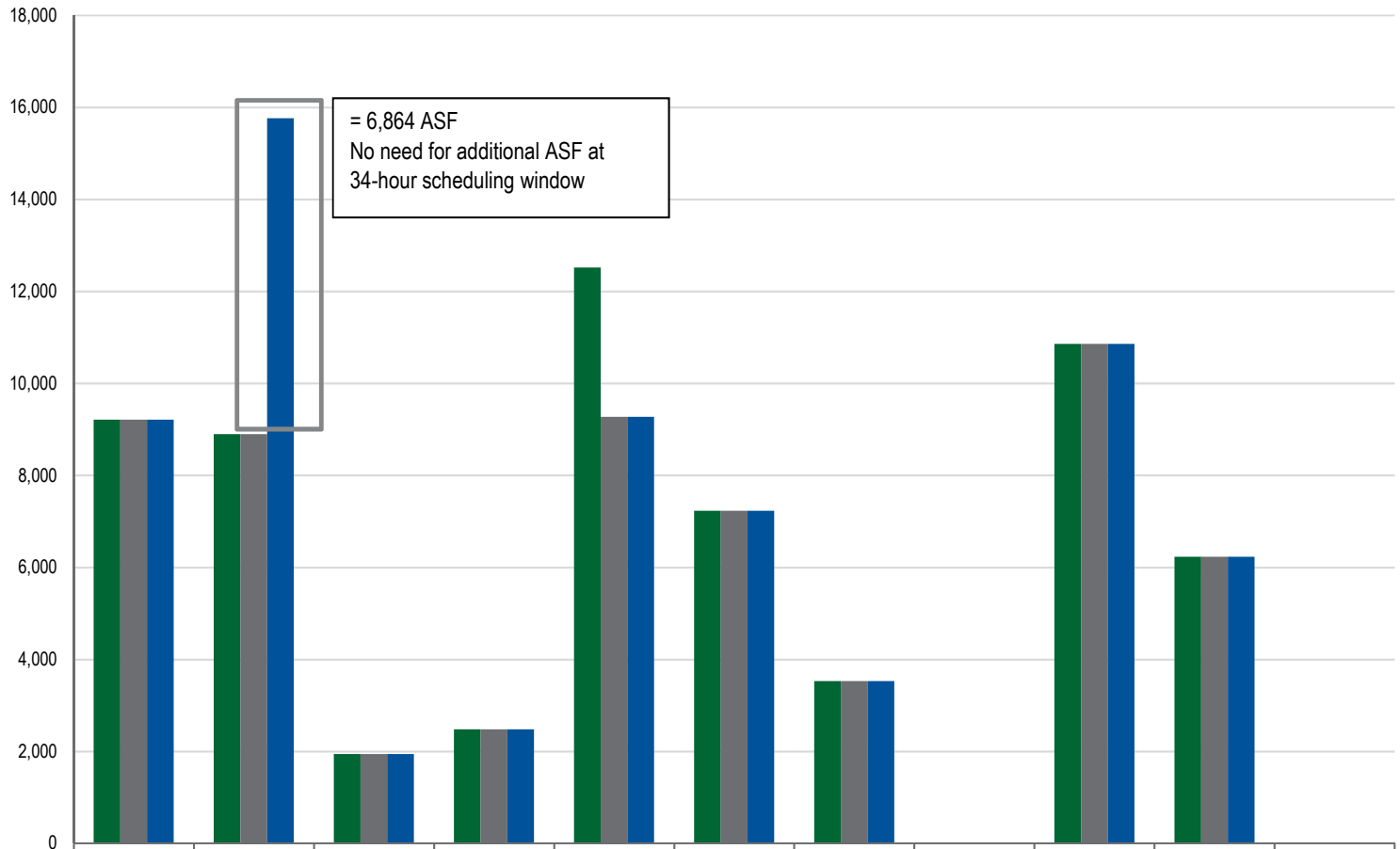
Residential (900)

There are currently no plans for residential facilities in Lewiston-Auburn.

Summary Need

The following graphs summarize space needs by FICM category for Current Adjusted and Projected Adjusted Need.

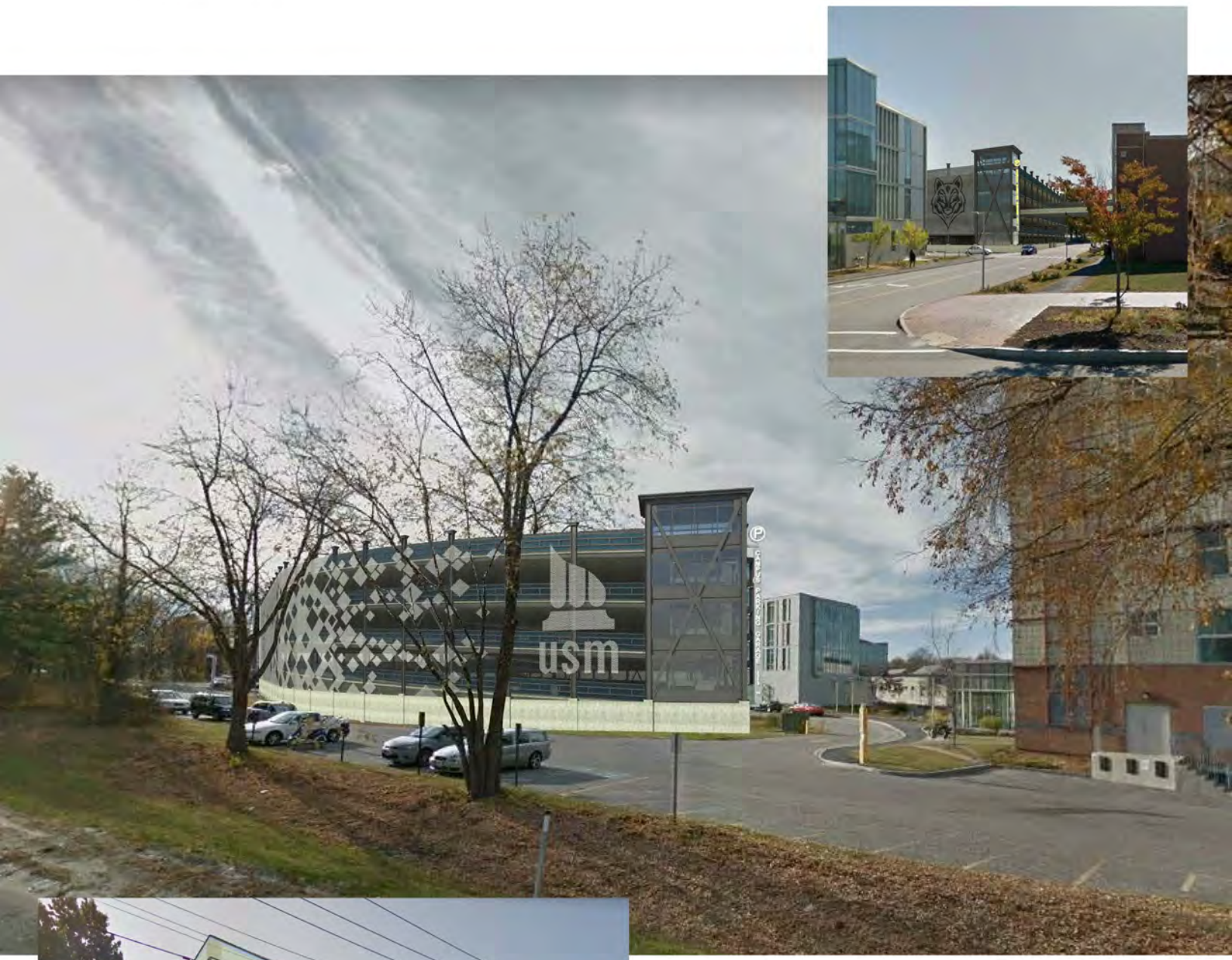
SUMMARY OF SPACE NEEDS AND DEFICITS BY CATEGORY



	100: Classroom	210/215: Class Laboratory	220/225: Open Laboratory	250/255: Research Laboratory	300: Office	400: Study / Library	500: Special Use	520/525: Athletics	600: General Use	700: Support	800: Health Care
Current ASF	9,209	8,900	1,943	2,480	12,517	7,233	3,529	0	10,862	6,235	0
Current Adjusted	9,209	8,900	1,943	2,480	9,271	7,233	3,529	0	10,862	6,235	0
Proj. Adjusted 347.8 FTE	9,209	15,764	1,943	2,480	9,271	7,233	3,529	0	10,862	6,235	0

Parking Feasibility Study

University of Southern Maine
68 Falmouth Street & 88 Bedford/Surrenden Streets
Portland, ME



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Executive Summary

Introduction

Platz Associates was contracted by the University of Southern Maine to conduct a site evaluation and Parking Feasibility Study in support of the growing parking demands at the Portland campus. The scope of this feasibility study is to understand the impact and cost implications for constructing a single or multi-level parking structure with possible vertical and/or lateral expansions at the selected sites located at 68 Falmouth Street and 88 Bedford / Surrenden Streets, Portland, Maine.

The following items are included in the study:

1. Review of the Owner's Development Objectives (communicated via 2019 USM Master Plan).
2. Identify constraints and opportunities for the selected site(s) and adjacent parcels.
3. Site evaluation, including but not limited to: onsite observations, assessing physical characteristics of the site(s), assessing codes, ordinances, and regulations, assessing available utilities, assessing access, circulation, and parking potential.
4. Identify environmental impact requirements/opportunities for site(s).
5. Conceptual Designs for level-deck and ramped multi-deck parking structures, including expansion schemes.
6. Estimate of Project Timeline and Cost of Work for each site.

Background

The site at 68 Falmouth Street is 2 acres +/- and was identified as a future development site per the 2019 USM Facilities Master Plan (see attached Exhibit A). The site at 88 Bedford/ Surrenden Streets is approximately 1.5 acres +/- and was identified as a future parking structure expansion site due to the adjacency to the existing parking garage. Both sites currently function as surface parking lots with fairly level topography across the site(s) and existing stormwater drainage and site lighting utilities. The Facilities Master Plan involves the infill development of surface parking and open spaces, affecting parking by both the displacement of current parking and by creating additional parking demand with new buildings and increased population. The Facilities Master Plan accounts for 1,000 parking spaces, 400 displaced and 600 new spaces. In 2017 the USM Portland campus had a headcount of 5,277 students, most all of whom are commuters.

Development Objectives

The most important considerations of the project are to adhere to the President's Goals and the CMPSC Guiding Principles set forth in the USM Facilities Master Plan and the consideration of the upcoming facilities being considered by the University for the adjacent parcels. While fluid in nature, this forecasting of future construction sequencing could provide for opportunities in efficiency and increase the quality of design while lowering the financial investment or impacts to construction schedules.

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CMPSC Guiding Principles (via 2019 USM Facilities Master Plan):

- *Student Experience*- improving the student's academic, co-curricular and living experience.
- *Inclusiveness*- fostering the ability for all to feel safe and participating members of the USM community.
- *Net-Zero Building Policy*- prioritizes capital renewal of existing facilities.
- *Public Safety*- provide the safest campus environment.
- *Mobility*- supporting robust pedestrian, bicycle, shuttle bus, ride share and metro regional public transit systems.
- *Sustainability*- supporting sustainability policies of the University.
- *Neighbors*- establish campus community that are positive members of the neighborhood.
- *Aesthetics*- create an environment that meets the visual quality that meets the mission and goals of the University.

The Portland Plan of the 2019 Facilities Master Plan envisions a transformational future for the campus, with a flexible and dynamic framework. A new campus heart lined by buildings and including significant landscape improvements would seek to capitalize on long views and gateway entry locations.

Process Methodology

First, an understanding of the project goals was established with an initial project kick-off meeting that included designated members from USM. With this consideration of the goals and vision for the project, our design team then visited the selected site(s) and performed a thorough existing conditions review of the available historic data maps, City archive information, available surveys, and visual observations.

For this feasibility study, our first task was to provide a preliminary assessment of the Owner's Development Objectives and identify constraints and opportunities for each site that will impact them. Next, we conducted site evaluations for the parcels that included: (1) on-site observations; (2) assessing the physical characteristics of the site; (3) assessing codes, ordinances and regulations that impact the Owner's Development Objectives; (4) assessing utilities available to the site; and (5) assessing the access, circulation, and parking potentials. Task 3 was identifying the environmental requirements that may apply to the Owner's Development Objectives for the site, such as the need for environmental impact statements, assessments, documentation, testing, or monitoring. A site context description provided for each location that identifies the physical characteristics of the areas immediately surrounding the sites, including land use patterns and potential expansion concepts and assess the impact of the Owner's Development Objectives on the surrounding sites and community. Our analysis also includes concept designs for each parking feasibility study drawn to City of Portland Zoning Code requirements, design budgets, and proposed project timelines for the selected concept designs. After preparing a draft report of the initial findings, meetings were conducted with designated members from USM to review the findings and offer insights and feedback for the preparation of this final report.

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Relevant Design Considerations: Parking Feasibility Study for 68 Falmouth Street

After evaluating the identified site, the following options were developed for consideration by the University. Option 1 includes surface level parking with a level deck above and no circulation between the two levels. Option 2 includes surface level parking, two intermediate level decks, and a top level deck, with circulation between the levels. Option 3 includes surface level parking with a level deck above, and lateral expansion into the community garden site, with circulation. Option 4 includes surface level parking and vertical expansion with multiple level decks above in a design that is convertible into future classroom or flexible assembly-type galleries or lecture halls situated along Falmouth Street.

All of the proposed options provide highly efficient parking layouts at approximately 300 square feet per space, indicating the dimensional parameters of the proposed site strongly support parking structure development. Additionally, all options offer multiple direct vehicular and pedestrian access points from existing curb cuts and sidewalk systems at all corners of the site, and integrate well with the existing topography which will minimize costs and site disruption. None of the layouts would require any special City of Portland Planning Board relief or zoning variances.

Chief considerations in selecting the preferred option, or sequential combination of options, include; number of parking spaces desired by phase(s), impact to future building development, and parking displacement for future expansion(s). After review with University Staff, Option 4 was selected for additional massing development to test the conversion aesthetics from the perspective of both the residential neighborhood and the classroom spaces in the adjacent Science Building.

The design parameters for Option 4 include:

- *Initial 4-Level parking garage consisting of 80-space ground level with entrances to North and South, two mid-levels of 114 spaces, and a top level of 117 spaces for a total of 425 spaces.*
- *Level-bay construction along Falmouth Street for possible conversion of parking decks into Office/Classroom space, softening the aesthetic offered to the residential neighborhood.*
- *38 parking spaces may be converted to 11,000 sf gross (8,350 sf net) Office/Classroom spaces, which is possible on a per-floor basis.*
- *Vehicular and pedestrian connections are possible in all directions, including the existing sidewalk system and driveways/lots at Falmouth, Bedford, and Durham Streets.*

For the development of the massing and façade studies, three levels of parking was converted resulting in 33,000 sf gross (25,050 sf net) office/classroom space and an adjacent 323 space parking field. This design maximizes the grade-level sidewalk connections and biases the façade development to the pedestrian realm, leaving the top deck of parking to reduce the building's massing along Falmouth Street and the impacts to the views from within the Science Building.

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Relevant Design Considerations: Parking Feasibility Study for 88 Bedford/ Surrenden Streets

After evaluating the identified site, the following options were developed for consideration by the University. Option 1 includes an arcing garage form that responds to the lot line along I-295 with internal circulation ramp connecting all levels of parking and providing site relief and view corridors towards the proposed future graduate center location adjacent to the Library/Osher Map buildings. Option 2 includes a rectangular multi-level garage with internal circulation ramp connecting all levels of parking and skybridge connection to the existing garage at the second level. Option 3 includes a level-deck expansion scenario to the existing garage with independent access to each level and radial internal circulation ramp providing site relief and view corridors towards the proposed future graduate center location adjacent to the Library/Osher Map buildings.

All of the proposed options provide highly efficient parking layouts at approximately 315 square feet per space, indicating the dimensional parameters of the proposed site strongly support parking structure development. Additionally, all options offer multiple direct vehicular and pedestrian access points from existing curb cuts and sidewalk systems at all corners of the site, and integrate well with the existing topography which will minimize costs and site disruption. None of the layouts would require any special City of Portland Planning Board relief or zoning variances.

Chief considerations in selecting the preferred option, or sequential combination of options, include; number of parking spaces desired, site and viewshed impacts to the future graduate center site, and financial impact(s) from modifying the existing garage structure. After review with University Staff, Option 1 was selected for additional massing development to test the conversion aesthetics from the perspective of both the I-295 highway corridor and the access drive adjacent to the Wishcamper Center.

The design parameters for Option 1 include:

- *5-Level parking garage consisting of 110-space ground level with entrances to North and West, three mid-levels of 161 spaces, and a top level of 173 spaces for a total of 766 spaces.*
- *Sculptural arcing form referencing the I-295 corridor and the adjacent cloverleaf highway on/off ramps provides a large marketing opportunity for integration into the façade elements.*
- Relief provided at the future graduate center building site, allowing for exposure and views between the campus and downtown.
- *Vehicular and pedestrian connections are possible in all directions to the existing sidewalk system and Bedford Street.*

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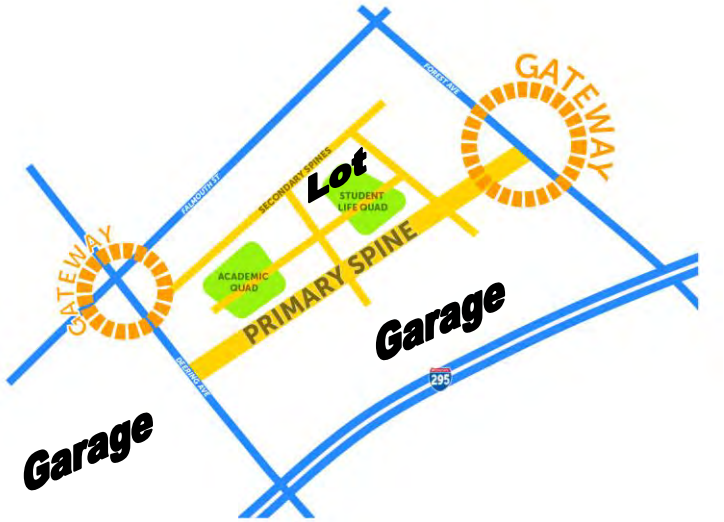
Part 1 : Parking Feasibility Study of 68 Falmouth Street Lot

Preliminary Assessment of Owner's Development Objectives

The 2019 Facilities Master Plan seeks to establish a new residential quad in place of the existing surface parking lot to connect to and pair with the adjacent academic quad. Liner buildings would reinforce the quad enclosure and the parking structures provided for students, faculty and visitors would be concentrated at the perimeter of the campus.



A concern with this approach is it does not provide a convenient parking adjacency to the buildings being served by the parking fields, the prime factor in the utility of a parking structure. Winter weather and the wide Right-of-way width of the Bedford Street arterial drive serving as the campus gateway combine with a long travel distance as significant barriers to the effective utilization of the existing parking garage.

The Design Team suggests incorporating a flexible, expandable, and interconnected parking armature, located within the campus bounds as defined by the perimeter arterial roadways, establishing a new landscaped residential quad for the campus that preserves open space and long views to Downtown Portland while simultaneously providing a highly effective, safe and available parking solution.

Integration of the parking structures directly with the building(s) they serve could provide opportunities to merge "back-of-house" activities for increased efficiency and utility while preserving development flexibility for the site. The visibility and way-finding provided for the parking structures from the arterial connections should be considered carefully in the campus master planning to ensure the highest levels of convenience and utility.

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Site Evaluation

Utilities

All utilities including but not limited to electric, water, sewer, storm drainage and gas service appear available to the site directly from Falmouth Street, pending confirmation of available capacity by each utility. Of these major utilities serving adjacent buildings/lots, only a storm drainage line and a sewer line appear to cross the site and may need adjustment in coordination with the parking structure development. Additionally, a See Appendix D for additional information.

Topography

The site topography varies throughout the campus, but is generally descending in grade from West to East. The site's existing surface parking lot and related site improvements provide the opportunity to connect at-grade on the East edge and adjacent grades slope up approximately 10 feet to the West edge, an advantage for parking structure development that allows the potential for direct connection to upper levels, reducing the impact of internal and external circulation and "couching" the lower level of parking to reduce visual impact from the campus core. See Appendix E for additional information.

Parking

The site is currently used as a surface parking lot consisting of 62 total parking spaces, 4 of which are dedicated to handicap accessibility. The parking lot is for USM faculty and staff and denoted as Lot P9. The only point of vehicle access is from the North corner of the parking lot from Falmouth Street.

Pedestrian Access

There is a path that borders the South East portion of the parking lot which connects to the Sullivan Recreation and Fitness Complex, the Science Building, and other campus pathways. The pathway is accessible from a set of stairs located in the South corner of the parking lot or the open area located in front of the Sullivan Recreation and Fitness Complex. All parking options provide direct connectivity to the pedestrian circulation system, requiring varied levels of off-site disturbance depending on desired access points. See Appendix B for additional information.

Building Height

The proposed height of the parking structures in all of the options vary, however; each option is below the allowable height of 75' per the zoning ordinance. For the purpose of this feasibility study, the Design Team has developed layouts that are limited in height to 38 feet to correspond with and support the view opportunities from the upper levels of the adjacent Science Building. See Appendix C for additional information.

Building Setbacks

All proposed parking structures are within the setbacks set forth in the zoning ordinance. The only setback that is applicable to this study is the setback along Falmouth Street, which is 20'. See Appendix C for additional information.

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Pedestrian Access

Pedestrian access and connectivity is maintained largely "as-is" in each of the parking options. The nature of efficient parking garage design supports pedestrian circulation nodes at the corners where vehicular parking is unavailable. Each parking option anticipates vertical circulation stair towers at these corners, and aligns these pedestrian elements with the existing sidewalk system and away from vehicular drives to provide a high degree of visibility, comfort, and safety.

Vehicle Access

All parking options would maintain the current access point on Falmouth Street, while some would potentially add access points from the central campus parking lot access drive or from Durham Street through the existing Central Heat Station parking lot. These options may not be favorable for long-term implementation, but may be designed to be convertible into pedestrian-focused elements if alternate vehicular access points are provided in a parking garage expansion.

Delivery/Loading Access

The existing loading dock at the surface lot to the Science Building is to be maintained, and importantly, will be expanded with a dedicated entry to reduce traffic backup conditions and to provide additional capacity for future needs. Additional service vehicle or university maintenance parking could be incorporated within this loading zone.

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Identification of Environmental Requirements

Due to the highly variable disposition of silty and sandy soils across the Back Bay basin generally, and extending specifically to the surrounding sites at the existing parking structure at Surrenden Street, it is recommended that a geotechnical engineer be brought on-board early in the schematic design process to provide soil analysis and identify the soil improvements necessary to support the preliminary foundation design.

Beyond this soils composition assessment, there are no known needs for environmental impact statements, additional environmental assessments, or testing/monitoring with respect to the materials reviewed as part of this parking feasibility investigation.

Generally, the proposed parking options provide close integration with the existing grades and take advantage of adjacent elevations to reduce the impact of sitework and potential exposure to the import/export of soils. Additionally, the lighter weight of a steel garage structure would support the use of either spread footings or geopiers, granting the Design Team flexibility to tailor a structural solution with the lowest level of environmental impact.

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Site and Neighborhood Context Description

Campus

The University was founded in 1878 with Corthell Hall being the first university building in Gorham, Maine. The Portland campus is located downtown and bordered by highly trafficked roads including, Interstate Highway 295, Forrest Avenue, Deering Avenue, Falmouth Street, and Bedford Street. The campus buildings are a variety of materials including but not limited to brick, glass curtain wall, panelized systems, and concrete.

Neighborhood

A completely developed urban neighborhood. The adjacent land consists of Interstate Highway 295 on the South, commercial uses on the North and residential uses on the west and south. The largest adjacent land use is the Oakhurst Dairy distribution center between the campus and Forest Ave. The adjacent residential areas provide housing for some of USM's students but are generally a set of very solid and cohesive neighborhoods.

Zoning

The campus is located in Zone R5 in the City of Portland, with an overlay zone type of "USM" for the University of Southern Maine. This zone has a strict set of rules designed to create a quality and cohesive campus environment while integrating with and respecting the residential character of surrounding neighborhoods.

USM Campus Design Principles and Standards (*Adopted May 23, 200)*

STANDARD A-1: Campus Edges Parking lots and structures, blank walls, or backs of buildings shall not be sited in a manner that forms a boundary to neighborhoods and the city.

STANDARD A-5: Views and Landmarks. View corridors and terminations to landmarks such as campus buildings, city buildings, and natural resources, shall be highlighted with design elements such as significant architectural features, quality materials, landscaping, public art or other visual amenities. View corridors and termination points shall include the view up Bedford Street and west across Deering Ave., and other important views as may be identified during campus planning and the City's development review process.

STANDARD B-3: Multi-modality. New development shall relate to a campus circulation system that serves pedestrians/bicyclists, autos, public transportation, service vehicles, and emergency vehicles. New development along transit corridors shall provide convenient and accessible routes from the building to the nearest transit stop.

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STANDARD B-4: Traffic-calming. Circulation improvements internal to the campus shall be designed to create a pedestrian-oriented environment and to discourage speed. Appropriate traffic calming measures may include gateway treatments that signal arrival into the campus environment, corner neck-downs, narrowed travel lanes, roundabouts, speed tables, and other devices. Development along public streets shall be designed with traffic calming measures to the extent allowed by City and State policies and requirements at a minimum.

PRINCIPLE C: Parking, Loading and Service Areas. Parking structures shall be designed and located so as to present an attractive façade to neighboring uses in order to minimize the impact along streets and residential areas. Surface parking lots shall be sited and designed to minimize their visual presence on the campus.

STANDARDS C-1: Structures. Parking structures shall be compatible with adjacent uses and architecture in form, bulk, massing, articulation, and materials. Parking structures shall incorporate architectural design elements in order to achieve visual interest on street frontage facades, and along major pedestrian ways, for the full height of the structure, that serve to enhance the pedestrian experience. STANDARD C-2: Active Uses: Parking structures shall incorporate liner buildings or enclosed active uses on the first floor along all primary frontages (excluding frontage dedicated to entrances, lobbies, and stair towers). Such space shall be provided with a minimum of 9-foot floor to ceiling clearance height and a 25-foot depth (measured from the exterior building wall). Alternatively, the parking structures may be set back at least 35 feet from the primary street right of way and that space shall not be occupied by surface parking or access lanes and shall be designated for future development. The setback space shall be provided with all stubbed utilities and other provisions needed to accommodate further development.

STANDARD C-3: Decks and Ramps. Parking structures shall have horizontal decks on all levels where the decks are visible from the public rights of way. Ramps and no horizontal parking decks shall be screened from all visible angles and shall not be permitted 4 on facades located along or within 45 feet of a public street (Note: such space would allow for the construction of a liner building and a ten-foot separation).

STANDARD C-4: Surface Lots. Parking lots shall be located behind buildings or to the side of existing or future buildings, but shall not occupy more than 64 feet of public street frontage within 45 feet of the street right of way (to allow for a future building). The areas devoted to surface parking shall be screened from streets, walkways, and significant views through the use of design elements such as plantings, fencing, grade changes, and/or walls.

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Site Implications (from Owner-provided campus utility plans)

Water Items:

- 4" Water pipe adjacent to the Eastern side of the lot – located at the James V. Sullivan Recreation & Fitness Complex
- 6" Water pipe adjacent to the Northern side of the lot – located under Falmouth Street
- Fire Hydrant adjacent to the Northern side of the lot – located on the opposite side of Falmouth Street

Gas Items:

- 2" Gas line adjacent to the Eastern side of the lot – located at the James V. Sullivan Recreation & Fitness Complex
- 6" Gas line adjacent to the Northern side of the site – located under Falmouth Street

Tele/Data Items:

- 2 Conduits located at the Northern part of the lot cross from East to West

Electrical Items:

- Conduit(s) located at the Northern part of the lot cross from East to West

Current Traffic Patterns

Forest Avenue serves as the primary arrival point to the USM Portland campus. The secondary arrival point to the campus is at the intersection of Deering, Brighton, and Falmouth Streets. The third arrival point to the campus is Bedford Street, which bisects the campus providing access to most of the parking supply for the campus.

Future Traffic Pattern Considerations

Closure of the Brighton Avenue Extension and installation of a roundabout at the intersection of Brighton, Deering, and Falmouth streets. After which, the remaining extension of Brighton Avenue will be given to USM by the city of Portland.

Alternate Means of Transportation

As identified in the Facility Master Plan, USM supports robust pedestrian, bicycle, shuttle bus, ride share and metro regional public transit systems that look beyond private vehicular parking to meet the transportation needs of the campus community. This could have a potential impact on the parking requirements for the Portland campus.

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Conceptual Drawings

Design Considerations

The practical parking capacity is an important design consideration due to the fact that no garage can operate at 100% efficiency. The industry accepted efficiency is between 85-95%. This allows for variations in parking activity, loss of parking due to mis-parked vehicles, construction, snow piling, and other unforeseen factors. This efficiency rate also takes into account traffic flow problems related to parkers trying searching for available spaces when the garage is at or near its maximum capacity.

Level of Service

The recommended Level-Of-Service (LOS) for visitor parking is LOS "A" or "B" which provides greater dimensions and ease of use for the parking garage, but for regular monthly parkers an LOS of "C" could be utilized to maximize the number of parking spaces and thereby increasing the efficiency of the design and providing a higher return on investment. LOS "D" is an extremely compact garage design that is mostly reserved for underground parking structures or extremely high-density urban designs.

LOS "B" provides a parking stall that is 8'-9" in width and 17'-9" in length, but this study utilizes a 9'-0" wide and 18'-0" long standard stall, and up to 20% compact spacing per City of Portland Design Standards at 8'-0" wide and 15'-0" long. The drive aisles will be sized at 24' in overall width.

Project Overview

Capacity, expansion, aesthetics and size of the parking structure were taken into consideration for four options developed as part of the programming effort so the design features of each could be evaluated. It is also the understanding that a large structure could have an undesirable impact on the site by restricting view corridors and clashing with the architectural character of the surrounding buildings, with the goal to maintain views from the upper levels of the Science Building towards the city skyline. All of the concept designs therefore top-off at 38'-0" above the existing surface lot to allow for these views from the Science Building.

The Parking Options include:

1. Single elevated level-deck parking scenario without internal ramping and providing independent access to two parking levels
2. Ramped multi-level garage with internal circulation ramp connecting all levels of parking.
3. Lateral expansion scenario with independent access to each level (to be combined with Option 2).
4. Level-deck scenario along Falmouth Street convertible to Office/Classroom Space with internal ramped-deck circulation connecting all levels of parking.

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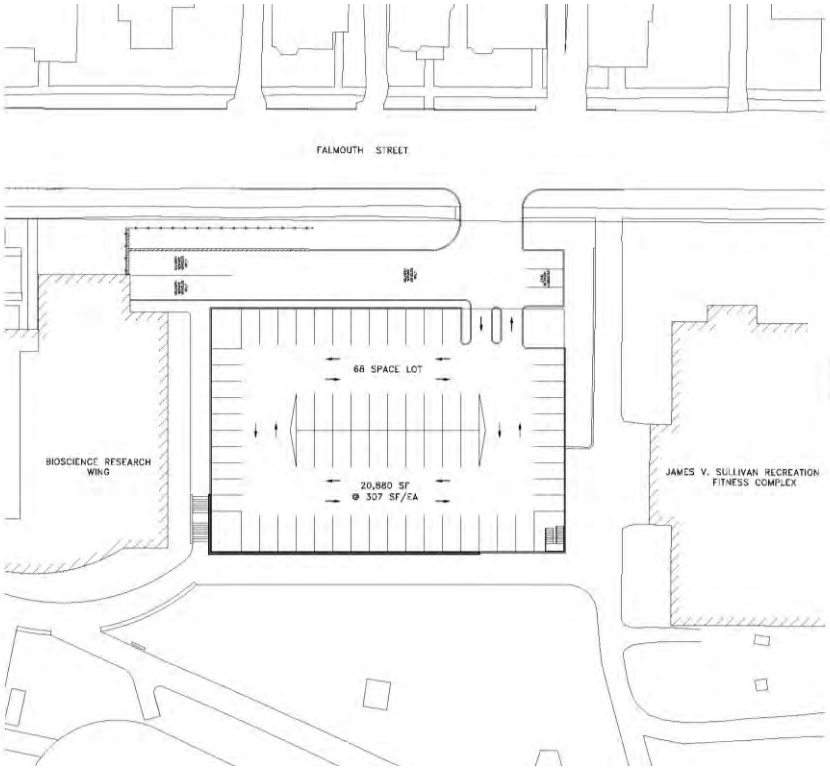
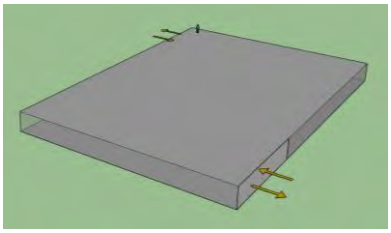
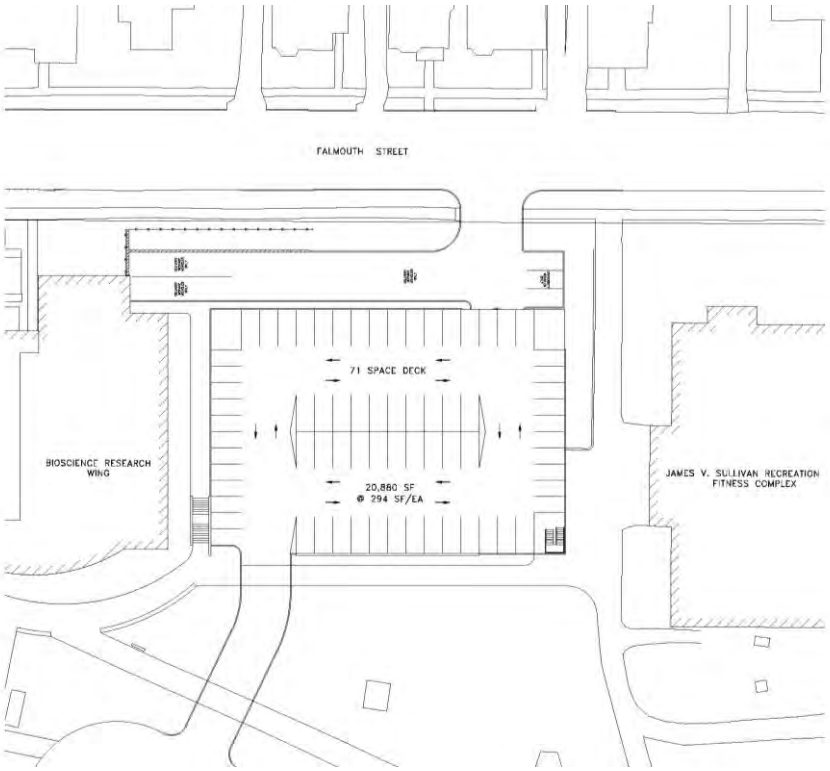
Parking Design Option 1: Single elevated level-deck parking scenario without internal ramping and providing independent access to two parking levels





SECOND ~ 20,880 SF @ 294 SF/EA (71 SPACES)
FIRST ~ 20,880 SF @ 307 SF/EA (68 SPACES)
TOTAL ~ 41,760 SF @ 301 SF/EA (139 SPACES)

Level 1



Level 2

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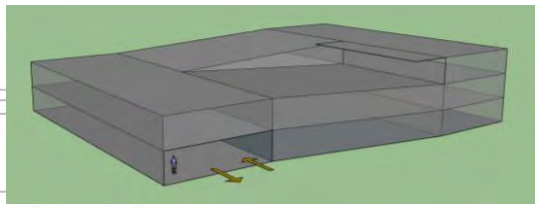
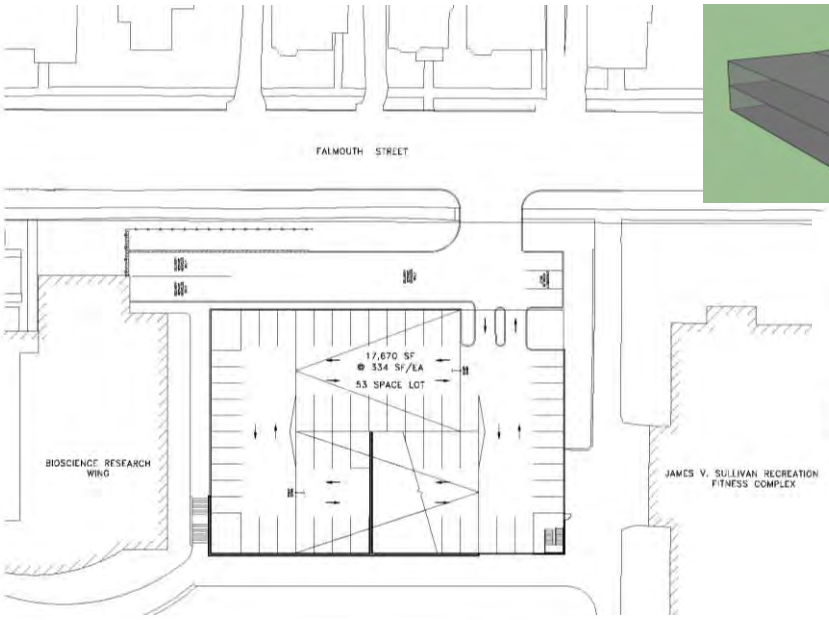
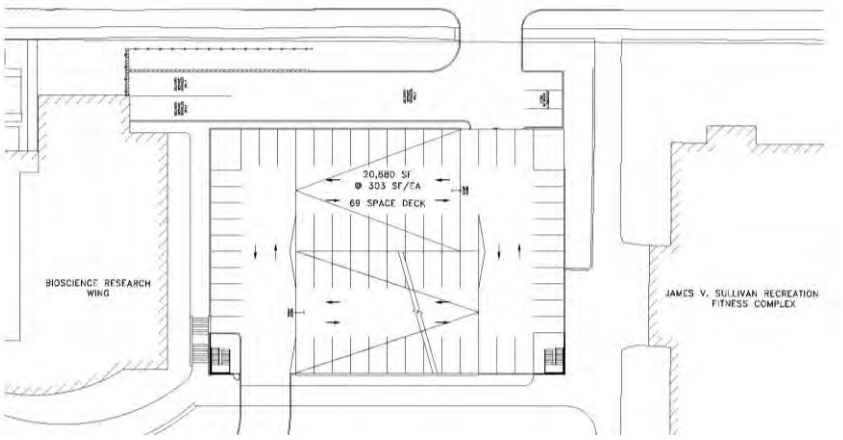
Parking Design Option 2: Ramped multi-level garage with internal circulation ramp connecting all levels of parking





FOURTH ~ 11,520 SF @ 288 SF/EA (40 SPACES)
THIRD ~ 20,880 SF @ 290 SF/EA (72 SPACES)
SECOND ~ 20,880 SF @ 303 SF/EA (69 SPACES)
FIRST ~ 17,670 SF @ 334 SF/EA (53 SPACES)
TOTAL ~ 70,950 SF @ 300 SF/EA (304 SPACES)

Level 1



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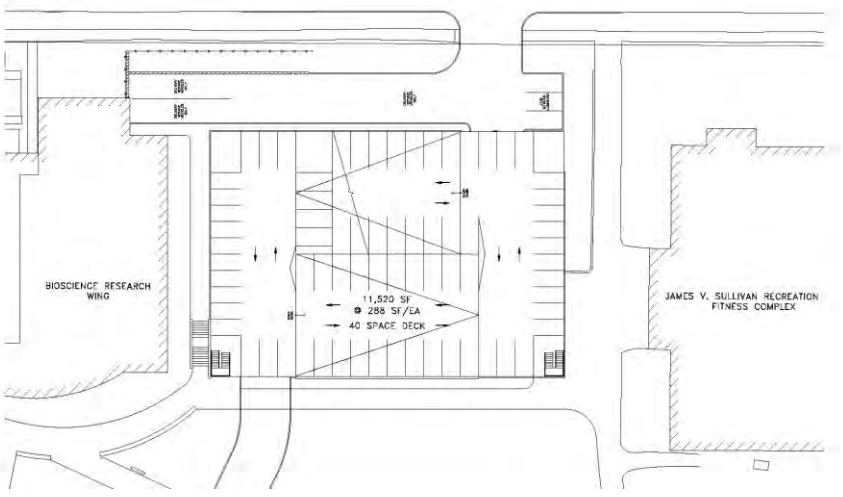

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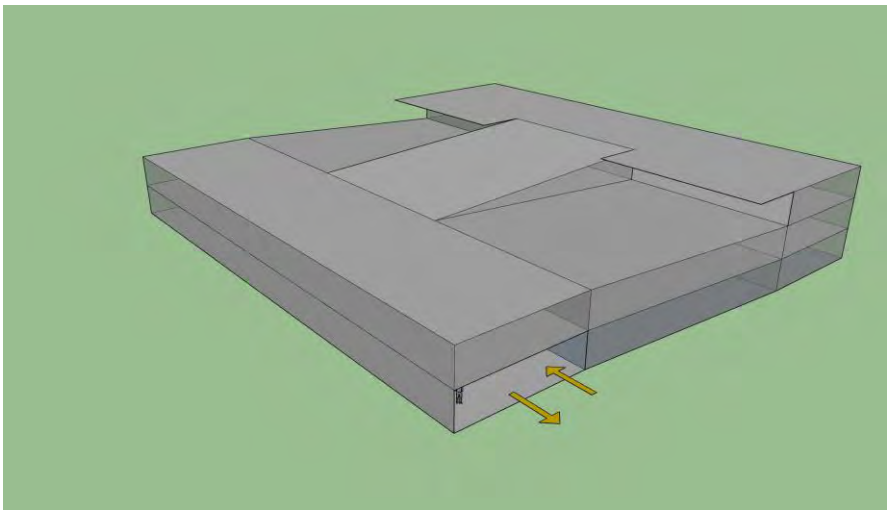
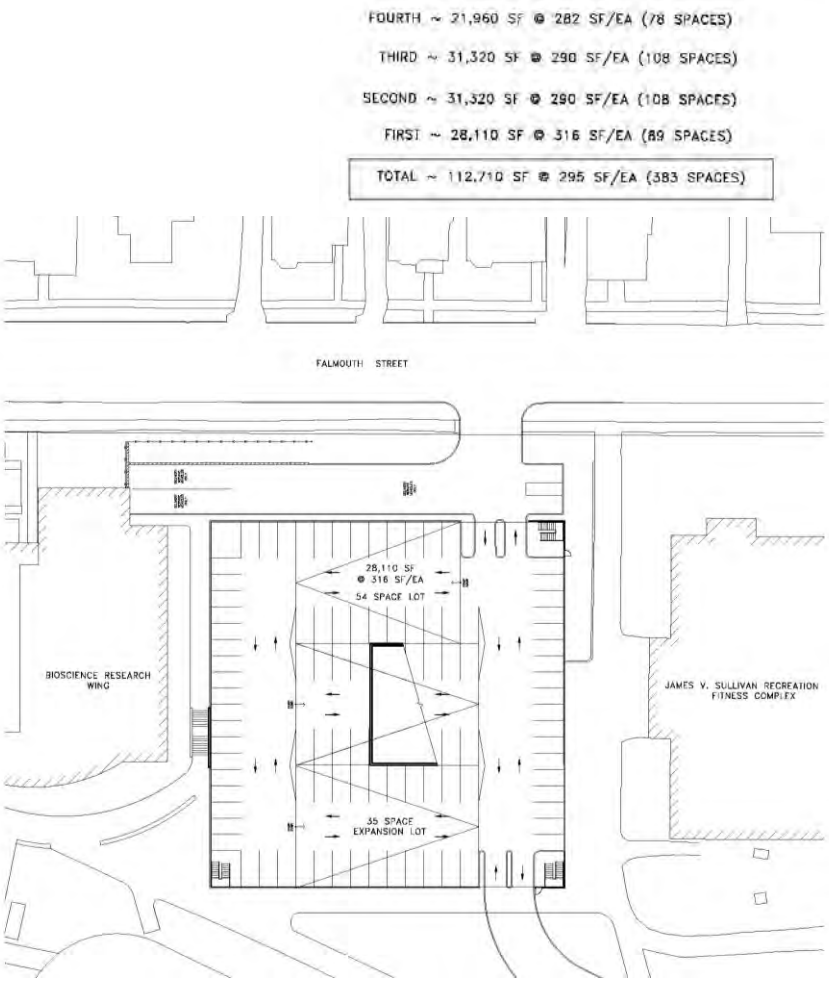
Parking Design Option 3: Level-deck expansion scenario with independent access to each level (to be combined with Option 2)





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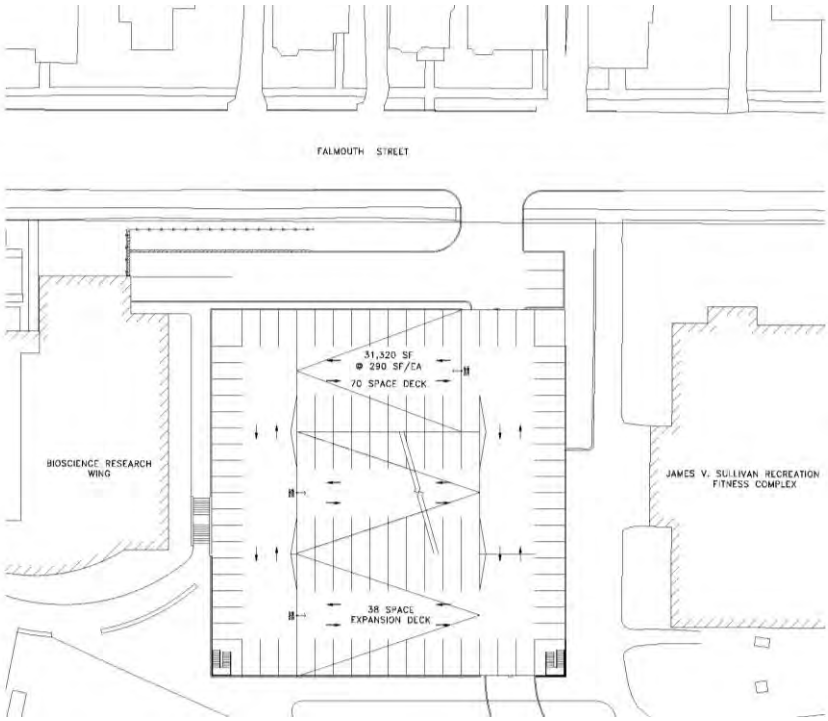

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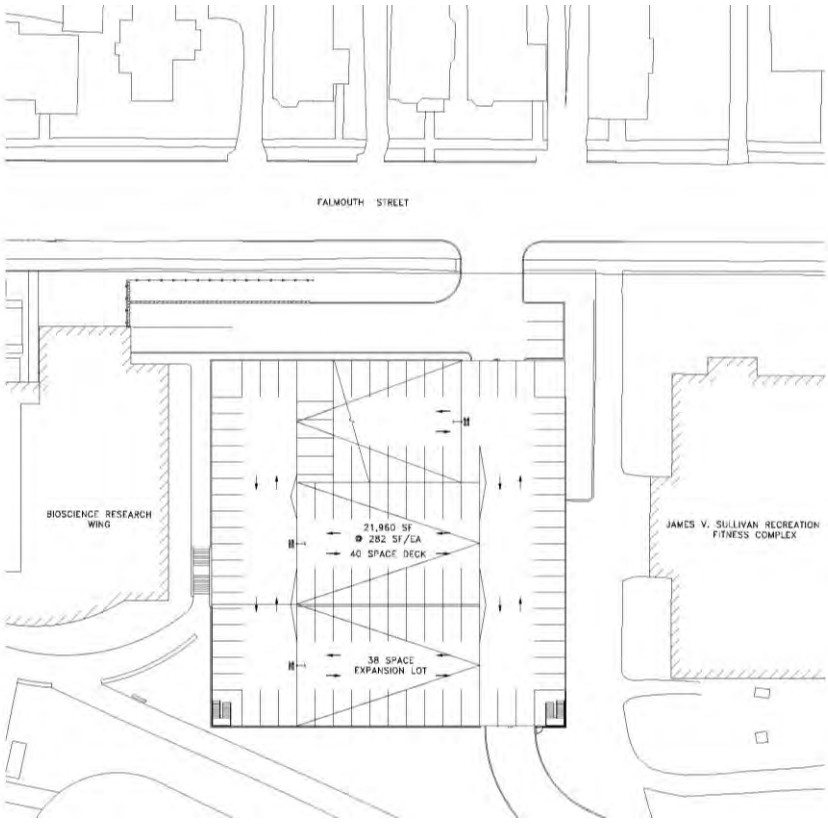

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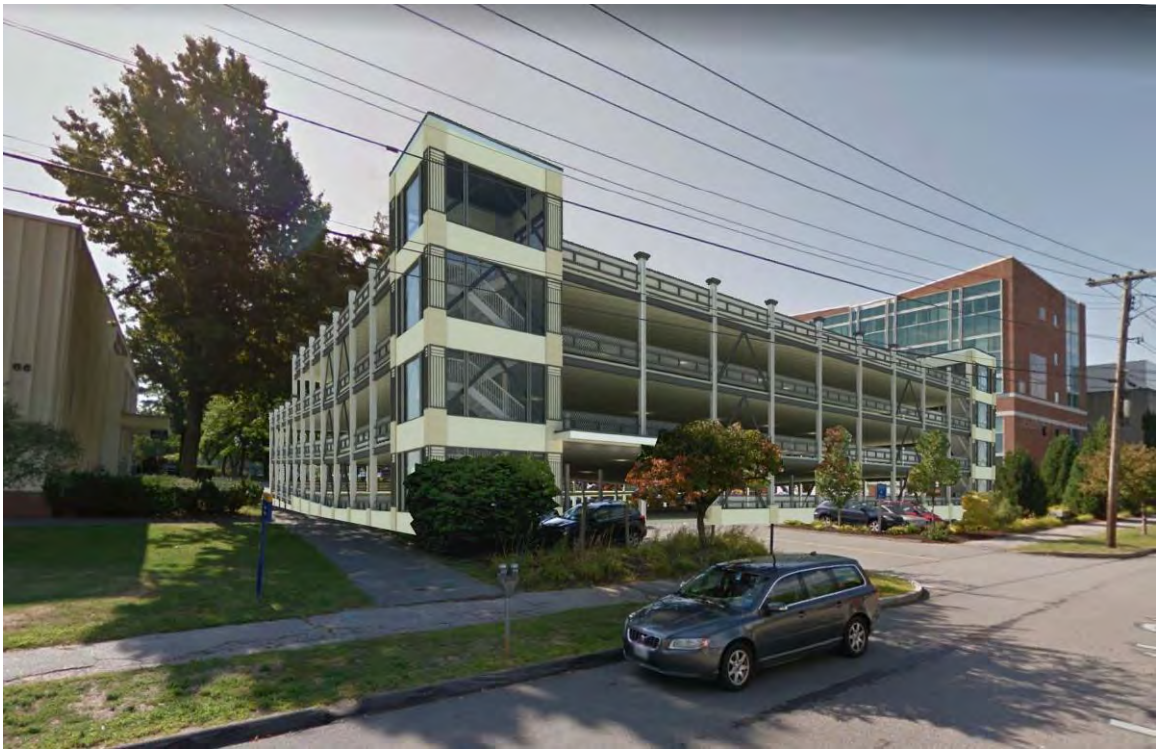
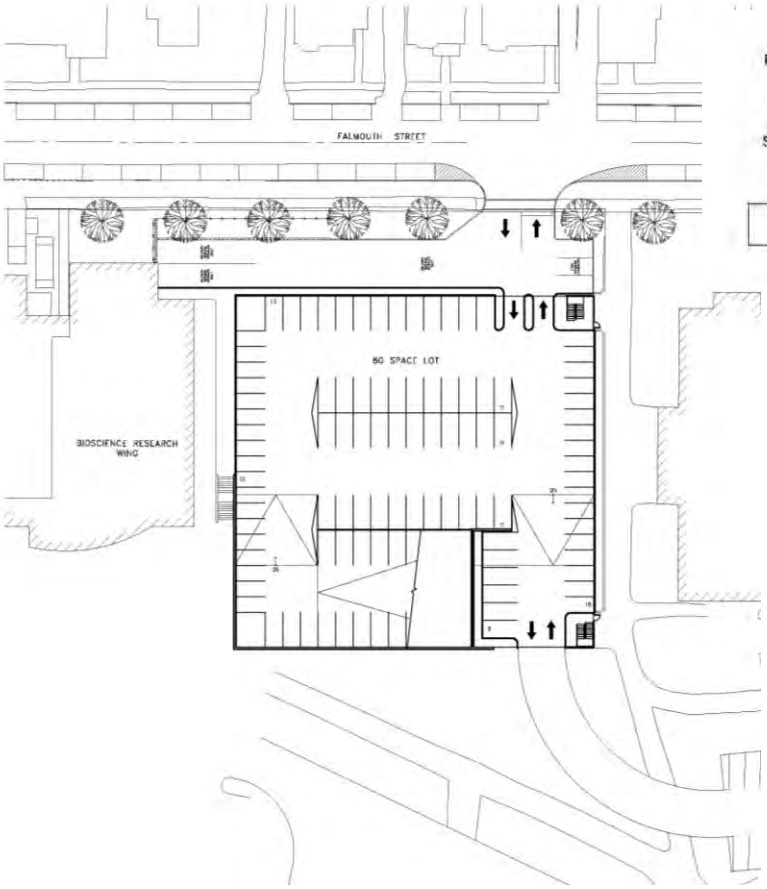
Parking Design Option 4A: Level-deck scenario along Falmouth Street convertible to Office/Classroom Space with internal ramped-deck circulation connecting all levels of parking.





FOURTH ~ 33,750 SF @ 288 SF/EA (117 SPACES)
THIRD ~ 33,000 SF @ 289 SF/EA (114 SPACES)
SECOND ~ 33,000 SF @ 289 SF/EA (114 SPACES)
FIRST ~ 25,000 SF @ 313 SF/EA (80 SPACES)
TOTAL ~ 124,750 SF @ 294 SF/EA (425 SPACES)

Level 1

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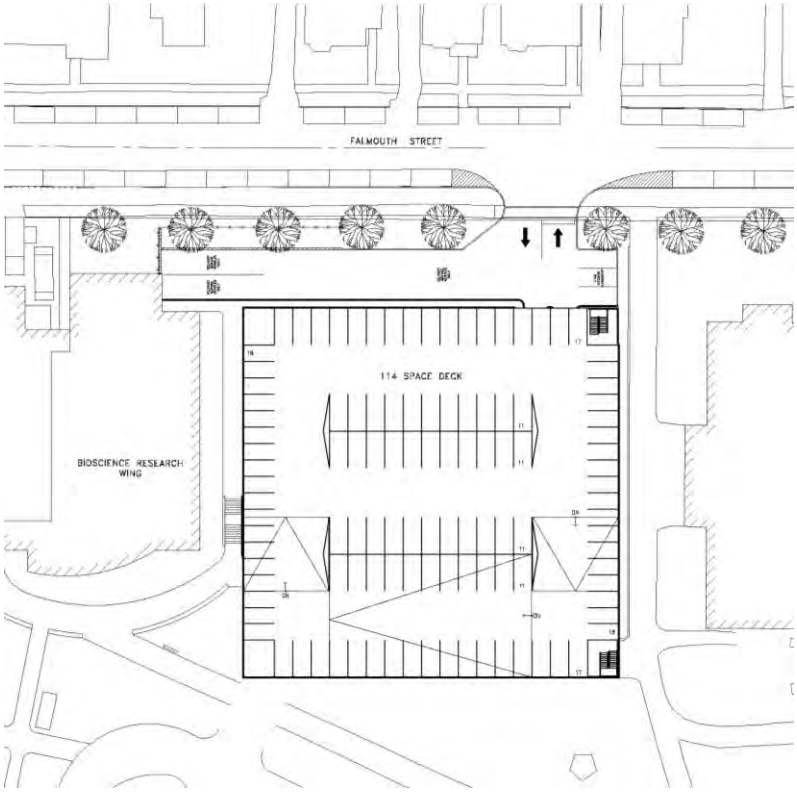
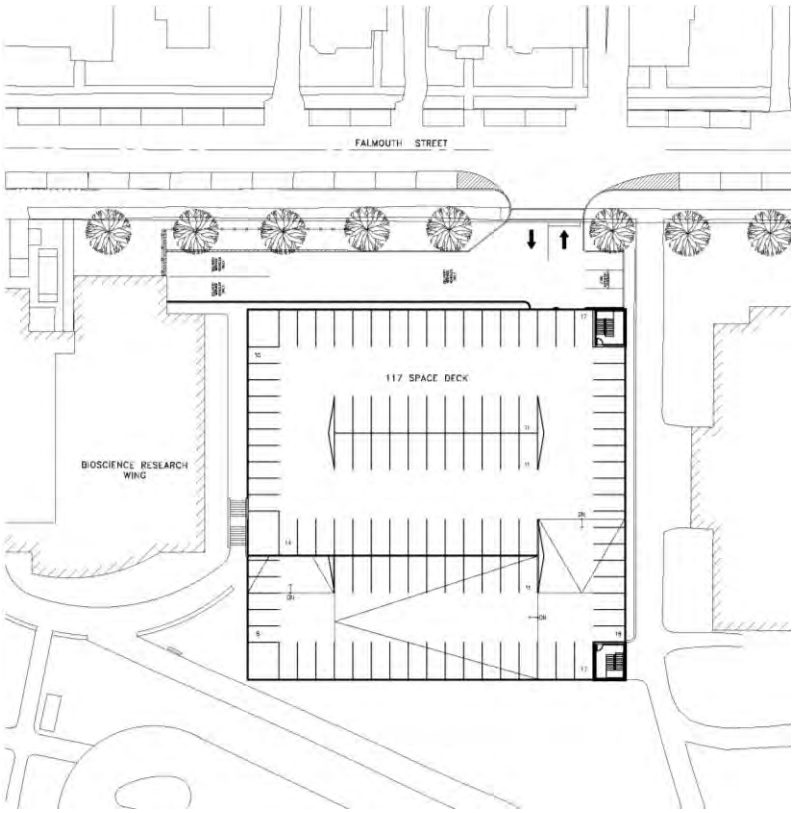


Level 2 & 3



Level 4

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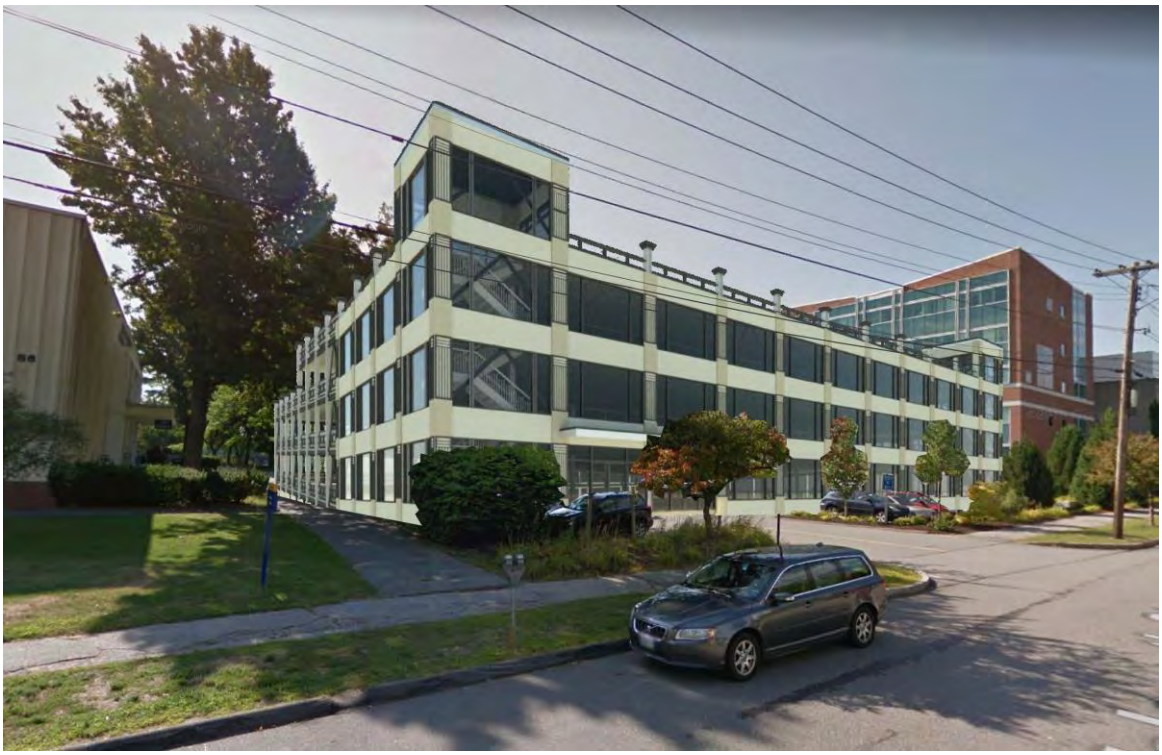
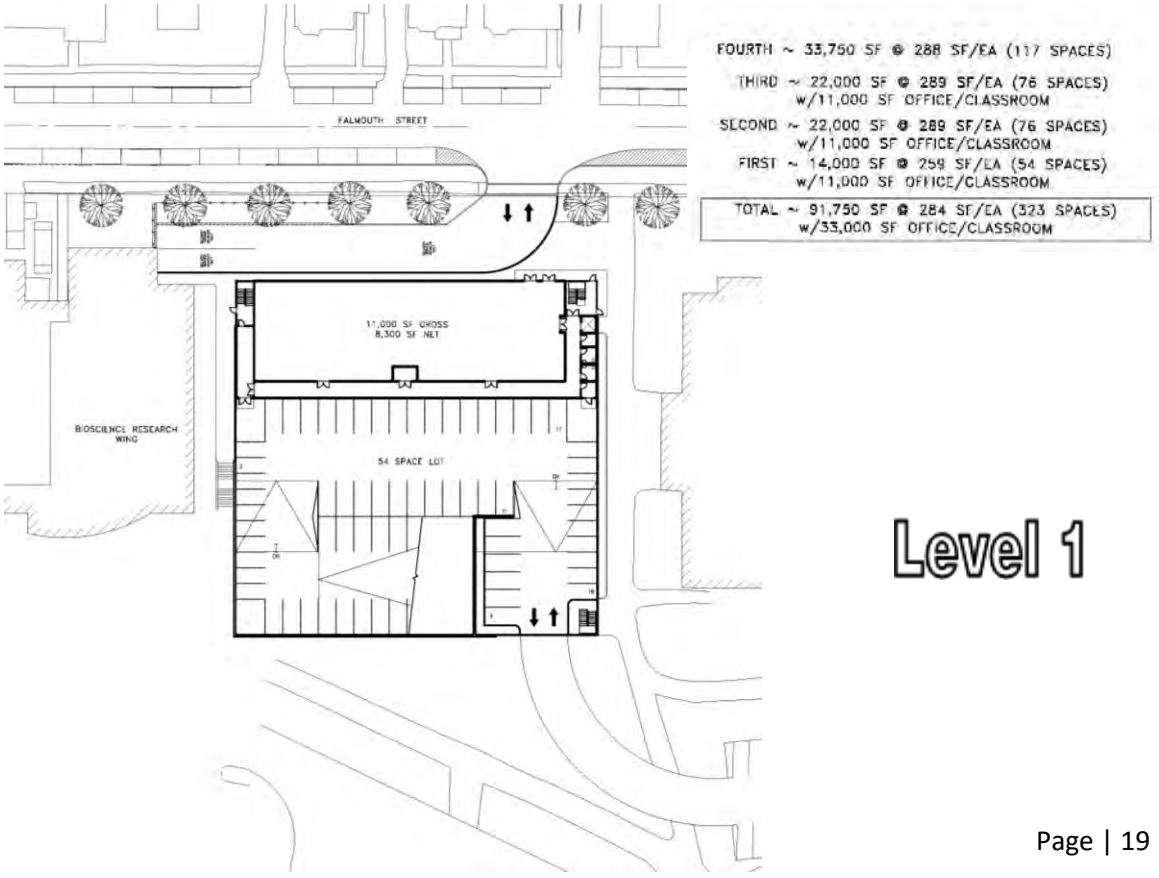
Parking Design Option 4B: Conversion to Office/Classroom Space (33,000 SF gross) with internal ramped-deck circulation connecting all levels of parking behind and above.





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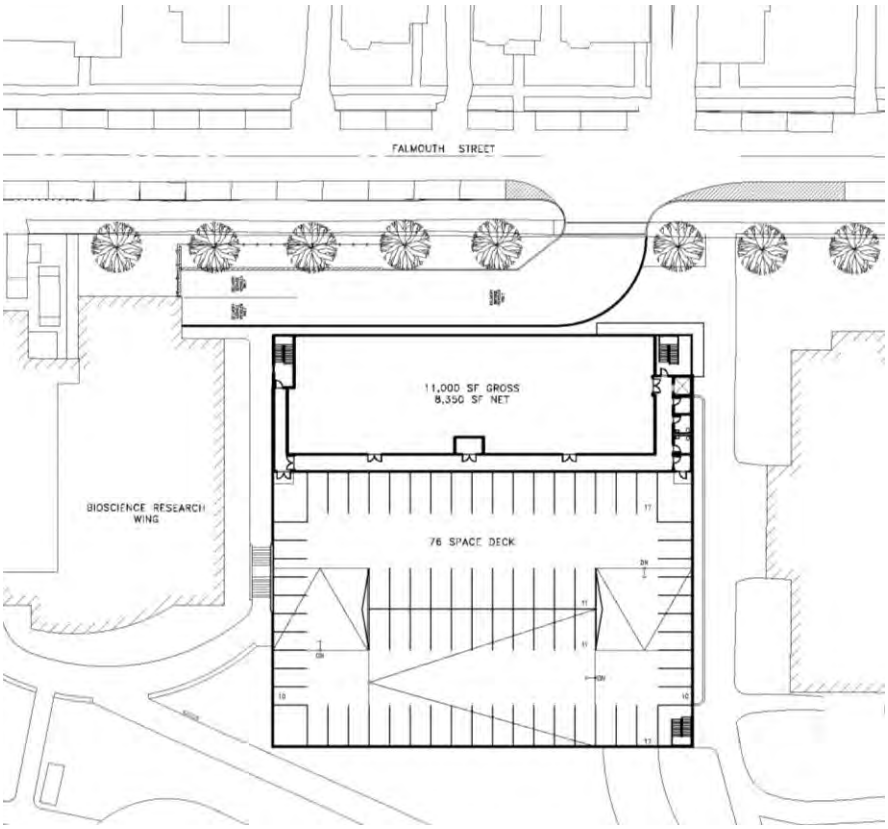
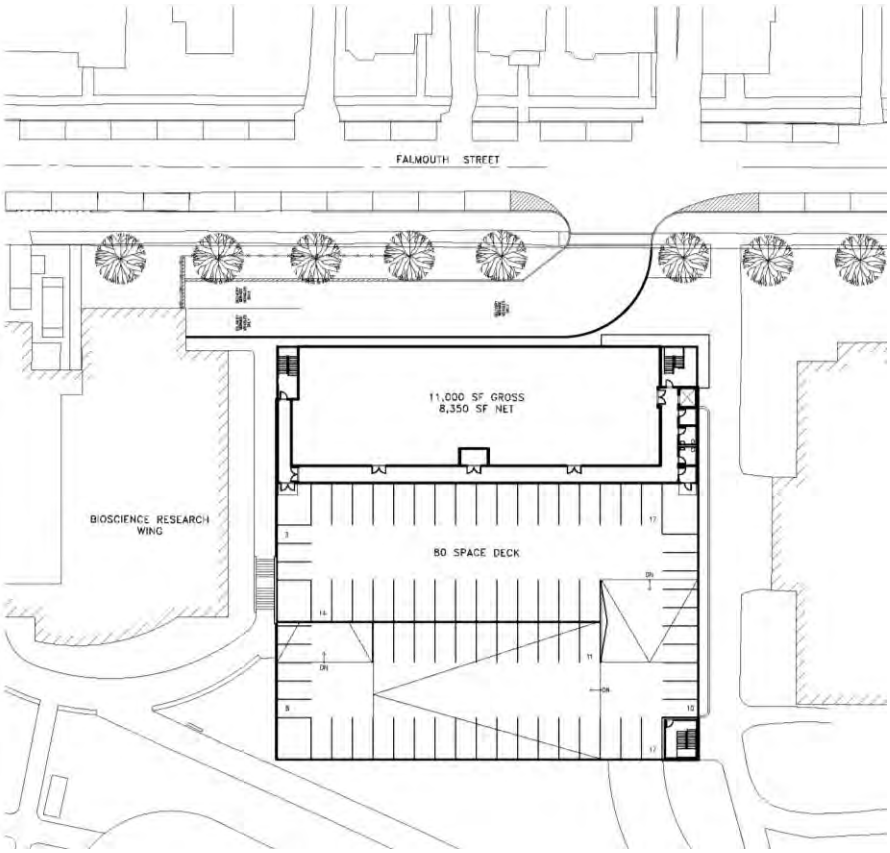


Level 2



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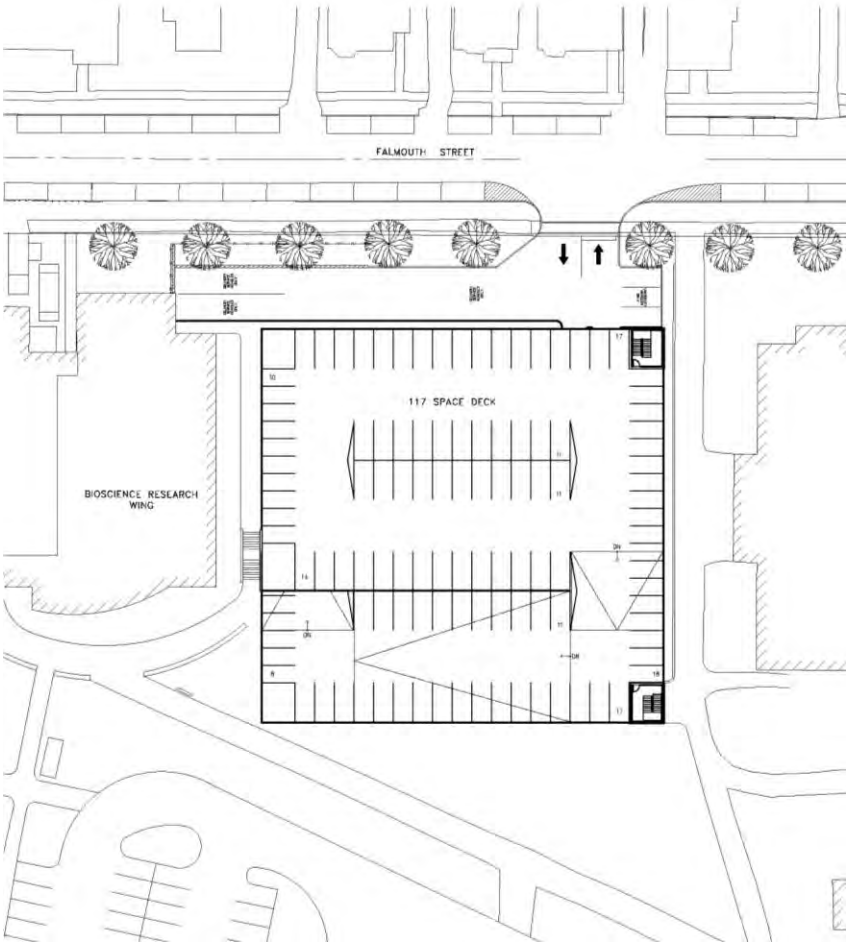

Level 4

Proposed view from Science Building

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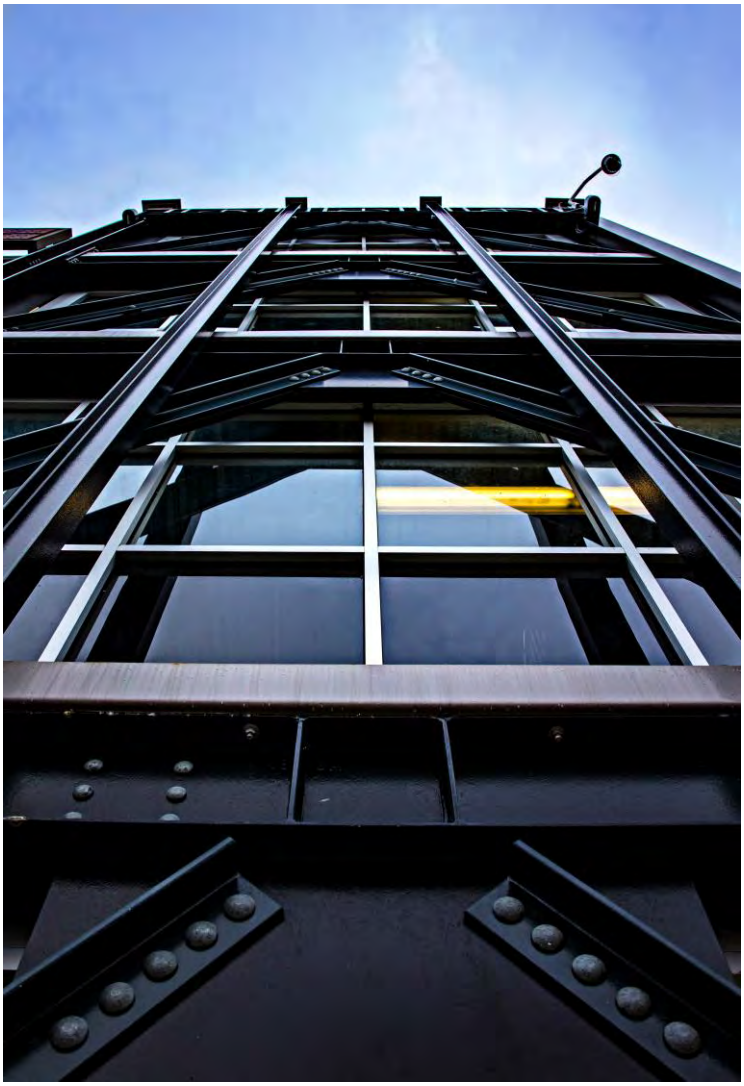
Structural System

The study assumes that a steel structure is used due to cost and the accelerated construction time versus cast in place concrete or pre-cast concrete structures. A footing design of spread footings or rammed aggregate piers is assumed, with cast-in-place composite decks protected with a vehicular traffic coating.

Perhaps most important to the long-term success of the garage design is the patron's feelings of comfort, safety and security while using the facility. Structural steel offers a much thinner structural profile, with small columns, long spans and braced frames rather than massive shear walls, giving the interior of the garage a bright openness with few obstructions for a sense of safety and visual security. Steel framed parking structures can also accommodate any type of façade system, and the building's aesthetics are custom designed to meet the specific requirements of the site or the character of the district surroundings, versus selecting a design from a concrete manufacturer's limited catalogue of standard finishes.



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Design Budget and Proposed Project Timelines

Costs of Steel Structural System

Based on our experience in parking garage design for a number of clients in Maine, we feel that a steel parking structure offers many advantages over a concrete structure and will be a better long-term investment from not only the initial cost and long term maintenance operations perspectives, but also providing more design flexibility and a much more aesthetically-pleasing contributor to the district's architectural fabric.

Initial investment costs are lower for steel-framed parking garages than concrete framing systems, typically quoted 10-15% less, which is partially due to the lighter structural weight and reduced site impacts. Also, the local labor force is far more comfortable with installing a more traditional steel-framed structure versus a concrete structure. The contractors here in Maine will provide a more competitive bid for a steel frame over a concrete system that may force sourcing qualified labor from out-of-state at a higher rate.

The complaint about steel garages in the past is that they have been more expensive to maintain, but we have not found this to be true. Quoted as up to 30% less to maintain than comparative concrete structures by structural engineer examinations, with regular maintenance of the high-performance paint system and elastomeric deck topping, we have found that maintenance costs are very manageable and typically only require spot-patching and paint touch-up, versus the much more extensive deck joint replacements required at regular periodic intervals with precast garages.

Additionally, with the pressures that maintenance budgets endure over the lifespan of a building, the exposed nature of steel-framed design allows for direct visual examination and inspection to assist developing deferred-action maintenance programs to head-off serious issues even during lean times. When concrete structural systems begin to show failure, it is often well past the point of patch and repair, instead requiring the complete and immediate replacement of the overall system which will require a large maintenance capital reserve carried for the life of the garage

Steel frame structures can be easily customized to conform to the particulars of irregular sites, an important consideration in tight urban contexts looking to capitalize on every inch, and may also be expanded in any direction, often planned ahead with the bolt holes pre-drilled. The ease of construction of both the building and the foundation systems capitalize on the efficiencies of shop fabrication, shortening erection schedules and allowing for winter construction. Steel-framed garages typically weigh 20% less than a corresponding concrete structure, which reduces foundation costs and permits a wider range of soil conditions to simplify design.

For all of these reasons, it has been our experience that a steel parking structure would be the most appealing, economical, and flexible garage, offering a maximum return on investment for the University of Southern Maine.

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Design Budget

With the Design-Bid-Build project delivery method, the actual costs of the project are not known with certainty until the bid opening, and are also affected by seasonal availability, the state of the current bid environment, and the complexity of the design as it relates to the available pool of responding contractors. That being said, there are a number of factors that can be used to gauge the pricing performance of the garage design relative to the resultant parking efficiency and the number of special features required for the project.

The current 2019 Means Construction Data pricing guide identifies the average cost of a surface parking space is in the $2,500-$3,000 range, structured parking with elevated decks and an open design in the $18,000-$22,000 range, structured parking with elevated decks in a closed design in the $20,000-$24,000 range, and underground parking with a closed design in the $30,000-$35,000 range. The range of these baseline costs should be considered primarily against the backdrop of the resultant parking efficiency on a square-foot basis, but also the specific project program requirements, such as; vehicular entry, ramping, enclosure, ventilation, and pedestrian access. Due to the highly-efficient nature of the options developed in this parking feasibility study, at approximately 300 sf per space, the average square foot cost of around $45 per square foot for a typical steel-framed parking structure would result in a per-space cost of $13,500.

Proposed Project Timeline

Due to the highly variable impact of the City of Portland design review process, in addition to the review and approval procedure timeline for the University's Capital Improvements process, just to name a couple of possible schedule impacts, the exact project timeline is difficult to determine and some degree of flexibility should be considered when forecasting the project approvals timeline. Also figuring into the early project timeline is the project budget pricing requirements, and the design development gaps afforded to these pricing efforts during design. To accelerate the construction schedule, fast-track techniques, performing parts of the construction effort under winter conditions, and possibly selecting a deck system that does not require a traffic topping may be considered.

The schedule requirements for the major design segments and project approvals would be as follows:

- Preliminary Garage Design and Civil Design Document Preparation……. 2 month duration
- City of Portland Planning Board Approval Process……. 3 month duration
- Design Development and Construction Document Preparation……. 3 month duration
- Project Bid and Contractor Award……. 1.5 month duration
- State Fire Marshal and Local Permit Approvals …….. 2 month duration
- Site and Building Construction ……. 8-10 month duration

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A general timeline for a steel-framed parking garage design and construction that would take best advantage of the traditional construction season with a Spring ground-breaking would be as follows:

- Preliminary Garage Design and Civil Design Document Preparation…….. Nov-Dec 2019
- City of Portland Planning Board Approval Process…….. Nov 2019-Jan 2020
- Design Development and Construction Document Preparation……. Dec 2019-Feb 2020
- Project Bid and Contractor Award……. Feb 2020-March 2020
- State Fire Marshal and Local Permit Approvals ……. March 2020-April 2020
- Structural Steel Shop Drawing Prep and Fabrication…… March 2020-June 2020
- Site and Building Construction …….. April 2020- Dec 2020

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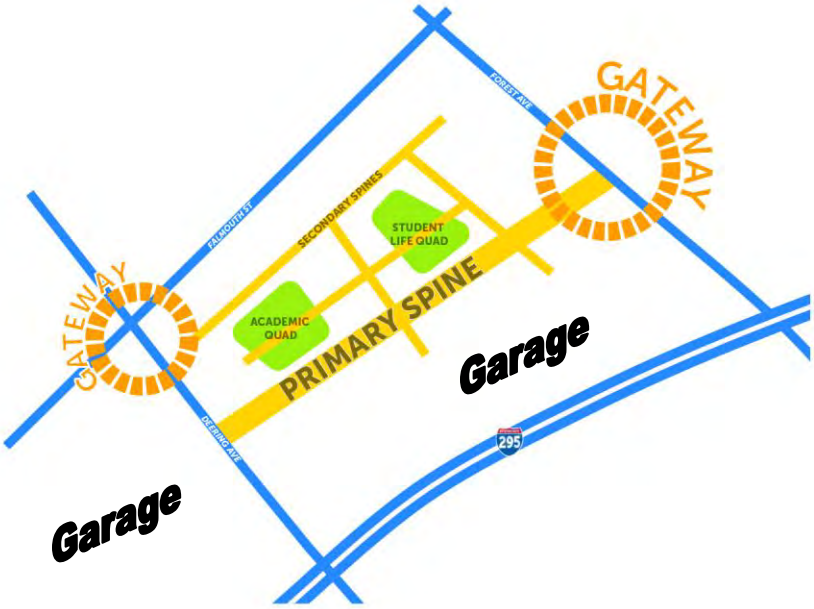
Part 2 : Parking Study of 88 Bedford/Surrenden Street Lot

Preliminary Assessment of Owner's Development Objectives

The 2019 Facilities Master Plan proposes a parking garage expansion in place of the existing surface parking lot to service the adjacent proposed graduate center and existing liner buildings along Bedford Street. The parking structure, provided for students, faculty and visitors, would then be concentrated at the perimeter of the campus with multiple direct connections to several high-population campus buildings.



With the parking structure located behind liner buildings along the arterial drive, the visibility of way-finding signage is critically important to ensure utilization and convenience. Concentrating the parking field adjacent to existing buildings and proposed future developments provides opportunities for either direct connections through pedestrian skybridges or short outdoor transitions through foul weather.

The site has been prepared for a parking structure expansion in this location, with water, sprinkler, and storm drainage lines stubbed to the site at the Northern access drive. Access has also been prepared for both vehicles and pedestrians, with little adjustment required to these site improvements to make way for construction of the new garage building.

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Site Evaluation

Utilities

All utilities including but not limited to electric, water, sewer, storm drainage and gas service appear available either directly to the site or from the local arterial connection to Bedford Street, pending confirmation of available capacity by each utility. Of these major utilities, stubs to the site for future buildings include water for domestic and sprinkler service and storm drainage. They appear to cross the site at a convenient point, but may need adjustment in coordination with the parking structure development. Additionally, a See Appendix D for additional information.

Topography

The site's existing surface parking lot and related site improvements provide the opportunity to connect at-grade on all sides of the proposed parking structure, limited only by the potential internal ramp locations within the garage itself. See Appendix E for additional information.

Parking

The site is currently used as a surface parking lot consisting of 40 total parking spaces, 8 of which are dedicated to handicap accessibility. The parking lot is for USM faculty and staff with some accessible parking serving the adjacent Wishcamper Center, and denoted on the campus map as Lot P3. The only point of vehicle access is from a collector drive at the Northwest corner of the parking lot from Bedford Street.

Pedestrian Access

The Bedford Street arterial drive has a wide pedestrian esplanade that provides opportunities to access the site from the Northwest and Northeast corners. All parking options provide direct connectivity to the pedestrian circulation system, possibly including pedestrian skybridge connections to the adjacent existing parking garage and Wishcamper Center, along possibly with the future graduate center proposed between the Wishcamper and Library/Osher Map Buildings. See Appendix B for additional information.

Building Height

The proposed height of the parking structure in all of the options is 55 feet, however; each option is below the allowable height of 85 feet per the zoning ordinance. For the purpose of this feasibility study, the Design Team has developed layouts that are limited in height to five levels of parking to correspond with the adjacent parking garage and Wishcamper Center building heights. See Appendix C for additional information.

Building Setbacks

All proposed parking structures are within the setbacks set forth in the zoning ordinance. The only setback that is applicable to this study is the setback along the I-295 highway corridor, which is 10'. See Appendix C for additional information.

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Pedestrian Access

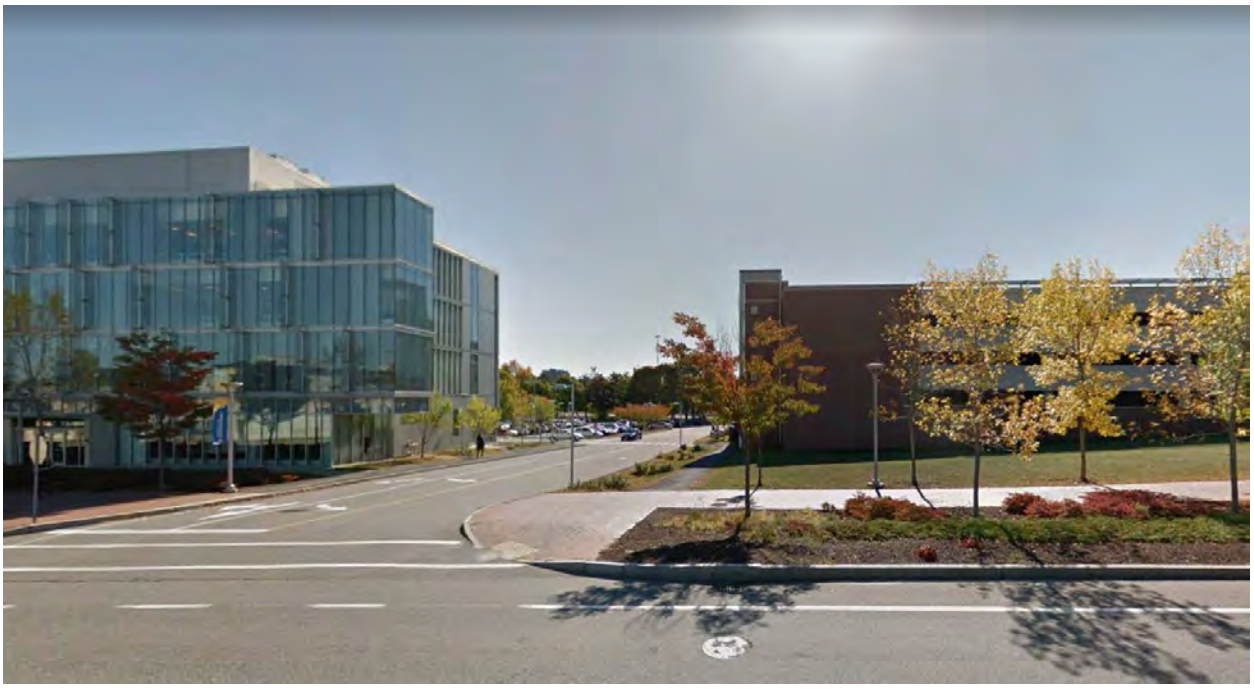
Pedestrian access and connectivity is maintained largely "as-is" in each of the parking options. The nature of efficient parking garage design supports pedestrian circulation nodes at the corners where vehicular parking is unavailable. Each parking option anticipates vertical circulation stair towers at these corners, and aligns these pedestrian elements with the existing sidewalk system and away from vehicular drives to provide a high degree of visibility, comfort, and safety.

Vehicle Access

All parking options would maintain the current access point on Bedford Street, aligning the main entrance with the existing adjacent garage for ideal integration with existing parking patterns and equipment. A access drive would be maintained all-around the proposed structure to allow for maintenance and security, loading or staging areas, and/or snow removal.

Delivery/Loading Access

The two existing single-bay loading zones along the perimeter drive around the site are maintained in all options, with the possibility of incorporating additional service vehicle or university maintenance parking within this loading zone.



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Identification of Environmental Requirements

Due to the highly variable disposition of silty and sandy soils across the Back Bay basin generally, and extending specifically to the surrounding sites at the existing parking structure at Surrenden Street, it is recommended that a geotechnical engineer be brought on-board early in the schematic design process to provide soil analysis and identify the soil improvements necessary to support the preliminary foundation design. Generally, the use of a steel-framed structure for the proposed parking garage would reduce the structural pier requirements from those provided for the adjacent precast garage of the same height, providing some assurance that the soils will support the proposed building scenarios.

Beyond this soils composition assessment, there are no known needs for environmental impact statements, additional environmental assessments, or testing/monitoring with respect to the materials reviewed as part of this parking feasibility investigation.

Generally, the proposed parking options provide close integration with the existing level site grades and take advantage of stubbed utilities to reduce the impact of sitework and potential exposure to the import/export of soils. Additionally, the lighter weight of a steel garage structure would support the use of geopiers, granting the Design Team flexibility to tailor a structural solution with the lowest level of environmental and financial impact.

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Site and Neighborhood Context Description

Campus

The University was founded in 1878 with Corthell Hall being the first university building in Gorham, Maine. The Portland campus is located downtown and bordered by highly trafficked roads including, Interstate Highway 295, Forrest Avenue, Deering Avenue, Falmouth Street, and Bedford Street. The campus buildings are a variety of materials including but not limited to brick, glass curtain wall, panelized systems, and concrete.

Neighborhood

A completely developed urban neighborhood, the adjacent land consists of Interstate Highway 295 on the South, University buildings to the North and East, and the existing parking garage to the West. The largest adjacent land use is the parking garage, which is accessed from Surrenden Street. The adjacent university structures are generally a set of very solid and consistant building blocks, within which the proposed garage options would cohesively connect, with circulation view corridors that offer relief to the massing.

Zoning

The campus is located in Zone R5 in the City of Portland, with an overlay zone type of “USM” for the University of Southern Maine. This zone has a strict set of rules designed to create a quality and cohesive campus environment while integrating with and respecting the residential character of surrounding neighborhoods.

Site Implications (from Owner-provided campus utility plans)

Water Items:

- 6” Water pipe stubbed to the North side of the lot – located at Conant Street
- 8” Water pipe for a possible sprinkler system stubbed to the North side of the lot – located at Conant Street
- Fire Hydrant at the Northwest corner of the lot – located on the site side of the access drive

Gas Items:

- 8” Gas line to the North of the site is available for connection down the access drive – located under Bedford Street

Tele/Data Items:

- Two 4” conduits are located at the Northern part of the site cross from the existing parking garage to the Wishcamper Center.

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Electrical Items:

- Conduits are located at all sides of the site, with some lines that might serve a future building needing verification.

Current Traffic Patterns

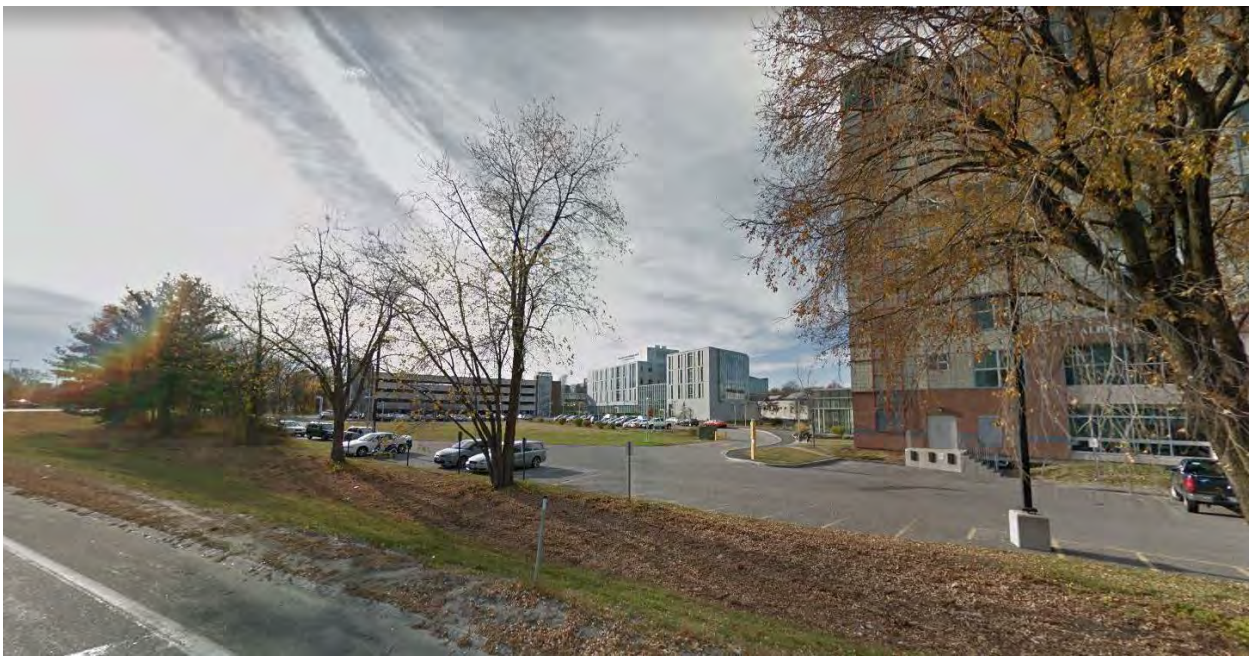
Forest Avenue serves as the primary arrival point to the USM Portland campus. The secondary arrival point to the campus is at the intersection of Deering, Brighton, and Falmouth Streets. The third arrival point to the campus is Bedford Street, which bisects the campus providing access to most of the parking supply for the campus.

Future Traffic Pattern Considerations

Closure of the Brighton Avenue Extension and installation of a roundabout at the intersection of Brighton, Deering, and Falmouth streets. After which, the remaining extension of Brighton Avenue will be given to USM by the city of Portland. The proposed parking garage would connect to the Bedford Street arterial drive, adjacent to the existing garage exit, which the Design Team suggests could be adjusted to allow incoming traffic in addition to the exit pattern.

Alternate Means of Transportation

As identified in the Facility Master Plan, USM supports robust pedestrian, bicycle, shuttle bus, ride share and metro regional public transit systems that look beyond private vehicular parking to meet the transportation needs of the campus community. This could have a potential impact on the parking requirements for the Portland campus. Areas within and around the proposed parking garage may be outfitted with ride share signage or bicycle racks to encourage and support alternate transportation modes.



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Conceptual Drawings

Design Considerations

The practical parking capacity is an important design consideration due to the fact that no garage can operate at 100% efficiency. The industry accepted efficiency is between 85-95%. This allows for variations in parking activity, loss of parking due to mis-parked vehicles, construction, snow piling, and other unforeseen factors. This efficiency rate also takes into account traffic flow problems related to parkers trying searching for available spaces when the garage is at or near its maximum capacity.

Level of Service

The recommended Level-Of-Service (LOS) for visitor parking is LOS "A" or "B" which provides greater dimensions and ease of use for the parking garage, but for regular monthly parkers an LOS of "C" could be utilized to maximize the number of parking spaces and thereby increasing the efficiency of the design and providing a higher return on investment. LOS "D" is an extremely compact garage design that is mostly reserved for underground parking structures or extremely high-density urban designs.

LOS "B" provides a parking stall that is 8'-9" in width and 17'-9" in length, but this study utilizes a 9'-0" wide and 18'-0" long standard stall, and up to 20% compact spacing per City of Portland Design Standards at 8'-0" wide and 15'-0" long. The drive aisles will be sized at 24' in overall width.

Project Overview

Capacity, expansion, aesthetics and size of the parking structure were taken into consideration for three options developed as part of the programming effort so the design features of each could be evaluated. It is also the understanding that a larger structure could have an undesirable impact on the site by restricting view corridors and clashing with the scale and architectural character of the surrounding buildings. All of the concept designs therefore top-off at 55'-0" above the existing surface lot to match with the scale and massing of the adjacent buildings.

The Parking Options include:

1. Arcing garage form that responds to the lot line along I-295 with internal circulation ramp connecting all levels of parking and providing site relief and view corridors towards the proposed future graduate center location adjacent to the Library/Osher Map buildings.

2. Rectangular multi-level garage with internal circulation ramp connecting all levels of parking and skybridge connection to the existing garage at the second level.

3. Level-deck expansion scenario to the existing garage with independent access to each level and radial internal circulation ramp providing site relief and view corridors towards the proposed future graduate center location adjacent to the Library/Osher Map buildings.

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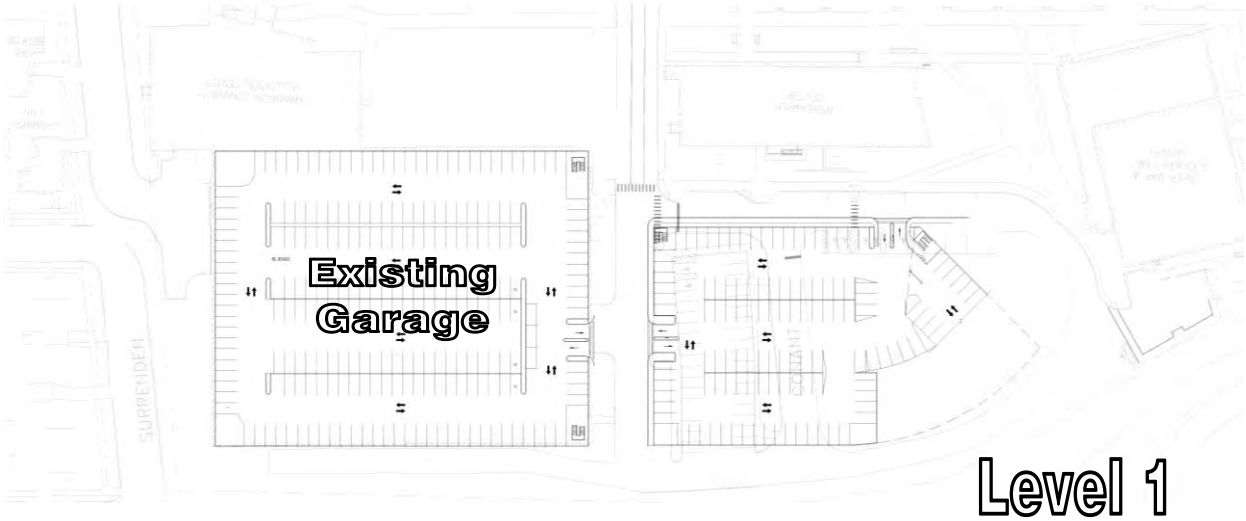
Parking Design Option 1: Arcing garage form that responds to the lot line along I-295 with internal circulation ramp connecting all levels of parking

FIFTH	~ 53,315 SF @ 308 SF/EA (173 SPACES)
FOURTH	~ 49,715 SF @ 309 SF/EA (161 SPACES)
THIRD	~ 49,715 SF @ 309 SF/EA (161 SPACES)
SECOND	~ 49,715 SF @ 309 SF/EA (161 SPACES)
FIRST	~ 37,560 SF @ 341 SF/EA (110 SPACES)
TOTAL	~ 240,020 SF @ 313 SF/EA (766 SPACES)



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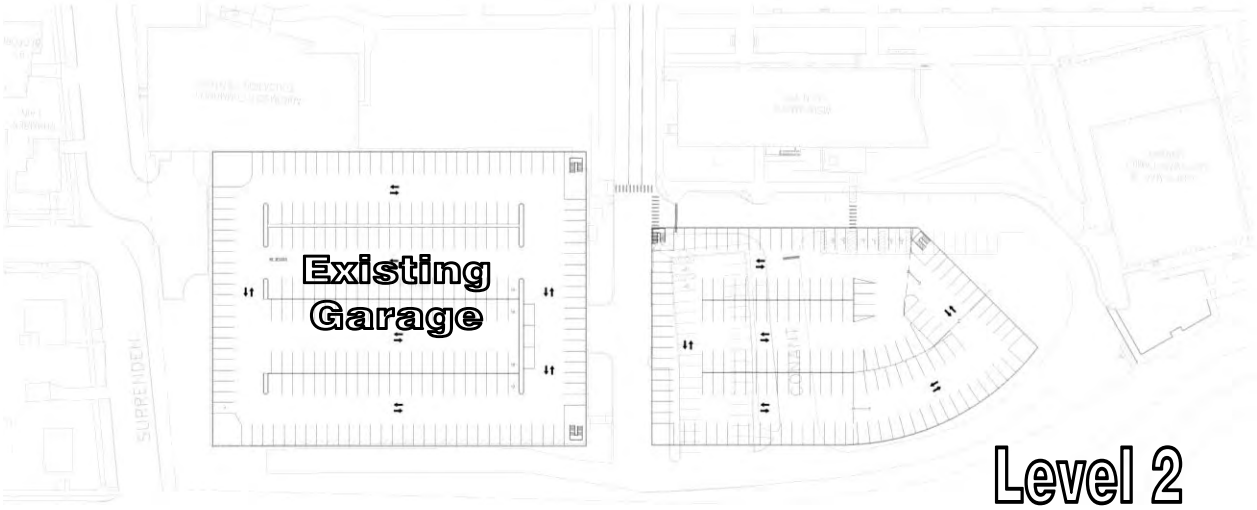

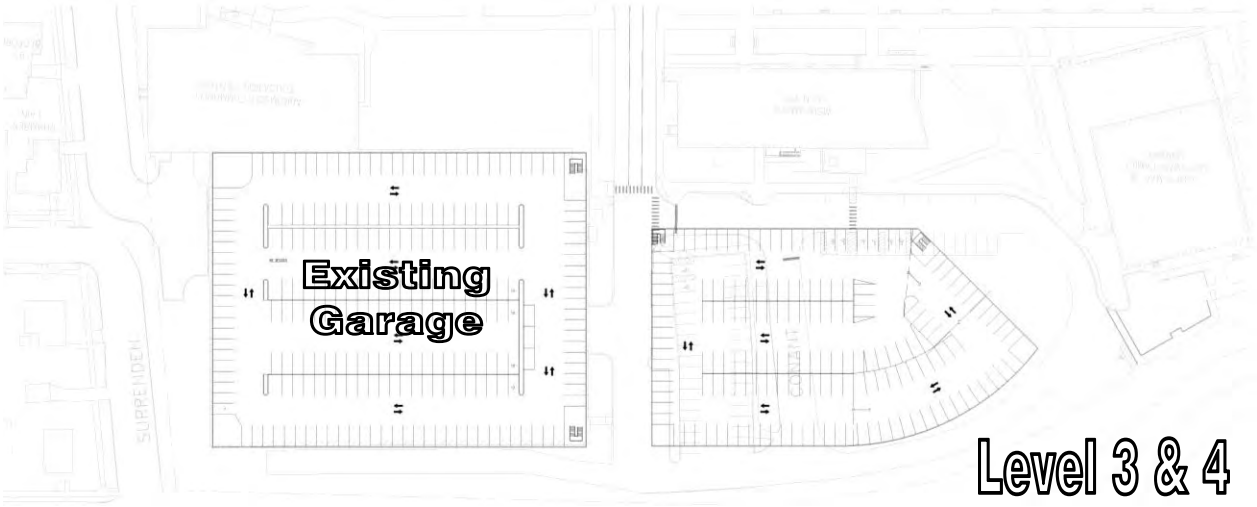

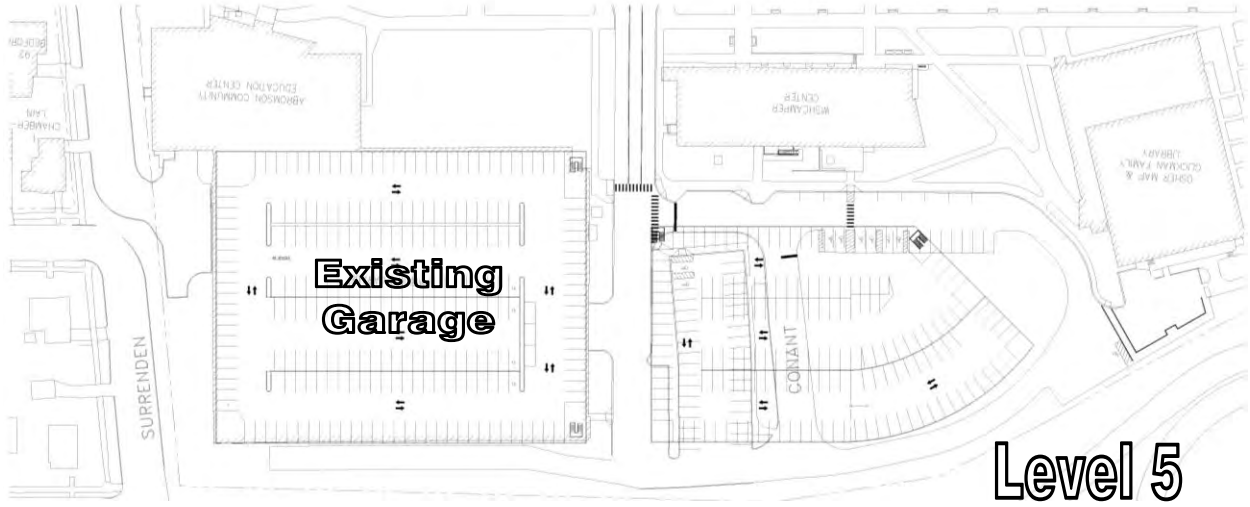

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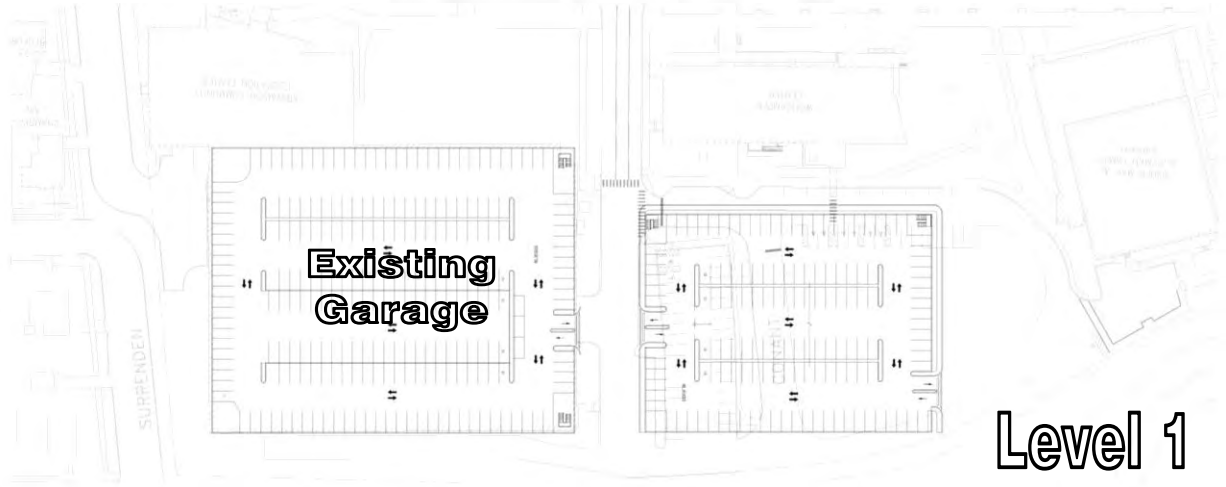
Parking Design Option 2: Rectangular multi-level garage with internal circulation ramp connecting all levels of parking and skybridge connection to the existing garage at the second level.

FIFTH ~ 47,575 SF @ 311 SF/EA (153 SPACES)
FOURTH ~ 46,475 SF @ 318 SF/EA (146 SPACES)
THIRD ~ 46,475 SF @ 318 SF/EA (146 SPACES)
SECOND ~ 46,475 SF @ 318 SF/EA (146 SPACES)
FIRST ~ 46,475 SF @ 334 SF/EA (139 SPACES)
TOTAL ~ 233,475 SF @ 320 SF/EA (730 SPACES)



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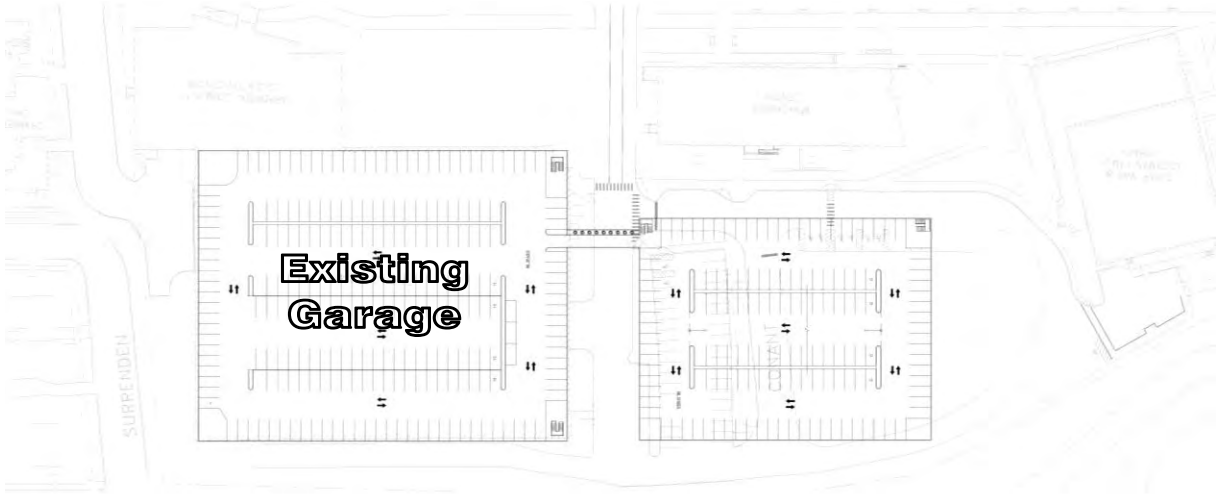
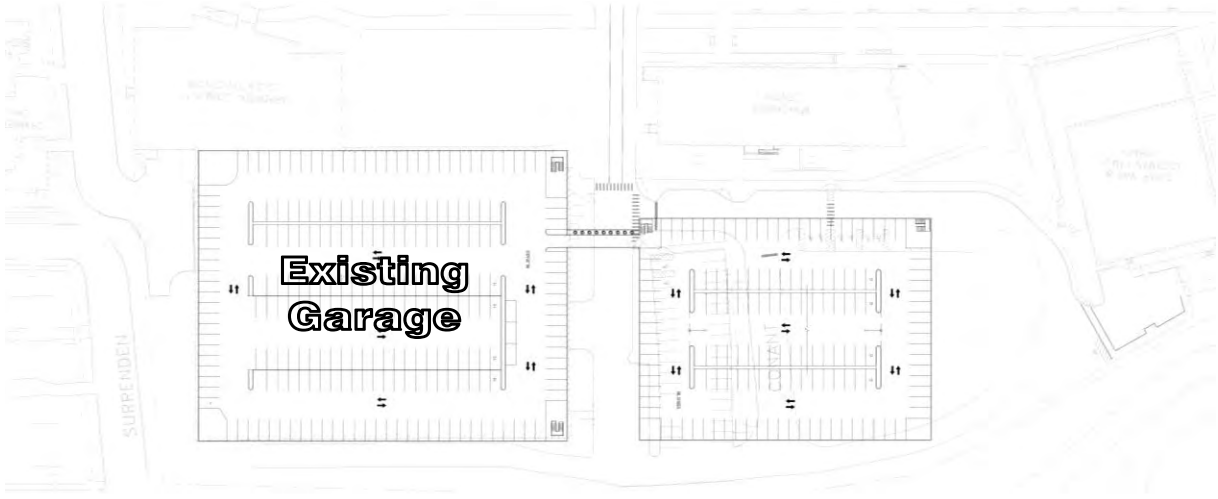


Level 2 - 4



Level 5

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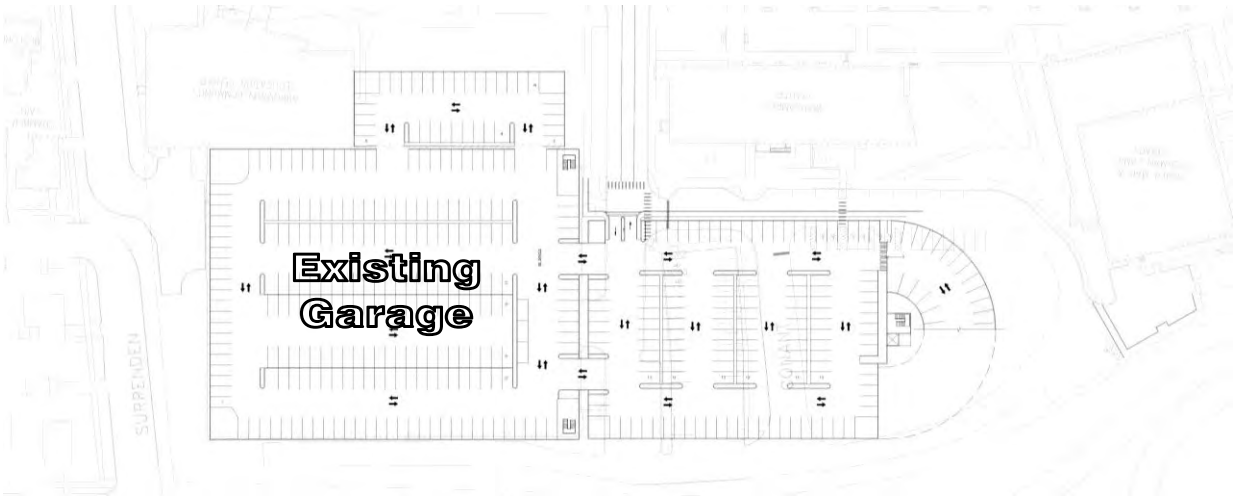
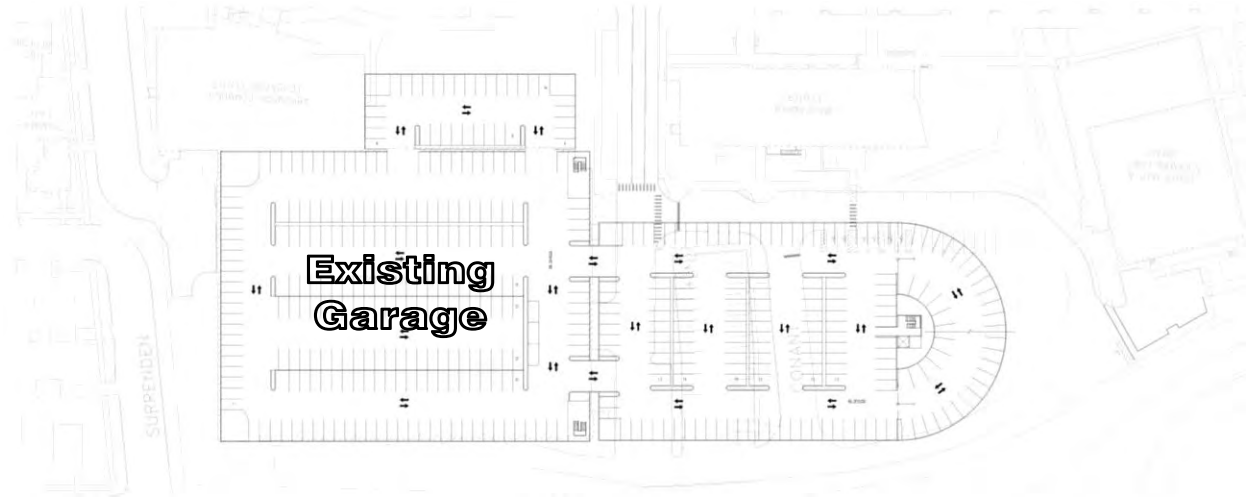
Parking Design Option 3: Level-deck expansion scenario to the existing garage with independent access to each level and radial internal circulation ramp

FIFTH ~	53,315 SF @ 308 SF/EA (173 SPACES)
FOURTH ~	49,715 SF @ 309 SF/EA (161 SPACES)
THIRD ~	49,715 SF @ 309 SF/EA (161 SPACES)
SECOND ~	49,715 SF @ 309 SF/EA (161 SPACES)
FIRST ~	37,560 SF @ 341 SF/EA (110 SPACES)
TOTAL ~	240,020 SF @ 313 SF/EA (766 SPACES)



Level 1



Level 3-5

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Design Budget and Proposed Project Timelines

Costs of Modifying Precast Structural System

Parking Design Option 3 investigates the modification of the existing precast parking structure to expand the parking field with level parking decks and two drive aisles. While a steel-framed parking garage is easily modified post-construction, that is not the case with precast structures. Every element of a precast garage is performing a structural task that would need to be replaced in some form, and due to the heavy loads that precast garages produce, this task is potentially expensive. Cutting into shear walls or even spandrel façade elements might require moment frames and/or removal of the precast tees for a lighter steel-framed system in the area(s) affected. Additionally, the structural piers have been designed for a certain loading, so additional loads would likely need to be carried by separate adjacent footings/piers.

Design Budget

With the Design-Bid-Build project delivery method, the actual costs of the project are not known with certainty until the bid opening, and are also affected by seasonal availability, the state of the current bid environment, and the complexity of the design as it relates to the available pool of responding contractors. That being said, there are a number of factors that can be used to gauge the pricing performance of the garage design relative to the resultant parking efficiency and the number of special features required for the project.

The current 2019 Means Construction Data pricing guide identifies the average cost of a surface parking space is in the $2,500-$3,000 range, structured parking with elevated decks and an open design in the $18,000-$22,000 range, structured parking with elevated decks in a closed design in the $20,000-$24,000 range, and underground parking with a closed design in the $30,000-$35,000 range. The range of these baseline costs should be considered primarily against the backdrop of the resultant parking efficiency on a square-foot basis, but also the specific project program requirements, such as; vehicular entry, ramping, enclosure, ventilation, and pedestrian access. Due to the highly-efficient nature of the options developed in this parking feasibility study, at approximately 315 sf per space, the average square foot cost of around $45 per square foot for a typical steel-framed parking structure would result in a per-space cost of $14,200.

Proposed Project Timeline

Due to the highly variable impact of the City of Portland design review process, in addition to the review and approval procedure timeline for the University's Capital Improvements process, just to name a couple of possible schedule impacts, the exact project timeline is difficult to determine and some degree of flexibility should be considered when forecasting the project approvals timeline. Also figuring into the early project timeline is the project budget pricing requirements, and the design development gaps afforded to these pricing efforts during design. To accelerate the construction schedule, fast-track techniques, performing parts of the construction effort under winter conditions, and possibly selecting a deck system that does not require a traffic topping may be considered.

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The schedule requirements for the major design segments and project approvals would be as follows:

- Preliminary Garage Design and Civil Design Document Preparation……. 2 month duration
- City of Portland Planning Board Approval Process…….. 3 month duration
- Design Development and Construction Document Preparation……. 3 month duration
- Project Bid and Contractor Award……. 1.5 month duration
- State Fire Marshal and Local Permit Approvals ……..... 2 month duration
- Site and Building Construction ……. 8-10 month duration

A general timeline for a steel-framed parking garage design and construction that would take best advantage of the traditional construction season with a Spring ground-breaking would be as follows:

- Preliminary Garage Design and Civil Design Document Preparation…….. Aug-Sept 2019
- City of Portland Planning Board Approval Process……. Aug-Oct 2019
- Design Development and Construction Document Preparation……. Sept 2019-Nov 2019
- Project Bid and Contractor Award……. Dec 2019-Jan 2020
- State Fire Marshal and Local Permit Approvals ……..… Dec 2019-Jan 2020
- Structural Steel Shop Drawing Prep and Fabrication…… Feb 2020-May 2020
- Site and Building Construction …… March 2020- Nov 2020

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Exhibit A. 2019 University Of Southern Maine Facilities Master Plan

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Exhibit B. 2018 University Of Southern Maine Aerial Photo

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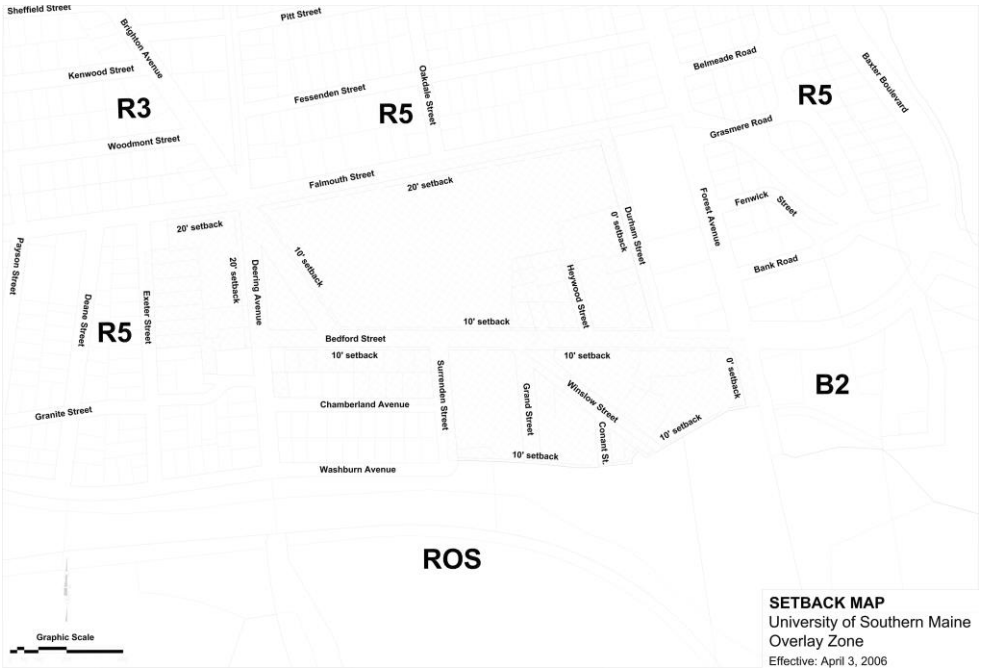
Exhibit C. University Of Southern Maine Zoning Overlay Plan



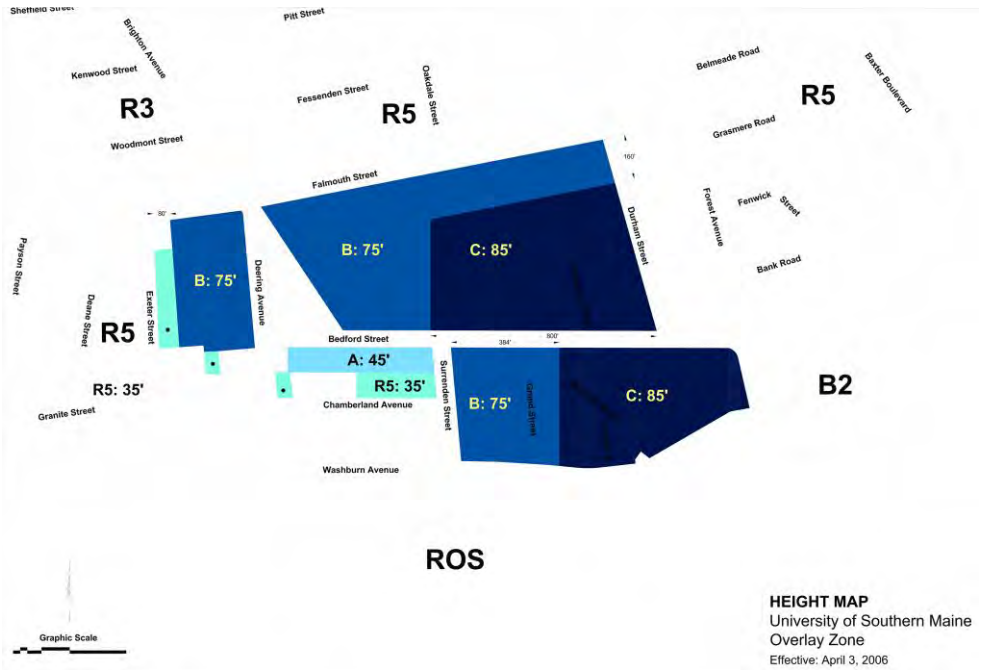


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Exhibit D. University Of Southern Maine Utilities Overlay Plan

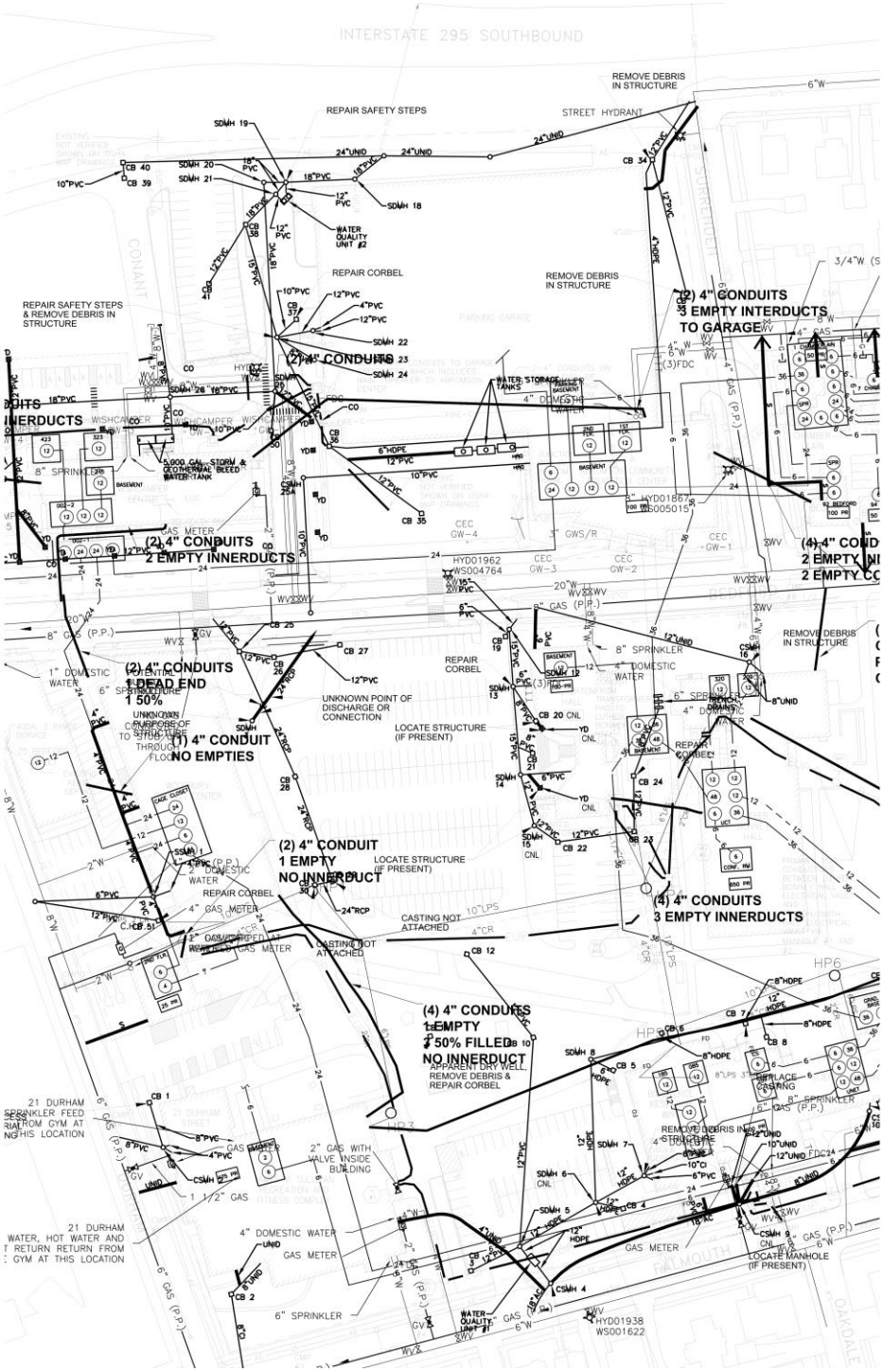

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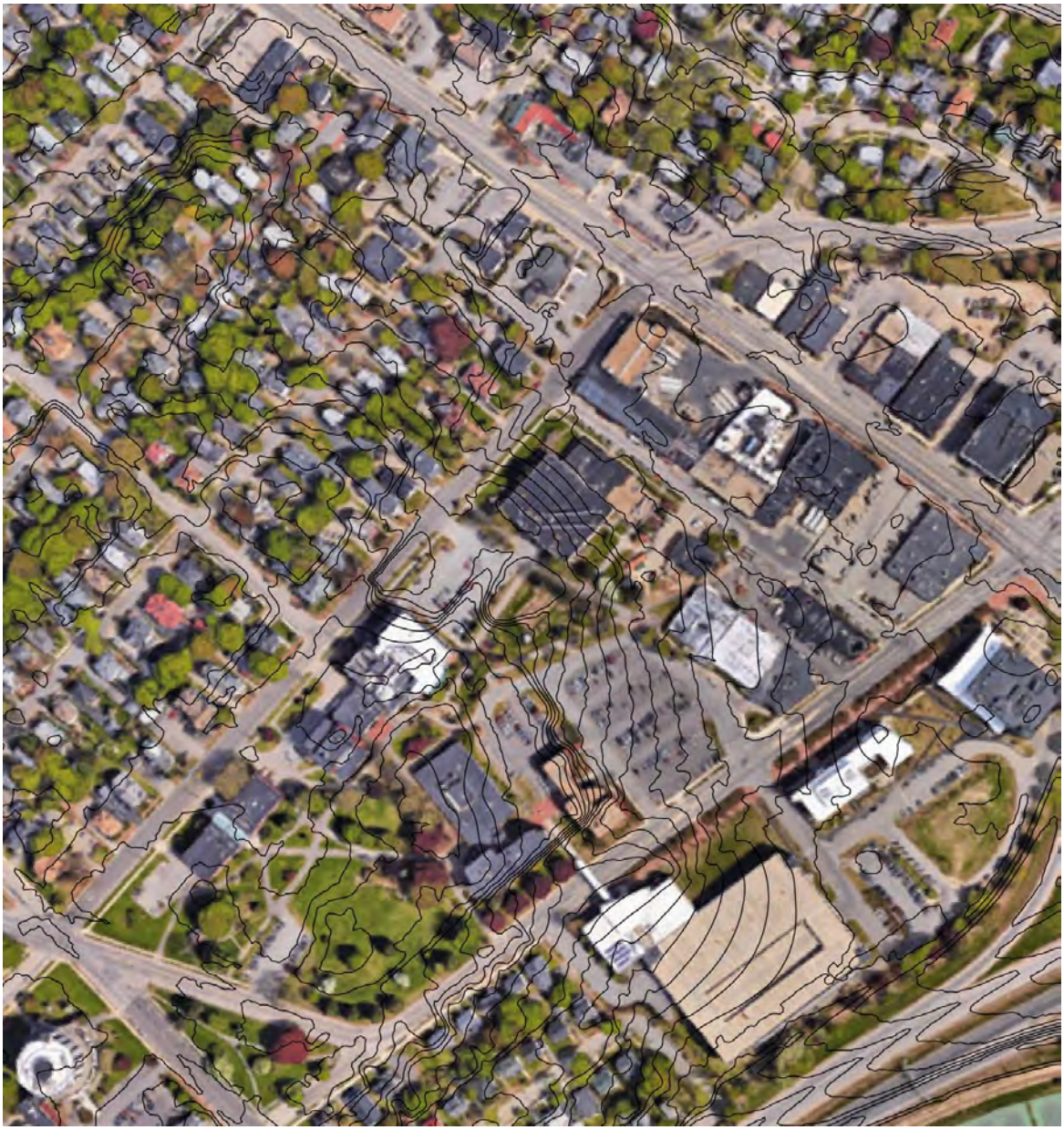
Exhibit E. University Of Southern Maine Topography Overlay Plan



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March 5, 2020

James Rather
Development Review Services Manager
City of Portland
389 Congress Street
Portland, ME 04101

Re: University of Southern Maine – 23 Bedford Street
Career and Student Success Center and Residence Hall
Level III Site Plan Application
Site Location of Development Amendment Application

Dear James:

On behalf of the University of Southern Maine, Woodard & Curran is pleased to submit applications for a Level III Site Plan Review and a Site Location of Development (SLOD) Amendment for a new Career and Student Success Center and a new Residence Hall to be located at 23-29 Bedford Street. The project represents a significant implementation of the University's Facilities Master Plan. In addition to the approximately 60,000 SF Student Success Center and the 580-bed Residence Hall (approximately 220,000 SF) the project will include: a new Campus Quad; pedestrian connections; integrated hardscape and landscape; a new service and loading area; stormwater management; new utility services; site lighting; and other site amenities.

The Site Plan application has been prepared in accordance with the City of Portland's Chapter 14, Land Use Code of Ordinances and the applicable sections of the City of Portland Design and Technical Manuals. The SLOD Amendment has been prepared in accordance with Maine Department of Environmental Protection Chapter 500 Rules. It is our understanding that the City will be reviewing the SLOD Amendment under its Delegated Review Authority.

The application materials, supporting documents, and design drawings will be uploaded into the ePlan folder when it becomes available for the project. Thank you for coordinating the review of this important project. If you have any questions regarding this application, please feel free to contact me at (207) 558-3662 or by email at dstairs@woodardcurran.com.

Sincerely,

WOODARD & CURRAN INC.

Darrin Stairs, PE
Project Manager

cc: Alexander Porteous - University of Southern Maine
Keith Brown - Capstone Development Group
Craig Piper – SMRT Architects

University of Southern Maine
Career and Student Success Center & Residence Hall

Stormwater Management Report
March 6, 2020

Applicant:

University of Southern Maine
Bedford Street
Portland, Maine 04101

Submitted by:

SMRT, Inc.
Architecture Engineering Planning
144 Fore Street / P.O. Box 618
Portland, Maine 04104

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APPENDICES

Appendix A-1 **Pre and Post Development Watershed Plans**
Appendix A-2 **HydroCad Runoff and Routing Calculations**
Appendix A-3 **Water Quality Plan and Calculations**
Appendix A-4 **Stormwater System Maintenance Plan**
Appendix A-5 **Preliminary Geotechnical Report, S.W. Cole, Jan. 28, 2020**

Appendix A-6 FEMA Firm Map

1.0 PROJECT DESCRIPTION

The University of Southern Maine (USM) is proposing to construct two new capital buildings on approximately 3.6 acres of the Portland campus of the University of Southern Maine. The project is known as the Career and Student Success Center & Residence Hall project. The project area is bounded by the easterly corner of the block defined by Falmouth, Durham, and Bedford Streets. This area presently includes a large public parking lot, the Woodbury Student Center (approx. 21,701 sf), the Facilities Management building (8,950 sf), and associated service areas, parking, and infrastructure. This project will remove all features in the project area. Essential services, infrastructure, and offices will be relocated on campus prior to commencing demolition.

The project will replace the Woodbury Center with an updated and properly-sized student activity center to be known as the Career Student Success Center (CSSC). The CSSC will be an approximately 28,000 sf building with two stories to accommodate multiple campus uses including dining, bookstore, student activities, formal mass gathering, and informal collaboration spaces. The new residence hall has been sited on the corner of Durham and Bedford Streets to establish a prominent, singular structure that will improve the campus gateway image. The building will be approximately 32,500 sf in a “C” shape with wings of 5 and 8 stories and provide housing for approximately 571 students in multiple dwelling unit layouts.

The project watershed is presently developed with no natural resource areas remaining. The existing topography generally slopes easterly toward the corner of Bedford and Durham Streets. The new buildings have been sited to generally maintain and compliment the existing topography of the project area. All runoff from the site is currently and will continue to be collected by storm drain structures of the City system in Bedford and Durham Streets. There are no surface drainage discharge locations from this project watershed.

Based on a geotechnical investigation, the subsurface soil conditions at the site typically consist of uncontrolled fill overlying glaciomarine sand, silt, and clay. Bedrock was typically encountered at 5 to 26 feet below grade. Groundwater was encountered at depths ranging from 8 to 16 feet. The majority of the mapped surficial soils are stiff, silty clary which is most commonly classified as Hydrologic Type C soils. A Geotechnical Evaluation of the proposed property has been prepared by S.W. Cole Engineering, Inc. and is included within the Appendix of this report.

2.0 STORM WATER NARRATIVE

2.1 Site Location

The project area is bounded by the easterly corner of the block defined by Falmouth, Durham, and Bedford Streets. The site is presently developed as a higher education campus with

buildings, paved areas, and landscaped areas. There are no areas of natural resources remaining on the site.

2.2 Receiving Waters

The Portland campus is located in the Back Cove watershed. Runoff from the site presently drains to the City storm drain system in Bedford Street and flows northerly to discharge into Back Cove. This area is not identified as part of an Urban Impaired Stream watershed by MDEP or the City of Portland.

2.3 Historic Flooding

There is no evidence of historical flooding on the project site. FEMA Flood Insurance Rate Map (Community Panel Number 2300510013B) dated July 17, 1986 indicates that no portion of the project area is within the floodplain associated with Back Cove.

2.4 Alterations to Natural Drainage Ways

Drainage characteristics will remain relatively the same from the pre to the post development condition. No alterations to natural drainage ways are proposed as part of this project.

2.5 Methodology and Modeling Assumptions

Runoff and routing calculations have been performed for the watershed areas affected by the proposed development under pre-development and post-development conditions scenarios. Times of concentration and runoff curve number calculations have been performed using the method described in Natural Resource Conservation Service (NRCS) Technical Release 55 (TR-55) – Urban Hydrology for Small Watersheds. The TR-20 based HydroCad modeling software has been utilized to perform the more complex runoff and routing calculations, some of which are beyond the scope of the TR-55 method. Time of concentration calculations have been amended where the value given by the TR-55 method is less than five minutes. In these cases a standard minimum value of five minutes has been used to keep this parameter within the acceptable working range of the model and prevent computational errors.

Design rainfall events have been modeled using the SCS Type III hydrograph for 24-hour duration storms. The rainfall depth for each return period is taken from Chapter 500, Stormwater Management, Appendix H. The rainfall values for standard design storm frequencies are shown in the table below.

24-Hour Rainfalls for Cumberland County SE at Design Storm Frequencies				
Chapter 500, Stormwater Management, Appendix H				
Frequency	2-Year	10-Year	25-Year	100-Year
Rainfall Depth	3.1 in	4.6 in	5.8 in	8.1 in

The onsite soils have been generally identified as Hydrologic Group C through geotechnical investigation. The existing topography of the site was determined by field survey and existing surface covers were identified by site inspection.

Stormwater BMPs have been designed to effectively capture, detain and treat runoff from developed areas of the site before allowing it to discharge in a non-erosive manner to downstream areas. The Maine Best Management Practices Manual (current edition on-line) and the Maine Erosion and Sediment Control Best Management Practices Manual for Designers and Engineers (current edition on-line) have been used as guidelines in the design of the storm water system.

2.6 Permitting Requirements

The proposed project area is part of a previously approved Site Location of Development Act permit for the Portland campus. The project is not in a lake watershed nor is it in an Urban Impaired Stream watershed and as such will not be required to meet the Phosphorus Standard or the Urban Impaired Stream Standards.

Per Chapter 500 standards, the project will be required to meet the Basic and General Standards, and the site was analyzed under the Redevelopment Treatment standard to identify the treatment target. The project was also analyzed for the flooding standard to provide stormwater quantity control for the 2-year, 10-year, 25-year storm events. The 100-year storm event was also analyzed to determine the resulting impacts.

Redevelopment Treatment Standard.

The project meets the definition of a redevelopment project and a pollutant ranking calculation was performed by the standard to determine the treatment required. For a project area of approximately 157,971 sf, the calculation is as follows:

Pollutant Ranking	Pre Development Area (sf)	Pre-Development Ranking
5	0	0.00
4	87532	8.04
3	424	0.03
2	67840	3.12
1	2175	0.05
	Total: 157971	**Weighted Average: 3.10**

Pollutant Ranking	Post Development Area (sf)	Post-Development Ranking
5	0.00	0.00
4	11194	1.03
3	0.00	0.00
2	139474	6.40
1	7303	0.17
	Total: 157971	**Weighted Average: 2.10**

The proposed project results in a significant increase in building footprint, though there is a significant decrease in medium intensity parking area. The existing impact ranking is 3.1 and the proposed impact ranking is 2.1. This provides a net balance of -1.00. Per Table 3 of Chapter 500, the treatment level for this redevelopment project is 50%.

Developed Area

The project area meeting the developed area definition is approximately 165,175 sf, including the area of the residence hall, CSSC, service area, lawn and landscape areas, and associated features. See C-122 Water Quality Plan.

Treatment Target
For a 50% redevelopment treatment, the target is to treat a minimum of 82,588 sf.

2.7 Proposed BMPs

The stormwater management system for this development is intended to provide effective water quality and quantity control/treatment for new development areas and to protect downstream stormwater infrastructure and natural resources from potential detrimental impacts. The site layout allows adequate area for surface filtration-style features. The following treatment BMPs were selected from Section 7.1 of the Maine Best Management Practices Manual.

A. Grassed Underdrained Soil Filters

Three grassed underdrained soil filters are proposed to meet the treatment goal from the developed area associated with the project. The roof areas of the new buildings provide a direct flow of runoff for treatment and roof drains will discharge directly to inlet control structures in each soil filter. The water quality volume is based on 1" of runoff from the tributary impervious area and 0.4" of runoff from the tributary landscaped areas.

Feature	Developed Area Treated	Developed Area (sf)
VFF 1	Majority of Dormitory Roof and Courtyard	40,773
VFF 2	Remaining portion of Dormitory Roof and lawn	12,262
VFF 3	Majority of CSSC Roof and lawn	35,324
	Total Area	**88,365**
	Treatment Target	**82,588**

2.8 Existing BMPs Impacted by Proposed Development

There are no existing BMPs impacted by the Proposed Development.

2.9 Project Impacts

The development of this project will result in the reduction of approximately 1.16 acres (50,706 sf) of impervious area. The project will construct multi-story buildings to replace two one-story buildings with a lower intensity of use. The project will also create two significant vegetated

areas to support the general campus population and the dormitory population. A “Quad” of lawn area will be created where an existing parking lot is presently, and a courtyard of lawn area will be created for the dorm where existing buildings are presently. These conditions will result in less impervious area. Another condition that reduces project impacts is that this parcel is drained in multiple locations to the City storm drain system in Durham and Bedford Streets. These drainage patterns are preserved in the post development condition and represents multiple flows that are reduced in the post development condition. The new stormwater management system is designed to provide water quality treatment through the use of the three vegetated soil filters. The focus of the design is on source control of pollutants and the prevention of erosive velocities to downstream receiving areas. The stormwater calculations demonstrate that the system will achieve the pollutant removal efficiency required by State and local regulations, maintains the existing drainage patterns of the site to a high degree, and the runoff from all areas will be similar to the site conditions before development.

3.0 STORM WATER QUANTITY ANALYSIS

The project area presently discharges to the City of Portland storm drain system in both Bedford and Durham Streets. The change in impervious area is approximately 1.0 acres which will significantly reduce the peak flow and volume of stormwater runoff from the project area. The impact to the City storm drain system will likely be an increase in its available capacity such that it is likely that downstream conditions will be improved as a result of the project.

Pre-Development Conditions

For pre-development conditions scenario, the site is divided into four subcatchment areas, representing runoff to Bedford Street, Durham Street, roof runoff to Bedford Street, and roof runoff to Durham Street. The analysis point for this model is a hypothetical point downstream of the drain manhole at the intersection of Durham and Bedford Streets.

A. Subcatchment 1S

Subcatchment 1S represents the northerly half of the project area adjacent to Sullivan Hall and the community garden. This area drains in an easterly direction to the City storm drain system in Durham Street.

B. Subcatchment 2S

Subcatchment 2S represents the southerly half of the project area adjacent to Masterton Hall and the Woodbury Center. This area drains southerly direction to the City storm drain system in Bedford Street.

C. Subcatchment #25

Subcatchment #25 represents the roof area of the Facilities Management building at #25 Bedford Street. The roof drains directly to the City storm drain system in Durham Street.

D. Subcatchment #35

Subcatchment #35 represents the roof area of the Woodbury Center building at #35 Bedford Street. The roof drains directly to the City storm drain system in Bedford Street.

The pre-development subcatchment areas, cover conditions, and time of concentration flow paths are described in detail in the supporting HydroCAD documentation included in the Appendix A-1 of this report. A Pre-Development Conditions Watershed Plan (C-120) is included.

Post-Development Conditions

For the post–development conditions, the site is developed with the two new buildings, new grassed Quad, grassed courtyard, and associated features and landscaping.

A. Subcatchment 1S

Subcatchment 1S represents the northerly half of the project area adjacent to Sullivan Hall and the community garden. This area drains in an easterly direction to the City storm drain system in Durham Street. The subcatchment was modified to show a reduced area as a result of construction of the CSSC (Subcatchments Dorm1, Dorm 2, and CTYRD).

B. Subcatchment 2S

represents the southerly half of the project area adjacent to Masterton Hall and the Woodbury Center. This area drains southerly direction to the City storm drain system in Bedford Street DP-3. The subcatchment was modified to show a reduced area as a result of construction of the CSSC (Subcatchments CSSC1 and CSSC2).

C. Subcatchment Dorm1

Subcatchment Dorm1 represents the majority of the roof runoff from the residence hall, which will be treated by a vegetated soil filter (VFF1) in the courtyard.

D. Subcatchment Dorm 2

Subcatchment Dorm2 represents a portion of the roof runoff from the residence hall, which will be treated by a vegetated soil filter(VFF2) near the Central Heating building.

E. Subcatchment CTYRD

Subcatchment CTYRD represents the courtyard area including lawn and hardscape areas, which will be treated by a vegetated soil filter (VFF1) in the courtyard.

F. Subcatchment SCCS1

Subcatchment SCCS1 represents approximately half of the SCCS roof runoff, which will not be treated and discharges to the Durham Street storm drain system.

G. Subcatchment SCCS2

Subcatchment SCCS2 represents approximately half of the SCCS roof runoff, which will be treated by a vegetated soil filter (VFF3) behind the SCCS.

Stormwater Modeling

HydroCAD software (based on TR-20 methods) was utilized to model the change in stormwater runoff to the City storm drain system for pre and post conditions. It is noted that the model was not intended to model the actual flow conditions in the storm drain system, but rather identify the change(s) in runoff inflow to the system. This model approach should provide a result that shows the flooding standard has been met by reducing the amount of runoff from the project area and consequently creating new capacity in the City storm drain for future flows. The point of analysis for the comparison was a fictional point downstream of the drain manhole (i.d. 1834) at the corner of Bedford and Durham. The model was prepared to reflect changes in surface conditions which is the most significant factor affecting peak flow rates between the two conditions. The presence of treatment features (vegetated filter fields) was also modeled and had a minor influence in attenuating the peak flows for the post development condition. A summary of the pre-development versus post-development conditions runoff rates is as follows:

Peak Flows to City Storm Drain System in CFS				
Storm Event	**Pre-Development (cfs)**	**Post Development (cfs)**	**Net (cfs)**	**Percentage**
2 yr storm	10.14	4.95	-5.19	-51%
10 yr storm	16.21	11.18	-5.14	-31%
25 yr storm	21.05	17.24	-3.81	-18%
100 yr storm	30.19	27.19	-3.50	-10%

Storm Drain Conveyance

The site storm drain system has generally been designed to convey a 10 year Storm Event. The culvert outlets from the vegetated soil filters have been designed to convey that value at a minimum (using Manning's Equation), with planned additional capacity for larger storm events.

10 Year Storm Event for Vegetated Soil Filters		
Outlet Culvert	**Peak Flow (cfs)**	**Storm Drain Design Capacity ***
VFF 1	0.79	18" dia.; 8.82 cfs min.
VFF 2	1.13	15" dia.; 5.47 cfs min.
VFF 3	1.33	12" dia.; 2.98 cfs min.

* Min. slope = 0.005, Manning's n = 0.011

Vegetated Soil Filter Performance

The three vegetated soil filters have been sized to accommodate the water quality volume for their respective treatment areas. A primary outlet provided for all three through a catch basin with a rim elevation 1.5 feet above the finish grade of the media area. A secondary outlet is provided by exfiltration through the media at a rate of 2.41 inches/hour. A tertiary outlet is provided by discharging overland away from the respective building. For a maximum, 100 year storm event, modelling showed that all three filters did not engage the tertiary outlet. The

exfiltration discharge allowed for the three filters to drain in no less than 24 hours and no greater than 48 hours.

4.0 MAINTENANCE

A comprehensive Maintenance Plan has been developed for the Stormwater Best Management Practices for this facility. A copy of the Plan is included in Appendix A-4.

5.0 CONCLUSIONS

The runoff and routing calculations demonstrate that the development will result in a reduction in the peak rate of runoff for the 2-year, 10-year, 25-year, and 100-year return periods.

Water quality treatment is provided that meets redevelopment standards for new developed areas associated with the project. Three vegetated soil filters provide treatment for greater than 50% of the developed area which meets the Chapter 500 treatment requirements for redevelopment.

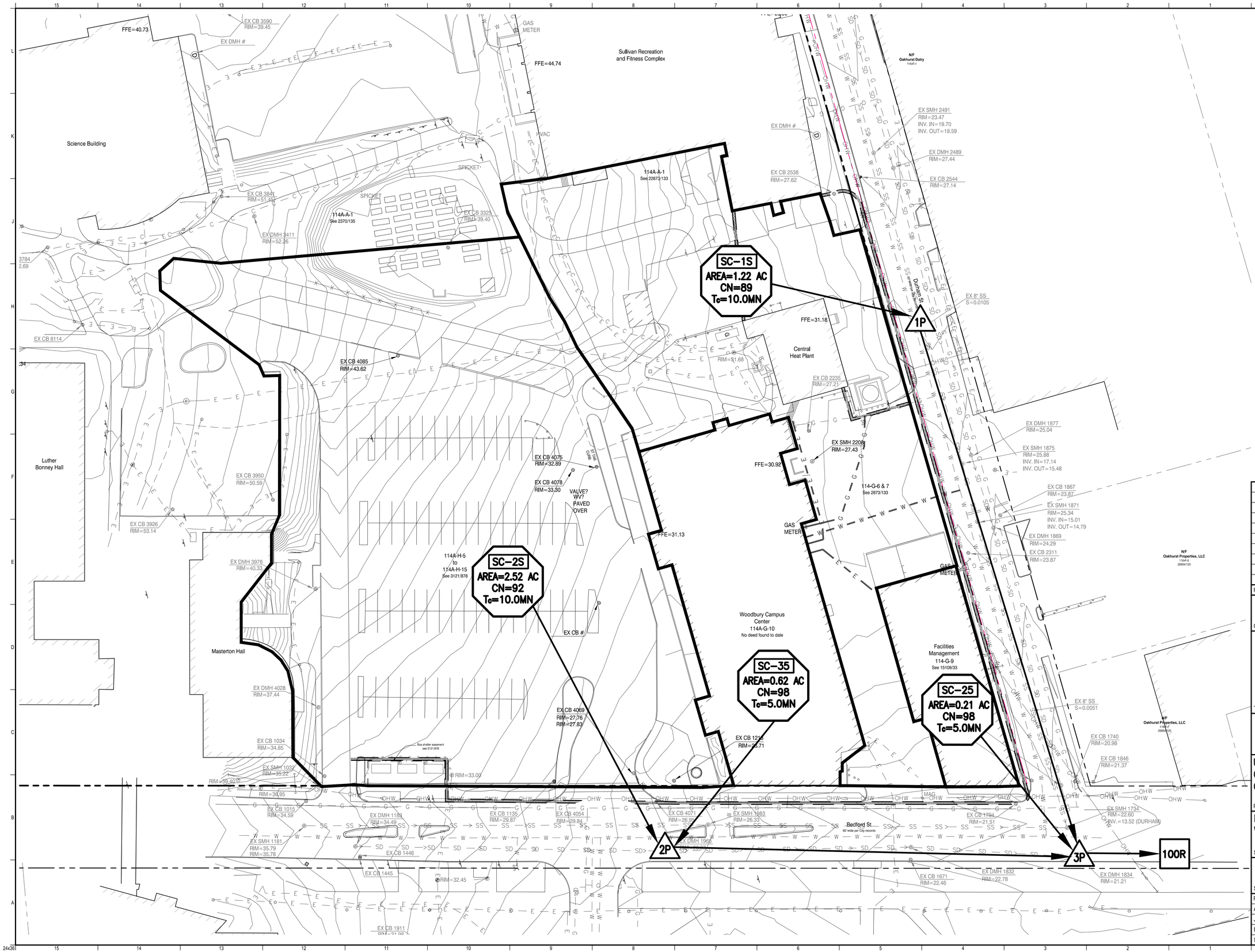
6.0 REFERENCES

- Maine Stormwater Management Design Manual Volume III BMP Technical Design Manual, current edition on-line.

- Maine Erosion and Sediment Control Best Management Practices Manual for Designers and Engineers, current edition on-line.

- Preliminary Geotechnical Engineering Services, Proposed Residential Hall & Student Success Center, prepared by S.W. Cole Engineering, Inc., January 28, 2020.

Appendix A-1 **Pre and Post Development Watershed Plans**



REV	DESCRIPTION	DATE

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3-6-20

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UNIVERSITY OF SOUTHERN MAINE
CAREER AND STUDENT SUCCESS
CENTER & RESIDENCE HALL

PORTLAND, MAINE

PRE-DEVELOPMENT
WATERSHED PLAN

SHEET TITLE:

SCALE: 1" = 30'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	C-120-19206	SHEET No.	C-120

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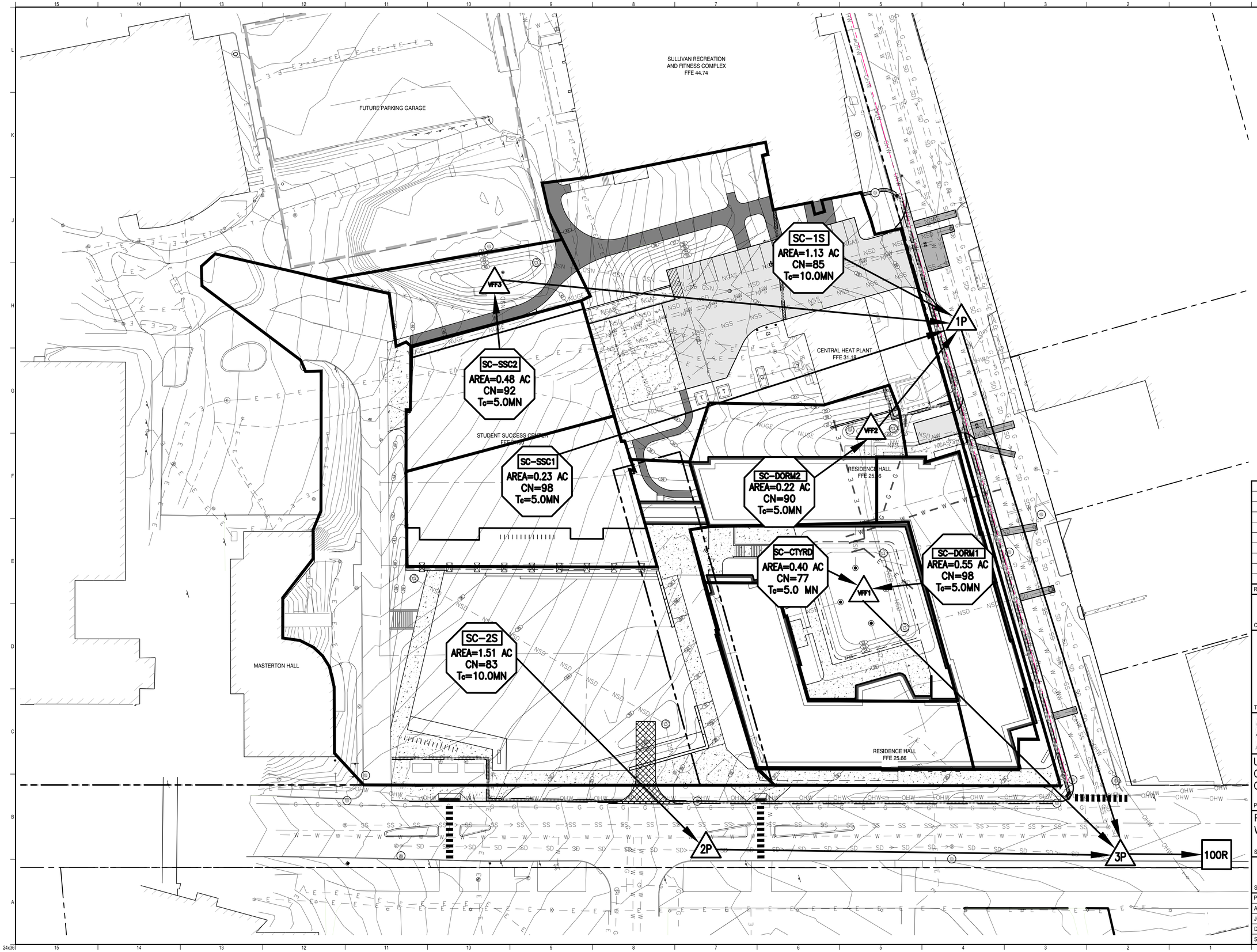

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PORTLAND, MAINE

POST-DEVELOPMENT WATERSHED PLAN

SHEET TITLE:

0 15' 30' 60' 90'

SCALE: 1" = 30'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		C-121
DRAWN BY:	WSM		
SMRT FILE:	C-121-19206	SHEET No.	

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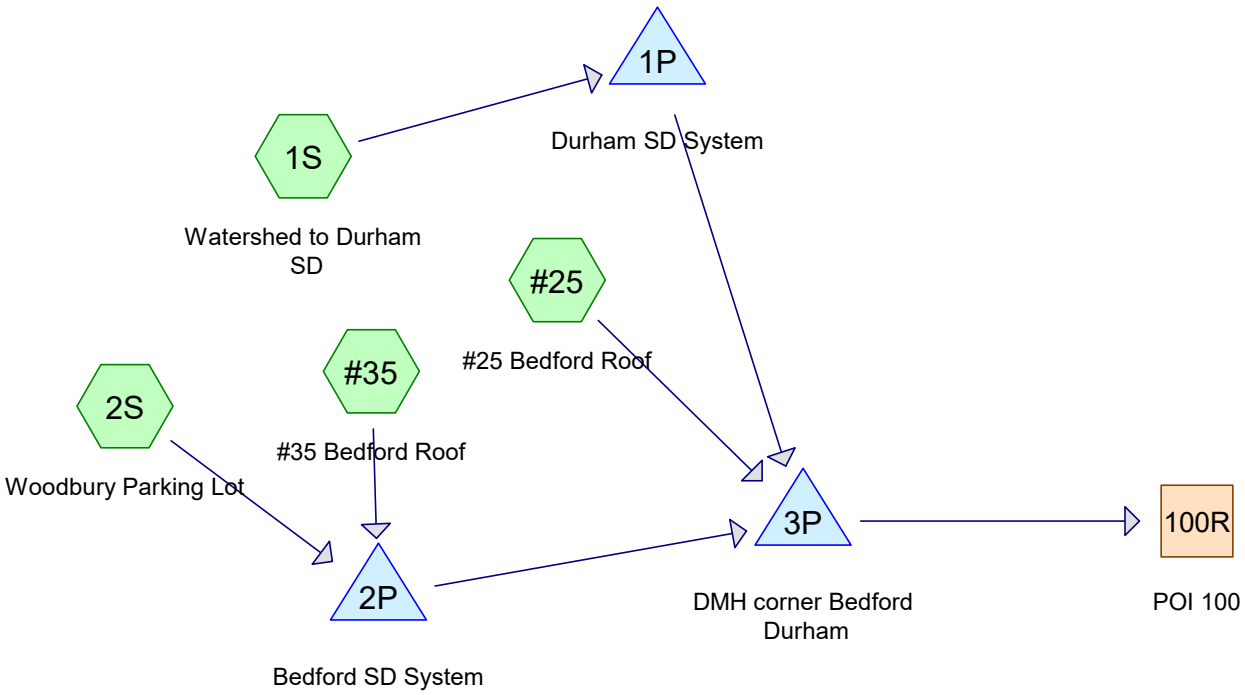
24x36

Appendix A-2 **HydroCAD Runoff and Routing Calculations**



Subcat Reach Pond Link

Routing Diagram for 19206 Ex Cond
Prepared by SMRT, Printed 3/4/2020
HydroCAD® 10.00-24 s/n 00729 © 2018 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.097	74	>75% Grass cover, Good, HSG C (1S, 2S)
3.480	98	Paved parking, HSG A (#25, #35, 1S, 2S)
4.577	**92**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
3.480	HSG A	#25, #35, 1S, 2S
0.000	HSG B	
1.097	HSG C	1S, 2S
0.000	HSG D	
0.000	Other	
4.577		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	1.097	0.000	0.000	1.097	>75% Grass cover, Good	1S, 2S
3.480	0.000	0.000	0.000	0.000	3.480	Paved parking	#25, #35, 1S, 2S
3.480	**0.000**	**1.097**	**0.000**	**0.000**	**4.577**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1P	22.53	13.35	300.0	0.0306	0.009	24.0	0.0	0.0
2	2P	21.90	13.35	300.0	0.0285	0.009	36.0	0.0	0.0
3	3P	13.35	11.00	200.0	0.0117	0.014	24.0	0.0	0.0

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment #25: #25 Bedford Roof Runoff Area=8,950 sf 100.00% Impervious Runoff Depth>2.68"
Tc=5.0 min CN=98 Runoff=0.62 cfs 0.046 af

Subcatchment #35: #35 Bedford Roof Runoff Area=27,201 sf 100.00% Impervious Runoff Depth>2.68"
Tc=5.0 min CN=98 Runoff=1.89 cfs 0.140 af

Subcatchment 1S: Watershed to Durham Runoff Area=53,341 sf 62.15% Impervious Runoff Depth>1.86"
Tc=10.0 min CN=89 Runoff=2.45 cfs 0.190 af

Subcatchment 2S: Woodbury Parking Lot Runoff Area=109,883 sf 74.87% Impervious Runoff Depth>2.12"
Tc=10.0 min CN=92 Runoff=5.64 cfs 0.447 af

Reach 100R: POI 100 Inflow=10.14 cfs 0.822 af
Outflow=10.14 cfs 0.822 af

Pond 1P: Durham SD System Peak Elev=23.18' Storage=6 cf Inflow=2.45 cfs 0.190 af
24.0" Round Culvert n=0.009 L=300.0' S=0.0306 '/' Outflow=2.46 cfs 0.190 af

Pond 2P: Bedford SD System Peak Elev=22.91' Storage=7 cf Inflow=7.20 cfs 0.586 af
36.0" Round Culvert n=0.009 L=300.0' S=0.0285 '/' Outflow=7.20 cfs 0.586 af

Pond 3P: DMH corner Bedford Durham Peak Elev=14.81' Storage=13 cf Inflow=10.14 cfs 0.822 af
24.0" Round Culvert n=0.014 L=200.0' S=0.0117 '/' Outflow=10.14 cfs 0.822 af

Total Runoff Area = 4.577 ac Runoff Volume = 0.822 af Average Runoff Depth = 2.16"
23.98% Pervious = 1.097 ac 76.02% Impervious = 3.480 ac

Summary for Subcatchment #25: #25 Bedford Roof

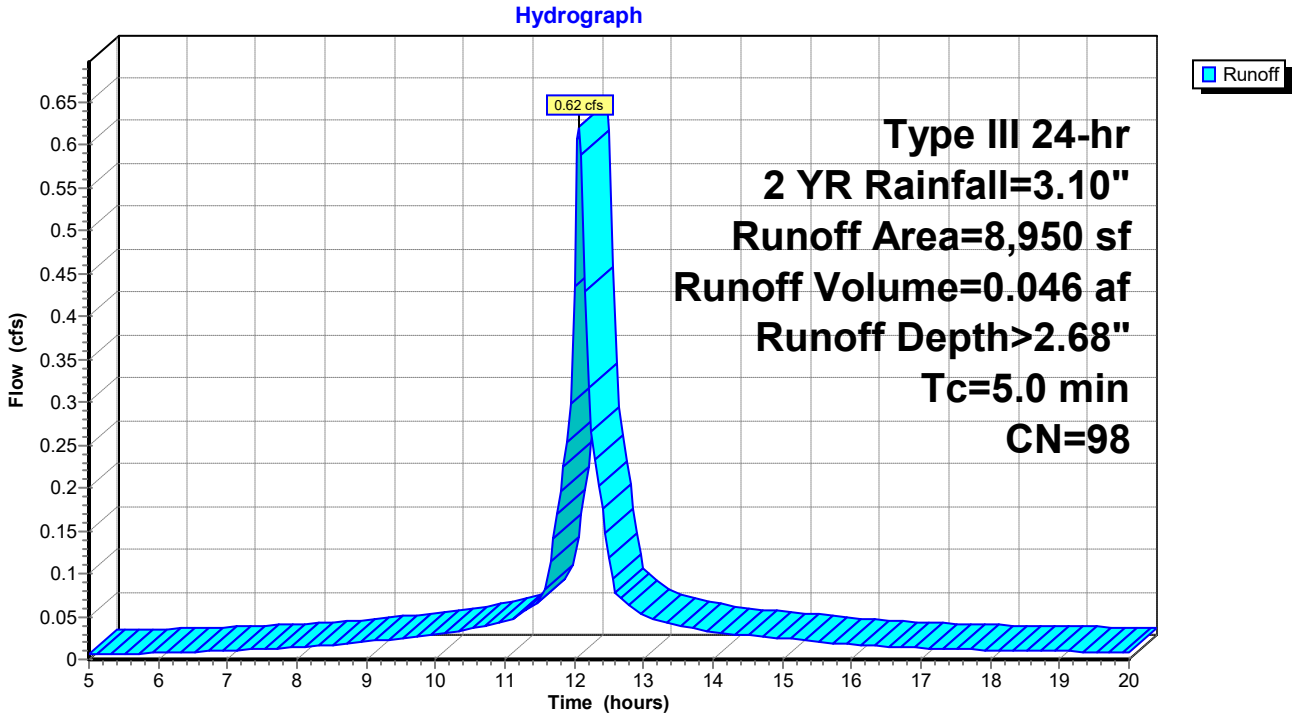
Runoff = 0.62 cfs @ 12.07 hrs, Volume= 0.046 af, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

Area (sf)	CN	Description
8,950	98	Paved parking, HSG A
8,950		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment #25: #25 Bedford Roof



Summary for Subcatchment #35: #35 Bedford Roof

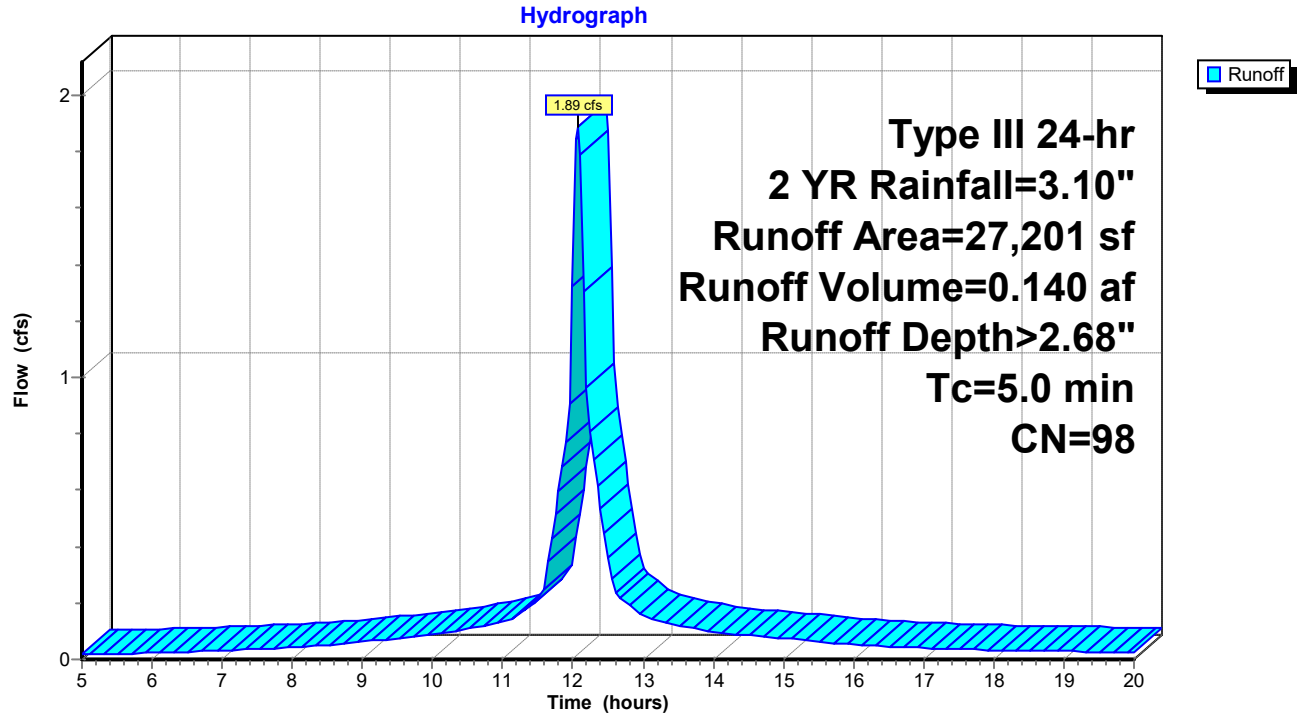
Runoff = 1.89 cfs @ 12.07 hrs, Volume= 0.140 af, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

Area (sf)	CN	Description
27,201	98	Paved parking, HSG A
27,201		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment #35: #35 Bedford Roof



Summary for Subcatchment 1S: Watershed to Durham SD

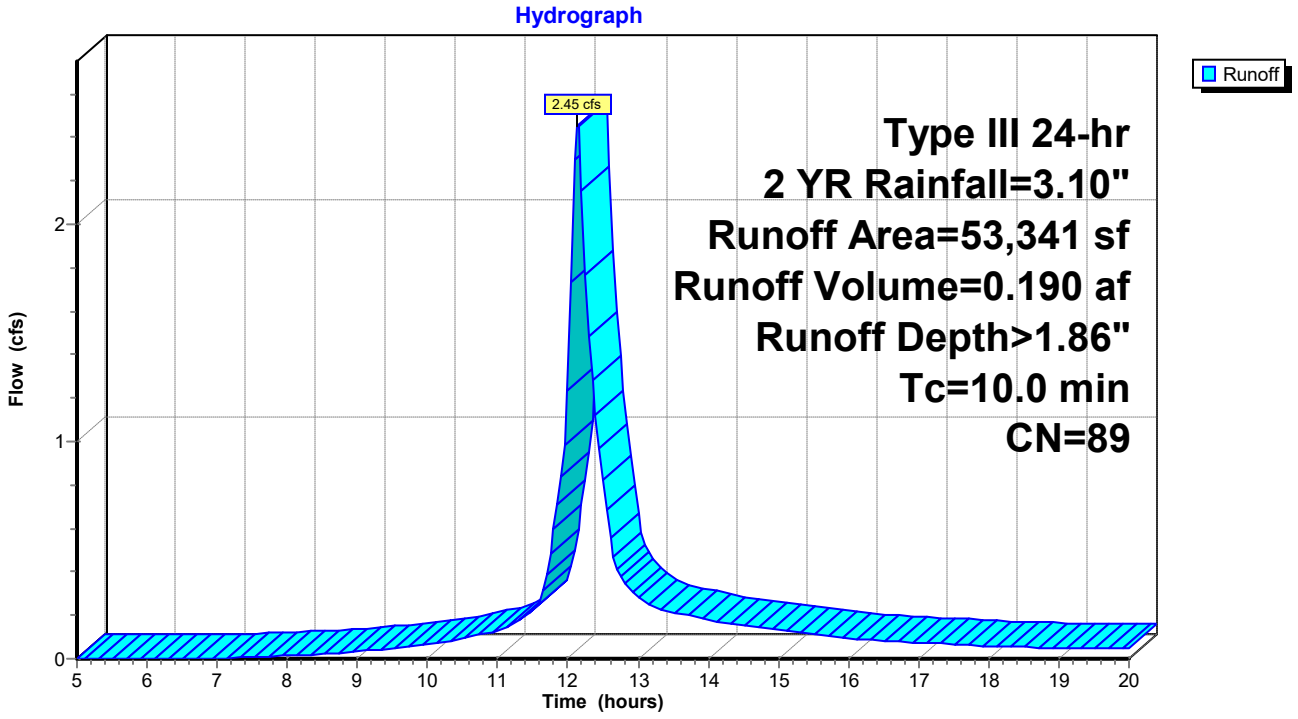
Runoff = 2.45 cfs @ 12.14 hrs, Volume= 0.190 af, Depth> 1.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

Area (sf)	CN	Description
33,152	98	Paved parking, HSG A
20,189	74	>75% Grass cover, Good, HSG C
53,341	89	Weighted Average
20,189		37.85% Pervious Area
33,152		62.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S: Watershed to Durham SD



Summary for Subcatchment 2S: Woodbury Parking Lot

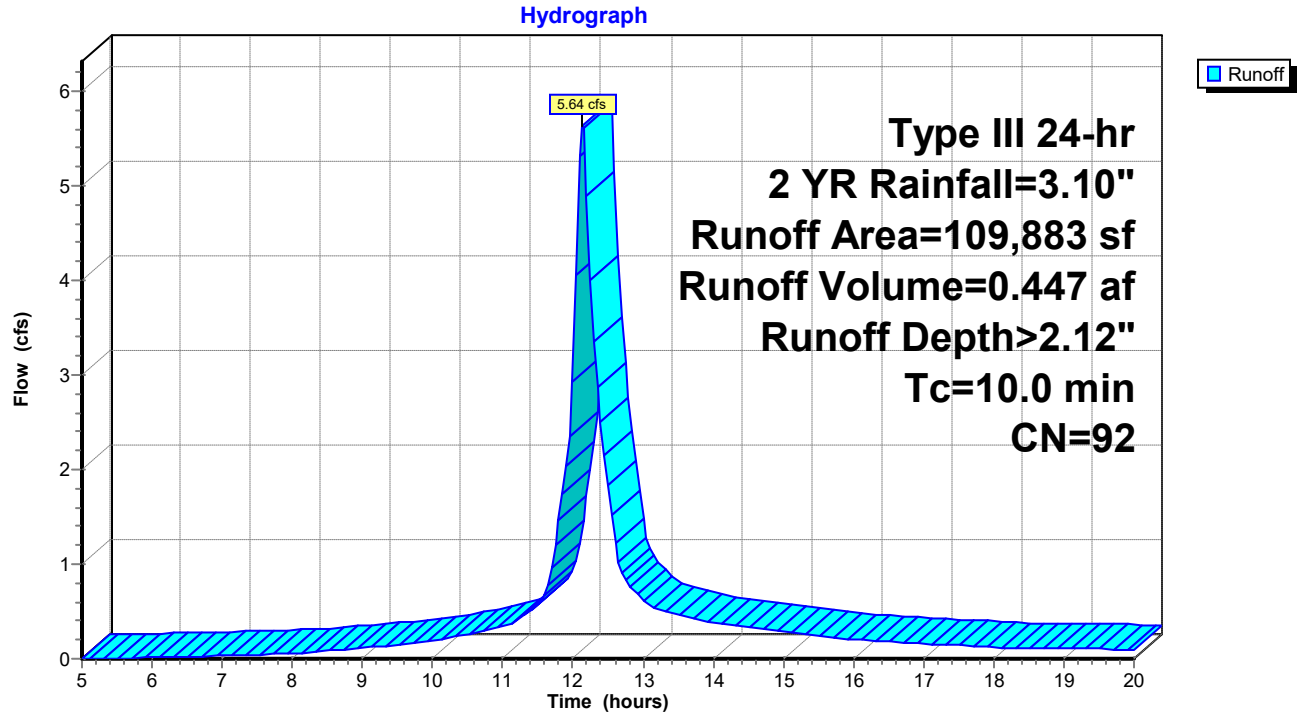
Runoff = 5.64 cfs @ 12.14 hrs, Volume= 0.447 af, Depth> 2.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

Area (sf)	CN	Description
82,271	98	Paved parking, HSG A
27,612	74	>75% Grass cover, Good, HSG C
109,883	92	Weighted Average
27,612		25.13% Pervious Area
82,271		74.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: Woodbury Parking Lot

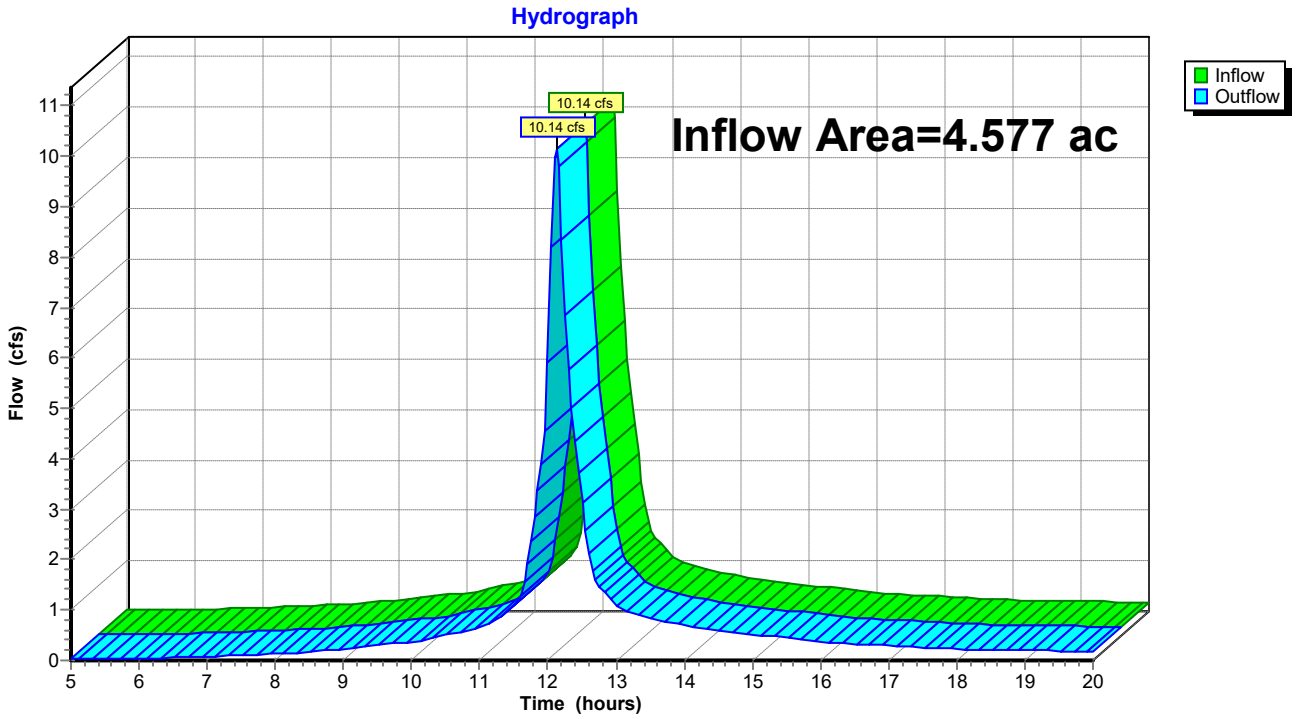


Summary for Reach 100R: POI 100

Inflow Area = 4.577 ac, 76.02% Impervious, Inflow Depth > 2.16" for 2 YR event
Inflow = 10.14 cfs @ 12.12 hrs, Volume= 0.822 af
Outflow = 10.14 cfs @ 12.12 hrs, Volume= 0.822 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 100R: POI 100



Summary for Pond 1P: Durham SD System

Inflow Area = 1.225 ac, 62.15% Impervious, Inflow Depth > 1.86" for 2 YR event
Inflow = 2.45 cfs @ 12.14 hrs, Volume= 0.190 af
Outflow = 2.46 cfs @ 12.14 hrs, Volume= 0.190 af, Atten= 0%, Lag= 0.0 min
Primary = 2.46 cfs @ 12.14 hrs, Volume= 0.190 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.18' @ 12.14 hrs Surf.Area= 9 sf Storage= 6 cf

Plug-Flow detention time= 0.1 min calculated for 0.190 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (782.5 - 782.4)

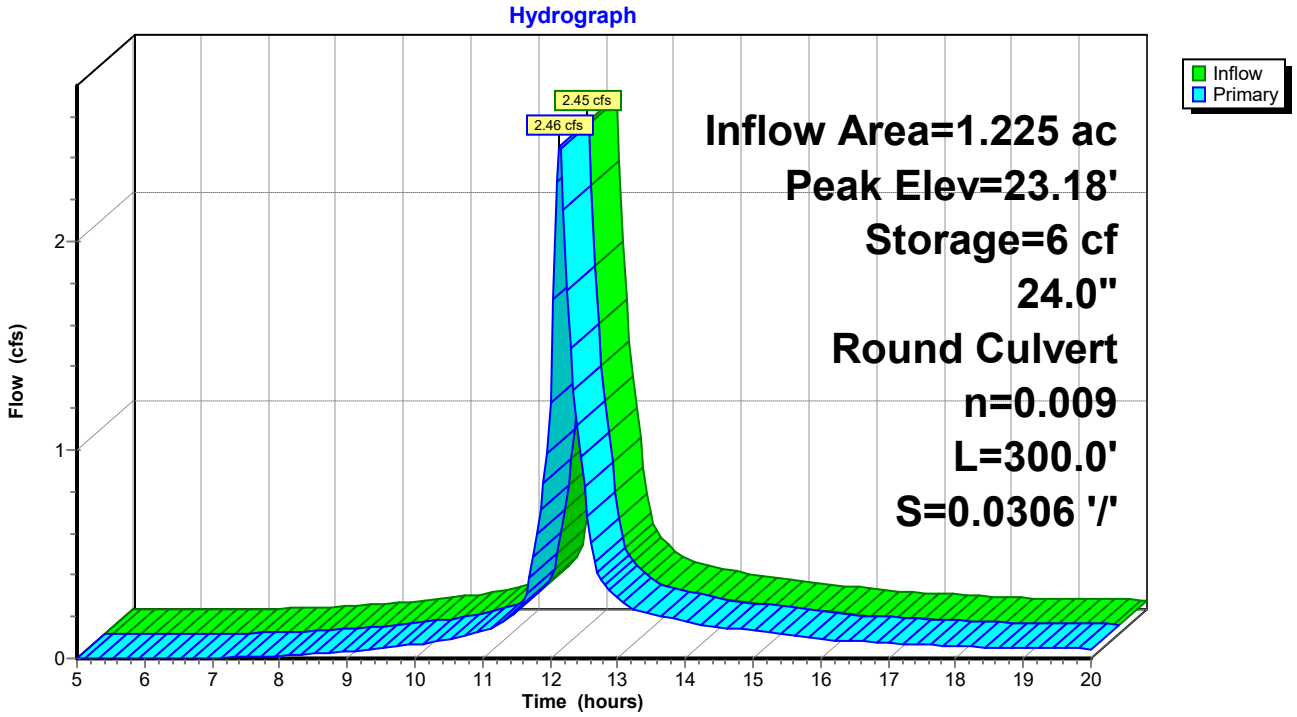
Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,591 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	100	1	51
29.00	15,000	6,040	6,091
30.00	1,000,000	507,500	513,591

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=2.42 cfs @ 12.14 hrs HW=23.18' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 2.42 cfs @ 2.74 fps)

Pond 1P: Durham SD System



Summary for Pond 2P: Bedford SD System

Inflow Area = 3.147 ac, 79.86% Impervious, Inflow Depth > 2.24" for 2 YR event
Inflow = 7.20 cfs @ 12.12 hrs, Volume= 0.586 af
Outflow = 7.20 cfs @ 12.12 hrs, Volume= 0.586 af, Atten= 0%, Lag= 0.0 min
Primary = 7.20 cfs @ 12.12 hrs, Volume= 0.586 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 22.91' @ 12.12 hrs Surf.Area= 9 sf Storage= 7 cf

Plug-Flow detention time= 0.0 min calculated for 0.584 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (763.1 - 763.1)

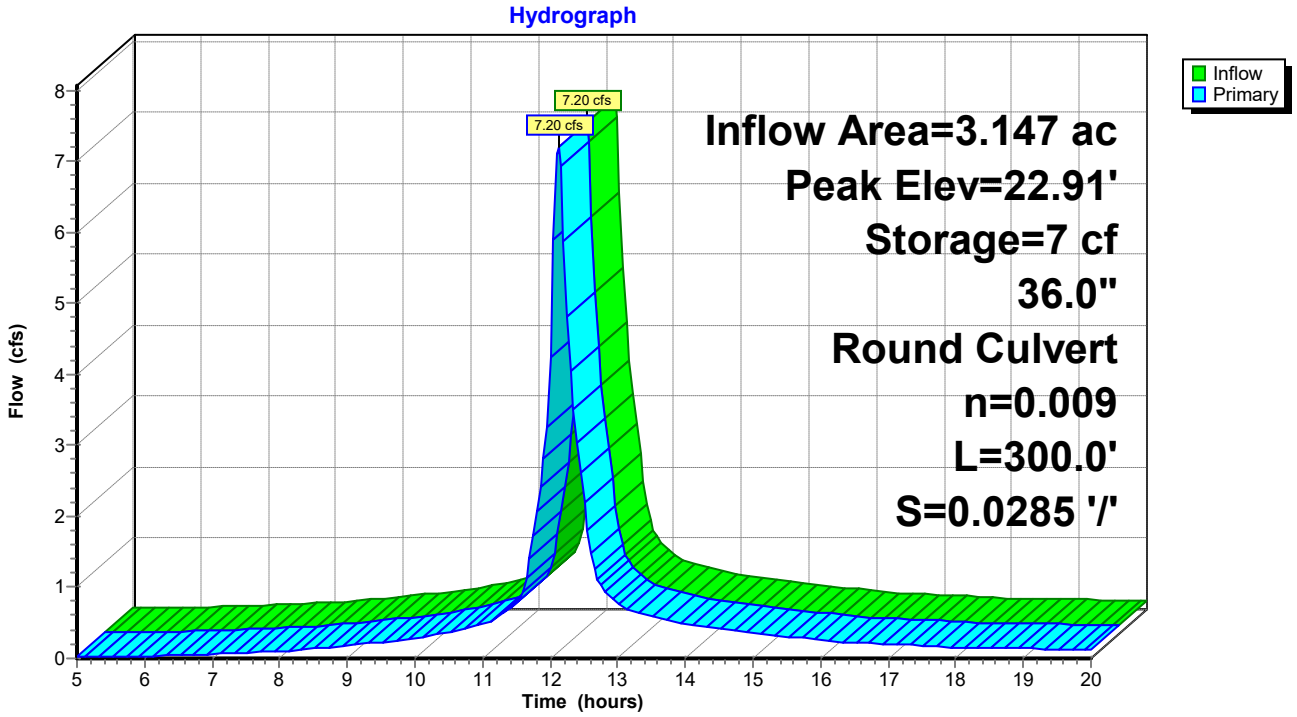
Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=7.03 cfs @ 12.12 hrs HW=22.90' (Free Discharge)
1=Culvert (Inlet Controls 7.03 cfs @ 3.41 fps)

Pond 2P: Bedford SD System



Summary for Pond 3P: DMH corner Bedford Durham

Inflow Area = 4.577 ac, 76.02% Impervious, Inflow Depth > 2.16" for 2 YR event
Inflow = 10.14 cfs @ 12.12 hrs, Volume= 0.822 af
Outflow = 10.14 cfs @ 12.12 hrs, Volume= 0.822 af, Atten= 0%, Lag= 0.0 min
Primary = 10.14 cfs @ 12.12 hrs, Volume= 0.822 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 14.81' @ 12.12 hrs Surf.Area= 9 sf Storage= 13 cf

Plug-Flow detention time= 0.1 min calculated for 0.822 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (766.2 - 766.2)

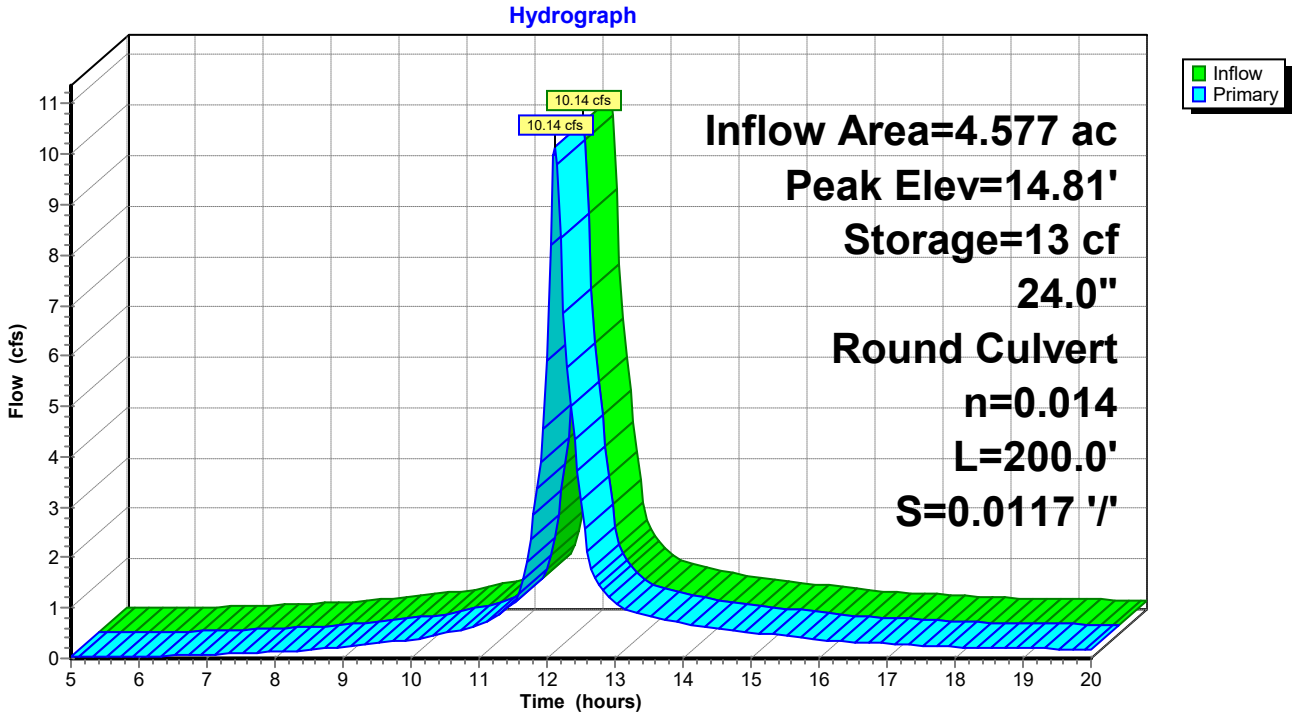
Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=9.91 cfs @ 12.12 hrs HW=14.79' (Free Discharge)
↑**1=Culvert** (Inlet Controls 9.91 cfs @ 4.09 fps)

Pond 3P: DMH corner Bedford Durham



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment #25: #25 Bedford Roof Runoff Area=8,950 sf 100.00% Impervious Runoff Depth>4.05"
Tc=5.0 min CN=98 Runoff=0.93 cfs 0.069 af

Subcatchment #35: #35 Bedford Roof Runoff Area=27,201 sf 100.00% Impervious Runoff Depth>4.05"
Tc=5.0 min CN=98 Runoff=2.83 cfs 0.211 af

Subcatchment 1S: Watershed to Durham Runoff Area=53,341 sf 62.15% Impervious Runoff Depth>3.19"
Tc=10.0 min CN=89 Runoff=4.11 cfs 0.326 af

Subcatchment 2S: Woodbury Parking Lot Runoff Area=109,883 sf 74.87% Impervious Runoff Depth>3.49"
Tc=10.0 min CN=92 Runoff=9.03 cfs 0.734 af

Reach 100R: POI 100 Inflow=16.21 cfs 1.341 af
Outflow=16.21 cfs 1.341 af

Pond 1P: Durham SD System Peak Elev=23.39' Storage=8 cf Inflow=4.11 cfs 0.326 af
24.0" Round Culvert n=0.009 L=300.0' S=0.0306 '/' Outflow=4.11 cfs 0.326 af

Pond 2P: Bedford SD System Peak Elev=23.20' Storage=9 cf Inflow=11.37 cfs 0.945 af
36.0" Round Culvert n=0.009 L=300.0' S=0.0285 '/' Outflow=11.37 cfs 0.945 af

Pond 3P: DMH corner Bedford Durham Peak Elev=15.50' Storage=19 cf Inflow=16.22 cfs 1.341 af
24.0" Round Culvert n=0.014 L=200.0' S=0.0117 '/' Outflow=16.21 cfs 1.341 af

Total Runoff Area = 4.577 ac Runoff Volume = 1.341 af Average Runoff Depth = 3.52"
23.98% Pervious = 1.097 ac 76.02% Impervious = 3.480 ac

Summary for Subcatchment #25: #25 Bedford Roof

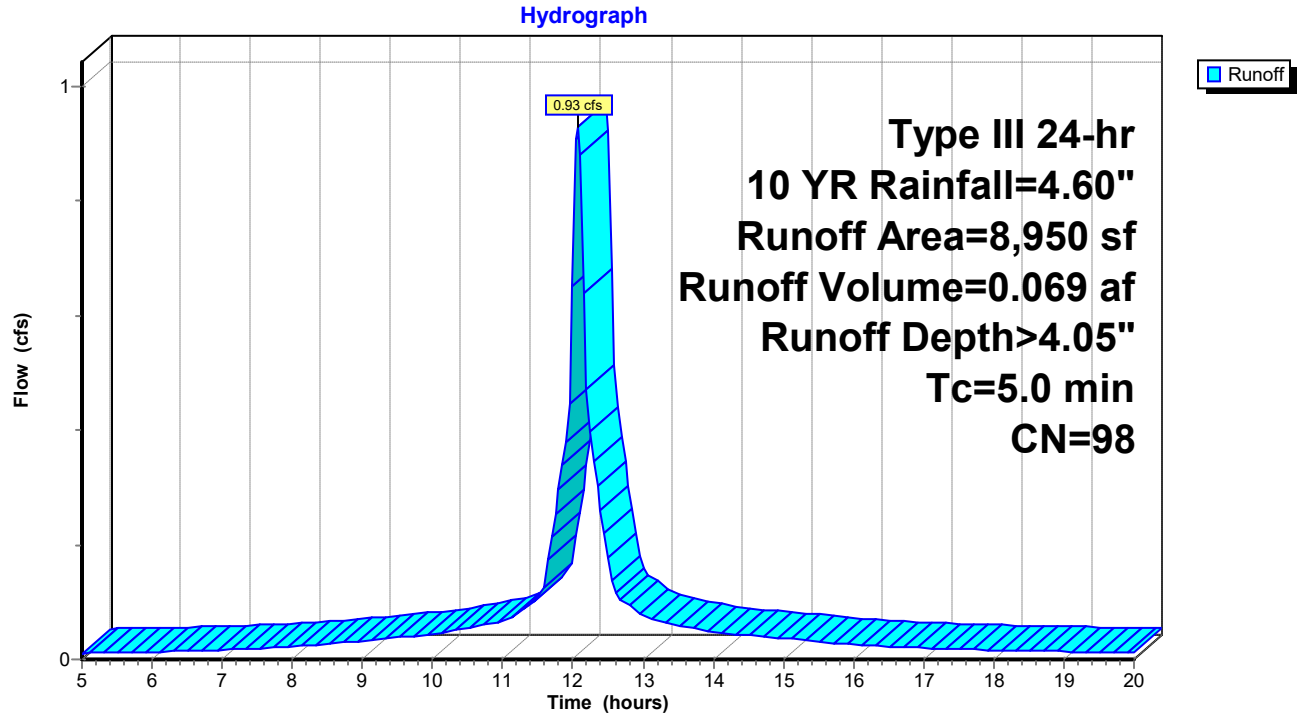
Runoff = 0.93 cfs @ 12.07 hrs, Volume= 0.069 af, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

Area (sf)	CN	Description
8,950	98	Paved parking, HSG A
8,950		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment #25: #25 Bedford Roof



Summary for Subcatchment #35: #35 Bedford Roof

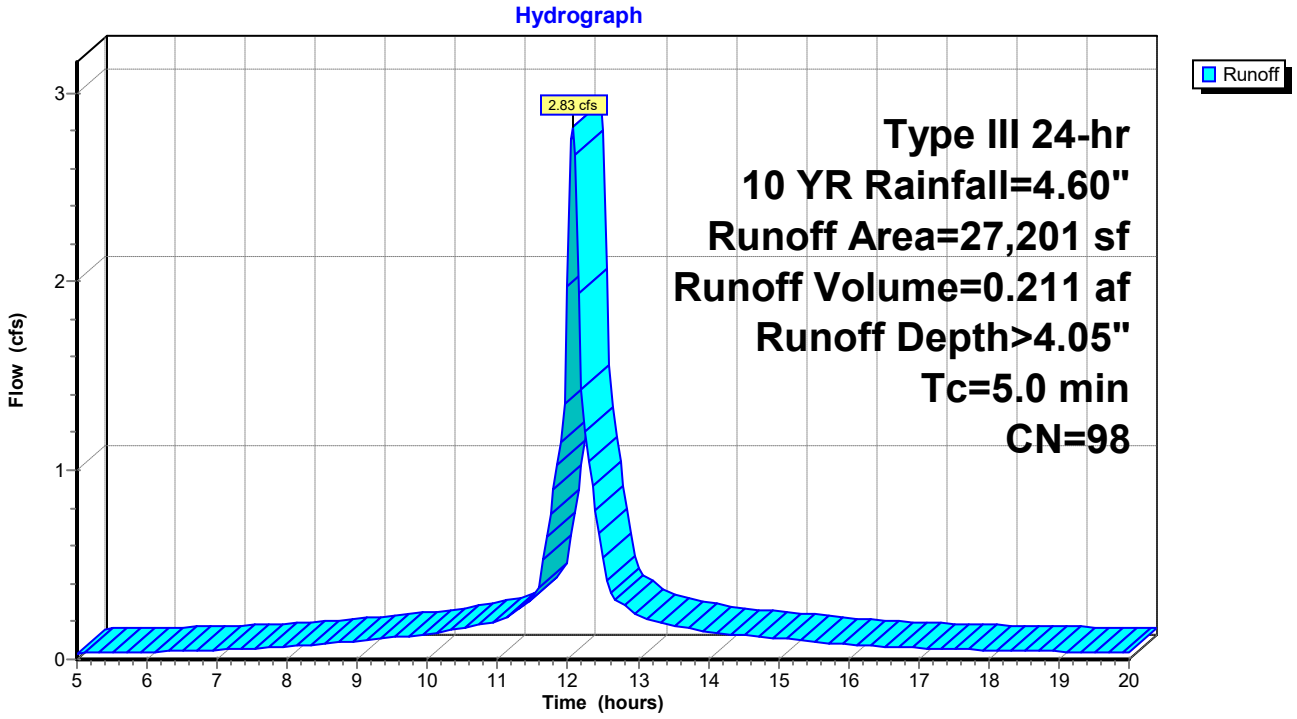
Runoff = 2.83 cfs @ 12.07 hrs, Volume= 0.211 af, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

Area (sf)	CN	Description
27,201	98	Paved parking, HSG A
27,201		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment #35: #35 Bedford Roof



Summary for Subcatchment 1S: Watershed to Durham SD

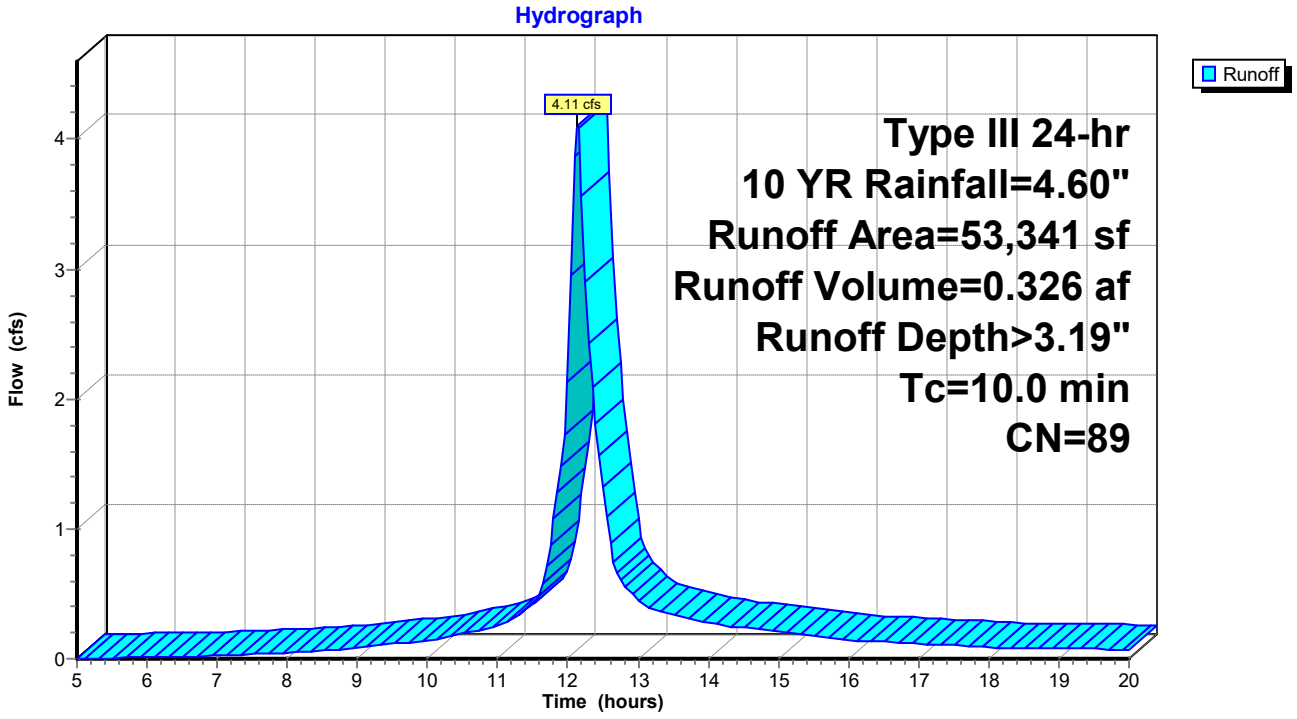
Runoff = 4.11 cfs @ 12.14 hrs, Volume= 0.326 af, Depth> 3.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

Area (sf)	CN	Description
33,152	98	Paved parking, HSG A
20,189	74	>75% Grass cover, Good, HSG C
53,341	89	Weighted Average
20,189		37.85% Pervious Area
33,152		62.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S: Watershed to Durham SD



Summary for Subcatchment 2S: Woodbury Parking Lot

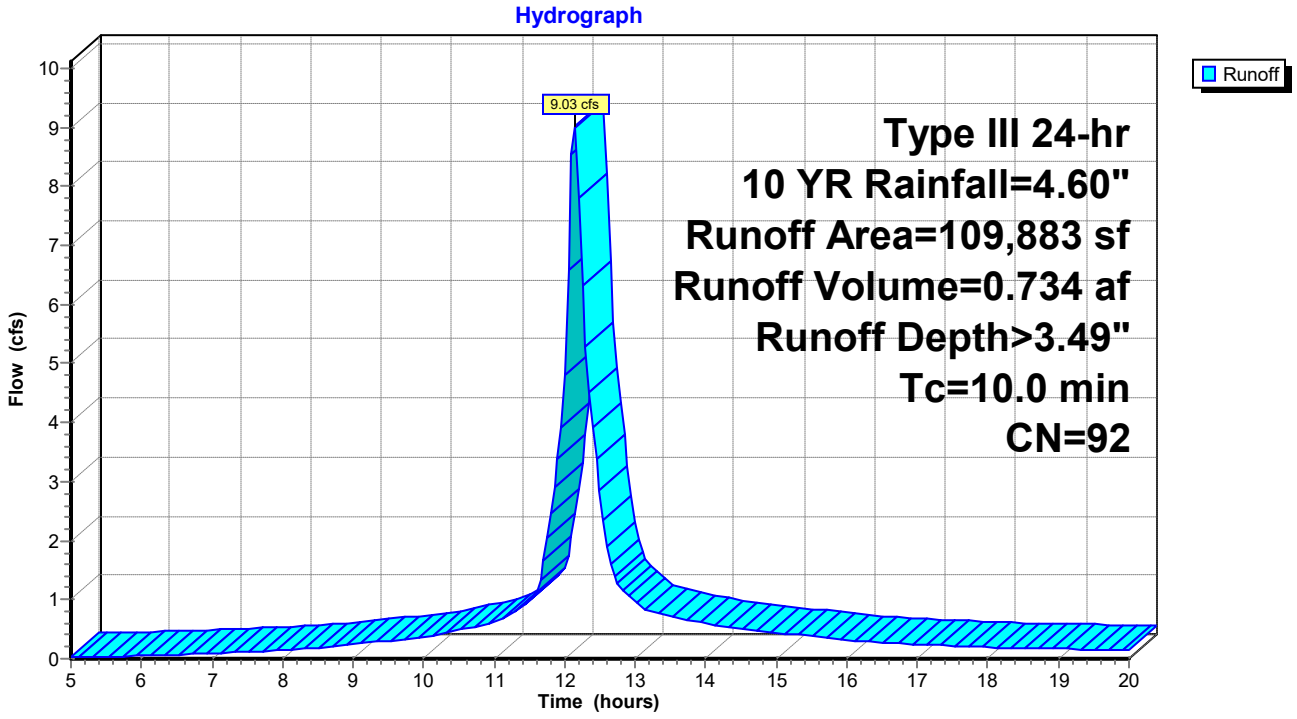
Runoff = 9.03 cfs @ 12.14 hrs, Volume= 0.734 af, Depth> 3.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

Area (sf)	CN	Description
82,271	98	Paved parking, HSG A
27,612	74	>75% Grass cover, Good, HSG C
109,883	92	Weighted Average
27,612		25.13% Pervious Area
82,271		74.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: Woodbury Parking Lot

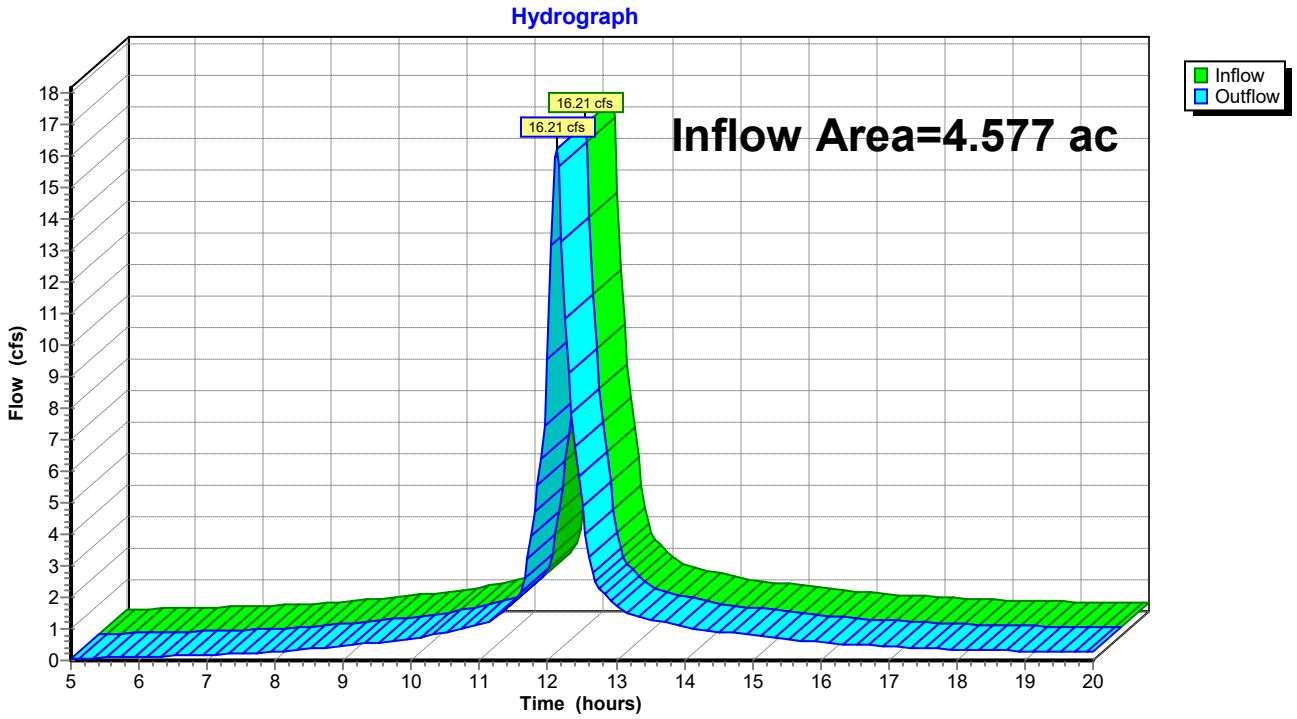


Summary for Reach 100R: POI 100

Inflow Area = 4.577 ac, 76.02% Impervious, Inflow Depth > 3.52" for 10 YR event
Inflow = 16.21 cfs @ 12.12 hrs, Volume= 1.341 af
Outflow = 16.21 cfs @ 12.12 hrs, Volume= 1.341 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 100R: POI 100



Summary for Pond 1P: Durham SD System

Inflow Area = 1.225 ac, 62.15% Impervious, Inflow Depth > 3.19" for 10 YR event
Inflow = 4.11 cfs @ 12.14 hrs, Volume= 0.326 af
Outflow = 4.11 cfs @ 12.14 hrs, Volume= 0.326 af, Atten= 0%, Lag= 0.0 min
Primary = 4.11 cfs @ 12.14 hrs, Volume= 0.326 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.39' @ 12.14 hrs Surf.Area= 9 sf Storage= 8 cf

Plug-Flow detention time= 0.1 min calculated for 0.326 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (769.6 - 769.6)

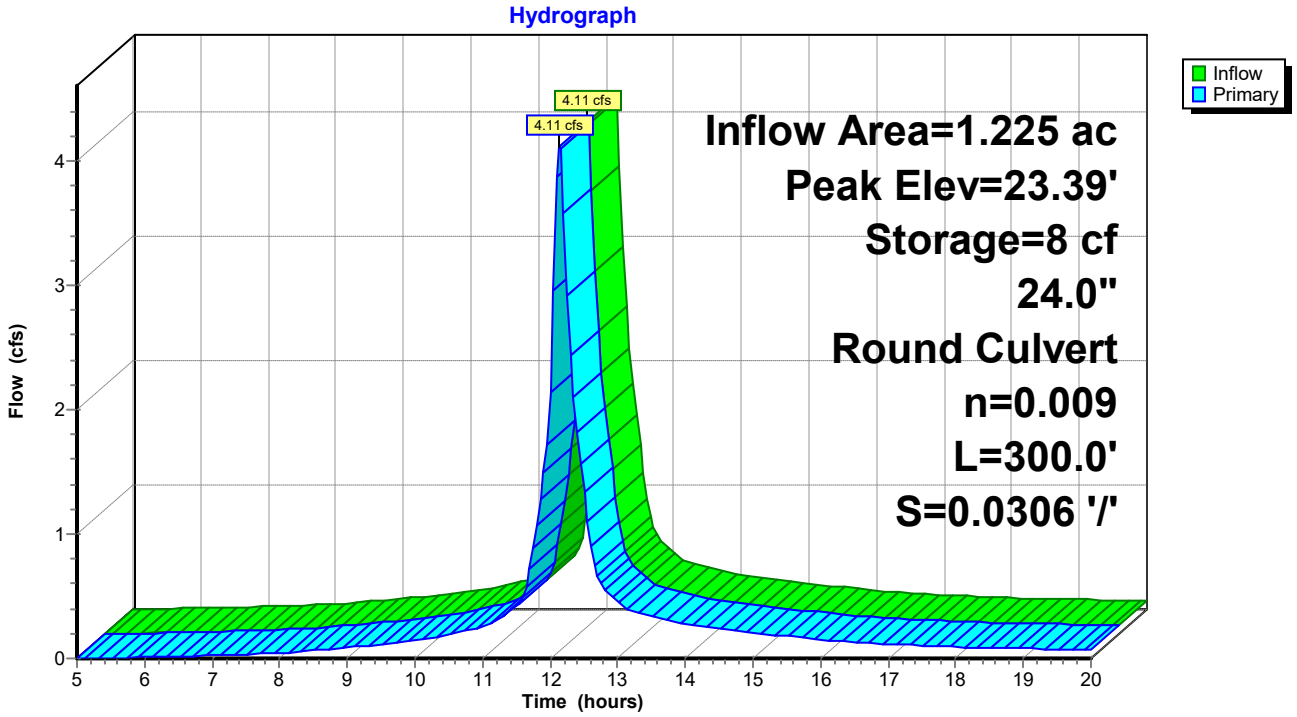
Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,591 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	100	1	51
29.00	15,000	6,040	6,091
30.00	1,000,000	507,500	513,591

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=4.04 cfs @ 12.14 hrs HW=23.39' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 4.04 cfs @ 3.15 fps)

Pond 1P: Durham SD System



Summary for Pond 2P: Bedford SD System

Inflow Area = 3.147 ac, 79.86% Impervious, Inflow Depth > 3.60" for 10 YR event
Inflow = 11.37 cfs @ 12.12 hrs, Volume= 0.945 af
Outflow = 11.37 cfs @ 12.12 hrs, Volume= 0.945 af, Atten= 0%, Lag= 0.0 min
Primary = 11.37 cfs @ 12.12 hrs, Volume= 0.945 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.20' @ 12.12 hrs Surf.Area= 9 sf Storage= 9 cf

Plug-Flow detention time= 0.0 min calculated for 0.942 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (754.2 - 754.2)

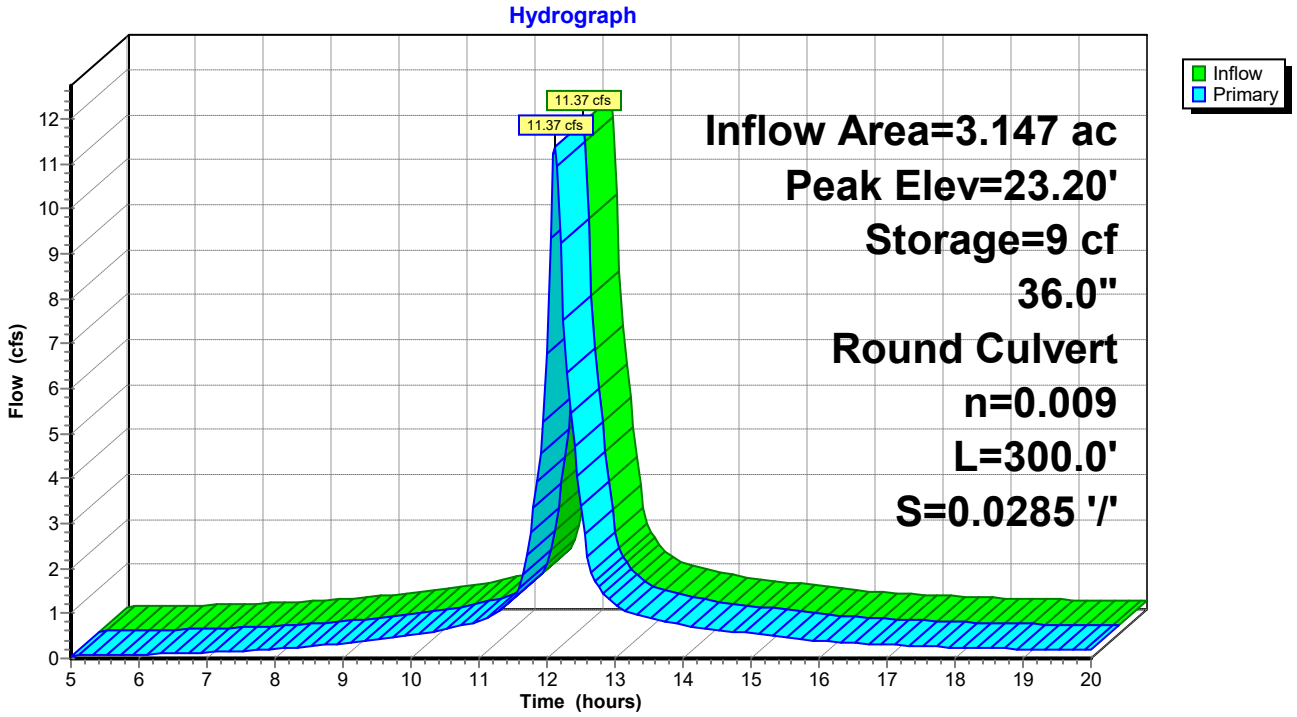
Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=11.11 cfs @ 12.12 hrs HW=23.18' (Free Discharge)
1=Culvert (Inlet Controls 11.11 cfs @ 3.86 fps)

Pond 2P: Bedford SD System



Summary for Pond 3P: DMH corner Bedford Durham

Inflow Area = 4.577 ac, 76.02% Impervious, Inflow Depth > 3.52" for 10 YR event
Inflow = 16.22 cfs @ 12.12 hrs, Volume= 1.341 af
Outflow = 16.21 cfs @ 12.12 hrs, Volume= 1.341 af, Atten= 0%, Lag= 0.0 min
Primary = 16.21 cfs @ 12.12 hrs, Volume= 1.341 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 15.50' @ 12.12 hrs Surf.Area= 9 sf Storage= 19 cf

Plug-Flow detention time= 0.1 min calculated for 1.336 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (757.0 - 757.0)

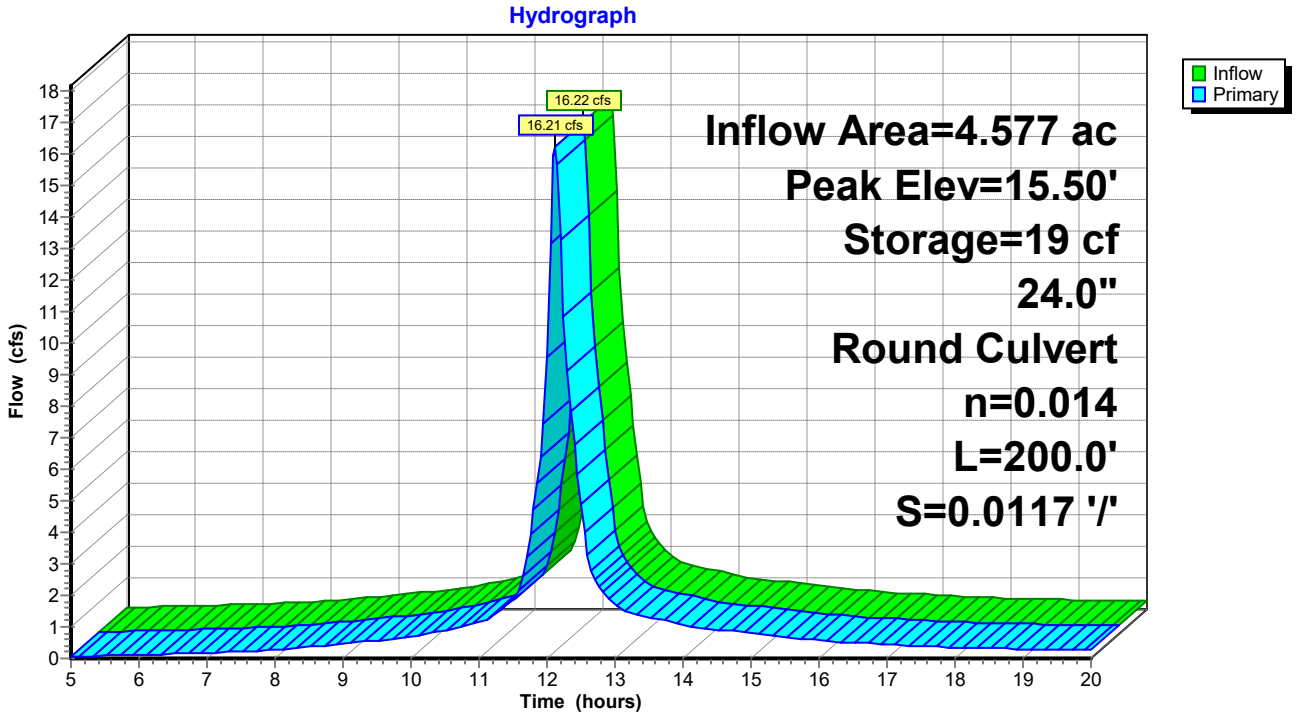
Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=15.85 cfs @ 12.12 hrs HW=15.45' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 15.85 cfs @ 5.04 fps)

Pond 3P: DMH corner Bedford Durham



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment #25: #25 Bedford Roof Runoff Area=8,950 sf 100.00% Impervious Runoff Depth>5.15"
Tc=5.0 min CN=98 Runoff=1.18 cfs 0.088 af

Subcatchment #35: #35 Bedford Roof Runoff Area=27,201 sf 100.00% Impervious Runoff Depth>5.15"
Tc=5.0 min CN=98 Runoff=3.57 cfs 0.268 af

Subcatchment 1S: Watershed to Durham Runoff Area=53,341 sf 62.15% Impervious Runoff Depth>4.29"
Tc=10.0 min CN=89 Runoff=5.42 cfs 0.438 af

Subcatchment 2S: Woodbury Parking Lot Runoff Area=109,883 sf 74.87% Impervious Runoff Depth>4.60"
Tc=10.0 min CN=92 Runoff=11.71 cfs 0.967 af

Reach 100R: POI 100 Inflow=21.05 cfs 1.760 af
Outflow=21.05 cfs 1.760 af

Pond 1P: Durham SD System Peak Elev=23.54' Storage=9 cf Inflow=5.42 cfs 0.438 af
24.0" Round Culvert n=0.009 L=300.0' S=0.0306 '/' Outflow=5.42 cfs 0.438 af

Pond 2P: Bedford SD System Peak Elev=23.40' Storage=11 cf Inflow=14.68 cfs 1.235 af
36.0" Round Culvert n=0.009 L=300.0' S=0.0285 '/' Outflow=14.68 cfs 1.235 af

Pond 3P: DMH corner Bedford Durham Peak Elev=16.28' Storage=26 cf Inflow=21.05 cfs 1.760 af
24.0" Round Culvert n=0.014 L=200.0' S=0.0117 '/' Outflow=21.05 cfs 1.760 af

Total Runoff Area = 4.577 ac Runoff Volume = 1.760 af Average Runoff Depth = 4.62"
23.98% Pervious = 1.097 ac 76.02% Impervious = 3.480 ac

Summary for Subcatchment #25: #25 Bedford Roof

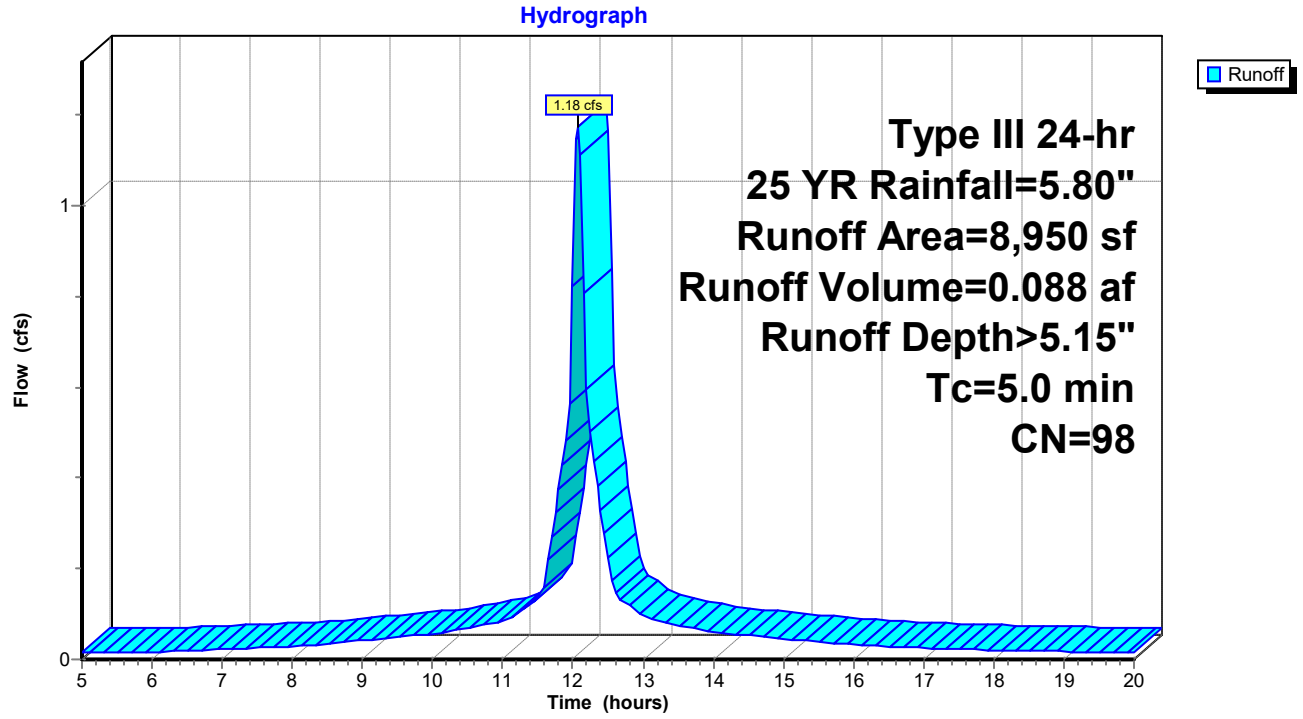
Runoff = 1.18 cfs @ 12.07 hrs, Volume= 0.088 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

Area (sf)	CN	Description
8,950	98	Paved parking, HSG A
8,950		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment #25: #25 Bedford Roof



Summary for Subcatchment #35: #35 Bedford Roof

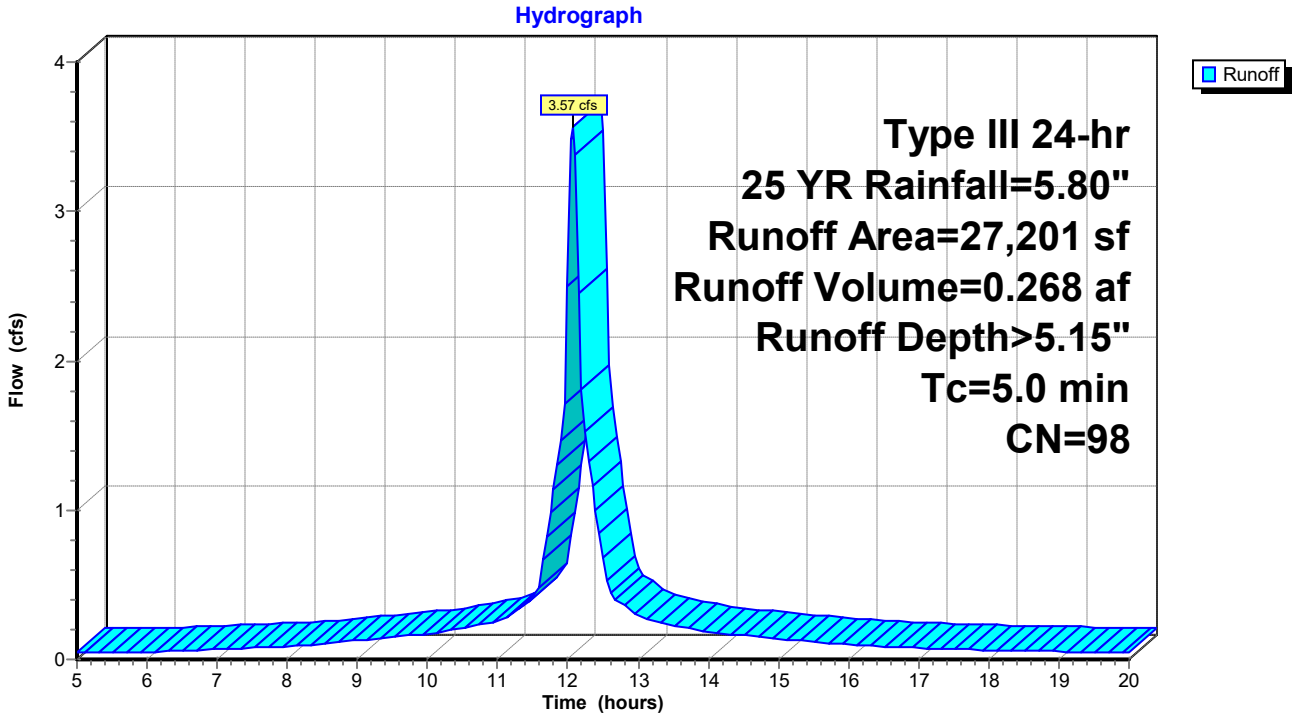
Runoff = 3.57 cfs @ 12.07 hrs, Volume= 0.268 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

Area (sf)	CN	Description
27,201	98	Paved parking, HSG A
27,201		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment #35: #35 Bedford Roof



Summary for Subcatchment 1S: Watershed to Durham SD

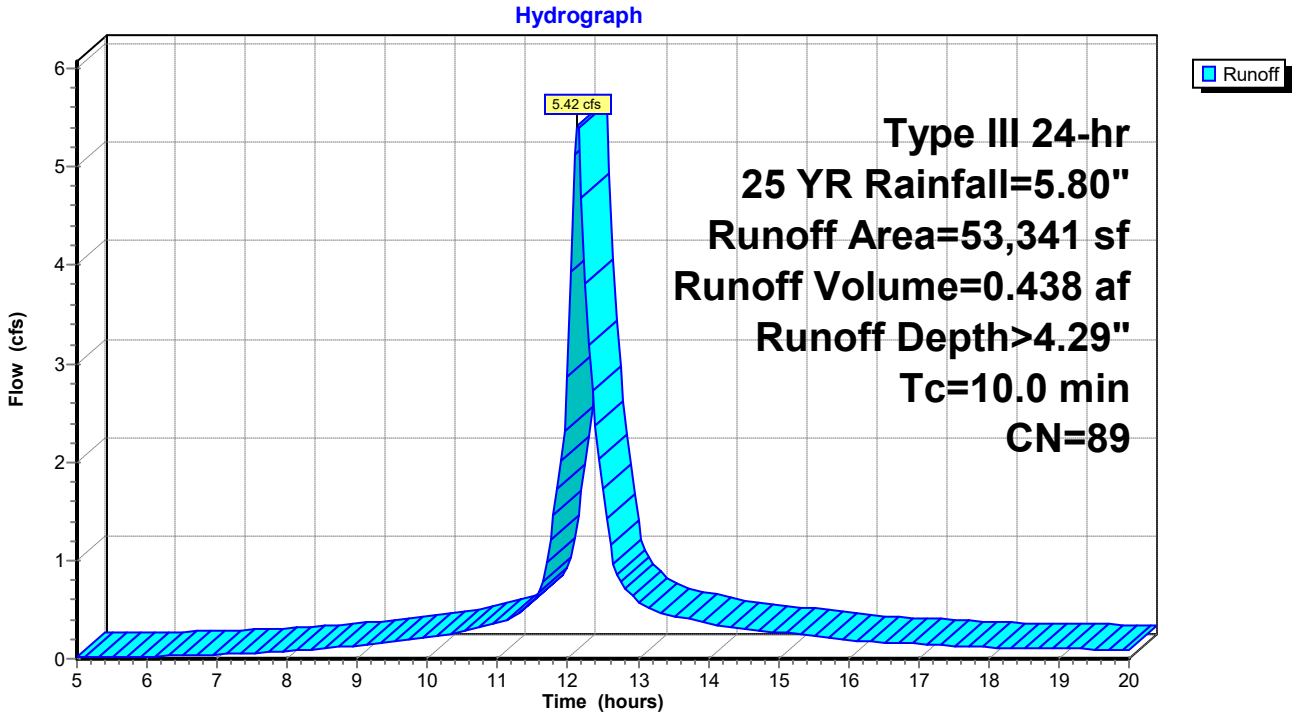
Runoff = 5.42 cfs @ 12.14 hrs, Volume= 0.438 af, Depth> 4.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

Area (sf)	CN	Description
33,152	98	Paved parking, HSG A
20,189	74	>75% Grass cover, Good, HSG C
53,341	89	Weighted Average
20,189		37.85% Pervious Area
33,152		62.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S: Watershed to Durham SD



Summary for Subcatchment 2S: Woodbury Parking Lot

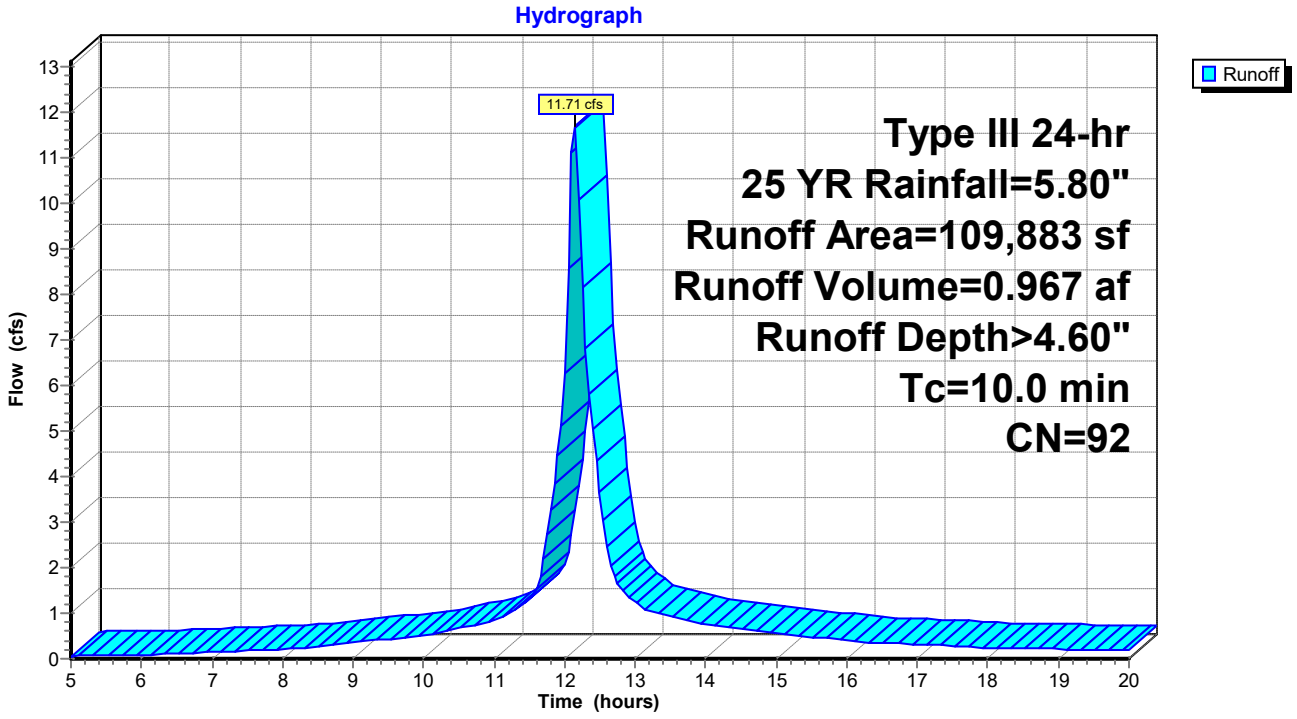
Runoff = 11.71 cfs @ 12.14 hrs, Volume= 0.967 af, Depth> 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

Area (sf)	CN	Description
82,271	98	Paved parking, HSG A
27,612	74	>75% Grass cover, Good, HSG C
109,883	92	Weighted Average
27,612		25.13% Pervious Area
82,271		74.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: Woodbury Parking Lot

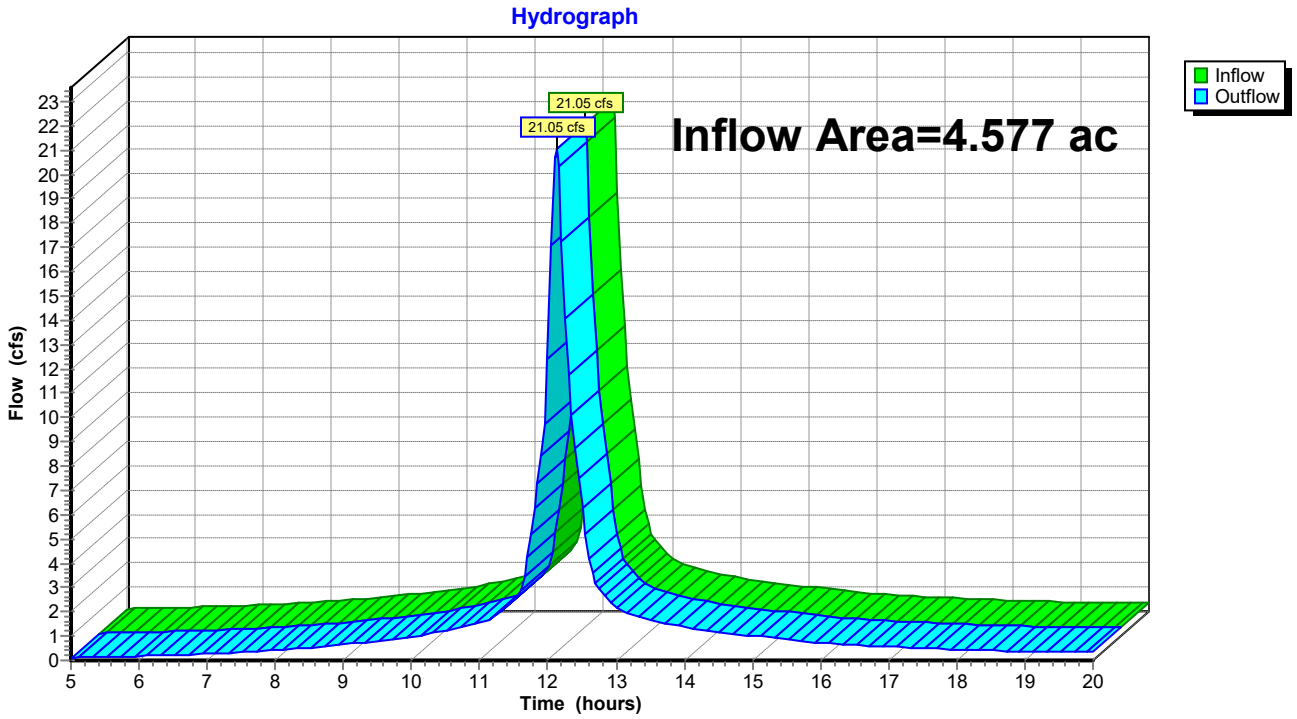


Summary for Reach 100R: POI 100

Inflow Area = 4.577 ac, 76.02% Impervious, Inflow Depth > 4.62" for 25 YR event
Inflow = 21.05 cfs @ 12.12 hrs, Volume= 1.760 af
Outflow = 21.05 cfs @ 12.12 hrs, Volume= 1.760 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 100R: POI 100



Summary for Pond 1P: Durham SD System

Inflow Area = 1.225 ac, 62.15% Impervious, Inflow Depth > 4.29" for 25 YR event
Inflow = 5.42 cfs @ 12.14 hrs, Volume= 0.438 af
Outflow = 5.42 cfs @ 12.14 hrs, Volume= 0.438 af, Atten= 0%, Lag= 0.0 min
Primary = 5.42 cfs @ 12.14 hrs, Volume= 0.438 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.54' @ 12.14 hrs Surf.Area= 9 sf Storage= 9 cf

Plug-Flow detention time= 0.1 min calculated for 0.438 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (762.9 - 762.9)

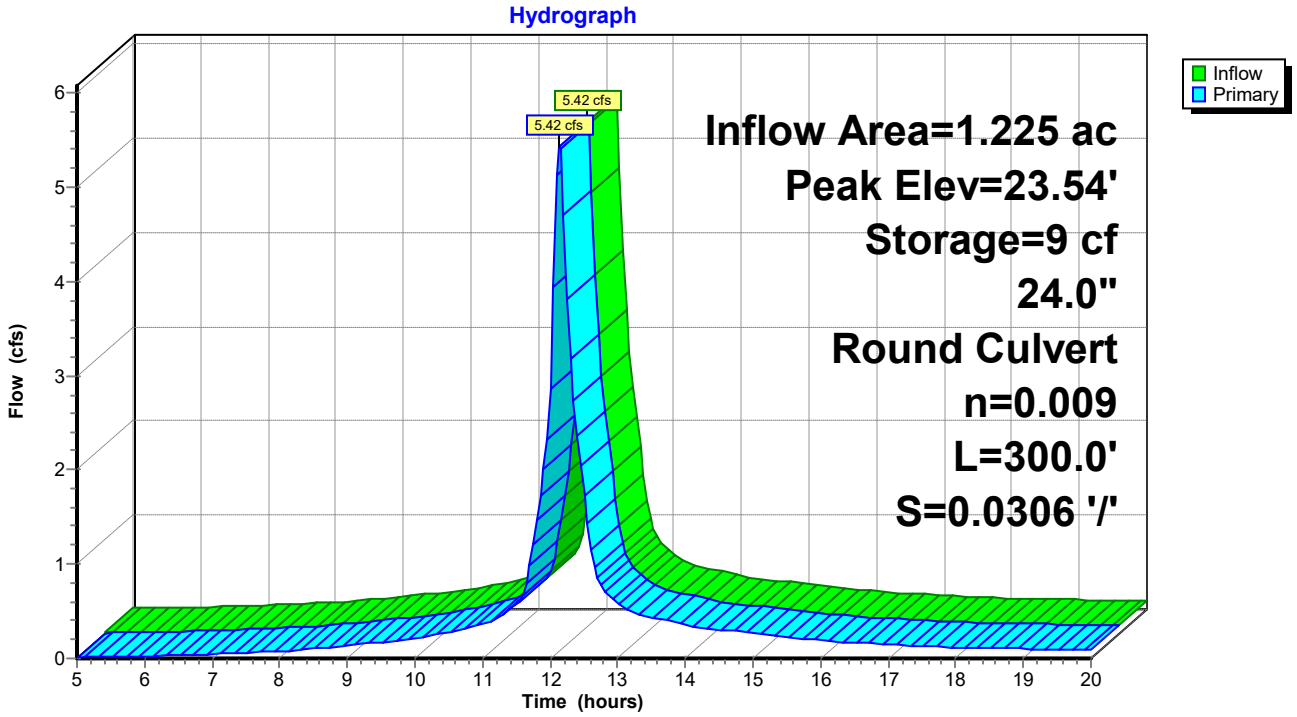
Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,591 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	100	1	51
29.00	15,000	6,040	6,091
30.00	1,000,000	507,500	513,591

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=5.34 cfs @ 12.14 hrs HW=23.53' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 5.34 cfs @ 3.40 fps)

Pond 1P: Durham SD System



Summary for Pond 2P: Bedford SD System

Inflow Area = 3.147 ac, 79.86% Impervious, Inflow Depth > 4.71" for 25 YR event
Inflow = 14.68 cfs @ 12.12 hrs, Volume= 1.235 af
Outflow = 14.68 cfs @ 12.12 hrs, Volume= 1.235 af, Atten= 0%, Lag= 0.0 min
Primary = 14.68 cfs @ 12.12 hrs, Volume= 1.235 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.40' @ 12.12 hrs Surf.Area= 9 sf Storage= 11 cf

Plug-Flow detention time= 0.0 min calculated for 1.235 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (750.0 - 750.0)

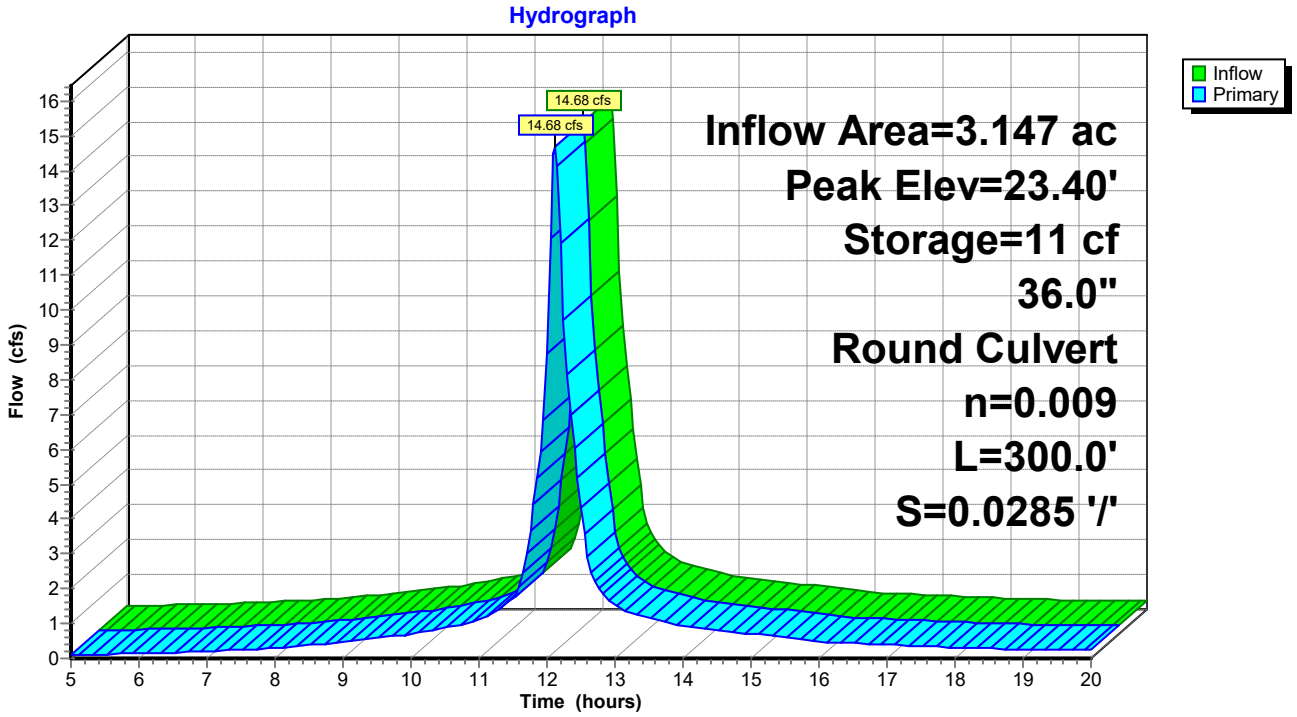
Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=14.35 cfs @ 12.12 hrs HW=23.38' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 14.35 cfs @ 4.14 fps)

Pond 2P: Bedford SD System



Summary for Pond 3P: DMH corner Bedford Durham

Inflow Area = 4.577 ac, 76.02% Impervious, Inflow Depth > 4.62" for 25 YR event
Inflow = 21.05 cfs @ 12.12 hrs, Volume= 1.760 af
Outflow = 21.05 cfs @ 12.12 hrs, Volume= 1.760 af, Atten= 0%, Lag= 0.0 min
Primary = 21.05 cfs @ 12.12 hrs, Volume= 1.760 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 16.28' @ 12.12 hrs Surf.Area= 9 sf Storage= 26 cf

Plug-Flow detention time= 0.1 min calculated for 1.754 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (752.4 - 752.4)

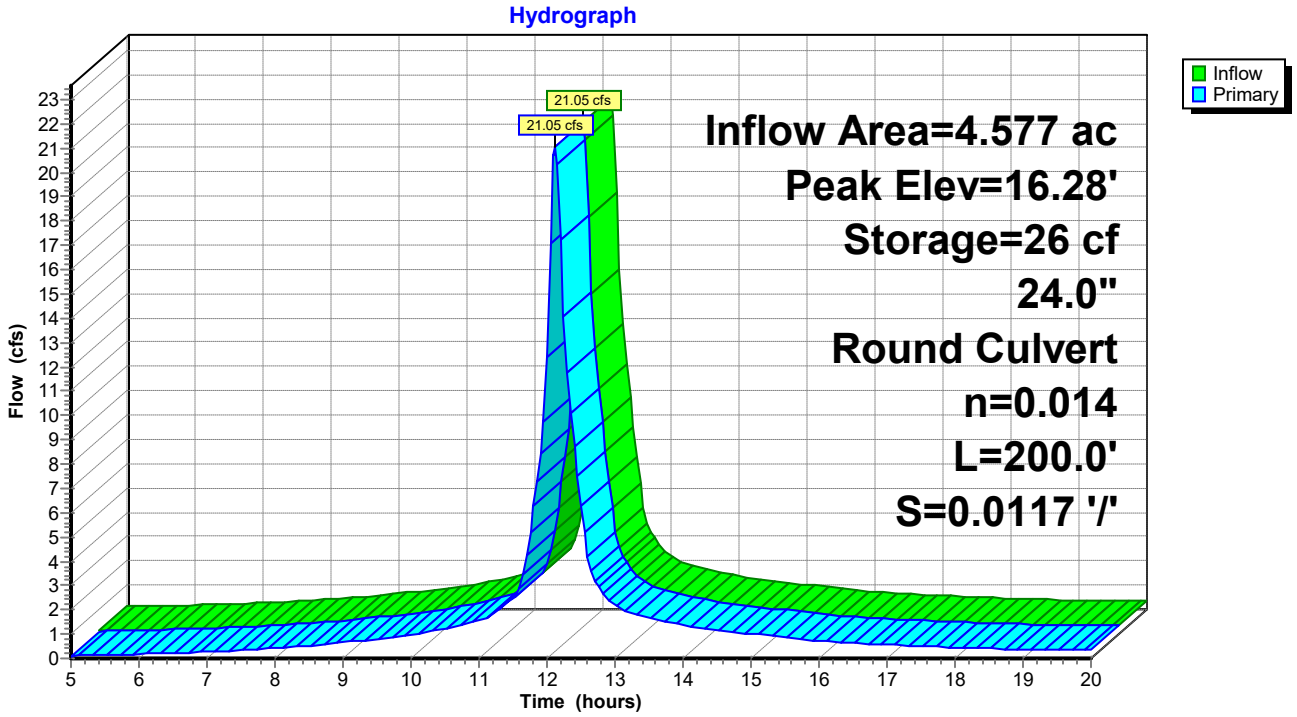
Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=20.57 cfs @ 12.12 hrs HW=16.20' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 20.57 cfs @ 6.55 fps)

Pond 3P: DMH corner Bedford Durham



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment #25: #25 Bedford Roof Runoff Area=8,950 sf 100.00% Impervious Runoff Depth>7.24"
Tc=5.0 min CN=98 Runoff=1.64 cfs 0.124 af

Subcatchment #35: #35 Bedford Roof Runoff Area=27,201 sf 100.00% Impervious Runoff Depth>7.24"
Tc=5.0 min CN=98 Runoff=5.00 cfs 0.377 af

Subcatchment 1S: Watershed to Durham Runoff Area=53,341 sf 62.15% Impervious Runoff Depth>6.40"
Tc=10.0 min CN=89 Runoff=7.93 cfs 0.654 af

Subcatchment 2S: Woodbury Parking Lot Runoff Area=109,883 sf 74.87% Impervious Runoff Depth>6.72"
Tc=10.0 min CN=92 Runoff=16.80 cfs 1.413 af

Reach 100R: POI 100 Inflow=30.19 cfs 2.567 af
Outflow=30.19 cfs 2.567 af

Pond 1P: Durham SD System Peak Elev=23.79' Storage=11 cf Inflow=7.93 cfs 0.654 af
24.0" Round Culvert n=0.009 L=300.0' S=0.0306 '/' Outflow=7.93 cfs 0.653 af

Pond 2P: Bedford SD System Peak Elev=23.74' Storage=14 cf Inflow=20.97 cfs 1.790 af
36.0" Round Culvert n=0.009 L=300.0' S=0.0285 '/' Outflow=20.97 cfs 1.790 af

Pond 3P: DMH corner Bedford Durham Peak Elev=19.27' Storage=53 cf Inflow=30.23 cfs 2.567 af
24.0" Round Culvert n=0.014 L=200.0' S=0.0117 '/' Outflow=30.19 cfs 2.567 af

Total Runoff Area = 4.577 ac Runoff Volume = 2.567 af Average Runoff Depth = 6.73"
23.98% Pervious = 1.097 ac 76.02% Impervious = 3.480 ac

Summary for Subcatchment #25: #25 Bedford Roof

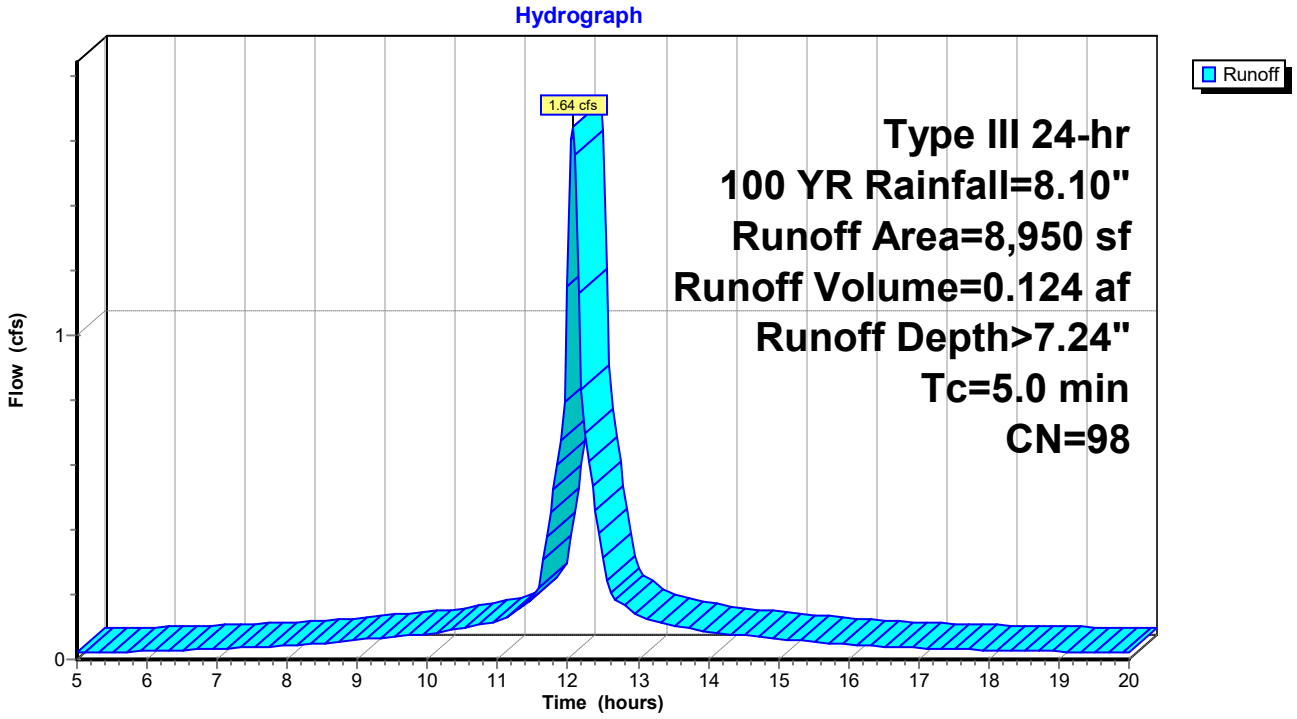
Runoff = 1.64 cfs @ 12.07 hrs, Volume= 0.124 af, Depth> 7.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

Area (sf)	CN	Description
8,950	98	Paved parking, HSG A
8,950		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment #25: #25 Bedford Roof



Summary for Subcatchment #35: #35 Bedford Roof

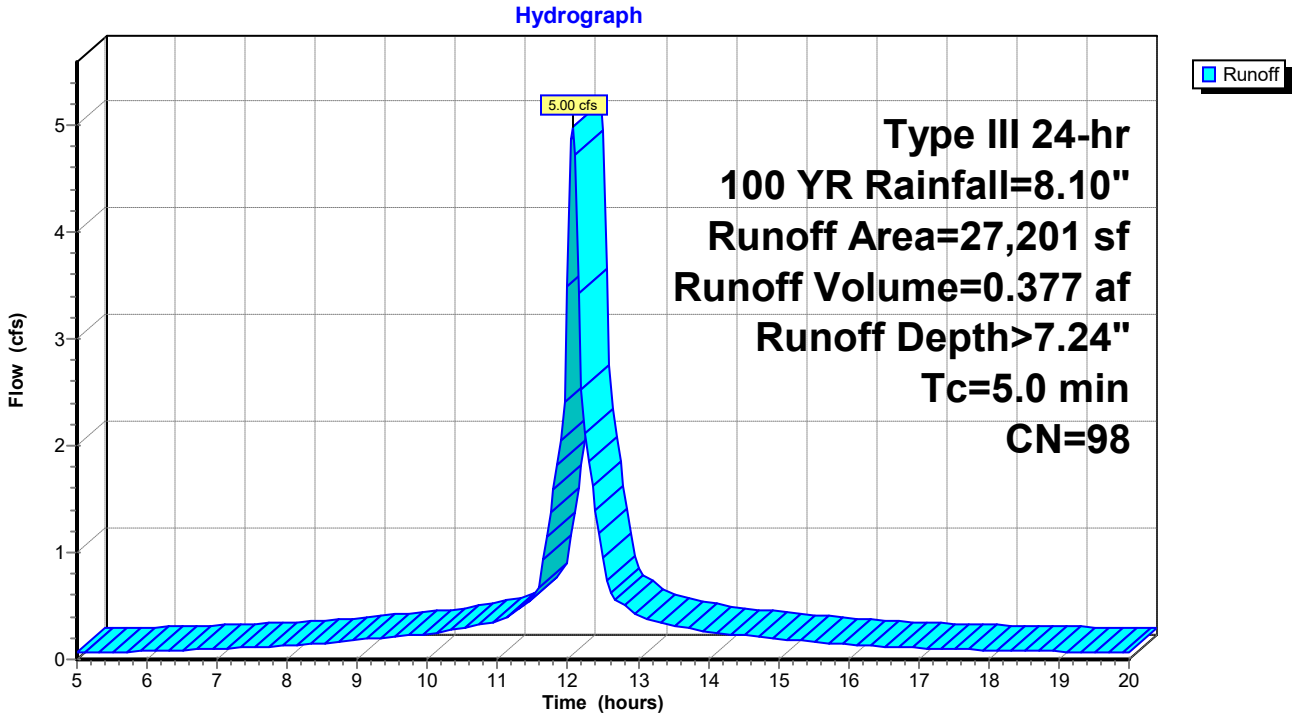
Runoff = 5.00 cfs @ 12.07 hrs, Volume= 0.377 af, Depth> 7.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

Area (sf)	CN	Description
27,201	98	Paved parking, HSG A
27,201		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment #35: #35 Bedford Roof



Summary for Subcatchment 1S: Watershed to Durham SD

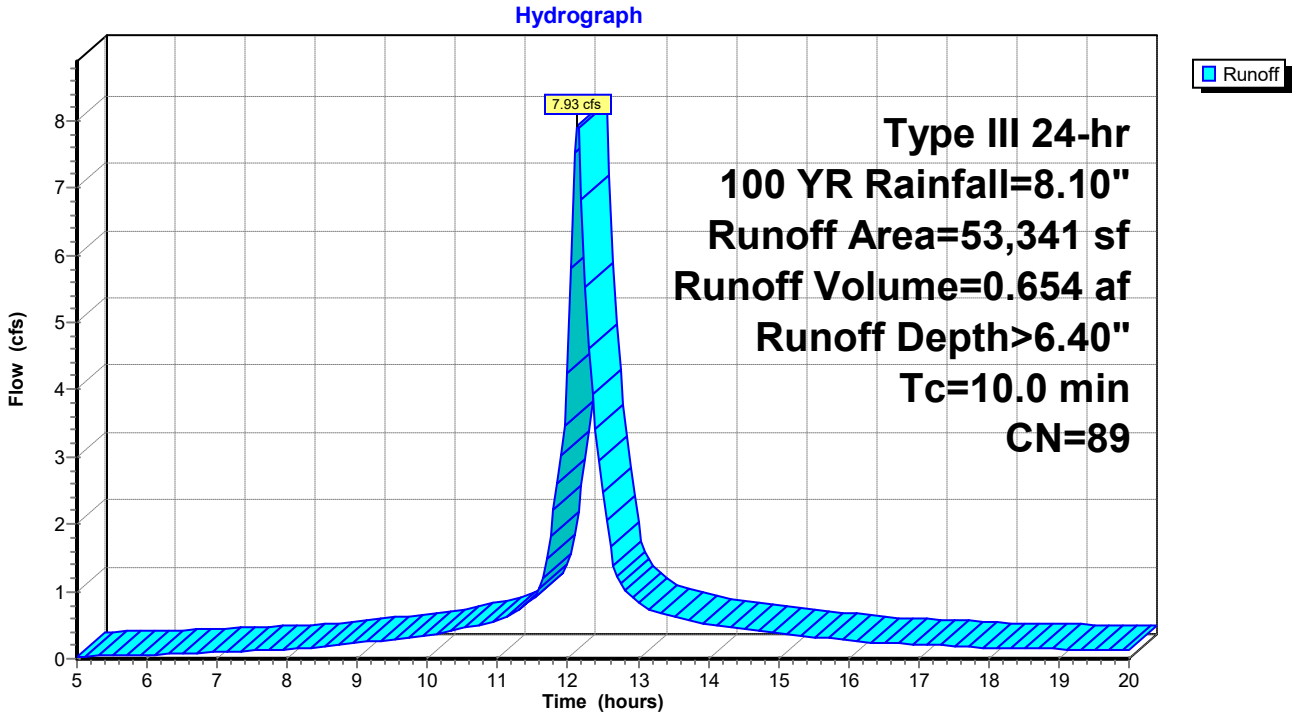
Runoff = 7.93 cfs @ 12.14 hrs, Volume= 0.654 af, Depth> 6.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

Area (sf)	CN	Description
33,152	98	Paved parking, HSG A
20,189	74	>75% Grass cover, Good, HSG C
53,341	89	Weighted Average
20,189		37.85% Pervious Area
33,152		62.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S: Watershed to Durham SD



Summary for Subcatchment 2S: Woodbury Parking Lot

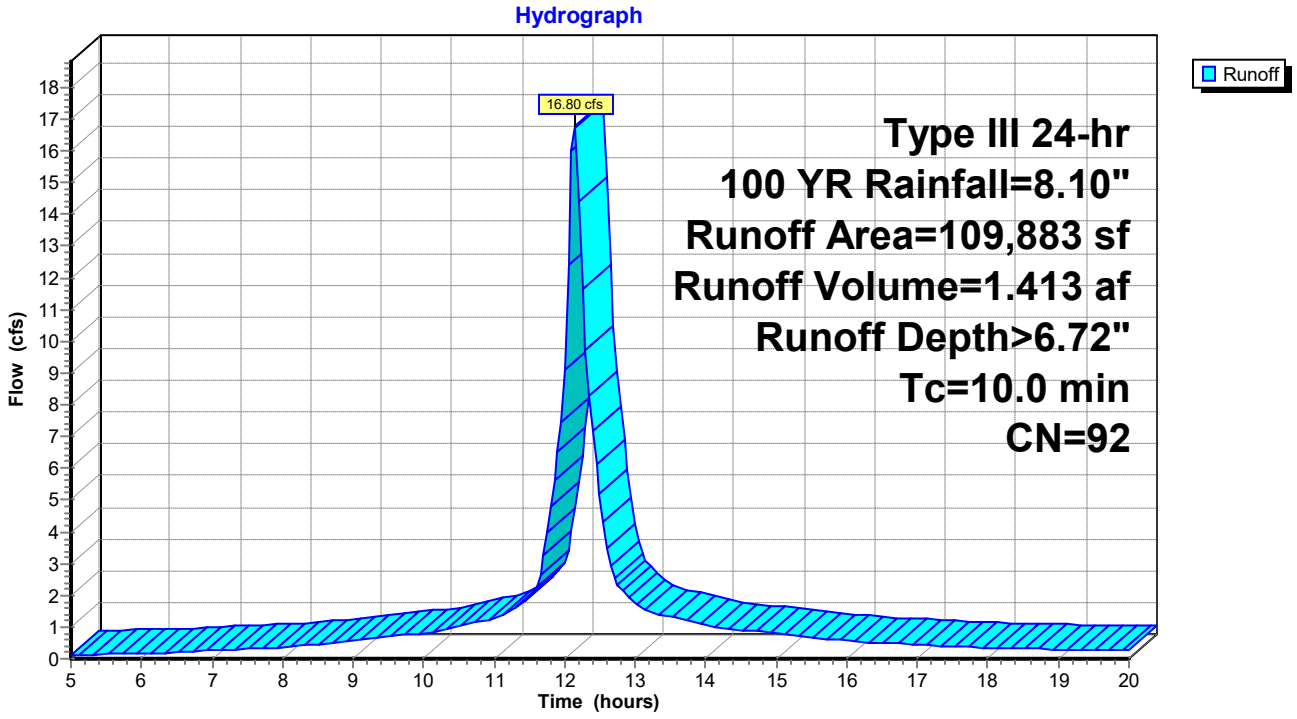
Runoff = 16.80 cfs @ 12.14 hrs, Volume= 1.413 af, Depth> 6.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

Area (sf)	CN	Description
82,271	98	Paved parking, HSG A
27,612	74	>75% Grass cover, Good, HSG C
109,883	92	Weighted Average
27,612		25.13% Pervious Area
82,271		74.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: Woodbury Parking Lot

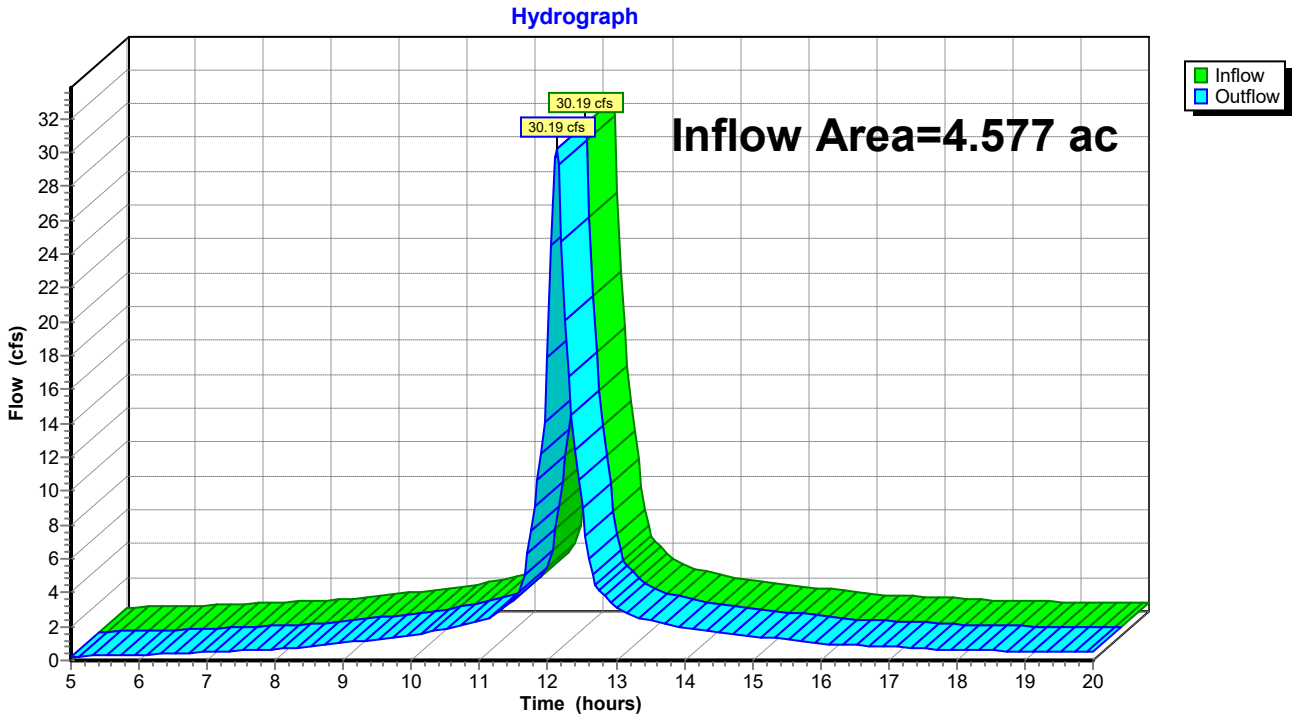


Summary for Reach 100R: POI 100

Inflow Area = 4.577 ac, 76.02% Impervious, Inflow Depth > 6.73" for 100 YR event
Inflow = 30.19 cfs @ 12.12 hrs, Volume= 2.567 af
Outflow = 30.19 cfs @ 12.12 hrs, Volume= 2.567 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 100R: POI 100



Summary for Pond 1P: Durham SD System

Inflow Area = 1.225 ac, 62.15% Impervious, Inflow Depth > 6.40" for 100 YR event
Inflow = 7.93 cfs @ 12.14 hrs, Volume= 0.654 af
Outflow = 7.93 cfs @ 12.14 hrs, Volume= 0.653 af, Atten= 0%, Lag= 0.0 min
Primary = 7.93 cfs @ 12.14 hrs, Volume= 0.653 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.79' @ 12.14 hrs Surf.Area= 9 sf Storage= 11 cf

Plug-Flow detention time= 0.1 min calculated for 0.653 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (754.9 - 754.9)

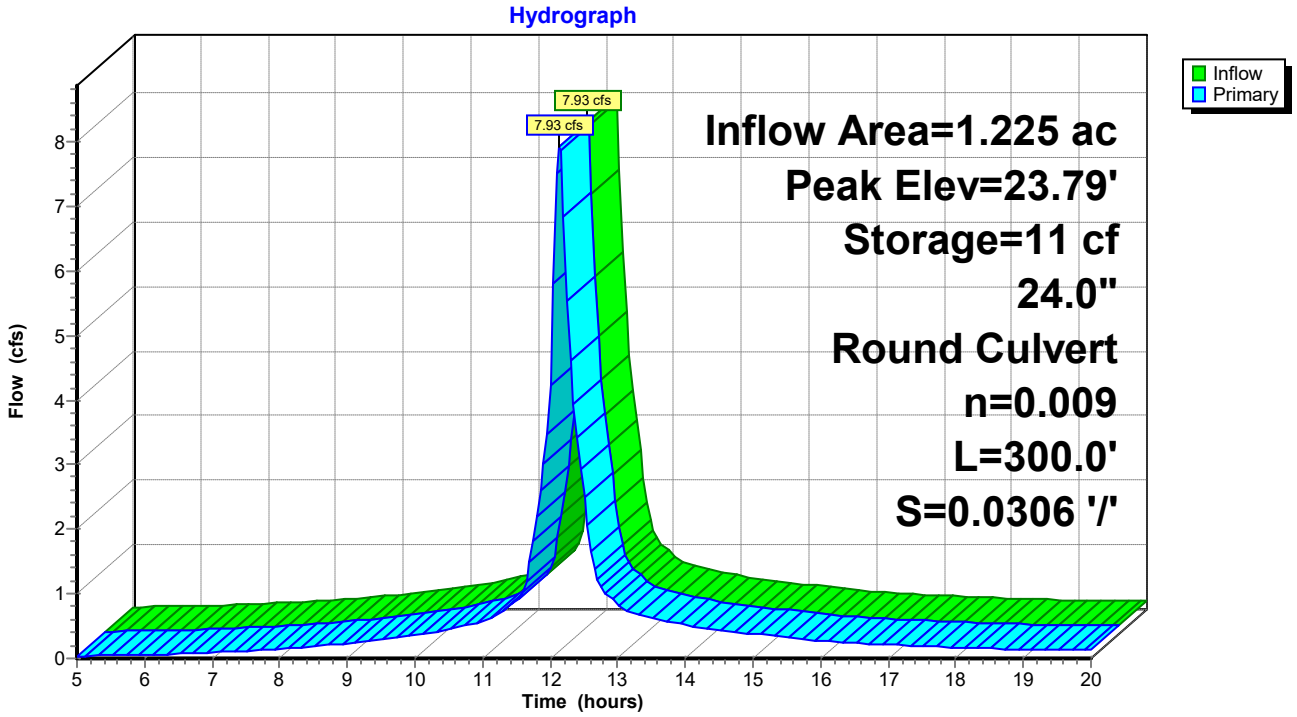
Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,591 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	100	1	51
29.00	15,000	6,040	6,091
30.00	1,000,000	507,500	513,591

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=7.79 cfs @ 12.14 hrs HW=23.77' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 7.79 cfs @ 3.80 fps)

Pond 1P: Durham SD System



Summary for Pond 2P: Bedford SD System

Inflow Area = 3.147 ac, 79.86% Impervious, Inflow Depth > 6.82" for 100 YR event
Inflow = 20.97 cfs @ 12.12 hrs, Volume= 1.790 af
Outflow = 20.97 cfs @ 12.12 hrs, Volume= 1.790 af, Atten= 0%, Lag= 0.0 min
Primary = 20.97 cfs @ 12.12 hrs, Volume= 1.790 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.74' @ 12.12 hrs Surf.Area= 9 sf Storage= 14 cf

Plug-Flow detention time= 0.0 min calculated for 1.790 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (744.9 - 744.9)

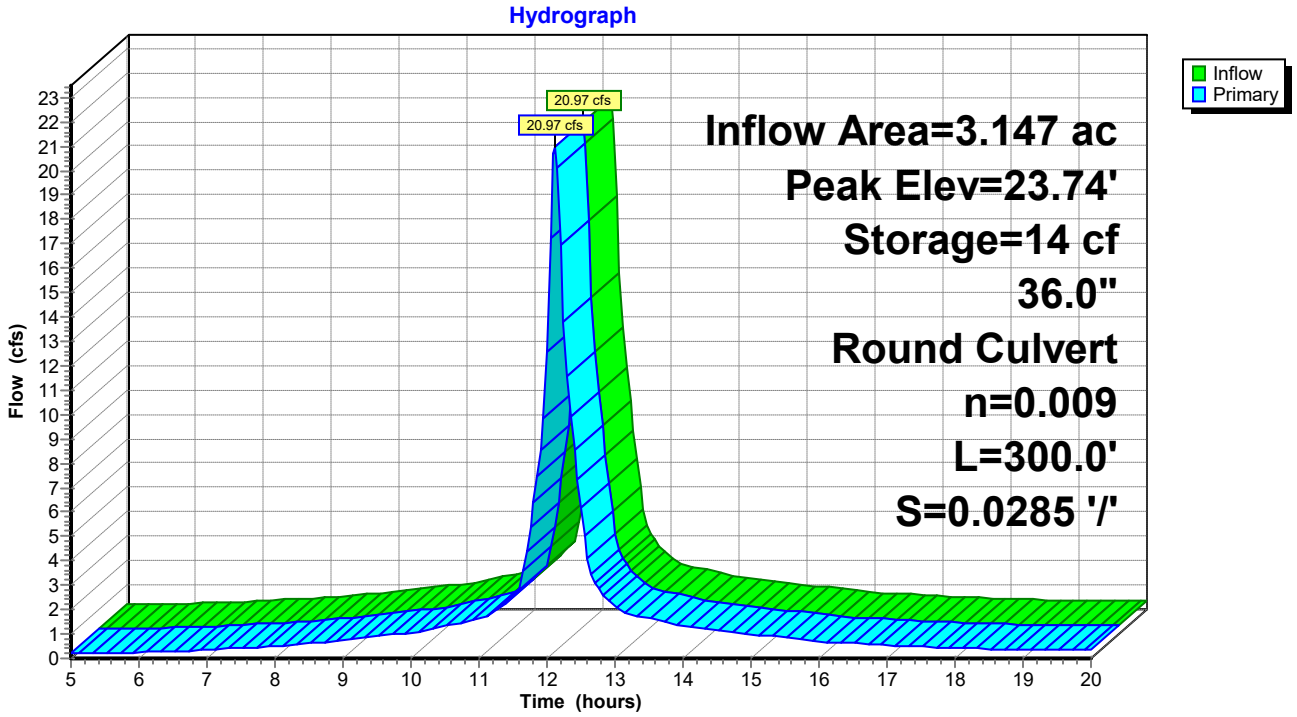
Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=20.51 cfs @ 12.12 hrs HW=23.71' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 20.51 cfs @ 4.59 fps)

Pond 2P: Bedford SD System



Summary for Pond 3P: DMH corner Bedford Durham

Inflow Area = 4.577 ac, 76.02% Impervious, Inflow Depth > 6.73" for 100 YR event
Inflow = 30.23 cfs @ 12.12 hrs, Volume= 2.567 af
Outflow = 30.19 cfs @ 12.12 hrs, Volume= 2.567 af, Atten= 0%, Lag= 0.1 min
Primary = 30.19 cfs @ 12.12 hrs, Volume= 2.567 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 19.27' @ 12.12 hrs Surf.Area= 9 sf Storage= 53 cf

Plug-Flow detention time= 0.1 min calculated for 2.567 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (746.9 - 746.9)

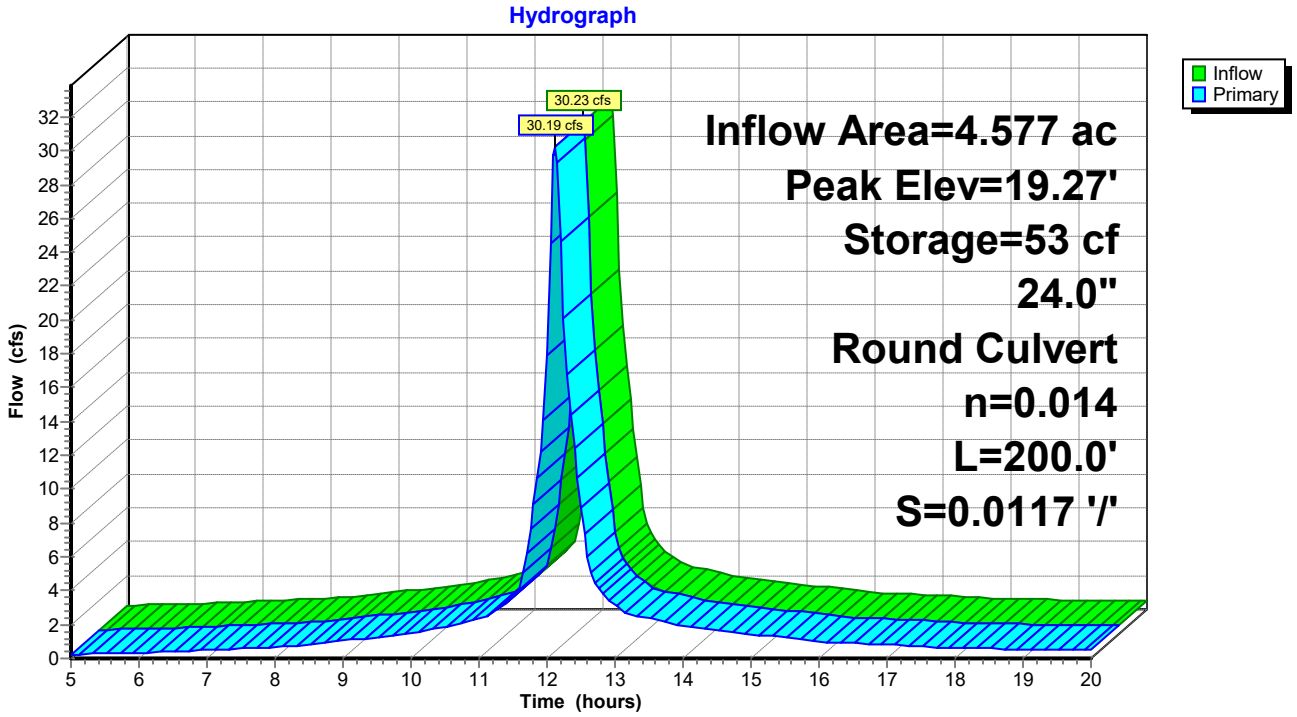
Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

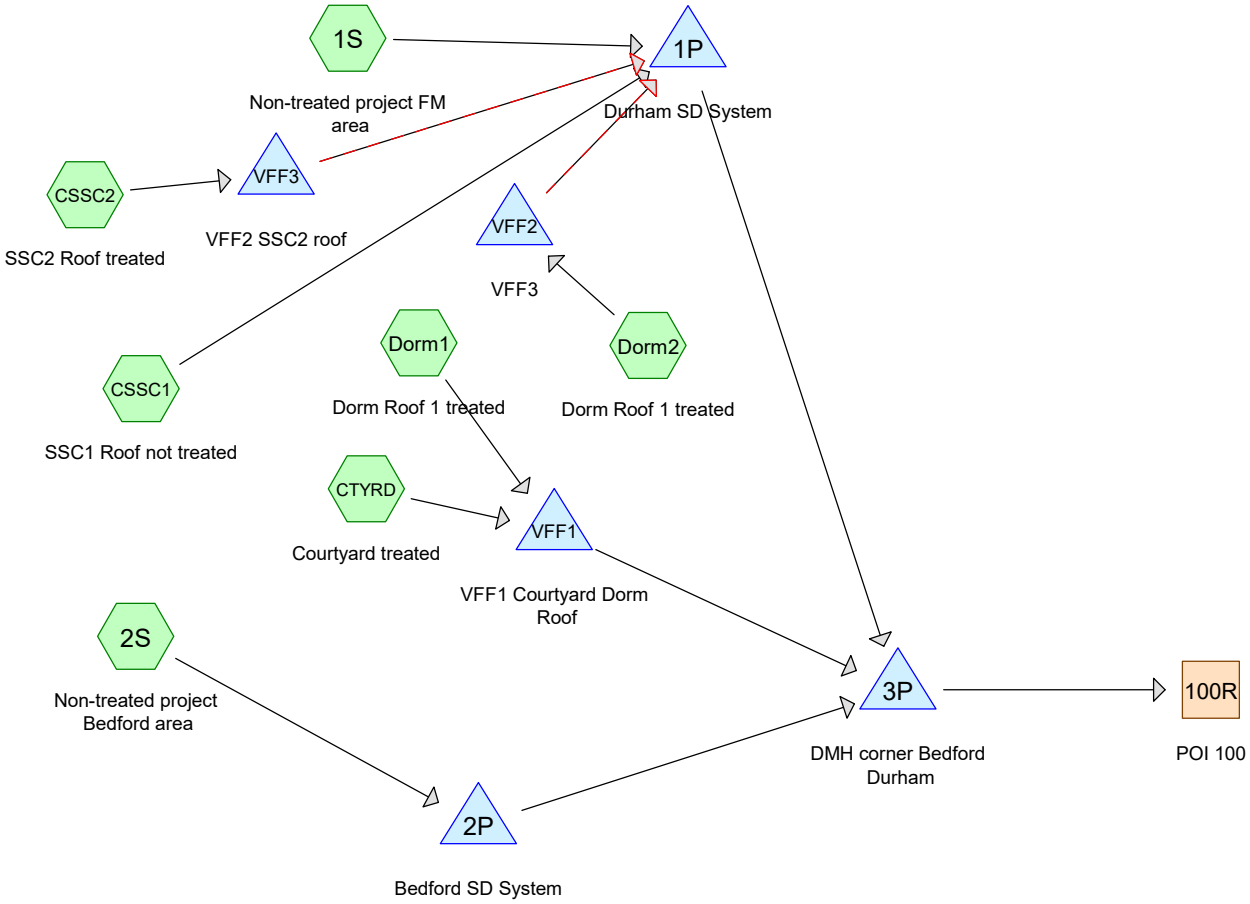
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=29.51 cfs @ 12.12 hrs HW=19.02' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 29.51 cfs @ 9.39 fps)

Pond 3P: DMH corner Bedford Durham





Subcat Reach Pond Link

Routing Diagram for 19206 Prop Cond A
Prepared by SMRT, Printed 3/5/2020
HydroCAD® 10.00-24 s/n 00729 © 2018 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.990	74	>75% Grass cover, Good, HSG C (1S, 2S, CSSC2, CTYRD)
0.162	74	>75% Grass cover, Good, HSG C VFF 1 area (Dorm2)
0.716	98	Dorm Roof treated (Dorm1, Dorm2)
0.051	98	Hardscape in courtyard (CTYRD)
0.596	98	Paved Sidewalks, hardscape (2S)
0.482	98	Paved parking, HSG A (1S)
0.307	98	SSC Roof not treated (CSSC1)
0.332	98	SSC Roof treated (CSSC2)
0.084	98	Sidewalk (CSSC2, Dorm2)
4.718	**87**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.482	HSG A	1S
0.000	HSG B	
2.151	HSG C	1S, 2S, CSSC2, CTYRD, Dorm2
0.000	HSG D	
2.085	Other	2S, CSSC1, CSSC2, CTYRD, Dorm1, Dorm2
4.718		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	2.151	0.000	0.000	2.151	>75% Grass cover, Good	1S, 2S, CSS C2, CTY RD, Dorm 2
0.000	0.000	0.000	0.000	0.716	0.716	Dorm Roof treated	Dorm 1, Dorm 2
0.000	0.000	0.000	0.000	0.051	0.051	Hardscape in courtyard	CTY RD
0.000	0.000	0.000	0.000	0.596	0.596	Paved Sidewalks, hardscape	2S
0.482	0.000	0.000	0.000	0.000	0.482	Paved parking	1S
0.000	0.000	0.000	0.000	0.307	0.307	SSC Roof not treated	CSS C1
0.000	0.000	0.000	0.000	0.332	0.332	SSC Roof treated	CSS C2
0.000	0.000	0.000	0.000	0.084	0.084	Sidewalk	CSS C2, Dorm 2
0.482	**0.000**	**2.151**	**0.000**	**2.085**	**4.718**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1P	22.53	13.35	300.0	0.0306	0.009	24.0	0.0	0.0
2	2P	21.90	13.35	300.0	0.0285	0.009	36.0	0.0	0.0
3	3P	13.35	11.00	200.0	0.0117	0.014	24.0	0.0	0.0
4	VFF1	23.50	13.65	75.0	0.1313	0.011	18.0	0.0	0.0
5	VFF2	24.00	15.00	150.0	0.0600	0.011	15.0	0.0	0.0
6	VFF3	41.50	24.00	150.0	0.1167	0.011	12.0	0.0	0.0

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Non-treated project FM Runoff Area=48,284 sf 43.45% Impervious Runoff Depth>1.48"
Tc=10.0 min CN=84 Runoff=1.79 cfs 0.137 af

Subcatchment 2S: Non-treated project Runoff Area=66,415 sf 39.07% Impervious Runoff Depth>1.42"
Tc=10.0 min CN=83 Runoff=2.35 cfs 0.180 af

Subcatchment CSSC1: SSC1 Roof not Runoff Area=13,368 sf 100.00% Impervious Runoff Depth>2.68"
Tc=5.0 min CN=98 Runoff=0.93 cfs 0.069 af

Subcatchment CSSC2: SSC2 Roof treated Runoff Area=22,091 sf 77.50% Impervious Runoff Depth>2.22"
Tc=5.0 min CN=93 Runoff=1.36 cfs 0.094 af

Subcatchment CTYRD: Courtyard treated Runoff Area=16,130 sf 13.64% Impervious Runoff Depth>1.05"
Tc=5.0 min CN=77 Runoff=0.48 cfs 0.032 af

Subcatchment Dorm1: Dorm Roof 1 Runoff Area=24,700 sf 100.00% Impervious Runoff Depth>2.68"
Tc=5.0 min CN=98 Runoff=1.72 cfs 0.127 af

Subcatchment Dorm2: Dorm Roof 1 treated Runoff Area=14,546 sf 51.56% Impervious Runoff Depth>1.63"
Tc=5.0 min CN=86 Runoff=0.68 cfs 0.045 af

Reach 100R: POI 100 Inflow=5.50 cfs 0.492 af
Outflow=5.50 cfs 0.492 af

Pond 1P: Durham SD System Peak Elev=23.28' Storage=7 cf Inflow=3.15 cfs 0.293 af
24.0" Round Culvert n=0.009 L=300.0' S=0.0306 '/' Outflow=3.15 cfs 0.293 af

Pond 2P: Bedford SD System Peak Elev=22.46' Storage=3 cf Inflow=2.35 cfs 0.180 af
36.0" Round Culvert n=0.009 L=300.0' S=0.0285 '/' Outflow=2.35 cfs 0.180 af

Pond 3P: DMH corner Bedford Durham Peak Elev=14.37' Storage=9 cf Inflow=5.50 cfs 0.492 af
24.0" Round Culvert n=0.014 L=200.0' S=0.0117 '/' Outflow=5.50 cfs 0.492 af

Pond VFF1: VFF1 Courtyard Dorm Roof Peak Elev=23.57' Storage=5,667 cf Inflow=2.19 cfs 0.159 af
Discarded=0.01 cfs 0.012 af Primary=0.06 cfs 0.019 af Secondary=0.00 cfs 0.000 af Outflow=0.07 cfs 0.031 af

Pond VFF2: VFF3 Peak Elev=24.35' Storage=624 cf Inflow=0.68 cfs 0.045 af
Primary=0.56 cfs 0.034 af Secondary=0.00 cfs 0.000 af Outflow=0.56 cfs 0.034 af

Pond VFF3: VFF2 SSC2 roof Peak Elev=41.82' Storage=2,208 cf Inflow=1.36 cfs 0.094 af
Primary=0.42 cfs 0.053 af Secondary=0.00 cfs 0.000 af Outflow=0.42 cfs 0.053 af

Total Runoff Area = 4.718 ac Runoff Volume = 0.684 af Average Runoff Depth = 1.74"
45.60% Pervious = 2.151 ac 54.40% Impervious = 2.567 ac

Summary for Subcatchment 1S: Non-treated project FM area

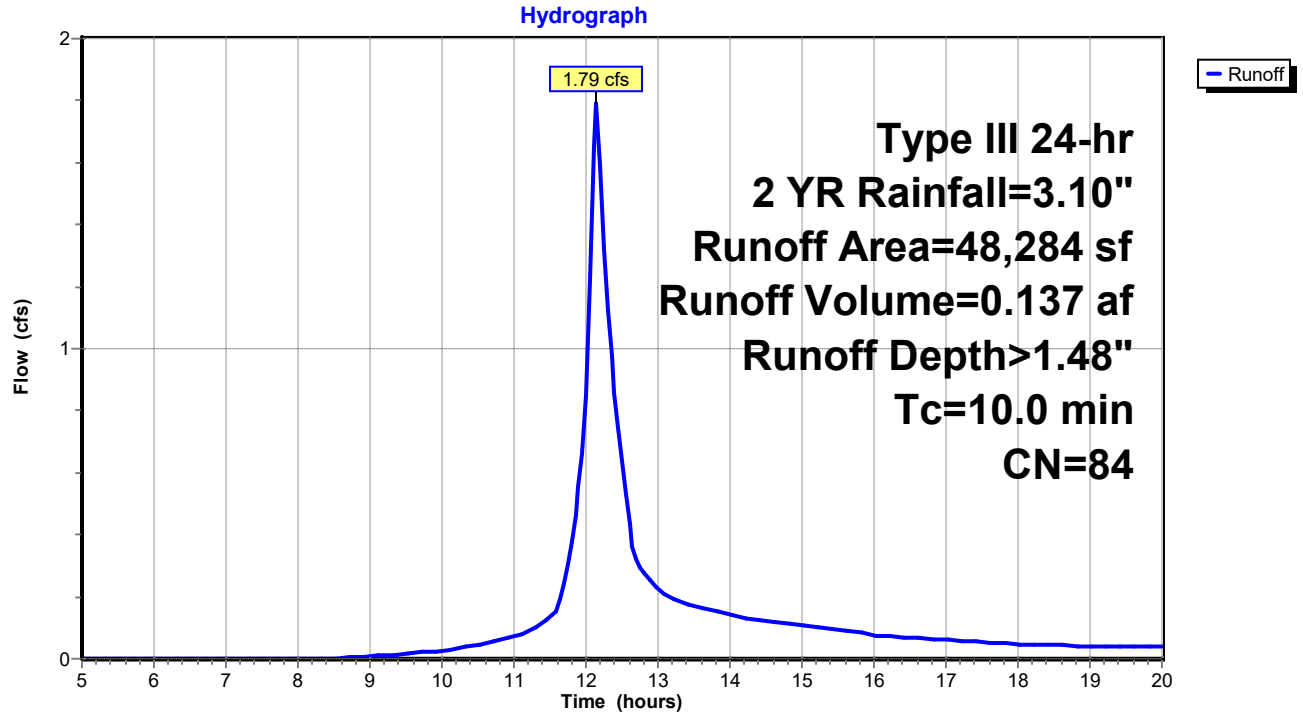
Runoff = 1.79 cfs @ 12.15 hrs, Volume= 0.137 af, Depth> 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

Area (sf)	CN	Description
20,981	98	Paved parking, HSG A
27,303	74	>75% Grass cover, Good, HSG C
48,284	84	Weighted Average
27,303		56.55% Pervious Area
20,981		43.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S: Non-treated project FM area



Summary for Subcatchment 2S: Non-treated project Bedford area

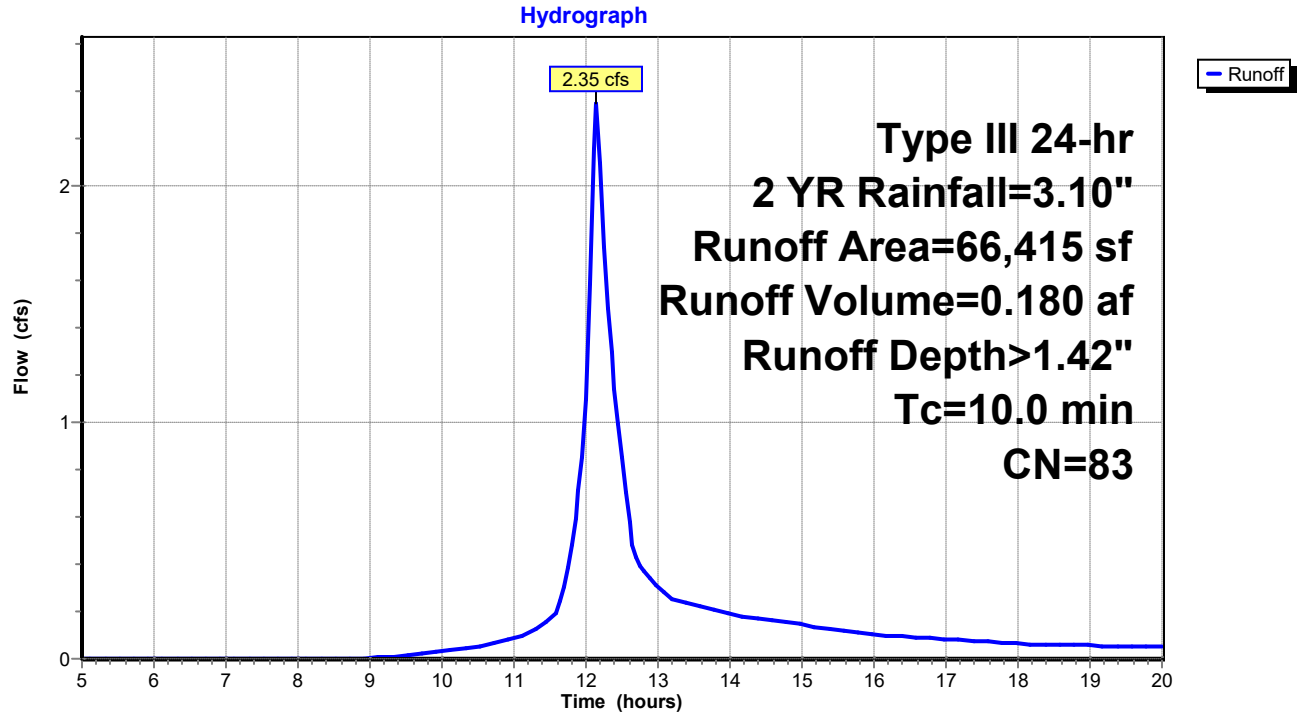
Runoff = 2.35 cfs @ 12.15 hrs, Volume= 0.180 af, Depth> 1.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

	Area (sf)	CN	Description
*	25,948	98	Paved Sidewalks, hardscape
	40,467	74	>75% Grass cover, Good, HSG C
	66,415	83	Weighted Average
	40,467		60.93% Pervious Area
	25,948		39.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: Non-treated project Bedford area



Summary for Subcatchment CSSC1: SSC1 Roof not treated

[49] Hint: Tc<2dt may require smaller dt

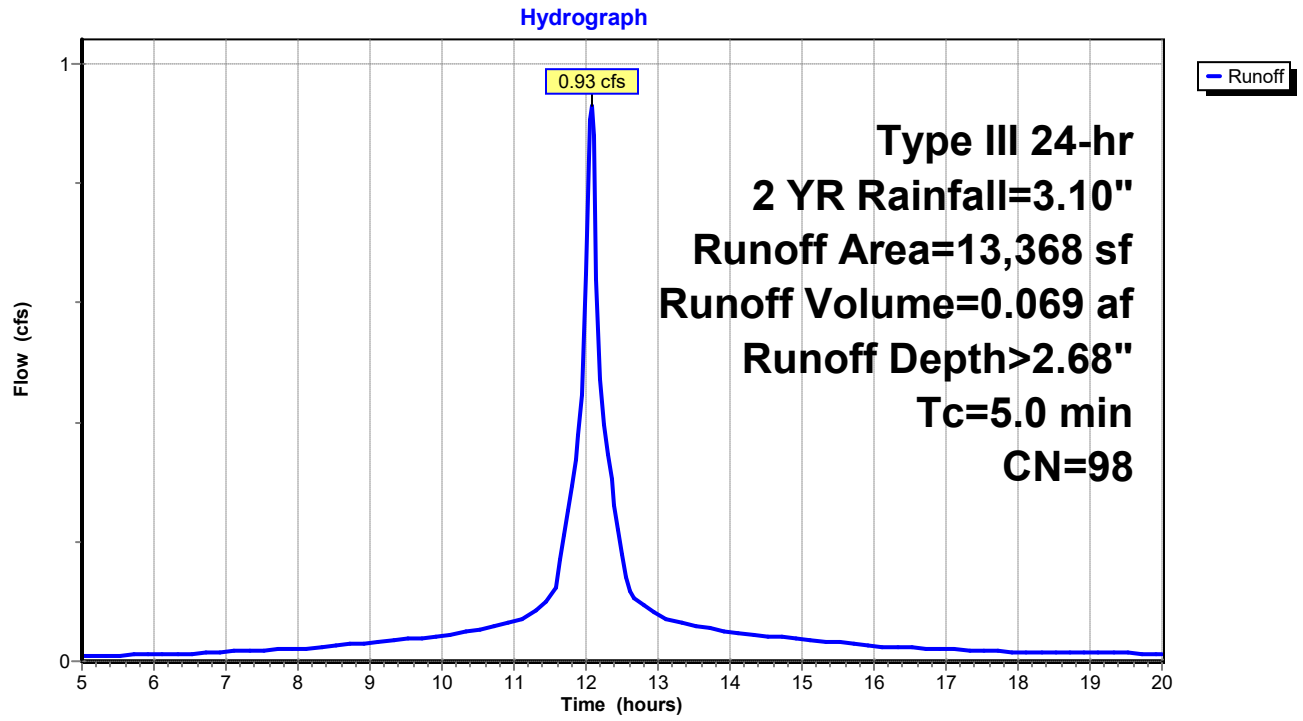
Runoff = 0.93 cfs @ 12.07 hrs, Volume= 0.069 af, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

	Area (sf)	CN	Description
*	13,368	98	SSC Roof not treated
	13,368		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment CSSC1: SSC1 Roof not treated



Summary for Subcatchment CSSC2: SSC2 Roof treated

[49] Hint: Tc<2dt may require smaller dt

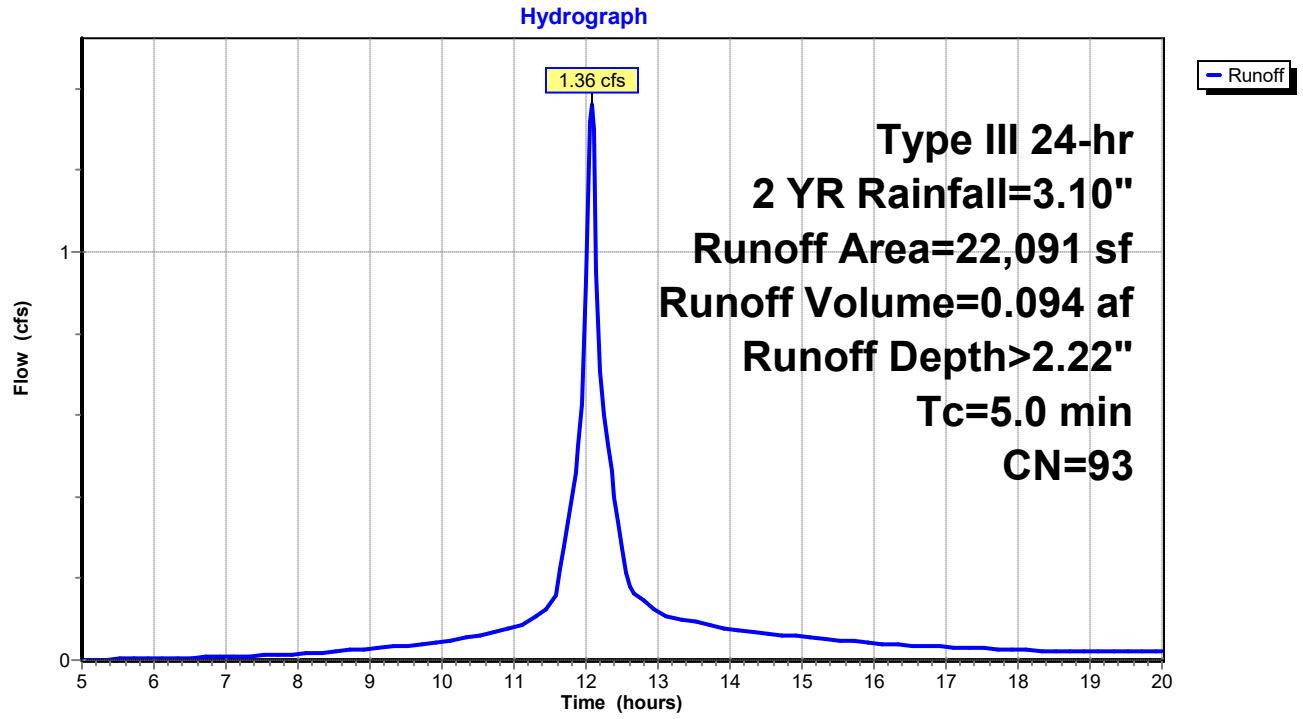
Runoff = 1.36 cfs @ 12.07 hrs, Volume= 0.094 af, Depth> 2.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

	Area (sf)	CN	Description
*	14,450	98	SSC Roof treated
	4,970	74	>75% Grass cover, Good, HSG C
*	2,671	98	Sidewalk
	22,091	93	Weighted Average
	4,970		22.50% Pervious Area
	17,121		77.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment CSSC2: SSC2 Roof treated



Summary for Subcatchment CTYRD: Courtyard treated

[49] Hint: Tc<2dt may require smaller dt

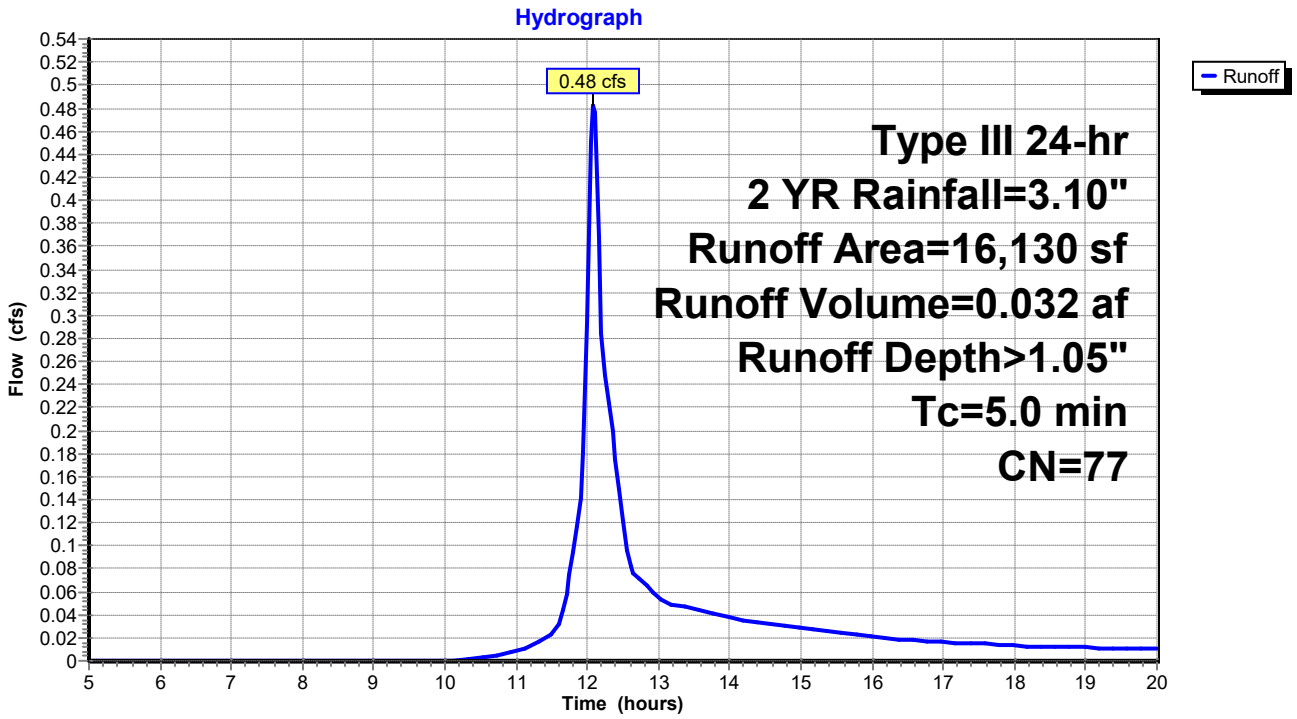
Runoff = 0.48 cfs @ 12.08 hrs, Volume= 0.032 af, Depth> 1.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

	Area (sf)	CN	Description
	13,930	74	>75% Grass cover, Good, HSG C
*	2,200	98	Hardscape in courtyard
	16,130	77	Weighted Average
	13,930		86.36% Pervious Area
	2,200		13.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment CTYRD: Courtyard treated



Summary for Subcatchment Dorm1: Dorm Roof 1 treated

[49] Hint: Tc<2dt may require smaller dt

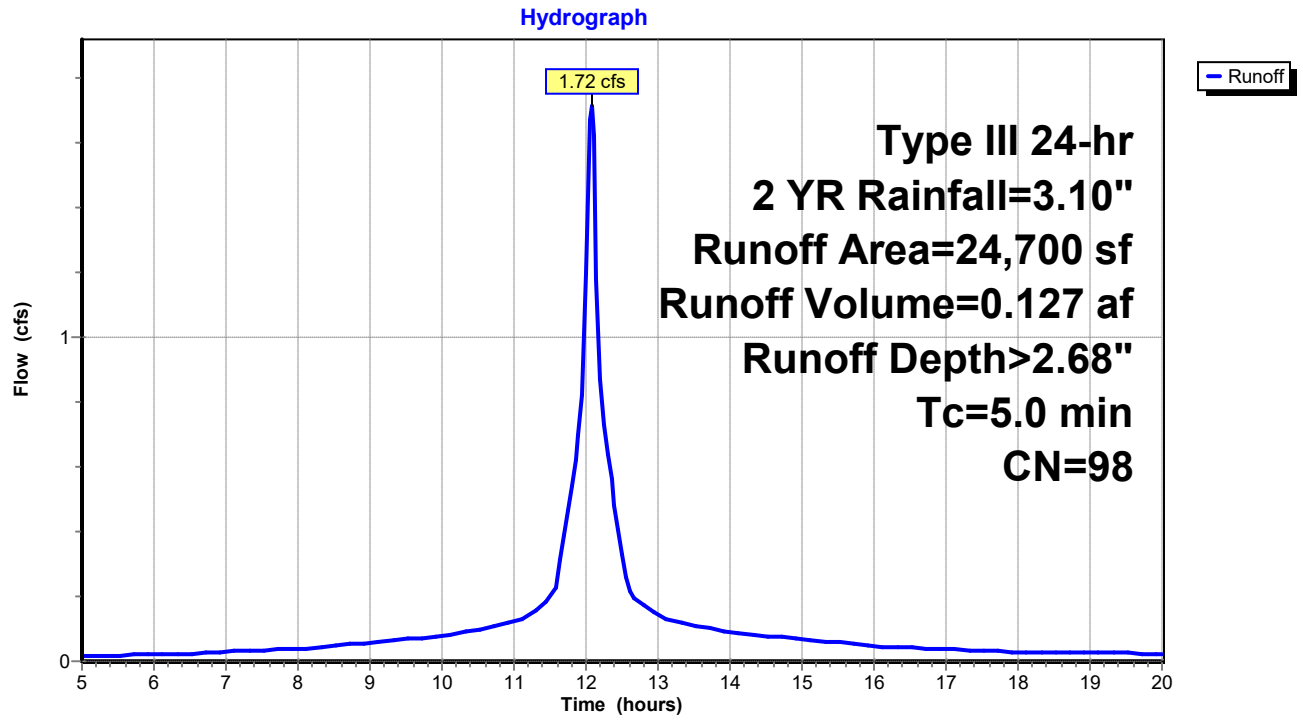
Runoff = 1.72 cfs @ 12.07 hrs, Volume= 0.127 af, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

	Area (sf)	CN	Description
*	24,700	98	Dorm Roof treated
	24,700		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment Dorm1: Dorm Roof 1 treated



Summary for Subcatchment Dorm2: Dorm Roof 1 treated

[49] Hint: Tc<2dt may require smaller dt

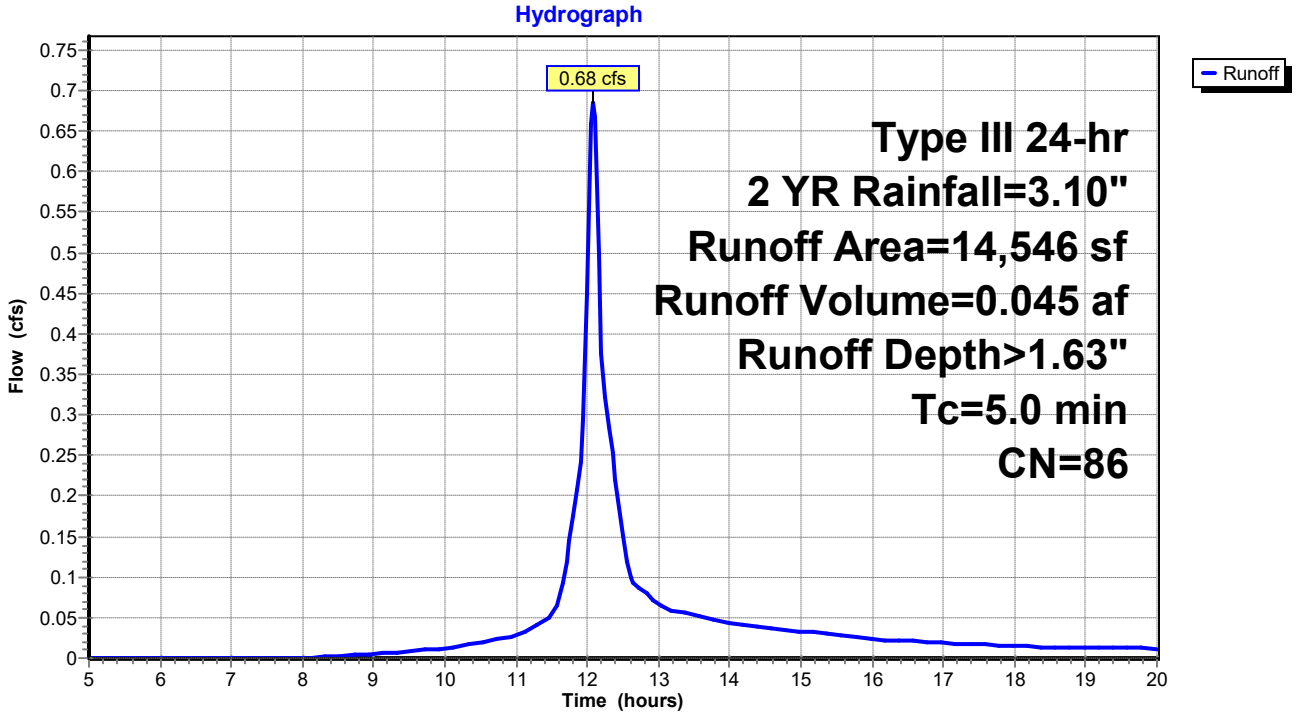
Runoff = 0.68 cfs @ 12.08 hrs, Volume= 0.045 af, Depth> 1.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

	Area (sf)	CN	Description
*	6,500	98	Dorm Roof treated
*	7,046	74	>75% Grass cover, Good, HSG C VFF 1 area
*	1,000	98	Sidewalk
	14,546	86	Weighted Average
	7,046		48.44% Pervious Area
	7,500		51.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment Dorm2: Dorm Roof 1 treated



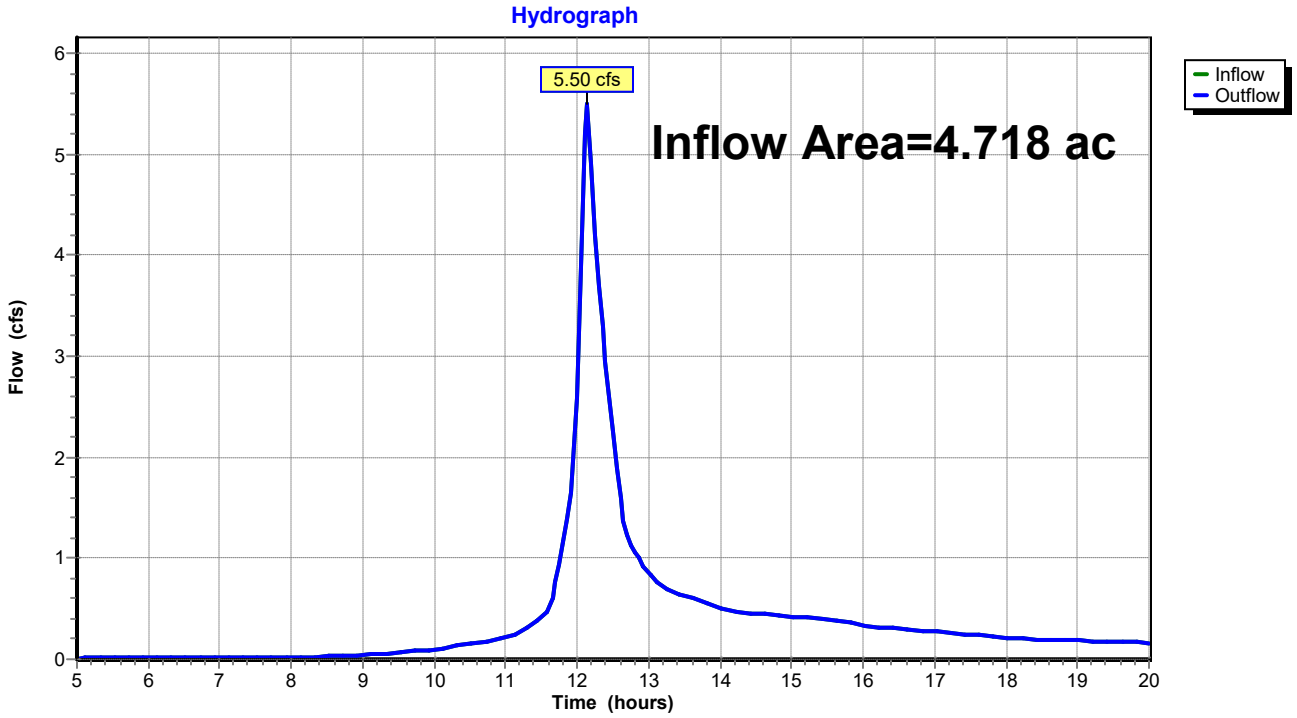
Summary for Reach 100R: POI 100

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.718 ac, 54.40% Impervious, Inflow Depth > 1.25" for 2 YR event
Inflow = 5.50 cfs @ 12.14 hrs, Volume= 0.492 af
Outflow = 5.50 cfs @ 12.14 hrs, Volume= 0.492 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 100R: POI 100



Summary for Pond 1P: Durham SD System

[82] Warning: Early inflow requires earlier time span
[79] Warning: Submerged Pond VFF2 Primary device # 1 OUTLET by 8.28'

Inflow Area = 2.256 ac, 60.00% Impervious, Inflow Depth > 1.56" for 2 YR event
Inflow = 3.15 cfs @ 12.13 hrs, Volume= 0.293 af
Outflow = 3.15 cfs @ 12.14 hrs, Volume= 0.293 af, Atten= 0%, Lag= 0.0 min
Primary = 3.15 cfs @ 12.14 hrs, Volume= 0.293 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.28' @ 12.14 hrs Surf.Area= 9 sf Storage= 7 cf

Plug-Flow detention time= 0.1 min calculated for 0.293 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (797.3 - 797.2)

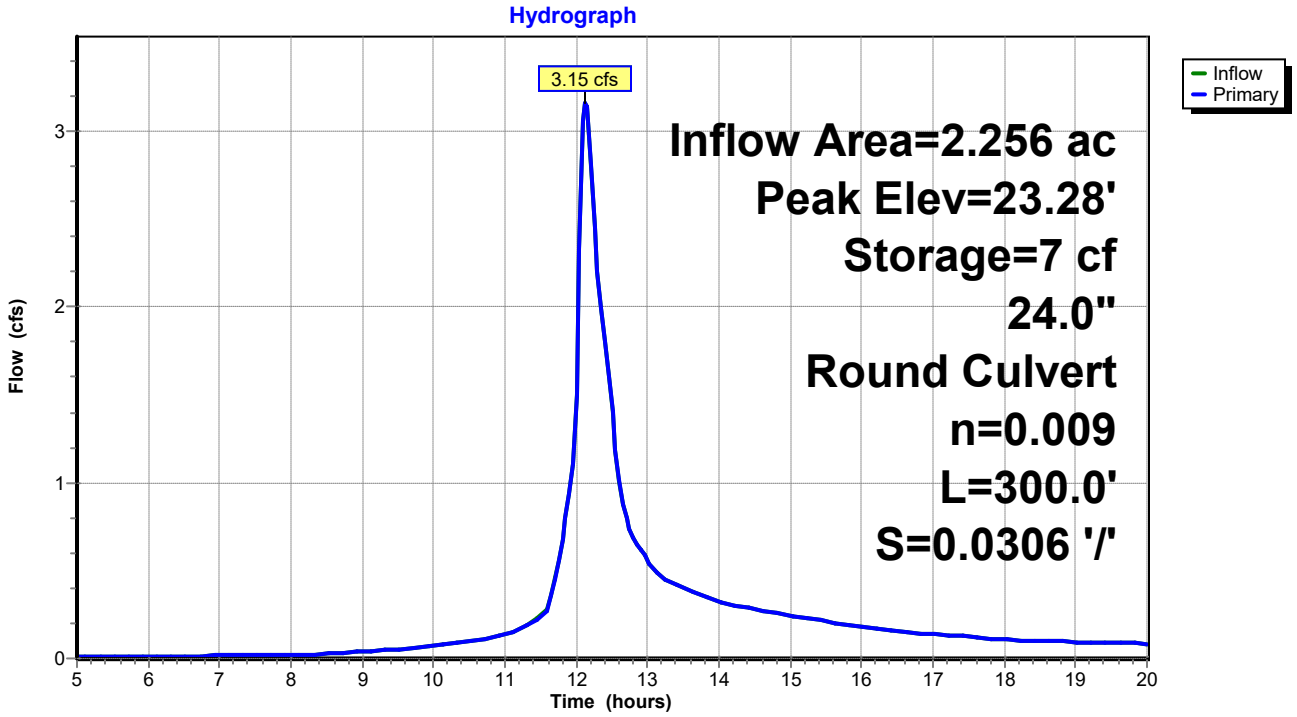
Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,753 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	500	3	53
29.00	15,000	6,200	6,253
30.00	1,000,000	507,500	513,753

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=3.11 cfs @ 12.14 hrs HW=23.27' (Free Discharge)
1=Culvert (Inlet Controls 3.11 cfs @ 2.93 fps)

Pond 1P: Durham SD System



Summary for Pond 2P: Bedford SD System

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 1.525 ac, 39.07% Impervious, Inflow Depth > 1.42" for 2 YR event
Inflow = 2.35 cfs @ 12.15 hrs, Volume= 0.180 af
Outflow = 2.35 cfs @ 12.15 hrs, Volume= 0.180 af, Atten= 0%, Lag= 0.0 min
Primary = 2.35 cfs @ 12.15 hrs, Volume= 0.180 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 22.46' @ 12.15 hrs Surf.Area= 9 sf Storage= 3 cf

Plug-Flow detention time= 0.0 min calculated for 0.179 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (800.3 - 800.3)

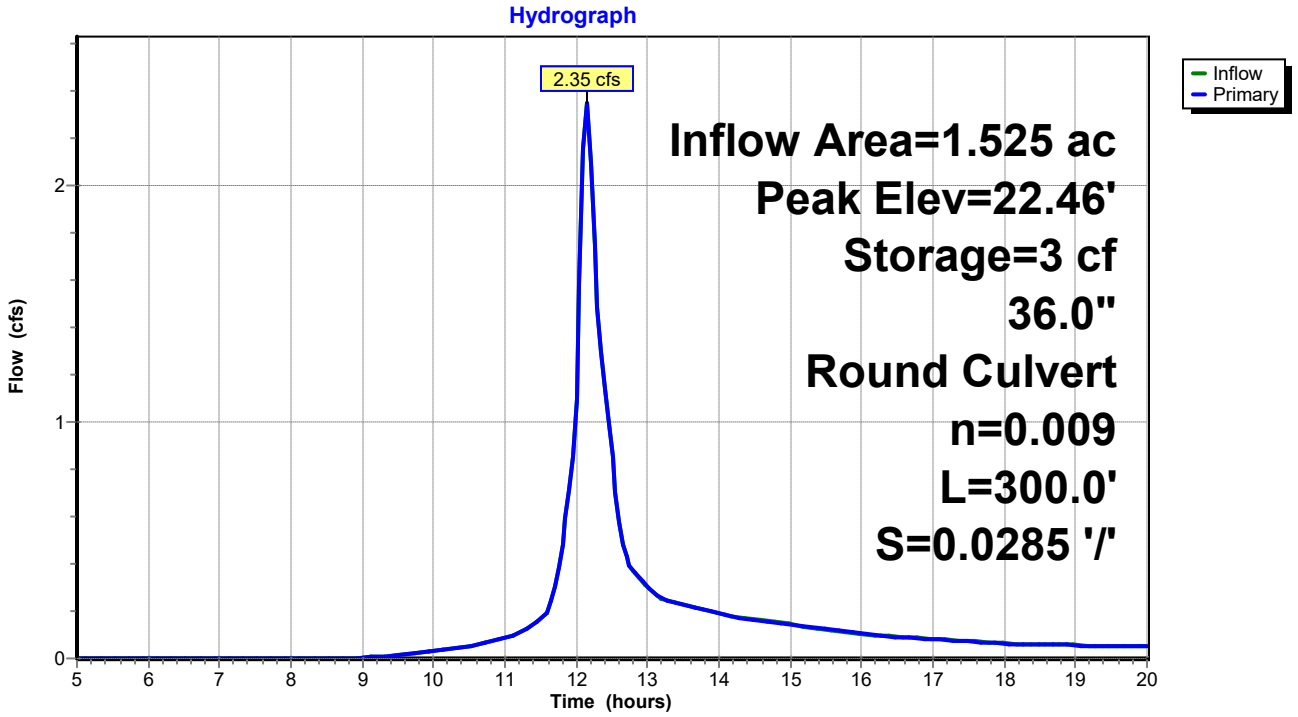
Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=2.33 cfs @ 12.15 hrs HW=22.46' (Free Discharge)
1=Culvert (Inlet Controls 2.33 cfs @ 2.55 fps)

Pond 2P: Bedford SD System



Summary for Pond 3P: DMH corner Bedford Durham

[82] Warning: Early inflow requires earlier time span
[79] Warning: Submerged Pond 1P Primary device # 1 OUTLET by 1.01'
[79] Warning: Submerged Pond 2P Primary device # 1 OUTLET by 1.01'
[79] Warning: Submerged Pond VFF1 Primary device # 1 OUTLET by 0.71'

Inflow Area = 4.718 ac, 54.40% Impervious, Inflow Depth > 1.25" for 2 YR event
Inflow = 5.50 cfs @ 12.14 hrs, Volume= 0.492 af
Outflow = 5.50 cfs @ 12.14 hrs, Volume= 0.492 af, Atten= 0%, Lag= 0.0 min
Primary = 5.50 cfs @ 12.14 hrs, Volume= 0.492 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 14.37' @ 12.14 hrs Surf.Area= 9 sf Storage= 9 cf

Plug-Flow detention time= 0.1 min calculated for 0.490 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (807.5 - 807.5)

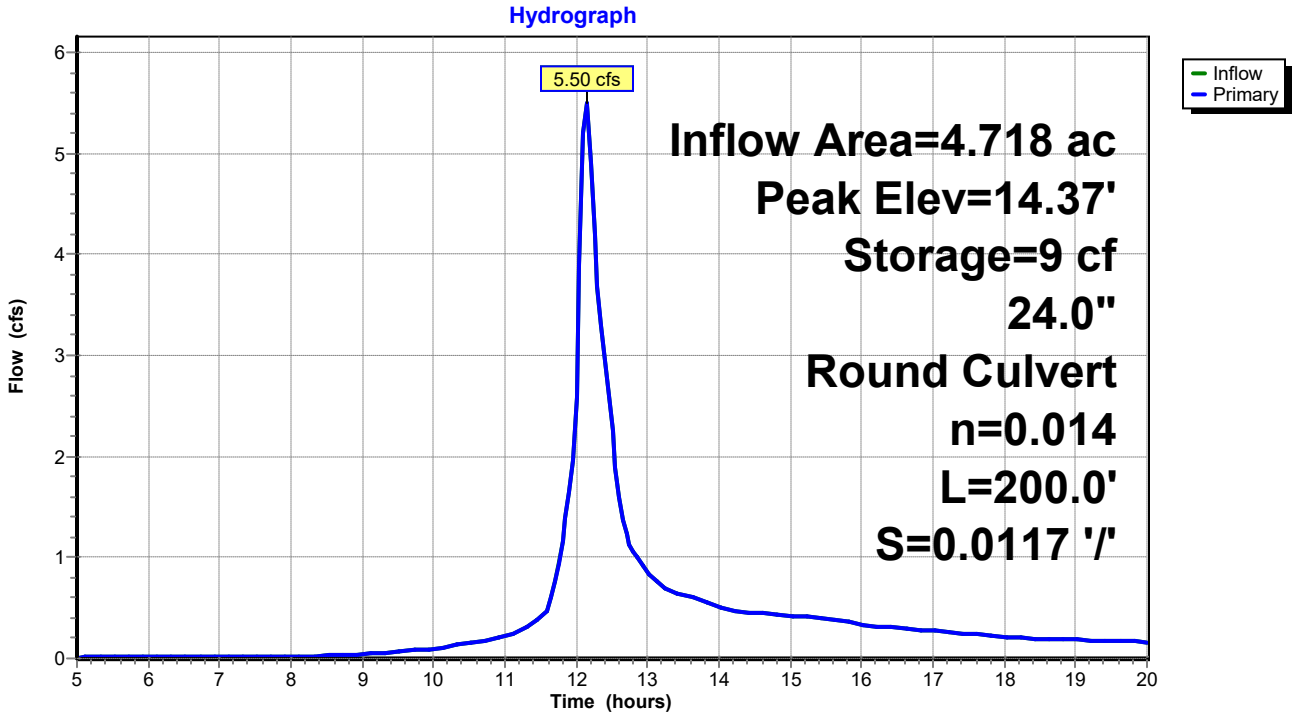
Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=5.43 cfs @ 12.14 hrs HW=14.36' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 5.43 cfs @ 3.42 fps)

Pond 3P: DMH corner Bedford Durham



Summary for Pond VFF1: VFF1 Courtyard Dorm Roof

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.937 ac, 65.88% Impervious, Inflow Depth > 2.04" for 2 YR event
Inflow = 2.19 cfs @ 12.07 hrs, Volume= 0.159 af
Outflow = 0.07 cfs @ 15.95 hrs, Volume= 0.031 af, Atten= 97%, Lag= 232.5 min
Discarded = 0.01 cfs @ 6.65 hrs, Volume= 0.012 af
Primary = 0.06 cfs @ 15.95 hrs, Volume= 0.019 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.57' @ 15.95 hrs Surf.Area= 4,298 sf Storage= 5,667 cf

Plug-Flow detention time= 362.1 min calculated for 0.031 af (20% of inflow)
Center-of-Mass det. time= 178.3 min (931.4 - 753.1)

Volume	Invert	Avail.Storage	Storage Description
#1	22.00'	16,345 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.00	2,900	0	0
23.00	3,800	3,350	3,350
24.00	4,670	4,235	7,585
24.50	5,185	2,464	10,049
25.00	20,000	6,296	16,345

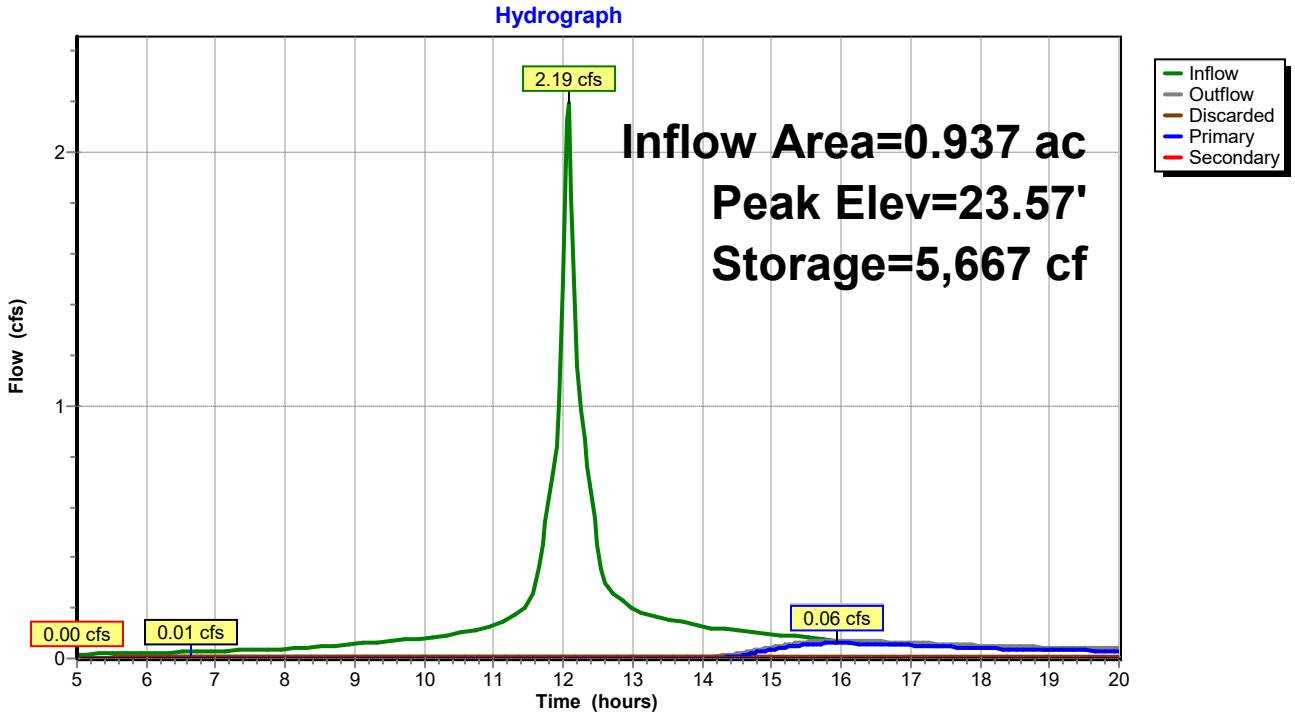
Device	Routing	Invert	Outlet Devices
#1	Primary	23.50'	**18.0" Round Culvert X 2.00** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 23.50' / 13.65' S= 0.1313 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf
#2	Secondary	24.50'	**12.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Discarded	22.00'	**0.01 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.01 cfs @ 6.65 hrs HW=22.03' (Free Discharge)
↑—**3=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.06 cfs @ 15.95 hrs HW=23.57' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.06 cfs @ 0.92 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond VFF1: VFF1 Courtyard Dorm Roof



Summary for Pond VFF2: VFF3

Inflow Area = 0.334 ac, 51.56% Impervious, Inflow Depth > 1.63" for 2 YR event
Inflow = 0.68 cfs @ 12.08 hrs, Volume= 0.045 af
Outflow = 0.56 cfs @ 12.15 hrs, Volume= 0.034 af, Atten= 18%, Lag= 4.1 min
Primary = 0.56 cfs @ 12.15 hrs, Volume= 0.034 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 24.35' @ 12.14 hrs Surf.Area= 471 sf Storage= 624 cf

Plug-Flow detention time= 100.7 min calculated for 0.034 af (75% of inflow)
Center-of-Mass det. time= 40.3 min (828.2 - 788.0)

Volume	Invert	Avail.Storage	Storage Description
#1	22.50'	15,005 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

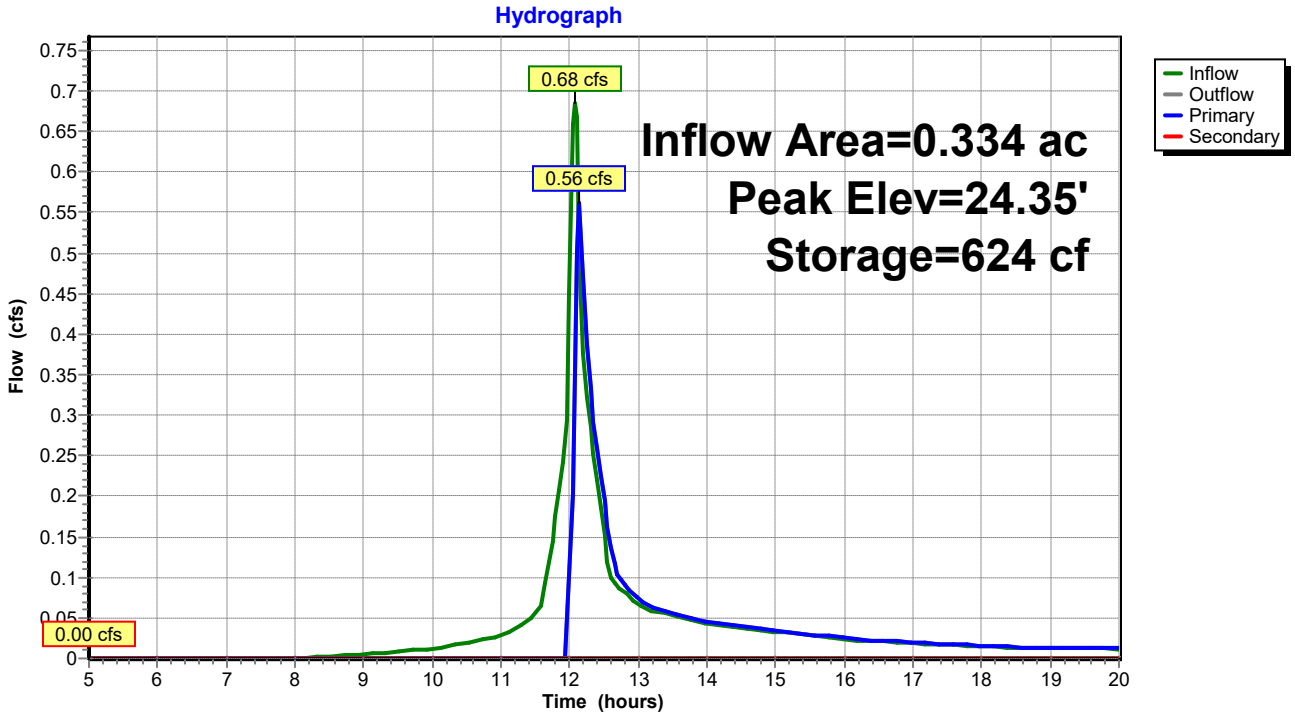
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.50	230	0	0
24.00	400	473	473
25.00	604	502	975
25.10	10,000	530	1,505
26.00	20,000	13,500	15,005

Device	Routing	Invert	Outlet Devices
#1	Primary	24.00'	**15.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 24.00' / 15.00' S= 0.0600 '/' Cc= 0.900 n= 0.011, Flow Area= 1.23 sf
#2	Secondary	24.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.55 cfs @ 12.15 hrs HW=24.35' (Free Discharge)
1=Culvert (Inlet Controls 0.55 cfs @ 2.00 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.50' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond VFF2: VFF3



Summary for Pond VFF3: VFF2 SSC2 roof

Inflow Area = 0.507 ac, 77.50% Impervious, Inflow Depth > 2.22" for 2 YR event
Inflow = 1.36 cfs @ 12.07 hrs, Volume= 0.094 af
Outflow = 0.42 cfs @ 12.39 hrs, Volume= 0.053 af, Atten= 69%, Lag= 18.9 min
Primary = 0.42 cfs @ 12.39 hrs, Volume= 0.053 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 41.82' @ 12.39 hrs Surf.Area= 1,734 sf Storage= 2,208 cf

Plug-Flow detention time= 169.0 min calculated for 0.053 af (56% of inflow)
Center-of-Mass det. time= 90.6 min (853.1 - 762.5)

Volume	Invert	Avail.Storage	Storage Description
#1	40.00'	19,489 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

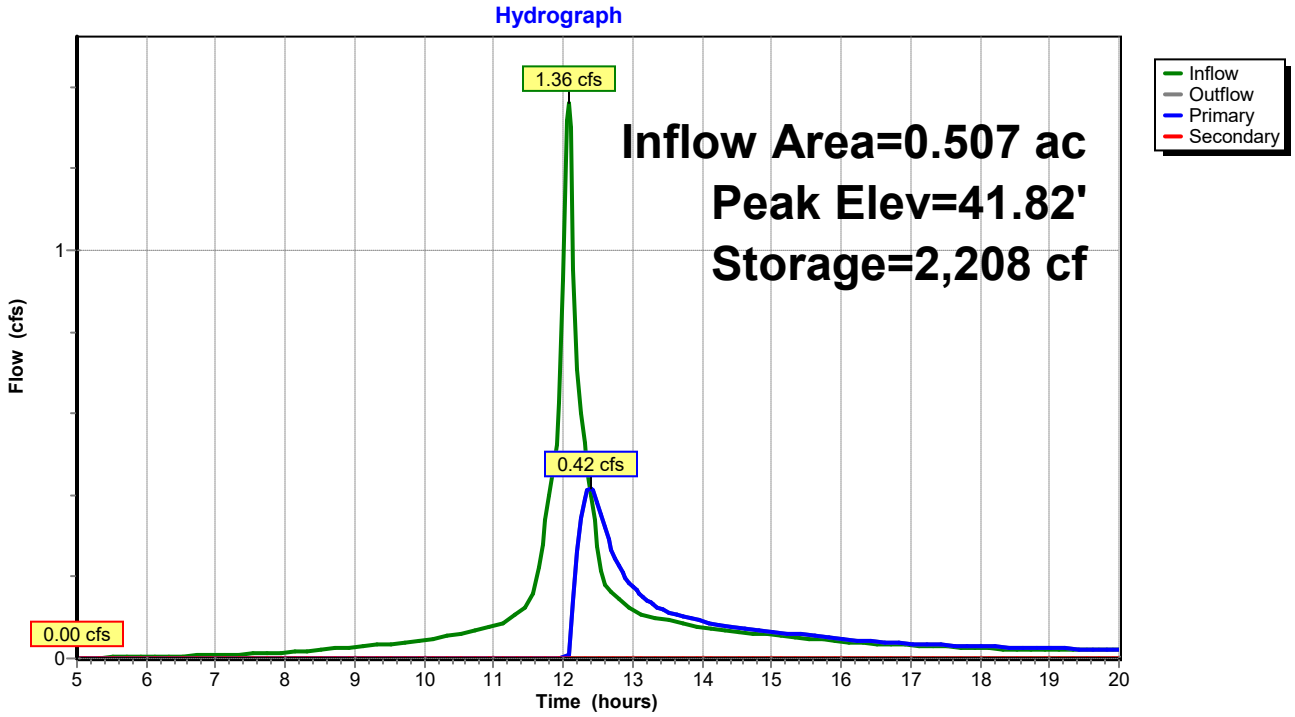
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
40.00	736	0	0
41.00	1,240	988	988
42.00	1,842	1,541	2,529
42.50	5,000	1,711	4,240
42.60	20,000	1,250	5,490
43.00	50,000	14,000	19,489

Device	Routing	Invert	Outlet Devices
#1	Primary	41.50'	**12.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 41.50' / 24.00' S= 0.1167 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Secondary	42.50'	**12.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.42 cfs @ 12.39 hrs HW=41.82' (Free Discharge)
1=Culvert (Inlet Controls 0.42 cfs @ 1.93 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=40.00' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond VFF3: VFF2 SSC2 roof



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Non-treated project FM Runoff Area=48,284 sf 43.45% Impervious Runoff Depth>2.72"
Tc=10.0 min CN=84 Runoff=3.25 cfs 0.251 af

Subcatchment 2S: Non-treated project Runoff Area=66,415 sf 39.07% Impervious Runoff Depth>2.63"
Tc=10.0 min CN=83 Runoff=4.33 cfs 0.334 af

Subcatchment CSSC1: SSC1 Roof not Runoff Area=13,368 sf 100.00% Impervious Runoff Depth>4.05"
Tc=5.0 min CN=98 Runoff=1.39 cfs 0.104 af

Subcatchment CSSC2: SSC2 Roof treated Runoff Area=22,091 sf 77.50% Impervious Runoff Depth>3.60"
Tc=5.0 min CN=93 Runoff=2.15 cfs 0.152 af

Subcatchment CTYRD: Courtyard treated Runoff Area=16,130 sf 13.64% Impervious Runoff Depth>2.13"
Tc=5.0 min CN=77 Runoff=0.99 cfs 0.066 af

Subcatchment Dorm1: Dorm Roof 1 Runoff Area=24,700 sf 100.00% Impervious Runoff Depth>4.05"
Tc=5.0 min CN=98 Runoff=2.57 cfs 0.192 af

Subcatchment Dorm2: Dorm Roof 1 treated Runoff Area=14,546 sf 51.56% Impervious Runoff Depth>2.91"
Tc=5.0 min CN=86 Runoff=1.21 cfs 0.081 af

Reach 100R: POI 100 Inflow=10.96 cfs 0.985 af
Outflow=10.96 cfs 0.985 af

Pond 1P: Durham SD System Peak Elev=23.67' Storage=10 cf Inflow=6.76 cfs 0.535 af
24.0" Round Culvert n=0.009 L=300.0' S=0.0306 '/' Outflow=6.76 cfs 0.535 af

Pond 2P: Bedford SD System Peak Elev=22.67' Storage=4 cf Inflow=4.33 cfs 0.334 af
36.0" Round Culvert n=0.009 L=300.0' S=0.0285 '/' Outflow=4.34 cfs 0.334 af

Pond 3P: DMH corner Bedford Durham Peak Elev=14.89' Storage=14 cf Inflow=10.96 cfs 0.985 af
24.0" Round Culvert n=0.014 L=200.0' S=0.0117 '/' Outflow=10.96 cfs 0.985 af

Pond VFF1: VFF1 Courtyard Dorm Roof Peak Elev=23.77' Storage=6,545 cf Inflow=3.56 cfs 0.257 af
Discarded=0.01 cfs 0.012 af Primary=0.78 cfs 0.116 af Secondary=0.00 cfs 0.000 af Outflow=0.79 cfs 0.128 af

Pond VFF2: VFF3 Peak Elev=24.50' Storage=700 cf Inflow=1.21 cfs 0.081 af
Primary=1.12 cfs 0.070 af Secondary=0.02 cfs 0.000 af Outflow=1.13 cfs 0.070 af

Pond VFF3: VFF2 SSC2 roof Peak Elev=42.11' Storage=2,765 cf Inflow=2.15 cfs 0.152 af
Primary=1.33 cfs 0.110 af Secondary=0.00 cfs 0.000 af Outflow=1.33 cfs 0.110 af

Total Runoff Area = 4.718 ac Runoff Volume = 1.180 af Average Runoff Depth = 3.00"
45.60% Pervious = 2.151 ac 54.40% Impervious = 2.567 ac

Summary for Subcatchment 1S: Non-treated project FM area

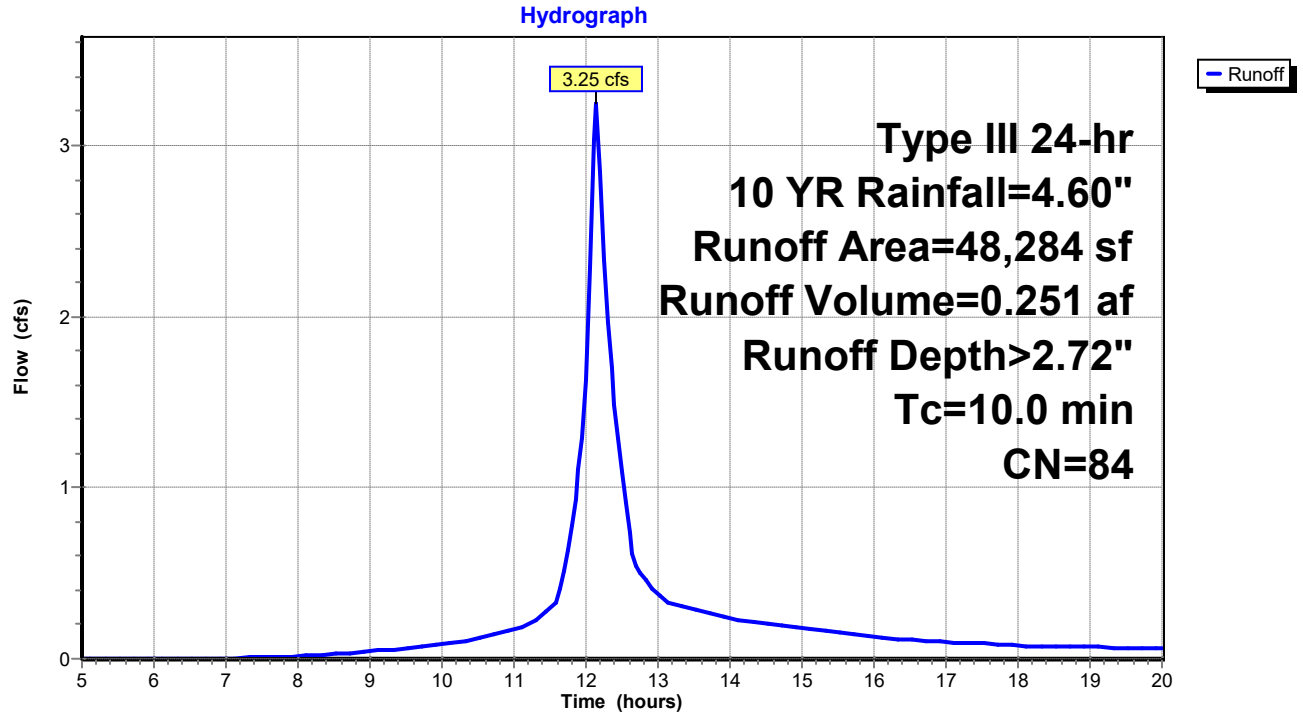
Runoff = 3.25 cfs @ 12.14 hrs, Volume= 0.251 af, Depth> 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

Area (sf)	CN	Description
20,981	98	Paved parking, HSG A
27,303	74	>75% Grass cover, Good, HSG C
48,284	84	Weighted Average
27,303		56.55% Pervious Area
20,981		43.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S: Non-treated project FM area



Summary for Subcatchment 2S: Non-treated project Bedford area

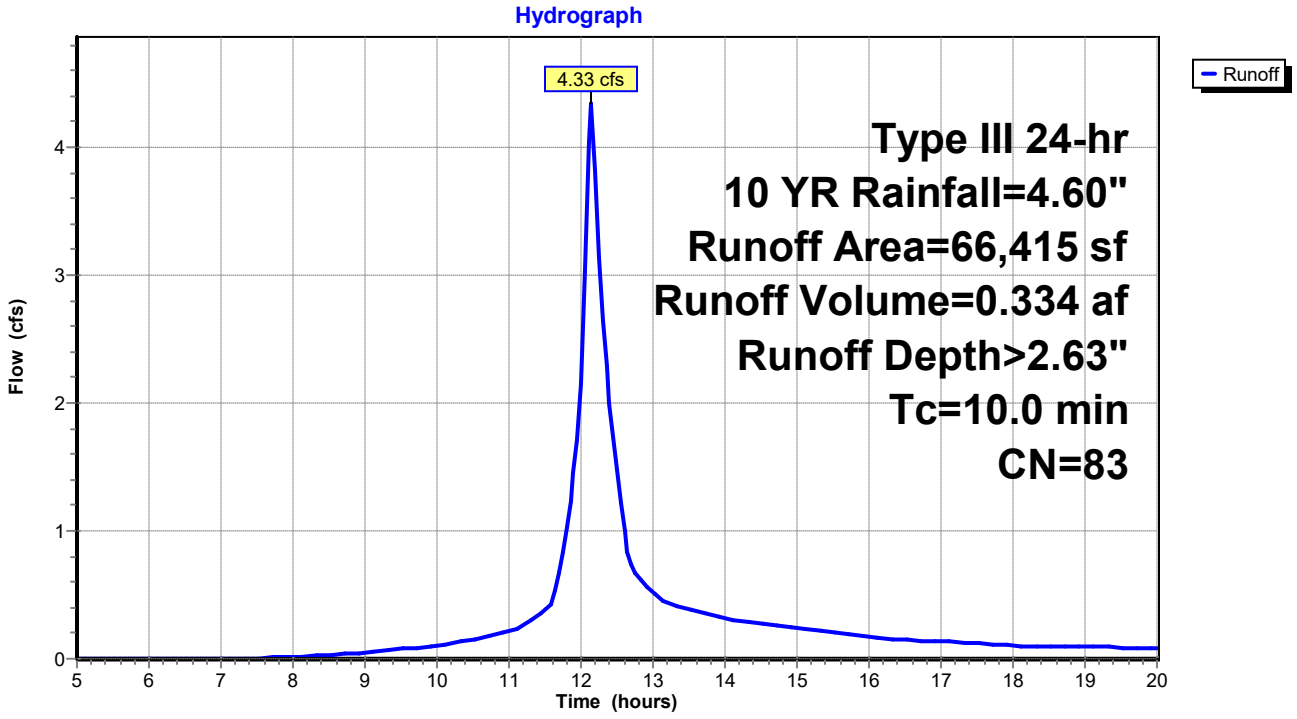
Runoff = 4.33 cfs @ 12.14 hrs, Volume= 0.334 af, Depth> 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

	Area (sf)	CN	Description
*	25,948	98	Paved Sidewalks, hardscape
	40,467	74	>75% Grass cover, Good, HSG C
	66,415	83	Weighted Average
	40,467		60.93% Pervious Area
	25,948		39.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: Non-treated project Bedford area



Summary for Subcatchment CSSC1: SSC1 Roof not treated

[49] Hint: Tc<2dt may require smaller dt

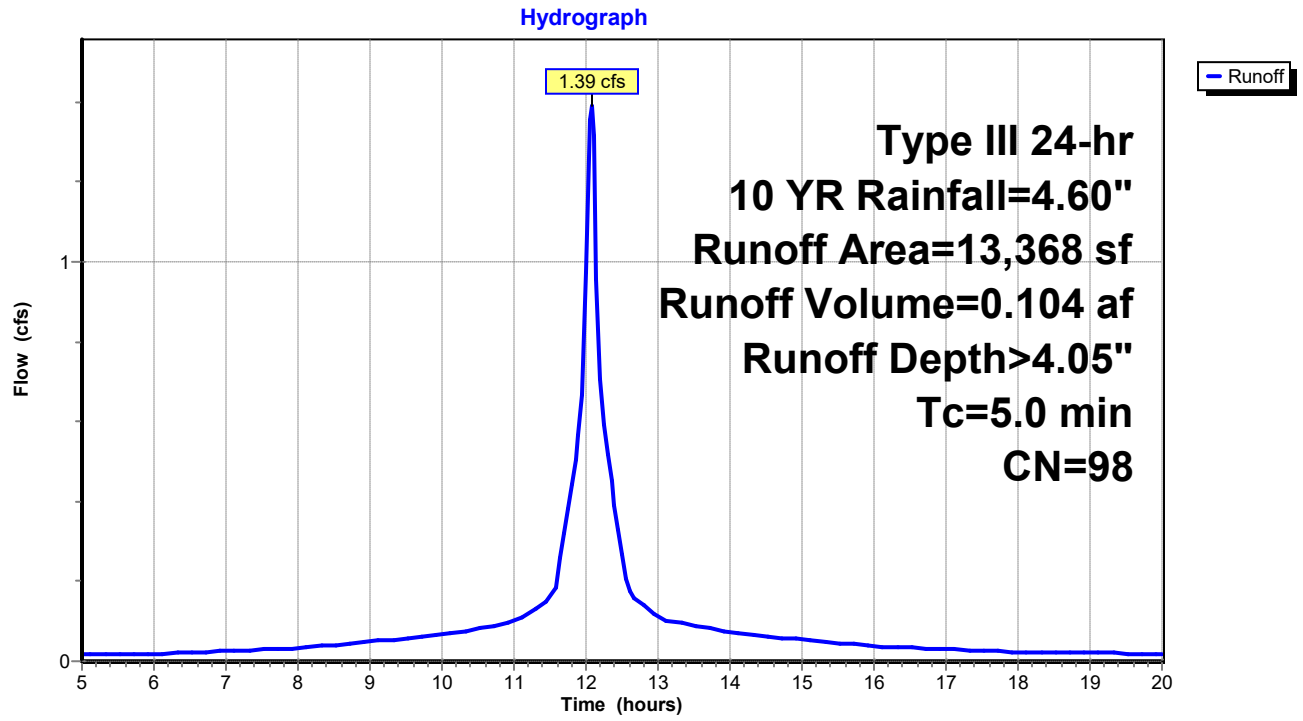
Runoff = 1.39 cfs @ 12.07 hrs, Volume= 0.104 af, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

	Area (sf)	CN	Description
*	13,368	98	SSC Roof not treated
	13,368		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment CSSC1: SSC1 Roof not treated



Summary for Subcatchment CSSC2: SSC2 Roof treated

[49] Hint: Tc<2dt may require smaller dt

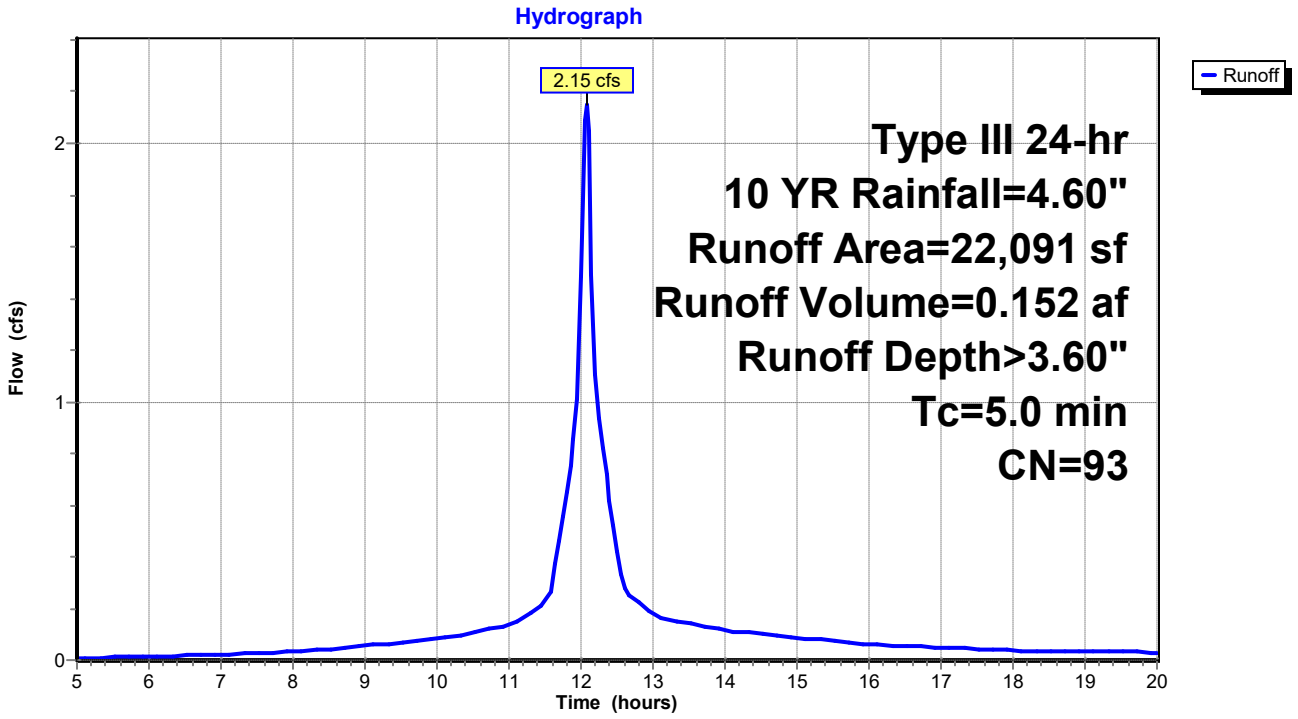
Runoff = 2.15 cfs @ 12.07 hrs, Volume= 0.152 af, Depth> 3.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

	Area (sf)	CN	Description
*	14,450	98	SSC Roof treated
	4,970	74	>75% Grass cover, Good, HSG C
*	2,671	98	Sidewalk
	22,091	93	Weighted Average
	4,970		22.50% Pervious Area
	17,121		77.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment CSSC2: SSC2 Roof treated



Summary for Subcatchment CTYRD: Courtyard treated

[49] Hint: Tc<2dt may require smaller dt

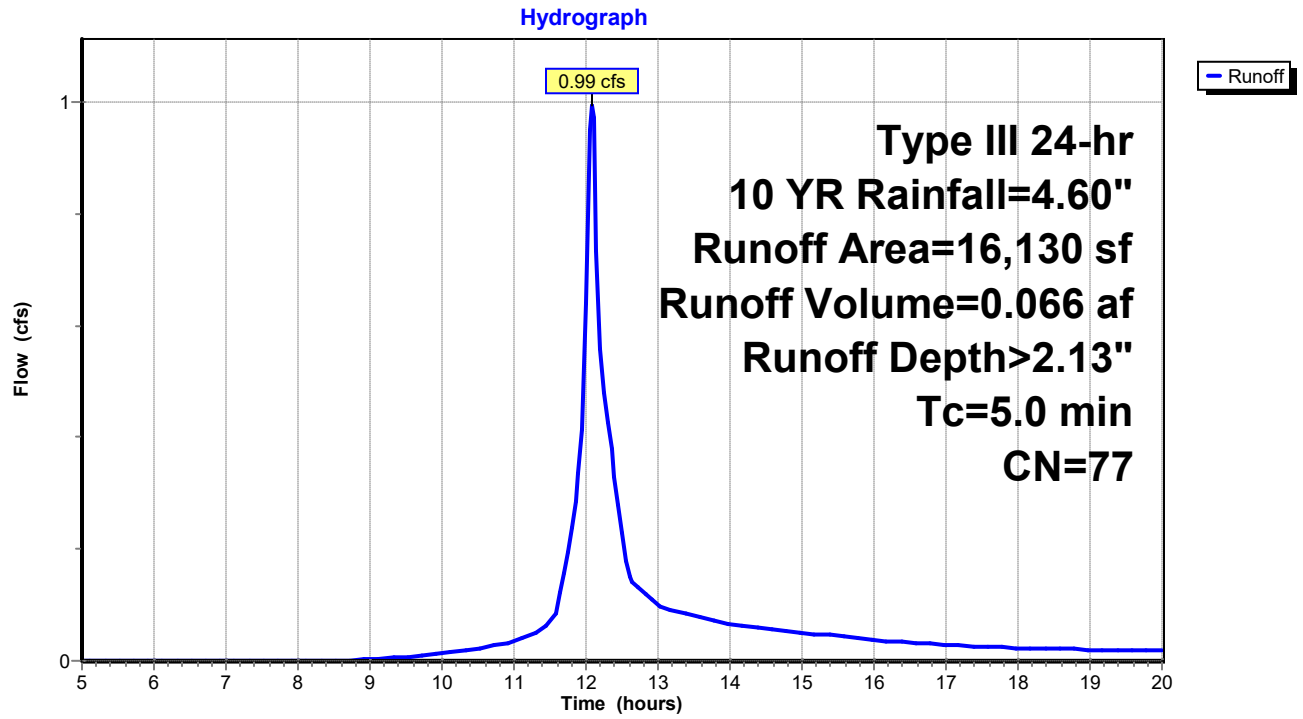
Runoff = 0.99 cfs @ 12.08 hrs, Volume= 0.066 af, Depth> 2.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

	Area (sf)	CN	Description
	13,930	74	>75% Grass cover, Good, HSG C
*	2,200	98	Hardscape in courtyard
	16,130	77	Weighted Average
	13,930		86.36% Pervious Area
	2,200		13.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment CTYRD: Courtyard treated



Summary for Subcatchment Dorm1: Dorm Roof 1 treated

[49] Hint: Tc<2dt may require smaller dt

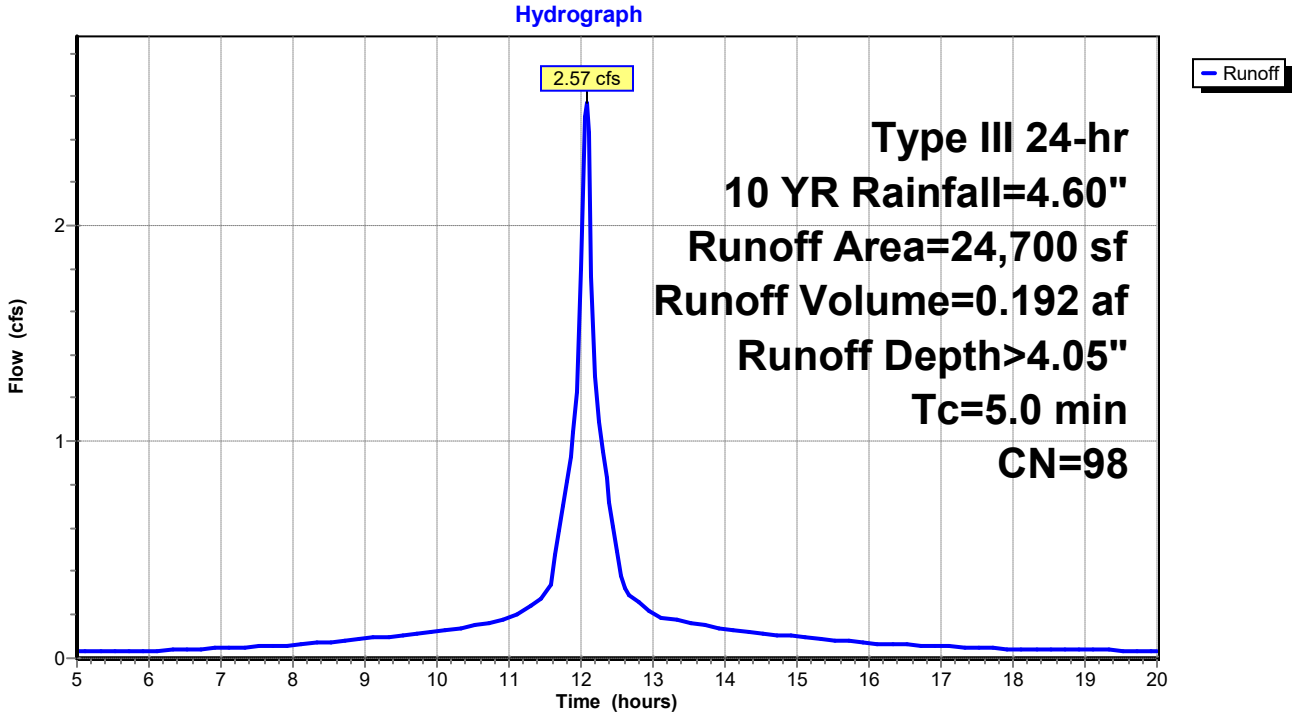
Runoff = 2.57 cfs @ 12.07 hrs, Volume= 0.192 af, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

	Area (sf)	CN	Description
*	24,700	98	Dorm Roof treated
	24,700		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment Dorm1: Dorm Roof 1 treated



Summary for Subcatchment Dorm2: Dorm Roof 1 treated

[49] Hint: Tc<2dt may require smaller dt

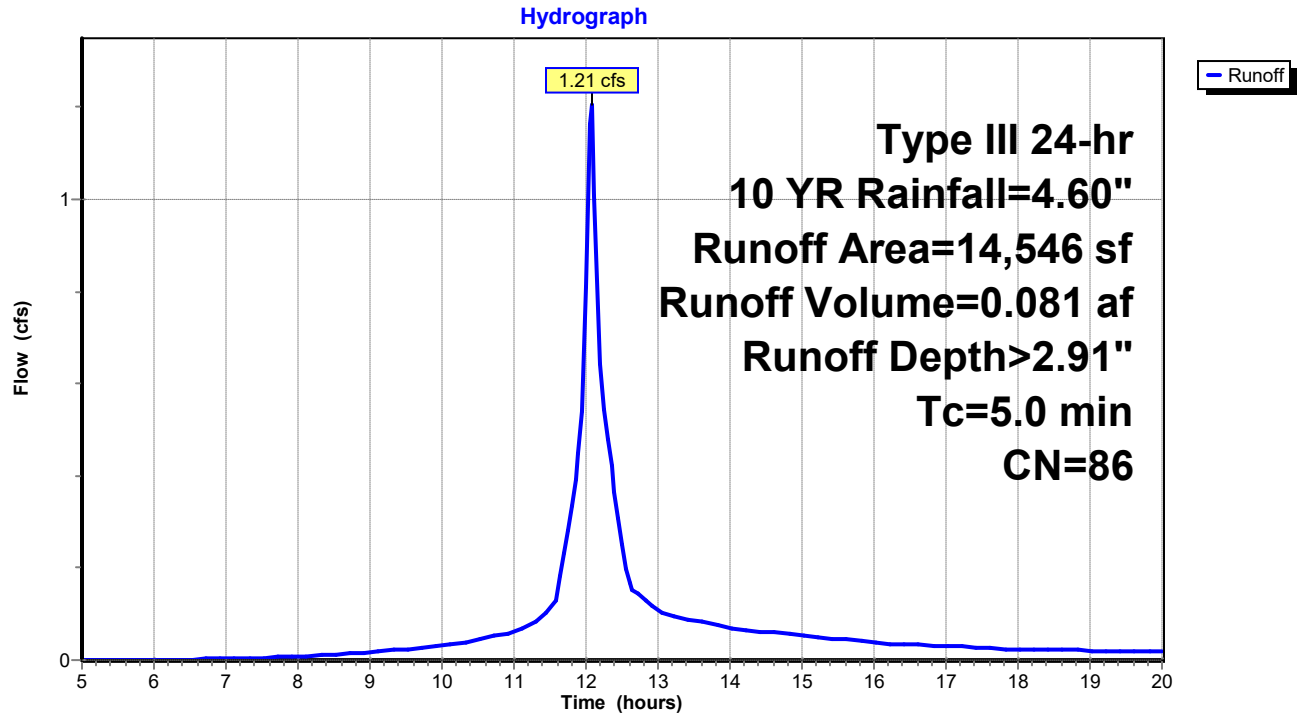
Runoff = 1.21 cfs @ 12.07 hrs, Volume= 0.081 af, Depth> 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

	Area (sf)	CN	Description
*	6,500	98	Dorm Roof treated
*	7,046	74	>75% Grass cover, Good, HSG C VFF 1 area
*	1,000	98	Sidewalk
	14,546	86	Weighted Average
	7,046		48.44% Pervious Area
	7,500		51.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment Dorm2: Dorm Roof 1 treated



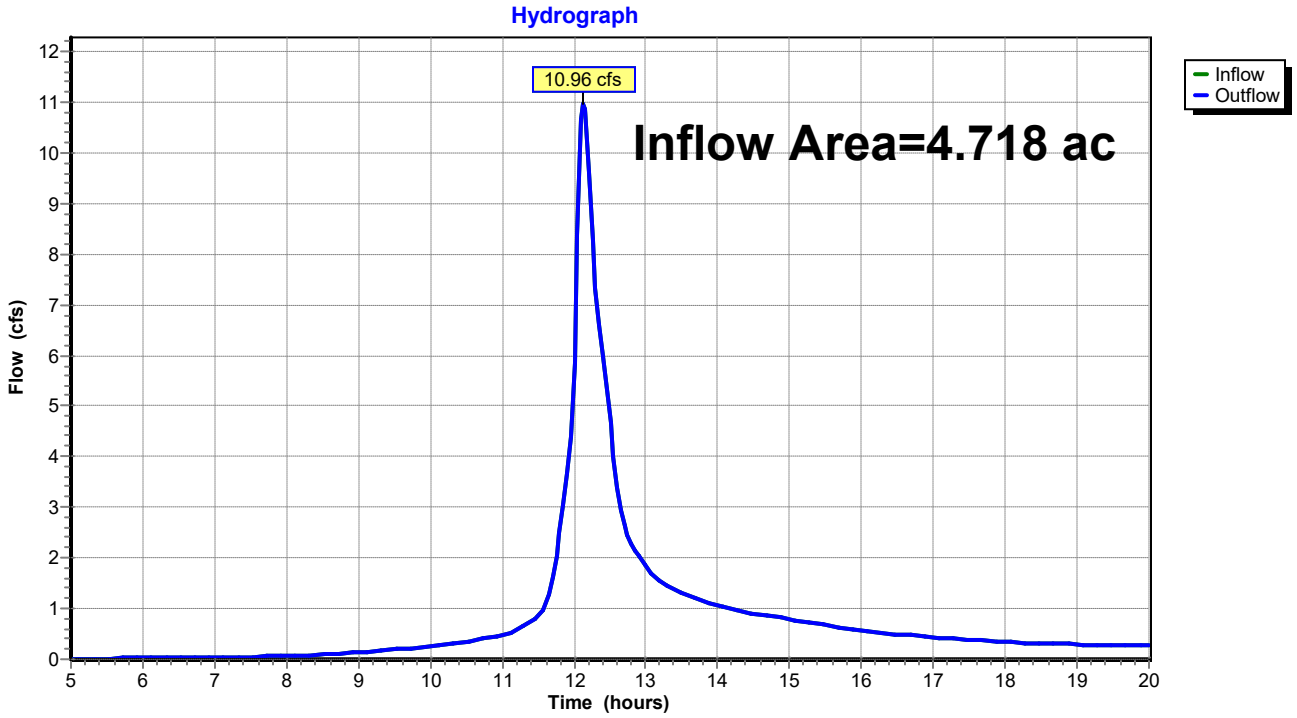
Summary for Reach 100R: POI 100

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.718 ac, 54.40% Impervious, Inflow Depth > 2.51" for 10 YR event
Inflow = 10.96 cfs @ 12.13 hrs, Volume= 0.985 af
Outflow = 10.96 cfs @ 12.13 hrs, Volume= 0.985 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 100R: POI 100



Summary for Pond 1P: Durham SD System

[82] Warning: Early inflow requires earlier time span
[79] Warning: Submerged Pond VFF2 Primary device # 1 OUTLET by 8.66'

Inflow Area = 2.256 ac, 60.00% Impervious, Inflow Depth > 2.85" for 10 YR event
Inflow = 6.76 cfs @ 12.12 hrs, Volume= 0.535 af
Outflow = 6.76 cfs @ 12.12 hrs, Volume= 0.535 af, Atten= 0%, Lag= 0.0 min
Primary = 6.76 cfs @ 12.12 hrs, Volume= 0.535 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.67' @ 12.12 hrs Surf.Area= 9 sf Storage= 10 cf

Plug-Flow detention time= 0.1 min calculated for 0.535 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (783.9 - 783.9)

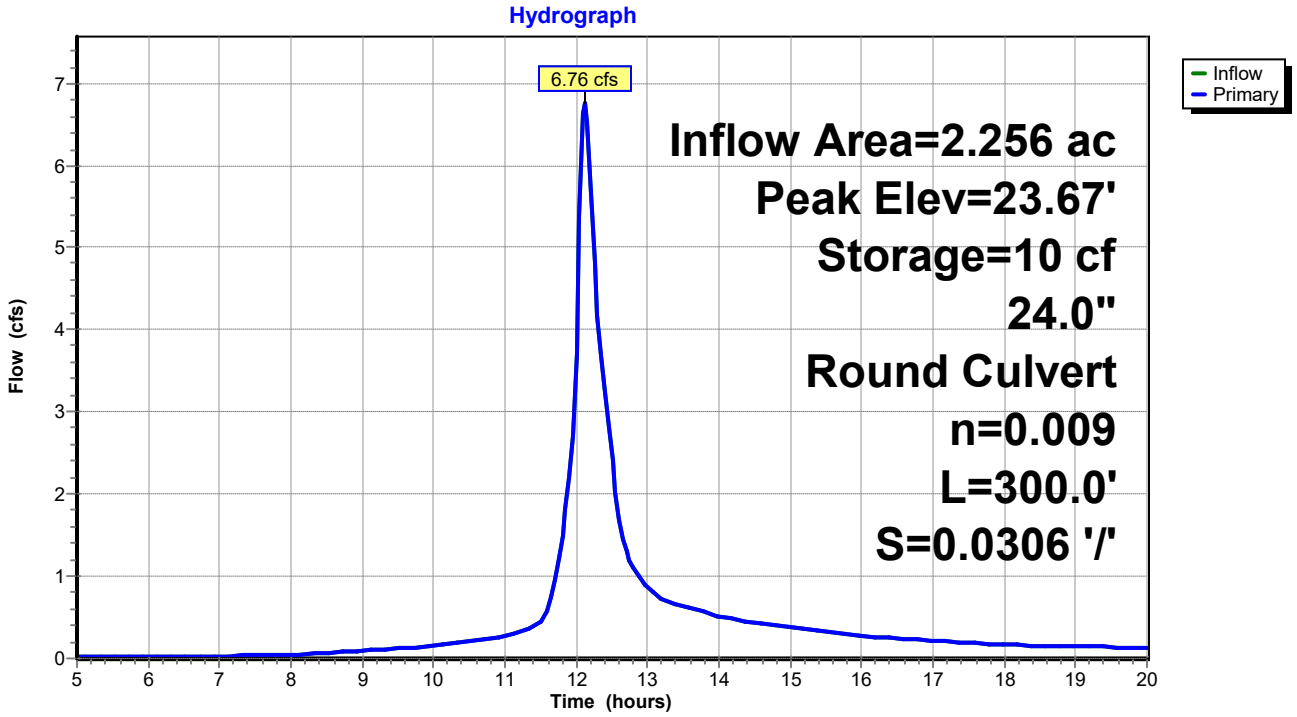
Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,753 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	500	3	53
29.00	15,000	6,200	6,253
30.00	1,000,000	507,500	513,753

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=6.59 cfs @ 12.12 hrs HW=23.66' (Free Discharge)
1=Culvert (Inlet Controls 6.59 cfs @ 3.61 fps)

Pond 1P: Durham SD System



Summary for Pond 2P: Bedford SD System

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 1.525 ac, 39.07% Impervious, Inflow Depth > 2.63" for 10 YR event
Inflow = 4.33 cfs @ 12.14 hrs, Volume= 0.334 af
Outflow = 4.34 cfs @ 12.14 hrs, Volume= 0.334 af, Atten= 0%, Lag= 0.0 min
Primary = 4.34 cfs @ 12.14 hrs, Volume= 0.334 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 22.67' @ 12.14 hrs Surf.Area= 9 sf Storage= 4 cf

Plug-Flow detention time= 0.0 min calculated for 0.333 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (786.2 - 786.1)

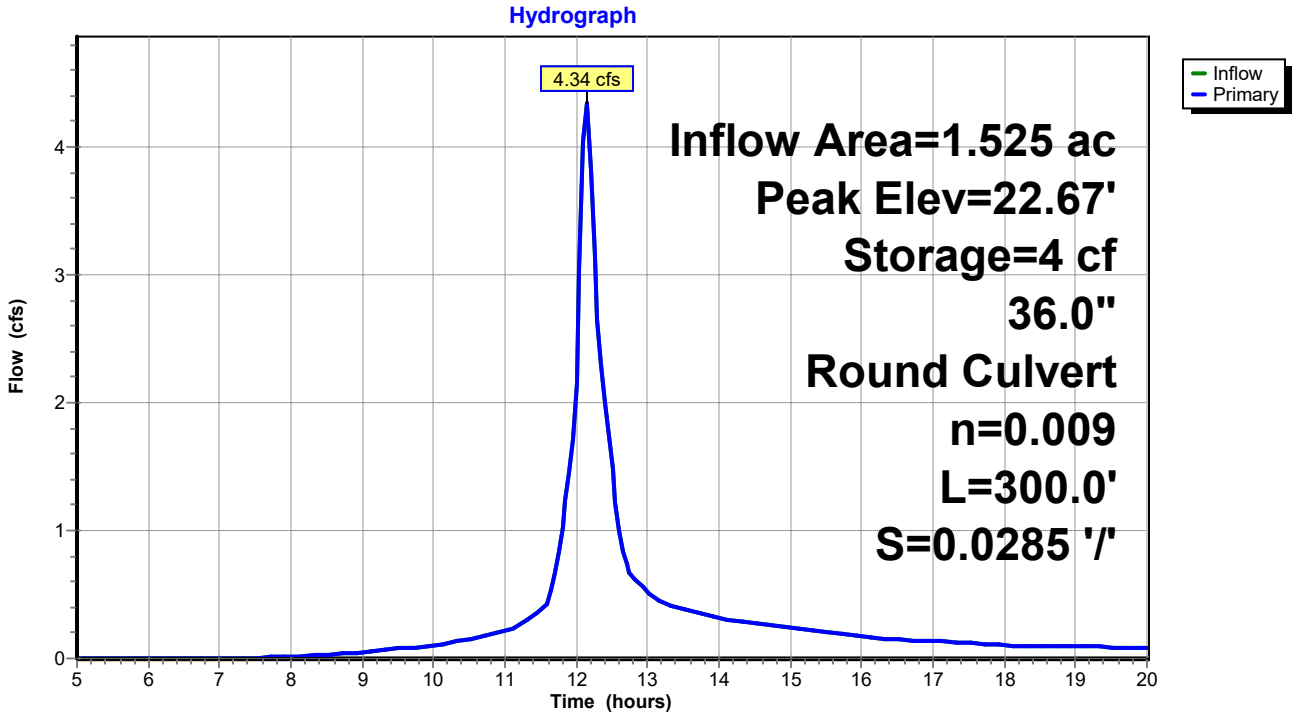
Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=4.28 cfs @ 12.14 hrs HW=22.67' (Free Discharge)
1=Culvert (Inlet Controls 4.28 cfs @ 2.99 fps)

Pond 2P: Bedford SD System



Summary for Pond 3P: DMH corner Bedford Durham

[82] Warning: Early inflow requires earlier time span
[88] Warning: Qout>Qin may require smaller dt or Finer Routing
[79] Warning: Submerged Pond 1P Primary device # 1 OUTLET by 1.53'
[79] Warning: Submerged Pond 2P Primary device # 1 OUTLET by 1.53'
[79] Warning: Submerged Pond VFF1 Primary device # 1 OUTLET by 1.23'

Inflow Area = 4.718 ac, 54.40% Impervious, Inflow Depth > 2.51" for 10 YR event
Inflow = 10.96 cfs @ 12.13 hrs, Volume= 0.985 af
Outflow = 10.96 cfs @ 12.13 hrs, Volume= 0.985 af, Atten= 0%, Lag= 0.0 min
Primary = 10.96 cfs @ 12.13 hrs, Volume= 0.985 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 14.89' @ 12.13 hrs Surf.Area= 9 sf Storage= 14 cf

Plug-Flow detention time= 0.1 min calculated for 0.982 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (794.2 - 794.1)

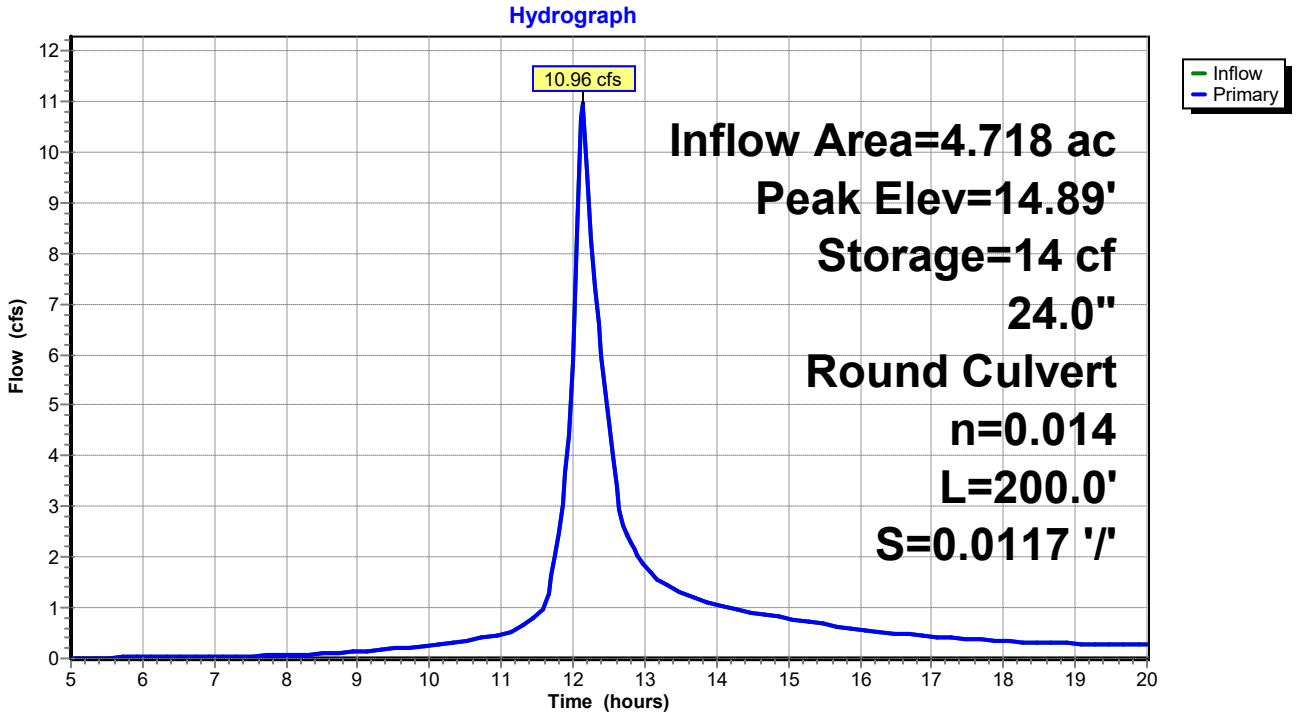
Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=10.80 cfs @ 12.13 hrs HW=14.87' (Free Discharge)
1=Culvert (Inlet Controls 10.80 cfs @ 4.20 fps)

Pond 3P: DMH corner Bedford Durham



Summary for Pond VFF1: VFF1 Courtyard Dorm Roof

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.937 ac, 65.88% Impervious, Inflow Depth > 3.29" for 10 YR event
Inflow = 3.56 cfs @ 12.07 hrs, Volume= 0.257 af
Outflow = 0.79 cfs @ 12.48 hrs, Volume= 0.128 af, Atten= 78%, Lag= 24.5 min
Discarded = 0.01 cfs @ 5.95 hrs, Volume= 0.012 af
Primary = 0.78 cfs @ 12.48 hrs, Volume= 0.116 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.77' @ 12.48 hrs Surf.Area= 4,472 sf Storage= 6,545 cf

Plug-Flow detention time= 197.2 min calculated for 0.127 af (50% of inflow)
Center-of-Mass det. time= 104.3 min (854.8 - 750.4)

Volume	Invert	Avail.Storage	Storage Description
#1	22.00'	16,345 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.00	2,900	0	0
23.00	3,800	3,350	3,350
24.00	4,670	4,235	7,585
24.50	5,185	2,464	10,049
25.00	20,000	6,296	16,345

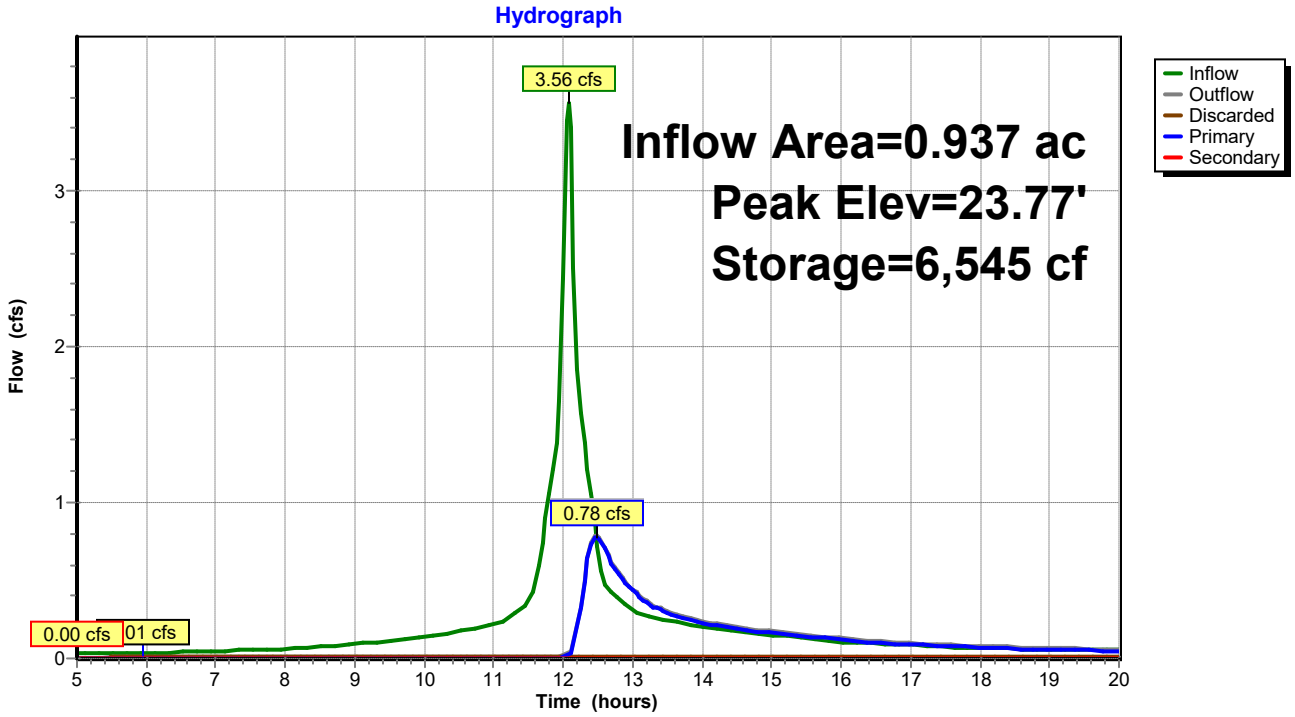
Device	Routing	Invert	Outlet Devices
#1	Primary	23.50'	**18.0" Round Culvert X 2.00** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 23.50' / 13.65' S= 0.1313 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf
#2	Secondary	24.50'	**12.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Discarded	22.00'	**0.01 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.01 cfs @ 5.95 hrs HW=22.03' (Free Discharge)
↑—**3=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.77 cfs @ 12.48 hrs HW=23.77' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.77 cfs @ 1.77 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond VFF1: VFF1 Courtyard Dorm Roof



Summary for Pond VFF2: VFF3

Inflow Area = 0.334 ac, 51.56% Impervious, Inflow Depth > 2.91" for 10 YR event
Inflow = 1.21 cfs @ 12.07 hrs, Volume= 0.081 af
Outflow = 1.13 cfs @ 12.11 hrs, Volume= 0.070 af, Atten= 6%, Lag= 2.1 min
Primary = 1.12 cfs @ 12.11 hrs, Volume= 0.070 af
Secondary = 0.02 cfs @ 12.10 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 24.50' @ 12.11 hrs Surf.Area= 503 sf Storage= 700 cf

Plug-Flow detention time= 70.7 min calculated for 0.069 af (86% of inflow)
Center-of-Mass det. time= 29.7 min (804.1 - 774.4)

Volume	Invert	Avail.Storage	Storage Description
#1	22.50'	15,005 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

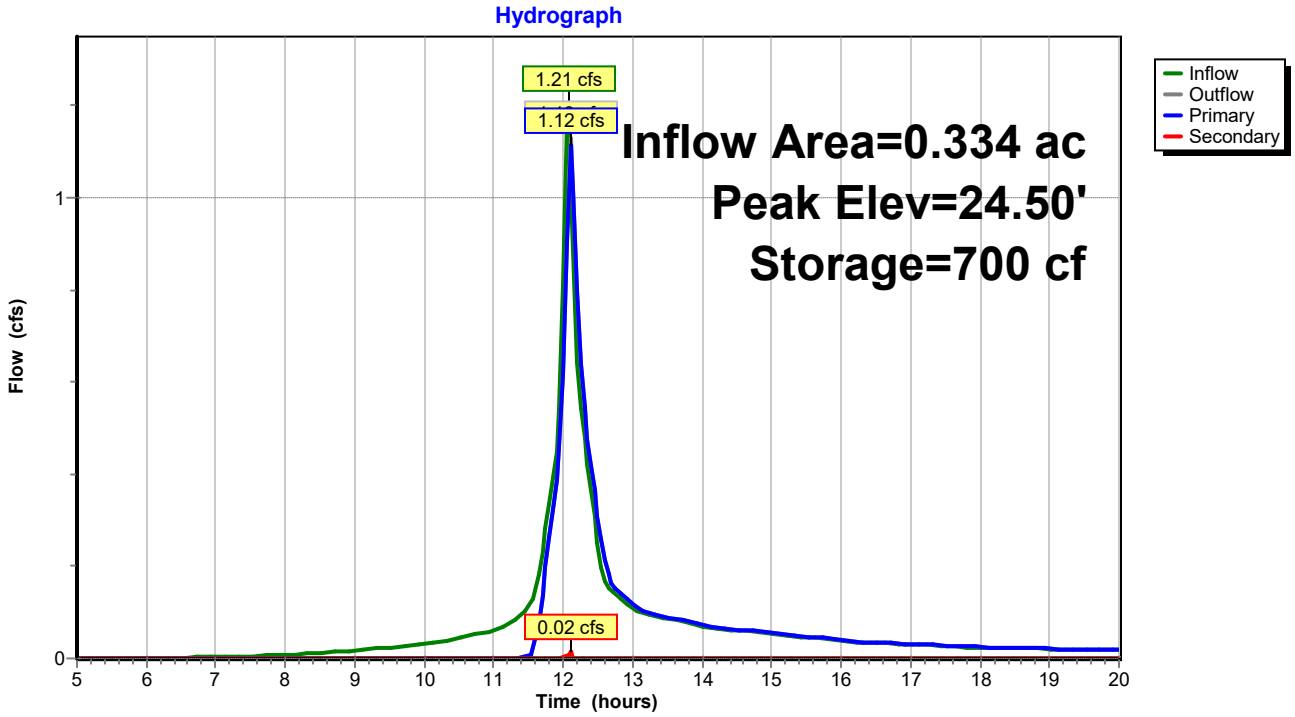
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.50	230	0	0
24.00	400	473	473
25.00	604	502	975
25.10	10,000	530	1,505
26.00	20,000	13,500	15,005

Device	Routing	Invert	Outlet Devices
#1	Primary	24.00'	**15.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 24.00' / 15.00' S= 0.0600 '/' Cc= 0.900 n= 0.011, Flow Area= 1.23 sf
#2	Secondary	24.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=1.09 cfs @ 12.11 hrs HW=24.50' (Free Discharge)
1=Culvert (Inlet Controls 1.09 cfs @ 2.40 fps)

Secondary OutFlow Max=0.00 cfs @ 12.10 hrs HW=24.50' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 0.00 cfs @ 0.11 fps)

Pond VFF2: VFF3



Summary for Pond VFF3: VFF2 SSC2 roof

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.507 ac, 77.50% Impervious, Inflow Depth > 3.60" for 10 YR event
Inflow = 2.15 cfs @ 12.07 hrs, Volume= 0.152 af
Outflow = 1.33 cfs @ 12.17 hrs, Volume= 0.110 af, Atten= 38%, Lag= 6.2 min
Primary = 1.33 cfs @ 12.17 hrs, Volume= 0.110 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 42.11' @ 12.17 hrs Surf.Area= 2,525 sf Storage= 2,765 cf

Plug-Flow detention time= 128.2 min calculated for 0.110 af (72% of inflow)
Center-of-Mass det. time= 65.2 min (817.7 - 752.5)

Volume	Invert	Avail.Storage	Storage Description
#1	40.00'	19,489 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

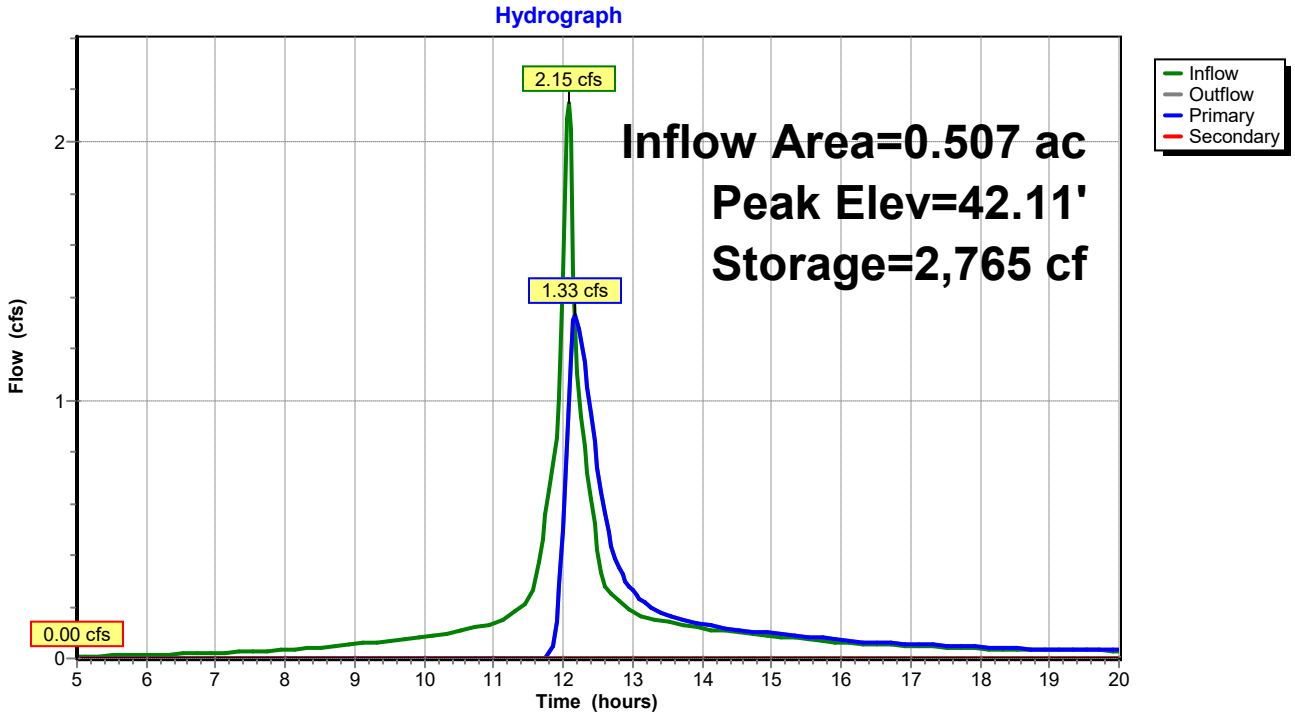
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
40.00	736	0	0
41.00	1,240	988	988
42.00	1,842	1,541	2,529
42.50	5,000	1,711	4,240
42.60	20,000	1,250	5,490
43.00	50,000	14,000	19,489

Device	Routing	Invert	Outlet Devices
#1	Primary	41.50'	**12.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 41.50' / 24.00' S= 0.1167 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Secondary	42.50'	**12.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=1.31 cfs @ 12.17 hrs HW=42.10' (Free Discharge)
1=Culvert (Inlet Controls 1.31 cfs @ 2.64 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=40.00' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond VFF3: VFF2 SSC2 roof



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Non-treated project FM Runoff Area=48,284 sf 43.45% Impervious Runoff Depth>3.77"
Tc=10.0 min CN=84 Runoff=4.44 cfs 0.348 af

Subcatchment 2S: Non-treated project Runoff Area=66,415 sf 39.07% Impervious Runoff Depth>3.67"
Tc=10.0 min CN=83 Runoff=5.97 cfs 0.466 af

Subcatchment CSSC1: SSC1 Roof not Runoff Area=13,368 sf 100.00% Impervious Runoff Depth>5.15"
Tc=5.0 min CN=98 Runoff=1.76 cfs 0.132 af

Subcatchment CSSC2: SSC2 Roof treated Runoff Area=22,091 sf 77.50% Impervious Runoff Depth>4.70"
Tc=5.0 min CN=93 Runoff=2.78 cfs 0.199 af

Subcatchment CTYRD: Courtyard treated Runoff Area=16,130 sf 13.64% Impervious Runoff Depth>3.09"
Tc=5.0 min CN=77 Runoff=1.44 cfs 0.095 af

Subcatchment Dorm1: Dorm Roof 1 Runoff Area=24,700 sf 100.00% Impervious Runoff Depth>5.15"
Tc=5.0 min CN=98 Runoff=3.24 cfs 0.243 af

Subcatchment Dorm2: Dorm Roof 1 treated Runoff Area=14,546 sf 51.56% Impervious Runoff Depth>3.98"
Tc=5.0 min CN=86 Runoff=1.63 cfs 0.111 af

Reach 100R: POI 100 Inflow=16.13 cfs 1.398 af
Outflow=16.13 cfs 1.398 af

Pond 1P: Durham SD System Peak Elev=23.90' Storage=12 cf Inflow=9.19 cfs 0.736 af
24.0" Round Culvert n=0.009 L=300.0' S=0.0306 '/' Outflow=9.19 cfs 0.736 af

Pond 2P: Bedford SD System Peak Elev=22.82' Storage=6 cf Inflow=5.97 cfs 0.466 af
36.0" Round Culvert n=0.009 L=300.0' S=0.0285 '/' Outflow=5.97 cfs 0.466 af

Pond 3P: DMH corner Bedford Durham Peak Elev=15.49' Storage=19 cf Inflow=16.12 cfs 1.398 af
24.0" Round Culvert n=0.014 L=200.0' S=0.0117 '/' Outflow=16.13 cfs 1.398 af

Pond VFF1: VFF1 Courtyard Dorm Roof Peak Elev=23.94' Storage=7,318 cf Inflow=4.68 cfs 0.338 af
Discarded=0.01 cfs 0.012 af Primary=1.97 cfs 0.196 af Secondary=0.00 cfs 0.000 af Outflow=1.98 cfs 0.208 af

Pond VFF2: VFF3 Peak Elev=24.54' Storage=718 cf Inflow=1.63 cfs 0.111 af
Primary=1.27 cfs 0.097 af Secondary=0.40 cfs 0.003 af Outflow=1.67 cfs 0.099 af

Pond VFF3: VFF2 SSC2 roof Peak Elev=42.23' Storage=3,105 cf Inflow=2.78 cfs 0.199 af
Primary=1.77 cfs 0.157 af Secondary=0.00 cfs 0.000 af Outflow=1.77 cfs 0.157 af

Total Runoff Area = 4.718 ac Runoff Volume = 1.594 af Average Runoff Depth = 4.05"
45.60% Pervious = 2.151 ac 54.40% Impervious = 2.567 ac

Summary for Subcatchment 1S: Non-treated project FM area

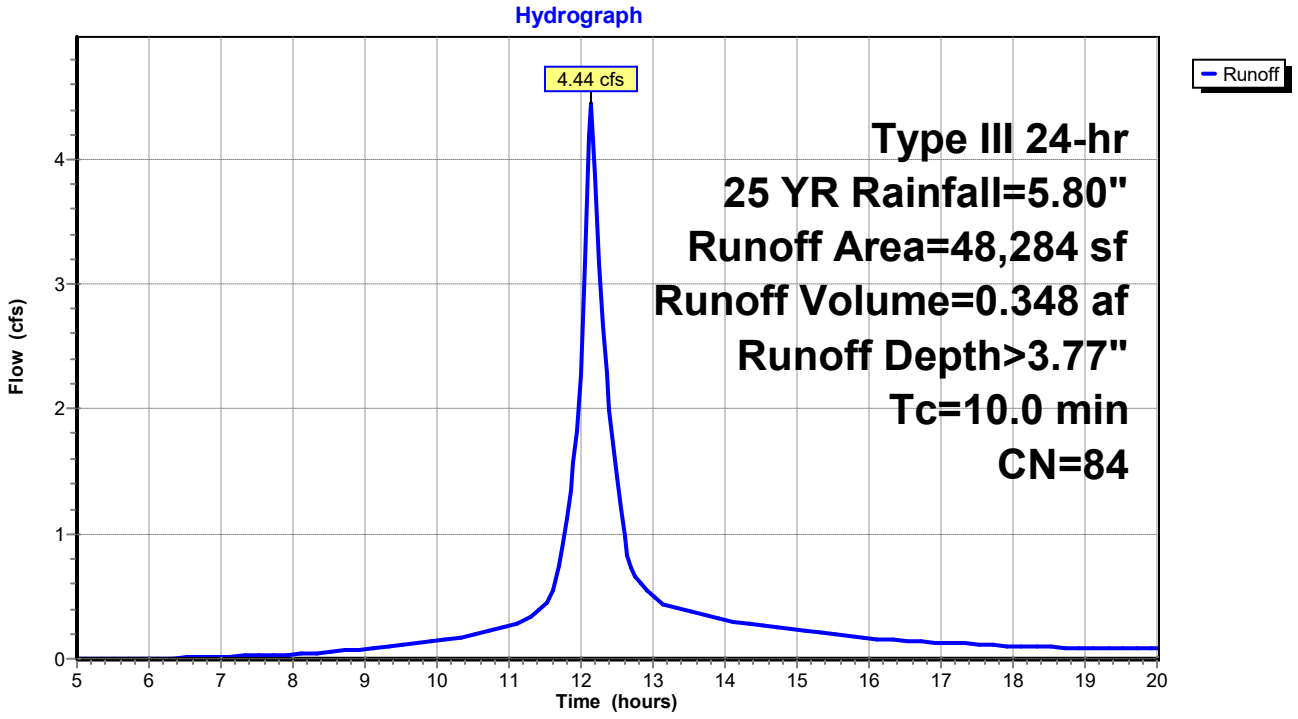
Runoff = 4.44 cfs @ 12.14 hrs, Volume= 0.348 af, Depth> 3.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

Area (sf)	CN	Description
20,981	98	Paved parking, HSG A
27,303	74	>75% Grass cover, Good, HSG C
48,284	84	Weighted Average
27,303		56.55% Pervious Area
20,981		43.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S: Non-treated project FM area



Summary for Subcatchment 2S: Non-treated project Bedford area

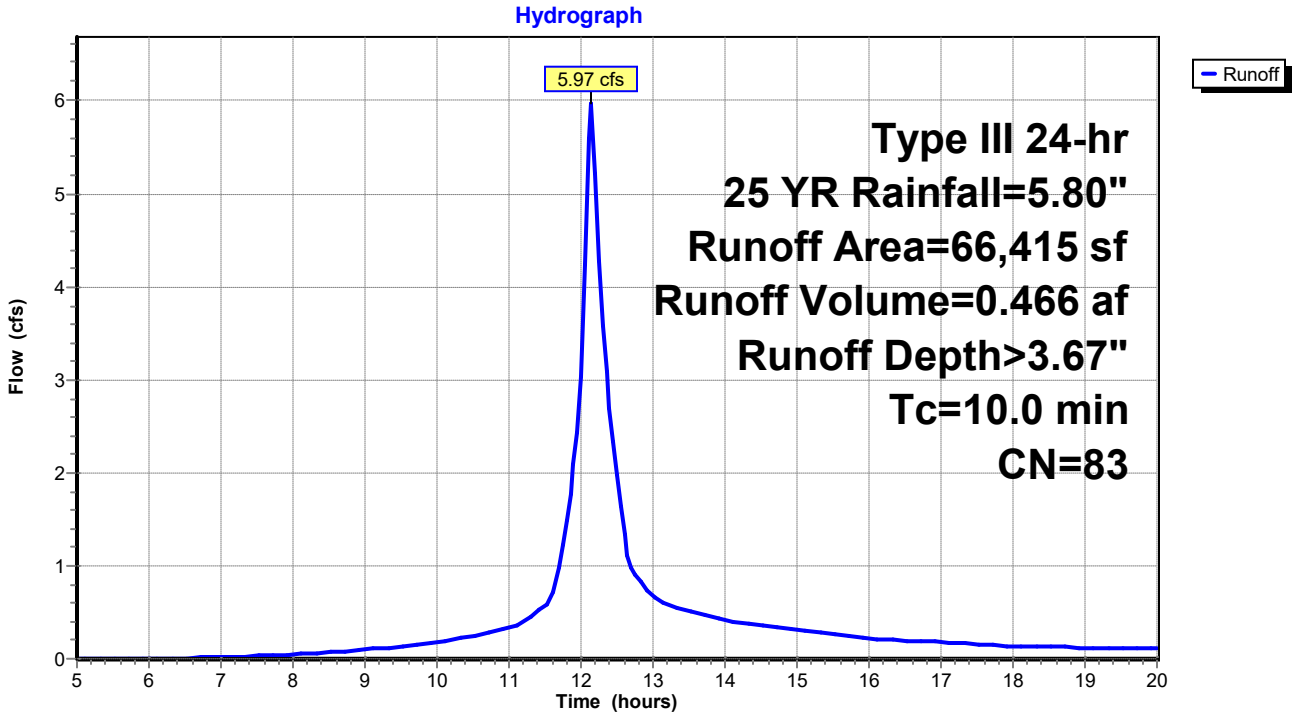
Runoff = 5.97 cfs @ 12.14 hrs, Volume= 0.466 af, Depth> 3.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

	Area (sf)	CN	Description
*	25,948	98	Paved Sidewalks, hardscape
	40,467	74	>75% Grass cover, Good, HSG C
	66,415	83	Weighted Average
	40,467		60.93% Pervious Area
	25,948		39.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: Non-treated project Bedford area



Summary for Subcatchment CSSC1: SSC1 Roof not treated

[49] Hint: Tc<2dt may require smaller dt

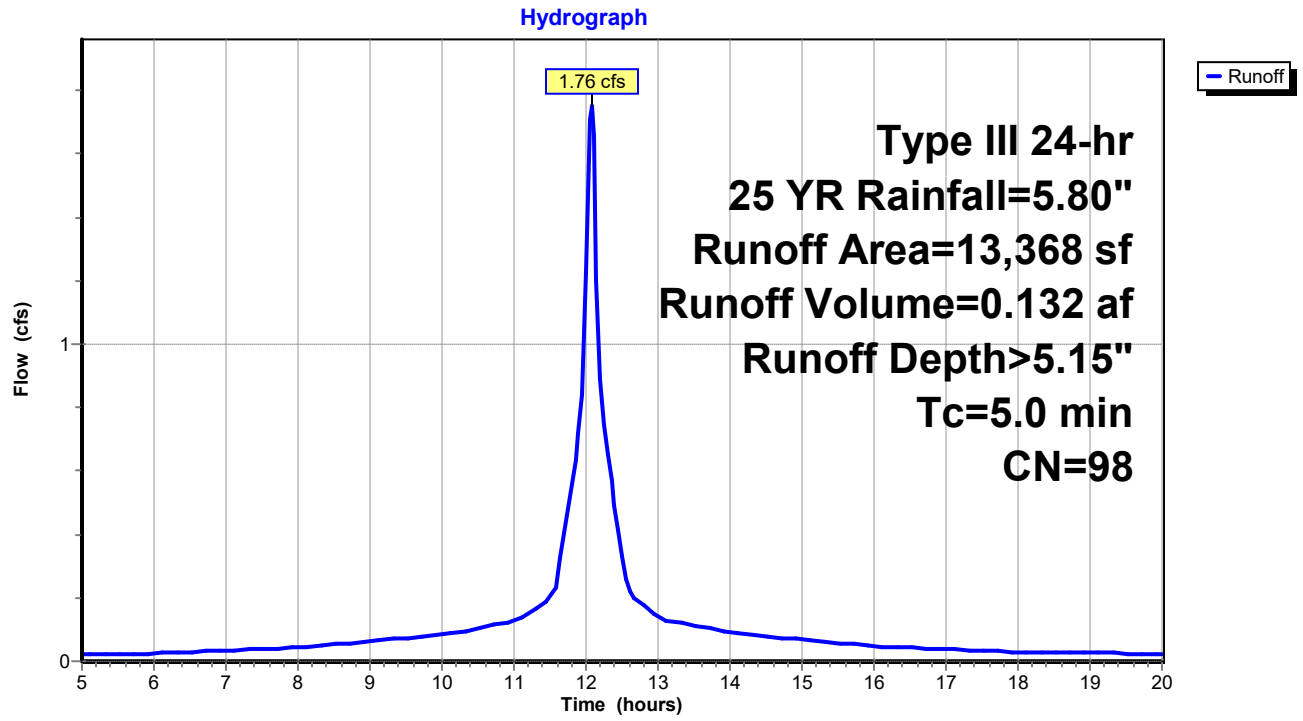
Runoff = 1.76 cfs @ 12.07 hrs, Volume= 0.132 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

	Area (sf)	CN	Description
*	13,368	98	SSC Roof not treated
	13,368		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment CSSC1: SSC1 Roof not treated



Summary for Subcatchment CSSC2: SSC2 Roof treated

[49] Hint: Tc<2dt may require smaller dt

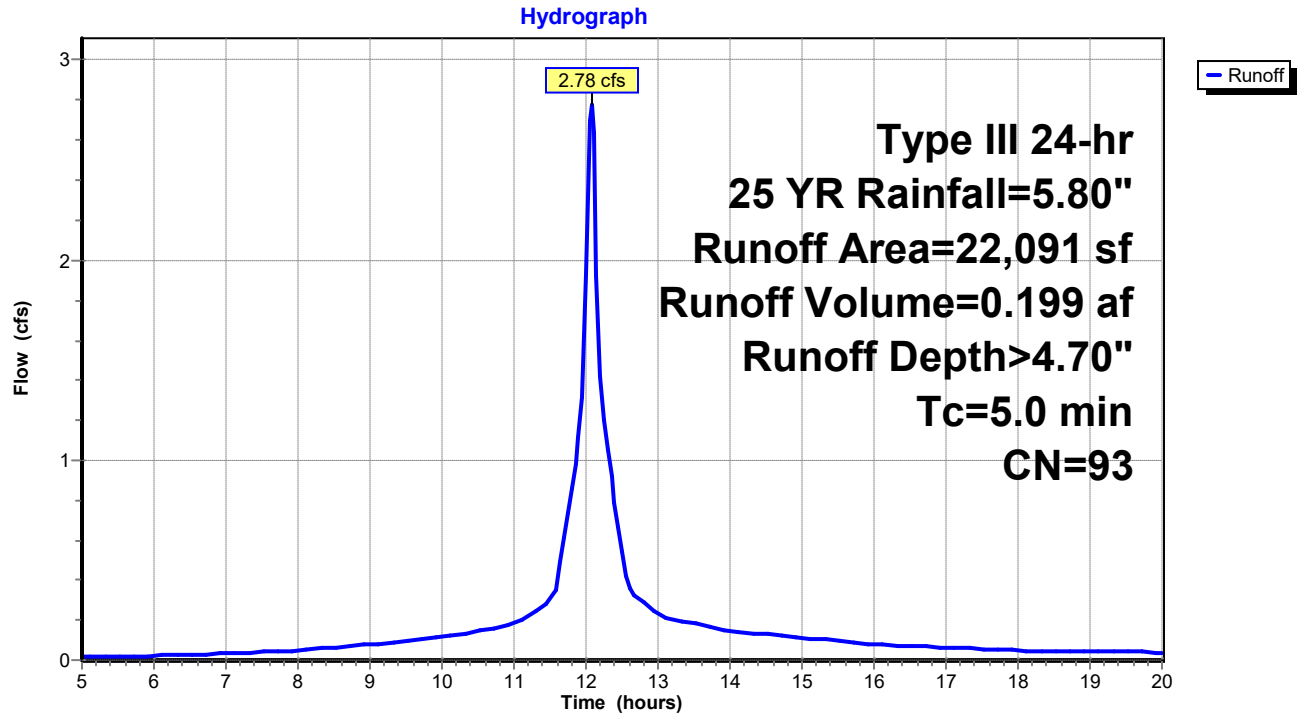
Runoff = 2.78 cfs @ 12.07 hrs, Volume= 0.199 af, Depth> 4.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

	Area (sf)	CN	Description
*	14,450	98	SSC Roof treated
	4,970	74	>75% Grass cover, Good, HSG C
*	2,671	98	Sidewalk
	22,091	93	Weighted Average
	4,970		22.50% Pervious Area
	17,121		77.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment CSSC2: SSC2 Roof treated



Summary for Subcatchment CTYRD: Courtyard treated

[49] Hint: Tc<2dt may require smaller dt

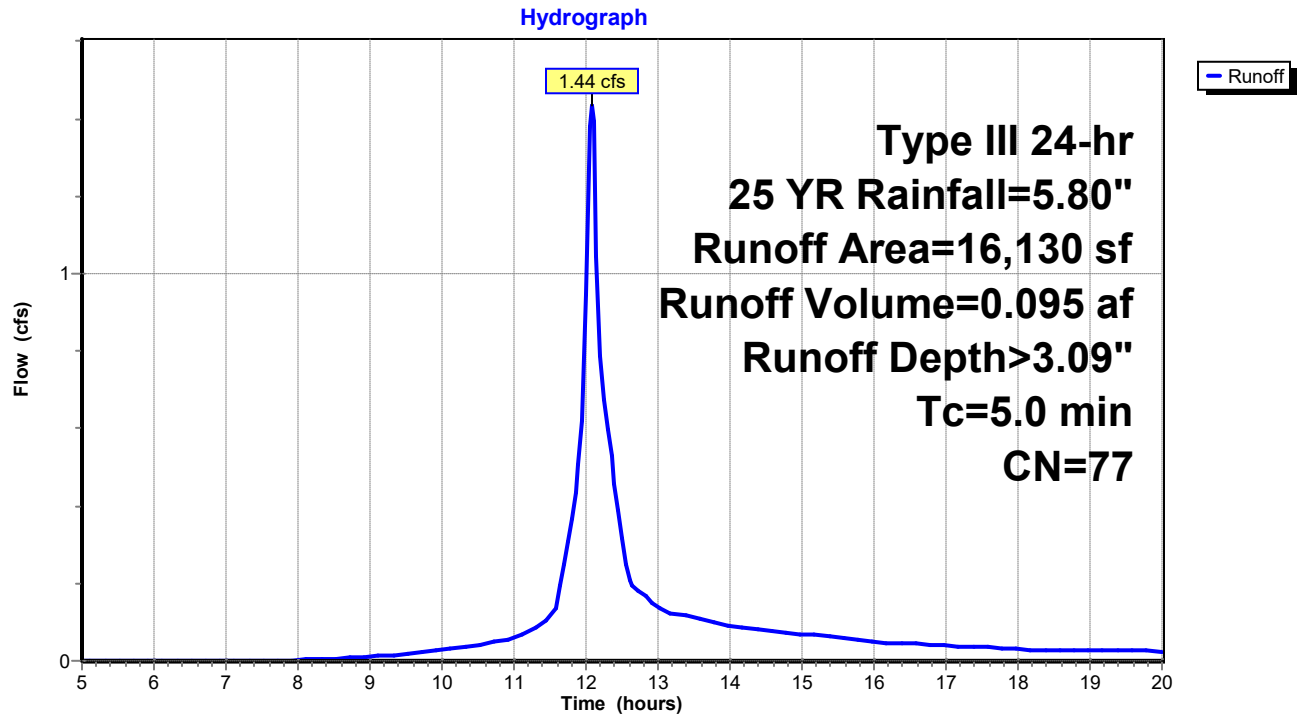
Runoff = 1.44 cfs @ 12.08 hrs, Volume= 0.095 af, Depth> 3.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

	Area (sf)	CN	Description
	13,930	74	>75% Grass cover, Good, HSG C
*	2,200	98	Hardscape in courtyard
	16,130	77	Weighted Average
	13,930		86.36% Pervious Area
	2,200		13.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment CTYRD: Courtyard treated



Summary for Subcatchment Dorm1: Dorm Roof 1 treated

[49] Hint: Tc<2dt may require smaller dt

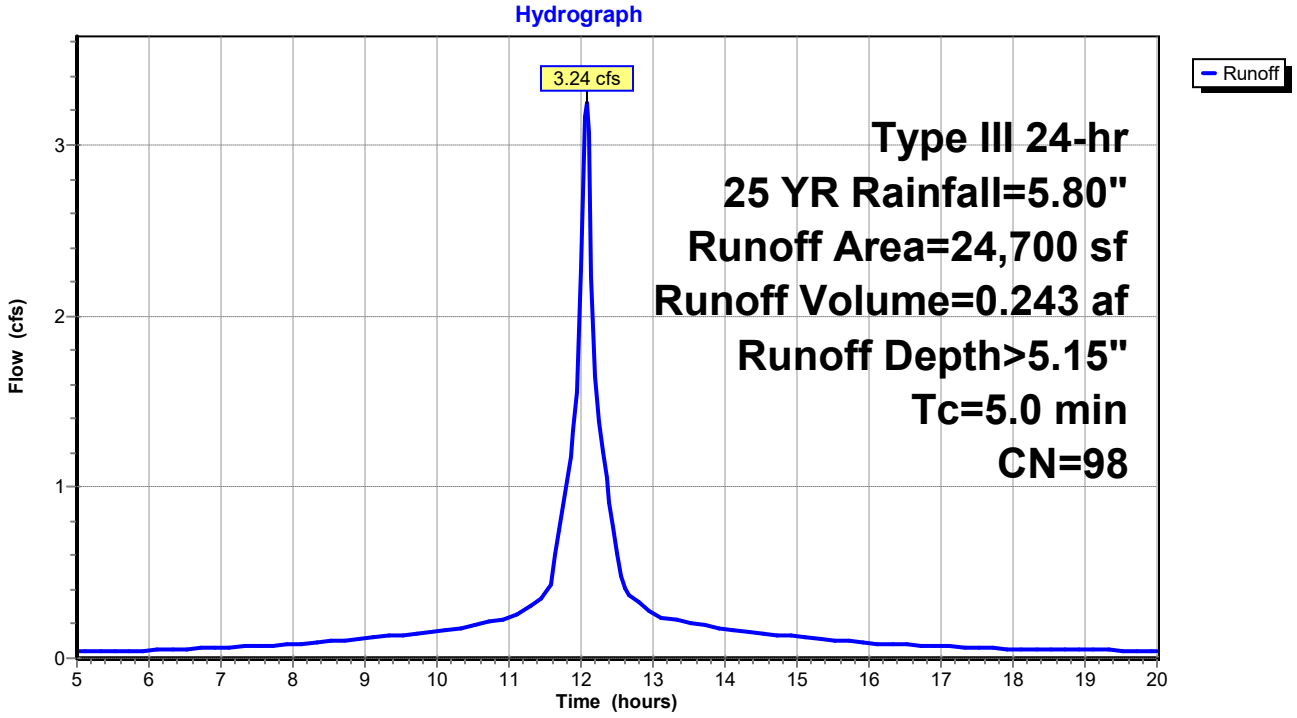
Runoff = 3.24 cfs @ 12.07 hrs, Volume= 0.243 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

	Area (sf)	CN	Description
*	24,700	98	Dorm Roof treated
	24,700		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment Dorm1: Dorm Roof 1 treated



Summary for Subcatchment Dorm2: Dorm Roof 1 treated

[49] Hint: Tc<2dt may require smaller dt

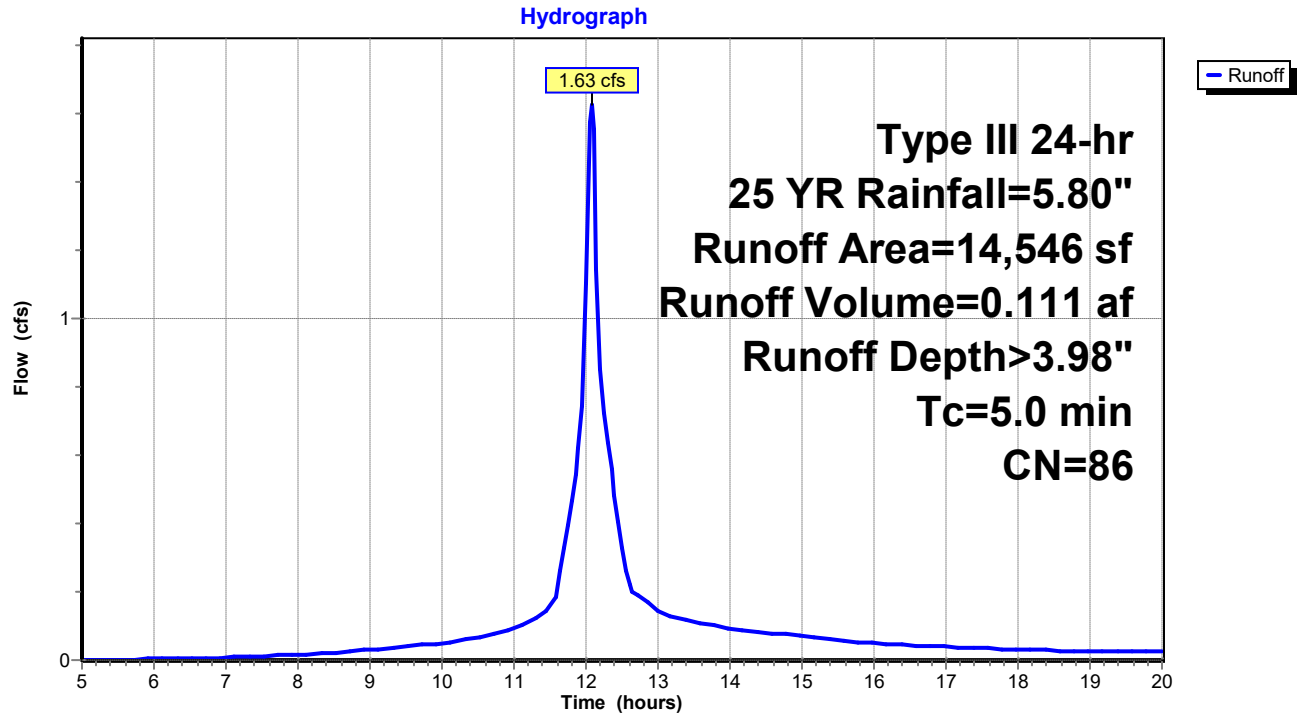
Runoff = 1.63 cfs @ 12.07 hrs, Volume= 0.111 af, Depth> 3.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

	Area (sf)	CN	Description
*	6,500	98	Dorm Roof treated
*	7,046	74	>75% Grass cover, Good, HSG C VFF 1 area
*	1,000	98	Sidewalk
	14,546	86	Weighted Average
	7,046		48.44% Pervious Area
	7,500		51.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment Dorm2: Dorm Roof 1 treated



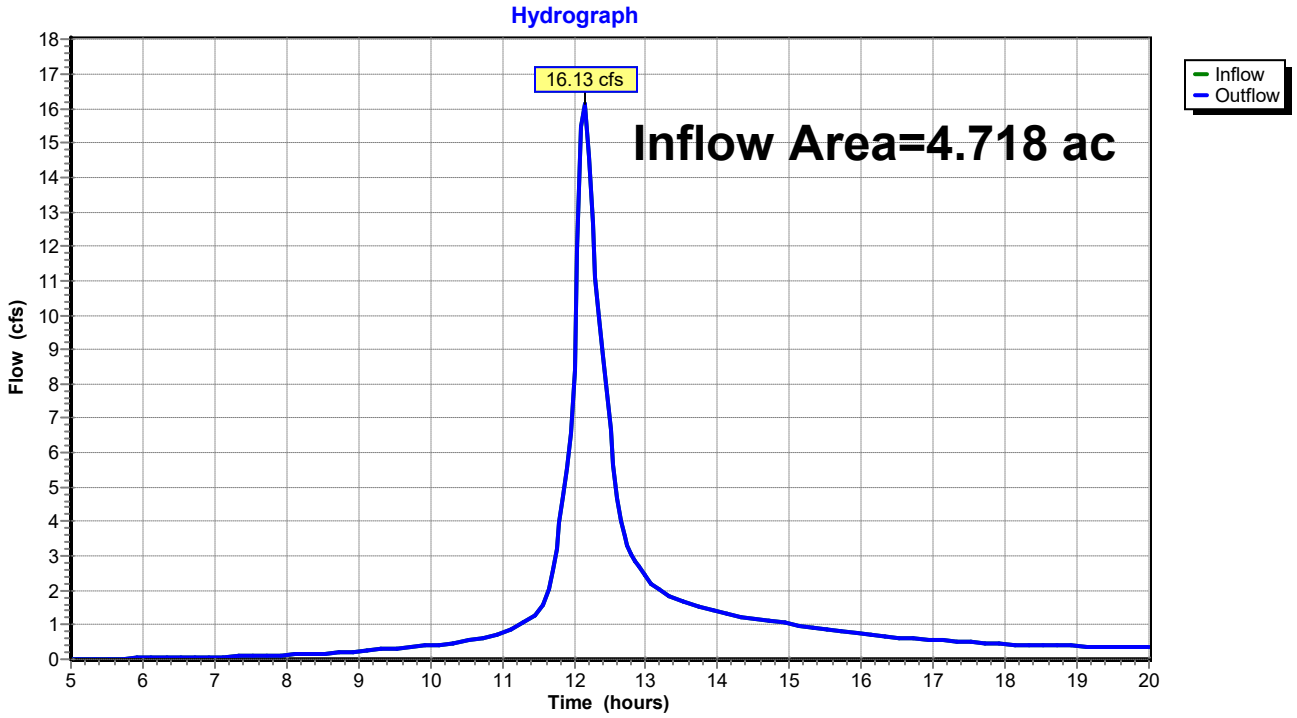
Summary for Reach 100R: POI 100

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.718 ac, 54.40% Impervious, Inflow Depth > 3.55" for 25 YR event
Inflow = 16.13 cfs @ 12.14 hrs, Volume= 1.398 af
Outflow = 16.13 cfs @ 12.14 hrs, Volume= 1.398 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 100R: POI 100



Summary for Pond 1P: Durham SD System

[82] Warning: Early inflow requires earlier time span
[79] Warning: Submerged Pond VFF2 Primary device # 1 OUTLET by 8.90'

Inflow Area = 2.256 ac, 60.00% Impervious, Inflow Depth > 3.91" for 25 YR event
Inflow = 9.19 cfs @ 12.11 hrs, Volume= 0.736 af
Outflow = 9.19 cfs @ 12.11 hrs, Volume= 0.736 af, Atten= 0%, Lag= 0.0 min
Primary = 9.19 cfs @ 12.11 hrs, Volume= 0.736 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.90' @ 12.11 hrs Surf.Area= 9 sf Storage= 12 cf

Plug-Flow detention time= 0.1 min calculated for 0.733 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (777.2 - 777.2)

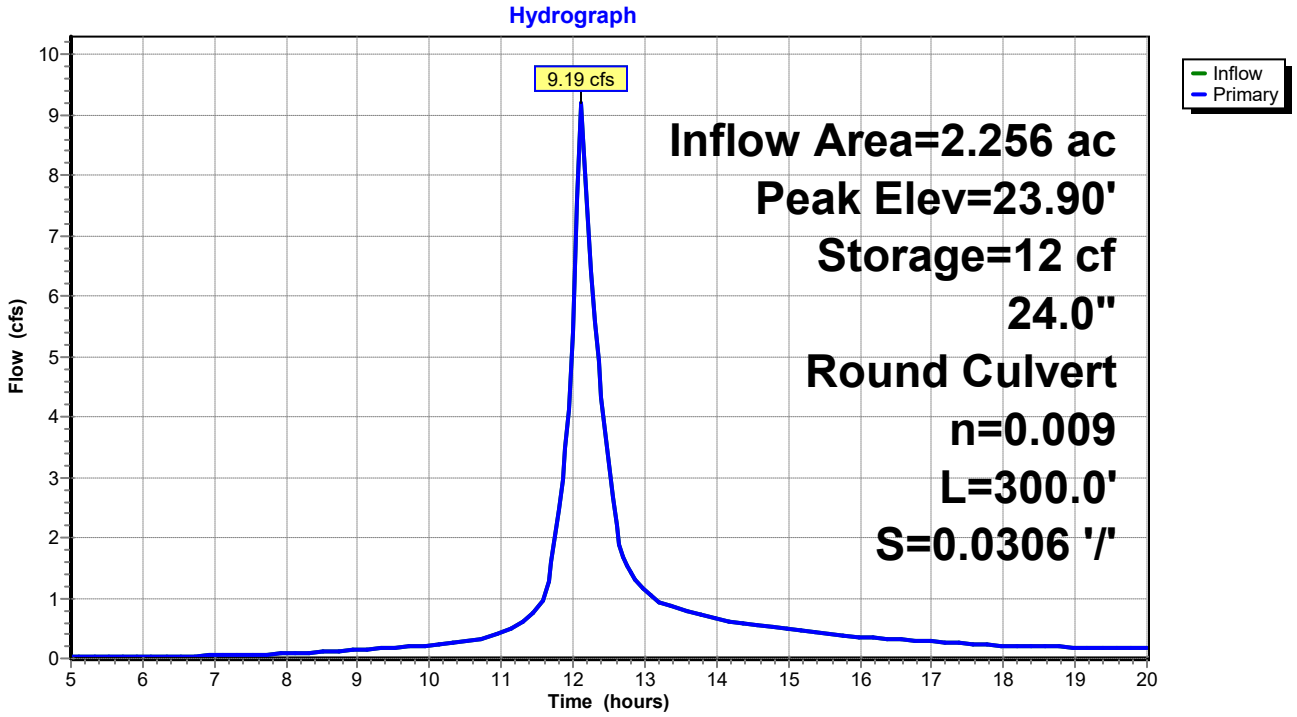
Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,753 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	500	3	53
29.00	15,000	6,200	6,253
30.00	1,000,000	507,500	513,753

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=9.00 cfs @ 12.11 hrs HW=23.89' (Free Discharge)
1=Culvert (Inlet Controls 9.00 cfs @ 3.97 fps)

Pond 1P: Durham SD System



Summary for Pond 2P: Bedford SD System

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 1.525 ac, 39.07% Impervious, Inflow Depth > 3.67" for 25 YR event
Inflow = 5.97 cfs @ 12.14 hrs, Volume= 0.466 af
Outflow = 5.97 cfs @ 12.14 hrs, Volume= 0.466 af, Atten= 0%, Lag= 0.0 min
Primary = 5.97 cfs @ 12.14 hrs, Volume= 0.466 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 22.82' @ 12.14 hrs Surf.Area= 9 sf Storage= 6 cf

Plug-Flow detention time= 0.0 min calculated for 0.464 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (778.4 - 778.3)

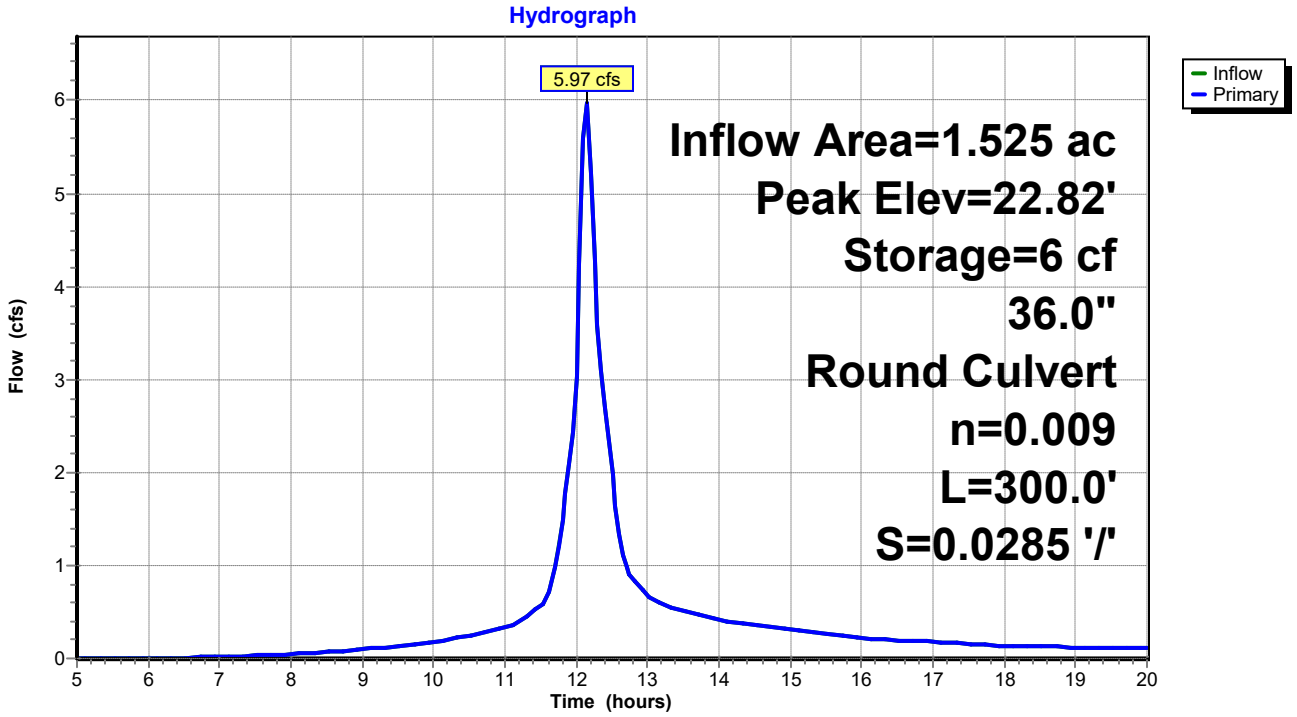
Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=5.89 cfs @ 12.14 hrs HW=22.81' (Free Discharge)
1=Culvert (Inlet Controls 5.89 cfs @ 3.25 fps)

Pond 2P: Bedford SD System



Summary for Pond 3P: DMH corner Bedford Durham

[82] Warning: Early inflow requires earlier time span
[88] Warning: Qout>Qin may require smaller dt or Finer Routing
[79] Warning: Submerged Pond 1P Primary device # 1 OUTLET by 2.13'
[79] Warning: Submerged Pond 2P Primary device # 1 OUTLET by 2.13'
[79] Warning: Submerged Pond VFF1 Primary device # 1 OUTLET by 1.83'

Inflow Area = 4.718 ac, 54.40% Impervious, Inflow Depth > 3.55" for 25 YR event
Inflow = 16.12 cfs @ 12.14 hrs, Volume= 1.398 af
Outflow = 16.13 cfs @ 12.14 hrs, Volume= 1.398 af, Atten= 0%, Lag= 0.0 min
Primary = 16.13 cfs @ 12.14 hrs, Volume= 1.398 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 15.49' @ 12.14 hrs Surf.Area= 9 sf Storage= 19 cf

Plug-Flow detention time= 0.0 min calculated for 1.398 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (785.7 - 785.7)

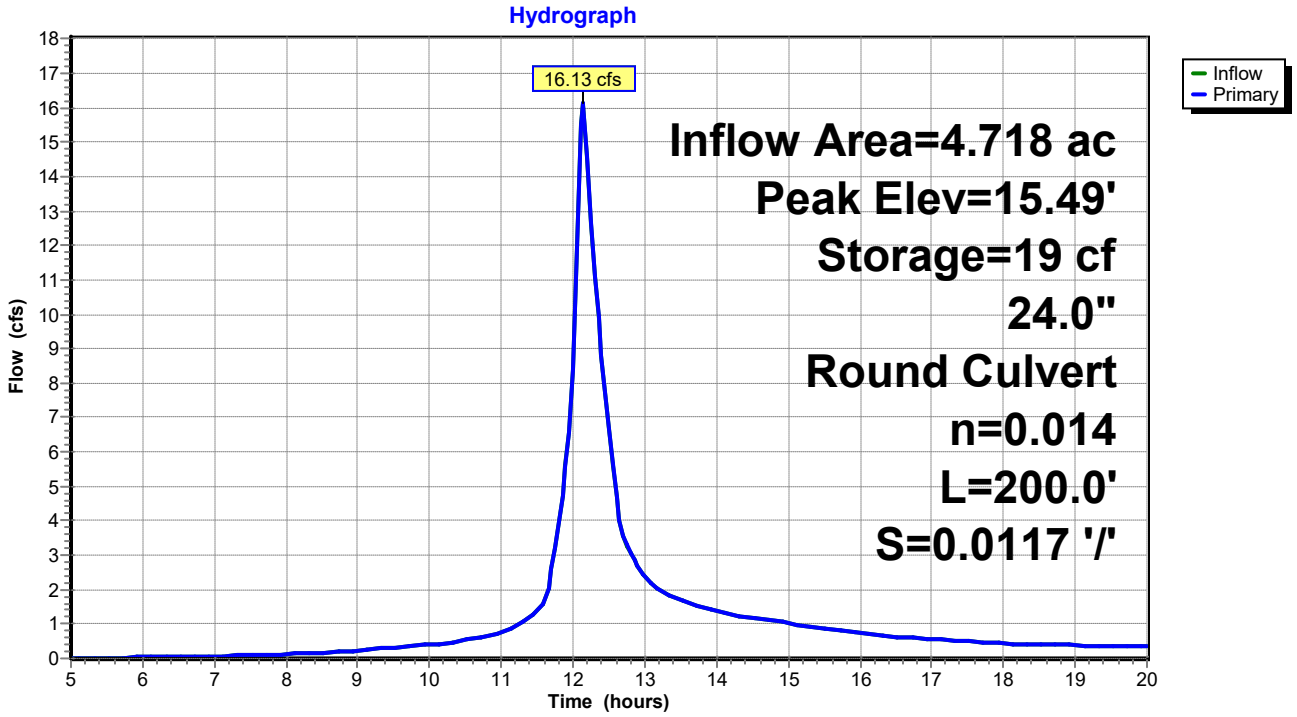
Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=15.96 cfs @ 12.14 hrs HW=15.46' (Free Discharge)
1=Culvert (Inlet Controls 15.96 cfs @ 5.08 fps)

Pond 3P: DMH corner Bedford Durham



Summary for Pond VFF1: VFF1 Courtyard Dorm Roof

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.937 ac, 65.88% Impervious, Inflow Depth > 4.33" for 25 YR event
Inflow = 4.68 cfs @ 12.07 hrs, Volume= 0.338 af
Outflow = 1.98 cfs @ 12.27 hrs, Volume= 0.208 af, Atten= 58%, Lag= 11.8 min
Discarded = 0.01 cfs @ 5.65 hrs, Volume= 0.012 af
Primary = 1.97 cfs @ 12.27 hrs, Volume= 0.196 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.94' @ 12.27 hrs Surf.Area= 4,620 sf Storage= 7,318 cf

Plug-Flow detention time= 160.5 min calculated for 0.208 af (61% of inflow)
Center-of-Mass det. time= 81.9 min (830.6 - 748.7)

Volume	Invert	Avail.Storage	Storage Description
#1	22.00'	16,345 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.00	2,900	0	0
23.00	3,800	3,350	3,350
24.00	4,670	4,235	7,585
24.50	5,185	2,464	10,049
25.00	20,000	6,296	16,345

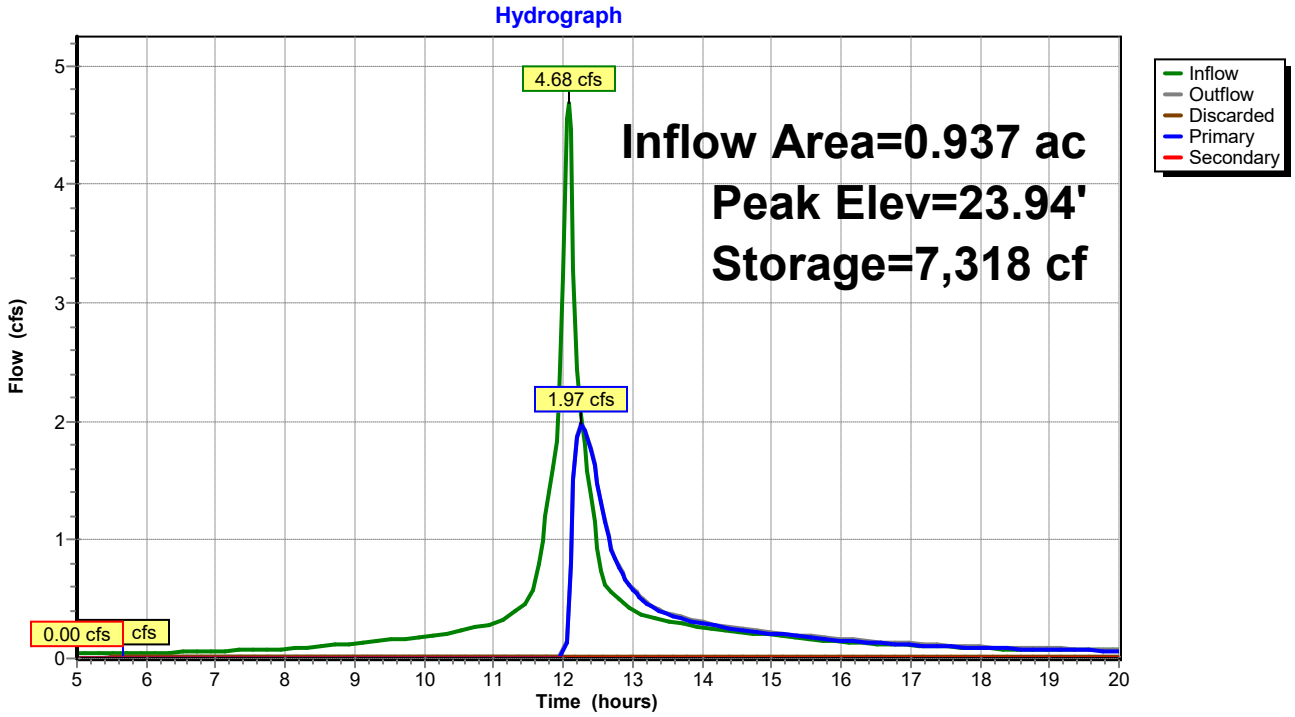
Device	Routing	Invert	Outlet Devices
#1	Primary	23.50'	**18.0" Round Culvert X 2.00** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 23.50' / 13.65' S= 0.1313 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf
#2	Secondary	24.50'	**12.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Discarded	22.00'	**0.01 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.01 cfs @ 5.65 hrs HW=22.03' (Free Discharge)
↑—**3=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=1.96 cfs @ 12.27 hrs HW=23.94' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 1.96 cfs @ 2.26 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond VFF1: VFF1 Courtyard Dorm Roof



Summary for Pond VFF2: VFF3

[88] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 0.334 ac, 51.56% Impervious, Inflow Depth > 3.98" for 25 YR event
Inflow = 1.63 cfs @ 12.07 hrs, Volume= 0.111 af
Outflow = 1.67 cfs @ 12.10 hrs, Volume= 0.099 af, Atten= 0%, Lag= 1.3 min
Primary = 1.27 cfs @ 12.09 hrs, Volume= 0.097 af
Secondary = 0.40 cfs @ 12.10 hrs, Volume= 0.003 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 24.54' @ 12.09 hrs Surf.Area= 510 sf Storage= 718 cf

Plug-Flow detention time= 60.8 min calculated for 0.099 af (90% of inflow)
Center-of-Mass det. time= 26.7 min (793.6 - 766.9)

Volume	Invert	Avail.Storage	Storage Description
#1	22.50'	15,005 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

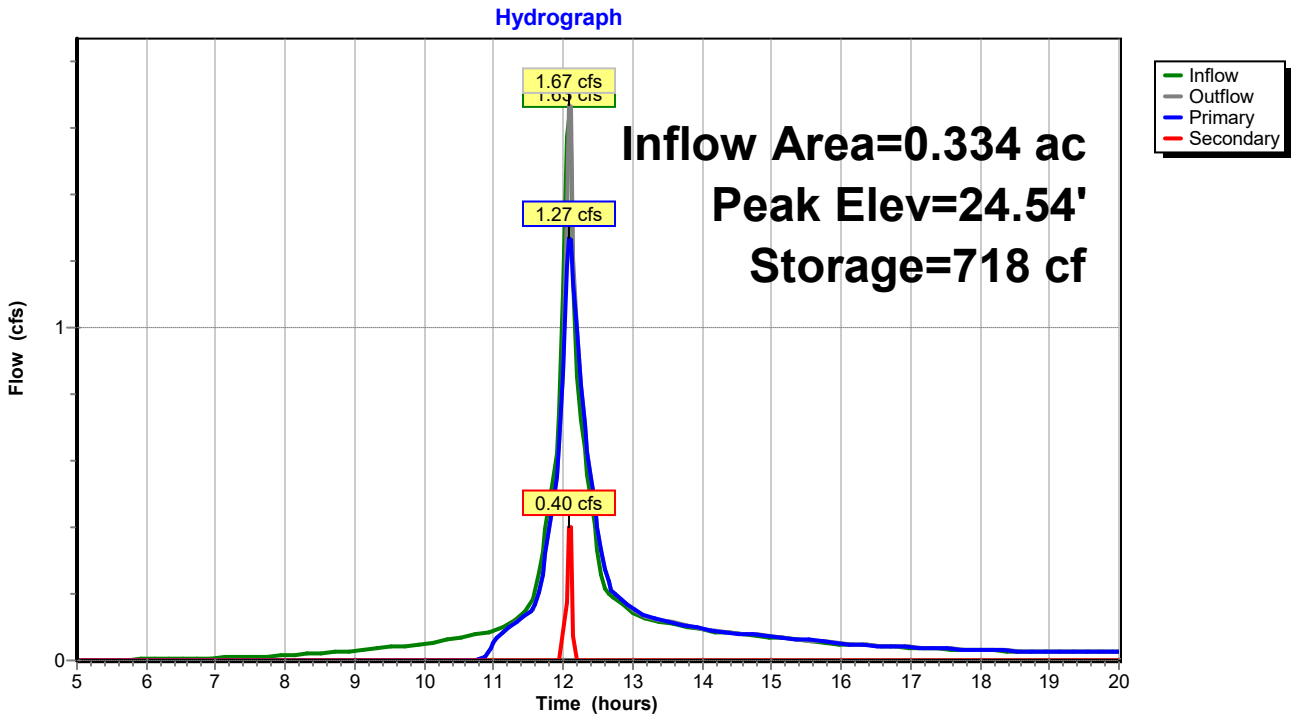
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.50	230	0	0
24.00	400	473	473
25.00	604	502	975
25.10	10,000	530	1,505
26.00	20,000	13,500	15,005

Device	Routing	Invert	Outlet Devices
#1	Primary	24.00'	**15.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 24.00' / 15.00' S= 0.0600 '/' Cc= 0.900 n= 0.011, Flow Area= 1.23 sf
#2	Secondary	24.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=1.26 cfs @ 12.09 hrs HW=24.54' (Free Discharge)
1=Culvert (Inlet Controls 1.26 cfs @ 2.49 fps)

Secondary OutFlow Max=0.35 cfs @ 12.10 hrs HW=24.54' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 0.35 cfs @ 0.48 fps)

Pond VFF2: VFF3



Summary for Pond VFF3: VFF2 SSC2 roof

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.507 ac, 77.50% Impervious, Inflow Depth > 4.70" for 25 YR event
Inflow = 2.78 cfs @ 12.07 hrs, Volume= 0.199 af
Outflow = 1.77 cfs @ 12.17 hrs, Volume= 0.157 af, Atten= 36%, Lag= 5.9 min
Primary = 1.77 cfs @ 12.17 hrs, Volume= 0.157 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 42.23' @ 12.17 hrs Surf.Area= 3,266 sf Storage= 3,105 cf

Plug-Flow detention time= 113.2 min calculated for 0.156 af (79% of inflow)
Center-of-Mass det. time= 58.4 min (806.1 - 747.7)

Volume	Invert	Avail.Storage	Storage Description
#1	40.00'	19,489 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

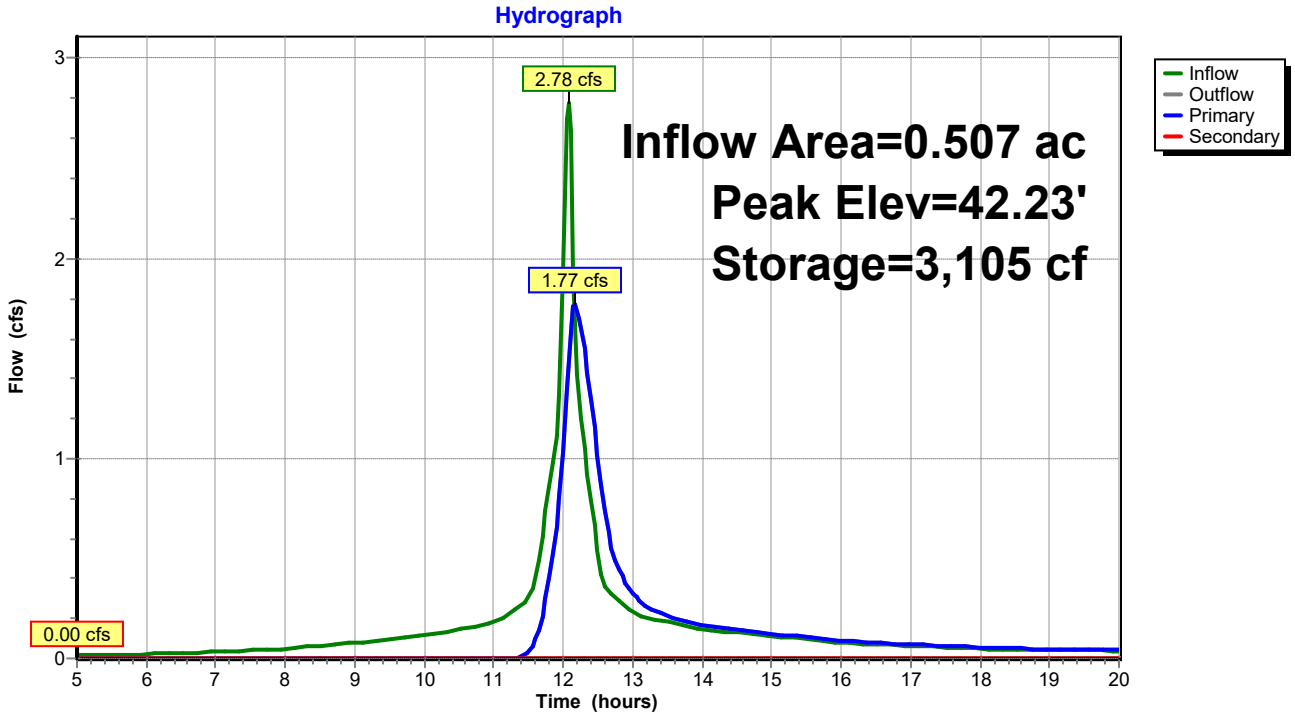
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
40.00	736	0	0
41.00	1,240	988	988
42.00	1,842	1,541	2,529
42.50	5,000	1,711	4,240
42.60	20,000	1,250	5,490
43.00	50,000	14,000	19,489

Device	Routing	Invert	Outlet Devices
#1	Primary	41.50'	**12.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 41.50' / 24.00' S= 0.1167 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Secondary	42.50'	**12.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=1.75 cfs @ 12.17 hrs HW=42.22' (Free Discharge)
1=Culvert (Inlet Controls 1.75 cfs @ 2.89 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=40.00' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond VFF3: VFF2 SSC2 roof



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Non-treated project FM Runoff Area=48,284 sf 43.45% Impervious Runoff Depth>5.84"
Tc=10.0 min CN=84 Runoff=6.73 cfs 0.540 af

Subcatchment 2S: Non-treated project Runoff Area=66,415 sf 39.07% Impervious Runoff Depth>5.73"
Tc=10.0 min CN=83 Runoff=9.12 cfs 0.728 af

Subcatchment CSSC1: SSC1 Roof not Runoff Area=13,368 sf 100.00% Impervious Runoff Depth>7.24"
Tc=5.0 min CN=98 Runoff=2.46 cfs 0.185 af

Subcatchment CSSC2: SSC2 Roof treated Runoff Area=22,091 sf 77.50% Impervious Runoff Depth>6.83"
Tc=5.0 min CN=93 Runoff=3.96 cfs 0.289 af

Subcatchment CTYRD: Courtyard treated Runoff Area=16,130 sf 13.64% Impervious Runoff Depth>5.04"
Tc=5.0 min CN=77 Runoff=2.32 cfs 0.156 af

Subcatchment Dorm1: Dorm Roof 1 Runoff Area=24,700 sf 100.00% Impervious Runoff Depth>7.24"
Tc=5.0 min CN=98 Runoff=4.54 cfs 0.342 af

Subcatchment Dorm2: Dorm Roof 1 treated Runoff Area=14,546 sf 51.56% Impervious Runoff Depth>6.08"
Tc=5.0 min CN=86 Runoff=2.43 cfs 0.169 af

Reach 100R: POI 100 Inflow=26.69 cfs 2.209 af
Outflow=26.69 cfs 2.209 af

Pond 1P: Durham SD System Peak Elev=24.30' Storage=16 cf Inflow=13.27 cfs 1.128 af
24.0" Round Culvert n=0.009 L=300.0' S=0.0306 '/' Outflow=13.27 cfs 1.128 af

Pond 2P: Bedford SD System Peak Elev=23.05' Storage=8 cf Inflow=9.12 cfs 0.728 af
36.0" Round Culvert n=0.009 L=300.0' S=0.0285 '/' Outflow=9.12 cfs 0.728 af

Pond 3P: DMH corner Bedford Durham Peak Elev=17.91' Storage=41 cf Inflow=26.67 cfs 2.209 af
24.0" Round Culvert n=0.014 L=200.0' S=0.0117 '/' Outflow=26.69 cfs 2.209 af

Pond VFF1: VFF1 Courtyard Dorm Roof Peak Elev=24.21' Storage=8,603 cf Inflow=6.86 cfs 0.497 af
Discarded=0.01 cfs 0.012 af Primary=4.76 cfs 0.353 af Secondary=0.00 cfs 0.000 af Outflow=4.77 cfs 0.365 af

Pond VFF2: VFF3 Peak Elev=24.57' Storage=735 cf Inflow=2.43 cfs 0.169 af
Primary=1.42 cfs 0.146 af Secondary=0.99 cfs 0.011 af Outflow=2.40 cfs 0.157 af

Pond VFF3: VFF2 SSC2 roof Peak Elev=42.38' Storage=3,694 cf Inflow=3.96 cfs 0.289 af
Primary=2.34 cfs 0.246 af Secondary=0.00 cfs 0.000 af Outflow=2.34 cfs 0.246 af

Total Runoff Area = 4.718 ac Runoff Volume = 2.407 af Average Runoff Depth = 6.12"
45.60% Pervious = 2.151 ac 54.40% Impervious = 2.567 ac

Summary for Subcatchment 1S: Non-treated project FM area

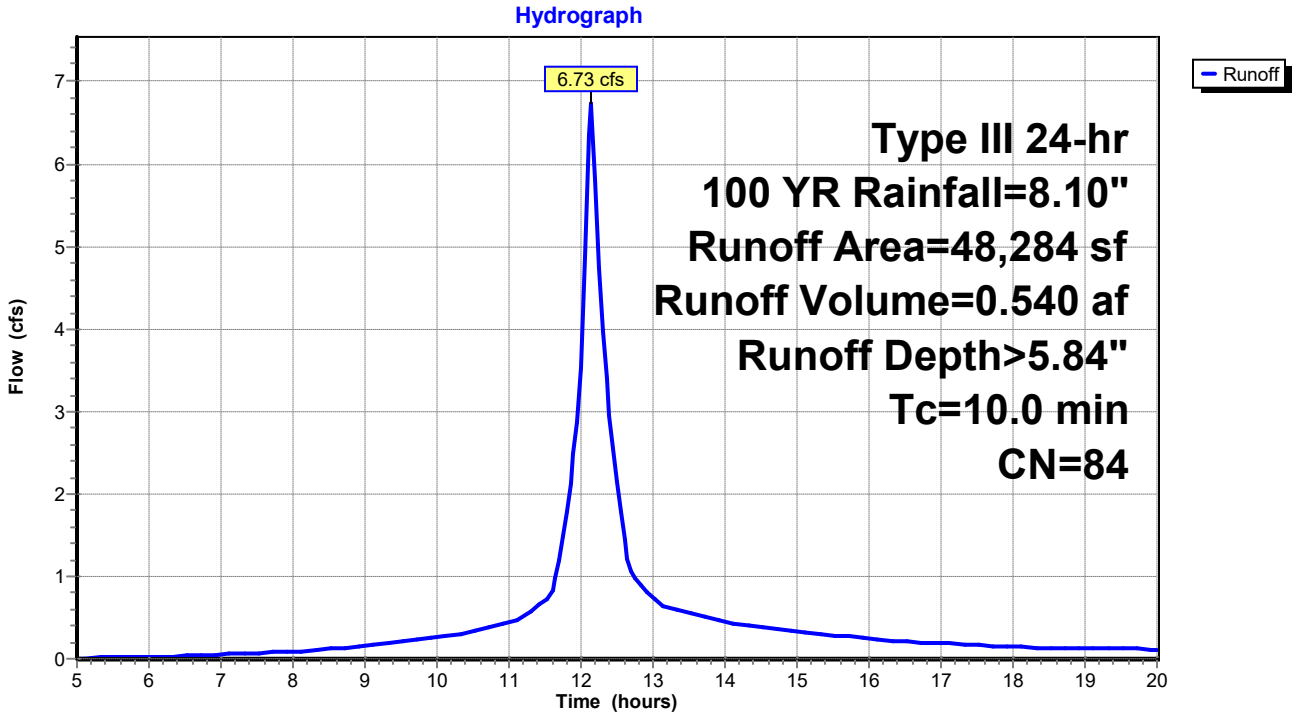
Runoff = 6.73 cfs @ 12.14 hrs, Volume= 0.540 af, Depth> 5.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

Area (sf)	CN	Description
20,981	98	Paved parking, HSG A
27,303	74	>75% Grass cover, Good, HSG C
48,284	84	Weighted Average
27,303		56.55% Pervious Area
20,981		43.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S: Non-treated project FM area



Summary for Subcatchment 2S: Non-treated project Bedford area

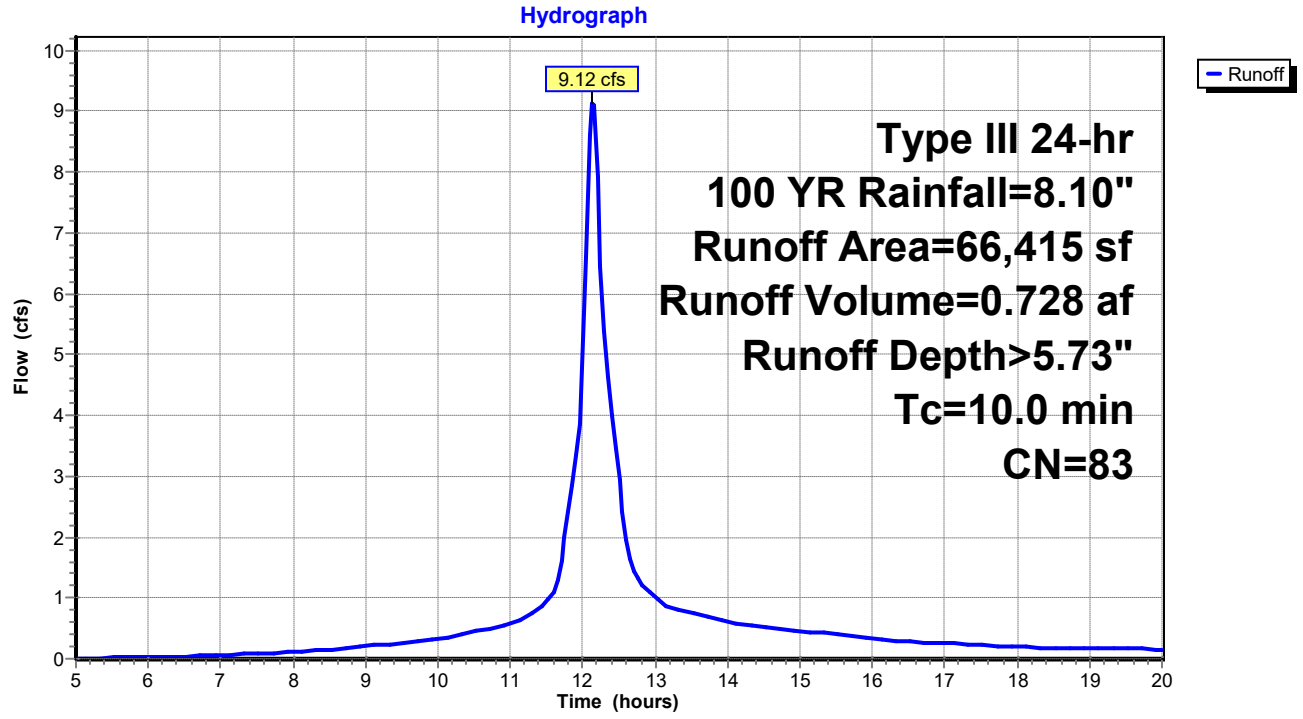
Runoff = 9.12 cfs @ 12.14 hrs, Volume= 0.728 af, Depth> 5.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

	Area (sf)	CN	Description
*	25,948	98	Paved Sidewalks, hardscape
	40,467	74	>75% Grass cover, Good, HSG C
	66,415	83	Weighted Average
	40,467		60.93% Pervious Area
	25,948		39.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: Non-treated project Bedford area



Summary for Subcatchment CSSC1: SSC1 Roof not treated

[49] Hint: Tc<2dt may require smaller dt

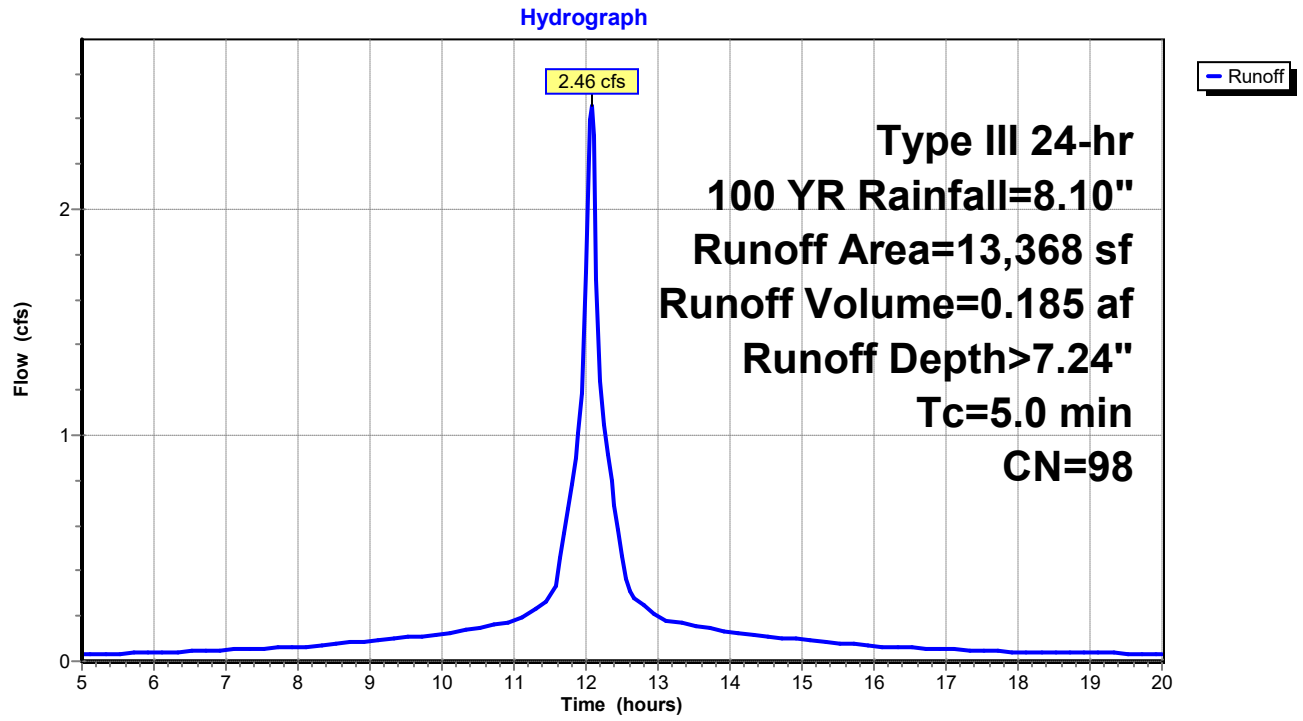
Runoff = 2.46 cfs @ 12.07 hrs, Volume= 0.185 af, Depth> 7.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

	Area (sf)	CN	Description
*	13,368	98	SSC Roof not treated
	13,368		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment CSSC1: SSC1 Roof not treated



Summary for Subcatchment CSSC2: SSC2 Roof treated

[49] Hint: Tc<2dt may require smaller dt

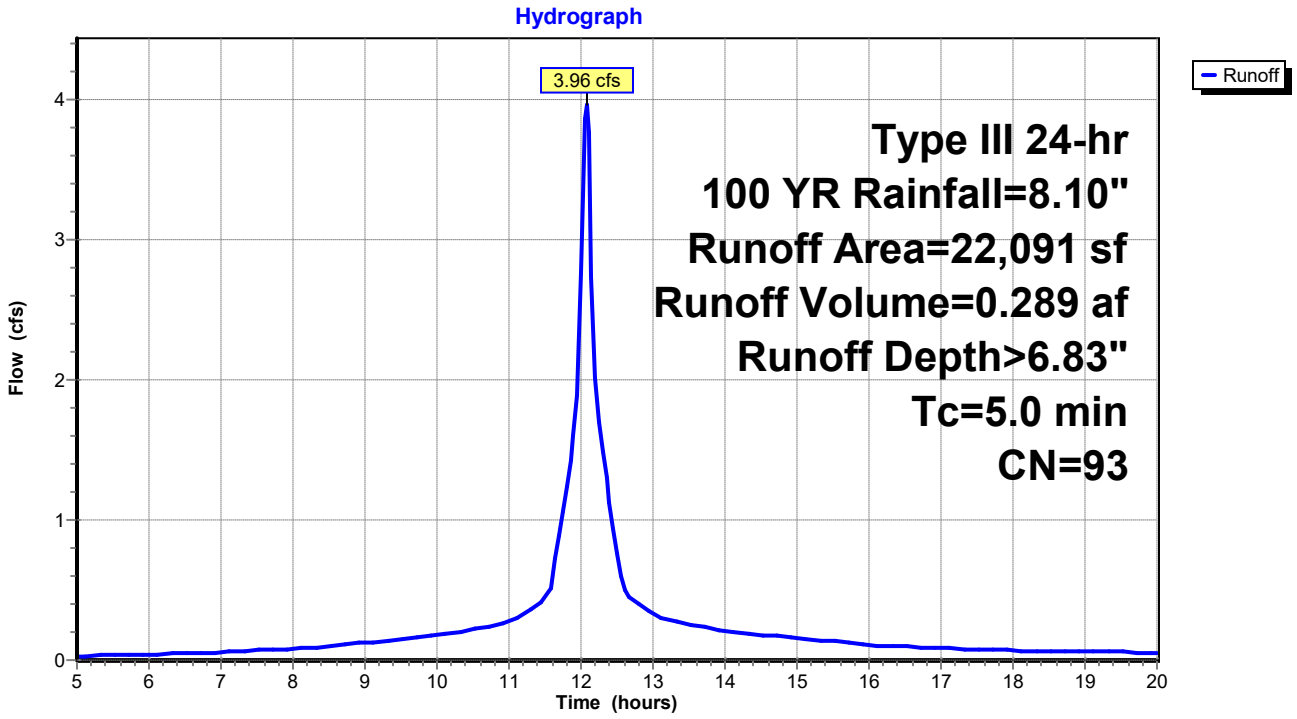
Runoff = 3.96 cfs @ 12.07 hrs, Volume= 0.289 af, Depth> 6.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

	Area (sf)	CN	Description
*	14,450	98	SSC Roof treated
	4,970	74	>75% Grass cover, Good, HSG C
*	2,671	98	Sidewalk
	22,091	93	Weighted Average
	4,970		22.50% Pervious Area
	17,121		77.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment CSSC2: SSC2 Roof treated



Summary for Subcatchment CTYRD: Courtyard treated

[49] Hint: Tc<2dt may require smaller dt

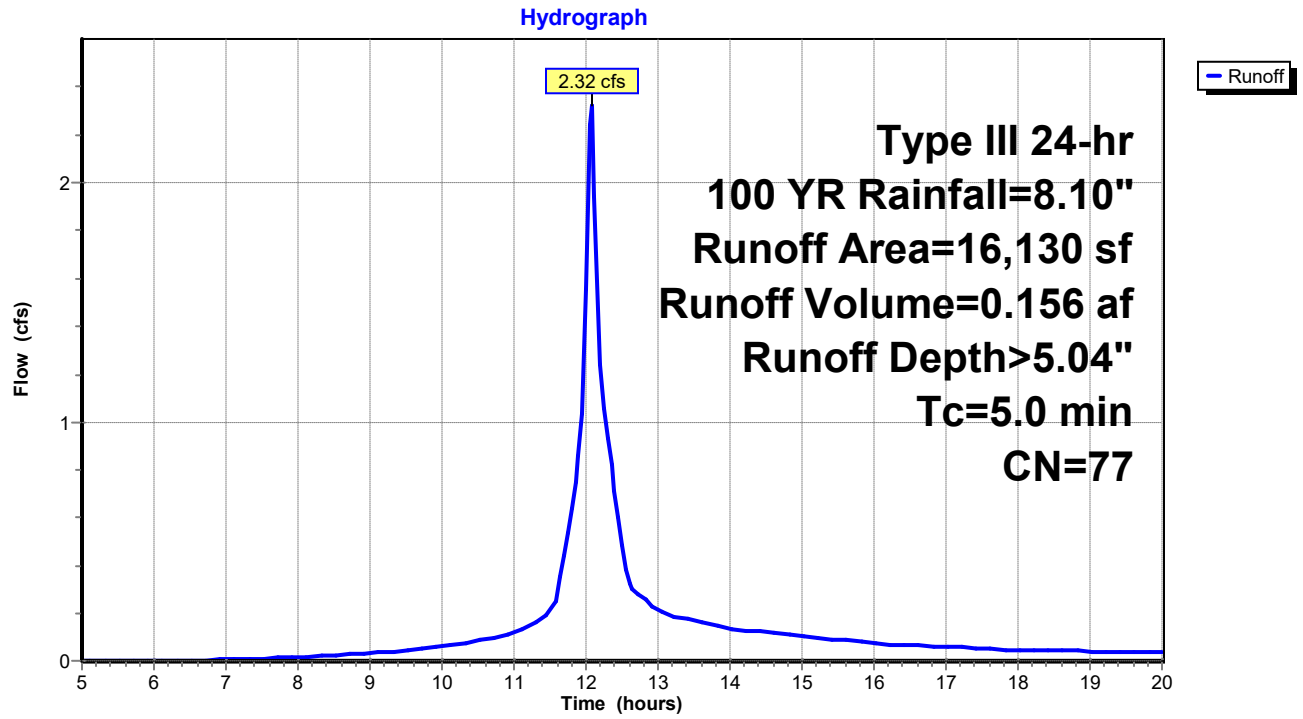
Runoff = 2.32 cfs @ 12.07 hrs, Volume= 0.156 af, Depth> 5.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

	Area (sf)	CN	Description
	13,930	74	>75% Grass cover, Good, HSG C
*	2,200	98	Hardscape in courtyard
	16,130	77	Weighted Average
	13,930		86.36% Pervious Area
	2,200		13.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment CTYRD: Courtyard treated



Summary for Subcatchment Dorm1: Dorm Roof 1 treated

[49] Hint: Tc<2dt may require smaller dt

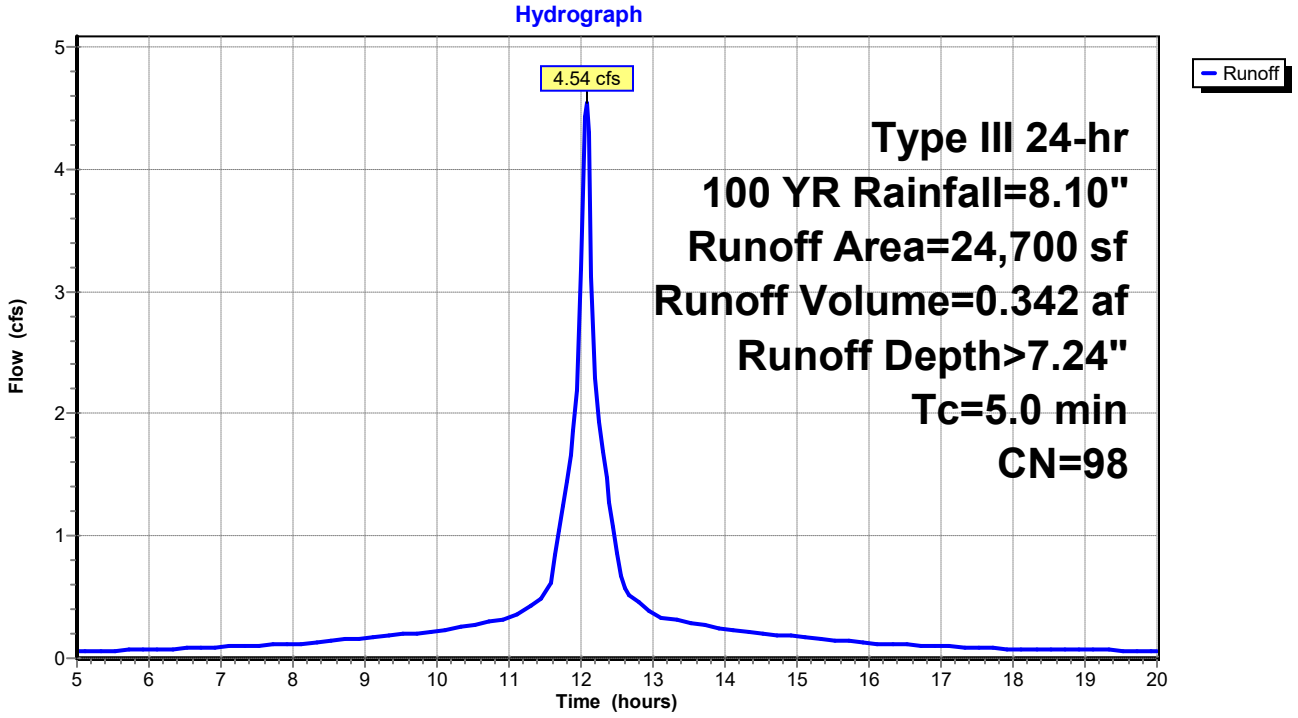
Runoff = 4.54 cfs @ 12.07 hrs, Volume= 0.342 af, Depth> 7.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

	Area (sf)	CN	Description
*	24,700	98	Dorm Roof treated
	24,700		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment Dorm1: Dorm Roof 1 treated



Summary for Subcatchment Dorm2: Dorm Roof 1 treated

[49] Hint: Tc<2dt may require smaller dt

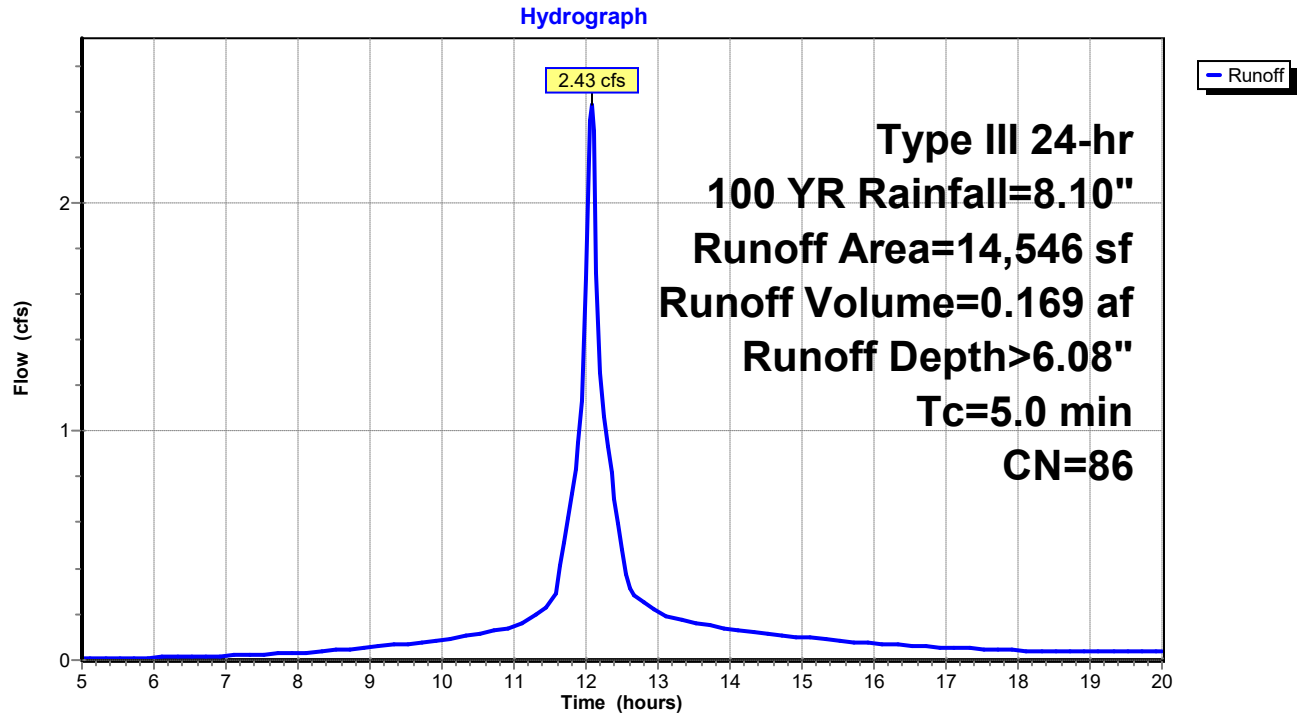
Runoff = 2.43 cfs @ 12.07 hrs, Volume= 0.169 af, Depth> 6.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

	Area (sf)	CN	Description
*	6,500	98	Dorm Roof treated
*	7,046	74	>75% Grass cover, Good, HSG C VFF 1 area
*	1,000	98	Sidewalk
	14,546	86	Weighted Average
	7,046		48.44% Pervious Area
	7,500		51.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment Dorm2: Dorm Roof 1 treated



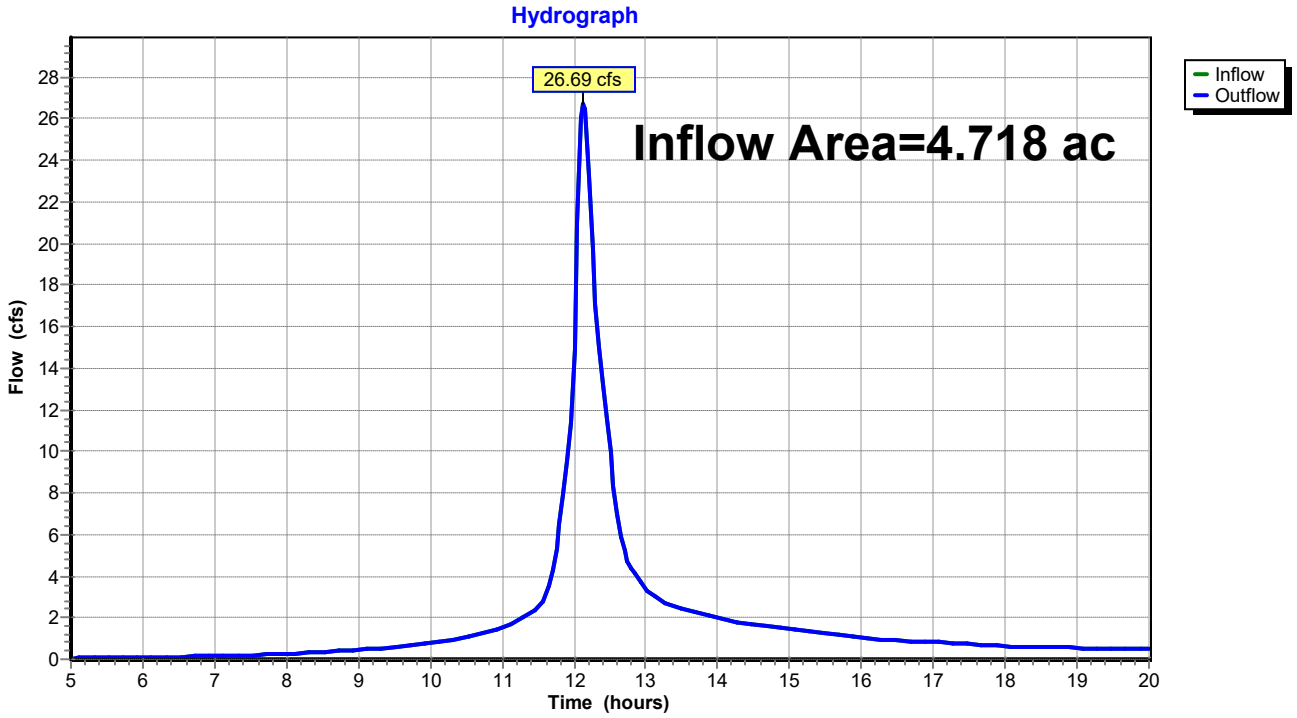
Summary for Reach 100R: POI 100

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.718 ac, 54.40% Impervious, Inflow Depth > 5.62" for 100 YR event
Inflow = 26.69 cfs @ 12.13 hrs, Volume= 2.209 af
Outflow = 26.69 cfs @ 12.13 hrs, Volume= 2.209 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 100R: POI 100



Summary for Pond 1P: Durham SD System

[82] Warning: Early inflow requires earlier time span
[79] Warning: Submerged Pond VFF2 Primary device # 1 INLET by 0.29'
[79] Warning: Submerged Pond VFF3 Primary device # 1 OUTLET by 0.29'

Inflow Area = 2.256 ac, 60.00% Impervious, Inflow Depth > 6.00" for 100 YR event
Inflow = 13.27 cfs @ 12.11 hrs, Volume= 1.128 af
Outflow = 13.27 cfs @ 12.11 hrs, Volume= 1.128 af, Atten= 0%, Lag= 0.0 min
Primary = 13.27 cfs @ 12.11 hrs, Volume= 1.128 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 24.30' @ 12.11 hrs Surf.Area= 9 sf Storage= 16 cf

Plug-Flow detention time= 0.1 min calculated for 1.124 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (768.1 - 768.0)

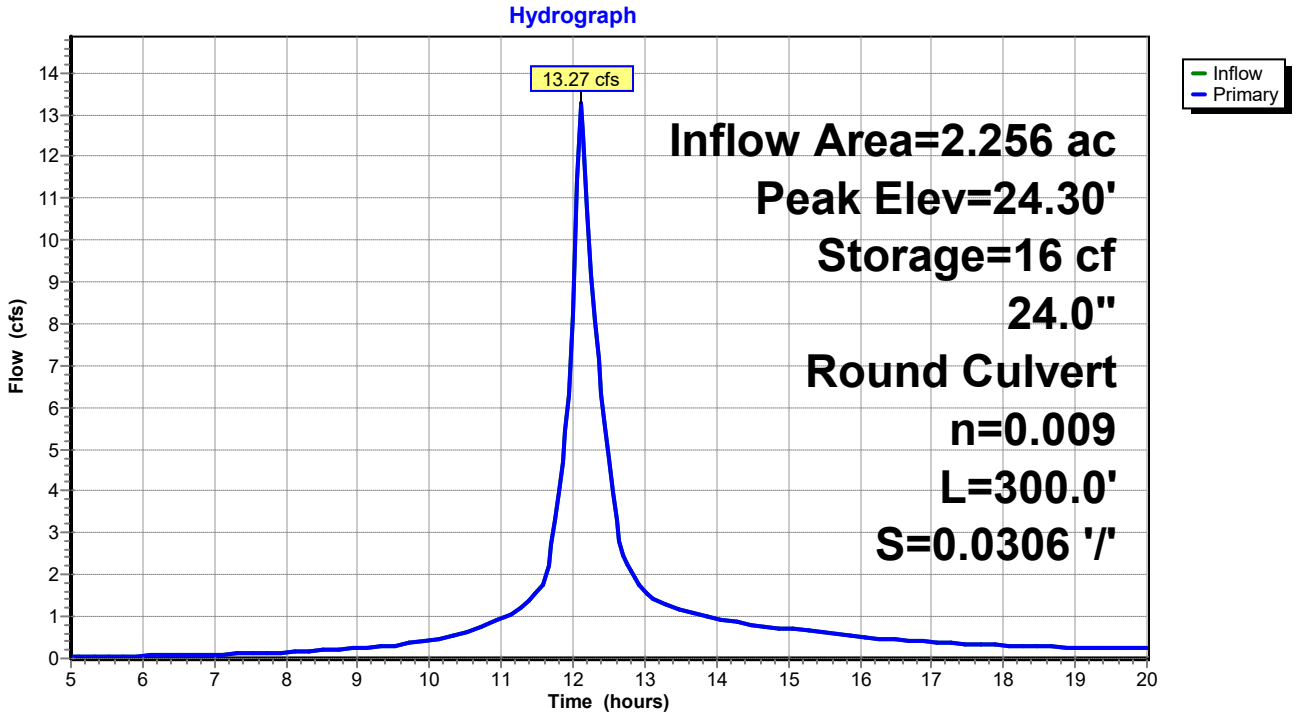
Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,753 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	500	3	53
29.00	15,000	6,200	6,253
30.00	1,000,000	507,500	513,753

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=13.07 cfs @ 12.11 hrs HW=24.27' (Free Discharge)
1=Culvert (Inlet Controls 13.07 cfs @ 4.50 fps)

Pond 1P: Durham SD System



Summary for Pond 2P: Bedford SD System

[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 1.525 ac, 39.07% Impervious, Inflow Depth > 5.73" for 100 YR event
Inflow = 9.12 cfs @ 12.14 hrs, Volume= 0.728 af
Outflow = 9.12 cfs @ 12.14 hrs, Volume= 0.728 af, Atten= 0%, Lag= 0.0 min
Primary = 9.12 cfs @ 12.14 hrs, Volume= 0.728 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.05' @ 12.14 hrs Surf.Area= 9 sf Storage= 8 cf

Plug-Flow detention time= 0.0 min calculated for 0.728 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (767.7 - 767.7)

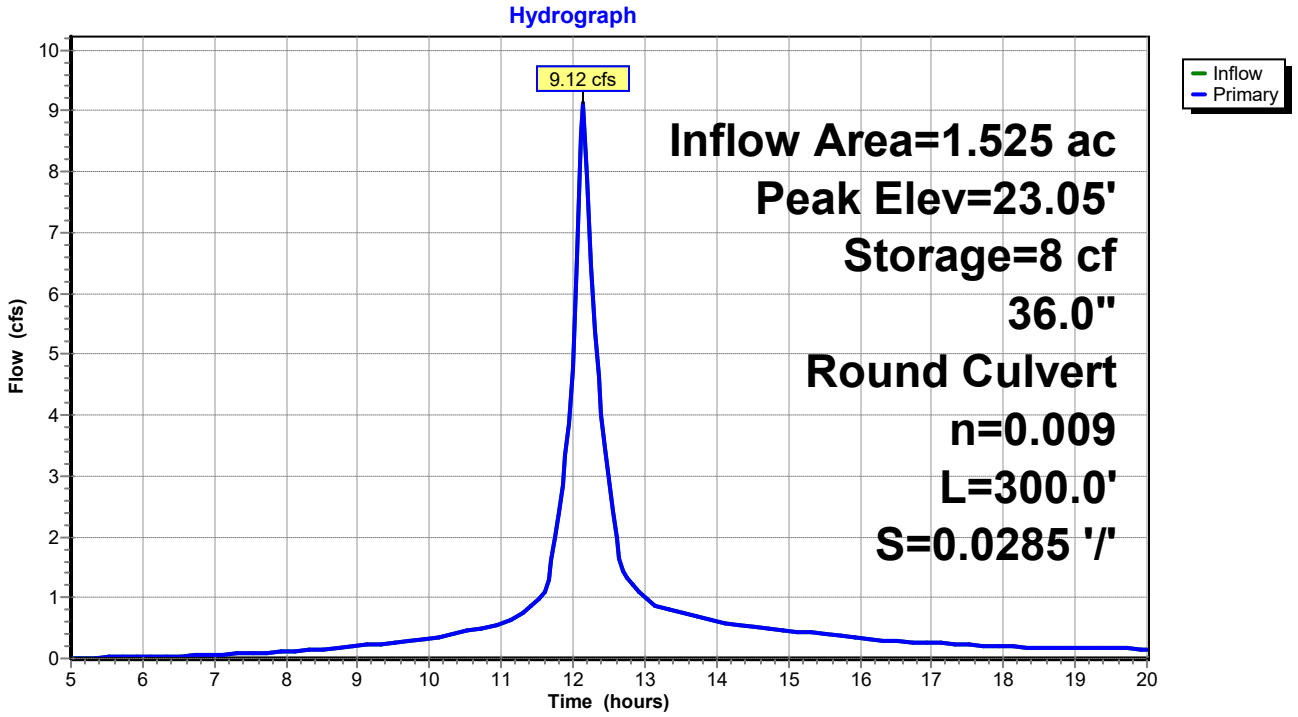
Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=8.98 cfs @ 12.14 hrs HW=23.04' (Free Discharge)
1=Culvert (Inlet Controls 8.98 cfs @ 3.64 fps)

Pond 2P: Bedford SD System



Summary for Pond 3P: DMH corner Bedford Durham

[82] Warning: Early inflow requires earlier time span
[88] Warning: Qout>Qin may require smaller dt or Finer Routing
[79] Warning: Submerged Pond 1P Primary device # 1 OUTLET by 4.48'
[79] Warning: Submerged Pond 2P Primary device # 1 OUTLET by 4.48'
[79] Warning: Submerged Pond VFF1 Primary device # 1 OUTLET by 4.18'

Inflow Area = 4.718 ac, 54.40% Impervious, Inflow Depth > 5.62" for 100 YR event
Inflow = 26.67 cfs @ 12.13 hrs, Volume= 2.209 af
Outflow = 26.69 cfs @ 12.13 hrs, Volume= 2.209 af, Atten= 0%, Lag= 0.1 min
Primary = 26.69 cfs @ 12.13 hrs, Volume= 2.209 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 17.91' @ 12.13 hrs Surf.Area= 9 sf Storage= 41 cf

Plug-Flow detention time= 0.0 min calculated for 2.201 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (775.1 - 775.1)

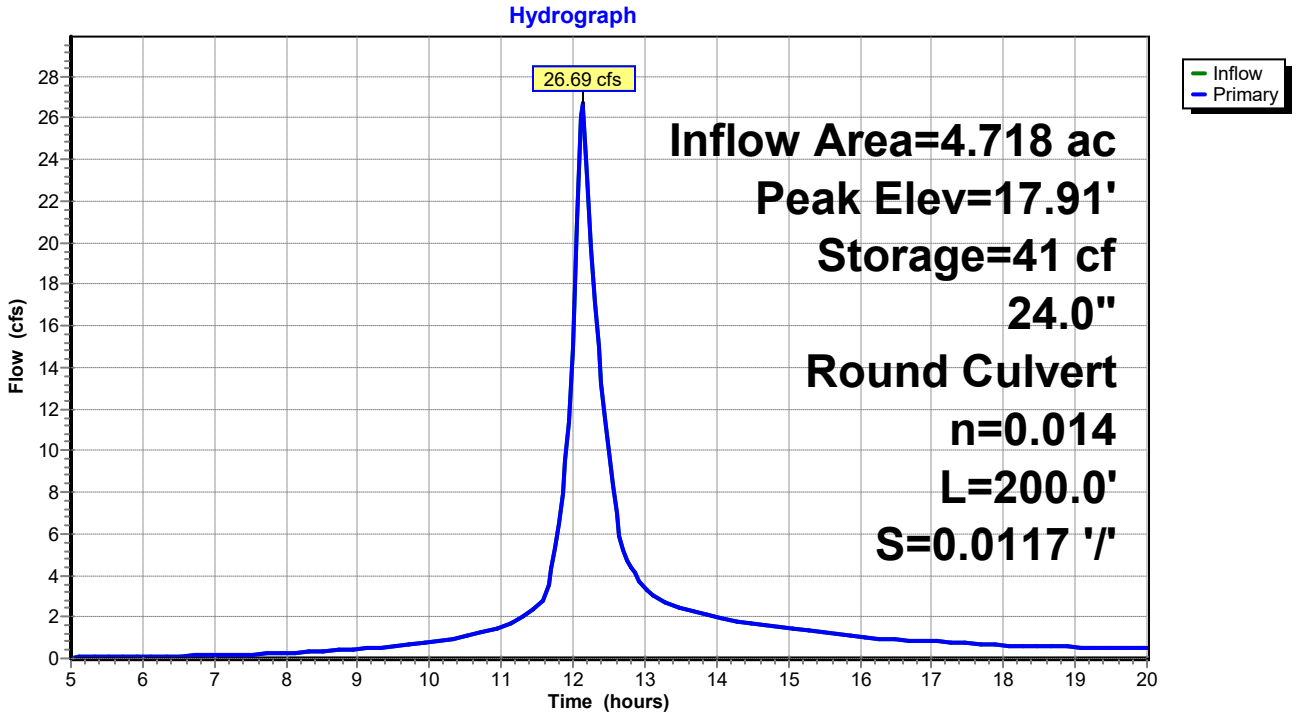
Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=26.27 cfs @ 12.13 hrs HW=17.77' (Free Discharge)
1=Culvert (Barrel Controls 26.27 cfs @ 8.36 fps)

Pond 3P: DMH corner Bedford Durham



Summary for Pond VFF1: VFF1 Courtyard Dorm Roof

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.937 ac, 65.88% Impervious, Inflow Depth > 6.37" for 100 YR event
Inflow = 6.86 cfs @ 12.07 hrs, Volume= 0.497 af
Outflow = 4.77 cfs @ 12.16 hrs, Volume= 0.365 af, Atten= 30%, Lag= 5.3 min
Discarded = 0.01 cfs @ 5.45 hrs, Volume= 0.012 af
Primary = 4.76 cfs @ 12.16 hrs, Volume= 0.353 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 24.21' @ 12.16 hrs Surf.Area= 4,889 sf Storage= 8,603 cf

Plug-Flow detention time= 128.1 min calculated for 0.364 af (73% of inflow)
Center-of-Mass det. time= 64.7 min (810.6 - 745.9)

Volume	Invert	Avail.Storage	Storage Description
#1	22.00'	16,345 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.00	2,900	0	0
23.00	3,800	3,350	3,350
24.00	4,670	4,235	7,585
24.50	5,185	2,464	10,049
25.00	20,000	6,296	16,345

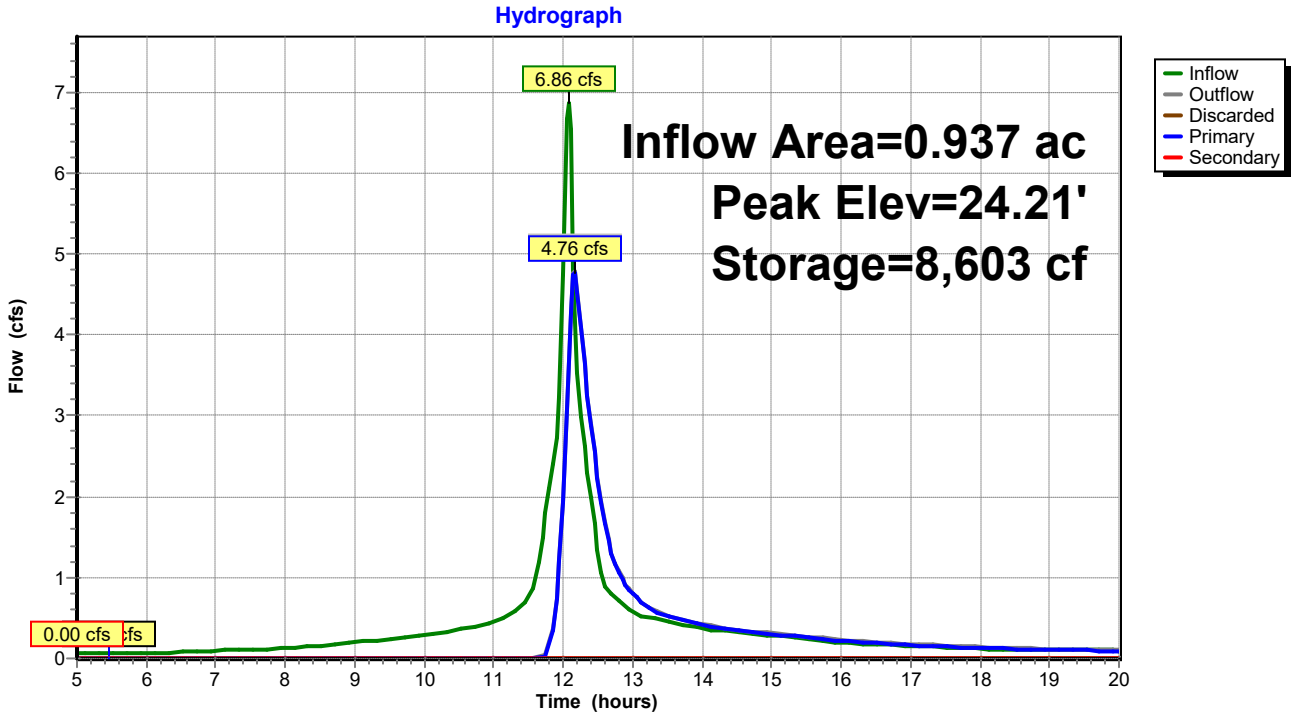
Device	Routing	Invert	Outlet Devices
#1	Primary	23.50'	**18.0" Round Culvert X 2.00** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 23.50' / 13.65' S= 0.1313 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf
#2	Secondary	24.50'	**12.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Discarded	22.00'	**0.01 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.01 cfs @ 5.45 hrs HW=22.03' (Free Discharge)
↑—**3=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=4.71 cfs @ 12.16 hrs HW=24.21' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 4.71 cfs @ 2.87 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond VFF1: VFF1 Courtyard Dorm Roof



Summary for Pond VFF2: VFF3

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.334 ac, 51.56% Impervious, Inflow Depth > 6.08" for 100 YR event
Inflow = 2.43 cfs @ 12.07 hrs, Volume= 0.169 af
Outflow = 2.40 cfs @ 12.08 hrs, Volume= 0.157 af, Atten= 1%, Lag= 0.4 min
Primary = 1.42 cfs @ 12.08 hrs, Volume= 0.146 af
Secondary = 0.99 cfs @ 12.08 hrs, Volume= 0.011 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 24.57' @ 12.08 hrs Surf.Area= 517 sf Storage= 735 cf

Plug-Flow detention time= 47.4 min calculated for 0.157 af (93% of inflow)
Center-of-Mass det. time= 22.5 min (779.8 - 757.4)

Volume	Invert	Avail.Storage	Storage Description
#1	22.50'	15,005 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

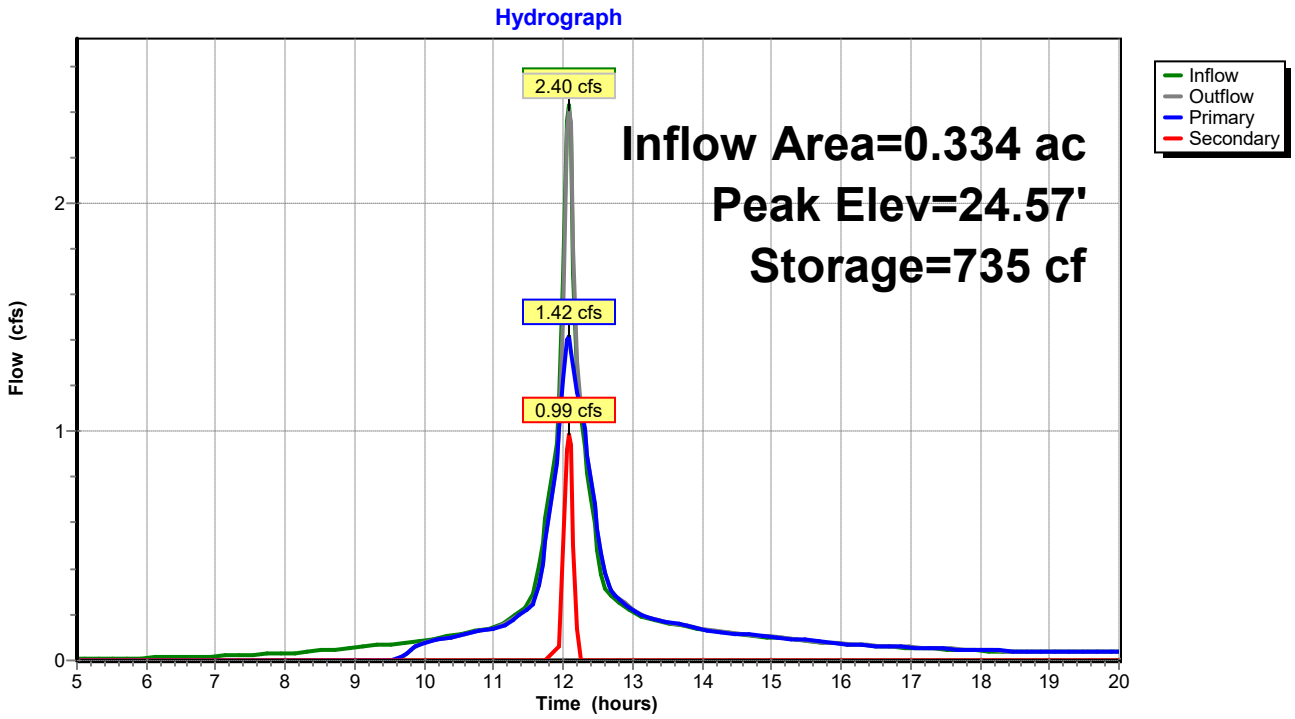
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.50	230	0	0
24.00	400	473	473
25.00	604	502	975
25.10	10,000	530	1,505
26.00	20,000	13,500	15,005

Device	Routing	Invert	Outlet Devices
#1	Primary	24.00'	**15.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 24.00' / 15.00' S= 0.0600 '/' Cc= 0.900 n= 0.011, Flow Area= 1.23 sf
#2	Secondary	24.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=1.40 cfs @ 12.08 hrs HW=24.57' (Free Discharge)
1=Culvert (Inlet Controls 1.40 cfs @ 2.57 fps)

Secondary OutFlow Max=0.92 cfs @ 12.08 hrs HW=24.57' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 0.92 cfs @ 0.66 fps)

Pond VFF2: VFF3



Summary for Pond VFF3: VFF2 SSC2 roof

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.507 ac, 77.50% Impervious, Inflow Depth > 6.83" for 100 YR event
Inflow = 3.96 cfs @ 12.07 hrs, Volume= 0.289 af
Outflow = 2.34 cfs @ 12.18 hrs, Volume= 0.246 af, Atten= 41%, Lag= 6.5 min
Primary = 2.34 cfs @ 12.18 hrs, Volume= 0.246 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 42.38' @ 12.18 hrs Surf.Area= 4,255 sf Storage= 3,694 cf

Plug-Flow detention time= 94.6 min calculated for 0.245 af (85% of inflow)
Center-of-Mass det. time= 50.5 min (792.8 - 742.3)

Volume	Invert	Avail.Storage	Storage Description
#1	40.00'	19,489 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

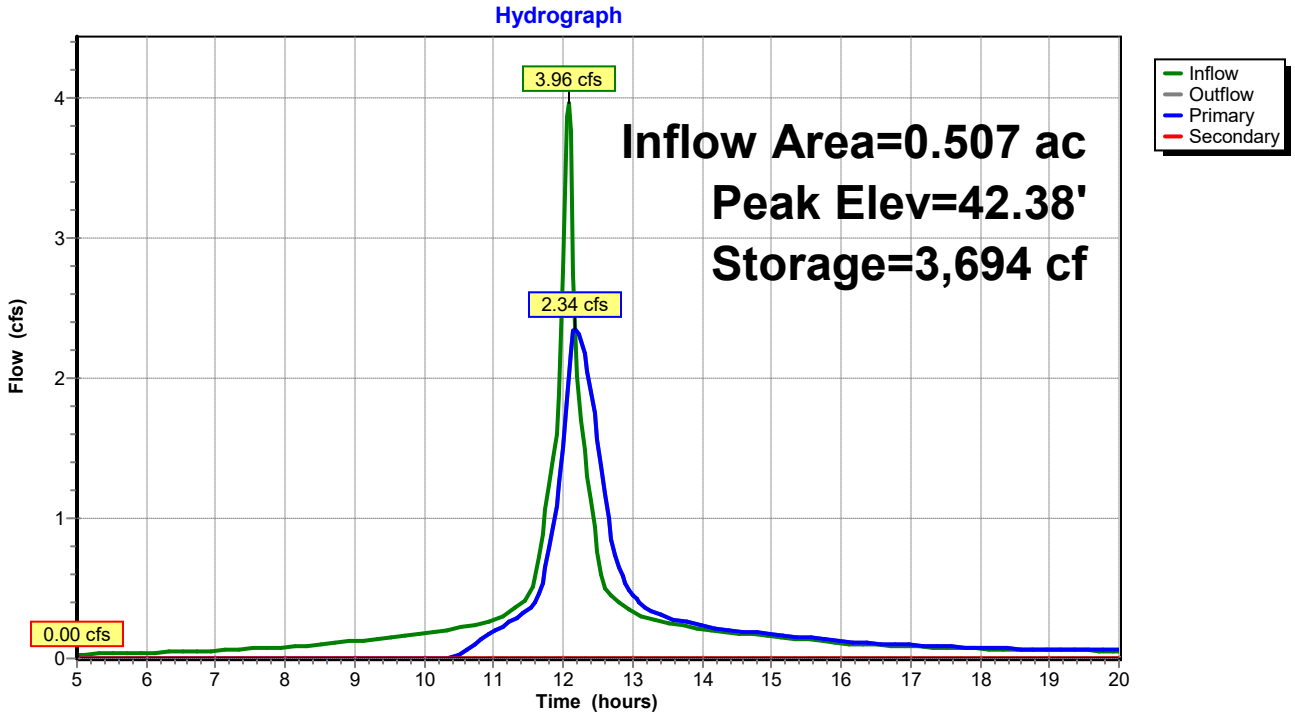
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
40.00	736	0	0
41.00	1,240	988	988
42.00	1,842	1,541	2,529
42.50	5,000	1,711	4,240
42.60	20,000	1,250	5,490
43.00	50,000	14,000	19,489

Device	Routing	Invert	Outlet Devices
#1	Primary	41.50'	**12.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 41.50' / 24.00' S= 0.1167 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Secondary	42.50'	**12.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=2.34 cfs @ 12.18 hrs HW=42.38' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 2.34 cfs @ 3.19 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=40.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond VFF3: VFF2 SSC2 roof



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Non-treated project FM Runoff Area=48,284 sf 43.45% Impervious Runoff Depth>9.42"
Tc=10.0 min CN=84 Runoff=10.58 cfs 0.870 af

Subcatchment 2S: Non-treated project Runoff Area=66,415 sf 39.07% Impervious Runoff Depth>9.30"
Tc=10.0 min CN=83 Runoff=14.43 cfs 1.182 af

Subcatchment CSSC1: SSC1 Roof not Runoff Area=13,368 sf 100.00% Impervious Runoff Depth>10.77"
Tc=5.0 min CN=98 Runoff=3.64 cfs 0.275 af

Subcatchment CSSC2: SSC2 Roof treated Runoff Area=22,091 sf 77.50% Impervious Runoff Depth>10.41"
Tc=5.0 min CN=93 Runoff=5.95 cfs 0.440 af

Subcatchment CTYRD: Courtyard treated Runoff Area=16,130 sf 13.64% Impervious Runoff Depth>8.53"
Tc=5.0 min CN=77 Runoff=3.83 cfs 0.263 af

Subcatchment Dorm1: Dorm Roof 1 Runoff Area=24,700 sf 100.00% Impervious Runoff Depth>10.77"
Tc=5.0 min CN=98 Runoff=6.73 cfs 0.509 af

Subcatchment Dorm2: Dorm Roof 1 treated Runoff Area=14,546 sf 51.56% Impervious Runoff Depth>9.67"
Tc=5.0 min CN=86 Runoff=3.77 cfs 0.269 af

Reach 100R: POI 100 Inflow=36.26 cfs 3.608 af
Outflow=36.26 cfs 3.608 af

Pond 1P: Durham SD System Peak Elev=25.30' Storage=25 cf Inflow=20.12 cfs 1.799 af
24.0" Round Culvert n=0.009 L=300.0' S=0.0306 '/' Outflow=20.12 cfs 1.799 af

Pond 2P: Bedford SD System Peak Elev=23.38' Storage=11 cf Inflow=14.43 cfs 1.182 af
36.0" Round Culvert n=0.009 L=300.0' S=0.0285 '/' Outflow=14.43 cfs 1.182 af

Pond 3P: DMH corner Bedford Durham Peak Elev=22.08' Storage=1,933 cf Inflow=42.01 cfs 3.607 af
24.0" Round Culvert n=0.014 L=200.0' S=0.0117 '/' Outflow=36.26 cfs 3.608 af

Pond VFF1: VFF1 Courtyard Dorm Roof Peak Elev=24.46' Storage=9,861 cf Inflow=10.57 cfs 0.772 af
Discarded=0.01 cfs 0.012 af Primary=8.02 cfs 0.625 af Secondary=0.00 cfs 0.000 af Outflow=8.03 cfs 0.638 af

Pond VFF2: VFF3 Peak Elev=24.62' Storage=760 cf Inflow=3.77 cfs 0.269 af
Primary=1.63 cfs 0.222 af Secondary=2.11 cfs 0.035 af Outflow=3.74 cfs 0.257 af

Pond VFF3: VFF2 SSC2 roof Peak Elev=42.56' Storage=4,806 cf Inflow=5.95 cfs 0.440 af
Primary=2.83 cfs 0.389 af Secondary=0.45 cfs 0.007 af Outflow=3.27 cfs 0.396 af

Total Runoff Area = 4.718 ac Runoff Volume = 3.809 af Average Runoff Depth = 9.69"
45.60% Pervious = 2.151 ac 54.40% Impervious = 2.567 ac

Summary for Subcatchment 1S: Non-treated project FM area

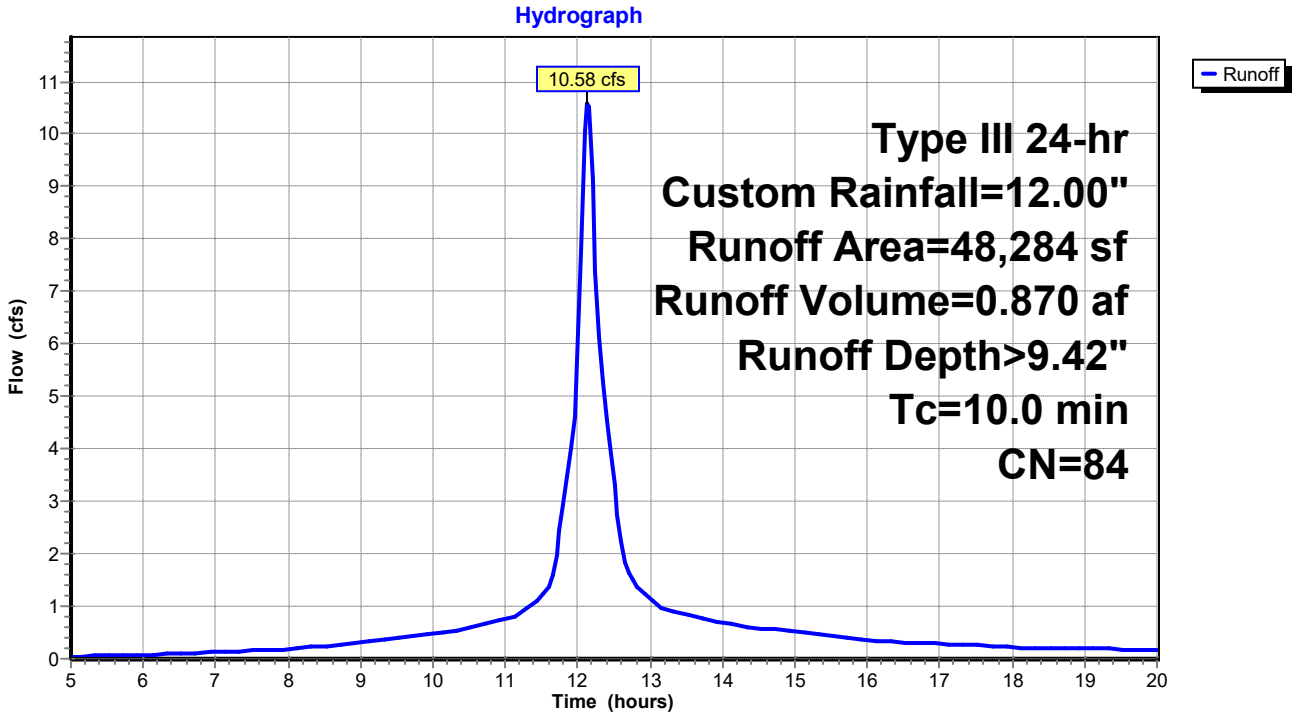
Runoff = 10.58 cfs @ 12.14 hrs, Volume= 0.870 af, Depth> 9.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr Custom Rainfall=12.00"

Area (sf)	CN	Description
20,981	98	Paved parking, HSG A
27,303	74	>75% Grass cover, Good, HSG C
48,284	84	Weighted Average
27,303		56.55% Pervious Area
20,981		43.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S: Non-treated project FM area



Summary for Subcatchment 2S: Non-treated project Bedford area

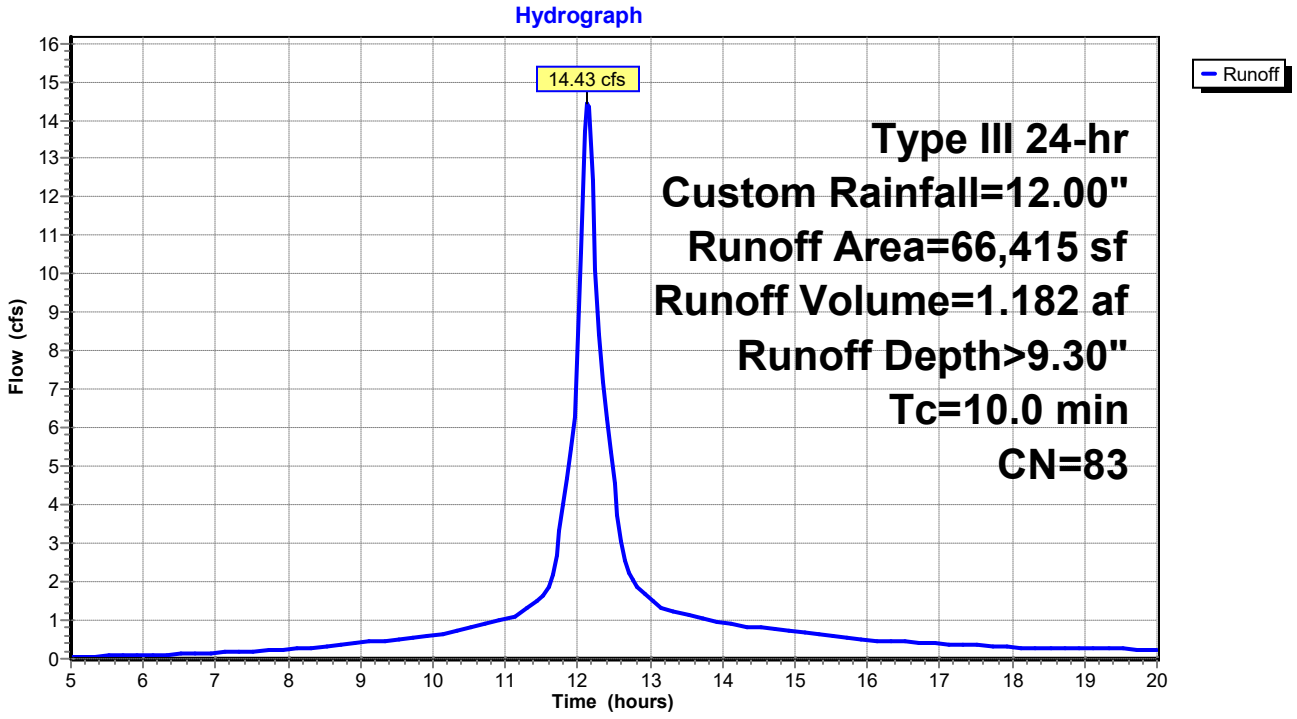
Runoff = 14.43 cfs @ 12.14 hrs, Volume= 1.182 af, Depth> 9.30"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr Custom Rainfall=12.00"

	Area (sf)	CN	Description
*	25,948	98	Paved Sidewalks, hardscape
	40,467	74	>75% Grass cover, Good, HSG C
	66,415	83	Weighted Average
	40,467		60.93% Pervious Area
	25,948		39.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: Non-treated project Bedford area



Summary for Subcatchment CSSC1: SSC1 Roof not treated

[49] Hint: Tc<2dt may require smaller dt

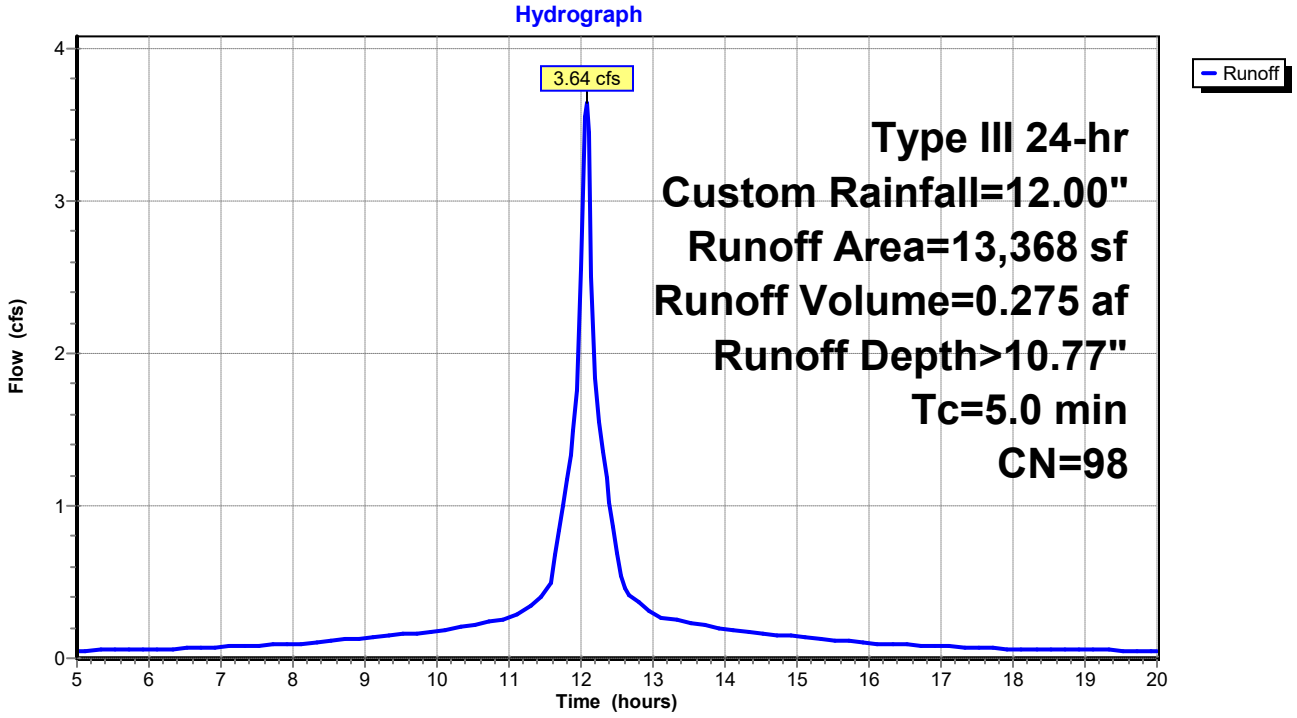
Runoff = 3.64 cfs @ 12.07 hrs, Volume= 0.275 af, Depth>10.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr Custom Rainfall=12.00"

	Area (sf)	CN	Description
*	13,368	98	SSC Roof not treated
	13,368		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment CSSC1: SSC1 Roof not treated



Summary for Subcatchment CSSC2: SSC2 Roof treated

[49] Hint: Tc<2dt may require smaller dt

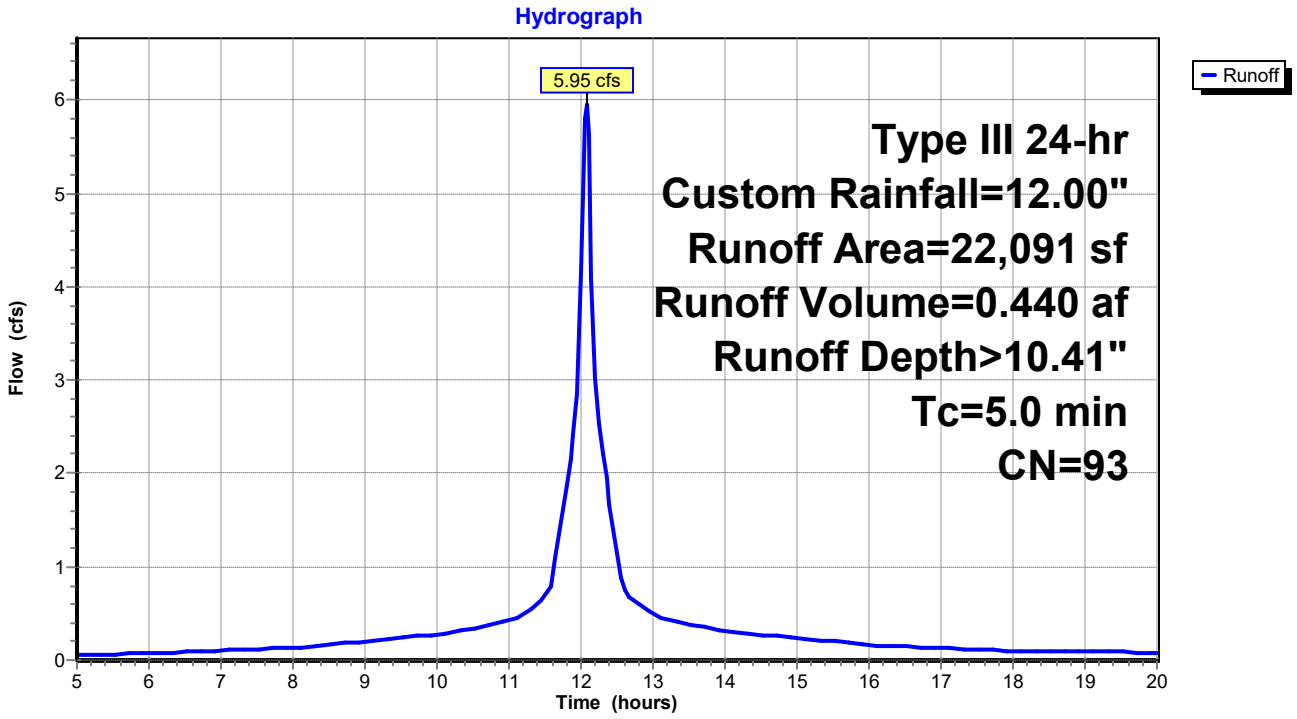
Runoff = 5.95 cfs @ 12.07 hrs, Volume= 0.440 af, Depth>10.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr Custom Rainfall=12.00"

	Area (sf)	CN	Description
*	14,450	98	SSC Roof treated
	4,970	74	>75% Grass cover, Good, HSG C
*	2,671	98	Sidewalk
	22,091	93	Weighted Average
	4,970		22.50% Pervious Area
	17,121		77.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment CSSC2: SSC2 Roof treated



Summary for Subcatchment CTYRD: Courtyard treated

[49] Hint: Tc<2dt may require smaller dt

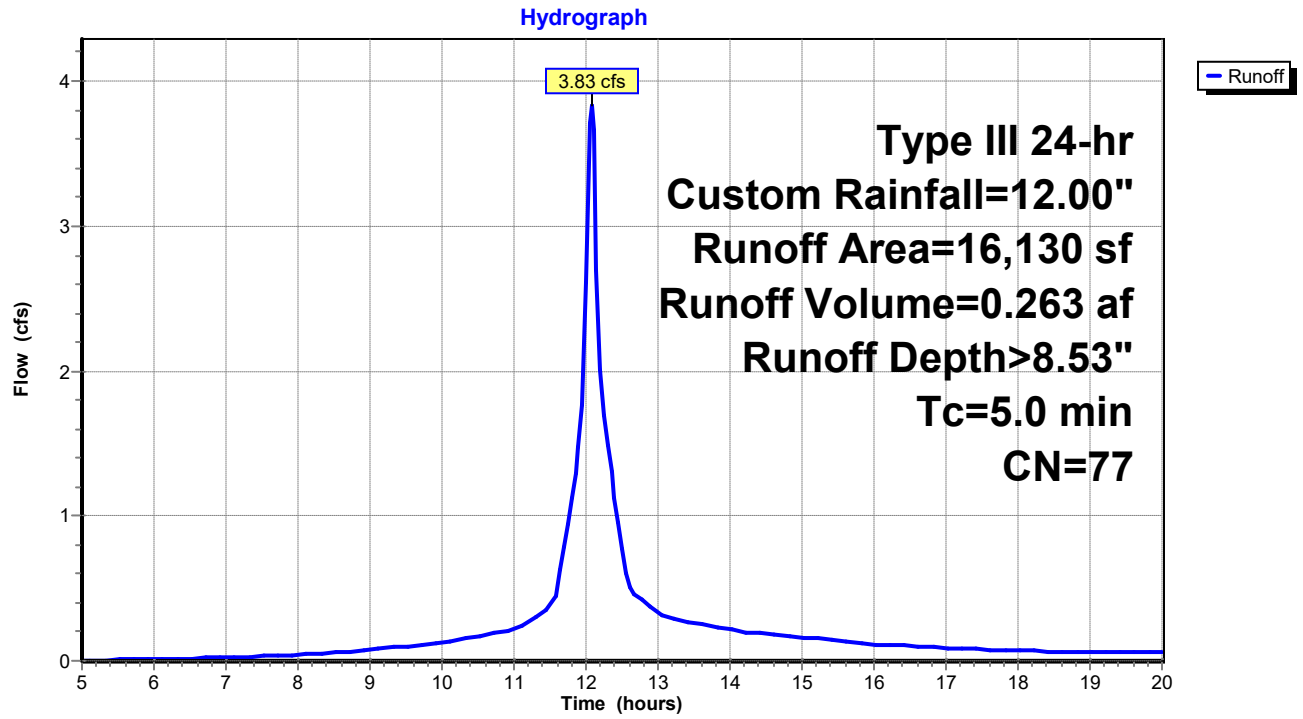
Runoff = 3.83 cfs @ 12.07 hrs, Volume= 0.263 af, Depth> 8.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr Custom Rainfall=12.00"

	Area (sf)	CN	Description
	13,930	74	>75% Grass cover, Good, HSG C
*	2,200	98	Hardscape in courtyard
	16,130	77	Weighted Average
	13,930		86.36% Pervious Area
	2,200		13.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment CTYRD: Courtyard treated



Summary for Subcatchment Dorm1: Dorm Roof 1 treated

[49] Hint: Tc<2dt may require smaller dt

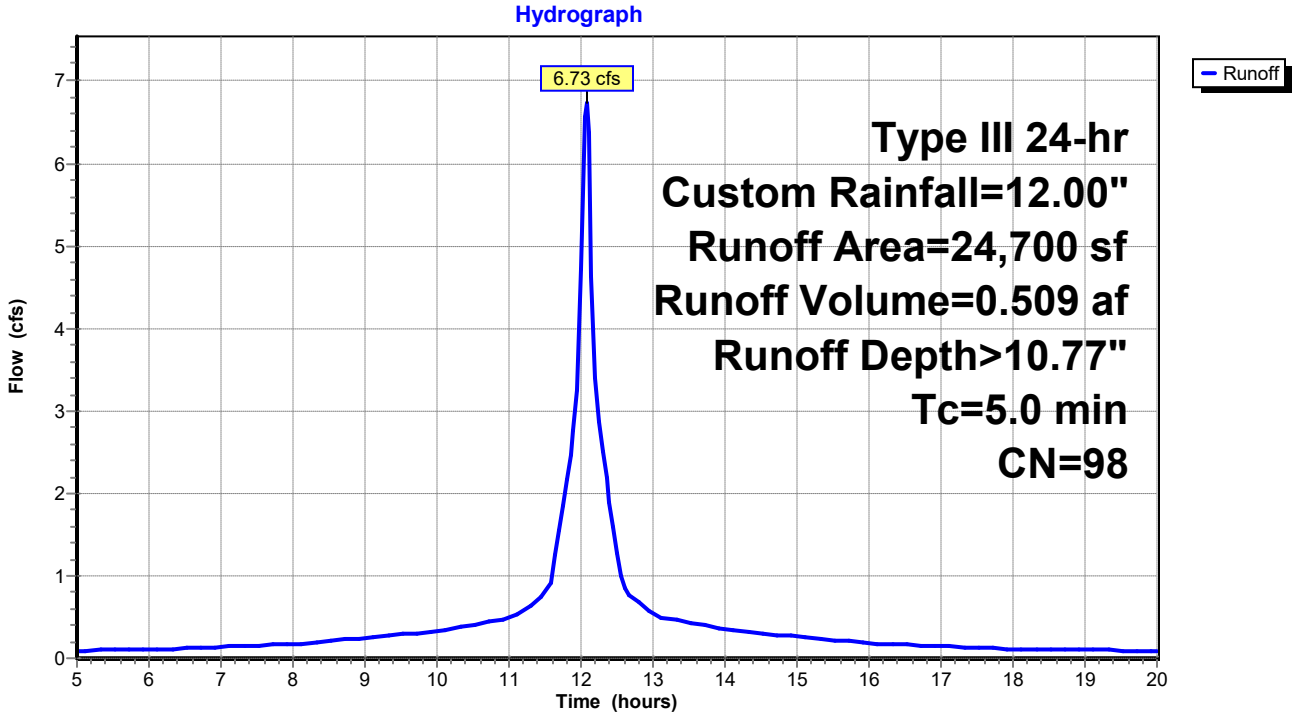
Runoff = 6.73 cfs @ 12.07 hrs, Volume= 0.509 af, Depth>10.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr Custom Rainfall=12.00"

	Area (sf)	CN	Description
*	24,700	98	Dorm Roof treated
	24,700		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment Dorm1: Dorm Roof 1 treated



Summary for Subcatchment Dorm2: Dorm Roof 1 treated

[49] Hint: Tc<2dt may require smaller dt

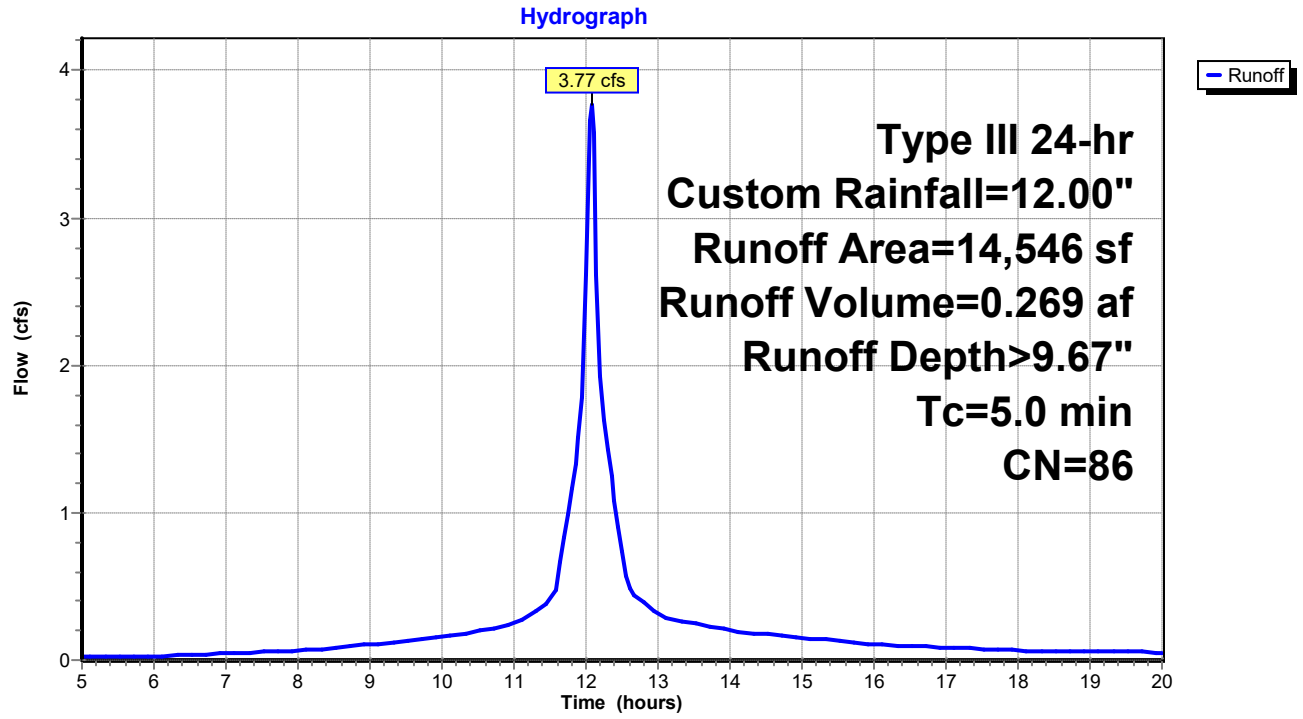
Runoff = 3.77 cfs @ 12.07 hrs, Volume= 0.269 af, Depth> 9.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr Custom Rainfall=12.00"

	Area (sf)	CN	Description
*	6,500	98	Dorm Roof treated
*	7,046	74	>75% Grass cover, Good, HSG C VFF 1 area
*	1,000	98	Sidewalk
	14,546	86	Weighted Average
	7,046		48.44% Pervious Area
	7,500		51.56% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment Dorm2: Dorm Roof 1 treated



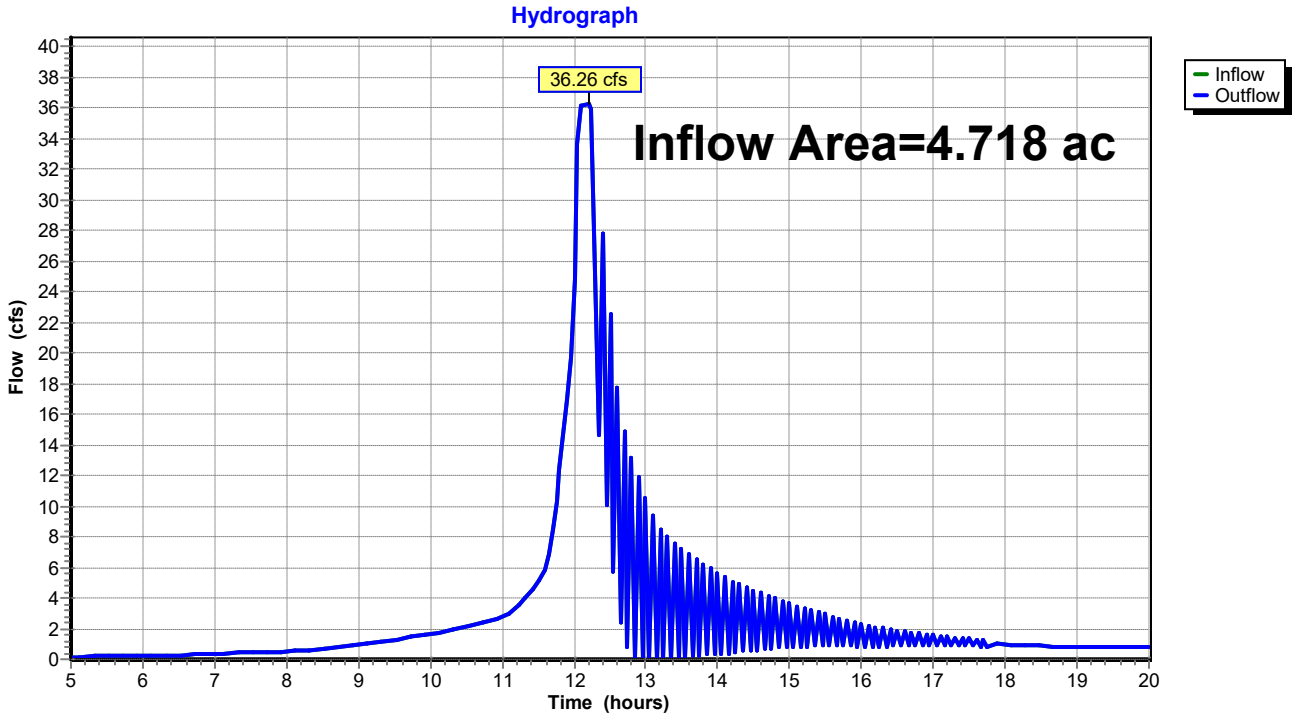
Summary for Reach 100R: POI 100

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 4.718 ac, 54.40% Impervious, Inflow Depth > 9.18" for Custom event
Inflow = 36.26 cfs @ 12.20 hrs, Volume= 3.608 af
Outflow = 36.26 cfs @ 12.20 hrs, Volume= 3.608 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 100R: POI 100



Summary for Pond 1P: Durham SD System

[82] Warning: Early inflow requires earlier time span
[88] Warning: Qout>Qin may require smaller dt or Finer Routing
[81] Warning: Exceeded Pond VFF2 by 0.66' @ 12.10 hrs
[81] Warning: Exceeded Pond VFF2 by 0.66' @ 12.10 hrs
[79] Warning: Submerged Pond VFF3 Primary device # 1 OUTLET by 1.28'

Inflow Area = 2.256 ac, 60.00% Impervious, Inflow Depth > 9.57" for Custom event
Inflow = 20.12 cfs @ 12.11 hrs, Volume= 1.799 af
Outflow = 20.12 cfs @ 12.11 hrs, Volume= 1.799 af, Atten= 0%, Lag= 0.0 min
Primary = 20.12 cfs @ 12.11 hrs, Volume= 1.799 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 25.30' @ 12.11 hrs Surf.Area= 9 sf Storage= 25 cf

Plug-Flow detention time= 0.1 min calculated for 1.793 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (758.8 - 758.7)

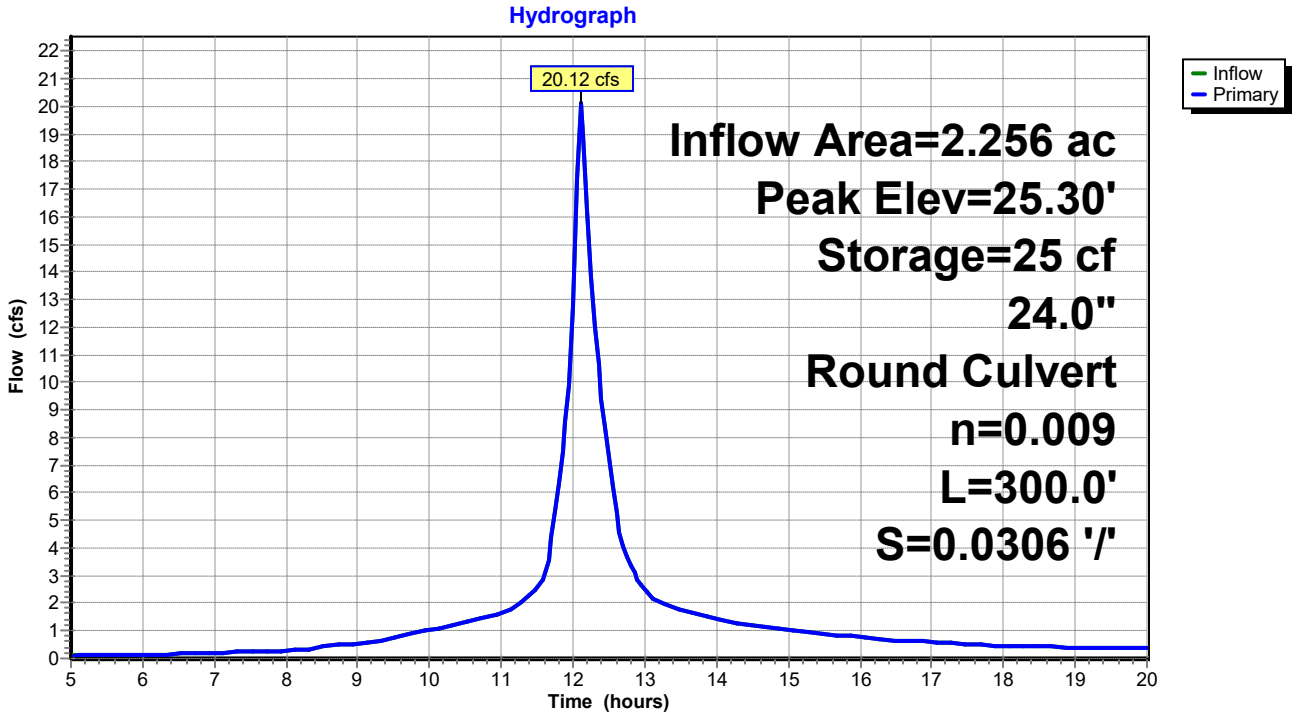
Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,753 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	500	3	53
29.00	15,000	6,200	6,253
30.00	1,000,000	507,500	513,753

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=19.80 cfs @ 12.11 hrs HW=25.24' (Free Discharge)
1=Culvert (Inlet Controls 19.80 cfs @ 6.30 fps)

Pond 1P: Durham SD System



Summary for Pond 2P: Bedford SD System

[82] Warning: Early inflow requires earlier time span
[44] Hint: Outlet device #1 is below defined storage

Inflow Area = 1.525 ac, 39.07% Impervious, Inflow Depth > 9.30" for Custom event
Inflow = 14.43 cfs @ 12.14 hrs, Volume= 1.182 af
Outflow = 14.43 cfs @ 12.14 hrs, Volume= 1.182 af, Atten= 0%, Lag= 0.0 min
Primary = 14.43 cfs @ 12.14 hrs, Volume= 1.182 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.38' @ 12.14 hrs Surf.Area= 9 sf Storage= 11 cf

Plug-Flow detention time= 0.0 min calculated for 1.178 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (757.4 - 757.3)

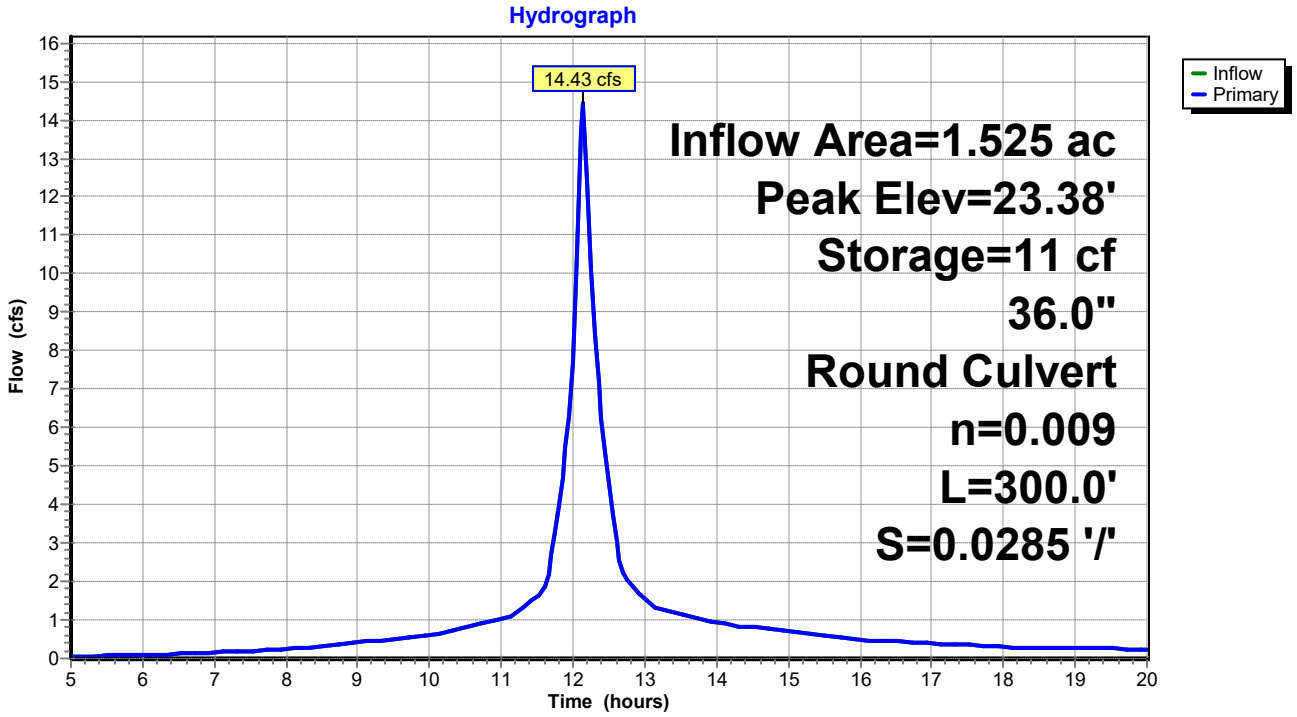
Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=14.19 cfs @ 12.14 hrs HW=23.37' (Free Discharge)
1=Culvert (Inlet Controls 14.19 cfs @ 4.13 fps)

Pond 2P: Bedford SD System



Summary for Pond 3P: DMH corner Bedford Durham

[82] Warning: Early inflow requires earlier time span
[85] Warning: Oscillations may require smaller dt or Finer Routing (severity=60)
[79] Warning: Submerged Pond 1P Primary device # 1 OUTLET by 8.73'
[79] Warning: Submerged Pond 2P Primary device # 1 INLET by 0.18'
[79] Warning: Submerged Pond VFF1 Primary device # 1 OUTLET by 8.43'

Inflow Area = 4.718 ac, 54.40% Impervious, Inflow Depth > 9.17" for Custom event
Inflow = 42.01 cfs @ 12.13 hrs, Volume= 3.607 af
Outflow = 36.26 cfs @ 12.20 hrs, Volume= 3.608 af, Atten= 14%, Lag= 4.3 min
Primary = 36.26 cfs @ 12.20 hrs, Volume= 3.608 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 22.08' @ 12.20 hrs Surf.Area= 22,123 sf Storage= 1,933 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.1 min (764.9 - 764.8)

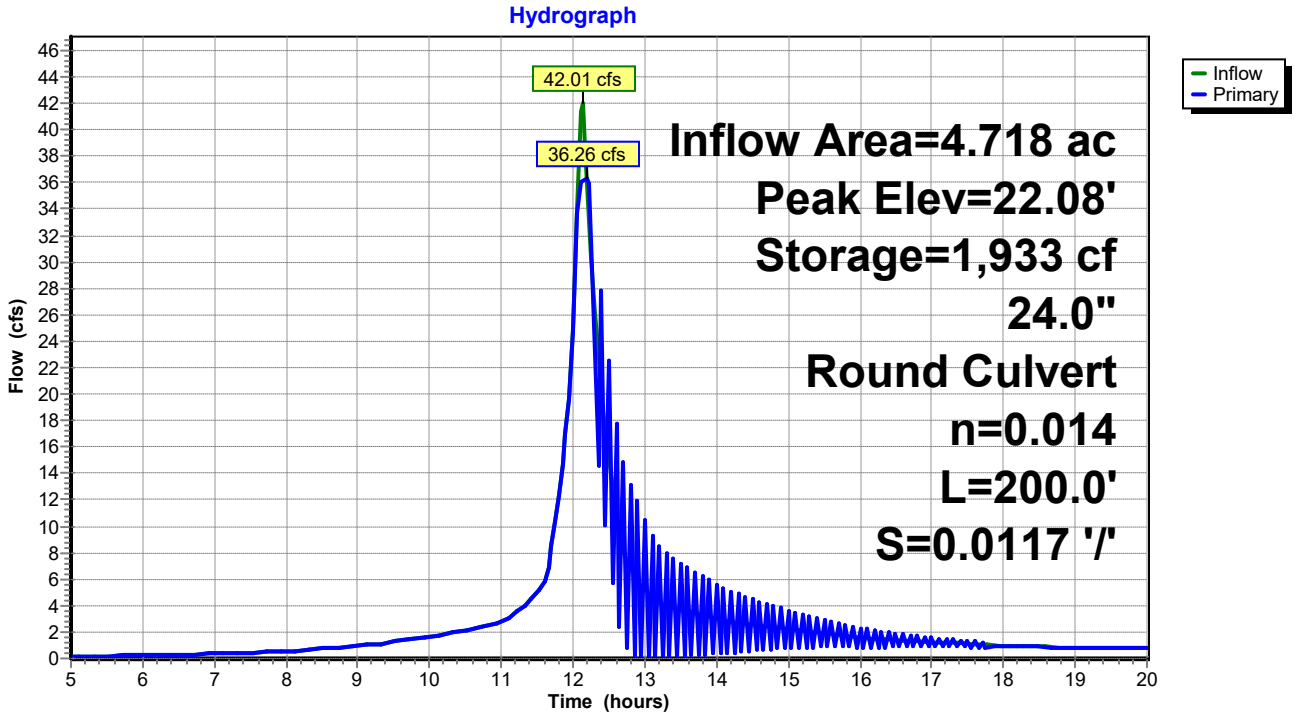
Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=36.26 cfs @ 12.20 hrs HW=22.08' (Free Discharge)
1=Culvert (Barrel Controls 36.26 cfs @ 11.54 fps)

Pond 3P: DMH corner Bedford Durham



Summary for Pond VFF1: VFF1 Courtyard Dorm Roof

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.937 ac, 65.88% Impervious, Inflow Depth > 9.88" for Custom event
Inflow = 10.57 cfs @ 12.07 hrs, Volume= 0.772 af
Outflow = 8.03 cfs @ 12.14 hrs, Volume= 0.638 af, Atten= 24%, Lag= 4.4 min
Discarded = 0.01 cfs @ 5.25 hrs, Volume= 0.012 af
Primary = 8.02 cfs @ 12.14 hrs, Volume= 0.625 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 24.46' @ 12.14 hrs Surf.Area= 5,148 sf Storage= 9,861 cf

Plug-Flow detention time= 102.3 min calculated for 0.635 af (82% of inflow)
Center-of-Mass det. time= 52.9 min (795.1 - 742.3)

Volume	Invert	Avail.Storage	Storage Description
#1	22.00'	16,345 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.00	2,900	0	0
23.00	3,800	3,350	3,350
24.00	4,670	4,235	7,585
24.50	5,185	2,464	10,049
25.00	20,000	6,296	16,345

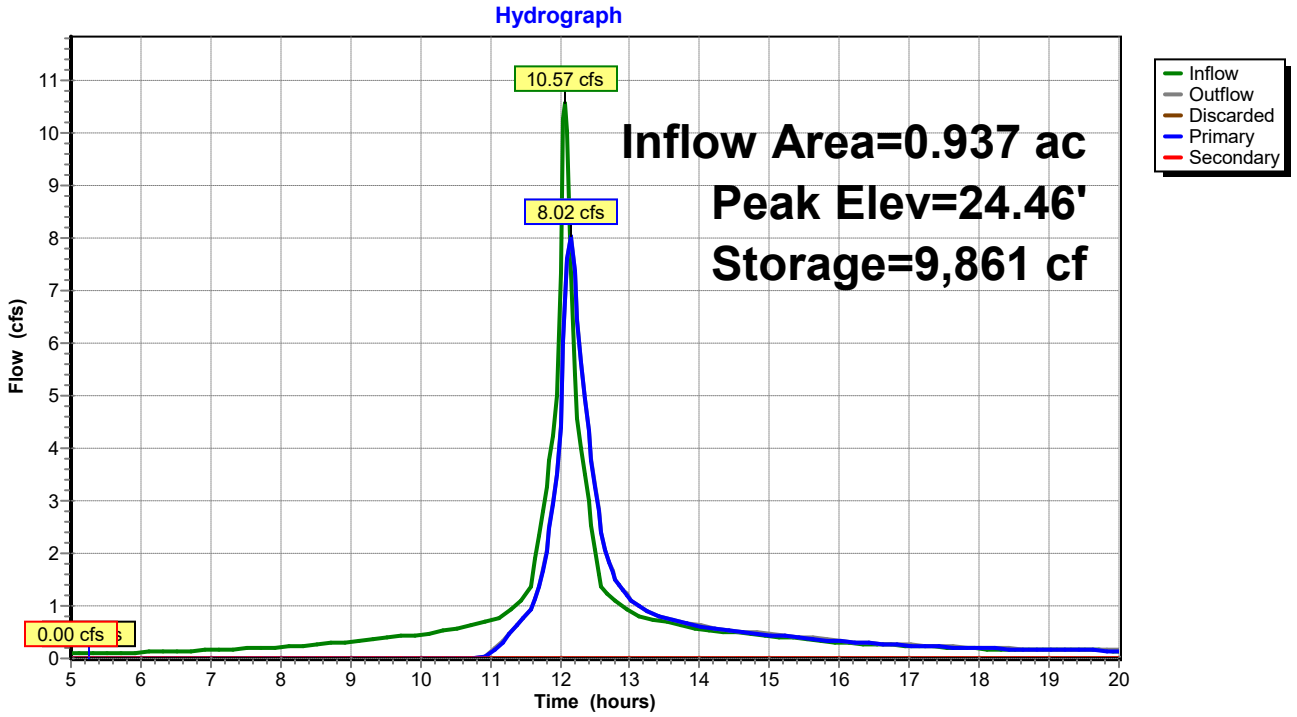
Device	Routing	Invert	Outlet Devices
#1	Primary	23.50'	**18.0" Round Culvert X 2.00** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 23.50' / 13.65' S= 0.1313 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf
#2	Secondary	24.50'	**12.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Discarded	22.00'	**0.01 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.01 cfs @ 5.25 hrs HW=22.03' (Free Discharge)
↑—**3=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=7.97 cfs @ 12.14 hrs HW=24.46' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 7.97 cfs @ 3.34 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond VFF1: VFF1 Courtyard Dorm Roof



Summary for Pond VFF2: VFF3

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.334 ac, 51.56% Impervious, Inflow Depth > 9.67" for Custom event
Inflow = 3.77 cfs @ 12.07 hrs, Volume= 0.269 af
Outflow = 3.74 cfs @ 12.08 hrs, Volume= 0.257 af, Atten= 1%, Lag= 0.5 min
Primary = 1.63 cfs @ 12.08 hrs, Volume= 0.222 af
Secondary = 2.11 cfs @ 12.08 hrs, Volume= 0.035 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 24.62' @ 12.08 hrs Surf.Area= 527 sf Storage= 760 cf

Plug-Flow detention time= 34.4 min calculated for 0.256 af (95% of inflow)
Center-of-Mass det. time= 17.4 min (765.9 - 748.6)

Volume	Invert	Avail.Storage	Storage Description
#1	22.50'	15,005 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

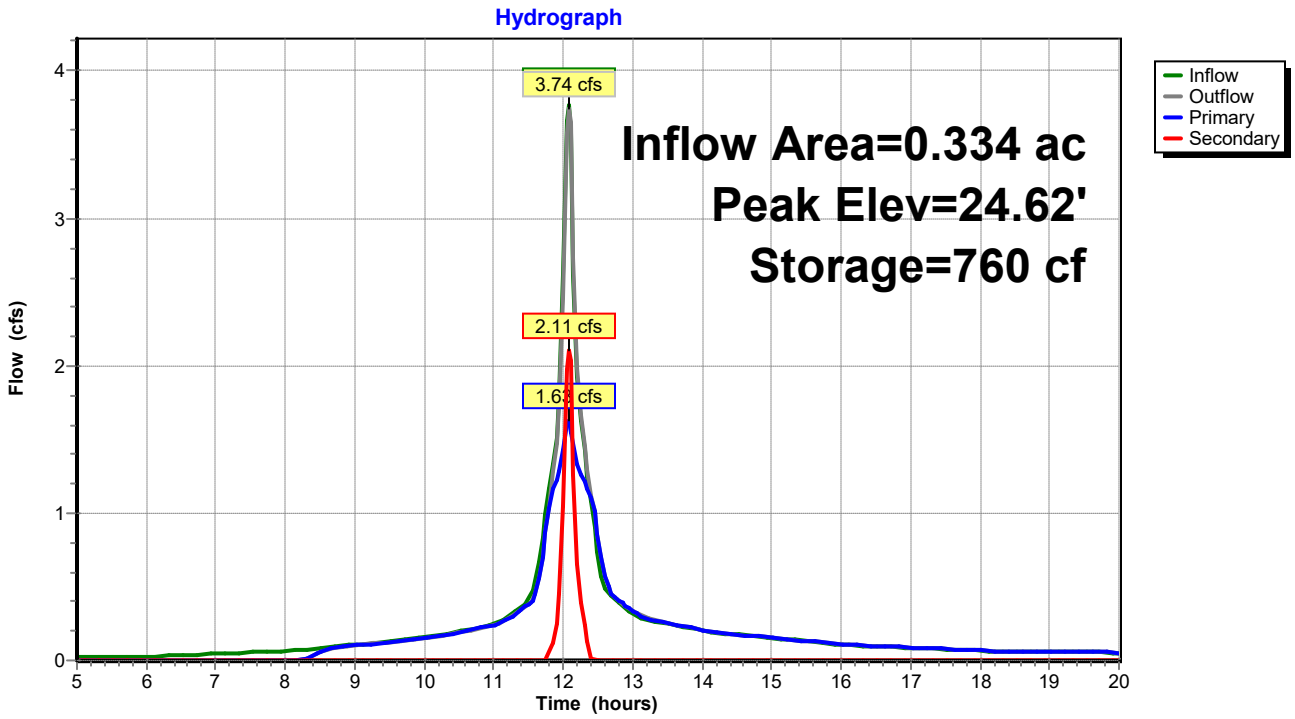
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.50	230	0	0
24.00	400	473	473
25.00	604	502	975
25.10	10,000	530	1,505
26.00	20,000	13,500	15,005

Device	Routing	Invert	Outlet Devices
#1	Primary	24.00'	**15.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 24.00' / 15.00' S= 0.0600 '/' Cc= 0.900 n= 0.011, Flow Area= 1.23 sf
#2	Secondary	24.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=1.61 cfs @ 12.08 hrs HW=24.62' (Free Discharge)
1=Culvert (Inlet Controls 1.61 cfs @ 2.67 fps)

Secondary OutFlow Max=1.99 cfs @ 12.08 hrs HW=24.62' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 1.99 cfs @ 0.85 fps)

Pond VFF2: VFF3



Summary for Pond VFF3: VFF2 SSC2 roof

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.507 ac, 77.50% Impervious, Inflow Depth > 10.41" for Custom event
Inflow = 5.95 cfs @ 12.07 hrs, Volume= 0.440 af
Outflow = 3.27 cfs @ 12.20 hrs, Volume= 0.396 af, Atten= 45%, Lag= 7.5 min
Primary = 2.83 cfs @ 12.20 hrs, Volume= 0.389 af
Secondary = 0.45 cfs @ 12.20 hrs, Volume= 0.007 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 42.56' @ 12.20 hrs Surf.Area= 13,967 sf Storage= 4,806 cf

Plug-Flow detention time= 75.5 min calculated for 0.395 af (90% of inflow)
Center-of-Mass det. time= 42.0 min (779.7 - 737.7)

Volume	Invert	Avail.Storage	Storage Description
#1	40.00'	19,489 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

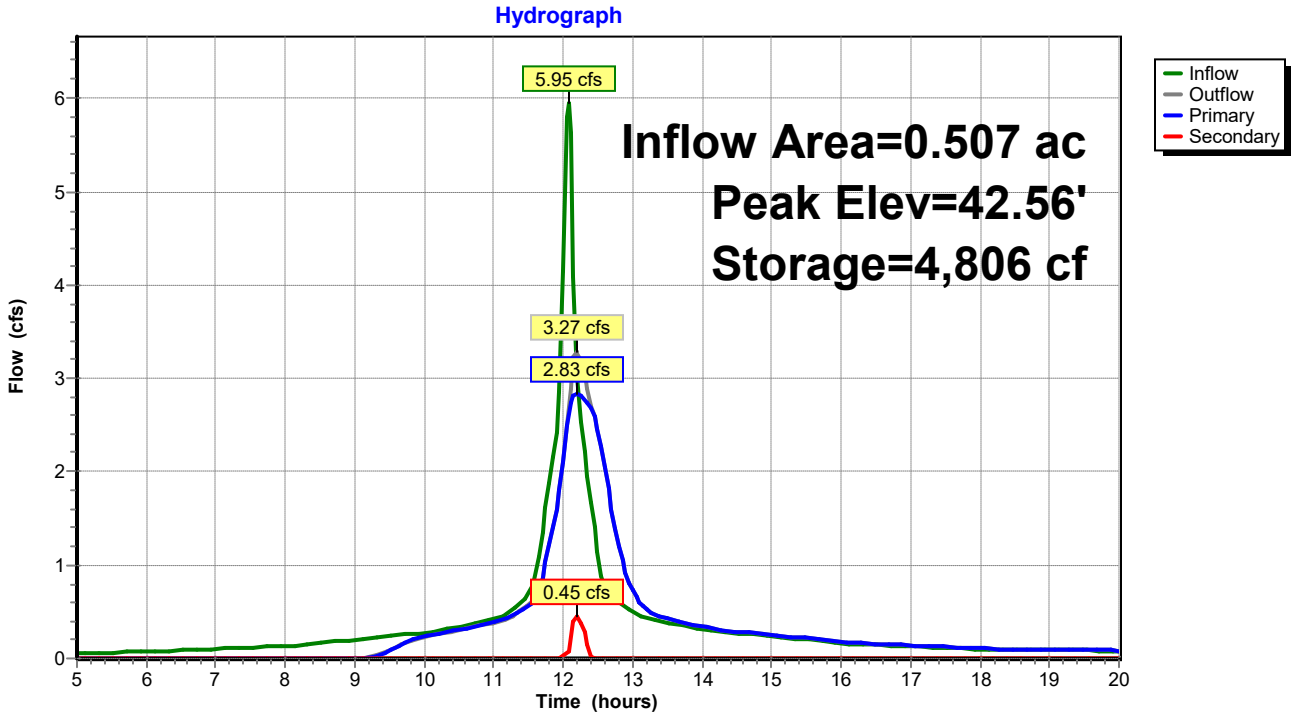
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
40.00	736	0	0
41.00	1,240	988	988
42.00	1,842	1,541	2,529
42.50	5,000	1,711	4,240
42.60	20,000	1,250	5,490
43.00	50,000	14,000	19,489

Device	Routing	Invert	Outlet Devices
#1	Primary	41.50'	**12.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 41.50' / 24.00' S= 0.1167 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Secondary	42.50'	**12.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=2.83 cfs @ 12.20 hrs HW=42.56' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 2.83 cfs @ 3.60 fps)

Secondary OutFlow Max=0.43 cfs @ 12.20 hrs HW=42.56' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 0.43 cfs @ 0.61 fps)

Pond VFF3: VFF2 SSC2 roof



POLLUTANT RATING CALCULATION
1/17/2020

EXISTING

	SF	AC
Total area	157971	3.627

Pollutant Rating	Area (SF)	Area (AC)	Weighted Area
5	0	0.0000	0.0000
4	87532	2.0095	8.0378
3	424	0.0097	0.0292
2	67840	1.5574	3.1148
1	2175	0.0499	0.0499
CHECK:	157971		
	Existing Impact Rating		11.2317
			3.10

PROPOSED

	SF	AC
Total area	157971	3.627

Pollutant Rating	Area (SF)	Area (AC)	Weighted Area
5	0	0.0000	0.0000
4	11194	0.2570	1.0279
3	0	0.0000	0.0000
2	139474	3.2019	6.4038
1	7303	0.1677	0.1677
CHECK:	157971		
	Proposed Impact Rating		7.5993
			2.10

SMRT
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Project:	19206	Date:	2/29/20
Designed by:	JMA	Page:	1

CALCULATION: SIZE WATER QUALITY VOLUMES FOR SOIL FILTERS

VFF1

SUBCATCH: DOMM 1: 28300 PAVED ⇒ 1 1/2" ⇒ 2400 CF

CTYRD: 13930 LAWN ⇒ .4"/12 ⇒ 446 CF
2200 PAVED ⇒ 1"/12 ⇒ 183 CF
3029 CF MIN.

VFF1 STORAGE @ EL. 23.5 5359 CF ✓

VFF2

SUBCATCH DOMM 2: 2400 PAVED ⇒ 1"/12 ⇒ 200 CF
7046 LAWN ⇒ .4"/12 ⇒ 235 CF
2200 PAVED ⇒ 1"/12 ⇒ 83 CF
518 CF MIN.

VFF2 STORAGE @ EL. 24 ⇒ 525 CF ✓

VFF3

SUBCATCH SSC ROOF 2: 14450 SF ⇒ 1"/12 ⇒ 1204 CF
4990 SF ⇒ .4"/12 ⇒ 166 CF
2691 SF ⇒ 1"/12 ⇒ 222 CF
1593 CF MIN.

VFF3 STORAGE @ EL. 41.5 ⇒ 1683 CF ✓

Hydrograph for Pond VFF1: VFF1 Courtyard Dorm Roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.02	2	22.00	0.00	0.00	**0.00**
6.00	0.02	78	22.03	0.00	0.00	0.00
7.00	0.03	179	22.06	0.00	0.00	0.00
8.00	0.04	319	22.11	0.00	0.00	0.00
9.00	0.07	518	22.17	0.00	0.00	0.00
10.00	0.09	804	22.27	0.00	0.00	0.00
11.00	0.15	1,228	22.40	0.00	0.00	0.00
12.00	**1.69**	2,789	22.85	0.00	0.00	0.00
13.00	**0.22**	**5,670**	**23.57**	**0.06**	**0.06**	0.00
14.00	0.14	**5,855**	**23.62**	**0.15**	**0.15**	0.00
15.00	0.11	5,811	23.61	0.12	0.12	0.00
16.00	0.08	5,754	23.59	0.09	0.09	0.00
17.00	0.06	5,702	23.58	0.07	0.07	0.00
18.00	0.05	5,661	23.57	0.06	0.06	0.00
19.00	0.04	5,634	23.56	0.05	0.05	0.00
20.00	0.04	5,618	23.56	0.04	0.04	0.00
21.00	0.03	5,606	23.56	0.04	0.04	0.00
22.00	0.03	5,593	23.56	0.03	0.03	0.00
23.00	0.03	5,580	23.55	0.03	0.03	0.00
24.00	0.02	5,566	23.55	0.03	0.03	0.00
25.00	0.00	5,500	23.53	0.01	0.01	0.00
26.00	0.00	5,464	23.52	0.01	0.01	0.00
27.00	0.00	5,439	23.52	0.01	0.01	0.00
28.00	0.00	5,419	23.51	0.00	0.00	0.00
29.00	0.00	5,404	23.51	0.00	0.00	0.00
30.00	0.00	5,393	23.51	0.00	0.00	0.00
31.00	0.00	5,385	23.51	0.00	0.00	0.00
32.00	0.00	5,378	23.50	0.00	0.00	0.00
33.00	0.00	5,374	23.50	0.00	0.00	0.00
34.00	0.00	5,370	23.50	0.00	0.00	0.00
35.00	0.00	5,367	23.50	0.00	0.00	0.00
36.00	0.00	5,365	23.50	0.00	0.00	0.00
37.00	0.00	5,364	23.50	0.00	0.00	0.00
38.00	0.00	5,362	23.50	0.00	0.00	0.00
39.00	0.00	5,361	23.50	0.00	0.00	0.00
40.00	0.00	5,361	23.50	0.00	0.00	0.00
41.00	0.00	5,360	23.50	0.00	0.00	0.00
42.00	0.00	5,360	23.50	0.00	0.00	0.00
43.00	0.00	5,360	23.50	0.00	0.00	0.00
44.00	0.00	5,359	23.50	0.00	0.00	0.00
45.00	0.00	5,359	23.50	0.00	0.00	0.00
46.00	0.00	5,359	23.50	0.00	0.00	0.00
47.00	0.00	5,359	23.50	0.00	0.00	0.00
48.00	0.00	5,359	23.50	0.00	0.00	0.00

Hydrograph for Pond VFF1: VFF1 Courtyard Dorm Roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.03	3	22.00	0.00	0.00	**0.00**
6.00	0.04	136	22.05	0.00	0.00	0.00
7.00	0.06	306	22.10	0.00	0.00	0.00
8.00	0.07	534	22.18	0.00	0.00	0.00
9.00	0.11	851	22.28	0.00	0.00	0.00
10.00	0.15	1,321	22.43	0.00	0.00	0.00
11.00	0.25	2,033	22.64	0.00	0.00	0.00
12.00	**2.73**	**4,592**	**23.32**	**0.00**	**0.00**	0.00
13.00	**0.35**	**6,265**	**23.71**	**0.49**	**0.49**	0.00
14.00	0.22	6,016	23.65	0.26	0.26	0.00
15.00	0.17	5,920	23.63	0.19	0.19	0.00
16.00	0.12	5,844	23.61	0.14	0.14	0.00
17.00	0.09	5,784	23.60	0.11	0.11	0.00
18.00	0.07	5,737	23.59	0.09	0.09	0.00
19.00	0.06	5,701	23.58	0.07	0.07	0.00
20.00	0.06	5,678	23.57	0.06	0.06	0.00
21.00	0.05	5,661	23.57	0.06	0.06	0.00
22.00	0.05	5,647	23.57	0.05	0.05	0.00
23.00	0.04	5,634	23.56	0.05	0.05	0.00
24.00	0.04	5,621	23.56	0.04	0.04	0.00
25.00	0.00	5,525	23.54	0.02	0.02	0.00
26.00	0.00	5,478	23.53	0.01	0.01	0.00
27.00	0.00	5,449	23.52	0.01	0.01	0.00
28.00	0.00	5,427	23.52	0.01	0.01	0.00
29.00	0.00	5,410	23.51	0.00	0.00	0.00
30.00	0.00	5,398	23.51	0.00	0.00	0.00
31.00	0.00	5,388	23.51	0.00	0.00	0.00
32.00	0.00	5,381	23.51	0.00	0.00	0.00
33.00	0.00	5,375	23.50	0.00	0.00	0.00
34.00	0.00	5,371	23.50	0.00	0.00	0.00
35.00	0.00	5,368	23.50	0.00	0.00	0.00
36.00	0.00	5,366	23.50	0.00	0.00	0.00
37.00	0.00	5,364	23.50	0.00	0.00	0.00
38.00	0.00	5,363	23.50	0.00	0.00	0.00
39.00	0.00	5,362	23.50	0.00	0.00	0.00
40.00	0.00	5,361	23.50	0.00	0.00	0.00
41.00	0.00	5,361	23.50	0.00	0.00	0.00
42.00	0.00	5,360	23.50	0.00	0.00	0.00
43.00	0.00	5,360	23.50	0.00	0.00	0.00
44.00	0.00	5,360	23.50	0.00	0.00	0.00
45.00	0.00	5,359	23.50	0.00	0.00	0.00
46.00	0.00	5,359	23.50	0.00	0.00	0.00
47.00	0.00	5,359	23.50	0.00	0.00	0.00
48.00	0.00	5,359	23.50	0.00	0.00	0.00

Hydrograph for Pond VFF1: VFF1 Courtyard Dorm Roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.05	4	22.00	0.00	0.00	**0.00**
6.00	0.05	183	22.06	0.00	0.00	0.00
7.00	0.07	409	22.14	0.00	0.00	0.00
8.00	0.09	707	22.24	0.00	0.00	0.00
9.00	0.15	1,136	22.37	0.00	0.00	0.00
10.00	0.21	1,772	22.56	0.00	0.00	0.00
11.00	0.33	2,728	22.83	0.00	0.00	0.00
12.00	**3.59**	**6,083**	**23.67**	**0.32**	**0.32**	0.00
13.00	**0.45**	**6,378**	**23.73**	**0.63**	**0.63**	0.00
14.00	0.29	6,098	23.67	0.33	0.33	0.00
15.00	0.22	5,993	23.65	0.24	0.24	0.00
16.00	0.15	5,903	23.63	0.18	0.18	0.00
17.00	0.12	5,837	23.61	0.14	0.14	0.00
18.00	0.09	5,784	23.60	0.11	0.11	0.00
19.00	0.08	5,748	23.59	0.09	0.09	0.00
20.00	0.08	5,725	23.59	0.08	0.08	0.00
21.00	0.07	5,704	23.58	0.07	0.07	0.00
22.00	0.06	5,687	23.58	0.07	0.07	0.00
23.00	0.06	5,670	23.57	0.06	0.06	0.00
24.00	0.05	5,653	23.57	0.05	0.05	0.00
25.00	0.00	5,539	23.54	0.02	0.02	0.00
26.00	0.00	5,485	23.53	0.01	0.01	0.00
27.00	0.00	5,454	23.52	0.01	0.01	0.00
28.00	0.00	5,431	23.52	0.01	0.01	0.00
29.00	0.00	5,413	23.51	0.00	0.00	0.00
30.00	0.00	5,400	23.51	0.00	0.00	0.00
31.00	0.00	5,390	23.51	0.00	0.00	0.00
32.00	0.00	5,382	23.51	0.00	0.00	0.00
33.00	0.00	5,376	23.50	0.00	0.00	0.00
34.00	0.00	5,372	23.50	0.00	0.00	0.00
35.00	0.00	5,369	23.50	0.00	0.00	0.00
36.00	0.00	5,366	23.50	0.00	0.00	0.00
37.00	0.00	5,364	23.50	0.00	0.00	0.00
38.00	0.00	5,363	23.50	0.00	0.00	0.00
39.00	0.00	5,362	23.50	0.00	0.00	0.00
40.00	0.00	5,361	23.50	0.00	0.00	0.00
41.00	0.00	5,361	23.50	0.00	0.00	0.00
42.00	0.00	5,360	23.50	0.00	0.00	0.00
43.00	0.00	5,360	23.50	0.00	0.00	0.00
44.00	0.00	5,360	23.50	0.00	0.00	0.00
45.00	0.00	5,359	23.50	0.00	0.00	0.00
46.00	0.00	5,359	23.50	0.00	0.00	0.00
47.00	0.00	5,359	23.50	0.00	0.00	0.00
48.00	0.00	5,359	23.50	0.00	0.00	0.00

Hydrograph for Pond VFF2: VFF3

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0	22.50	0.00	0.00	**0.00**
6.00	0.00	0	22.50	0.00	0.00	0.00
7.00	0.00	0	22.50	0.00	0.00	0.00
8.00	0.00	0	22.50	0.00	0.00	0.00
9.00	0.00	0	22.50	0.00	0.00	0.00
10.00	0.00	7	22.52	0.00	0.00	0.00
11.00	0.01	36	22.63	0.00	0.00	0.00
12.00	**0.26**	**234**	**23.25**	**0.00**	**0.00**	0.00
13.00	**0.04**	**568**	**24.10**	**0.05**	**0.05**	0.00
14.00	0.03	558	24.08	0.03	0.03	0.00
15.00	0.02	554	24.07	0.02	0.02	0.00
16.00	0.02	549	24.06	0.02	0.02	0.00
17.00	0.01	546	24.05	0.01	0.01	0.00
18.00	0.01	544	24.04	0.01	0.01	0.00
19.00	0.01	543	24.04	0.01	0.01	0.00
20.00	0.01	542	24.04	0.01	0.01	0.00
21.00	0.01	541	24.04	0.01	0.01	0.00
22.00	0.01	540	24.03	0.01	0.01	0.00
23.00	0.01	539	24.03	0.01	0.01	0.00
24.00	0.01	537	24.03	0.01	0.01	0.00
25.00	0.00	529	24.01	0.00	0.00	0.00
26.00	0.00	527	24.01	0.00	0.00	0.00
27.00	0.00	527	24.00	0.00	0.00	0.00
28.00	0.00	526	24.00	0.00	0.00	0.00
29.00	0.00	526	24.00	0.00	0.00	0.00
30.00	0.00	526	24.00	0.00	0.00	0.00
31.00	0.00	526	24.00	0.00	0.00	0.00
32.00	0.00	526	24.00	0.00	0.00	0.00
33.00	0.00	525	24.00	0.00	0.00	0.00
34.00	0.00	525	24.00	0.00	0.00	0.00
35.00	0.00	525	24.00	0.00	0.00	0.00
36.00	0.00	525	24.00	0.00	0.00	0.00
37.00	0.00	525	24.00	0.00	0.00	0.00
38.00	0.00	525	24.00	0.00	0.00	0.00
39.00	0.00	525	24.00	0.00	0.00	0.00
40.00	0.00	525	24.00	0.00	0.00	0.00
41.00	0.00	525	24.00	0.00	0.00	0.00
42.00	0.00	525	24.00	0.00	0.00	0.00
43.00	0.00	525	24.00	0.00	0.00	0.00
44.00	0.00	525	24.00	0.00	0.00	0.00
45.00	0.00	525	24.00	0.00	0.00	0.00
46.00	0.00	525	24.00	0.00	0.00	0.00
47.00	0.00	525	24.00	0.00	0.00	0.00
48.00	0.00	525	24.00	0.00	0.00	0.00

Hydrograph for Pond VFF2: VFF3

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0	22.50	0.00	0.00	**0.00**
6.00	0.00	0	22.50	0.00	0.00	0.00
7.00	0.00	0	22.50	0.00	0.00	0.00
8.00	0.00	2	22.51	0.00	0.00	0.00
9.00	0.01	17	22.56	0.00	0.00	0.00
10.00	0.02	58	22.70	0.00	0.00	0.00
11.00	0.03	143	22.98	0.00	0.00	0.00
12.00	**0.51**	**566**	**24.09**	**0.04**	**0.04**	0.00
13.00	**0.07**	**580**	**24.13**	**0.08**	**0.08**	0.00
14.00	0.05	569	24.10	0.05	0.05	0.00
15.00	0.04	563	24.09	0.04	0.04	0.00
16.00	0.03	557	24.07	0.03	0.03	0.00
17.00	0.02	553	24.06	0.02	0.02	0.00
18.00	0.02	549	24.06	0.02	0.02	0.00
19.00	0.01	547	24.05	0.01	0.01	0.00
20.00	0.01	546	24.05	0.01	0.01	0.00
21.00	0.01	545	24.05	0.01	0.01	0.00
22.00	0.01	544	24.05	0.01	0.01	0.00
23.00	0.01	544	24.04	0.01	0.01	0.00
24.00	0.01	543	24.04	0.01	0.01	0.00
25.00	0.00	530	24.01	0.00	0.00	0.00
26.00	0.00	527	24.01	0.00	0.00	0.00
27.00	0.00	527	24.00	0.00	0.00	0.00
28.00	0.00	526	24.00	0.00	0.00	0.00
29.00	0.00	526	24.00	0.00	0.00	0.00
30.00	0.00	526	24.00	0.00	0.00	0.00
31.00	0.00	526	24.00	0.00	0.00	0.00
32.00	0.00	526	24.00	0.00	0.00	0.00
33.00	0.00	526	24.00	0.00	0.00	0.00
34.00	0.00	525	24.00	0.00	0.00	0.00
35.00	0.00	525	24.00	0.00	0.00	0.00
36.00	0.00	525	24.00	0.00	0.00	0.00
37.00	0.00	525	24.00	0.00	0.00	0.00
38.00	0.00	525	24.00	0.00	0.00	0.00
39.00	0.00	525	24.00	0.00	0.00	0.00
40.00	0.00	525	24.00	0.00	0.00	0.00
41.00	0.00	525	24.00	0.00	0.00	0.00
42.00	0.00	525	24.00	0.00	0.00	0.00
43.00	0.00	525	24.00	0.00	0.00	0.00
44.00	0.00	525	24.00	0.00	0.00	0.00
45.00	0.00	525	24.00	0.00	0.00	0.00
46.00	0.00	525	24.00	0.00	0.00	0.00
47.00	0.00	525	24.00	0.00	0.00	0.00
48.00	0.00	525	24.00	0.00	0.00	0.00

Hydrograph for Pond VFF2: VFF3

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0	22.50	0.00	0.00	**0.00**
6.00	0.00	0	22.50	0.00	0.00	0.00
7.00	0.00	2	22.51	0.00	0.00	0.00
8.00	0.01	16	22.56	0.00	0.00	0.00
9.00	0.01	52	22.68	0.00	0.00	0.00
10.00	0.03	125	22.92	0.00	0.00	0.00
11.00	0.05	265	23.34	0.00	0.00	0.00
12.00	**0.72**	**675**	**24.33**	**0.53**	**0.53**	0.00
13.00	**0.10**	**588**	**24.14**	**0.11**	**0.11**	0.00
14.00	0.06	575	24.11	0.07	0.07	0.00
15.00	0.05	569	24.10	0.05	0.05	0.00
16.00	0.03	562	24.08	0.04	0.04	0.00
17.00	0.03	558	24.08	0.03	0.03	0.00
18.00	0.02	553	24.07	0.02	0.02	0.00
19.00	0.02	551	24.06	0.02	0.02	0.00
20.00	0.02	549	24.06	0.02	0.02	0.00
21.00	0.02	548	24.05	0.02	0.02	0.00
22.00	0.01	547	24.05	0.01	0.01	0.00
23.00	0.01	546	24.05	0.01	0.01	0.00
24.00	0.01	545	24.05	0.01	0.01	0.00
25.00	0.00	530	24.01	0.00	0.00	0.00
26.00	0.00	527	24.01	0.00	0.00	0.00
27.00	0.00	527	24.00	0.00	0.00	0.00
28.00	0.00	526	24.00	0.00	0.00	0.00
29.00	0.00	526	24.00	0.00	0.00	0.00
30.00	0.00	526	24.00	0.00	0.00	0.00
31.00	0.00	526	24.00	0.00	0.00	0.00
32.00	0.00	526	24.00	0.00	0.00	0.00
33.00	0.00	526	24.00	0.00	0.00	0.00
34.00	0.00	525	24.00	0.00	0.00	0.00
35.00	0.00	525	24.00	0.00	0.00	0.00
36.00	0.00	525	24.00	0.00	0.00	0.00
37.00	0.00	525	24.00	0.00	0.00	0.00
38.00	0.00	525	24.00	0.00	0.00	0.00
39.00	0.00	525	24.00	0.00	0.00	0.00
40.00	0.00	525	24.00	0.00	0.00	0.00
41.00	0.00	525	24.00	0.00	0.00	0.00
42.00	0.00	525	24.00	0.00	0.00	0.00
43.00	0.00	525	24.00	0.00	0.00	0.00
44.00	0.00	525	24.00	0.00	0.00	0.00
45.00	0.00	525	24.00	0.00	0.00	0.00
46.00	0.00	525	24.00	0.00	0.00	0.00
47.00	0.00	525	24.00	0.00	0.00	0.00
48.00	0.00	525	24.00	0.00	0.00	0.00

Hydrograph for Pond VFF3: VFF2 SSC2 roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0	40.00	0.00	0.00	**0.00**
6.00	0.00	10	40.01	0.00	0.00	0.00
7.00	0.01	32	40.04	0.00	0.00	0.00
8.00	0.02	74	40.10	0.00	0.00	0.00
9.00	0.03	150	40.19	0.00	0.00	0.00
10.00	0.05	280	40.34	0.00	0.00	0.00
11.00	0.08	498	40.57	0.00	0.00	0.00
12.00	**0.93**	**1,350**	**41.27**	**0.00**	**0.00**	0.00
13.00	**0.12**	**1,979**	**41.69**	**0.16**	**0.16**	0.00
14.00	0.08	1,903	41.64	0.09	0.09	0.00
15.00	0.06	1,872	41.62	0.06	0.06	0.00
16.00	0.04	1,847	41.60	0.05	0.05	0.00
17.00	0.03	1,826	41.59	0.04	0.04	0.00
18.00	0.02	1,810	41.58	0.03	0.03	0.00
19.00	0.02	1,797	41.57	0.02	0.02	0.00
20.00	0.02	1,790	41.57	0.02	0.02	0.00
21.00	0.02	1,785	41.57	0.02	0.02	0.00
22.00	0.02	1,781	41.56	0.02	0.02	0.00
23.00	0.01	1,776	41.56	0.02	0.02	0.00
24.00	0.01	1,771	41.56	0.01	0.01	0.00
25.00	0.00	1,738	41.54	0.01	0.01	0.00
26.00	0.00	1,723	41.53	0.00	0.00	0.00
27.00	0.00	1,712	41.52	0.00	0.00	0.00
28.00	0.00	1,704	41.51	0.00	0.00	0.00
29.00	0.00	1,699	41.51	0.00	0.00	0.00
30.00	0.00	1,694	41.51	0.00	0.00	0.00
31.00	0.00	1,691	41.51	0.00	0.00	0.00
32.00	0.00	1,689	41.50	0.00	0.00	0.00
33.00	0.00	1,688	41.50	0.00	0.00	0.00
34.00	0.00	1,686	41.50	0.00	0.00	0.00
35.00	0.00	1,686	41.50	0.00	0.00	0.00
36.00	0.00	1,685	41.50	0.00	0.00	0.00
37.00	0.00	1,685	41.50	0.00	0.00	0.00
38.00	0.00	1,684	41.50	0.00	0.00	0.00
39.00	0.00	1,684	41.50	0.00	0.00	0.00
40.00	0.00	1,684	41.50	0.00	0.00	0.00
41.00	0.00	1,684	41.50	0.00	0.00	0.00
42.00	0.00	1,684	41.50	0.00	0.00	0.00
43.00	0.00	1,683	41.50	0.00	0.00	0.00
44.00	0.00	1,683	41.50	0.00	0.00	0.00
45.00	0.00	1,683	41.50	0.00	0.00	0.00
46.00	0.00	1,683	41.50	0.00	0.00	0.00
47.00	0.00	1,683	41.50	0.00	0.00	0.00
48.00	0.00	1,683	41.50	0.00	0.00	0.00

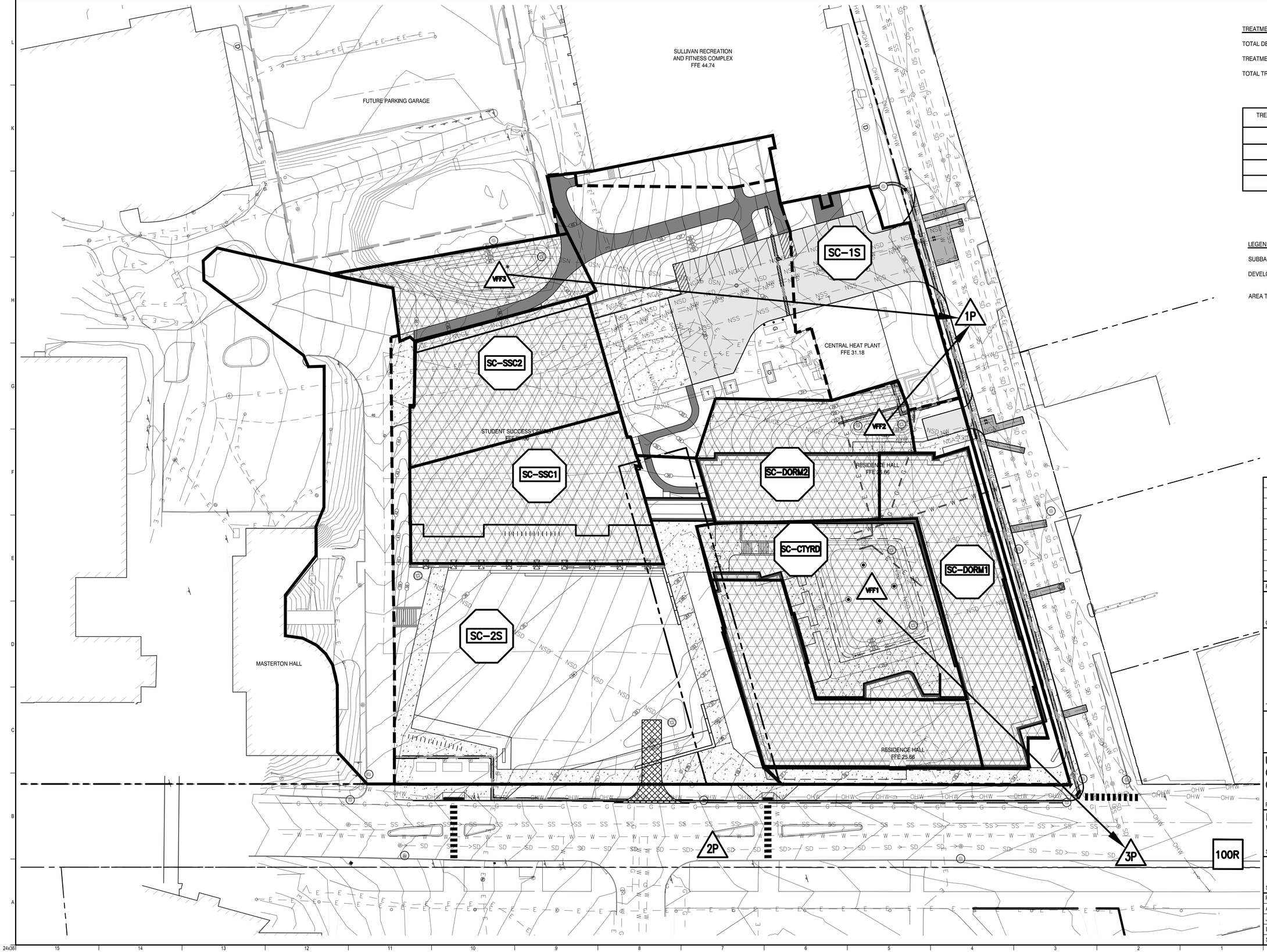
Hydrograph for Pond VFF3: VFF2 SSC2 roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.01	1	40.00	0.00	0.00	**0.00**
6.00	0.01	38	40.05	0.00	0.00	0.00
7.00	0.02	98	40.13	0.00	0.00	0.00
8.00	0.03	196	40.25	0.00	0.00	0.00
9.00	0.06	352	40.42	0.00	0.00	0.00
10.00	0.08	600	40.66	0.00	0.00	0.00
11.00	0.14	988	41.00	0.00	0.00	0.00
12.00	**1.49**	**2,243**	**41.84**	**0.57**	**0.57**	0.00
13.00	**0.18**	**2,043**	**41.72**	**0.25**	**0.25**	0.00
14.00	0.12	1,948	41.67	0.13	0.13	0.00
15.00	0.09	1,912	41.64	0.10	0.10	0.00
16.00	0.06	1,881	41.62	0.07	0.07	0.00
17.00	0.05	1,857	41.61	0.05	0.05	0.00
18.00	0.04	1,838	41.60	0.04	0.04	0.00
19.00	0.03	1,825	41.59	0.04	0.04	0.00
20.00	0.03	1,816	41.59	0.03	0.03	0.00
21.00	0.03	1,809	41.58	0.03	0.03	0.00
22.00	0.02	1,803	41.58	0.03	0.03	0.00
23.00	0.02	1,796	41.57	0.02	0.02	0.00
24.00	0.02	1,790	41.57	0.02	0.02	0.00
25.00	0.00	1,746	41.54	0.01	0.01	0.00
26.00	0.00	1,726	41.53	0.00	0.00	0.00
27.00	0.00	1,715	41.52	0.00	0.00	0.00
28.00	0.00	1,706	41.51	0.00	0.00	0.00
29.00	0.00	1,700	41.51	0.00	0.00	0.00
30.00	0.00	1,696	41.51	0.00	0.00	0.00
31.00	0.00	1,692	41.51	0.00	0.00	0.00
32.00	0.00	1,690	41.50	0.00	0.00	0.00
33.00	0.00	1,688	41.50	0.00	0.00	0.00
34.00	0.00	1,687	41.50	0.00	0.00	0.00
35.00	0.00	1,686	41.50	0.00	0.00	0.00
36.00	0.00	1,685	41.50	0.00	0.00	0.00
37.00	0.00	1,685	41.50	0.00	0.00	0.00
38.00	0.00	1,684	41.50	0.00	0.00	0.00
39.00	0.00	1,684	41.50	0.00	0.00	0.00
40.00	0.00	1,684	41.50	0.00	0.00	0.00
41.00	0.00	1,684	41.50	0.00	0.00	0.00
42.00	0.00	1,684	41.50	0.00	0.00	0.00
43.00	0.00	1,683	41.50	0.00	0.00	0.00
44.00	0.00	1,683	41.50	0.00	0.00	0.00
45.00	0.00	1,683	41.50	0.00	0.00	0.00
46.00	0.00	1,683	41.50	0.00	0.00	0.00
47.00	0.00	1,683	41.50	0.00	0.00	0.00
48.00	0.00	1,683	41.50	0.00	0.00	0.00

Hydrograph for Pond VFF3: VFF2 SSC2 roof

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.01	1	40.00	0.00	0.00	**0.00**
6.00	0.02	65	40.09	0.00	0.00	0.00
7.00	0.03	162	40.21	0.00	0.00	0.00
8.00	0.05	309	40.37	0.00	0.00	0.00
9.00	0.08	534	40.60	0.00	0.00	0.00
10.00	0.11	880	40.91	0.00	0.00	0.00
11.00	0.18	1,406	41.31	0.00	0.00	0.00
12.00	**1.93**	**2,527**	**42.00**	**1.05**	**1.05**	0.00
13.00	**0.23**	**2,086**	**41.75**	**0.31**	**0.31**	0.00
14.00	0.15	1,978	41.68	0.16	0.16	0.00
15.00	0.11	1,938	41.66	0.12	0.12	0.00
16.00	0.08	1,903	41.64	0.09	0.09	0.00
17.00	0.06	1,877	41.62	0.07	0.07	0.00
18.00	0.05	1,857	41.61	0.05	0.05	0.00
19.00	0.04	1,842	41.60	0.05	0.05	0.00
20.00	0.04	1,834	41.60	0.04	0.04	0.00
21.00	0.03	1,826	41.59	0.04	0.04	0.00
22.00	0.03	1,820	41.59	0.03	0.03	0.00
23.00	0.03	1,812	41.58	0.03	0.03	0.00
24.00	0.03	1,804	41.58	0.03	0.03	0.00
25.00	0.00	1,751	41.54	0.01	0.01	0.00
26.00	0.00	1,729	41.53	0.00	0.00	0.00
27.00	0.00	1,716	41.52	0.00	0.00	0.00
28.00	0.00	1,708	41.52	0.00	0.00	0.00
29.00	0.00	1,701	41.51	0.00	0.00	0.00
30.00	0.00	1,696	41.51	0.00	0.00	0.00
31.00	0.00	1,693	41.51	0.00	0.00	0.00
32.00	0.00	1,690	41.50	0.00	0.00	0.00
33.00	0.00	1,688	41.50	0.00	0.00	0.00
34.00	0.00	1,687	41.50	0.00	0.00	0.00
35.00	0.00	1,686	41.50	0.00	0.00	0.00
36.00	0.00	1,685	41.50	0.00	0.00	0.00
37.00	0.00	1,685	41.50	0.00	0.00	0.00
38.00	0.00	1,684	41.50	0.00	0.00	0.00
39.00	0.00	1,684	41.50	0.00	0.00	0.00
40.00	0.00	1,684	41.50	0.00	0.00	0.00
41.00	0.00	1,684	41.50	0.00	0.00	0.00
42.00	0.00	1,684	41.50	0.00	0.00	0.00
43.00	0.00	1,683	41.50	0.00	0.00	0.00
44.00	0.00	1,683	41.50	0.00	0.00	0.00
45.00	0.00	1,683	41.50	0.00	0.00	0.00
46.00	0.00	1,683	41.50	0.00	0.00	0.00
47.00	0.00	1,683	41.50	0.00	0.00	0.00
48.00	0.00	1,683	41.50	0.00	0.00	0.00

Appendix A-3 **Water Quality Calculation**



TREATMENT SUMMARY:

TOTAL DEVELOPED AREA =165,175 SF

TREATMENT REQUIRMENT (50% DEVELOPED AREA) = 82,588 SF

TOTAL TREATMENT PROVIDED = 88,365 SF

TREATMENT BMP	DEVELOPED AREA TREATED (SF)
VFF 1	40,773
VFF 2	12,262
VFF 3	35,324
TOTAL	88,365

LEGEND

SUBBASIN BOUNDARY

DEVELOPED AREA BOUNDARY

AREA TREATED BY BMP

REV	DESCRIPTION	DATE

ISSUED FOR SD AND PERMITTING
3-6-20

CURRENT ISSUE STATUS:

TRUE NORTH:

SMRT Architects and Engineers
144 Fore Street/P.O. Box 618
Portland, Maine 04104
1.877.700.7678
www.smrtinc.com

UNIVERSITY OF SOUTHERN MAINE
CAREER AND STUDENT SUCCESS CENTER & RESIDENCE HALL

PORTLAND, MAINE

POST-DEVELOPMENT
WATER QUALITY PLAN

SHEET TITLE:

0 15' 30' 60' 90'

SCALE: 1" = 30'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	C-121-19206	SHEET No.	C-122

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NOT FOR CONSTRUCTION

24x36

Appendix A-4 Stormwater System Maintenance Plan

STORMWATER FACILITIES
INSPECTION AND MAINTENANCE PLAN
March 2020

Student Success Center and Residence Hall
University of Southern Maine, Portland, Maine

During construction activities, the maintenance of all stormwater measures will be the direct responsibility of the Contractor undertaking the work. All work shall conform to the terms and conditions and the Maine General Permit for Construction Activities (MCGP). After acceptance by the Owner, the maintenance of all stormwater management facilities, the establishment of any contract services required to implement the programs, and the keeping of records and maintenance log book will be the responsibility University of Southern Maine (USM). Notwithstanding any other schedule noted below, general inspections should be conducted by facilities staff monthly during wet weather conditions(rainfall of 0.5 inch or more) from March to November.

Piped Drainage Systems

Piped drainage systems shall be inspected on an annual basis to remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit; and any erosion damage observed at the pipe inlet and outlet. Sediment shall be removed when its level exceeds 20% of the pipe diameter. This may be accomplished by hydraulic flushing or any mechanical means. Sediment shall be contained at the pipe outlets and not allowed to transport downstream.

Driveways, Walkways and Parking Lots

Accumulations of winter sand along paved surfaces shall be cleared at least once a year, preferably in the spring, to minimize transportation of sediment during rainfall events. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader. No gravel roads or shoulders on project,

Inlet and Outlet Grates

Inlet and outlet grates have been designed for some of the pipe culvert sections and outlet structures at the site. These are intended to trap and control floatables and debris within the stormwater system. The grates should be inspected on a quarterly basis, and after large storm events (rainfall in excess of 1.0 inch) for build-up of debris and other potentially detrimental material. Periodic maintenance of these features will be required to keep grates clear and prevent damage to either the grate itself or the attached structure.

Vegetated Underdrained Filter Ponds

Inspections of the vegetatated underdrained filter ponds shall be conducted on a semi-annual basis and following significant rainfall events (rainfall in excess of 1.0 inch). Delayed or poor maintenance practices can result in loss of treatment capacity. Records should be kept of all maintenance operations to help plan future work and identify problem areas. The basin embankments should be maintained to preserve their integrity including, but not limited to,

vegetation maintenance, rodent control, erosion control and repair, and outlet control structure maintenance and repair. The embankments should be inspected annually for erosion or destabilization of side slopes, embankment settling and other signs of overtop structural failure.

The basins should be mowed at least semi-annually and clippings should be removed to minimize the amount of organic material accumulation in the basin. Sediment and debris should be removed from sediment forebays at least annually. The filter pond areas shall not be used for snow storage. Snow storage should be sited so that snow melt flows to a pretreatment BMP before reaching the filtration area. Vehicular equipment used to maintain or rehabilitate a filter pond should work from the pond perimeter and not enter the pond areas, as this will compact the soil surface and reduce filtration capacity. Under no circumstances should heavy equipment be used within soil filter areas unless removal of the filter material is proposed.

The surface of the filter ponds may clog with fine sediments over time. Maintenance of good grass cover should minimize this; however, if ponded runoff does not infiltrate within 48 hours, rototilling the top of the soil bed may be required to re-establish the soils filtration capacity. After a period of five to ten years the soil filter material may need to be replaced entirely to maintain the pollution removal function (the filter material is effectively a sorptive filter with a finite capacity). The end of the effective life of the filter material will be evidenced by significantly diminished infiltration rates and a reduction in outflow through the underdrain system. Removed soil filter material can be disposed of properly at a landfill.

Appendix A-5 **S.W. Cole Engineering, Inc. Geotechnical Report**

REPORT

19-1813 S

January 28, 2020

Preliminary Geotechnical Engineering Services

Proposed Residential Hall
& Student Success Center
University of Southern Maine
Bedford Street and Durham Street
Portland, Maine

Prepared For:
University of Southern Maine
Capital Planning & Project Management
Attention: Ann Vashon, Project Manager
25 Bedford Street
Portland, Maine 04101

Prepared By:
S. W. Cole Engineering, Inc.
286 Portland Road
Gray, Maine 04039
T: 207-657-2866

S.W.COLE ENGINEERING, INC.

- *Geotechnical Engineering*
- *Construction Materials Testing and Special Inspections*
- *GeoEnvironmental Services*
- *Test Boring Explorations*

www.swcole.com

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1.2 Site and Proposed Construction 1
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3.1 Soil and Bedrock 3
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4.0 EVALUATION AND RECOMMENDATIONS 3
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4.2 Excavation and Dewatering Considerations 4
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4.4 Recommendations for Additional Study 6
5.0 CLOSURE 6

Appendix A Limitations
Appendix B Figures
Appendix C Exploration Logs & Key

19-1813 S

January 28, 2020

University of Southern Maine
Capital Planning & Project Management
Attention: Ann Vashon, Project Manager
25 Bedford Street
Portland, Maine 04101

Subject: Preliminary Geotechnical Engineering Services
Proposed Residential Housing & Student Success Center
University of Southern Maine
Bedford Street & Durham Street
Portland, Maine

Dear Ann:

In accordance with our Contract, dated January 14, 2020, we have reviewed prior subsurface explorations for the subject project. This report summarizes our findings and its contents are subject to the limitations set forth in Appendix A.

1.0 INTRODUCTION

1.1 Scope and Purpose

The purpose of our services was to review our prior subsurface information at the site in order to assess suitable foundation types and earthwork considerations associated with the proposed building construction. Our scope of services included a review of prior explorations completed at the site in July 2019, a geotechnical assessment of the subsurface findings and preparation of this report.

1.2 Site and Proposed Construction

The site of the proposed construction is located on the University of Southern Maine (USM) Portland Campus and is situated on the easterly side of the intersection of Durham and Bedford Streets in Portland, Maine. The site is currently occupied by two buildings,

as well as paved and landscaped areas. We understand the existing Woodbury Campus Center and the adjacent facilities office building structures will be razed in favor of the proposed construction.

Based on conceptual information provided at this time, we understand redevelopment plans call for construction of a student housing structure and a student center building. The student housing structure will consist of two connected L-shaped structures; one 8-story and one 5-story, with on-grade floor slabs on the ground floor level. The Student Success Center is proposed on the westerly side of the Student Housing buildings in an area currently occupied by paved parking and landscaped areas. The proposed Student Center structure will be 4-stories.

Proposed and existing site features are shown on the "Exploration Location Plan" attached in Appendix B.

2.0 EXPLORATION AND TESTING

2.1 Explorations

Eight test borings (B-19-1 through B-19-8) were made at the site on July 30 and 31, 2020 by S. W. Cole Explorations, LLC. The exploration locations were selected by USM and established in the field by S. W. Cole Engineering, Inc. (S.W.COLE) using measurements from existing site features. The approximate exploration locations are shown on the "Exploration Location Plan" attached in Appendix B. Logs of the explorations and a key to the notes and symbols used on the logs are attached in Appendix C.

2.2 Testing

The prior test borings were drilled using hollow stem auger techniques. The soils were sampled at 2 to 5 foot intervals using a split spoon sampler and Standard Penetration Testing (SPT) methods. Pocket Penetrometer Tests (PPT) were performed where stiffer cohesive soils were encountered. SPT blow counts and PPT results are shown on the logs.

Soil samples obtained from the explorations were returned to our laboratory for further visual classification. Laboratory testing was not requested by the client.

3.0 SUBSURFACE CONDITIONS

3.1 Soil and Bedrock

Beneath a surficial layer of pavement or topsoil, test borings B-19-1, B-19-2, B-19-3, B-19-6, B-19-7 and B-19-8, made in the proposed Residence Hall and Student Success Center development area, encountered a soil profile generally consisting of uncontrolled fill overlying native deposits of glaciomarine sand, silt and clay, overlying a thin veneer of outwash sand, mantling refusal surfaces (probable bedrock) at depths varying from about 11 to 26 feet below the ground surface. The uncontrolled fills generally varied from 1 to 3 feet thick, except at B-19-6 where the uncontrolled fills extend down to probable bedrock at a depth of about 13 feet, and B-19-7 where the uncontrolled fill extend down to what appears to be native sand and silt at a depth of about 9 feet.

Test borings B-19-4 and B-19-5 were made northwest of the proposed development area and encountered a surficial layer of topsoil overlying native deposits of silty sand, overlying shallow refusal surfaces (probable bedrock) at depths of about 5 feet below the ground surface.

Not all the strata were encountered at each exploration; refer to the attached logs for more detailed subsurface information.

3.2 Groundwater

The soils encountered at the test borings were moist to wet from the ground surface. Groundwater was encountered at depths varying from about 8 to 16 feet in the borings within the proposed development area. Groundwater likely becomes perched on the relatively impervious silty clay and bedrock surfaces encountered at the test borings. Long term groundwater information is not available. It should be anticipated that groundwater levels will fluctuate, particularly in response to periods of snowmelt and precipitation, as well as changes in site use.

4.0 EVALUATION AND RECOMMENDATIONS

4.1 Foundation and Floor Slab Considerations

Based on the subsurface findings, the proposed construction appears feasible from a geotechnical standpoint. The principle foundation and floor slab considerations include:

Residential Hall: The subsurface conditions beneath the proposed Residential Hall are generally unsuitable for direct support of spread footing foundations; consequently, we recommend pile-supported foundations or, rigid inclusions be considered to improve the ground for support of spread footing foundations.

On-grade floor slabs bearing on a layer of compacted Structural Fill overlying properly prepared soil subgrades appear feasible for the Residential Hall.

Based on the available subsurface information, we preliminarily interpret the soil profile beneath the Residence Hall at correspond to Seismic Soil Site Class E (IBC 2015).

Student Success Center: Although none of the prior test borings are located directly beneath the Student Success Center, the nearby test borings suggest the trend of soil and bedrock conditions generally improves from east to west. We anticipate the Student Success Center is likely underlain by uncontrolled fills overlying stable native sands, overlying relatively shallow bedrock. At this time, based on the nearby exploration information, we recommend planning consider aggregate pier ground improvement or, over-excavation and replacement of unsuitable soils with compacted Structural Fill for support of spread footing foundations.

On-grade floor slabs bearing on a layer of compacted Structural Fill overlying properly prepared soil subgrades appear feasible for the Student Success Center.

Based on the available subsurface information, we anticipate the soil profile beneath the Student Success Center would correspond to Seismic Soil Site Class D (IBC 2015).

4.2 Excavation and Dewatering Considerations

Excavation work will generally encounter uncontrolled fills, silty sand, silt, clay soils, groundwater, and bedrock with depth. Care must be exercised during construction to limit disturbance of the bearing soils. Earthwork and grading activities should occur ideally during drier, non-freezing weather of Spring, Summer and Fall. Rubber tired construction equipment should not operate directly on the native silt and clays, when wet. Low ground pressure tracked equipment may be needed and temporary haul roads overlying geotextile fabric may be necessary. Final cuts to soil subgrades should be performed with a smooth-edged bucket to help reduce strength loss from soil disturbance.

Based on the trend of subsurface findings, we anticipate bedrock removal may be required in the western portion of the development area. As blasting is restricted in the City of Portland, bedrock removal by hoe-ramming should be anticipated. We recommend pre-construction surveys be completed on surrounding structures, water supply wells and infrastructure prior to commencing excavation activities.

Vibrations from construction should be controlled below threshold limits of 0.5 in/sec for structures, water supply wells and infrastructure within 500 feet of the project site. More restrictive vibration limits may be warranted in specific cases with sensitive equipment, historic structures or artifacts on-site or within close proximity.

Sumping and pumping dewatering techniques should be adequate to control groundwater in foundation and most utility excavations. Controlling the water levels to at least one foot below planned excavation depths will help stabilize subgrades during construction. Excavations must be properly shored or sloped in accordance with OSHA Regulations to prevent sloughing and caving of the sidewalls during construction. Care must be taken to preclude undermining adjacent structures, utilities and roadways. The design and planning of excavations, excavation support systems, and dewatering is the responsibility of the contractor.

The on-site granular fills and native sands may be suitable for reuse as compacted Granular Borrow in paved and landscape areas. The drier native silts and clays are unsuitable for reuse in building and paved areas, but may be reused in landscape areas. The saturated silts and clays are unsuitable for reuse and should be properly disposed off-site.

4.3 Weather Considerations

Construction activity should be limited during wet and freezing weather and the site soils may require drying or thawing before construction activities may continue. The contractor should anticipate the need for water to temper fills in order to facilitate compaction during dry weather. If construction takes place during cold weather, subgrades, foundations and floor slabs must be protected during freezing conditions. Concrete and fill must not be placed on frozen soil; and once placed, the concrete and soil beneath the structure must be protected from freezing.

4.4 Recommendations for Additional Study

We recommend additional test boring explorations and in-situ geophysical testing be performed at the site to further explore the subsurface conditions and Seismic Site Class.

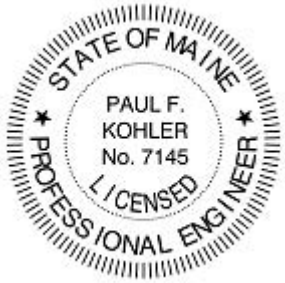
5.0 CLOSURE

It has been a pleasure to be of assistance to you with this phase of your project. We look forward to working with you during the design phase of the project.

Sincerely,

S. W. Cole Engineering, Inc.

Paul F. Kohler, P.E.
Senior Geotechnical Engineer



TJB:pfk/emw

APPENDIX A

Limitations

This report has been prepared for the exclusive use of the University of Southern Maine (USM) for specific application to the proposed Residence Hall and Student Success Center on the USM Campus in Portland, Maine. S. W. Cole Engineering, Inc. (S.W.COLE) has endeavored to conduct our services in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

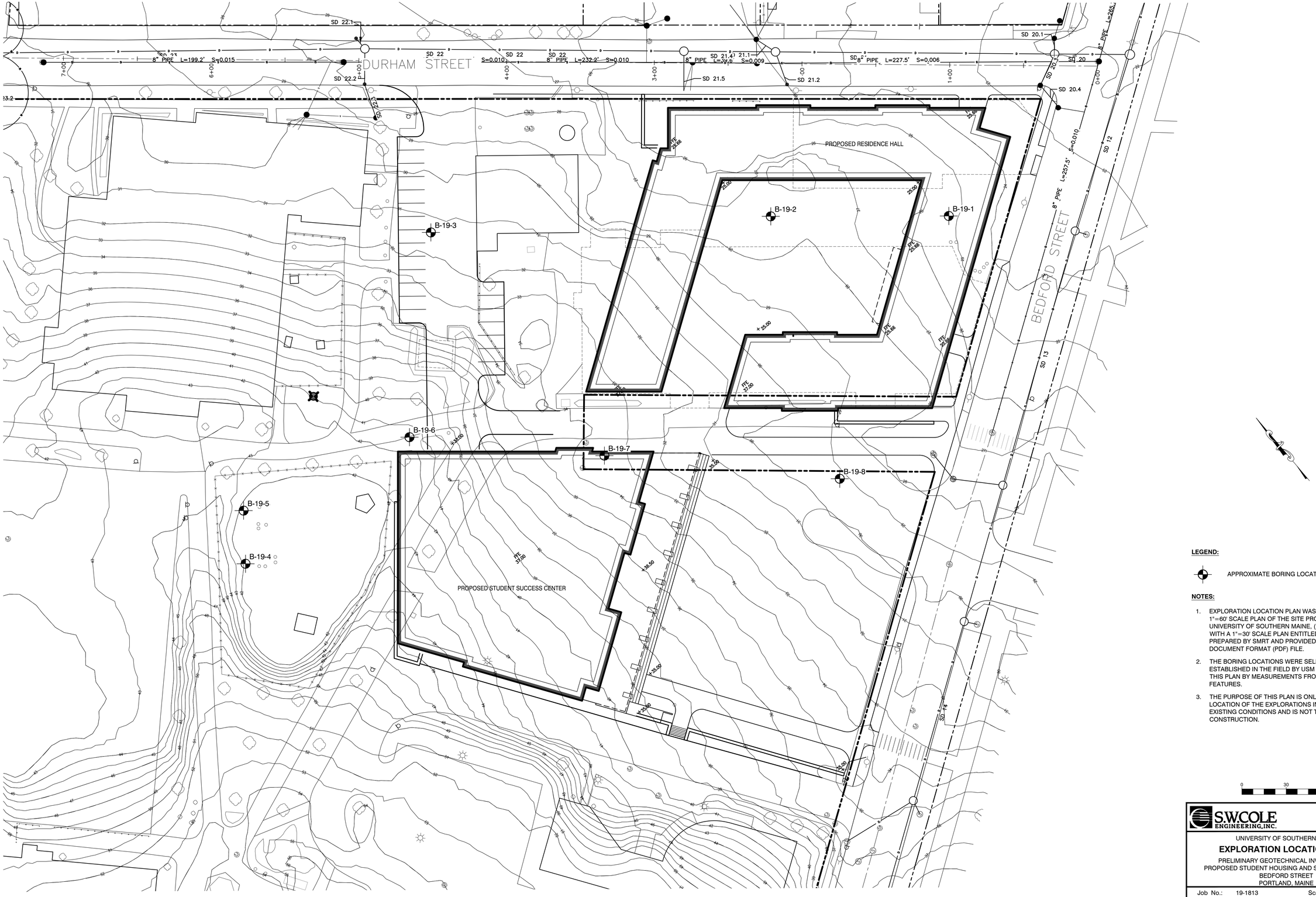
Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

S.W.COLE's scope of services has not included the investigation, detection, or prevention of any Biological Pollutants at the project site or in any existing or proposed structure at the site. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S.W.COLE should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S.W.COLE.

APPENDIX B

Figures



LEGEND:

APPROXIMATE BORING LOCATION

NOTES:

1. EXPLORATION LOCATION PLAN WAS PREPARED FROM A 1"=60' SCALE PLAN OF THE SITE PROVIDED BY UNIVERSITY OF SOUTHERN MAINE, (USM) AND OVERLAID WITH A 1"=30' SCALE PLAN ENTITLED "BORING PLAN," PREPARED BY SMRT AND PROVIDED AS A PORTABLE DOCUMENT FORMAT (PDF) FILE.
2. THE BORING LOCATIONS WERE SELECTED AND ESTABLISHED IN THE FIELD BY USM AND LOCATED ON THIS PLAN BY MEASUREMENTS FROM EXISTING SITE FEATURES.
3. THE PURPOSE OF THIS PLAN IS ONLY TO DEPICT THE LOCATION OF THE EXPLORATIONS IN RELATION TO THE EXISTING CONDITIONS AND IS NOT TO BE USED FOR CONSTRUCTION.

S.W.COLE ENGINEERING, INC.

UNIVERSITY OF SOUTHERN MAINE

EXPLORATION LOCATION PLAN

PRELIMINARY GEOTECHNICAL INVESTIGATION
PROPOSED STUDENT HOUSING AND SUCCESS CENTER
BEDFORD STREET
PORTLAND, MAINE

Job No.:	19-1813	Scale:	1" = 30'
Date :	01/28/2020	Sheet:	1

R:\2019\19-1813\CAD\Drawings\19-1813 ELP.dwg, 1/28/2020 1:23:05 PM, 1:1, CEM, S. W. Cole Engineering, Inc.

APPENDIX C

Exploration Logs and Key

BORING LOG

S.W.COLE EXPLORATIONS, LLC

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-1
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/30/2019
DATE FINISH: 7/30/2019

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 25' Estimated | **TOTAL DEPTH (FT):** 25.5 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Corey Culligan | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.91 | **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▽ 16 ft 7/30/2019 Soils Saturated at 16 +/- ft
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth
			1D		0.4-2.4	24/18	4-7-6-6			0.3 Asphalt Pavement Medium dense dark brown fine to medium SAND with some silt and gravel (Fill)	
										2.0 Very stiff becoming stiff brown Silty CLAY with some brown sand layers	
20	5		2D		5-7 6-	24/24	3-5-9-10	q_P=7 to 8 ksf			
										9.0 Loose or soft brown Silty CLAY with silty sand layers	
15	10		3D		10-12 11-	24/20	WOH-2-3-5	q_P=5 to 7 ksf		11.0 Very stiff to stiff brown Silty CLAY with some brown silty sand layers	
					14-			q_P=2 ksf		14.0 Medium brown silty CLAY with brown silty sand layers	▽
10	15		4D		15-17	24/24	1-2-4-1				
					17-			q_P=0.3 ksf		16.5 Soft gray Silty CLAY	
										19.0 Medium gray sandy silty CLAY with gray sand layers	
5	20		5D		20-22 20.5-	24/24	3-3-7-10	q_P=1 ksf		21.0 Medium dense brown fine SAND with some silt, some clayey silt layers Some gravel	
0	25		6D		25-25.3	4/4	60/4"			25.0 Dense brown Silty SAND and GRAVEL	

Auger Refusal at 25.5 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

BORING LOG

S.W.COLE EXPLORATIONS, LLC

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-2
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/30/2019
DATE FINISH: 7/30/2019

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 26.5' Estimated | **TOTAL DEPTH (FT):** 17.0 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Brett Raiche | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.91 | **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▽ 14 ft 7/30/2019 Saturated soils at 14 ft +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth
25			1D		0.3-2.3	24/18	6-2-2-4			0.3 Asphalt Pavement 0.5 Medium dense brown Silty CLAY and SAND (Mixed Fill) 1.2 Medium dense brown SAND, some silt, some gravel (Fill) Very stiff brown Silty CLAY, occasional sand layers	
	5		2D		5-7 5.5-	24/20	2-3-4-5	q_P=6 to 7 ksf			
20										9.0 Soft or loose brown Silty Sandy CLAY	
	10		3D		10-12 11-	24/24	WOH- 2-2-4	q_P=1 to 1.5 ksf		10.5 Medium varved brown Silty CLAY with frequent sand layers	▽
15											
	15		4D		15-16.3	16/8	6-10- 50/4"			14.5 Medium dense brown Silty SAND, some fine gravel, pieces of broken rock in tip of spoon	
10											

Auger Refusal at 17.0 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

BORING LOG

S.W.COLE EXPLORATIONS, LLC

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-3
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/30/2019
DATE FINISH: 7/30/2019

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 31.5' Estimated
TOTAL DEPTH (FT): 11.5
LOGGED BY: Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Corey Culligan
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.91
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): ▽ 8 ft 7/30/2019 Sand seams wet at 8 +/- ft
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth
30			1D		0.3-2.3	24/14	6-8-4-4			0.3 Asphalt Pavement 1.0 Medium dense brown Gravelly SAND, trace silt (Fill)	
					2-			q_P=8 ksf		Very stiff brown Silty CLAY, some thin brown sand layers	
	5		2D		5-7	24/20	5-3-4-5				
25					6-			q_P=4 to 7 ksf			▽
										8.0 Medium dense brown SAND, some silt	
	10		3D		10-11.5	18/14	3-2-60				
20										11.0 Probable weathered BEDROCK Auger Refusal at 11.5 feet Probable Bedrock	

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

BORING LOG

S.W.COLE EXPLORATIONS, LLC

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-4
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/31/2019
DATE FINISH: 7/31/2019

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 42' Estimated | **TOTAL DEPTH (FT):** 5.3 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Corey Culligan | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.91 | **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): 7/31/2019 No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth
			1D		0-2	24/12	1-3-5-9			0.7 Topsoil with organics Medium dense light brown Silty SAND, trace fine gravel	
40										3.0 Medium dense brown Silty SAND, some gravel, pieces of broken rock in tip of spoon	
	5		2D		5-5.3	3/3	50/3"			5.0 Probable weathered BEDROCK	

Auger Refusal at 5.3 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

S.W.COLE EXPLORATIONS, LLC

BORING LOG

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-5
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/31/2019
DATE FINISH: 7/31/2019

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 42' Estimated
TOTAL DEPTH (FT): 5.0
LOGGED BY: Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Corey Culligan
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.91
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): 7/31/2019 No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth
			1D		0-2	24/14	1-1-4-12			0.3 Topsoil with organics 0.8 Medium dense light brown Silty SAND, trace fine gravel	
40			2D		2-4	24/16	12-18-18-30			Medium dense to dense brown Silty SAND, some gravel, pieces of broken rock in tip of spoon	
	5									4.0 Probable weathered BEDROCK	

Auger Refusal at 5.0 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

S.W.COLE EXPLORATIONS, LLC

BORING LOG

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-6
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/31/2019
DATE FINISH: 7/31/2019

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 41.5' Estimated
TOTAL DEPTH (FT): 13.3
LOGGED BY: Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Corey Culligan
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.91
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): ▽ 11 ft 7/31/2019 Soils appear saturated at 11 ft +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth
40			1D		0-2	24/14	4-16-11-10			0.3 Topsoil with organics Medium dense brown Silty SAND, some gravel (Probable Fill or disturbed soil)	
			2D		2-4	24/16	8-11-13-10				
	5		3D		5-7	24/20	6-9-9-9				
35											
	10		4D		10-12	24/6	5-5-5-3			Possible loose blast spoils FILL	▽
30										13.0 Probable weathered BEDROCK Auger Refusal at 13.3 feet Probable Bedrock	

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-19-6

BORING LOG

S.W.COLE EXPLORATIONS, LLC

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-7
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/31/2019
DATE FINISH: 7/31/2019

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 33.5' Estimated | **TOTAL DEPTH (FT):** 12.3 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Corey Culligan | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.91 | **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): 7/31/2019 No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth
			1D		0.5-2.5	24/15	20-16-12-9			0.5 Asphalt Pavement 0.8 Dense brown SAND and GRAVEL, trace silt (Pavement Base Fill) 1.5 Medium dense brown Gravelly SAND, trace silt (Pavement Subbase Fill)	
30										Medium dense to dense brown silty SAND, some gravel (Probable Fill)	
	5		2D		5-7	24/20	9-11-12-16				
25										9.0 Dense brown SAND and SILT with pieces of weathered rock	
	10		3D		10-11.7	20/16	11-28-38-50/2"			10.5 Very dense, highly weathered ROCK (Sapprolite) 11.7 Probable weathered BEDROCK	

Auger Refusal at 12.3 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

BORING LOG

S.W.COLE EXPLORATIONS, LLC

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-8
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/31/2019
DATE FINISH: 7/31/2019

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 29' Estimated
TOTAL DEPTH (FT): 13.9
LOGGED BY: Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Corey Culligan
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.91
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): ▽ 10 ft 7/31/2019 Soils appeared saturated at 10 ft +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth
			1D		0.3-2.3	24/12	7-7-4-5			0.3 Asphalt Pavement 0.8 Medium dense brown Gravelly SAND, trace silt (Pavement Base Fill)	
										Loose brown silty SAND with brown silty CLAY (Mixed Fill)	
										3.0 Very stiff brown silty CLAY	
25	5		2D		5-7 6-	24/20	3-3-4-6	q_P=5 to 6 ksf			
20	10		3D		10-12 11-	24/20	4-6-8-7	q_P=1 to 2 ksf		9.0 Medium Dense, varved brown Silty SAND with brown silty clay layers	▽
										12.5 Probable cobbles or weathered BEDROCK	

Auger Refusal at 13.9 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

KEY TO NOTES & SYMBOLS
Test Boring and Test Pit Explorations

Stratification lines represent the approximate boundary between soil types and the transition may be gradual.

Key to Symbols Used:

w	-	water content, percent (dry weight basis)
q_u	-	unconfined compressive strength, kips/sq. ft. - laboratory test
S_v	-	field vane shear strength, kips/sq. ft.
L_v	-	lab vane shear strength, kips/sq. ft.
q_p	-	unconfined compressive strength, kips/sq. ft. – pocket penetrometer test
O	-	organic content, percent (dry weight basis)
W_L	-	liquid limit - Atterberg test
W_P	-	plastic limit - Atterberg test
WOH	-	advance by weight of hammer
WOM	-	advance by weight of man
WOR	-	advance by weight of rods
HYD	-	advance by force of hydraulic piston on drill
RQD	-	Rock Quality Designator - an index of the quality of a rock mass.
γ_T	-	total soil weight
γ_B	-	buoyant soil weight

Description of Proportions:

Trace:	0 to 5%
Some:	5 to 12%
"Y"	12 to 35%
And	35+%
With	Undifferentiated

Description of Stratified Soils

Parting:	0 to 1/16" thickness
Seam:	1/16" to 1/2" thickness
Layer:	½" to 12" thickness
Varved:	Alternating seams or layers
Occasional:	one or less per foot of thickness
Frequent:	more than one per foot of thickness

REFUSAL: **Test Boring Explorations** - Refusal depth indicates that depth at which, in the drill foreman's opinion, sufficient resistance to the advance of the casing, auger, probe rod or sampler was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

REFUSAL: **Test Pit Explorations** - Refusal depth indicates that depth at which sufficient resistance to the advance of the backhoe bucket was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

Although refusal may indicate the encountering of the bedrock surface, it may indicate the striking of large cobbles, boulders, very dense or cemented soil, or other buried natural or man-made objects or it may indicate the encountering of a harder zone after penetrating a considerable depth through a weathered or disintegrated zone of the bedrock.

Appendix A-6 FEMA Firm Map

ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION IN FT. (NGVD)[1]	DESCRIPTION OF LOCATION
RM 28	56.00	Disk set vertically in north face near the northwest corner of 3-story building housing the Casco Bank on Forest Avenue, 1.2 miles northwest along Forest Avenue from the Post Office near the intersection of Forest Avenue and Woodford Street.
RM 29	35.25	Copper bolt set in top of granite post flush with surface, located approximately 0.85 mile northwest along Forest Avenue from Post Office near intersection of Forest Avenue and Noyes Street, 9.0 feet northwest of northwest curb of Noyes Street and 8.5 feet southwest of southwest curb of Forest Avenue.
RM 30	25.36	Disk set in top of concrete foundation of Oakhurst Dairy building at No. 364 Forest Avenue, 35 feet southwest of north corner of building and level with street, approximately 0.55 mile northwest of Post Office near intersection of Hudson Street.
RM 31	11.88	MDOT plaque set in centerline of service doorway of Franklin Street Pumping Station at intersection of Franklin Street and Marginal Way.
RM 32	9.89	Brass disk set in top of reinforced concrete post 10 inches below present ground level, 250 feet south of C. Profenno Company, 127 Marginal Way, and 350 feet north of intersection of Preble Street and Marginal Way, 27.5 feet southeast of centerline of Marginal Way.
RM 33	36.80	Disk set vertically in northeast face of concrete foundation of 2-story brick building, 56 feet northwest of Seawall Street and 1 foot northwest of east corner of building, near Seawall Street Railroad Station and 360 feet north of crossing of Portland Terminal Railroad and Seawall Street.
RM 34	22.81	Disk set in sidewalk on west side of Saint John Street and opposite intersection of A Street at corner of entrance to Arlan's Shopping Center parking lot, in center of sidewalk and 4.28 feet west of western edge of Saint John Street and approximately 177.4 feet from Arlan's Store.
RM 35	12.83	Chiseled X cut in bolt on rim of fire hydrant on northwest side of Commercial Street, 550 feet northeast of High Street, 76 feet south of Pole No. 29.1, across from No. 322 Commercial Street.
RM 36	28.34	Disk set flush in top of concrete endwall railing at northwest end of Interstate 295 bridge over the Fore River, 21.7 feet south of Portland-South Portland city line sign, and 24.7 feet west of the centerline of Interstate 295 southbound, and 3.5 feet above pavement grade at curb line.
RM 37	22.23	Disk set vertically in center of south face of large rock set in second layer of masonry retaining wall on north of railroad tracks, 45.5 feet east of west end of wall, located .75 mile east from the overpass of U.S. Route 1 over tracks and 142 feet east of east edge of Emery Street foot bridge over tracks.
RM 38	15.56	Disk set vertically in southeast side of first concrete pier southeast of Commercial Street, 25.0 feet southeast of centerline of Commercial Street, 39 feet southwest of northeast end of pier, 0.85 mile west from Custom House at State Route 77 bridge over Fore River.

[1] National Geodetic Vertical Datum of 1929

Project Location

ZONE A2 (EL 10)
ZONE A4 (EL 11)
ZONE C
ZONE B
ZONE V3 (EL 12)
BACK COVE
FORE RIVER
THOMPSON POINT
CORPORATE LIMITS
RM 28
RM 29
RM 30
RM 31
RM 32
RM 33
RM 34
RM 35
RM 36
RM 37
RM 38

KEY TO MAP

- 500-Year Flood Boundary
- 100-Year Flood Boundary
- Zone Designations*
- 100-Year Flood Boundary
- 500-Year Flood Boundary
- Base Flood Elevation Line With Elevation In Feet**
- Base Flood Elevation in Feet Where Uniform Within Zone** (EL 987)
- Elevation Reference Mark RM7×
- Zone D Boundary
- River Mile •M1.5

ZONE B / ZONE A1 / ZONE A5 / ZONE B / 513

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depth less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance and flood plain management purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas. The coastal flooding elevations shown may differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

For adjoining map panels, see separately printed Index To Map Panels.

Coastal base flood elevations shown on this map include the effects of wave action.

Coastal base flood elevations apply only landward of 0.0 NGVD.

INITIAL IDENTIFICATION:
APRIL 29, 1977
FLOOD HAZARD BOUNDARY MAP REVISIONS:
NONE

FLOOD INSURANCE RATE MAP EFFECTIVE:
JULY 17, 1986
FLOOD INSURANCE RATE MAP REVISIONS:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.

APPROXIMATE SCALE
400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
PORTLAND, MAINE
CUMBERLAND COUNTY

PANEL 13 OF 17
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
230051 0013 B

EFFECTIVE DATE:
JULY 17, 1986

Federal Emergency Management Agency

COASTAL BASE FLOOD ELEVATIONS APPLY ONLY LANDWARD OF 0.0 NGVD

ADJOINING AREA SHOWN AS INSET A ON PANEL 230051 0016 B

University of Southern Maine (USM) Portland Campus

Transportation Demand Management (TDM) Plan

PREPARED FOR

University of Southern Maine
96 Falmouth Street
Portland, Maine 04103
(207) 228-8124

PREPARED BY

500 Southborough Drive, Suite 105B
South Portland, Maine 04106
207.889.3150

March 5, 2020

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1

Introduction

This Transportation Demand Management (TDM) plan provides a cohesive strategy for establishing and implementing a successful TDM program for the University of Southern Maine (USM) Portland campus. This plan seeks to enhance multimodal accessibility, ensure the use of non-vehicular modes, and discourage the use of driving through parking management, to achieve and build upon the parking demand reduction goals for the campus.

The TDM Plan expresses a TDM program of strategies and timeframe for when USM intends to implement the various strategies. The strategies aim at promoting walking and bicycling, improving transit service to promote ridership, promoting carpooling, changing time-of-day travel demands to eliminate or reduce vehicle trips, and managing parking demand via changes to USM's pricing and permit policies.

USM Portland

The University of Southern Maine (USM) Portland campus encompasses approximately 30 acres, with 27 buildings comprising 1,190,929 assignable square feet (ASF). Located less than one mile from the heart of downtown Portland, the Portland campus provides excellent access to social, cultural and internship opportunities. Linked to the Gorham campus ten miles to the west and the Portland city center via frequent bus service (METRO's Husky Line),

the Portland campus also has convenient access and visibility from Interstate Highway 295, with Forest Avenue serving as the primary roadway arrival point. A second important arrival point onto the campus is at the intersection of Deering Avenue, Brighton Avenue, and Falmouth Streets, soon to be transformed into a roundabout. Bedford Street bisects the campus providing access to most of the parking lots and garage for the campus.

The campus is in a completely developed urban neighborhood. The adjacent land consists of Interstate Highway 295 on the east, commercial uses on the north (along Forest Avenue), and residential uses on the west and south. The largest adjacent land use is the Oakhurst Dairy distribution center between the campus and Forest Avenue. The adjacent residential areas provide housing for some of USM's students but are generally a set of very solid and cohesive neighborhoods. Currently, no students reside on the Portland campus.

In 2017 and 2018, the University of Southern Maine undertook a process that resulted in a final *Facilities Master Plan* approval by the Board of Trustees in January 2019.[1] The process included information gathering via tours of all three campuses, extensive internal and external stakeholder interviews, and public input. The plan incorporates the visions, goals, facilities assessments, and the campus space needs assessments into a set of campus physical development recommendations. USM is now embarking in implementing specific capital projects identified in the plan.

Commitment to TDM

USM has a history of promoting Transportation Demand Management (TDM) strategies on its campuses. For starters, TDM clearly falls within two guiding principles of the University's Facilities Master Plan through its attempt to increase non-private vehicular transportation and reduce related transportation emissions:

- **Mobility**—the plan supports robust pedestrian, bicycle, shuttle bus, ride share and metropolitan and regional public transit systems that look beyond private vehicular parking to meet the transportation needs of the campus community.
- **Sustainability**—the plan supports all existing sustainability policies of the University.

TDM also indirectly relates to several other guiding principles as a result of potential outcomes from a TDM program:

- **Student Experience**—the process, plan and implementation focuses upon improving the students' academic, co-curricular and living experience on each of the campuses.
- **Public Safety**—the plan and subsequent implementation seeks to provide the safest campus environment possible through physical, programmatic and operational improvements.
- **Neighbors**—the plan seeks to establish campuses and campus communities that are positive members of the neighborhoods, mitigating negative impact and providing a beautiful and inviting campus landscape for all neighborhood members to enjoy.

[1] For more details, please visit *usm.maine.edu/president/master-plan*.

- **Aesthetics**—the visual quality of the campus facilities is important to creating an environment that meets the mission and goals of the University.

The implementation of TDM measures provides USM with the ability to make access to the campus more enjoyable and safer for affiliates (because of reduced traffic), improved relations with neighbors (because of decreased traffic and parking concerns), and decreased campus space dedicated to parking.

As a result, the University introduced TDM for the first time within its 2017 Sustainability Plan. The sustainability plan set a quantitative goal for sustainability efforts related to transportation and established a baseline of strategies to achieve that goal. Per the sustainability plan, the goal related to transportation was to reduce greenhouse gas emissions from transportation by 20 percent from a Fiscal Year (FY) 2006 baseline. TDM-related strategies suggested by the Sustainability Plan are presented in Chapter 3; one recommendation was to develop a TDM plan.

To further understand how TDM will play a role as the campus continues to transform, USM hired VHB to develop a comprehensive TDM Plan that will allow the University to meet their sustainability goals while responsibly meeting user parking demands (and limiting the additional parking supply requirements). To develop a strategic approach for USM transportation that leverages current realities in developing future outcomes, VHB and USM hosted a series of stakeholder meetings and interviews. These conversations helped inform the proposed strategies presented in this TDM plan.

Development Proposal: Facilities Master Plan Program Elements

Consistent with the USM *Facilities Master Plan* approved January 27, 2019, USM has several development program aspirations that have triggered the need to complete this TDM Plan. In the short-term, in the next three years, the University plans on embarking on building the new campus "heart", consisting of the following capital projects:

- **Career and Student Success Center**—This building will replace the dining and cocurricular activity space currently in the Woodbury Campus Center. In addition, the vision for this building is to provide a common place for programs and functions that support both the academic success and long-term professional success of the USM student. The building is anticipated to be approximately 56,000 square feet.
- **Student Housing**— This approximately 211,000 square-feet building will house upwards of 577 beds to accommodate upper class undergraduate students and graduate students.
- **"Quad"**—A key component of the transformation of the Portland Campus is a second campus open space, located adjacent to the residence halls and the Career and Student Success Center.

To accommodate parking needs for these uses, the master plan proposes increasing parking supply. (Actual proposed parking supply will be based on a separate study or evaluation.)

The development noted above may be followed by the following capital projects, anticipated within five to ten years:

- **Graduate Center for Professional Studies**—A new Graduate Center is anticipated to accommodate and integrate three primary programs: The University of Maine School of Law, a University of Maine MBA Program, and possibly the Muskie School of Public Service. It is anticipated that the new facility will be in the range of approximately 160,000 gross square feet with a footprint of approximately 38,000-45,000 gross square feet.
- **Center for the Arts**—Serving both the needs of USM students and the community, this new 83,818 square foot facility would be a premier arts venue in Portland. Current plans call for a 850-seat theatrical performance hall and a 250-seat recital hall.

2

Mobility Context

Understanding the transportation context that is available for students, faculty, staff, and visitors at USM Portland is important to be able to recommend targeted TDM program elements. This section discusses in detail all the different ways that one can access the USM campus as well as opportunities and challenges related to those options.

Walking and the Pedestrian Environment

USM's Portland campus is located on the edge of the Portland peninsula adjacent to the Oakdale residential neighborhood. Oakdale maintains a grid of streets, a majority with sidewalks, and low-volume, low-speed streets that make it generally comfortable and conducive for walking. The University is also adjacent to Forest Avenue, which offers local retail (including a grocery shop) within a short walk of the University. *Walkscore.com*, a real-

estate site that evaluates walkability and transportation when choosing where to live, scores USM a 78 out of 100 and considers it to be a "Very Walkable" location where most errands can be accomplished on foot. Unfortunately for the University, both built and natural barriers limit accessibility to areas on the south side because of the I-295 highway, to the west and southwest because of a below-grade railroad, and to the northeast because of the Back Cove. Although the University is less than a mile from much of downtown Portland, I-295 adds an additional psychological barrier for walking trips to downtown. Figure 1 shows the walkshed in quarter-mile increments out to a mile from the USM Portland campus.

Figure 1: 1-Mile Walkshed from USM Portland Campus

On campus, there is a robust network of pedestrian paths that connect all campus buildings (Figure 2). There are also information kiosks and wayfinding to assist pedestrians in their orientation around campus.

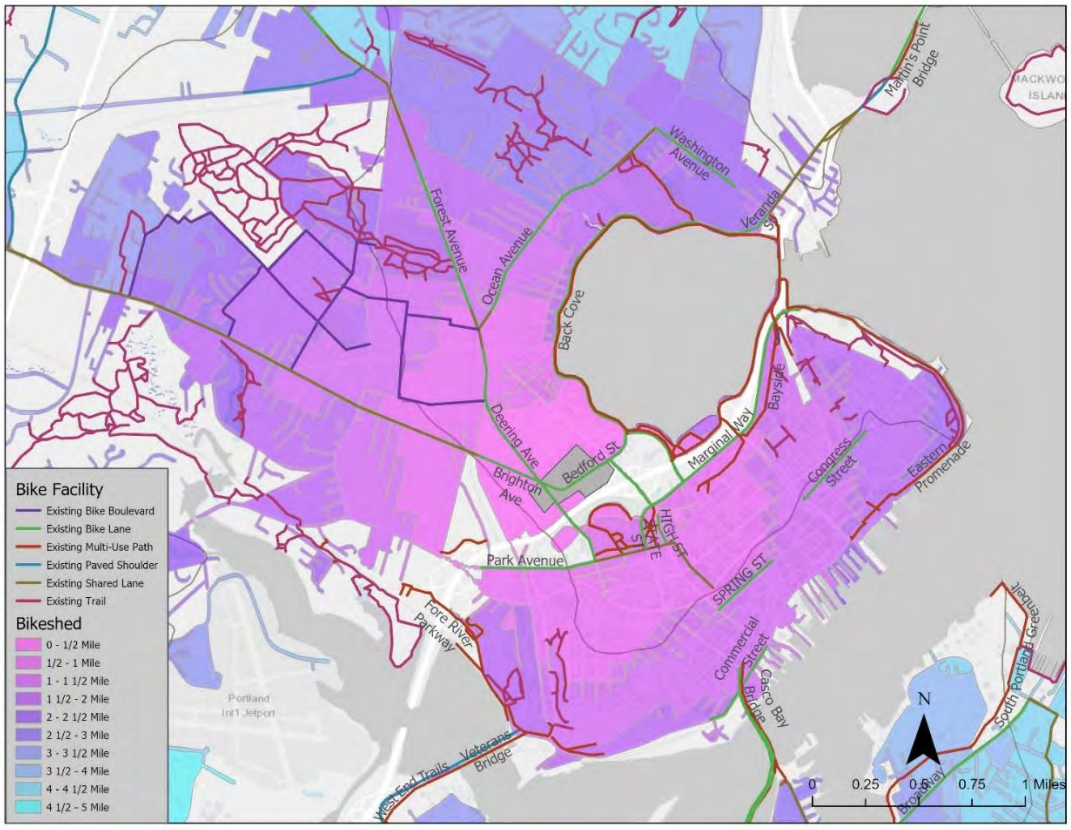
Figure 2: Portland Campus Map

In summary, walking is easy in and around USM; however, natural or human-made barriers limit accessibility, particularly to downtown Portland. TDM strategies within this plan will seek to better connect the University despite these perceived or real barriers.

Bicycling Environment and Infrastructure

The *Walkscore.com* website lists USM at a Bikescore of 93 out of 100, the equivalent of a "Biker's Paradise." In fact, USM is located at the convergence of several key bike routes in the region that ultimately connect to the Portland Peninsula. Bike lanes around USM can be found along Brighton Avenue, Deering Avenue, Bedford Street, and Forest Avenue. There is also a multi-use trail that runs parallel along the Back Cove. Although somewhat limited by the aforementioned walking barriers, the entire Portland peninsula can be accessed within 2 miles of USM. Within 5 Miles, one can reach South Portland to the south, Westbrook to the west, and the border of Falmouth to the north. For the bike-to-transit trips, METRO buses serving the University are equipped with three bike racks.

Figure 3: Bikeshed from USM



On-campus, there are eight locations with bicycle racks and a bicycle repair stand adjacent to the Woodbury Campus Center. The locations of these racks are readily visible within the campus map (Figure 2) posted on kiosks throughout the campus and online. The condition of the on-campus bicycle racks is fair; however, the Bike Fix-it Station needs repair: its tools have rusted and are bent and unusable. Shower access for campus affiliates is available at the Sullivan Gym. In order to gain access, they must show their campus ID.

In comparison to most places in the United States, the biking network in and around Portland and USM Portland campus is robust. On-campus, commuters have a place to store these bikes. In general, getting people to bike for their commute is difficult and limited to a group of bikers who feel confident to bike on the existing bicycle network. TDM strategies related to biking should focus on marketing this commute option and expanding the potential pool of people that can bike. The University should also collaborate with the City as they seek to expand and improve the bicycle network.

Public Transit

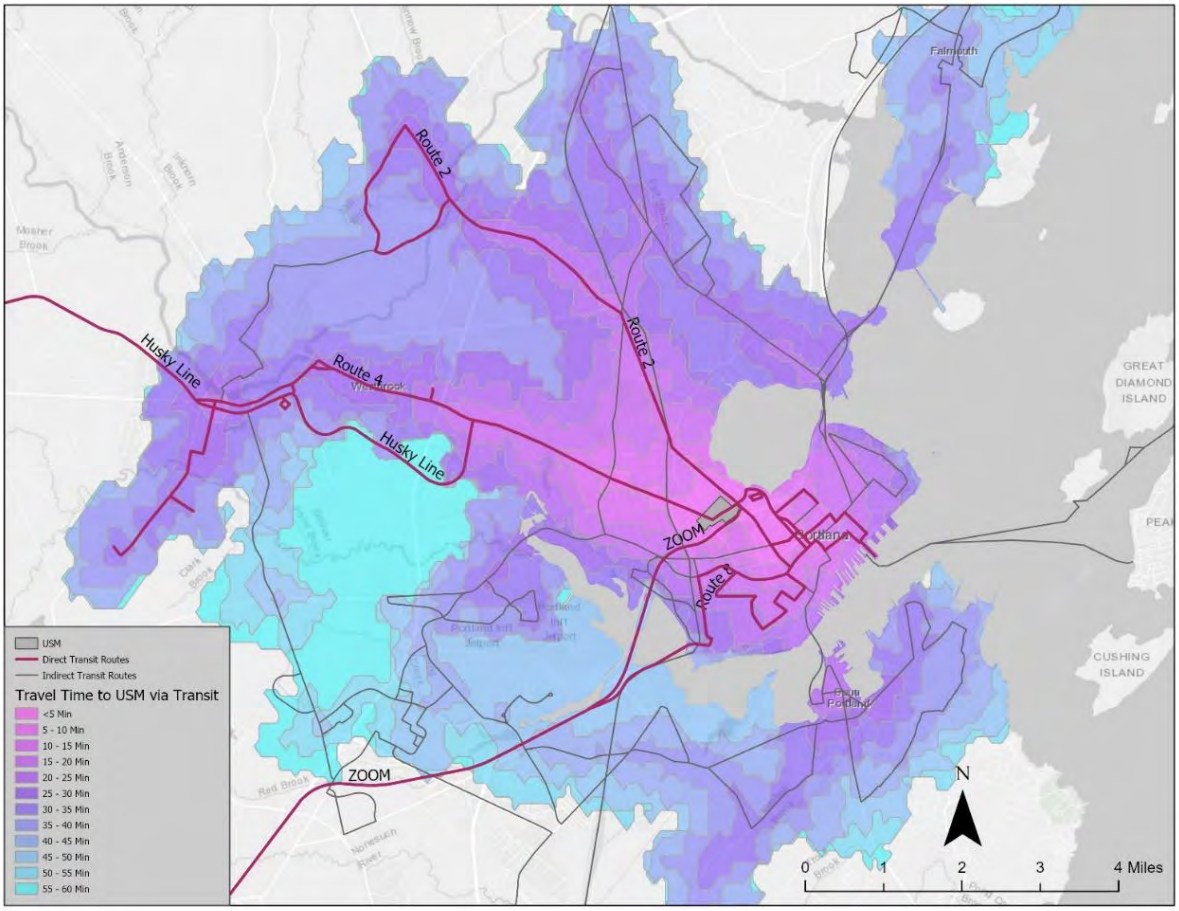
USM affiliates are granted unlimited free METRO transit access as part of their enrollment and employment at USM. Transit access is paid by way of the transportation fee which also grants employees and students access to parking. When boarding a METRO bus, USM affiliates must show their ID to the bus driver.

Four METRO bus routes serve the USM Portland campus: the Route 4 and Husky Line serve the campus directly with a stop on Bedford Street, and within a quarter-mile, the Route 2 (via Forest Avenue) and Route 8 (at Hannaford Plaza). In addition to METRO service, the Lakes Region Explorer Bus ($2 one-way) is also nearby.

On Bedford Street, at the heart of campus, there are shelters for Route 4 (Westbrook–Portland Pulse) and the Husky Line (USM Gorham via Westbrook–Portland Pulse). Route 2 (Forest Avenue) and Route 8 (Peninsula Loop) can be accessed at nearby Hannaford Plaza roughly a quarter-mile from campus. The Lakes Region Explorer (Windham Route), run by RTP, stops at the corner of Forest Avenue and Bedford Street.

Transit "accessibility" was determined by travel time including walk access (as opposed to walking and biking where distance from campus generally determines accessibility). Expected transit travel time to the campus using the existing Portland transit network was mapped out in 5-minute increments (Figure 4). These increments include up to a maximum of a 15-minute walk for the total trip (to account for walk-access to transit).

Figure 4: Transit Service at USM Portland



Transit is not only a function of having a service route present nearby; other important pieces to consider are its span of service (i.e., is the service available at the times of day when needed) and service frequency (i.e., does the service operate at frequent intervals). Scheduled headways and service hours for direct services are included in Table 1 below.

Table 1: Direct Transit Route Headways

Route	Headways (minutes)							Span					
	Weekday			Saturday		Sunday		Weekday		Saturday		Sunday	
	Peak	Day	Evening	Day	Evening	Day	Evening	Start	End	Start	End	Start	End
Bedford St USM (0.0 Miles)													
Husky	30	30	50	45	45	45	45	6:30 AM	10:30 PM	8:30 AM	11:00 PM	8:00 AM	7:00 PM
4	30	30	60	30	60	45	-	5:30 AM	11:30 PM	6:00 AM	11:30 PM	8:30 AM	7:30 PM
Forest at Bedford St. (<0.25 Miles)													
2	20	30	60	60	60	60	-	6:00 AM	11:00 PM	6:30 AM	10:30 PM	8:30 AM	4:40 PM
Lakes Region Explorer	180	180	180	-	-	-	-	6:00 AM	10:30 PM	-	-	-	-
Hannaford Plaza (<0.25 Miles)													
8	30	30	-	60	-	60	-	7:00 AM	6:00 PM	8:00 AM	6:00 PM	9:00 AM	4:00 PM
?													
Zoom Turnpike Express	30	-	-	-	-	-	-	6:00 AM	6:40 PM	-	-	-	-

While all transit services adjacent to USM operate during the schedule of a normal business day and into the evening, part of the challenge of getting USM affiliates to use these services is the lack of frequency. As one can see above, the most frequent transit service (Route 2) runs every 20 minutes while the Husky Line, Route 4, and Route 8 run on 30-minute intervals. At this frequency it is difficult to capture choice riders even if they had a direct transit route from their home to USM. These services do not offer "transit freedom" or the ability to travel without planning. ("Transit freedom", per the definition by Jarrett Walker in *Human Transit*, is a frequency of at least 15 minutes all day.[2])

Other Mobility

In addition to walking, biking, and riding transit buses, USM affiliates can use ride-hailing services Uber, Lyft, or taxis, which are readily available in and around the peninsula. No carshare vehicles are located within a half-mile of USM. Also, no dedicated carpool parking spaces are designated on campus. Carshare and carpool are opportunities that the TDM Plan can leverage to reduce the number of people parking on campus.

Parking Facilities and Policy

Campus affiliates and visitors can park at 11 distinct parking lots (including one garage) across campus hosting a total of 1,701 spaces (Figure 5). By far, the largest parking facility on campus is the University Garage, which has a total of 1,155 parking spaces. Lots are designated by permit type and only users with that permit can park in that lot. Figure 5 identifies the location of these lots, permitted users, and the total number of spaces. The campus also has dedicated spaces for handicap, service vehicles, and an electric charging station.

[2] Source: humantransit.org/2011/12/how-frequent-is-freedom.html

Figure 5: Parking Spaces at USM Portland

Note: Although the 1,155-space Abromson Garage is primarily for student and visitor parking, faculty and staff may use the facility. The garage is access-controlled by a revenue control system.

All vehicles in University of Southern Maine (USM) parking lots on the Portland campus must display a valid USM parking permit, which comes in the form of a hang tag that must be hung from a vehicle's rear-view mirror. Permits may be obtained from the parking office or online through the University's parking web portal.

USM Portland has the following permit types:

- Student (Commuter, Gorham Residential) – All students are given the same parking privileges on the Portland Campus
- Employee (Faculty, Staff)

On the Portland campus, students may park at three different lots during the day (designated by a green sign) and at a fourth lot only after 4:30 PM. All students pay a transportation fee if registered for on-campus courses. The fee varies based on the number of credits for which they are registered: between $55 and $110 per semester. These payments are mandatory as part of enrollment and are made each semester: fall, spring, and summer.

On the Portland campus, employees are allowed to park in eight different lots on campus (designated by a blue sign). They pay $25 annually for their parking permit, which needs to be renewed each calendar year.

Short-term visitors to the campus may park in the parking garage for $2 an hour between the hours of 7 AM and 5 PM, Monday–Friday. Outside of these hours, visitor parking is free. There is a charge for overnight parking, except during snow bans. Prospective students and their families, campus guests, visitors, and volunteers receive free validation by the office or department they are visiting. To pay for parking, visitors must pay at the Parking Garage Office or use the pay-on-foot stations located by the doors to the parking garage on the first and second floors of Abromson Center and the ground floor of the parking garage by the vehicle exit.

A violation of parking guidelines may result in any number of consequences, including a parking ticket fine, towing of a vehicle (and responsibility of the owner/operator for payment of related towing and storage fees), or suspension of campus parking privileges. Parking tickets range from $25 to $200 depending on the infraction. Students and faculty must pay outstanding tickets before picking up a new permit.

Parking at USM is relatively unconstrained. Typical parking activity is accommodated with the present supply. Although on-street parking is also an option, many of the streets adjacent or near the campus are metered or have 1- or 2-hour parking limits during daytime hours. Recent observations conducted by VHB for USM found many of the on-street parking spaces available during peak parking periods.

To be more effective at discouraging parking on-campus, the University will need to comprehensively review parking pricing to make sure that it reflects market value. USM may also need to re-evaluate parking operations to make it more apparent for the user what is the transactional cost of parking.

Regional TDM Program

At USM's disposal are several regional, state, and national-level TDM programs and services that are intended to support programs such as the one being reviewed by USM. Among these potential programs/services that could support USM include:

Emergency Ride Home: This program essentially serves as "insurance" to provide people an option to get home from work in case of an emergency. GO MAINE (the statewide commuter program) provides a guaranteed ride home using taxi or Enterprise rent-a-car to commuters who carpool, vanpool, take transit, bike or walk at least three days a week. The benefit is available for up to eight times per calendar year.

Way 2 Go Maine: *Way 2 Go Maine* is an annual commuter challenge in October hosted by GO MAINE. The campaign works with local employers to encourage them to use alternative transportation options through an inter-company competition. The competition recognizes companies for their successful participation and distribute prizes such as gift cards and swag to encourage participation.

Vanpool Matching: Vanpooling is a common, long-distance commute option for employees headed to the same general area consisting of between 5 to 15 commuters. GO MAINE assists to form these vanpools. In November 2019, there was one vanpool arriving in Portland from Augusta.

Rewards Program: GO MAINE has a rewards program for individuals who take greener trips, which include walking, biking, telecommuting, carpooling, vanpooling, or taking public transportation. Participants must sign-up and log their commutes daily. Rewards include gift cards and discounts to various local businesses.

Portland Slow Ride: To get people comfortable with biking, the Bicycle Coalition of Maine offers the "Portland First Friday Slow Ride". These rides are typically done at a relaxed pace and coincide with Portland's "First Friday" art walk event.

Smart Cycling Traffic Skills 101 and Educational Courses: Traffic Skills 101 is hosted by the Bicycle Coalition of Maine and is a course that teaches new and experienced cyclists how to ride in traffic. An individual or employer can specifically request a safety workshop.

Discounted Helmets: The Bicycle Coalition of Maine runs a helmet purchase discount program: when purchased in bulk (8-30 helmets) the cost is $7 per helmet.

Bicycle Benefit: As part of this national program, local businesses offer rewards to patrons who arrive at their establishments by bicycle.

Cycling Savvy: Is a program of the American Bicycling Education Association aimed at helping communities become more livable and sustainable by promoting a civil and cooperative environment on roads through complementary education and infrastructure design.

Best Employers for Commuters: This membership program provides qualified employers with national recognition and an elite designation for offering outstanding commuter benefits.

TDM at USM

TDM related to increasing multimodal transportation is not a new concept for USM. In 2017, the Office of Sustainability worked with various campus stakeholders to develop an eight-year sustainability plan that set a quantitative goal for sustainability efforts related to transportation and established a baseline of strategies to achieve that goal. Per the sustainability plan, the goal related to transportation was to reduce greenhouse gas emissions from transportation by 20 percent from a FY 2006 baseline.

Table 2 below identifies the original strategies pursued by the sustainability plan as well as current strategies that came as a result of this original proposal:

Table 2: Suggested TDM Tactics from Sustainability Plan

Category	Original TDM Strategy	Present Day (Fall 2019) Response
Shuttle	Extend shuttle routes and improve shuttle footprint	USM has partnered with the City bus system, METRO, allowing students, staff and faculty to ride anywhere in the METRO system for free and vastly expanding the reach of University affiliates.
Carsharing	Explore option of starting a carshare program on campus	USM has explored options with one company and discussed ways it could fit into the vehicle fleet.
Comprehensive TDM Strategy	Create a Comprehensive Transportation Demand Management (TDM) strategy	This document is a product of the development of a comprehensive TDM Plan.
Bicycle Infrastructure	Create adequate bicycle infrastructure & education on campus to support people who would consider biking including a bikeshare program.	To accommodate bicycles, USM provides bicycle racks around the campus (8 racks total). The Portland campus also has a fix-it work stand which is the first of its kind in Portland and allows riders to make simple bike repairs on campus. The University transportation website also highlights the benefits of biking from a health and environmental perspective.
Carpooling	Create adequate carpooling infrastructure & education on campus to support people who would consider carpooling	USM researched different carpool apps and began interviewing stakeholders to create a plan.
Hybrid & EV Vehicle Discounts	Create modest incentives for hybrid or electric vehicles	An EV charging station is provided at the parking garage and is free to use. Additional charging stations are being considered for the garage, Wishcamper, and locations in Gorham.
Incentive Program	Explore a partnership with Rise-Up to award incentives for alternative transportation commuting	The Office of Sustainability has held brainstorming sessions with the Wellness Committee to determine what types of incentives would qualify for the health credit. The Wellness Committee has agreed to work on implementation.
Carbon On-Setting Project	Explore possibility of creating a carbon on-setting project with local low-income households	No transportation related actions were identified. The Office of Sustainability chose a home weatherization project instead.
Sustainable Business Travel	Develop mechanism for incentivizing more sustainable business travel	Measured carbon footprint of business travel in order to establish a baseline.
Parking Enforcement	Create a parking enforcement division of the University, separate from Public Safety, in order to maximize space utilization of existing lots	Division was created, staff were hired, and enforcement began.

The responsibilities for implementing these strategies have largely fallen on the Parking and Sustainability Offices. According to USM, approximately 0.1 FTE is spent currently implementing TDM strategies, not counting parking enforcement which exceed 1 FTE by itself

The Plan found that it would be useful to conduct a Transportation Survey of campus affiliates to understand transportation patterns, needs and barriers. USM most recently conducted a transportation survey effort in Spring 2019, yielding over 1,000 responses related to current commute patterns, inter-campus travel, and receptiveness of possible TDM strategies.

Not listed within the Sustainability Plan, but nevertheless worth mentioning as TDM measures that have been pursued by the University include:

- Establishing a new USM transportation website to communicate the availability of alternative modes of transportation.
- Charging USM employees, students, and visitors for parking.
- Having an adopted University-wide telecommuting policy which encourages voluntary telecommuting.

3

Existing Transportation Patterns

By exploring how USM students, faculty, and staff are currently traveling to campus we can identify which alternative modes may have the greatest potential to reduce drive alone commutes. This investigation allows for the development of targeted TDM strategies that offer a greater degree of changing commuter behavior.

VHB has reviewed USM affiliates' travel patterns using two data sources: a transportation survey and registered permit data. These data help identify how people are commuting to campus, what modes of transportation may interest commuters, and finally, what types of strategies would be most beneficial towards encouraging alternative commute modes.

Transportation Survey: Mode Shares and Travel Behavior

The Transportation survey conducted in Spring 2019 was done as part of the University's sustainability effort to chart emissions related to transportation. The online survey asked about current travel patterns between home and USM and about travel between the USM campuses. The survey also included questions about one's attraction to certain TDM strategies. About 1,000 USM affiliates participated.

Some key findings related to the survey (pulled from the "Final Survey Summary" prepared by USM) include:

- 78 percent of the USM population reported driving alone at least once a week to campus from home. About 72 percent of the population drives 2+ times per week to campus.
- 94 percent of USM employees park on campus; 81 percent of students park on campus.
- 25 percent of commuter students ride the METRO bus
- Dedicated carpool spots were the highest ranked activity to encourage students to use an alternative mode of transportation
- Per the survey, a new bike would be the best buyout reward for a parking cashout program, which may be a function of it being the highest value option ($500) compared to less valuable options of $100 cash, $200 discount on carshare/bikeshare, $200 discount on carshare/scootershare, $150 gift certificate to bookstore, and $150 gift certificate to dining services.

Additional conclusions from the survey data for the USM population who indicated making a trip to the Portland Campus include:

- 72 percent of USM Portland population reported having driven alone at least once a week to campus, 66 percent of the population drive 2+ times per week alone.
- 14 percent of the USM Portland population reported have taken transit at least once a week, 11.5 percent have taken transit at least twice per week.
- Considering only USM Portland commute trips, the Portland campus mode split is as follows: Drive Alone: 68 percent; Transit: 11 percent; Walk/Bike: 10 percent; Carpool: 10 percent; Motorcycle: 1 percent
- Average One-Way Commute Distance: 13.8 miles.
- 56 percent of the USM Portland population travels to other campuses
- Between Portland and Gorham Campus, 40 percent take transit, 37 percent drive alone, 20 percent carpool, 3 percent bike, 1 percent use a motorcycle

Commute Trip Origins Based on Parking Permit Data

USM provided VHB with anonymized home address data for all their parking permit holders, which allows for an investigation of opportunities for providing incentives for reducing drive-alone trips to the campus. The following figures shows the distribution of commute trip origins based on the permit data. Major clusters of population are centered around the City of Portland, Westbrook, Gorham, Lewiston-Auburn, Brunswick, and Sanford (Figure 6). Figure 7 shows a zoomed-in version of the same data, showing that major residential areas include: Portland, South Portland, Westbrook, Gorham, Biddeford, Scarborough, and Yarmouth.

Using the parking permit data, VHB calculated drive time for faculty and staff. About 50 percent live less than a 20-minute drive from the Portland campus and 94 percent live within a 60-minute drive of the campus.

Figure 6: Distribution of Home (Commute Trip Origins) – Southern Maine Area

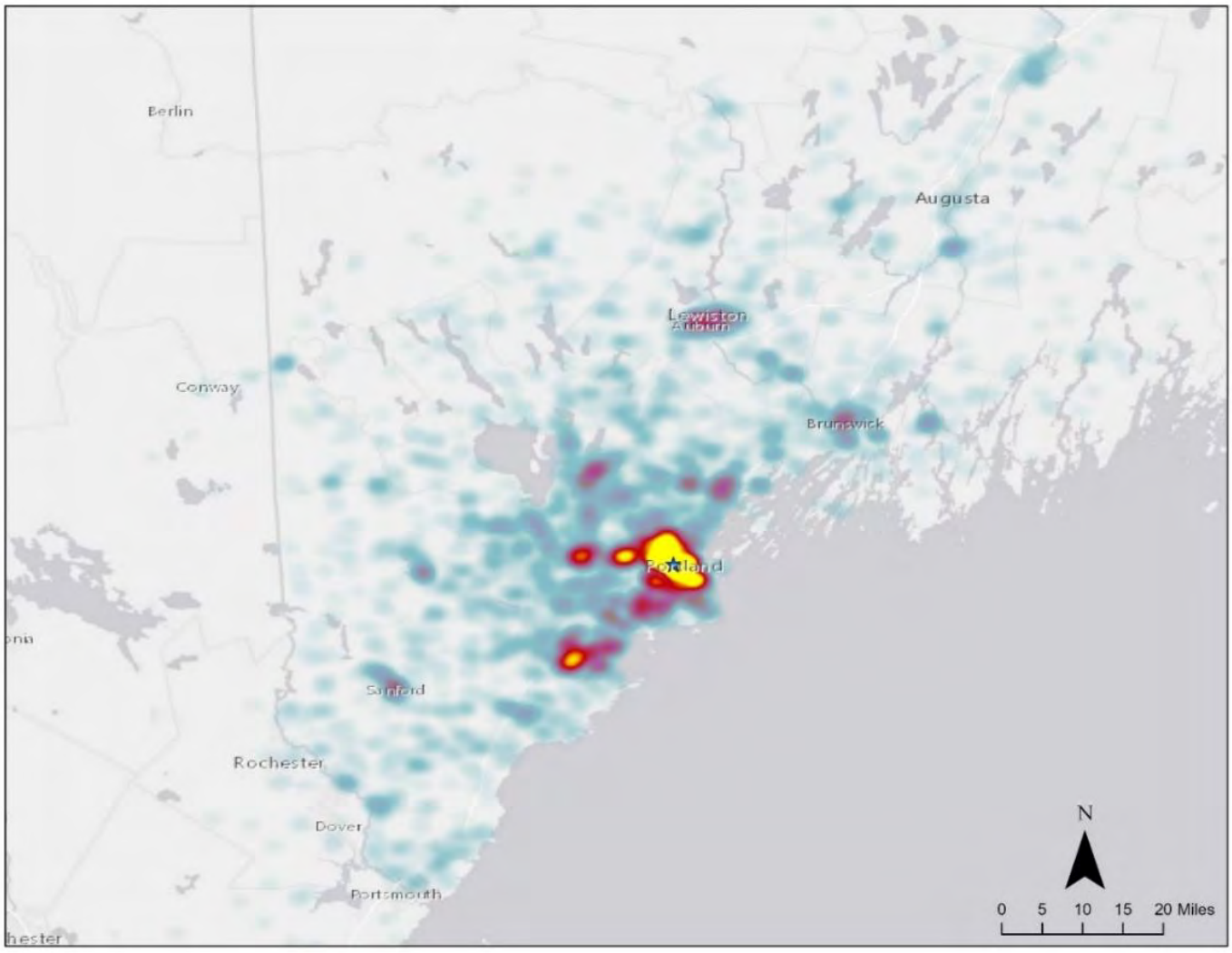
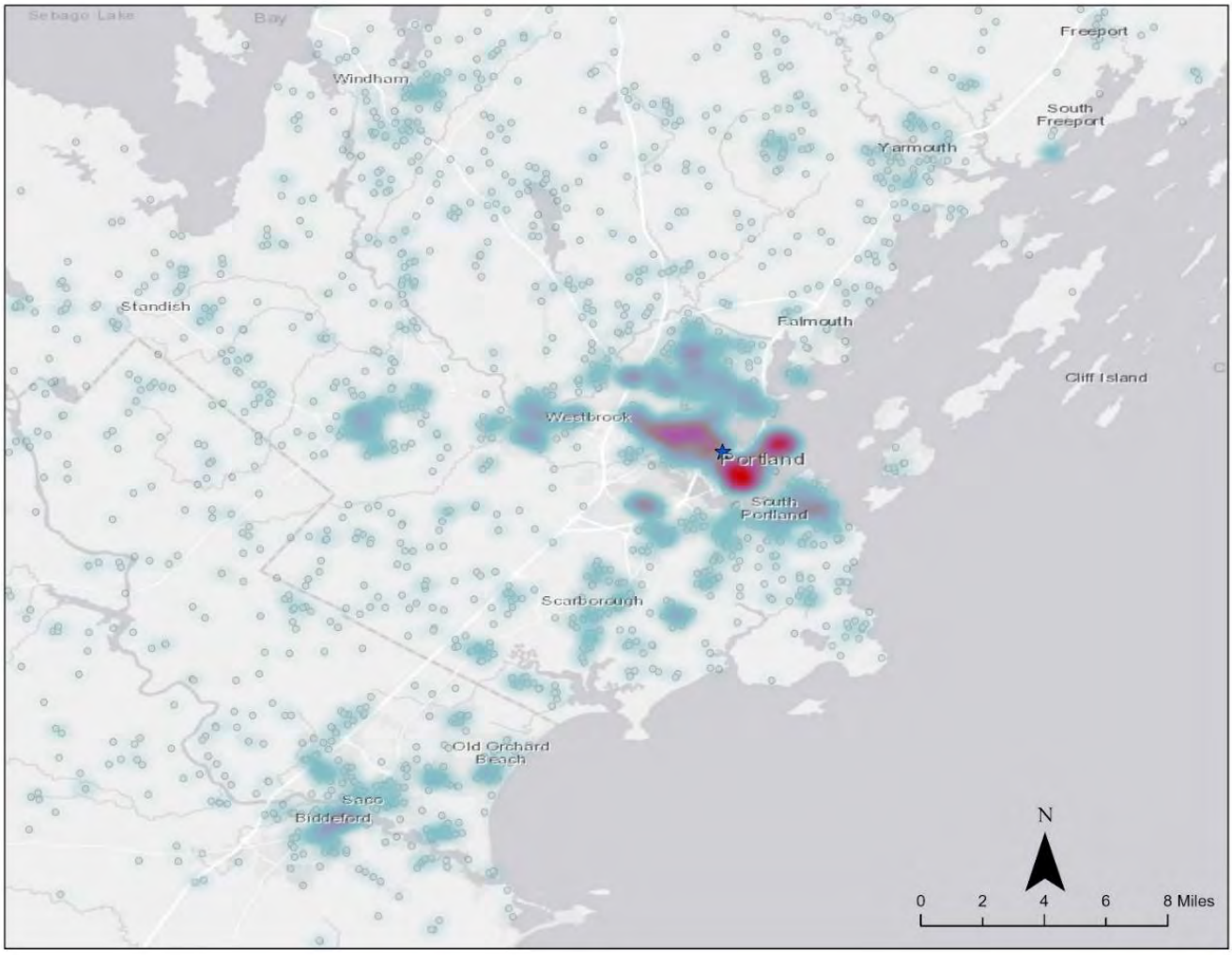


Figure 7: Distribution of Home (Commute Trip Origins) – Greater Portland Area



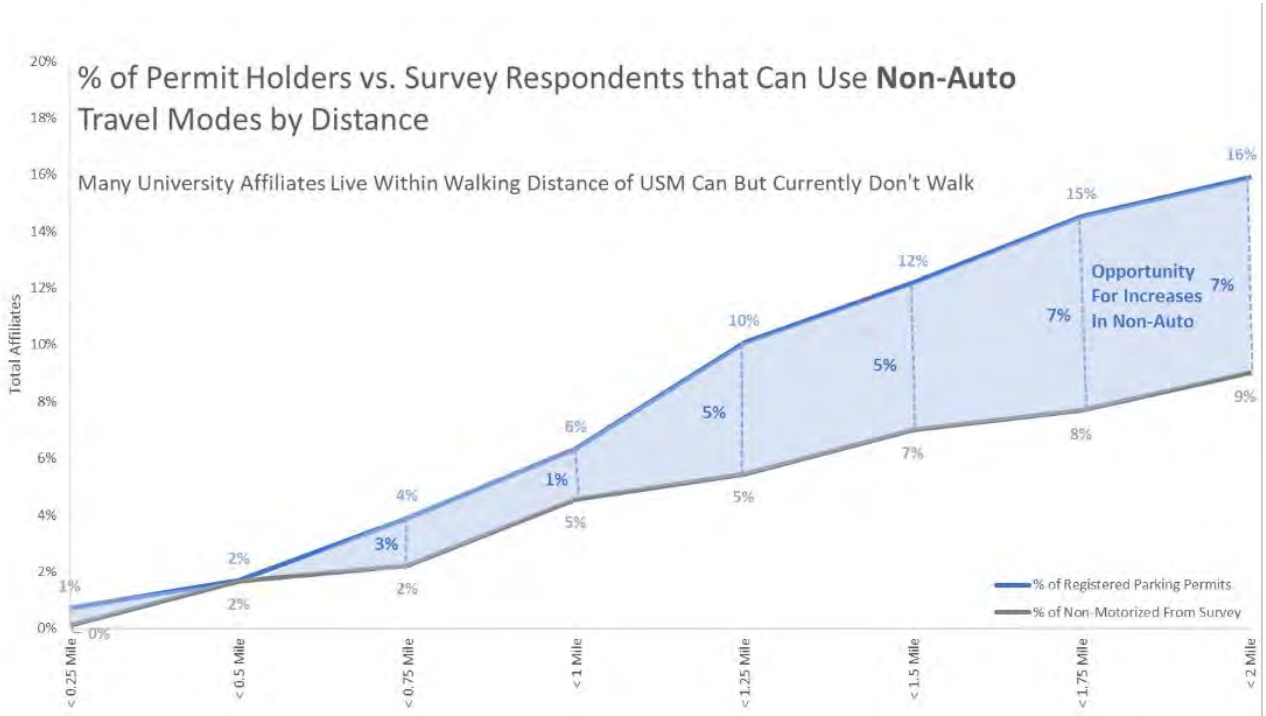
Alternative Mode Potential: Opportunities for TDM

To gauge the modal potential for walking, biking, and transit to USM, the geographic distribution of parking permit trip origin data was compared to the walking, bicycling, and transit travel market sheds. To get an understanding of current travel behavior versus potential travel choices, the 2019 transportation survey results are overlaid against this geographic distribution. The difference between the total number of people matched to a particular mode and the mode choice results from the survey form an "opportunity" zone for a potential increase in the use of a travel mode.

Walk Potential

Within a mile walking distance from campus, approximately 5 percent of USM Portland students/employees reported using non-auto transportation to the USM Portland campus whereas per the permit data 6 percent of parking permit holders were geographically matched to reside a mile from USM (Figure 9). The delta between the two data points increases significantly as distance from campus increases. At 2 miles, only 9 percent of students/employees use non-auto travel modes (per the survey), whereas a total of 16 percent live within 2 miles of campus (per the permit data).

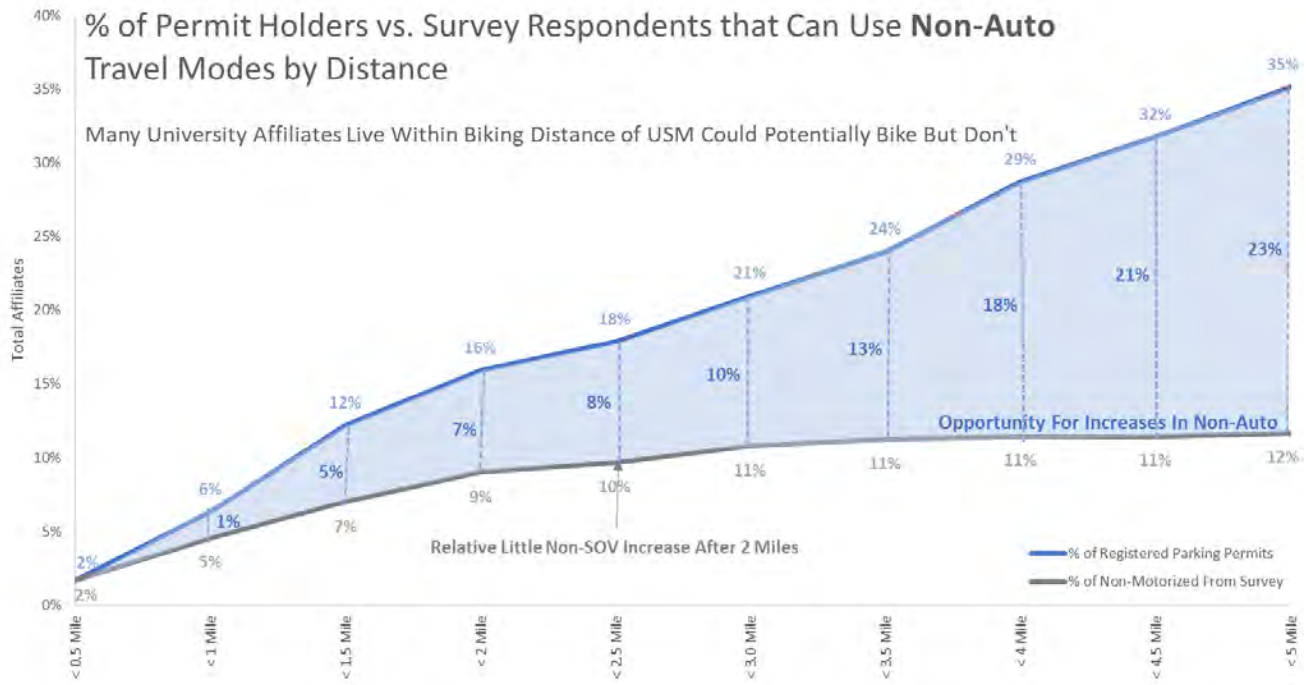
Figure 9: Walk Potential



Bicycling Potential

Biking distance for parking permit holders was compared to non-motorized users based on survey results (Figure 10). Based on the geocoded parking permit data, up to 35 percent of all USM employees and commuter students live within 5 miles of campus, considered a reasonable biking distance for a commute. Per the transportation survey, however, only about 12 percent of commuters who live within 5 miles of campus use a non-motorized form of transportation. After 2½ miles, most people at USM stop using non-SOV[3] modes of transportation.

Figure 10: Bike Potential

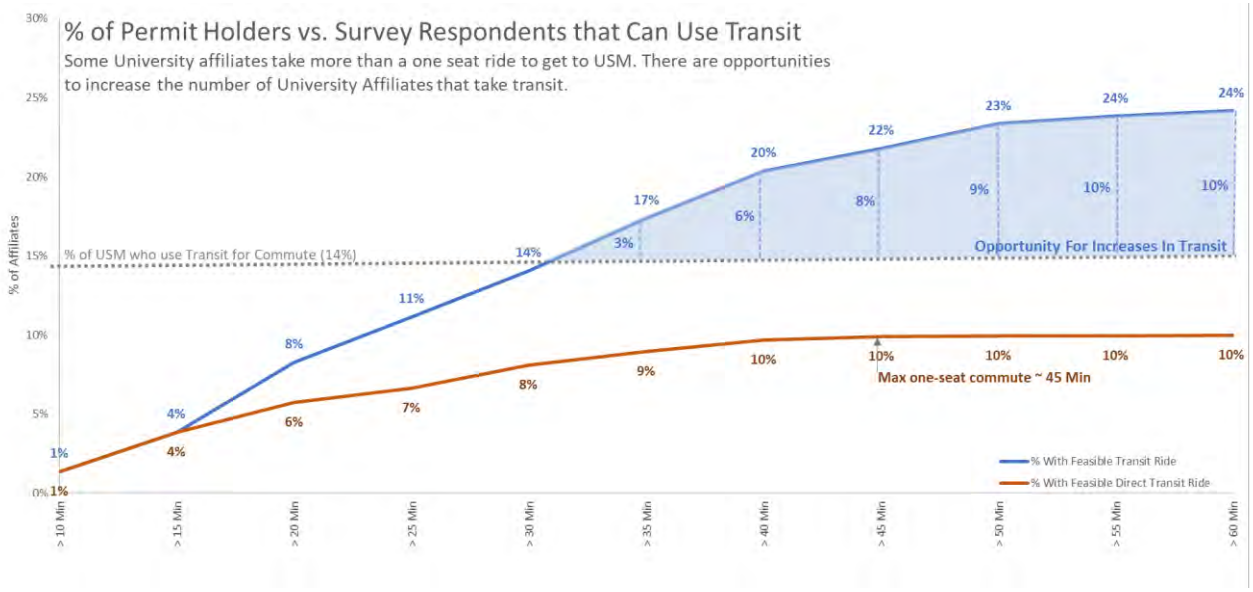


[3] SOV – single-occupancy vehicle (this mode is also referred to as *drive alone*)

Transit Potential

Transit-access time was compared to the percent of commuters from the survey who reported using transit (Figure 11). Up to 10 percent of USM affiliates live within walking distance of a direct transit route to USM Portland (based on the parking permit data). A further 14 percent (summing to 24 percent) can take a transit option that would take less than an hour to access USM Portland. This is 10 percent more than the existing number of University affiliates who indicated taking transit to USM (as reported in the transportation survey).

Figure 11: Transit Potential



Given the higher number of USM affiliates who noted taking transit than the number of affiliates within direct transit routes indicates that either a percentage of affiliates may be connecting on transit service or otherwise driving to a stop first (example driving to Gorham campus and then hopping on the Husky Line). Of all transit routes with direct access to the USM Portland campus, the Husky Line has the highest number of permit holders who live within walking distance (459), followed by Route 4 (451), Route 2 (352), and Route 8 (270). Of all transit routes, the Route 9A and Route 9B serve the most affiliates within walking distance of stops (611), but these routes require a transfer to a transit bus line with direct service to the Portland campus.

4

TDM Coordinator (TC)

TDM program management responsibilities will be designated to a single representative associated with the University.

USM will appoint Aaron Witham, Assistant Director of Facilities Management for Sustainability, as TDM Coordinator for USM; the Director of Auxiliary Services will play a supporting role.

The Assistant Director of Facilities Management for Sustainability can be reached via:

- email at aaron.z.witham@maine.edu
- phone at 207-780-5947.

The responsibilities of the Assistant Director of Facilities Management for Sustainability will include the following:

- Promote non-SOV transportation choices primarily to faculty, staff, students and residents
- Champion the implementation of new TDM strategies to reduce parking demand and increase the use of non-SOV transportation modes
- Conduct new student/new employee orientation to educate incoming affiliates regarding their transportation options to and from the campus.

- Coordinate the implementation of TDM strategies with Campus Scheduling, Human Resources, Parking, and any other departments.
- Work with the City of Portland, METRO, GoMaine, a private carpool app and other potential partners to improve non-SOV transportation access to the campus and to gain support for program implementation.
- Recruit and engage participants for any outreach events or campaigns associated with the TDM program over time.
- Review potential new alternative transportation technology or SOV reduction technology and coordinate implementation efforts associated with them.
- Coordinate all monitoring and evaluation activities necessary to measure the effectiveness of the TDM program in achieving the targets.
- Develop a TDM Report, which will provide an assessment of strategies implemented to date and outline the activities to be implemented in the upcoming year.

The responsibilities of the Director of Auxiliary Services will include the following:

- Provide consultation on TDM strategies that impact parking supply, services, and technology.
- Provide up-to-date data on parking volumes and patterns from the parking garage.
- Provide support for conducting additional parking assessments and measurements annually.
- Co-develop and implement financial parking incentives or disincentives as identified by the TDM plan.
- Maintain existing parking infrastructure and technology, with the support of Facilities Management and Capital Planning.
- Maintain parking services, including payments, campus notifications, and website updates.
- Carry-out parking enforcement.

5

Parking Reduction Goal

USM expects the TDM program to reduce the number of single-occupancy vehicle trips and reduce the need for parking by implementing measures that encourage the use of sustainable travel modes and discourage the demand for vehicle parking on campus.

A successful implementation of the TDM Plan is expected to result in the reduction of peak parking demand by at least 3 percent and upwards of 12 percent from a parking demand level under today's conditions.[4] By establishing this goal the University is able to orient, focus, and prioritize resources to achieve this specific outcome.

[4] Parking demand is expressed as the average peak parking space occupancy during a 3-day weekday period in the spring (April) or fall (October), representing a typically busy, classes-in-session activity level.

6

Trip and Parking Reduction Strategies

The USM Portland TDM Plan establishes an aspirational vision and set of goals for transportation, mobility, and sustainability. The Plan builds off USM's multimodal strengths but pushes forward-thinking and multifaceted solutions.

Ultimately, USM will achieve success if one keeps in mind the following key concepts:

There is no "silver bullet" in TDM. The recommendations represent a package of reforms; implementing only one or two items will not solve USM's parking challenges.

Behavior change is difficult, but critical if USM would like to realize its vision. Future growth at the University will present critical challenges with parking. USM will need to depart from the status quo and rethink parking and transportation in order to grow sustainably.

The Plan is a "living" document. Key to the success of this plan is to implement, measure, learn, and adjust. Over time as the transportation context, technology, institutional culture, and user preferences change, so may the types of strategies that are pursued.

The table below presents the strategies that USM agrees to implement; they are grouped by categories reflected in the City of Portland's *Technical Manual*. The table also includes timeframe for when USM plans to implement the various strategies, identifying which strategies can be implemented within the next two years and which ones may require additional time for launching their implementation.

Table 3: Proposed TDM Program for USM Portland

Strategy		Description	Infrastructure	Incentives	Education	Timeline Years	
						Short-Term (0–2 Years)	Long-Term (2–5 Years)
Walk/Bike	**City Bikeshare**	USM will advocate and encourage the development of the citywide Bikeshare system	X			Full Launch	Monitor + Adjust
	Bicycle Repair Station	USM will install a new bike repair station (or shop) in a central part of their campus	X			Planning + Testing	Full Launch
	Promote Local Bicycling Activities	Promote the participation in (and facilitation of) local bike activities such as the Portland Slow Ride, Smart Cycling Traffic Skills 101, and Cycling Savvy Events			X	Full Launch	Monitor + Adjust
	Discounted Bicycle Supplies	Provide discount sales for bike supplies through the Bicycle Coalition of Maine		X		Full Launch	Monitor + Adjust
	Improve Bicycling Infrastructure w/ City of Portland	Collaborate with the City of Portland on identifying improvements to bicycling infrastructure along corridors traveled by USM commuters	X			Full Launch	Monitor + Adjust
Transit	**Husky Line Bus Service Improvements**	Research the possibility of increasing the frequency of the Husky Line to 15 minutes	X			Planning + Testing	Soft Launch
	Transit Screen Installation	Install real-time transit screens at high profile locations on campus as part of the new campus student center	X			Planning + Testing	Full Launch
	Expand Transit Services: On-Demand Route and/or Increasing METRO Bus Frequencies	Research the possibility of launching a local on-demand bus shuttle connecting downtown Portland to USM and/or increasing service frequency on METRO routes that connect downtown Portland to USM	X			Planning + Testing	Soft Launch
Carpool	**Vanpool Vehicles**	Pilot a program to lease vanpool vehicles and initiate vanpools in high commuter corridors		X		Soft Launch	Monitor + Adjust
	Reserved Carpool/Vanpool Spaces	Designate reserved parking spaces for carpools and vanpools in prime parking locations	X			Full Launch	Monitor + Adjust

Strategy		Description	Infrastructure	Incentives	Education	Timeline Years	
						Short-Term (0–2 Years)	Long-Term (2–5 Years)
	Develop rideshare matching platform	Develop rideshare matching platform or meet & greet events to pair potential carpool participants	X		X	Soft Launch	Full Launch
Parking	**Parking Buyout Program**	Launch a parking buyout program to incentivize employees & students to forgo the purchase of a parking permit		X		Planning + Testing	Soft Launch
	Student Permit Unbundling	Unbundle parking permit fee from the registration fee and require a separate action for registering for parking permit	X			Full Launch	Monitor + Adjust
	EV Charging Stations	Install additional EV charging stations at select parking locations	X			Planning + Testing	Full Launch
	Parking Pricing Increase	Increase parking pricing for faculty/staff for greater parity (compared to student rates)		X		Soft Launch	Monitor + Adjust
Time of Day Demand	**Class Schedule Review**	Conduct course catalog review to spread out courses (by time & location)	X			Full Launch	Monitor + Adjust
	Promote Telework and Flexwork	Promote and encourage use of telework & flexwork policies for employees			X	Full Launch	Monitor + Adjust
Communications and Marketing	**New Student and New Employee Orientation**	Build upon current student and employee orientation to include transportation review and commute assistance			X	Full Launch	Monitor + Adjust
	Transportation Website	Build upon current website (launched last May), by adding new and expanded transportation options and benefits, and performing ongoing maintenance and updates			X	Full Launch	Monitor + Adjust
	Access Guide	Develop a “slick sheet” access guide summarizing ways to travel to campus and nearby destinations			X	Full Launch	Monitor + Adjust
	Guaranteed Ride Home	Promote a Guaranteed Ride Home Program from GoMaine or a private carpool app to complement alternative mode use			X	Full Launch	Monitor + Adjust

7

Monitoring and Reporting Plan

Program monitoring and evaluation are important components of any successful TDM Program, because they provide a quantitative benchmark of the program's effectiveness in reducing single occupancy vehicle trips and parking demand. The Transportation Coordinator (TC) can use the information gathered via the monitoring plan to direct the ongoing implementation of the TDM Program, allowing for adjustments and the introduction of new strategies. Furthermore, via regular periodic reports, USM will provide evidence to the City of the applicant's diligence in implementing the program.

There are different methods for collecting the data necessary to monitor a TDM Program, including surveys, program participation documentation, vehicle parking counts, and activity logs. USM's TDM program monitoring will use vehicle parking occupancy counts and person surveys in evaluating the effectiveness of the program. Each of these tools is discussed below.

Parking Occupancy Counts

Parking counts refer to a visual or automated account of occupied and/or empty parking spaces. These data are used to ensure that the amount of parking supply (spaces) on the redevelopment site is appropriate to meet peak hour parking demand (parked vehicles).

Under the direction of the Transportation Coordinator, once every year, the university will collect observations of vehicle parking during a representative (typically busy, classes-in-session) 3-day period in the spring (April) and the fall (October). The TC will report the peak parking demand for the campus parking for those observed days.

Parking occupancy of the campus's garages will be based data retrieved for the parking revenue control system, whereas occupancy of the campus's surface parking lots will require manual field observations. Observations of spaces occupied will be made during each hour in a ten-hour period of 8:00 AM to 6:00 PM.

The reporting of parking transactions and garage use should distinguish, to the extent possible, those users who are USM employees, students, and transient/visitors (hourly, public) users.

To develop a parking occupancy rate relative to the campus population, the TC should compile the latest number of enrolled students and the number of faculty and staff associated with the Portland campus.

Commute/Travel Survey

Every two years, the Transportation Coordinator will administer a survey of both employees and students of USM Portland.

Surveys provide a qualitative understanding of how well TDM (and Parking Management) program elements are working. The survey will at a minimum ask respondents for the type and frequency of modes of transportation used in a typical week, reasons behind driving alone, and ideas for incentives that would encourage drive-alone respondents to use an alternative mode.

The TC will conduct the surveys in either the spring or fall session (e.g., April or October), in a period that coincides with the parking occupancy data collection. The survey will be completed during a week without any holidays and when classes are in session.

Status and Monitoring Report

Each year that monitoring is conducted, the TC will prepare a report summarizing TDM program status and monitoring results. In addition to reporting the results of the data collection, the report will detail (1) what/when strategies were implemented, (2) an estimate of how many individuals participated in certain programs, and (3) the lessons learned regarding the most effective TDM strategies.

The TC will submit the report to the City of Portland's TDM Program Manager (a position currently staffed in the Planning and Transportation Division of the Planning and Urban

Development Department). A report should be issued within 6 months following a data collection period (e.g., if the survey and data collection occurs in April, a report should by issued no later than October of that same year). The TC will meet with the City of Portland Planning Department and discuss suggestions for changes to the TDM Program.

Monitoring Schedule

Monitoring (survey, parking, and traffic data collection) should begin within the year following the opening of the planned residence hall. Monitoring will occur according to the schedule detailed below, until the year 2030, the horizon year of the *Facilities Master Plan*. Updates to the *Sustainability Strategic Plan* may conclude that further monitoring is warranted.

- Annually:
    - Conduct parking occupancy observations (as described above)
    - Prepare a TDM monitoring report (as described above)
- Biennially:
    - Conduct a travel survey (as described above)

Memorandum

To: Aaron Witham
University of Southern Maine

Date: March 5, 2020

Project #: 55325.00

From: Jennifer Conley, PE, PTOE

Re: Traffic Impact Analysis for Residence Hall, Student Center and Parking Garage

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VHB has conducted a Traffic Impact Study (TIS) for the proposed development of a Residential Hall and Student Center at the University of Southern Maine (USM). Although a parking garage is not the subject of the current permit application, for the purposes of the traffic analysis, the proposed parking garage was included because in the long term, trips to and from the residences will also be traveling to the new parking garage. The 580-bed residence hall will be located on the corner of Bedford Street and Durham Street. The new Student Center will be located to the west of the residence hall, set back from Bedford Street. Vehicular access for loading will be provided to the sites via a lot off of Durham Street. Pedestrian access to the dormitory will be via a front entrance on Bedford Street, an entrance on Durham Street and an entrance across from the Student Center. The main entrances to the student center will face the lawn towards Bedford Street with an additional entrance to the rear of the building.

Although the parking garage is not included as a part of the initial permitting effort, the permitting for the parking garage is expected to closely follow the application for the dormitory and student center. In addition, a number of the residents of the proposed dormitory are expected to be students who may bring cars to campus, the parking supply is anticipated to soon become necessary. As such, it made sense for the traffic impacts of the parking garage to be included in this traffic analysis. The parking garage will be located on the site of the existing Sullivan Gym lot (between the Sullivan Gym and the Science Building), between the Student Center and Falmouth Street. For the purpose of this analysis, the parking garage is anticipated to supply between 400 and 500 spaces accessed via Falmouth Street. The garage is intended to primarily serve the new dormitory with excess supply to be distributed to either staff, visitors, or commuter students, as needed.

The Traffic Impact Study is summarized within this document, which contains:

- a description of the site and existing transportation network in the study area;
- a description development program for the site;
- a trip generation and distribution estimate for the proposed development;
- an evaluation of traffic operations at key nearby intersections; and,
- a set of conclusions and recommendations to support the project.

Existing Conditions

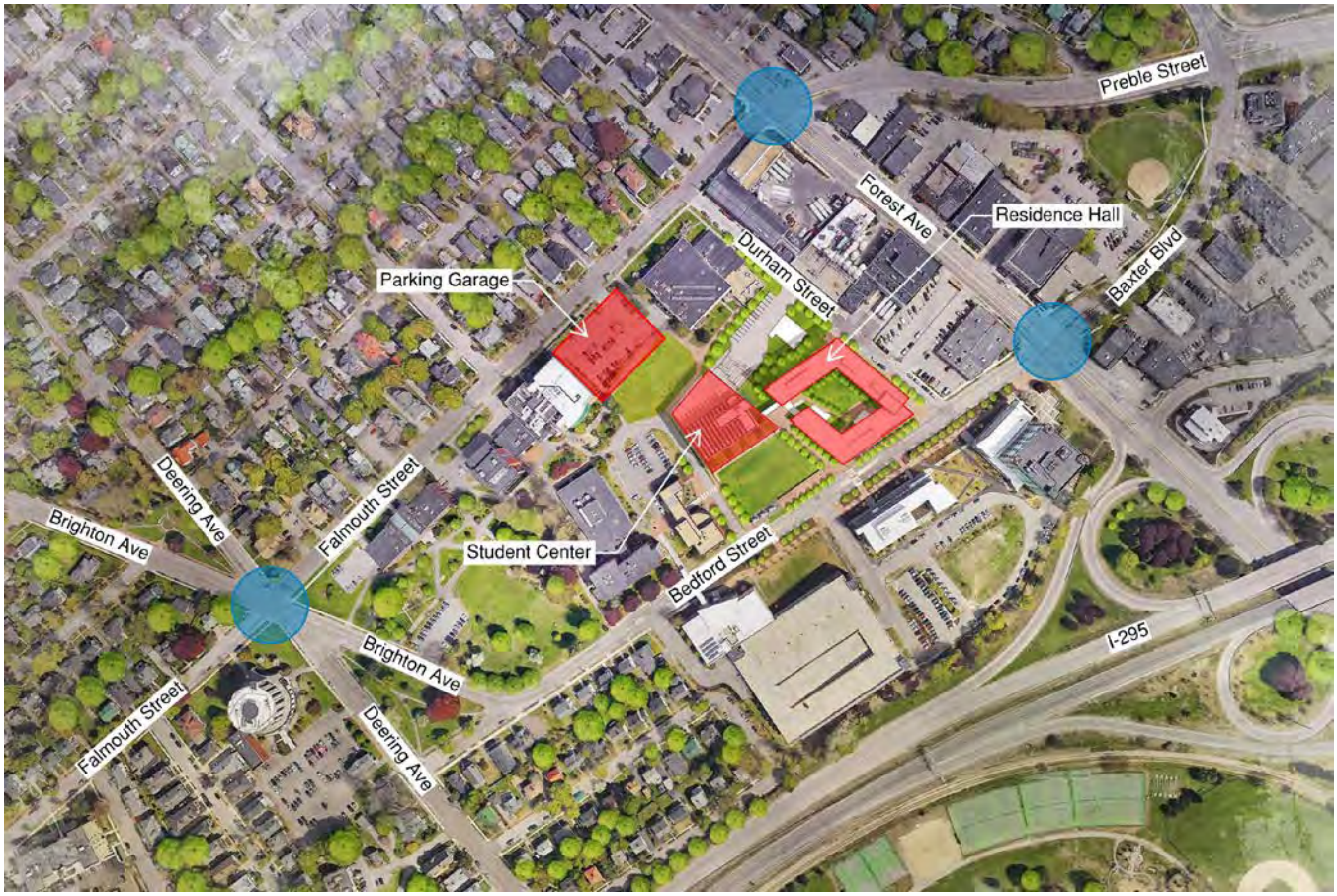
The existing conditions in the vicinity of the proposed development as outlined above were reviewed. As indicated, the proposed development is expected to occur on the northwest corner of the intersection of Bedford and Durham Streets and the proposed parking garage is to be located on Falmouth Street between Brighton Avenue/Deering Avenue and Forest Avenue. As such, likely points of vehicular access will be via either end of Falmouth Street. The intersections of Falmouth Street at Forest Avenue (signalized) and Falmouth Street at Brighton Avenue/Deering

500 Southborough Drive
Suite 105B
South Portland, Maine 04106

Avenue (signalized, but soon to become a roundabout) were studied. In addition, because the existing parking garage is located on Bedford and until the proposed garage is opened, access will likely be via Bedford Street, the intersection of Forest Avenue at Bedford Street was also studied.

A review of existing conditions focused on the project site and transportation network access to and from the site as depicted in **Figure 1**.

Figure 1: Study Area



Existing Roadway Characteristics

The proposed development will be located on the USM campus on the block located between Bedford Street, Forest Avenue, Falmouth Street, and Brighton Avenue. Forest Avenue is an arterial running northwest to southeast through Portland. In the vicinity of the project site, Forest Avenue (numbered Routes 302 and 100) consists of two through lanes in each direction in addition to turn lanes at some of the signalized intersections. Despite already providing some pedestrian, bicyclists and transit accommodation, Forest Avenue has recently been the focus of a corridor study to determine how to allocate the right of way in order to better serve all users.

Bedford Street intersects with Forest Avenue just north of the I-295 ramps at a four-way signalized intersection with Baxter Boulevard and extends less than 1700 feet to its end at Deering Street. Bedford Street is serves two-way traffic in a single lane in each direction with turn lanes when needed. The roadway is punctuated by pedestrian crossing locations providing access to USM buildings on both sides of the street. The proposed dormitory will abut Bedford Street and the student center will face it over a green area. Bedford Street also provides access to the existing parking garage.

Brighton Ave extends west and north from where it intersects with Bedford Street at an unsignalized intersection and continues 15 miles (under different names) until it intersects with Route 302 in North Windham, providing access to the campus from a number of communities to the west and north. Although Brighton Avenue currently forms the end of this block, future plans will reconfigure this area. Brighton Avenue consists of a single travel lane in each direction along with bicycle accommodation in both directions as well as parking in the eastbound direction. West of Brighton Avenue, Bedford Street consists of a single travel lane towards Brighton avenue and operates under Stop control.

The intersection of Brighton Avenue at Falmouth Street and Deering Avenue is a six-way signalized intersection that is scheduled to be converted into a roundabout, with construction beginning in the spring of 2020. This intersection is currently accessed by six two-way roadways and experiences congestion, confusion, and safety issues. The intersection experiences high pedestrian volumes and has sidewalks and crosswalks on all legs.

Falmouth Street, while primarily residential, is one of the few continuous east-west streets connecting Saint John street and Forest Avenue. Between the intersections of Brighton Avenue/Deering Street and Forest Avenue, Falmouth Street consists of a single travel lane in each direction with parking and sidewalks provided on both sides of the street. Falmouth Street will ultimately provide access to the proposed garage anticipated to serve primarily residential students.

Falmouth Street intersects Forest Avenue and Preble Street to form a four-way signalized intersection. This intersection was also considered for improvements in the previously mentioned corridor study that included Forest Avenue.

Existing Traffic Volume Data

Turning movement count data was collected at the study area intersections of Forest Avenue at Bedford Street; Forest Avenue at Falmouth Street and at Falmouth Street, Brighton Avenue and Deering Avenue. Traffic data was collected on Tuesday February 25, 2020 when both USM and local Portland schools were in session. The weather was cloudy and approximately 40-degrees. Data was collected during the typical peak commuter peak periods, 7:00 to 9:00 AM and 4:00 to 6:00 PM. The peak hour occurred from 7:30 to 8:30 AM and 4:30 to 5:30 PM at the three study area

intersections. Data adjustments were researched to determine the design hourly volumes at these locations. Traffic count data from MaineDOT was reviewed and a weekly mean factor of 1.02 and the highest volume week adjustment of 0.89 were applied to the volumes to result in design hourly volumes. All traffic volume data is provided in the appendix.

Existing Campus Parking Demand and Commuter Trip Patterns

USM conducted a parking study in October 2019 and found that the parking demand is at or above 80 percent of the parking supply from 10:00 AM to 4:00 PM and peaks at over 90 percent from 1:00 to 3:00 PM on weekdays. Outside of those hours, there is little parking demand on-campus.

The majority of the commuting students park in the existing campus garage. The number of trips entering and exiting the existing USM garage were obtained for a typical school week in October 2019. A review of the data collected between Tuesday, October 21, 2019 and Thursday, October 23, 2019 has revealed that the commuter student trips peak from 11:00 AM to 12:00 PM when the trips entering the garage are almost equal to the numbers leaving the garage. 10.5 percent of the day's trips typically occur between this time period. The hours of 8:00 to 9:00 AM, 12:00 to 1:00 PM, 2:00 to 3:00 PM and 4:00 to 5:00 PM generate a similar number of trips with differing directional splits. In the morning, most students are entering. Midday there are some students entering while others exiting and, in the afternoon, most students are exiting the garage. Approximately 10 percent of the daily trips to and from the garage occur during each of these hours. This data suggests that not all students are on-campus at the same time. There are a number of students that leave in the midday peak hour while others arrive at that time.

Future Conditions

The future conditions in the study area were analyzed both with and without the proposed project. The future traffic volumes and intersection operations for both the project opening year of 2022 and the future horizon year of 2027.

Infrastructure Improvements

The future conditions for the study area include a significant infrastructure change at the intersection of Falmouth Street, Brighton Avenue and Deering Avenue. Beginning in Spring 2020, construction will begin at this signalized intersection to create a roundabout. As shown in Figure 2 from the City of Portland website, the eastern leg of Brighton Avenue will be discontinued, and the traffic redirected to the southeast Deering Avenue leg of the intersection. The remaining five legs of the intersection will form the new roundabout. With constructed starting shortly, this intersection will be analyzed as a roundabout in all scenarios.

The traffic volume data collected at the intersection of Falmouth Street, Brighton Avenue and Deering Avenue was redistributed to represent the volumes that will exist at the five-leg roundabout in the future, rather than the current six-leg condition. The proposed roundabout design is presented in **Figure 2**.

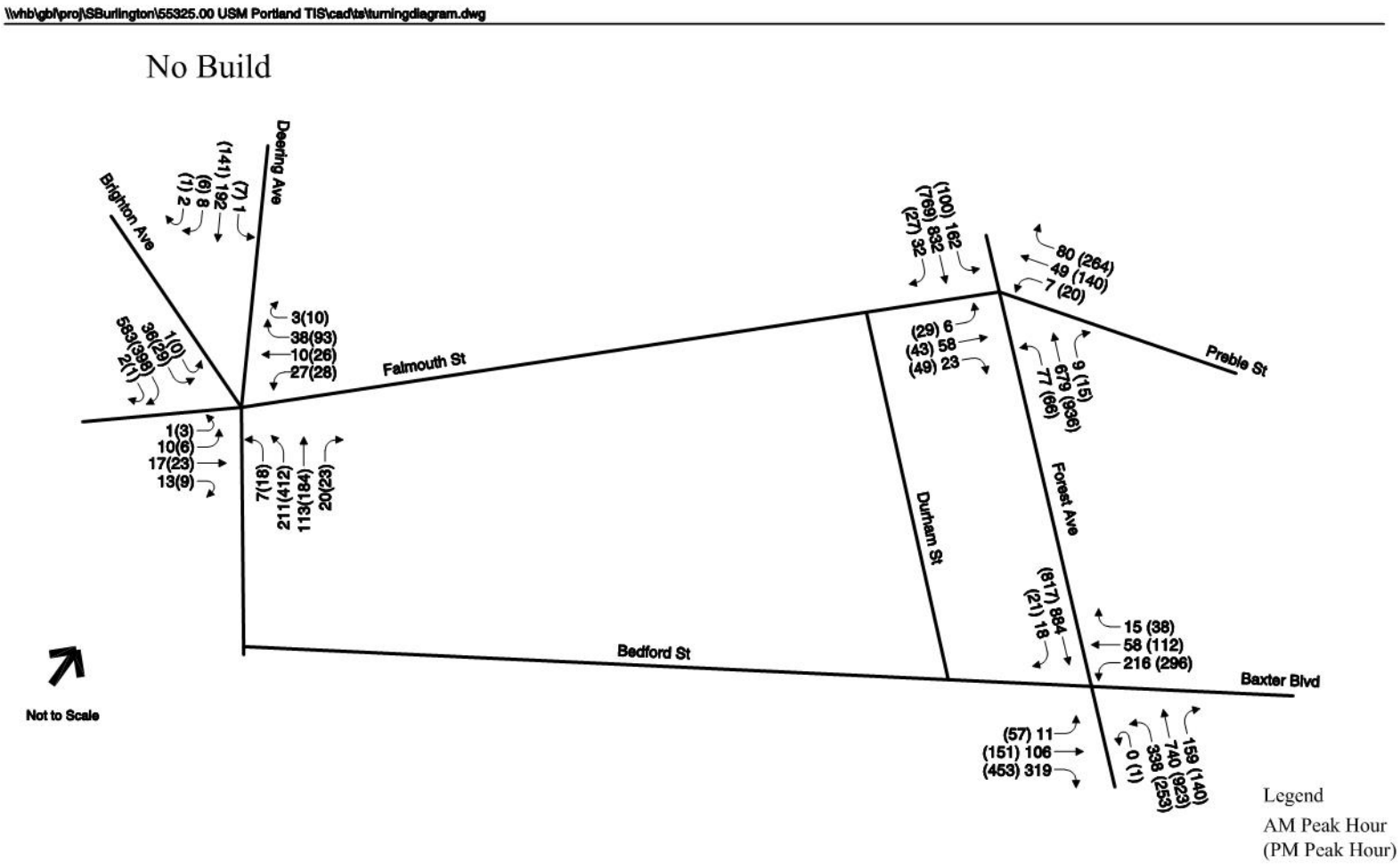
Figure 2: Proposed Roundabout at Falmouth Street, Brighton Avenue and Deering Avenue ***(City of Portland)***

In addition to the impending improvements at Falmouth Street, Brighton Avenue and Deering Avenue, the *Portland-South Portland Smart Corridor Plan* evaluated alternatives for improving traffic operations along Forest Avenue. As a part of a DPW water resources project, the striping changes have been incorporated to better serve cyclists at these intersections. Adaptive traffic signal control will be in place at these signals shortly. This technology will allow for a more responsive signal system that, for example, ends green time for approaches that do not have traffic on them and lengthens green time for approaches with additional demand. For the purposes of the analysis, the signal timings from the *Portland-South Portland Smart Corridor Plan* were field checked in used as a baseline operation.

Background Traffic Volume Adjustments

The *Portland-South Portland Smart Corridor Plan* identified sites along the corridor where potential large developments could occur and included projections for those developments in the Planning Study (each of which was outside of this immediate study area). With a seven-year time horizon and no defined plans for those sites, that approach is not appropriate for this traffic analysis. Instead, a one percent per year background growth rate was applied to the traffic volumes to account for any smaller projects that are contemplated in the area and could affect traffic volumes at the study area intersections. This annual growth rate is consistent with the growth rate used for the roundabout analysis. **Figure 3** illustrates the 2027 No Build traffic volumes.

Figure 3: 2027 No Build Traffic Volumes



Trip Generation

VHB has evaluated the trip generation of the proposed campus developments. Although only the 580-bed residential hall and new Student Center is currently proposed, the University understands that based on their student profile, it is likely that a number of the dorm beds will be occupied by upperclassmen who will want to bring a car to campus. Therefore, this analysis considers not only the residence space and Student Center, but also the provision of an additional parking facility on-campus.

Approximately 68 percent of residential students at the Gorham campus currently have a parking pass. That percentage is high due in part to the policy that the parking fee is coupled with other fees and not a separate chosen fee. The University is incorporating changes to that program to ensure that bringing a car to campus would be an additional cost and a choice made by students. In addition, the location of the Portland campus is more likely to work with a car free lifestyle as there are transit opportunities and destinations nearby for walking and biking.

Adding residential beds to a campus typically will reduce vehicle trips if enrollment is expected to remain the same. A portion of the student body who were previously commuting to and from the campus each day, now will reside on-campus and walk to classes. The students with cars will occasionally use them to drive to recreation or commercial establishments and others may get vehicular deliveries or visitors, but the reduction in the typical peak hour trips is usually significant.

The proposed Student Center is not expected to generate a significant number of trips as it is an expansion of an existing use on the campus and is expected to continue to serve the student population. With the improved facility, it is possible that additional special events could occur that would generate additional trips, but if they were to occur, the traffic would be intermittent and not generate a typical trip generation.

The most significant generator of trips on a college campus is typically increases in enrollment. Enrollment has been slowly growing in recent years, but may have been limited due to a lack of on-campus housing. Recently, demand has been high for on-campus housing at the Gorham campus, resulting in 210 students being housed in triples (rooms with two other students). This indicates that there is already demand for 210 additional beds. In addition, based on surveys, the University has identified that 296 additional undergraduate students and 106 existing graduate students currently are living off-campus that would like to be in on-campus housing. It is also likely that a number of students have opted to attend other Universities that could accommodate them in on-campus housing (in less than a triple room).

Short-Term Trip Generation

In the short term, based on the needs of the existing students, it is likely that a number of commuter students to the Portland Campus (either from Gorham or from off-campus housing) will convert to on-campus residential students. Based on the existing known demand, as many as 210 Gorham residents who are living in triples and up to 402 students who are living off-campus (296 undergrad students and 106 grad students) who currently commute would likely convert to residential students. This would fill the 580 beds on the Portland campus. Of these students, many of them will not generate even one vehicle trip on a typical day. Others will have classes on the Gorham campus and become a commuter in the opposite direction. A few other trips will be generated for eating, shopping, part time jobs

and recreation in the area. Portland commuters who will no longer be commuting as they become on-campus residents.

The University conducted a survey that found that students at the Portland campus currently commute by the rounded percentages listed below.

Portland Campus Mode Shares:

- 70% drive alone
- 10% use transit
- 10% walk or bike
- 10% carpool

As such, if 580 commuter students were removed from the campus, that would result in approximately 858 fewer vehicle trips per day (400 people driving alone is 800 trips and 58 people in 29 carpools is 58 trips). However, as indicated above, a percentage of the new residential students will originate from the existing residential facilities in Gorham. For trips just between the two schools, the transit percent is significantly higher.

Mode share between Portland and Gorham campuses:

- 40% drive alone
- 40% use transit
- 20% carpool

If all of the 580 Portland residential students had been previously coming from Gorham moved on-campus, the trip reduction would be 580 trips (232 people driving alone is 464 trips and 116 people in 58 carpools is 116 trips).

With 210 of the new residential students coming from the Gorham campus and the remainder coming from the general commuting population, the number of trips to the campus will be reduced by 680 trips.

Portland on-campus residents who may commute

However, a number of these new on-campus residents may have classes at the Gorham campus. If one half of the Portland campus residents have courses at the Gorham campus, and the mode share is consistent with the students coming from Gorham to Portland, then there would be 116 students driving alone to the other campus and 58 in carpools resulting in 290 new vehicle trips related to the residents commuting to that campus.

Other Trips

As indicated above, on any given day, it is likely that 10 percent of the residential student population will make a trip off-campus. Based on the urban location of the campus, it is likely that a number of these trips will be made via alternate modes like walking and biking. The *Walkscore* website lists USM at a Bikescore of 93 out of 100, the equivalent of a "Biker's Paradise" As the entire Portland peninsula can be accessed within 2 miles of USM. Within 5 miles, one can reach South Portland to the south, Westbrook to the west, and the border of Falmouth to the north.

However, to be conservative, it was estimated that each of these trips would occur via personal vehicle. This would result in a trip increase of 100 vehicle trips per day.

Total Short-Term Trips

Combining the trip reduction associated with commuters converting to residents with the reverse commuter trips and other trips results in a total trip reduction of 290 vehicle trips per day, a large percentage of them being removed during the campus peak hours. Although the number of trips would decrease significantly, the total parking demand would likely remain constant as vehicles that are currently parked elsewhere the majority of the time (overnight, non-class hours) will now be stored on-campus for a longer portion of the day. In some cases, vehicles may be used to travel to other campuses during the day creating an available space for a student coming to the Portland campus. However, instead of the peak parking demand occurring for just a few hours midday, these vehicles would be parked on-campus most of the time.

Long-Term Trip Generation

As indicated above, the off-campus trip generation of the Student Center is expected to be minimal with the exception of special events. Similar to the short-term trip generation, the dorm beds are expected to result in a net loss of trips. Even the parking garage itself will not generate traffic unless demand is anticipated to increase to serve a new traffic generator.

The driver of long-term trip generation will be an increase in the student population. USM is projecting that the student body will increase by 972 students (or 706 full time equivalents) between now and 2027, the five-year time horizon after completion of the student housing and Student Center. Of that increase, 580 are expected to be housed in the residence hall, leaving an increase of approximately 390 students that will commute (whether from another campus or from off-campus) to the Portland campus.

New commuter trips

As noted above, surveys indicate that of the students that commute to the Portland campus, 70 percent of them drive alone and 10 percent of them carpool. Applying these rates to the 390 students results in 273 students driving alone (273 entering and 273 exiting) and 40 students in carpool (20 entering and 20 exiting) for a total of approximately 590 daily commuter vehicle trips to and from the campus. Applying the trip characteristics observed over the course of the day at the existing garage results in a peak trip generation of 58 vehicle trips from 8:00 to 9:00 AM, 62 vehicle trips from 11:00 AM to 12:00 PM, 60 vehicle trips from 2:00 to 3:00 PM and 52 trips from 4:00 to 5:00 PM.

New residential trips

As outlined above, there are expected to be a number of trips associated with the new residences. Unlike in the opening year when those trips are in place of commuter trips, with the growth of enrollment expected in the five years after opening, the residential students will be above the current enrollment levels. Therefore, the 290 reverse commuting residential students and the 100 miscellaneous trips per day would be increased trips as well. The miscellaneous trips would primarily occur during the off-peak hours in the evenings with few occurring during class time. To be conservative, the 290 reverse commuting trips were estimated to occur at the same times as the

commuting peak on the Portland campus, resulting in a peak hour trip generation of 29 trips from 8:00 to 9:00 AM, 30 trips from 11:00 AM to 12:00 PM, 29 trips from 2:00 to 3:00 PM, and 26 trips from 4:00 to 5:00 PM.

New other trips associated with long term increase in enrollment

With increases in student enrollment, there will be an increase in faculty, staff and other services (most significantly deliveries of all types). A review of the ratio of the number of enrolled students to the number of faculty and staff reveals an anticipated increase of approximately 270 person trips per day (135 entering and 135 exiting). Because most of the existing faculty and staff currently travel by personal auto, it was assumed that the future staff would as well. Faculty and staff are not anticipated to generate many trips during the peak hours of student travel, however, to be conservative, 30 trips were anticipated during each of the student peak hours. It was also estimated that an additional five trips were made during each of the peak hours to account for deliveries, service, maintenance, etc. associated with the increase in enrollment.

Total Long-Term Trip Generation based on USM data

The total long-term trip generation based on USM data indicates that the campus will generate an additional 122 vehicle trips during the weekday AM peak hour and 113 vehicle trips during the weekday PM peak hour.

Table 1: Long-Term Trip Generation Based on USM Information

		Commuter Students[1]	Residential Students[2]	Faculty/Staff/ Other[3]	Parking Garage[4]	**Total Trips**
Weekday AM Peak Hour	Enter	57	0	30	-	***87***
	Exit	1	29	5	-	***35***
	Total	58	29	35	-	**122**
Weekday PM Peak Hour	Enter	10	22	5	-	***37***
	Exit	42	4	30	-	***76***
	Total	52	26	35	-	**113**

[1]Based on anticipated enrollment of 970 additional students, 390 new commuter students anticipated, commuter mode splits and hourly trip pattern at existing garage

[2]Based on 580 dormitory beds, trips to other campuses, mode splits between campuses and other recreational etc trips

[3]Estimates for faculty, staff and other trips

[4] parking garage – trips assigned to generators

Long-Term Trip Generation Comparison

For comparison purposes, an industry standard trip generation estimate for the proposed future enrollment increases was calculated based on rates published by the Institute of Transportation Engineers (ITE) in the 7th edition of the Trip Generation Manual (as per MaineDOT Traffic Management Permit Requirements) and checked against the 10th edition (most recent edition) for any more recent updates. The trip rates were calculated for the weekday AM and PM peak hours using the Land Use Code (LUC) for University/College (LUC 550). These time periods are typically the highest volume times on the adjacent roadway network. One of the USM school peak hours does overlap somewhat with the roadway peak period.

The ITE 7th edition data indicates that the total AM peak hour trip generation of the campus would be 204 trips (163 in and 41 out) and the PM peak hour trip generation of the campus would be 233 trips (70 in and 163 out) without any adjustment for the trip patterns noted as this urban/suburban campus. The more recent ITE data (10th edition) indicates that the campus would generate 126 trips (101 in and 25 out) in the highest AM peak hour and 136 trips (43 and 93 out) in the highest PM peak hour.

The mode shares for the campus (70% drove alone and 10% carpool) were applied to the trip estimates per ITE. The results are illustrated in **Table 2** below as well as the information determined based on the trip patterns at the existing campus garage and other existing campus data.

Table 2: Long-Term Trip Generation – Industry Standards (adjusted for mode share) compared to Local Data

		ITE 7th Edition[1]	ITE 10th Edition[2]	Local Data[3]
Weekday AM Peak Hour	Enter	122	76	87
	Exit	31	19	35
	Total	153	95	122
Weekday PM Peak Hour	Enter	52	43	37
	Exit	122	92	76
	Total	174	135	113

[1]Based on Institute of Transportation Engineers *Trip Generation*, 7th Edition
[2]Based on Institute of Transportation Engineers *Trip Generation*, 10th Edition
[3]Based on data outlined in Table 1 for increased commuter and residential students

Any project which generates 100 or more passenger car equivalents (PCE) trips during the peak hour of traffic generation, must file a Traffic Movement Permit application with Maine Department of Transportation. As outlined above, the project is anticipated to generate between approximately 100 and 200 passenger car equivalents during the peak hours. While the Maine Traffic Movement Permit requires use of the 7th edition of ITE, those rates have been

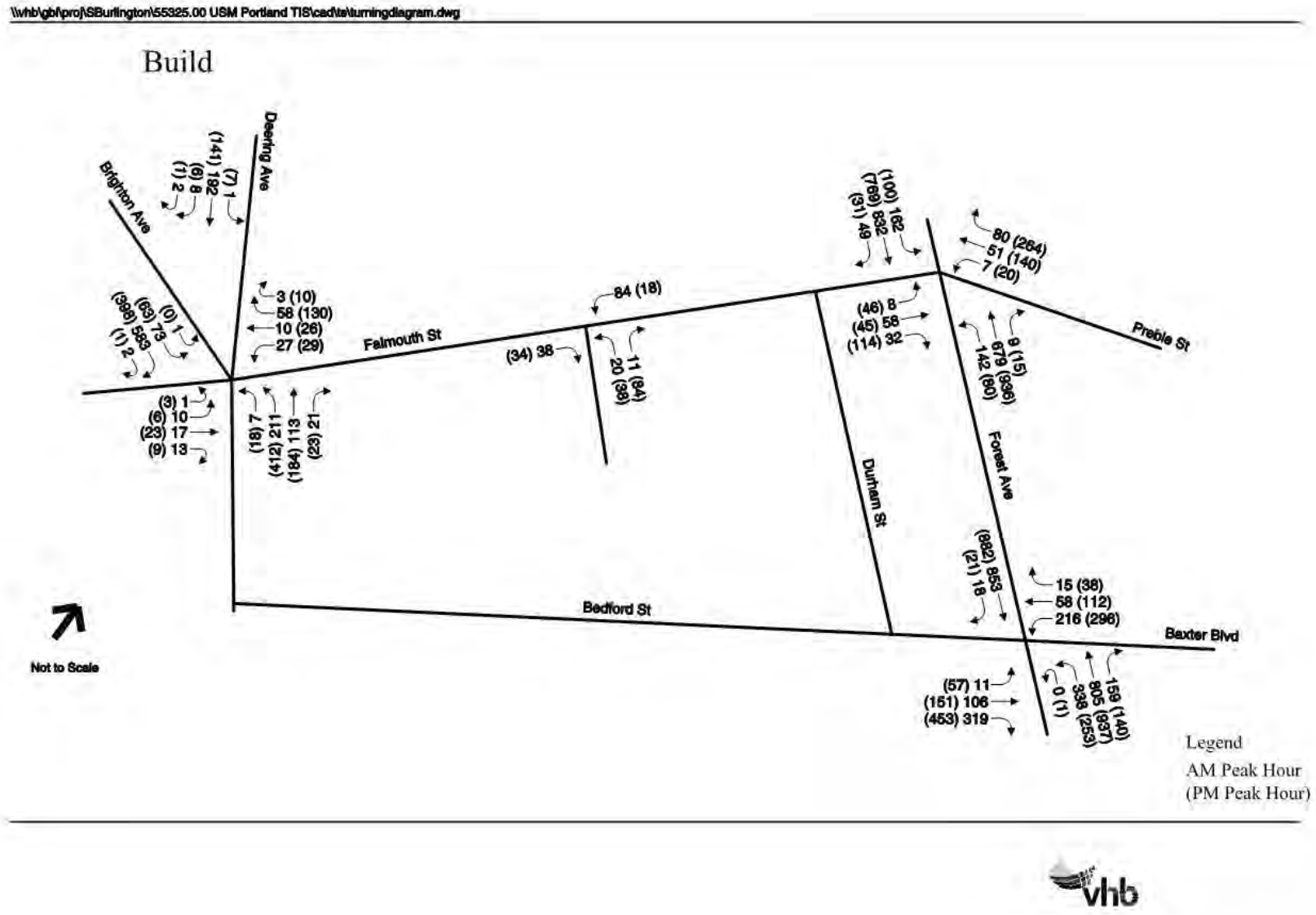
significantly updated in the more recent version and result in data that is more in line with what is expected based on actual campus information. To be conservative and in line with the requirements of the Maine Traffic Movement Permit Data, the ITE 7th edition data was used for the following analysis, however, it was assumed those trips were made up of the components expected on this campus and were distributed accordingly.

TRIP DISTRIBUTION

The various trips generated by the site will distribute in different ways. The residential trips attending classes in Gorham will travel to and from the west on Brighton Avenue. The commuter site-generated trips were distributed onto the adjacent street network based on zip code data for the existing student body, assuming the University will continue to draw from similar geographic areas. Most site trips are anticipated to be generated to and from the south on Forest Avenue with 46 percent of traffic oriented to and from I-295 and another seven percent oriented to and from downtown Portland and parts of South Portland. The next sources of trips are 30 percent to and from Brighton Avenue and 14 percent to and from points north via Forest Avenue. Minor percentages access USM from Deering Avenue points south and Baxter Boulevard. The remaining trips will likely distribute in a similar fashion, with the majority of trips into and out of Portland or onto I-295 and remaining trips to the north and west.

Based on the expected trip distribution, the site-generated trips were added to the 2027 No Build peak hour traffic volumes to establish the 2027 Build networks. The Build networks are shown in **Figure 4**. The trip generation figure is included in the Appendix.

Figure 4: 2027 Build Traffic Volumes



TRAFFIC ANALYSES

Intersection Capacity Analyses

Intersection capacity analyses were performed for the study area intersections. Levels of service (LOS) were calculated based on the criteria published in the *2000 Highway Capacity Manual*.[1] Level of service is the term that defines the conditions that may occur on a given roadway or at an intersection when accommodating various traffic volume loads. Levels of service range from A to F with LOS A representing generally free flowing operating conditions and LOS F representing generally congested conditions. Synchro 9 was used to determine the LOS at signalized intersections and Sidra Intersection 8 was used to determine the LOS at the proposed roundabout. Copies of the LOS calculations are provided in the Appendix.

Table 4 summarizes the operational analysis at the signalized study area intersections during the 2027 weekday AM and PM peak hours under No Build and Build conditions. As shown, the intersection of Forest Avenue at Falmouth Street is expected to operate at LOS B in 2027. Because the operation was borderline B/C, with the project in place, the operation will become LOS C with only a two second project related delay increase. Even the heavy increase of the Forest Avenue northbound left turns onto Falmouth Street in the morning can be accommodated in the storage length available.

The signalized intersection of Forest Avenue at Bedford Street is expected to operate at LOS D in 2027 both without and with the project. Project related delays are expected to be three seconds or less per vehicle. Even in the No Build condition, without project traffic, a number of movements at this intersection are currently operating at LOS E. The installation of adaptive signal control will ensure that the intersection operates at optimal conditions throughout the day.

Table 4: 2027 Signalized Intersection Operation

Intersection	No Build			Build		
Peak Hour	v/c[+]	Delay*	LOS **	v/c[+]	Delay*	LOS **
Forest Avenue at Falmouth/Preble						
AM Peak Hour	0.48	18.3	B	0.53	20.3	C
PM Peak Hour	0.52	18.7	B	0.54	20.5	C
Forest Avenue at Bedford/Baxter						
AM Peak Hour	0.79	39.0	D	0.79	39.2	D
PM Peak Hour	0.90	45.7	D	0.93	48.8	D

[+] *Volume to capacity ratio*
** Delay expressed in seconds per vehicle*
*** Level of Service*

[1] Highway Capacity Manual, Federal Highway Administration, Transportation Research Board, 2000.

Table 5 summarizes the operational analysis at the Brighton Avenue, Deering Avenue and Falmouth Street roundabout during the 2027 weekday AM and PM peak hours under No Build and Build conditions. As shown, even with anticipated growth and project related traffic, the proposed infrastructure will result in a LOS B or better condition during the peak hours at the roundabout in 2027.

Table 5: Roundabout Levels of Service

Peak Hour	No Build			Build		
Movement	v/c*	Delay**	LOS ***	v/c	Delay	LOS
AM peak hour						
Deering Ave southeast	0.36	4.0	A	0.39	4.3	A
Falmouth Street northeast	0.13	5.5	A	0.16	5.3	A
Deering Ave northwest	0.38	4.8	A	0.39	5.1	A
Brighton Ave east	0.79	9.5	B	0.83	11.5	B
Falmouth Street southwest	0.15	11.4	B	0.16	12.3	B
PM peak hour						
Deering Ave southeast	0.63	4.5	A	0.68	5.1	A
Falmouth Street northeast	0.37	9.4	A	0.48	11.4	B
Deering Ave northwest	0.40	9.7	A	0.43	11.1	B
Brighton Ave east	0.54	4.2	A	0.58	5.0	A
Falmouth Street southwest	0.10	7.2	A	0.10	7.7	A

** Volume to Capacity Ratio*
*** Delay expressed in seconds per vehicle*
**** Level of Service*

The driveway approach of the garage proposed on Falmouth Street is anticipated to operate at LOS B with 12 to 13 seconds of delay during both the AM and PM peak hours.

Transportation Demand Management (TDM)

The University of Southern Maine (USM) has recently developed a Transportation Demand Management (TDM) plan that provides a cohesive strategy for establishing and implementing a successful TDM program for the Portland campus. The TDM plan seeks to enhance multimodal accessibility, ensure the use of non-vehicular modes, and discourage the use of driving through parking management, to achieve and build upon the university's parking demand reduction goals for the campus. The TDM Plan presents a suite of strategies and timeframe for when USM intends to implement the various strategies. The strategies aim at promoting walking and bicycling, improving transit service to promote ridership, promoting carpooling, changing time-of-day travel demands to eliminate or reduce

vehicle trips, and managing parking demand via changes to USM's pricing and permit policies. The implementation of TDM will reduce the vehicle trips to the site and reduce delays at area intersections.

Conclusions

The addition of the dormitory beds to the campus is anticipated to reduce vehicle trips as commuters convert to on-campus residences. The student center is expected to better serve the existing student population and is not expected to increase trips to the campus except perhaps for special events. In the future, with optimistic enrollment increases, and conservative methodology, vehicular trips are anticipated to increase between 163 and 174 during the weekday AM and PM peak hours. With these trips added to the roadway network, delay increases will be minimal at the signalized intersections along Forest Avenue and at the proposed roundabout at Falmouth Street and Brighton and Deering Avenues. Overall, this proposed project is not intended to adversely impact traffic operations in the vicinity of the USM campus.

University of Southern Maine

Residence Hall and Career Student Success Center

Design Narrative

Capstone Development Partners
SMRT Architects and Engineers
Elkus Manfredi Architects

4 June 2020

The University of Southern Maine is a fast growing and increasingly influential educational institution in the City of Portland, as well as the state of Maine. The 2019 Facilities Master Plan outlined a series of important planning and building initiatives to better prepare the university to attract and retain highly qualified students and faculty thereby transforming the local and state economies through scholarship, civic and cultural engagement, and innovation. The addition of 580 new residential beds and a student center focused on career counseling and graduate success, both framing a new central quad, are the cornerstones of that master plan.

Today, the core campus is bounded by Bedford Street, Durham Street, Falmouth Street and Deering Avenue and characterized by ad hoc buildings and landscapes that are indicative of incremental growth and expedient design. There is no predominant architectural language and the open spaces of the campus are largely comprised of the negative space left over when buildings were sited as objects in the landscape. Seeking to create a legible hierarchy of both open space and building form, the proposed design for these two important new buildings grows directly from the aspirations of that Master Plan.

Campus Plan, Circulation and Open Space

The proposed residence hall anchors the corner of Durham and Bedford Streets, providing a strong corner to mark the arrival to the center of the campus moving west on Bedford Street, the primary urban arterial that moves through the campus. Reflecting the geometry of the Durham and Bedford intersection, the four wings of the residential building form a parallelogram that encloses a ½ acre semi private courtyard for the residents. The building has a large perimeter, which is mitigated by creating a five story lower portion that frames Bedford Street and the new Central Quad and a higher, eight story portion that frames Durham Street and the northern edge of the courtyard against the existing campus utility plant. The height of the lower Bedford Street wing is approximately the same height of the Wishcamper Center and Osher Map Library directly across the street. Together these buildings serve to define the street walls that mark the entrance to this part of the campus.

The lower Bedford Street wing of the residence hall turns to run parallel to Durham Street, forming the eastern edge of a new large, one acre Central Quad. This quad is an open, gently sloping green lawn that

will become the signature open space for the University, framed by Masterton Hall on the west, the new residence hall on the east, and set back almost 200' from the road, the new Career and Student Success Center ("CSSC") on the north.

The CSSC serves as a fulcrum in the overall campus plan, reconciling the non-parallel geometries of Bedford and Falmouth Streets. The façade facing Bedford Street terminates the Central Quad and offers a south facing grand portico, providing comfortable shade in the spring, summer and fall while providing weather protection in the winter. The west façade parallels the east façade of Masterton Hall and defines an important north – south cross-campus connector. The north or rear façade roughly parallels Falmouth street and creates the possibility that the future parking garage will work with the CSSC to frame and further extend the series of open spaces that loosely form an east – west green connector from Deering Avenue all the way to the Sullivan fitness center. The east façade, facing the utility plant, is parallel to Durham Street and serves as a loading dock for the CSSC.

Building Design

The buildings are designed to be a visual and tactile manifestation of the University's desire to "to build a sustainable, iconic academic campus in the heart of Portland enhancing the commuter experience while creating a welcoming residential community." Creating buildings that are didactically sustainable, welcoming, and tied directly to visual language of the nearby campus buildings have become the imperatives for our design. The residential building aspires to weave itself into the fabric of the campus in both its footprint and its fenestration while the Student Success Center seeks to become the iconic center of the campus. The buildings draw their material palette and fenestration patterns both from the immediate context of the campus and the "heart of Portland" – the downtown and the waterfront.

Residence Hall

The lower volume of the residence hall is characterized by essentially complete transparency all along the Bedford Street façade. The first floor behind this glass houses all of the public functions of the residence hall – the community kitchen, the living room, two seminar / classrooms, the bike room and the building's entry lobby. These spaces activate the sidewalk throughout the day and late into the evening, spilling light onto the sidewalk and making the campus a more welcoming, attractive and safe place. A long horizontal canopy leads pedestrians from the Wishcamper crosswalk and the corner of the Central Quad along Bedford Street to the bike and pedestrian lobbies, which form the primary entry to the residence hall. This canopy separates the public, transparent base of the building from the more private residences above, which are characterized by a regular grid of large windows punched into a panelized façade and five vertical bay windows, which mark the living rooms of select apartments. The canopy forms a protruding shelf to hold the freestanding letters that name the building and signify the entry. Like other buildings on campus and throughout the city, the lowest story of the residence hall is made of hand laid standard modular brick. The light and dark gray bricks accent the color palette of the recent Wishcamper and Osher buildings directly across Bedford street and give the residence hall a visually strong, durable base to rest upon.

Up above, along Durham Street and the edge of the existing Physical Plant the taller, 8-story volume of the residence hall is comprised of lighter materials, both in weight and color. The upper ranges of all the facades are a combination of large widows with passive house compliant frames, cement fiber panels and metal panels, creating a basket weave of windows and metal panels that alternate within bands of fiber-cement panels. These volumes are clad in the lighter panel colors to lessen their visual weight and tie them to the lighter modern architecture of the Wishcamper and Osher upper stories. The ratio of windows to walls within these facades reveal their residential use, which is a new building type on this campus. Incidentally, the lighter colors and materials of these two taller wings also serve to reflect more light into the residential courtyard, making it more enjoyable in all seasons.

The intersection of the taller and lower volumes at the corner of Durham and Bedford Streets provides an opportunity to mark this as a prominent corner for the University. The lower volume frames Bedford Street, but the taller volume sets back and places student lounges at the southern edge of the wing to create visual permeability into the building as well as a beacon of light emanating from the building in the evening and nighttime. The intersection of the two plan geometries gives the building a prow shape, with the point of the prow pointed to Downtown. Wrapping the floor to ceiling glass around this angular corner above the lower Bedford Street wing creates drama in the building form and allows unparalleled views of the peninsula skyline and Back Cove.

The residence hall employs myriad strategies to embrace the overarching objective of didactic sustainability. These strategies are highlighted within the building to educate the residents about their choices and the effects of those choices on all aspects of sustainability: environmental stewardship, social justice, and economic equity. One of the most aggressive sustainable features of the building is that it is designed to Passive House (PHIUS) standards. When completed, this building will use very little energy while providing residents with year-round comfort.

Career and Student Success Center

If the residence hall seeks to reinforce the structure of the city blocks and weave itself into the immediate context of the campus, the Career and Student Success Center seeks to stand apart, to become that iconic center of student life that welcomes both resident students and commuter students, as well as the public of Portland and beyond. Its place on the campus, its geometry, and its architectural language collectively seek to make this building the heart of social life for the campus. Like the residence hall, it is designed to be both didactically sustainable and welcoming, but unlike the residence hall, it has a larger, more civic scale that seeks to signify the importance and prominence of the University of Southern Maine in the state. The large scale begins with the soaring south facing portico. A broad gesture roughly 30’ tall, 20’ deep, and 200’ long, this portico forms a front porch to the campus, city, and state. It becomes the “band shell” at the top of the lawn, hosting events like graduations, concerts and the like. The columns of the portico are diagonal mass timber, making a clear statement that this university is invested in furthering the timber industry in the state, embracing sustainable and renewable low-carbon building technologies, and welcoming all in an informal, universally accessible manner. In short, it is a counterpoint to the formal, intimidating, large scale porticos of many other major universities’ iconic campus buildings.

Furthering the goal of being welcoming and promoting accessibility, the porch covers a two story mass timber framed lobby. Enclosed entirely in a transparent curtainwall, this dramatic lobby is anchored by a monumental stone fireplace and a soaring open stair, inviting all up to the second floor. On the ground floor, the lobby is adjacent to a large dining commons with a seating capacity of about 300. Serving a wide variety of locally sourced and sustainable foods, this dining commons uses food to attract both residential and commuting students to mix with faculty and staff from all around the campus. It becomes the indoor "town square" for the University.

The second floor is home to the Career Center and a 3,500 square foot multi-purpose room. This grand room also overlooks the Central Quad with a large glazed wall facing south under the overhang of the portico. It can be used for events ranging from career fairs, to large dinners, to dances and other celebratory events for both the campus and the community.

The materials that make up the CSSC are selected to tie the building to the essence of the state of Maine and the City of Portland. Materials are authentic, natural, and rugged. The mass timber framing of the public spaces speaks to the forestry industry in the state and the long history of the maritime industry in the Port. Dark mullions forming multi-paned windows in the large curtainwall expanses draw their visual characteristics from many of the historic wharf and commercial buildings in the City as well. The solid areas of the angular volume of the CSSC are clad in corrugated metal and natural stained wood in large planks – both selected for their prevalence in the industrial nature of both the historic and contemporary waterfront. Dark metal railings, light fixtures, and site furnishings also invoke the nobly utilitarian character of the waterfront and downtown buildings.

To maximize energy efficiency, the building is sited to take advantage of passive solar heating through the large glass openings facing south in the wintertime when the sun is low, while shading the glass with the portico overhang in the summer. The west, east, and north sides have fewer glazed openings and more solid walls to raise the energy efficiency of the entire building while still allowing daylight to penetrate deep into the interior spaces. The corrugated metal and wood cladding materials are relatively low carbon in their manufacture and shipping and can be recycled at the end of their long lifecycle. Above, on the roof, we are proposing a solar array that serves dual purposes: to provide shade for the roof membrane below (thus reducing heat gain through the roof in the summer), and to produce renewable energy for the electrical grid.

These and other sustainable strategies will enable the University and the development team to pursue a Silver level of LEED Certification for the CSSC, with an aspiration to push the certification even higher.

The Residence Hall and Career Student Success Center will be transformative projects for the University of Southern Maine in Portland. Designed with the imperatives of sustainability, accessibility, and legibility, these buildings tell the story of a University dedicated to the education and practice of living a sustainable lifestyle; welcoming people of all cultures and abilities; and being an iconic, innovative engine that drives the State's economy.

COMMITMENT & INTEGRITY
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Via Electronic Mail

July 15, 2020

Department of Planning & Development
Attn: Matthew Grooms
City of Portland
389 Congress Street
Portland, ME 04101

Re: USM Career & Student Success Center and Residence Hall
Neighborhood Meeting Certification

To Whom It May Concern:

I, Darrin Stairs, PE of Woodard & Curran, hereby certify that a neighborhood meeting was held on July 15, 2020, at via a virtual (Zoom) meeting, at 6:00 pm regarding the Level III Site Plan Submittal for the proposed **USM Career & Student Success Center and Residence Hall** project located at 23 Bedford Street.

I also certify that on July 2, 2020, invitations were mailed to the following:

1. All addresses on the abutters list provided by the Planning Division which includes property owners within 500 feet of the proposed development.

2. Residents on the "interested parties" list.

Signed,

WOODARD & CURRAN INC.

Darrin Stairs, PE
Project Manager

Attached to this certification are:

1. Copy of the invitation sent
2. Attendees List
3. Meeting Notes
4. Presentation Slides

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July 2, 2020

Dear Neighbor:

On behalf of the University of Southern Maine (Applicant), please join us for a neighborhood meeting to discuss the University's plans for a new Career and Student Success Center and Residence Hall, to be located at 23 Bedford Street in Portland, Maine. A Level III Site Plan Application for the development has been filed with the City of Portland Planning Division on behalf of the Applicant.

Meeting Location: Virtual Zoom Meeting. Register at the following link to receive a Zoom invitation to the meeting: https://usm.maine.edu/finance/forms-0

Meeting Date: Wednesday, July 15, 2020

Meeting Time: Meeting open at 5:30 PM, EST; Presentation to begin at 6:00 PM EST

The City code requires that property owners within 500 feet of the proposed development and residents on an "interested parties list" be invited to participate in a neighborhood meeting. Attendance will be taken, and minutes recorded and submitted to the Planning Board.

If you have any questions, please contact Darrin Stairs at (207) 558-3662 or via email at dstairs@woodardcurran.com.

Sincerely,

WOODARD & CURRAN INC.

Darrin Stairs, PE
Project Manager

Note: Under Section 14-32(C) and 14-524(a)d of the City Code of Ordinances, an applicant for a Level III development is required to hold a neighborhood meeting within 30 days of submitting a preliminary application or 21 days of submitting a final site plan application, if a preliminary plan was not submitted. The neighborhood meeting must be held at least seven days prior to the Planning Board public hearing on the proposal. Should you wish to offer additional comments on this proposed development, you may contact the Planning Division at 874-8721 or send written correspondence to the Planning and Urban Development Department, Planning Division, 4th Floor, 389 Congress Street Portland, ME 04101 or by email: to jrather@portlandmaine.gov.

USM CSSC & Portland Commons Neighborhood Meeting
July 15, 2020 6:00pm-7:00pm
Attendees List

Name	email address	Address
Aaron Witham	aaron.z.witham@maine.edu	1677 Royalsborough Rd, Durham, ME
Alec Porteous	alexander.porteous@maine.edu	USM
Ann Vashon	ann.vashon@maine.edu	Maine
Brenda Nicholas	rnichol1@maine.rr.com	
Carolyn McDonough	cmcdonou@maine.edu	5765 Service Building
Craig Piper, SMRT Architec	cpiper@smrtinc.com	105 Loveitts Field Road, South Portland, Maine 04106
Darrin Stairs	dstairs@woodardcurran.com	41 Hutchins Drive
DAVID E WEEKS	dweeks01@maine.rr.com	355 Forest Avenue
David E. Roussel	david.roussel@maine.edu	
Dawn Gay	dgay@llbean.com	8 Chamberlain Ave
Glenn Cumings	glennc@maine.edu	24 Nevins Street
Jeanne Paquette	jeanne.paquette@maine.edu	USM Bedford Street, Portland, Maine
Joe Picoraro	jpicoraro@pcconstruction.com	193 Presumpscot Street
John Lewandowski	jrl@maine.rr.com	132 Brighton Ave
John Souther	John.souther@maine.edu	42 Bailey Farm Rd, Freeport Me 04032
Kate Snyder	ksnyder@portlandmaine.gov	389 Congress Street
Katie Mahoney	katherine.mahoney@maine.edu	494 Deering Avenue
Kristin Sweeney	sweeneykg@gmail.com	167 Caleb St
Lachelle Lackey	lachelle.lackey@maine.edu	25 Bedford St.
Mary Costigan	mcostigan@bernsteinshur.com	100 Middle St
Paul A Kuplinski	paul.kuplinski@maine.edu	PO Box 9300, Portland, ME
Philip Chaney	pchaney@smrtinc.com	80 Brentwood Street
Ross Cameron	rcameron@elkus-manfredi.com	25 Drydock Ave
Samantha Warren	samantha.warren@maine.edu	70 Kent Street
STEPHEN WILKINS	Swilkins@pcconstruction.com	
Susan Fekety	sfekety@gwi.net	125 Bolton Street
Thomas Blanchard	thomas.blanchard@maine.edu	25 Bedford St, Portland, ME 04101
Jennifer Conley		
Laurie Davis		
Annie Anderson		72 Pitt Street

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NEIGHBORHOOD MEETING NOTES

PROJECT: USM Career & Student Success Center and Portland Commons Residence Hall

MEETING DATE: 7/15/2020

LOCATION: Virtual Meeting (Zoom)

This neighborhood meeting for the proposed USM Career & Student Success Center and Portland Commons Residence Hall was held virtually via the Zoom platform on July 15th.

The zoom meeting was opened at 5:30pm to allow for attendees to log in and resolve technical difficulties.

The presentation began at 6:00pm and lasted approximately 45 minutes. A link to the presentation was shared with all registered attendees earlier in the day, and a copy of the presentation is attached.

Alec Porteous, Chief Operating Officer & Chief Business Officer for USM, opened the meeting and welcomed attendees.

Darrin Stairs, Project Manager at Woodard & Curran, reviewed the meeting details, including the application currently being considered, contacts at City Planning and the University, and specifics on how to ask questions or comment via the virtual platform at the end of the meeting.

Mr. Porteous then introduced executive and senior staff in attendance from USM and the University of Maine System, as well as the project team of which he would speak in more detail later in the meeting.

Mr. Porteous then introduced USM President Glenn Cummings.

President Cummings welcomed all attendees and recognized Mayor Snyder who was in attendance and is a resident of the neighborhood. Mr. Cummings thanked the Mayor for her support of the project.

President Cummings spoke of the transformational effects that the proposed projects would have on the Portland campus, including replacing the existing parking lot with a green quad that would become the centerpiece of the campus. This quad will be a resource for the students and staff as well as the surrounding community. The President also described the Career & Student Success Center, including a dining room, café/pub, fireside student lounge, a state-of-the-art Career services center, and dedicated student life offices. President Cummings explained that the proposed 577-bed residence hall will add a residential life component not currently present on the campus that will couple with the state-of-the-art student center. Students that will reside in the new hall will be primarily be upper-level and graduate students. The President then turned the presentation back over to Mr. Porteous.

Mr. Porteous gave an overview of the project, beginning with the timeline that began with the Project initiation in June of 2018 and will culminate with the completion of construction in the Spring of 2013.

Mr. Porteous introduced the project team by organization and described the role that each is playing on the project.

Mr. Porteous reviewed the project background for the Residence Hall (Portland Commons). He shared a rendering view from Bedford Street and explained the architects would share a description of the design elements later in the presentation.

Mr. Porteous stated that enrollment at USM from 2015 to 2020 has grown by 7.3%. He explained that this has led to over-occupancy on the Gorham Campus, and that even during the current pandemic USM is seeing housing requests in excess of occupancy for the Gorham Dorms. Upper Class, Graduate and Law School students struggle to find affordable housing in the Greater Portland area. Portland Commons

will alleviate this housing shortage and enable USM and UMS to take advantage of the national and international appeal of the Portland Area. Mr. Porteous explained that the 2018 Brailsford and Dunlavey market analysis justified 550-600 beds on the Portland campus without cannibalizing occupancy on the Gorham Campus.

Mr. Porteous reviewed the Project Details for Portland Commons, including that it would be the largest Passive House residence hall in New England and among the five largest in the U.S. He explained that the Portland Campus has had Portland based residential options in the past, but never on-campus housing. The residence will be a short walk from the new quad, the student center, and academic buildings.

Mr. Porteous shared project background for the Career & Student Success Center, including that it will be approximately 40,000 sf, will seek LEED Certification, and will feature mass timber and cross laminated timber. Mr. Porteous reviewed the building programming, including: first floor – dining, pub/café. University Store and welcome center; second floor- 13,500 sf Career Center with multipurpose event room overlooking the quad, interview rooms for employers; and third floor – student affairs offices, student government, student lounges and study spaces. Mr. Porteous acknowledged the generous support of the Maine voters in 2018 that authorized $49 Million in bonding to modernize UMS facilities to attract and retain students to Maine. Mr. Porteous then turned the presentation over to Aaron Witham, Assistant Director of Facilities Management for Sustainability, to review Transportation and Parking related issues.

Mr. Witham reviewed the transportation studies that have been completed to date by VHB, including: A Parking Study, Transportation Demand Management (TDM) study, and a Traffic Study. He reviewed the current status of parking supply on campus – showing a map of current lots and parking counts. Mr. Witham recounted that findings of the parking study that showed peak parking times are generally in the middle of the week days, between 12:00 and 1:30.

Mr. Witham then reviewed other related Parking Projects that are not part of this application. These included: A Structured Parking Feasibility Study completed by Platz in 2019; the plan to construct a 425-500 space parking garage near the Sullivan Gym; and the construction of the Wishcamper Parking lot in 2021. Mr. Witham shared a map that showed the future parking supply with the displaced spaces lost to construction of the City Roundabout project and the CSSC/Residence Hall, and the added spaces expected from the Wishcamper Parking lot renovation and the new structured parking garage.

Mr. Witham then concluded reviewing the Traffic Impact Analysis expected with this project. He explained that the Residence Hall is not a creator of new trips to the campus, but rather replaces a significant number of commuter trips with students now able to walk to classes and activities rather than drive. The net result is a decrease in peak daily trips - with the majority of resident trips occurring outside of peak hours and on weekends. The Student Center is also not believed to be a generator of trips, as it is an accessory function to campus activities and is replacing the existing student center. The exception would be some special events. Mr. Witham explained the primary driver for increased trips on the campus will come from increases in enrollment. The slight increases expected in traffic at area intersections are already being accommodated for with current and proposed City improvement projects, including the roundabout at Deering and Brighton Avenue. Mr. Witham then turned the presentation over to Craig Piper of SMRT Architects.

Mr. Piper reviewed the Project Design and Architectural standards. The proposed residence hall anchors the corner of Durham and Bedford Streets, providing a strong corner to mark the arrival to the center of the campus moving west on Bedford Street, the primary urban arterial that moves through the campus. Reflecting the geometry of the Durham and Bedford intersection, the four wings of the residential building

form a parallelogram that encloses a ½ acre semiprivate courtyard for the residents. The Residence Hall building has a large perimeter, which is mitigated by creating a five story lower portion that frames Bedford Street and the new Central Quad and a higher, eight story portion that frames Durham Street and the northern edge of the courtyard against the existing campus utility plant. The height of the lower Bedford Street wing is approximately the same height of the Wishcamper Center and Osher Map Library directly across the street. Together these buildings serve to define the street walls that mark the entrance to this part of the campus. The lower Bedford Street wing of the residence hall turns to run parallel to Durham Street, forming the eastern edge of a new large, one-acre Central Quad. This quad is an open, gently sloping green lawn that will become the signature open space for the University, framed by Masterton Hall on the west, the new residence hall on the east, and set back almost 200' from the road, the new Career and Student Success Center ("CSSC") on the north. The CSSC serves as a fulcrum in the overall campus plan, reconciling the non-parallel geometries of Bedford and Falmouth Streets. The façade facing Bedford Street terminates the Central Quad and offers a south facing grand portico, providing comfortable shade in the spring, summer and fall while providing weather protection in the winter. The west façade parallels the east façade of Masterton Hall and defines an important north – south cross-campus connector. The north or rear façade roughly parallels Falmouth street and creates the possibility that the future parking garage will work with the CSSC to frame and further extend the series of open spaces that loosely form an east – west green connector from Deering Avenue all the way to the Sullivan fitness center. The east façade, facing the utility plant, is parallel to Durham Street and serves as a loading dock for the CSSC.

The buildings are designed to be a visual and tactile manifestation of the University's desire to "to build a sustainable, iconic academic campus in the heart of Portland enhancing the commuter experience while creating a welcoming residential community." Creating buildings that are didactically sustainable, welcoming, and tied directly to visual language of the nearby campus buildings have become the imperatives for our design. The residential building aspires to weave itself into the fabric of the campus in both its footprint and its fenestration while the Student Success Center seeks to become the iconic center of the campus. The buildings draw their material palette and fenestration patterns both from the immediate context of the campus and the "heart of Portland" – the downtown and the waterfront.

The lower volume of the residence hall is characterized by essentially complete transparency all along the Bedford Street façade. The first floor behind this glass houses all of the public functions of the residence hall – the community kitchen, the living room, two seminar / classrooms, the bike room and the building's entry lobby. These spaces activate the sidewalk throughout the day and late into the evening, spilling light onto the sidewalk and making the campus a more welcoming, attractive and safe place. A long horizontal canopy leads pedestrians from the Wishcamper crosswalk and the corner of the Central Quad along Bedford Street to the bike and pedestrian lobbies, which form the primary entry to the residence hall.

Up above, along Durham Street and the edge of the existing Physical Plant the taller, 8-story volume of the residence hall is comprised of lighter materials, both in weight and color. The upper ranges of all the facades are a combination of large widows with passive house compliant frames, cement fiber panels and metal panels, creating a basket weave of windows and metal panels that alternate within bands of fiber-cement panels.

The intersection of the taller and lower volumes at the corner of Durham and Bedford Streets provides an opportunity to mark this as a prominent corner for the University. The lower volume frames Bedford Street, but the taller volume sets back and places student lounges at the southern edge of the wing to create visual permeability into the building as well as a beacon of light emanating from the building in the evening and nighttime.

The residence hall employs myriad strategies to embrace the overarching objective of didactic sustainability. These strategies are highlighted within the building to educate the residents about their choices and the effects of those choices on all aspects of sustainability: environmental stewardship, social justice, and economic equity. One of the most aggressive sustainable features of the building is that it is designed to Passive House (PHIUS) standards. When completed, this building will use very little energy while providing residents with year-round comfort.

The Residence Hall and Career Student Success Center will be transformative projects for the University of Southern Maine in Portland. Designed with the imperatives of sustainability, accessibility, and legibility, these buildings tell the story of a University dedicated to the education and practice of living a sustainable lifestyle; welcoming people of all cultures and abilities; and being an iconic, innovative engine that drives the State's economy.

Mr. Piper turned the presentation over to Alec Porteous who concluded with the reaffirmation that the CSSC and the new residence hall and campus quad will fulfill a significant portion of the Portland Campus Master Plan and will transform the campus.

At this time the meeting was opened to questions and comments from the neighborhood. No questions were asked, but the following comments were received.

Comment 1: Really appreciate the presentation and the planning that has been done. Thank you

Comment 2: This is very exciting to see! The architecture is stunning and it feels like what USM had needed.

Comment 3: No questions, but agree that it is attractive project that will help to define the campus. Good work!

After waiting for a few minutes and seeing no additional questions or comments, both Mr. Porteous and President Cummings thanked all for their attending and for the kind comments that were received.

The Neighborhood Meeting concluded at approximately 7:00 PM.

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Career & Student Success Center / Portland Commons

Neighborhood Meeting

July 15, 2020

Presentation Details

- Level III Site Plan Application: PL-001040-2020, 23-25 Bedford Street
- City of Portland Planning Division – 207.874.8719
- Planner Assigned: Matthew Grooms
- Development Review Services Manager: James Rather

- Q&A Discussion
  - Raise hand feature
  - Chat feature
  - Technical issues: Please contact Katie Mahoney (katherine.mahoney@maine.edu)
  - Future project inquires: Alec Porteous (alexander.porteous@maine.edu)

Presentation Agenda

1. *Welcome / Introductions*
2. *Project Overview*
3. *Project Background – Portland Commons*
4. *Project Background – Career & Student Success Center*
5. *Related Parking & Transportation Planning*
6. *Project Design & Architectural Renderings*
7. *Questions / Discussion*

Transforming USM's Portland Campus

- **USM's proposed Career and Student Success Center (CSSC) and** Portland Commons Residence Hall will have a transformational effect **on the University's Portland campus.**

- Portland campus adds residential life component → Project adds a 577-bed residence hall to a campus that has never had on-campus housing and couples that with a state-of-the-art student center.

- Career & Student Success Center takes center stage → Building will include a spacious dining room flanked by a café/pub, and fireside student lounge. The second floor will include office, meeting, and event space dedicated to career services, and the third floor will be dedicated to student affairs offices, lounges and programming.

- Surface parking lot centerpiece becomes Green Quad → central quad will serve as entry-point to Portland campus, providing key functionality and aesthetic appeal. The quad will be a resource for all students, staff and faculty and the surrounding community, as well.

Career & Student Success Center
Residence Hall
Aerial

PROJECT OVERVIEW

Project Overview – Timeline / Process

Work-to-Date

- **June 2018**: Project initiation → Formation of USM President's P3 Committee (USM & UMS committee members).

- **January 2019**: UMS Trustees approve USM's Master Plan, which includes the concept of a Career & Student Success Center as well as a significant residence hall and the transformation of the Portland campus' Bedford Street Parking Lot into a green quad.

- **July – December 2019**: USM/UMS conduct RFQ and RFP processes.
  - Capstone Development Partners selected in a competitive project process to develop jointly CSSC / Portland Commons

- **January 2020 – Present**: BOT approval of PDA, project advances.
  - USM/UMS and Capstone team advance project through design stages; reevaluate plans due to COVID-19; execute PDA

Project Overview – **Timeline / Process (cont'd)**

Next Steps

- July 15, 2020: Neighborhood meeting.
- Late Summer / Fall 2020 : City of Portland Planning Board Process.
- Spring 2021: Demolition of Woodbury Student Center and 25 Bedford Street (Department of Facilities Management building).
- Spring 2021: Begin construction of CSSC and Portland Commons project.
- Spring 2023: Complete construction and open to students and University community.

Project Overview – Team

UNIVERSITY OF SOUTHERN MAINE

Maine's Public Universities
UNIVERSITY OF MAINE SYSTEM

CAPSTONE DEVELOPMENT PARTNERS

SMRT

ELKUS | MANFREDI ARCHITECTS

PC CONSTRUCTION

cmp CAPSTONE MANAGEMENT PARTNERS

WOODARD & CURRAN

Steven Winter Associates, Inc.

PROJECT BACKGROUND – PORTLAND COMMONS

Career & Student Success Center
Portland Commons Residence Hall
Bedford St. Corner – Spring Scene

Project Background – Portland Commons

- From 2015 to 2020, USM grew student enrollment by 7.3%.
  - Robust enrollment growth has led to over-occupancy in residence halls on the Gorham campus
  - Even during the COVID-19 pandemic, USM is seeing housing requests exceed natural occupancy for the Gorham dorms

- Upper Class, Graduate and Law School students struggle to find affordable housing in the Greater Portland area.
  - Portland Commons will help alleviate this housing shortage and will enable USM and the University of Maine System to take advantage of the City of Portland's national and international appeal

- A 2018 Brailsford and Dunlavey market analysis demonstrated that USM could add 550 to 600 beds on the Portland campus without cannibalizing occupancy in the Gorham campus residence halls.

Project Details – Portland Commons

- 577-bed, 220,000 square foot Portland Commons Residence Hall will be built to Passive House standards.
  - Portland Commons will be the largest Passive House residence hall in New England and will be among top five largest in the U.S.
  - Passive House lowers energy use and emissions, cutting utility bill by >50% compared to building to current standard code
- Portland Commons achieves two major goals of establishing Portland as a residential campus and adding an affordable housing option for upper class, graduate and Maine Law students.
  - While USM has had Portland-based residential options in the past, the Portland campus has never had on-campus housing
  - Fronted by a green quad, Portland Commons will be a short walk to all Portland campus academic buildings and the proposed Graduate Student Center
  - With Portland housing prices continuing to climb, and demand continuing to grow, Portland Commons will offer a unique alternative to students seeking to live and study in the city

PROJECT BACKGROUND – CAREER & STUDENT SUCCESS CENTER

Career & Student Success Center
Residence Hall
Long View of CSSC from Bedford Street Crosswalk

Project Background – Career & Student Success Center

Approx. 40,000 square feet;

LEED Certification;

Mass Timber / Cross Laminated Timber

- Dining Services
- Career Services / Career Hub
- Student Organizations
- Open Spaces / Lounges for Students
- Diversity Center
- Multi-purpose room
- University Store
- SGA
- Husky Dining Room

Project Details – Career & Student Success Center

- The Career & Student Success Center will help fulfill the needs of **USM's growing and increasingly diverse student body.** Key input from students and Student Affairs staff members has helped shape the composition of the CSSC.

  - **First Floor**: 300+ seat dining, adjacent café/pub, fireside student lounge, University Store and welcome center

  - **Second Floor**: 13,500 square foot Career Center, equipped with a multipurpose event room overlooking the green quad, office suite for career advisers, interview rooms for employers visiting campus or Zoom interviews, Husky Dining Room overlooking the first floor

  - **Third Floor**: Student Affairs focus, with 1,840 square foot Diversity & Intercultural Center overlooking the campus green, Student Government Office, Student Affairs Programming Office, student lounges and study spaces

Project Details – **Career & Student Success Center (cont'd)**

- With the generous support of Maine voters, the Career & Student Success Center will fulfill USM's commitment to enhanced career advisory and placement services that keeps Maine students in our state and attracts out-of-state students to live and work in Maine.

  - *This commitment responds to the successful passage of Question 4 on the 2018 ballot, which authorized $49 million in bonding for modernizing UMS facilities to attract and retain students to Maine.*

- President Cummings and the USM Foundation led the bond campaign for USM, and the President responded to the successful outcome by saying:

  - *"For our students, passage of Question 4 will translate to an enhanced learning environment, better preparation for future careers, and more integrated interaction with area employers. For the rest of us, yesterday marked a key date in our steady approach to becoming a truly great university."*

RELATED PARKING & TRANSPORTATION PLANNING

Transportation Studies

- In 2019 USM hired VHB, renowned transportation consultant, to conduct studies & guide planning efforts
  - Parking study
  - Transportation Demand Management (TDM) study
  - Traffic study

Parking Supply on Campus: Current Status

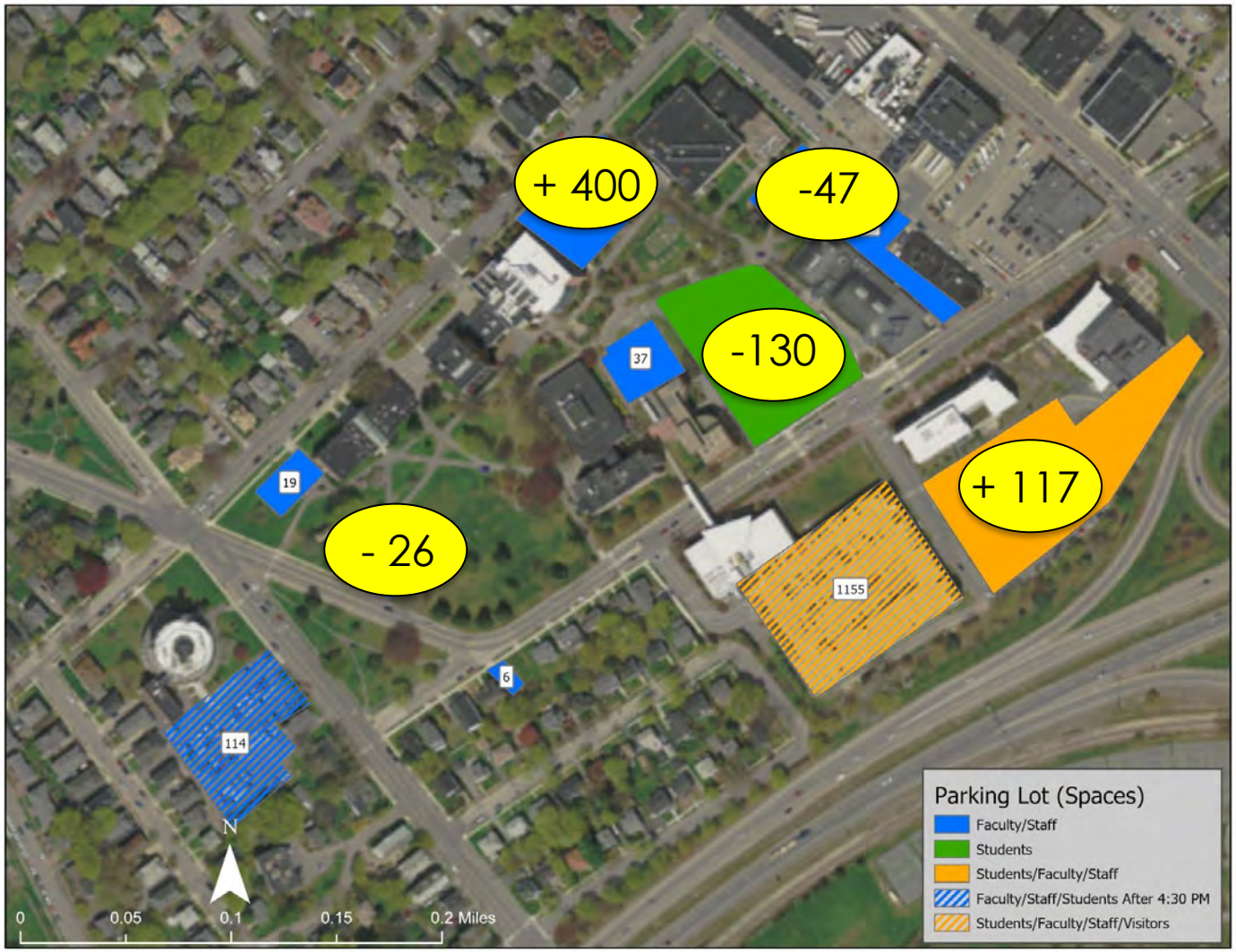
Related Parking Projects

- **Structured Parking Feasibility Study**: During Summer 2019, USM contracted with Platz Associates to review options for additional structured parking on USM's Portland Campus.

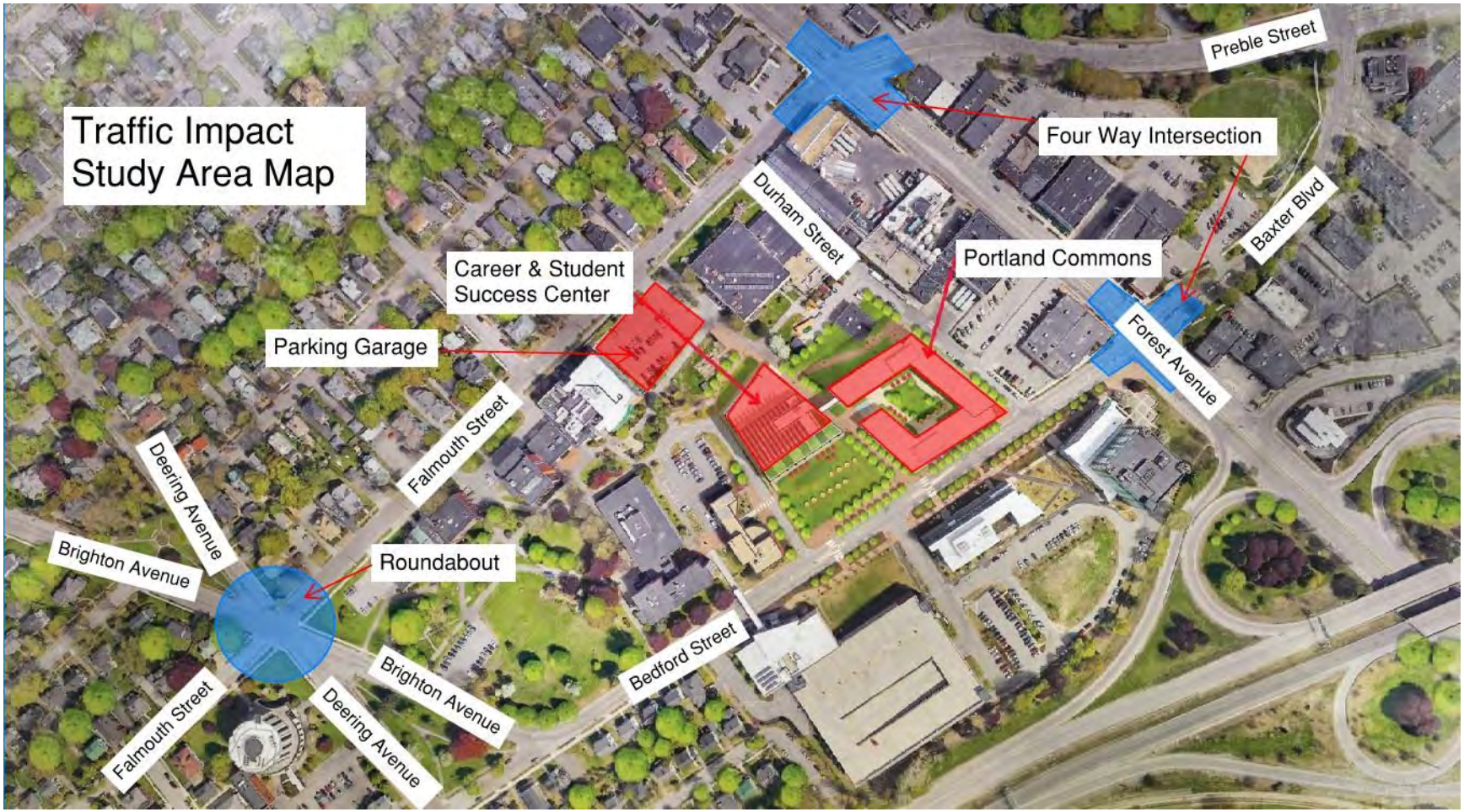
- **Sullivan Lot Garage**: In February, USM received BOT approval to construct a 425-500 space parking garage in the Sullivan Gym surface parking lot.
  - Desman Design Management selected to design garage
  - Project will have a separate Planning Board process
  - Construction to be completed in the Spring of 2023

- **Wishcamper Parking Lot**: In May, USM received approval from the City of Portland Planning Board to revise the Wishcamper Parking Lot, adding approximately 120 spaces.
  - Construction to be completed during Summer 2021

Parking Supply on Campus: Future Status



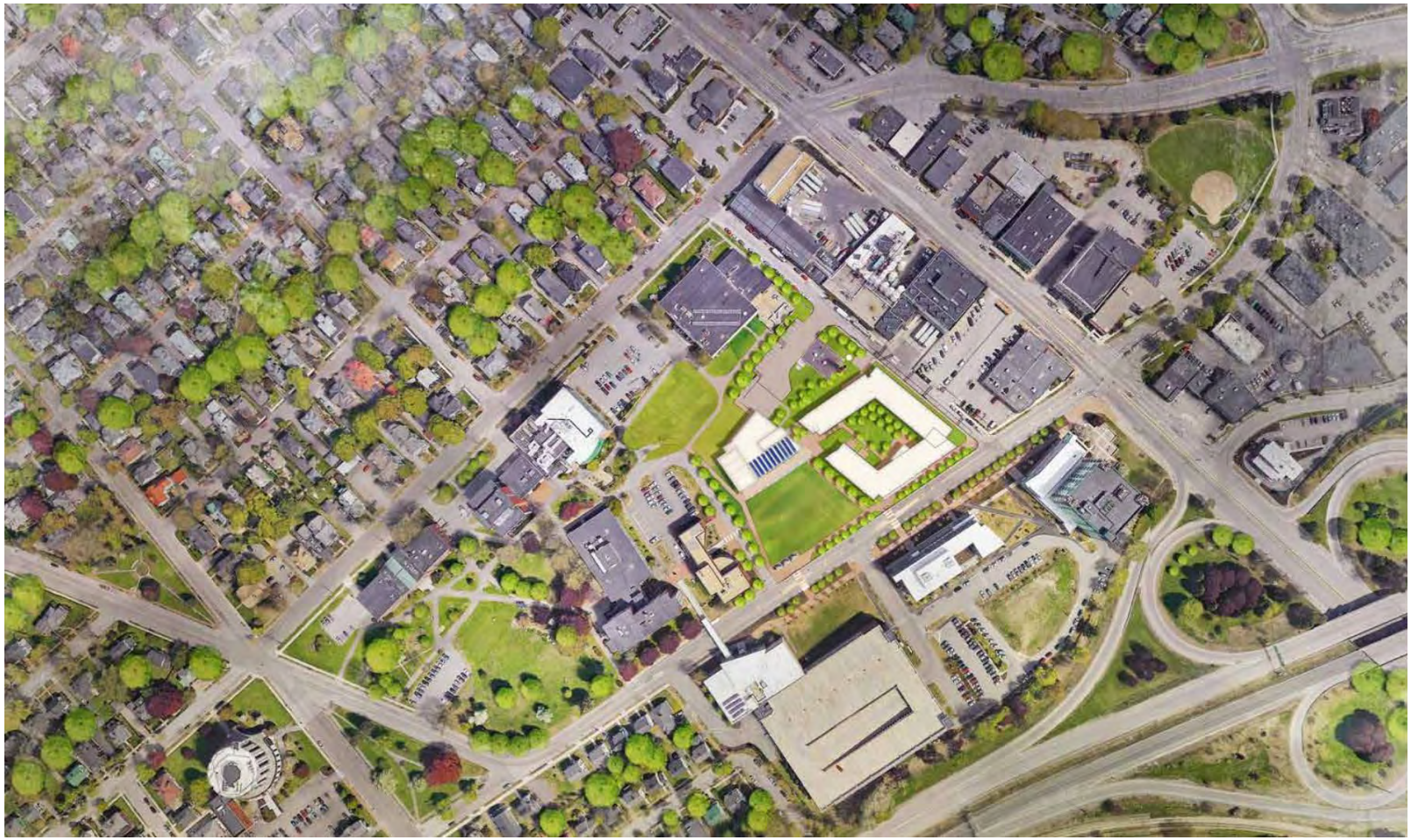
Traffic Impact Analysis



PROJECT DESIGN & ARCHITECTURAL RENDERINGS

Career & Student Success Center Residence Hall

Site Plan



Career & Student Success Center
Residence Hall
Overall Bird's Eye

Career & Student Success Center
Residence Hall
Entry View of Residence Community

Career & Student Success Center
Residence Hall
Residence Hall View Along Durham Street

Career & Student Success Center Residence Hall

Bedford Street View in Spring

Career & Student Success Center Residence Hall

Bedford Street View in Winter

Career & Student Success Center
Residence Hall
Long View of CSSC from Bedford Street Crosswalk

Career & Student Success Center
Residence Hall

Career & Student Success Center South Facade

Career & Student Success Center
Residence Hall

Career and Student Success Center Portico

Career & Student Success Center
Residence Hall
Overall Bird's Eye

CONCLUSION

Conclusion

- The Career & Student Success Center, Portland Commons Residence Hall, and the Green Quad will fulfill **a significant portion of USM's** Portland Campus Master Plan.

- The project will transform USM's Portland campus, adding on-campus housing and creating a state-of-the-art Career & Student Success Center.
  - Students will be able to congregate to meet, dine, study and pursue career-related activities
  - **Project will frame a campus green that will become USM's** Portland entryway

- The project will be flanked by a modern parking garage and bolstered by a transportation demand management plan that ensures adequate parking and seeks to reduce campus traffic and distribute it more evenly.

QUESTIONS / DISCUSSION

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To: Matthew Grooms, Senior Planner, City of Portland **Date:** 7/17/2020

From: Aaron Witham, Asst. Dir. Facilities Management, University of Southern Maine

Project: PL-001040-2020, 25 Bedford St. (USM Career & Student Success Center and Residential Hall)

Re: University of Southern Maine Impact on Street Parking Adjacent to Portland Campus

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As a follow-up to previous conversations between the City of Portland and the University of Southern Maine on May 13th and June 3rd, 2020, City officials asked the University to estimate its total maximum impact of parking on public streets adjacent to the Portland campus. This memo summarizes that analysis.

Summary:

- From Monday, June 8th through Wednesday, June 10th, the University's Office of Sustainability collected street occupancy data between the hours of 12:30-1:30 pm, corresponding to the peak parking demand in campus lots.
- Occupancy of existing spaces averaged 31% in June, compared to the previous inventory done by VHB in October of 2019, which yielded a 62% occupancy.
- Since the October data set did not include detail about who was parking on the streets, an alternative method for estimating USM's total potential impact had to be employed.
- USM's total potential impact was estimated by subtracting the June data set (when campus was closed) from the October data set (when campus was open and classes were in session) during the 12:30-1:30 pm time slot.
- The estimation of USM's total potential impact is 62 vehicles.
- See attachment #1 for a street-by-street comparison and a list of the assumptions made.
- According to VHB, there were 202 parking spaces on the streets adjacent to campus under Fall, 2019 conditions. Seventy-seven of the spaces on these streets were open during peak parking demand when classes were in session.

Long-term Implications of University's Impact on Public Streets:

- At the completion of the roundabout project in September of 2021, there will be a minimum of between 159-173 [1]spaces on public streets adjacent to campus (depending on whether the City maintains existing parking on Bedford Street). This leaves between 34-48 open spaces during USM's peak parking demand time.
- On campus, total parking available will be between 1,977-2,052 spaces (depending on how big the new garage is). Total demand is anticipated to be 1,952 maximum (not including the effect of USM's

[1] These space counts are lower than before construction not only because of the loss of parking adjacent to Bedford park, but also because of the anticipated loss of six public parking spaces on Falmouth St. and six on Durham St. in order to create adequate sightline distances for safety surrounding the Falmouth street parking garage driveway and the Durham street Career & Student Success Center driveway, respectively. Exactly how many spaces will be lost will need to be determined by the City.

Transportation Demand Management Plan). This leaves between 25-100 open spaces during USM's peak parking demand time.

- Therefore, the University lots could accommodate the University's portion of public street parking by building an appropriately sized garage and/or by employing modest TDM (Transportation Demand Management) measures.

Short-term Implications of University's Impact on Public Streets:

- Parking availability will be lower than it is now due to the roundabout construction and University construction between March of 2021 and June of 2023.
- At the lowest point for street parking, availability goes from 202 to 182 spaces between March 2021 and September 2021. Fifty-seven spaces will still be available, according to the survey analysis.
- For most of the University's construction period, availability on campus goes from 1,701 to 1,537[2] spaces between September of 2021 and February of 2023 due to a combination of the roundabout project and the University's own construction projects. This leaves a 50 fewer spaces than Fall 2019 demand at the peak parking demand hour.
- From March of 2021 through early May of 2021, availability on campus will be 1,422. This amounts to 165 fewer spaces than Fall 2019 demand at the peak parking demand hour. Supply then drops to 1,331 over the summer, but demand for parking is extremely low over the summer and can be fully accommodated by the existing parking garage.
- The University does not expect these temporary parking capacity reductions on campus to be actual deficits given significant reductions in expected demand due to Covid, such as less in-person classes and a high number of telecommuting staff.
- If the number of in-person classes rebound in the Spring to levels comparable to last Fall, the University will manage demand for parking through initiatives that are already underway, such as a major course schedule revision. Prior to the outbreak of Covid-19, USM introduced a new time block schedule for Academic Year 2020-2021 to spread classes more significantly across days and time periods.
- Under a post-Covid "return-to-normal" scenario, the University's traffic consultant VHB believes that the University's TDM initiatives to expand offerings for telecommuting and efforts to spread out the course schedule can not only accommodate the reduced capacity in campus lots, but can also theoretically absorb USM's impact on on-street parking. Moreover, they estimate that the collective impact of the University's TDM plan can reduce parking demand by up to 12% (i.e. 234 spaces).

[2] Original projections submitted to the City within VHB's parking analysis totaled 1,552. Since then, the Wishcamper lot expansion was approved by the City with five less spaces than proposed in the permit application, and the central heat plant lot is now contemplated to possibly be turned into a temporary delivery area for a temporary kitchen location for Sodexo in Sullivan Gym; however, the University is more likely to find an off-campus location for Sodexo's operations. Regardless, when the new Career & Student Success Center opens, 15 spaces in the heat plant lot will be available.

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TDM Initiative #1- Promotion of Telework & Flexwork Policies:

- The University's TDM plan includes the promotion of telework & flexwork policies.
- Due to the Covid-19 outbreak, the University has had the opportunity experiment with telework & flexwork at a much higher volume than any time in the past and has found it to be successful in many cases.
- Telecommuting for many of these employees will continue through this December. The extent of telecommuting into the future is yet to be determined, but will be planned strategically to accomplish parking reduction, utility reduction, and Covid mitigation goals, as these factors evolve.

TDM Initiative #2- Course Schedule Revision:

- Before the pandemic, the USM Registrar revised the overall architecture of the course schedule to begin this Fall.
- The revision will lengthen the daily course schedule with a 45-minute earlier start for the first block in the morning.
- It will also spread out classes throughout the day by offering one additional daytime block and one additional evening block.
- The spreading out will result in more classes being held in off-peak hours when demand for parking is less.
- Additionally, the new structure will align the schedules more effectively between Portland and Gorham campuses, so that students can more easily use the METRO to travel between campuses and not have to cause congestion and parking issues by getting in their cars.

In the event that in-person classes resume to full capacity next Spring, then the University can take additional measures if necessary beyond telecommuting and course schedule revision to ensure that demand for parking doesn't exceed supply over the critical months of March, April, and May of 2021. Such measures could include:

- Working with METRO to increase frequency of bus routes and using the Gorham campus as a park & ride for employees
- Employing a private shuttle service to utilize remote lots
- Other initiatives outlined in USM's Transportation Demand Management Plan

Please let us know if you have any follow-up questions.

Sincerely,

Aaron Witham
Assistant Director of Facilities Management for Sustainability

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Attachment #1

Average Occupancy on Streets Adjacent to Campus on Monday-Wednesday between 12:30-1:30 pm

Street Name	Total Spaces	October 2019 Average Occupancy	June 2020 Average Occupancy	**Average Occupancy Difference**
Durham Street (Campus Side)	25	21	16	**5**
Falmouth Street (Forest to Brighton)	69	44	9	**35**
Falmouth Street (Brighton to Exeter)	9	7	3	**4**
Oakdale Street (Falmouth to Fessenden)	6	3	4	**-1**
Deering Ave (Brighton to 295)	21	16	6	**11**
Brighton Ave (adj to Bedford Park)	17	4	3	**2**
Exeter Street (Falmouth to Granite)	14	13	9	**4**
Bedford Street (adj to Bedford Park)	14	6	1	**5**
Chamberlain Ave	14	5	9	**-4**
Surrenden Street	13	4	3	**1**
All Streets	202	125	63	**62**

Notes:

*October data were collected as part of the VHB parking inventory at the same time the campus data were collected.

*Counts were taken between 8:30 am-4:30 pm, from Monday Oct. 21st- Wednesday October 23rd, 2019, and between 12:30-1:30pm from Monday June 8- Wednesday June 10.

*Occupancy shown here is just for the 12:30-1:30 pm time slot, as that is when peak parking demand occurs on campus.

*Peak parking demand was determined by when parking lots on the USM campus are the most full, according to an inventory done by VHB.

*The previously shared May data set only included a few streets and thus has been omitted from this table comparing average occupancy across all streets. Data for the same streets were comparable between the May and June data sets.

*The summary of data offered here was compiled by the Office of Sustainability at USM.

*Some construction vehicles were observed in June due to construction around the Brighton/Deering intersection; these have been included in the counts, assuming that the spots they were taking could have been otherwise occupied.

*Some blocks were closed to non-local traffic in June due to roundabout construction, thus limiting parking; however, occupancy here was retained in the analysis since it likely skews the University impact number higher (to be conservative) and excluding it would underrepresent the University's impact.

*The average occupancy difference columns were created by subtracting the June data from the October data, creating a difference that is assumed to be the parking burden on the community by University-affiliated vehicles.

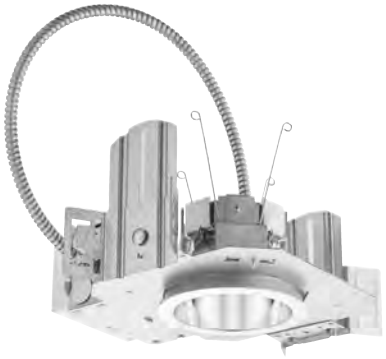
* Brighton Ave and Bedford St were left in the analysis even though those parking spaces will be lost due to the roundabout project. Leaving them in allows for the University's impact on space counts to be reflected, while avoiding an arbitration inflation of the University's impact due to the roundabout project if their space counts were excluded from one or both data sets.

LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

LDN4

4" OPEN
Non-IC
New Construction Downlight



FEATURES & SPECIFICATIONS

INTENDED USE — Typical applications include corridors, lobbies, conference rooms and private offices.

CONSTRUCTION — Galvanized steel mounting/plaster frame; galvanized steel junction box with bottom-hinged access covers and spring latches. Reflectors are retained by torsion springs.

Vertically adjustable mounting brackets with commercial bar hangers provide 3-3/4" total adjustment.

Two combination 1/2"-3/4" and four 1/2" knockouts for straight-through conduit runs. Capacity: 8 (4 in, 4 out). No. 12 AWG conductors, rated for 90°C.

Accommodates 12"-24" joist spacing.

Passive cooling thermal management for 25°C standard; high ambient (40°C) option available. Light engine and drivers are accessible from above or below ceiling.

Max ceiling thickness 1-1/2".

OPTICS — LEDs are binned to a 3-step SDCM; 80 CRI minimum. 90 CRI optional.

LED light source concealed with diffusing optical lens.

General illumination lighting with 1.0 S/MH and 55° cutoff to source and source image.

Self-flanged anodized reflectors in specular, semi-specular, or matte diffuse finishes. Also available in white and black painted reflectors.

ELECTRICAL — Multi-volt (120-277V, 50/60Hz) 0-10V dimming drivers mounted to junction box, 10% or 1% minimum dimming level available.

0-10V dimming fixture requires two (2) additional low-voltage wires to be pulled.

70% lumen maintenance at 60,000 hours.

LISTINGS — Certified to US and Canadian safety standards. Wet location standard (covered ceiling). IP55 rated. ENERGY STAR® certified product.

WARRANTY — 5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

battery pack

A+ Capable options indicated by this color background.

ORDERING INFORMATION

Lead times will vary depending on options selected. Consult with your sales representative.

Example: LDN4 35/15 LO4AR LSS MVOLT EZ1

LDN4													
Series		**Color temperature**		**Lumens**[1]		**Aperture/Trim Color**				**Finish**		**Voltage**	
LDN4	4" round	27/	2700K	05	500 lumens	LO4	Downlight	AR	Clear	LSS	Semi-specular	MVOLT	Multi-volt
		30/	3000K	07	750 lumens	LW4	Wallwash	WR[2]	White	LD	Matte diffuse	120	120V
		35/	3500K	10	1000 lumens			BR[2]	Black	LS	Specular	277	277V
		40/	4000K	15	1500 lumens							347[3]	347V
		50/	5000K	20	2000 lumens								
				25	2500 lumens								
				30	3000 lumens								
				40	4000 lumens								

Driver		**Options**			
GZ10	0-10V driver dims to 10%	SF[4]	Single fuse	N80[8]	nLight™ Lumen Compensation
GZ1	0-10V driver dims to 1%	TRW[6]	White painted flange	NPS80EZ[7,10]	nLight® dimming pack controls 0-10V eldoLED drivers (EZ10, EZ1).
EZ10	0-10V eldoLED driver with smooth and flicker-free deep dimming performance down to 10%	TRBL[6]	Black painted flange	NPS80EZER[7,10]	nLight® dimming pack controls 0-10V eldoLED drivers (EZ10, EZ1). ER controls fixtures on emergency circuit.
EZ1	0-10V eldoLED driver with smooth and flicker-free deep dimming performance down to 1%	EL[5]	Emergency battery pack with integral test switch. 10W Constant Power, Not Certified in CA Title 20 MAEDBS	HAO[11]	High ambient option (40°C)
		ELR[5]	Emergency battery pack with remote test switch. 10W Constant Power, Not Certified in CA Title 20 MAEDBS	CP[12]	Chicago Plenum
		ELSD[5]	Emergency battery pack with self-diagnostics, 10W Constant Power, integral test switch. Not Certified in CA Title 20 MAEDBS	RRL__	RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature. Available only in RRLA, RRLB, RRLAE, and RRLC12S.
		ELRSD[5]	Emergency battery pack with self-diagnostics, 10W Constant Power, remote test switch. Not Certified in CA Title 20 MAEDBS	NLTAIR2[8,9]	nLight® Air enabled
		E10WCP[5]	Emergency battery pack, 10W Constant Power with integral test switch. Certified in CA Title 20 MAEDBS	NLTAIRER2[9,10]	nLight® AIR Dimming Pack Wireless Controls. Controls fixtures on emergency circuit, not available with battery pack options
		E10WCPR[5]	Emergency battery pack, 10W Constant Power with remote test switch. Certified in CA Title 20 MAEDBS	USPOM	US point of manufacture
		NPP16D[7,10]	nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1).	90CRI	High CRI (90+)
		NPP16DER[7,10]	nLight® network power/relay pack with 0-10V dimming for non-eldoLED drivers (GZ10, GZ1). ER controls fixtures on emergency circuit.		

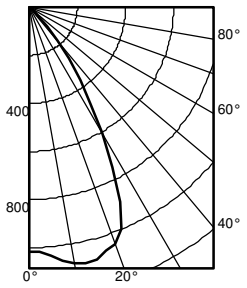
Notes

1 Overall height varies based on lumen package; refer to dimensional chart on page 3.
2 Not available with finishes.
3 Not available with emergency options.
4 Must specify voltage 120V or 277V.
5 12.5" of plenum depth or top access required for battery pack maintenance.
6 Available with clear (AR) reflector only.
7 Specify voltage. ER for use with generator supply EM power. Will require an emergency hot feed and normal hot feed.
8 Fixture begins at 80% light level. Must be specified with NPS80EZ or NPS80EZ ER. Only available with EZ10 and EZ1 drivers.
9 Not available with CP, NPS80EZ, NPS80EZER, NPP16D, NPP16DER or N80 options.
10 NLTAIR2 and NLTAIRER2 not recommended for metal ceiling installations.
11 Fixture height is 5-11/16" for all lumen packages with HAO.
12 Must specify voltage for 3000lm. Not available with emergency battery pack option.

PHOTOMETRY

Distribution Curve | **Distribution Data** | **Output Data** | **Coefficient of Utilization** | **Illuminance Data at 30" Above Floor for a Single Luminaire**

LDN4 35/10 LO4AR, input watts: 10.58, delivered lumens: 1085.2, LM/W = 102.57, spacing criterion at 0= 1.04, test no. ISF 30712P229.



	Ave	Lumens
0	1017	
5	1039	101
15	1084	304
25	895	395
35	369	232
45	52	51
55	1	2
65	1	1
75	0	0
85	0	0
90	0	

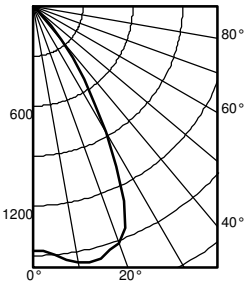
Zone	Lumens	% Lamp
0° - 30°	799.7	73.7
0° - 40°	1031.5	95.1
0° - 60°	1084.7	100.0
0° - 90°	1085.2	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	1085.2	*100.0

*Efficiency

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	111	108	106	109	107	105	105	103	101
2	103	99	96	102	98	95	98	95	93
3	96	92	88	95	91	87	92	89	86
4	90	85	81	89	84	80	87	83	79
5	85	79	75	84	78	74	82	77	74
6	79	73	69	79	73	69	77	72	68
7	75	69	64	74	68	64	73	68	64
8	70	64	60	70	64	60	69	63	60
9	66	60	56	66	60	56	65	60	56
10	63	57	53	62	57	53	61	56	53

		50% beam - 55.6°		10% beam - 78.0°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	33.6	5.8	16.8	8.9	3.4
10.0	18.1	7.9	9.0	12.2	1.8
12.0	11.3	10.0	5.6	15.4	1.1
14.0	7.7	12.1	3.8	18.6	0.8
16.0	5.6	14.2	2.8	21.9	0.6

LDN4 35/15 LO4AR, input watts: 17.5, delivered lumens: 1570.1, LM/W = 89.72, spacing criterion at 0= 1.04, test no. ISF 30712P234.



	Ave	Lumens
0	1472	
5	1503	146
15	1569	440
25	1295	571
35	534	335
45	75	74
55	1	3
65	1	1
75	0	0
85	0	0
90	0	

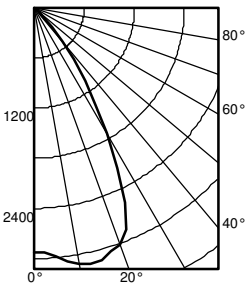
Zone	Lumens	% Lamp
0° - 30°	1157.1	73.7
0° - 40°	1492.5	95.1
0° - 60°	1569.4	100.0
0° - 90°	1570.1	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	1570.1	*100.0

*Efficiency

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	111	108	106	109	107	105	105	103	101
2	103	99	96	102	98	95	98	95	93
3	96	92	88	95	91	87	92	89	86
4	90	85	81	89	84	80	87	83	79
5	85	79	75	84	78	74	82	77	74
6	79	73	69	79	73	69	77	72	68
7	75	69	64	74	68	64	73	68	64
8	70	64	60	70	64	60	69	63	60
9	66	60	56	66	60	56	65	60	56
10	63	57	53	62	57	53	61	56	53

		50% beam - 55.6°		10% beam - 78.0°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	48.7	5.8	24.3	8.9	4.9
10.0	26.2	7.9	13.1	12.2	2.6
12.0	16.3	10.0	8.2	15.4	1.6
14.0	11.1	12.1	5.6	18.6	1.1
16.0	8.1	14.2	4.0	21.9	0.8

LDN4 35/30 LO4AR, input watts: 32.1, delivered lumens: 3122.6, LM/W = 88.52, spacing criterion at 0= 1.04, test no. ISF 30712P249.



	Ave	Lumens
0	2927	
5	2989	290
15	3120	875
25	2575	1136
35	1062	667
45	149	148
55	3	5
65	2	1
75	0	0
85	0	0
90	0	

Zone	Lumens	% Lamp
0° - 30°	2301.2	73.7
0° - 40°	2968.2	95.1
0° - 60°	3121.1	100.0
0° - 90°	3122.6	100.0
90° - 120°	0.0	0.0
90° - 130°	0.0	0.0
90° - 150°	0.0	0.0
90° - 180°	0.0	0.0
0° - 180°	3122.6	*100.0

*Efficiency

pf	20%								
pc	80%			70%			50%		
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%
0	119	119	119	116	116	116	111	111	111
1	111	108	106	109	107	105	105	103	101
2	103	99	96	102	98	95	98	95	93
3	96	92	88	95	91	87	92	89	86
4	90	85	81	89	84	80	87	83	79
5	85	79	75	84	78	74	82	77	74
6	79	73	69	79	73	69	77	72	68
7	75	69	64	74	68	64	73	68	64
8	70	64	60	70	64	60	69	63	60
9	66	60	56	66	60	56	65	60	56
10	63	57	53	62	57	53	61	56	53

		50% beam - 55.6°		10% beam - 78.0°	
Mounting Height	Inital FC Center Beam	Diameter	FC	Diameter	FC
8.0	96.8	5.8	48.4	8.9	9.7
10.0	52.0	7.9	26.0	12.2	5.2
12.0	32.4	10.0	16.2	15.4	3.2
14.0	22.1	12.1	11.1	18.6	2.2
16.0	16.1	14.2	8.0	21.9	1.6

Accessories: *Order as separate catalog numbers (shipped separately).*

SCA4	Sloped ceiling adapter. Degree of slope must be specified (5D, 10D, 15D, 20D, 25D, 30D). Refer to TECH-190.

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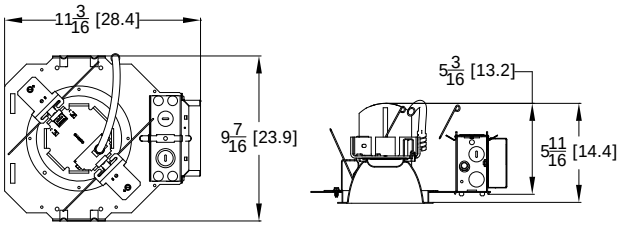
LDN4

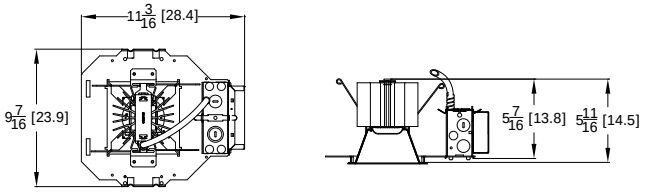
* All dimensions are inches (centimeters) unless otherwise noted.

LDN4 500-1500 LUMEN



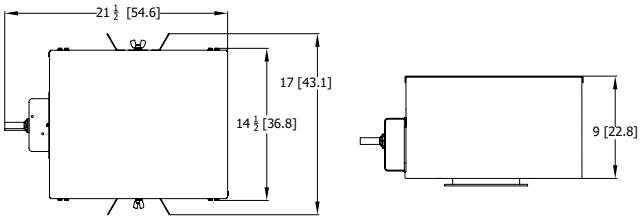
Aperture: 4-5/16 (11)
Ceiling Opening: 5-1/8 (13)
Overlap trim: 5-7/16 (13.8)

LDN4 2000-3000 LUMEN



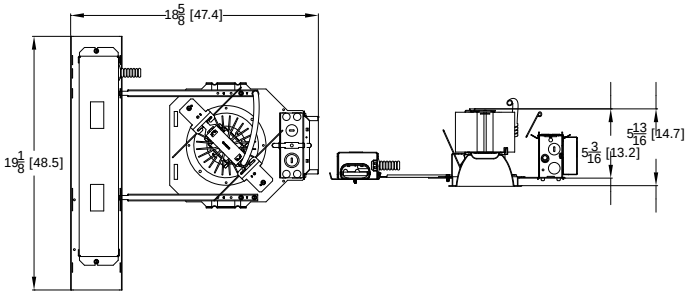
Aperture: 4-5/16 (11) Square
Ceiling Opening: 5-1/8 (13) Square
Overlap trim: 5-7/16 (13.8) Square

LDN4 CP



Aperture: 4-5/16? (11)
Ceiling Opening: 5-1/8? (13)
Overlap trim: 5-7/16? (13.8)

LDN4 EL-ELR



Aperture: 4-5/16 (11)
Ceiling Opening: 5-1/8 (13)
Overlap trim: 5-7/16 (13.8)

LDN4			
Nominal	**Lumens**	**Wattage**	**Lm/W**
500	523.6	5.74	91.2
750	751.1	8.6	87.3
1000	1045	10.58	98.8
1500	1512	17.5	86.4
2000	2006	22.12	90.7
2500	2551	26.1	97.7
3000	3007	32.1	93.7
4000	4212	43	98.0

LUMEN OUTPUT MULTIPLIERS - CCT					
	2700K	**3000K**	**3500K**	**4000K**	**5000K**
80CRI	0.950	0.966	1.000	1.025	1.101

HOW TO ESTIMATE DELIVERED LUMENS IN EMERGENCY MODE

Use the formula below to estimate the delivered lumens in emergency mode

Delivered Lumens = 1.25 x P x LPW

P = Ouput power of emergency driver. P = 10W for PS1055CP

LPW = Lumen per watt rating of the luminaire. This information is available on the ABL luminaire spec sheet.
The LPW rating is also available at Designlight Consortium.

LUMEN OUTPUT MULTIPLIERS - FINISH			
	Clear (AR)	**White (WR)**	**Black (BR)**
Specular (LS)	1.0	N/A	N/A
Semi-specular (LSS)	0.950	N/A	N/A
Matte diffuse (LD)	0.85	N/A	N/A
Painted	N/A	0.87	0.73

Notes

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- CRI: 80 typical.

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ADDITIONAL DATA

COMPATIBLE 0-10V WALL-MOUNT DIMMERS		
MANUFACTURER	PART NO.	POWER BOOSTER AVAILABLE
Lutron®	Diva® DVTV	
	Diva® DVSCTV	
	Nova T® NTFTV	
	Nova® NFTV	
Leviton®	AWSMT-7DW	CN100
	AWSMG-7DW	PE300
	AMRMG-7DW	
	Leviton Centura Fluorescent Control System	
	IllumaTech® IP7 Series	
Synergy®	ISD BC	RDMFC
	SLD LPCS	
	Digital Equinox (DEQ BC)	
Douglas Lighting Controls	WPC-5721	
Entertainment Technology	Tap Glide TG600FAM120 (120V)	
	Tap Glide Heatsink TGH1500FAM120 (120V)	
	Oasis 0A2000FAMU	
Honeywell	EL7315A1019	EL7305A1010 (optional)
	EL7315A1009	
HUNT Dimming	Preset slide: PS-010-IV and PS-010-WH	
	Preset slide: PS-010-3W-IV and PS-010-3W-WH	
	Preset slide, controls FD-010: PS-IFC-010-IV and PS-IFC-010-WH-120/277V	
	Preset slide, controls FD-010: PS-IFC-010-3W-IV and PS-IFC-010-3W-WH-120/277V	
	Remote mounted unit: FD-010	
Lehigh Electronic Products	Solitaire	PBX
PDM Electrical Products	WPC-5721	
Starfield Controls	TR61 with DALI interface port	RT03 DALInet Router
WattStopper®	LS-4 used with LCD-101 and LCD-103	

A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and out-of-the-box control compatibility with simple commissioning.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is part of an A+ Certified solution for nLight® control networks when ordered with drivers marked by a shaded background*
- This luminaire is part of an A+ Certified solution for nLight control networks, providing advanced control functionality at the luminaire level, when selection includes driver and control options marked by a shaded background*

To learn more about A+, visit www.acuitybrands.com/aplus.

*See ordering tree for details

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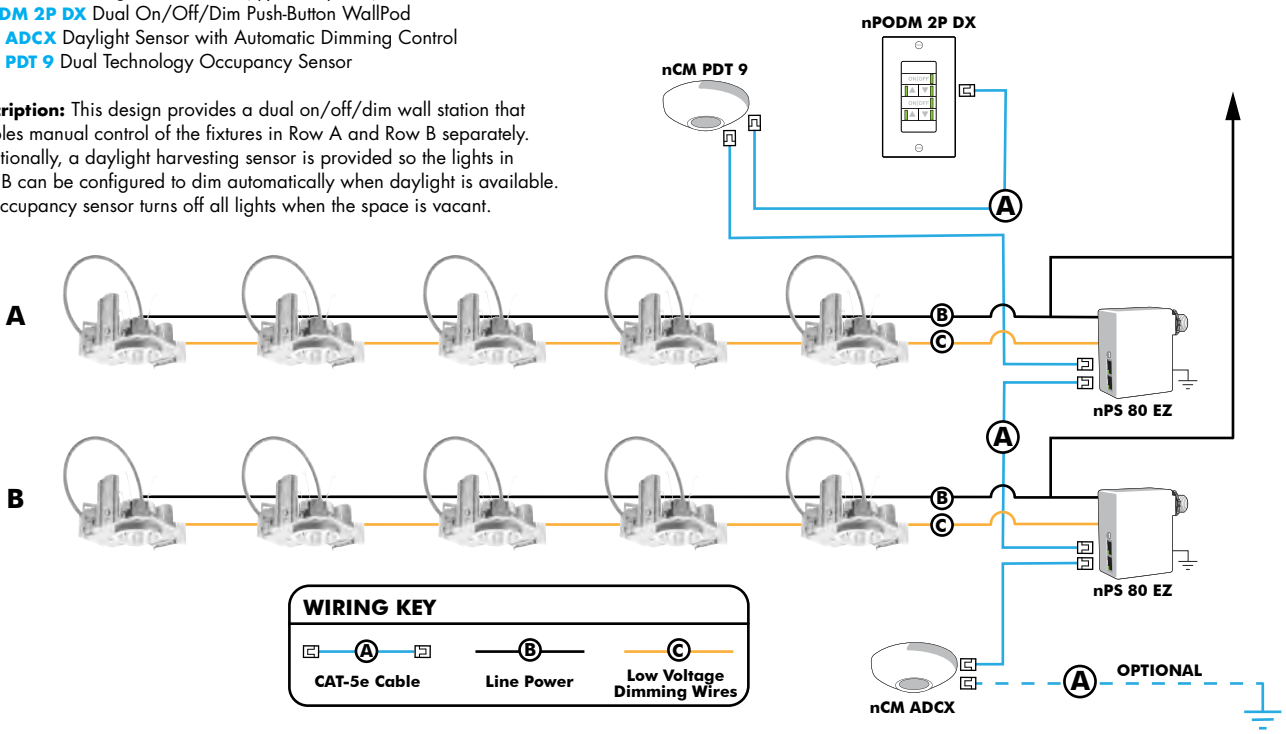
LDN4

EXAMPLE
Group Fixture Control*
*Appiication diagram applies for fixtures with eldoLED drivers only.

nPS 80 EZ Dimming/Control Pack (qty: 2 required)
nPODM 2P DX Dual On/Off/Dim Push-Button WallPod
nCM ADCX Daylight Sensor with Automatic Dimming Control
nCM PDT 9 Dual Technology Occupancy Sensor

Description: This design provides a dual on/off/dim wall station that enables manual control of the fixtures in Row A and Row B separately. Additionally, a daylight harvesting sensor is provided so the lights in Row B can be configured to dim automatically when daylight is available. An occupancy sensor turns off all lights when the space is vacant.



Choose Wall Controls
nLight offers multiple styles of wall controls - each with varying features and user experience.

Push-Button Wallpod
Traditional tactile buttons and LED user feedback

Graphic Wallpod
Full color touch screen provides a sophisticated look and feel

nLight® Wired Controls Accessories:			
Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlight for complete listing of nLight controls.			
WallPod Stations	**Model number**	**Occupancy sensors**	**Model Number**
On/Off	nPODM (Color)	Small motion 360º, ceiling (PIR/dual Tech)	nCM 9 / nCM PDT 9
On/Off & Raise/Lower	nPOD DX (Color)	Large motion 360º, ceiling (PIR/dual tech)	nCM 10 / nCM PDT 10
Graphic Touchscreen	nPOD GFX (Color)	Wide View (PIR/dual tech)	nWV 16 / nWV PDT 16
Photocell controls	**Model Number**	Wall Switch w/ Raise/Lower (PIR/dual tech)	nWSX LV DX / nWSX PDT LV DX
Dimming	nCM ADCX	**Cat-5 cables (plenum rated)**	**Model Number**
		10', CAT5 10FT	CAT5 10FT J1
		15, CAT5 15FT	CAT5 15FT J1

nLight® AIR Control Accessories: *Order as separate catalog number. Visit www.acuitybrands.com/products/controls/nlightair.*	
Wall switches	**Model number**
On/Off single pole	rPODB [color]
On/Off two pole	rPODB 2P [color]
On/Off & raise/lower single pole	rPODB DX [color]
On/Off & raise/lower two pole	rPODB 2P DX [color]
On/Off & raise/lower single pole	rPODBZ DX WH[1]

Notes
1 Can only be ordered with the RES7Z zone control sensor version.

nLight AIR
nLight AIR is the ideal solution for retrofit or new construction spaces where adding communication is cost prohibitive. The integrated nLight AIR rPP20 Power Pack is part of each Lithonia LDN Luminaire. These individually addressable controls offer the ultimate in flexibility during initial setup and for space repurposing.

Simple as 1,2,3

1. Install the nLight® AIR fixtures with embedded smart sensor
2. Install the wireless battery-powered wall switch
3. With CLAIRITY app, pair the fixtures with the wall switch and if desired, customize the sensor settings for the desired outcome

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JOB _____ TYPE _____

NOTES _____ APPROVALS _____

FEATURES

- 20" size in post top, pole and wall mount
- High performance optics up to 17,000 delivered lumens
- Elegant form factor
- Diffusion lens option
- SiteSync™ wireless control options

CERTIFICATIONS

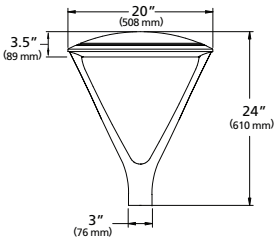
c UL us LISTED

3000K and warmer CCTs only

SPECIFICATIONS

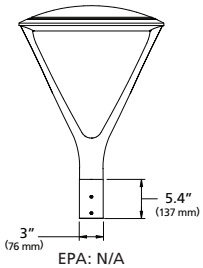
Weight: 35 lbs

FM33



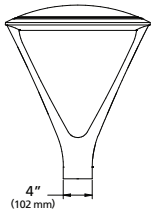
EPA: .512

PT23



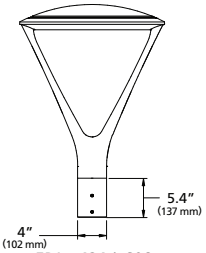
EPA: N/A

FM44



EPA: .534

PT24 / PT34



EPA: .424 / .608

ORDERING CODE

Series	LED Engine	CCT	Distribution	Rotation	Voltage	Mounting
UR20 Ouro	No Lens or Clear Lens	**AM** Amber	No Lens or Clear Lens	Blank for no rotation	**UNV** 120-277V	**FM33** Flush mt 3.0" OD pole, 3" fixture base
	24L-25 3,000 lm	**3K7** 3000K, 70 CRI	**FR** Type 1/Front Row	**L**[1] Optic rotation left	**347** 347V	**FM44** Flush mt 3.6" to 4.0" OD pole, 4" fixture base
	24L-65 7,000 lm	**3K8** 3000K, 80 CRI	**2** Type II	**R**[1] Optic rotation right	**480** 480V	**PT23** 3" Post Top mount for 2 3/8" OD Tenon
	56L-75 10,000 lm	**3K9** 3000K, 90 CRI	**3** Type III		**DALI** 120-277V†	**PT24** 4" Post Top mount for 2 3/8" OD Tenon
	56L-110 15,000 lm	**4K7** 4000K, 70 CRI	**4** Type IV		†Consult factory	**PT34** 4" Post Top mount for 2 7/8" OD Tenon
	56L-140 17,000 lm	**4K8** 4000K, 80 CRI	**4W** Type IV Wide			
	HDL - High Diffusion Lens	**5K7** 5000K, 70 CRI	**5QM** Type V Square Medium			
	28L-30 3,000 lm		**5QN** Type V Square Narrow			
	28L-70 7,000 lm		**5R** Type V Rectangular			
	68L-80 9,000 lm		**5W** Type V Wide (Round)			
	68L-115 13,000 lm		HDL - High Diffusion Lens			
	68L-150 15,000 lm		**3** Type III/Asymmetric			
			5W Type V/Symmetric			

Fixture Finish	Control Options		Options	Control Accessories^
BL Black	**7PR-TL** 7 pin PCR with twist lock photocontrol	**SWPM-40F**[2,3,4,5] SiteSync with Sensor 9' to 40' MH	**BC**[6] Back-light Control	**SW7PR**[2,3] SiteSync with 7 pin PCR
DB Dark Bronze	**7PR-SC** 7 pin PCR with shorting cap	**WSP-40F-1**[2,5] Dimming Occ. Sensor for up to 40' MH, 120/277/347V	**SF** Single Fuse	**SWUSB** SiteSync Software on USB
LG Light Gray	**7PR** 7 pin PCR, wireless control enabled	**WSP-40F-2**[2,5] Dimming Occ. Sensor for up to 40' MH, 208/240V	**DF** Double Fuse	**SWTAB** SiteSync Windows® Tablet
GT Graphite	**AD-01**[2] AstroDIM: 50% output at midnight	**WSP-40F-3**[2,5] Dimming Occ. Sensor for up to 40' MH, 480V	**TB** Terminal Block	**SWBRG** SiteSync Wireless Bridge Node
PS Platinum Silver	**AD-02**[2] AstroDIM: 50% output midnight to 4 AM	**NXSPW14F**[2,5] NX Wireless, PIR Sensor, 14'	**CLR**[5] Clear Lens	**WIR-RME-L** wiSCAPE External Fixture Module
TT Titanium	**AD-03**[2] AstroDIM: 50% output 10PM	**NXSPW30F**[2,5] NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30'.	**TL** Tamper proof latch	**SCL-R** Occ. Sensor for Round Pole (up to 16' MH)
WH White	**AD-04**[2] AstroDIM: 50% output 10PM to 4AM	**NXSP14F**[2,5] NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14'		**SCL -S** Occ. Sensor for Square Pole (up to 16' MH)
CC Custom Color†	**NXWE** NX Wireless Enabled	**NXSP30F**[2,5] NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30'		**SCH-R** Occ. Sensor for Round Pole (16' to 30' MH)
†Consult factory	**SWP**[2,3,4] SiteSync Pre commission			**SCH-S** Occ. Sensor for Square Pole (16' to 30' MH)
				NXOFM-1R1D-UNV NX 7-pin Module
				^ Please refer to page 8 for ordering details

1 Not available with 5QM, 5QN, and 5W distributions.
2 Not available with other sensor or wireless control options.
3 Specify group and zone at time of order. See www.hubbelllighting.com/sitesync for more details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node.
4 Not available with 347V and 480V
5 24L & 56L only.
6 Not available with Type V distributions or HDL option.

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LUMINAIRE PERFORMANCE

LED #	Nominal Lumen Package	Nominal Wattage	Lens Options	Distribution	3000K					4000K					5000K				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
24L	3,000	25	No Lens	FR	2932	0	0	1	115	3119	0	0	1	123	3098	0	0	1	124
				FR-BC	1994	0	0	0	78	2121	0	0	0	83	2107	0	0	0	83
				2	2943	1	0	1	116	3099	1	0	1	122	3110	1	0	1	124
				2-BC	1724	0	0	1	68	1834	0	0	1	72	1822	0	0	1	72
				3	3007	1	0	1	118	3200	1	0	1	126	3178	1	0	1	127
				3-BC	1830	0	0	1	73	1947	0	0	1	78	1934	0	0	1	77
				4	3056	0	0	1	120	3251	0	0	1	128	3229	0	0	1	129
				4-BC	2235	0	0	1	88	2377	0	0	1	93	2362	0	0	1	93
				4W	3078	1	0	2	121	3276	1	0	2	129	3253	1	0	2	130
				4W-BC	1855	0	0	1	73	1975	0	0	1	78	1961	0	0	1	77
				5QM	2931	2	0	1	115	3119	2	0	1	123	3098	2	0	1	124
				5QN	2694	2	0	1	106	2866	2	0	1	113	2847	2	0	1	114
				5R	3054	2	0	2	120	3250	2	0	2	128	3228	2	0	2	129
				5W	3043	2	0	1	120	3237	2	0	1	127	3216	2	0	1	129
			Clear Lens	FR	2773	0	0	1	109	2951	0	0	1	116	2930	0	0	1	117
				FR-BC	1886	0	0	1	74	2007	0	0	1	79	1993	0	0	1	78
				2	2784	1	0	1	109	2963	1	0	1	116	2942	1	0	1	118
				2-BC	1631	0	0	1	64	1736	0	0	1	68	1723	0	0	1	67
				3	2845	1	0	1	111	3028	1	0	1	119	3007	1	0	1	120
				3BC	1806	0	0	1	72	1922	0	0	1	77	1909	0	0	1	76
				4	2891	0	0	1	113	3076	0	0	1	120	3055	0	0	1	122
				4-BC	2114	0	0	1	83	2250	0	0	1	88	2234	0	0	1	88
				4W	2912	1	0	1	114	3099	1	0	2	121	3077	1	0	2	123
				4W-BC	1755	0	0	1	69	1868	0	0	1	73	1855	0	0	1	5
				5QM	2773	1	0	1	109	2950	2	0	1	116	2931	2	0	1	117
				5QN	2549	1	0	0	100	2712	2	0	1	106	2693	2	0	1	108
				5R	2890	2	0	2	113	3075	2	0	2	120	3054	2	0	2	122
				5W	2879	2	0	1	113	3064	2	0	1	120	3042	2	0	1	122
28L		30	HDL Lens	3	2816	1	0	1	96	2997	1	0	1	102	3020	1	0	1	101
				5W	2917	1	0	1	100	3105	1	0	1	106	3084	1	0	1	103

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LUMINAIRE PERFORMANCE

LED #	Nominal Lumen Package	Nominal Wattage	Lens Options	Distribution	3000K					4000K					5000K				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
24L	7,000	65	No Lens	FR	6754	1	0	1	104	7187	1	0	1	111	7138	1	0	1	110
				FR-BC	4392	0	0	1	68	4673	0	0	1	72	4641	0	0	1	71
				2	6571	1	0	2	101	6992	1	0	2	108	6944	1	0	2	107
				2-BC	3799	0	0	1	58	4042	0	0	1	62	4014	0	0	1	62
				3	6625	1	0	2	102	7051	1	0	2	108	7002	1	0	2	108
				3BC	4032	0	0	1	62	4291	0	0	1	66	4261	0	0	1	66
				4	6788	1	0	2	104	7223	1	0	2	111	7174	1	0	2	110
				4-BC	4924	0	0	2	76	5239	0	0	2	81	5203	0	0	2	80
				4W	6699	1	0	2	103	7128	1	0	3	110	7079	1	0	3	109
				4W-BC	4088	0	0	2	63	4350	0	0	2	67	4321	0	0	2	66
				5QM	7025	3	0	1	108	7477	3	0	1	115	7425	3	0	1	114
				5QN	6964	3	0	1	107	7410	3	0	1	114	7323	3	0	1	113
				5R	7038	3	0	3	108	7489	3	0	3	115	7437	3	0	3	114
				5W	7011	3	0	2	108	7460	3	0	2	115	7409	3	0	2	114
			Clear Lens	FR	6432	1	0	1	97	6844	1	0	1	104	6798	1	0	1	105
				FR-BC	4182	0	0	1	63	4450	0	0	1	67	4420	0	0	1	67
				2	6258	1	0	1	95	6659	1	0	2	101	6613	1	0	2	102
				2-BC	3617	0	0	1	55	3849	0	0	1	58	3823	0	0	1	58
				3	6310	1	0	2	96	6714	1	0	2	102	6668	1	0	2	103
				3-BC	3599	0	0	1	55	3829	0	0	1	59	3803	0	0	1	59
				4	6465	1	0	2	98	6879	1	0	2	104	6832	1	0	2	105
				4-BC	4688	0	0	2	71	4990	0	0	2	76	4955	0	0	2	75
				4W	6380	1	0	2	97	6789	1	0	2	103	6742	1	0	2	104
				4W-BC	3893	0	0	2	59	4143	0	0	2	63	4115	0	0	2	62
				5QM	6691	3	0	1	101	7119	3	0	1	108	7070	3	0	1	109
				5QN	6632	2	0	1	100	7058	3	0	1	107	7009	3	0	1	108
				5R	6702	3	0	3	102	7131	3	0	3	108	7082	3	0	3	109
				5W	6676	3	0	2	101	7104	3	0	2	108	7055	3	0	2	109
28L		70	HDL Lens	3	6047	2	0	2	92	6047	2	0	2	92	6236	2	0	2	89
				5W	6221	2	0	1	94	6619	2	0	1	100	6525	2	0	1	93

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LUMINAIRE PERFORMANCE

LED #	Nominal Lumen Package	Nominal Published Wattage	Lens Options	Distribution	3000K					4000K					5000K				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
56L	10,000	75	No Lens	FR	9315	1	0	1	124	9913	1	0	1	132	9845	1	0	1	131
				FR-BC	6058	0	0	1	81	6445	0	0	1	86	6402	0	0	1	85
				2	9063	2	0	2	120	9644	2	0	2	128	9578	2	0	2	128
				2-BC	5239	0	0	1	70	5575	0	0	1	74	5536	0	0	1	74
				3	9139	2	0	2	125	9725	2	0	2	134	9657	2	0	2	129
				3-BC	5561	0	0	2	74	5877	0	0	2	78	5561	0	0	2	74
				4	9362	1	0	2	124	9362	1	0	2	124	9876	1	0	2	132
				4-BC	6791	0	0	2	90	7226	0	0	2	96	7168	0	0	2	96
				4W	9240	2	0	3	123	9832	2	0	3	131	9765	2	0	3	130
				4W-BC	5639	0	0	2	75	6001	0	0	2	80	5959	0	0	2	79
				5QM	9691	3	0	1	129	10312	3	0	1	137	10240	3	0	1	137
				5QN	9606	3	0	1	128	10222	3	0	1	136	10151	3	0	1	135
				5R	9706	3	0	3	129	10328	3	0	3	137	10258	3	0	3	137
				5W	9669	4	0	2	129	10289	4	0	2	137	10217	4	0	2	136
			Clear Lens	FR	8871	1	0	1	117	9760	1	0	1	129	9374	1	0	1	125
				FR-BC	5769	0	0	1	76	6138	0	0	1	81	6096	0	0	1	81
				2	8631	2	0	2	114	9183	2	0	2	121	9121	2	0	2	122
				2-BC	4989	0	0	1	67	5309	0	0	1	71	5272	0	0	1	62
				3	8703	1	0	2	115	9260	2	0	2	122	9197	2	0	2	123
				3-BC	4964	1	0	1	66	5282	1	0	2	70	5245	1	0	2	69
				4	8916	1	0	2	118	9487	1	0	2	125	9423	1	0	2	126
				4-BC	6467	0	0	2	85	6881	0	0	2	91	6834	0	0	2	90
				4W	8799	2	0	3	116	9363	2	0	3	124	9300	2	0	3	124
				4W-BC	5370	0	0	2	72	5714	1	0	2	76	5675	0	0	2	76
				5QM	9228	3	0	1	122	9820	3	0	1	130	9752	3	0	1	130
				5QN	9147	3	0	1	121	9734	3	0	1	129	9668	3	0	1	129
				5R	9244	3	0	3	122	9836	3	0	3	130	9769	3	0	3	130
				5W	9208	4	0	2	122	9798	4	0	2	130	9732	4	0	2	130
68L		80	HD Lens	3	7853	2	0	2	99	8356	2	0	2	106	8299	2	0	2	104
				5W	8080	2	0	2	102	8684	3	0	2	110	8684	3	0	2	109

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LUMINAIRE PERFORMANCE

LED #	Nominal Lumen Package	Nominal Published Wattage	Lens Options	Distribution	3000K					4000K					5000K				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
56L	15,000	110	No Lens	FR	13533	1	0	1	125	14399	1	0	2	133	14301	1	0	2	130
				FR-BC	8799	1	0	1	81	9363	1	0	1	86	9300	1	0	1	85
				2	13165	2	0	2	121	14009	2	0	2	129	13913	2	0	2	126
				2-BC	7611	1	0	2	70	8098	1	0	2	75	8042	1	0	2	74
				3	13275	2	0	3	122	14126	2	0	3	130	14030	2	0	3	128
				3-BC	8079	1	0	2	73	8596	1	0	2	78	8538	1	0	2	78
				4	13601	1	0	3	125	14472	1	0	3	133	14373	1	0	3	131
				4-BC	9865	1	0	2	91	10497	1	0	3	97	10425	1	0	3	96
				4W	13422	2	0	3	124	14283	2	0	3	132	14185	2	0	3	129
				4W-BC	8191	1	0	3	75	8715	1	0	3	80	8656	1	0	3	80
				5QM	14077	4	0	2	130	14979	4	0	2	138	14876	4	0	2	135
				5QN	13953	4	0	1	129	14848	4	0	1	137	14747	4	0	1	134
				5R	14100	4	0	4	130	15004	4	0	4	138	14901	4	0	4	135
				5W	14046	4	0	2	129	14946	4	0	2	138	14844	4	0	3	135
			Clear Lens	FR	12803	1	0	1	118	13624	1	0	1	126	13531	1	0	1	123
				FR-BC	9298	1	0	1	86	8325	1	0	1	77	8798	1	0	1	81
				2	12455	2	0	2	115	13254	2	0	2	123	13164	2	0	2	120
				2-BC	7200	1	0	1	67	7661	1	0	2	71	7610	1	0	2	70
				3	12560	2	0	3	116	13365	2	0	3	124	13273	2	0	3	121
				3-BC	7163	1	0	2	65	7622	1	0	2	69	7570	1	0	2	69
				4	12868	1	0	3	119	13692	1	0	3	127	13599	1	0	3	124
				4-BC	9333	1	0	2	86	9931	1	0	2	92	9864	1	0	2	90
				4W	12699	2	0	3	117	13513	2	0	3	125	13420	2	0	3	122
				4W-BC	7750	1	0	3	72	8246	1	0	3	76	8190	1	0	3	76
				5QM	13318	3	0	2	123	14172	4	0	2	131	14075	4	0	2	128
				5QN	13202	3	0	1	122	14048	4	0	1	130	13951	4	0	1	127
				5R	13341	4	0	4	123	14195	4	0	4	131	14099	4	0	4	128
				5W	13290	4	0	2	123	14141	4	0	2	131	14044	4	0	2	128
68L		115	HD Lens	3	11577	2	0	2	102	12320	2	0	2	109	12236	2	0	2	106
				5W	11912	3	0	2	105	12676	3	0	2	112	12588	3	0	2	109

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LUMINAIRE PERFORMANCE

LED #	Nominal Lumen Package	Nominal Published Wattage	Lens Options	Distribution	3000K					4000K					5000K				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
56L	17,000	140	No Lens	FR	15323	2	0	2	111	16306	2	0	2	118	16194	2	0	2	116
				FR-BC	9964	1	0	1	72	10603	1	0	1	77	10530	1	0	1	76
				2	14897	2	0	2	108	15852	2	0	2	115	15743	2	0	2	112
				2-BC	8618	1	0	2	63	9169	1	0	2	67	9107	1	0	2	66
				3	15032	2	0	3	109	15996	2	0	3	116	15886	2	0	3	113
				3-BC	9147	1	0	2	65	9733	1	0	2	70	9667	1	0	2	69
				4	15400	1	0	3	112	16387	1	0	4	119	16275	1	0	4	116
				4-BC	11170	1	0	3	81	11886	1	0	3	86	11804	1	0	3	86
				4W	15198	2	0	4	110	16173	3	0	4	117	16062	3	0	4	115
				4W-BC	9275	1	0	3	67	9869	1	0	3	72	9801	1	0	3	71
				5QM	15939	4	0	2	116	16962	4	0	2	123	16845	4	0	2	120
				5QN	15801	4	0	1	115	16813	4	0	1	122	16698	4	0	1	119
				5R	15966	4	0	4	116	16990	4	0	4	123	16874	4	0	4	121
				5W	15906	4	0	3	115	16925	4	0	3	123	16808	4	0	3	120
			Clear Lens	FR	14541	1	0	2	105	15473	2	0	2	111	15367	2	0	2	110
				FR-BC	9456	1	0	1	68	10061	1	0	1	72	9993	1	0	1	72
				2	14146	2	0	2	102	15053	2	0	2	108	14950	2	0	2	107
				2-BC	8178	1	0	2	59	8702	1	0	2	63	8642	1	0	2	62
				3	14265	2	0	3	103	15179	2	0	3	109	15076	2	0	3	108
				3BC	8136	1	0	2	58	8657	1	0	2	62	8598	1	0	2	61
				4	14614	1	0	3	105	15551	1	0	3	112	15445	1	0	3	110
				4-BC	10600	1	0	3	76	11279	1	0	3	81	11203	1	0	3	81
				4W	14423	2	0	3	104	15347	2	0	4	111	15243	2	0	4	109
				4W-BC	8802	1	0	3	63	9365	1	0	3	67	9302	1	0	3	67
				5QM	15126	4	0	2	109	16095	4	0	2	116	15985	4	0	2	114
				5QN	14994	4	0	1	108	15955	4	0	1	115	15846	4	0	1	113
				5R	15152	4	0	4	109	16122	4	0	4	116	16012	4	0	4	114
				5W	15094	4	0	3	109	16061	4	0	3	116	15951	4	0	3	114
68L		115	HD Lens	3	13240	2	0	2	89	13992	3	0	3	95	13897	3	0	3	93
				5W	13623	3	0	2	92	14396	3	0	2	97	14298	3	0	2	95

Electrical Characteristics												Dimming				
System Watts	Drive Current	Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming Range	Source current out		Absolute voltage	
		VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
25	298mA	120-480	50/60	0.21	0.12	0.10	0.09	0.07	0.05	>0.9	20	10% to 100%	0mA	1mA	0V	10V
30	298mA			0.25	0.14	0.13	0.11	0.09	0.06							
65	800mA			0.54	0.31	0.27	0.23	0.19	0.14							
70	700mA			0.58	0.34	0.29	0.25	0.20	0.15							
75	420mA			0.63	0.36	0.31	0.27	0.22	0.16							
80	350mA			0.67	0.38	0.33	0.29	0.23	0.17							
110	600mA			0.92	0.53	0.46	0.40	0.32	0.23							
115	500mA			0.96	0.55	0.48	0.42	0.33	0.24							
140	750mA			1.17	0.67	0.58	0.51	0.40	0.29							
150	625mA			1.25	0.72	0.63	0.54	0.43	0.31							

TM-21 LIFETIME CALCULATION

Projected Lumen Maintenance (25°C / 77°F)						
HOURS	0	25,000	36,000	50,000	100,000	Reported L70
Projected Lumen Maintenance	100%	97%	95%	93%	87%	> 60,000 hrs

Kim Lighting reserves the right to change specifications without notice.

SPECIFICATIONS

Housing:

- Low copper aluminum alloy die-casting is designed as one-piece with internal cooling fins.
- Solid, cast aluminum wall creates a thermal barrier between the optical and electrical compartments.
- Molded silicone gasket throughout insures the sealing between the two compartments and provides ingress protection.
- Housing is designed with integral LED heat sink utilized for thermal transfer and for securing the location of each LED module.
- IK09 rated enclosure protects electrical equipment against external mechanical impacts.

Lens Frame:

- One-piece low copper aluminum alloy die-cast is secured to housing with 6 screws.

Backlight Control

- Optional Backlight Control on each LED module to completely control unwanted backlight.

Lens

One-piece flat glass lens slips secure with clips. Extra silicone gasketing is provided to retain a clear optical compartment.

Optical Module:

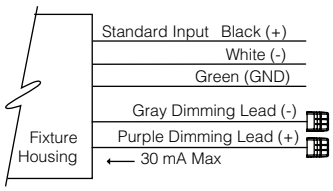
- LEDs shall be mounted to a metal printed circuit board assembly (MCPCB).
- Optical lenses shall be clear injection molded PMMA acrylic.
- Each MCPCB and optic shall be sealed to the diecast housing and sealed with a continuous one piece injection molded silicone rubber gasket.
- Patent Pending design of optical array shall independently shield each LED optic across the length of the aperture.
- Optional fixture finish optical surfaces shall not exceed BUG ratings of the standard white finish and shall be greater than or equal to the delivered lumens of the optional matte black optical surface finish.

Electrical Components

- Standard programmable driver allows for programmable drive current settings.
- Electrical components are stategically located in the driver gear compartment with a molded silicon grommet seal to provide separation from the optical chamber.
- Maximum lightning surge current 20KA with thermally protected varistor technology. Surge suppression is series circuited preventing total fixture failure. ANSI/IEEE C62.41 Category C High.
- Open circuit fault will turn off the luminaire in order to protect the sensitive electronics and acts as a signal for maintenance.
- Programmable Driver is rated for -40°C starting.
- "Thermal Shield", primary side, thermister provides protection for the sustainable life of electronic components.

Dimming:

- Dimming range from 100% to 10% through the use of the standard 0-10V interface on the programmable driver.
- Modular wiring harness in the service area provides user access to the dimming circuitry.
- Dimming circuitry compatible with 0-10V, user-defined control devices.
- Optional factory programmed dimming profile.



Fusing:

SF for 120, 277, and 347 Line volts

DF for 208, 240, and 480 Line volts

Hight temperature fuse holders factory installed inside the fixture housing.

Fuse is included.

Finish:

Fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat.

Standard colors include (BLS) Black Gloss Smooth, (BLT) Black Matte Textured, (DBS) Dark Bronze Smooth, (GTT) Graphite Matte Textured, (LGS) Light Gray Smooth, (PSS) Platinum Silver Smooth, (VGS) Verde Green Smooth, (WHS) White Gloss Smooth, and (CC) Custom Color (Include RAL#).

Certifications and Listings:

- IUL 1598 Standard for Luminaires.
- IUL 8750 Standard for Safety for Light
- IEmitting Diode (LED) Equipment for use in Lighting Products.
- ICSA C22.2#250.0 Luminaires.
- ANSI C136.31-2010 Vibration tested and compliant 1.5G and 4G reference page 9
- IRoHS compliant.
- IIP66 rated.
- IIEC 66262 Mechanical Impact Code IK09.
- IDA approved, 3000K and warmer CCTs only.

CAUTION:

Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

WARRANTY:

For full warranty see: http://www.hubbelllighting.com/resources/warranty

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CONTROLS

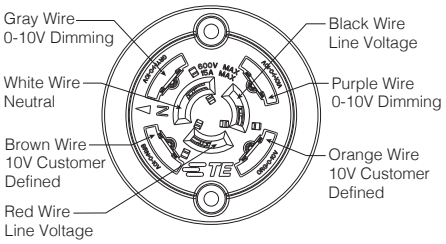
Photocell Receptacle

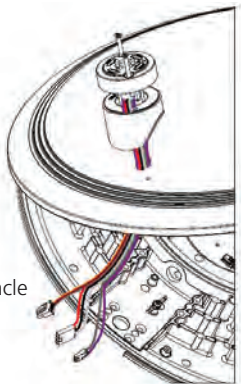
7PR

Fully gasketed and wired 7-pin receptacle option. Easy access location above the electrical compartment. 7-pin construction allows for a user-defined interface and provides a controlled definition of operational performance. ANSI twist-lock control module by-others.

Standard customer operation modes:

1. Traditional on/off photoelectric control.
2. 5-pin wireless photoelectric control for added dimming feature.
3. 7-pin wireless photoelectric control for dimming and additional I/O connections for customer use.





7-Pin receptacle placement

Wireless Controls

wiSCAPE™

Hubbell Control Solution's wiSCAPE™ wireless control modules allow an individual fixture to managed, monitored and measured. The modules communicate securely over a robust certified meshed radio signal. The wiSCAPE modules provide on/off/dim control, external device input, alerts and metering.

WIR-RME-L

wiSCAPE External Module,120-480V, 1000ft range (LOS), Internal Photocell, 1 Digital Input, Compatible with the A-25-7H option

SiteSync™[1]

SiteSync™ wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit www.hubbelllighting.com/products/sitesync for more details.

Dimming WASP Occupancy Sensor

WSP

The Dimming WASP Outdoor Occupancy Sensor is specifically designed to provide 0-10VDC output for the control of dimmable fixtures. Easy to use dipswitches allow the user to adjust sensor time delay and sensitivity as well as set unoccupied and occupied dimming levels. Sensors also feature a daylight sensor for ON/OFF control of fixtures when there is sufficient natural light. Visit https://hubbellcdn.com/installationmanuals/2102B_Dimming_WASP_Install.pdf for more details.

Pole Mounted

Round Pole-Mounted Occupancy Sensor up to 16'. Select voltage and finish color.

SCL-R

Round Pole-Mounted Occupancy Sensor up to 16' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for round pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.

Ordering Example: SCL-R44/277[2]/BL[3]

Square Pole-Mounted Occupancy Sensor up to 16'. Select voltage and finish color.

SCL-S

Square Pole-Mounted Occupancy Sensor up to 16' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for square pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.

Ordering Example: SCL-L/277[2]/BL[3]

Round Pole-Mounted Occupancy Sensor 16' to 30'. Select voltage and finish color.

SCH-R

Round Pole-Mounted Occupancy Sensor: 16' to 30' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for round pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.

Ordering Example: SCH-R4[4]/277[2]/BL[3]

Square Pole-Mounted Occupancy Sensor 16' to 30'. Select voltage and finish color.

SCH-S

Square Pole-Mounted Occupancy Sensor: 16 to 30' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for round pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.

Ordering Example: SCH-S/277[2]/BL[3]

AstroDIM

AstroDIM provides multi-stage night-time power reduction based on an internal timer referenced to the power on/off time. There is no need for an external control infrastructure. The unit automatically performs a dimming profile based on the predefined scheduled reference to the midpoint, which is calculated based on the power on/off times.

[1]PRECOMMISSIONED SITESYNC ORDERING INFORMATION: When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project location, Group information, and Operating schedules. For more detailed information please visit www.HubbellLighting.com/products/sitesync or contact Hubbell Lighting tech support at (800) 345-4928.

SiteSync fixtures with occupancy sensor (SWPM) require the mounting height of the fixture for selection of the lens.

Examples:

SiteSync only : UR20/56L-75/3K7/UNV/ASQ/BL/SWP

SiteSync with Motion Control: UR20/56L-75/3K7/UNV/ASQ/BL/SWPM-40F

[2]Voltage, [3]Color, [4]Pole Diameter,

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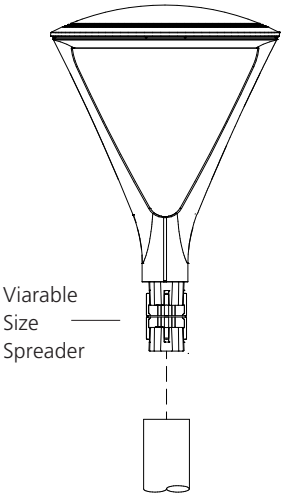
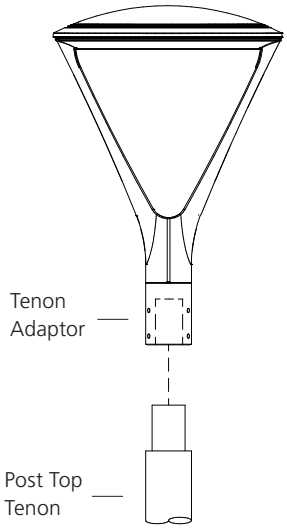
MOUNTING INSTALLATION

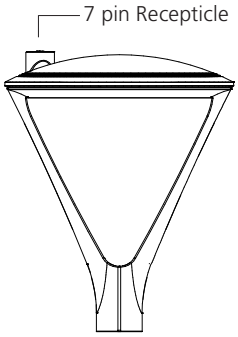


Flush Mount
FM33/44

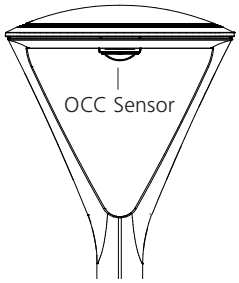


Post Top
PT23/24/34

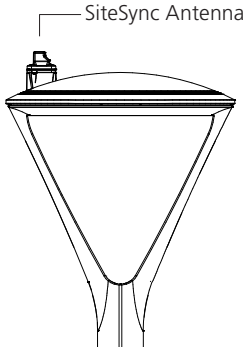
SENSOR PLACEMENT



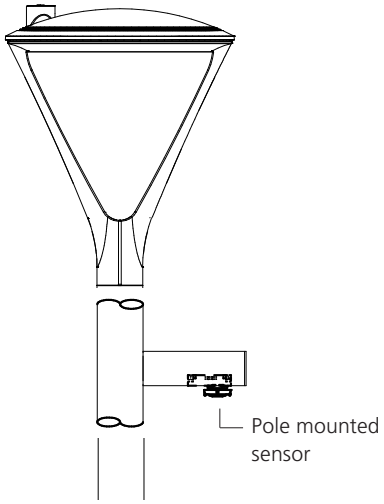
7 pin PCR
7PR



OCC Sensor
NX or WSP



SiteSync
SW7PR



Pole Mounted Sensor
SCL-R, SCL-S, SCH-R,
SCH-S

MOUNTING VIBRATION RATINGS

UR 20 Arm		UR28 Arm		UR 20 Post Top		UR 28 Post Top	
Ordering Code	Rating	Ordering Code	Rating	Ordering Code	Rating	Ordering Code	Rating
ASQ	4G	**ASQ**	4G	**FM33**	4G	**FM44**	1.5G
A34	4G	**A34**	4G	**FM44**	1.5G	**FM45**	1.5G
A46	4G	**A46**	4G	**PT23**	4G	**PT24**	1.5G
MAF	4G	**MAF**	4G	**PT24**	4G	**PT34**	1.5G
				PT34	1.5G	**PT25**	1.5G
						PT35	1.5G

For the 4 G test, ANSI C136.31-2010 Vibration is tested to comply with Vibration Test Level 1 Normal Applications, Vibration Test Level 2 Bridge/Overpass Applications, and Vibration Test Level 3

For the 1.5G test, ANSI C136.31-2010 Vibration is tested to comply with Vibration Level 1 Bridge/Overpass Applications

Kim Lighting reserves the right to change specifications without notice.

KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

UR20

ARCHITECTURAL AREA/SITE

Ouro™

FEATURES

- 20" size in post top, pole and wall mount
- High performance optics up to 17,000 delivered lumens
- Elegant form factor
- Diffusion lens option
- SiteSync™ wireless control options
- UL/cUL listed for wet locations, IP65 and 3G vibration rated

c UL us LISTED

ida DARK SKY APPROVED 2016

3000K and warmer CCTs only

DLC DLC PREMIUM LISTED

IK10 IP66

Ouro Arm Mount

CONTROL TECHNOLOGY

Bluetooth® DMX

RELATED PRODUCTS

- Ouro Small Post Top
- Ouro Large Post Top
- Ouro Large Arm Mount

SPECIFICATIONS

CONSTRUCTION

- Low copper aluminum alloy die-casting is designed as one-piece with internal cooling fins.
- Solid, cast aluminum wall creates a thermal barrier between the optical and electrical compartments.
- Molded silicone gasket throughout insures the sealing between the two compartments and provides ingress protection.
- Housing is designed with integral LED heat sink utilized for thermal transfer and for securing the location of each LED module.
- IK09 rated enclosure protects electrical equipment against external mechanical impacts.
- All external fasteners are stainless steel.
- One-piece low copper aluminum alloy die-cast lens frame is secured to housing with 6 screws.

OPTICS

- LEDs mount to a metal printed circuit board assembly (MCPCB).
- Optical lenses are clear injection molded PMMA acrylic.
- Optional Backlight Control on each LED module to completely control unwanted backlight.

INSTALLATION

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

ELECTRICAL

- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories listed.
- High voltage configurations, 347/480. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories listed.
- "Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components
- Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments.
- Luminaire shall be capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C.
- Surge protection: 10,000k in parallel, 20,000k in series
- Wiring: No. 18AWM rated 105°C, wet rating.

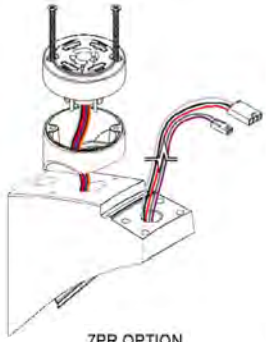
CONTROLS

7PR

- Fully gasketed and wired 7-pin receptacle option. Easy access location above the electrical compartment. 7-pin construction allows for a user-defined interface and provides a controlled definition of operational performance. ANSI twist-lock control module by-others.

Standard customer operation modes:

- Traditional on/off photoelectric control.
- 5-pin wireless photoelectric control for added dimming feature.
- 7-pin wireless photoelectric control for for dimming and additional I/O connections for customer use.



7PR OPTION

(Specifications continued on page 3)

KEY DATA	
Lumen Range	2888 - 17080
Wattage Range	25 - 150
Efficacy Range (LPW)	100 -136
Reported Life (Hours)	L70/>60,000
Weight	32 lbs - 14.5 Kg
EPA	0.372

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HUBBELL® HUBBELL Lighting

KIM LIGHTING

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

UR20

ARCHITECTURAL AREA/SITE

ORDERING GUIDE

Example: UR20-24L-25-3K8-3-L-UNV-ASQ-BLT-7PR-BC-SWTAB

CATALOG #

HOUSING

UR20

Model	LED Engine	CCT	Distribution	Rotation	Voltage
UR20 Ouro	**No Lens or Clear Lens** **24L-25** 3,000 lm **24L-65** 7,000 lm **56L-75** 10,000 lm **56L-110** 15,000 lm **56L-140** 17,000 lm **HDL - High Diffusion Lens** **28L-30** 3,000 lm **28L-70** 7,000 lm **68L-80** 9,000 lm **68L-115** 13,000 lm **68L-150** 15,000 lm	**AM** Amber, 590nm peak **3K7** 3000K, 70 CRI **3K8** 3000K, 80 CRI **3K9** 3000K, 90 CRI **4K7** 4000K, 70 CRI **4K8** 4000K, 80 CRI **5K7** 5000K, 70 CRI	**No Lens or Clear Lens** **FR** Type 1/Front Row **2** Type II **3** Type III **4** Type IV **4W** Type IV Wide **5QM** Type V Square Medium **5QN** Type V Square Narrow **5R** Type V Rectangular **5W** Type V Wide (Round) **HDL - High Diffusion Lens** **3** Type III/Asymmetric **5W** Type V/Symmetric	Blank for no rotation **L** [1] Optic rotation left **R** [1] Optic rotation right	**UNV** 120-277V **347** 347V **480** 480V **DALI** 120-277V† †Consult factory

Mounting	Fixture Finish	Control Options	Options	Control Accessories
ASQ Arm Square pole **A34** Arm mt 3.3-4.2" OD pole **A46** Arm mt 4.5-6.0" OD pole **MAF** Horizontal Slip Fitter 2 3/8" OD arm **SVSF** Square Vertical Slipfitter for 2"Tenon (2-3/8"OD) **VSF** Round Vertical Slipfitter for 2"Tenon (2-3/8"OD) **WB** Wall Bracket	**BLS** Black Smooth **BLT** Black Textured **DBS** Dark Bronze Smooth **GTT** Graphite Textured **LGS** Light Gray Smooth **PSS** Platinum Silver Smooth **VGS** Verde Green Smooth **WHS** White Smooth **CC** Custom Color* *Consult factory	**7PR-TL** 7 pin PCR with twist lock photocontrol **7PR-SC** 7 pin PCR with shorting cap **7PR** 7 pin PCR, wireless control enabled **AD-01** [2] AstroDIM: 50% output at midnight **AD-02** [2] AstroDIM: 50% output midnight to 4 AM **AD-03** [2] AstroDIM: 50% output 10PM **AD-04** [2] AstroDIM: 50% output 10PM to 4AM **NXWE** NX Wireless Enabled **SWP** [2,3,4] SiteSync Pre commission **SWPM-40F** [2,3,4,5] SiteSync with Sensor 9' to 40' MH **WSP-40F-1** [2,5] Dimming Occ. Sensor for up to 40' MH, 120/277/347V **WSP-40F-2** [2,5] Dimming Occ. Sensor for up to 40' MH, 208/240V **WSP-40F-3** [2,5] Dimming Occ. Sensor for up to 40' MH, 480V **NXSPW14F** [2,5] NX Wireless, PIR Sensor, 14' **NXSPW30F** [2,5] NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30'. **NXSP14F** [2,5] NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14' **NXSP30F** [2,5] NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30'	**BC** [6] Back-light Control **SF** Single Fuse **DF** Double Fuse **TB** Terminal Block **CLR** [6] Clear Lens **TL** Tamper proof latch	**SW7PR** [2,3] SiteSync with 7 pin PCR **SWUSB** SiteSync Software on USB **SWTAB** SiteSync Windows® Tablet **SWBRG** SiteSync Wireless Bridge Node **WIR-RME-L** wiSCAPE External Fixture Module **SCH-R** Occ. Sensor for Round Pole **SCH-S** Occ. Sensor for Square Pole **NXOFM-1R1D-UNV** NX 7-pin Module

Microsoft, Encarta, MSN, and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

1 Not available with 5QM, 5QN, and 5W distributions.
2 Not available with other sensor or wireless control options.
3 Specify group and zone at time of order. See www.hubbelllighting.com/sitesync for more details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node.
4 Not available with 347V and 480V
5 24L & 56L only.
6 Not available with Type V distributions or HDL option.

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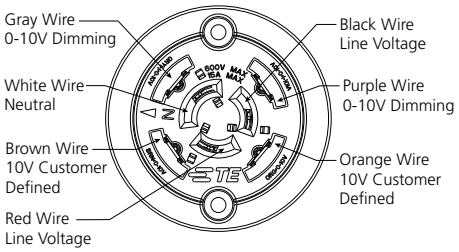
HUBBELL Lighting

SPECIFICATIONS (CONTINUED)

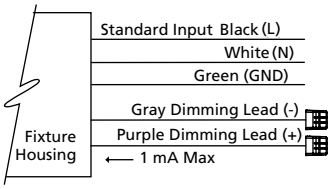
CONTROLS (CONTINUED)

Photocell receptacle wiring diagram



DIMMING:

- Dimming range from 100% to 10% through the use of the standard 0-10V interface on the programmable driver.
- Modular wiring harness in the service area provides user access to the dimming circuitry.
- Dimming circuitry compatible with 0-10V, user-defined control devices.
- Optional factory programmed dimming profile.



WIRELESS CONTROLS
WISCAPE™

- Hubbell Control Solution's wiSCAPE™ wireless control modules allow an individual fixture to managed, monitored and measured. The modules communicate securely over a robust certified meshed radio signal. The wiSCAPE modules provide on/off/dim control, external device input, alerts and metering.

WIR-RME-L

- wiSCAPE External Module,120-480V, 1000ft range (LOS), Internal Photocell, 1 Digital Input, Compatible with the A-25-7H option

SITESYNC™[1]

- SiteSync™ wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit www.hubbelllighting.com/products/sitesync for more details.

NX DISTRIBUTED INTELIGENCE™

- Hubbell Control Solutions' NX Distributed Intelligence™ lighting control platform utilizes a Distributed Network Architecture (DNA) that connects intelligent devices including luminaires, controllers, panels, occupancy sensors, photocells, wall switches and dimmers, creating a system with an unmatched level of reliability, scalability and simplicity

POLE MOUNTED

Round Pole-Mounted Occupancy
Sensor up to 16'. Select voltage and finish color.

SCL-R

- Round Pole-Mounted Occupancy Sensor up to 16' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for round pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.
- Ordering Example: SCL-R44/277[2]/BL[3]

SQUARE POLE-MOUNTED OCCUPANCY

Sensor up to 16'. Select voltage and finish color.

SCL-S

- Square Pole-Mounted Occupancy Sensor up to 16' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for square pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.
- Ordering Example: SCL-L/277[2]/BL[3]

ROUND POLE-MOUNTED OCCUPANCY

Sensor 16' to 30'. Select voltage and finish color.

SCH-R

Round Pole-Mounted Occupancy Sensor: 16' to 30' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for round pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.

- Ordering Example: SCH-R4[4]/277[2]/BL[3]

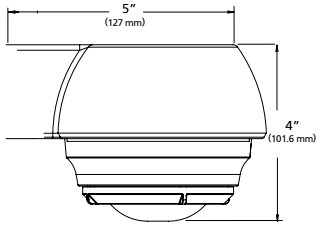
SQUARE POLE-MOUNTED OCCUPANCY

Sensor 16' to 30'. Select voltage and finish color.

SCH-S

Square Pole-Mounted Occupancy Sensor: 16 to 30' - an outdoor occupancy sensor with 0-10V interface dimming control that mounts directly to the pole. Wide 360° pattern. Module colors are available in Black, Gray, and White. Module is cut for round pole mounting. Pole diameter is needed upon order. Poles to be drilled in the field will be provided with installation instructions.

- Ordering Example: SCH-S/277[2]/BL[3]



ASTRODIM

- AstroDIM provides multi-stage night-time power reduction based on an internal timer referenced to the power on/off time. There is no need for an external control infrastructure. The unit automatically performs a dimming profile based on the predefined scheduled reference to the midpoint, which is calculated based on the power on/off times.

OPTIONAL FUSING:

- SF for 120, 277, and 347 Line volts
- DF for 208, 240, and 480 Line volts

(Specifications continued on page 4)

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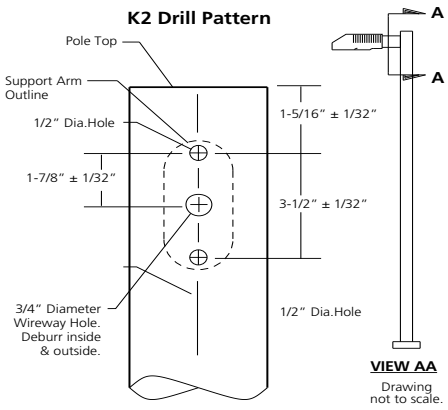
SPECIFICATIONS (CONTINUED)

MOUNTING
- Hight temperature fuse holders factory installed inside the fixture housing.
- Fuse is included.

SUPPORT ARM:
- Die-cast, low copper aluminum alloy, with splice access cover.
- Die-cast pole adaptor and an internal reinforcing plate are provided with a wire strain relief.
- The arm adapter is square or circular cut for specified pole size and shape.
- For field wire connections, a terminal block is mounted in the arm cavity and accessible behind the splice access cover. The block accepts #14 to #8 wire sizes and is factory prewired to the electrical module's quick-disconnect plug inside the electrical compartment.

OPTIONAL SLIP-FITTER:
- Internally accessible slip-fitter attaches to a 1-1/4" to 2-3/8" tenon and allows hands-free wiring and maintenance.

OPTIONAL WALL MOUNT:
- Optional, cast aluminum mounting plate attaches to a wall over a junction box and the speed mount is bolted to the cover plate. To complete the wiring, the luminaire assembly slides over the mounting plate.



CAUTION
- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury.

CERTIFICATIONS AND LISTINGS
- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40˚C ambient temperatures
- ANSI C136.31-2010 Vibration tested and compliant 1.5G and 4G reference page 5
- IEC 66262 Mechanical Impact Code IK10
- IDA approved, 3000K and warmer CCTs only.
- IP66 certified
- RoHS compliant

WARRANTY
- 5 year warranty
- See HLI Standard Warranty for additional information

†PRECOMMISSIONED SITESYNC ORDERING INFORMATION: When ordering a fixture with the SiteSync lighting control option, additional information will be required to complete the order. The SiteSync Commissioning Form or alternate schedule information must be completed. This form includes Project location, Group information, and Operating schedules. For more detailed information please visit www.HubbellLighting.com/products/sitesync or contact Hubbell Lighting tech support at (800) 345-4928

Examples:
PA7R/FT/NU3/12L-020-3K7/42A/TT/SWP/UNV/LR

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KIM LIGHTING

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

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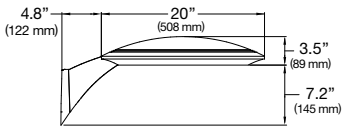
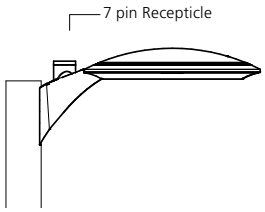
DIMENSIONS

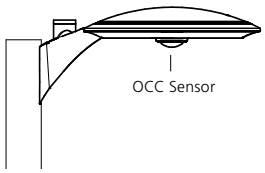


Weight: 32 lbs EPA: .372

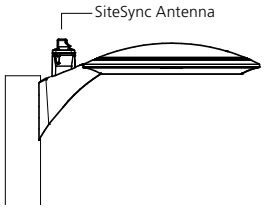
SENSOR PLACEMENT



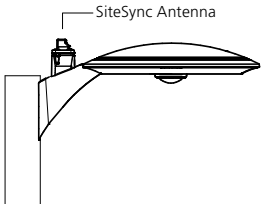
7 pin PCR
7PR



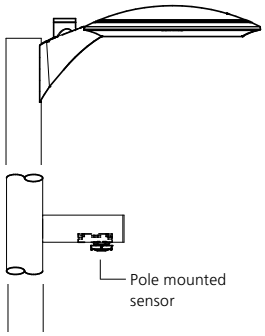
OCC Sensor
NX or WSP



SiteSync
SWP



SiteSync with sensor
SWPM-40F



Pole Mounted Sensor
SCL-R, SCL-S, SCH-R, SCH-S

MOUNTING VIBRATION RATINGS

UR 20 Arm		UR28 Arm		UR 20 Post Top		UR 28 Post Top	
Ordering Code	Rating	Ordering Code	Rating	Ordering Code	Rating	Ordering Code	Rating
ASQ	4G	ASQ	4G	FM33	4G	FM44	1.5G
A34	4G	A34	4G	FM44	1.5G	FM45	1.5G
A46	4G	A46	4G	PT23	4G	PT24	1.5G
MAF	4G	MAF	4G	PT24	4G	PT34	1.5G
				PT34	1.5G	PT25	1.5G
						PT35	1.5G

For the 4 G test, ANSI C136.31-2010 Vibration is tested to comply with Vibration Test Level 1 Normal Applications, Vibration Test Level 2 Bridge/Overpass Applications, and Vibration Test Level 3

For the 1.5G test, ANSI C136.31-2010 Vibration is tested to comply with Vibration Level 1 Bridge/Overpass Applications

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HUBBELL Lighting

DELIVERED LUMENS

LEDs #	Lumens Package	Drive Current	Nominal Watts	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
24L	3,000	298mA	25	No lens	FR	3258	0	0	0	128	3467	0	0	0	136	3443	0	0	0	135
					FR-BC	2141	0	0	0	84	2278	0	0	0	89	2263	0	0	0	89
					2	3107	1	0	1	122	3306	1	0	1	130	3284	1	0	1	129
					2-BC	1849	0	0	0	73	1967	0	0	0	77	1954	0	0	0	77
					3	3128	2	0	1	123	3329	2	0	1	131	3306	2	0	1	130
					3-BC	1870	0	0	1	73	1990	0	0	1	78	1977	0	0	1	78
					4	3118	0	0	1	122	3318	0	0	1	130	3295	0	0	1	129
					4-BC	2330	0	0	1	92	2479	0	0	1	97	2462	0	0	1	97
					4W	3242	1	0	1	127	3449	1	0	1	135	3426	1	0	1	135
					4W-BC	2011	0	0	1	79	2140	0	0	1	84	2125	0	0	1	83
					5QM	2999	2	0	0	118	3191	2	0	0	125	3169	2	0	0	124
					5QN	2888	2	0	0	113	3073	2	0	0	121	3052	2	0	0	120
					5R	3092	2	0	2	121	3291	2	0	2	129	3268	2	0	2	128
					5W	3059	2	0	1	120	3255	2	0	1	128	3233	2	0	1	127
				clear lens	FR	3083	0	0	0	121	3280	0	0	0	128	3258	0	0	0	128
					FR-BC	2026	0	0	0	79	2155	0	0	0	84	2141	0	0	0	84
					2	2940	1	0	1	115	3128	1	0	1	123	3107	1	0	1	122
					2-BC	1749	0	0	0	68	1861	0	0	0	73	1848	0	0	0	72
					3	2959	1	0	1	116	3149	1	0	1	123	3127	1	0	1	122
					3-BC	1732	0	0	1	68	1843	0	0	1	72	1830	0	0	1	72
					4	2950	0	0	1	116	3139	0	0	1	123	3117	0	0	1	122
					4-BC	1847	0	0	1	72	1966	0	0	1	77	1952	0	0	0	76
					4W	3067	1	0	1	120	3263	1	0	1	128	3241	1	0	1	127
					4W-BC	1903	0	0	1	75	2025	0	0	1	79	2011	0	0	1	79
					5QM	2837	2	0	0	111	3019	2	0	0	118	2998	2	0	0	117
					5QN	2732	2	0	0	107	2907	2	0	0	114	2887	2	0	0	113
					5R	2926	2	0	2	115	3113	2	0	2	122	3092	2	0	2	121
					5W	2894	2	0	1	113	3079	2	0	1	121	3058	2	0	1	120
28L		298mA	30	HDL lens	3	2880	1	0	1	99	3065	1	0	1	105	2971	1	0	1	102
					5W	2946	1	0	1	101	3134	1	0	1	107	3113	1	0	1	106

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DELIVERED LUMENS (CONTINUED)

LEDs #	Lumens Package	Drive Current	Nominal Watts	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
24L	7,000	800mA	65	No lens	FR	7507	1	0	1	115	7988	1	0	1	123	7933	1	0	1	122
					FR-BC	4717	0	0	0	73	5019	0	0	0	77	4985	0	0	0	77
					2	6938	1	0	2	107	7382	1	0	2	114	7332	1	0	2	113
					2-BC	4072	0	0	1	63	4334	0	0	1	67	4304	0	0	1	66
					3	6892	1	0	2	106	7333	1	0	2	113	7283	1	0	2	112
					3-BC	4121	0	0	1	63	4385	0	0	1	67	4355	0	0	1	67
					4	6927	1	0	2	107	7371	1	0	2	113	7320	1	0	2	113
					4-BC	5133	0	0	2	79	5461	0	0	2	84	5424	0	0	2	83
					4W	7055	1	0	2	109	7507	1	0	2	115	7456	1	0	2	115
					4W-BC	4431	0	0	2	68	4715	0	0	2	73	4682	0	0	2	72
					5QM	7188	3	0	1	111	7649	3	0	1	118	7597	3	0	1	117
					5QN	7465	3	0	0	115	7944	3	0	0	122	7889	3	0	0	121
					5R	7125	3	0	3	110	7582	3	0	3	117	7530	3	0	3	116
					5W	7048	3	0	2	108	7499	3	0	2	115	7448	3	0	2	115
				clear lens	FR	7149	1	0	1	108	7607	1	0	1	115	7555	1	0	1	114
					FR-BC	4492	0	0	0	68	4780	0	0	0	72	4747	0	0	0	72
					2	6607	1	0	2	100	7030	1	0	2	107	6982	1	0	2	106
					2-BC	3878	0	0	1	59	4127	0	0	1	63	4099	0	0	1	62
					3	6563	1	0	2	99	6984	1	0	2	106	6936	1	0	2	105
					3-BC	3841	0	0	1	59	4087	0	0	1	63	4059	0	0	1	62
					4	6597	1	0	2	100	7019	1	0	2	106	6971	1	0	2	106
					4-BC	4888	0	0	2	74	5201	0	0	2	79	5165	0	0	2	78
					4W	6719	1	0	2	102	7149	1	0	2	108	7100	1	0	2	108
					4W-BC	4219	0	0	2	64	4490	0	0	2	68	4459	0	0	2	68
					5QM	6846	3	0	1	104	7284	3	0	1	110	7235	3	0	1	110
					5QN	7109	3	0	0	108	7565	3	0	0	115	7513	3	0	0	114
					5R	6785	3	0	3	103	7220	3	0	3	109	7171	3	0	3	109
					5W	6711	3	0	1	102	7142	3	0	1	108	7093	3	0	1	107
28L		700mA	70	HDL lens	3	6481	2	0	2	98	6897	2	0	2	104	6685	2	0	2	96
					5W	6628	2	0	1	100	7053	2	0	1	107	6952	2	0	1	100

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DELIVERED LUMENS (CONTINUED)

LEDs #	Lumens Package	Drive Current	Nominal Watts	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
56L	10,000	420mA	75	No lens	FR	10354	1	0	1	138	11018	1	0	1	146	10942	1	0	1	145
					FR-BC	6506	0	0	1	87	6923	0	0	1	92	6875	0	0	1	92
					2	9569	2	0	2	127	10182	2	0	2	135	10112	2	0	2	134
					2-BC	5617	0	0	1	75	5977	0	0	1	80	5936	0	0	1	79
					3	9505	1	0	2	125	10114	1	0	2	134	10045	1	0	2	133
					3-BC	5683	0	0	2	76	6047	0	0	2	81	6006	0	0	2	79
					4	9554	1	0	2	127	10166	1	0	2	135	10078	1	0	2	134
					4-BC	7079	0	0	2	94	7533	0	0	2	100	7481	0	0	2	99
					4W	9731	1	0	2	129	10355	2	0	3	138	10284	2	0	3	137
					4W-BC	6111	0	0	2	81	6503	0	0	2	87	6458	0	0	2	86
					5QM	9915	3	0	1	132	10550	3	0	2	140	10478	3	0	2	139
					5QN	10296	3	0	1	137	10956	3	0	1	146	10881	3	0	1	145
					5R	9827	3	0	3	131	10457	3	0	3	139	10385	3	0	3	138
					5W	9720	4	0	2	129	10343	4	0	2	137	10272	4	0	2	137
				clear lens	FR	9860	1	0	1	130	10492	1	0	1	139	10420	1	0	1	138
					FR-BC	6196	0	0	0	83	6593	0	0	1	88	6547	0	0	1	87
					2	9112	1	0	2	120	9696	2	0	2	128	9630	2	0	2	127
					2-BC	5349	0	0	1	71	5692	0	0	1	76	5653	0	0	1	75
					3	9052	1	0	2	120	9632	1	0	2	127	9566	1	0	2	126
					3-BC	5297	0	0	2	71	5637	0	0	2	75	5598	0	0	2	74
					4	9098	1	0	2	120	9681	1	0	2	128	9615	1	0	2	127
					4-BC	6741	0	0	2	90	7174	0	0	2	96	7124	0	0	2	95
					4W	9267	1	0	2	122	9861	1	0	2	130	9793	1	0	2	129
					4W-BC	5820	0	0	2	78	6193	0	0	2	83	6150	0	0	2	82
					5QM	9442	3	0	1	125	10047	3	0	1	133	9978	3	0	1	132
					5QN	9805	3	0	1	130	10434	3	0	1	138	10362	3	0	1	137
					5R	9358	3	0	3	124	9958	3	0	3	132	9890	3	0	3	131
					5W	9257	4	0	2	122	9850	4	0	2	130	9782	4	0	2	129
68L		350mA	80	HDL lens	3	8418	2	0	2	107	8958	2	0	2	113	8896	2	0	2	113
					5W	8609	3	0	1	109	9160	3	0	1	116	9252	3	0	1	117

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DELIVERED LUMENS (CONTINUED)

LEDs #	Lumens Package	Drive Current	Nominal Watts	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
56L	15,000	600mA	110	No lens	FR	15041	1	0	2	139	16005	1	0	2	147	15895	1	0	2	146
					FR-BC	9451	0	0	1	87	10056	0	0	1	93	9987	0	0	1	92
					2	13900	2	0	2	128	14791	2	0	2	136	14689	2	0	2	135
					2-BC	8159	0	0	2	75	8682	0	0	2	80	8623	0	0	2	79
					3	13808	2	0	3	127	14692	2	0	3	135	14592	2	0	3	134
					3-BC	8256	1	0	2	75	8785	1	0	2	80	8725	1	0	2	79
					4	13878	1	0	3	128	14768	1	0	3	136	14667	1	0	3	135
					4-BC	10283	1	0	2	95	10942	1	0	3	101	10867	1	0	3	100
					4W	14135	2	0	3	130	15041	2	0	4	139	14938	2	0	3	138
					4W-BC	8877	0	0	2	82	9446	0	0	2	87	9381	0	0	2	86
					5QM	14402	4	0	2	133	15325	4	0	2	141	15220	4	0	2	140
					5QN	14957	4	0	1	138	15915	4	0	1	147	15806	4	0	1	146
					5R	14275	4	0	4	132	15190	4	0	4	140	15086	4	0	4	139
					5W	14120	4	0	2	130	15025	4	0	2	138	14922	4	0	2	138
				clear lens	FR	14230	1	0	1	132	15142	1	0	2	140	15038	1	0	2	139
					FR-BC	8941	0	0	1	83	9514	0	0	1	88	9449	0	0	1	87
					2	13151	2	0	2	122	13994	2	0	2	129	13898	2	0	2	129
					2-BC	7720	0	0	2	71	8215	0	0	2	76	8158	0	0	2	75
					3	13064	2	0	2	121	13901	2	0	2	129	13806	2	0	2	128
					3-BC	7645	1	0	2	69	8135	1	0	2	74	8079	1	0	2	73
					4	13131	1	0	3	121	13972	1	0	3	129	13876	1	0	3	128
					4-BC	9729	1	0	2	90	10353	1	0	2	94	10282	1	0	2	95
					4W	13374	2	0	3	124	14231	2	0	3	132	14134	2	0	3	131
					4W-BC	8399	0	0	2	78	8937	0	0	2	83	8876	0	0	2	82
					5QM	13626	3	0	2	126	14500	4	0	2	134	14400	4	0	2	133
					5QN	14151	4	0	1	131	15058	4	0	1	139	14955	4	0	1	138
					5R	13506	4	0	4	125	14372	4	0	4	133	14273	4	0	4	132
					5W	13359	4	0	2	124	14215	4	0	2	132	14118	4	0	2	131
68L		500mA	115	HDL lens	3	12410	3	0	2	109	13206	3	0	3	116	13115	3	0	3	116
					5W	12691	3	0	2	112	13505	3	0	2	119	13412	3	0	2	118

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ARCHITECTURAL AREA/SITE

DELIVERED LUMENS (CONTINUED)

LEDs #	Lumens Package	Drive Current	Nominal Watts	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
						Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
							B	U	G			B	U	G			B	U	G	
56L	17,000	750mA	140	No lens	FR	17031	2	0	2	124	18123	2	0	2	132	17999	2	0	2	131
					FR-BC	10701	0	0	1	78	11387	0	0	1	83	11309	0	0	1	82
					2	15740	2	0	2	114	16748	2	0	2	122	16634	2	0	2	121
					2-BC	9239	1	0	2	67	9831	1	0	2	71	9764	1	0	2	71
					3	15635	2	0	3	113	16637	2	0	3	121	16523	2	0	3	120
					3-BC	9348	1	0	2	67	9947	1	0	2	71	9879	1	0	2	71
					4	15715	1	0	3	114	16722	1	0	3	121	16608	1	0	3	121
					4-BC	11644	1	0	3	85	12391	1	0	3	90	12306	1	0	3	89
					4W	16006	2	0	4	116	17032	2	0	4	124	16915	2	0	4	123
					4W-BC	10052	1	0	2	73	10696	1	0	3	78	10623	1	0	3	77
					5QM	16309	4	0	2	118	17354	4	0	2	126	17235	4	0	2	125
					5QN	16936	4	0	1	123	18022	4	0	1	131	17898	4	0	1	130
					5R	16164	4	0	4	117	17200	4	0	4	125	17082	4	0	4	124
					5W	15989	4	0	2	116	17013	4	0	2	123	16897	4	0	2	123
				clear lens	FR	16162	1	0	2	116	17198	2	0	2	124	17080	2	0	2	123
					FR-BC	10155	0	0	1	73	10659	0	0	1	77	10732	0	0	1	77
					2	14936	2	0	2	108	15894	2	0	2	115	15785	2	0	2	114
					2-BC	8768	1	0	2	63	9330	1	0	2	67	9266	1	0	2	67
					3	14837	2	0	3	107	15788	2	0	3	114	15680	2	0	3	113
					3-BC	8683	1	0	2	62	9239	1	0	2	66	9176	1	0	2	66
					4	14913	1	0	3	107	15869	1	0	3	114	15760	1	0	3	114
					4-BC	11050	1	0	3	80	11758	1	0	3	85	11678	1	0	3	84
					4W	15189	2	0	4	109	16163	2	0	4	116	16052	2	0	4	116
					4W-BC	9539	0	0	2	69	10150	1	0	2	73	10081	1	0	2	73
					5QM	15476	4	0	2	112	16468	4	0	2	119	16355	4	0	2	118
					5QN	16072	4	0	1	116	17102	4	0	1	123	16985	4	0	1	122
					5R	15339	4	0	4	111	16323	4	0	4	118	16211	4	0	4	117
					5W	15173	4	0	2	109	16145	4	0	2	116	16035	4	0	2	116
68L		625mA	150	HDL lens	3	14192	3	0	3	96	14999	3	0	3	101	14896	3	0	3	101
					5W	14514	3	0	2	98	15338	3	0	2	104	15233	3	0	2	103

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ARCHITECTURAL AREA/SITE

PHOTOMETRY

UR20-56L-140-4K7-FR

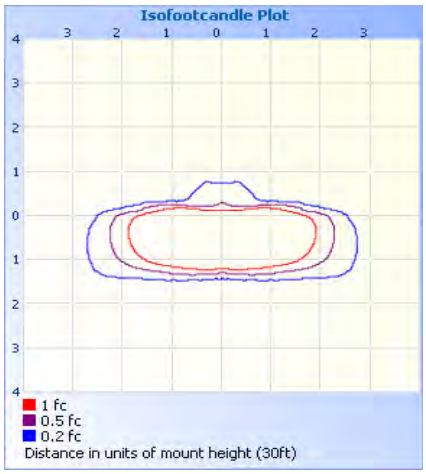
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**18123**
Watts	**140**
Efficacy	**129.5**
IES Type	**II**
BUG Rating	**B2-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	16164	89.2%
Downward House Side	1959	10.8%
Downward Total	18123	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	18123	100%

ISOFOOT CANDLE PLOT



UR20-56L-140-4K7-2

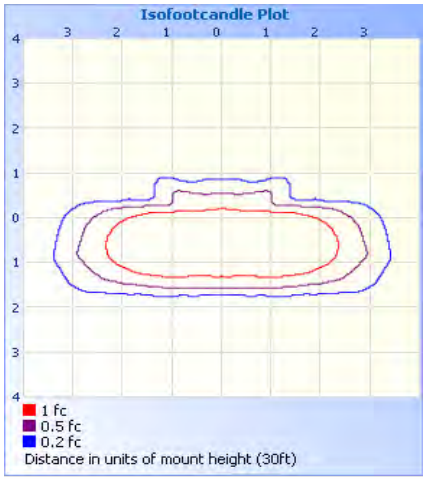
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**16748**
Watts	**140**
Efficacy	**119.6**
IES Type	**II**
BUG Rating	**B2-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	13888	82.9%
Downward House Side	2860	17.1%
Downward Total	16748	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	16748	100%

ISOFOOT CANDLE PLOT



UR20-56L-140-4K7-3

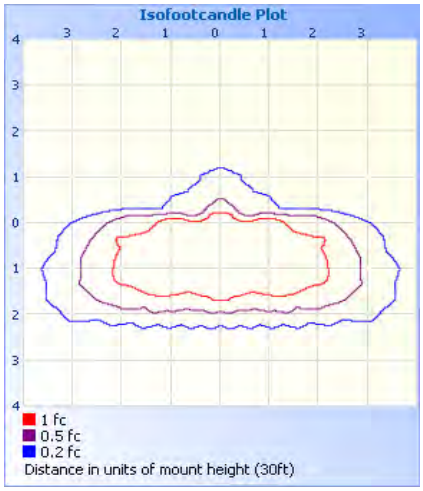
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**16637**
Watts	**140**
Efficacy	**118.8**
IES Type	**III**
BUG Rating	**B2-U0-G3**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	14461	86.9%
Downward House Side	2176	13.1%
Downward Total	16637	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	16637	100%

ISOFOOT CANDLE PLOT



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UR20

ARCHITECTURAL AREA/SITE

PHOTOMETRY

UR20-56L-140-4K7-4

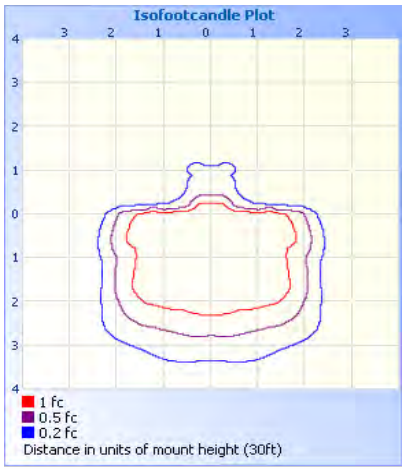
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**16722**
Watts	**140**
Efficacy	**119.4**
IES Type	**IV**
BUG Rating	**B1-U0-G3**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	15112	90.4%
Downward House Side	1610	9.6%
Downward Total	16722	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	16722	100%

ISOFOOT CANDLE PLOT



UR20-56L-140-4K7-4W

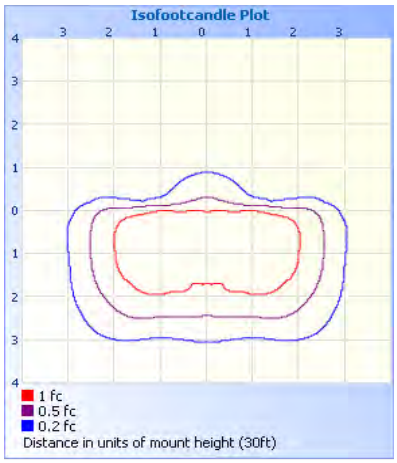
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17033**
Watts	**138**
Efficacy	**123.4**
IES Type	**IV**
BUG Rating	**B2-U0-G4**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	15040	88.3%
Downward House Side	1993	11.7%
Downward Total	17033	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17033	100%

ISOFOOT CANDLE PLOT



UR20-56L-140-4K7-5QM

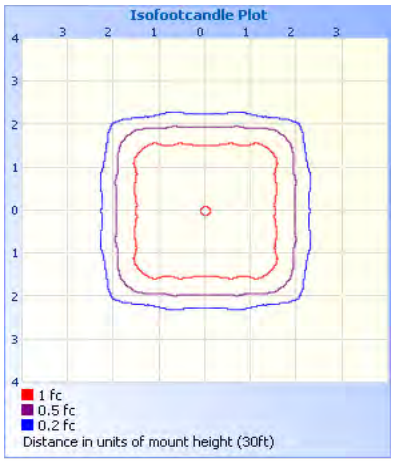
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17354**
Watts	**140**
Efficacy	**124.0**
IES Type	**VS**
BUG Rating	**B4-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8677	50.0%
Downward House Side	8677	50.0%
Downward Total	17354	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17354	100%

ISOFOOT CANDLE PLOT



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UR20

ARCHITECTURAL AREA/SITE

PHOTOMETRY

UR20-56L-140-4K7-5QN

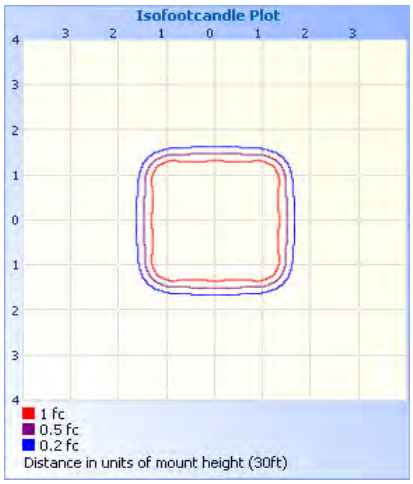
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**18023**
Watts	**140**
Efficacy	**128.7**
IES Type	**VS**
BUG Rating	**B4-U0-G1**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	9012	50.0%
Downward House Side	9012	50.0%
Downward Total	18023	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	18023	100%

ISOFOOT CANDLE PLOT



UR20-56L-140-4K7-5R

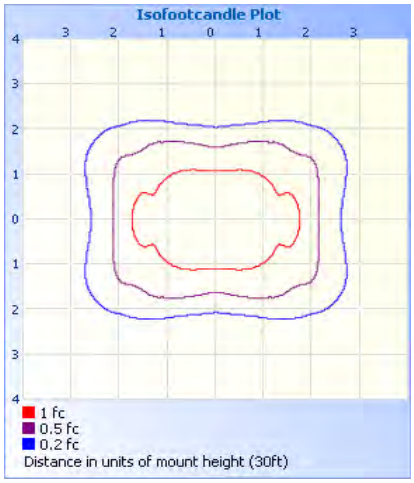
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17201**
Watts	**140**
Efficacy	**122.9**
IES Type	**III**
BUG Rating	**B4-U0-G4**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8601	50.0%
Downward House Side	8601	50.0%
Downward Total	17201	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17201	100%

ISOFOOT CANDLE PLOT



UR20-56L-140-4K7-5W

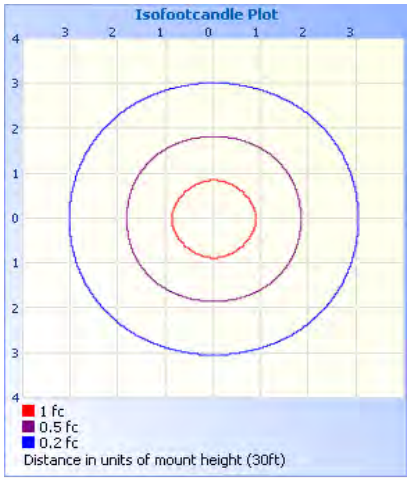
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17014**
Watts	**140**
Efficacy	**121.5**
IES Type	**III**
BUG Rating	**B4-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8507	50.0%
Downward House Side	8507	50.0%
Downward Total	17014	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17014	100%

ISOFOOT CANDLE PLOT



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KIM LIGHTING

DATE: LOCATION:

TYPE: PROJECT:

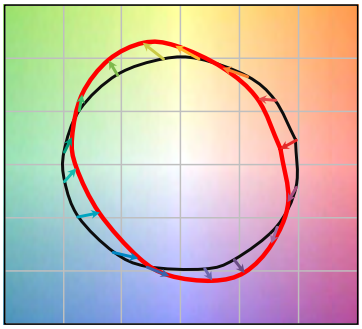
CATALOG #:

UR20

ARCHITECTURAL AREA/SITE

TM-30 DATA

COLOR VECTOR GRAPHIC

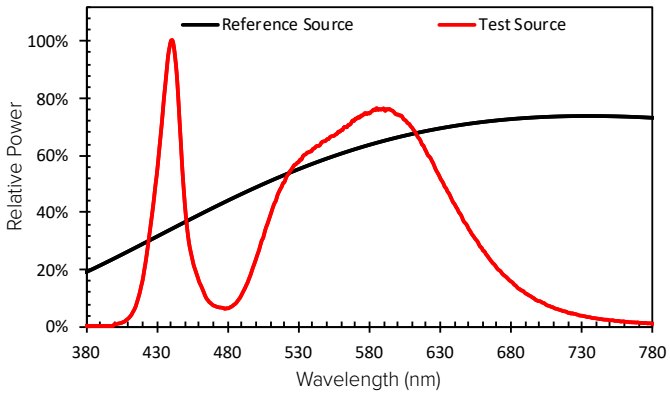


Reference Illuminant — Test Source

TEST SOURCE

R_f	68
R_g	99
CCT(K)	3947
D_{UV}	0.0004
x	0.3831
y	0.3793
CIE R_a	72

SPECTRAL POWER DISTRIBUTION COMPARISON



ELECTRICAL DATA

Drive Current	LED Count	System Watts	Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming				
			VAC	Hz	120	208	240	277	347	480			Dimming Range	Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
														Min	Max	Min	Max
298mA	24	25	120-480	50/60	0.21	0.12	0.10	0.09	0.07	0.05	>0.9	20	10% to 100%	0mA	1mA	0V	10V
298mA	28	30			0.25	0.14	0.13	0.11	0.09	0.06							
800mA	24	65			0.54	0.31	0.27	0.23	0.19	0.14							
700mA	28	70			0.58	0.34	0.29	0.25	0.20	0.15							
420mA	56	75			0.63	0.36	0.31	0.27	0.22	0.16							
350mA	68	80			0.67	0.38	0.33	0.29	0.23	0.17							
600mA	56	110			0.92	0.53	0.46	0.40	0.32	0.23							
500mA	68	115			0.96	0.55	0.48	0.42	0.33	0.24							
750mA	56	140			1.17	0.67	0.58	0.51	0.40	0.29							
625mA	68	150			1.25	0.72	0.63	0.54	0.43	0.31							

TM-21 Lifetime Calculation - Projected Lumen Maintenance (25°C / 77°C)						
Ambient Temp.	0	25,000	36,000	50,000	100,000	Reported L70
25°C / 77°F	100%	97%	95%	93%	87%	60khrs

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KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

ALT1

ARCHITECTURAL AREA/SITE

Altitude®

FEATURES

- Elegant form factor
- High performance optics up to 17,500 delivered lumens
- Diffusion lens for low glare comfort
- NX™ wireless control options

Altitude

c UL us LISTED

3000K and warmer CCTs only

CONTROL TECHNOLOGY

NX DISTRIBUTED INTELLIGENCE

RELATED PRODUCTS

Ouro Pavilion PGL8

SPECIFICATIONS

CONSTRUCTION

- One piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 with vents and .100" minimum wall thickness
- Separate internal driver compartment rated for IP66 ingress protection
- Finish: fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) polyester powdercoat
- Standard colors include (BLS) Black Gloss Smooth, (BLT) Black Matte Textured, (DBS) Dark Bronze Gloss Smooth, (GTT) Graphite Matte Textured, (LGS) Light Gray Gloss Smooth, (PSS) Platinum Silver Smooth, (VGS) Verde Green Smooth, (WH) White, and (CC) Custom Color (Include RAL#)
- Lens is impact resistant 1/8" tempered glass with anti-reflective coating
- Lens has a one-piece extruded vulcanized silicone gasket
- Lens frame one piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 and .100" minimum wall thickness
- Lens frame has a one-piece O-ring extruded vulcanized silicone gasket
- Mid-frame one piece die-cast, low copper (<0.6% Cu) Aluminum Alloy 360 and .100" minimum wall thickness
- Mid-frame secures to Lens Frame and housing by stainless steel recessed Allen-head screws
- Silicone gaskets throughout
- All external fasteners are stainless steel

OPTICS

- LEDs mount to a metal printed circuit board assembly (MCPCB)
- Optical lenses are clear injection molded PMMA acrylic

INSTALLATION

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury

ELECTRICAL

- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories recognized
- High voltage configurations, 347/480. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories recognized
- "Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components
- Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments
- Luminaire shall be capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C

ELECTRICAL (CONTINUED)

- Dimming range from 10% to 100% through the use of standard 0-10V interface on the programmable driver
- Modular wiring harness in the service area provides user access to the dimming circuitry
- Optional factory programmed dimming profile
- Surge protection: 10,000k in parallel, 20,000k in series
- SF for 120, 277, 347 Line volts
  DF for 208, 240, 480 Line volts
- Wiring: No. 18AWM rated 105°C, wet rating.

CERTIFICATIONS AND LISTINGS

- UL 1598 Standard for Luminaires
- IP66 certified
- RoHS compliant

WARRANTY

- 5 year warranty
- See HLI Standard Warranty for additional information

KEY DATA	
Lumen Range	1,673–18,452
Wattage Range	22–156
Efficacy Range (LPW)	56–137
Reported Life (Hours)	L70/60,000
Weight	21.5 lbs 9.75 kg
EPS Front View / Side View	.37 / .64

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KIM LIGHTING®

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

ALT1

ARCHITECTURAL AREA/SITE

ORDERING GUIDE

Example: ALT1-54L-120-3K8-3-UNV-A34-GT-NXSPW30F-CLR

CATALOG #

HOUSING

ALT1

Housing		LED Engine		CCT/CRI		Distribution		Rotation		Voltage	
ALT1	Architectural Area/Site	**28L-20**	20W, 3,000 lm	**AM**	Amber[9]	**FR**	Type I/Front Row		Blank for no rotation	**UNV**	Universal 120–277V
		28L-40	40W, 5,000 lm	**3K7**	3000K, 70 CRI	**2**	Type II	**L**	Optic rotation left[1]	**347**	347V
		28L-60	60W, 7,500 lm	**3K8**	3000K, 80 CRI	**3**	Type III	**R**	Optic rotation right[1]	**480**	480V
		28L-85	85W, 10,000 lm	**3K9**	3000K, 90 CRI	**4**	Type IV				
		54L-95	95W, 12,500 lm	**4K7**	4000K, 70 CRI	**4W**	Type IV Wide				
		54L-120	120W, 15,000 lm	**4K8**	4000K, 80 CRI	**5QM**	Type V Square Medium				
		54L-155	155W, 17,500 lm	**5K7**	5000K, 70 CRI	**5QN**	Type V Square Narrow				
				5K8	5000K, 80 CRI	**5R**	Type V Rectangular				
						5W	Type V Wide (Round)				

Mounting		Fixture Finish		Control Options		Options		Control Accessories	
ASQ	Arm Square pole	**BL**	Black	**7PR**	7 pin PCR, wireless control enabled	**BC**	Backlight Control[6]	**SCPREMOTE**	Remote control for SCP option. Order at least one per project to program and control the occupancy sensor
A34	Arm mt 3.3–4.2" OD pole	**DB**	Dark Bronze	**7PR-TL**	7 pin PCR with twist lock photocontrol	**SF**	Single Fuse	**SW7PR**	SiteSync™ on fixture module via 7PR
A46	Arm mt 4.5–6.0" OD pole	**GT**	Graphite	**7PR-SC**	7 pin PCR with shorting cap	**DF**	Double Fuse	**SWUSB**	SiteSync™ Software on USB
MAF	Horizontal Slipfitter 2.375" OD arm	**LG**	Light Grey	**AD-012**	AstroDIM: 50% output at midnight[10]	**TB**	Terminal Block	**SWTAB**	SiteSync™ Windows Tablet[8]
SVSF	Vertical Slipfitter Mount square for 2" pipe tenon, (2.375" OD)	**PS**	Platinum Silver	**AD-022**	AstroDIM: 50% output midnight to 4 AM[10]	**CLR**	Clear Lens	**SWBRG**	SiteSync™ Wireless Bridge Node
VSF	Vertical Slipfitter Mount for 2" pipe tenon, (2.375" OD)	**TT**	Titanium	**AD-032**	AstroDIM: 50% output 10PM[10]	**HDL**	Diffuse Lens[7]	**SWFC**	SiteSync™ Field Commission Service
WB	Wall Bracket for area wall mount	**WH**	White	**AD-042**	AstroDIM: 50% output 10PM to 4AM[10]			**WIR-RME-L**	wiSCAPE™ External Fixture Module
		CC	Custom Color[2]	**NXSP14F**	Wired NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14' [3,4]			**NXOFM-1R1D-UNV**	NX External Contol Node
				NXSP30F	Wired NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30' [3,4]				
				NXSPW14F	NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14' [3,4]				
				NXSPW30F	NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 30' [3,4]				
				NXWE	NX Wireless Enabled				
				SCL-8F	Low voltage sensor for 3rd party wireless controls via 7PR. For mounting heights up to 8'				
				SCL-40F	Low voltage sensor for 3rd party wireless controls via 7PR. For mounting heights 9' to 40'				
				SCP-8F	Remote control programable line voltage sensor, use with SCPREMOTE				
				SCP-40F	Remote control programable line voltage sensor, use with SCPREMOTE				
				SWP	Site Sync™ Pre Commission Wireless Module[3,4,5]				
				SWPM-40F	Site Sync with Sensor 9' to 40' MH[3,4,5]				

Notes:

1 Not available with 5QM and 5W distributions

2 Consult factory

3 Not available with other sensor or wireless control options

4 Not available in 480V

5 Specify group and zone at time of order, See www.hubbelllighting.com/sitesync for more details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node

6 Not available with Type 5 distributions, CLR, or HDL option

7 Only available in Type 3 or Type 5W

8 Microsoft, Encarta, MSN, and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries

9 Wildlife friendly

10 Not available for 28L-20 engine and sensor options

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DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

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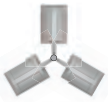
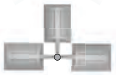
PRODUCT EXCEPTIONS & DETAILS

Configuration			EPA
	1SA	1 Arm Side Mount	0.98
	2SB	2 Arm Side Mount	1.48
	2SL	2 Arm Side Mount	1.96
	3ST	3 Arm Side Mount	2.20

Configuration			EPA
	3SY*	3 Arm Side Mount	2.46
	4SC	4 Arm Side Mount	2.46
	1W	Single Wall Mount	n/a
	HSF	Horizontal Slipfitter	n/a

DELIVERED LUMENS

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
28L	20	3,000	No Lens	FR	3110	0	0	0	141	3274	0	0	0	149	3318	1	0	0	148
				FR-BC	2036	0	0	0	93	2143	0	0	0	97	2172	0	0	0	97
				2	2903	1	0	1	132	3056	1	0	1	139	3097	1	0	1	138
				2-BC	1771	0	0	0	80	1864	0	0	0	85	1889	0	0	0	84
				3	2945	1	0	1	131	3100	1	0	1	138	3141	1	0	1	140
				3-BC	1779	0	0	1	81	1873	0	0	1	85	1898	0	0	1	85
				4	2943	0	0	1	134	3098	0	0	1	141	3139	0	0	1	141
				4-BC	2189	0	0	1	100	2304	0	0	1	105	2335	0	0	1	104
				4W	2927	1	0	1	133	3081	1	0	1	140	3122	1	0	1	139
				4W-BC	1673	0	0	1	76	1761	0	0	1	80	1785	0	0	1	80
				5R	3025	2	0	2	137	3184	2	0	2	145	3227	2	0	2	144
				5QM	3069	2	0	0	139	3230	2	0	0	147	3273	2	0	0	146
				5QN	3051	2	0	0	139	3211	2	0	0	146	3254	2	0	0	145
				5W	3024	2	0	1	137	3183	2	0	1	145	3226	2	0	1	144
			Clear Lens	FR	2909	0	0	0	132	3062	0	0	0	139	3103	0	0	0	141
				2	2715	1	0	1	123	2858	1	0	1	130	2896	1	0	1	132
				3	2754	1	0	1	125	2899	1	0	1	132	2938	1	0	1	134
				4	2752	0	0	1	125	2897	0	0	1	132	2936	0	0	1	133
				4W	2738	1	0	1	124	2882	1	0	1	131	2920	1	0	1	133
				5R	2829	2	0	2	129	2978	2	0	2	135	3018	2	0	2	137
				5QM	2870	2	0	0	130	3021	2	0	0	137	3062	2	0	0	139
				5QN	2853	2	0	0	130	3003	2	0	0	137	3044	2	0	0	138
				5W	2829	2	0	1	129	2977	2	0	1	135	3017	2	0	1	137
			HDL Lens	3	2341	1	0	1	106	2464	1	0	1	112	2497	1	0	1	114
				5W	2405	1	0	1	109	2531	1	0	1	115	2565	1	0	1	117

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DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
28L	40	5,000	No Lens	FR	4870	1	0	0	128	5127	1	0	0	135	5195	1	0	0	137
				FR-BC	3189	0	0	0	84	3356	0	0	0	88	3401	0	0	0	90
				2	4546	1	0	1	120	4785	1	0	1	126	4849	1	0	1	128
				2-BC	2773	0	0	1	73	2919	0	0	1	77	2958	0	0	1	78
				3	4611	1	0	2	121	4854	1	0	2	128	4919	1	0	2	129
				3-BC	2786	0	0	1	73	2933	0	0	1	77	2972	0	0	1	78
				4	4608	1	0	2	121	4851	1	0	2	128	4915	1	0	2	129
				4-BC	3428	0	0	1	90	3608	0	0	1	95	3656	0	0	1	96
				4W	4584	1	0	2	121	4825	1	0	2	127	4889	1	0	2	129
				4W-BC	2621	0	0	1	69	2758	0	0	1	73	2795	0	0	1	74
				5R	4737	2	0	2	125	4986	3	0	1	131	5053	3	0	3	133
				5QM	4806	2	0	1	126	5058	2	0	1	133	5126	2	0	1	135
				5QN	4777	2	0	0	126	5028	2	0	0	132	5096	2	0	0	134
				5W	4736	3	0	1	125	4985	2	0	2	131	5052	3	0	1	133
			Clear Lens	FR	4555	1	0	0	120	4795	1	0	0	126	4859	1	0	0	128
				2	4252	1	0	1	112	4476	1	0	1	118	4536	1	0	1	119
				3	4333	1	0	1	114	4561	1	0	1	120	4622	1	0	1	121
				4	4310	0	0	2	113	4537	1	0	2	119	4598	1	0	2	121
				4W	4287	1	0	2	113	4513	1	0	2	119	4573	1	0	2	120
				5R	4431	2	0	2	117	4663	2	0	2	123	4726	2	0	2	124
				5QM	4495	2	0	1	118	4731	2	0	1	125	4794	2	0	1	126
				5QN	4468	2	0	0	118	4703	2	0	0	124	4766	2	0	0	125
				5W	4430	3	0	1	117	4663	3	0	1	123	4725	3	0	1	124
			HDL Lens	3	3741	1	0	1	98	3937	1	0	1	104	3990	1	0	1	105
				5W	3891	2	0	1	102	4095	2	0	1	108	4150	2	0	1	109

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DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
28L	60	7,500	No Lens	FR	7347	1	0	1	122	7733	1	0	1	129	7837	1	0	1	131
				FR-BC	4810	0	0	0	80	5063	0	0	0	84	5131	0	0	0	86
				2	6858	1	0	2	114	7218	1	0	2	120	7315	1	0	2	122
				2-BC	4183	0	0	1	70	4403	0	0	1	73	4462	0	0	1	74
				3	6956	1	0	2	116	7322	1	0	2	122	7420	1	0	2	123
				3-BC	4203	0	0	1	70	4424	0	0	1	74	4483	0	0	1	75
				4	6951	1	0	2	116	7317	1	0	2	122	7415	1	0	2	124
				4-BC	5171	0	0	2	86	5443	0	0	2	91	5516	0	0	2	92
				4W	6915	1	0	2	115	7278	1	0	2	121	7376	1	0	2	123
				4W-BC	3953	0	0	2	66	4161	0	0	2	69	4216	0	0	2	70
				5R	7145	3	0	3	119	7521	3	0	3	125	7622	3	0	3	127
				5QM	7249	3	0	1	121	7630	3	0	1	127	7732	3	0	1	129
				5QN	7206	3	0	0	120	7585	3	0	0	126	7687	3	0	0	128
				5W	7144	3	0	2	119	7520	3	0	2	125	7620	3	0	2	127
			Clear Lens	FR	6872	1	0	1	115	7233	1	0	1	121	7330	1	0	1	122
				2	6414	1	0	2	107	6751	1	0	2	113	6842	1	0	2	114
				3	6506	1	0	2	108	6848	1	0	2	114	6940	1	0	2	116
				4	6502	1	0	2	108	6844	1	0	2	114	6935	1	0	2	116
				4W	6468	1	0	2	108	6807	1	0	2	113	6899	1	0	2	115
				5R	6683	3	0	3	111	7035	3	0	3	117	7129	3	0	3	119
				5QM	6780	3	0	1	113	7137	3	0	1	119	7232	3	0	1	121
				5QN	6740	2	0	0	112	7094	3	0	0	118	7189	3	0	0	120
				5W	6682	3	0	2	111	7033	3	0	2	117	7128	3	0	2	119
			HDL Lens	3	5531	2	0	1	92	5821	2	0	1	97	5899	2	0	1	98
				5W	5680	2	0	1	95	5979	2	0	1	100	6059	2	0	1	101

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DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
28L	85	10,000	No Lens	FR	9699	1	0	1	113	10209	1	0	1	119	10346	1	0	1	120
				FR-BC	6350	0	0	1	74	6684	0	0	1	78	6773	0	0	1	79
				2	9054	1	0	2	105	9530	2	0	2	111	9657	2	0	2	112
				2-BC	5523	0	0	1	64	5813	0	0	1	68	5891	0	0	1	68
				3	9183	1	0	2	107	9666	1	0	2	112	9795	1	0	2	114
				3-BC	5549	0	0	2	65	5841	0	0	2	68	5919	0	0	2	69
				4	9177	1	0	2	107	9660	1	0	2	112	9789	1	0	2	114
				4-BC	6827	0	0	2	79	7186	0	0	2	84	7282	0	0	2	85
				4W	9129	1	0	3	106	9609	1	0	3	112	9737	1	0	3	113
				4W-BC	5219	0	0	2	61	5493	0	0	2	64	5567	0	0	2	65
				5R	9433	3	0	3	110	9929	3	0	3	115	10062	3	0	3	117
				5QM	9570	3	0	1	111	10073	3	0	1	117	10208	3	0	1	119
				5QN	9514	3	0	0	111	10014	3	0	0	116	10148	3	0	0	118
				5W	9432	4	0	2	110	9927	4	0	2	115	10060	4	0	2	117
			Clear Lens	FR	9072	1	0	1	105	9549	1	0	1	111	9677	1	0	1	113
				2	8468	1	0	2	98	8913	1	0	2	104	9033	1	0	2	105
				3	8589	1	0	2	100	9041	1	0	2	105	9162	1	0	2	107
				4	8584	1	0	2	100	9035	1	0	2	105	9156	1	0	2	106
				4W	8538	1	0	2	99	8987	1	0	3	105	9108	1	0	3	106
				5R	8823	3	0	3	103	9287	3	0	3	108	9411	3	0	3	109
				5QM	8951	3	0	1	104	9422	3	0	1	110	9548	3	0	1	111
				5QN	8898	3	0	0	103	9366	3	0	0	109	9491	3	0	0	110
				5W	8822	3	0	2	103	9285	4	0	2	108	9410	4	0	2	109
			HDL Lens	3	7302	2	0	2	85	7685	2	0	2	89	7788	2	0	2	91
				5W	7499	2	0	1	87	7893	2	0	1	92	7999	2	0	1	93

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DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
54L	95	12,500	No Lens	FR	11792	1	0	1	125	12412	1	0	1	132	12578	1	0	1	134
				FR-BC	7848	0	0	1	83	8260	0	0	1	88	8371	0	0	1	90
				2	11210	2	0	2	119	11800	2	0	2	126	11958	2	0	2	126
				2-BC	5993	0	0	1	64	6308	0	0	1	67	6392	0	0	1	69
				3	11225	1	0	2	119	11815	2	0	2	126	11974	2	0	2	127
				3-BC	6273	0	0	2	67	6603	0	0	2	70	6691	0	0	2	72
				4	11311	1	0	2	120	11906	1	0	3	127	12065	1	0	3	128
				4-BC	7291	0	0	2	78	7674	0	0	2	82	7777	0	0	2	84
				4W	11203	2	0	3	119	11792	2	0	3	125	11950	2	0	3	127
				4W-BC	5603	0	0	2	60	5898	0	0	2	63	5977	0	0	2	65
				5R	11623	3	0	3	124	12234	3	0	3	130	12398	3	0	3	131
				5QM	11770	3	0	2	125	12389	3	0	2	132	12555	3	0	2	133
				5QN	11799	3	0	0	126	12420	3	0	0	132	12586	3	0	0	133
				5W	11594	4	0	2	123	12204	4	0	2	130	12367	4	0	2	131
			Clear Lens	FR	11029	1	0	1	117	11609	1	0	1	124	11765	1	0	1	125
				2	10485	2	0	2	112	11036	2	0	2	117	11184	2	0	2	119
				3	10555	1	0	2	112	11110	1	0	2	118	11259	1	0	2	120
				4	10579	1	0	2	113	11136	1	0	2	118	11285	1	0	2	120
				4W	10479	1	0	3	111	11029	2	0	3	117	11177	2	0	3	119
				5R	10871	3	0	3	116	11443	3	0	3	122	11596	3	0	3	123
				5QM	11009	3	0	2	117	11588	3	0	2	123	11743	3	0	2	125
				5QN	11036	3	0	0	117	11616	3	0	0	124	11772	3	0	0	125
				5W	10845	4	0	2	115	11415	4	0	2	121	11568	4	0	2	123
			HDL Lens	3	8736	2	0	2	93	9195	2	0	2	98	9318	2	0	2	100
				5W	9152	3	0	1	97	9633	3	0	1	102	9762	3	0	1	104

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DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
54L	120	15,000	No Lens	FR	14390	1	0	1	118	15146	1	0	1	124	15349	1	0	1	125
				FR-BC	9577	1	0	1	78	10080	1	0	1	83	10215	1	0	1	84
				2	13680	2	0	2	112	14399	2	0	2	118	14592	2	0	2	120
				2-BC	7313	0	0	1	60	7697	0	0	2	63	7800	0	0	2	64
				3	13698	2	0	3	112	14418	2	0	3	118	14611	2	0	3	120
				3-BC	7655	0	0	2	63	8057	0	0	2	66	8165	0	0	2	67
				4	13803	1	0	3	113	14528	1	0	3	119	14723	1	0	3	121
				4-BC	8897	0	0	2	73	9365	0	0	2	77	9490	0	0	2	78
				4W	13671	2	0	3	112	14390	2	0	3	118	14583	2	0	4	120
				4W-BC	6838	1	0	2	56	7197	1	0	2	59	7294	1	0	2	60
				5R	14184	4	0	4	116	14929	4	0	4	122	15129	4	0	4	124
				5QM	14363	3	0	2	118	15118	4	0	2	124	15321	4	0	2	126
				5QN	14399	4	0	4	118	15156	4	0	1	124	15359	4	0	1	126
				5W	14149	4	0	2	116	14893	4	0	2	122	15092	4	0	2	124
			Clear Lens	FR	13459	1	0	1	110	14167	1	0	1	116	14356	1	0	2	118
				2	12795	2	0	2	105	13468	2	0	2	110	13648	2	0	2	112
				3	12812	2	0	2	105	13486	2	0	2	111	13666	2	0	2	112
				4	12910	1	0	3	106	13589	1	0	3	111	13771	1	0	3	113
				4W	12787	2	0	3	105	13459	2	0	3	110	13640	2	0	3	112
				5R	13266	4	0	4	109	13964	4	0	4	114	14151	4	0	4	116
				5QM	13434	3	0	2	110	14140	3	0	2	116	14330	3	0	2	117
				5QN	13467	4	0	0	110	14175	4	0	0	116	14365	4	0	0	118
				5W	13234	4	0	2	108	13929	4	0	2	114	14116	4	0	2	116
			HDL Lens	3	10892	3	0	2	89	11464	3	0	2	94	11618	3	0	2	95
				5W	11250	3	0	1	92	11841	3	0	2	97	12000	3	0	2	98

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ARCHITECTURAL AREA/SITE

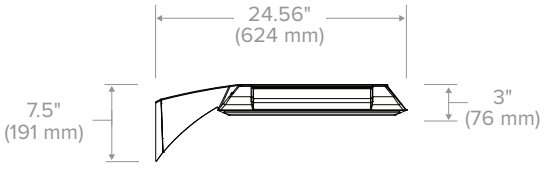
DELIVERED LUMENS (CONTINUED)

LEDs #	Nominal Watts	Nominal Lumens	Lens Options	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
54L	155	17,500	No Lens	FR	17299	2	0	2	111	18208	2	0	2	117	18452	2	0	2	119
				FR-BC	11513	1	0	1	74	12118	1	0	1	78	12280	1	0	1	79
				2	16445	2	0	2	105	17310	2	0	3	111	17542	2	0	3	112
				2-BC	8791	0	0	2	56	9253	0	0	2	59	9377	0	0	2	60
				3	16467	2	0	3	106	17333	2	0	3	111	17565	2	0	3	113
				3-BC	9202	1	0	2	59	9686	1	0	2	62	9816	1	0	2	63
				4	16593	1	0	3	106	17465	1	0	3	112	17699	1	0	4	113
				4-BC	10696	0	0	2	69	11258	1	0	2	72	11409	1	0	2	73
				4W	16435	2	0	4	105	17299	2	0	4	111	17531	2	0	4	112
				4W-BC	8220	1	0	2	53	8652	1	0	2	55	8768	1	0	2	56
				5R	17051	4	0	4	109	17947	4	0	4	115	18188	4	0	4	117
				5QM	17267	4	0	2	111	18174	4	0	2	117	18418	4	0	2	118
				5QN	17309	4	0	1	111	18219	4	0	1	117	18463	4	0	1	118
				5W	17009	4	0	2	109	17903	4	0	2	115	18143	4	0	2	116
			Clear Lens	FR	16180	1	0	2	104	17030	1	0	2	109	17258	1	0	2	111
				2	15382	2	0	2	99	16190	2	0	2	104	16407	2	0	2	105
				3	15402	2	0	3	99	16212	2	0	3	104	16429	2	0	3	105
				4	15520	1	0	3	99	16336	1	0	3	105	16555	1	0	3	106
				4W	15372	2	0	4	99	16180	2	0	4	104	16397	2	0	4	105
				5R	15948	4	0	4	102	16787	4	0	4	108	17011	4	0	4	109
				5QM	16150	4	0	2	104	16999	4	0	2	109	17227	4	0	2	110
				5QN	16190	4	0	1	104	17041	4	0	1	109	17269	4	0	1	111
				5W	15909	4	0	2	102	16745	4	0	2	107	16969	4	0	2	109
			HDL Lens	3	13093	3	0	2	84	13782	3	0	2	88	13966	3	0	2	90
				5W	13524	3	0	2	87	14235	3	0	2	91	14426	3	0	2	92

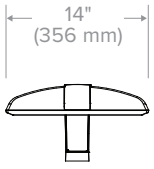
CRI Lumen Multiplier		
CCT	80 CRI	90 CRI
3000K	0.9119	0.7033
4000K	0.8941	N/A

Amber Multiplier	
CCT	Multiplier
5000K	1
AM	0.1727

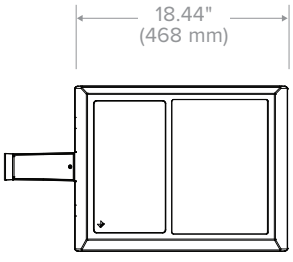
DIMENSIONS



Side View



Front View



Top View

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ARCHITECTURAL AREA/SITE

PHOTOMETRY

ALT1-54L-155-4k7-FR

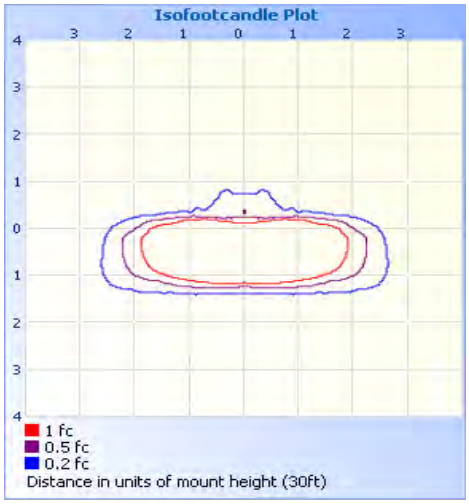
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**18208**
Watts	**156**
Efficacy	**116.7**
IES Type	**I**
BUG Rating	**B2-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	16101	88.4%
Downward House Side	2107	11.6%
Downward Total	18208	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	18208	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-2

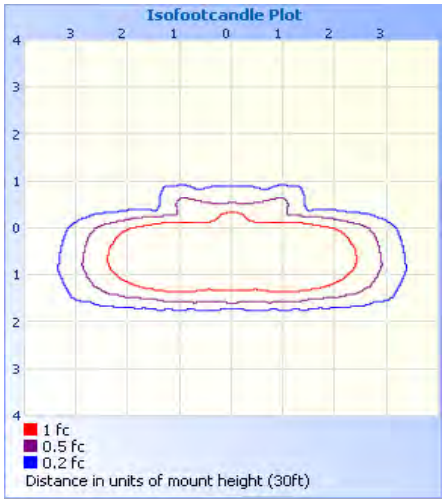
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17309**
Watts	**156**
Efficacy	**111.0**
IES Type	**II**
BUG Rating	**B2-U0-G3**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	14323	82.7%
Downward House Side	2986	17.3%
Downward Total	17309	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17309	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-3

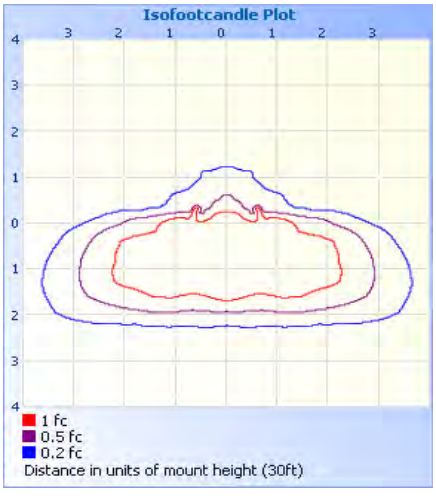
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17332**
Watts	**156**
Efficacy	**111.1**
IES Type	**III**
BUG Rating	**B2-U0-G3**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	14911	86.0%
Downward House Side	2421	14.0%
Downward Total	17332	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17332	100%

ISOFOOT CANDLE PLOT



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ALT1

ARCHITECTURAL AREA/SITE

PHOTOMETRY

ALT1-54L-155-4k7-4

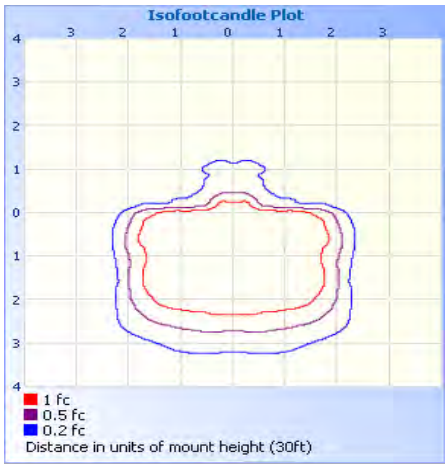
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17465**
Watts	**156**
Efficacy	**112.0**
IES Type	**IV**
BUG Rating	**B1-U0-G3**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	15757	90.2%
Downward House Side	1708	9.8%
Downward Total	17465	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17465	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-4W

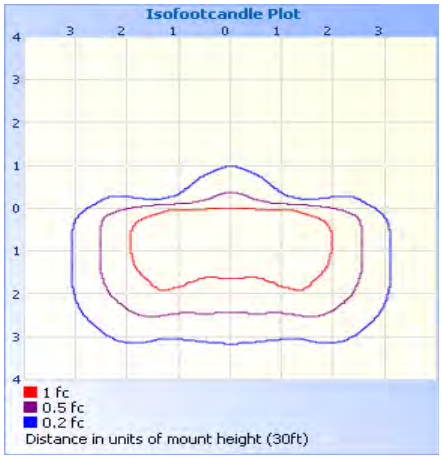
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17299**
Watts	**156**
Efficacy	**110.9**
IES Type	**IV**
BUG Rating	**B2-U0-G4**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	15320	88.6%
Downward House Side	1979	11.4%
Downward Total	17299	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17299	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-5R

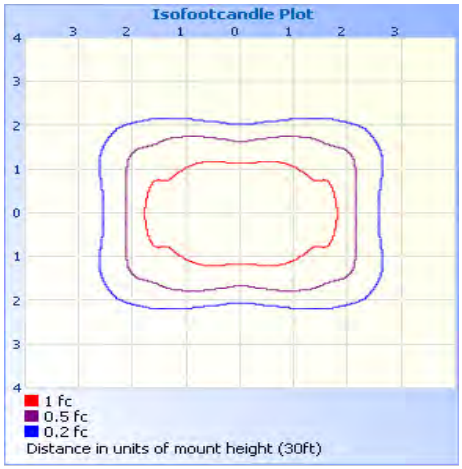
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17947**
Watts	**156**
Efficacy	**115.0**
IES Type	**III**
BUG Rating	**B4-U0-G4**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8974	50.0%
Downward House Side	8974	50.0%
Downward Total	17947	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17947	100%

ISOFOOT CANDLE PLOT



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ARCHITECTURAL AREA/SITE

PHOTOMETRY

ALT1-54L-155-4k7-5QM

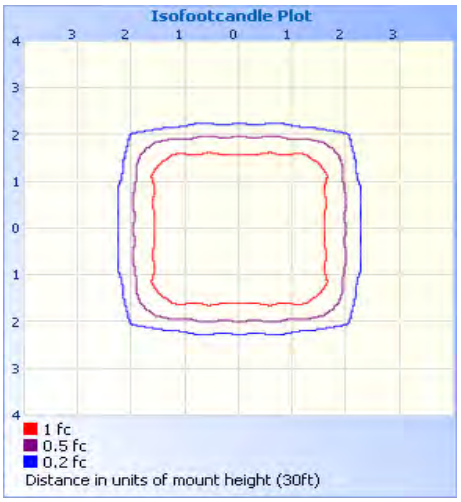
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**18173**
Watts	**156**
Efficacy	**116.5**
IES Type	**V**
BUG Rating	**B4-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	9087	50.0%
Downward House Side	9087	50.0%
Downward Total	18173	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	18173	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-5QN

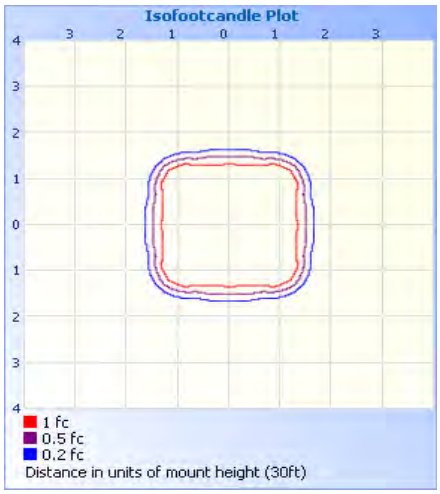
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**18219**
Watts	**156**
Efficacy	**116.8**
IES Type	**V**
BUG Rating	**B4-U0-G1**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	9110	50.0%
Downward House Side	9110	50.0%
Downward Total	18219	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	18219	100%

ISOFOOT CANDLE PLOT



ALT1-54L-155-4k7-5W

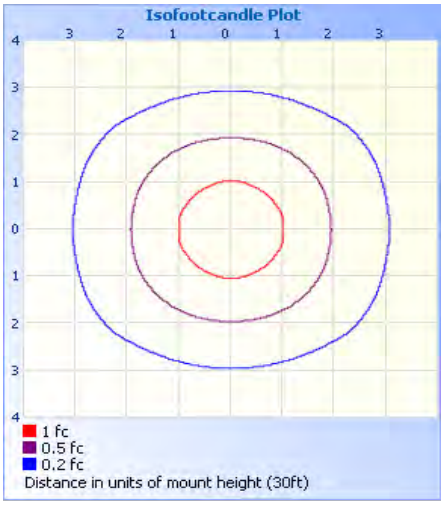
LUMINAIRE DATA

Description	**4000K, 70CRI**
Delivered Lumens	**17904**
Watts	**156**
Efficacy	**114.8**
IES Type	**V**
BUG Rating	**B4-U0-G2**
Mounting Height	**30 ft**
Grid Scale	**30 ft**

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	8952	50.0%
Downward House Side	8952	50.0%
Downward Total	17904	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	17904	100%

ISOFOOT CANDLE PLOT



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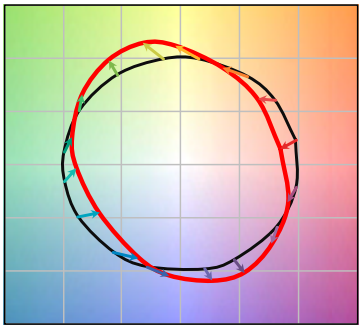
TM-30 DATA

COLOR VECTOR GRAPHIC

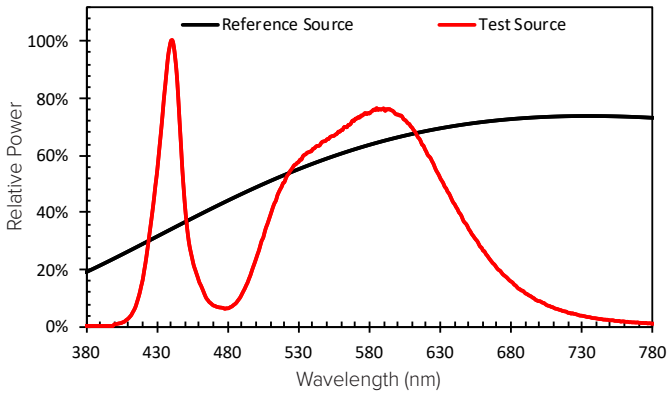


Reference Illuminant — Test Source

TEST SOURCE

R_f	68
R_g	99
CCT(K)	3947
D_{UV}	0.0004
x	0.3831
y	0.3793
CIE R_a	72

SPECTRAL POWER DISTRIBUTION COMPARISON



ELECTRICAL DATA

Electrical													Dimming			
# LED	System Watts	Drive Current	Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming Range	Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
28	22	250 mA	120-480	50/60	0.18	0.11	0.09	0.08	0.06	0.05	>0.9	20	10% to 100%	0mA	1mA	0V	10V
	38	400 mA			0.32	0.18	0.16	0.14	0.11	0.08							
	60	650 mA			0.50	0.29	0.25	0.22	0.17	0.13							
	86	950 mA			0.72	0.41	0.36	0.31	0.25	0.18							
54	94	550 mA			0.78	0.45	0.39	0.34	0.27	0.20							
	122	700 mA			1	0.59	0.51	0.44	0.35	0.25							
	156	900 mA			1.30	0.75	0.65	0.56	0.45	0.33							

TM-21 Lifetime Calculation - Projected Lumen Maintenance (25°C / 77°C)						
Hours	0	25,000	36,000	50,000	100,000	Reported L70
Projected Lumen Maintenance	100%	96.9%	95.3%	93.3%	86.6%	> 60,000

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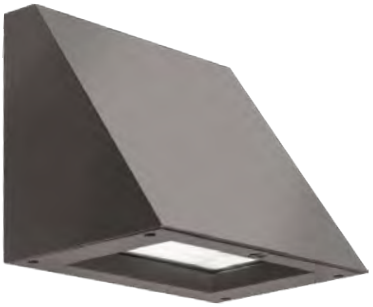


WDGE2 LED
Architectural Wall Sconce

Catalog Number

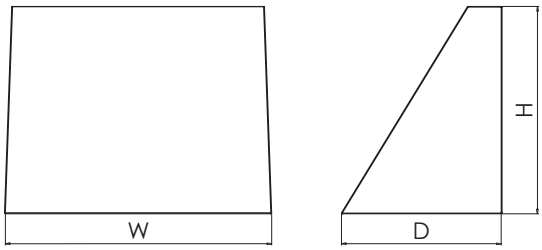
Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth: 7″
Height: 9″
Width: 11.5″
Weight: (without options) 13.5 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE2 delivers up to 6,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

WDGE LED Family Overview

Luminaire	Standard EM, 0°C	Cold EM, -20°C	Sensor	Lumens (4000K)					
				P1	P2	P3	P4	P5	P6
WDGE1 LED	4W	--	--	1,200	2,000	--	--	--	--
WDGE2 LED	10W	18W	Standalone / nLight	1,200	2,000	3,000	4,500	6,000	--
WDGE3 LED	15W	18W	Standalone / nLight	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	--	--	Standalone / nLight	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE2 LED P3 40K 80CRI VF MVOLT DDBXD

Series	Package		Color Temperature		CRI	Distribution		Voltage	Mounting	
WDGE2 LED	P1[1]	P1SW	27K	2700K	80CRI	VF	Visual comfort forward throw	MVOLT	**Shipped included**	**Shipped separately**
	P2[1]	P2SW	30K	3000K	90CRI	VW	Visual comfort wide	347[3]	SRM Surface mounting bracket	AWS 3/8inch Architectural wall spacer
	P3[1]	P3SW	35K	3500K				480[3]		BBW Surface-mounted back box
	P4[1]	Door with small window (SW) is required to accommodate sensors. See page 2 for more details.	40K	4000K						PBBW Premium surface-mounted back box (top, left, right conduit entry)
	P5[1]		50K[2]	5000K						

Options

E4WH	Emergency battery backup, CEC compliant (4W, 0°C min)
E10WH	Emergency battery backup, CEC compliant (10W, 5°C min)
E20WC	Emergency battery backup, CEC compliant (18W, -20°C min)
PE[4]	Photocell, Button Type
DS[5]	Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)
DMG[6]	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)
BCE	Bottom conduit entry for premium back box (PBBW). Total of 4 entry points.

Standalone Sensors/Controls (only available with P1SW, P2SW & P3SW)

PIR	Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.
PIRH	Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching
PIR1FC3V	Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.
PIRH1FC3V	Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.

Networked Sensors/Controls (only available with P1SW, P2SW & P3SW)

NLTAIR2 PIR	nLightAIR Wireless enabled bi-level motion/ambient sensor for 8-15' mounting heights.
NLTAIR2 PIRH	nLightAIR Wireless enabled bi-level motion/ambient sensor for 15-30' mounting heights.

See page 4 for out of box functionality

Finish

DDBXD	Dark bronze
DBLXD	Black
DNAXD	Natural aluminum
DWHXD	White
DSSXD	Sandstone
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white
DSSTXD	Textured sandstone

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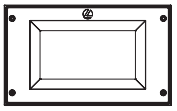
Accessories

Ordered and shipped separately.

WDGEAWS DDBXD U	WDGE 3/8inch Architectural Wall Spacer (specify finish)
WDGE2PBBW DDBXD U	WDGE2 Premium surface-mounted back box (specify finish)
WSBBW DDBXD U	Surface - mounted back box (specify finish)

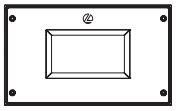
NOTES

1 P1-P5 not available with sensors/controls. Sensors/controls only available with P1SW, P2SW and P3SW.
2 50K not available in 90CRI
3 347V and 480V not available with E4WH, E10WH, E20WC or DS.
4 PE not available in 480V or with sensors/controls
5 DS option not available with E4WH, E10WH, E20WC or sensors/controls.
6 DMG option not available with sensors/controls



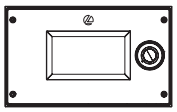
Default configuration with no sensors/controls.

Power Packages: P1, P2, P3, P4, P5



Small Window (SW) configuration

Power Packages: P1SW, P2SW, P3SW



Configuration with sensors/controls

Power Packages: P1SW, P2SW, P3SW

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	27K (2700K, 80 CRI)		30K (3000K, 80 CRI)		35K (3500K, 80 CRI)		40K (4000K, 80 CRI)		50K (5000K, 80 CRI)	
			Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
P1 / P1SW	10W	VF	1,166	119	1,209	123	1,251	128	1,256	128	1,254	128
		VW	1,197	122	1,241	126	1,284	131	1,289	131	1,286	131
P2 / P2SW	15W	VF	1,878	129	1,947	134	2,015	139	2,023	139	2,019	139
		VW	1,927	133	1,997	137	2,067	142	2,075	143	2,071	143
P3 / P3SW	23W	VF	2,908	129	3,015	134	3,119	138	3,132	139	3,126	139
		VW	2,983	132	3,093	137	3,200	142	3,213	143	3,206	142
P4	35W	VF	4,096	117	4,247	121	4,394	126	4,412	126	4,403	126
		VW	4,202	120	4,357	125	4,508	129	4,526	129	4,517	129
P5	48W	VF	5,567	115	5,772	119	5,972	123	5,996	124	5,984	124
		VW	5,711	118	5,921	122	6,127	126	6,151	127	6,139	127

Electrical Load

Performance Package	System Watts	Current (A)					
		120V	208V	240V	277V	347V	480V
P1 / P1SW	10W	0.082	0.049	0.043	0.038	--	--
	13W	--	--	--	--	0.046	0.033
P2 / P2SW	15W	0.132	0.081	0.072	0.064	--	--
	18W	--	--	--	--	0.056	0.041
P3 / P3SW	23W	0.195	0.114	0.100	0.088	--	--
	26W	--	--	--	--	0.079	0.058
P4	35W	0.302	0.175	0.152	0.134	--	--
	38W	--	--	--	--	0.115	0.086
P5	48W	0.434	0.241	0.211	0.184	--	--
	52W	--	--	--	--	0.157	0.119

Lumen Multiplier for 90CRI

CCT	Multiplier
27K	0.845
30K	0.867
35K	0.845
40K	0.885
50K	0.898

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.96	>0.95	>0.91

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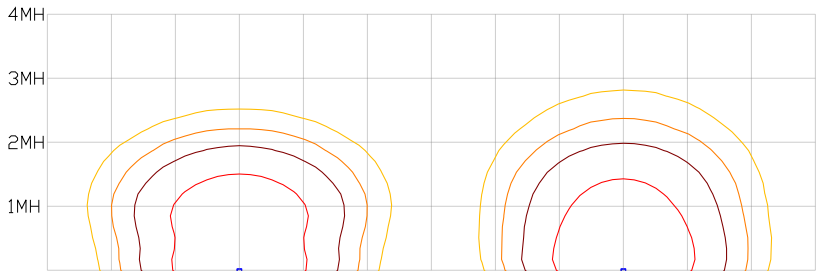
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting WDGE LED homepage. Tested in accordance with IESNA LM-79 and LM-80 standards.

LEGEND
- 0.25 fc
- 0.5 fc
- 1.0 fc
- 3.0 fc

MH = 10ft
Grid = 10ft x 10ft



WDGE2 LED P3 40K 80CRI VW

WDGE2 LED P3 40K 80CRI VF

Emergency Egress Options

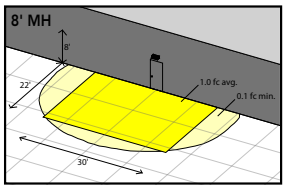
Emergency Battery Backup

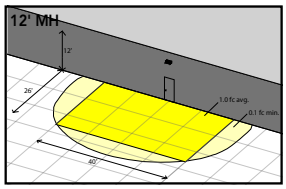
The emergency battery backup is integral to the luminaire — no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product. All emergency battery backup configurations include an independent secondary driver with an integral relay to immediately detect loss of normal power and automatically energize the luminaire. The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time normal power is lost and maintain a minimum of 60% of the light output at the end of 90minutes.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9

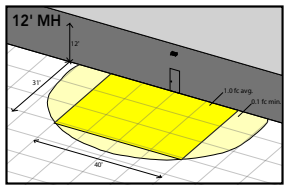
The examples below show illuminance of 1 fc average and 0.1 fc minimum in emergency mode with E10WH or E20WC and VF distribution.

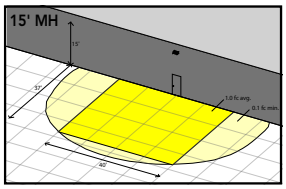
Grid = 10ft x 10ft





WDGE2 LED xx 40K 80CRI VF MVOLT E10WH



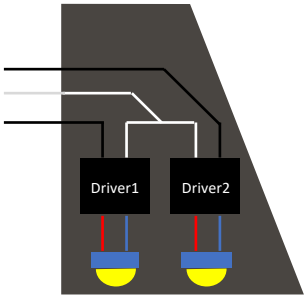


WDGE2 LED xx 40K 80CRI VF MVOLT E20WC

Dual Switching (DS) Option

The dual switching option offers operational redundancy that certain codes require. With this option the luminaire comes integrated with two drivers and two light engines. These work completely independent to each other so that a failure of any individual component does not cause the whole luminaire to go dark. This option is typically used with a back generator or inverter providing emergency power.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9



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Control / Sensor Options

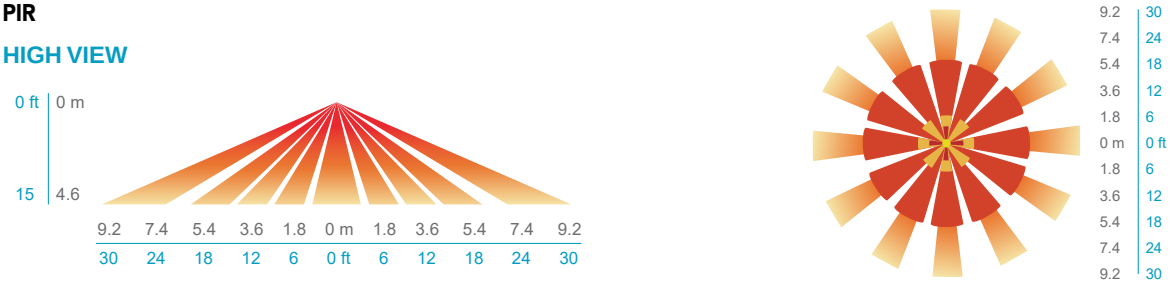
Motion/Ambient Sensor (PIR_, PIRH_)

Motion/Ambeint sensor (Sensor Switch MSOD) is integrated into the the luminaire. The sensor provides both Motion and Daylight based dimming of the luminaire. For motion detection, the sensor utilizes 100% Digital Passive Infrared (PIR) technology that is tuned for walking size motion while preventing false tripping from the environment. The integrated photocell enables additional energy savings during daytime periods when there is sufficient daylight. Optimize sensor coverage by either selecting PIR or PIRH option. PIR option comes with a sensor lens that is optimized to provide maximum coverage for mounting heights between 8-15ft, while PIRH is optimized for 15-40ft mounting height.

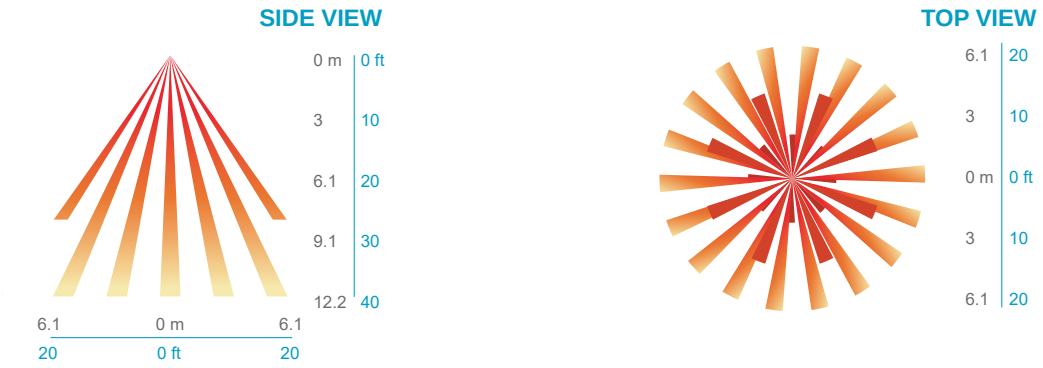
Networked Control (NLTAIR2)

nLight® AIR is a wireless lighting controls platform that allows for seamless integration of both indoor and outdoor luminaires. Five-tier security architecture, 900 MHz wireless communication and app (CLAIRITY™ Pro) based configurability combined together make nLight® AIR a secure, reliable and easy to use platform.

PIR



PIRH



Option	Dim Level	High Level (when triggered	Photocell Operation	Motion Time Delay	Ramp-down Time	Ramp-up Time
PIR or PIRH	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 5fc	5 min	5 min	Motion - 3 sec Photocell - 45 sec
PIR1FC3V, PIRH1FC3V	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 1fc	5 min	5 min	Motion - 3 sec Photocell - 45 sec
NLTAIR2 PIR, NLTAIR2 PIRH (out of box)	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 5fc	7.5 min	5 min	Motion - 3 sec Photocell - 45 sec

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Mounting, Options & Accessories

NLTAIR2 PIR – nLight AIR Motion/Ambient Sensor

D = 7″

H = 11″

W = 11.5″

PBBW – Premium Back Box

D = 1.75″

H = 9″

W = 11.5″

BBW – Standard Back Box

D = 1.5″

H = 4″

W = 5.5″

AWS – 3/8inch Architectural Wall Spacer

D = 0.38″

H = 4.4″

W = 7.5″

FEATURES & SPECIFICATIONS

INTENDED USE
Common architectural look, with clean rectilinear shape, of the WDGE LED was designed to blend with any type of construction, whether it be tilt-up, frame or brick. Applications include commercial offices, warehouses, hospitals, schools, malls, restaurants, and other commercial buildings.

CONSTRUCTION
The single-piece die-cast aluminum housing integrates secondary heat sinks to optimize thermal transfer from the internal light engine heat sinks and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP66 rating for the luminaire.

FINISH
Exterior painted parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS
Well crafted reflector optics allow the light engine to be recessed within the luminaire, providing visual comfort, superior distribution, uniformity, and spacing in wall-mount applications. The WDGE LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine consists of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L91/100,000 hours at 25°C). The electronic driver has a power factor of >90%, THD <20%. Luminaire comes with built in 6kV surge protection, which meets a minimum Category C low exposure (per ANSI/IEEE C62.41.2).

INSTALLATION
A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The 3/8″ Architectural Wall Spacer (AWS) can be used to create a floating appearance or to accommodate small imperfections in the wall surface.

LISTINGS
CSA certified to U.S. and Canadian standards. Luminaire is IP66 rated. PIR options are rated for wet location. Rated for -40°C minimum ambient.
DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

WARRANTY
5-year limited warranty. Complete warranty terms located at:
www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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University of Southern Maine
Career and Student Success Center & Residence Hall

Stormwater Management Report
Revised July 24, 2020

Applicant:

University of Southern Maine
Bedford Street
Portland, Maine 04101

Submitted by:

SMRT, Inc.
Architecture Engineering Planning
144 Fore Street / P.O. Box 618
Portland, Maine 04104

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APPENDICES

Appendix A-1 **Pre and Post Development Watershed Plans**
Appendix A-2 **HydroCad Runoff and Routing Calculations**
Appendix A-3 **Water Quality Plan and Calculations**
Appendix A-4 **Stormwater System Maintenance Plan**
Appendix A-5 **Preliminary Geotechnical Report, S.W. Cole, Jan. 28, 2020**

Appendix A-6 FEMA Firm Map

1.0 PROJECT DESCRIPTION

The University of Southern Maine (USM) is proposing to construct two new capital buildings on approximately 3.6 acres of the Portland campus of the University of Southern Maine. The project is known as the Career and Student Success Center & Residence Hall project. The project area is bounded by the easterly corner of the block defined by Falmouth, Durham, and Bedford Streets. This area presently includes a large public parking lot, the Woodbury Student Center (approx. 21,701 sf), the Facilities Management building (8,950 sf), and associated service areas, parking, and infrastructure. This project will remove all features in the project area. Essential services, infrastructure, and offices will be relocated on campus prior to commencing demolition.

The project will replace the Woodbury Center with an updated and properly-sized student activity center to be known as the Career Student Success Center (CSSC). The CSSC will be an approximately 27,000 sf building with two stories to accommodate multiple campus uses including dining, bookstore, student activities, formal mass gathering, and informal collaboration spaces. The new residence hall has been sited on the corner of Durham and Bedford Streets to establish a prominent, singular structure that will improve the campus gateway image. The building will be approximately 32,500 sf in a “C” shape with wings of 5 and 8 stories and provide housing for approximately 571 students in multiple dwelling unit layouts.

The project watershed is presently developed with no natural resource areas remaining. The existing topography generally slopes easterly toward the corner of Bedford and Durham Streets. The new buildings have been sited to generally maintain and compliment the existing topography of the project area. All runoff from the site is currently and will continue to be collected by storm drain structures of the City system in Bedford and Durham Streets. There are no surface drainage discharge locations from this project watershed.

Based on a geotechnical investigation, the subsurface soil conditions at the site typically consist of uncontrolled fill overlying glaciomarine sand, silt, and clay. Bedrock was typically encountered at 5 to 26 feet below grade. Groundwater was encountered at depths ranging from 8 to 16 feet. The majority of the mapped surficial soils are stiff, silty clary which is most commonly classified as Hydrologic Type C soils. A Geotechnical Evaluation of the proposed property has been prepared by S.W. Cole Engineering, Inc. and is included within the Appendix of this report.

2.0 STORM WATER NARRATIVE

2.1 Site Location

The project area is bounded by the easterly corner of the block defined by Falmouth, Durham, and Bedford Streets. The site is presently developed as a higher education campus with

buildings, paved areas, and landscaped areas. There are no areas of natural resources remaining on the site.

2.2 Receiving Waters

The Portland campus is located in the Back Cove watershed. Runoff from the site presently drains to the City storm drain system in Bedford Street and flows northerly to discharge into Back Cove. This area is not identified as part of an Urban Impaired Stream watershed by MDEP or the City of Portland.

2.3 Historic Flooding

There is no evidence of historical flooding on the project site. FEMA Flood Insurance Rate Map (Community Panel Number 2300510013B) dated July 17, 1986 indicates that no portion of the project area is within the floodplain associated with Back Cove.

2.4 Alterations to Natural Drainage Ways

Drainage characteristics will remain relatively the same from the pre to the post development condition. No alterations to natural drainage ways are proposed as part of this project.

2.5 Methodology and Modeling Assumptions

Runoff and routing calculations have been performed for the watershed areas affected by the proposed development under pre-development and post-development conditions scenarios. Times of concentration and runoff curve number calculations have been performed using the method described in Natural Resource Conservation Service (NRCS) Technical Release 55 (TR-55) – Urban Hydrology for Small Watersheds. The TR-20 based HydroCad modeling software has been utilized to perform the more complex runoff and routing calculations, some of which are beyond the scope of the TR-55 method. Time of concentration calculations have been amended where the value given by the TR-55 method is less than five minutes. In these cases a standard minimum value of five minutes has been used to keep this parameter within the acceptable working range of the model and prevent computational errors.

Design rainfall events have been modeled using the SCS Type III hydrograph for 24-hour duration storms. The rainfall depth for each return period is taken from Chapter 500, Stormwater Management, Appendix H. The rainfall values for standard design storm frequencies are shown in the table below.

24-Hour Rainfalls for Cumberland County SE at Design Storm Frequencies				
Chapter 500, Stormwater Management, Appendix H				
Frequency	2-Year	10-Year	25-Year	100-Year
Rainfall Depth	3.1 in	4.6 in	5.8 in	8.1 in

The onsite soils have been generally identified as Hydrologic Group C through geotechnical investigation. The existing topography of the site was determined by field survey and existing surface covers were identified by site inspection.

Stormwater BMPs have been designed to effectively capture, detain and treat runoff from developed areas of the site before allowing it to discharge in a non-erosive manner to downstream areas. The Maine Best Management Practices Manual (current edition on-line) and the Maine Erosion and Sediment Control Best Management Practices Manual for Designers and Engineers (current edition on-line) have been used as guidelines in the design of the storm water system.

2.6 Permitting Requirements

The proposed project area is part of a previously approved Site Location of Development Act permit for the Portland campus. The project is not in a lake watershed nor is it in an Urban Impaired Stream watershed and as such will not be required to meet the Phosphorus Standard or the Urban Impaired Stream Standards.

Per Chapter 500 standards, the project will be required to meet the Basic and General Standards, and the site was analyzed under the Redevelopment Treatment standard to identify the treatment target. The project was also analyzed for the flooding standard to provide stormwater quantity control for the 2-year, 10-year, 25-year storm events. The 100-year storm event was also analyzed to determine the resulting impacts.

Redevelopment Treatment Standard.

The project meets the definition of a redevelopment project and a pollutant ranking calculation was performed by the standard to determine the treatment required. For a project area of approximately 157,971 sf, the calculation is as follows:

Pollutant Ranking	Pre Development Area (sf)	Pre-Development Ranking
5	0	0.00
4	87532	8.04
3	424	0.03
2	67840	3.12
1	2175	0.05
	Total: 157971	**Weighted Average: 3.10**

Pollutant Ranking	Post Development Area (sf)	Post-Development Ranking
5	0.00	0.00
4	11194	1.03
3	0.00	0.00
2	139474	6.40
1	7303	0.17
	Total: 157971	**Weighted Average: 2.10**

The proposed project results in a significant increase in building footprint, though there is a significant decrease in medium intensity parking area. The existing impact ranking is 3.1 and the proposed impact ranking is 2.1. This provides a net balance of -1.00. Per Table 3 of Chapter 500, the treatment level for this redevelopment project is 50% or approximately 78,986 sf.

Developed Area

The project area meeting the developed area definition is approximately 165,175 sf, including the area of the residence hall, CSSC, service area, lawn and landscape areas, and associated features. See C-122 Water Quality Plan.

Treatment Target
For a 50% redevelopment treatment, the target is to treat a minimum of 82,588 sf.

2.7 Proposed BMPs

The stormwater management system for this development is intended to provide effective water quality and quantity control/treatment for new development areas and to protect downstream stormwater infrastructure and natural resources from potential detrimental impacts. The site layout allows adequate area for surface filtration-style features. The following treatment BMPs were selected from Section 7.1 of the Maine Best Management Practices Manual.

A. Grassed Underdrained Soil Filters

Three grassed underdrained soil filters are proposed to meet the treatment goal from the developed area associated with the project. The roof areas of the new buildings provide a direct flow of runoff for treatment and roof drains will discharge directly to inlet control structures in each soil filter. The water quality volume is based on 1" of runoff from the tributary impervious area and 0.4" of runoff from the tributary landscaped areas.

B. BioRetention Cell Soil Filters

Three grassed underdrained soil filters are proposed to meet the treatment goal from the developed area associated with the project. The roof areas of the new buildings provide a direct flow of runoff for treatment and roof drains will discharge directly to inlet control structures in each soil filter. The water quality volume is based on 1" of runoff from the tributary impervious area and 0.4" of runoff from the tributary landscaped areas.

C. Total Developed Area Treated

The total developed area treated by the five features is as follows:

Feature	Developed Area Treated	Developed Area (sf)
VFF 1	Courtyard Areas	14,050
VFF 2	Dorm roof, site pavement and lawn areas	11,496
VFF 3	CSSC Roof, site pavement and lawn areas	34,500
BRC 1	Dorm Roof	10,548
BRC 2	Dorm Roof	10,000
	Total Area	**80,594 sf**
	Treatment Target	**78,986 sf**

The treatment target is met by the proposed design.

2.8 Existing BMPs Impacted by Proposed Development

There are no existing BMPs impacted by the Proposed Development.

2.9 Project Impacts

The development of this project will result in the reduction of approximately 1.16 acres (50,706 sf) of impervious area. The project will construct multi-story buildings to replace two one-story buildings with a lower intensity of use. The project will also create two significant vegetated areas to support the general campus population and the dormitory population. A "Quad" of lawn area will be created where an existing parking lot is presently, and a courtyard of lawn area will be created for the dorm where existing buildings are presently. These conditions will result in less impervious area. Another condition that reduces project impacts is that this parcel is drained in multiple locations to the City storm drain system in Durham and Bedford Streets. These drainage patterns are preserved in the post development condition and represents multiple flows that are reduced in the post development condition. The new stormwater management system is designed to provide water quality treatment through the use of the three vegetated soil filters. The focus of the design is on source control of pollutants and the prevention of erosive velocities to downstream receiving areas. The stormwater calculations demonstrate that the system will achieve the pollutant removal efficiency required by State and local regulations, maintains the existing drainage patterns of the site to a high degree, and the runoff from all areas will be similar to the site conditions before development.

3.0 STORM WATER QUANTITY ANALYSIS

The project area presently discharges to the City of Portland storm drain system in both Bedford and Durham Streets. The change in impervious area is approximately 1.0 acres which will significantly reduce the peak flow and volume of stormwater runoff from the project area. The impact to the City storm drain system will likely be an increase in its available capacity such that it is likely that downstream conditions will be improved as a result of the project.

Pre-Development Conditions

For pre-development conditions scenario, the site is divided into four subcatchment areas, representing runoff to Bedford Street, Durham Street, roof runoff to Bedford Street, and roof runoff to Durham Street. The analysis point for this model is a hypothetical point downstream of the drain manhole at the intersection of Durham and Bedford Streets.

A. Subcatchment 1S

Subcatchment 1S represents the northerly half of the project area adjacent to Sullivan Hall and the community garden. This area drains in an easterly direction to the City storm drain system in Durham Street.

B. Subcatchment 2S

Subcatchment 2S represents the southerly half of the project area adjacent to Masterton Hall and the Woodbury Center. This area drains southerly direction to the City storm drain system in Bedford Street.

C. Subcatchment #25

Subcatchment #25 represents the roof area of the Facilities Management building at #25 Bedford Street. The roof drains directly to the City storm drain system in Durham Street.

D. Subcatchment #35

Subcatchment #35 represents the roof area of the Woodbury Center building at #35 Bedford Street. The roof drains directly to the City storm drain system in Bedford Street.

The pre-development subcatchment areas, cover conditions, and time of concentration flow paths are described in detail in the supporting HydroCAD documentation included in the Appendix A-1 of this report. A Pre-Development Conditions Watershed Plan (C-120) is included.

Post-Development Conditions

For the post–development conditions, the site is developed with the two new buildings, new grassed Quad, grassed courtyard, and associated features and landscaping.

A. Subcatchment 1S

Subcatchment 1S represents the northerly half of the project area adjacent to Sullivan Hall and the community garden. This area drains in an easterly direction to the City storm drain system in Durham Street. The subcatchment was modified to show a reduced area as a result of construction of the CSSC (Subcatchments Dorm1, Dorm 2, Dorm 3, Dorm 4, Dorm 5, and CTYRD).

B. Subcatchment 2S

represents the southerly half of the project area adjacent to Masterton Hall and the Woodbury Center. This area drains southerly direction to the City storm drain system in Bedford Street DP-3. The subcatchment was modified to show a reduced area as a result of construction of the CSSC (Subcatchment CSSC).

C. Subcatchment Dorm1

Subcatchment Dorm1 represents roof runoff from the residence hall, which will be treated by a bioretention cell (BRC1) along the Durham facade.

D. Subcatchment Dorm 2

Subcatchment Dorm2 represents roof runoff from the residence hall, which will be treated by a vegetated soil filter(VFF2) near the Central Heating building.

E. Subcatchment CTYRD

Subcatchment CTYRD represents the courtyard area including lawn and hardscape areas, which will be treated by a vegetated soil filter (VFF3) in the courtyard.

F. Subcatchment CSSC

Subcatchment CSSC represents the SCCS roof runoff, which will be treated by a vegetated soil filter (VFF3) adjacent to the building.

G. Subcatchment Dorm 3

Subcatchment Dorm represents roof runoff from the residence hall, which will be treated by a bioretention cell (BRC2) along the westerly façade of the building.

H. Subcatchment Dorm 4

Subcatchment Dorm 4 represents roof runoff from the residence hall, which will not be treated and will drain to the Durham Street storm drain system.

I. Subcatchment Dorm 5

Subcatchment Dorm 5 represents roof runoff from the residence hall, which will not be treated and will drain to the Durham Street storm drain system.

Stormwater Modeling

HydroCAD software (based on TR-20 methods) was utilized to model the change in stormwater runoff to the City storm drain system for pre and post conditions. It is noted that the model was not intended to model the actual flow conditions in the storm drain system, but rather identify the change(s) in runoff inflow to the system. This model approach should provide a result that shows the flooding standard has been met by reducing the amount of runoff from the project area and consequently creating new capacity in the City storm drain for future flows. The point of analysis for the comparison was a fictional point downstream of the drain manhole (i.d. 1834) at the corner of Bedford and Durham. The model was prepared to reflect changes in surface conditions which is the most significant factor affecting peak flow rates between the two conditions. The presence of treatment features (vegetated filter fields) was also modeled and had a minor influence in attenuating the peak flows for the post development condition. A summary of the pre-development versus post-development conditions runoff rates is as follows:

Peak Flows to City Storm Drain System in CFS				
Storm Event	**Pre-Development (cfs)**	**Post Development (cfs)**	**Net (cfs)**	**Percentage**
2 yr storm	10.14	5.58	-4.56	-45%
10 yr storm	16.21	9.83	-6.38	-39%
25 yr storm	21.05	15.19	-5.86	-28%
100 yr storm	30.19	27.54	-2.65	-9%

Storm Drain Conveyance

The site storm drain system has generally been designed to convey a 10 year Storm Event. The culvert outlets from the vegetated soil filters have been designed to convey that value at a minimum (using Manning's Equation), with planned additional capacity for larger storm events.

10 Year Storm Event for Vegetated Soil Filters		
Outlet Culvert	**Peak Flow (cfs)**	**Storm Drain Design Capacity ***
VFF 1	0.09	15" dia.; 5.47 cfs min. (two culverts for redundancy
VFF 2	0.08	12" dia.; 2.98 cfs min.
VFF 3	0.30	12" dia.; 2.98 cfs min.
BRC1	0.23	12" dia.; 2.98 cfs min.
BRC2	0.97	12" dia.; 2.98 cfs min.

* Min. slope = 0.005, Manning's n = 0.011

4.0 MAINTENANCE

A comprehensive Maintenance Plan has been developed for the Stormwater Best Management Practices for this facility. A copy of the Plan is included in Appendix A-4.

5.0 CONCLUSIONS

The runoff and routing calculations demonstrate that the development will result in a reduction in the peak rate of runoff for the 2-year, 10-year, 25-year, and 100-year return periods.

Water quality treatment is provided that meets redevelopment standards for new developed areas associated with the project. Three vegetated soil filters provide treatment for greater than 50% of the developed area which meets the Chapter 500 treatment requirements for redevelopment.

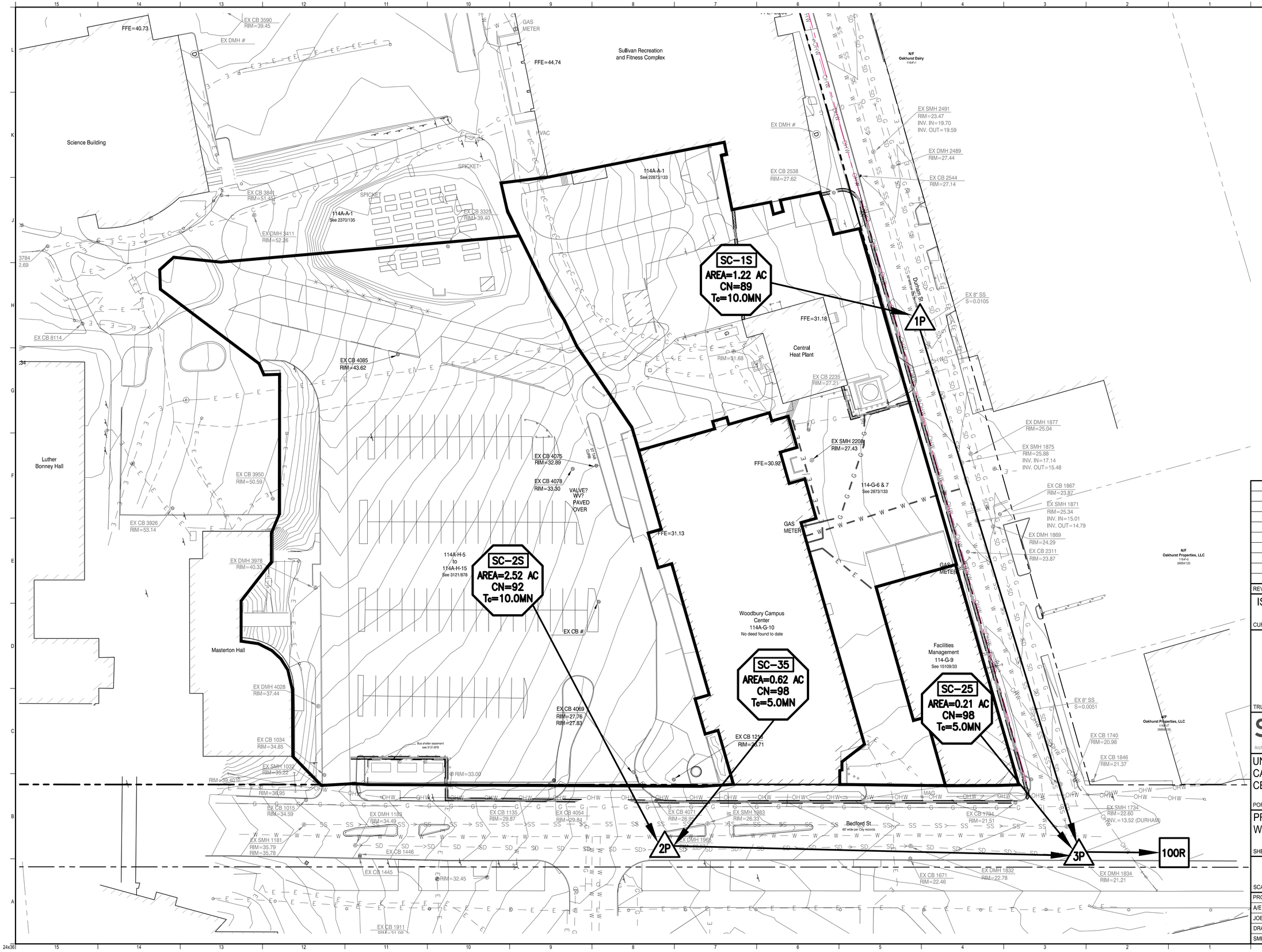
6.0 REFERENCES

- Maine Stormwater Management Design Manual Volume III BMP Technical Design Manual, current edition on-line.

- Maine Erosion and Sediment Control Best Management Practices Manual for Designers and Engineers, current edition on-line.

- Preliminary Geotechnical Engineering Services, Proposed Residential Hall & Student Success Center, prepared by S.W. Cole Engineering, Inc., January 28, 2020.

Appendix A-1 **Pre and Post Development Watershed Plans**



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PORTLAND, MAINE

PRE-DEVELOPMENT WATERSHED PLAN

SHEET TITLE:

0 15' 30' 60' 90'

SCALE: 1" = 30'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	C-120-19206	SHEET No.	C-120

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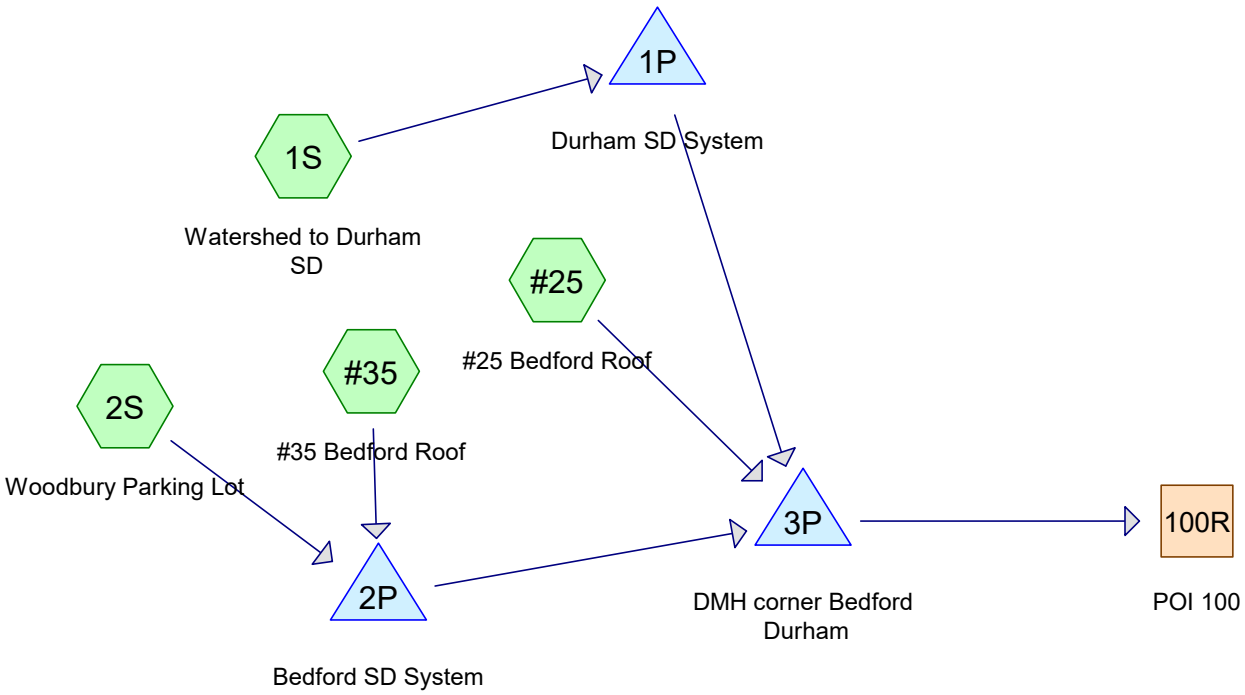
24x36

Appendix A-2 **HydroCAD Runoff and Routing Calculations**



Subcat Reach Pond Link

Routing Diagram for 19206 Ex Cond
Prepared by SMRT, Printed 3/4/2020
HydroCAD® 10.00-24 s/n 00729 © 2018 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.097	74	>75% Grass cover, Good, HSG C (1S, 2S)
3.480	98	Paved parking, HSG A (#25, #35, 1S, 2S)
4.577	**92**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
3.480	HSG A	#25, #35, 1S, 2S
0.000	HSG B	
1.097	HSG C	1S, 2S
0.000	HSG D	
0.000	Other	
4.577		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	1.097	0.000	0.000	1.097	>75% Grass cover, Good	1S, 2S
3.480	0.000	0.000	0.000	0.000	3.480	Paved parking	#25, #35, 1S, 2S
3.480	**0.000**	**1.097**	**0.000**	**0.000**	**4.577**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1P	22.53	13.35	300.0	0.0306	0.009	24.0	0.0	0.0
2	2P	21.90	13.35	300.0	0.0285	0.009	36.0	0.0	0.0
3	3P	13.35	11.00	200.0	0.0117	0.014	24.0	0.0	0.0

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment #25: #25 Bedford Roof Runoff Area=8,950 sf 100.00% Impervious Runoff Depth>2.68"
Tc=5.0 min CN=98 Runoff=0.62 cfs 0.046 af

Subcatchment #35: #35 Bedford Roof Runoff Area=27,201 sf 100.00% Impervious Runoff Depth>2.68"
Tc=5.0 min CN=98 Runoff=1.89 cfs 0.140 af

Subcatchment 1S: Watershed to Durham Runoff Area=53,341 sf 62.15% Impervious Runoff Depth>1.86"
Tc=10.0 min CN=89 Runoff=2.45 cfs 0.190 af

Subcatchment 2S: Woodbury Parking Lot Runoff Area=109,883 sf 74.87% Impervious Runoff Depth>2.12"
Tc=10.0 min CN=92 Runoff=5.64 cfs 0.447 af

Reach 100R: POI 100 Inflow=10.14 cfs 0.822 af
Outflow=10.14 cfs 0.822 af

Pond 1P: Durham SD System Peak Elev=23.18' Storage=6 cf Inflow=2.45 cfs 0.190 af
24.0" Round Culvert n=0.009 L=300.0' S=0.0306 '/' Outflow=2.46 cfs 0.190 af

Pond 2P: Bedford SD System Peak Elev=22.91' Storage=7 cf Inflow=7.20 cfs 0.586 af
36.0" Round Culvert n=0.009 L=300.0' S=0.0285 '/' Outflow=7.20 cfs 0.586 af

Pond 3P: DMH corner Bedford Durham Peak Elev=14.81' Storage=13 cf Inflow=10.14 cfs 0.822 af
24.0" Round Culvert n=0.014 L=200.0' S=0.0117 '/' Outflow=10.14 cfs 0.822 af

Total Runoff Area = 4.577 ac Runoff Volume = 0.822 af Average Runoff Depth = 2.16"
23.98% Pervious = 1.097 ac 76.02% Impervious = 3.480 ac

Summary for Subcatchment #25: #25 Bedford Roof

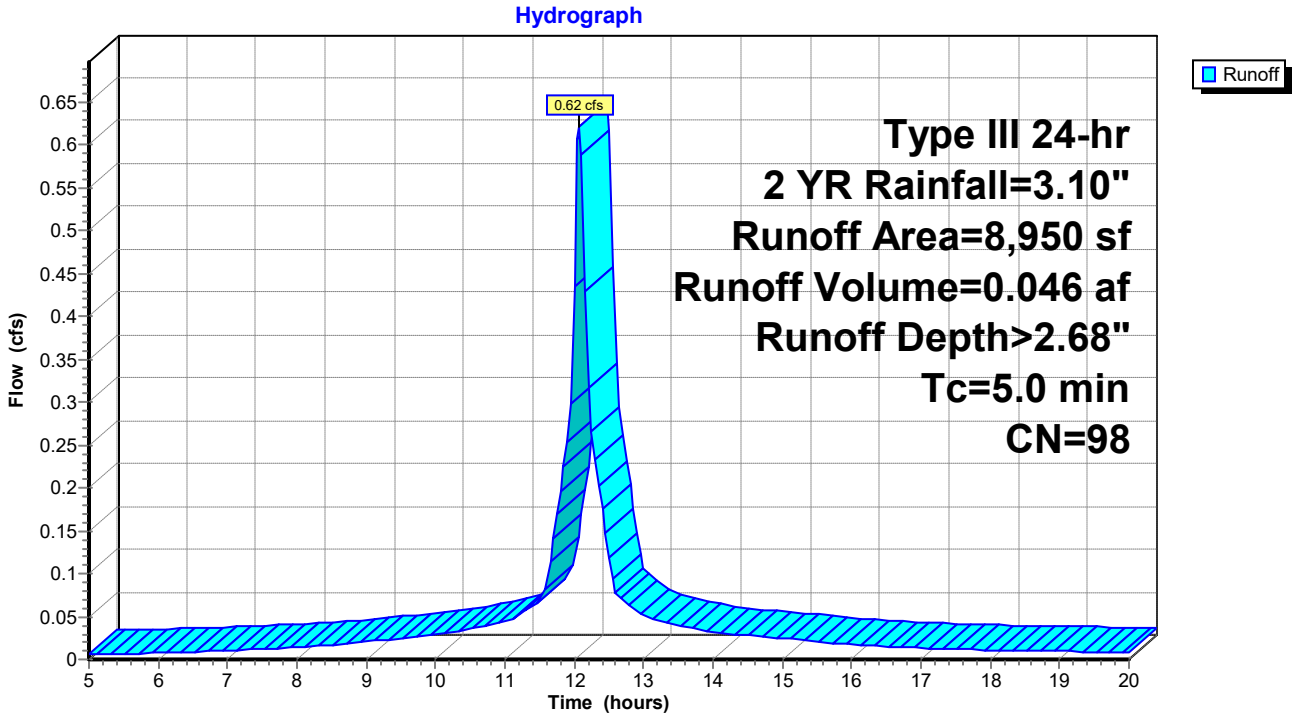
Runoff = 0.62 cfs @ 12.07 hrs, Volume= 0.046 af, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

Area (sf)	CN	Description
8,950	98	Paved parking, HSG A
8,950		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment #25: #25 Bedford Roof



Summary for Subcatchment #35: #35 Bedford Roof

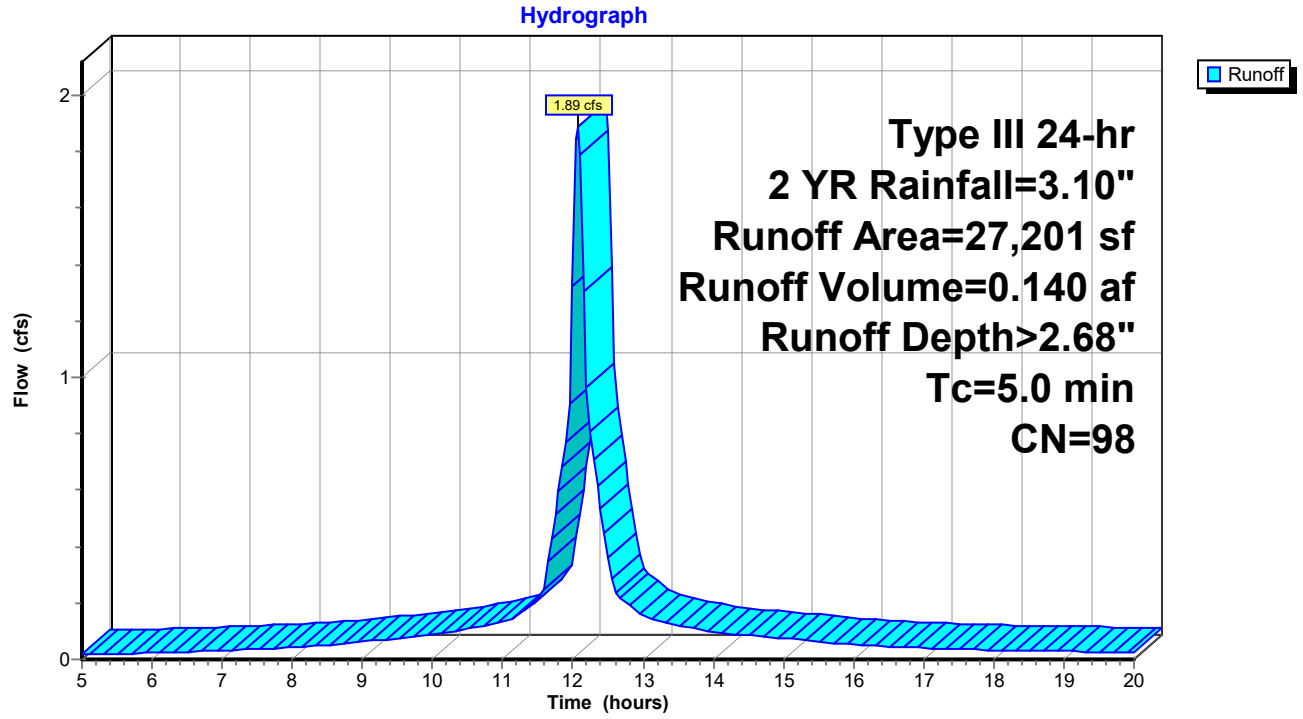
Runoff = 1.89 cfs @ 12.07 hrs, Volume= 0.140 af, Depth> 2.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

Area (sf)	CN	Description
27,201	98	Paved parking, HSG A
27,201		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment #35: #35 Bedford Roof



Summary for Subcatchment 1S: Watershed to Durham SD

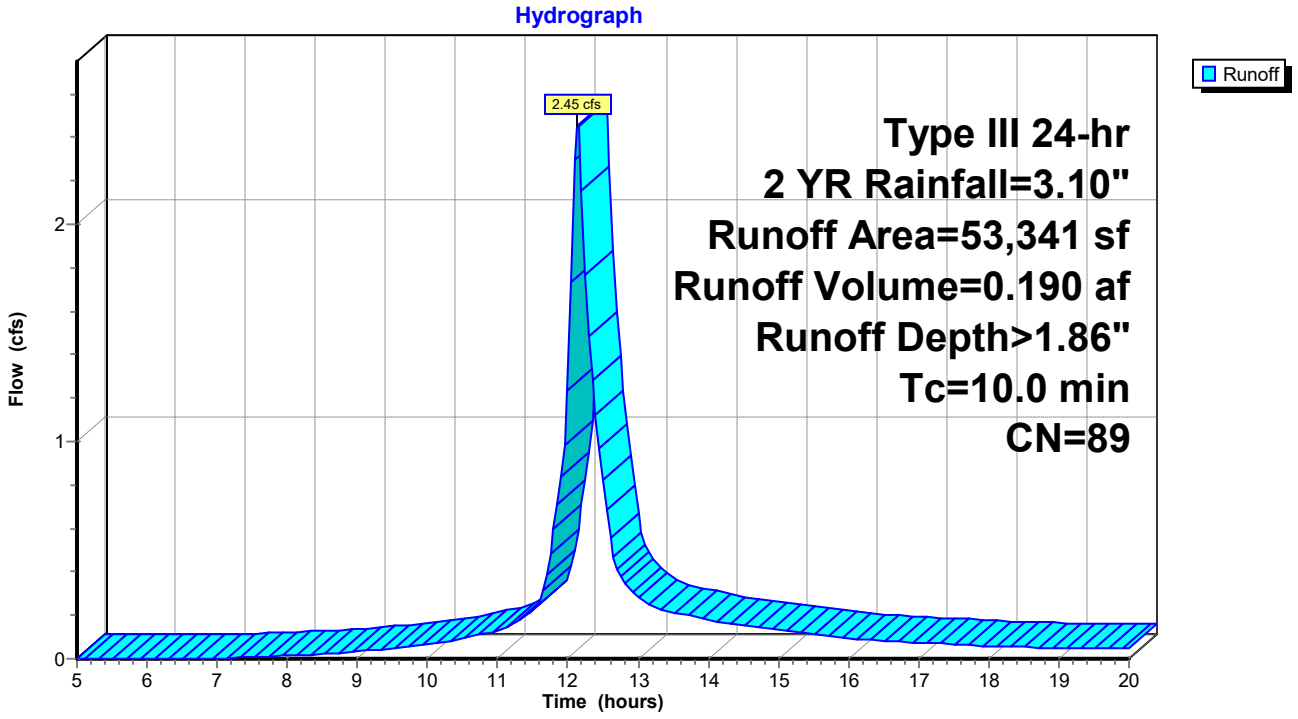
Runoff = 2.45 cfs @ 12.14 hrs, Volume= 0.190 af, Depth> 1.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

Area (sf)	CN	Description
33,152	98	Paved parking, HSG A
20,189	74	>75% Grass cover, Good, HSG C
53,341	89	Weighted Average
20,189		37.85% Pervious Area
33,152		62.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S: Watershed to Durham SD



Summary for Subcatchment 2S: Woodbury Parking Lot

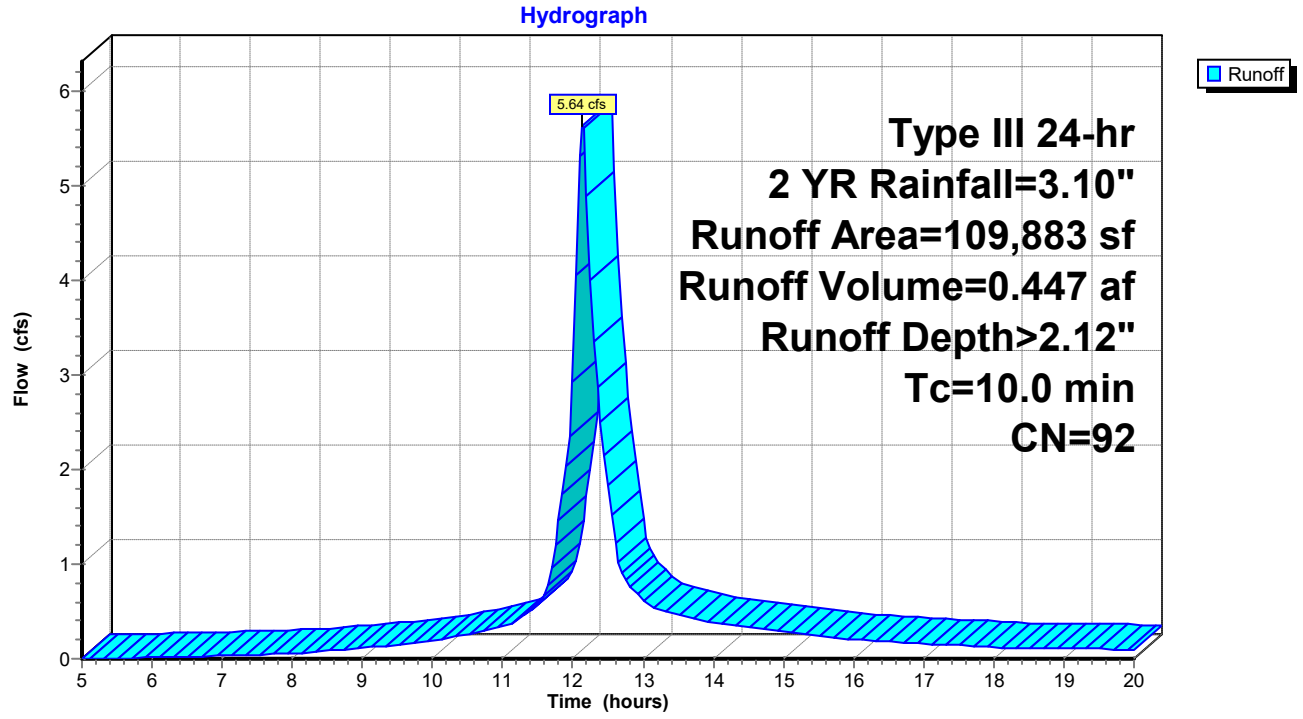
Runoff = 5.64 cfs @ 12.14 hrs, Volume= 0.447 af, Depth> 2.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

Area (sf)	CN	Description
82,271	98	Paved parking, HSG A
27,612	74	>75% Grass cover, Good, HSG C
109,883	92	Weighted Average
27,612		25.13% Pervious Area
82,271		74.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: Woodbury Parking Lot

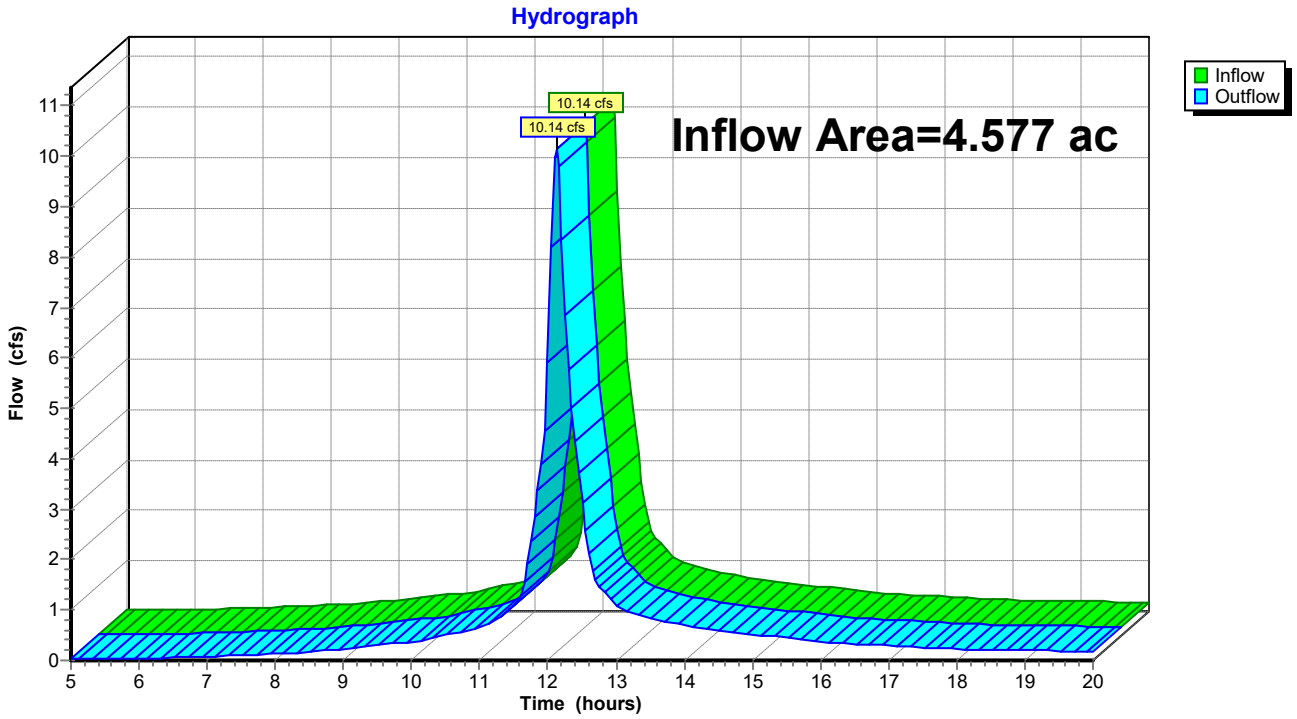


Summary for Reach 100R: POI 100

Inflow Area = 4.577 ac, 76.02% Impervious, Inflow Depth > 2.16" for 2 YR event
Inflow = 10.14 cfs @ 12.12 hrs, Volume= 0.822 af
Outflow = 10.14 cfs @ 12.12 hrs, Volume= 0.822 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 100R: POI 100



Summary for Pond 1P: Durham SD System

Inflow Area = 1.225 ac, 62.15% Impervious, Inflow Depth > 1.86" for 2 YR event
Inflow = 2.45 cfs @ 12.14 hrs, Volume= 0.190 af
Outflow = 2.46 cfs @ 12.14 hrs, Volume= 0.190 af, Atten= 0%, Lag= 0.0 min
Primary = 2.46 cfs @ 12.14 hrs, Volume= 0.190 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.18' @ 12.14 hrs Surf.Area= 9 sf Storage= 6 cf

Plug-Flow detention time= 0.1 min calculated for 0.190 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (782.5 - 782.4)

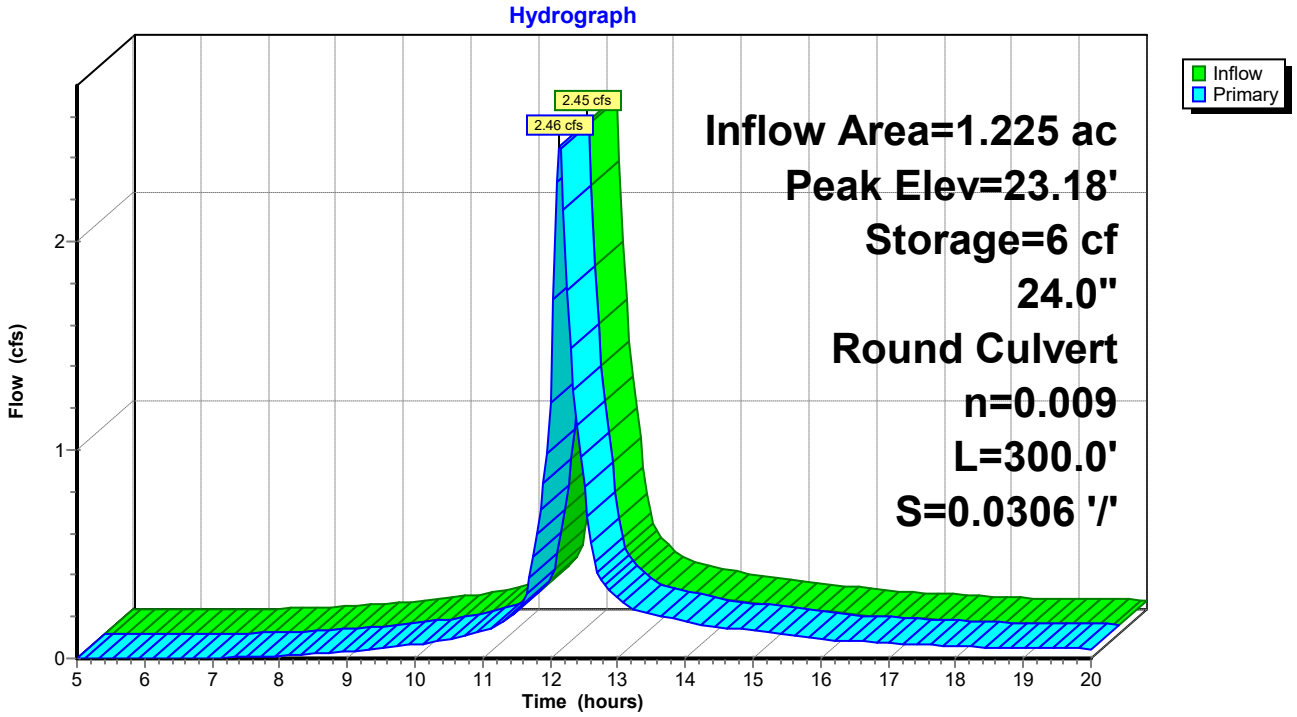
Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,591 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	100	1	51
29.00	15,000	6,040	6,091
30.00	1,000,000	507,500	513,591

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=2.42 cfs @ 12.14 hrs HW=23.18' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 2.42 cfs @ 2.74 fps)

Pond 1P: Durham SD System



Summary for Pond 2P: Bedford SD System

Inflow Area = 3.147 ac, 79.86% Impervious, Inflow Depth > 2.24" for 2 YR event
Inflow = 7.20 cfs @ 12.12 hrs, Volume= 0.586 af
Outflow = 7.20 cfs @ 12.12 hrs, Volume= 0.586 af, Atten= 0%, Lag= 0.0 min
Primary = 7.20 cfs @ 12.12 hrs, Volume= 0.586 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 22.91' @ 12.12 hrs Surf.Area= 9 sf Storage= 7 cf

Plug-Flow detention time= 0.0 min calculated for 0.584 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (763.1 - 763.1)

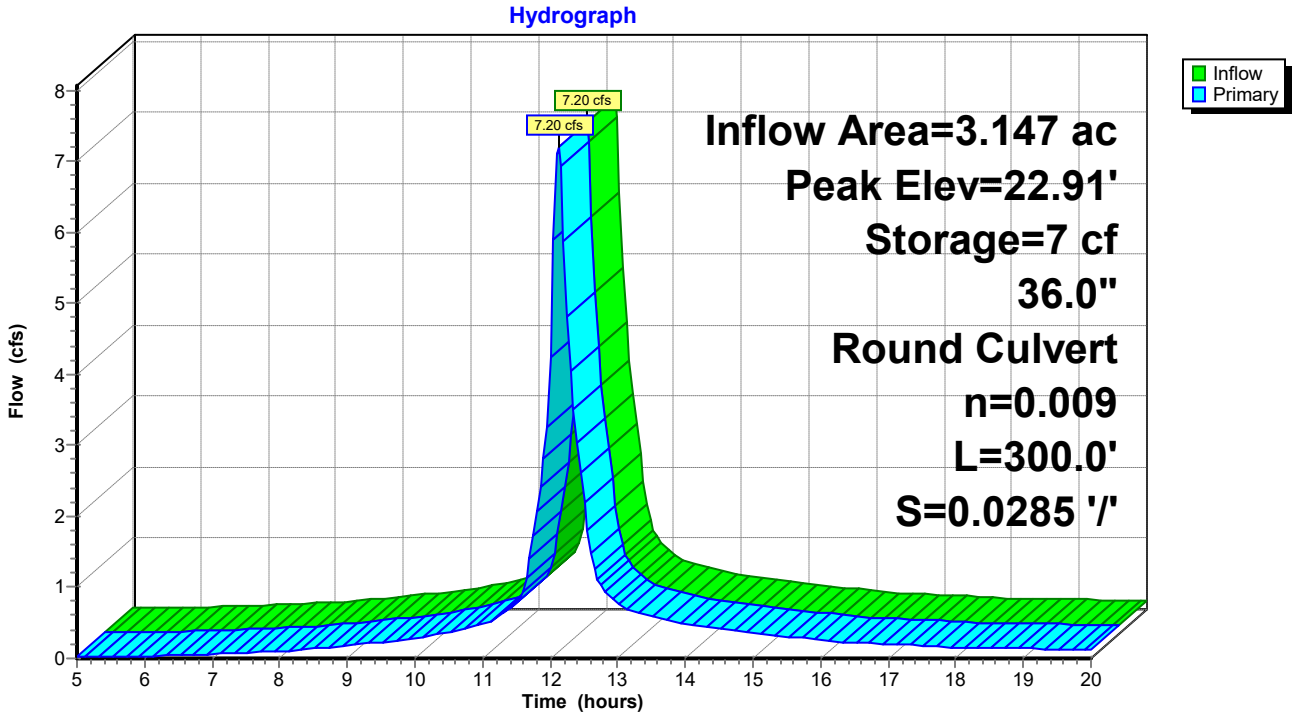
Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=7.03 cfs @ 12.12 hrs HW=22.90' (Free Discharge)
1=Culvert (Inlet Controls 7.03 cfs @ 3.41 fps)

Pond 2P: Bedford SD System



Summary for Pond 3P: DMH corner Bedford Durham

Inflow Area = 4.577 ac, 76.02% Impervious, Inflow Depth > 2.16" for 2 YR event
Inflow = 10.14 cfs @ 12.12 hrs, Volume= 0.822 af
Outflow = 10.14 cfs @ 12.12 hrs, Volume= 0.822 af, Atten= 0%, Lag= 0.0 min
Primary = 10.14 cfs @ 12.12 hrs, Volume= 0.822 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 14.81' @ 12.12 hrs Surf.Area= 9 sf Storage= 13 cf

Plug-Flow detention time= 0.1 min calculated for 0.822 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (766.2 - 766.2)

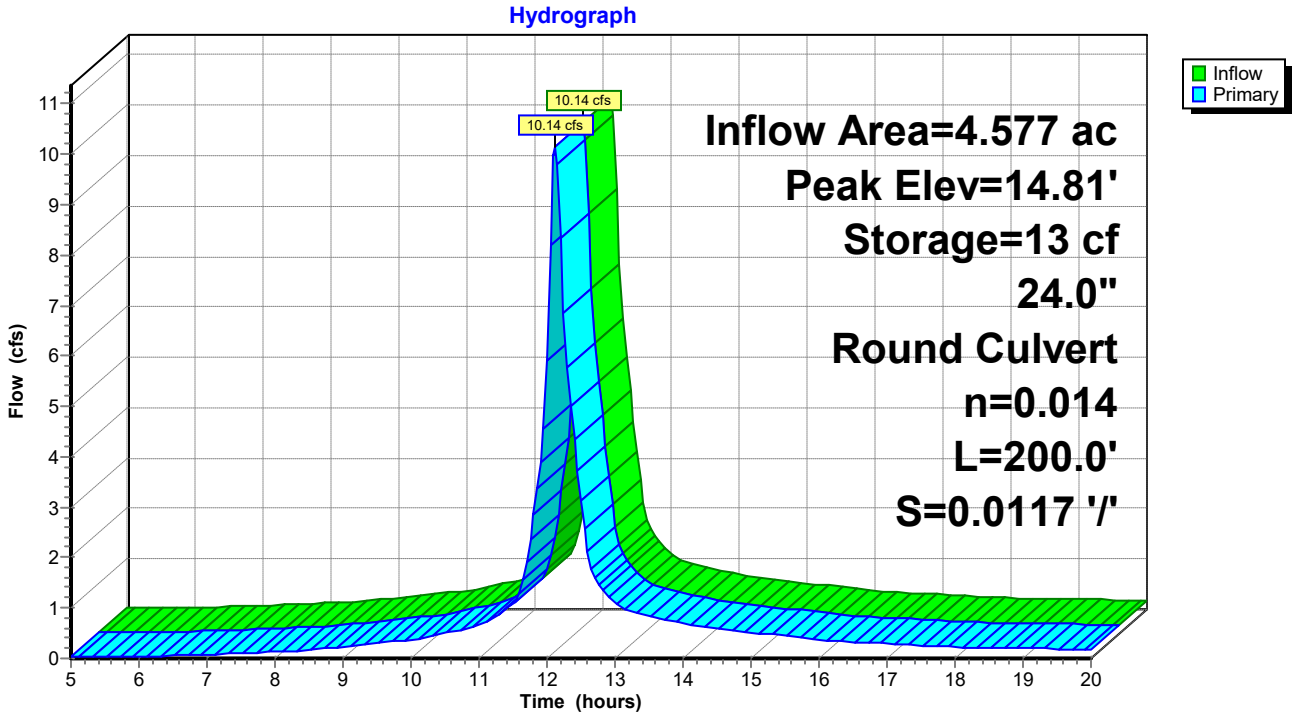
Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=9.91 cfs @ 12.12 hrs HW=14.79' (Free Discharge)
↑**1=Culvert** (Inlet Controls 9.91 cfs @ 4.09 fps)

Pond 3P: DMH corner Bedford Durham



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment #25: #25 Bedford Roof Runoff Area=8,950 sf 100.00% Impervious Runoff Depth>4.05"
Tc=5.0 min CN=98 Runoff=0.93 cfs 0.069 af

Subcatchment #35: #35 Bedford Roof Runoff Area=27,201 sf 100.00% Impervious Runoff Depth>4.05"
Tc=5.0 min CN=98 Runoff=2.83 cfs 0.211 af

Subcatchment 1S: Watershed to Durham Runoff Area=53,341 sf 62.15% Impervious Runoff Depth>3.19"
Tc=10.0 min CN=89 Runoff=4.11 cfs 0.326 af

Subcatchment 2S: Woodbury Parking Lot Runoff Area=109,883 sf 74.87% Impervious Runoff Depth>3.49"
Tc=10.0 min CN=92 Runoff=9.03 cfs 0.734 af

Reach 100R: POI 100 Inflow=16.21 cfs 1.341 af
Outflow=16.21 cfs 1.341 af

Pond 1P: Durham SD System Peak Elev=23.39' Storage=8 cf Inflow=4.11 cfs 0.326 af
24.0" Round Culvert n=0.009 L=300.0' S=0.0306 '/' Outflow=4.11 cfs 0.326 af

Pond 2P: Bedford SD System Peak Elev=23.20' Storage=9 cf Inflow=11.37 cfs 0.945 af
36.0" Round Culvert n=0.009 L=300.0' S=0.0285 '/' Outflow=11.37 cfs 0.945 af

Pond 3P: DMH corner Bedford Durham Peak Elev=15.50' Storage=19 cf Inflow=16.22 cfs 1.341 af
24.0" Round Culvert n=0.014 L=200.0' S=0.0117 '/' Outflow=16.21 cfs 1.341 af

Total Runoff Area = 4.577 ac Runoff Volume = 1.341 af Average Runoff Depth = 3.52"
23.98% Pervious = 1.097 ac 76.02% Impervious = 3.480 ac

Summary for Subcatchment #25: #25 Bedford Roof

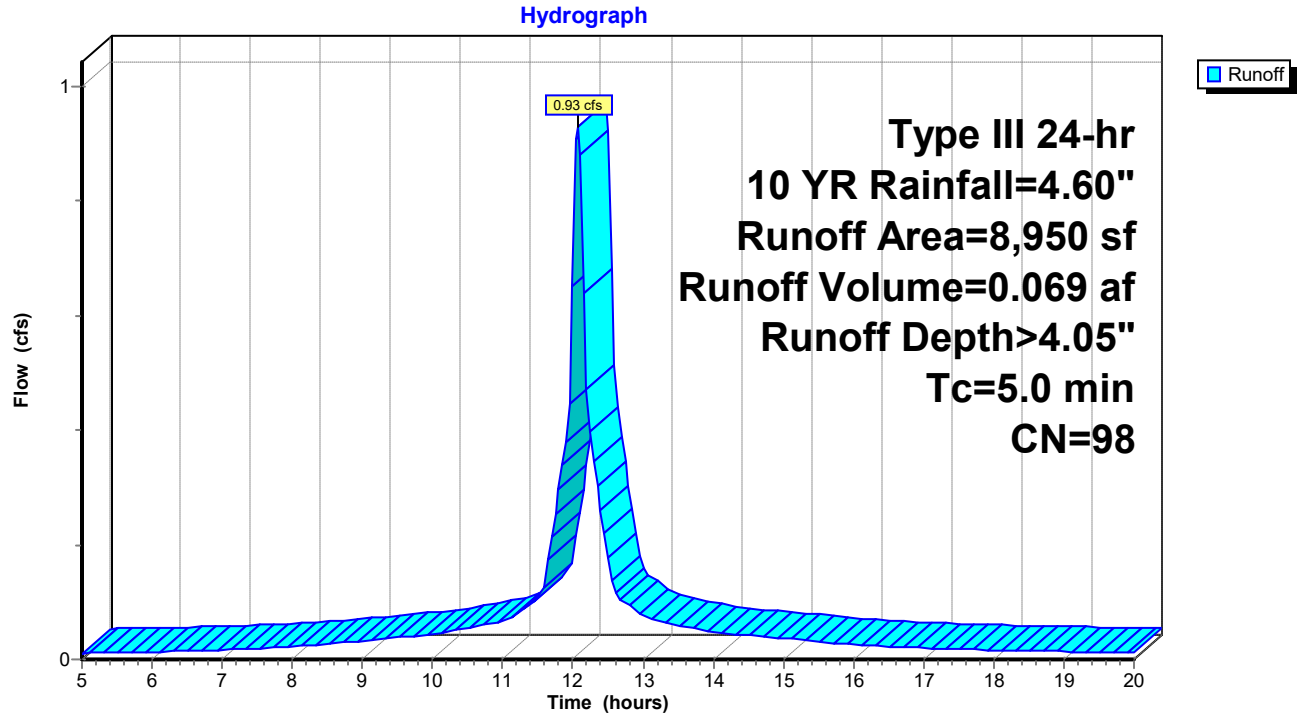
Runoff = 0.93 cfs @ 12.07 hrs, Volume= 0.069 af, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

Area (sf)	CN	Description
8,950	98	Paved parking, HSG A
8,950		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment #25: #25 Bedford Roof



Summary for Subcatchment #35: #35 Bedford Roof

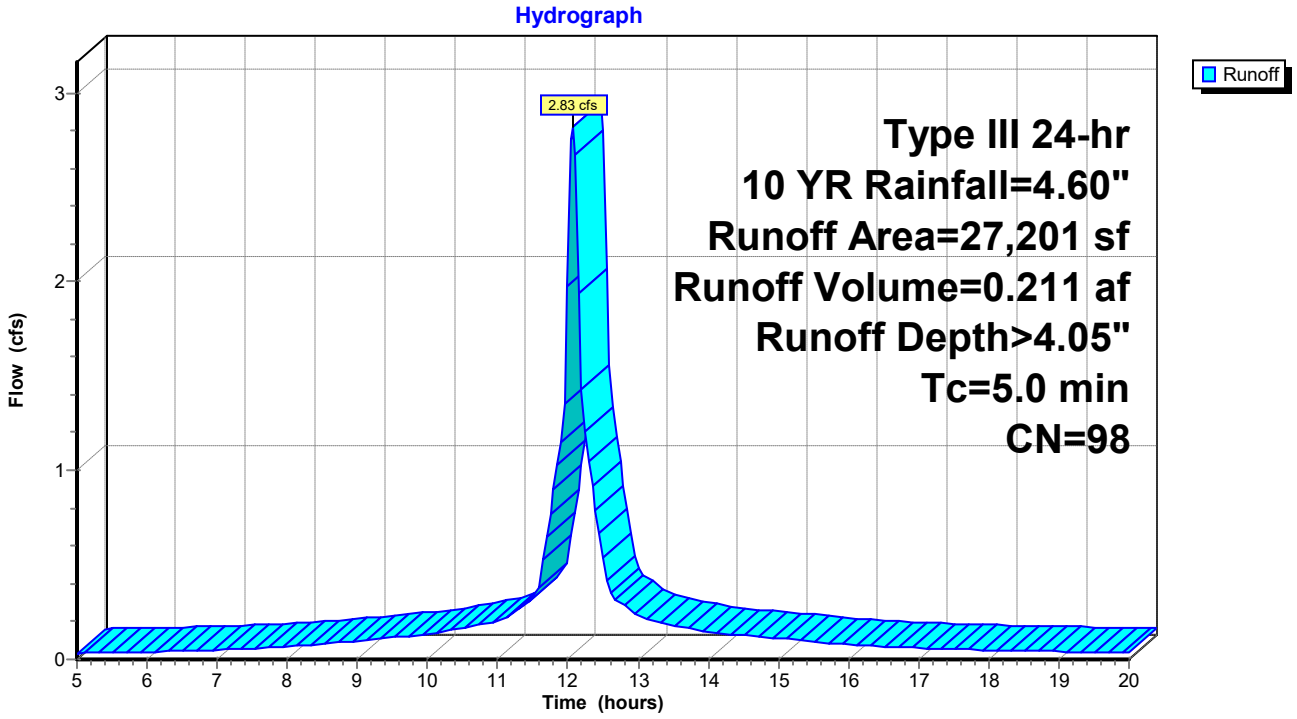
Runoff = 2.83 cfs @ 12.07 hrs, Volume= 0.211 af, Depth> 4.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

Area (sf)	CN	Description
27,201	98	Paved parking, HSG A
27,201		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment #35: #35 Bedford Roof



Summary for Subcatchment 1S: Watershed to Durham SD

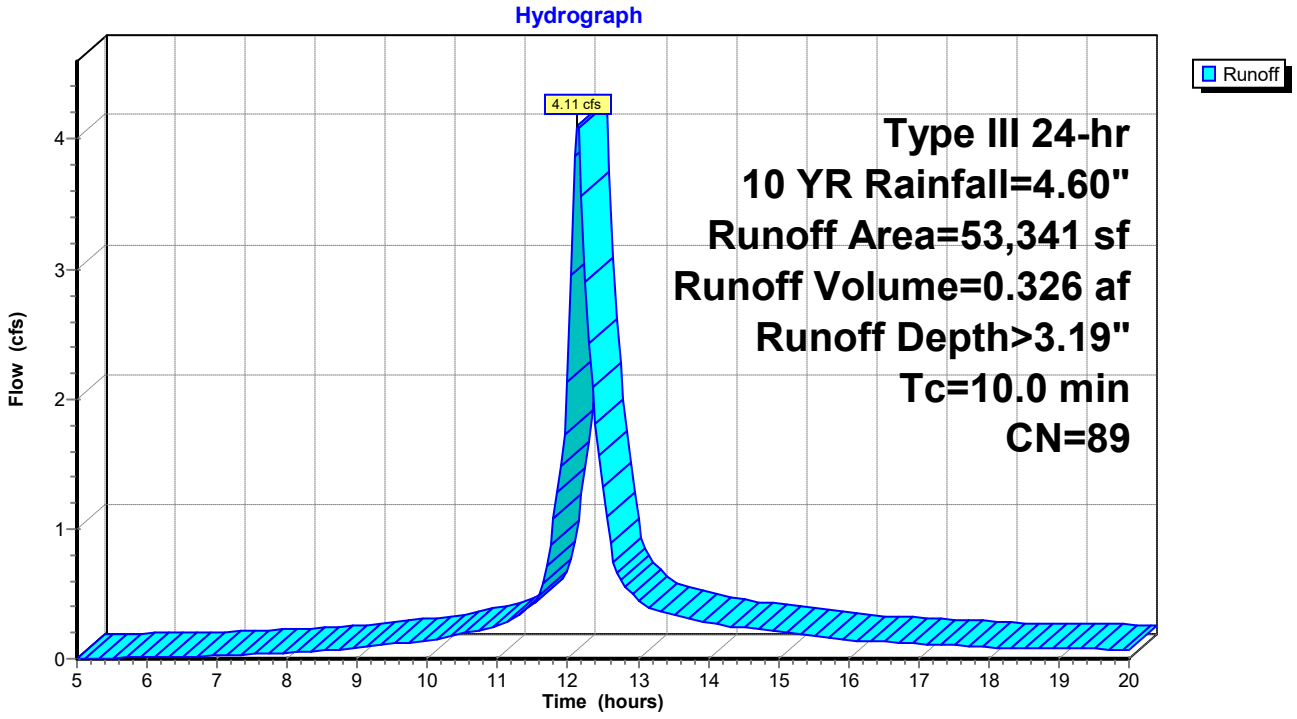
Runoff = 4.11 cfs @ 12.14 hrs, Volume= 0.326 af, Depth> 3.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

Area (sf)	CN	Description
33,152	98	Paved parking, HSG A
20,189	74	>75% Grass cover, Good, HSG C
53,341	89	Weighted Average
20,189		37.85% Pervious Area
33,152		62.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S: Watershed to Durham SD



Summary for Subcatchment 2S: Woodbury Parking Lot

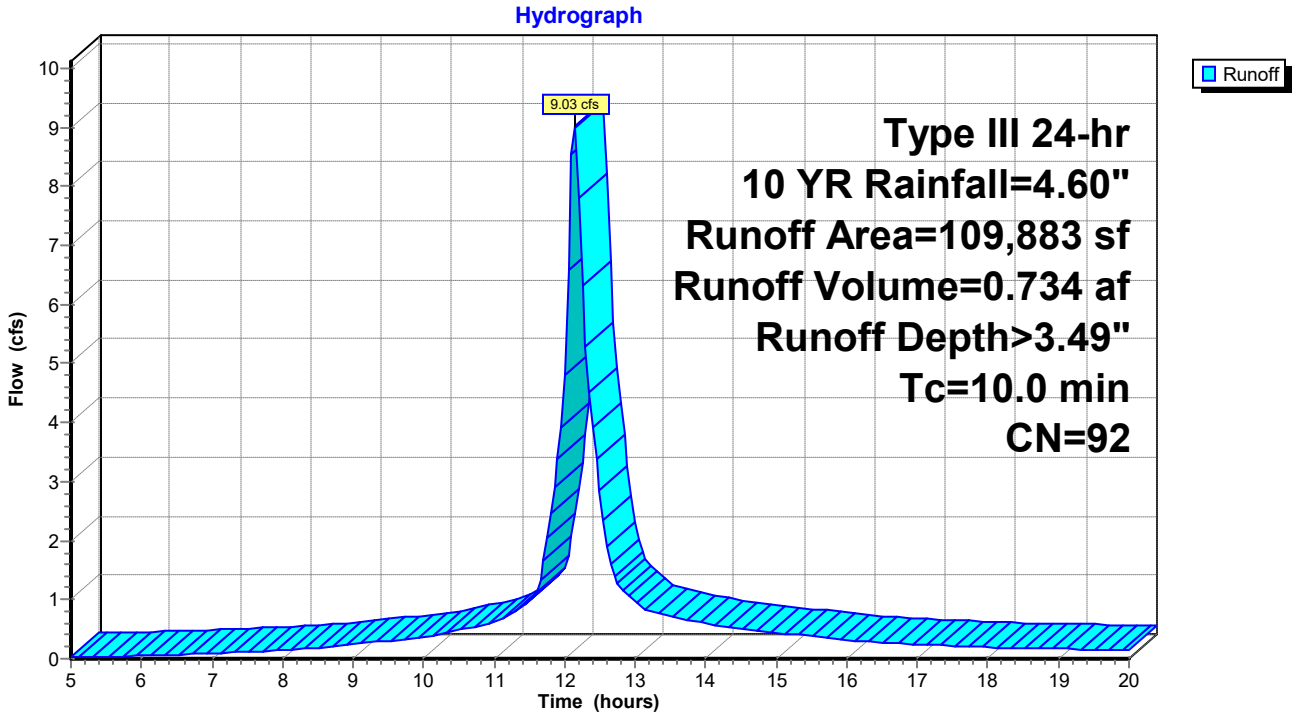
Runoff = 9.03 cfs @ 12.14 hrs, Volume= 0.734 af, Depth> 3.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

Area (sf)	CN	Description
82,271	98	Paved parking, HSG A
27,612	74	>75% Grass cover, Good, HSG C
109,883	92	Weighted Average
27,612		25.13% Pervious Area
82,271		74.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: Woodbury Parking Lot

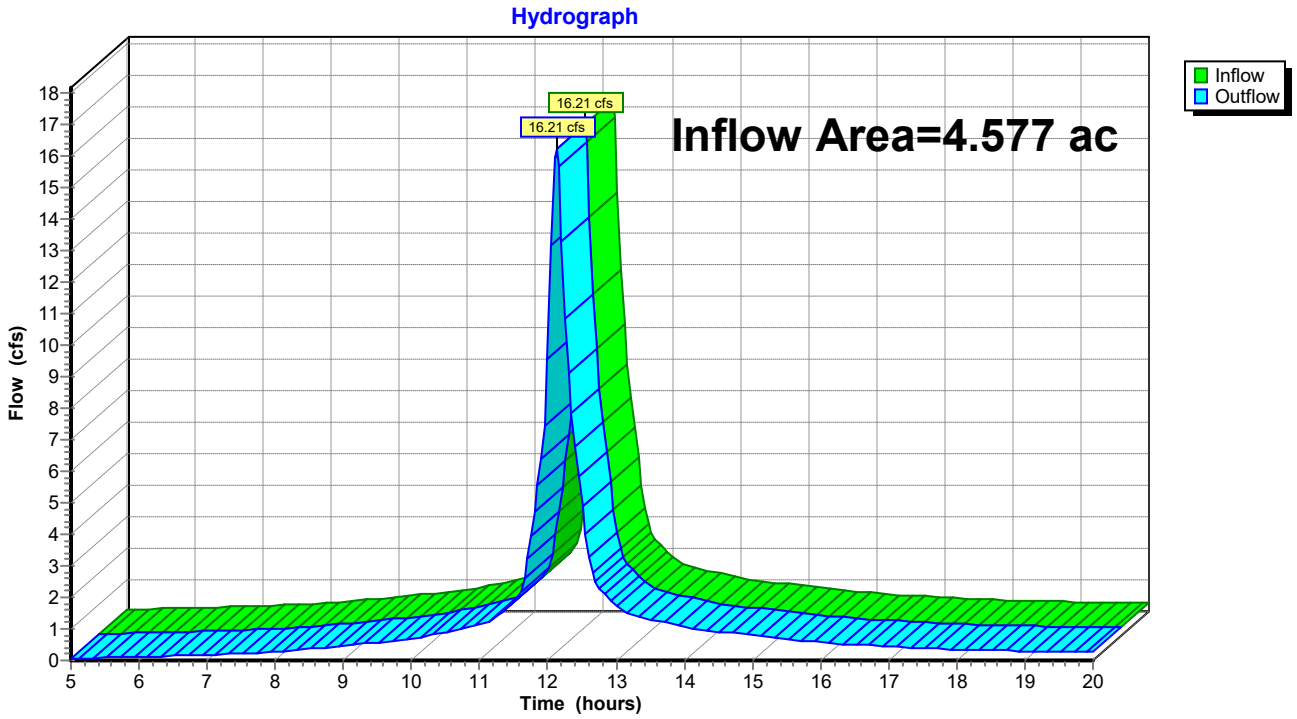


Summary for Reach 100R: POI 100

Inflow Area = 4.577 ac, 76.02% Impervious, Inflow Depth > 3.52" for 10 YR event
Inflow = 16.21 cfs @ 12.12 hrs, Volume= 1.341 af
Outflow = 16.21 cfs @ 12.12 hrs, Volume= 1.341 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 100R: POI 100



Summary for Pond 1P: Durham SD System

Inflow Area = 1.225 ac, 62.15% Impervious, Inflow Depth > 3.19" for 10 YR event
Inflow = 4.11 cfs @ 12.14 hrs, Volume= 0.326 af
Outflow = 4.11 cfs @ 12.14 hrs, Volume= 0.326 af, Atten= 0%, Lag= 0.0 min
Primary = 4.11 cfs @ 12.14 hrs, Volume= 0.326 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.39' @ 12.14 hrs Surf.Area= 9 sf Storage= 8 cf

Plug-Flow detention time= 0.1 min calculated for 0.326 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (769.6 - 769.6)

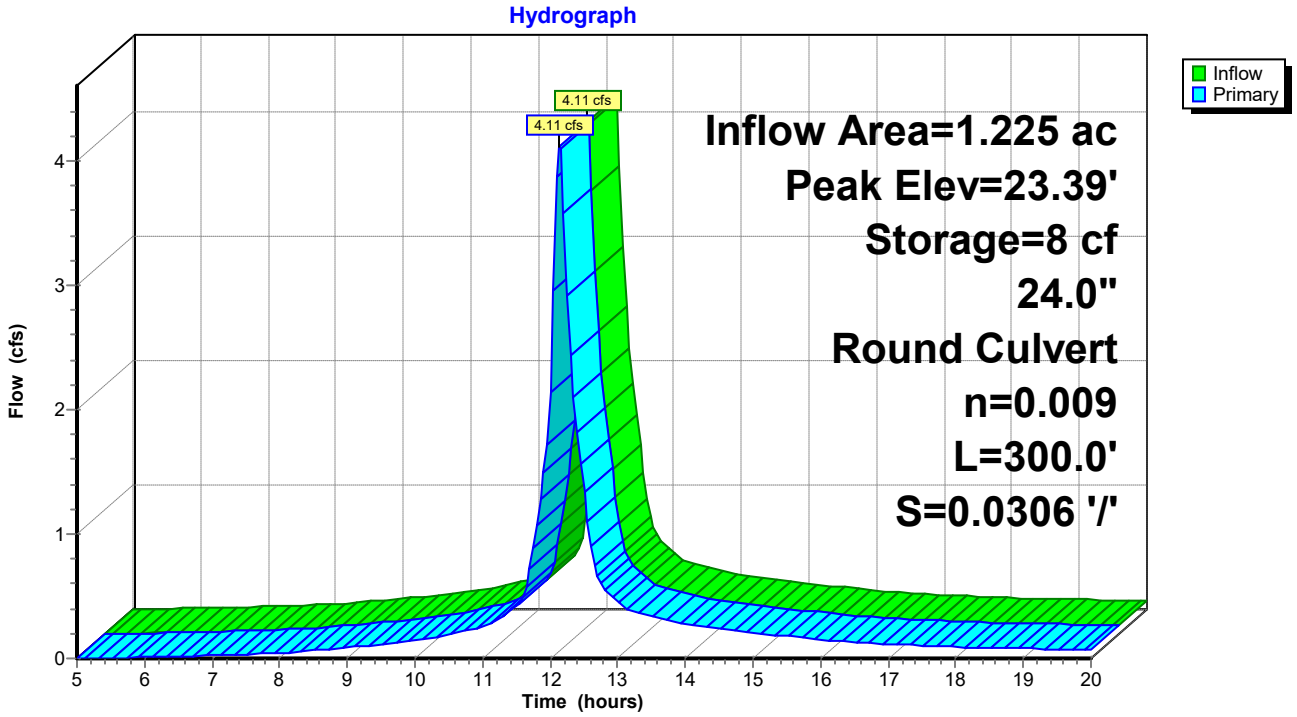
Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,591 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	100	1	51
29.00	15,000	6,040	6,091
30.00	1,000,000	507,500	513,591

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=4.04 cfs @ 12.14 hrs HW=23.39' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 4.04 cfs @ 3.15 fps)

Pond 1P: Durham SD System



Summary for Pond 2P: Bedford SD System

Inflow Area = 3.147 ac, 79.86% Impervious, Inflow Depth > 3.60" for 10 YR event
Inflow = 11.37 cfs @ 12.12 hrs, Volume= 0.945 af
Outflow = 11.37 cfs @ 12.12 hrs, Volume= 0.945 af, Atten= 0%, Lag= 0.0 min
Primary = 11.37 cfs @ 12.12 hrs, Volume= 0.945 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.20' @ 12.12 hrs Surf.Area= 9 sf Storage= 9 cf

Plug-Flow detention time= 0.0 min calculated for 0.942 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (754.2 - 754.2)

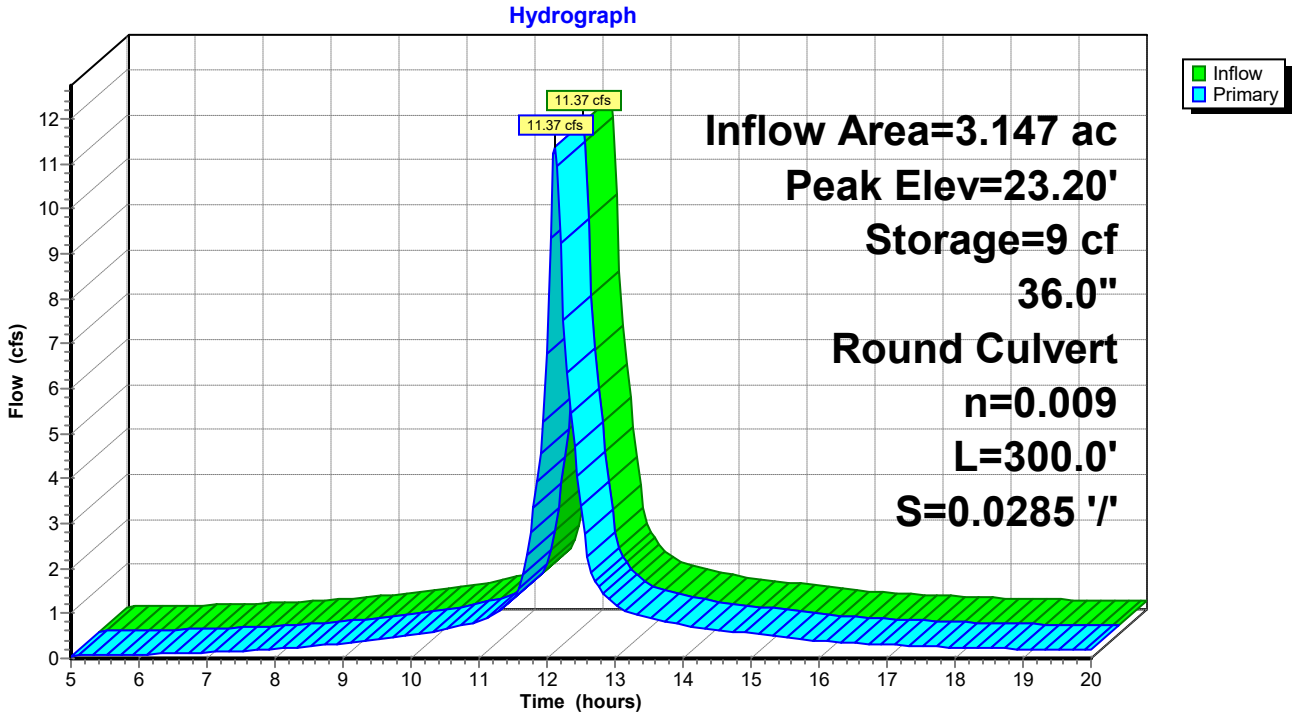
Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=11.11 cfs @ 12.12 hrs HW=23.18' (Free Discharge)
1=Culvert (Inlet Controls 11.11 cfs @ 3.86 fps)

Pond 2P: Bedford SD System



Summary for Pond 3P: DMH corner Bedford Durham

Inflow Area = 4.577 ac, 76.02% Impervious, Inflow Depth > 3.52" for 10 YR event
Inflow = 16.22 cfs @ 12.12 hrs, Volume= 1.341 af
Outflow = 16.21 cfs @ 12.12 hrs, Volume= 1.341 af, Atten= 0%, Lag= 0.0 min
Primary = 16.21 cfs @ 12.12 hrs, Volume= 1.341 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 15.50' @ 12.12 hrs Surf.Area= 9 sf Storage= 19 cf

Plug-Flow detention time= 0.1 min calculated for 1.336 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (757.0 - 757.0)

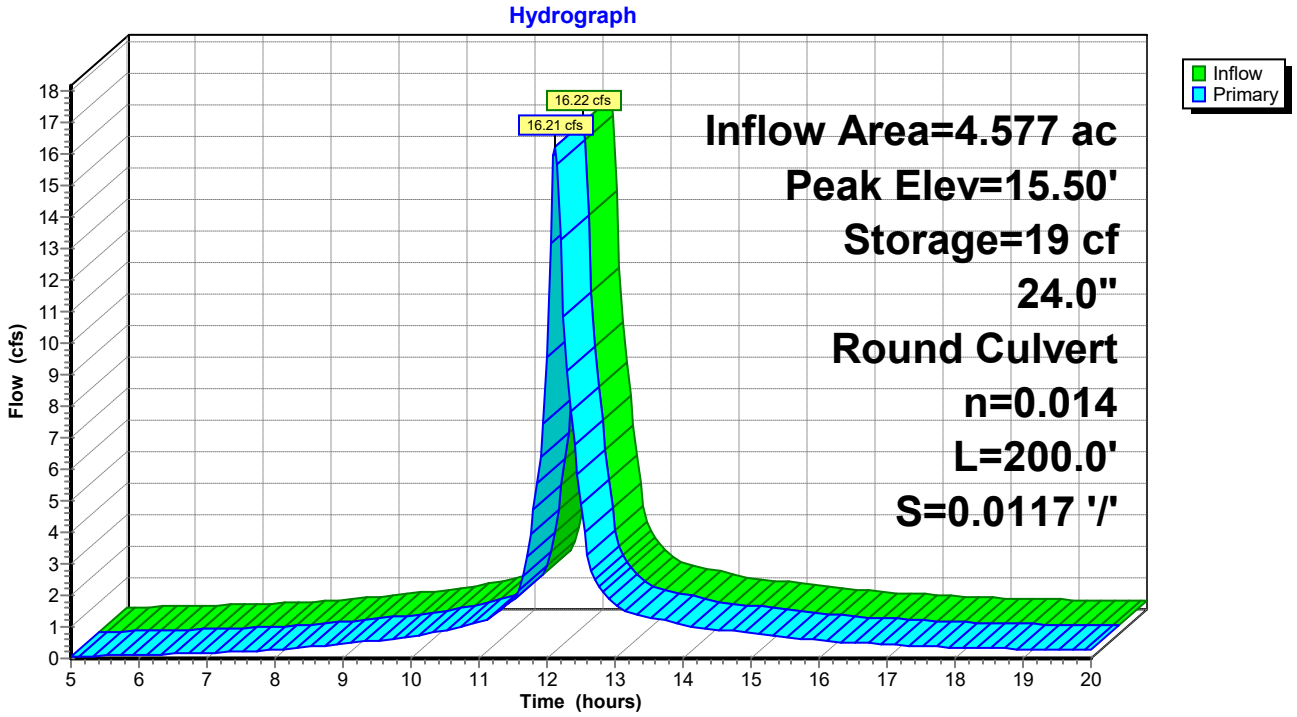
Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=15.85 cfs @ 12.12 hrs HW=15.45' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 15.85 cfs @ 5.04 fps)

Pond 3P: DMH corner Bedford Durham



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment #25: #25 Bedford Roof Runoff Area=8,950 sf 100.00% Impervious Runoff Depth>5.15"
Tc=5.0 min CN=98 Runoff=1.18 cfs 0.088 af

Subcatchment #35: #35 Bedford Roof Runoff Area=27,201 sf 100.00% Impervious Runoff Depth>5.15"
Tc=5.0 min CN=98 Runoff=3.57 cfs 0.268 af

Subcatchment 1S: Watershed to Durham Runoff Area=53,341 sf 62.15% Impervious Runoff Depth>4.29"
Tc=10.0 min CN=89 Runoff=5.42 cfs 0.438 af

Subcatchment 2S: Woodbury Parking Lot Runoff Area=109,883 sf 74.87% Impervious Runoff Depth>4.60"
Tc=10.0 min CN=92 Runoff=11.71 cfs 0.967 af

Reach 100R: POI 100 Inflow=21.05 cfs 1.760 af
Outflow=21.05 cfs 1.760 af

Pond 1P: Durham SD System Peak Elev=23.54' Storage=9 cf Inflow=5.42 cfs 0.438 af
24.0" Round Culvert n=0.009 L=300.0' S=0.0306 '/' Outflow=5.42 cfs 0.438 af

Pond 2P: Bedford SD System Peak Elev=23.40' Storage=11 cf Inflow=14.68 cfs 1.235 af
36.0" Round Culvert n=0.009 L=300.0' S=0.0285 '/' Outflow=14.68 cfs 1.235 af

Pond 3P: DMH corner Bedford Durham Peak Elev=16.28' Storage=26 cf Inflow=21.05 cfs 1.760 af
24.0" Round Culvert n=0.014 L=200.0' S=0.0117 '/' Outflow=21.05 cfs 1.760 af

Total Runoff Area = 4.577 ac Runoff Volume = 1.760 af Average Runoff Depth = 4.62"
23.98% Pervious = 1.097 ac 76.02% Impervious = 3.480 ac

Summary for Subcatchment #25: #25 Bedford Roof

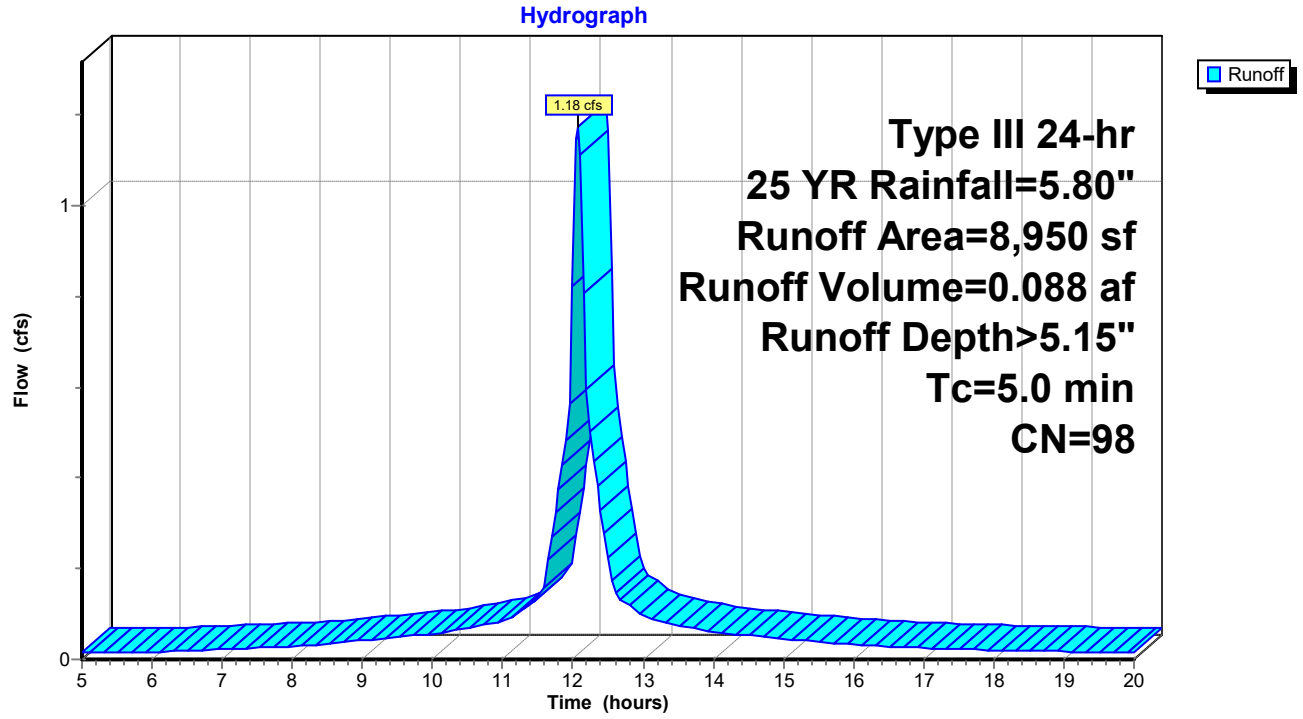
Runoff = 1.18 cfs @ 12.07 hrs, Volume= 0.088 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

Area (sf)	CN	Description
8,950	98	Paved parking, HSG A
8,950		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment #25: #25 Bedford Roof



Summary for Subcatchment #35: #35 Bedford Roof

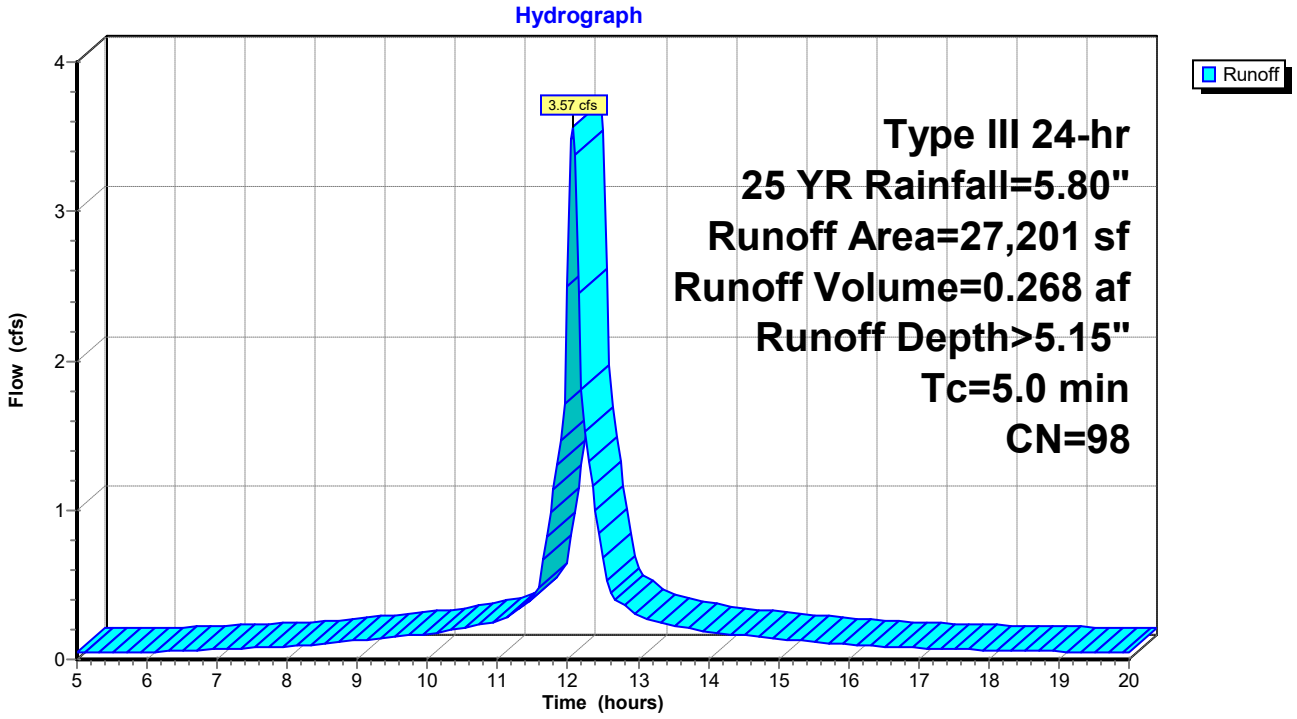
Runoff = 3.57 cfs @ 12.07 hrs, Volume= 0.268 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

Area (sf)	CN	Description
27,201	98	Paved parking, HSG A
27,201		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment #35: #35 Bedford Roof



Summary for Subcatchment 1S: Watershed to Durham SD

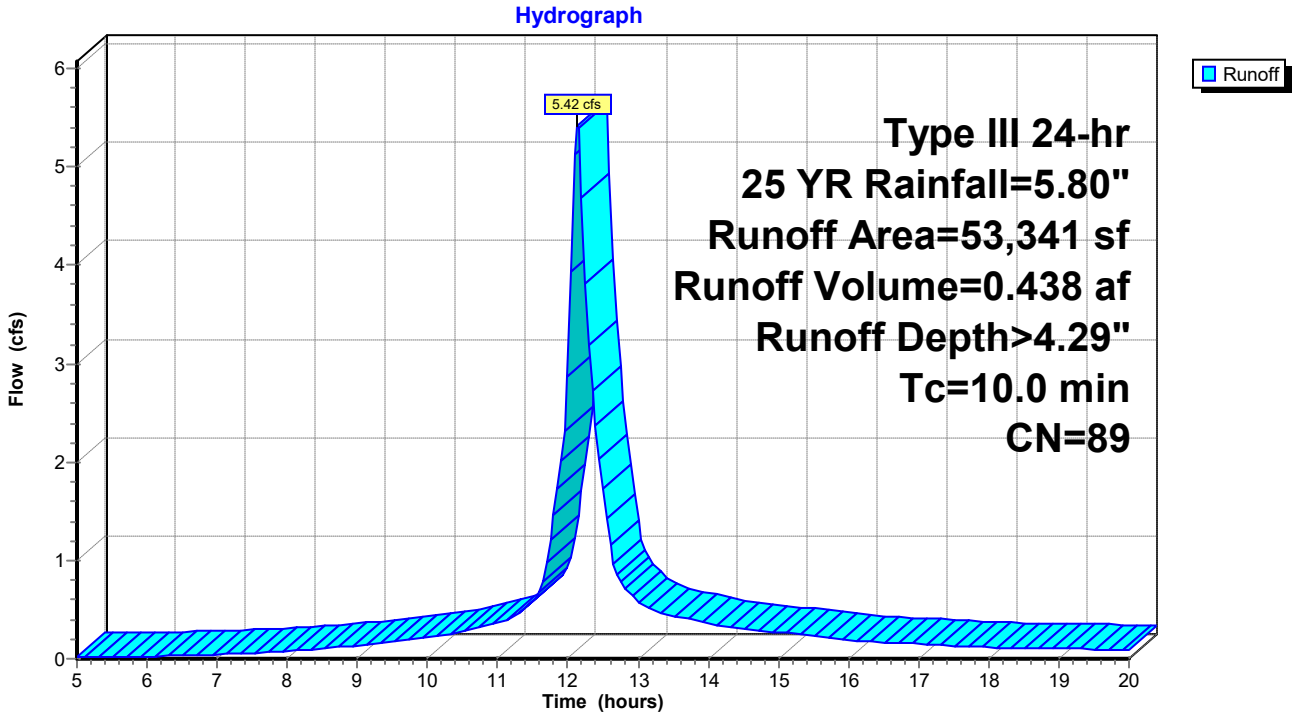
Runoff = 5.42 cfs @ 12.14 hrs, Volume= 0.438 af, Depth> 4.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

Area (sf)	CN	Description
33,152	98	Paved parking, HSG A
20,189	74	>75% Grass cover, Good, HSG C
53,341	89	Weighted Average
20,189		37.85% Pervious Area
33,152		62.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S: Watershed to Durham SD



Summary for Subcatchment 2S: Woodbury Parking Lot

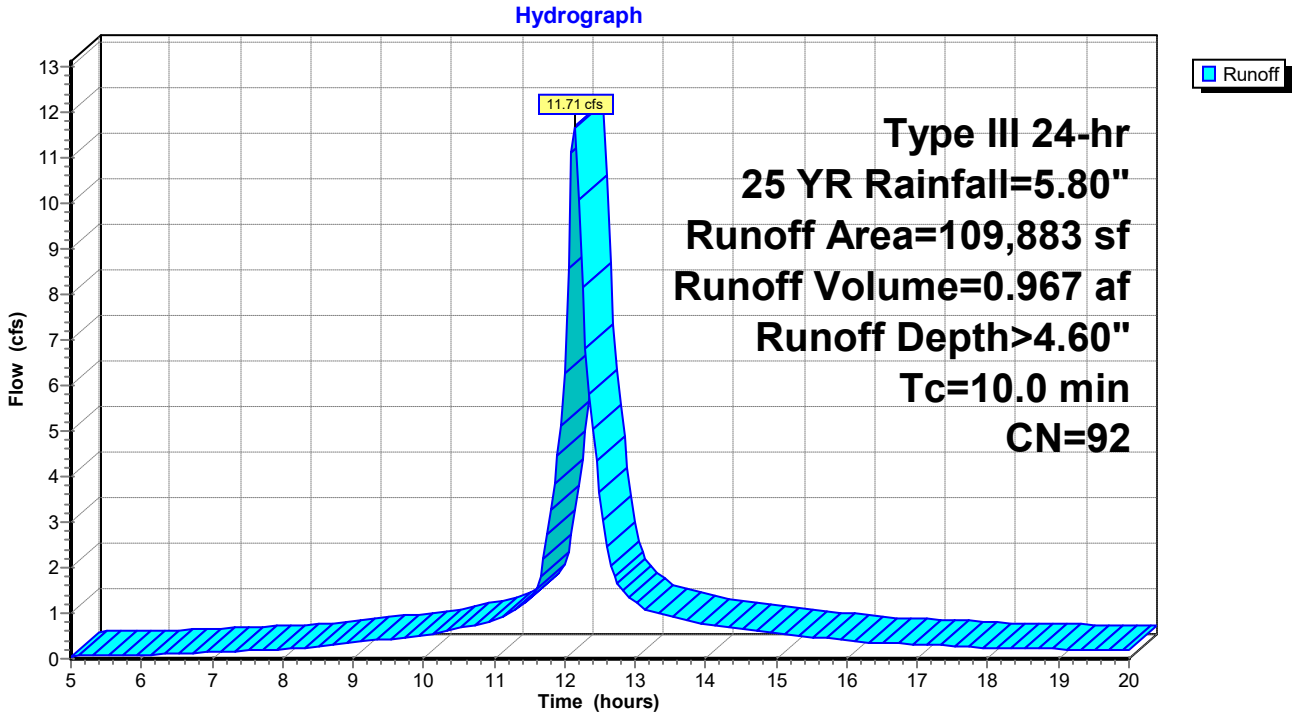
Runoff = 11.71 cfs @ 12.14 hrs, Volume= 0.967 af, Depth> 4.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

Area (sf)	CN	Description
82,271	98	Paved parking, HSG A
27,612	74	>75% Grass cover, Good, HSG C
109,883	92	Weighted Average
27,612		25.13% Pervious Area
82,271		74.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: Woodbury Parking Lot

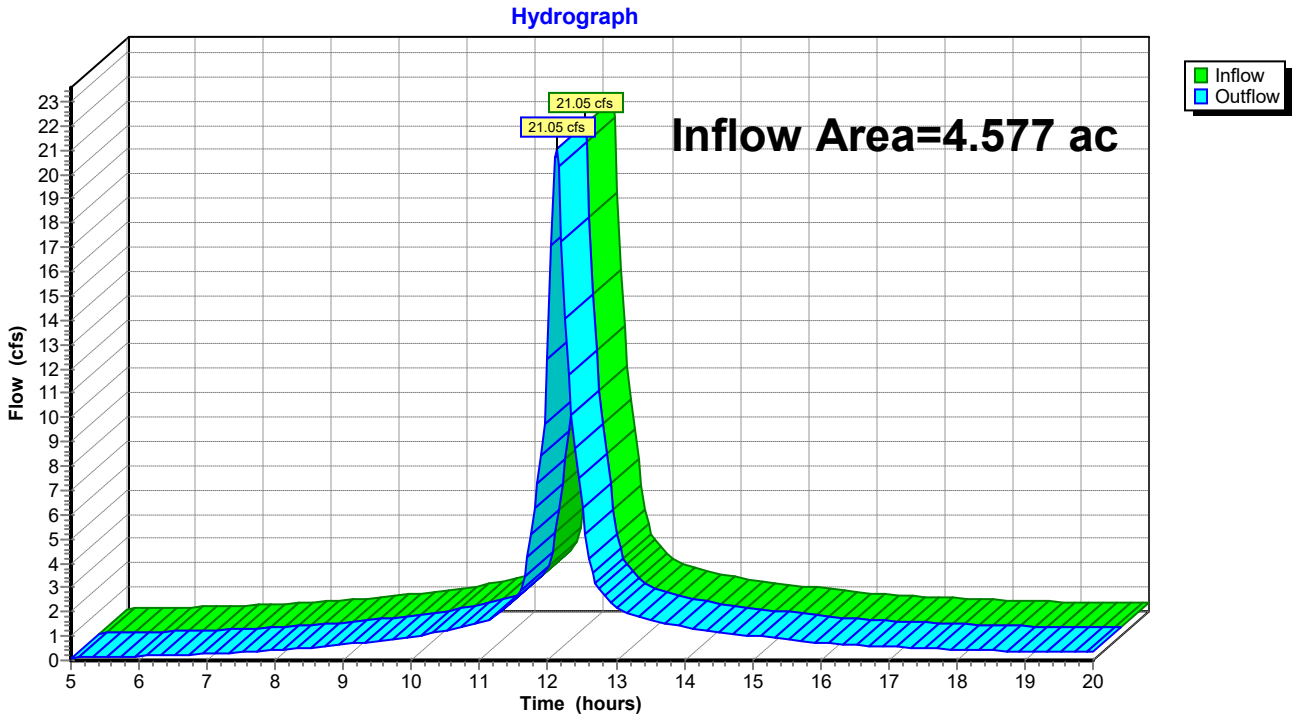


Summary for Reach 100R: POI 100

Inflow Area = 4.577 ac, 76.02% Impervious, Inflow Depth > 4.62" for 25 YR event
Inflow = 21.05 cfs @ 12.12 hrs, Volume= 1.760 af
Outflow = 21.05 cfs @ 12.12 hrs, Volume= 1.760 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 100R: POI 100



Summary for Pond 1P: Durham SD System

Inflow Area = 1.225 ac, 62.15% Impervious, Inflow Depth > 4.29" for 25 YR event
Inflow = 5.42 cfs @ 12.14 hrs, Volume= 0.438 af
Outflow = 5.42 cfs @ 12.14 hrs, Volume= 0.438 af, Atten= 0%, Lag= 0.0 min
Primary = 5.42 cfs @ 12.14 hrs, Volume= 0.438 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.54' @ 12.14 hrs Surf.Area= 9 sf Storage= 9 cf

Plug-Flow detention time= 0.1 min calculated for 0.438 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (762.9 - 762.9)

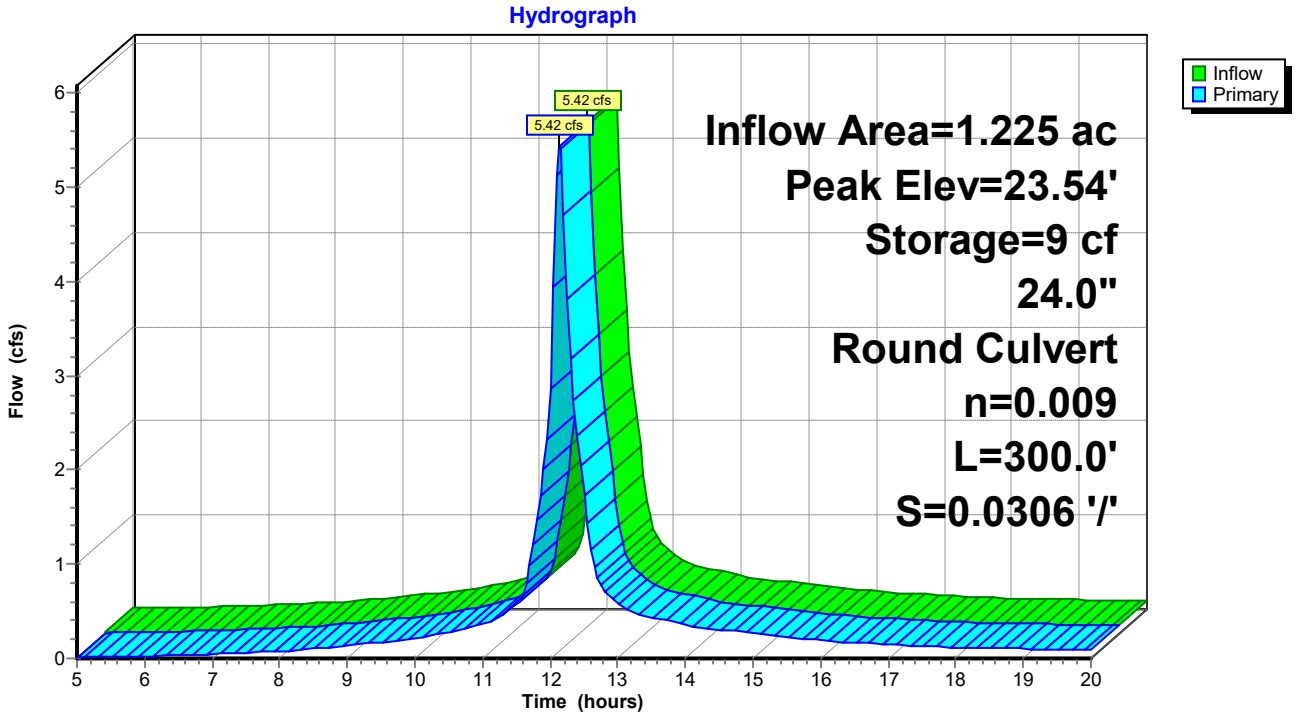
Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,591 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	100	1	51
29.00	15,000	6,040	6,091
30.00	1,000,000	507,500	513,591

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=5.34 cfs @ 12.14 hrs HW=23.53' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 5.34 cfs @ 3.40 fps)

Pond 1P: Durham SD System



Summary for Pond 2P: Bedford SD System

Inflow Area = 3.147 ac, 79.86% Impervious, Inflow Depth > 4.71" for 25 YR event
Inflow = 14.68 cfs @ 12.12 hrs, Volume= 1.235 af
Outflow = 14.68 cfs @ 12.12 hrs, Volume= 1.235 af, Atten= 0%, Lag= 0.0 min
Primary = 14.68 cfs @ 12.12 hrs, Volume= 1.235 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.40' @ 12.12 hrs Surf.Area= 9 sf Storage= 11 cf

Plug-Flow detention time= 0.0 min calculated for 1.235 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (750.0 - 750.0)

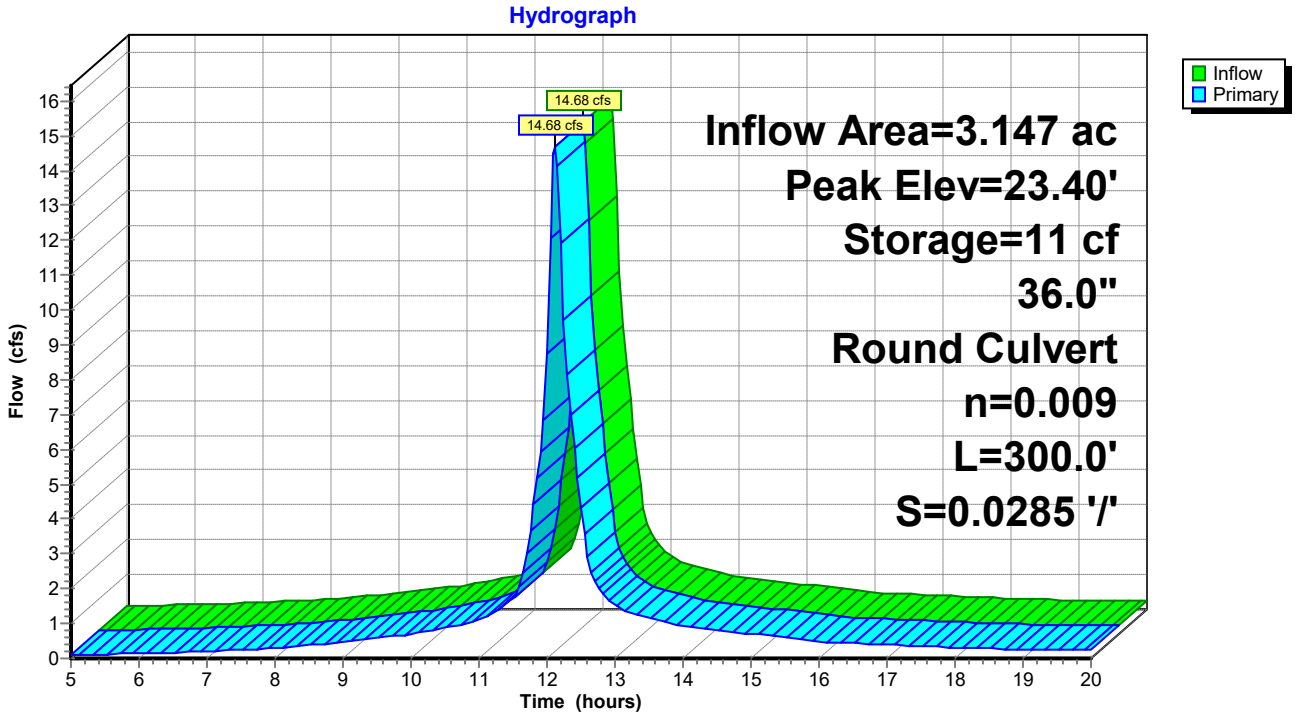
Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=14.35 cfs @ 12.12 hrs HW=23.38' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 14.35 cfs @ 4.14 fps)

Pond 2P: Bedford SD System



Summary for Pond 3P: DMH corner Bedford Durham

Inflow Area = 4.577 ac, 76.02% Impervious, Inflow Depth > 4.62" for 25 YR event
Inflow = 21.05 cfs @ 12.12 hrs, Volume= 1.760 af
Outflow = 21.05 cfs @ 12.12 hrs, Volume= 1.760 af, Atten= 0%, Lag= 0.0 min
Primary = 21.05 cfs @ 12.12 hrs, Volume= 1.760 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 16.28' @ 12.12 hrs Surf.Area= 9 sf Storage= 26 cf

Plug-Flow detention time= 0.1 min calculated for 1.754 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (752.4 - 752.4)

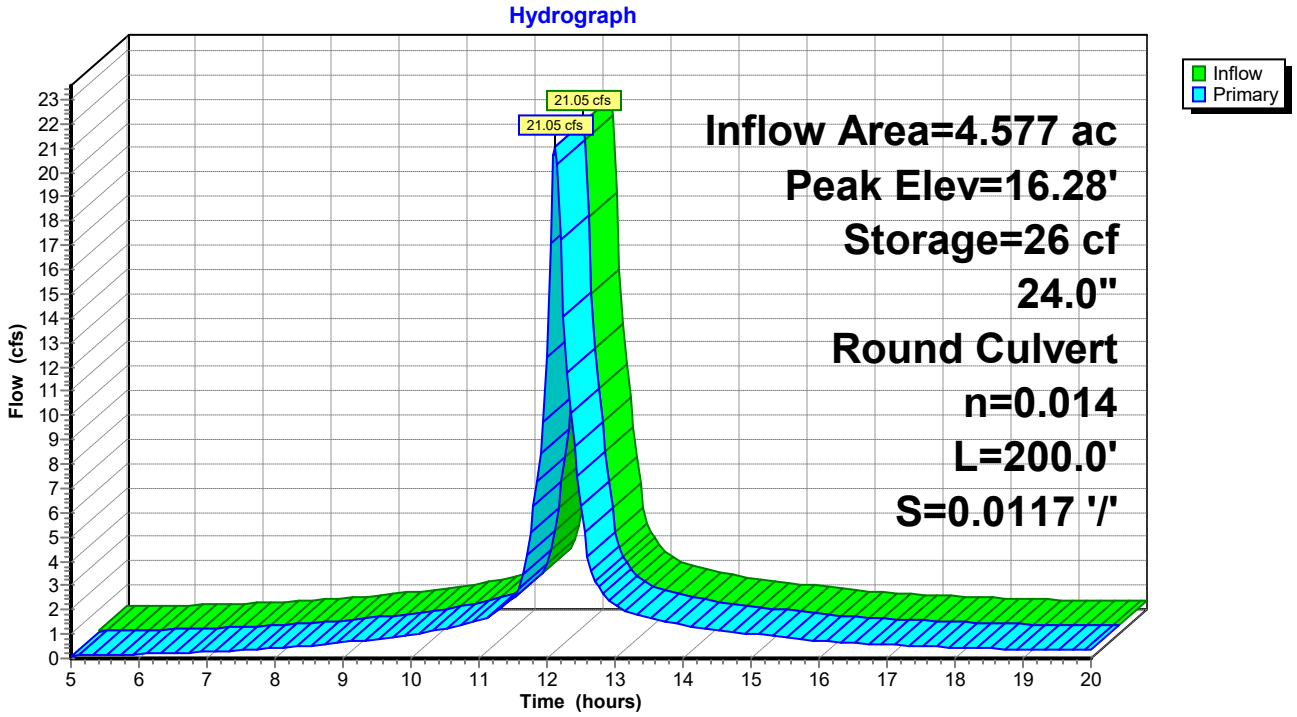
Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=20.57 cfs @ 12.12 hrs HW=16.20' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 20.57 cfs @ 6.55 fps)

Pond 3P: DMH corner Bedford Durham



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment #25: #25 Bedford Roof Runoff Area=8,950 sf 100.00% Impervious Runoff Depth>7.24"
Tc=5.0 min CN=98 Runoff=1.64 cfs 0.124 af

Subcatchment #35: #35 Bedford Roof Runoff Area=27,201 sf 100.00% Impervious Runoff Depth>7.24"
Tc=5.0 min CN=98 Runoff=5.00 cfs 0.377 af

Subcatchment 1S: Watershed to Durham Runoff Area=53,341 sf 62.15% Impervious Runoff Depth>6.40"
Tc=10.0 min CN=89 Runoff=7.93 cfs 0.654 af

Subcatchment 2S: Woodbury Parking Lot Runoff Area=109,883 sf 74.87% Impervious Runoff Depth>6.72"
Tc=10.0 min CN=92 Runoff=16.80 cfs 1.413 af

Reach 100R: POI 100 Inflow=30.19 cfs 2.567 af
Outflow=30.19 cfs 2.567 af

Pond 1P: Durham SD System Peak Elev=23.79' Storage=11 cf Inflow=7.93 cfs 0.654 af
24.0" Round Culvert n=0.009 L=300.0' S=0.0306 '/' Outflow=7.93 cfs 0.653 af

Pond 2P: Bedford SD System Peak Elev=23.74' Storage=14 cf Inflow=20.97 cfs 1.790 af
36.0" Round Culvert n=0.009 L=300.0' S=0.0285 '/' Outflow=20.97 cfs 1.790 af

Pond 3P: DMH corner Bedford Durham Peak Elev=19.27' Storage=53 cf Inflow=30.23 cfs 2.567 af
24.0" Round Culvert n=0.014 L=200.0' S=0.0117 '/' Outflow=30.19 cfs 2.567 af

Total Runoff Area = 4.577 ac Runoff Volume = 2.567 af Average Runoff Depth = 6.73"
23.98% Pervious = 1.097 ac 76.02% Impervious = 3.480 ac

Summary for Subcatchment #25: #25 Bedford Roof

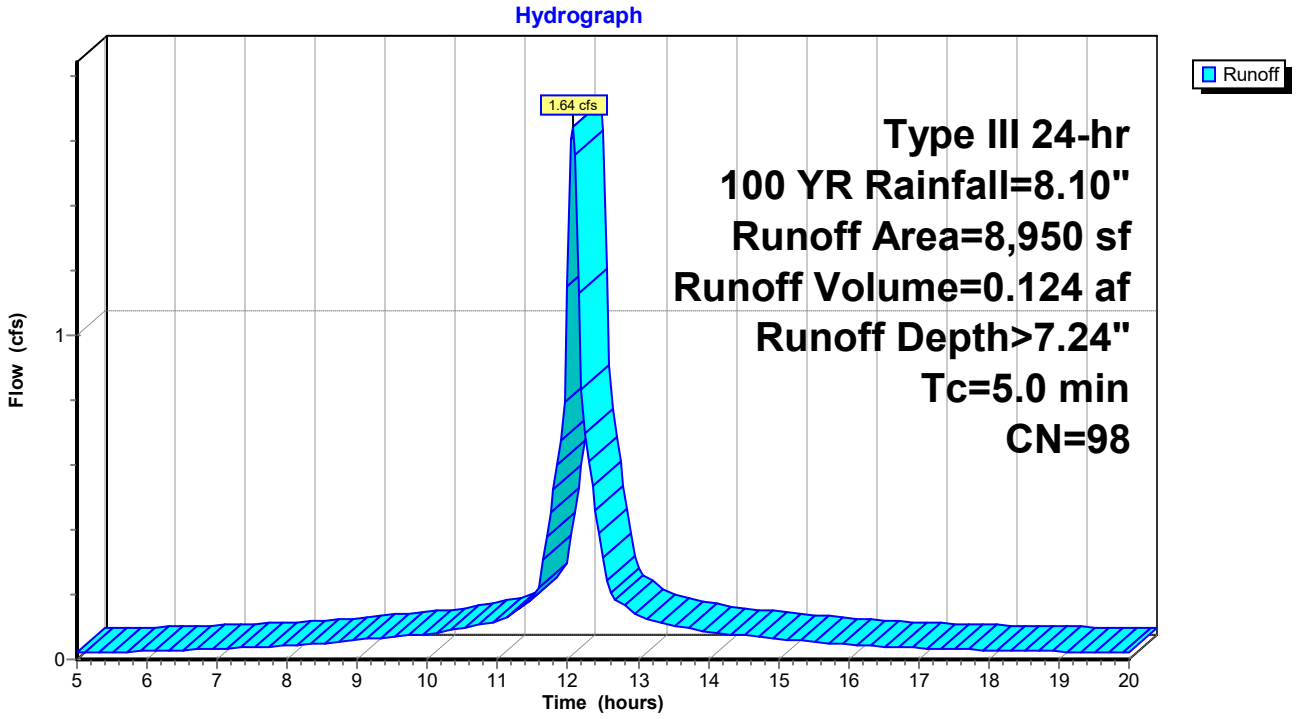
Runoff = 1.64 cfs @ 12.07 hrs, Volume= 0.124 af, Depth> 7.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

Area (sf)	CN	Description
8,950	98	Paved parking, HSG A
8,950		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment #25: #25 Bedford Roof



Summary for Subcatchment #35: #35 Bedford Roof

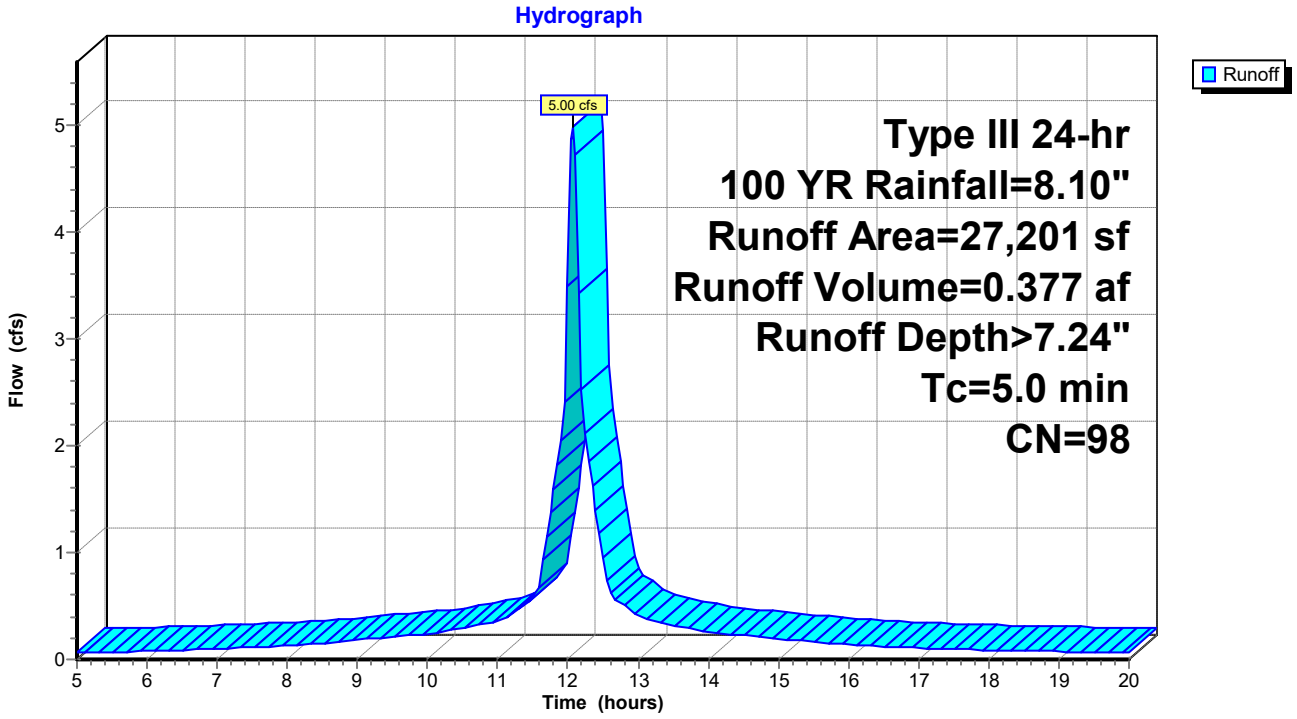
Runoff = 5.00 cfs @ 12.07 hrs, Volume= 0.377 af, Depth> 7.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

Area (sf)	CN	Description
27,201	98	Paved parking, HSG A
27,201		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment #35: #35 Bedford Roof



Summary for Subcatchment 1S: Watershed to Durham SD

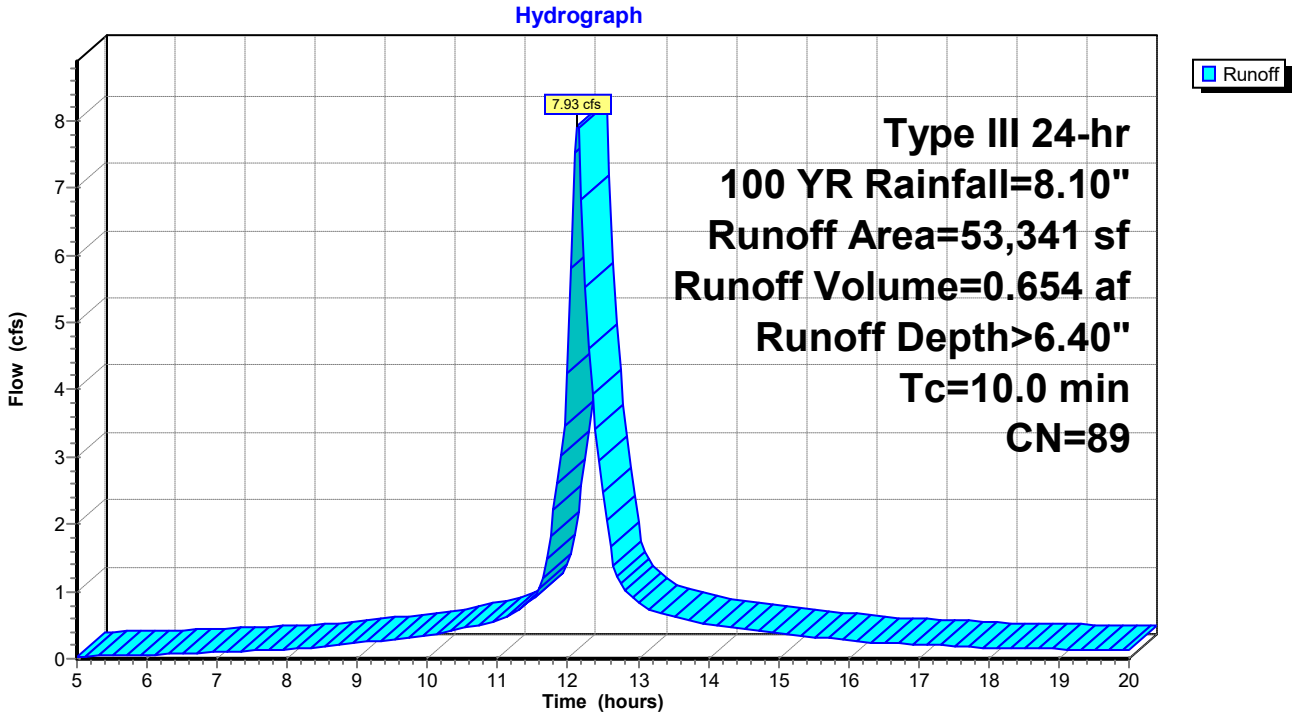
Runoff = 7.93 cfs @ 12.14 hrs, Volume= 0.654 af, Depth> 6.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

Area (sf)	CN	Description
33,152	98	Paved parking, HSG A
20,189	74	>75% Grass cover, Good, HSG C
53,341	89	Weighted Average
20,189		37.85% Pervious Area
33,152		62.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1S: Watershed to Durham SD



Summary for Subcatchment 2S: Woodbury Parking Lot

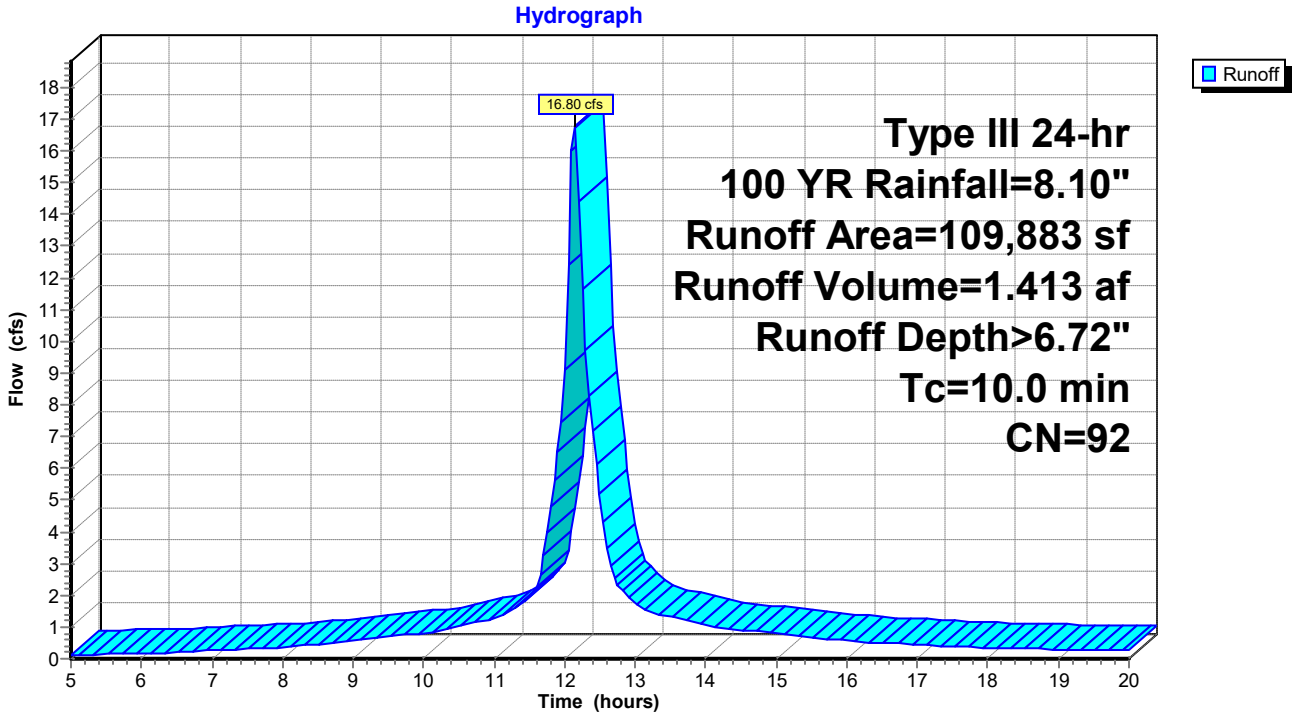
Runoff = 16.80 cfs @ 12.14 hrs, Volume= 1.413 af, Depth> 6.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

Area (sf)	CN	Description
82,271	98	Paved parking, HSG A
27,612	74	>75% Grass cover, Good, HSG C
109,883	92	Weighted Average
27,612		25.13% Pervious Area
82,271		74.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 2S: Woodbury Parking Lot

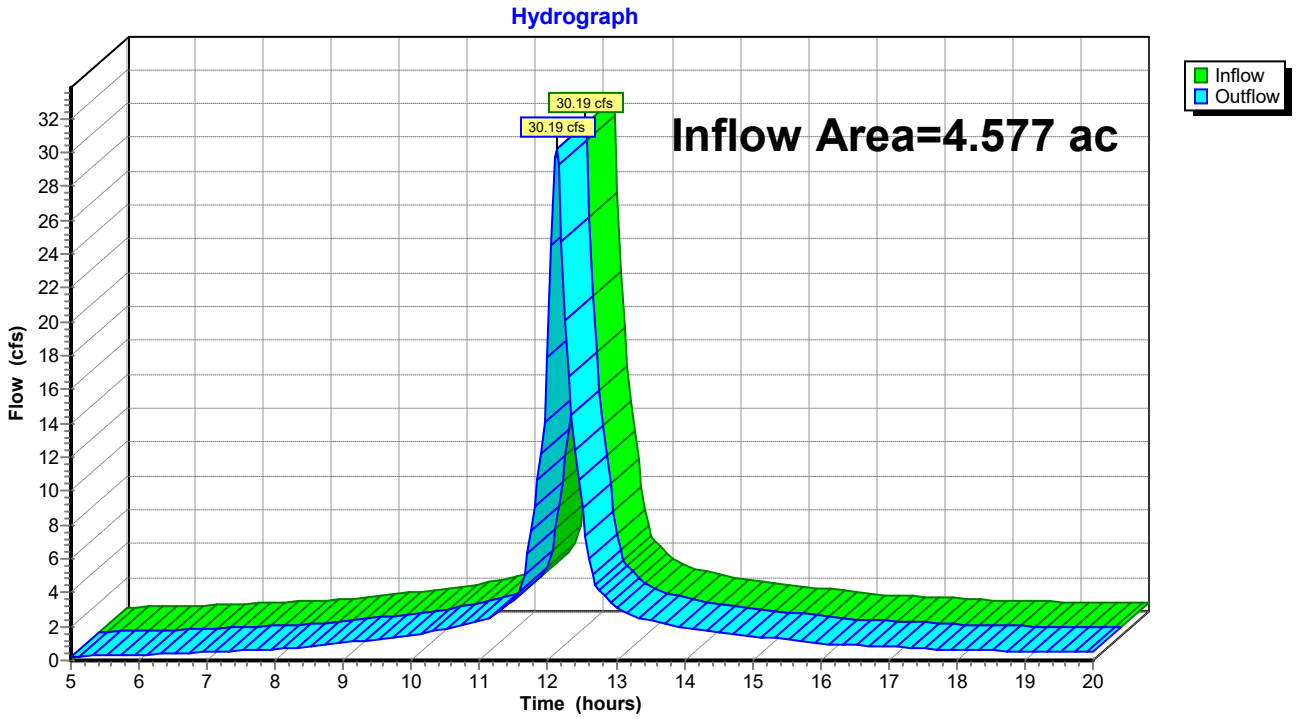


Summary for Reach 100R: POI 100

Inflow Area = 4.577 ac, 76.02% Impervious, Inflow Depth > 6.73" for 100 YR event
Inflow = 30.19 cfs @ 12.12 hrs, Volume= 2.567 af
Outflow = 30.19 cfs @ 12.12 hrs, Volume= 2.567 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Reach 100R: POI 100



Summary for Pond 1P: Durham SD System

Inflow Area = 1.225 ac, 62.15% Impervious, Inflow Depth > 6.40" for 100 YR event
Inflow = 7.93 cfs @ 12.14 hrs, Volume= 0.654 af
Outflow = 7.93 cfs @ 12.14 hrs, Volume= 0.653 af, Atten= 0%, Lag= 0.0 min
Primary = 7.93 cfs @ 12.14 hrs, Volume= 0.653 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.79' @ 12.14 hrs Surf.Area= 9 sf Storage= 11 cf

Plug-Flow detention time= 0.1 min calculated for 0.653 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (754.9 - 754.9)

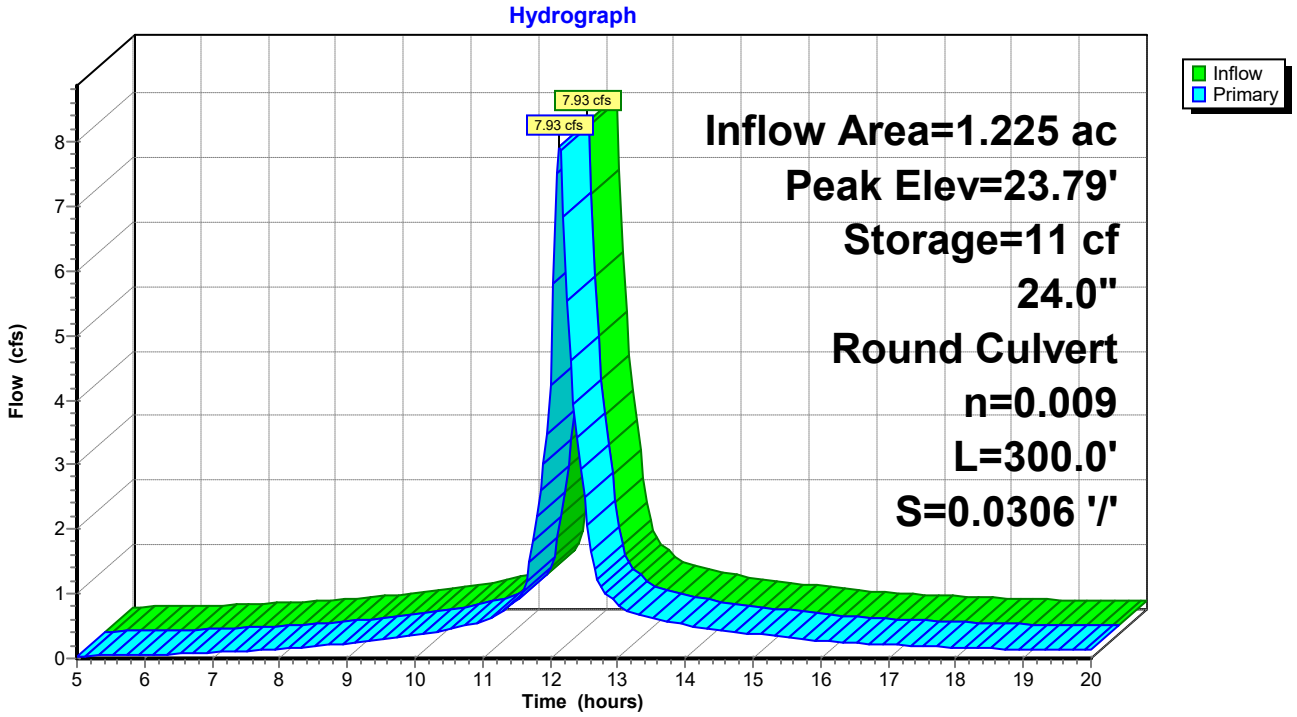
Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,591 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	100	1	51
29.00	15,000	6,040	6,091
30.00	1,000,000	507,500	513,591

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=7.79 cfs @ 12.14 hrs HW=23.77' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 7.79 cfs @ 3.80 fps)

Pond 1P: Durham SD System



Summary for Pond 2P: Bedford SD System

Inflow Area = 3.147 ac, 79.86% Impervious, Inflow Depth > 6.82" for 100 YR event
Inflow = 20.97 cfs @ 12.12 hrs, Volume= 1.790 af
Outflow = 20.97 cfs @ 12.12 hrs, Volume= 1.790 af, Atten= 0%, Lag= 0.0 min
Primary = 20.97 cfs @ 12.12 hrs, Volume= 1.790 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 23.74' @ 12.12 hrs Surf.Area= 9 sf Storage= 14 cf

Plug-Flow detention time= 0.0 min calculated for 1.790 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (744.9 - 744.9)

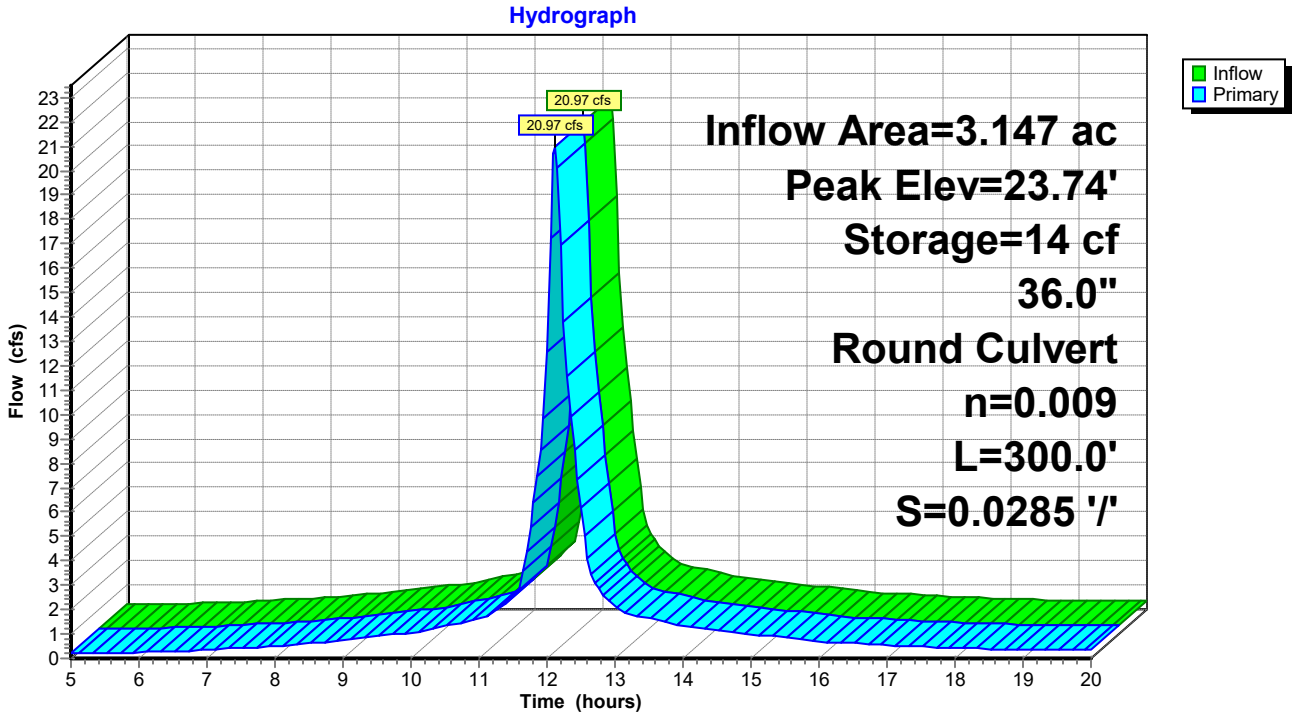
Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=20.51 cfs @ 12.12 hrs HW=23.71' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 20.51 cfs @ 4.59 fps)

Pond 2P: Bedford SD System



Summary for Pond 3P: DMH corner Bedford Durham

Inflow Area = 4.577 ac, 76.02% Impervious, Inflow Depth > 6.73" for 100 YR event
Inflow = 30.23 cfs @ 12.12 hrs, Volume= 2.567 af
Outflow = 30.19 cfs @ 12.12 hrs, Volume= 2.567 af, Atten= 0%, Lag= 0.1 min
Primary = 30.19 cfs @ 12.12 hrs, Volume= 2.567 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 19.27' @ 12.12 hrs Surf.Area= 9 sf Storage= 53 cf

Plug-Flow detention time= 0.1 min calculated for 2.567 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (746.9 - 746.9)

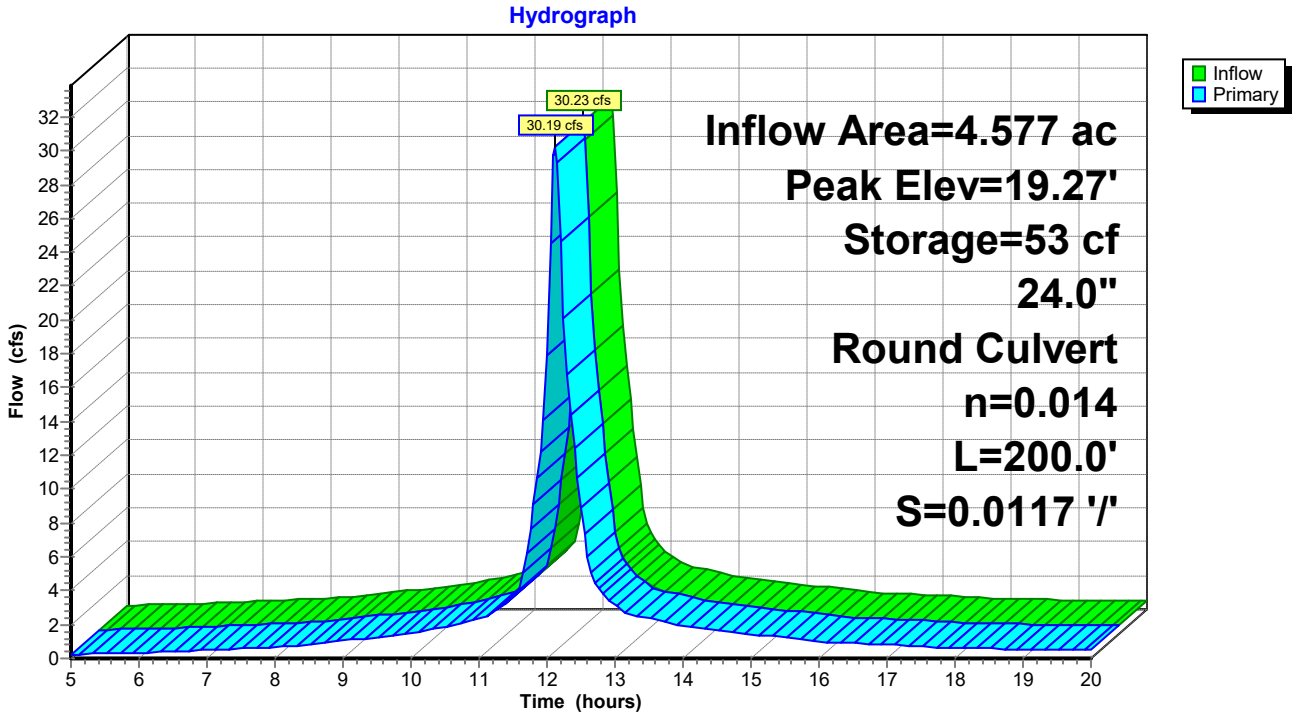
Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

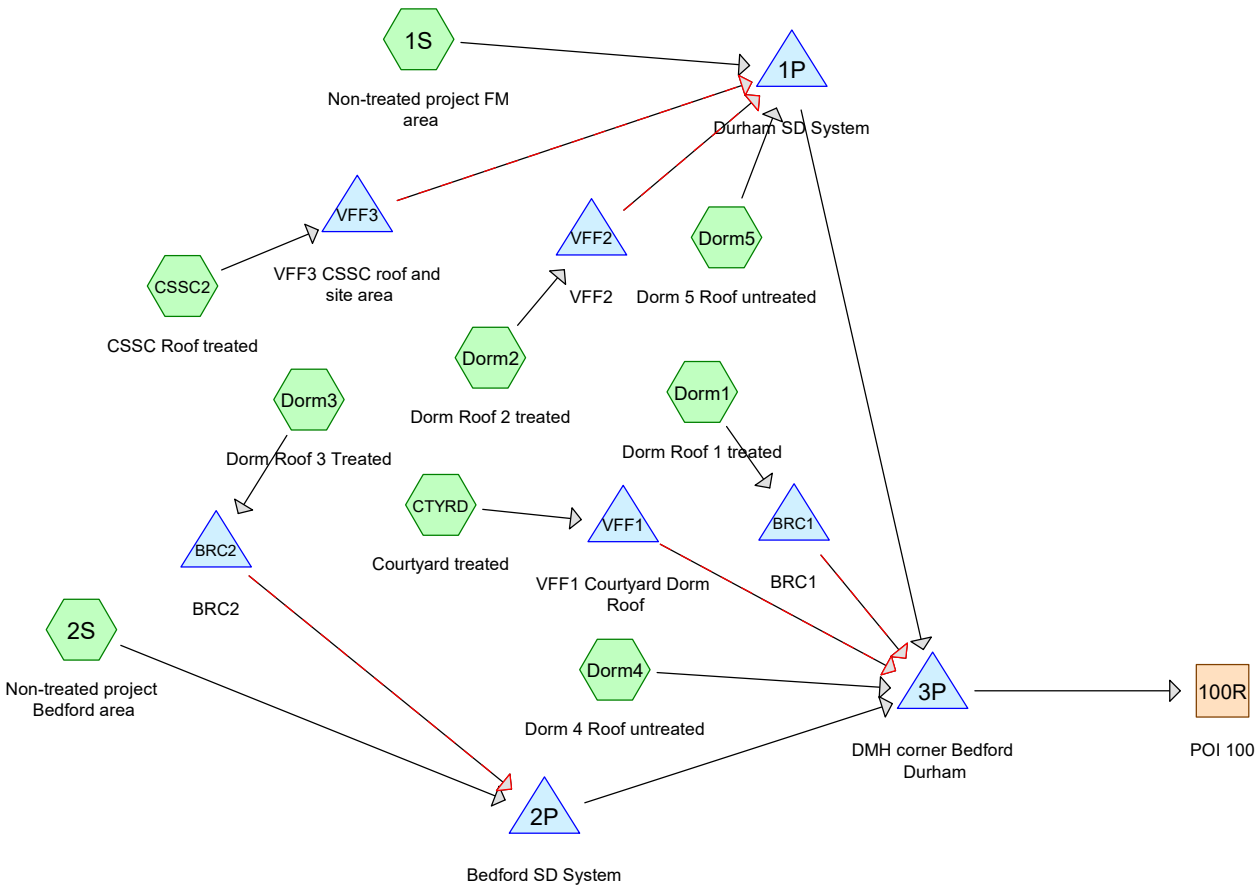
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=29.51 cfs @ 12.12 hrs HW=19.02' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 29.51 cfs @ 9.39 fps)

Pond 3P: DMH corner Bedford Durham





Subcat Reach Pond Link

Routing Diagram for 19206 Prop Cond 200723
Prepared by SMRT, Printed 7/26/2020
HydroCAD® 10.00-24 s/n 00729 © 2018 HydroCAD Software Solutions LLC

Summary for Subcatchment 1S: Non-treated project FM area

Runoff = 1.79 cfs @ 12.15 hrs, Volume= 0.148 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

Area (sf)	CN	Description
20,981	98	Paved parking, HSG A
27,303	74	>75% Grass cover, Good, HSG C
48,284	84	Weighted Average
27,303		56.55% Pervious Area
20,981		43.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 2S: Non-treated project Bedford area

Runoff = 2.35 cfs @ 12.15 hrs, Volume= 0.194 af, Depth= 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

	Area (sf)	CN	Description
*	25,948	98	Paved Sidewalks, hardscape
	40,467	74	>75% Grass cover, Good, HSG C
	66,415	83	Weighted Average
	40,467		60.93% Pervious Area
	25,948		39.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment CSSC2: CSSC Roof treated

Runoff = 2.19 cfs @ 12.07 hrs, Volume= 0.161 af, Depth> 2.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

	Area (sf)	CN	Description
*	27,000	98	SSC Roof treated
	6,400	74	>75% Grass cover, Good, HSG C
*	1,100	98	Sidewalk
	34,500	94	Weighted Average
	6,400		18.55% Pervious Area
	28,100		81.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment CTYRD: Courtyard treated

Runoff = 0.45 cfs @ 12.08 hrs, Volume= 0.032 af, Depth= 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

	Area (sf)	CN	Description
	11,850	74	>75% Grass cover, Good, HSG C
*	2,200	98	Hardscape in courtyard
	14,050	78	Weighted Average
	11,850		84.34% Pervious Area
	2,200		15.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm1: Dorm Roof 1 treated

Runoff = 0.64 cfs @ 12.07 hrs, Volume= 0.047 af, Depth> 2.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

	Area (sf)	CN	Description
*	8,000	98	Dorm Roof treated
*	2,000	80	BRC Bed
	10,000	94	Weighted Average
	2,000		20.00% Pervious Area
	8,000		80.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm2: Dorm Roof 2 treated

Runoff = 0.47 cfs @ 12.08 hrs, Volume= 0.034 af, Depth= 1.53"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

	Area (sf)	CN	Description
*	4,000	98	Dorm Roof treated
*	7,046	74	>75% Grass cover, Good, HSG C VFF 1 area
*	450	98	Sidewalk
	11,496	83	Weighted Average
	7,046		61.29% Pervious Area
	4,450		38.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm3: Dorm Roof 3 Treated

Runoff = 0.69 cfs @ 12.07 hrs, Volume= 0.051 af, Depth> 2.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

	Area (sf)	CN	Description
*	8,928	98	Dorm Roof treated
*	1,620	80	BRC bed
	10,548	95	Weighted Average
	1,620		15.36% Pervious Area
	8,928		84.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm4: Dorm 4 Roof untreated

Runoff = 0.54 cfs @ 12.07 hrs, Volume= 0.042 af, Depth> 2.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

	Area (sf)	CN	Description
*	6,100	98	Dorm roof untreated
*	1,700	98	Bedford Sidewalk
	7,800	98	Weighted Average
	7,800		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm5: Dorm 5 Roof untreated

Runoff = 0.37 cfs @ 12.07 hrs, Volume= 0.028 af, Depth> 2.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2 YR Rainfall=3.10"

	Area (sf)	CN	Description
*	5,280	98	Dorm Roof untreated
	5,280		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Reach 100R: POI 100

Inflow Area = 4.784 ac, 53.60% Impervious, Inflow Depth > 1.59" for 2 YR event
Inflow = 5.58 cfs @ 12.14 hrs, Volume= 0.633 af
Outflow = 5.58 cfs @ 12.14 hrs, Volume= 0.633 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: Durham SD System

Inflow Area = 2.286 ac, 59.07% Impervious, Inflow Depth > 1.66" for 2 YR event
Inflow = 2.22 cfs @ 12.13 hrs, Volume= 0.317 af
Outflow = 2.22 cfs @ 12.13 hrs, Volume= 0.317 af, Atten= 0%, Lag= 0.0 min
Primary = 2.22 cfs @ 12.13 hrs, Volume= 0.317 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 23.15' @ 12.13 hrs Surf.Area= 9 sf Storage= 6 cf

Plug-Flow detention time= 0.2 min calculated for 0.317 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (905.5 - 905.4)

Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,753 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	500	3	53
29.00	15,000	6,200	6,253
30.00	1,000,000	507,500	513,753

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=2.18 cfs @ 12.13 hrs HW=23.14' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 2.18 cfs @ 2.67 fps)

Summary for Pond 2P: Bedford SD System

Inflow Area = 1.767 ac, 45.32% Impervious, Inflow Depth = 1.54" for 2 YR event
Inflow = 2.87 cfs @ 12.15 hrs, Volume= 0.226 af
Outflow = 2.87 cfs @ 12.15 hrs, Volume= 0.226 af, Atten= 0%, Lag= 0.0 min
Primary = 2.87 cfs @ 12.15 hrs, Volume= 0.226 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 22.52' @ 12.15 hrs Surf.Area= 9 sf Storage= 3 cf

Plug-Flow detention time= 0.0 min calculated for 0.226 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (842.6 - 842.6)

Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=2.87 cfs @ 12.15 hrs HW=22.52' (Free Discharge)
↑**1=Culvert** (Inlet Controls 2.87 cfs @ 2.69 fps)

Summary for Pond 3P: DMH corner Bedford Durham

Inflow Area = 4.784 ac, 53.60% Impervious, Inflow Depth > 1.59" for 2 YR event
Inflow = 5.58 cfs @ 12.14 hrs, Volume= 0.633 af
Outflow = 5.58 cfs @ 12.14 hrs, Volume= 0.633 af, Atten= 0%, Lag= 0.0 min
Primary = 5.58 cfs @ 12.14 hrs, Volume= 0.633 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 14.37' @ 12.14 hrs Surf.Area= 9 sf Storage= 9 cf

Plug-Flow detention time= 0.2 min calculated for 0.633 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (868.3 - 868.2)

Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=5.49 cfs @ 12.14 hrs HW=14.36' (Free Discharge)
1=Culvert (Inlet Controls 5.49 cfs @ 3.43 fps)

Summary for Pond BRC1: BRC1

Inflow Area = 0.230 ac, 80.00% Impervious, Inflow Depth > 2.44" for 2 YR event
Inflow = 0.64 cfs @ 12.07 hrs, Volume= 0.047 af
Outflow = 0.11 cfs @ 12.54 hrs, Volume= 0.047 af, Atten= 83%, Lag= 27.9 min
Primary = 0.11 cfs @ 12.54 hrs, Volume= 0.047 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 23.30' @ 12.54 hrs Surf.Area= 1,922 sf Storage= 570 cf

Plug-Flow detention time= 32.3 min calculated for 0.047 af (100% of inflow)
Center-of-Mass det. time= 32.3 min (820.1 - 787.8)

Volume	Invert	Avail.Storage	Storage Description
#1	22.99'	20,610 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.99	1	0	0
23.00	1,800	9	9
23.50	2,002	951	960
24.00	2,200	1,051	2,010
25.00	35,000	18,600	20,610

Device	Routing	Invert	Outlet Devices
#1	Device 2	23.50'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	19.00'	**12.0" Round Culvert** L= 70.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 19.00' / 18.00' S= 0.0143 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#3	Secondary	23.75'	**15.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
#4	Device 2	22.99'	**2.410 in/hr Exfiltration over Surface area**

Primary OutFlow Max=0.11 cfs @ 12.54 hrs HW=23.30' (Free Discharge)
└**2=Culvert** (Passes 0.11 cfs of 7.37 cfs potential flow)
  ├**1=Orifice/Grate** (Controls 0.00 cfs)
  └**4=Exfiltration** (Exfiltration Controls 0.11 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.99' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond BRC2: BRC2

Inflow Area = 0.242 ac, 84.64% Impervious, Inflow Depth > 2.54" for 2 YR event
Inflow = 0.69 cfs @ 12.07 hrs, Volume= 0.051 af
Outflow = 0.52 cfs @ 12.16 hrs, Volume= 0.032 af, Atten= 25%, Lag= 5.1 min
Discarded = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Primary = 0.52 cfs @ 12.16 hrs, Volume= 0.032 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 29.57' @ 12.16 hrs Surf.Area= 1,656 sf Storage= 958 cf

Plug-Flow detention time= 186.6 min calculated for 0.032 af (62% of inflow)
Center-of-Mass det. time= 87.0 min (869.5 - 782.5)

Volume	Invert	Avail.Storage	Storage Description
#1	28.99'	14,992 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
28.99	1	0	0
29.00	1,656	8	8
29.50	1,656	828	836
30.00	1,656	828	1,664
31.00	25,000	13,328	14,992

Device	Routing	Invert	Outlet Devices
#1	Primary	23.00'	**12.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 23.00' / 19.00' S= 0.0667 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Secondary	29.75'	**10.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#3	Device 1	29.50'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Discarded	29.00'	**2.410 in/hr Exfiltration over Surface area above 29.00'** Excluded Surface area = 1,656 sf

Discarded OutFlow Max=0.00 cfs @ 5.00 hrs HW=28.99' (Free Discharge)
└**4=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=0.51 cfs @ 12.16 hrs HW=29.57' (Free Discharge)
└**1=Culvert** (Passes 0.51 cfs of 9.32 cfs potential flow)
└**3=Orifice/Grate** (Weir Controls 0.51 cfs @ 0.88 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=28.99' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond VFF1: VFF1 Courtyard Dorm Roof

Inflow Area = 0.323 ac, 15.66% Impervious, Inflow Depth = 1.20" for 2 YR event
Inflow = 0.45 cfs @ 12.08 hrs, Volume= 0.032 af
Outflow = 0.01 cfs @ 22.80 hrs, Volume= 0.001 af, Atten= 98%, Lag= 643.1 min
Primary = 0.01 cfs @ 22.80 hrs, Volume= 0.001 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 23.50' @ 22.80 hrs Surf.Area= 1,562 sf Storage= 1,366 cf

Plug-Flow detention time= 732.5 min calculated for 0.001 af (3% of inflow)
Center-of-Mass det. time= 547.3 min (1,397.3 - 850.0)

Volume	Invert	Avail.Storage	Storage Description
#1	22.49'	22,618 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.49	1	0	0
22.50	1,080	5	5
23.00	1,395	619	624
24.00	1,728	1,562	2,186
24.50	15,000	4,182	6,368
25.00	50,000	16,250	22,618

Device	Routing	Invert	Outlet Devices
#1	Primary	19.00'	**15.0" Round Culvert X 2.00** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 19.00' / 13.65' S= 0.0713 '/' Cc= 0.900 n= 0.011, Flow Area= 1.23 sf
#2	Device 1	23.50'	**24.0" x 24.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 2	22.49'	**2.410 in/hr Exfiltration over Surface area**
#4	Secondary	24.50'	**110.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.00 cfs @ 22.80 hrs HW=23.50' (Free Discharge)
└**1=Culvert** (Passes 0.00 cfs of 23.27 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 0.00 cfs @ 0.13 fps)
└**3=Exfiltration** (Passes 0.00 cfs of 0.09 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.49' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond VFF2: VFF2

Inflow Area = 0.264 ac, 38.71% Impervious, Inflow Depth = 1.53" for 2 YR event
Inflow = 0.47 cfs @ 12.08 hrs, Volume= 0.034 af
Outflow = 0.01 cfs @ 17.56 hrs, Volume= 0.005 af, Atten= 97%, Lag= 328.7 min
Primary = 0.01 cfs @ 17.56 hrs, Volume= 0.005 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 24.01' @ 17.56 hrs Surf.Area= 1,161 sf Storage= 1,250 cf

Plug-Flow detention time= 530.7 min calculated for 0.005 af (15% of inflow)
Center-of-Mass det. time= 379.9 min (1,213.4 - 833.5)

Volume	Invert	Avail.Storage	Storage Description
#1	22.50'	17,193 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.50	504	0	0
24.00	1,152	1,242	1,242
25.00	2,500	1,826	3,068
25.10	10,000	625	3,693
26.00	20,000	13,500	17,193

Device	Routing	Invert	Outlet Devices
#1	Primary	21.00'	**12.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.00' / 15.00' S= 0.0400 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Device 1	24.00'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	22.50'	**2.410 in/hr Exfiltration over Surface area**
#4	Secondary	24.60'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.01 cfs @ 17.56 hrs HW=24.01' (Free Discharge)
↑**1=Culvert** (Passes 0.01 cfs of 5.99 cfs potential flow)
↑**2=Orifice/Grate** (Weir Controls 0.01 cfs @ 0.27 fps)
↑**3=Exfiltration** (Passes 0.01 cfs of 0.06 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.50' (Free Discharge)
↑**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond VFF3: VFF3 CSSC roof and site area

Inflow Area = 0.792 ac, 81.45% Impervious, Inflow Depth > 2.44" for 2 YR event
Inflow = 2.19 cfs @ 12.07 hrs, Volume= 0.161 af
Outflow = 0.17 cfs @ 13.13 hrs, Volume= 0.136 af, Atten= 92%, Lag= 63.3 min
Primary = 0.17 cfs @ 13.13 hrs, Volume= 0.136 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 41.06' @ 13.13 hrs Surf.Area= 3,040 sf Storage= 3,983 cf

Plug-Flow detention time= 278.1 min calculated for 0.136 af (84% of inflow)
Center-of-Mass det. time= 212.2 min (1,000.0 - 787.8)

Volume	Invert	Avail.Storage	Storage Description
#1	39.49'	13,735 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
39.49	1	0	0
39.50	2,000	10	10
40.00	2,400	1,100	1,110
41.00	3,000	2,700	3,810
41.50	3,350	1,588	5,398
42.00	30,000	8,338	13,735

Device	Routing	Invert	Outlet Devices
#1	Primary	35.00'	**12.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 35.00' / 24.00' S= 0.0367 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Device 1	40.00'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	39.49'	**2.410 in/hr Exfiltration over Surface area**
#4	Secondary	41.50'	**30.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.17 cfs @ 13.13 hrs HW=41.06' (Free Discharge)
└**1=Culvert** (Passes 0.17 cfs of 8.80 cfs potential flow)
└**2=Orifice/Grate** (Passes 0.17 cfs of 19.80 cfs potential flow)
└**3=Exfiltration** (Exfiltration Controls 0.17 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=39.49' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Subcatchment 1S: Non-treated project FM area

Runoff = 3.25 cfs @ 12.14 hrs, Volume= 0.268 af, Depth= 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

Area (sf)	CN	Description
20,981	98	Paved parking, HSG A
27,303	74	>75% Grass cover, Good, HSG C
48,284	84	Weighted Average
27,303		56.55% Pervious Area
20,981		43.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 2S: Non-treated project Bedford area

Runoff = 4.33 cfs @ 12.14 hrs, Volume= 0.358 af, Depth= 2.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

	Area (sf)	CN	Description
*	25,948	98	Paved Sidewalks, hardscape
	40,467	74	>75% Grass cover, Good, HSG C
	66,415	83	Weighted Average
	40,467		60.93% Pervious Area
	25,948		39.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment CSSC2: CSSC Roof treated

Runoff = 3.42 cfs @ 12.07 hrs, Volume= 0.257 af, Depth> 3.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

	Area (sf)	CN	Description
*	27,000	98	SSC Roof treated
	6,400	74	>75% Grass cover, Good, HSG C
*	1,100	98	Sidewalk
	34,500	94	Weighted Average
	6,400		18.55% Pervious Area
	28,100		81.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment CTYRD: Courtyard treated

Runoff = 0.90 cfs @ 12.08 hrs, Volume= 0.064 af, Depth= 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

	Area (sf)	CN	Description
	11,850	74	>75% Grass cover, Good, HSG C
*	2,200	98	Hardscape in courtyard
	14,050	78	Weighted Average
	11,850		84.34% Pervious Area
	2,200		15.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm1: Dorm Roof 1 treated

Runoff = 0.99 cfs @ 12.07 hrs, Volume= 0.074 af, Depth> 3.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

	Area (sf)	CN	Description
*	8,000	98	Dorm Roof treated
*	2,000	80	BRC Bed
	10,000	94	Weighted Average
	2,000		20.00% Pervious Area
	8,000		80.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm2: Dorm Roof 2 treated

Runoff = 0.87 cfs @ 12.08 hrs, Volume= 0.062 af, Depth= 2.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

	Area (sf)	CN	Description
*	4,000	98	Dorm Roof treated
*	7,046	74	>75% Grass cover, Good, HSG C VFF 1 area
*	450	98	Sidewalk
	11,496	83	Weighted Average
	7,046		61.29% Pervious Area
	4,450		38.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm3: Dorm Roof 3 Treated

Runoff = 1.06 cfs @ 12.07 hrs, Volume= 0.081 af, Depth> 3.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

	Area (sf)	CN	Description
*	8,928	98	Dorm Roof treated
*	1,620	80	BRC bed
	10,548	95	Weighted Average
	1,620		15.36% Pervious Area
	8,928		84.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm4: Dorm 4 Roof untreated

Runoff = 0.81 cfs @ 12.07 hrs, Volume= 0.063 af, Depth> 4.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

	Area (sf)	CN	Description
*	6,100	98	Dorm roof untreated
*	1,700	98	Bedford Sidewalk
	7,800	98	Weighted Average
	7,800		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm5: Dorm 5 Roof untreated

Runoff = 0.55 cfs @ 12.07 hrs, Volume= 0.043 af, Depth> 4.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10 YR Rainfall=4.60"

	Area (sf)	CN	Description
*	5,280	98	Dorm Roof untreated
	5,280		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Reach 100R: POI 100

Inflow Area = 4.784 ac, 53.60% Impervious, Inflow Depth > 2.92" for 10 YR event
Inflow = 9.83 cfs @ 12.13 hrs, Volume= 1.166 af
Outflow = 9.83 cfs @ 12.13 hrs, Volume= 1.166 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: Durham SD System

Inflow Area = 2.286 ac, 59.07% Impervious, Inflow Depth > 3.03" for 10 YR event
Inflow = 3.83 cfs @ 12.13 hrs, Volume= 0.576 af
Outflow = 3.84 cfs @ 12.13 hrs, Volume= 0.576 af, Atten= 0%, Lag= 0.0 min
Primary = 3.84 cfs @ 12.13 hrs, Volume= 0.576 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 23.36' @ 12.13 hrs Surf.Area= 9 sf Storage= 7 cf

Plug-Flow detention time= 0.2 min calculated for 0.576 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (905.4 - 905.3)

Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,753 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	500	3	53
29.00	15,000	6,200	6,253
30.00	1,000,000	507,500	513,753

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=3.77 cfs @ 12.13 hrs HW=23.35' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 3.77 cfs @ 3.09 fps)

Summary for Pond 2P: Bedford SD System

Inflow Area = 1.767 ac, 45.32% Impervious, Inflow Depth = 2.85" for 10 YR event
Inflow = 5.26 cfs @ 12.14 hrs, Volume= 0.419 af
Outflow = 5.26 cfs @ 12.14 hrs, Volume= 0.419 af, Atten= 0%, Lag= 0.0 min
Primary = 5.26 cfs @ 12.14 hrs, Volume= 0.419 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 22.76' @ 12.14 hrs Surf.Area= 9 sf Storage= 5 cf

Plug-Flow detention time= 0.0 min calculated for 0.418 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (823.0 - 822.9)

Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=5.16 cfs @ 12.14 hrs HW=22.75' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 5.16 cfs @ 3.14 fps)

Summary for Pond 3P: DMH corner Bedford Durham

Inflow Area = 4.784 ac, 53.60% Impervious, Inflow Depth > 2.92" for 10 YR event
Inflow = 9.83 cfs @ 12.13 hrs, Volume= 1.166 af
Outflow = 9.83 cfs @ 12.13 hrs, Volume= 1.166 af, Atten= 0%, Lag= 0.0 min
Primary = 9.83 cfs @ 12.13 hrs, Volume= 1.166 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 14.78' @ 12.13 hrs Surf.Area= 9 sf Storage= 13 cf

Plug-Flow detention time= 0.1 min calculated for 1.164 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (865.0 - 864.9)

Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=9.65 cfs @ 12.13 hrs HW=14.77' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 9.65 cfs @ 4.05 fps)

Summary for Pond BRC1: BRC1

Inflow Area = 0.230 ac, 80.00% Impervious, Inflow Depth > 3.89" for 10 YR event
Inflow = 0.99 cfs @ 12.07 hrs, Volume= 0.074 af
Outflow = 0.24 cfs @ 12.46 hrs, Volume= 0.074 af, Atten= 76%, Lag= 23.3 min
Primary = 0.24 cfs @ 12.46 hrs, Volume= 0.074 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 23.53' @ 12.46 hrs Surf.Area= 2,013 sf Storage= 1,014 cf

Plug-Flow detention time= 58.2 min calculated for 0.074 af (100% of inflow)
Center-of-Mass det. time= 58.1 min (835.8 - 777.7)

Volume	Invert	Avail.Storage	Storage Description
#1	22.99'	20,610 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.99	1	0	0
23.00	1,800	9	9
23.50	2,002	951	960
24.00	2,200	1,051	2,010
25.00	35,000	18,600	20,610

Device	Routing	Invert	Outlet Devices
#1	Device 2	23.50'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	19.00'	**12.0" Round Culvert** L= 70.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 19.00' / 18.00' S= 0.0143 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#3	Secondary	23.75'	**15.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
#4	Device 2	22.99'	**2.410 in/hr Exfiltration over Surface area**

Primary OutFlow Max=0.23 cfs @ 12.46 hrs HW=23.53' (Free Discharge)
└**2=Culvert** (Passes 0.23 cfs of 7.59 cfs potential flow)
  └**1=Orifice/Grate** (Weir Controls 0.12 cfs @ 0.54 fps)
  └**4=Exfiltration** (Exfiltration Controls 0.11 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.99' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond BRC2: BRC2

Inflow Area = 0.242 ac, 84.64% Impervious, Inflow Depth > 3.99" for 10 YR event
Inflow = 1.06 cfs @ 12.07 hrs, Volume= 0.081 af
Outflow = 0.98 cfs @ 12.11 hrs, Volume= 0.061 af, Atten= 7%, Lag= 2.2 min
Discarded = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Primary = 0.98 cfs @ 12.11 hrs, Volume= 0.061 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 29.61' @ 12.11 hrs Surf.Area= 1,656 sf Storage= 1,022 cf

Plug-Flow detention time= 145.2 min calculated for 0.061 af (76% of inflow)
Center-of-Mass det. time= 62.9 min (836.7 - 773.8)

Volume	Invert	Avail.Storage	Storage Description
#1	28.99'	14,992 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
28.99	1	0	0
29.00	1,656	8	8
29.50	1,656	828	836
30.00	1,656	828	1,664
31.00	25,000	13,328	14,992

Device	Routing	Invert	Outlet Devices
#1	Primary	23.00'	**12.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 23.00' / 19.00' S= 0.0667 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Secondary	29.75'	**10.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#3	Device 1	29.50'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Discarded	29.00'	**2.410 in/hr Exfiltration over Surface area above 29.00'** Excluded Surface area = 1,656 sf

Discarded OutFlow Max=0.00 cfs @ 5.00 hrs HW=28.99' (Free Discharge)
└**4=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=0.97 cfs @ 12.11 hrs HW=29.61' (Free Discharge)
└**1=Culvert** (Passes 0.97 cfs of 9.35 cfs potential flow)
└**3=Orifice/Grate** (Weir Controls 0.97 cfs @ 1.09 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=28.99' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond VFF1: VFF1 Courtyard Dorm Roof

Inflow Area = 0.323 ac, 15.66% Impervious, Inflow Depth = 2.38" for 10 YR event
Inflow = 0.90 cfs @ 12.08 hrs, Volume= 0.064 af
Outflow = 0.09 cfs @ 13.02 hrs, Volume= 0.033 af, Atten= 90%, Lag= 56.3 min
Primary = 0.09 cfs @ 13.02 hrs, Volume= 0.033 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 23.58' @ 13.02 hrs Surf.Area= 1,590 sf Storage= 1,496 cf

Plug-Flow detention time= 242.4 min calculated for 0.033 af (51% of inflow)
Center-of-Mass det. time= 124.9 min (954.9 - 830.0)

Volume	Invert	Avail.Storage	Storage Description
#1	22.49'	22,618 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.49	1	0	0
22.50	1,080	5	5
23.00	1,395	619	624
24.00	1,728	1,562	2,186
24.50	15,000	4,182	6,368
25.00	50,000	16,250	22,618

Device	Routing	Invert	Outlet Devices
#1	Primary	19.00'	**15.0" Round Culvert X 2.00** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 19.00' / 13.65' S= 0.0713 '/' Cc= 0.900 n= 0.011, Flow Area= 1.23 sf
#2	Device 1	23.50'	**24.0" x 24.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 2	22.49'	**2.410 in/hr Exfiltration over Surface area**
#4	Secondary	24.50'	**110.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.09 cfs @ 13.02 hrs HW=23.58' (Free Discharge)
└**1=Culvert** (Passes 0.09 cfs of 23.51 cfs potential flow)
└**2=Orifice/Grate** (Passes 0.09 cfs of 1.28 cfs potential flow)
└**3=Exfiltration** (Exfiltration Controls 0.09 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.49' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond VFF2: VFF2

Inflow Area = 0.264 ac, 38.71% Impervious, Inflow Depth = 2.81" for 10 YR event
Inflow = 0.87 cfs @ 12.08 hrs, Volume= 0.062 af
Outflow = 0.08 cfs @ 13.02 hrs, Volume= 0.033 af, Atten= 91%, Lag= 56.8 min
Primary = 0.08 cfs @ 13.02 hrs, Volume= 0.033 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 24.21' @ 13.02 hrs Surf.Area= 1,435 sf Storage= 1,514 cf

Plug-Flow detention time= 241.3 min calculated for 0.033 af (54% of inflow)
Center-of-Mass det. time= 130.3 min (946.3 - 815.9)

Volume	Invert	Avail.Storage	Storage Description
#1	22.50'	17,193 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.50	504	0	0
24.00	1,152	1,242	1,242
25.00	2,500	1,826	3,068
25.10	10,000	625	3,693
26.00	20,000	13,500	17,193

Device	Routing	Invert	Outlet Devices
#1	Primary	21.00'	**12.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.00' / 15.00' S= 0.0400 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Device 1	24.00'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	22.50'	**2.410 in/hr Exfiltration over Surface area**
#4	Secondary	24.60'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.08 cfs @ 13.02 hrs HW=24.21' (Free Discharge)
└**1=Culvert** (Passes 0.08 cfs of 6.23 cfs potential flow)
└**2=Orifice/Grate** (Passes 0.08 cfs of 2.51 cfs potential flow)
└**3=Exfiltration** (Exfiltration Controls 0.08 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.50' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond VFF3: VFF3 CSSC roof and site area

Inflow Area = 0.792 ac, 81.45% Impervious, Inflow Depth > 3.89" for 10 YR event
Inflow = 3.42 cfs @ 12.07 hrs, Volume= 0.257 af
Outflow = 0.94 cfs @ 12.42 hrs, Volume= 0.231 af, Atten= 72%, Lag= 21.0 min
Primary = 0.31 cfs @ 12.42 hrs, Volume= 0.211 af
Secondary = 0.63 cfs @ 12.42 hrs, Volume= 0.020 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 41.54' @ 12.42 hrs Surf.Area= 5,521 sf Storage= 5,578 cf

Plug-Flow detention time= 298.8 min calculated for 0.231 af (90% of inflow)
Center-of-Mass det. time= 250.1 min (1,027.8 - 777.7)

Volume	Invert	Avail.Storage	Storage Description
#1	39.49'	13,735 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
39.49	1	0	0
39.50	2,000	10	10
40.00	2,400	1,100	1,110
41.00	3,000	2,700	3,810
41.50	3,350	1,588	5,398
42.00	30,000	8,338	13,735

Device	Routing	Invert	Outlet Devices
#1	Primary	35.00'	**12.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 35.00' / 24.00' S= 0.0367 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Device 1	40.00'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	39.49'	**2.410 in/hr Exfiltration over Surface area**
#4	Secondary	41.50'	**30.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.30 cfs @ 12.42 hrs HW=41.54' (Free Discharge)
↑—**1=Culvert** (Passes 0.30 cfs of 8.93 cfs potential flow)
↑—**2=Orifice/Grate** (Passes 0.30 cfs of 23.90 cfs potential flow)
↑—**3=Exfiltration** (Exfiltration Controls 0.30 cfs)

Secondary OutFlow Max=0.59 cfs @ 12.42 hrs HW=41.54' (Free Discharge)
↑—**4=Broad-Crested Rectangular Weir** (Weir Controls 0.59 cfs @ 0.50 fps)

Summary for Subcatchment 1S: Non-treated project FM area

Runoff = 4.44 cfs @ 12.14 hrs, Volume= 0.370 af, Depth= 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

Area (sf)	CN	Description
20,981	98	Paved parking, HSG A
27,303	74	>75% Grass cover, Good, HSG C
48,284	84	Weighted Average
27,303		56.55% Pervious Area
20,981		43.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 2S: Non-treated project Bedford area

Runoff = 5.97 cfs @ 12.14 hrs, Volume= 0.496 af, Depth= 3.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

	Area (sf)	CN	Description
*	25,948	98	Paved Sidewalks, hardscape
	40,467	74	>75% Grass cover, Good, HSG C
	66,415	83	Weighted Average
	40,467		60.93% Pervious Area
	25,948		39.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment CSSC2: CSSC Roof treated

Runoff = 4.39 cfs @ 12.07 hrs, Volume= 0.334 af, Depth> 5.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

	Area (sf)	CN	Description
*	27,000	98	SSC Roof treated
	6,400	74	>75% Grass cover, Good, HSG C
*	1,100	98	Sidewalk
	34,500	94	Weighted Average
	6,400		18.55% Pervious Area
	28,100		81.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment CTYRD: Courtyard treated

Runoff = 1.29 cfs @ 12.08 hrs, Volume= 0.091 af, Depth= 3.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

	Area (sf)	CN	Description
	11,850	74	>75% Grass cover, Good, HSG C
*	2,200	98	Hardscape in courtyard
	14,050	78	Weighted Average
	11,850		84.34% Pervious Area
	2,200		15.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm1: Dorm Roof 1 treated

Runoff = 1.27 cfs @ 12.07 hrs, Volume= 0.097 af, Depth> 5.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

	Area (sf)	CN	Description
*	8,000	98	Dorm Roof treated
*	2,000	80	BRC Bed
	10,000	94	Weighted Average
	2,000		20.00% Pervious Area
	8,000		80.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm2: Dorm Roof 2 treated

Runoff = 1.20 cfs @ 12.07 hrs, Volume= 0.086 af, Depth= 3.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

	Area (sf)	CN	Description
*	4,000	98	Dorm Roof treated
*	7,046	74	>75% Grass cover, Good, HSG C VFF 1 area
*	450	98	Sidewalk
	11,496	83	Weighted Average
	7,046		61.29% Pervious Area
	4,450		38.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm3: Dorm Roof 3 Treated

Runoff = 1.36 cfs @ 12.07 hrs, Volume= 0.104 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

	Area (sf)	CN	Description
*	8,928	98	Dorm Roof treated
*	1,620	80	BRC bed
	10,548	95	Weighted Average
	1,620		15.36% Pervious Area
	8,928		84.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm4: Dorm 4 Roof untreated

Runoff = 1.02 cfs @ 12.07 hrs, Volume= 0.081 af, Depth> 5.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

	Area (sf)	CN	Description
*	6,100	98	Dorm roof untreated
*	1,700	98	Bedford Sidewalk
	7,800	98	Weighted Average
	7,800		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm5: Dorm 5 Roof untreated

Runoff = 0.69 cfs @ 12.07 hrs, Volume= 0.055 af, Depth> 5.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25 YR Rainfall=5.80"

	Area (sf)	CN	Description
*	5,280	98	Dorm Roof untreated
	5,280		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Reach 100R: POI 100

Inflow Area = 4.784 ac, 53.60% Impervious, Inflow Depth > 4.04" for 25 YR event
Inflow = 15.19 cfs @ 12.16 hrs, Volume= 1.609 af
Outflow = 15.19 cfs @ 12.16 hrs, Volume= 1.609 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: Durham SD System

Inflow Area = 2.286 ac, 59.07% Impervious, Inflow Depth > 4.15" for 25 YR event
Inflow = 7.17 cfs @ 12.17 hrs, Volume= 0.790 af
Outflow = 7.16 cfs @ 12.17 hrs, Volume= 0.790 af, Atten= 0%, Lag= 0.0 min
Primary = 7.16 cfs @ 12.17 hrs, Volume= 0.790 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 23.71' @ 12.17 hrs Surf.Area= 9 sf Storage= 11 cf

Plug-Flow detention time= 0.1 min calculated for 0.789 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (885.7 - 885.6)

Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,753 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	500	3	53
29.00	15,000	6,200	6,253
30.00	1,000,000	507,500	513,753

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=6.90 cfs @ 12.17 hrs HW=23.69' (Free Discharge)
↑**1=Culvert** (Inlet Controls 6.90 cfs @ 3.66 fps)

Summary for Pond 2P: Bedford SD System

Inflow Area = 1.767 ac, 45.32% Impervious, Inflow Depth = 3.95" for 25 YR event
Inflow = 7.15 cfs @ 12.13 hrs, Volume= 0.581 af
Outflow = 7.15 cfs @ 12.13 hrs, Volume= 0.581 af, Atten= 0%, Lag= 0.0 min
Primary = 7.15 cfs @ 12.13 hrs, Volume= 0.581 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 22.91' @ 12.13 hrs Surf.Area= 9 sf Storage= 7 cf

Plug-Flow detention time= 0.0 min calculated for 0.580 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (813.2 - 813.2)

Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=7.01 cfs @ 12.13 hrs HW=22.90' (Free Discharge)
↑**1=Culvert** (Inlet Controls 7.01 cfs @ 3.40 fps)

Summary for Pond 3P: DMH corner Bedford Durham

Inflow Area = 4.784 ac, 53.60% Impervious, Inflow Depth > 4.04" for 25 YR event
Inflow = 15.20 cfs @ 12.16 hrs, Volume= 1.609 af
Outflow = 15.19 cfs @ 12.16 hrs, Volume= 1.609 af, Atten= 0%, Lag= 0.0 min
Primary = 15.19 cfs @ 12.16 hrs, Volume= 1.609 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 15.35' @ 12.16 hrs Surf.Area= 9 sf Storage= 18 cf

Plug-Flow detention time= 0.1 min calculated for 1.607 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (852.9 - 852.9)

Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=15.01 cfs @ 12.16 hrs HW=15.33' (Free Discharge)
1=Culvert (Inlet Controls 15.01 cfs @ 4.79 fps)

Summary for Pond BRC1: BRC1

Inflow Area = 0.230 ac, 80.00% Impervious, Inflow Depth > 5.05" for 25 YR event
Inflow = 1.27 cfs @ 12.07 hrs, Volume= 0.097 af
Outflow = 0.58 cfs @ 12.25 hrs, Volume= 0.097 af, Atten= 54%, Lag= 10.5 min
Primary = 0.58 cfs @ 12.25 hrs, Volume= 0.097 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 23.57' @ 12.25 hrs Surf.Area= 2,029 sf Storage= 1,097 cf

Plug-Flow detention time= 53.9 min calculated for 0.097 af (100% of inflow)
Center-of-Mass det. time= 53.7 min (826.8 - 773.1)

Volume	Invert	Avail.Storage	Storage Description
#1	22.99'	20,610 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.99	1	0	0
23.00	1,800	9	9
23.50	2,002	951	960
24.00	2,200	1,051	2,010
25.00	35,000	18,600	20,610

Device	Routing	Invert	Outlet Devices
#1	Device 2	23.50'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	19.00'	**12.0" Round Culvert** L= 70.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 19.00' / 18.00' S= 0.0143 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#3	Secondary	23.75'	**15.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
#4	Device 2	22.99'	**2.410 in/hr Exfiltration over Surface area**

Primary OutFlow Max=0.57 cfs @ 12.25 hrs HW=23.57' (Free Discharge)
└**2=Culvert** (Passes 0.57 cfs of 7.63 cfs potential flow)
  ├**1=Orifice/Grate** (Weir Controls 0.46 cfs @ 0.85 fps)
  └**4=Exfiltration** (Exfiltration Controls 0.11 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.99' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond BRC2: BRC2

Inflow Area = 0.242 ac, 84.64% Impervious, Inflow Depth > 5.15" for 25 YR event
Inflow = 1.36 cfs @ 12.07 hrs, Volume= 0.104 af
Outflow = 1.27 cfs @ 12.11 hrs, Volume= 0.085 af, Atten= 6%, Lag= 2.1 min
Discarded = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Primary = 1.27 cfs @ 12.11 hrs, Volume= 0.085 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 29.63' @ 12.11 hrs Surf.Area= 1,656 sf Storage= 1,057 cf

Plug-Flow detention time= 126.1 min calculated for 0.085 af (81% of inflow)
Center-of-Mass det. time= 54.8 min (824.7 - 769.9)

Volume	Invert	Avail.Storage	Storage Description
#1	28.99'	14,992 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
28.99	1	0	0
29.00	1,656	8	8
29.50	1,656	828	836
30.00	1,656	828	1,664
31.00	25,000	13,328	14,992

Device	Routing	Invert	Outlet Devices
#1	Primary	23.00'	**12.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 23.00' / 19.00' S= 0.0667 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Secondary	29.75'	**10.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#3	Device 1	29.50'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Discarded	29.00'	**2.410 in/hr Exfiltration over Surface area above 29.00'** Excluded Surface area = 1,656 sf

Discarded OutFlow Max=0.00 cfs @ 5.00 hrs HW=28.99' (Free Discharge)
└**4=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=1.25 cfs @ 12.11 hrs HW=29.63' (Free Discharge)
└**1=Culvert** (Passes 1.25 cfs of 9.36 cfs potential flow)
└**3=Orifice/Grate** (Weir Controls 1.25 cfs @ 1.19 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=28.99' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond VFF1: VFF1 Courtyard Dorm Roof

Inflow Area = 0.323 ac, 15.66% Impervious, Inflow Depth = 3.40" for 25 YR event
Inflow = 1.29 cfs @ 12.08 hrs, Volume= 0.091 af
Outflow = 0.11 cfs @ 13.12 hrs, Volume= 0.060 af, Atten= 91%, Lag= 62.8 min
Primary = 0.11 cfs @ 13.12 hrs, Volume= 0.060 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 24.01' @ 13.12 hrs Surf.Area= 2,001 sf Storage= 2,205 cf

Plug-Flow detention time= 250.9 min calculated for 0.060 af (66% of inflow)
Center-of-Mass det. time= 150.5 min (970.1 - 819.7)

Volume	Invert	Avail.Storage	Storage Description
#1	22.49'	22,618 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.49	1	0	0
22.50	1,080	5	5
23.00	1,395	619	624
24.00	1,728	1,562	2,186
24.50	15,000	4,182	6,368
25.00	50,000	16,250	22,618

Device	Routing	Invert	Outlet Devices
#1	Primary	19.00'	**15.0" Round Culvert X 2.00** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 19.00' / 13.65' S= 0.0713 '/' Cc= 0.900 n= 0.011, Flow Area= 1.23 sf
#2	Device 1	23.50'	**24.0" x 24.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 2	22.49'	**2.410 in/hr Exfiltration over Surface area**
#4	Secondary	24.50'	**110.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.11 cfs @ 13.12 hrs HW=24.01' (Free Discharge)
└**1=Culvert** (Passes 0.11 cfs of 24.75 cfs potential flow)
└**2=Orifice/Grate** (Passes 0.11 cfs of 19.07 cfs potential flow)
└**3=Exfiltration** (Exfiltration Controls 0.11 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.49' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond VFF2: VFF2

Inflow Area = 0.264 ac, 38.71% Impervious, Inflow Depth = 3.91" for 25 YR event
Inflow = 1.20 cfs @ 12.07 hrs, Volume= 0.086 af
Outflow = 0.11 cfs @ 13.02 hrs, Volume= 0.057 af, Atten= 91%, Lag= 56.5 min
Primary = 0.11 cfs @ 13.02 hrs, Volume= 0.057 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 24.57' @ 13.02 hrs Surf.Area= 1,922 sf Storage= 2,120 cf

Plug-Flow detention time= 247.3 min calculated for 0.057 af (67% of inflow)
Center-of-Mass det. time= 149.7 min (956.3 - 806.6)

Volume	Invert	Avail.Storage	Storage Description
#1	22.50'	17,193 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.50	504	0	0
24.00	1,152	1,242	1,242
25.00	2,500	1,826	3,068
25.10	10,000	625	3,693
26.00	20,000	13,500	17,193

Device	Routing	Invert	Outlet Devices
#1	Primary	21.00'	**12.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.00' / 15.00' S= 0.0400 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Device 1	24.00'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	22.50'	**2.410 in/hr Exfiltration over Surface area**
#4	Secondary	24.60'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.11 cfs @ 13.02 hrs HW=24.57' (Free Discharge)
↑**1=Culvert** (Passes 0.11 cfs of 6.63 cfs potential flow)
↑**2=Orifice/Grate** (Passes 0.11 cfs of 11.30 cfs potential flow)
↑**3=Exfiltration** (Exfiltration Controls 0.11 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.50' (Free Discharge)
↑**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond VFF3: VFF3 CSSC roof and site area

Inflow Area = 0.792 ac, 81.45% Impervious, Inflow Depth > 5.05" for 25 YR event
Inflow = 4.39 cfs @ 12.07 hrs, Volume= 0.334 af
Outflow = 2.39 cfs @ 12.21 hrs, Volume= 0.308 af, Atten= 45%, Lag= 8.2 min
Primary = 0.45 cfs @ 12.21 hrs, Volume= 0.242 af
Secondary = 1.94 cfs @ 12.21 hrs, Volume= 0.066 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 41.59' @ 12.21 hrs Surf.Area= 8,008 sf Storage= 5,894 cf

Plug-Flow detention time= 254.4 min calculated for 0.308 af (92% of inflow)
Center-of-Mass det. time= 214.1 min (987.2 - 773.1)

Volume	Invert	Avail.Storage	Storage Description
#1	39.49'	13,735 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
39.49	1	0	0
39.50	2,000	10	10
40.00	2,400	1,100	1,110
41.00	3,000	2,700	3,810
41.50	3,350	1,588	5,398
42.00	30,000	8,338	13,735

Device	Routing	Invert	Outlet Devices
#1	Primary	35.00'	**12.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 35.00' / 24.00' S= 0.0367 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Device 1	40.00'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	39.49'	**2.410 in/hr Exfiltration over Surface area**
#4	Secondary	41.50'	**30.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.44 cfs @ 12.21 hrs HW=41.59' (Free Discharge)
└**1=Culvert** (Passes 0.44 cfs of 8.94 cfs potential flow)
└**2=Orifice/Grate** (Passes 0.44 cfs of 24.26 cfs potential flow)
└**3=Exfiltration** (Exfiltration Controls 0.44 cfs)

Secondary OutFlow Max=1.90 cfs @ 12.21 hrs HW=41.59' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 1.90 cfs @ 0.73 fps)

Summary for Subcatchment 1S: Non-treated project FM area

Runoff = 6.73 cfs @ 12.14 hrs, Volume= 0.572 af, Depth> 6.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

Area (sf)	CN	Description
20,981	98	Paved parking, HSG A
27,303	74	>75% Grass cover, Good, HSG C
48,284	84	Weighted Average
27,303		56.55% Pervious Area
20,981		43.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 2S: Non-treated project Bedford area

Runoff = 9.12 cfs @ 12.14 hrs, Volume= 0.772 af, Depth> 6.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

	Area (sf)	CN	Description
*	25,948	98	Paved Sidewalks, hardscape
	40,467	74	>75% Grass cover, Good, HSG C
	66,415	83	Weighted Average
	40,467		60.93% Pervious Area
	25,948		39.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment CSSC2: CSSC Roof treated

Runoff = 6.23 cfs @ 12.07 hrs, Volume= 0.480 af, Depth> 7.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

	Area (sf)	CN	Description
*	27,000	98	SSC Roof treated
	6,400	74	>75% Grass cover, Good, HSG C
*	1,100	98	Sidewalk
	34,500	94	Weighted Average
	6,400		18.55% Pervious Area
	28,100		81.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment CTYRD: Courtyard treated

Runoff = 2.06 cfs @ 12.07 hrs, Volume= 0.147 af, Depth= 5.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

	Area (sf)	CN	Description
	11,850	74	>75% Grass cover, Good, HSG C
*	2,200	98	Hardscape in courtyard
	14,050	78	Weighted Average
	11,850		84.34% Pervious Area
	2,200		15.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm1: Dorm Roof 1 treated

Runoff = 1.80 cfs @ 12.07 hrs, Volume= 0.139 af, Depth> 7.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

	Area (sf)	CN	Description
*	8,000	98	Dorm Roof treated
*	2,000	80	BRC Bed
	10,000	94	Weighted Average
	2,000		20.00% Pervious Area
	8,000		80.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm2: Dorm Roof 2 treated

Runoff = 1.84 cfs @ 12.07 hrs, Volume= 0.134 af, Depth> 6.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

	Area (sf)	CN	Description
*	4,000	98	Dorm Roof treated
*	7,046	74	>75% Grass cover, Good, HSG C VFF 1 area
*	450	98	Sidewalk
	11,496	83	Weighted Average
	7,046		61.29% Pervious Area
	4,450		38.71% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm3: Dorm Roof 3 Treated

Runoff = 1.92 cfs @ 12.07 hrs, Volume= 0.149 af, Depth> 7.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

	Area (sf)	CN	Description
*	8,928	98	Dorm Roof treated
*	1,620	80	BRC bed
	10,548	95	Weighted Average
	1,620		15.36% Pervious Area
	8,928		84.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm4: Dorm 4 Roof untreated

Runoff = 1.43 cfs @ 12.07 hrs, Volume= 0.113 af, Depth> 7.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

	Area (sf)	CN	Description
*	6,100	98	Dorm roof untreated
*	1,700	98	Bedford Sidewalk
	7,800	98	Weighted Average
	7,800		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Subcatchment Dorm5: Dorm 5 Roof untreated

Runoff = 0.97 cfs @ 12.07 hrs, Volume= 0.077 af, Depth> 7.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 YR Rainfall=8.10"

	Area (sf)	CN	Description
*	5,280	98	Dorm Roof untreated
	5,280		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Summary for Reach 100R: POI 100

Inflow Area = 4.784 ac, 53.60% Impervious, Inflow Depth > 6.22" for 100 YR event
Inflow = 27.54 cfs @ 12.14 hrs, Volume= 2.478 af
Outflow = 27.54 cfs @ 12.14 hrs, Volume= 2.478 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Summary for Pond 1P: Durham SD System

Inflow Area = 2.286 ac, 59.07% Impervious, Inflow Depth > 6.34" for 100 YR event
Inflow = 13.92 cfs @ 12.14 hrs, Volume= 1.208 af
Outflow = 13.93 cfs @ 12.14 hrs, Volume= 1.208 af, Atten= 0%, Lag= 0.0 min
Primary = 13.93 cfs @ 12.14 hrs, Volume= 1.208 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 24.37' @ 12.14 hrs Surf.Area= 9 sf Storage= 17 cf

Plug-Flow detention time= 0.2 min calculated for 1.208 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (858.5 - 858.5)

Volume	Invert	Avail.Storage	Storage Description
#1	22.53'	513,753 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.53	9	0	0
28.19	9	51	51
28.20	500	3	53
29.00	15,000	6,200	6,253
30.00	1,000,000	507,500	513,753

Device	Routing	Invert	Outlet Devices
#1	Primary	22.53'	**24.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 22.53' / 13.35' S= 0.0306 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=13.73 cfs @ 12.14 hrs HW=24.34' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 13.73 cfs @ 4.59 fps)

Summary for Pond 2P: Bedford SD System

Inflow Area = 1.767 ac, 45.32% Impervious, Inflow Depth > 6.12" for 100 YR event
Inflow = 10.79 cfs @ 12.13 hrs, Volume= 0.901 af
Outflow = 10.79 cfs @ 12.13 hrs, Volume= 0.901 af, Atten= 0%, Lag= 0.0 min
Primary = 10.79 cfs @ 12.13 hrs, Volume= 0.901 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 23.16' @ 12.13 hrs Surf.Area= 9 sf Storage= 9 cf

Plug-Flow detention time= 0.1 min calculated for 0.901 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (800.6 - 800.6)

Volume	Invert	Avail.Storage	Storage Description
#1	22.18'	559,750 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.18	9	0	0
27.72	9	50	50
27.82	5,000	250	300
28.00	100,000	9,450	9,750
29.00	1,000,000	550,000	559,750

Device	Routing	Invert	Outlet Devices
#1	Primary	21.90'	**36.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.90' / 13.35' S= 0.0285 '/' Cc= 0.900 n= 0.009 Corrugated PE, smooth interior, Flow Area= 7.07 sf

Primary OutFlow Max=10.58 cfs @ 12.13 hrs HW=23.15' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 10.58 cfs @ 3.80 fps)

Summary for Pond 3P: DMH corner Bedford Durham

Inflow Area = 4.784 ac, 53.60% Impervious, Inflow Depth > 6.22" for 100 YR event
Inflow = 27.52 cfs @ 12.14 hrs, Volume= 2.478 af
Outflow = 27.54 cfs @ 12.14 hrs, Volume= 2.478 af, Atten= 0%, Lag= 0.1 min
Primary = 27.54 cfs @ 12.14 hrs, Volume= 2.478 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 18.23' @ 12.14 hrs Surf.Area= 9 sf Storage= 44 cf

Plug-Flow detention time= 0.1 min calculated for 2.475 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (833.7 - 833.7)

Volume	Invert	Avail.Storage	Storage Description
#1	13.35'	607,878 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
13.35	9	0	0
21.96	9	77	77
22.00	15,000	300	378
23.00	100,000	57,500	57,878
24.00	1,000,000	550,000	607,878

Device	Routing	Invert	Outlet Devices
#1	Primary	13.35'	**24.0" Round Culvert** L= 200.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.35' / 11.00' S= 0.0117 '/' Cc= 0.900 n= 0.014, Flow Area= 3.14 sf

Primary OutFlow Max=27.02 cfs @ 12.14 hrs HW=18.04' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 27.02 cfs @ 8.60 fps)

Summary for Pond BRC1: BRC1

Inflow Area = 0.230 ac, 80.00% Impervious, Inflow Depth > 7.27" for 100 YR event
Inflow = 1.80 cfs @ 12.07 hrs, Volume= 0.139 af
Outflow = 1.48 cfs @ 12.13 hrs, Volume= 0.139 af, Atten= 18%, Lag= 3.8 min
Primary = 1.48 cfs @ 12.13 hrs, Volume= 0.139 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 23.64' @ 12.13 hrs Surf.Area= 2,057 sf Storage= 1,243 cf

Plug-Flow detention time= 49.0 min calculated for 0.139 af (100% of inflow)
Center-of-Mass det. time= 48.9 min (816.8 - 767.9)

Volume	Invert	Avail.Storage	Storage Description
#1	22.99'	20,610 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.99	1	0	0
23.00	1,800	9	9
23.50	2,002	951	960
24.00	2,200	1,051	2,010
25.00	35,000	18,600	20,610

Device	Routing	Invert	Outlet Devices
#1	Device 2	23.50'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	19.00'	**12.0" Round Culvert** L= 70.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 19.00' / 18.00' S= 0.0143 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#3	Secondary	23.75'	**15.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88
#4	Device 2	22.99'	**2.410 in/hr Exfiltration over Surface area**

Primary OutFlow Max=1.44 cfs @ 12.13 hrs HW=23.64' (Free Discharge)
└**2=Culvert** (Passes 1.44 cfs of 7.69 cfs potential flow)
  ├**1=Orifice/Grate** (Weir Controls 1.32 cfs @ 1.21 fps)
  └**4=Exfiltration** (Exfiltration Controls 0.11 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.99' (Free Discharge)
└**3=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond BRC2: BRC2

Inflow Area = 0.242 ac, 84.64% Impervious, Inflow Depth > 7.37" for 100 YR event
Inflow = 1.92 cfs @ 12.07 hrs, Volume= 0.149 af
Outflow = 1.82 cfs @ 12.10 hrs, Volume= 0.129 af, Atten= 5%, Lag= 1.9 min
Discarded = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Primary = 1.82 cfs @ 12.10 hrs, Volume= 0.129 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 29.67' @ 12.10 hrs Surf.Area= 1,656 sf Storage= 1,116 cf

Plug-Flow detention time= 102.9 min calculated for 0.129 af (87% of inflow)
Center-of-Mass det. time= 44.7 min (810.3 - 765.6)

Volume	Invert	Avail.Storage	Storage Description
#1	28.99'	14,992 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
28.99	1	0	0
29.00	1,656	8	8
29.50	1,656	828	836
30.00	1,656	828	1,664
31.00	25,000	13,328	14,992

Device	Routing	Invert	Outlet Devices
#1	Primary	23.00'	**12.0" Round Culvert** L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 23.00' / 19.00' S= 0.0667 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Secondary	29.75'	**10.0' long x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32
#3	Device 1	29.50'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Discarded	29.00'	**2.410 in/hr Exfiltration over Surface area above 29.00'** Excluded Surface area = 1,656 sf

Discarded OutFlow Max=0.00 cfs @ 5.00 hrs HW=28.99' (Free Discharge)
└**4=Exfiltration** (Controls 0.00 cfs)

Primary OutFlow Max=1.80 cfs @ 12.10 hrs HW=29.67' (Free Discharge)
└**1=Culvert** (Passes 1.80 cfs of 9.39 cfs potential flow)
└**3=Orifice/Grate** (Weir Controls 1.80 cfs @ 1.34 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=28.99' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond VFF1: VFF1 Courtyard Dorm Roof

Inflow Area = 0.323 ac, 15.66% Impervious, Inflow Depth = 5.48" for 100 YR event
Inflow = 2.06 cfs @ 12.07 hrs, Volume= 0.147 af
Outflow = 0.41 cfs @ 12.51 hrs, Volume= 0.116 af, Atten= 80%, Lag= 26.1 min
Primary = 0.41 cfs @ 12.51 hrs, Volume= 0.116 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 24.21' @ 12.51 hrs Surf.Area= 7,408 sf Storage= 3,163 cf

Plug-Flow detention time= 197.2 min calculated for 0.116 af (79% of inflow)
Center-of-Mass det. time= 118.1 min (924.2 - 806.1)

Volume	Invert	Avail.Storage	Storage Description
#1	22.49'	22,618 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.49	1	0	0
22.50	1,080	5	5
23.00	1,395	619	624
24.00	1,728	1,562	2,186
24.50	15,000	4,182	6,368
25.00	50,000	16,250	22,618

Device	Routing	Invert	Outlet Devices
#1	Primary	19.00'	**15.0" Round Culvert X 2.00** L= 75.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 19.00' / 13.65' S= 0.0713 '/' Cc= 0.900 n= 0.011, Flow Area= 1.23 sf
#2	Device 1	23.50'	**24.0" x 24.0" Horiz. Orifice/Grate X 2.00** C= 0.600 Limited to weir flow at low heads
#3	Device 2	22.49'	**2.410 in/hr Exfiltration over Surface area**
#4	Secondary	24.50'	**110.0' long x 5.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.41 cfs @ 12.51 hrs HW=24.21' (Free Discharge)
└**1=Culvert** (Passes 0.41 cfs of 25.32 cfs potential flow)
└**2=Orifice/Grate** (Passes 0.41 cfs of 31.55 cfs potential flow)
└**3=Exfiltration** (Exfiltration Controls 0.41 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=22.49' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond VFF2: VFF2

Inflow Area = 0.264 ac, 38.71% Impervious, Inflow Depth > 6.07" for 100 YR event
Inflow = 1.84 cfs @ 12.07 hrs, Volume= 0.134 af
Outflow = 1.47 cfs @ 12.16 hrs, Volume= 0.105 af, Atten= 20%, Lag= 5.4 min
Primary = 0.12 cfs @ 12.16 hrs, Volume= 0.073 af
Secondary = 1.36 cfs @ 12.16 hrs, Volume= 0.032 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 24.69' @ 12.16 hrs Surf.Area= 2,083 sf Storage= 2,358 cf

Plug-Flow detention time= 192.0 min calculated for 0.105 af (79% of inflow)
Center-of-Mass det. time= 114.2 min (908.5 - 794.3)

Volume	Invert	Avail.Storage	Storage Description
#1	22.50'	17,193 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
22.50	504	0	0
24.00	1,152	1,242	1,242
25.00	2,500	1,826	3,068
25.10	10,000	625	3,693
26.00	20,000	13,500	17,193

Device	Routing	Invert	Outlet Devices
#1	Primary	21.00'	**12.0" Round Culvert** L= 150.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 21.00' / 15.00' S= 0.0400 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Device 1	24.00'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	22.50'	**2.410 in/hr Exfiltration over Surface area**
#4	Secondary	24.60'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.12 cfs @ 12.16 hrs HW=24.68' (Free Discharge)
↑—**1=Culvert** (Passes 0.12 cfs of 6.75 cfs potential flow)
↑—**2=Orifice/Grate** (Passes 0.12 cfs of 14.81 cfs potential flow)
↑—**3=Exfiltration** (Exfiltration Controls 0.12 cfs)

Secondary OutFlow Max=1.23 cfs @ 12.16 hrs HW=24.68' (Free Discharge)
↑—**4=Broad-Crested Rectangular Weir** (Weir Controls 1.23 cfs @ 0.73 fps)

Summary for Pond VFF3: VFF3 CSSC roof and site area

Inflow Area = 0.792 ac, 81.45% Impervious, Inflow Depth > 7.27" for 100 YR event
Inflow = 6.23 cfs @ 12.07 hrs, Volume= 0.480 af
Outflow = 5.15 cfs @ 12.13 hrs, Volume= 0.455 af, Atten= 17%, Lag= 3.4 min
Primary = 0.64 cfs @ 12.13 hrs, Volume= 0.289 af
Secondary = 4.50 cfs @ 12.13 hrs, Volume= 0.166 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 41.65' @ 12.13 hrs Surf.Area= 11,541 sf Storage= 6,542 cf

Plug-Flow detention time= 204.0 min calculated for 0.455 af (95% of inflow)
Center-of-Mass det. time= 173.7 min (941.6 - 767.9)

Volume	Invert	Avail.Storage	Storage Description
#1	39.49'	13,735 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
39.49	1	0	0
39.50	2,000	10	10
40.00	2,400	1,100	1,110
41.00	3,000	2,700	3,810
41.50	3,350	1,588	5,398
42.00	30,000	8,338	13,735

Device	Routing	Invert	Outlet Devices
#1	Primary	35.00'	**12.0" Round Culvert** L= 300.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 35.00' / 24.00' S= 0.0367 '/' Cc= 0.900 n= 0.011, Flow Area= 0.79 sf
#2	Device 1	40.00'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 2	39.49'	**2.410 in/hr Exfiltration over Surface area**
#4	Secondary	41.50'	**30.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.64 cfs @ 12.13 hrs HW=41.65' (Free Discharge)
└**1=Culvert** (Passes 0.64 cfs of 8.96 cfs potential flow)
└**2=Orifice/Grate** (Passes 0.64 cfs of 24.75 cfs potential flow)
└**3=Exfiltration** (Exfiltration Controls 0.64 cfs)

Secondary OutFlow Max=4.41 cfs @ 12.13 hrs HW=41.65' (Free Discharge)
└**4=Broad-Crested Rectangular Weir** (Weir Controls 4.41 cfs @ 0.97 fps)

Appendix A-4 Stormwater System Maintenance Plan

STORMWATER FACILITIES
INSPECTION AND MAINTENANCE PLAN
Revised July 2020

Student Success Center and Residence Hall
University of Southern Maine, Portland, Maine

During construction activities, the maintenance of all stormwater measures will be the direct responsibility of the Contractor undertaking the work. All work shall conform to the terms and conditions and the Maine General Permit for Construction Activities (MCGP). After acceptance by the Owner, the maintenance of all stormwater management facilities, the establishment of any contract services required to implement the programs, and the keeping of records and maintenance log book will be the responsibility University of Southern Maine (USM). Notwithstanding any other schedule noted below, general inspections should be conducted by facilities staff monthly during wet weather conditions(rainfall of 0.5 inch or more) from March to November.

Piped Drainage Systems

Piped drainage systems shall be inspected on an annual basis to remove any obstructions to flow; remove accumulated sediments and debris at the inlet, at the outlet, and within the conduit; and any erosion damage observed at the pipe inlet and outlet. Sediment shall be removed when its level exceeds 20% of the pipe diameter. This may be accomplished by hydraulic flushing or any mechanical means. Sediment shall be contained at the pipe outlets and not allowed to transport downstream.

Driveways, Walkways and Parking Lots

Accumulations of winter sand along paved surfaces shall be cleared at least once a year, preferably in the spring, to minimize transportation of sediment during rainfall events. Accumulations on pavement may be removed by pavement sweeping. Accumulations of sand along road shoulders may be removed by grading excess sand to the pavement edge and removing it manually or by a front-end loader. No gravel roads or shoulders on project,

Inlet and Outlet Grates

Inlet and outlet grates have been designed for some of the pipe culvert sections and outlet structures at the site. These are intended to trap and control floatables and debris within the stormwater system. The grates should be inspected on a quarterly basis, and after large storm events (rainfall in excess of 1.0 inch) for build-up of debris and other potentially detrimental material. Periodic maintenance of these features will be required to keep grates clear and prevent damage to either the grate itself or the attached structure.

Vegetated Underdrained Filter Ponds

Inspections of the vegetatated underdrained filter ponds shall be conducted on a semi-annual basis and following significant rainfall events (rainfall in excess of 1.0 inch). Delayed or poor maintenance practices can result in loss of treatment capacity. Records should be kept of all maintenance operations to help plan future work and identify problem areas. The basin embankments should be maintained to preserve their integrity including, but not limited to,

vegetation maintenance, rodent control, erosion control and repair, and outlet control structure maintenance and repair. The embankments should be inspected annually for erosion or destabilization of side slopes, embankment settling and other signs of overtop structural failure.

The basins should be mowed at least semi-annually and clippings should be removed to minimize the amount of organic material accumulation in the basin. Sediment and debris should be removed from sediment forebays at least annually. The filter pond areas shall not be used for snow storage. Snow storage should be sited so that snow melt flows to a pretreatment BMP before reaching the filtration area. Vehicular equipment used to maintain or rehabilitate a filter pond should work from the pond perimeter and not enter the pond areas, as this will compact the soil surface and reduce filtration capacity. Under no circumstances should heavy equipment be used within soil filter areas unless removal of the filter material is proposed.

The surface of the filter ponds may clog with fine sediments over time. Maintenance of good grass cover should minimize this; however, if ponded runoff does not infiltrate within 48 hours, rototilling the top of the soil bed may be required to re-establish the soils filtration capacity. After a period of five to ten years the soil filter material may need to be replaced entirely to maintain the pollution removal function (the filter material is effectively a sorptive filter with a finite capacity). The end of the effective life of the filter material will be evidenced by significantly diminished infiltration rates and a reduction in outflow through the underdrain system. Removed soil filter material can be disposed of properly at a landfill.

BioRetention Cells

Inspections of the bioretention cells features shall be conducted on a semi-annual basis and following significant rainfall events (rainfall in excess of 1.0 inch). Delayed or poor maintenance practices can result in loss of treatment capacity. Records should be kept of all maintenance operations to help plan future work and identify problem areas. The basin embankments should be maintained to preserve their integrity including, but not limited to, vegetation maintenance, rodent control, erosion control and repair, and outlet control structure maintenance and repair. The embankments should be inspected annually for erosion or destabilization of side slopes, embankment settling and other signs of overtop structural failure.

Sediment and debris should be removed from sediment forebays at least annually. The retention cell areas shall not be used for snow storage. Snow storage should be sited so that snow melt flows to a pretreatment BMP before reaching the filtration area. Vehicular equipment used to maintain or rehabilitate a bioretention cell should work from outside the limits and not enter cell areas, as this will compact the soil surface and reduce filtration capacity. Under no circumstances should heavy equipment be used within bioretention cell areas unless removal of the filter material is proposed.

The surface of the bioretention cells may clog with fine sediments over time. Maintenance of landscaping cover should minimize this; however, if ponded runoff does not infiltrate within 48 hours, replanting of the filter bed may be required to re-establish the soils filtration capacity. After a period of five to ten years the soil filter material may need to be replaced entirely to maintain the pollution removal function (the filter material is effectively a sorptive filter with a finite capacity). The end of the effective life of the filter material will

be evidenced by significantly diminished infiltration rates and a reduction in outflow through the underdrain system. Removed soil filter material can be disposed of properly at a landfill.

Appendix A-5 **S.W. Cole Engineering, Inc. Geotechnical Report**

REPORT

19-1813 S

January 28, 2020

Preliminary Geotechnical Engineering Services

Proposed Residential Hall
& Student Success Center
University of Southern Maine
Bedford Street and Durham Street
Portland, Maine

Prepared For:
University of Southern Maine
Capital Planning & Project Management
Attention: Ann Vashon, Project Manager
25 Bedford Street
Portland, Maine 04101

Prepared By:
S. W. Cole Engineering, Inc.
286 Portland Road
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S.W.COLE ENGINEERING, INC.

- *Geotechnical Engineering*
- *Construction Materials Testing and Special Inspections*
- *GeoEnvironmental Services*
- *Test Boring Explorations*

www.swcole.com

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19-1813 S

January 28, 2020

University of Southern Maine
Capital Planning & Project Management
Attention: Ann Vashon, Project Manager
25 Bedford Street
Portland, Maine 04101

Subject: Preliminary Geotechnical Engineering Services
Proposed Residential Housing & Student Success Center
University of Southern Maine
Bedford Street & Durham Street
Portland, Maine

Dear Ann:

In accordance with our Contract, dated January 14, 2020, we have reviewed prior subsurface explorations for the subject project. This report summarizes our findings and its contents are subject to the limitations set forth in Appendix A.

1.0 INTRODUCTION

1.1 Scope and Purpose

The purpose of our services was to review our prior subsurface information at the site in order to assess suitable foundation types and earthwork considerations associated with the proposed building construction. Our scope of services included a review of prior explorations completed at the site in July 2019, a geotechnical assessment of the subsurface findings and preparation of this report.

1.2 Site and Proposed Construction

The site of the proposed construction is located on the University of Southern Maine (USM) Portland Campus and is situated on the easterly side of the intersection of Durham and Bedford Streets in Portland, Maine. The site is currently occupied by two buildings,

as well as paved and landscaped areas. We understand the existing Woodbury Campus Center and the adjacent facilities office building structures will be razed in favor of the proposed construction.

Based on conceptual information provided at this time, we understand redevelopment plans call for construction of a student housing structure and a student center building. The student housing structure will consist of two connected L-shaped structures; one 8-story and one 5-story, with on-grade floor slabs on the ground floor level. The Student Success Center is proposed on the westerly side of the Student Housing buildings in an area currently occupied by paved parking and landscaped areas. The proposed Student Center structure will be 4-stories.

Proposed and existing site features are shown on the "Exploration Location Plan" attached in Appendix B.

2.0 EXPLORATION AND TESTING

2.1 Explorations

Eight test borings (B-19-1 through B-19-8) were made at the site on July 30 and 31, 2020 by S. W. Cole Explorations, LLC. The exploration locations were selected by USM and established in the field by S. W. Cole Engineering, Inc. (S.W.COLE) using measurements from existing site features. The approximate exploration locations are shown on the "Exploration Location Plan" attached in Appendix B. Logs of the explorations and a key to the notes and symbols used on the logs are attached in Appendix C.

2.2 Testing

The prior test borings were drilled using hollow stem auger techniques. The soils were sampled at 2 to 5 foot intervals using a split spoon sampler and Standard Penetration Testing (SPT) methods. Pocket Penetrometer Tests (PPT) were performed where stiffer cohesive soils were encountered. SPT blow counts and PPT results are shown on the logs.

Soil samples obtained from the explorations were returned to our laboratory for further visual classification. Laboratory testing was not requested by the client.

3.0 SUBSURFACE CONDITIONS

3.1 Soil and Bedrock

Beneath a surficial layer of pavement or topsoil, test borings B-19-1, B-19-2, B-19-3, B-19-6, B-19-7 and B-19-8, made in the proposed Residence Hall and Student Success Center development area, encountered a soil profile generally consisting of uncontrolled fill overlying native deposits of glaciomarine sand, silt and clay, overlying a thin veneer of outwash sand, mantling refusal surfaces (probable bedrock) at depths varying from about 11 to 26 feet below the ground surface. The uncontrolled fills generally varied from 1 to 3 feet thick, except at B-19-6 where the uncontrolled fills extend down to probable bedrock at a depth of about 13 feet, and B-19-7 where the uncontrolled fill extend down to what appears to be native sand and silt at a depth of about 9 feet.

Test borings B-19-4 and B-19-5 were made northwest of the proposed development area and encountered a surficial layer of topsoil overlying native deposits of silty sand, overlying shallow refusal surfaces (probable bedrock) at depths of about 5 feet below the ground surface.

Not all the strata were encountered at each exploration; refer to the attached logs for more detailed subsurface information.

3.2 Groundwater

The soils encountered at the test borings were moist to wet from the ground surface. Groundwater was encountered at depths varying from about 8 to 16 feet in the borings within the proposed development area. Groundwater likely becomes perched on the relatively impervious silty clay and bedrock surfaces encountered at the test borings. Long term groundwater information is not available. It should be anticipated that groundwater levels will fluctuate, particularly in response to periods of snowmelt and precipitation, as well as changes in site use.

4.0 EVALUATION AND RECOMMENDATIONS

4.1 Foundation and Floor Slab Considerations

Based on the subsurface findings, the proposed construction appears feasible from a geotechnical standpoint. The principle foundation and floor slab considerations include:

Residential Hall: The subsurface conditions beneath the proposed Residential Hall are generally unsuitable for direct support of spread footing foundations; consequently, we recommend pile-supported foundations or, rigid inclusions be considered to improve the ground for support of spread footing foundations.

On-grade floor slabs bearing on a layer of compacted Structural Fill overlying properly prepared soil subgrades appear feasible for the Residential Hall.

Based on the available subsurface information, we preliminarily interpret the soil profile beneath the Residence Hall at correspond to Seismic Soil Site Class E (IBC 2015).

Student Success Center: Although none of the prior test borings are located directly beneath the Student Success Center, the nearby test borings suggest the trend of soil and bedrock conditions generally improves from east to west. We anticipate the Student Success Center is likely underlain by uncontrolled fills overlying stable native sands, overlying relatively shallow bedrock. At this time, based on the nearby exploration information, we recommend planning consider aggregate pier ground improvement or, over-excavation and replacement of unsuitable soils with compacted Structural Fill for support of spread footing foundations.

On-grade floor slabs bearing on a layer of compacted Structural Fill overlying properly prepared soil subgrades appear feasible for the Student Success Center.

Based on the available subsurface information, we anticipate the soil profile beneath the Student Success Center would correspond to Seismic Soil Site Class D (IBC 2015).

4.2 Excavation and Dewatering Considerations

Excavation work will generally encounter uncontrolled fills, silty sand, silt, clay soils, groundwater, and bedrock with depth. Care must be exercised during construction to limit disturbance of the bearing soils. Earthwork and grading activities should occur ideally during drier, non-freezing weather of Spring, Summer and Fall. Rubber tired construction equipment should not operate directly on the native silt and clays, when wet. Low ground pressure tracked equipment may be needed and temporary haul roads overlying geotextile fabric may be necessary. Final cuts to soil subgrades should be performed with a smooth-edged bucket to help reduce strength loss from soil disturbance.

Based on the trend of subsurface findings, we anticipate bedrock removal may be required in the western portion of the development area. As blasting is restricted in the City of Portland, bedrock removal by hoe-ramming should be anticipated. We recommend pre-construction surveys be completed on surrounding structures, water supply wells and infrastructure prior to commencing excavation activities.

Vibrations from construction should be controlled below threshold limits of 0.5 in/sec for structures, water supply wells and infrastructure within 500 feet of the project site. More restrictive vibration limits may be warranted in specific cases with sensitive equipment, historic structures or artifacts on-site or within close proximity.

Sumping and pumping dewatering techniques should be adequate to control groundwater in foundation and most utility excavations. Controlling the water levels to at least one foot below planned excavation depths will help stabilize subgrades during construction. Excavations must be properly shored or sloped in accordance with OSHA Regulations to prevent sloughing and caving of the sidewalls during construction. Care must be taken to preclude undermining adjacent structures, utilities and roadways. The design and planning of excavations, excavation support systems, and dewatering is the responsibility of the contractor.

The on-site granular fills and native sands may be suitable for reuse as compacted Granular Borrow in paved and landscape areas. The drier native silts and clays are unsuitable for reuse in building and paved areas, but may be reused in landscape areas. The saturated silts and clays are unsuitable for reuse and should be properly disposed off-site.

4.3 Weather Considerations

Construction activity should be limited during wet and freezing weather and the site soils may require drying or thawing before construction activities may continue. The contractor should anticipate the need for water to temper fills in order to facilitate compaction during dry weather. If construction takes place during cold weather, subgrades, foundations and floor slabs must be protected during freezing conditions. Concrete and fill must not be placed on frozen soil; and once placed, the concrete and soil beneath the structure must be protected from freezing.

4.4 Recommendations for Additional Study

We recommend additional test boring explorations and in-situ geophysical testing be performed at the site to further explore the subsurface conditions and Seismic Site Class.

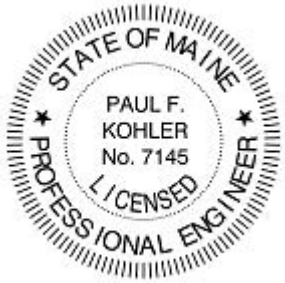
5.0 CLOSURE

It has been a pleasure to be of assistance to you with this phase of your project. We look forward to working with you during the design phase of the project.

Sincerely,

S. W. Cole Engineering, Inc.

Paul F. Kohler, P.E.
Senior Geotechnical Engineer



TJB:pfk/emw

APPENDIX A

Limitations

This report has been prepared for the exclusive use of the University of Southern Maine (USM) for specific application to the proposed Residence Hall and Student Success Center on the USM Campus in Portland, Maine. S. W. Cole Engineering, Inc. (S.W.COLE) has endeavored to conduct our services in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

S.W.COLE's scope of services has not included the investigation, detection, or prevention of any Biological Pollutants at the project site or in any existing or proposed structure at the site. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S.W.COLE should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S.W.COLE.

APPENDIX B

Figures

LEGEND:

APPROXIMATE BORING LOCATION

NOTES:

1. EXPLORATION LOCATION PLAN WAS PREPARED FROM A 1"=60' SCALE PLAN OF THE SITE PROVIDED BY UNIVERSITY OF SOUTHERN MAINE, (USM) AND OVERLAID WITH A 1"=30' SCALE PLAN ENTITLED "BORING PLAN," PREPARED BY SMRT AND PROVIDED AS A PORTABLE DOCUMENT FORMAT (PDF) FILE.
2. THE BORING LOCATIONS WERE SELECTED AND ESTABLISHED IN THE FIELD BY USM AND LOCATED ON THIS PLAN BY MEASUREMENTS FROM EXISTING SITE FEATURES.
3. THE PURPOSE OF THIS PLAN IS ONLY TO DEPICT THE LOCATION OF THE EXPLORATIONS IN RELATION TO THE EXISTING CONDITIONS AND IS NOT TO BE USED FOR CONSTRUCTION.

0 30 60 Feet

S.W.COLE ENGINEERING, INC.

UNIVERSITY OF SOUTHERN MAINE

EXPLORATION LOCATION PLAN

PRELIMINARY GEOTECHNICAL INVESTIGATION
PROPOSED STUDENT HOUSING AND SUCCESS CENTER
BEDFORD STREET
PORTLAND, MAINE

Job No.:	19-1813	Scale:	1" = 30'
Date :	01/28/2020	Sheet:	1

R:\2019\19-1813\CAD\Drawings\19-1813 ELP.dwg, 1/28/2020 1:23:05 PM, 1:1, CEM, S. W. Cole Engineering, Inc.

APPENDIX C

Exploration Logs and Key

BORING LOG

S.W.COLE EXPLORATIONS, LLC

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-1
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/30/2019
DATE FINISH: 7/30/2019

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 25' Estimated | **TOTAL DEPTH (FT):** 25.5 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Corey Culligan | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.91 | **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▽ 16 ft 7/30/2019 Soils Saturated at 16 +/- ft
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS: Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth
			1D		0.4-2.4	24/18	4-7-6-6			0.3 Asphalt Pavement Medium dense dark brown fine to medium SAND with some silt and gravel (Fill)	
										2.0 Very stiff becoming stiff brown Silty CLAY with some brown sand layers	
20	5		2D		5-7 6-	24/24	3-5-9-10	q_P=7 to 8 ksf			
										9.0 Loose or soft brown Silty CLAY with silty sand layers	
15	10		3D		10-12 11-	24/20	WOH-2-3-5	q_P=5 to 7 ksf		11.0 Very stiff to stiff brown Silty CLAY with some brown silty sand layers	
					14-			q_P=2 ksf		14.0 Medium brown silty CLAY with brown silty sand layers	▽
10	15		4D		15-17	24/24	1-2-4-1				
					17-			q_P=0.3 ksf		16.5 Soft gray Silty CLAY	
										19.0 Medium gray sandy silty CLAY with gray sand layers	
5	20		5D		20-22 20.5-	24/24	3-3-7-10	q_P=1 ksf		21.0 Medium dense brown fine SAND with some silt, some clayey silt layers Some gravel	
0	25		6D		25-25.3	4/4	60/4"			25.0 Dense brown Silty SAND and GRAVEL	

Auger Refusal at 25.5 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

S.W.COLE EXPLORATIONS, LLC

BORING LOG

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-2
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/30/2019
DATE FINISH: 7/30/2019

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 26.5' Estimated | **TOTAL DEPTH (FT):** 17.0 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Brett Raiche | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.91 | **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▽ 14 ft 7/30/2019 Saturated soils at 14 ft +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth
25			1D		0.3-2.3	24/18	6-2-2-4			0.3 Asphalt Pavement 0.5 Medium dense brown Silty CLAY and SAND (Mixed Fill) 1.2 Medium dense brown SAND, some silt, some gravel (Fill) Very stiff brown Silty CLAY, occasional sand layers	
	5		2D		5-7 5.5-	24/20	2-3-4-5	q_P=6 to 7 ksf			
20										9.0 Soft or loose brown Silty Sandy CLAY	
	10		3D		10-12 11-	24/24	WOH- 2-2-4	q_P=1 to 1.5 ksf		10.5 Medium varved brown Silty CLAY with frequent sand layers	▽
15											
	15		4D		15-16.3	16/8	6-10- 50/4"			14.5 Medium dense brown Silty SAND, some fine gravel, pieces of broken rock in tip of spoon	
10											

Auger Refusal at 17.0 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

S.W.COLE EXPLORATIONS, LLC

BORING LOG

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-3
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/30/2019
DATE FINISH: 7/30/2019

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 31.5' Estimated
TOTAL DEPTH (FT): 11.5
LOGGED BY: Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Corey Culligan
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.91
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): ▽ 8 ft 7/30/2019 Sand seams wet at 8 +/- ft
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth
30			1D		0.3-2.3	24/14	6-8-4-4			0.3 Asphalt Pavement 1.0 Medium dense brown Gravelly SAND, trace silt (Fill)	
					2-			q_P=8 ksf		Very stiff brown Silty CLAY, some thin brown sand layers	
	5		2D		5-7	24/20	5-3-4-5				
25					6-			q_P=4 to 7 ksf			▽
										8.0 Medium dense brown SAND, some silt	
	10		3D		10-11.5	18/14	3-2-60				
20										11.0 Probable weathered BEDROCK Auger Refusal at 11.5 feet Probable Bedrock	

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

S.W.COLE EXPLORATIONS, LLC

BORING LOG

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-4
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/31/2019
DATE FINISH: 7/31/2019

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 42' Estimated
TOTAL DEPTH (FT): 5.3
LOGGED BY: Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Corey Culligan
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.91
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): 7/31/2019 No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth
			1D		0-2	24/12	1-3-5-9			Topsoil with organics	
										0.7 Medium dense light brown Silty SAND, trace fine gravel	
40											
										3.0 Medium dense brown Silty SAND, some gravel, pieces of broken rock in tip of spoon	
	5		2D		5-5.3	3/3	50/3"			5.0 Probable weathered BEDROCK	
										Auger Refusal at 5.3 feet Probable Bedrock	

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

S.W.COLE EXPLORATIONS, LLC

BORING LOG

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-5
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/31/2019
DATE FINISH: 7/31/2019

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 42' Estimated
TOTAL DEPTH (FT): 5.0
LOGGED BY: Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Corey Culligan
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.91
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): 7/31/2019 No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth
			1D		0-2	24/14	1-1-4-12			0.3 Topsoil with organics 0.8 Medium dense light brown Silty SAND, trace fine gravel	
40			2D		2-4	24/16	12-18-18-30			Medium dense to dense brown Silty SAND, some gravel, pieces of broken rock in tip of spoon	
	5									4.0 Probable weathered BEDROCK	

Auger Refusal at 5.0 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

S.W.COLE EXPLORATIONS, LLC

BORING LOG

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-6
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/31/2019
DATE FINISH: 7/31/2019

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 41.5' Estimated
TOTAL DEPTH (FT): 13.3
LOGGED BY: Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Corey Culligan
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.91
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): ▽ 11 ft 7/31/2019 Soils appear saturated at 11 ft +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth
40			1D		0-2	24/14	4-16-11-10			0.3 Topsoil with organics Medium dense brown Silty SAND, some gravel (Probable Fill or disturbed soil)	
			2D		2-4	24/16	8-11-13-10				
	5		3D		5-7	24/20	6-9-9-9				
35											
	10		4D		10-12	24/6	5-5-5-3			Possible loose blast spoils FILL	▽
30										13.0 Probable weathered BEDROCK Auger Refusal at 13.3 feet Probable Bedrock	

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-19-6

S.W.COLE EXPLORATIONS, LLC

BORING LOG

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-7
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/31/2019
DATE FINISH: 7/31/2019

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 33.5' Estimated
TOTAL DEPTH (FT): 12.3
LOGGED BY: Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Corey Culligan
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.91
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): 7/31/2019 No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth
			1D		0.5-2.5	24/15	20-16-12-9			0.5 Asphalt Pavement 0.8 Dense brown SAND and GRAVEL, trace silt (Pavement Base Fill) 1.5 Medium dense brown Gravelly SAND, trace silt (Pavement Subbase Fill)	
30										Medium dense to dense brown silty SAND, some gravel (Probable Fill)	
	5		2D		5-7	24/20	9-11-12-16				
25										9.0 Dense brown SAND and SILT with pieces of weathered rock	
	10		3D		10-11.7	20/16	11-28-38-50/2"			10.5 Very dense, highly weathered ROCK (Sapprolite) 11.7 Probable weathered BEDROCK	

Auger Refusal at 12.3 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

S.W.COLE EXPLORATIONS, LLC

BORING LOG

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-8
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/31/2019
DATE FINISH: 7/31/2019

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 29' Estimated
TOTAL DEPTH (FT): 13.9
LOGGED BY: Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Corey Culligan
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.91
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): ▽ 10 ft 7/31/2019 Soils appeared saturated at 10 ft +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth
			1D		0.3-2.3	24/12	7-7-4-5			0.3 Asphalt Pavement 0.8 Medium dense brown Gravelly SAND, trace silt (Pavement Base Fill)	
										Loose brown silty SAND with brown silty CLAY (Mixed Fill)	
										3.0 Very stiff brown silty CLAY	
25	5		2D		5-7 6-	24/20	3-3-4-6	q_P=5 to 6 ksf			
20	10		3D		10-12 11-	24/20	4-6-8-7	q_P=1 to 2 ksf		9.0 Medium Dense, varved brown Silty SAND with brown silty clay layers	▽
										12.5 Probable cobbles or weathered BEDROCK	

Auger Refusal at 13.9 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

KEY TO NOTES & SYMBOLS
Test Boring and Test Pit Explorations

Stratification lines represent the approximate boundary between soil types and the transition may be gradual.

Key to Symbols Used:

w	-	water content, percent (dry weight basis)
q_u	-	unconfined compressive strength, kips/sq. ft. - laboratory test
S_v	-	field vane shear strength, kips/sq. ft.
L_v	-	lab vane shear strength, kips/sq. ft.
q_p	-	unconfined compressive strength, kips/sq. ft. – pocket penetrometer test
O	-	organic content, percent (dry weight basis)
W_L	-	liquid limit - Atterberg test
W_P	-	plastic limit - Atterberg test
WOH	-	advance by weight of hammer
WOM	-	advance by weight of man
WOR	-	advance by weight of rods
HYD	-	advance by force of hydraulic piston on drill
RQD	-	Rock Quality Designator - an index of the quality of a rock mass.
γ_T	-	total soil weight
γ_B	-	buoyant soil weight

Description of Proportions:

Trace:	0 to 5%
Some:	5 to 12%
"Y"	12 to 35%
And	35+%
With	Undifferentiated

Description of Stratified Soils

Parting:	0 to 1/16" thickness
Seam:	1/16" to 1/2" thickness
Layer:	½" to 12" thickness
Varved:	Alternating seams or layers
Occasional:	one or less per foot of thickness
Frequent:	more than one per foot of thickness

REFUSAL: **Test Boring Explorations** - Refusal depth indicates that depth at which, in the drill foreman's opinion, sufficient resistance to the advance of the casing, auger, probe rod or sampler was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

REFUSAL: **Test Pit Explorations** - Refusal depth indicates that depth at which sufficient resistance to the advance of the backhoe bucket was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

Although refusal may indicate the encountering of the bedrock surface, it may indicate the striking of large cobbles, boulders, very dense or cemented soil, or other buried natural or man-made objects or it may indicate the encountering of a harder zone after penetrating a considerable depth through a weathered or disintegrated zone of the bedrock.

Appendix A-6 **FEMA Firm Map**

ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION IN FT. (NGVD)[1]	DESCRIPTION OF LOCATION
RM 28	56.00	Disk set vertically in north face near the northwest corner of 3-story building housing the Casco Bank on Forest Avenue, 1.2 miles northwest along Forest Avenue from the Post Office near the intersection of Forest Avenue and Woodford Street.
RM 29	35.25	Copper bolt set in top of granite post flush with surface, located approximately 0.85 mile northwest along Forest Avenue from Post Office near intersection of Forest Avenue and Noyes Street, 9.0 feet northwest of northwest curb of Noyes Street and 8.5 feet southwest of southwest curb of Forest Avenue.
RM 30	25.36	Disk set in top of concrete foundation of Oakhurst Dairy building at No. 364 Forest Avenue, 35 feet southwest of north corner of building and level with street, approximately 0.55 mile northwest of Post Office near intersection of Hudson Street.
RM 31	11.88	MDOT plaque set in centerline of service doorway of Franklin Street Pumping Station at intersection of Franklin Street and Marginal Way.
RM 32	9.89	Brass disk set in top of reinforced concrete post 10 inches below present ground level, 250 feet south of C. Profenno Company, 127 Marginal Way, and 350 feet north of intersection of Preble Street and Marginal Way, 27.5 feet southeast of centerline of Marginal Way.
RM 33	36.80	Disk set vertically in northeast face of concrete foundation of 2-story brick building, 56 feet northwest of Seawall Street and 1 foot northwest of east corner of building, near Seawall Street Railroad Station and 360 feet north of crossing of Portland Terminal Railroad and Seawall Street.
RM 34	22.81	Disk set in sidewalk on west side of Saint John Street and opposite intersection of A Street at corner of entrance to Arlan's Shopping Center parking lot, in center of sidewalk and 4.28 feet west of western edge of Saint John Street and approximately 177.4 feet from Arlan's Store.
RM 35	12.83	Chiseled X cut in bolt on rim of fire hydrant on northwest side of Commercial Street, 550 feet northeast of High Street, 76 feet south of Pole No. 29.1, across from No. 322 Commercial Street.
RM 36	28.34	Disk set flush in top of concrete endwall railing at northwest end of Interstate 295 bridge over the Fore River, 21.7 feet south of Portland-South Portland city line sign, and 24.7 feet west of the centerline of Interstate 295 southbound, and 3.5 feet above pavement grade at curb line.
RM 37	22.23	Disk set vertically in center of south face of large rock set in second layer of masonry retaining wall on north of railroad tracks, 45.5 feet east of west end of wall, located .75 mile east from the overpass of U.S. Route 1 over tracks and 142 feet east of east edge of Emery Street foot bridge over tracks.
RM 38	15.56	Disk set vertically in southeast side of first concrete pier southeast of Commercial Street, 25.0 feet southeast of centerline of Commercial Street, 39 feet southwest of northeast end of pier, 0.85 mile west from Custom House at State Route 77 bridge over Fore River.

[1] National Geodetic Vertical Datum of 1929

Project Location

ZONE A2 (EL 10)
ZONE A4 (EL 11)
ZONE A1 (EL 10)
ZONE A2 (EL 10)
ZONE A2 (EL 10)
ZONE C
ZONE B
ZONE B
ZONE A2 (EL 10)
ZONE A2 (EL 10)
ZONE C
ZONE A2 (EL 10)
ZONE A2 (EL 10)
ZONE C
ZONE C
ZONE A2 (EL 10)
ZONE A2 (EL 10)
ZONE V3 (EL 12)
ZONE A2 (EL 10)
ZONE A2 (EL 10)
ZONE A2 (EL 10)

BACK COVE
FORE RIVER
FORE RIVER
FORE RIVER
THOMPSON POINT

RM 28
RM 29
RM 30
RM 31
RM 32
RM 33
RM 34
RM 35
RM 36
RM 37
RM 38

CORPORATE LIMITS
PORTLAND CORPORATE LIMITS

WOODFORD STREET, REVERE, LINCOLN, COYLE, ASHMONT, BRIGHTON AVENUE, LURLEY, FOREST, NOYES STREET, DARTMOUTH, DEERING AVENUE, DEERING, NOTES, DEERING, WILLIAM, FESSENDEN, HUDSON, STREET, STEVENS AVENUE, CAPISIC STREET, FROST, CONGRESS, PORTLAND, TERMINAL RAILROAD, LASSEL, MITTON, POWELAND, DAVIS, SEAWALL STREET, VALLEY, A STREET, ST JOHN, C STREET, D STREET, PROMENADE, VAUGHAN, CHADWICK, WESTERN, BRAMHALL, PARK AVENUE, CUMBERLAND, WINTER STREET, STATE STREET, HIGH STREET, SPRING, DANFORTH, EMERY, SALEM, PORTLAND, AVENUE, PORTLAND, STREET, CONGRESS, STREET, PLEASANT STREET, CANADIAN NATIONAL RAILWAY, COMMERCIAL, BARRACKET ROAD, MARGINAL WAY, SOMERSET, LANCASTER, PREBLE STREET, CEDAR, CHAPEL, STONE, CUMBERLAND, PEARL, VERMONT, BOYD, EAST, MAYO, STREET, OXFORD, SMITH, AVENUE, KENNEDY, FRANKLIN, DIAMOND, FOX, MADISON, AVENUE, HAMMOND, COVE, ANDERSON, WASHINGTON, AVENUE, BEATTIE, ANDROS, HANOVER, ALDER, STREET, AVENUE, PORTLAND, STREET, FORE, STREET, RAILWAY, CANADIAN NATIONAL RAILWAY, PORTLAND TERMINAL RAILROAD, HARBOR

KEY TO MAP

500-Year Flood Boundary
100-Year Flood Boundary
Zone Designations*
100-Year Flood Boundary
500-Year Flood Boundary
Base Flood Elevation Line With Elevation In Feet**
Base Flood Elevation in Feet Where Uniform Within Zone**
Elevation Reference Mark
Zone D Boundary
River Mile

ZONE B
ZONE A1
ZONE A5
ZONE B
513
(EL 987)
RM7×
•M1.5

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depth less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance and flood plain management purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas. The coastal flooding elevations shown may differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

For adjoining map panels, see separately printed Index To Map Panels.

Coastal base flood elevations shown on this map include the effects of wave action.

Coastal base flood elevations apply only landward of 0.0 NGVD.

INITIAL IDENTIFICATION:
APRIL 29, 1977
FLOOD HAZARD BOUNDARY MAP REVISIONS:
NONE

FLOOD INSURANCE RATE MAP EFFECTIVE:
JULY 17, 1986
FLOOD INSURANCE RATE MAP REVISIONS:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.

APPROXIMATE SCALE
400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
PORTLAND, MAINE
CUMBERLAND COUNTY

PANEL 13 OF 17
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
230051 0013 B

EFFECTIVE DATE:
JULY 17, 1986

Federal Emergency Management Agency

COASTAL BASE FLOOD ELEVATIONS APPLY ONLY LANDWARD OF 0.0 NGVD

ADJOINING AREA SHOWN AS INSET A ON PANEL 230051 0016 B

COMMITMENT & INTEGRITY
DRIVE RESULTS

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July 27, 2020

Matthew Grooms, Planner
City of Portland Planning Division
389 Congress Street
Portland, ME 04101

Re: University of Southern Maine
Career & Student Success Center and Residence Hall (Portland Commons)
Response to Staff Comments

Dear Matthew:

Thank you for coordinating the review of the proposed Career & Student Success Center (CSSC) and Residence Hall (Portland Commons) at 25 Bedford Street. We want to especially thank City staff for meeting with us over the last several months and providing the opportunity for an open dialogue as the designs have evolved.

The following letter compiles responses to comments received from the City, including the following:

- Email correspondence from Caitlin Cameron, Urban Designer, dated April 10, 2020;
- Email correspondence from Jeff Tarling, Urban Forester, dated April 10, 2020;
- Email correspondence from Mike Tremblay, Senior Engineer, dated April 10, 2020;
- Email correspondence from Tom Errico, Traffic Engineer (TY Lin), dated April 10, 2020;
- Email correspondence from Ben Pearson, Compliance Coordinator, dated April 10, 2020;
- Email correspondence from Michael Guethle, Stormwater Review Engineer (Wright-Pierce), dated April 23, 2020.

By-and-large, these comments have been addressed and reviewed with City staff in our meetings over the last several months. We have compiled them, here, to formalize our responses for the record.

In addition, we have made other updates to the drawings and offer supplemental Application materials; those updates and materials are described herein and attached for your use.

Comments from City

The comments received to-date are provided below for your reference and our response follows each comment in italics:

Email from Caitlin Cameron, Urban Designer, dated April 10, 2020

- Purpose: The USM overlay zone is especially concerned with new construction that creates visual connection with existing campus buildings and has the goal of a cohesive campus appearance. This has not been addressed so far in the submission. Staff do not find the proposed student center form, articulation, or materiality contribute to campus cohesion.

  The campus is defined by buildings with generally consistent material treatments of typically two materials (brick, warm-tone concrete or masonry/veneer, or grey metal/curtain wall) applied to the building. Curtain wall and large windows are found in many buildings. The buildings are generally contemporary with expressive roof forms, curtain wall/high transparency, typical institutional characteristics. More explanation is needed on what visual connections with existing buildings are being created and how these buildings are contributing to a cohesive campus appearance.

- *See attached Design Narrative dated June 29, 2020 and updated renderings dated July 23,2020.*

- A: Campus Design: More explanation is needed on how these buildings are integrated into the coherent whole of the campus.

  Campus Edges, Building Orientation are well designed to place the most active portions of the buildings towards the main streets and paths of the campus. The proposal is removed from and should not be expected to relate to the residential neighborhood.

  Pedestrian Environment: Please clarify the intended uses and circulation through the new quad and the edge treatments.

  Gateways, View and Landmarks: This location is not considered a gateway. However, the view of the residence hall on Bedford from Forest Avenue approach is visible corner and should be considered for the overall corner treatment and appearance. The current rendering of this corner shows some emphasis provided by the stair tower/shading devices.

  However, there are many materials and treatments happening within one building and this view of the building. The corner view doesn't visually connect to the existing buildings.

  - *See attached Design Narrative dated June 29, 2020 and updated renderings dated July 23,2020.*

- B: Access and Circulation: The project maintains the connectivity and circulation patterns already established on the ground and in the master plan. If the architecture of the student center building is going to be less visually cohesive with the existing campus buildings, then urban design and landscape components become even more important in creating the campus cohesion.

  Sidewalks: The standard requires brick sidewalks at least 8 feet in width. This is especially critical on Bedford Street where there is existing sidewalk design across the street that includes wide brick sidewalks, lighting, and landscape esplanades. This side of the street should have a cohesive design as the main street of the campus.

  Lighting: Please confirm that the proposed lighting conforms to what is already installed around campus or on the existing streets.

  - *Sidewalks: The USM Design Guidelines indicate 8' wide brick sidewalks, those guidelines were completed in May of 2006, and Wishcamper was built shortly after that. Subsequently, the City Sidewalk Material policy from the Technical Manual was adopted in October 2016 and shows the USM campus with concrete sidewalks. USM preference is not to use brick, and we believe we are in compliance with the Sidewalk Materials policy.*

    Lighting: The project goal is to be consistent with existing lighting on campus if available and meet energy and dark skies compliance, as well as, provide a safe and secure pathways to campus buildings and public ways. However, there is not a consistent campus standard. The fixtures proposed have a similar style and a similar height to what is existing around the Wishcamper portion of the campus. The maintenance parking lot has a few taller pole lights but do match the proposed fixtures and mounting height of the new lighting that will be installed as part of the new Wishcamper parking lot project.

- C: Parking, Loading, Service Areas: Project appropriately places the loading, service areas, utilities away from the active street frontage. No new parking is associated with this proposal. Active uses are appropriately oriented towards Bedford Street.

  - *Acknowledged.*

- D: Architectural Design:

  Height, setbacks, stepbacks, and massing are considered appropriate in scale and placement for this location on campus.

  Entrances: The entrances appropriately face Bedford Street, however, the residence hall entrance is not proportionately scaled and emphasized compared to the overall scale of the building.

  Materials: The residence hall uses far more materials within one building than is characteristic of the existing buildings. Many of the materials selected for this building could be considered to relate to the campus materials, however, the existing buildings generally apply only one or two materials. The use of brick may be more appropriate for the rear massing of the building adjacent to existing structures that use brick and warm-tone concrete materials. The grey tones better relate to the buildings found on Bedford Street. Use of natural wood finishes is not contextual to Portland or the USM campus. Treatment of rooftop mechanicals should conform to the standard regarding screening and integration with the overall design form.

    - *See attached Design Narrative dated June 29, 2020 and updated renderings dated July 23,2020.*

Email from Jeff Tarling, Urban Forester, dated April 10, 2020

- The main landscape features of the project are the Quad open space turf area, which will become perhaps the main focal point of the University once the project has been completed. It is a really large space without the number of trees one might see on the typical college campus... this is likely due to the multi use purpose of having a large open area. The proposed tree alley on the right side consists of only 4 shade trees with 3 on the West, opposing side. Recommendations or suggestions might include increasing the tree numbers to 5 on each side, one suggestion on the tree type use would be to consider a New England native tree that has Fall color as it can help create a sense of place vs using the European Linden. While they can grow stately, here in Portland we receive more complaints from the public about 'Sooty Mold' issues with Linden than almost all others. Suggestions might include Sugar Maple, European Beech (noticing the nearby campus has some great heritage Beech examples), Red Maple, Honeylocust, perhaps American Elm. This would be a University choice vs a condition.

  - *We welcome suggestion of alternative species to the Lindens such as European Beech, Red or Sugar Maple, or new (with proven resistance to Dutch Elm Disease) American Elm varieties and will review with USM.*

- Street-trees - the project plans a densely spaced planting of 'Adirondack' Crabapple which should do well along Bedford Street. The density is closer than our 'City' standard, it is likely USM will be caring for these trees if so the density is acceptable, if the trees are to be maintained by the city we would look at reducing them by 50%. Overall, the proposed USM project will increase the green space percentage by removing the parking lot and creating the Quad area. It would be hopeful that the tree numbers in the Quad could be increased to at least 5 shade trees on each side of the Quad and selecting a tree other than the European Linden only since we have seen many issues.

  - *The proposed flowering crabapples along Bedford Street directly mirror those on the opposite side and will be maintained in similar fashion by the USM. See above for Quad tree species.*

Email from Mike Tremblay, Senior Engineer, dated April 10, 2020

- DPW suggests that parking be provided along the new residents hall on Bedford Street. This can likely be provided in the currently proposed 12-foot esplanade. The remaining space should be wide enough for a viable esplanade, or could be reallocated to wider sidewalks along this segment of Bedford Street.

- *Parallel parking spaces are commonly 9' wide and 20' long, so the esplanade area would be adequate for about 8 parking spaces (160' along dorm frontage). The suggestion to use the esplanade for parking is not consistent with review comments by Urban Design reviewer to match the easterly side of Bedford, which has an esplanade with street trees.*

- The sidewalk on Durham Street should be widened to the edge of the City ROW. It is likely that Durham Street will see significantly more pedestrian traffic once the residence hall is occupied.
  - *The Durham sidewalk is presently shown at 6' wide which is adequate for two-way pedestrian traffic. This end of the campus has limited destinations for students.*
- A maintenance agreement will be required as the Bedford Street sidewalk is located within USM's property.
  - *Acknowledged.*
- The ADA ramp at the corner of Durham Street and Bedford Street should be reconsidered. Its alignment suggests there may be a crosswalk across Bedford Street where none is provided.
  - *The ADA ramp has been modified to reflect that there is not a crosswalk across Bedford Street and will align to allow for access across Durham St.*
- Proposed spot grades should be provided for all new sidewalks, ramps, and driveways.
  - *Additional spot grade information will be included in the construction documents.*
- A move-in/move-out traffic management plan should be provided. This plan should include, but not necessarily be limited to, the day(s) of the week that such activity will take place; where loading and unloading will take place; how vehicles will be routed to and from the loading zone(s); what, if any, changes to roadway regulations may be necessary (e.g. converting a roadway to one-way to allow for street parking where none would otherwise exists); etc.
  - *Please see the attached "Preliminary Plan for Summer/Fall Move-In" prepared by USM.*

Email from Tom Errico, Traffic Engineer (TY Lin) , dated April 10, 2020

- According to the Traffic Impact Analysis prepared by VHB dated March 5, 2020 the project would generate new peak hour traffic levels that would require a Traffic Movement Permit (TMP). The trip generation estimate was based upon the residence hall and student center facilities and increases in student enrollment in 2027. The applicant shall submit a Traffic Movement Permit application so that a scoping meeting can be scheduled.
  - *An application for a Traffic Movement Permit was submitted on 07/22/2020, and we anticipate the scoping meeting to be scheduled within the next few weeks.*
- The Applicant should provide documentation if USM has an existing Traffic Movement Permit. The TMP Application should also include trips associated with site changes implemented over the last 10-years.
  - *Evidence of an existing Traffic Movement Permit (issued with the Site Plan approval of the University Commons project in 2007) was provided to City staff under separate cover. As mentioned in the previous response, an application for a new Traffic Movement Permit has been submitted.*
- According to the analysis, USM will experience an increase of between 95 and 153 trips during the Weekday AM peak hour and between 113 and 174 vehicles during the Weekday PM peak hour. The study compared ITE Trip Generation estimates and local/site specific trip estimates. I have not fully reviewed the trip generation estimate methodology but will provide direction/approval during the TMP process. For the purposes of submitting a TMP Application, I

would suggest the applicant use the 7th Edition of the ITE Trip Generation Manual (or the 10th Edition if the pending TMP modified regulations are adopted prior to submitting the application).

  - *We used the 7th edition (and referred to the 10th as well).*

- For the purposes of assigning the new vehicle trips to the roadway network, the traffic impact analysis assumed a new parking garage would be constructed on Falmouth Street. The parking garage will not generate new traffic to the USM campus but will likely result in redistribution of vehicles arriving and departing the campus. This will be discussed at the TMP scoping meeting but would likely be required for the traffic study.

  - *The redistribution of traffic was incorporated into the traffic analysis, which was submitted to the City. The analysis was also incorporated into the Traffic Movement Permit application.*

- I briefly reviewed the Parking Assessment: Existing and Future Conditions prepared by VHB dated January 17, 2020. The assessment documents existing demand in USM parking facilities but does not appear to account for USM generated parking demand on public streets. The applicant should note if this information has been estimated or included in the assessment.

  - *The original parking analysis by VHB did cover public streets, but it was not included in the report submitted to the City because the focus of the report was campus parking. Since then, two memos have been submitted to the City that include analysis of street parking data. The second memo, dated 7/17/2020, includes an estimate of USM's contribution to street parking occupancy.*

Email from Ben Pearson, Compliance Coordinator, dated April 10, 2020

- A kitchen and pub are proposed but I did not see any grease control equipment planned. A schier great-basin 250 or equivalent high capacity grease interceptor is required to capture all dishwashing fixtures from the proposed food service facilities. There must be a junction manhole with independent channels at the location where the outlet of the grease interceptor connects to the sanitary sewer.

  - *A grease interceptor has been incorporated into the plans/design with appropriate manhole connections.*

Email from Michael Guethle, Stormwater Review Engineer (Wright-Pierce), dated April 23, 2020

- 1) Basic Standard: Per the City's Technical Manual Portland Stormwater Management Standards And Maine Dep Chapter 500 Stormwater Management, an Erosion & Sediment Control management plan, notes, and details per the Chapter 500 Rules must be provided to meet the Basic Standard.

  - *Acknowledged.*

  Erosion and Sedimentation Control best practices were observed on the Erosion and Sediment Control Plan and associated Details. An Inspection, Maintenance, and Housekeeping Plan has been provided with the erosion details and notes.

  a. In general, application of erosion and sedimentation control devices is appropriate. The following items need revision or review:

  i. Catch basin inlet protection should include catch basin throat inlet protection where necessary.

    - *Inlet protection will be included.*

  ii. Construction Entrance appears to be located in a low area of the site, near or in a catch basin area. Construction Entrances should ideally not be located in stormwater treatment areas or adjacent to catch basins. It is understood that this entrance is likely located at a

critical point for vehicle turning movements, and if the construction entrance cannot be moved, additional detailing on sediment transport mitigation in this location should be included in the construction management plan.

- *The construction entrance has been located at existing curb cut on Bedford St. Additional detailing pertaining to sedimentation transport mitigation will be provided.*

iii. Construction fence/limit of work appears to not be inclusive of some grading and pavement activities at the western boundary. Perimeter erosion control is recommended on this border as well.

- *The construction fence location has been modified to include all work areas.*

iv. Check dams should be provided on the southwestern boundary swale.

- *Check dams will be added to swale.*

- 2) General Standard: The applicant has provided information regarding the size and scope of the project, and has indicated the project is subject to the General Standard under the requirements of the Site Location of Development Act (SLODA). The project is being reviewed under the redevelopment guidelines and requirements.

  a. The applicant has provided an impact analysis to compare pre-development and post-development land use pollutant rankings under MaineDEP redevelopment guidelines. The written analysis indicated that the proposed development had a lower pollutant ranking than the existing site and is therefore required to treat 50% of the proposed site's disturbed surface area.

  A summary of pollutant rankings was provided. However, it is not clear which land use is being allocated which pollutant ranking. A visual or written description of site improvements and their allocated pollutant rankings should be provided.

  - *The stormwater report has been updated.*

  Please elaborate on the pollutant ranking selected for the roof areas. It is our understanding that the roof areas are flat, which is typically assigned a pollutant ranking of 3.

  - *The stormwater report has been updated.*

  Please also describe the general use of existing and proposed parking areas to better define their use as low-, medium-, or high- turnover parking areas.

  - *The stormwater report has been updated.*

  b. High-pollutant surface areas should be prioritized for stormwater treatment under the redevelopment standard. Please provide written or visual understanding of how priority for treatment has been assigned to high-ranking pollutants.

  - *The stormwater report has been updated.*

  c. One stormwater treatment system is provided as a "quad of lawn area". If the area is meant to be accessed by pedestrians as part of the site, it is suggested that the applicant provide a hardened access location to the basin, and review the proposed grasses to be suitable to both foot traffic, as well as submerged conditions.

  - *Stormwater treatment areas have been modified on the site. See revised plans.*

  d. An executed maintenance contract for the BMP systems is required. Given the difficulty in providing maintenance to courtyard-type stormwater treatment systems, please provide the executed maintenance agreement for this system as part of the application. Maintenance agreements for other treatment systems may be provided as a condition of approval.

  - *The stormwater report has been updated.*

- 3) Grassed Underdrained Soil Filter (GUSF) Design:

  a. A bioretention cell detail was provided. Please confirm if this detail is incorporated into the design.

    - *The detail has been adjusted to reflect proposed condition.*

  b. Additional design information in the stormwater management report is needed showing the following characteristics:

    The amount of impervious and developed area conveyed to the GUSF;

    Confirmation on the BMP sizing being a minimum of 5% of the impervious surface area and 2% of the developed surface area;

    Confirmation of basin areas, depth, media layers, and sizing;

    Maintenance access to the courtyard basin in accordance with Chapter 7.1 of the BMP manual;

    Sizing for sediment pretreatment for walkways and other sanded areas.

      - *The stormwater report has been updated.*

  c. Additional questions were developed from the HydroCAD calculation submission:

  GUSF outlets should be reviewed. GUSF outlets should include exfiltration rates in accordance with MaineDEP Chapter 500; underdrains conveying to the outlet control structure; and design for the outlet control structure inlets.

    - *The stormwater report has been updated.*

  Currently, exfiltration is modeled as a discarded value at 0.01 CFS, and outlets include a 20-foot overflow spillway which was not observed on the plans. Please revise.

    - *The stormwater report has been updated.*

  The filter basin should drain dry in no less than 24-hours and no more than 48-hours. The applicant has indicated that the filter basin drains 24-hours following the beginning of a rain event, but not that the system drains 24- hours following the basin filling, or following a water quality rain event.

    - *The stormwater report has been updated.*

  Please provide calculations indicating the basin draining 24-hours to 48-hours following either the basin filling to the ponding level, or following a 24-hour, 1-inch water quality rain event.

    - *The stormwater report has been updated.*

  Typically, this will require a reducer to the underdrain orifice, which will be adjusted in the field following construction. Please indicate that any reducer will be field-verified and adjusted in accordance with Chapter 7.1 of the BMP manual.

    - *The stormwater report has been updated.*

- 4) Flooding Standard: The applicant has submitted HydroCAD files indicating the post-development do not exceed the pre-development runoff rates for the facility. However, these calculations will need to be revised based on the above review comments for the GUSF designs.

    - *The stormwater report has been updated.*

- 5) Grading and Drainage:

  a. A Maine Construction General Permit will likely be required for the project due to the extent of grading.

- *Acknowledged.*

b. Typical details should show a maximum 2% cross-slope for sidewalks, crosswalks, and crosswalk portions of driveways and maintenance entrances.

- *Details and plans have been modified.*

c. Locations of level landings, and maximum slopes for regulated maximum distances, should be provided on the plans for ADA access locations.

- *Details and plans have been modified.*

d. For catch basin grates and frames to be re-set in the roadway, please provide a standard "dishpan" detail in accordance with the City Technical Manual.

- *Details and plans have been modified.*

e. Type F basins did not have a sump identified. The City Technical Manual includes a 3-foot sump for basins.

- *Details and plans have been modified.*

f. Not all pipes have inverts or rim elevations at this time, and were not able to be reviewed.

- *Details and plans have been modified.*

- 6) Utility Connections:

a. Ability to serve letters have not been provided for utilities impacted by the proposed project, but have been requested by the applicant for applicable utilities. The applicant has indicated that ability to serve letters will be submitted to Planning upon receipt.

- *Pending. SMRT is coordinating with Utilities.*

b. It is understood that grease trap sizing is being reviewed by Department of Public Works. Applicant shall defer to comments from Department of Public Works on this item.

- *Details and plans have been modified.*

i. A sewer cleanout should be provided at the intersection between the grease It is understood that grease trap sizing is being reviewed by Department of Public Works.

- *Details and plans have been modified.*

ii. An oil-water separator detail was provided, please confirm if this is the detail for the grease trap. If an oil-water separator is proposed, please confirm its location on the plan.

- *Details and plans have been modified.*

c. Standard design for the water and fire system has been provided. Adherence to PWD standards is typically provided by the water utility for water connections, and would be addressed in an ability to serve letter and acceptance through PWD.

- *Pending. SMRT is coordinating with PWD.*

d. Standard design for the electrical and gas utilities has been provided.

i. An existing gas line is located near CB 2235. Please confirm if the gas in this location is to be abandoned or removed, and if the GUSF adjacent to the gas line will have a liner.

- *Details and plans have been modified.*

e. Connection to Existing Stormwater Systems: E-mail, or otherwise written, confirmation from the Department of Public Works accepting this connection is requested to confirm that this connection is appropriate under Land Use section 14- 526 (b) 3 a. (iv); and 14-526 (c) 3 a.

- *Pending – SMRT is coordinating with the Department of Public Works.*

f. Planting impacts to utilities:

i. Several plantings are located over underground utilities, or beneath overhead wires. Please confirm how the design incorporates mitigation or prevention for roots impacting underground utilities, or canopy expansion impacting overhead wires.

- *Planting is being coordinated with utilities. Some overhead utilities are likely to be removed.*

ii. For installation adjacent to stormwater BMPs, please confirm how stormwater BMP liners (if any) are incorporated into the design.

- *Liners are not being utilized.*

Updates to Application Materials

Since submitting the Site Plan Application, the following updates and additional materials are provided in support:

- A virtual neighborhood meeting was held on July 15, 2020, at 6:00 pm regarding the Level III Site Plan Submittal for the proposed project; enclosed is a letter certifying that the neighborhood meeting was held, in addition to copies of the meeting invitation, attendance list, and meeting notes.
- The Site Plans have been revised as follows:
  - The CSSC building size has been reduced from 60,000 square feet to 43,000 square feet, and the location on the site has been adjusted slightly. Accordingly, the service yard and loading dock have been modified. All access points from perimeter streets remain the same. Minor modifications to internal sidewalks have been made to align with building modifications.
  - Stormwater management areas have been adjusted on site based on building location changes and client requests. Stormwater management has been designed in accordance with Chapter 500 regulations.
  - Curb cuts and proposed on-street parking along Durham Street have been reviewed with adjacent neighbor Oakhurst Dairy to coordinate with their truck movement.
- The building renderings and elevations have been revised as described in the attached Design Narrative.
- The Logistics Plan that accompanies the Construction Management Plan has been updated to reflect the site changes.
- USM has completed additional on-street parking analyses at staff's request. The analyses are summarized in the attached "On Street Parking Adjacent to Portland Campus" memo dated July 17, 2020.

If you have any questions or require additional information, please do not hesitate to contact me at (207) 558-3662 or by email at dstairs@woodardcurran.com.

Sincerely,

WOODARD & CURRAN INC.

Darrin Stairs, PE
Project Manager

cc: Alexander Porteous, University of Southern Maine
Craig Piper, SMRT Architects
Mary Costigan, Bernstein Shur

Enclosures: Design Narrative, June 4, 2020
Neighborhood Meeting Materials, July 15, 2020
Revised Renderings, July 23, 2020
Revised Site Plans, July 24, 2020
Stormwater Report, Revised July 24, 2020
Updated Lighting Cut Sheets
Construction Logistics Plan June 30, 2020
Portland Commons Residence Hall - Preliminary Plan for Summer/Fall Move-In Plan
USM On Street Parking Adjacent to Portland Campus July 17, 2020

Department of Environmental Protection
Bureau of Land & Water Quality
17 State House Station
Augusta, Maine 04333
Telephone: 207-287-3901

FOR DEP USE **FORM A PAGE 1**
ATS # _____
L-_____
Total Fees: _____
Date: Received _____

****

SITE LOCATION OF DEVELOPMENT PERMIT APPLICATION 38 M.R.SA. §§481-490

PLEASE TYPE OR PRINT IN *INK ONLY*

This application is for: (CHECK THE ONE THAT APPLIES)	☐ **20 acre development** ☐ **Planning Permit** ☐ **Metallic Mining**	☐ **Marine Oil Terminal** ☐ **Structure** ☐ **Subdivision**	■ **Major Amendment** ☐ **Minor Amendment**

1. Name of Applicant:	University of Southern Maine	**6. Name of Agent (if applicable):**	Woodard & Curran, Darrin Stairs
2. Applicant's Mailing Address:	25 Bedford St, Portland, ME 04104	**7. Agent's Mailing Address:**	41 Hutchins Dr., Portland, ME
3. Applicant's Daytime Phone #:	207-780-4585	**8. Agent's Daytime Phone # :**	(207) 558-3662
4. Applicant's Fax # (if available):		**9. Agent's Fax # (if available):**	
5. Applicant's *e-mail address* (REQUIRED -license will be sent via: e-mail):	john.souther@maine.edu	**10. Agent's *e-mail address* (REQUIRED - license will be sent via e-mail):**	dstairs@woodardcurran.com

PROJECT INFORMATION

11. Name of Development:	USM Campus and Student Success Center and Residence Hall						
12. Map and Lot #'s:	**Map #:**	**Lot #:**	**13. Deed Reference #'s:**	**Book #:** 15109	**Page #:** 33		
14. Location of Project City/Town:	Portland	**15. County:**	Cumberland	**16. UTM Northing**	4835207.	**17. UTM Easting**	70.27361111
18. Brief Description of Project including total parcel size:	Amendment to existing SLOD for redevelopment of 3.8 acres with a new Career and Student Success Center and Residence Hall on campus.						

19. Type of Direct Watershed: (Check all that apply)

☐ Lake not most at risk ☐ River, stream or brook ☐ Coastal wetland
☐ Lake most at risk ☐ Urban impaired stream ☐ Wellhead or public water
☐ Lake most at risk, severely blooming ☐ Freshwater wetland

20. Name of Waterbody Project Site drains to:	Site drains to municipal sewer system; within the Back Cove watershed		
21. Amount of Developed Area:	Total acres: 3.8	Existing Developed area: 3.8 acres	New Developed area: 0 acres (Entire site to be redeveloped)
22. Amount of Impervious Area:	Total acres: 2.5	Existing Impervious areas 0 acres	New Impervious area: 2.5 acres (Net Reduction of 1.16 acres)

23. Development started prior to obtaining a license?:	☐ **Yes** ■ **No**		
24. .Development or any portion of the site subject to enforcement action?	☐ **Yes** ☐ **No**	**If yes**, name of enforcement staff involved?	
25. Common scheme of development?:	☐ **Yes** ☐ **No**	**26. Title, Right or Interest:**	■ **own** ☐ **lease** ☐ **purchase option** ☐ **written agreement**
27. Natural Resources Protection Act permit required?:	☐ **Yes** ☐ **No**	**If yes:** ☐ **PBR** ☐ **Tier 1** ☐ **Tier 2** ☐ **Full Permit**	
28. Existing DEP Permit number (if applicable):	L-20438-22-D-A		
29. Names of DEP staff person(s) present at the pre-application meeting:	NA		
30. Does agent have an interest in project? If yes, what is the interest?	☐ **Yes** ■ **No**		

CERTIFICATIONS AND SIGNATURES LOCATED ON PAGE 2

IMPORTANT: IF THE SIGNATURE BELOW IS NOT THE APPLICANT'S SIGNATURE, ATTACH LETTER OF AGENT AUTHORIZATION SIGNED BY THE APPLICANT.

By signing below the applicant (or authorized agent), certifies that he or she has read and understood the following :

CERTIFICATIONS / SIGNATURES

"I certify under penalty of law that I have personally examined the information submitted in this document and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment. I authorize the Department to enter the property that is the subject of this application, at reasonable hours, including buildings, structures or conveyances on the property, to determine the accuracy of any information provided herein.

Further, I hereby authorize the DEP to send me an electronically signed decision on the license I am applying for with this application by emailing the decision to the electronic address located on the front page of this application (see #5 for the applicant and #10 for the agent)"..

Signed:_____ **Title** Project Manager **Date:**_____

Notice of Intent to Comply with Maine Construction General Permit	**With this Site Law application form and my signature, I am filing notice of my intent to carry out work which meets the requirements of the Maine Construction General Permit (MCGP). I have read and will comply with all of the MCGP standards.** **If this form is not being signed by the landowner or lessee of the property, attach documentation showing authorization to sign.** **Signed**_____ **Date:** March 5, 2020

NOTE: You must file a MCGP Notice of Termination (Form K) within 20 days of completing permanent stabilization of the project site.

CERTIFICATION

The person responsible for preparing this application and/or attaching pertinent site and design information hereto, by signing below, certifies that the application for development approval is complete and accurate to the best of his/her knowledge.

Signature: _____

Name (print): Darrin Stairs

Date: March 5, 2020

Re/Cert/Lic No.: _____

Engineer PE15118

Geologist_____

Soil Scientist _____

Land Surveyor _____

Site Evaluator _____

Active Member of the Maine Bar _____

Professional Landscape Architect _____

Other_____

Maine's Public Universities
UNIVERSITY OF MAINE SYSTEM

UNIVERSITY OF SOUTHERN MAINE
PORTLAND • GORHAM • LEWISTON • ONLINE

February 27, 2020

To: Local, State, and Federal Review Officials

The University of Southern Maine, a member of the University of Maine System, is preparing plans for the Career and Student Success Center (CSSC) at the University of Southern Maine, Portland, ME. The University has retained Woodard & Curran, Inc. to assist in the preparation of the applications associated with permitting approvals for this project. When necessary, Woodard & Curran, Inc. is authorized as its agent to represent the University in addressing questions on the plans, or applicable applications, for this project.

Sincerely,

John M. Souther,
Executive Director of Facilities Management,
University of Southern Maine for the
University of Maine System

Facilities Management
P.O. Box 9300, Portland, ME 04104-9300
(207) 780-4160, TTY (207) 780-5646, FAX (207) 780-4538
www.usm.maine.edu
A member of the University of Maine System

FORM D

SUBMISSIONS CHECKLIST

If a provision is not applicable, put "NA"

Section 1. Development description

A. Narrative

X 1. Objectives and details

X 2. Existing facilities (with dates of construction)

B. Topographic map

X 1. Location of development boundaries

X 2. Quadrangle name

C. Construction plan

X 1. Outline of construction sequence (major aspects)

2. Dates

D. Drawings

X 1. Development facilities

X a. Location, function and ground area

NA b. Length/cross-sections for roads

X 2. Site work (nature and extent)

X 3. Existing facilities (location, function ground area and floor area)

4. Topography

X a. Pre- and post-development (contours 2 ft or less)

X b. Previous construction, facilities and lot lines

X **Section 2. Title, right or interest** (copy of document)

Section 3. Financial capacity

X A. Estimated costs

B. Financing

X 1. Letter of commitment to fund

2. Self-financing

NA a. Annual report

NA b. Bank statement

3. Other

NA a. Cash equity commitment

NA b. Financial plan

NA c. Letter

NA 4. Affordable housing information

Section 4. Technical ability (description)

X A. Prior experience (statement)

X B. Personnel (documents)

Section 5. Noise

X A. Developments producing a minor noise impact (statement)

NA 1. Residential developments

NA 2. Certain non-residential subdivisions

X 3. Schools and hospitals

NA 4. Other developments

NA a. Type, source and location of noise

NA b. Uses, zoning and plans

NA c. Protected locations

NA d. Minor nature of impact

NA e. Demonstration
NA B. Developments producing a major noise impact (full noise study)
NA 1. Baseline
NA a. Uses, zoning and plans
NA b. Protected locations
NA c. Quiet area
NA 2. Noise generated by the development
NA a. Type, source and location of noise
NA b. Sound levels
NA c. Control measures
NA d. Comparison with regulatory limits
NA e. Comparison with local limits

X **Section 6. Visual quality and scenic character**(narrative, description, visual impact analysis)

X **Section 7. Wildlife and fisheries** (narrative)

NA **Section 8. Historic sites** (narrative)

NA **Section 9. Unusual natural areas** (narrative)

Section 10. Buffers

NA A. Site plan and narrative

Section 11. Soils

X A. Soil survey map and report
X 1. Soil investigation narrative
X 2. Soil survey map
X B. Soil survey intensity level by development type
1. Class A (High Intensity) Soil Survey
2. Class B (High Intensity) Soil Survey
3. Class C (Medium High-Intensity) Soil Survey
4. Class D (Medium Intensity) Soil Survey
C. Geotechnical Investigation
NA D. Hydric soils mapping

Section 12. Stormwater management

A. Narrative
X 1. Development location
NA 2. Surface water on or abutting the site
NA 3. Downstream ponds and lakes
X 4. General topography
X 5. Flooding
NA 6. Alterations to natural drainage ways
X 7. Alterations to land cover
X 8. Modeling assumptions
9. Basic standard
X 10. Flooding standard
X 11. General standard
X 12. Parcel size
13. Developed area
14. Disturbed area
15. Impervious area
B. Maps
X 1. U.S.G.S. map with site boundaries
X 2. S.C.S. soils map with site boundaries
X C. Drainage Plans (a pre-development plan and a post-development plan)

X 1. Contours
X 2. Plan elements
X 3. Land cover types and boundaries
X 4. Soil group boundaries
X 5. Stormwater quantity subwatershed boundaries
X 6. Stormwater quality subwatershed boundaries
X 7. Watershed analysis points
X 8. Hydrologic flow lines (w/flow types and flow lengths labeled)
X 9. Runoff storage areas
X 10. Roads and drives
X 11. Buildings, parking lots, and other facilities
X 12. Drainage system layout for storm drains, catch basins, and culverts
NA 13. Natural and man-made open drainage channels
NA 14. Wetlands
NA 15. Flooded areas
X 16. Benchmark
X 17. Stormwater detention, retention, and infiltration facilities
X 18. Stormwater treatment facilities
NA 19. Drainage easements
X 20. Identify reaches, ponds, and subwatersheds matching stormwater model
NA 21. Buffers

X D. Runoff analysis (pre-development and post development)
X 1. Curve number computations
X 2. Time of concentration calculations
X 3. Travel time calculations
X 4. Peak discharge calculations
X 5. Reservoir routing calculations

X E. Flooding Standard
X 1. Variance submissions (if applicable)
X a. Submissions for discharge to the ocean, great pond, or major river
X i. Map
X ii. Drainage plan
X iii. Drainage system design
NA iv. Outfall design
NA v. Easements
NA b. Insignificant increase
NA i. Downstream impacts

X c. Submissions for discharge to a public stormwater system
X i. Letter of permission
X ii. Proof of capacity
NA ii. Outfall analysis and design (pictures)
X 2. Sizing of storm drains and culverts
X 3. Stormwater ponds and basins
X a. Impoundment sizing calculations
X b. Inlet calculations
X c. Outlet calculations
NA d. Emergency spillway calculations
X e. Subsurface investigation report
NA f. Embankment specifications
NA g. Embankment seepage controls
NA h. Outlet seepage controls
X i. Detail sheet
j. Basin cross sections
X k. Basin plan sheet
NA 4. Infiltration systems
NA a. Well locations map
NA b. Sand and gravel aquifer map
NA c. Subsurface investigation report with test pit or boring logs

NA d. Permeability analysis
NA e. Infiltration structure design
NA f. Pollutant generation and transport analysis
NA g. Monitoring and operations plan
NA i. Locations of storage points of potential contaminants
NA ii. Locations of observation wells and infiltration monitoring plan
NA iii. Groundwater quality monitoring plan
NA 5. Drainage easement declarations.
X F. Stormwater quality treatment plan peak discharge calculations
X 1. Basic stabilization plan
NA a. Ditches, swales, and other open channel stabilization
NA b. Culvert and storm-drain outfall stabilization
NA c. Earthen slope and embankment stabilization
X d. Disturbed area stabilization
NA e. Gravel roads and drives stabilization

X 2. General Standard
X a. Calculations for sizing BMP
X b. Impervious area calculation
X c. Developed area calculation
X d. Summary spreadsheet of calculations

NA 3. Phosphorus control plan
NA a. Calculations for the site's allowable phosphorus export
NA b. Calculations for determining the developed site's phosphorus export
NA c. Calculations for determining any phosphorus compensation fees
NA 4. Offset Credits
NA a. Urban impaired stream
NA Offset credit calculation
NA b. Phosphorus credit determination
NA i. Location map
NA ii. Scaled plan
NA iii. Title and right
NA iv. Demolition plan
NA v. Vegetation plan
NA vi. Offset credit calculation
NA vii. Calculation for the new allowable export
NA 5. Runoff treatment measures
NA a. structural measures
NA i. Design drawings and specifications
NA ii. Design calculations
NA iii. Maintenance plan
NA iv. TSS removal or phosphorus treatment factor determinations
NA v. Stabilization plan
NA b. Vegetated buffers
NA i. Soil survey
NA ii. Buffer plan
NA iii. Turnout and level spreader designs
NA iv. Deed restrictions
NA 6. Control plan for thermal impacts to coldwater fisheries
NA 7. Control plan for other pollutants
X 8. Engineering inspection of stormwater management facilities

X G. Maintenance of common facilities or property
X 1. Components of the maintenance plan
X A. Maintenance of facilities by owner or operator
X 1. Site owner or operator (name legally responsible party)
X 2. Contact person responsible for maintenance
NA 3. Transfer mechanism

X 4. List of facilities to be maintained
X 5. List of inspection and maintenance tasks for each facility
NA 6. Identifications of any deed covenants, easements, or restrictions
___ 7. Sample maintenance log
___ 8. Copies of any third-party maintenance contracts
NA B. Maintenance of facilities by homeowner's association
NA 1. Incorporation documents for the association
NA 2. Membership criteria
NA 3. Association officer responsible for maintenance
NA 4. Establishment of fee assessment for maintenance work
NA 5. Establishment of lien system
NA 6. Reference to department order(s) in association charter
NA 7. Transfer mechanism from developer to association
NA 8. List of facilities to be maintained
NA 9. Identification of any deed covenants, easements, or restrictions
NA 10. Renewal of covenants and leases
NA 11. List of inspection and maintenance tasks for each facility
NA 12. Sample maintenance log
NA 13. Copies of any third-party maintenance contracts
NA C. Maintenance of facilities by municipality or municipal district
NA 1. Identification of the municipal department or utility district
NA 2. Contact person responsible for maintenance
NA 3. Evidence of acceptance of maintenance responsibility
NA 4. Transfer mechanism from developer
NA 5. List of facilities to be maintained
NA 6. List of inspection and maintenance tasks for each facility
NA 7. Identifications of any deed covenants, easements, or restrictions
NA 8. Sample maintenance log
X 2. General inspection and maintenance requirements
NA a. Drainage easements
X b. Ditches, culverts, and catch-basin systems
X c. Roadways and parking surfaces
X d. Stormwater detention and retention facilities
NA 1. Embankment inspection and maintenance
NA 2. Outlet inspection and clean-out
NA 3. Spillway maintenance
X 4. Sediment removal and disposal
NA e. Stormwater infiltration facilities
NA 1. Sediment protection plan
NA 2. Infiltration rehabilitation plan
NA 3. Sediment removal and disposal
NA 4. Groundwater monitoring plan
NA f. Proprietary treatment devices
NA g. Buffers
NA h. Other practices and measures

Section 13. Urban Impaired Stream Submissions

NA 1. Off-site credits
NA 2. Compensation fees (Urban Impaired Stream/Phosphorus)
NA 3. Development impacts

Section 14. Basic Standards

X A. Narrative
X 1. Soil types
NA 2. Existing erosion problems
NA 3. Critical areas
NA 4. Protected natural resources
X 5. Erosion control measures

X 6. Site stabilization
X B. Implementation schedule
X C. Erosion and sediment control plan
X 1. Pre-development and post-development contours
X 2. Plan scale and elements
X 3. Land cover types and boundaries
NA 4. Existing erosion problems
NA 5. Critical areas
X 6. Protected natural resources
X 7. Locations (general)
X 8. Locations of controls
X 9. Disturbed areas
10. Stabilized construction entrance
X D. Details and specifications (for both temporary and permanent measures)
NA E. Design calculations
X F. Stabilization plan
X 1. Temporary seeding
X 2. Permanent seeding
X 3. Sodding
X 4. Temporary mulching
X 5. Permanent mulching
X G. Winter construction plan
X 1. Dormant seeding
X 2. Winter mulching
NA H. Third-party inspections
NA 1. Inspector's name, address, and telephone number
NA 2. Inspector's qualifications
NA 3. Inspection schedule
NA 4. Contractor contact
NA 5. Reporting protocol

Section 15. Groundwater

NA A. Narrative
NA 1. Location and maps
NA 2. Quantity
NA 3. Sources
NA 4. Measures to prevent degradation
NA B. Groundwater protection plan
NA C. Monitoring plan
NA 1. Monitoring points
NA 2. Monitoring frequency
NA 3. Background conditions
NA 4. Monitoring parameters
NA 5. Personnel qualifications
NA 6. Proof of training
NA 7. Equipment and methods
NA 8. Quality assurance/quality control
NA 9. Reporting requirements
NA 10. Remedial action plan
NA D. Monitoring well installation report
NA 1. Well location map
NA 2. Elevation data
NA 3. Well installation data
NA 4. Well construction details
NA 5. Borehole logs
NA 6. Summary of depth measurements
NA 7. Characteristics of subsurface strata
NA 8. Well installation contract

NA 9. Schematic cross-sections
NA 10. Monitoring point summary table
NA 11. Protective casing
NA 12. On-site well identification

Section 16. Water supply

X A. Water supply method
NA 1. Individual wells (evidence of sufficient/healthful supply)
NA a. Support of findings by well drillers
NA b. Support of findings by geologist
NA 2. Common well(s) (reports)
NA a. Hydrogeology report
NA b. Engineering report
NA c. Well installation report
NA d. Long-term safe yield and zone of influence determination
NA e. Public water supply
NA i. Proposed well or wells
NA ii. Existing well or wells
NA iii. Water quality analysis
NA 3. Well construction in shallow-to-bedrock areas
NA 4. Additional information
X 5. Off-site utility company or public agency
NA 6. Other sources
NA B. Subsurface wastewater disposal systems (locations of systems and wells)
X C. Total usage (statement re: total anticipated water usage)

Section 17. Wastewater disposal

NA A. On-site subsurface wastewater disposal systems (investigation results)
NA 1. Site plan
2. Soil conditions summary table
NA 3. Logs of subsurface explorations
4. Additional test pits, borings or probes
NA a. Soil conditions A
NA b. Soils with Profiles 8 and 9 parent material
NA c. Soil conditions D
NA d. Disposal field length 60 feet or greater
NA 5. 3-bedroom design
NA 6. Larger disposal systems
a. System design details
NA b. Plan view
NA c. Cross sections
NA d. Test pit data
NA e. Mounding analysis
NA B. Nitrate-nitrogen impact assessment
NA 1. When required
NA a. Exempted NA
i. Conventional systems meeting certain setbacks
NA ii. Denitrification systems
NA b. Special conditions and other exemptions
NA 2. Assumptions
NA a. Initial concentration
NA b. Background concentration
NA c. Contribution from development
NA d. Mixing and dilution
NA e. Severe-drought scenario
NA f. Wastewater flow to subsurface wastewater disposal fields

NA 3. Assessment report minimum requirements
NA a. Narrative and calculations
NA b. Site plan
NA i. Well locations
NA ii. 10 mg/l and 8 mg/l isocons
NA iii. Groundwater contours and groundwater flow divides
NA c. References
NA 4. Denitrification systems
NA a. Design plans and specifications
NA b. Installation information
NA c. Monitoring plan
NA d. Maintenance
NA e. Backup system
X D. Municipal facility or utility company letter
NA E. Storage or treatment lagoons

X **Section 18. Solid waste** (list: type, quantity, method of collection and location)
X A. Commercial solid waste facility (final disposal location)
X B. Off-site disposal of construction/demolition debris (final disposal location)
C. On-site disposal of woodwaste/land clearing debris
NA 1. Applicability of rules (evidence re: applicability of rules)
2. Burning of wood wastes
NA a. Delineation on site plan
NA b. Plans for handling unburned woodwaste and woodash
NA c. Evidence of capacity to accept waste (approved facility)
NA d. Usage of materials
NA e. Data on mixing ratios and application rates
X D. Special or Hazardous Waste

Section 19. Flooding
NA A. Explanation of flooding impact
NA B. Site plan showing 100-year flood elevation
NA C. Hydrology analysis
X D. FEMA flood zone map with site boundaries

Section 20. Blasting
NA A. Site Plan or map
NA B. Report
1. Assessment
2. Blasting plan

Section 21. Air emissions (narrative and summary)
NA A. Point and non-point sources identified
NA B. Emission components (point sources)

Section 22. Odors
NA A. Identification of nature/source
NA B. Estimate of areas affected
NA C. Methods of control)

NA **Section 23. Water vapor** (narrative)

X **Section 24. Sunlight** (statement and drawing, if required)

Section 25. Notices
NA A. Evidence that notice sent
NA B. List of abutters for purposes of notice

Supplemental requirements for Wind Energy Developments only:

Section 26. Shadow flicker

NA A. A copy of the Windpro Analysis and associated narrative

Section 27. Public Safety

NA A. Design safety certifications or other documents attesting to the safety of the wind turbine equipment.
NA B. Evidence pertaining to overspeed controls
NA C. Site plan documenting safety setbacks zones for each wind turbine
NA D. Other documents as necessary to demonstrate safety considerations

Section 28. Tangible Benefits

NA A. Narrative demonstration of tangible benefits

Section 29. Decommissioning

NA A. Description of implementation trigger for decommissioning
NA B. Description of extent of decommissioning
NA C. Itemization of total cost to complete decommissioning
NA D. Demonstration of financial assurance for completeness of decommissioning plan

Section 30. Generating Facility-visual Quality and Scenic Character

NA A. (narrative, description, visual impact analysis)

USM Career and Student Success Center and Residence Hall

Site Location of Development

41 Hutchins Drive
Portland, ME 04102
800-426-4262

woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

0232656.00
University of Southern Maine
March 2020

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1. DEVELOPMENT DESCRIPTION

This narrative report is in support of a Site Location of Development (SLOD) Permit Amendment for the proposed USM Career and Student Success Center ("CSSC") and Residence Hall to be located at 23-29 Bedford Street in Portland, Maine. A letter authorizing Woodard & Curran to act at the agent on behalf of the Applicant is attached to this application.

1.1 OBJECTIVES & DETAILS

The University of Southern Maine comprises three campus locations in central and southern Maine, a region that is viewed nationally as among the most livable and desirable in the country. The three campuses, located in Portland, Gorham, and Lewiston, have different physical features and dynamics, and each offers a variety of educational, cultural, and recreational opportunities to USM students. This project represents a significant implementation of the USM Facilities Master Plan. In addition to the approximately 60,000 SF Student Success Center and the 580-bed Residence Hall (approximately 220,000 SF) the project will include: a new Campus Quad; pedestrian connections; integrated hardscape and landscape; a new service and loading area; stormwater management; new utility services; site lighting; and other site amenities. The proposed work is shown on the drawings and renderings included with this application and is detailed below.

The proposed CSSC and Residence Hall project is located on the Portland Campus of USM, at approximately the corner of Bedford Street and Durham Street in Portland, Maine (Site). The attached Location Map and Tax Maps show the project location. The project is located within two underlying City Zones. Most of the project is in the R-5 Residential Zone, with a small portion on the eastern side in B-2 Community Business Zone. The entirety of the project is in the USM Overlay Zone. The purpose of the USM Overlay zone is to allow the University to continue and reasonably expand within defined boundaries, and to recognize the unique qualities of a university campus while at the same time protecting the value and integrity of established neighborhoods. This project is in alignment with that purpose. University buildings and structures are subject to the requirements of the underlying zoning districts, except as modified by the USM Overlay Zone.

The site is currently developed with the Facilities Building, the Woodbury Student Center, and several paved parking lots. The proposed project includes redevelopment of the site for a new Career and Student Success Center, Residence Hall, and Campus Quad. The project will also include reconstruction of the sidewalks along the project's frontages, and the addition of street trees and streetlights.

In addition to the SLOD permit, the proposed work requires the following permits:

- City of Portland Level III Site Plan;
- Maine Construction General Permit Notice of Intent; and
- FAA Notice of Proposed Construction.

1.2 EXISTING FACILITIES

The Existing Conditions Plan, included in the drawings submitted with this application, depicts the existing conditions of the project area, based on a ground-level survey and site observations completed by SurveyWorks, Inc in February 2020. The Site is currently fully developed with buildings and surface parking lots. There are no significant natural features or wetlands due to the intense level of existing development. Topography slopes generally from west to east towards the intersection of Bedford and Durham Streets, from approximate elevation 50' down to 23'.

1.3 TOPOGRAPHIC MAP

A USGS topographic map showing the approximate location of proposed project is attached to this Section for your reference. Topography slopes generally from west to east towards the intersection of Bedford and Durham Streets, from approximate elevation 50' down to 23'.

1.4 CONSTRUCTION PLAN

Construction is anticipated to begin in August of 2020. Erosion and sediment control measures will be installed prior to any ground disturbing activities, as described in Section 14 of this Report. A Construction Management Plan has been submitted to the City as part of the Site Plan Application review process.

The Site will be managed during construction to minimize impacts to the adjacent land uses. Maintaining access to adjacent properties and public facilities will be a priority. Traffic impacts to adjacent roadways, including Bedford, Durham and Falmouth Streets, will be minimized during construction to the greatest extent possible. Traffic controls will consist of temporary signage and barriers where necessary to manage vehicle, pedestrian, and bicycle traffic and direct it safely around the construction area. Street opening permits will be required for utility connections. Additionally, stormwater will be discharged through an outfall to Fore River.

Below is the anticipated sequence of construction activities for major aspects of the development:

- Installation of erosion and sediment control measures and traffic control measures;
- Demolition and site preparation activities;
- Construction of utilities, stormwater management system;
- Construction of the buildings;
- Installation of landscaping and final surface materials; and
- Removal of erosion and sediment control measures.

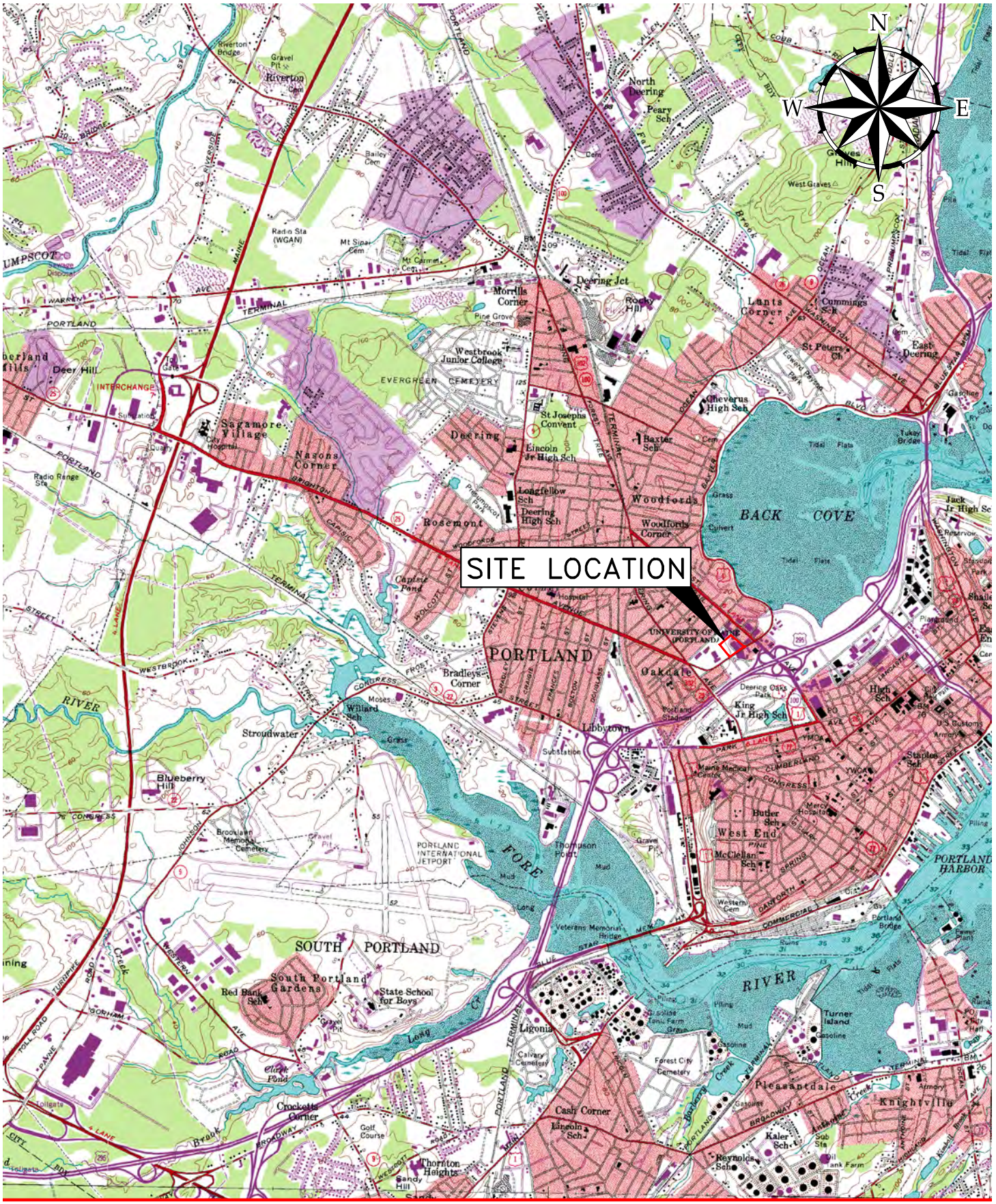
1.5 DRAWINGS

Design drawings showing the proposed development are attached to this Section.

1.6 LIST OF ATTACHMENTS

The following documents are attached to this Section:

- Topographic Map; and
- Design Drawings (Bound Separately).



WOODARD &CURRAN
41 Hutchins Drive
Portland, Maine 04102
800.426.4262 | www.woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

LOCATION MAP

DESIGNED BY: DS	CHECKED BY: DS
DRAWN BY: DS	0232656.00 LOCATION MAP*.dwg

UNIVERSITY OF SOUTHERN MAINE
PO BOX 9300
PORTLAND, ME

CAMPUS STUDENT SUCCESS CENTER
& STUDENT RESIDENTIAL
PORTLAND, MAINE

JOB NO: 0232656.00
DATE: March 2020
SCALE: 1" = 1000'

Location Map

2. TITLE, RIGHT, OR INTEREST

The proposed development is located on properties owned by the Applicant and identified as Tax Map 114, Lots G-6 thru G-10; and Map 114A, lots H-5 thru H-15. Attached are copies of the deeds associated with these properties.

2.1 LIST OF ATTACHMENTS

- Deed, dated August 28, 1957, Cumberland County Registry of Deeds, Book 2370, Pg 135.
- Deed, dated December 24, 1964, Cumberland County Registry of Deeds, Book 2873, Pg 133.
- Deed, dated March 28, 1970, Cumberland County Registry of Deeds, Book 3121, Pg 878.
- Deed, dated October 14, 1999, Cumberland County Registry of Deeds, Book 15109, Pg 33.

378

4111 (90)

Know all Men by these Presents,

That FOREST CITY CHEVROLET ~~COMPANY~~ Company

a corporation organized and existing under the laws of the State of Maine and located at Portland in the County of Cumberland and State of Maine in consideration of One Dollar ($1.00) and other valuable considerations,

paid by UNIVERSITY OF MAINE, a body politic and corporate, organized under the laws of the State of Maine,

the receipt whereof it does hereby acknowledge, does hereby give, grant, bargain, sell and convey, unto the said University of Maine, its successors ~~heirs~~ and assigns forever,

a certain lot or parcel of land together with any improvements thereon situated on the northwesterly side of Bedford Street in the City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning at the intersection of the northwesterly side of Bedford Street with the southwesterly side of Heywood Street; thence southwesterly by Bedford Street two hundred forty-three (243) feet, more or less, to land of University of Maine, being the land conveyed by Edward D. Noyes to Portland Junior College by deed dated December 31, 1956 and recorded in the Cumberland County Registry of Deeds, Book 2332, Page 151; thence northwesterly by said land of University of Maine two hundred forty-five (245) feet, more or less, to other land of University of Maine, being the land conveyed by Edward D. Noyes to Portland University Extension Courses, Inc. by deed dated July 1, 1948 and recorded in said Registry of Deeds, Book 1916, Page 364; thence northeasterly by said other land of University of Maine one hundred sixty-three (163) feet, more or less, to land of University of Maine, being the same land conveyed by Edward D. Noyes to it by deed dated April 9, 1958 and recorded in said Registry of Deeds, Book 2404, Page 15; thence southeasterly by said land and by an extension southeasterly of the line of said land which is the southwesterly side of Heywood Street three hundred (300) feet, more or less, to Bedford Street and the point of beginning.

Being the same premises conveyed to Forest City Motor Co. by deed of Beatrice M. Noyes and by deed of Canal National Bank, et al, as Trustees under the Will of Edward Deering Noyes, Jr. both deeds dated May 18, 1964, recorded in Cumberland County Registry of Deeds, Book 2821, Pages 354 and 346 respectively. The grantor herein is the successor in interest to said Forest City Motor Co. by change of corporate name duly recorded in said Registry of Deeds.

To have and to hold, the aforegranted and bargained premises with all the privileges and appurtenances thereof to the said University of Maine, its successors

~~heirs~~ and assigns, to its and their use and behoof forever.

And the said Grantor Corporation does hereby COVENANT with the said Grantee, its/ successors ~~heirs~~ and assigns, that it is lawfully seized in fee of the premises, that they are free of all incumbrances;

that it has good right to sell and convey the same to the said Grantee to hold as aforesaid; and that it and its successors, shall and will WARRANT AND DEFEND the same to the said Grantee, its/ successors ~~heirs~~ and assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, the said Forest City Chevrolet ~~Company~~ has caused this instrument to be sealed with its corporate seal and signed in its corporate name by Philip Gemmer, its President, ~~its Treasurer~~ thereunto duly authorized, this 28 TH day of MARCH in the year one thousand nine hundred and seventy.

Signed, Sealed and Delivered in presence of

Helen A. Pinder

Forest City Chevrolet

~~Company~~

By Philip Gemmer

President ~~Treasurer~~

(CORPORATE SEAL)

State of Maine

County of Cumberland **ss.** 19 70

Then personally appeared the above named

Philip Gemmer, President ~~Treasurer~~ **of said Grantor Corporation as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act**

(90) 135

Know all Men by these Presents,

That Portland Junior College ~~Company~~,

a corporation organized and existing under the laws of the State of Maine and located at Portland in the County of Cumberland and State of Maine in consideration of one dollar and other valuable considerations

paid by University of Maine, a corporation organized and existing under the laws of the State of Maine and located at Orono in the County of Penobscot and State of Maine

the receipt whereof it does hereby acknowledge, does hereby give, grant, bargain, sell and convey, unto the said University of Maine its successors ~~heirs~~ and assigns forever,

a certain lot or parcel of land with the buildings thereon situated in Portland aforesaid bounded and described as follows:

Beginning at a pipe set in the ground at the corner formed by the intersection of the easterly side of Brighton Avenue and the southerly side of Falmouth Street; thence by said southerly side of Falmouth Street in an easterly direction nine hundred eighty-two and sixty-seven hundredths (982.67) feet to a pipe set in the ground on said southerly side of Falmouth Street; thence southerly with an included angle of ninety-four degrees thirty-eight minutes (94° 38') three hundred fifty-two and eighty-nine hundredths (352.89) feet to a pipe; thence westerly on a line parallel with Falmouth Street and at an included angle of eighty-five degrees twenty-two minutes (85° 22') one hundred sixty-four and sixty-five hundredths (164.65) feet to a point, said point being on the line of a row of trees running approximately north and south; thence southwardly along the line of said row of trees two hundred forty-five (245) feet more or less to the northerly side of Bedford Street; thence westerly along the northerly side of said Bedford Street six hundred (600) feet more or less to the easterly side of Brighton Avenue; thence along the easterly side of Brighton Avenue four hundred eighty-seven and thirty-eight hundredths (487.38) feet more or less to the point of beginning.

Reference is made to three deeds to Portland University Extension Courses, Inc., the name of which, subsequently, by act of the Legislature has been changed to Portland Junior College, and a fourth deed to Portland Junior College, all from Edward Deering Noyes dated and recorded as follows: December 28, 1946, Book 1854 Page 424, June 30, 1947, Book 1875 Page 227, July 1, 1948, Book 1916 Page 364, and December 31, 1956, Book 2332 Page 151.

Portland Junior College to University of Maine -- War

135

To have and to hold, the aforegranted and bargained premises with all the privileges and appurtenances thereof to the said

University of Maine, its successors

~~heirs~~ and assigns, to its and their use and behoof forever.

And the said Grantor Corporation does hereby COVENANT with the said Grantee , its successors ~~heirs~~ and assigns, that it is lawfully seized in fee of the premises, that they are free of all incumbrances;
that it has good right to sell and convey the same to the said Grantee to hold as aforesaid; and that if and its successors, shall and will WARRANT AND DEFEND the same to the said Grantee , its successors ~~heirs~~ and assigns forever, against the lawful claims and demands of all persons.

In Witness Whereof, the said Portland Junior College ~~Company~~ has caused this instrument to be sealed with its corporate seal and signed in its corporate name by Philip I. Milliken , its Treasurer, thereunto duly authorized, this 28th day of August in the year one thousand nine hundred and fifty-seven.

Signed, Sealed and Delivered
in presence of

Jane C. Magnusson

PORTLAND JUNIOR COLLEGE
~~Company~~.

By Philip I. Milliken
Treasurer.

Countersigned
Raymond S. Rracy
President

(CORPORATE SEAL)

State of Maine

County of Cumberland ss. August 28, 1957

Then personally appeared the above named Philip I. Milliken Treasurer of said Grantor Corporation as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity, and the free act and deed of said corporation.

Before me,

Jane C. Magnusson Justice of the Peace.
~~Notary Public~~

AUG 28 1957
REGISTRY OF DEEDS, CUMBERLAND COUNTY, MAINE
Received at 12 H 27 M P.M., and recorded in
BOOK 2370 PAGE 135 Register

Vogel

to

University of Maine

-

War

Know all Men by these Presents, That

I, BEATRICE N. VOGEL, of Falmouth, County of Cumberland and State of Maine, formerly known as Beatrice M. Noyes,

in consideration of one dollar and other valuable consideration s paid by UNIVERSITY OF MAINE, an educational corporation organized and existing under the laws of the State of Maine,

the receipt whereof I do hereby acknowledge, do hereby give, grant, bargain, sell and convey unto the said University of Maine, its successors and assigns forever, a one-third (1/3) interest in common and undivided in and to a certain lot or parcel of land situated on the southwesterly side of Durham Street, City of Portland, County of Cumberland and State of Maine, bounded and described as follows:

Beginning on the southwesterly side of Durham Street at the most northerly corner of land now or formerly of Allan G. Ballard, et al, which corner is situated one hundred eighty-two and eleven hundredths (182.11) feet, northwesterly of Bedford Street as measured along said southwesterly side of Durham Street; thence southwesterly by land of said Ballard and by land of International Harvester Co. a distance of one hundred (100) feet, more or less, to other land of said International Harvester Co.; thence northwesterly by said other land of international Harvester Co. a distance of one hundred twelve (112) feet, more or less, to land now of the University of Maine; thence northeasterly by land of the University of Maine one hundred (100) feet, more or less, to Durham Street; thence southeasterly by Durham Street a distance of one hundred twelve (112) feet, more or less, to the point of beginning.

Being a portion of the premises conveyed by James D. Fessenden, et al, to Nathaniel Deering, et als, dated January 21, 1879, recorded in the Cumberland County Registry of Deeds, Book 455, Page 49.

This conveyance is made subject to and with the benefit of a lease of the above described premises from Edward Deering Noyes, Jr., as Lessor to International Harvester Co. as Lessee dated September 9, 1947.

To Have and to Hold the aforegranted and bargained premises, with all the privileges and appurtenances thereof, to the said University of Maine, its successors and assigns, to its and their use and behoof forever. And I do covenant with the said Grantee, its successors and assigns, that I am lawfully seized in fee of the premises; that they are free of all incumbrances except as aforesaid, that I ha ve good right to sell and convey the same to the said Grantee to hold as aforesaid; and that I and my heirs and assigns shall and will warrant and defend the same to the said Grantee, its successors and assigns forever, against the lawful claims and demands of all persons, except as aforesaid.

In Witness Whereof, I, Beatrice N. Vogel, and I, Leo G. Vogel, husband of the said Beatrice N. Vogel, joining in this deed as Grantor, and relinquishing and conveying my rights by descent and all other rights in the above described premises, have hereunto set our hands and seals this 24th day of December in the year of our Lord one thousand nine hundred and sixty-four

Signed, Sealed and Delivered in presence of

Robert B Long
Robert B Long

Beatrice N Vogel
Leo G Vogel

State of Maine, CUMBERLAND ss. December 24, 1964.

Personally appeared the above named Beatrice N. Vogel and acknowledged the foregoing instrument to be her free act and deed.

Before me, H. Dawson Osgood
NOTARY PUBLIC.
MY COMMISSION EXPIRES SEPTEMBER 6, 1968

STATE OF MAINE, CUMBERLAND COUNTY, SS. *REGISTRY OF DEEDS*

Received DEC 30 1964 *at* 3 o'clock 30 *m.* *M., and recorded in BOOK* 2873 *PAGE* 133 *Attest:* Edward P. Thyson *Register.*

0075689 BK15109PG033

WARRANTY DEED
Maine Statutory Short Form

Know all Men by these presents,

That **Gary T. Gervais**, of Portland, Cumberland County, Maine, for consideration paid, grants to **University of Maine System**, a body politic and corporate, organized and existing under the laws of the State of Maine, with a mailing address of 107 Main Avenue, Bangor, Maine 04401, with Warranty Covenants, a certain lot or parcel of land, together with the buildings thereon, situated in Portland, Cumberland County, Maine, and situated at the northwesterly corner of Bedford Street and Durham Street and bounded and described as follows:

Beginning at the intersection formed by the northerly side of Bedford Street and the westerly side of Durham Street; thence southwesterly and along the northerly line of Bedford Street 68.93 feet to an iron pipe; thence northwesterly and parallel to the westerly line of Durham Street 163.20 feet to an iron pipe; thence northeasterly and at right angles to the last course 66.33 feet to an iron pipe in the westerly line of Durham Street; thence southeasterly and along the westerly line of Durham Street 182.11 feet to the point of beginning.

Being the same premises described in a deed from Mildred L. Cohen to Robert R. Gervais, Jr., and Gary T. Gervais, dated July 25, 1980, recorded in Cumberland County Registry of Deeds, Book 4637, Page 155, and from Robert R. Gervais, Jr., to Gary T. Gervais dated March 29, 1985, recorded in said Registry, Book 6719, Page 321.

This conveyance is made subject to a lease, as may be amended, between Gary T. Gervais and University of Maine System, dated November 8, 1989, as evidenced by a Memorandum of Lease dated February 28, 1990, recorded in Cumberland County Registry of Deeds, Book 9102, Page 319. Said lease is hereby terminated.

Also hereby conveying all rights, easements, privileges, and appurtenances belonging to the premises hereinabove described.

Witness my hand this 14th day of October 1999.

Signed and Delivered in
the presence of:

Gary T. Gervais

MAINE REAL ESTATE TAX PAID

STATE OF MAINE
CUMBERLAND, SS.

October 14, 1999

Then personally appeared the above named Gary T. Gervais and acknowledged the foregoing instrument to be his free act and deed.

Before me,

Thomas S Leahy

~~Notary Public~~/Attorney at Law

Printed Name: Thomas S. Leahy

KJT\TGL\GERVAIS\Warranty Deed.doc

RECEIVED
RECORDED REGISTRY OF DEEDS
1999 OCT 15 AM 10:44
CUMBERLAND COUNTY
John B O'Brien

3. FINANCIAL CAPACITY

3.1 ESTIMATED COSTS

The construction budget for the proposed development is approximately $96M for the Career and Success Student Center and the Residence Hall.

3.2 FINANCING

A copy of a letter verifying the Applicant's financial capacity to undertake the project is attached to this Section.

3.3 LIST OF ATTACHMENTS

- Financial Capacity Letter

UNIVERSITY OF
SOUTHERN MAINE
Finance and Administration

March 5, 2020

Mr. Darrin Stairs
Woodard & Curran
41 Hutchins Drive
Portland, ME 04102

Dear Mr. Stairs:

The University of Southern Maine expects the Career and Student Success Center (CSSC) and residence hall projects to cost approximately $96 million combined.

To fund the project, the University would utilize the following resources:

(1) For the CSSC project ($31 million), USM has at its disposal $19 million in voter-approved general obligation debt and $1 million in philanthropic contributions.

(2) For the remaining $11 million in funding required for the CSSC, as well as the $65 million total cost of the residence hall, the University of Maine System would issue revenue bonds.

Thank you for your consideration.

Sincerely,

Alexander E. Porteous
Chief Business Officer

P.O. Box 9300, Portland, ME 04104-9300
(207) 780-4484 TTY (207) 780-5646, FAX (207) 780-4549
www.usm.maine.edu
A member of the University of Maine System

4. TECHNICAL ABILITY

The University of Southern Maine (USM) is a public university with over 8,000 undergraduate and graduate students taking courses online and at campuses in Portland, Gorham and Lewiston. Known for its academic excellence, student focus and engagement with the community, USM provides students with hands-on experience that complements classroom learning and leads to employment opportunities in one of the nation's most desirable places to live. USM is a member of the University of Maine System (UMS), the State's largest educational enterprise that includes seven universities and an annual enrollment of nearly 30,000 students.

Capstone Development Partners (CDP) is a student housing real estate development company exclusively focused on working with colleges and universities in public private partnerships. The Principals of CDP have a combined experience of more than 40 years helping colleges and universities overcome real estate development and housing challenges. Their mission is unique to the student housing industry in that they focus on projects where they are in partnership with the university— rather than simply building apartments in a community with little regard for its plans, its institutional objectives or its long and short-term goals. They have built a reputation on collaborating with schools and respecting and burnishing the unique campus culture of its partners. They work hard every day to establish creative solutions that align the interests of the municipal, private and university project stakeholders, inclusive of housing and student life professionals, finance executives, presidents, facilities personnel, and the many others involved in development on or near a college campus.

Woodard & Curran (W&C), a 1,000-person Portland-based firm, has provided engineering services to the public and private sector for over 40 years, including permitting, civil/site engineering, stormwater and construction management services. W&C has completed projects for colleges, universities, and healthcare institutions that build strong, sustainable infrastructure and environmental programs serving both their business needs and the communities that make them so vibrant. With extensive experience in design and permitting for site development projects, W&C has completed many projects within the City of Portland and for the University of Maine System.

SMRT is a full-service firm of architects, engineers, planners and professionals committed to solving problems through design. Based in Portland, Maine, SMRT specializes in creating complex, 24-7 facilities for clients with challenges in education, healthcare, science/technology/industry, justice, government and workplace environments. Through collaboration, the project focus is to deliver buildings that further owner's business objectives through strong design, sustainable infrastructure and high functionality. SMRT has broad experience with projects for higher education including multiple projects for the University of Maine.

Elkus Manfredi Architects (EMA) is a full-service design firm providing architecture, master planning, urban design, interior architecture, historic preservation, space planning, programming, and experiential graphic design. EMA's portfolio of work includes a diversity of projects, including community-building higher education campus plans and facilities that create places for living, learning and innovating. The firm is at the forefront of sustainable design, with 8 of its 60 LEED projects at the Platinum-certified level. Elkus Manfredi has also signed on to the AIA's 2030 Commitment and has a rigorous process of early performance modeling to optimize design.

PC Construction (PCC) shares over half a century of industry-leading excellence with every client we meet. They offer general contracting, construction management, and design-build services to private and public companies for projects of all sizes — from a single office fit-up to water supply programs valued at over $300 million. With headquarters in Vermont and a network of locations in Georgia, Maine, New Hampshire, New York and North Carolina, PCC manage project offices up and down the east coast and boast an annual volume average of $500 million.

Copies of resumes and project references can be provided upon request.

5. NOISE

The proposed buildings will have a combination of roof-mounted and interior-located mechanical equipment for heating, ventilation, and air conditioning (HVAC). Two new generators with sound attenuating enclosures will be located in the service area near the existing generator, which is to remain. Noise levels at present are minimal and are not known to have created an unreasonably adverse impact on the surrounding campus and industrial (Oakhurst) areas. Proposed noise levels are anticipated to be similar. The generators will be exercised weekly and not run continuously unless there is a power outage. Note that the generators are located within the service core and flanked by existing and proposed buildings, providing partial shielding of the sound. Cut sheets for the proposed generators and enclosures are attached

5.1 LIST OF ATTACHMENTS

- Generator and Sound Enclosure Cut sheets

C4.4 Generator Set

Electric Power

Image shown may not reflect actual configuration

Caterpillar is leading the power generation marketplace with Power Solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost-effectiveness.

Specifications

Generator Set Specifications	
Rating	80 ekW (100 kVA)
Voltage	480 Volts
Frequency	60 Hz
Speed	1800 rpm

Generator Set Configurations	
Emissions/Fuel Strategy	U.S. EPA Certified for Stationary Emergency Application (Tier 3 Nonroad Equivalent Emission Standards)

Engine Specifications		
Engine Model	C4.4 Vertical In-line 4, 4-cycle diesel	
Bore	105.0 mm	4.13 in
Displacement	4.4 L	268.5 in³
Stroke	127.0 mm	5.0 in
Compression Ratio	16.7:1	
Aspiration	Turbocharged Air-to-Air-Aftercooled	
Governor Type	Electronic	
Fuel System	Common Rail	

Package Dimensions*		
Length	2362 mm	93 in
Width	1110 mm	44 in
Height	1304 mm	51 in
Weight†	1130 kg	2491 lb

*Note: For reference only – do not use for installation design. Please contact your local dealer for exact weight and dimensions.

†Weight includes: Oversize generator, skid base, circuit breaker, oil, and coolant.

Benefits & Features

Cat® Diesel Engine

- Reliable, rugged, durable design
- Field-proven in thousands of applications worldwide
- Four-stroke cycle diesel engine combines consistent performance and excellent fuel economy with minimum weight
- Electronic engine control

Generator

- Matched to the performance and output characteristics of Cat engines
- Industry-leading mechanical and electrical design
- Industry-leading motor starting capabilities
- High efficiency

Cat EMCP Control Panel

The EMCP controller features the reliability and durability you have come to expect from your Cat equipment. EMCP 4 is a scalable control platform designed to ensure reliable generator set operation, providing extensive information about power output and engine operation. EMCP 4 systems can be further customized to meet your needs through programming and expansion modules.

Seismic Certification

- Seismic certification available.
- Anchoring details are site specific, and are dependent on many factors such as generator set size, weight, and concrete strength.
- IBC certification requires that the anchoring system used is reviewed and approved by a professional engineer.
- Seismic certification per applicable building codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, CBC 2007, CBC 2010.

Design Criteria

- The generator set accepts 100% rated load in one step per NFPA 110 and meets ISO 8528-5 transient response.
- Cooling system designed to operate in 50°C/122°F ambient temperatures with an air flow restriction of 0.5 in. water.

UL 2200/CSA – Optional

- UL 2200 Listed
- CSA Certified

Certain restrictions may apply. Consult with your Cat dealer.

Single-Source Supplier

Fully prototype tested with certified torsional vibration analysis.

Worldwide Product Support

Cat dealers provide extensive post-sale support including maintenance and repair agreements. Cat dealers have over 1,800 dealer branch stores operating in 200 countries. The Cat S•O•S℠ program cost effectively detects internal engine component condition, even the presence of unwanted fluids and combustion by-products.

Standard Equipment

Air Inlet

- Single element Air filter

Cooling

- Radiator and cooling fan complete with protective guards
- Standard ambient temperatures up to 50°C (122°F)

Exhaust

- Exhaust flange outlet

Fuel

- Primary and secondary fuel filters
- Fuel priming pump
- Flexible fuel lines

Generator

- Matched to the performance and output characteristics of Cat engines
- Load adjustment module provides engine relief upon load impact and improves load acceptance and recovery time
- IP23 protection
- Integrated Voltage Regulation

Governor

- Electronic governor – ADEM™ A4

Control Panels

- EMCP 4.2 Series generator set controller

Mounting

- Rubber vibration isolators

Starting/Charging

- 12 volt starting motor
- Battery with rack and cables

General

- Paint – Caterpillar Yellow except rails and radiators gloss black

Optional Equipment

Exhaust

- Industrial, residential, critical mufflers

Generator

- Excitation: [ ] Permanent Magnet Excited (PM) [ ] Internally Excited (IE)
- Anti-condensation heater
- Oversize and premium generators

Starting/Charging

- Battery charger – UL 10 amp
- Battery disconnect switch
- Jacket water heater

General

- UL 2200
- CSA Certification
- Enclosures: sound attenuated, weather protective
- Sub-base dual wall UL Listed fuel tanks
- Automatic transfer switches (ATS)

C4.4
80 ekW/ 100 kVA/ 60 Hz/ 1800 rpm/ 480V/ 0.8 Power Factor

Rating Type: STANDBY

Emissions: U.S. EPA Certified for Stationary Emergency Application (Tier 3 Nonroad Equivalent Emission Standards)

Image shown may not reflect actual configuration

D80-8
80 ekW/ 100 kVA
60Hz/ 1800 rpm/ 480V

Package Performance	
Generator Set Power Rating with Fan @ 0.8 Power Factor	80 ekW
Generator Set Power Rating	100 kVA

Fuel Consumption		
100% Load With Fan	23.7 L/hr	6.3 gal/hr
75% Load With Fan	19.0 L/hr	5.0 gal/hr
50% Load With Fan	13.9 L/hr	3.7 gal/hr

Cooling System[1]		
Engine Coolant Capacity	7.0 L	1.8 gal
Radiator Coolant Capacity	10.0 L	2.6 gal
Engine Coolant Capacity with Radiator/Exp Tank	17.0 L	4.5 gal
Air Flow Restriction (System)	0.12 kPa	0.48 in. water

Inlet Air		
Combustion Air Inlet Flow Rate	7.8 m^3/min	275 cfm

Exhaust System		
Exhaust Stack Gas Temperature	630°C	1166°F
Exhaust Gas Flow Rate	17.6 m^3/min	620 cfm
Exhaust System Backpressure (maximum allowable)	15.0 kPa	60.2 in. water
Exhaust Flange Size (internal diameter)	64 mm	2.5 in

C4.4
80 ekW/ 100 kVA/ 60 Hz/ 1800 rpm/ 480V/ 0.8 Power Factor

Rating Type: STANDBY

Emissions: U.S. EPA Certified for Stationary Emergency Application (Tier 3 Nonroad Equivalent Emission Standards)

Heat Rejection		
Heat Rejection to Coolant (total)	47.9 kW	2724 Btu/min
Heat Rejection to Exhaust (total)	77.7 kW	4419 Btu/min
Heat Rejection to Atmosphere from Engine	13.5 kW	768 Btu/min
Heat Rejection to Atmosphere from Generator	7.1 kW	404 Btu/min

Alternator[2]		
Motor Starting Capability @ 30% Voltage Dip	215 skVA	
Frame	LC3114D	
Temperature Rise	105°C	189°F
Excitation	Self Excited	

Lube System		
Sump Refill with Filter	8.4 L	2.2 gal

Emissions (Nominal)[3]	
NOx + HC	3.6 g/kW-hr
CO	0.9 g/kW-hr
PM	0.12 g/kW-hr

[1] For ambient and altitude capabilities consult your Cat dealer. Air flow restriction (system) is added to the existing restriction from the factory.

[2] Generator temperature rise is based on a 40°C (104°F) ambient per NEMA MG1-32.

[3] The nominal emissions data shown is subject to instrumentation, measurement, facility and engine to engine variations. Emissions data is based on 100% Prime load. This information should not be used for permitting purposes and is subject to change without notice. Contact your Cat dealer for further details.

ELECTRIC POWER – Technical Spec Sheet
STANDARD

C4.4

80 ekW/ 100 kVA/ 60 Hz/ 1800 rpm/ 480V/ 0.8 Power Factor

Rating Type: STANDBY

Emissions: U.S. EPA Certified for Stationary Emergency Application (Tier 3 Nonroad Equivalent Emission Standards)

DEFINITIONS AND CONDITIONS

Applicable Codes and Standards:
AS1359, CSA C22.2 No 100-04, UL142, UL489, UL601, UL869, UL2200, NFPA 37, NFPA 70, NFPA 99, NFPA 110, IBC,IEC60034-1, ISO3046, ISO8528, NEMA MG 1-22, NEMA MG 1-33, 72/23/EEC, 98/37/EC, 2004/108/EC.

STANDBY: Output available with varying load for the duration of the interruption of the normal source power. Averagepower output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

Ratings are based on SAE J1349 standard conditions. These ratings also apply at ISO3046 standard conditions.

Fuel Rates are based on fuel oil to specification EPA 2D 89.330-96 with a density of 0.845 – 0.850 kg/L (7.052 – 7.094 lbs/U.S. gal.) @ 15°C (59°F) and fuel inlet temperature 40°C (104°F).

Additional ratings may be available for specific customer requirements, contact your Cat representative for details.

Performance No.: P4510A
Feature Code: NAC222P
Generator Arrangement: 4518416
Date: 03/24/2016
Source Country: U.S.

LEHE1041-00

www.Cat-ElectricPower.com
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Materials and specifications are subject to change without notice.
The International System of Units (SI) is used in this publication.

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Weather Protective and Sound Attenuated Enclosures

D40 to D60
D80 to D100
D125 to D200

Features

Highly Corrosion Resistant construction

- tested and proven to withstand extreme conditions of corrosion
- Zinc plated or stainless steel fastener

Excellent Access

- Single side access for service and controls
- All non-service sides have removable doors and/or panels
-
- Lube oil and coolant drains piped to the exterior of the enclosure base
- Large cable entry area for installation ease
- Double doors on both sides
- Vertically hinged doors with solid bar door stays to hold doors in place when open

Security and Safety

- Lockable access doors which give full access to control panel and breaker
- Cooling fan and battery charging alternator fully guarded
- via lockable access
- Stub-up area is rodent proof

Transportability

- These enclosures are of extremely rugged construction to withstand outdoor exposure and rough handling common on many construction sites. The sound deadening material is of a self-extinguishing design
- This range of enclosures are designed on modular principles with many interchangeable components permitting on site repair

Options

- Weather Protective - constructed with 16 gauge steel; industrial silencer mounted within the main enclosure body
- Sound Attenuated Level 1 - constructed with 16 gauge steel; weather protective with critical silencer - silencer mounted in separate upward discharging radiator hood
- Sound Attenuated Level 2 - constructed with 16 gauge steel; weather protective with critical silencer and 100% lined with sound deadening material – silencer mounted in separate upward discharging radiator hood
- Sound Attenuated Aluminum constructed with 14 gauge Aluminum 5052 grade. Weather protective with critical silencer and 100% lined with sound deadening material – silencer mounted in separate upward discharging radiator hood
- Caterpillar Yellow* or white paint
- UL Listed sub base tanks
- Externally mounted emergency stop button
- codes: IBC 2000, IBC 2003, IBC 2006, IBC 2009, IBC 2012, CBC 2007, CBC 2010
-

*Not available with Aluminium enclosures

Enclosure Sound Pressure Levels (SPL) at 100%

Weather Protective Enclosure		Cooling Air Flow Rate		SPL @7m (23ft)
Model	Standby eKW	m^3/s	cfm	dBA
D40 (2/4)	40	1.7	3602	85
D50 (2/4)	50	1.7	3602	86
D60 (2/4)	60	1.9	4026	88
D80-8	80	3.2	6696	79
D100-8	100	3.6	7564	81
D125-8	125	4.6	9676	78
D150-10	150	4.6	9676	79
D175-4	175	5.9	12431	84
D200-2	200	5.9	12431	89

SA Level 1 Enclosure		Cooling Air Flow Rate		SPL @7m (23ft)
Model	Standby eKW	m^3/s	cfm	dBA
D40 (2/4)	40	1.7	3602	66
D50 (2/4)	50	1.7	3602	66
D60 (2/4)	60	1.8	3899	71
D80-8	80	3.2	6696	78
D100-8	100	3.2	6696	79
D125-8	125	4.2	8899	74
D150-10	150	4.2	8899	74
D175-4	175	5.6	11830	78
D200-2	200	5.5	11654	81

SA Level 2 Enclosure		Cooling Air Flow Rate		SPL @7m (23ft)
Model	Standby eKW	m^3/s	cfm	dBA
D80-8	80	3.2	6696	75
D100-8	100	3.2	6696	76
D125-8	125	4.2	8899	74
D150-10	150	4.2	8899	74
D175-4	175	5.2	11018	74
D200-2	200	5.1	10806	75

Enclosures

SA Aluminum Enclosure		Cooling Air Flow Rate		SPL @7m (23ft)
Model	Standby eKW	m^3/s	cfm	dBA
D80-2	80	3.2	6696	73
D100-8	100	3.2	6696	74
D125-8	125	4.2	8899	74
D150-10	150	4.2	8899	75
D175-4	175	5.2	11018	75
D200-2	200	5.1	10806	75

The sound pressure level data shown above is quoted as free eld and is forguidance only. Actual levels produced may vary according to site conditions.

Enclosure Dimensions and Weights

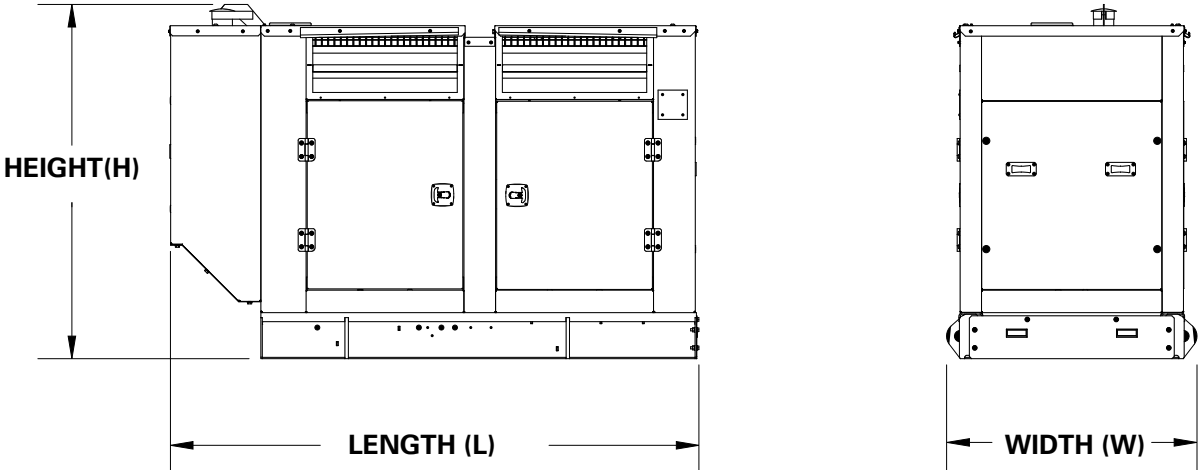

Image represents SA Level 1, SA Level 2 and SA Aluminum enclosures on skid base only

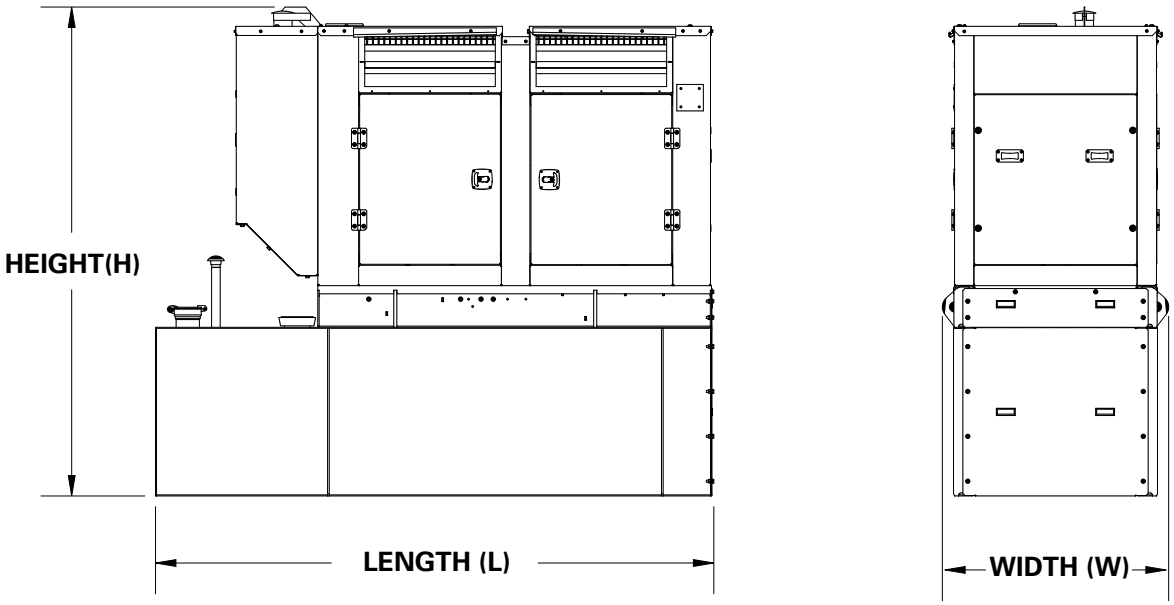

Image represents SA Level 1, SA Level 2 and SA Aluminum enclosures mounted on optional UL listed sub base tank

Model	Standby eKW	WP Industrial		SA Level 1		SA Level 2		SA Aluminum	
		kg	lb	kg	lb	kg	lb	kg	lb
D40-2	40	121	267	137	302	NA	NA	NA	NA
D50-2	50								
D60-2	60								
D80-8	80	263	580	313	690	321	708	142	312
D100-8	100								
D125-8	125	348	768	393	867	406	896	176	387
D150-10	150								
D175-4	175								
D200-2	200								

Enclosure weights (includes muffler)

Enclosure Dimensions Skid Bases

Engine Model	Generator Set Rating ekW	Enclosure	Width 'W'		Length 'L'		Height 'H'	
			mm	in	mm	in	mm	in
C4.4	40	WP	1075	42.3	1972	77.6	1378	54.3
	50							
	60							
	40	SA Level 1, SA Level 2 and SA Aluminum	1075	42.3	1972	77.6	1378	54.3
	50							
	60							
C4.4	80	WP	1110	43.7	2523	99.3	1773	69.8
	100							
	80	SA Level 1, SA Level 2 and SA Aluminum	1110	43.7	2891	113.8	1852	72.9
	100							
C7.1	125	WP	1110	43.7	3204	126.1	1773	69.8
	150							
	175							
	200							
	125	SA Level 1, SA Level 2 and SA Aluminum	1110	43.7	3659	144.1	1852	72.9
	150							
	175							
	200							

Enclosure Dimensions on UL Listed Sub Base Tanks

Engine Model	Generator Set Rating ekW	Enclosure	137 Gallon Sub Base Tank				255 Gallon Sub Base Tank			
			Length 'L'		Height 'H'		Length 'L'		Height 'H'	
			mm	in	mm	in	mm	in	mm	in
C4.4	40	WP	2503	98.5	1912	75.3	2503	98.5	2241	88.2
	50									
	60									
	40	SA Level 1, SA Level 2 and SA Aluminum	2503	98.5	1912	75.3	2503	98.5	2241	88.2
	50									
	60									

Engine Model	Generator Set Rating ekW	Enclosure	209 Gallon Sub Base Tank				394 Gallon Sub Base Tank			
			Length 'L'		Height 'H'		Length 'L'		Height 'H'	
			mm	in	mm	in	mm	in	mm	in
C4.4	80	WP	3447	135.7	2258	88.9	3447	135.7	2608	102.7
	100									
	80	SA Level 1, SA Level 2 and SA Aluminum	3447	135.7	2337	92.0	3447	135.7	2687	105.8
	100									

Engine Model	Generator Set Rating ekW	Enclosure	402 Gallon Sub Base Tank				777 Gallon Sub Base Tank			
			Length 'L'		Height 'H'		Length 'L'		Height 'H'	
			mm	in	mm	in	mm	in	mm	in
C7.1	125	WP	4035	158.9	2420	95.3	5035	198.2	2706	106.5
	150									
	175									
	200									
	125	SA Level 1, SA Level 2 and SA Aluminum	4035	158.9	2499	98.4	5035	198.2	2785	106.5
	150									
	175									
	200									

Note: Weight includes oil and coolant but not fuel

Ref: WPIA, WPIB, WPIC, SATCBA, SATCBB, SAT, CBC, SATFBA, SATFBB, SATFBC, ENCAL02, ENCAL03, ENCAL04.

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6. VISUAL QUALITY & SCENIC CHARACTER

As further described in the City of Portland Site Plan Application for the proposed development, the architecture and landscaping have been designed to create a visual connection with existing campus buildings with a goal of achieving a cohesive campus appearance. The project will be characterized by excellence in architectural design, craftsmanship, materials, streetscape and landscape improvements, signage and lighting appropriate for a university in an urban setting in the Northeast.

The Site Plan Application includes renderings of the proposed development. It is not anticipated that the proposed development will result in any negative visual impacts.

7. WILDLIFE & FISHERIES

The Site has been previously developed and there are no known areas of significant natural features, including areas of significant wildlife habitats or wetlands. The attached Official Species List identifies the northern long-eared bat, which has been listed as a Federally Threatened Species, in association with the project area; however, there are no critical habitat areas located within the project area. Based on US Fish & Wildlife information, the northern long-eared bat typically lives in caves during the winter months and in trees larger than three inches in diameter during the summer, with migration between these two habitats in the spring in the fall. The project is located in an existing urban, developed area and no trees meeting the criteria for bat habitat are proposed to be impacted by the project. It is not anticipated that the proposed development will have a negative impact on the northern long-eared bat.

A letter has been sent to the Maine Department of Inland Fisheries and Wildlife (MDIFW) requesting information regarding any known threatened or endangered species or critical habitat relative to the project area; a copy of this letter is attached to this Section for your reference. A copy of the MDIFW response can be provided upon receipt.

7.1 LIST OF ATTACHMENTS

- Official Species List; and
- MDIFW Environmental Review Request Letter.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
Phone: (207) 469-7300 Fax: (207) 902-1588
http://www.fws.gov/mainefieldoffice/index.html

In Reply Refer To: February 24, 2020
Consultation Code: 05E1ME00-2020-SLI-0740
Event Code: 05E1ME00-2020-E-02458
Project Name: USM Portland Student Housing

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies the threatened, endangered, candidate, and proposed species and designated or proposed critical habitat that may occur within the boundary of your proposed project or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC Web site at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the Endangered Species Consultation Handbook at: http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

This species list also identifies candidate species under review for listing and those species that the Service considers species of concern. Candidate species have no protection under the Act but are included for consideration because they could be listed prior to completion of your project. Species of concern are those taxa whose conservation status is of concern to the Service (i.e., species previously known as Category 2 candidates), but for which further information is needed.

If a proposed project may affect only candidate species or species of concern, you are not required to prepare a Biological Assessment or biological evaluation or to consult with the Service. However, the Service recommends minimizing effects to these species to prevent future conflicts. Therefore, if early evaluation indicates that a project will affect a candidate species or species of concern, you may wish to request technical assistance from this office to identify appropriate minimization measures.

Please be aware that bald and golden eagles are not protected under the Endangered Species Act but are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.). Projects affecting these species may require development of an eagle conservation plan: http://www.fws.gov/windenergy/eagle_guidance.html Information on the location of bald eagle nests in Maine can be found on the Maine Field Office Web site: http://www.fws.gov/mainefieldoffice/Project%20review4.html

Additionally, wind energy projects should follow the wind energy guidelines: http://www.fws.gov/windenergy/ for minimizing impacts to migratory birds and bats. Projects may require development of an avian and bat protection plan.

Migratory birds are also a Service trust resource. Under the Migratory Bird Treaty Act, construction activities in grassland, wetland, stream, woodland, and other habitats that would result in the take of migratory birds, eggs, young, or active nests should be avoided. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g.,

cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm and at: http://www.towerkill.com; and at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Maine Ecological Services Field Office
P. O. Box A
East Orland, ME 04431
(207) 469-7300

Project Summary

Consultation Code: 05E1ME00-2020-SLI-0740

Event Code: 05E1ME00-2020-E-02458

Project Name: USM Portland Student Housing

Project Type: DEVELOPMENT

Project Description: Proposed development on the USM Portland campus on the corner of Bedford Street and Durham Street in Portland, ME

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/43.6628773524905N70.27456771513867W

Counties: Cumberland, ME

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, ME 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

March 5, 2020

Maine Department of Inland Fisheries and Wildlife
41 State House Station
Augusta, ME 04333

RE: USM Career and Student Success Center and Residence Hall – Environmental Review Request

Dear Reviewer:

The University of Southern Maine (USM), is proposing to construct a new Career and Student Success Center and a new Residence Hall to be located at 23-29 Bedford Street, on the Portland, Maine campus. The project represents a significant implementation of the USM Facilities Master Plan. In addition to the 58,200 SF Student Success Center and the 580-bed Residence Hall the project will include: a new Campus Quad; pedestrian connections; integrated hardscape and landscape; a new service and loading area; stormwater management; new utility services; site lighting; and other site amenities..

The proposed work will require an amendment to the existing Maine Department of Environmental Protection Site Location of Development Permit (L-20438-22-D-A), which requires coordination with the Maine Department of Inland Fisheries and Wildlife (MDIFW). On behalf of USM, we are requesting a review of the project area for any known threatened or endangered species or critical habitat. A Site Location Map and Site Plan have been attached for your reference.

We appreciate your review of this project. If you have any questions regarding this information or the proposed project, please do not hesitate to contact me at (207)558-3662 or dstairs@woodardcurran.com. Thank you for your assistance.

Sincerely,

WOODARD & CURRAN

Darrin Stairs, P.E.
Project Manager

Enclosure(s) Site Location Map
Site Plan

PN: 0232656.00

8. HISTORIC SITES

A letter has been sent to the Maine Historic Preservation Commission (MHPC) requesting a review of the project area relative to historic properties; a copy of this letter is attached to this Section for your reference. A copy of the MHPC response can be provided upon receipt.

This project is not located within, or within 100 feet, of any City Historic District. There are no Historic Resources located within or within 100 feet of the project limits.

8.1 LIST OF ATTACHMENTS

- MHPC Project Review Request Letter.

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, ME 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

March 5, 2020

Kirk F. Mohney, Director
Maine Historic Preservation Commission
55 Capitol Street, 65 State House Station
Augusta, Maine 04333-0065

Re: USM Career and Student Success Center and Residence Hall – Project Review Request

Dear Mr. Mohney:

The University of Southern Maine (USM), is proposing to construct a new Career and Student Success Center and a new Residence Hall to be located at 23-29 Bedford Street, on the Portland, Maine campus. The project represents a significant implementation of the USM Facilities Master Plan. In addition to the 58,200 SF Student Success Center and the 580-bed Residence Hall the project will include: a new Campus Quad; pedestrian connections; integrated hardscape and landscape; a new service and loading area; stormwater management; new utility services; site lighting; and other site amenities..

The proposed work will require an amendment to the existing Maine Department of Environmental Protection Site Location of Development Permit (L-20438-22-D-A), which requires coordination with the Maine Historic Preservation Commission (MHOC). On behalf of USM, we are requesting a review of the project area for any known threatened or endangered species or critical habitat. A Site Location Map and Site Plan have been attached for your reference.

We appreciate your review of this project. If you have any questions regarding this information or the proposed project, please do not hesitate to contact me at (207)558-3662 or dstairs@woodardcurran.com. Thank you for your assistance.

Sincerely,

WOODARD & CURRAN

Darrin Stairs, P.E.
Project Manager

Enclosure(s) USGS Map
Site Plan

PN: 232656.00

9. UNUSUAL NATURAL AREAS

The Site has been previously developed and there are no known unusual natural areas. A letter has been sent to the Maine Natural Areas Program (MNAP) requesting a review of the Site relative to rare and exemplary botanical features; a copy of this letter is attached to this Section for your reference. A copy of the MNAP response can be provided upon receipt.

9.1 LIST OF ATTACHMENTS

- MNAP Site Review Request Letter.

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, ME 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

March 5, 2020

Maine Natural Areas Program
177 State House Station
Augusta, ME 04333-0093

RE: USM Career and Student Success Center and Residence Hall – Site Review Request

Dear Reviewer:

The University of Southern Maine (USM), is proposing to construct a new Career and Student Success Center and a new Residence Hall to be located at 23-29 Bedford Street, on the Portland, Maine campus. The project represents a significant implementation of the USM Facilities Master Plan. In addition to the 58,200 SF Student Success Center and the 580-bed Residence Hall the project will include: a new Campus Quad; pedestrian connections; integrated hardscape and landscape; a new service and loading area; stormwater management; new utility services; site lighting; and other site amenities..

The proposed work will require an amendment to the existing Maine Department of Environmental Protection Site Location of Development Permit (L-20438-22-D-A), which requires coordination with the Maine Natural Areas Program (MNAP). On behalf of USM, we are requesting a review of the project area for any known threatened or endangered species or critical habitat. A Site Location Map and has been attached for your reference.

We appreciate your review of this project. If you have any questions regarding this information or the proposed project, please do not hesitate to contact me at (207)558-3662 or dstairs@woodardcurran.com. Thank you for your assistance.

Sincerely,

WOODARD & CURRAN

Darrin Stairs, P.E.
Project Manager

Enclosure(s) Site Location Map

PN: 0232656.00

10. BUFFERS

The Site has been previously developed. There are no existing or proposed buffers. This Section is not applicable.

11. SOILS

Copies of the United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey and the Geotechnical Report prepared for the Site are attached to this Section for your reference

11.1 LIST OF ATTACHMENTS

- United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey
- Geotechnical Report

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,440 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County and Part of Oxford County, Maine
Survey Area Data: Version 16, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cu	Cut and fill land	0.5	13.2%
HrC	Lyman-Tunbridge complex, 8 to 15 percent slopes, rocky	1.1	26.7%
WmB	Windsor loamy sand, 0 to 8 percent slopes	2.4	60.1%
Totals for Area of Interest		**4.0**	**100.0%**

REPORT

19-1813 S

January 28, 2020

Preliminary Geotechnical Engineering Services

Proposed Residential Hall
& Student Success Center
University of Southern Maine
Bedford Street and Durham Street
Portland, Maine

Prepared For:
University of Southern Maine
Capital Planning & Project Management
Attention: Ann Vashon, Project Manager
25 Bedford Street
Portland, Maine 04101

Prepared By:
S. W. Cole Engineering, Inc.
286 Portland Road
Gray, Maine 04039
T: 207-657-2866

S.W.COLE ENGINEERING, INC.

- *Geotechnical Engineering*
- *Construction Materials Testing and Special Inspections*
- *GeoEnvironmental Services*
- *Test Boring Explorations*

www.swcole.com

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1.2 Site and Proposed Construction 1
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Appendix C Exploration Logs & Key

19-1813 S

January 28, 2020

University of Southern Maine
Capital Planning & Project Management
Attention: Ann Vashon, Project Manager
25 Bedford Street
Portland, Maine 04101

Subject: Preliminary Geotechnical Engineering Services
Proposed Residential Housing & Student Success Center
University of Southern Maine
Bedford Street & Durham Street
Portland, Maine

Dear Ann:

In accordance with our Contract, dated January 14, 2020, we have reviewed prior subsurface explorations for the subject project. This report summarizes our findings and its contents are subject to the limitations set forth in Appendix A.

1.0 INTRODUCTION

1.1 Scope and Purpose

The purpose of our services was to review our prior subsurface information at the site in order to assess suitable foundation types and earthwork considerations associated with the proposed building construction. Our scope of services included a review of prior explorations completed at the site in July 2019, a geotechnical assessment of the subsurface findings and preparation of this report.

1.2 Site and Proposed Construction

The site of the proposed construction is located on the University of Southern Maine (USM) Portland Campus and is situated on the easterly side of the intersection of Durham and Bedford Streets in Portland, Maine. The site is currently occupied by two buildings,

as well as paved and landscaped areas. We understand the existing Woodbury Campus Center and the adjacent facilities office building structures will be razed in favor of the proposed construction.

Based on conceptual information provided at this time, we understand redevelopment plans call for construction of a student housing structure and a student center building. The student housing structure will consist of two connected L-shaped structures; one 8-story and one 5-story, with on-grade floor slabs on the ground floor level. The Student Success Center is proposed on the westerly side of the Student Housing buildings in an area currently occupied by paved parking and landscaped areas. The proposed Student Center structure will be 4-stories.

Proposed and existing site features are shown on the "Exploration Location Plan" attached in Appendix B.

2.0 EXPLORATION AND TESTING

2.1 Explorations

Eight test borings (B-19-1 through B-19-8) were made at the site on July 30 and 31, 2020 by S. W. Cole Explorations, LLC. The exploration locations were selected by USM and established in the field by S. W. Cole Engineering, Inc. (S.W.COLE) using measurements from existing site features. The approximate exploration locations are shown on the "Exploration Location Plan" attached in Appendix B. Logs of the explorations and a key to the notes and symbols used on the logs are attached in Appendix C.

2.2 Testing

The prior test borings were drilled using hollow stem auger techniques. The soils were sampled at 2 to 5 foot intervals using a split spoon sampler and Standard Penetration Testing (SPT) methods. Pocket Penetrometer Tests (PPT) were performed where stiffer cohesive soils were encountered. SPT blow counts and PPT results are shown on the logs.

Soil samples obtained from the explorations were returned to our laboratory for further visual classification. Laboratory testing was not requested by the client.

3.0 SUBSURFACE CONDITIONS

3.1 Soil and Bedrock

Beneath a surficial layer of pavement or topsoil, test borings B-19-1, B-19-2, B-19-3, B-19-6, B-19-7 and B-19-8, made in the proposed Residence Hall and Student Success Center development area, encountered a soil profile generally consisting of uncontrolled fill overlying native deposits of glaciomarine sand, silt and clay, overlying a thin veneer of outwash sand, mantling refusal surfaces (probable bedrock) at depths varying from about 11 to 26 feet below the ground surface. The uncontrolled fills generally varied from 1 to 3 feet thick, except at B-19-6 where the uncontrolled fills extend down to probable bedrock at a depth of about 13 feet, and B-19-7 where the uncontrolled fill extend down to what appears to be native sand and silt at a depth of about 9 feet.

Test borings B-19-4 and B-19-5 were made northwest of the proposed development area and encountered a surficial layer of topsoil overlying native deposits of silty sand, overlying shallow refusal surfaces (probable bedrock) at depths of about 5 feet below the ground surface.

Not all the strata were encountered at each exploration; refer to the attached logs for more detailed subsurface information.

3.2 Groundwater

The soils encountered at the test borings were moist to wet from the ground surface. Groundwater was encountered at depths varying from about 8 to 16 feet in the borings within the proposed development area. Groundwater likely becomes perched on the relatively impervious silty clay and bedrock surfaces encountered at the test borings. Long term groundwater information is not available. It should be anticipated that groundwater levels will fluctuate, particularly in response to periods of snowmelt and precipitation, as well as changes in site use.

4.0 EVALUATION AND RECOMMENDATIONS

4.1 Foundation and Floor Slab Considerations

Based on the subsurface findings, the proposed construction appears feasible from a geotechnical standpoint. The principle foundation and floor slab considerations include:

Residential Hall: The subsurface conditions beneath the proposed Residential Hall are generally unsuitable for direct support of spread footing foundations; consequently, we recommend pile-supported foundations or, rigid inclusions be considered to improve the ground for support of spread footing foundations.

On-grade floor slabs bearing on a layer of compacted Structural Fill overlying properly prepared soil subgrades appear feasible for the Residential Hall.

Based on the available subsurface information, we preliminarily interpret the soil profile beneath the Residence Hall at correspond to Seismic Soil Site Class E (IBC 2015).

Student Success Center: Although none of the prior test borings are located directly beneath the Student Success Center, the nearby test borings suggest the trend of soil and bedrock conditions generally improves from east to west. We anticipate the Student Success Center is likely underlain by uncontrolled fills overlying stable native sands, overlying relatively shallow bedrock. At this time, based on the nearby exploration information, we recommend planning consider aggregate pier ground improvement or, over-excavation and replacement of unsuitable soils with compacted Structural Fill for support of spread footing foundations.

On-grade floor slabs bearing on a layer of compacted Structural Fill overlying properly prepared soil subgrades appear feasible for the Student Success Center.

Based on the available subsurface information, we anticipate the soil profile beneath the Student Success Center would correspond to Seismic Soil Site Class D (IBC 2015).

4.2 Excavation and Dewatering Considerations

Excavation work will generally encounter uncontrolled fills, silty sand, silt, clay soils, groundwater, and bedrock with depth. Care must be exercised during construction to limit disturbance of the bearing soils. Earthwork and grading activities should occur ideally during drier, non-freezing weather of Spring, Summer and Fall. Rubber tired construction equipment should not operate directly on the native silt and clays, when wet. Low ground pressure tracked equipment may be needed and temporary haul roads overlying geotextile fabric may be necessary. Final cuts to soil subgrades should be performed with a smooth-edged bucket to help reduce strength loss from soil disturbance.

Based on the trend of subsurface findings, we anticipate bedrock removal may be required in the western portion of the development area. As blasting is restricted in the City of Portland, bedrock removal by hoe-ramming should be anticipated. We recommend pre-construction surveys be completed on surrounding structures, water supply wells and infrastructure prior to commencing excavation activities.

Vibrations from construction should be controlled below threshold limits of 0.5 in/sec for structures, water supply wells and infrastructure within 500 feet of the project site. More restrictive vibration limits may be warranted in specific cases with sensitive equipment, historic structures or artifacts on-site or within close proximity.

Sumping and pumping dewatering techniques should be adequate to control groundwater in foundation and most utility excavations. Controlling the water levels to at least one foot below planned excavation depths will help stabilize subgrades during construction. Excavations must be properly shored or sloped in accordance with OSHA Regulations to prevent sloughing and caving of the sidewalls during construction. Care must be taken to preclude undermining adjacent structures, utilities and roadways. The design and planning of excavations, excavation support systems, and dewatering is the responsibility of the contractor.

The on-site granular fills and native sands may be suitable for reuse as compacted Granular Borrow in paved and landscape areas. The drier native silts and clays are unsuitable for reuse in building and paved areas, but may be reused in landscape areas. The saturated silts and clays are unsuitable for reuse and should be properly disposed off-site.

4.3 Weather Considerations

Construction activity should be limited during wet and freezing weather and the site soils may require drying or thawing before construction activities may continue. The contractor should anticipate the need for water to temper fills in order to facilitate compaction during dry weather. If construction takes place during cold weather, subgrades, foundations and floor slabs must be protected during freezing conditions. Concrete and fill must not be placed on frozen soil; and once placed, the concrete and soil beneath the structure must be protected from freezing.

4.4 Recommendations for Additional Study

We recommend additional test boring explorations and in-situ geophysical testing be performed at the site to further explore the subsurface conditions and Seismic Site Class.

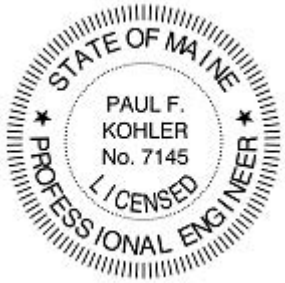
5.0 CLOSURE

It has been a pleasure to be of assistance to you with this phase of your project. We look forward to working with you during the design phase of the project.

Sincerely,

S. W. Cole Engineering, Inc.

Paul F. Kohler, P.E.
Senior Geotechnical Engineer



TJB:pfk/emw

APPENDIX A

Limitations

This report has been prepared for the exclusive use of the University of Southern Maine (USM) for specific application to the proposed Residence Hall and Student Success Center on the USM Campus in Portland, Maine. S. W. Cole Engineering, Inc. (S.W.COLE) has endeavored to conduct our services in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

S.W.COLE's scope of services has not included the investigation, detection, or prevention of any Biological Pollutants at the project site or in any existing or proposed structure at the site. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S.W.COLE should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S.W.COLE.

APPENDIX B

Figures

LEGEND:

APPROXIMATE BORING LOCATION

NOTES:

1. EXPLORATION LOCATION PLAN WAS PREPARED FROM A 1"=60' SCALE PLAN OF THE SITE PROVIDED BY UNIVERSITY OF SOUTHERN MAINE, (USM) AND OVERLAID WITH A 1"=30' SCALE PLAN ENTITLED "BORING PLAN," PREPARED BY SMRT AND PROVIDED AS A PORTABLE DOCUMENT FORMAT (PDF) FILE.
2. THE BORING LOCATIONS WERE SELECTED AND ESTABLISHED IN THE FIELD BY USM AND LOCATED ON THIS PLAN BY MEASUREMENTS FROM EXISTING SITE FEATURES.
3. THE PURPOSE OF THIS PLAN IS ONLY TO DEPICT THE LOCATION OF THE EXPLORATIONS IN RELATION TO THE EXISTING CONDITIONS AND IS NOT TO BE USED FOR CONSTRUCTION.

0 30 60 Feet

S.W.COLE ENGINEERING, INC.

UNIVERSITY OF SOUTHERN MAINE

EXPLORATION LOCATION PLAN

PRELIMINARY GEOTECHNICAL INVESTIGATION
PROPOSED STUDENT HOUSING AND SUCCESS CENTER
BEDFORD STREET
PORTLAND, MAINE

Job No.:	19-1813	Scale:	1" = 30'
Date :	01/28/2020	Sheet:	1

R:\2019\19-1813\CAD\Drawings\19-1813 ELP.dwg, 1/28/2020 1:23:05 PM, 1:1, CEM, S. W. Cole Engineering, Inc.

APPENDIX C

Exploration Logs and Key

BORING LOG

S.W.COLE EXPLORATIONS, LLC

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-1
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/30/2019
DATE FINISH: 7/30/2019

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 25' Estimated | **TOTAL DEPTH (FT):** 25.5 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Corey Culligan | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.91 | **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▽ 16 ft 7/30/2019 Soils Saturated at 16 +/- ft
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth
			1D		0.4-2.4	24/18	4-7-6-6			0.3 Asphalt Pavement Medium dense dark brown fine to medium SAND with some silt and gravel (Fill)	
										2.0 Very stiff becoming stiff brown Silty CLAY with some brown sand layers	
20	5		2D		5-7 6-	24/24	3-5-9-10	q_P=7 to 8 ksf			
										9.0 Loose or soft brown Silty CLAY with silty sand layers	
15	10		3D		10-12 11-	24/20	WOH-2-3-5	q_P=5 to 7 ksf		11.0 Very stiff to stiff brown Silty CLAY with some brown silty sand layers	
					14-			q_P=2 ksf		14.0 Medium brown silty CLAY with brown silty sand layers	▽
10	15		4D		15-17	24/24	1-2-4-1				
					17-			q_P=0.3 ksf		16.5 Soft gray Silty CLAY	
										19.0 Medium gray sandy silty CLAY with gray sand layers	
5	20		5D		20-22 20.5-	24/24	3-3-7-10	q_P=1 ksf		21.0 Medium dense brown fine SAND with some silt, some clayey silt layers Some gravel	
0	25		6D		25-25.3	4/4	60/4"			25.0 Dense brown Silty SAND and GRAVEL	

Auger Refusal at 25.5 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

BORING LOG

S.W.COLE EXPLORATIONS, LLC

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-2
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/30/2019
DATE FINISH: 7/30/2019

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 26.5' Estimated | **TOTAL DEPTH (FT):** 17.0 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Brett Raiche | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.91 | **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): ▽ 14 ft 7/30/2019 Saturated soils at 14 ft +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth
25			1D		0.3-2.3	24/18	6-2-2-4			0.3 Asphalt Pavement 0.5 Medium dense brown Silty CLAY and SAND (Mixed Fill) 1.2 Medium dense brown SAND, some silt, some gravel (Fill) Very stiff brown Silty CLAY, occasional sand layers	
	5		2D		5-7 5.5-	24/20	2-3-4-5	q_P=6 to 7 ksf			
20										9.0 Soft or loose brown Silty Sandy CLAY	
	10		3D		10-12 11-	24/24	WOH- 2-2-4	q_P=1 to 1.5 ksf		10.5 Medium varved brown Silty CLAY with frequent sand layers	▽
15											
	15		4D		15-16.3	16/8	6-10- 50/4"			14.5 Medium dense brown Silty SAND, some fine gravel, pieces of broken rock in tip of spoon	
10											

Auger Refusal at 17.0 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

BORING LOG

S.W.COLE EXPLORATIONS, LLC

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-3
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/30/2019
DATE FINISH: 7/30/2019

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 31.5' Estimated
TOTAL DEPTH (FT): 11.5
LOGGED BY: Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Corey Culligan
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.91
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): ▽ 8 ft 7/30/2019 Sand seams wet at 8 +/- ft
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth
30			1D		0.3-2.3	24/14	6-8-4-4			0.3 Asphalt Pavement 1.0 Medium dense brown Gravelly SAND, trace silt (Fill)	
					2-			q_P=8 ksf		Very stiff brown Silty CLAY, some thin brown sand layers	
	5		2D		5-7	24/20	5-3-4-5				
25					6-			q_P=4 to 7 ksf			▽
										8.0 Medium dense brown SAND, some silt	
	10		3D		10-11.5	18/14	3-2-60				
20										11.0 Probable weathered BEDROCK Auger Refusal at 11.5 feet Probable Bedrock	

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

BORING LOG

S.W.COLE EXPLORATIONS, LLC

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-4
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/31/2019
DATE FINISH: 7/31/2019

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 42' Estimated | **TOTAL DEPTH (FT):** 5.3 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Corey Culligan | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.91 | **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): 7/31/2019 No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth
			1D		0-2	24/12	1-3-5-9			0.7 Topsoil with organics Medium dense light brown Silty SAND, trace fine gravel	
40										3.0 Medium dense brown Silty SAND, some gravel, pieces of broken rock in tip of spoon	
	5		2D		5-5.3	3/3	50/3"			5.0 Probable weathered BEDROCK	

Auger Refusal at 5.3 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

S.W.COLE EXPLORATIONS, LLC

BORING LOG

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-5
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/31/2019
DATE FINISH: 7/31/2019

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 42' Estimated
TOTAL DEPTH (FT): 5.0
LOGGED BY: Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Corey Culligan
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.91
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): 7/31/2019 No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth
			1D		0-2	24/14	1-1-4-12			0.3 Topsoil with organics 0.8 Medium dense light brown Silty SAND, trace fine gravel	
40			2D		2-4	24/16	12-18-18-30			Medium dense to dense brown Silty SAND, some gravel, pieces of broken rock in tip of spoon	
	5									4.0 Probable weathered BEDROCK	

Auger Refusal at 5.0 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

S.W.COLE EXPLORATIONS, LLC

BORING LOG

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-6
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/31/2019
DATE FINISH: 7/31/2019

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 41.5' Estimated
TOTAL DEPTH (FT): 13.3
LOGGED BY: Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Corey Culligan
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.91
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): ▽ 11 ft 7/31/2019 Soils appear saturated at 11 ft +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_2O Depth
40			1D		0-2	24/14	4-16-11-10			0.3 Topsoil with organics Medium dense brown Silty SAND, some gravel (Probable Fill or disturbed soil)	
			2D		2-4	24/16	8-11-13-10				
	5		3D		5-7	24/20	6-9-9-9				
35											
	10		4D		10-12	24/6	5-5-5-3			Possible loose blast spoils FILL	▽
30										13.0 Probable weathered BEDROCK Auger Refusal at 13.3 feet Probable Bedrock	

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING NO.: B-19-6

BORING LOG

S.W.COLE EXPLORATIONS, LLC

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-7
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/31/2019
DATE FINISH: 7/31/2019

Drilling Information

LOCATION: See Exploration Location Plan | **ELEVATION (FT):** 33.5' Estimated | **TOTAL DEPTH (FT):** 12.3 | **LOGGED BY:** Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC | **DRILLER:** Corey Culligan | **DRILLING METHOD:** Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50 | **AUGER ID/OD:** 2 1/4 in / 5 5/8 in | **SAMPLER:** Standard Split-Spoon
HAMMER TYPE: Automatic | **HAMMER WEIGHT (lbs):** 140 | **CASING ID/OD:** N/A /N/A | **CORE BARREL:**
HAMMER EFFICIENCY FACTOR: 0.91 | **HAMMER DROP (inch):** 30
WATER LEVEL DEPTHS (ft): 7/31/2019 No free water observed
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_u = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth
			1D		0.5-2.5	24/15	20-16-12-9			0.5 Asphalt Pavement 0.8 Dense brown SAND and GRAVEL, trace silt (Pavement Base Fill) 1.5 Medium dense brown Gravelly SAND, trace silt (Pavement Subbase Fill)	
30										Medium dense to dense brown silty SAND, some gravel (Probable Fill)	
	5		2D		5-7	24/20	9-11-12-16				
25										9.0 Dense brown SAND and SILT with pieces of weathered rock	
	10		3D		10-11.7	20/16	11-28-38-50/2"			10.5 Very dense, highly weathered ROCK (Sapprolite) 11.7 Probable weathered BEDROCK	

Auger Refusal at 12.3 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

BORING LOG

S.W.COLE EXPLORATIONS, LLC

CLIENT: University of Southern Maine
PROJECT: Proposed Student Housing
LOCATION: University of Southern Maine, Portland, Maine

BORING NO.: B-19-8
SHEET: 1 of 1
PROJECT NO. 19-1813
DATE START: 7/31/2019
DATE FINISH: 7/31/2019

Drilling Information

LOCATION: See Exploration Location Plan
ELEVATION (FT): 29' Estimated
TOTAL DEPTH (FT): 13.9
LOGGED BY: Paul Kohler
DRILLING CO.: S. W. Cole Explorations, LLC
DRILLER: Corey Culligan
DRILLING METHOD: Hollow Stem Auger
RIG TYPE: Truck Mounted Diedrich D-50
AUGER ID/OD: 2 1/4 in / 5 5/8 in
SAMPLER: Standard Split-Spoon
HAMMER TYPE: Automatic
HAMMER WEIGHT (lbs): 140
CASING ID/OD: N/A /N/A
CORE BARREL:
HAMMER EFFICIENCY FACTOR: 0.91
HAMMER DROP (inch): 30
WATER LEVEL DEPTHS (ft): ▽ 10 ft 7/31/2019 Soils appeared saturated at 10 ft +/-
GENERAL NOTES:

KEY TO NOTES AND SYMBOLS:
Water Level: ▽ At time of Drilling; ▼ At Completion of Drilling; ▼ After Drilling
D = Split Spoon Sample; U = Thin Walled Tube Sample; R = Rock Core Sample; V = Field Vane Shear
Pen. = Penetration Length; Rec. = Recovery Length; bpf = Blows per Foot; mpf = Minute per Foot
WOR = Weight of Rods; WOH = Weight of Hammer; RQD = Rock Quality Designation; PID = Photoionization Detector
S_v = Field Vane Shear Strength, kips/sq.ft.; q_U = Unconfined Compressive Strength, kips/sq.ft.; Ø = Friction Angle (Estimated); N/A = Not Applicable

Elev. (ft)	Depth (ft)	Casing Pen. (bpf)	SAMPLE INFORMATION: Sample No.	Type	Depth (ft)	Pen./ Rec. (in)	Blow Count or RQD	Field / Lab Test Data	Graphic Log	Sample Description & Classification	H_20 Depth
			1D		0.3-2.3	24/12	7-7-4-5			0.3 Asphalt Pavement 0.8 Medium dense brown Gravelly SAND, trace silt (Pavement Base Fill)	
										Loose brown silty SAND with brown silty CLAY (Mixed Fill)	
										3.0 Very stiff brown silty CLAY	
25	5		2D		5-7 6-	24/20	3-3-4-6	q_P=5 to 6 ksf			
20	10		3D		10-12 11-	24/20	4-6-8-7	q_P=1 to 2 ksf		9.0 Medium Dense, varved brown Silty SAND with brown silty clay layers	▽
										12.5 Probable cobbles or weathered BEDROCK	

Auger Refusal at 13.9 feet
Probable Bedrock

Stratification lines represent approximate boundary between soil types, transitions may be gradual. Water level readings have been made at times and under conditions stated. Fluctuations of groundwater may occur due to other factors than those present at the time measurements were made.

BORING / WELL 19-1813 USM PRELIM.GPJ SWCE TEMPLATE.GDT 1/28/20

KEY TO NOTES & SYMBOLS
Test Boring and Test Pit Explorations

Stratification lines represent the approximate boundary between soil types and the transition may be gradual.

Key to Symbols Used:

w	-	water content, percent (dry weight basis)
q_u	-	unconfined compressive strength, kips/sq. ft. - laboratory test
S_v	-	field vane shear strength, kips/sq. ft.
L_v	-	lab vane shear strength, kips/sq. ft.
q_p	-	unconfined compressive strength, kips/sq. ft. – pocket penetrometer test
O	-	organic content, percent (dry weight basis)
W_L	-	liquid limit - Atterberg test
W_P	-	plastic limit - Atterberg test
WOH	-	advance by weight of hammer
WOM	-	advance by weight of man
WOR	-	advance by weight of rods
HYD	-	advance by force of hydraulic piston on drill
RQD	-	Rock Quality Designator - an index of the quality of a rock mass.
γ_T	-	total soil weight
γ_B	-	buoyant soil weight

Description of Proportions:

Trace:	0 to 5%
Some:	5 to 12%
"Y"	12 to 35%
And	35+%
With	Undifferentiated

Description of Stratified Soils

Parting:	0 to 1/16" thickness
Seam:	1/16" to 1/2" thickness
Layer:	½" to 12" thickness
Varved:	Alternating seams or layers
Occasional:	one or less per foot of thickness
Frequent:	more than one per foot of thickness

REFUSAL: **Test Boring Explorations** - Refusal depth indicates that depth at which, in the drill foreman's opinion, sufficient resistance to the advance of the casing, auger, probe rod or sampler was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

REFUSAL: **Test Pit Explorations** - Refusal depth indicates that depth at which sufficient resistance to the advance of the backhoe bucket was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

Although refusal may indicate the encountering of the bedrock surface, it may indicate the striking of large cobbles, boulders, very dense or cemented soil, or other buried natural or man-made objects or it may indicate the encountering of a harder zone after penetrating a considerable depth through a weathered or disintegrated zone of the bedrock.

12. STORMWATER MANAGEMENT

The attached Stormwater Management Plan describes the proposed stormwater management measures for the project, as shown on the design drawings attached to Section 1 of this Report. A USGS map and a soils map are attached to Section 1 and Section 11 of this Report, respectively.

12.1 LIST OF ATTACHMENTS

- Stormwater Management Plan (Bound Separately)

13. URBAN IMPAIRED STREAM

The proposed development is not located within the watershed of an Urban Impaired Stream; the Urban Impaired Stream Standard does not apply.

14. BASIC STANDARD

The proposed project is located within a developed urban area; there are no other known protected resources associated with the Site. Based on a geotechnical investigation, the subsurface soil conditions at the site typically consist of uncontrolled fill overlying glaciomarine sand, silt, and clay. Bedrock was typically encountered at 5 to 26 feet below grade. Groundwater was encountered at depths ranging from 8 to 16 feet. The majority of the mapped surficial soils are stiff, silty clary which is most commonly classified as Hydrologic Type C soils. The Soil Erosion and Sediment Control Plan and compliance with the Basic Standard is described in the Stormwater Management provided as part of Section 12 of this Report.

During construction, the Contractor will be responsible for conducting inspections in accordance with the attached *Stormwater Erosion & Sediment Control Inspection Report Form* (or equivalent). Inspections shall be performed at least once a week, as well as before and after storm events. A person with knowledge of stormwater management and erosion and sediment control, including the standards and conditions of the permit approvals, shall conduct the inspections and perform maintenance of the facilities. If maintenance or modifications are necessary, implementation will be completed within seven days and prior to any rainfall event. After construction, the Owner will be responsible for inspecting and maintaining the Site's stormwater system.

14.1 LIST OF ATTACHMENTS

- Erosion & Sediment Control Inspection Report Form.

EROSION & SEDIMENT CONTROL
INSPECTION REPORT FORM

Inspectors: Date: ___ / ___ / _____

_____ of _____ (Project Owner)
_____ of _____ (Contractor)
_____ of _____
_____ of _____

Storm Event? ☐ Yes ☐ No Rainfall Amount _____ Storm Duration _____ hours

Visual Observations of Activity and Site Conditions:

Disturbed Soil Areas:

Storage Of Soils:

Sediment & Erosion Control Measures:

Construction Site Entrance:

Surface Stabilization:

Corrective Action Taken:

Attachments (if any):

Signature:

Name Title Date

15. GROUNDWATER

The proposed development is not located within a Significant Sand and Gravel Aquifer. As previously noted, the Site is comprised primarily of cut and fill land. The proposed development will not infiltrate to, or extract, groundwater and is not anticipated to result in any impacts to groundwater.

16. WATER SUPPLY

The proposed development will be provided with both fire protection water service and domestic water service as shown on the drawings that will connect to an existing public water main in Durham Street. SMRT has been working directly with the Portland Water District to determine the appropriate design for this work. An ability to serve determination will be provided upon receipt.

17. WASTEWATER DISPOSAL

The proposed development will be provided with sanitary sewer service to an existing sewer main located in Durham Street as shown on the drawings. A Wastewater Capacity Application will be submitted to the City under separate cover. A copy of the City's determination will be provided upon receipt.

18. SOLID WASTE

18.1 SOLID WASTE

All solid waste materials and recyclables from the proposed development will be transported and disposed of or recycled in accordance with applicable laws and regulations.

18.2 CONSTRUCTION & DEMOLITION DEBRIS

The proposed development will generate construction waste and demolition debris (CDD). The Contractor will be responsible for properly disposing of the CDD. The Contractor will be responsible for handling, managing, and disposing of all waste generated by construction in accordance with the Maine Solid Waste Management Regulations and all other applicable local, state, and federal regulations.

18.3 SPECIAL & HAZARDOUS WASTE

The proposed development is not anticipated to produce any hazardous waste. Site investigations identified the presence of typical urban fill, as is seen on redevelopment sites throughout the City. We anticipate that soils from the site may be classified as special waste and shall be handled and disposed of accordingly.

19. FLOODING

The proposed development is not located within a flood hazard zone, as shown on the FEMA Flood Insurance Rate Map attached to this Section. The proposed development will not cause or increase flooding or cause an unreasonable flood hazard to any adjacent structures. The 100-year flood plain is located off-site and is not within the viewport of the design drawings; therefore, the 100-year flood plain is not shown on the design drawings

19.1 LIST OF ATTACHMENTS

- FEMA Flood Insurance Rate Map

ELEVATION REFERENCE MARKS

REFERENCE MARK	ELEVATION IN FT. (NGVD)[1]	DESCRIPTION OF LOCATION
RM 28	56.00	Disk set vertically in north face near the northwest corner of 3-story building housing the Casco Bank on Forest Avenue, 1.2 miles northwest along Forest Avenue from the Post Office near the intersection of Forest Avenue and Woodford Street.
RM 29	35.25	Copper bolt set in top of granite post flush with surface, located approximately 0.85 mile northwest along Forest Avenue from Post Office near intersection of Forest Avenue and Noyes Street, 9.0 feet northwest of northwest curb of Noyes Street and 8.5 feet southwest of southwest curb of Forest Avenue.
RM 30	25.36	Disk set in top of concrete foundation of Oakhurst Dairy building at No. 364 Forest Avenue, 35 feet southwest of north corner of building and level with street, approximately 0.55 mile northwest of Post Office near intersection of Hudson Street.
RM 31	11.88	MDOT plaque set in centerline of service doorway of Franklin Street Pumping Station at intersection of Franklin Street and Marginal Way.
RM 32	9.89	Brass disk set in top of reinforced concrete post 10 inches below present ground level, 250 feet south of C. Profenno Company, 127 Marginal Way, and 350 feet north of intersection of Preble Street and Marginal Way, 27.5 feet southeast of centerline of Marginal Way.
RM 33	36.80	Disk set vertically in northeast face of concrete foundation of 2-story brick building, 56 feet northwest of Seawall Street and 1 foot northwest of east corner of building, near Seawall Street Railroad Station and 360 feet north of crossing of Portland Terminal Railroad and Seawall Street.
RM 34	22.81	Disk set in sidewalk on west side of Saint John Street and opposite intersection of A Street at corner of entrance to Arlan's Shopping Center parking lot, in center of sidewalk and 4.28 feet west of western edge of Saint John Street and approximately 177.4 feet from Arlan's Store.
RM 35	12.83	Chiseled X cut in bolt on rim of fire hydrant on northwest side of Commercial Street, 550 feet northeast of High Street, 76 feet south of Pole No. 29.1, across from No. 322 Commercial Street.
RM 36	28.34	Disk set flush in top of concrete endwall railing at northwest end of Interstate 295 bridge over the Fore River, 21.7 feet south of Portland-South Portland city line sign, and 24.7 feet west of the centerline of Interstate 295 southbound, and 3.5 feet above pavement grade at curb line.
RM 37	22.23	Disk set vertically in center of south face of large rock set in second layer of masonry retaining wall on north of railroad tracks, 45.5 feet east of west end of wall, located .75 mile east from the overpass of U.S. Route 1 over tracks and 142 feet east of east edge of Emery Street foot bridge over tracks.
RM 38	15.56	Disk set vertically in southeast side of first concrete pier southeast of Commercial Street, 25.0 feet southeast of centerline of Commercial Street, 39 feet southwest of northeast end of pier, 0.85 mile west from Custom House at State Route 77 bridge over Fore River.

[1] National Geodetic Vertical Datum of 1929

Project Location

ZONE A2 (EL 10)
ZONE A4 (EL 11)
ZONE C
ZONE B
ZONE V3 (EL 12)
BACK COVE
FORE RIVER
THOMPSON POINT
CORPORATE LIMITS
RM 28
RM 29
RM 30
RM 31
RM 32
RM 33
RM 34
RM 35
RM 36
RM 37
RM 38

KEY TO MAP

- 500-Year Flood Boundary
- 100-Year Flood Boundary
- Zone Designations*
- 100-Year Flood Boundary
- 500-Year Flood Boundary
- Base Flood Elevation Line With Elevation In Feet**
- Base Flood Elevation in Feet Where Uniform Within Zone** (EL 987)
- Elevation Reference Mark RM7×
- Zone D Boundary
- River Mile •M1.5

ZONE B / ZONE A1 / ZONE A5 / ZONE B / 513

**Referenced to the National Geodetic Vertical Datum of 1929

*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depth less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.

NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance and flood plain management purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas. The coastal flooding elevations shown may differ significantly from those developed by the National Weather Service for hurricane evacuation planning.

For adjoining map panels, see separately printed Index To Map Panels.

Coastal base flood elevations shown on this map include the effects of wave action.

Coastal base flood elevations apply only landward of 0.0 NGVD.

INITIAL IDENTIFICATION:
APRIL 29, 1977
FLOOD HAZARD BOUNDARY MAP REVISIONS:
NONE

FLOOD INSURANCE RATE MAP EFFECTIVE:
JULY 17, 1986
FLOOD INSURANCE RATE MAP REVISIONS:

Refer to the FLOOD INSURANCE RATE MAP EFFECTIVE date shown on this map to determine when actuarial rates apply to structures in the zones where elevations or depths have been established.

To determine if flood insurance is available in this community, contact your insurance agent, or call the National Flood Insurance Program, at (800) 638-6620.

APPROXIMATE SCALE
400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

CITY OF
PORTLAND, MAINE
CUMBERLAND COUNTY

PANEL 13 OF 17
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
230051 0013 B

EFFECTIVE DATE:
JULY 17, 1986

Federal Emergency Management Agency

COASTAL BASE FLOOD ELEVATIONS APPLY ONLY LANDWARD OF 0.0 NGVD

ADJOINING AREA SHOWN AS INSET A ON PANEL 230051 0016 B

20. BLASTING

Based on geotechnical investigations completed to date, no blasting is anticipated for this project. Any rock removal required will be accomplished through mechanical means. The geotechnical report for this project is attached to Section 11.

21. AIR EMISSIONS

The project is not anticipated to require an air emissions license; this Section is not applicable.

22. ODORS

The proposed development will not involve any processes that emit significant odors; this Section is not applicable.

23. WATER VAPOR

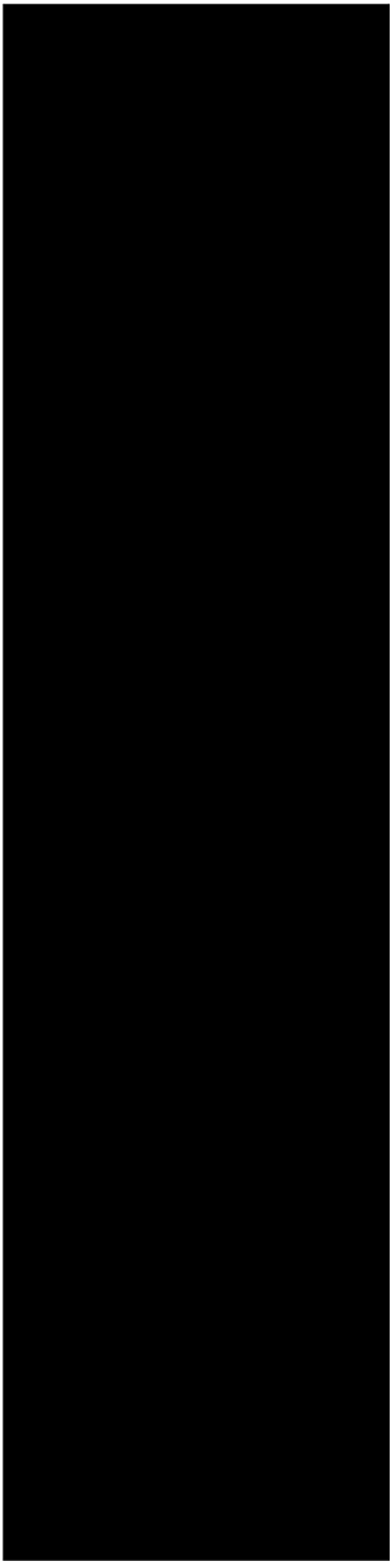
The proposed development will not involve any processes that emit water vapors; this Section is not applicable.

24. SUNLIGHT

The Oakhurst Dairy facility, which is separated from the USM property by Durham Street, has a series of solar panels located on a two rooftops; one set on a lower service building fronting on Durham Street, as well as several located on a taller portion of the facility adjacent to Forest Avenue. The proposed Residence Hall, which will be constructed within the allowable building height of the USM Overlay Zone, may partially block sunlight to the lower roof top at certain times of the day and year. It is not anticipated that the Residence Hall will block sunlight to the majority the Oakhurst rooftops for the majority of the year. There may be short portions of the day during the mid-winter months (when the sun is lowest on the horizon) that shadows may be cast on the lower rooftop.

25. NOTICES

The City of Portland has Delegated Review Authority for this application; as such, it is our understanding that the public notice requirements associated with MaineDEP Site Law do not apply.



WOODARD &CURRAN

woodardcurran.com

COMMITMENT & INTEGRITY DRIVE RESULTS

University of Southern Maine
Portland Commons Residence Hall
Preliminary Plan for Summer/Fall Move-In

Proposed Planning Committee Membership

USM - Transportation Coordinator, Parking Office, Public Safety, Residential Life, Graduate Student
Community – City of Portland, Neighborhood and Oakhurst

Two spring meetings to develop a plan in order to effectively communicate to all stakeholders. An additional meeting in late July or early August to finalize all logistics and an early/mid-September meeting to evaluate the plan and make recommendations for improvement.

Overview

30% (175 students) – SUMMER RESIDENTS & EARLY ARRIVALS - student staff, student-athletes, etc.
returning groups arrive in small numbers during a 10-day to two week period
35% (200 students) Blue Move-In Day
35% (200 students) Gold Move-In Day

Blue/Gold Move-In Days

Students will be assigned different dates (Blue or Gold) and times of the day (8 am to 6 pm) to prevent congestion and long lines. Assignments will be determined by floor & room or Alpha by last name. Each hour time block would have 20 students moving in to the residence hall.

Procedures (for students)

1. Plan to arrive on the assigned date and during the designated time slot
2. Follow directions (up Bedford Street/down Falmouth Street) towards entrance to Durham Street
3. Staff will control vehicle flow and access to Durham Street unloading areas (as space is available) The Sullivan Gym parking lot/garage will be utilized as a vehicle staging area
4. When at unloading area, Student will start the curbside check-in process with Res Life staff
5. When checked-in, student vehicle will be unloaded in designated/approved areas (Heat Plant parking lot on Durham Street)
6. Once items are unloaded, vehicle will be moved to the Bedford Street parking garage
7. Once vehicle is parked in the Bedford Street garage, items will be taken to room by hand or with provided carts

Move-Out Plan

Currently in Gorham, we do not have a move-out plan as students move out sporadically over a two-week period. We would envision a similar process in Portland. The Planning Committee would be charged in March of each year to develop similar procedures for anticipated high-capacity days (Commencement and lease end date).

Notes

The Portland Commons Residence Hall is for Law, Graduate and Upper class students. Very few families will participate in the move-in/move-out process.

UNIVERSITY OF SOUTHERN MAINE

PORTLAND, MAINE

CAREER AND STUDENT SUCCESS CENTER & RESIDENCE HALL

REISSUED FOR PERMITTING

7-24-20

APPLICANT INFORMATION

OWNER:

UNIVERSITY OF SOUTHERN MAINE
BEDFORD STREET
PORTLAND, MAINE 04101
PH: 207-780-4160

PERMITS

CITY OF PORTLAND

LEVEL III SITE PLAN APPLICATION
SITE LOCATION AND DEVELOPMENT ACT (DELEGATED REVIEW)

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

SITE LOCATION OF DEVELOPMENT ACT

CONSULTANT INFORMATION

SURVEYOR:

SURVEYWORKS, INC.
7 COBBLESTONE DRIVE, SUITE 4
TURNER, MAINE 04282
PH: 207-200-1678

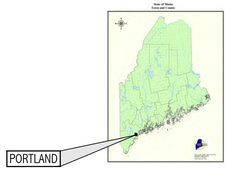
ARCHITECT/CIVIL ENGINEER/LANDSCAPE ARCHITECT
/STRUCTURAL ENGINEER/ELECTRICAL ENGINEER
/MECHANICAL ENGINEER/INTERIOR DESIGNER:

SMRT, INC.
144 FORE STREET
PORTLAND, MAINE 04104
PH: 207-772-3846

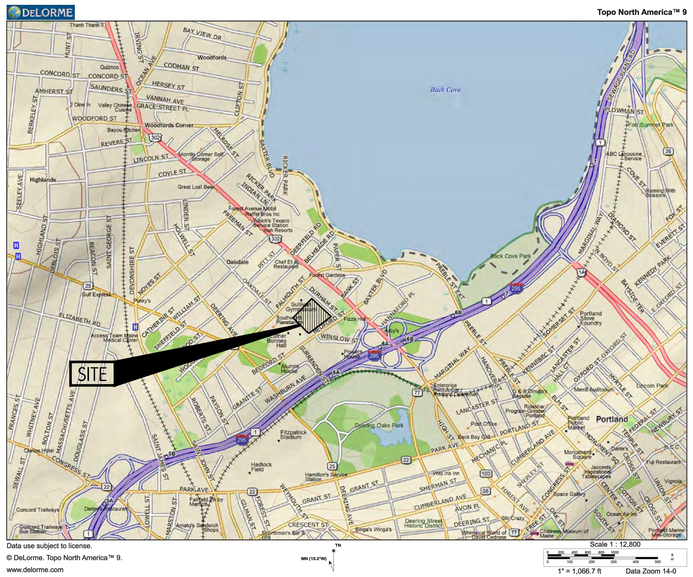
ELKUS MANFREDI ARCHITECTS
25 DRYDOCK AVENUE
BOSTON, MASSACHUSETTS 02210
PH: 617-426-1300

DRAWING LIST

GI001	COVER SHEET
SITE	
C-001	SITE NOTES & LEGENDS
CD101	EXISTING CONDITIONS & DEMOLITION PLAN
CD102	BUILDING DEMOLITION PLAN
CP101	SITE LAYOUT PLAN
CP501	SITE LAYOUT DETAILS
CP502	SITE LAYOUT DETAILS
CE001	EROSION & SEDIMENT CONTROL NOTES
CE101	EROSION & SEDIMENT CONTROL PLAN
CE501	EROSION & SEDIMENT CONTROL DETAILS
CG101	GRADING & DRAINAGE PLAN
CG501	GRADING & DRAINAGE DETAILS
CG502	GRADING & DRAINAGE DETAILS
CU101	UTILITY PLAN
CU102	STEAM LINE PLAN
CU501	UTILITY DETAILS
ARCHITECTURAL - RESIDENCE HALL	
1.A200	EXTERIOR ELEVATIONS
1.A201	EXTERIOR ELEVATIONS
1.A202	EXTERIOR ELEVATIONS
1.A203	EXTERIOR ELEVATIONS
ARCHITECTURAL - CAREER AND STUDENT SUCCESS CENTER	
2.A200	EXTERIOR ELEVATIONS
2.A201	EXTERIOR ELEVATIONS
SITE ELECTRICAL	
ES103	PHOTOMETRIC PLAN
ES104	PHOTOMETRIC PLAN
PLANTING	
LP101	PLANTING & LANDSCAPING PLAN
LP501	PLANTING & LANDSCAPE DETAILS & SCHEDULE



LOCUS



PERMITTING REQUIREMENTS

MUNICIPAL	SUBMITTED	STATUS
LEVEL B SITE PLAN APPROVAL	3-6-20 7-24-20 (REVISED)	UNDER REVIEW
MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION		
SITE LOCATION OF DEVELOPMENT ACT AMENDMENT (DELEGATED REVIEW BY THE CITY OF PORTLAND, ME)	3-6-20 7-24-20 (REVISED)	UNDER REVIEW
MAINE GENERAL CONSTRUCTION PERMIT	PRIOR TO CONSTRUCTION	

REV	DESCRIPTION	DATE
1	REISSUED FOR PERMITTING	7-24-20
0	ISSUED FOR SD AND PERMITTING	3-6-20

REISSUED FOR PERMITTING
7-24-20
CURRENT ISSUE STATUS:

STATE OF MAINE
JEFFREY
ACETO
No. 6418
LICENSED
PROFESSIONAL ENGINEER

SMRT Architects and Engineers
75 Washington Avenue, Suite 3A
Portland, Maine 04101
1.877.700.7678
www.smrtinc.com
Architecture • Engineering • Planning

UNIVERSITY OF SOUTHERN MAINE
CAREER AND STUDENT SUCCESS CENTER & RESIDENCE HALL

PORTLAND, MAINE

COVER SHEET

SHEET TITLE:

0 1/2" 1" 2" 3"
SCALE:

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	GI001-19206	SHEET No.	GI001

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NOT FOR CONSTRUCTION

24x36

GENERAL NOTES

1. THE SCOPE OF SITE WORK FOR THIS PROJECT INCLUDES PROTECTION OF EXISTING STRUCTURES AND UTILITIES, AND REINSTATEMENT OF DISTURBED AREAS OF THE SITE TO MATCH EXISTING CONDITIONS. THE EXISTING CONDITIONS SHOWN ON THE PROJECT DRAWINGS ARE TAKEN FROM RECORD DRAWINGS AND HISTORICAL INFORMATION. THE CONTRACTOR SHALL REVIEW THE DRAWINGS AND SITE CONDITIONS PRIOR TO THE START OF WORK AND CONTACT THE PROJECT ARCHITECT IMMEDIATELY IF DISCREPANCIES ARE FOUND.
2. EXISTING UNDERGROUND UTILITIES HAVE BEEN LOCATED FROM HISTORICAL RECORDS AND PREVIOUS DESIGN DRAWINGS. NO GUARANTEE IS MADE THAT THE UTILITIES SHOWN WILL BE FOUND IN THE LOCATIONS INDICATED, OR THAT THE INFORMATION SHOWN IS COMPLETE. INFORMATION ON EXISTING UTILITY LOCATIONS IS PROVIDED FOR REFERENCE ONLY AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFIRMING EXISTING UTILITY LOCATIONS AND DEPTHS AND COORDINATING THE WORK ACCORDINGLY.
3. THE CONTRACTOR SHALL UNDERTAKE TEST PITS AT THE SITE AND ENGAGE PRIVATE UTILITY DETECTION SERVICE, AS NECESSARY, TO ACCURATELY IDENTIFY UTILITIES IN ORDER TO EFFICIENTLY PLAN AND COMPLETE THE WORK.
4. THE CONTRACTOR SHALL PROTECT EXISTING STRUCTURES AND UTILITIES ADJACENT TO THE WORK. ANY DAMAGE TO EXISTING STRUCTURES, ROADS, SIDEWALKS, UTILITIES, OR OTHER SITE FEATURES CAUSED BY THE WORK SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.
5. ANY UTILITY REPAIRS OR RECONFIGURATION REQUIRED AS PART OF THIS PROJECT SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE AUTHORITY HAVING JURISDICTION.
6. TEMPORARY WORKS, SUPPORT AND PROTECTION OF STRUCTURES ARE THE RESPONSIBILITY OF THE CONTRACTOR AND THE COSTS SHALL BE CONSIDERED INCIDENTAL TO THE OVERALL PROJECT SUM.
7. ALL WORK SHALL BE UNDERTAKEN IN STRICT ACCORDANCE WITH LOCAL, STATE AND FEDERAL SAFETY STANDARDS.
8. OPEN EXCAVATIONS AND WORK AREAS SHALL BE CLEARLY DELINEATED AND FENCED, AS NECESSARY TO PREVENT UNAUTHORIZED ACCESS
9. DRIVEWAYS, WALKWAYS AND ENTRANCES SERVING PREMISES SHALL BE KEPT CLEAR AND AVAILABLE TO OWNER, OWNER'S EMPLOYEES, AND EMERGENCY VEHICLES, AS NECESSARY TO MAINTAIN THE FUNCTION OF THE FACILITY. COORDINATE ALL WORK WITH OWNER TO ENSURE THAT ADEQUATE ACCESS AND CIRCULATION IS MAINTAINED AT ALL TIMES.
10. DE-WATERING, IF NECESSARY, SHALL BE UNDERTAKEN IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL STANDARDS. NO DISCHARGE OF SEDIMENT LADEN RUNOFF TO SURFACE WATERS, OR THE PIPED STORM DRAIN SYSTEM AT THE SITE SHALL BE ALLOWED.
11. ALL DISTURBED PAVEMENT AREAS, ROADS AND SIDEWALKS SHALL BE REINSTATED TO MATCH EXISTING GRADES, MATERIALS AND DEPTHS.
12. EXISTING PAVEMENT SHALL BE SAW-CUT AT LEAST TWELVE INCHES INTO SOUND MATERIAL TO PROVIDE A CLEAN, STRAIGHT EDGE BETWEEN EXISTING SOUND SURFACE MATERIAL AND THE REPAIRED AREA.
13. A SMOOTH TRANSITION SHALL BE PROVIDED BETWEEN REPAIR WORKS AND EXISTING PAVEMENT. ALL REINSTATED AREAS SHALL BE GRADED TO PITCH UNIFORMLY TO ENSURE POSITIVE DRAINAGE.

LAYOUT NOTES:

1. DO NOT SCALE THE DRAWINGS. ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY OMISSIONS IN DIMENSIONING SHALL BE REPORTED IMMEDIATELY TO THE ARCHITECT FOR DECISION. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, NOTES, AND SPECIFICATIONS SHALL IMMEDIATELY BE REPORTED TO THE ARCHITECT FOR FURTHER DIRECTION AND RESOLUTION BEFORE ANY ADDITIONAL WORK PROCEEDS.
2. ALL ANGLES ARE 90 DEGREES UNLESS OTHERWISE NOTED.
3. ALL DIMENSIONS FROM BUILDING ARE TO FACE OF BUILDING FOUNDATION. ALL DIMENSIONS FROM CURBS ARE TO FACE OF CURB.
4. PROVIDE A SMOOTH TRANSITION WHERE NEW WORK MEETS EXISTING WORK.
5. CONTRACTOR SHALL NOTIFY DIG-SAFE (1-888-344-7233) AND LOCAL UTILITY COMPANIES TO VERIFY LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATION.
6. CONTRACTOR SHALL SECURE ALL NECESSARY PERMITS FOR WORK SHOWN ON THESE PLANS.
7. ALL WORK SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS AND MEET OR EXCEED CITY OF PORTLAND STANDARDS.
8. PROVIDE TAPERED END SECTIONS AT ALL CURB ENDS.
9. EXISTING CONDITIONS AND TOPOGRAPHIC DATA ARE BASED UPON TOPOGRAPHIC SURVEY PREPARED BY SURVEYWORKS, INC., TURNER, MAINE, AND DATED 2-14-2020.

GRADING NOTES:

1. SOIL DISTURBANCE IS TO BE KEPT TO A MINIMUM AND ALL DISTURBED AREAS SHALL BE STABILIZED (WITH PERMANENT OR TEMPORARY MEASURES) AS QUICKLY AS POSSIBLE.
2. ALL DISTURBED AREAS NOT OTHERWISE TREATED SHALL BE LOAMED AND SEEDED (6" DEPTH).
3. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE MAINTAINED ON A REGULAR BASIS AND AS REQUIRED AFTER STORM EVENTS.
4. GULLIES OR OTHERWISE ERODED AREAS IN SEEDED AREAS SHALL BE RESTORED AS SOON AS POSSIBLE FOLLOWING OBSERVATION, USING EROSION CONTROL MESH TO STABILIZE AS REQUIRED.
5. FILL IN AND AROUND THE AREA OF THE NEW BUILDING ADDITION SHALL MEET THE SPECIFICATION FOR 'STRUCTURAL FILL'.
6. ALL EMBANKMENTS AND OTHER FILL SECTIONS SHALL BE CONSTRUCTED USING GRANULAR BORROW - A MIXTURE OF SAND AND GRAVEL MEETING MDOT SPECIFICATION 703.19 GRANULAR BORROW. SUITABLE SOIL BORROW MAY BE USED IN PLACE OF GRANULAR BORROW ONLY WHERE MOISTURE CONTENT CAN BE CONTROLLED TO MEET THE SPECIFIED COMPACTION.

INLET & OUTLET STRUCTURES:

1. INLET AND OUTLET STRUCTURES SHALL BE PRECAST CONCRETE, UNLESS OTHERWISE SPECIFIED. CONCRETE STRUCTURES SHALL BE DESIGNED TO WITHSTAND H-20 WHEEL LOADING AND SHALL BE PROVIDED WITH PROTECTIVE GRATES WITH A MAXIMUM OPENING SIZE OF FOUR INCHES UNLESS OTHERWISE SPECIFIED. CONCRETE STRUCTURES SHALL BE CONSTRUCTED ON A MINIMUM 12-INCH DEEP BASE OF 3/4-INCH COMPACTED CRUSHED STONE.
2. OUTLET PIPES SHALL BE PROVIDED WITH ANTI-SEEP COLLARS TO PREVENT PIPING OF RUNOFF ALONG STONE EMBEDMENT TRENCHES

DEWATERING NOTES:

1. THE CONTRACTOR SHALL EMPLOY A DEWATERING SYSTEM THAT ACHIEVES THE FOLLOWING FUNCTIONS DURING CONSTRUCTION:

   A. DEVELOP A SUBSTANTIALLY DRY AND STABLE SUBGRADE DURING EXECUTION OF THE WORK,

   B. PREVENT DAMAGE TO STRUCTURES ADJACENT TO THE WORK,

   C. RETAIN SEDIMENTS ON-SITE AND WITHIN THE WORK AREA. DEWATERING OPERATIONS SHALL BE SUSPENDED IF THE TURBIDITY OF DISCHARGES TO THE DOWNSTREAM DRAINAGE SYSTEM IS INCREASED ABOVE AMBIENT LEVELS.
2. FLOCCULANTS MAY BE USED TO CONTROL THE TURBIDITY OF DISCHARGE WATER. REFER TO THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION'S EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS (2014, OR AS CURRENTLY REVISED) FOR RECOMMENDATIONS AND SPECIFICATIONS.
3. SURFACE WATER ENTERING THE CONSTRUCTION SITE SHALL BE INTERCEPTED AND DIVERTED AROUND THE WORK AREA THROUGH THE USE OF DIKES, CURB WALLS, DITCHES, SUMPS, PUMPING, OR OTHER APPROVED MEANS.
4. ANY ENFORCEMENT ACTIONS OR FINES RESULTING FROM THE IMPROPER DISCHARGE OF TURBID WATER AND SEDIMENT TO DOWNSTREAM AREAS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
5. DIRT BAGS AND TEMPORARY DEWATERING PONDS SHALL BE CONSTRUCTED AND MAINTAINED AS NEEDED TO CAPTURE AND TREAT PUMPATE FROM DEWATERED AREAS.

GEOTEXTILE & EROSION BLANKET NOTES:

1. EROSION CONTROL BLANKET FOR USE IN PONDS AND DRAINAGE CHANNELS SHALL BE 100% BIODEGRADABLE DOUBLE NET EROSION BLANKET WITH A 100% COCONUT FIBER MATRIX AND ORGANIC JUTE NETTING. EROSION CONTROL BLANKET FOR USE IN CHANNELS SHALL BE NORTH AMERICAN GREEN® BIONET® C125-BN ™. EAST COAST EROSION BLANKETS ECC-2B OR APPROVED EQUAL.
2. PERMANENT TURF REINFORCEMENT MAT FOR REINFORCED TURF SPILLWAYS AND EMERGENCY OVERFLOW WEIRS SHALL BE A UV-STABILIZED POLYPROPYLENE MAT WITH TWO LAYERS OF UV-STABILIZED NETTING. PERMANENT TURF REINFORCEMENT MAT SHALL BE NORTH AMERICAN GREEN® P300, EAST COAST EROSION BLANKETS ECP-2, OR APPROVED EQUAL.
3. GEOTEXTILE SEPARATION FABRIC SHALL BE A WOVEN SLIT FILM GEOTEXTILE WITH AN APPARENT OPENING SIZE OF 50 (US STANDARD SIEVE) (PER ASTM D4751) THAT MEETS THE REQUIREMENTS FOR A CLASS 2 SEPARATION GEOTEXTILE PER AASHTO M288.96. GEOTEXTILE SEPARATION FABRIC SHALL BE MIRAFI® 500X OR APPROVED EQUAL.
4. GEOTEXTILE DRAINAGE FABRIC SHALL BE A NONWOVEN GEOTEXTILE MANUFACTURED FOR USE IN SUBSURFACE DRAINAGE APPLICATIONS. THE MATERIAL SHALL HAVE AN APPARENT OPENING SIZE OF 70 (US STANDARD SIEVE) (PER ASTM D4751), A PERMITTIVITY OF 1.7/SEC OR GREATER (PER ASTM D4491) AND RETAIN A MINIMUM OF 70% STRENGTH AT 500 HOURS UV EXPOSURE (PER ASTM D4355). GEOTEXTILE DRAINAGE FABRIC SHALL BE MIRAFI® 140N, CONTECH® C-35NW, OR APPROVED EQUAL.

MANHOLE & CATCH BASIN NOTES:

1. ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4,000 PSI AT THE END OF 28 DAYS, UNLESS OTHERWISE NOTED.
2. MANHOLES MAY BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE OR CAST IN PLACE.
3. PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPECIFICATION C-478.
4. ALL STORM AND SEWER MANHOLE COVERS SHALL BE SOLID AND HAVE ONE 7/8" DIAMETER DRILLED PICK HOLE LOCATED 8" FROM THE CENTER OF THE COVER.
5. ALL SANITARY MANHOLE COVERS SHALL HAVE "SEWER" CAST INTO THE COVER. ALL STORMWATER / DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
6. ALL MANHOLE RISERS SHALL BE ETHERIDGE 24" OR APPROVED EQUAL.
7. SEWER BRICK SHALL CONFORM TO ASTM SPECIFICATION DESIGNATION C-32-63, GRADE MA AND SA.
8. ALL SANITARY MANHOLES SHALL HAVE A WATERPROOFING COATING APPLIED TO THE EXTERIOR SURFACE.
9. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35.
10. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS WITHIN CITY RIGHTS-OF-WAY TO BE REMOVED SHALL BE SALVAGED BY THE CONTRACTOR , AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
11. ALL CATCH BASIN OUTLETS SHALL BE INSTALLED WITH A CASCO TRAP.

UTILITY NOTES:

1. PROVIDE AND INSTALL MATERIALS NECESSARY TO COMPLETE UTILITY FEATURES AND DESIGN UNLESS OTHERWISE INDICATED.
2. ALL WORK SHALL MEET OR EXCEED STANDARDS OF THE CITY OF PORTLAND AND THE PORTLAND WATER DISTRICT.
3. ALL SEWER WORK SHALL BE IN ACCORDANCE WITH CITY OF PORTLAND STANDARD AND SHALL BE INSPECTED AND APPROVED BY THE CITY OF PORTLAND.
4. CONTRACTOR TO VERIFY EXISTING UTILITY CONNECTION POINTS PRIOR TO SUBMISSION OF BIDS AND INCLUDE ALL EXTRA WORK REQUIRED TO EXTEND UTILITIES AS REQUIRED.
5. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND HAVE BEEN DETERMINED BY SURFACE EVIDENCE AND/OR PREVIOUSLY GENERATED PLANS. NO GUARANTEE IS MADE THAT ALL UTILITIES ARE SHOWN OR WILL BE FOUND IN LOCATIONS INDICATED. THIS INFORMATION IS PROVIDED FOR REFERENCE AND THE CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES AND POINTS OF CONNECTION IN THE FIELD. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND RESTORATION OF ALL UTILITIES DISTURBED DURING CONSTRUCTION AT NO EXTRA EXPENSE TO THE OWNER.
6. THE OWNER, CONSTRUCTION MANAGER AND ARCHITECT SHALL BE NOTIFIED AT LEAST TWO DAYS PRIOR TO ANY INTERRUPTION TO ANY UTILITY SERVICE.
7. ADJUST ALL UTILITY STRUCTURE TOPS/RIMS TO MATCH PROPOSED GRADES UNLESS NOTED OTHERWISE.
8. LOCATIONS OF EXISTING SEWER LINES ARE BASED ON THE TOPOGRAPHIC SURVEY PRODUCED BY SURVEYWORKS, INC., DATED 2-14-2020.
9. EXISTING UTILITY CONNECTIONS TO THE BUILDINGS AT THE SITE ARE TAKEN FROM PREVIOUS PLANS AND A SURVEY OF SURFACE FEATURES. THE CONTRACTOR SHALL EXCAVATE TEST PITS IN AREAS ADJACENT TO EXISTING BUILDINGS AS NECESSARY TO VERIFY THE LOCATION, DEPTH AND SIZE OF EXISTING SERVICES. ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ARCHITECT AND OWNER.
10. CONTRACTOR SHALL MAKE PROVISION FOR CONNECTING NEW UTILITY SERVICES TO THE PROJECT WITHOUT INTERRUPTION BY USE OF LIVE TAPPING AND OVER-PUMPING WHERE APPROPRIATE.

EMBANKMENT NOTES:

1. BASIN EMBANKMENTS SHALL BE CONSTRUCTED OF SUITABLE ON-SITE SOIL. COMPACTED IN MAXIMUM EIGHT INCH LIFTS TO 90% MAXIMUM DRY DENSITY. A MINIMUM OF SIX INCHES OF CLEAN SCREENED LOAM SHALL BE APPLIED TO FINISHED GRADE AND THE AREA SHALL BE IMMEDIATELY SEEDED AND STABILIZED WITH MULCH, HYDROSEED, OR EROSION BLANKET DEPENDING ON THE LEVEL OF EXPECTED INUNDATION (SEE EROSION CONTROL SHEETS).
2. EMBANKMENTS CONSTRUCTED ON EXISTING SOIL SLOPES STEEPER THAN 4H:1V SHOULD BE KEYED INTO THE EXISTING GROUND SURFACE WITH CONTINUOUS LEVEL BENCHES. EMBANKMENTS CONSTRUCTED ON EXISTING SOIL SLOPES FLATTER THAN 4H:1V SHALL HAVE A 10FT WIDE BENCH CUT INTO THE NATIVE SOIL AT THE TOE OF THE SLOPE FOR FILL EMBANKMENTS. A ONE FOOT (1') MINIMUM LAYER OF DRAINAGE COURSE MATERIAL SHALL BE PLACED OVER THE INITIAL BENCH PRIOR TO PLACING EMBANKMENT FILL. THE TOE BLANKET DRAIN SHALL BE CONSTRUCTED SUCH THAT GRAVITY DRAINAGE FORM THE BLANKET DRAIN OCCURS.

PLANTING NOTES:

1. THE LANDSCAPE CONTRACTOR SHALL SUPPLY AND INSTALL ALL PLANTS IN SUFFICIENT QUANTITIES TO COMPLETE THE WORK AS SHOWN ON THE DRAWINGS. DISCREPANCIES BETWEEN QUANTITIES NOTED ON THE DRAWINGS AND THOSE GRAPHICALLY SHOWN SHALL BE REPORTED IMMEDIATELY TO THE LANDSCAPE ARCHITECT AND SHALL NOT ENTITLE THE CONTRACTOR TO ADDITIONAL REMUNERATION.
2. THE LANDSCAPE CONTRACTOR IS ADVISED THAT BELOW GROUND UTILITIES EXIST ON SITE, THE LOCATIONS OF WHICH SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF OPERATIONS (SEE GENERAL NOTES REGARDING DIGSAFE). SHOULD THE LOCATION OF ANY PROPOSED PLANTING CONFLICT WITH ANY UTILITY, THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY FOR DECISION.
3. ANY AND ALL PAVING, CURBING, UTILITIES, LAWNS, ETC,, DAMAGED AS A RESULT OF THE LANDSCAPE CONTRACTOR'S OPERATIONS SHALL BE REPLACED OR REPAIRED TO ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
4. LOCATIONS OF PROPOSED PLANTINGS AND BED LINES SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
5. PLANTS SHALL BE PLACED NO CLOSER THAN ONE-HALF THE NOTED SPACING TO PAVEMENT EDGES, BED LINES, OR STRUCTURE FACES, UNLESS NOTED OR SHOWN OTHERWISE.
6. PLANT MASSES SHALL BE LAID OUT AND INSTALLED STARTING AT THE PRINCIPAL, FORM-DEFINING PERIMETER, THEN FILLING INWARD IN DOUBLE-ROW-STAGGERED FASHION, UNLESS NOTED OR SHOWN OTHERWISE.
7. ALL PLANTING BEDS INCLUDING TREE AND SHRUB PITS AS INDICATED SHALL RECEIVE 3" APPROVED CLEAN, UNIFORMLY GROUND OR SHREDDED PINE OR HEMLOCK BARK MULCH.
8. THE LANDSCAPE CONTRACTOR SHALL RELOCATE ANY PLANT ACCORDING TO THE DIRECTION OF THE LANDSCAPE ARCHITECT.
9. ALL PLANT MATERIALS CALLED FOR AND INSTALLED SHALL MEET OR EXCEED SPECIFICATIONS OF THE "AMERICAN STANDARDS FOR NURSERY STOCK" (LATEST EDITION) AS SET FORTH BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
10. ALL PLANTING BEDS SHALL BE DEFINED BY A NEAT, SHOVEL-CUT BED LINE. BED LINES SHALL BE TRUE TO FORM AS SHOWN ON THE DRAWINGS, CONSISTING OF SMOOTH CURVES AND SHARP LINES AND CORNERS.
11. IF, BECAUSE OF CULTURE REQUIREMENTS, AVAILABILITY, OR OTHER CIRCUMSTANCES, THE LANDSCAPE CONTRACTOR BELIEVES A PARTICULAR PLANT CALLED FOR IS INAPPROPRIATE, THE LANDSCAPE CONTRACTOR SHALL REPORT THE SITUATION IMMEDIATELY TO THE LANDSCAPE ARCHITECT FOR DECISION.
12. ALL DISTURBED AREAS NOT OTHERWISE TREATED SHALL RECEIVE 6" LOAM AND SEED.

SITE ABBREVIATIONS

ALT	ALTERNATE	GALV	GALVANIZED	MISC.	MISCELLANEOUS	S	SLOPE
BOC	BOTTOM OF CURB	GC	GENERAL CONTRACTOR	NSD	NEW STORM DRAIN (LINE)	T & B	TOP & BOTTOM
BOW	BOTTOM OF WALL	HC	HANDICAPPED	NSS	NEW SANITARY SEWER (LINE)	TO	TOP OF
CIP	CAST-IN-PLACE	HMA	HOT MIX ASPHALT	NW	NEW WATER (LINE)	TOC	TOP OF CURB
℄	CENTER LINE	HP	HIGH POINT	O.C.	ON CENTER	TOW	TOP OF WALL
CLL	CONTRACT LIMITS LINE	ID	INSIDE DIAMETER	OD	OUTSIDE DIAMETER	TP	TEST PIT
ECB	EXISTING CATCH BASIN	LP	LOW POINT	R	RADIUS	TYP.	TYPICAL
FFE	FINISHED FLOOR ELEVATION	LT	LEFT	RE:	REFER (TO)	UG	UNDERGROUND
GA	GAUGE	MAX.	MAXIMUM	ROW	RIGHT-OF-WAY	W/	WITH
		MIN.	MINIMUM	RT	RIGHT	W/O	WITHOUT

SITE LEGEND

EXISTING		PROPOSED	
BODY OF WATER/STREAM		BOLLARD	
BOLLARD		BORING	
BORING		BRIDGE	
BRIDGE		BUILDING W/ DOOR	
BUILDING W/ DOOR		BUILDING CANOPY	
BUILDING CANOPY		CATCH BASIN	
CATCH BASIN		CHECKDAM - STONE	
CHECKDAM - STONE		COMMUNICATIONS LINE-OH	NTC NTC
COMMUNICATIONS LINE-OH	T T T	COMMUNICATIONS LINE-UG	NUC NUC
COMMUNICATIONS LINE-UG	C C C	CONCRETE PAD	
CONCRETE PAD		CULVERT	
CULVERT		CURB - BITUMINOUS	
CURB - BITUMINOUS		CURB - FLUSH	
CURB - SLOPED GRANITE		CURB - SLOPED GRANITE	
CURB - VERT GRANITE		CURB - VERT GRANITE	
CURB - SLIPFORM		CURB - SLIPFORM	
DETENTION POND		DETENTION POND	
DIRECTION OF FLOW		DIRECTION OF FLOW	
DITCH		DITCH	
DRAIN MANHOLE		DRAIN MANHOLE	
DRIP STRIP		DRIP STRIP	
EASEMENT		EASEMENT	
ELECTRIC MANHOLE		ELECTRIC MANHOLE	
ELECTRIC - OVERHEAD	OHW OHW	ELECTRIC - OVERHEAD	NOHE
ELECTRIC - UNDERGROUND	E E E	ELECTRIC - UNDERGROUND	NUGE
ELEVATION BOT OF CURB	+BOC	ELEVATION BOT OF CURB	+BOC
ELEVATION BOT OF STEP	+BOS	ELEVATION BOT OF STEP	+BOS
ELEVATION TOP OF CURB	+TOC	ELEVATION TOP OF CURB	+TOC
ELEVATION TOP OF STEP	+TOS	ELEVATION TOP OF STEP	+TOS
ELEVATION - SPOT	+100.0	ELEVATION - SPOT	+100.0
FENCE - CHAINLINK	X X X X	EMERGENCY CALL BOX	
FENCE - ORNAMENTAL		EROSION CONTROL MESH	
FIELD INLET		FENCE - CHAINLINK	X X X X
FIRE HYDRANT		FENCE - ORNAMENTAL	
FLAG POLE		FIRE HYDRANT	
FORCE MAIN PIPE	SFM SFM	FLAG POLE	
GAS & FUEL EQUIPMENT	GAS	FORCE MAIN PIPE	NSFM
GAS LINE	G G G	FOUNDATION DRAIN	NFND
GAS VALVE		GAS & FUEL EQUIPMENT	GAS
GENERATOR ON CONC PAD		GAS LINE	NGAS
GRAVEL DRIVE		GAS VALVE	
GUARDRAIL		GENERATOR ON CONC PAD	
HELIPAD		GRAVEL DRIVE	
HIGH POINT ELEVATION	+HP	GUARDRAIL	
IRRIGATION PIPING		HELIPAD	
LANDMARK SIGN		HIGH POINT ELEVATION	+HP
LIGHT - BOLLARD		IRRIGATION PIPING	
LIGHT POLE		LANDMARK SIGN	
LIGHT - SPOT		LIGHT - BOLLARD	
LOW POINT ELEVATION	+LP	LIGHT POLE	
MAJOR CONTOUR	100	LIGHT - SPOT/WALL	
MINOR CONTOUR	100	LIMIT OF WORK	
PARKING AREA-BITUMINOUS		LOW POINT ELEVATION	+LP
PAVEMENT STRIPING		MAJOR CONTOUR	100
PROPERTY LINE		MINOR CONTOUR	102
PROPERTY LINE - ABUTTER		PARKING AREA-BITUMINOUS	
		PAVEMENT STRIPING	
RETAINING WALL		PROPERTY LINE	
RIPRAP		RETAINING WALL	
ROADWAY		RIPRAP	
ROADWAY CENTER LINE		ROADWAY	
SANITARY SEWER PIPE	SS SS	ROADWAY CENTER LINE	
SANITARY SEWER MANHOLE		SANITARY SEWER MANHOLE	
SETBACK		SANITARY SEWER PIPE	NSS NSS
SIGN		SETBACK	
SIGN - TWO-SIDED		SIGN	
SILT FENCE	SF SF	SIGN - TWO-SIDED	
SLOPE NOTATION	S = .01	SILT FENCE	SF SF
SOIL TYPE BOUNDARY		SLOPE NOTATION	S = .01
SPRINKLER		SPRINKLER	
STONE WALL		STONE WALL	
STORM DRAIN PIPE	SD SD	STORM DRAIN PIPE	NSD NSD
TELEPHONE EQUIPMENT	TE	TELEPHONE EQUIPMENT	TE
TEST PIT	TP	TEST PIT	
TRAFFIC ARM & SIGNAL		TRAFFIC ARM & SIGNAL	
TRANSFORMER ON CONC	T	TRANSFORMER ON CONC	T
TURF		TURF	
UNDERDRAIN PIPE	UD UD UD UD UD	UNDERDRAIN PIPE	UD UD UD UD UD
UTILITY POLE		UTILITY POLE	
WALKWAY - BITUMINOUS		WALKWAY - BITUMINOUS	
WALKWAY - BRICK/COBBLE		WALKWAY - BRICK/COBBLE	
WALKWAY - CONCRETE		WALKWAY - CONCRETE	
WALL - ORNAMENTAL		WALL - ORNAMENTAL	
WATER GATE VALVE		WATER GATE VALVE	
WATER PIPE (DOMESTIC)	W W W	WATER PIPE (DOMESTIC)	NW NW
WATER PIPE (FIRE)	F	WATER PIPE (FIRE)	NFS NFS
WATER SHUTOFF		WATER SHUTOFF	
WATERSHED BOUNDARY		WELL	W
WETLAND BOUNDARY			

NOTE:
THIS LEGEND IS FOR REFERENCE ONLY AND APPLIES ONLY TO THE CIVIL/SITE LAYOUT DRAWINGS. NOT ALL ITEMS SHOWN HEREIN MAY APPEAR ON THE DRAWINGS, OR BE INCORPORATED IN THE DESIGN.

REV	DESCRIPTION	DATE
1	REISSUED FOR PERMITTING	7-24-20
0	ISSUED FOR SD AND PERMITTING	3-6-20

REISSUED FOR PERMITTING
7-24-20
CURRENT ISSUE STATUS:

STATE OF MAINE — JEFFREY T. CECTO — No. 6418 — LICENSED PROFESSIONAL ENGINEER

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UNIVERSITY OF SOUTHERN MAINE
CAREER AND STUDENT SUCCESS CENTER & RESIDENCE HALL

PORTLAND, MAINE

SITE NOTES & LEGENDS

SHEET TITLE:

0 1/2" 1" 2" 3"

SCALE:

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	C-001-19206	SHEET No.	C-001

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24x36

DEMOLITION LEGEND:

- MATERIALS TO BE REMOVED
- LIMIT OF BITUMINOUS REMOVAL
- UNDERGROUND PIPING TO BE REMOVED

DEMOLITION NOTES:

1. ALL PRE-EXISTING STRUCTURES WITHIN THE PROPOSED BUILDING FOOTPRINT, UNDER AREAS PROPOSED FOR PAVING, AND ALONG PROPOSED UTILITY ROUTES ARE TO BE COMPLETELY REMOVED AND REPLACED WITH COMPACTED STRUCTURAL FILL.
2. MAINTAIN TWO-WAY ACCESS THROUGH CONSTRUCTION FOR MAINTENANCE DRIVE.
3. FENCE NOTED TO BE REMOVED SHALL BE SALVAGED.
4. UTILITY POLES AND LIGHTS NOTED FOR REMOVAL SHALL BE SALVAGED.
5. ALL CONFLICTING ITEMS WITHIN THE DEVELOPMENT AREA NOT OTHERWISE NOTED SHALL BE REMOVED.
6. IN PAVEMENT REMOVAL AREAS EXISTING SURFACE SHALL BE GROUND, REMOVED AND STOCKPILED FOR LATER USE AS SUITABLE FILL MATERIAL.
7. ALL MANHOLE AND CATCH BASIN FRAMES AND COVERS TO BE REMOVED SHALL BE SALVAGED FOR FUTURE USE.

DEMOLITION KEY:

1. REMOVE BUILDING - SEE SHEET CD102 FOR DETAILS
2. REMOVE PAVEMENT TO LIMITS SHOWN
3. REMOVE WALKWAY PAVEMENT TO LIMITS SHOWN
4. REMOVE EXISTING CURBING
5. REMOVE SIGN & STOCKPILE FOR REINSTALLATION
6. PROTECT EXISTING ELECTRICAL LINES & STRUCTURES TO REMAIN
7. PROTECT EXISTING STRUCTURE TO REMAIN
8. REMOVE GUARDRAIL
9. REMOVE SEWER STRUCTURE
10. REMOVE STORM STRUCTURE & CONNECTED PIPING
11. PROTECT HYDRANT TO REMAIN
12. REMOVE BOLLARD
13. REMOVE EXISTING CALL BOX & LIGHT & SALVAGE FOR OWNER
14. REMOVE EXISTING BICYCLE REPAIR STATION & SALVAGE FOR OWNER
15. DISCONNECT GAS METER
16. REMOVE UTILITY POLE IN CONJUNCTION W/ CMP
17. PROTECT BUS SHELTER & BOLLARDS
18. REMOVE ALL EXISTING RAISED PLANTING BEDS
19. MARK DOORS "EMERGENCY EGRESS ONLY"
20. REMOVE CONCRETE PAVEMENT TO LIMITS SHOWN

REV	DESCRIPTION	DATE
1	REISSUED FOR PERMITTING	7-24-20
0	ISSUED FOR SD AND PERMITTING	3-6-20

REISSUED FOR PERMITTING
7-24-20

CURRENT ISSUE STATUS:

TRUE NORTH:

JEFFREY M. CETO No. 6418 LICENSED PROFESSIONAL ENGINEER STATE OF MAINE

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PORTLAND, MAINE

EXISTING CONDITIONS & DEMOLITION PLAN

SHEET TITLE:

0 15' 30' 60' 90'

SCALE: 1" = 30'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	CD101-19206	SHEET No.	CD101

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DEMOLITION LEGEND:

- MATERIALS TO BE REMOVED
- LIMIT OF BITUMINOUS REMOVAL
- UNDERGROUND PIPING TO BE REMOVED
- BUILDING TO BE REMOVED

DEMOLITION NOTES:

1. ALL PRE-EXISTING STRUCTURES WITHIN THE PROPOSED BUILDING FOOTPRINT, UNDER AREAS PROPOSED FOR PAVING, AND ALONG PROPOSED UTILITY ROUTES ARE TO BE COMPLETELY REMOVED AND REPLACED WITH COMPACTED STRUCTURAL FILL.
2. MAINTAIN TWO-WAY ACCESS THROUGH CONSTRUCTION FOR MAINTENANCE DRIVE.
3. FENCE NOTED TO BE REMOVED SHALL BE SALVAGED.
4. UTILITY POLES AND LIGHTS NOTED FOR REMOVAL SHALL BE SALVAGED.
5. ALL CONFLICTING ITEMS WITHIN THE DEVELOPMENT AREA NOT OTHERWISE NOTED SHALL BE REMOVED.
6. IN PAVEMENT REMOVAL AREAS EXISTING SURFACE SHALL BE GROUND, REMOVED AND STOCKPILED FOR LATER USE AS SUITABLE FILL MATERIAL.
7. ALL MANHOLE AND CATCH BASIN FRAMES AND COVERS TO BE REMOVED SHALL BE SALVAGED FOR FUTURE USE.

DEMOLITION KEY:

- (A) #35 BEDFORD STREET; BUILDING DESCRIPTION: WOODBURY CAMPUS CENTER
- (B) #25 BEDFORD STREET: BUILDING DESCRIPTION: FACILITIES MANAGMENT
- (C) SAND/SALT SHED; BUILDING DESCRIPTION:
- (D) SHED

REV	DESCRIPTION	DATE
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0	ISSUED FOR SD AND PERMITTING	3-6-20

REISSUED FOR PERMITTING
7-24-20

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PORTLAND, MAINE

BUILDING DEMOLITION PLAN

SHEET TITLE:

0 15' 30' 60' 90'

SCALE: 1" = 30'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	CD102-19206	SHEET No.	CD102

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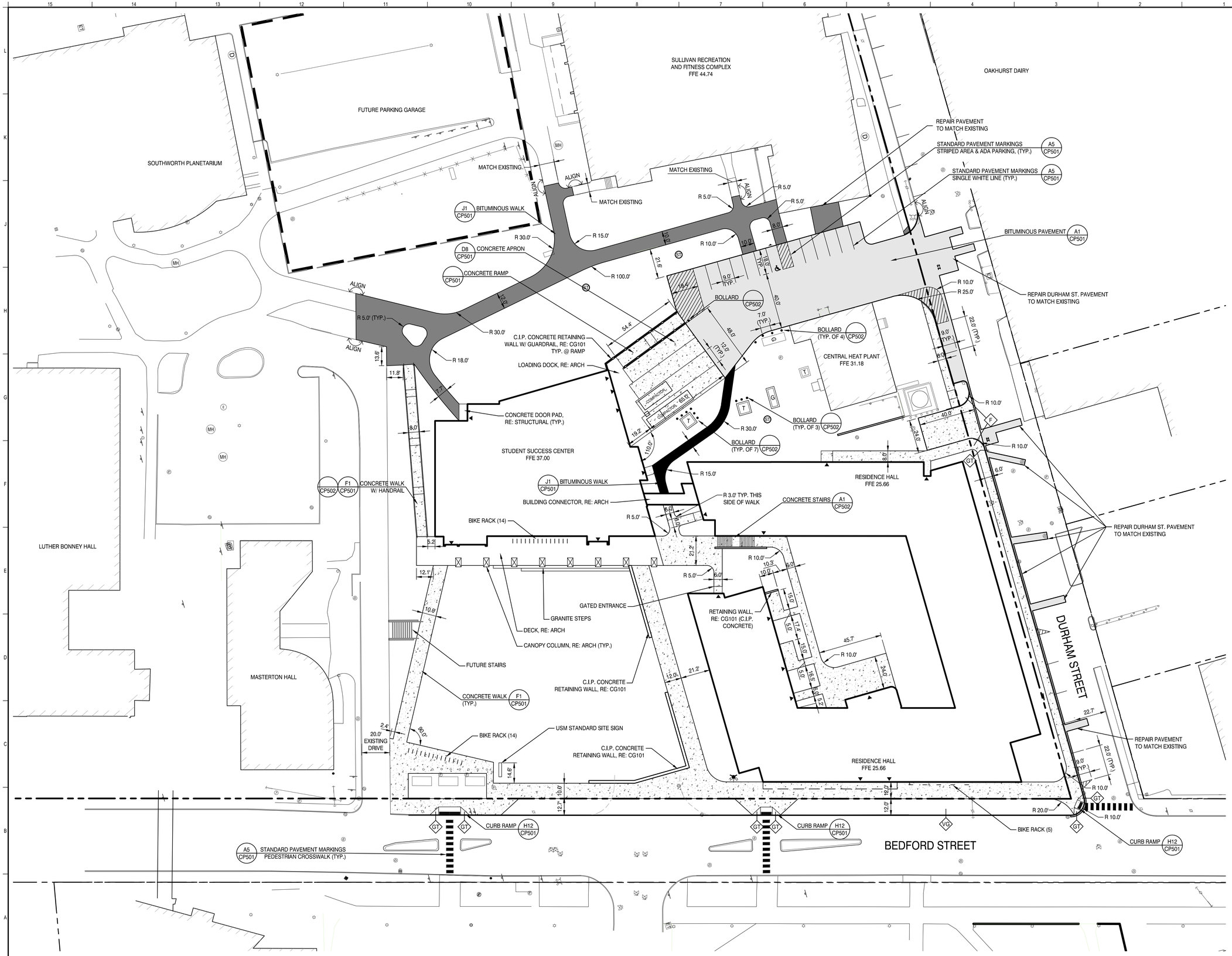

CURB LEGEND

- VG — VERTICAL GRANITE CURB D1 CP501
- GT — GRANITE TIPDOWN CURB
- VGT — VERTICAL GRANITE TRANSITION CURB
- F — FLUSH CURB D1 CP501 SIM.

REV	DESCRIPTION	DATE
1	REISSUED FOR PERMITTING	7-24-20
0	ISSUED FOR SD AND PERMITTING	3-6-20

REISSUED FOR PERMITTING
7-24-20

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PORTLAND, MAINE

SITE LAYOUT PLAN

SHEET TITLE:

0 15' 30' 60' 90'

SCALE: 1" = 30'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	CP101-19206	SHEET No.	CP101

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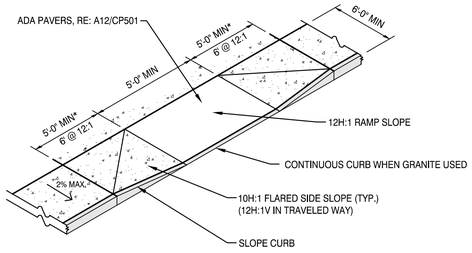
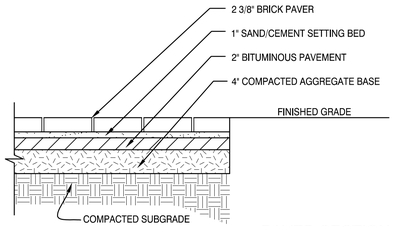


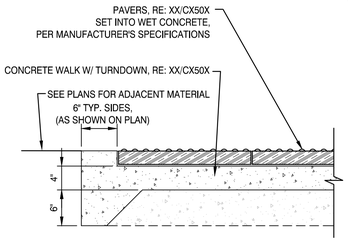
NOTE:

1. FLARE LENGTH TO BE 6' WHEN IN A WALKWAY.

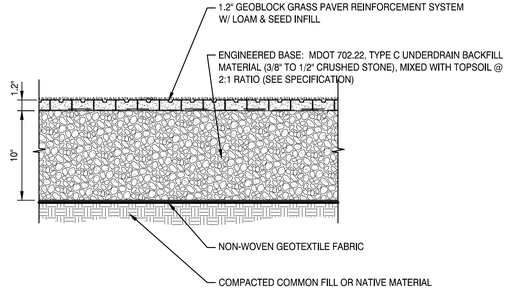
CURB RAMP H12
NOT TO SCALE



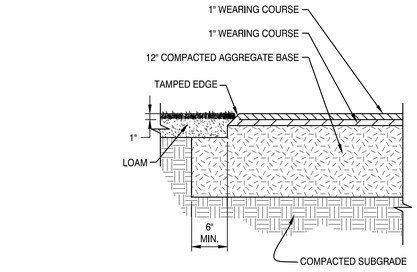
PAVER SECTION K8
1" = 1'-0"



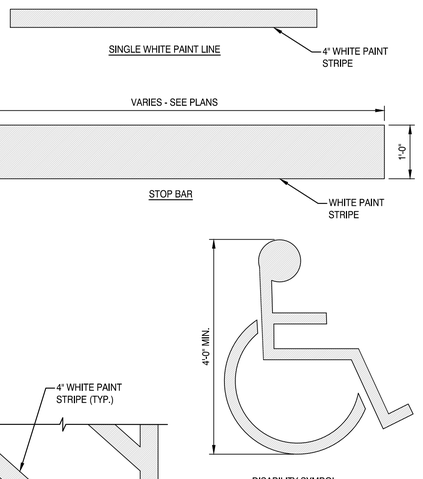
ADA PAVER SECTION H8
1" = 1'-0"



REINFORCED TURF J5
1" = 1'-0"

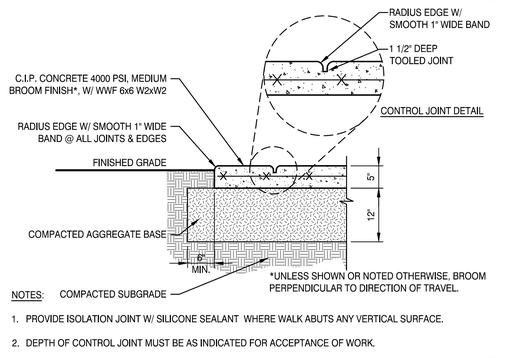


BITUMINOUS WALK J1
1" = 1'-0"



DISABILITY SYMBOL

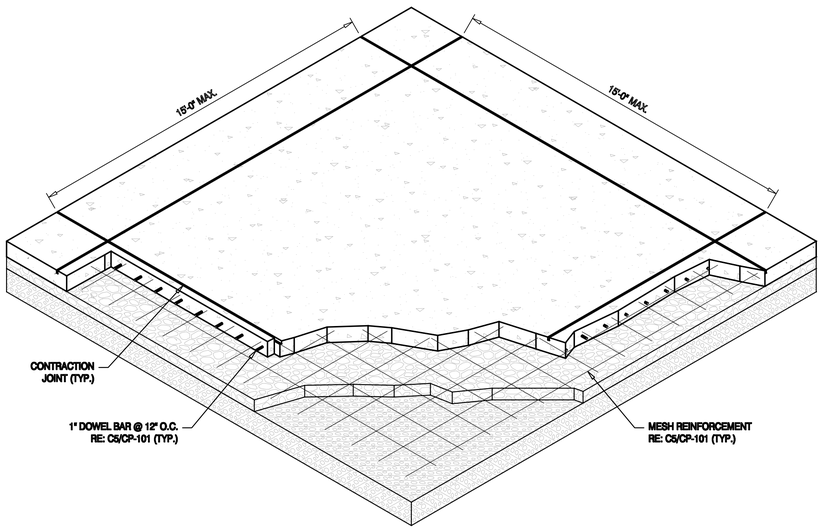
STANDARD PAVEMENT MARKINGS A5
3/4" = 1'-0"



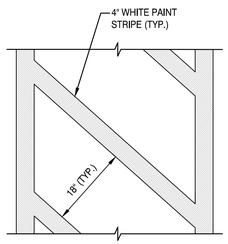
NOTES:

1. PROVIDE ISOLATION JOINT W/ SILICONE SEALANT WHERE WALK ABUTS ANY VERTICAL SURFACE.
2. DEPTH OF CONTROL JOINT MUST BE AS INDICATED FOR ACCEPTANCE OF WORK.

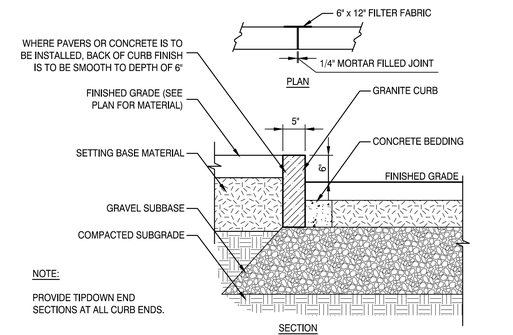
CONCRETE WALK F1
3/4" = 1'-0"



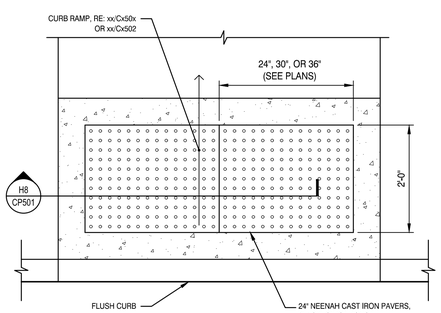
CONCRETE APRON D8
NOT TO SCALE



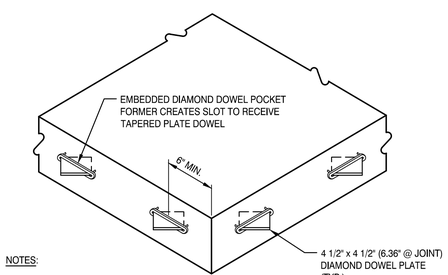
STRIPED AREA



VERTICAL GRANITE CURB D1
3/4" = 1'-0"



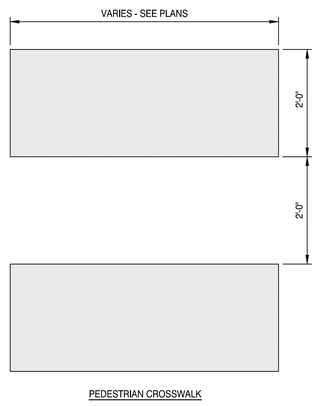
ADA PAVER PLAN A12
3/4" = 1'-0"



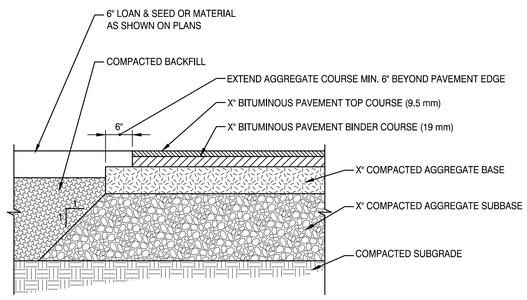
NOTES:

1. DIAMOND DOWEL SHALL BE 3/8" STAINLESS STEEL PLATES.
2. DIAMOND DOWEL TO BE PLACED @ 18" O.C.
3. DIAMOND DOWEL SYSTEM AS MANUFACTURED BY PNA CONSTRUCTION TECHNOLOGIES, INC. (800) 542-0214.
4. DIAMOND DOWEL SYSTEM TO BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S STANDARDS AND RECOMMENDATIONS.

DIAMOND DOWEL CONCRETE CONNECTION A8
NOT TO SCALE



PEDESTRIAN CROSSWALK



BITUMINOUS PAVEMENT A1
3/4" = 1'-0"

REV	DESCRIPTION	DATE
1	REISSUED FOR PERMITTING	7-24-20
0	ISSUED FOR SD AND PERMITTING	3-6-20

REISSUED FOR PERMITTING
7-24-20

CURRENT ISSUE STATUS:

STATE OF MAINE
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CAREER AND STUDENT SUCCESS CENTER & RESIDENCE HALL

PORTLAND, MAINE

SITE LAYOUT DETAILS

SHEET TITLE:

0 1/2" 1" 2" 3"

SCALE:

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	CP501-19206	SHEET No.	CP501

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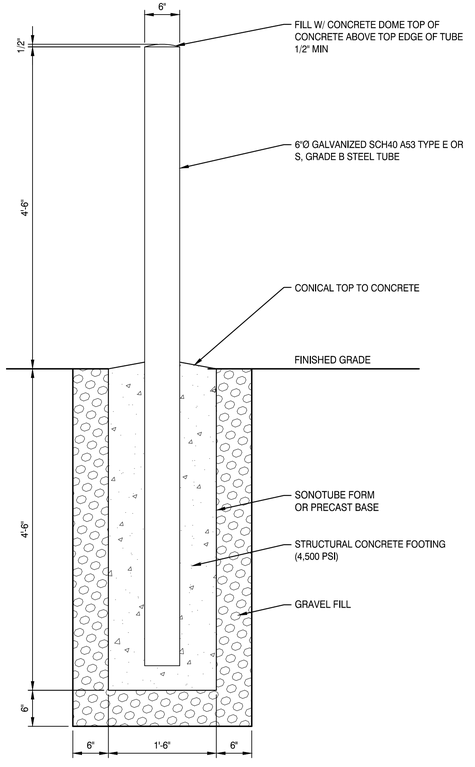
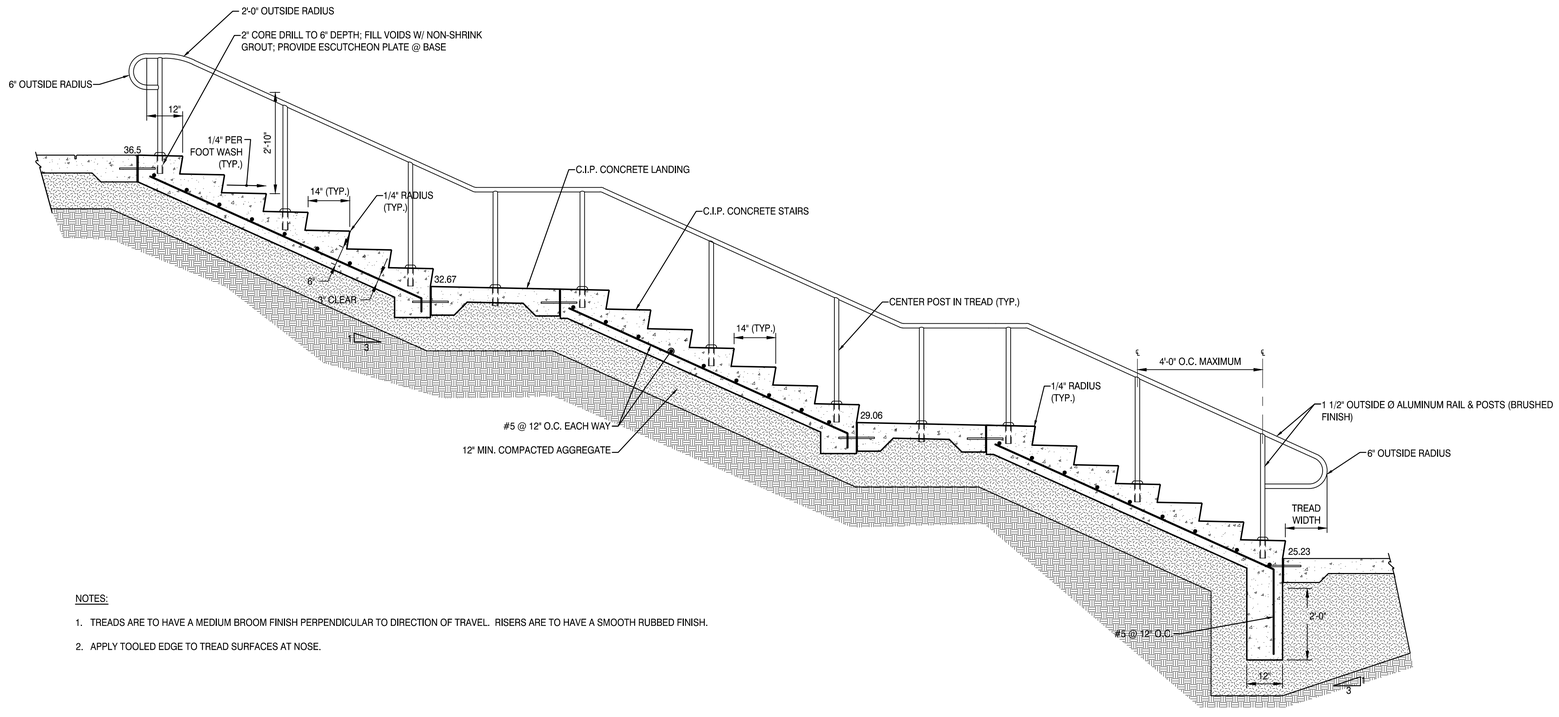
24x36



BOLLARD A12
1" = 1'-0"



NOTES:

1. TREADS ARE TO HAVE A MEDIUM BROOM FINISH PERPENDICULAR TO DIRECTION OF TRAVEL. RISERS ARE TO HAVE A SMOOTH RUBBED FINISH.
2. APPLY TOOLED EDGE TO TREAD SURFACES AT NOSE.

CONCRETE STAIRS A1
1/2" = 1'-0"

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SITE LAYOUT DETAILS

SHEET TITLE:

0 1/2" 1" 2" 3"

SCALE:

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	CP502-19206	SHEET No.	CP502

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EROSION & SEDIMENTATION CONTROL NOTES:

TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES INCLUDE THE USE OF STABILIZED CONSTRUCTION ENTRANCE, SILTATION FENCE, EROSION CONTROL MIX BERM, STONE CHECK DAMS, HAY BALE BARRIERS, CATCH BASIN INLET BARRIERS, CATCH BASIN SEDIMENT COLLECTION BAGS, EROSION CONTROL BLANKET, AND TEMPORARY SEEDING AND MULCHING AS REQUIRED. PERMANENT DEVICES INCLUDE THE USE OF RIP RAP AT EXPOSED STORM DRAIN AND CULVERT INLETS AND OUTLETS, RIP RAPPED SLOPES, AND PERMANENT VEGETATION.

GENERAL

A. IT IS ANTICIPATED THAT CONSTRUCTION MAY BEGIN AS SOON AS POSSIBLE FOLLOWING RECEIPT OF NECESSARY PERMITS.

1. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES PUBLISHED BY THE THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, (2016, OR AS CURRENTLY REVISED), OR U.S ENVIRONMENTAL PROTECTION AGENCY PUBLICATION 832/R-92-005 (SEPTEMBER, 1992, OR AS CURRENTLY REVISED) STORM WATER MANAGEMENT FOR CONSTRUCTION, CHAPTER 3, WHICHEVER IS MORE STRINGENT.

2. ANY ADDITIONAL EROSION AND SEDIMENTATION CONTROL DEEMED NECESSARY BY THE OWNER'S REPRESENTATIVE, DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) PERSONNEL AND/OR MUNICIPAL OFFICIALS SHALL BE INSTALLED BY THE CONTRACTOR.

3. THE CONTRACTOR IS RESPONSIBLE FOR ALL FINES RESULTING FROM EROSION OR SEDIMENTATION FROM THE SITE TO SURROUNDING PROPERTIES, WATER BODIES, OR WETLANDS AS A RESULT OF THIS PROJECT.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR/ REPLACEMENT/ MAINTENANCE OF ALL EROSION CONTROL MEASURES UNTIL ALL DISTURBED AREAS ARE STABILIZED TO THE SATISFACTION OF THE ABOVE PERSONNEL. DESCRIPTIONS OF ACCEPTABLE PERMANENT STABILIZATION FOR VARIOUS COVER TYPES FOLLOWS:

A. FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS A 90% COVER OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.

B. FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.

C. FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE APPROVED APPLICATION RATES AND LIMITATIONS.

D. FOR AREAS STABILIZED WITH RIP RAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIP RAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIP RAP. STONE MUST BE SIZED APPROPRIATELY.

E. PAVED AREAS: FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE COMPACTED GRAVEL SUBBASE IS COMPLETED.

F. FOR OPEN CHANNELS, PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH MATURE VEGETATION AT LEAST THREE INCHES IN HEIGHT, WITH WELL-GRADED RIP RAP, OR WITH ANOTHER NON-EROSIVE LINING CAPABLE OF WITHSTANDING THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHOUT RELIANCE ON CHECK DAMS TO SLOW FLOW. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE LINING, UNDERCUTTING OF THE BANKS, OR DOWN CUTTING OF THE CHANNEL.

B. EROSION AND SEDIMENTATION CONTROL MEASURES

1. PRIOR TO THE BEGINNING OF CONSTRUCTION, THE STABILIZED CONSTRUCTION ENTRANCE AND TEMPORARY SILT FENCE SHALL BE INSTALLED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. IT IS THE INTENT THAT SILT FENCE OR EROSION CONTROL MIX BERM BE INSTALLED DOWN GRADIENT OF ALL DISTURBED AREAS OF THE SITE. SILT FENCE SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS WILL BE MADE IMMEDIATELY. SEDIMENT DEPOSITS SHALL BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDE OF THE SILT BARRIERS. THIS SEDIMENT WILL BE SPREAD AND STABILIZED IN AREAS OF THE SITE NOT SUBJECT TO EROSION. SILT FENCE OR EROSION CONTROL MIX BERM SHALL BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, THEY WILL BE REPLACED WITH A TEMPORARY CRUSHED STONE CHECK DAM.

2. ALL CATCH BASINS, NEW OR EXISTING, THAT MAY RECEIVE RUNOFF FROM DISTURBED AREAS MUST BE PROTECTED DURING CONSTRUCTION.

3. REMOVAL OF SOD, TREES, BUSHES AND OTHER VEGETATION AND SOIL DISTURBANCE WILL BE KEPT TO A MINIMUM WHILE ALLOWING PROPER SITE DEVELOPMENT.

4. GRUBBINGS AND ANY UNUSABLE TOPSOIL SHALL BE STRIPPED AND REMOVED FROM THE PROJECT SITE AND DISPOSED OF IN AN APPROVED MANNER.

5. ANY SUITABLE TOPSOIL WILL BE STRIPPED AND STOCKPILED FOR REUSE IN FINAL GRADING. TOPSOIL WILL BE STOCKPILED IN A MANNER SUCH THAT NATURAL DRAINAGE IS NOT OBSTRUCTED AND NO OFF-SITE SEDIMENT DAMAGE WILL RESULT. SEDIMENT BARRIERS SHALL BE INSTALLED DOWN-GRADIENT OF ALL SOIL STOCKPILES AND STORMWATER SHALL BE PREVENTED FROM RUNNING ONTO ALL STOCKPILES. IF A STOCKPILE IS NECESSARY, THE SIDE SLOPES OF THE TOPSOIL STOCKPILE WILL NOT EXCEED 2:1. TOPSOIL STOCKPILES WILL BE TEMPORARILY SEEDED WITH AROOSTOOK RYE, ANNUAL OR PERENNIAL RYE GRASS WITHIN 7 DAYS OF FORMATION, OR TEMPORARILY MULCHED IF SEEDING CANNOT BE DONE WITHIN THE RECOMMENDED SEEDING DATES.

6. TEMPORARY DIVERSION BERMS AND DRAINAGE SWALES SHALL BE CONSTRUCTED AS NECESSARY.

7. TEMPORARY STABILIZATION SHALL BE CONDUCTED WITHIN 7 DAYS OF INITIAL DISTURBANCE OF SOILS. PRIOR TO ANY RAIN EVENT, AND PRIOR TO ANY WORK SHUT DOWN LASTING MORE THAN ONE DAY. TEMPORARY STABILIZATION INCLUDES SEED, MULCH, OR OTHER NON-ERODABLE COVER.

8. TEMPORARY SEEDING SPECIFICATIONS: WHERE SEEDBED HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME, AND SEED. APPLY LIMESTONE AT A RATE OF 3 TONS PER ACRE (138 LB. PER 1,000 SQUARE FEET) AND 10-10-10 (N-P2O5-K2O) FERTILIZER AT A RATE OF 600 LBS PER ACRE (13.8 LB. PER 1,000 SQUARE FEET). UNIFORMLY APPLY SEED AT THE RECOMMENDED SEEDING RATES AND DATES, APPLY HAY OR STRAW MULCH AT A RATE OF 2 TONS PER ACRES, AND ANCHOR AS NECESSARY.

RECOMMENDED TEMPORARY SEEDING DATES AND APPLICATION RATES ARE AS FOLLOWS:

AROOSTOOK RYE:
RECOMMENDED SEEDING DATES: 8/15 -10/1
APPLICATION RATE: 112 LBS/ACRE

ANNUAL RYE GRASS:
RECOMMENDED SEEDING DATES: 4/1 - 7/1
APPLICATION RATE: 40 LBS/ACRE

PERENNIAL RYE GRASS:
RECOMMENDED SEEDING DATES: 8/15 - 9/15
APPLICATION RATE: 40 LBS/ACRE

9. PERMANENT SEEDING SPECIFICATION. IF A LANDSCAPE PLAN HAS BEEN PREPARED FOR THE PROJECT, SOIL PREPARATION AND SEED SPECIFICATIONS OF THAT PLAN SHALL SUPERSEDE THESE GENERAL PERMANENT SEEDING REQUIREMENTS. IT IS RECOMMENDED THAT PERMANENT SEEDING BE COMPLETED BETWEEN APRIL 1 AND JUNE 15 OF EACH YEAR. LATE SEASON SEEDING MAY BE DONE BETWEEN AUGUST 15 AND SEPTEMBER 15. AREAS NOT SEEDED OR WHICH DO NOT OBTAIN A SATISFACTORY GROWTH BY OCTOBER 1 SHALL BE SEEDED WITH AROOSTOOK RYE MULCHED AT RATES PREVIOUSLY SPECIFIED. SEE WINTER CONDITIONS NOTES FOR SEEDING STABILIZATION AFTER NOVEMBER 1.

A. APPLY TOPSOIL TO A MINIMUM DEPTH OF 4 INCHES. MIX TOPSOIL WITH THE SUBSOIL TO A MINIMUM DEPTH OF 6 INCHES.

B. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TESTS. IN LIEU OF SOIL TESTS, APPLY GROUND LIMESTONE AT A RATE OF 3 TONS PER ACRE (138 LB. PER 1,000 SQUARE FEET) AND GRANULAR, COMMERCIAL-GRADE, 10-10-10 (N-P2O5-K2O) FERTILIZER AT A RATE OF 800 LBS PER ACRE (18.4 LBS PER 1,000 SQUARE FEET).

C. UNIFORMLY APPLY SEED MIXTURE AT THE RECOMMENDED SEEDING RATES AND DATES, APPLY HAY OR STRAW MULCH AT A RATE OF 2 TONS PER ACRES, AND ANCHOR AS NECESSARY.

D. THE SEED MIXTURE FOR LAWN AND FILTRATION BASIN AREAS SHALL CONSIST OF SEEDS PROPORTIONED BY WEIGHT AS FOLLOWS:

30% CREEPING RED FESCUE
50% KENTUCKY BLUEGRASS
20% ITALIAN/PERENNIAL RYE GRASS

NOTE: SEED MIXTURE SHALL CONSIST OF AT LEAST TWO VARIETIES OF EACH TYPE OF GRASS. WHEN USED IN A FILTER BASIN, STORMWATER SHALL NOT BE DIRECTED TO THE BASIN UNTIL THE GRASS IS ESTABLISHED.

10. MULCH ALL AREAS SEEDED SO THAT SOIL IS NOT VISIBLE THROUGH THE MULCH REGARDLESS OF THE APPLICATION RATE.

11. DITCH LININGS, STONE CHECK DAMS, AND RIP RAP INLET AND OUTLET PROTECTION SHALL BE INSTALLED WITHIN 48 HOURS OF COMPLETING THE GRADING OF THAT SECTION OF DITCH OR INSTALLATION OF CULVERT.

12. RIP RAP REQUIRED AT CULVERTS AND STORM DRAIN INLETS AND OUTLETS SHALL CONSIST OF FIELD STONE OR ROUGH UNHEWN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE.

13. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL PERMANENT SLOPES STEEPER THAN 15%, IN THE BASE OF DITCHES NOT OTHERWISE PROTECTED, AND ANY DISTURBED AREAS WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE (E.G. WETLANDS AND WATER BODIES). EROSION CONTROL BLANKET SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

14. TEMPORARY CONTROL MEASURES, SUCH AS SILT FENCE, SHALL BE REMOVED WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED.

15. TEMPORARY EROSION CONTROL MIX BERM SHALL BE REMOVED BY SPREADING MATERIAL IN AREAS OF THE SITE NOT SUBJECT TO EROSION.

C. WINTER CONDITIONS

1. "WINTER CONSTRUCTION" IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1ST THROUGH APRIL 15TH. IF AREAS WITHIN THE CONSTRUCTION ACTIVITY ARE NOT STABILIZED WITH TEMPORARY OR PERMANENT MEASURES OUTLINED ABOVE BY NOVEMBER 15TH, THEN THE SITE MUST BE PROTECTED WITH ADDITIONAL STABILIZATION MEASURES THAT ARE SPECIFIC TO WINTER CONDITIONS. NO MORE THAN ONE ACRE OF THE SITE MAY BE WITHOUT STABILIZATION AT ONE TIME.

2. SILT FENCE: IN LIEU OF PROVIDING THE 4" X 4" TRENCH, FOR FROZEN GROUND, STONY SOIL, THE PRESENCE OF LARGE ROOTS, OR OTHER PROHIBITIVE CONDITIONS, THE BOTTOM 8" TO 12" OF THE FABRIC MAY BE LAID ON EXISTING GRADE AND BACK FILLED WITH STONE ANCHORING MATERIAL, AS SHOWN ON THE DRAWINGS.

3. AREAS WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIERS.

4. HAY MULCH SHALL BE APPLIED AT TWICE THE STANDARD TEMPORARY STABILIZATION RATE. AT THE END OF EACH CONSTRUCTION DAY, AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE MUST BE STABILIZED. MULCH MAY NOT BE SPREAD ON TOP OF SNOW.

5. AFTER NOVEMBER 1ST OR THE FIRST KILLING FROST FOR THE REGION AND BEFORE SNOW FALL, ALL EXPOSED AND DISTURBED AREAS NOT TO UNDERGO FURTHER DISTURBANCE ARE TO HAVE DORMANT SEEDING. THE DORMANT SEEDING METHOD: PREPARE THE SEEDBED, LIME AND FERTILIZE, APPLY THE SELECTED PERMANENT SEED MIXTURE AT DOUBLE THE REGULAR SEEDING RATE, AND MULCH AND ANCHOR. DORMANT SEEDINGS NEED TO BE ANCHORED EXTREMELY WELL ON SLOPES, DITCH BASES AND AREAS OF CONCENTRATED FLOWS. DORMANT SEEDING REQUIRES INSPECTION AND RESEEDING AS NEEDED IN THE SPRING. ALL AREAS WHERE COVER IS INADEQUATE MUST BE IMMEDIATELY RESEEDED AND MULCHED AS SOON AS POSSIBLE.

6. ALL VEGETATED DITCH LINES THAT HAVE NOT BEEN STABILIZED BY NOVEMBER 1ST, OR WILL BE WORKED DURING THE WINTER CONSTRUCTION PERIOD, MUST BE STABILIZED WITH AN APPROPRIATE STONE LINING BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE UNLESS SPECIFICALLY RELEASED FROM THIS STANDARD BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

7. MULCH NETTING MUST BE USED TO ANCHOR MULCH ON ALL SLOPES GREATER THAN 8% UNLESS EROSION CONTROL BLANKETS OR EROSION CONTROL MIX IS BEING USED ON THESE SLOPES.

D. HOUSEKEEPING

1. SPILL PREVENTION. CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON-SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORM WATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION.

2. GROUNDWATER PROTECTION. DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS, ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.

3. FUGITIVE SEDIMENT AND DUST. ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL.

4. DEBRIS AND OTHER MATERIAL. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WATER, MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

5. COMPLY WITH THE REQUIREMENTS OF SECTION 01570, CONSTRUCTION WASTE MANAGEMENT, FOR REMOVAL AND DISPOSAL OF CONSTRUCTION DEBRIS AND WASTE.

6. TRENCH OR FOUNDATION DE-WATERING. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED AREAS THAT ARE SPECIFICALLY DESIGNATED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFER DAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE.

7. STREET SWEEPING.

8. PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. AUTHORIZED NON-STORMWATER DISCHARGES ARE:

A. DISCHARGES FROM FIRE-FIGHTING ACTIVITY,
B. FIRE HYDRANT FLUSHINGS,
C. DUST CONTROL RUNOFF,
D. ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVLOVE DETERGENTS,
E. PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURED, UNLESS ALL SPILLED MATERIAL HAS BEEN REMOVED) IF DETERGENTS ARE NOT USED,
F. UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE,
G. UNCONTAMINATED GROUNDWATER OR SPRING WATER,
H. FOUNDATION OF FOOTING DRAIN WATER WHERE FLOWS ARE NOT CONTAMINATED,
I. UNCONTAMINATED EXCAVATION DEWATERING,
J. POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS,
K. LANDSCAPE IRRIGATION.

9. NO DISCHARGE FROM THE FOLLOWING IS ALLOWED. UNAUTHORIZED NON-STORMWATER DISCHARGES ARE:

A. WASTEWATER FROM WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS, OR OTHER CONSTRUCTION MATERIALS,
B. FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE,
C. SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING,
D. TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

E. INSPECTION AND MAINTENANCE

1. INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION AND STORM WATER CONTROL MEASURES, AREAS USED FOR STORAGE THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AT LEAST ONCE A WEEK AS WELL AS BEFORE AND WITHIN 24 HOURS AFTER A STORM EVENT (RAINFALL), AND PRIOR TO COMPLETION OF PERMANENT STABILIZATION. A PERSON WITH KNOWLEDGE OF EROSION AND STORM WATER CONTROLS, INCLUDING THE STANDARDS IN ALL DEP AND MUNICIPAL COMPANION DOCUMENTS, MUST CONDUCT THE INSPECTION. THIS PERSON MUST BE IDENTIFIED IN THE INSPECTION LOG. IF BEST MANAGEMENT PRACTICES (BMPS) NEED TO BE MODIFIED OF IF ADDITIONAL BMPS ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (RAINFALL). ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.

2. AN INSPECTION AND MAINTENANCE LOG MUST BE KEPT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME AND QUALIFICATIONS OF THE PERSON PERFORMING THE INSPECTION, DATE, AND MAJOR OBSERVATIONS RELATING TO OPERATION OF EROSION AND SEDIMENTATION CONTROLS AND POLLUTION PREVENTION MEASURES. MAJOR OBSERVATIONS MUST INCLUDE: BMPS THAT NEED TO BE MAINTAINED, LOCATION(S) OF BMPS THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, AND LOCATION(S) WHERE ADDITIONAL BMPS ARE NEEDED THAT DID NOT EXIST AT THE TIME OF THE INSPECTION. FOLLOW-UP TO CORRECT DEFICIENCIES OR ENHANCE CONTROLS MUST ALSO BE INDICATED IN THE LOG AND DATED, INCLUDING WHAT ACTION WAS TAKEN AND WHEN.

3. INSPECTIONS DURING CONSTRUCTION SHOULD BE PERFORMED AT LEAST ONCE PER WEEK AND AFTER EVERY RAINFALL EVENT.

F. CONSTRUCTION SCHEDULE & SEQUENCE

1. INSTALL TEMPORARY EROSION CONTROL MEASURES IN THE VICINITY OF THE CONSTRUCTION AREA, INCLUDING A STABILIZED CONSTRUCTION ENTRANCE AT LOCATIONS DEEMED NECESSARY BY THE OWNER'S REPRESENTATIVE, SEDIMENT BARRIERS, AND SILT FENCE. NOTE: TEMPORARY EROSION CONTROL MEASURES FOR WINTER CONDITIONS SHALL BE IMPLEMENTED.

2. GRUB THE SITE, STOCKPILE REUSABLE MATERIAL, AND DISPOSE OF UNUSABLE AND/OR SURPLUS MATERIAL. INSTALL UNDERGROUND UTILITIES AND BUILD DRIVE AND PARKING TO GRADE.

3. EXCAVATE FOUNDATIONS.

4. CONSTRUCT BUILDING.

5. CONSTRUCT OTHER SITE IMPROVEMENTS, INCLUDING PAVEMENT.

6. PLACE LOAM, SEED, AND MULCH.

7. FOLLOWING PERMANENT STABILIZATION OF THE SITE, REMOVE TEMPORARY EROSION CONTROL MEASURES.

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UNIVERSITY OF SOUTHERN MAINE
CAREER AND STUDENT SUCCESS CENTER & RESIDENCE HALL

PORTLAND, MAINE

EROSION & SEDIMENT CONTROL NOTES

SHEET TITLE:

0 1/2" 1" 2" 3"

SCALE:

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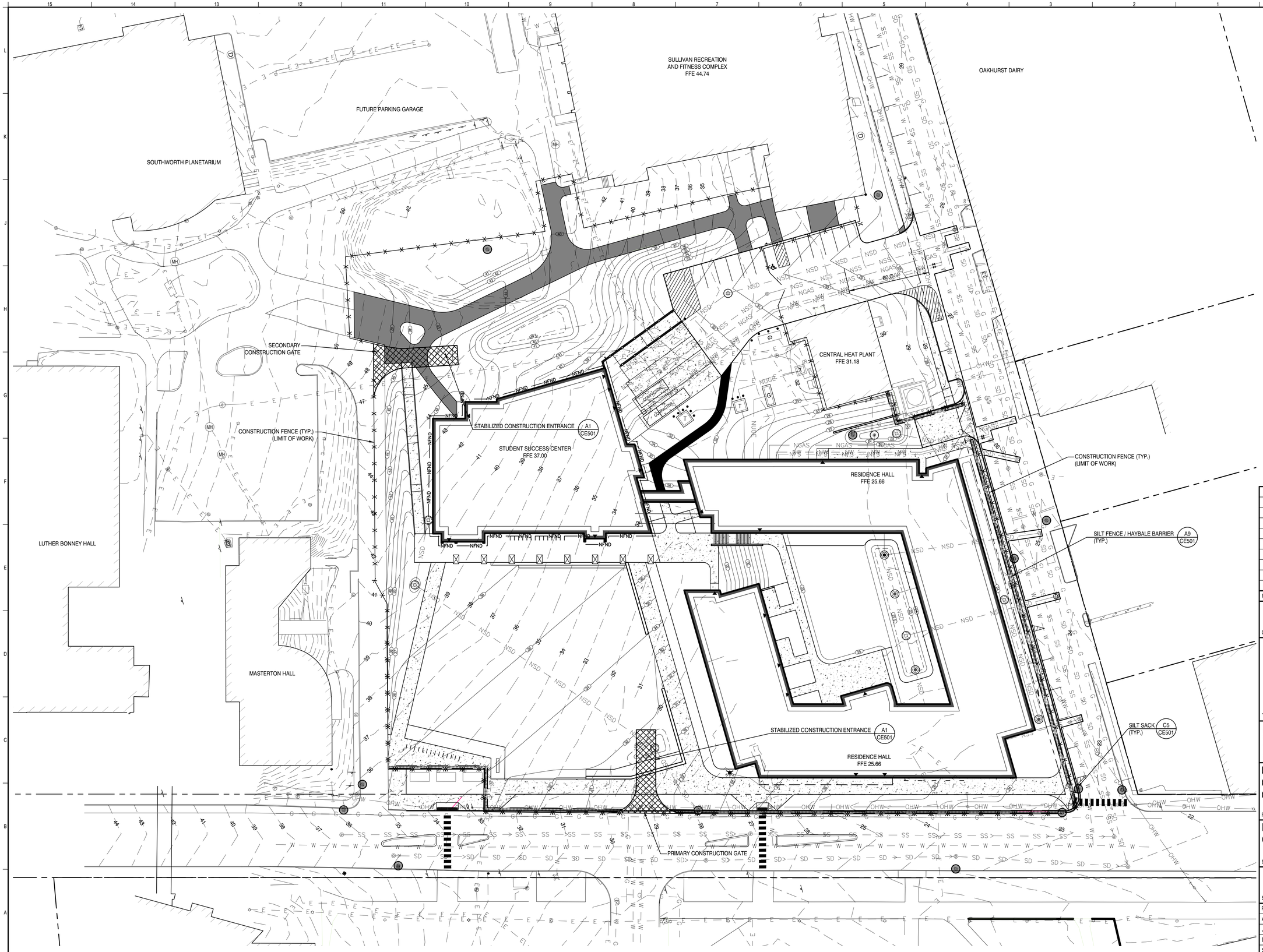

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TRUE NORTH:

STATE OF MAINE JEFFREY T. ACETO No. 6418 LICENSED PROFESSIONAL ENGINEER

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UNIVERSITY OF SOUTHERN MAINE
CAREER AND STUDENT SUCCESS CENTER & RESIDENCE HALL

PORTLAND, MAINE

EROSION & SEDIMENT CONTROL PLAN

SHEET TITLE:

0 15' 30' 60' 90'

SCALE: 1" = 30'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	CE101-19206	SHEET No.	CE101

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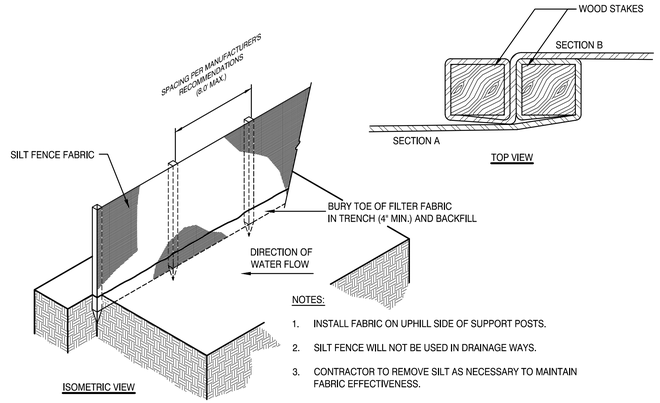
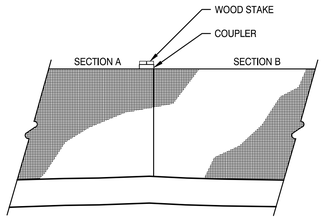


TOP VIEW

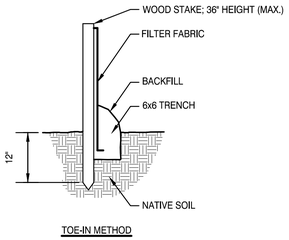
ISOMETRIC VIEW

NOTES:

1. INSTALL FABRIC ON UPHILL SIDE OF SUPPORT POSTS.
2. SILT FENCE WILL NOT BE USED IN DRAINAGE WAYS.
3. CONTRACTOR TO REMOVE SILT AS NECESSARY TO MAINTAIN FABRIC EFFECTIVENESS.



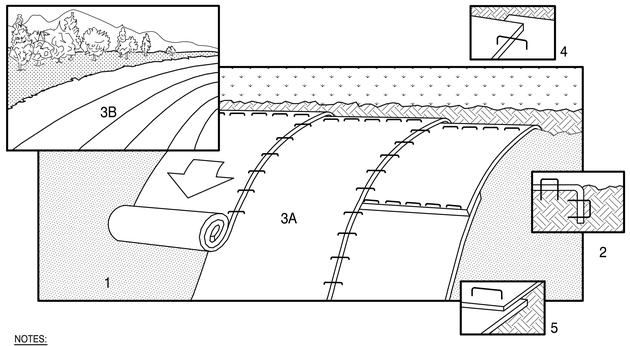
JOINING SECTIONS



TOE-IN METHOD

SILT FENCE F10

NOT TO SCALE

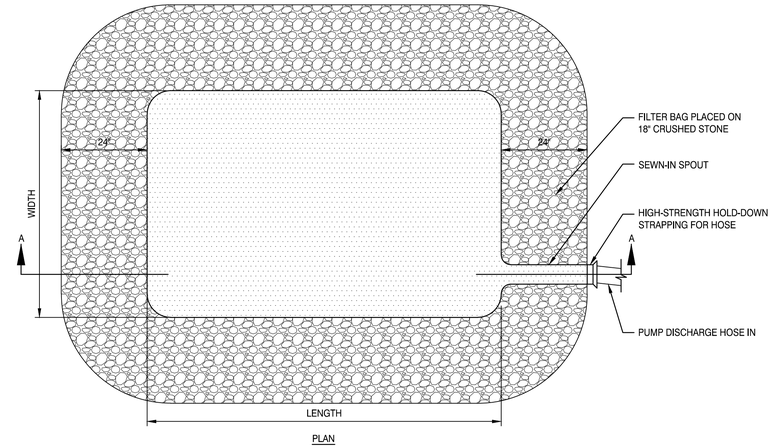


NOTES:

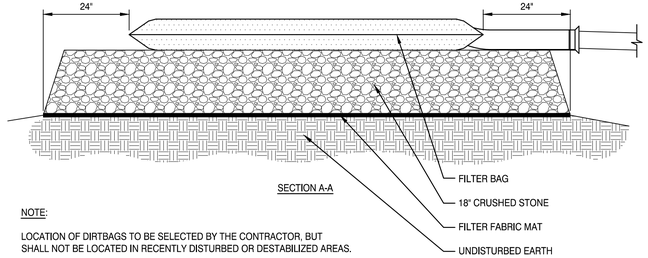
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP. REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE PATTERN RECOMMENDATIONS FOR SLOPE INSTALLATIONS.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 4" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.
6. EROSION CONTROL BLANKET FOR USE ON SLOPES SHALL BE A BIODEGRADABLE DOUBLE NET WOVEN BLANKET WITH JUTE NETTING AND COCONUT FIBRE MATRIX SPECIFICALLY MANUFACTURED FOR THE PURPOSE (NORTH AMERICAN GREEN) BIO-NET S150BN OR APPROVED EQUAL.
7. ONCE PERMANENT STABILIZATION IS ACHIEVED, REMOVE ANY NON-BIODEGRADABLE MESH, IF USED.

EROSION CONTROL BLANKET F5

NOT TO SCALE



PLAN



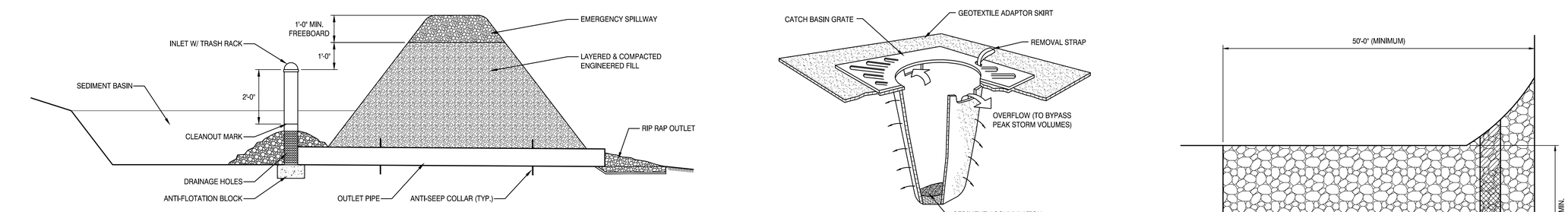
SECTION A-A

NOTE:

LOCATION OF DIRTBAGS TO BE SELECTED BY THE CONTRACTOR, BUT SHALL NOT BE LOCATED IN RECENTLY DISTURBED OR DESTABILIZED AREAS.

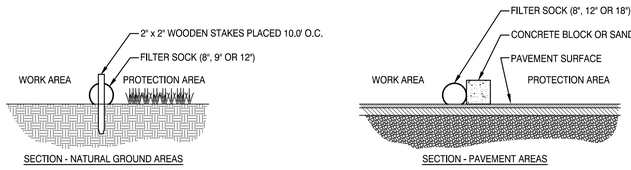
DIRT BAG F1

NOT TO SCALE



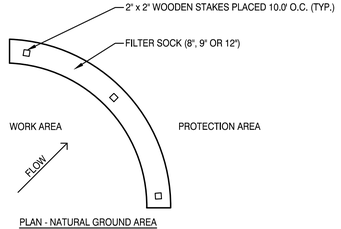
TEMPORARY SEDIMENT BASIN D9

NOT TO SCALE

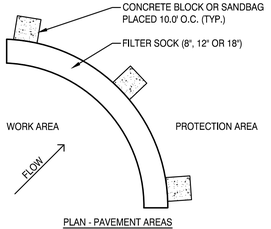


SECTION - NATURAL GROUND AREAS

SECTION - PAVEMENT AREAS



PLAN - NATURAL GROUND AREA



PLAN - PAVEMENT AREAS

NOTES:

1. SOCK SIZE TO BE PER MANUFACTURER'S RECOMMENDATION FOR THE APPLICATION.
2. FILTER MATERIAL TO BE PER MANUFACTURER'S RECOMMENDATION FOR THE APPLICATION.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER AFTER SITE IS PERMANENTLY STABILIZED.

FILTER SOCK A9

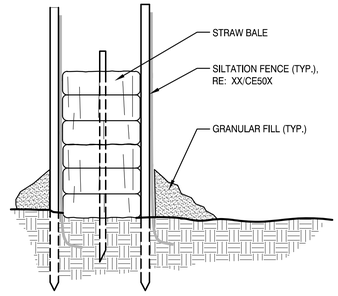
NOT TO SCALE

NOTES:

1. CATCH BASIN PROTECTION TO BE "SILTSACK" (BY ACF ENVIRONMENTAL) OR "STREAM GUARD" (BY FOSS ENVIRONMENTAL SERVICES).
2. INSERT TO BE EMPTIED IN AN APPROVED MANNER WHEN IT IS 1/2 FULL OF SEDIMENT.
3. INSPECT INSERT AFTER ALL RAINFALL EVENTS, REPAIR AND MAINTAIN AS REQUIRED.

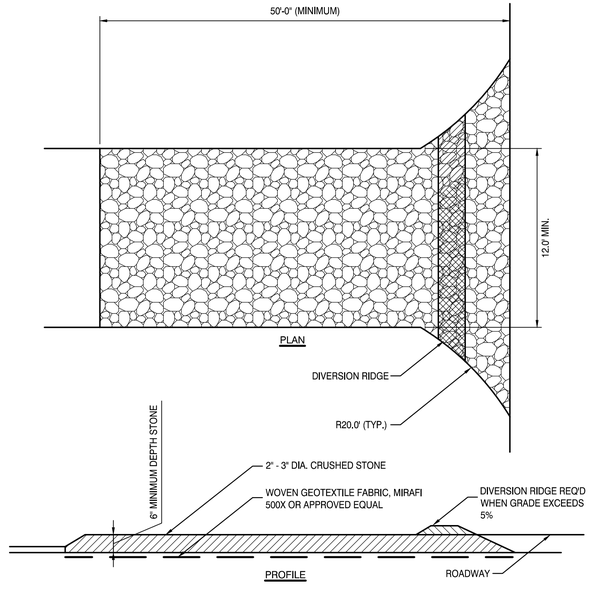
SILT SACK C5

NOT TO SCALE



SILT FENCE / HAYBALE BARRIER A5

NOT TO SCALE



PLAN

PROFILE

NOTES:

1. THE PURPOSE IS TO REMOVE MUD FROM TIRES OF CONSTRUCTION VEHICLES.
2. WHEN STONE BECOMES CLOGGED AND INEFFECTIVE, TOPDRESS WITH 3" OF NEW STONE OR REPLACE ENTIRE PAD.
3. IF TIRE WASHING IS REQUIRED, WASH WATER SHALL DRAIN INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
4. REMOVE ENTIRE SYSTEM AT COMPLETION OF THE PROJECT, AND RESTORE TO ORIGINAL CONDITION.

STABILIZED CONSTRUCTION ENTRANCE A1

NOT TO SCALE

REV	DESCRIPTION	DATE
1	REISSUED FOR PERMITTING	7-24-20
0	ISSUED FOR SD AND PERMITTING	3-6-20

REISSUED FOR PERMITTING
7-24-20

CURRENT ISSUE STATUS:

JEFFREY P. ACETO No. 5418 LICENSED PROFESSIONAL ENGINEER STATE OF MAINE

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PORTLAND, MAINE

EROSION & SEDIMENT CONTROL DETAILS

SHEET TITLE:

0 1/2" 1" 2" 3"

SCALE:

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	CE501-19206	SHEET No.	CE501

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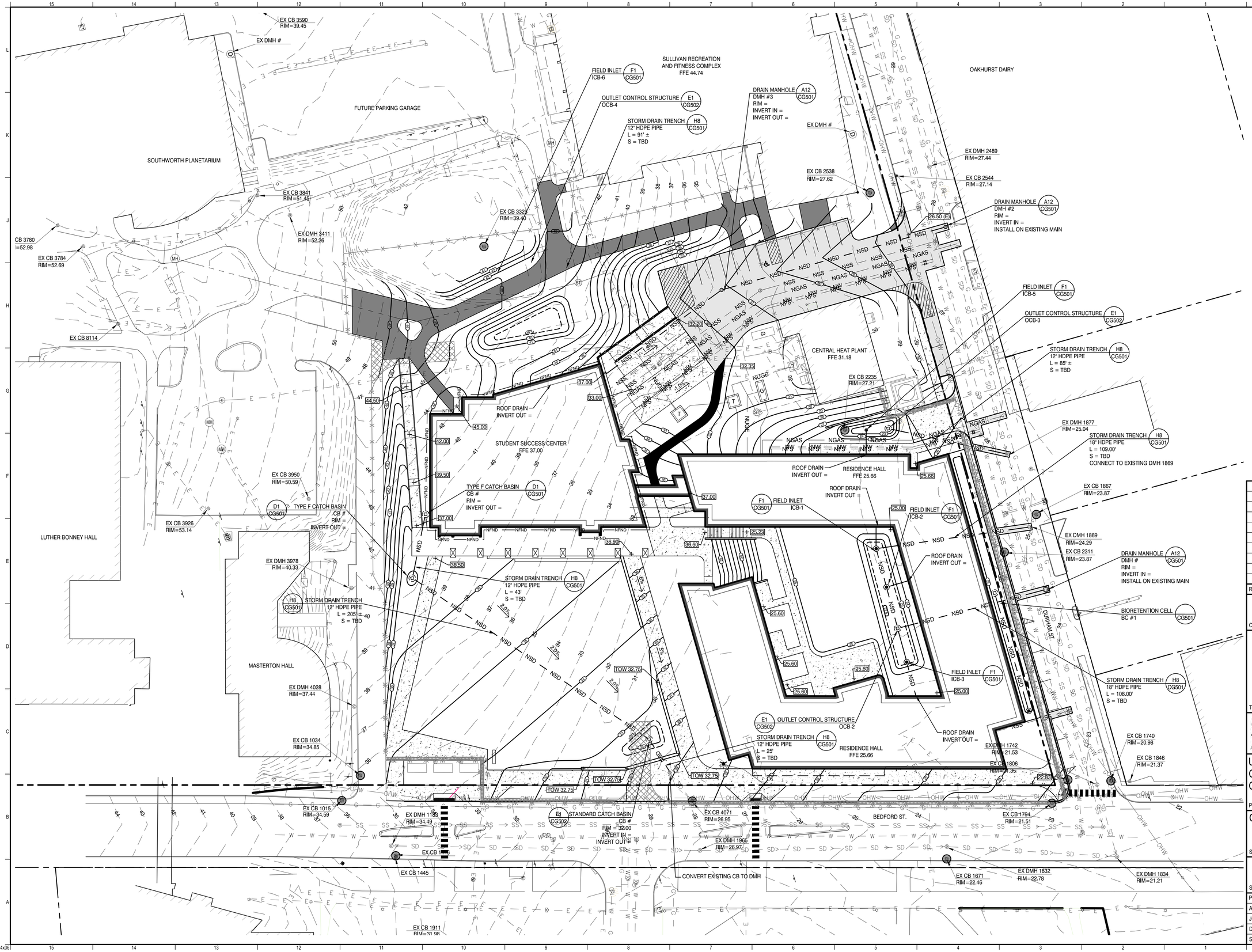

REV	DESCRIPTION	DATE
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REISSUED FOR PERMITTING
7-24-20

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PORTLAND, MAINE

GRADING & DRAINAGE PLAN

SHEET TITLE:

0 15' 30' 60' 90'

SCALE: 1" = 30'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	CG101-19206	SHEET No.	CG101

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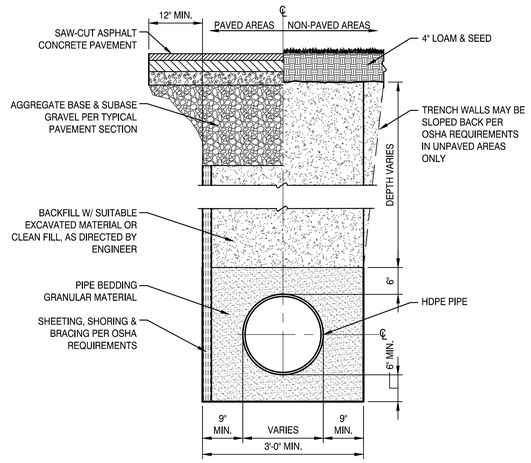
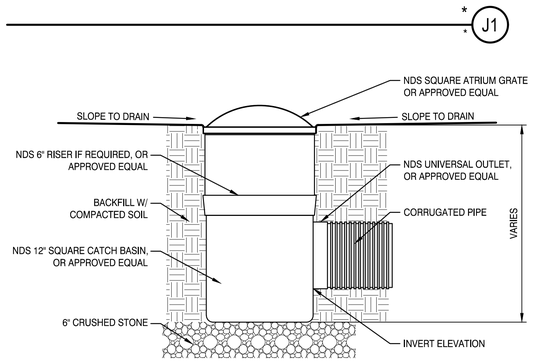
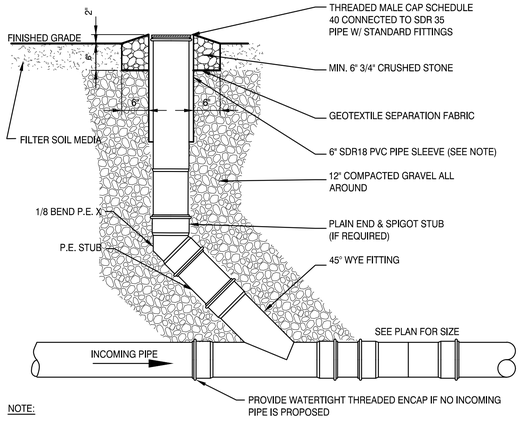


STORM DRAIN TRENCH H5
NOT TO SCALE

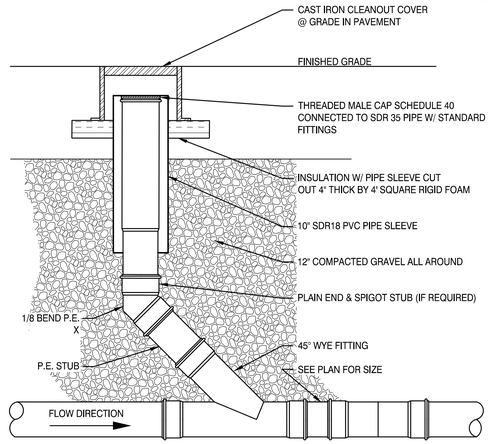


FIELD INLET F1
NOT TO SCALE

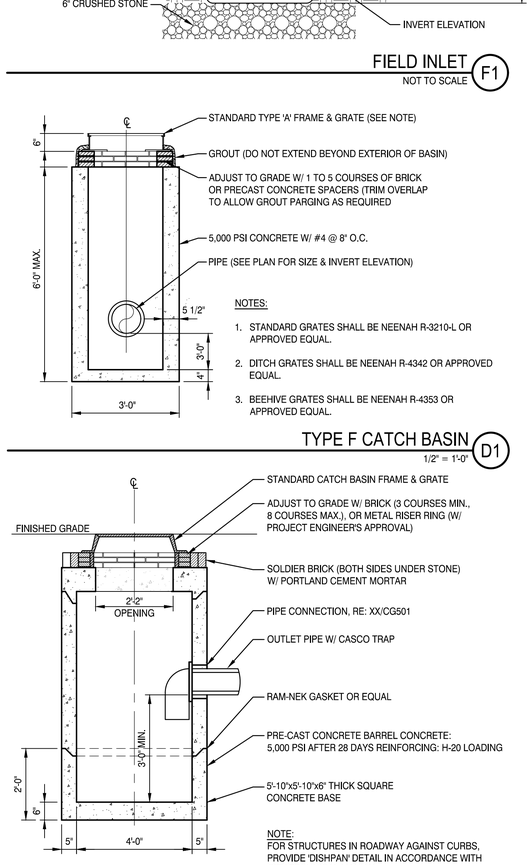


NOTE:
WHERE PIPE & RISER ARE 4"Ø USE 6" SLEEVE. WHERE PIPE & RISER ARE 6"Ø USE 8" SLEEVE.

CLEANOUT - VEGETATED AREAS E8
*

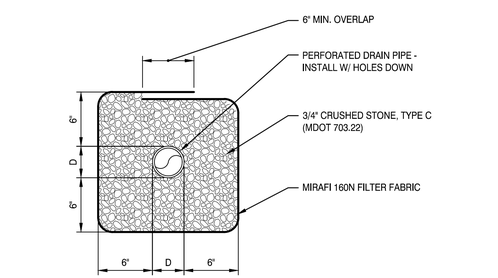


CLEANOUT - PAVED AREAS E5
NOT TO SCALE

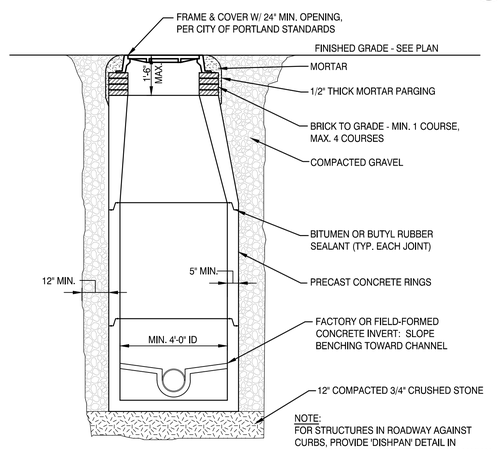


NOTES:
1. STANDARD GRATES SHALL BE NEENAH R-3210-L OR APPROVED EQUAL.
2. DITCH GRATES SHALL BE NEENAH R-4342 OR APPROVED EQUAL.
3. BEEHIVE GRATES SHALL BE NEENAH R-4353 OR APPROVED EQUAL.

TYPE F CATCH BASIN D1
1/2" = 1'-0"

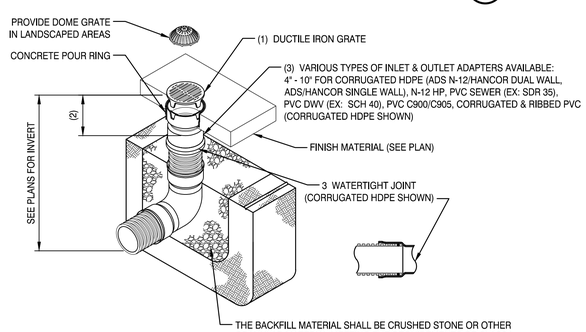


UNDERDRAIN D12
1 1/2" = 1'-0"



NOTE:
FOR STRUCTURES IN ROADWAY AGAINST CURBS, PROVIDE 'DISHPAN' DETAIL IN ACCORDANCE WITH CITY TECHNICAL MANUAL

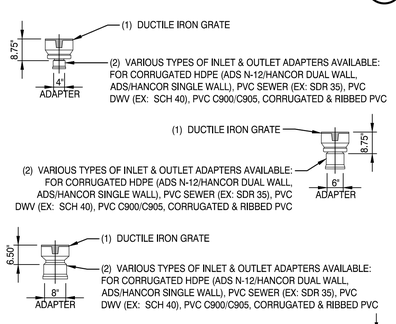
DRAIN MANHOLE A12
NOT TO SCALE



NOTES:
1. GRATES/SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2. FOR COMPLETE DESIGN DETAILS.
3. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL) & PVC SEWER.

GRATE OPTIONS	LOAD RATING	PART #
PEDESTRIAN/STANDARD	LIGHT DUTY	1099CGS
SOLID COVER	LIGHT DUTY	1099CGC
BRONZE	N/A	1099CGB
DOME	N/A	1099CGD

CLEANOUT - VEGETATED AREAS E8
*



NOTES:
1. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS & HANCOR DUAL WALL) & SDR 35 PVC.
2. DIMENSIONS ARE FOR REFERENCE ONLY, ACTUAL DIMENSIONS MAY VARY.

DESIGN DETAILS

IN-LINE DRAIN A5
NOT TO SCALE

NOTE:
FOR STRUCTURES IN ROADWAY AGAINST CURBS, PROVIDE 'DISHPAN' DETAIL IN ACCORDANCE WITH CITY TECHNICAL MANUAL

STANDARD CATCH BASIN A1
1/2" = 1'-0"

REV	DESCRIPTION	DATE
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0	ISSUED FOR SD AND PERMITTING	3-6-20

REISSUED FOR PERMITTING
7-24-20
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PORTLAND, MAINE

GRADING & DRAINAGE DETAILS

SHEET TITLE:

SCALE: 0 1/2" 1" 2" 3"

PROJECT MANAGER:	KD
A/E OF RECORD:	JTA
JOB CAPTAIN:	SDL
DRAWN BY:	WSM
SMRT FILE:	CG501-19206

PROJECT NO: 19206

CG501

SHEET No.

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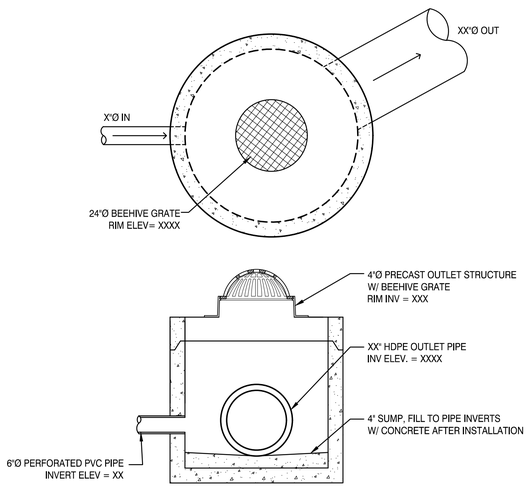
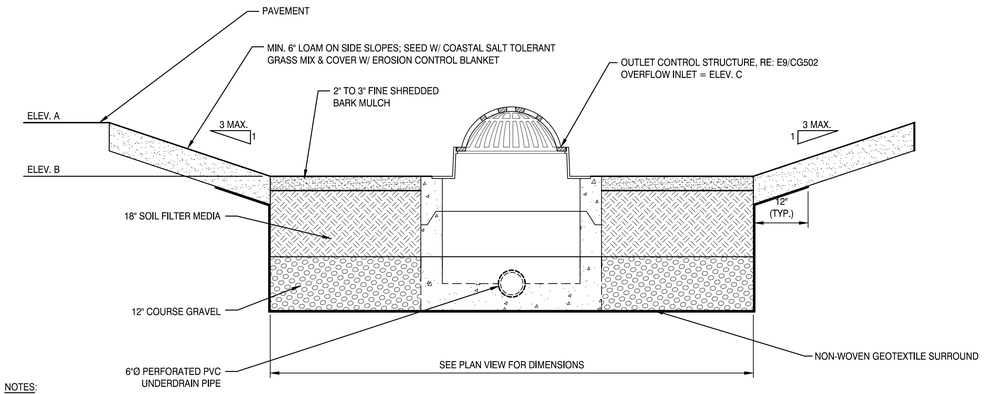


OUTLET CONTROL STRUCTURE E9



NOTES:

1. SEED FOR SLOPES SHALL BE COASTAL SALT TOLERANT GRASS MIX BY NEW ENGLAND WETLAND PLANTS, INC. OR APPROVED EQUAL. SEE LANDSCAPE PLANS FOR OTHER PLANTINGS.
2. EROSION BLANKET SHALL BE A DOUBLE NET STRAW/COCONUT BIODEGRADABLE BLANKET (NORTH AMERICAN GREEN SC150BN OR APPROVED EQUAL).
3. SOIL FILTER MEDIA SHALL CONSIST OF A SILTY SAND COMBINED WITH 20% TO 25% (BY VOLUME) OF A MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH. RESULTING MIXTURE SHALL HAVE A FINES CONTENT OF AT LEAST 8% WITH A CLAY CONTENT OF LESS THAN 2%.
4. INSTALLATION OF BIORETENTION AREAS SHALL NOT COMMENCE UNTIL ALL DISTURBED AREAS UPSTREAM OF THE SITES HAVE BEEN PERMANENTLY STABILIZED.

BIORETENTION CELL A1

REV	DESCRIPTION	DATE
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REISSUED FOR PERMITTING
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CAREER AND STUDENT SUCCESS
CENTER & RESIDENCE HALL

PORTLAND, MAINE

GRADING & DRAINAGE DETAILS

SHEET TITLE:

0 1/2" 1" 2" 3"

SCALE:

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL	CG502	
DRAWN BY:	WSM		
SMRT FILE:	CG502-19206	SHEET No.	

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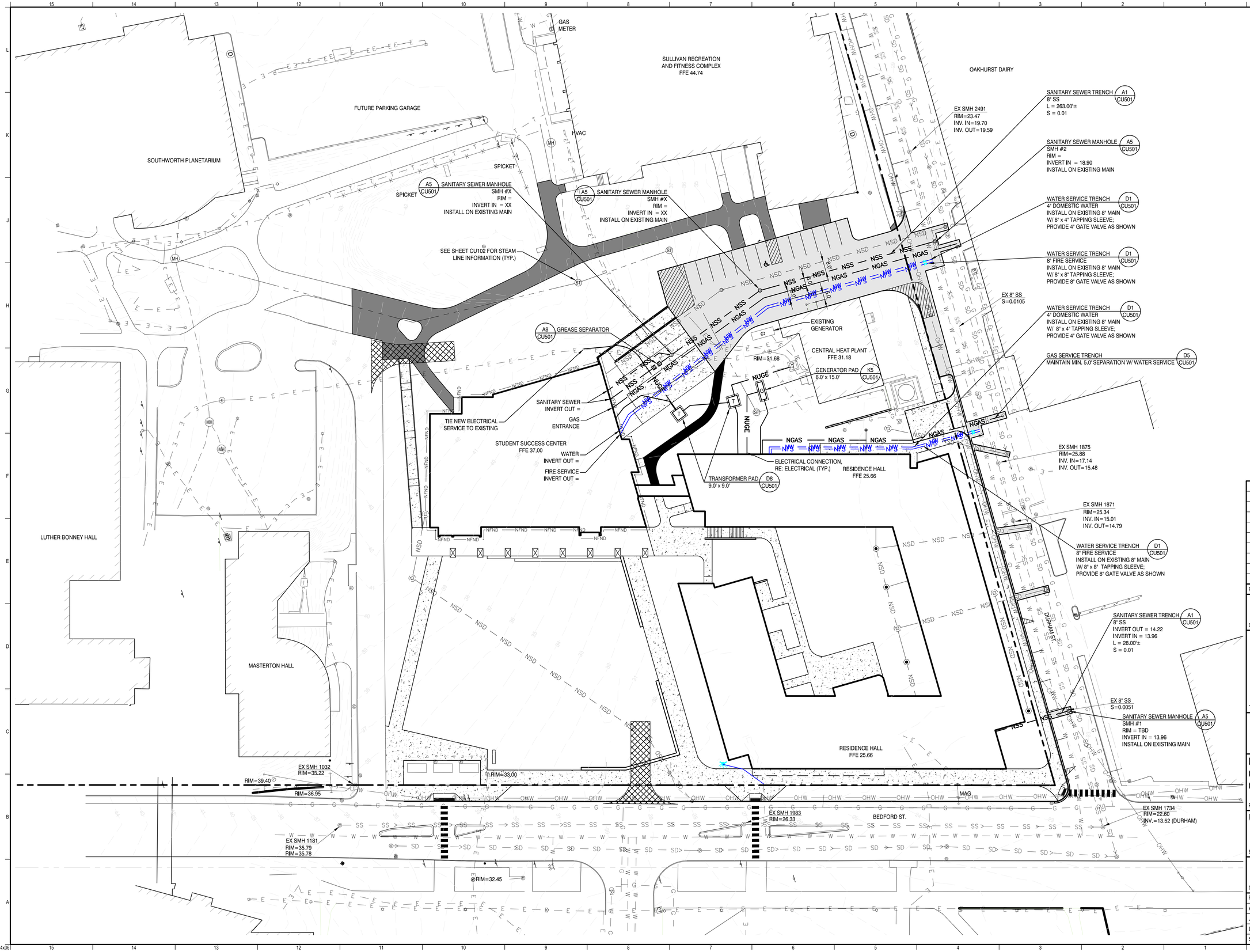

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PORTLAND, MAINE

UTILITY PLAN

SHEET TITLE:

0 15' 30' 60' 90'

SCALE: 1" = 30'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	CU101-19206	SHEET No.	CU101

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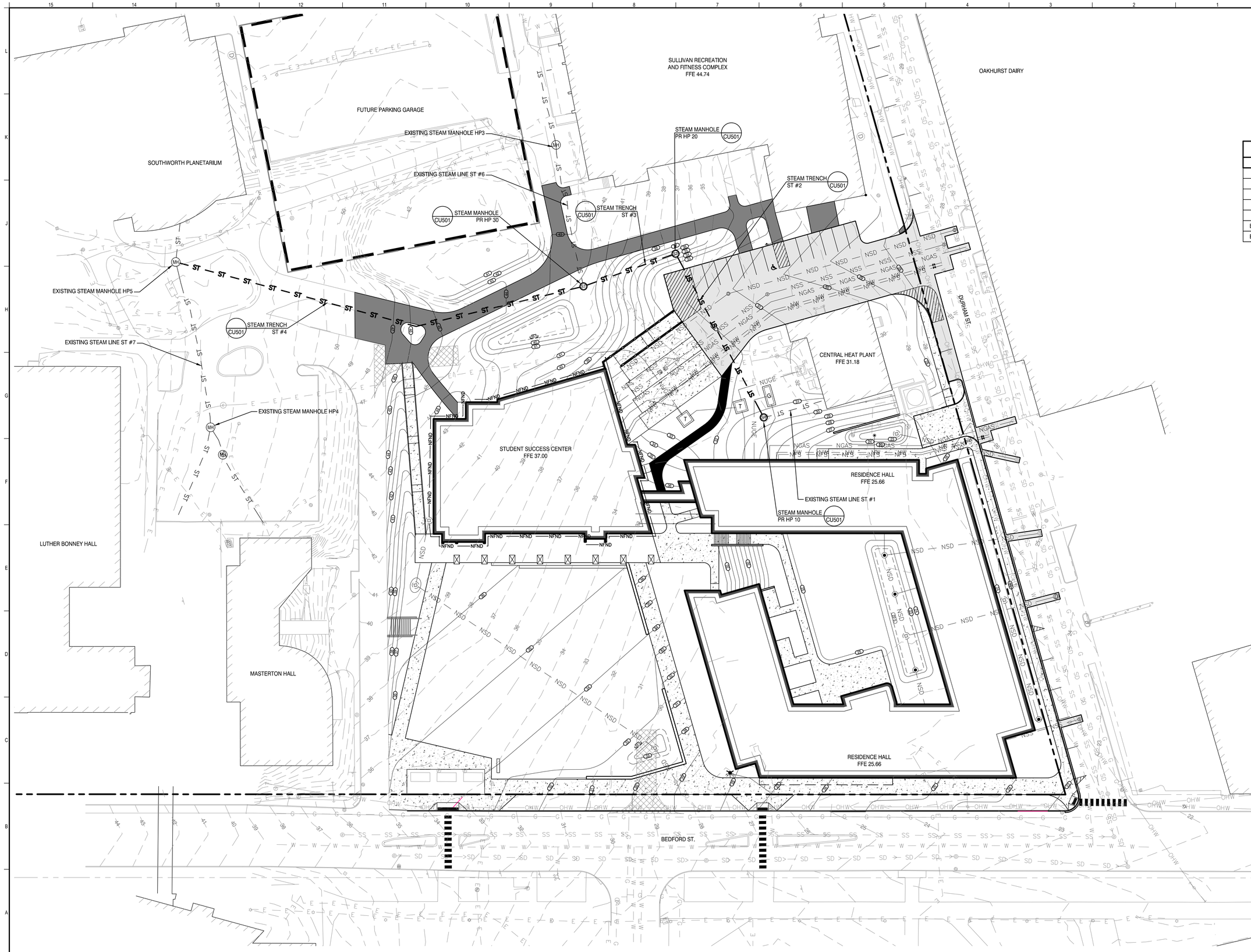

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UNIVERSITY OF SOUTHERN MAINE
CAREER AND STUDENT SUCCESS CENTER & RESIDENCE HALL

PORTLAND, MAINE

STEAM LINE PLAN

SHEET TITLE:

0 15' 30' 60' 90'

SCALE: 1" = 30'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	CU102-19206	SHEET No.	CU102

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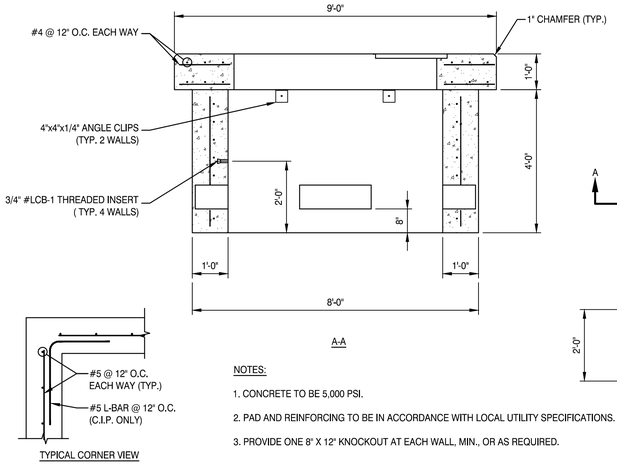
STEAM TRENCH G12



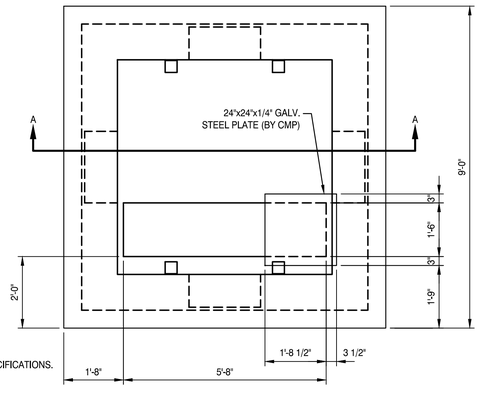
NOTES:

1. CONCRETE TO BE 5,000 PSI.
2. PAD AND REINFORCING TO BE IN ACCORDANCE WITH LOCAL UTILITY SPECIFICATIONS.
3. PROVIDE ONE 8" X 12" KNOCKOUT AT EACH WALL, MIN., OR AS REQUIRED.

TRANSFORMER PAD D8

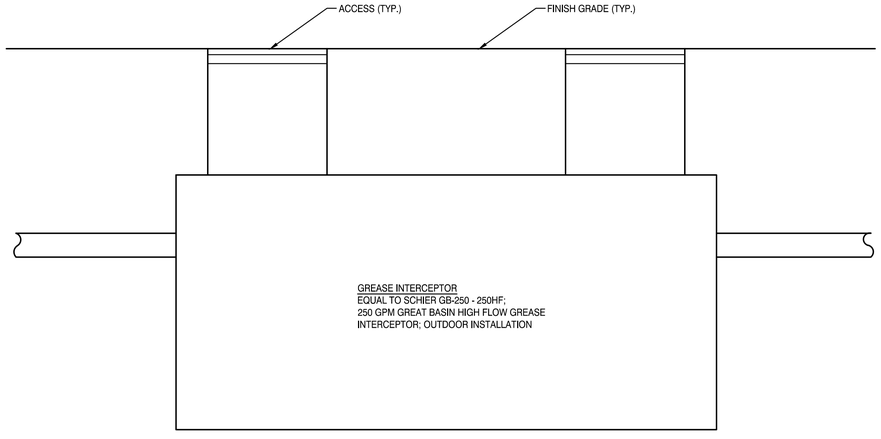
NOT TO SCALE

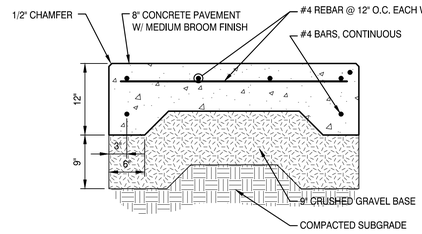
STEAM STRUCTURE G8



GREASE INTERCEPTOR A8

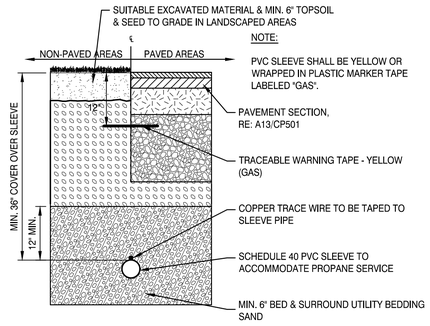
1/2" = 1'-0"





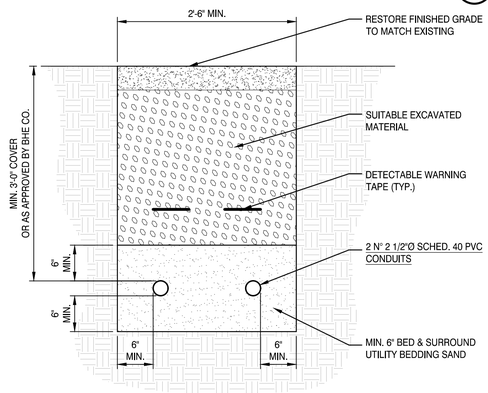
GENERATOR PAD K5

NOT TO SCALE



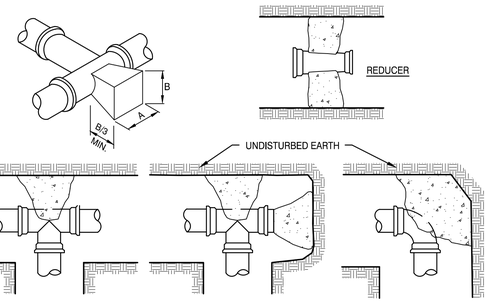
GAS SERVICE TRENCH D5

NOT TO SCALE



PRIMARY ELECTRIC TRENCH D5

NOT TO SCALE



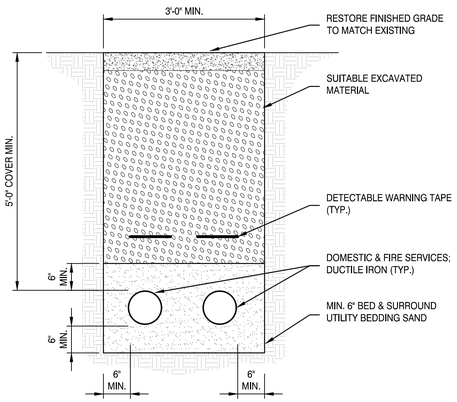
FITTING SIZES	TEES & PLUGS		90° BEND		45° BEND & WYE		REDUCER, 11 1/4° & 22 1/2° BENDS	
	A	B	A	B	A	B	A	B
4"	1'-7"	1'-2"	1'-9"	1'-5"	1'-8"	0'-10"	1'-7"	0'-6"
6"	2'-0"	1'-11"	2'-5"	2'-2"	1'-10"	1'-7"	1'-9"	0'-10"
8"	2'-8"	2'-6"	3'-2"	3'-0"	2'-5"	2'-1"	1'-9"	1'-6"
10"	3'-4"	3'-3"	4'-0"	3'-10"	3'-0"	2'-9"	2'-2"	1'-11"
12"	4'-0"	3'-10"	4'-8"	4'-8"	3'-8"	3'-3"	2'-7"	2'-3"
14"	5'-5"	3'-10"	6'-6"	4'-11"	4'-9"	3'-5"	3'-5"	2'-5"

NOTES:

1. DIMENSIONS ARE BASED ON 150 PSI WATER PRESSURE AND 2000 PSF SOIL BEARING CAPACITY.
2. WRAP ALL FITTINGS WITH POLYETHYLENE.
3. GRIP-RING PIPE RESTRAINERS TO BE USED IN CONJUNCTION WITH THRUST BLOCKS.

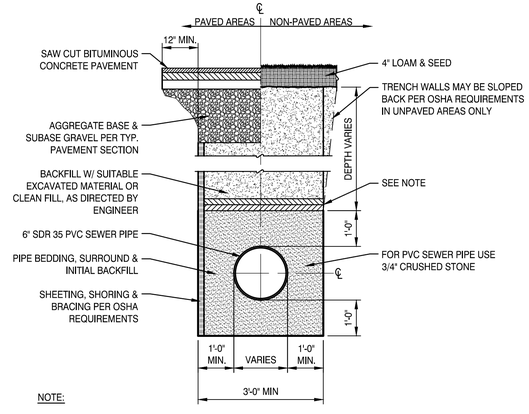
THRUST BLOCKS G1

NOT TO SCALE



WATER SERVICE TRENCH D1

3/4" = 1'-0"

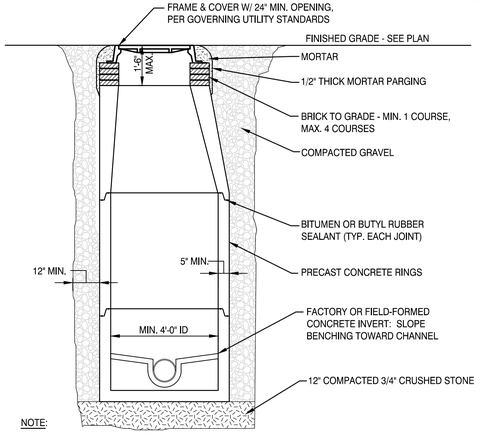


NOTE:

INSULATE GRAVITY SEWER WHERE COVER IS LESS THAN FOUR FEET. USE 2" THICK RIGID STYROFOAM INSULATION FOR FULL WIDTH OF TRENCH.

SANITARY SEWER TRENCH A1

NOT TO SCALE



NOTE:

PROVIDE DROP PIPE FOR ALL INVERT DIFFERENTIALS GREATER THAN TWO (2) FEET.

SANITARY SEWER MANHOLE A5

NOT TO SCALE

REV	DESCRIPTION	DATE
1	REISSUED FOR PERMITTING	7-24-20
0	ISSUED FOR SD AND PERMITTING	3-6-20

REISSUED FOR PERMITTING
7-24-20

CURRENT ISSUE STATUS:

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UNIVERSITY OF SOUTHERN MAINE
CAREER AND STUDENT SUCCESS
CENTER & RESIDENCE HALL

PORTLAND, MAINE

UTILITY DETAILS

SHEET TITLE:

0 1/2" 1" 2" 3"

SCALE:

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL	CU501	
DRAWN BY:	WSM		
SMRT FILE:	CU501-19206	SHEET No.	

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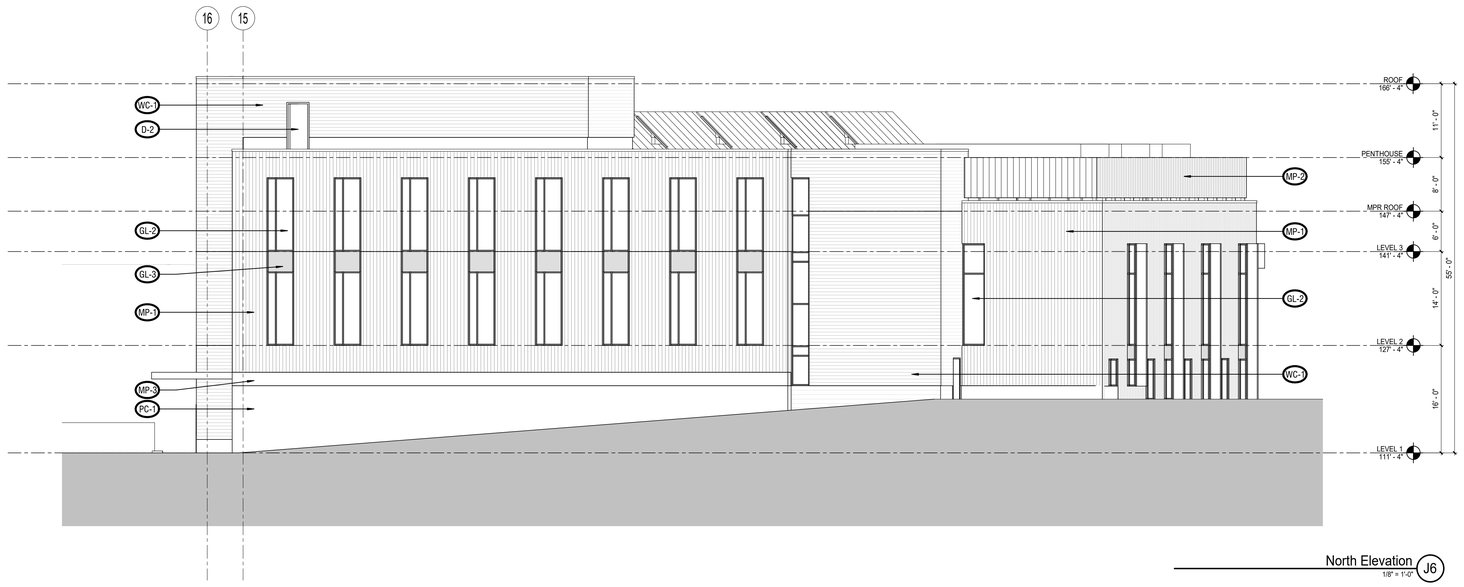
24x36



North Elevation J6
1/8" = 1'-0"

West Elevation B6
1/8" = 1'-0"

ELEVATION KEY NOTE

NOTE:
SEE EXTERIOR MATERIALS FINISH SCHEDULE ON A200FS FOR COLOR AND FINISH OF EACH KEY NOTE EXTERIOR MATERIAL

TAG	MATERIAL	DESCRIPTION
ESS-1	EXPOSED STRUCTURAL STEEL (PAINTED)	EXPOSED STRUCTURAL STEEL (EXPOSED TO VIEW)
ESS-2	EXPOSED STRUCTURAL STEEL	SOLAR PANEL & SCREEN WALL FRAMING
CP-1	ALUMINUM COPING CAP	
CP-2	ALUMINUM COPING CAP	
D-1	ALUM. FRAMED GLASS DOOR AT CURTAINWALL	HEAVY DUTY ALUM FRAMED DOOR WITH 1" INSULATING GLASS
D-2	HOLLOW METAL DOOR TYPE 1	INSULATED HOLLOW METAL DOOR
D-3	OVERHEAD COILING DOOR	
GL-1	GLAZING TYPE 1	
GL-2	GLAZING TYPE 2	
GL-3	GLAZING TYPE 3	
L-1	WOOD LOUVER TYPE 1	
M-1	CURTAINWALL MULLION TYPE 1	
M-2	CURTAINWALL MULLION TYPE 2	
M-3	CURTAINWALL MULLION TYPE 3	
MG-1	METAL GUARDRAIL	
MP-1	METAL PANEL TYPE 1	CORRUGATED METAL PANEL
MP-2	METAL PANEL TYPE 2	SCREEN WALL
MP-3	METAL PANEL TYPE 3	FLAT METAL WALL PANELS
PC-1	PRECAST CONCRETE	
S-1	SIGNAGE	N.I.C. (BY TENANT)
SB-1	STAINLESS STEEL	STAINLESS STEEL BASE
SP-1	SOLAR PANELS	
SBX	SHADOW BOX ASSEMBLY	TYPE GL-1 GLAZING, ALUMINUM PANEL, INTEGRAL INSULATION AND GALVANIZED STEEL AIR SEAL SHEET (REFER TO PROJECT SPEC. AND DETAILS ON A410-A419)
T-1	TIMBER COLUMNS	8" x 8"
WC-1	RAINSCREEN WOOD SIDING	BASIS OF DESIGN - CAMBIA THERMALLY MODIFIED POPLAR SIDING IN CLIP PROFILE

GENERAL NOTE

1. ALL CURTAINWALL SYSTEM TO BE UNITIZED ALUM. CURTAINWALL WITH HIGH THERMAL PERFORMANCE. REFER TO PROJECT SPECIFICATION FOR DESIGN AND PERFORMANCE CRITERIA.

2. REFER TO PROJECT SPECIFICATION FOR DESIGN AND PERFORMANCE CRITERIA OF GROUND FLOOR STOREFRONT SYSTEM.

3. REFER TO PROJECT SPECIFICATION FOR ASSEMBLY OF GLAZING TYPES 1-6

4. REFER TO PROJECT SPECIFICATION AND PROJECT DETAILS FOR UNITIZED CURTAIN WALL AND STOREFRONT MULLION CONFIGURATIONS, ASSEMBLIES AND PERFORMANCE CRITERIA

REV	DESCRIPTION	DATE

PROGRESS
07-26-20
CURRENT ISSUE STATUS:

PROJECT NORTH:

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UNIVERSITY OF SOUTHERN MAINE
CAREER AND STUDENT SUCCESS CENTER & PORTLAND COMMONS

PROJECT LOCATION

EXTERIOR ELEVATIONS

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	XXX	PROJECT NO:	00000
A/E OF RECORD:	Checker		
JOB CAPTAIN:	XXX		
DRAWN BY:	Author		
SMRT FILE:	2.A202-00000	SHEET No.	2.A202

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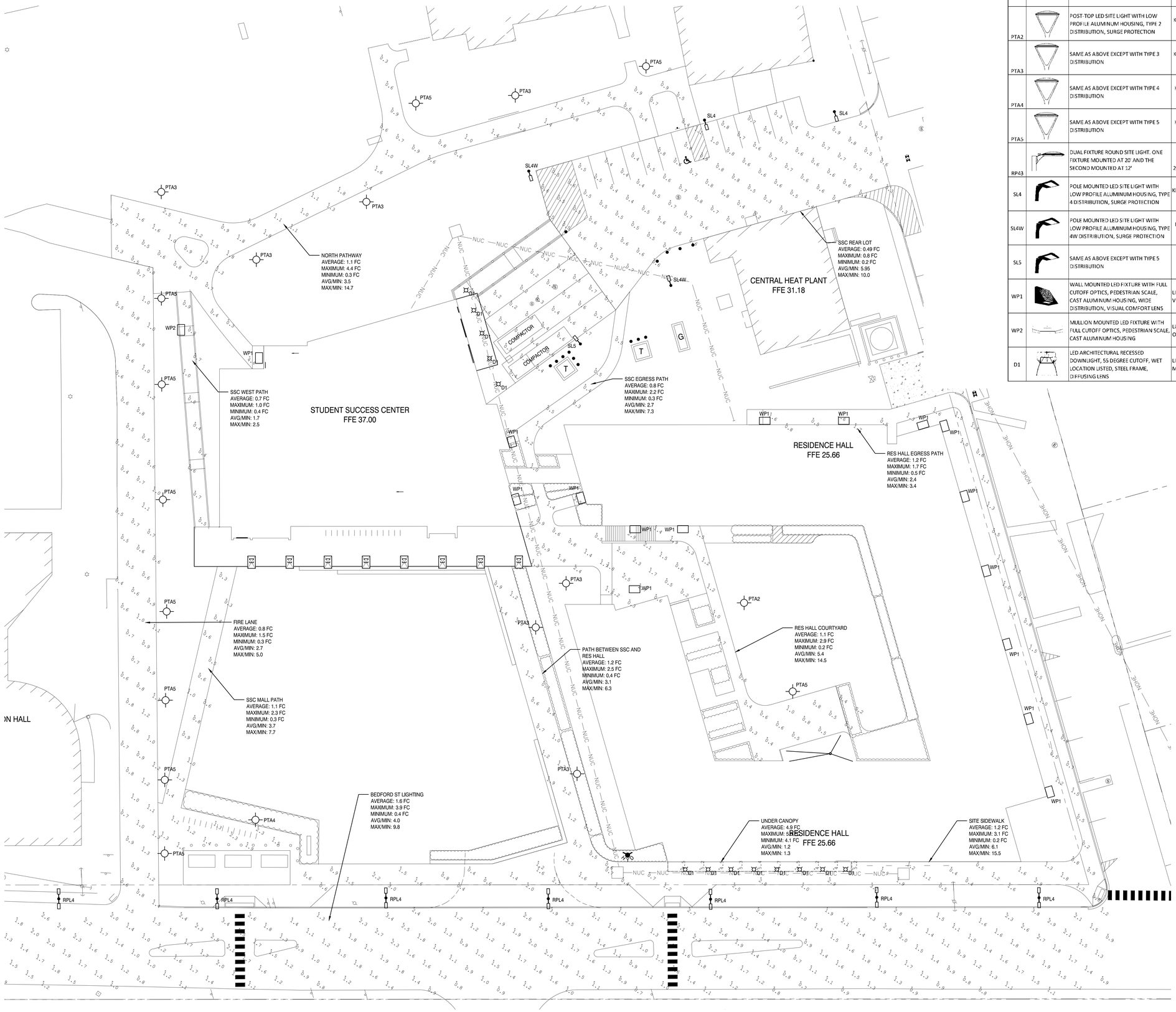

SITE & LANDSCAPE LIGHTING SCHEDULE

LABEL	IMAGE	DESCRIPTION	MANUFACTURER & MODEL NUMBER	QUANTITY	BUG RATING	FULL CUTOFF?	WATTAGE	OUTPUT	CONTROL METHOD	MOUNTING
PTA2		POST-TOP LED SITE LIGHT WITH LOW PROFILE ALUMINUM HOUSING, TYPE 2 DISTRIBUTION, SURGE PROTECTION	KIM LIGHTING UR20-24L-25-3K7-2-PT-UNV-BLT-SF	1	B1-U0-G1	YES	25 W	3,000 LUMENS	TIME CLOCK	12' TALL ROUND 4" OD ALUMINUM POLE
PTA3		SAME AS ABOVE EXCEPT WITH TYPE 3 DISTRIBUTION	KIM LIGHTING UR20-24L-25-3K7-3-PT-UNV-BLT-SF	7	B1-U0-G1	YES	25 W	3,000 LUMENS	TIME CLOCK	ROUND 12' X 4" ALUMINUM POLE
PTA4		SAME AS ABOVE EXCEPT WITH TYPE 4 DISTRIBUTION	KIM LIGHTING UR20-24L-25-3K7-4W-PT-UNV-BLT-SF	1	B1-U0-G2	YES	25 W	3,000 LUMENS	TIME CLOCK	ROUND 12' X 4" ALUMINUM POLE
PTA5		SAME AS ABOVE EXCEPT WITH TYPE 5 DISTRIBUTION	KIM LIGHTING UR20-24L-25-3K7-5W-PT-UNV-BLT-WSP-40F-1-SF	10	B2-U0-G1	YES	25 W	3,000 LUMENS	TIME CLOCK & MOTION SENSOR	ROUND 20' X 4" ALUMINUM POLE
RP43		DUAL FIXTURE ROUND SITE LIGHT. ONE FIXTURE MOUNTED AT 20' AND THE SECOND MOUNTED AT 12'	KIM LIGHTING 12': UR20-24L-25-3K7-3-UNV-BLT-SF 20': UR20-56L-75-3K7-4W-UNV-BLT-SF	7	B2-U0-G1 B1-U0-G2	YES	100 W		TIME CLOCK & MOTION SENSOR	ROUND 12' X 4" ALUMINUM POLE
SL4		POLE MOUNTED LED SITE LIGHT WITH LOW PROFILE ALUMINUM HOUSING, TYPE 4 DISTRIBUTION, SURGE PROTECTION	KIM LIGHTING ALT1-28L-20-3K7-4-UNV-A34-BLT-NXSP30F-SF	2	B1-U0-G1	YES	20 W	3,000 LUMENS	TIME CLOCK & MOTION SENSOR	ROUND 20' X 4" ALUMINUM POLE
SL4W		POLE MOUNTED LED SITE LIGHT WITH LOW PROFILE ALUMINUM HOUSING, TYPE 4W DISTRIBUTION, SURGE PROTECTION	KIM LIGHTING ALT1-28L-20-3K7-4W-UNV-A34-BLT-NXSP30F-SF	2	B1-U0-G1	YES	20 W	3,000 LUMENS	TIME CLOCK & MOTION SENSOR	ROUND 20' X 4" ALUMINUM POLE
SL5		SAME AS ABOVE EXCEPT WITH TYPE 5 DISTRIBUTION	KIM LIGHTING ALT1-28L-20-3K7-5R-UNV-A34-BLT-NXSP30F-SF	1	B2-U0-G2	YES	20 W	3,000 LUMENS	TIME CLOCK & MOTION SENSOR	ROUND 20' X 4" ALUMINUM POLE
WP1		WALL MOUNTED LED FIXTURE WITH FULL CUTOFF OPTICS, PEDESTRIAN SCALE, CAST ALUMINUM HOUSING, WIDE DISTRIBUTION, VISUAL COMFORT LENS	LITHONIA WDGE2-LED-P1-30K-80CRI-VW-MVOLT-PIRH-DBLBXD	15	B0-U0-G0	YES	10 W	1,200 LUMENS	TIME CLOCK & MOTION SENSOR	SURFACE, 12' AFG
WP2		MULLION MOUNTED LED FIXTURE WITH FULL CUTOFF OPTICS, PEDESTRIAN SCALE, CAST ALUMINUM HOUSING	LUMINAIRE LED BLD 36-15W 3000K BLK OCC	1	B0-U0-G0	YES	15 W	1,500 LUMENS	TIME CLOCK & MOTION SENSOR	SURFACE, 8' AFG
D1		LED ARCHITECTURAL RECESSED DOWNLIGHT, 55 DEGREE CUTOFF, WET LOCATION LISTED, STEEL FRAME, DIFFUSING LENS	LITHONIA LDN4-30-05-LO4AR-LSS-MVOLT-EZ1	13	NA	YES	6 W	500 LUMENS	TIME CLOCK	RECESSED

REV	DESCRIPTION	DATE
1	REISSUED FOR PERMITTING	7-24-20
0	ISSUED FOR SD AND PERMITTING	3-6-20

REISSUED FOR PERMITTING
7-24-20

CURRENT ISSUE STATUS:

TRUE NORTH:

WILLIAM R. HOWE No. 7560 LICENSED PROFESSIONAL ENGINEER STATE OF MAINE
7/24/20

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UNIVERSITY OF SOUTHERN MAINE
CAREER AND STUDENT SUCCESS CENTER & RESIDENCE HALL

PORTLAND, MAINE

PHOTOMETRIC PLAN

SHEET TITLE:

0 10' 20' 40' 80'

SCALE: 1" = 20'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	WRH		
JOB CAPTAIN:	SDL		
DRAWN BY:	RBB		
SMRT FILE:	ES103-19206	SHEET No.	ES103

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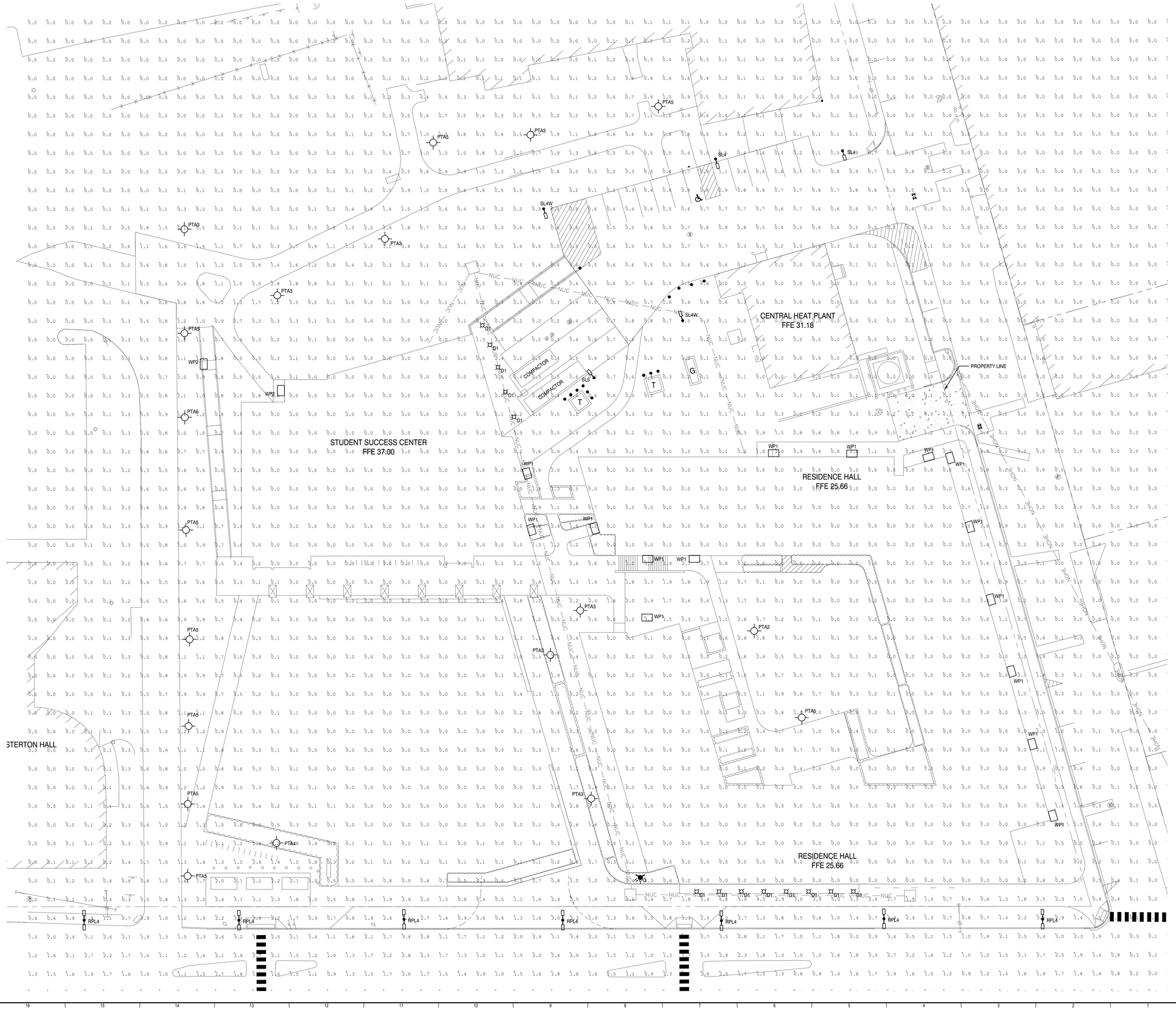

REV	DESCRIPTION	DATE
1	REISSUED FOR PERMITTING	7-24-20
0	ISSUED FOR SD AND PERMITTING	3-6-20

REISSUED FOR PERMITTING
7-24-20

CURRENT ISSUE STATUS:

TRUE NORTH:

STATE OF MAINE
WILLIAM R. HILL
No. 7580
LICENSED
PROFESSIONAL ENGINEER
7/24/20

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UNIVERSITY OF SOUTHERN MAINE
CAREER AND STUDENT SUCCESS
CENTER & RESIDENCE HALL

PORTLAND, MAINE

PHOTOMETRIC PLAN

SHEET TITLE:

0 10' 20' 40' 30'

SCALE: 1" = 20'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	WRH		
JOB CAPTAIN:	SDL		
DRAWN BY:	RBB		
SMRT FILE:	ES104-19206	SHEET No.	ES104

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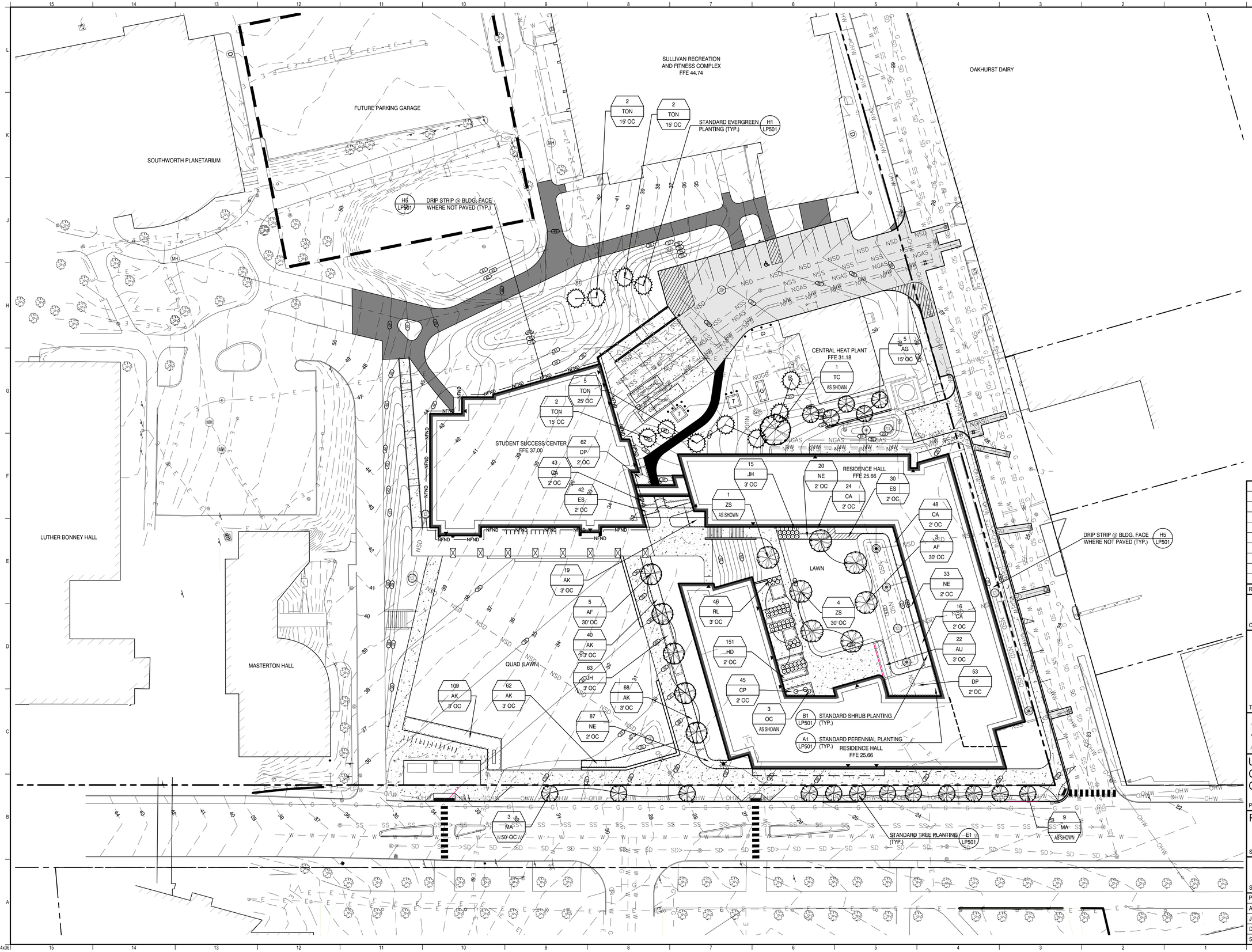

REV	DESCRIPTION	DATE
1	REISSUED FOR PERMITTING	7-24-20
0	ISSUED FOR SD AND PERMITTING	3-6-20

REISSUED FOR PERMITTING
7-24-20

CURRENT ISSUE STATUS:

TRUE NORTH:

LICENSED LANDSCAPE ARCHITECT
MARK G. JOHNSON
NO. 1857
STATE OF MAINE
3-6-2020

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UNIVERSITY OF SOUTHERN MAINE CAREER AND STUDENT SUCCESS CENTER & RESIDENCE HALL

PORTLAND, MAINE

PLANTING & LANDSCAPING PLAN

SHEET TITLE:

0 15' 30' 60' 90'

SCALE: 1" = 30'

PROJECT MANAGER:	KD
A/E OF RECORD:	MGJ
JOB CAPTAIN:	SDL
DRAWN BY:	WSM
SMRT FILE:	LP101-19206

PROJECT NO: 19206

LP101

SHEET No.

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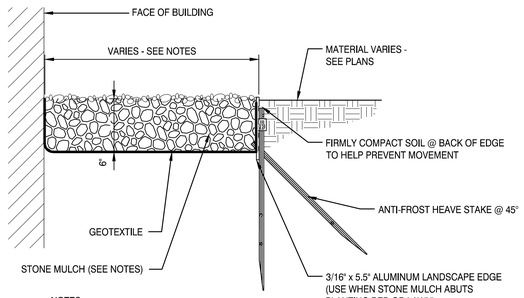
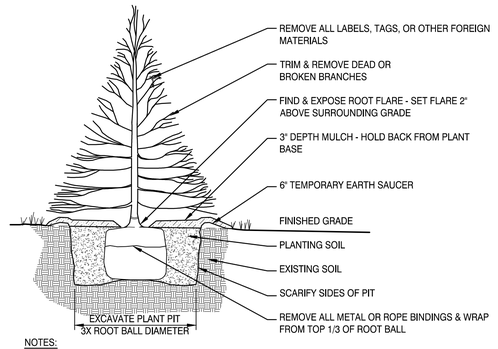


NOTES:

1. STONE MULCH TO BE ROUNDED RIVERSTONE, 3" INCHES DIA. MAX., WASHED AND FREE OF FOREIGN OR ORGANIC MATERIALS.
2. STANDARD MAINTENANCE STRIP TO BE 12" WIDE.
3. STANDARD DRIP STRIP TO BE WIDTH OF BUILDING EAVE PLUS 12" UNLESS SHOWN OTHERWISE.
4. EDGE TO BE BY SURE-LOC ALUMINUM EDGING CORP, OR APPROVED EQUAL .
   - MILL FINISH
   - 12" STAKES
   - ANTI-FROST HEAVE STAKE POCKETS @ 8" O.C.

DRIP STRIP H5

NOT TO SCALE

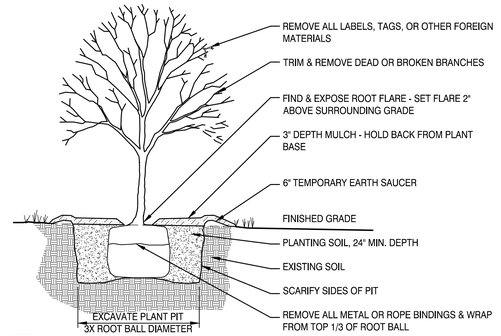


NOTES:

1. TREE TO BE SET PLUMB.
2. SECURE TREE AS MAY BE REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

STANDARD EVERGREEN PLANTING H1

NOT TO SCALE

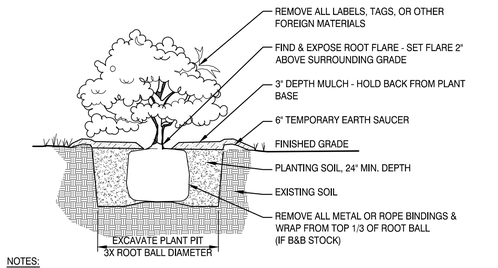


NOTES:

1. TREE TO BE SET PLUMB.
2. SECURE TREE AS MAY BE REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

STANDARD DECIDUOUS TREE PLANTING E1

NOT TO SCALE

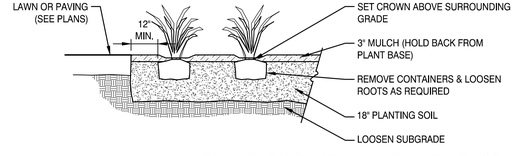


NOTES:

1. SHRUB TO BE SET PLUMB.

STANDARD SHRUB PLANTING B1

NOT TO SCALE



STANDARD PERENNIAL PLANTING A1

NOT TO SCALE

MARK	SCIENTIFIC NAME / COMMON NAME	SIZE CAL	SIZE HT	ROOT	REMARKS
TREES					
AG	Amelanchier x grandiflora 'Autumn Brilliance' / Autumn Brilliance Serviceberry	1 1/2"	6'-8'	B & B	Clump form, 3-stem minimum
AF	Acer x freemani 'Armstrong' / Armstrong Red Maple	2"	12'-14'	B & B	Full, matched specimens
MA	Malus 'Adirondack' / Adirondack Crabapple	1 1/2"	6'-8'	B & B	Full, matched specimens
TC	Tilia cordata 'Greenspire' / Littleleaf Linden	2"	12'-14'	B & B	Full, matched specimens
ZS	Zelkova serrata 'Musashino' / Musashino Zelkova	2"	12'-14'	B & B	Full, matched specimens
SHRUBS					
AU	Arctostaphylos uva-ursi / Bearberry	#2	18"	Cont.	
AK	Azalea 'Karen' / Evergreen Azalea	#2	18"	Cont.	
JH	Juniperus horzontalis 'Bar Harbor' Bar Harbor Juniper	#2	6"	Cont.	
RL	Rhododendron laetivirens 'Wilson' / Wilson Rhododendron	#2	18"	Cont.	
SP	Stewartia pseudocamellia / Japanese Stewartia	#7	5'-6'	Cont.	Full, matched specimens
TON	Thuja occidentalis 'Nigra' / Dark American Arborvitae	#5	5'-6'	Cont.	
PERENNIALS					
CA	Calamagrostis x accutifolia 'Karl Foerster' / Feather Reed Grass	#1	-	Cont.	
CP	Carex pennsylvanica / Sedge	#1	-	Cont.	
DP	Dennstaedtia punctiloba / Hayscented Fern	#1	-	Cont.	
ES	Echinacea Sombrero Lemon Yellow / Coneflower	#1	-	Cont.	
HD	Hosta 'Dream Weaver' / Hosta	#1	-	Cont.	
NE	Nepeta 'Early Bird' / Catmint	#1	-	Cont.	
OC	Osmunda cinnamomea / Cinnamon Fern	#1	-	Cont.	

PLANT SCHEDULE A5

REV	DESCRIPTION	DATE
1	REISSUED FOR PERMITTING	7-24-20
0	ISSUED FOR SD AND PERMITTING	3-6-20

REISSUED FOR PERMITTING
7-24-20

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LICENSED LANDSCAPE ARCHITECT
MARK G. JOHNSON
NO. 1857
STATE OF MAINE
3-6-2020

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CAREER AND STUDENT SUCCESS CENTER & RESIDENCE HALL

PORTLAND, MAINE

PLANTING & LANDSCAPING DETAILS & SCHEDULE

SHEET TITLE:

0 1/2" 1" 2" 3"

SCALE:

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	MGJ		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	LP501-19206	SHEET No.	LP501

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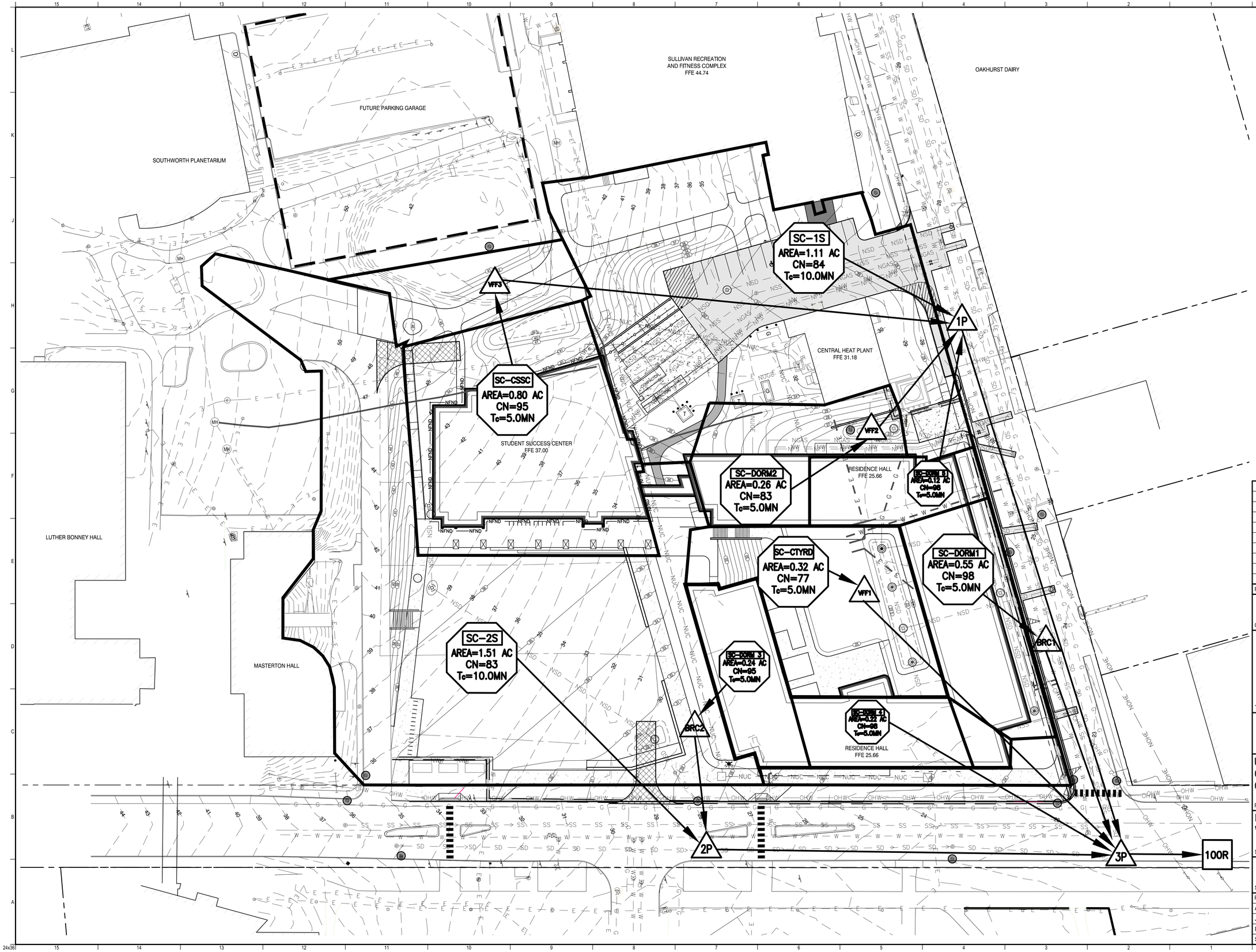

REV	DESCRIPTION	DATE

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PORTLAND, MAINE

POST-DEVELOPMENT WATERSHED PLAN

SHEET TITLE:

0 15' 30' 60' 90'

SCALE: 1" = 30'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	C-121-19206	SHEET No.	C-121

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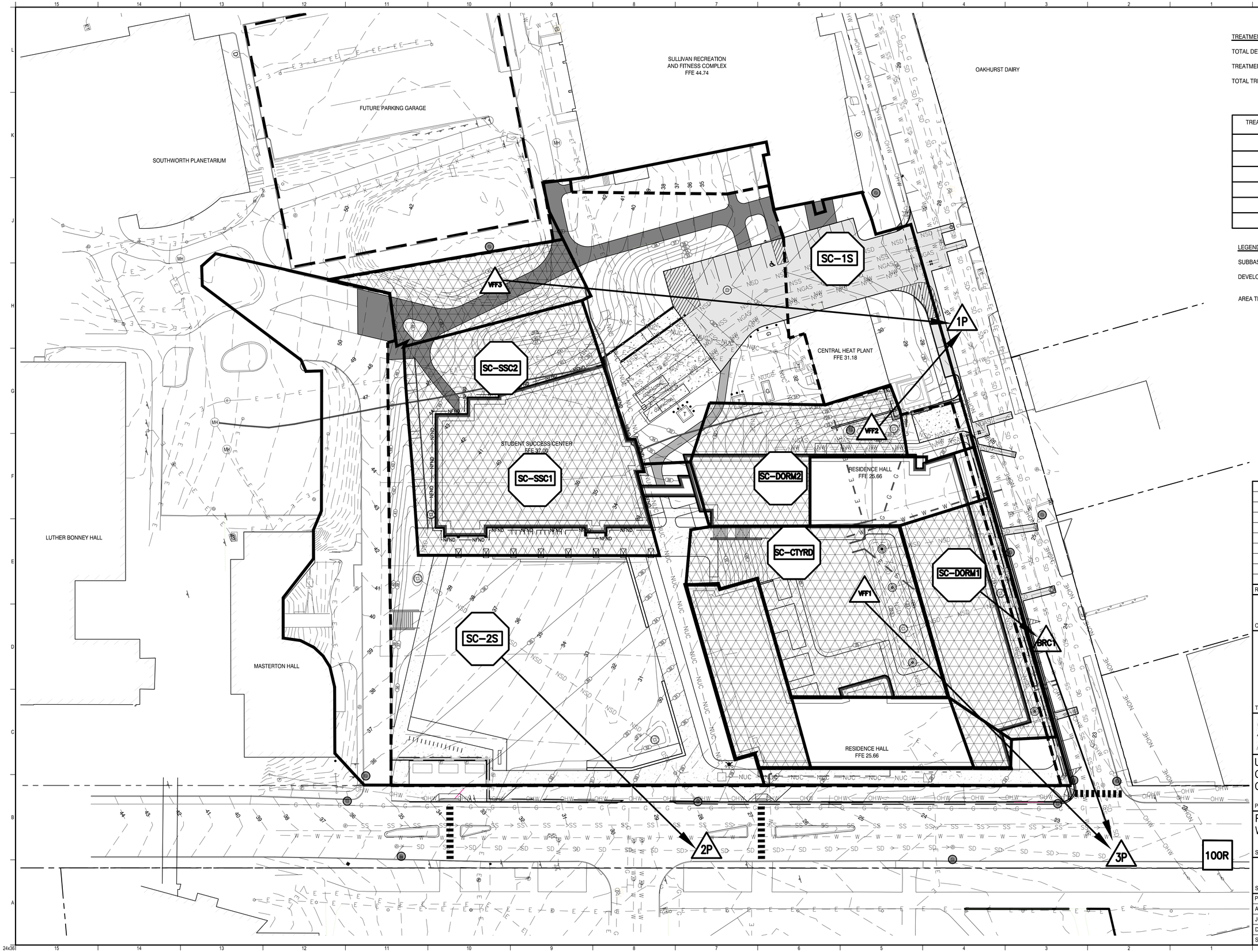

TREATMENT SUMMARY:

TOTAL DEVELOPED AREA =157, 972 SF

TREATMENT REQUIRMENT (50% DEVELOPED AREA) = 78,986 SF

TOTAL TREATMENT PROVIDED = 80,594 SF

TREATMENT BMP	DEVELOPED AREA TREATED (SF)
VFF 1	14,050
VFF 2	11,496
VFF 3	34,500
BRC 1	10,548
BRC 2	10,000
TOTAL	**80,594 SF**

LEGEND

SUBBASIN BOUNDARY

DEVELOPED AREA BOUNDARY

AREA TREATED BY BMP

REV	DESCRIPTION	DATE

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7-24-20

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CAREER AND STUDENT SUCCESS CENTER & RESIDENCE HALL

PORTLAND, MAINE

POST-DEVELOPMENT
WATER QUALITY PLAN

SHEET TITLE:

0 15' 30' 60' 90'

SCALE: 1" = 30'

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	JTA		
JOB CAPTAIN:	SDL		
DRAWN BY:	WSM		
SMRT FILE:	C-121-19206	SHEET No.	C-122

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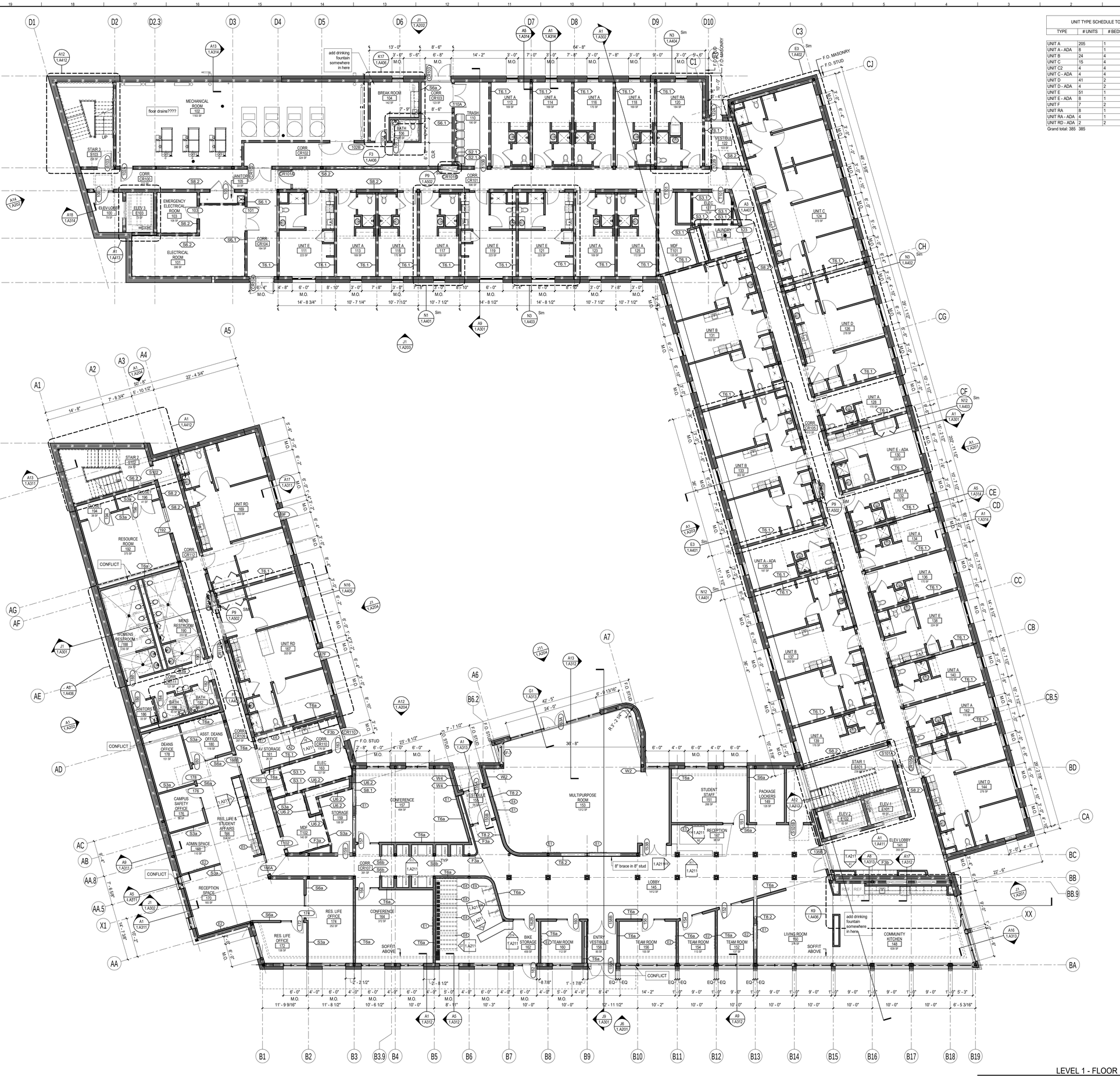

UNIT TYPE SCHEDULE TOTAL			
TYPE	# UNITS	# BEDS	TOTAL BED
UNIT A	205	1	205
UNIT A - ADA	8	1	8
UNIT B	24	4	96
UNIT C	15	4	60
UNIT C2	4	4	16
UNIT C - ADA	4	4	16
UNIT D	41	2	82
UNIT D - ADA	4	2	8
UNIT E	51	1	51
UNIT E - ADA	8	1	8
UNIT F	7	2	14
UNIT RA	8	1	8
UNIT RA - ADA	4	1	4
UNIT RD - ADA	2	2	4
Grand total: 385	385		580

PLAN NOTES:

1. SEE 1.GI001 FOR GENERAL PROJECT NOTES, LEGENDS ABBREVIATIONS AND GENERAL MOUNTING HEIGHTS.
2. SEE 1.GI002 FOR TOP OF WALL DETAILS AND PARTITION TYPES.
3. CONTRACTOR IS RESPONSIBLE FOR REVIEWING CODE COMPLIANCE PLANS AND NOTIFYING THE ARCHITECT OF CONFLICTS BETWEEN WHAT IS IN THE FIELD AND ON THE CODE DOCUMENTS.
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APPLIANCE SCHEDULE	
TYPE MARK	COMMENTS
A1	24" REFRIGERATOR
A2	30" REFRIGERATOR
A3	24" RANGE
A4	30" RANGE
A5	18" DISHWASHER
A6	24" DISHWASHER
A7	MICROWAVE - OVER RANGE
A8	MICROWAVE - UNDER COUNTER
A9	MICROWAVE - COMPACT COUNTERTOP
A10	24" RANGE HOOD
A11	30" RANGE HOOD
A12	WASHER - COMPACT
A13	WASHER
A14	DRYER - HEAT PUMP
A15	DRYER – GAS
BATHROOM ACCESSORIES SCHEDULE	
TYPE MARK	COMMENTS
B1	FRAMED MIRROR 60" X 48"
B2	FRAMED MIRROR 24" X 48"
B3	HORIZONTAL MOUNTED BABY CHANGING STATION
B4	SANITARY NAPKIN DISPOSAL
B5	TOILET TISSUE DISPENSER
B6	18" VERTICAL GRAB BAR
B7	48" GRAB BAR
B8	36" GRAB BAR
B9	ROBE HOOK
B10	TOWEL BAR 24"
B11	SHOWER CURTAIN ROD
B12	TOILET TISSUE DISPENSER
B13	HAND DRYER
B14	TOWEL BAR 18"

EQUIPMENT SCHEDULE	
TYPE MARK	COMMENTS
E1	TV 60"
E2	TV 46"
E3	TV 55"
E4	PROJECTOR
E5	PRINTER
E6	VENDING - SNACK
E7	VENDING - BEVERAGE
E8	FLOOR MOUNTED BIKE STORAGE SYSTEM AS SPECIFIED
E9	WALL MOUNTED BIKE STORAGE SYSTEM AS SPECIFIED

REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-20

CURRENT ISSUE STATUS:

PROJECT NORTH:

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UNIVERSITY OF SOUTHERN MAINE CAREER & STUDENT SUCCESS CENTER & PORTLAND COMMONS

PROJECT LOCATION

LEVEL 1 - FLOOR PLAN

SHEET TITLE:

SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19206
AJE OF RECORD:	PDC		
JOB CAPTAIN:	SDL		1.A101
DRAWN BY:	SDL/CAF		
SMRT FILE:	1.A101-19206	SHEET No.	

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PLAN NOTES:

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LEVEL 2 - FLOOR PLAN
1/8" = 1'-0" A1

REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-20

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PROJECT LOCATION

LEVEL 2 - FLOOR PLAN

SHEET TITLE:

SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	PDC		
JOB CAPTAIN:	SDL		1.A102
DRAWN BY:	SDL/CAF		
SMRT FILE:	1.A102-19206	SHEET No.	

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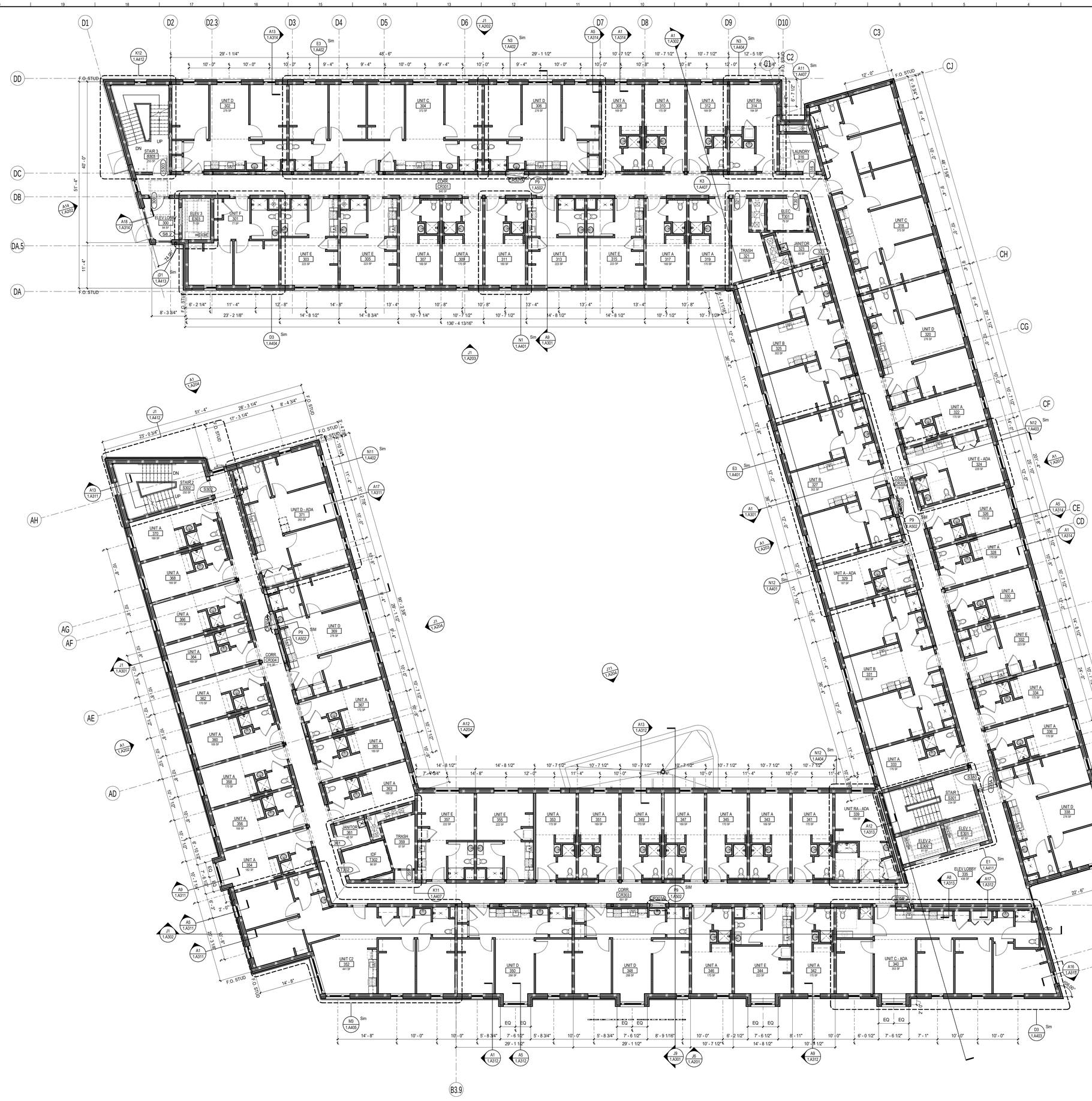

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LEVEL 3 - FLOOR PLAN (A1)
1/8" = 1'-0"

REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-20

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PROJECT LOCATION

LEVEL 3 - FLOOR PLAN

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	POC		
JOB CAPTAIN:	SDL		1.A103
DRAWN BY:	SDL/CAF		
SMRT FILE:	1.A103-19206	SHEET No.	

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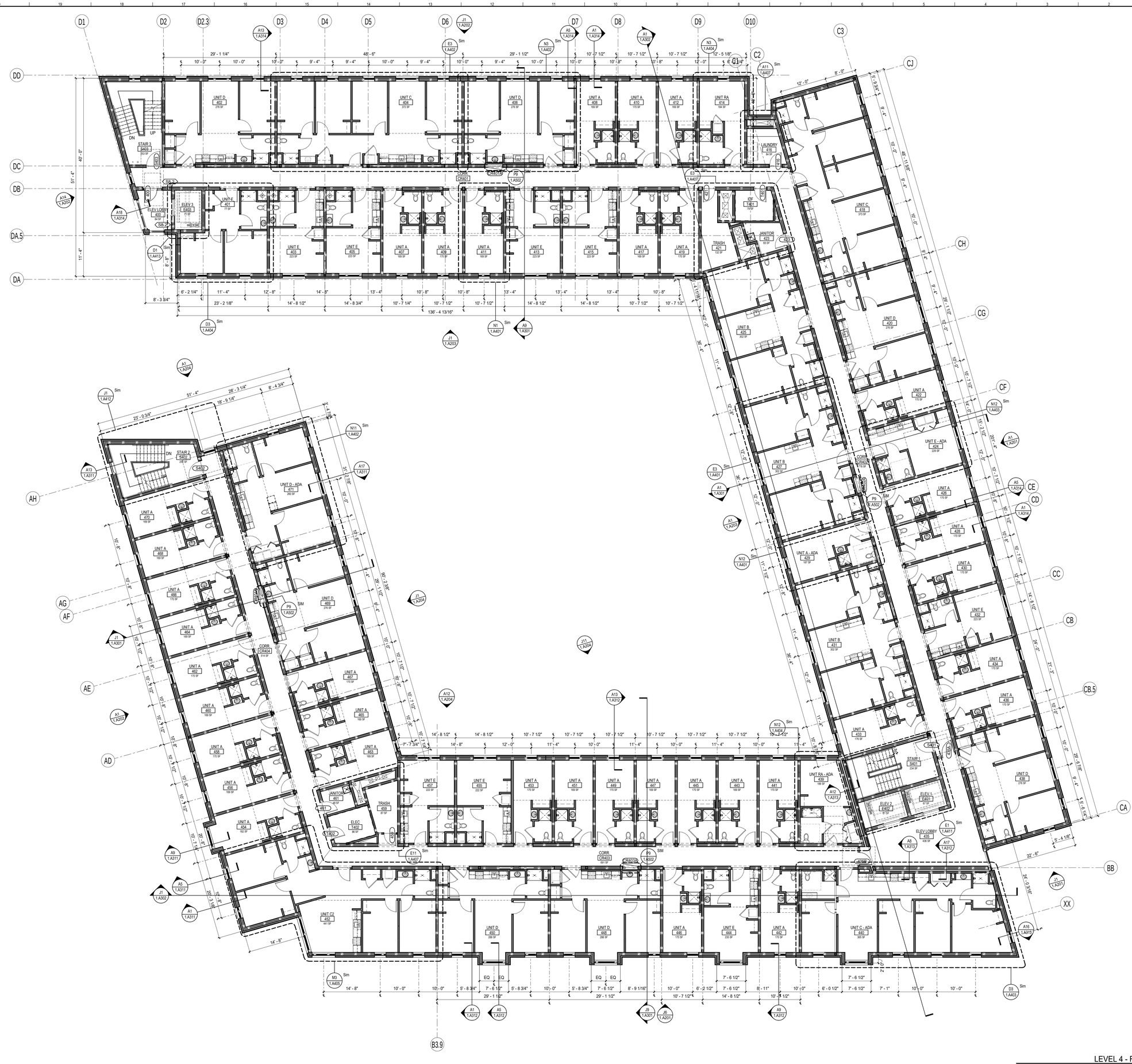

PLAN NOTES:

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LEVEL 4 - FLOOR PLAN (A1)
1/8" = 1'-0"

REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
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PROJECT LOCATION

LEVEL 4 - FLOOR PLAN

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	POC		
JOB CAPTAIN:	SDL		1.A104
DRAWN BY:	SDL/CAF		
SMRT FILE:	1.A104-19206	SHEET No.	

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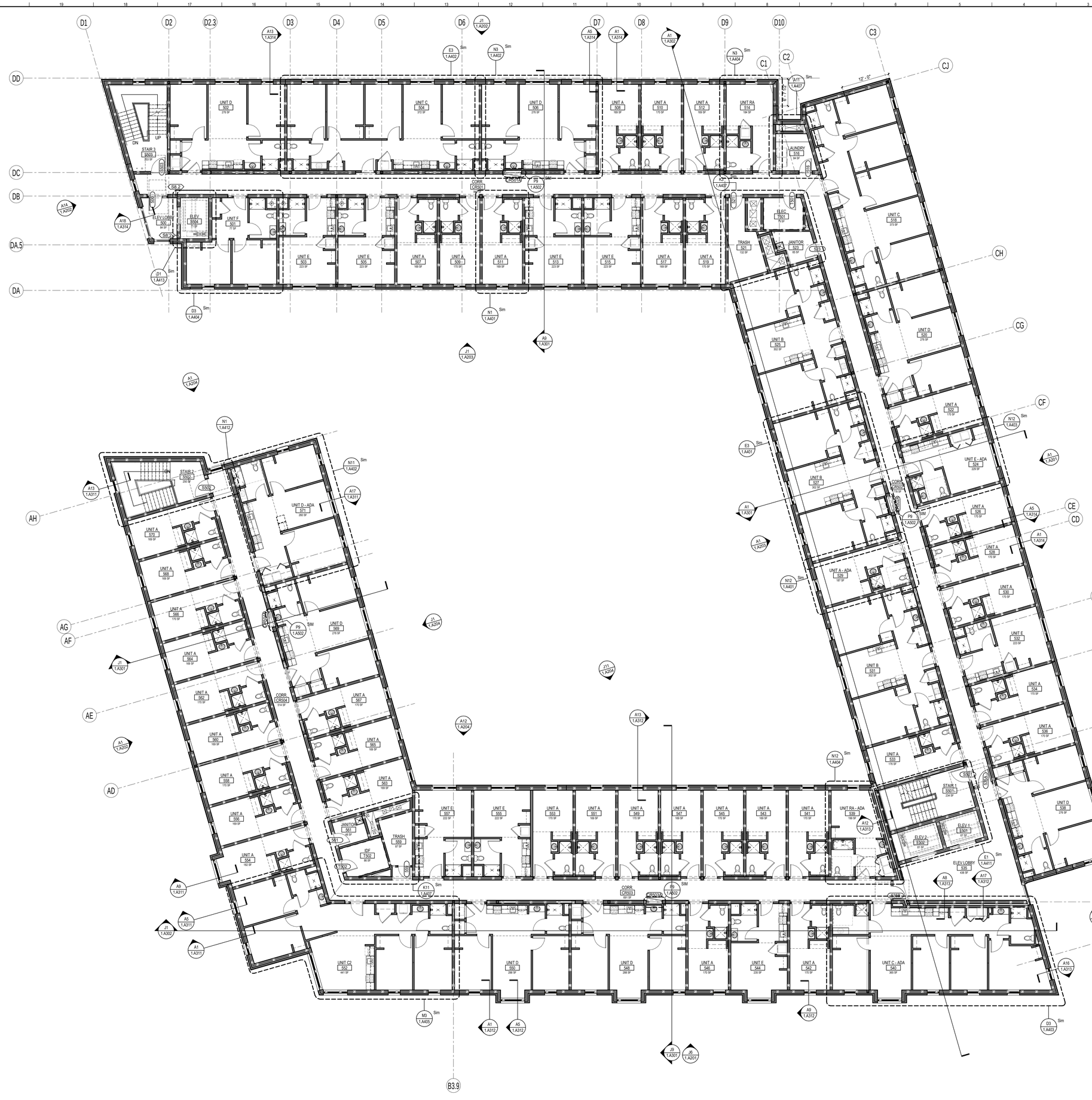

PLAN NOTES:

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LEVEL 5 - FLOOR PLAN A1
1/8" = 1'-0"

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PROJECT LOCATION

LEVEL 5 - FLOOR PLAN

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	POC		
JOB CAPTAIN:	SDL		
DRAWN BY:	SDL/CAF		
SMRT FILE:	1.A105-19206	SHEET No.	1.A105

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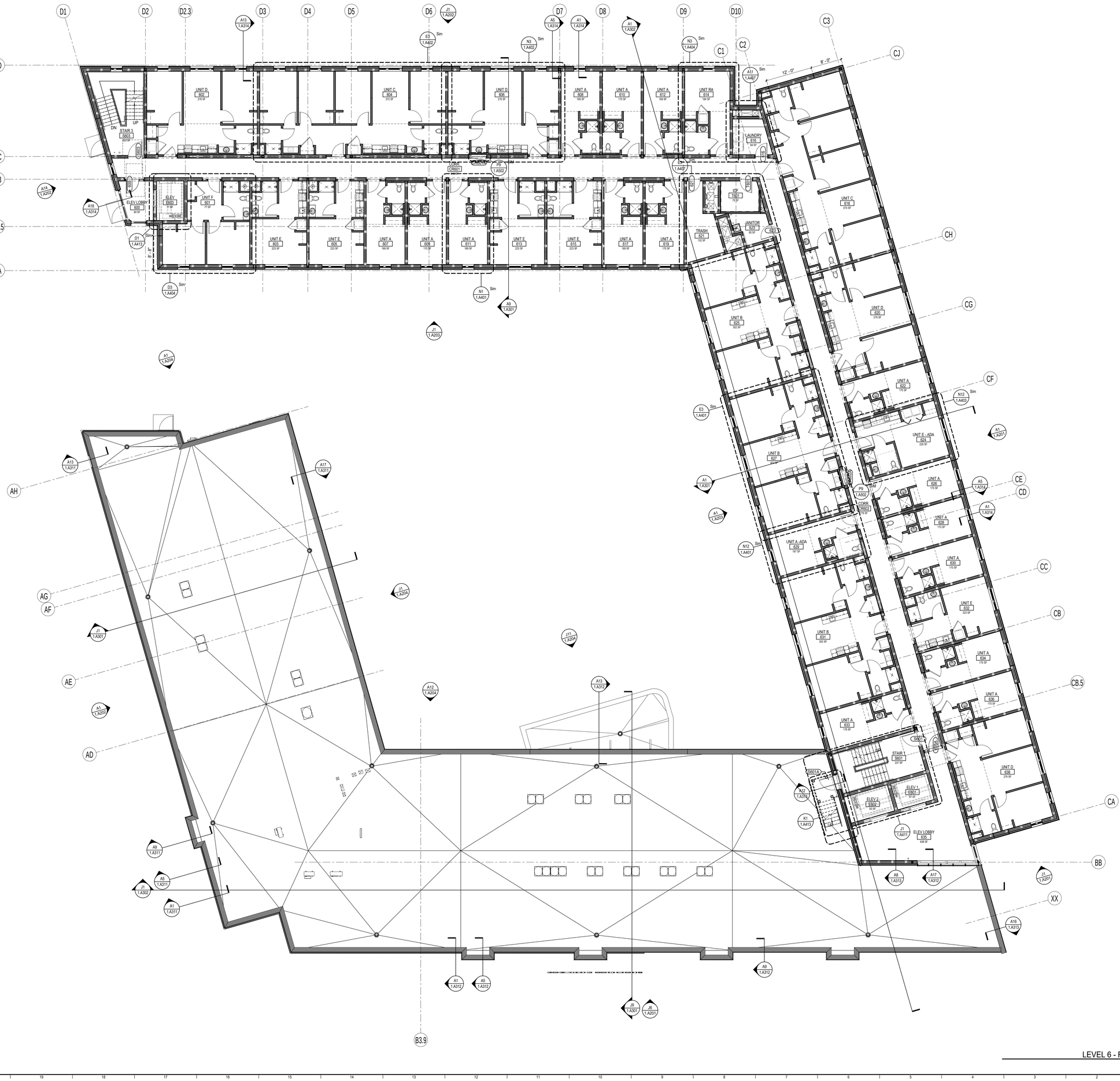

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LEVEL 6 - FLOOR PLAN
1/8" = 1'-0" A1

REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-20

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PROJECT LOCATION

LEVEL 6 - FLOOR PLAN

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	PDC		
JOB CAPTAIN:	SDL		
DRAWN BY:	SDL/CAF		
SMRT FILE:	1.A106-19206	SHEET No.	1.A106

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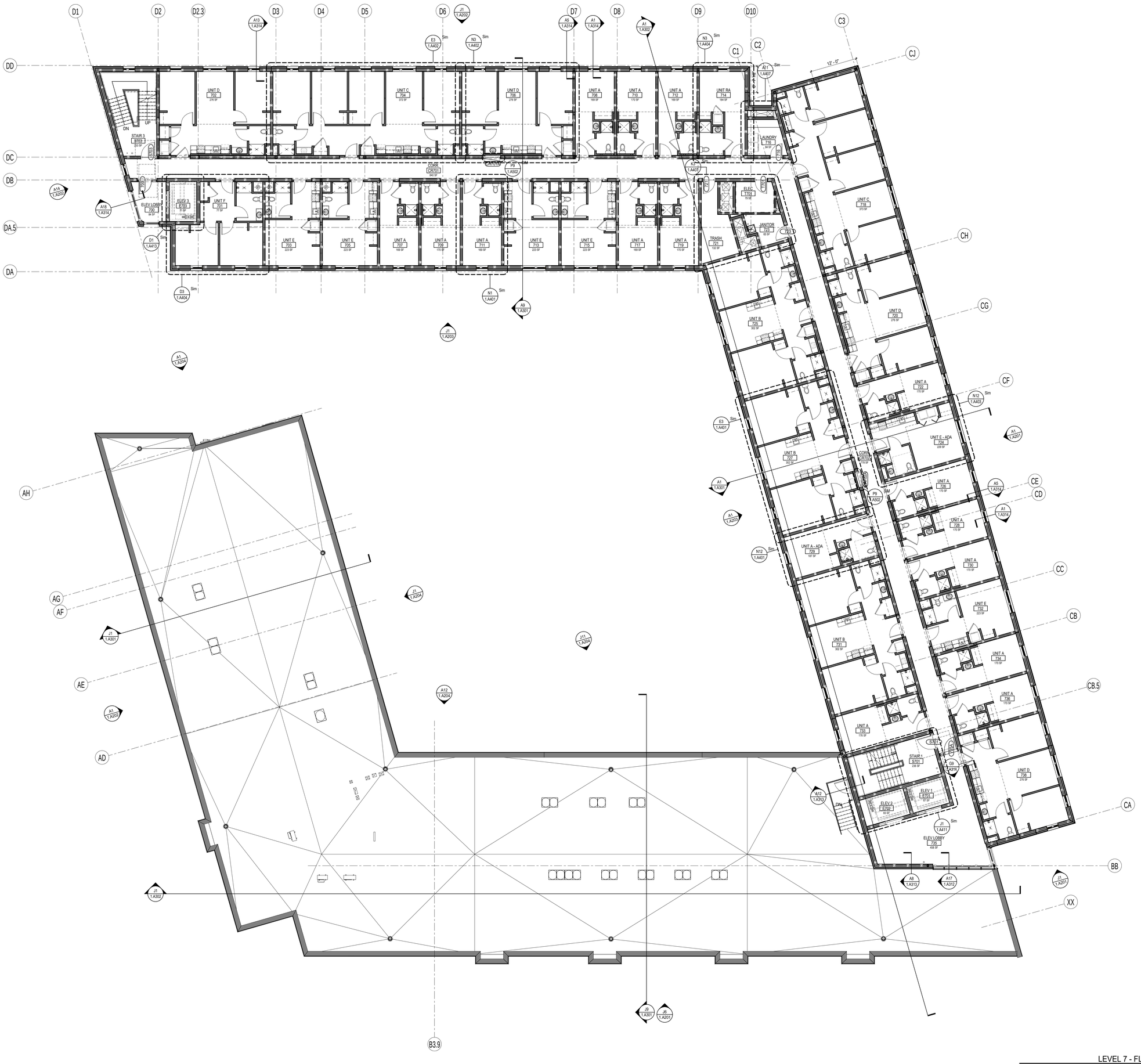

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LEVEL 7 - FLOOR PLAN
1/8" = 1'-0" A1

REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-20

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PROJECT LOCATION

LEVEL 7 - FLOOR PLAN

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	PDC		
JOB CAPTAIN:	SDL		
DRAWN BY:	SDL/CAF		
SMRT FILE:	1.A107-19206	SHEET No.	1.A107

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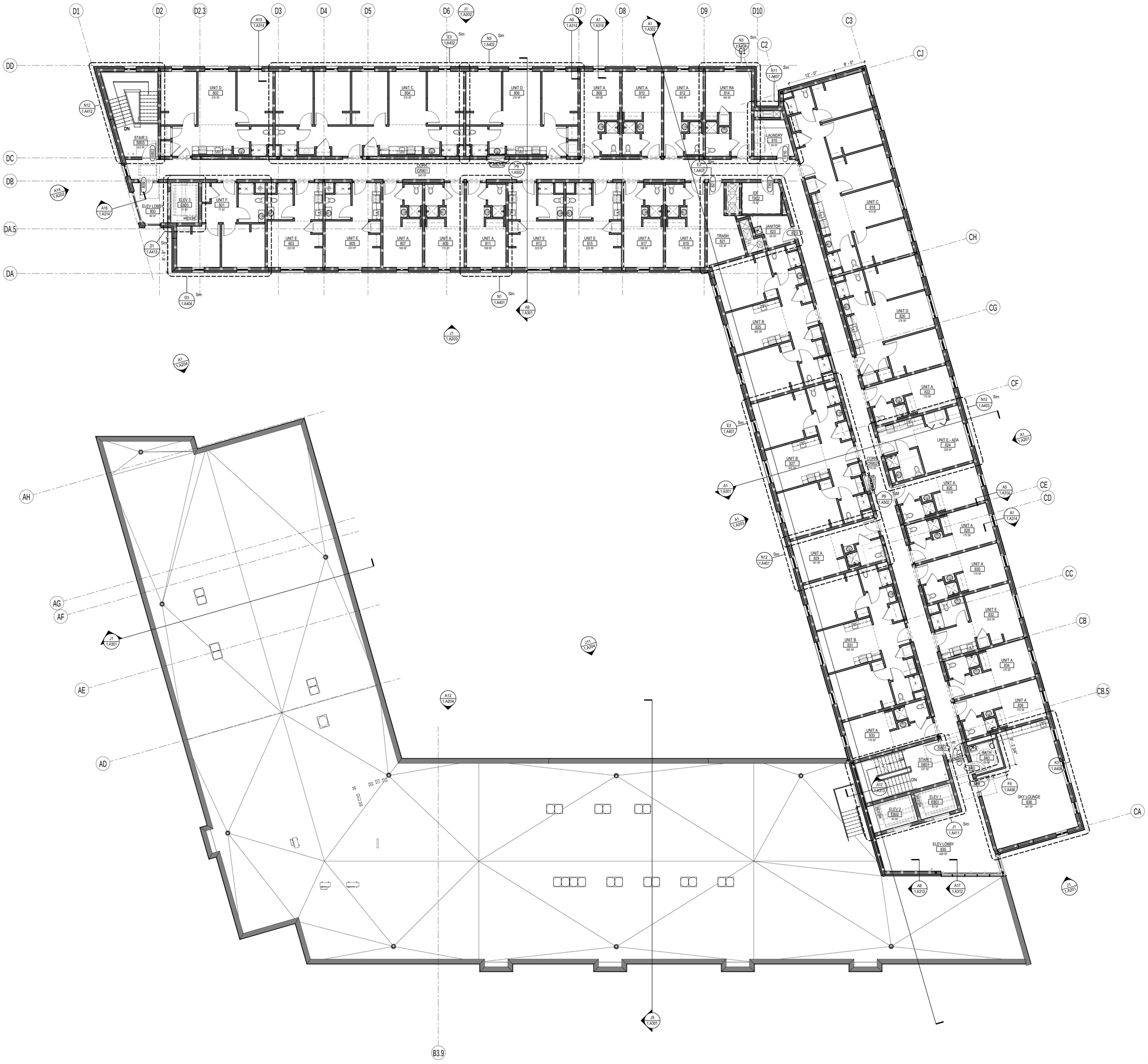

PLAN NOTES:

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REV	DESCRIPTION	DATE

DESIGN DEVELOPMENT
7-31-20

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UNIVERSITY OF SOUTHERN MAINE CAREER & STUDENT SUCCESS CENTER & PORTLAND COMMONS

PROJECT LOCATION

LEVEL 8 - FLOOR PLAN

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	PDC		
JOB CAPTAIN:	SDL		
DRAWN BY:	SDL/CAF		1.A108
SMRT FILE:	1.A108-19206	SHEET No.	

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LEVEL 8 - FLOOR PLAN A1
1/8" = 1'-0"

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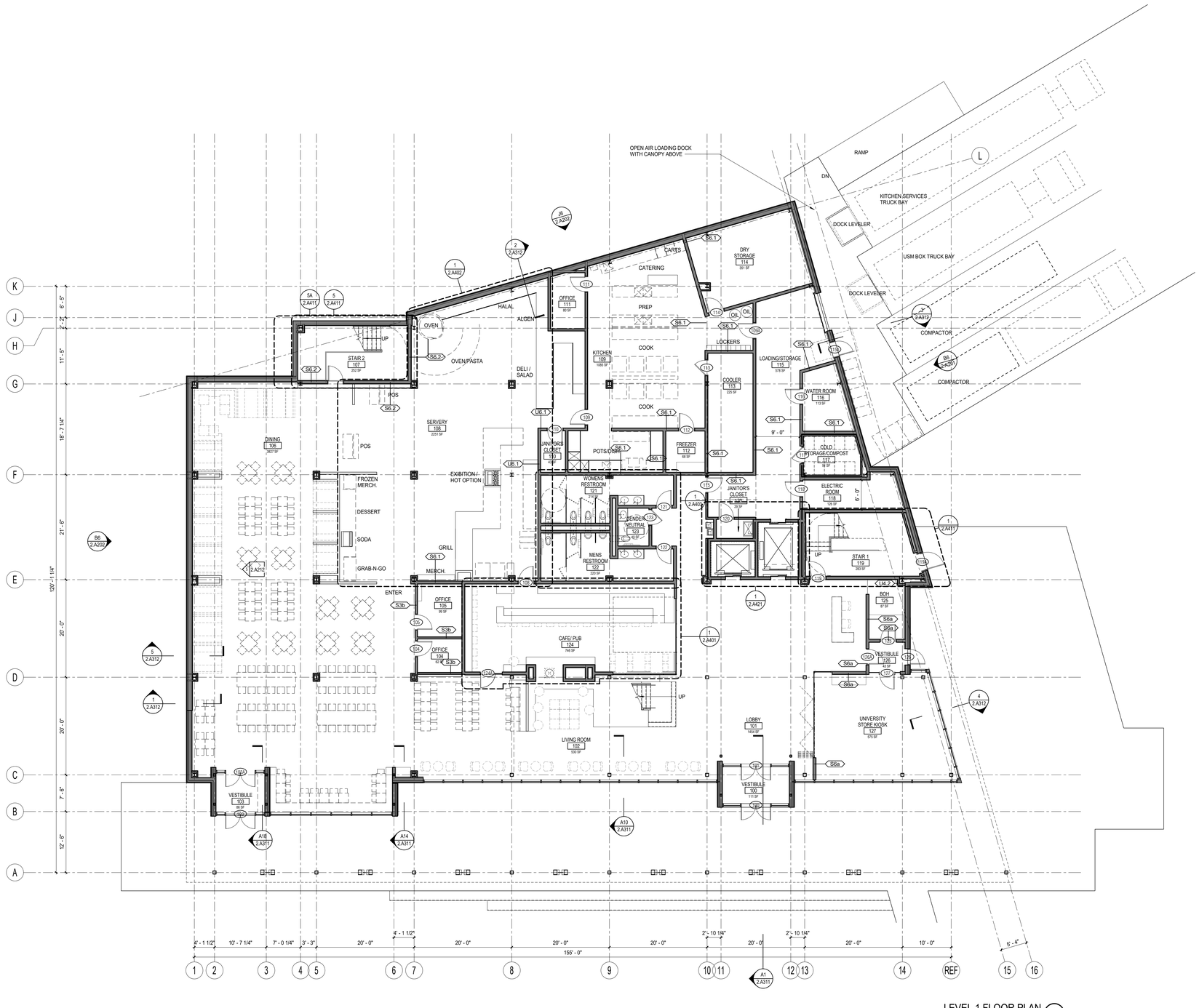

LEVEL 1 FLOOR PLAN (1)
1/8" = 1'-0"

PLAN NOTES:

1. SEE G-001 FOR GENERAL PROJECT NOTES, LEGENDS AND ABBREVIATIONS.
2. SEE G-002 FOR GENERAL MOUNTING HEIGHTS, TOP OF WALL DETAILS AND PARTITION TYPES.
3. CONTRACTOR IS RESPONSIBLE FOR REVIEWING CODE COMPLIANCE PLANS AND NOTIFYING THE ARCHITECT OF CONFLICTS BETWEEN WHAT IS IN THE FIELD AND ON THE CODE DOCUMENTS.
4. DIMENSIONS ARE FACE OF CONCRETE, FACE OF MASONRY AND CENTERLINE OF STUD, UNLESS NOTED OTHERWISE.
5. DOOR JAMBS (HINGE SIDE) SHALL BE 4" FROM CORNER IN STUD PARTITIONS AND 8" FROM CORNER IN MASONRY PARTITIONS UNLESS NOTED OTHERWISE.
6. REFER TO DETAILS FOR ADDITIONAL DIMENSIONING INFORMATION.
7. REFER TO ENLARGED PLANS FOR PARTITION TYPES AND DIMENSIONS IN AREAS WHICH ARE DETAILED AT A LARGER SCALE.
8. FURNITURE AND OWNER PROVIDED EQUIPMENT ARE INDICATED BY DASHED LINE TYPE.
9. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF OWNER PROVIDED EQUIPMENT INCLUDING BUT NOT LIMITED TO DIMENSIONAL INFORMATION, AND MECHANICAL, ELECTRICAL AND PLUMBING REQUIREMENTS.

KEYNOTE

REV	DESCRIPTION	DATE
	PROGRESS	07-26-20

CURRENT ISSUE STATUS:

PROJECT NORTH:

SMRT Architects and Engineers
144 Fore Street
Portland, Maine 04101
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www.smrtinc.com

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PROJECT LOCATION

LEVEL ONE - FLOOR PLAN

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	XXX	PROJECT NO:	00000
A/E OF RECORD:	Checker		
JOB CAPTAIN:	XXX		
DRAWN BY:	Author		
SMRT FILE:	2.A101-00000	SHEET No.	2.A101

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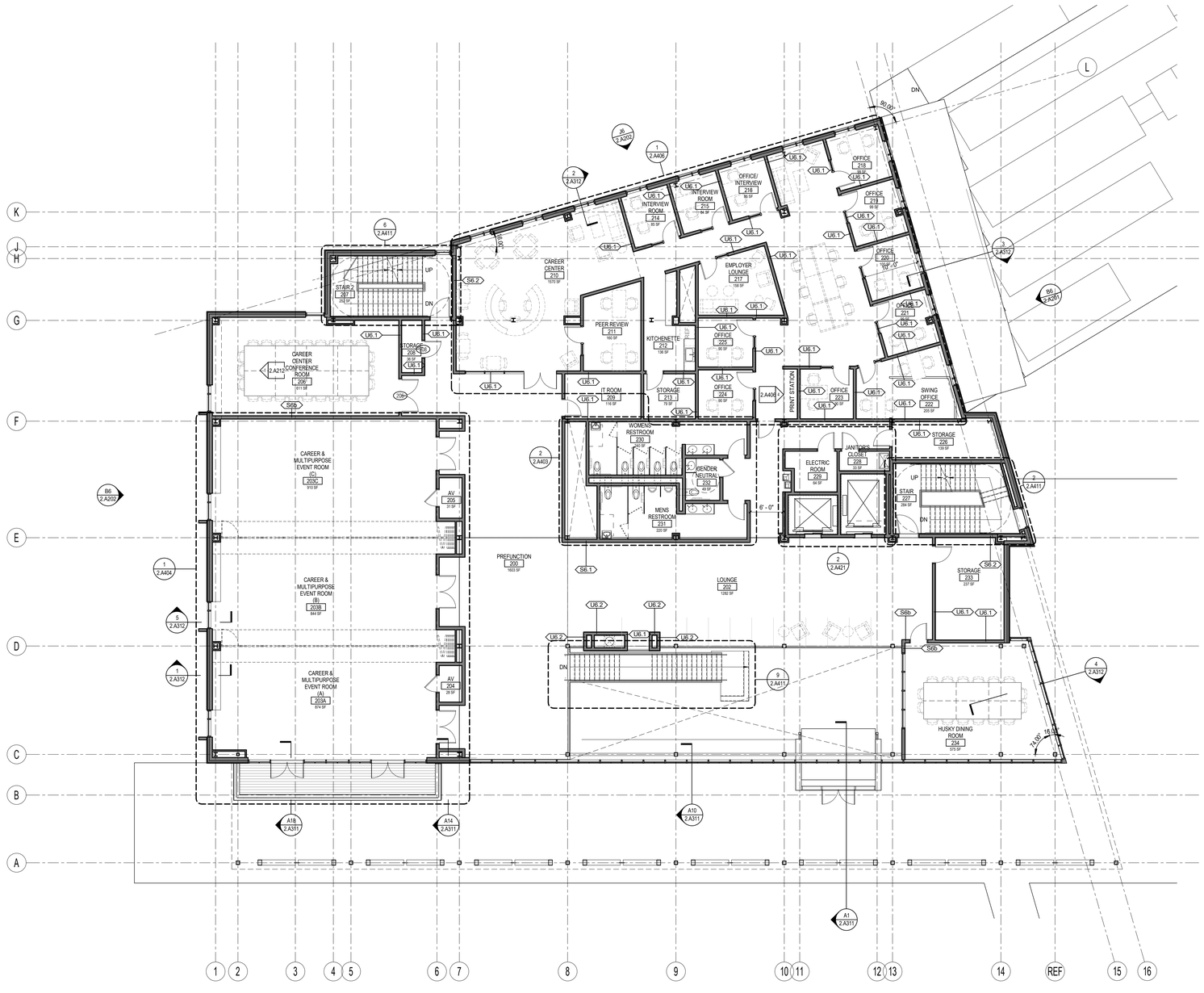

LEVEL 2 - FLOOR PLAN
1/8" = 1'-0"

REV	DESCRIPTION	DATE

PROGRESS
07-26-20
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PROJECT LOCATION

LEVEL TWO - FLOOR PLAN

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"
SCALE: AS NOTED

PROJECT MANAGER:	XXX	PROJECT NO:	00000
A/E OF RECORD:	Checker		
JOB CAPTAIN:	XXX		
DRAWN BY:	Author		
SMRT FILE:	2.A102-00000	SHEET No.	2.A102

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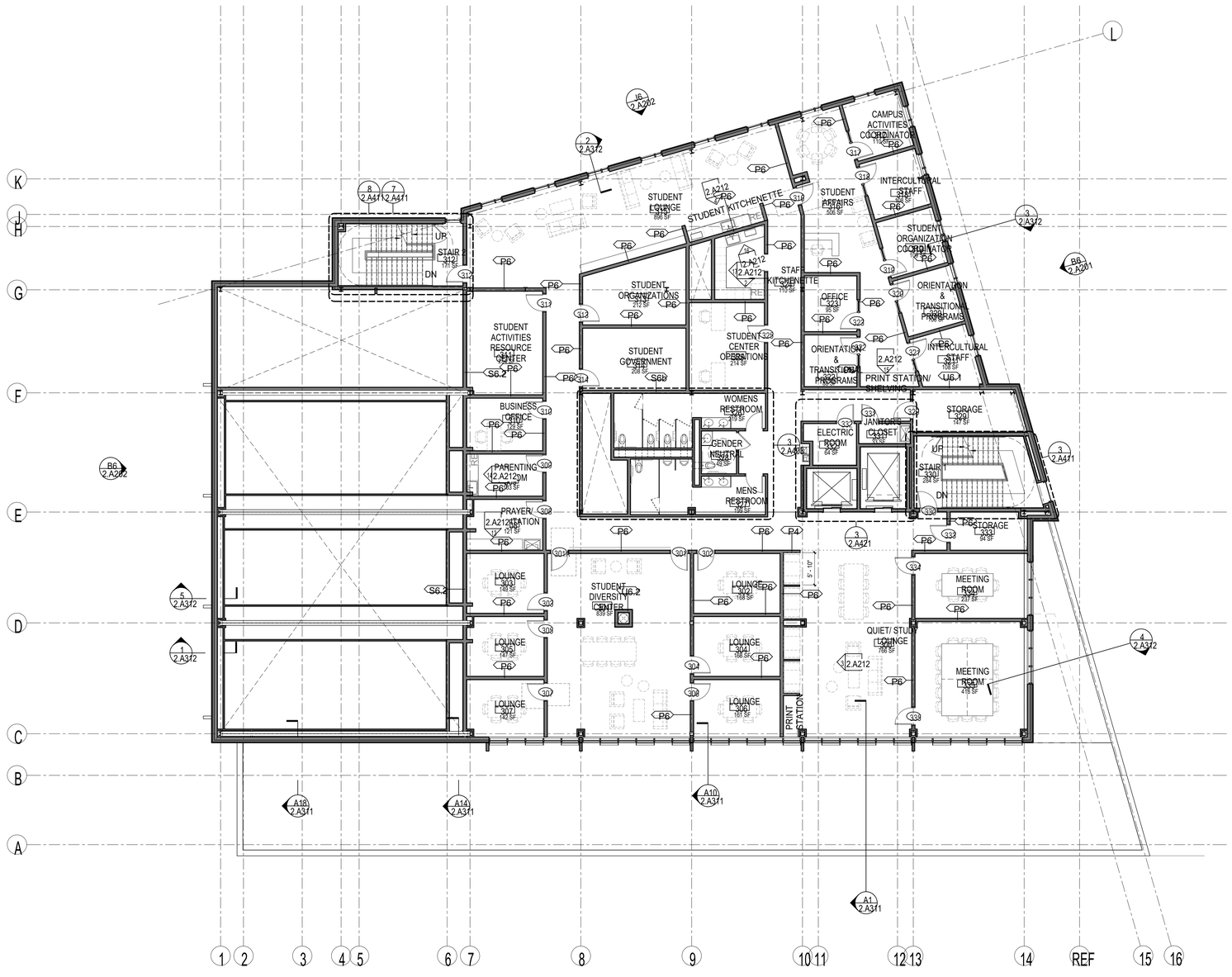

AFL03 - FLOOR PLAN

1/8" = 1'-0"

REV	DESCRIPTION	DATE

PROGRESS
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CENTER & PORTLAND COMM

PROJECT LOCATION

LEVEL THREE - FLOOR PLAN

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	XXX
PROJECT NO:	00000
A/E OF RECORD:	Checker
JOB CAPTAIN:	XXX
DRAWN BY:	Author
SMRT FILE:	2.A103-00000

2.A103

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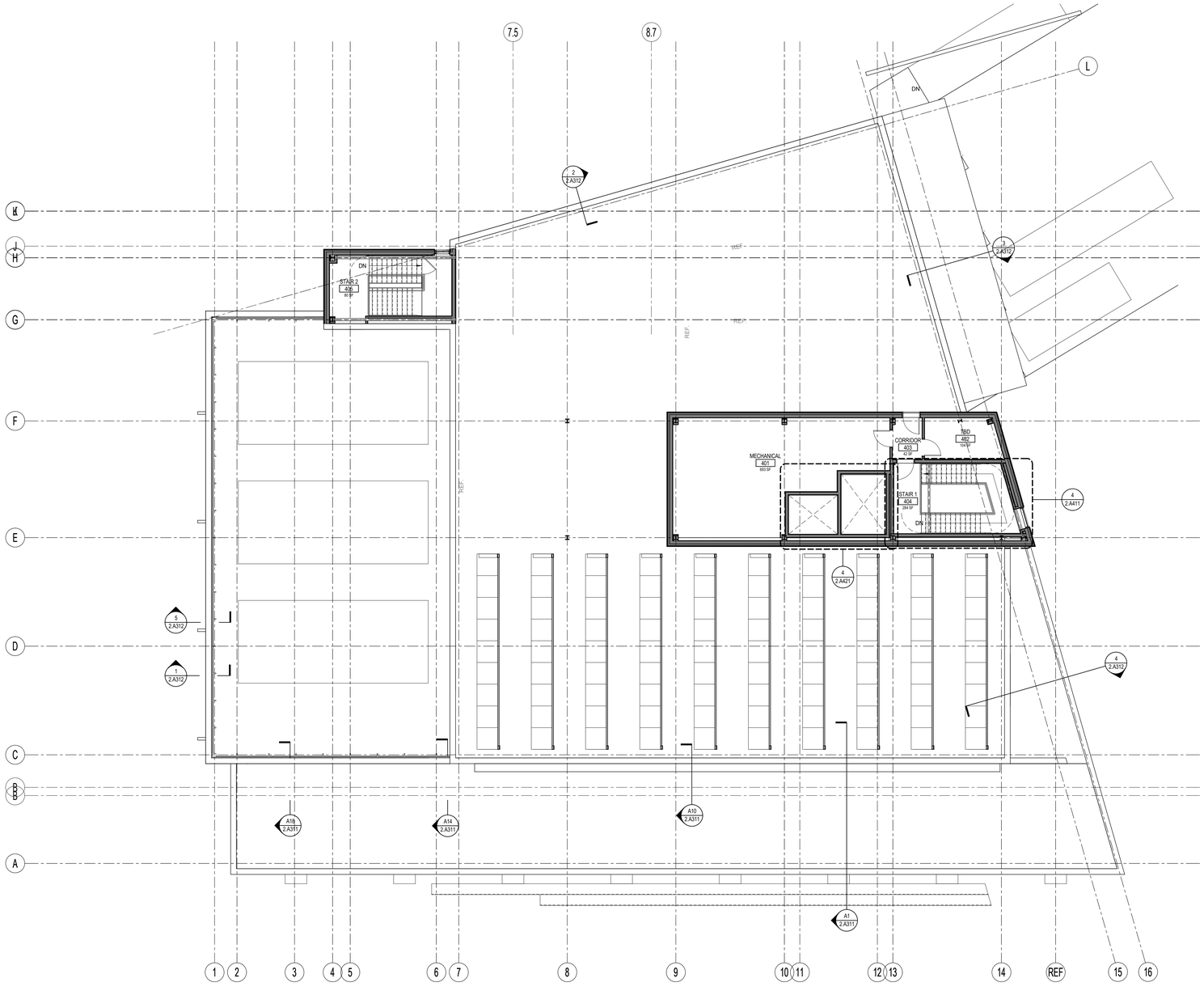

AFL04 - PENTHOUSE PLAN 1
1/8" = 1'-0"

REV	DESCRIPTION	DATE

PROGRESS
07-26-20
CURRENT ISSUE STATUS:

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PROJECT LOCATION

PENTHOUSE - FLOOR PLAN

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	XXX	PROJECT NO:	00000
A/E OF RECORD:	Checker		
JOB CAPTAIN:	XXX		
DRAWN BY:	Author		
SMRT FILE:	2.A104-00000	SHEET No.	2.A104

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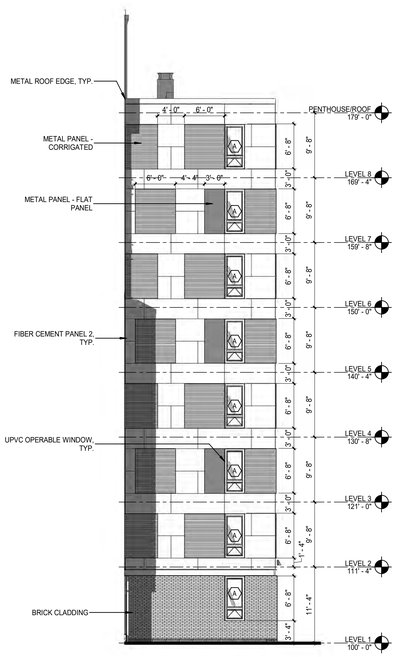
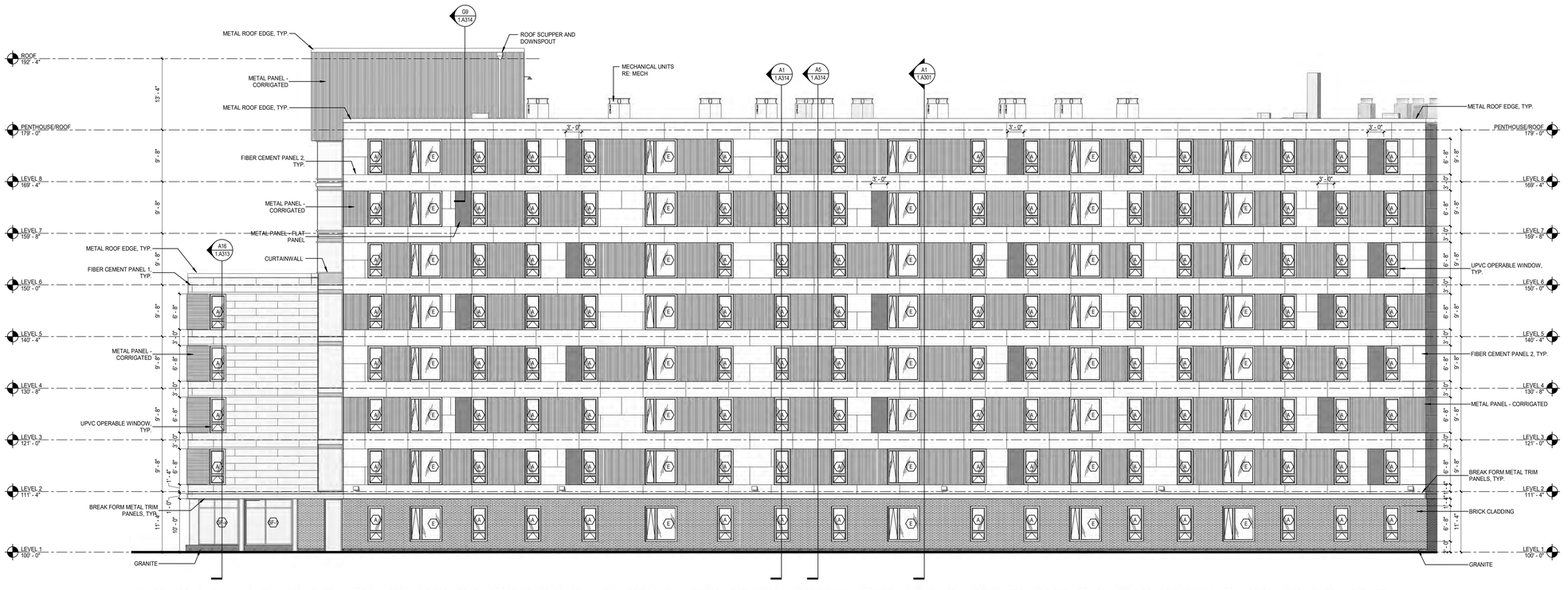
36x48

SOUTH ELEVATION - BEDFORD STREET J6
1/8" = 1'-0"



SOUTH ELEVATION - PARTIAL J1
1/8" = 1'-0"



EAST ELEVATION - DURHAM STREET A1
1/8" = 1'-0"

ELEVATION NOTES:

1. REFER TO FIRE PROTECTION, MECHANICAL, PLUMBING, ELECTRICAL DRAWINGS FOR ALL RESPECTIVE FIXTURE/ DEVICE LOCATIONS, COUNTS, & ASSOCIATED RECESSED BOXES AT EXTERIOR WALLS.
2. SEE SPECIFICATIONS FOR PREPARATION OF WALL MOUNTING SURFACE FOR INSTALLATION OF EXTERIOR FIXTURES.
3. PROVIDE MASONRY CONTROL JOINTS AT ALL INSIDE MASONRY CORNERS AND ALIGN WITH OPENINGS WHEN POSSIBLE.

REV	DESCRIPTION	DATE

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7-17-20
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PROJECT LOCATION

EXTERIOR ELEVATIONS
SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"
SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	PDC		
JOB CAPTAIN:	SDL		1.A201
DRAWN BY:	SDL/CAF		
SMRT FILE:	1.A201-19206	SHEET No.	

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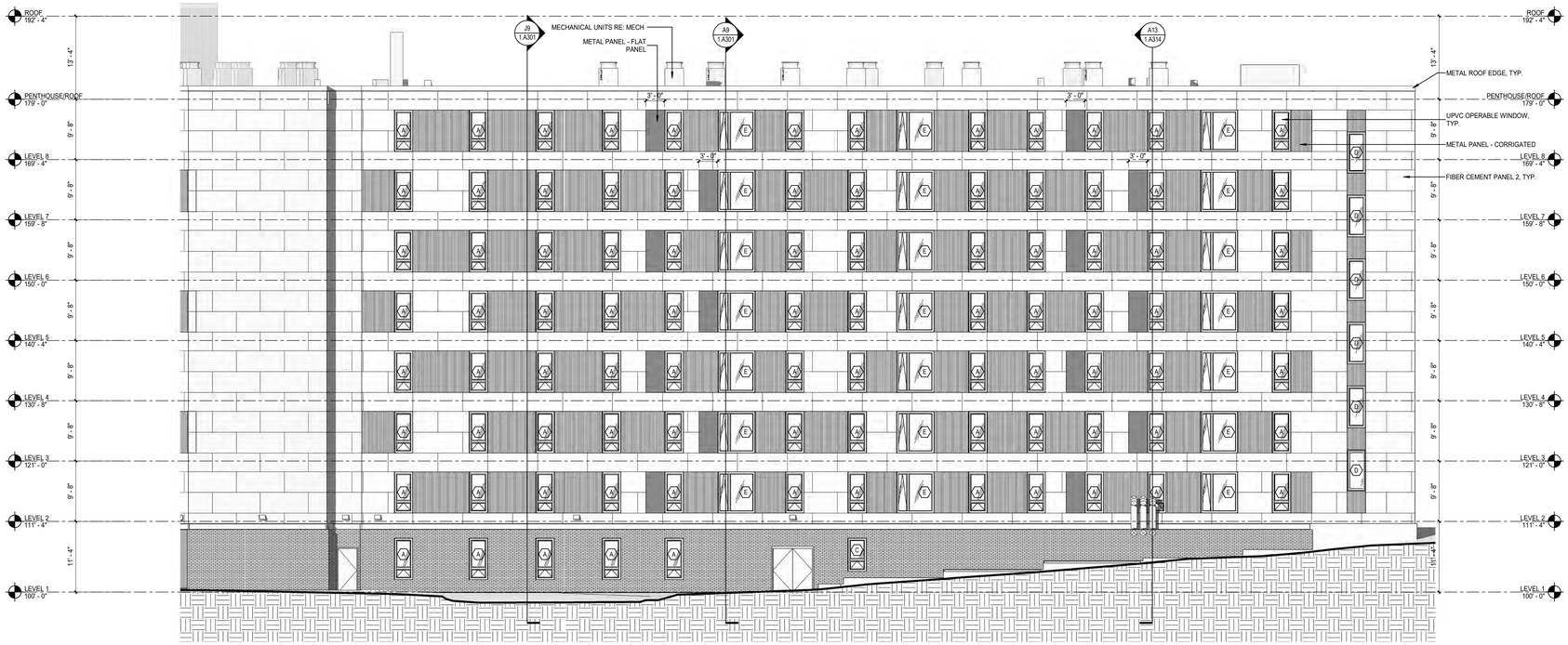
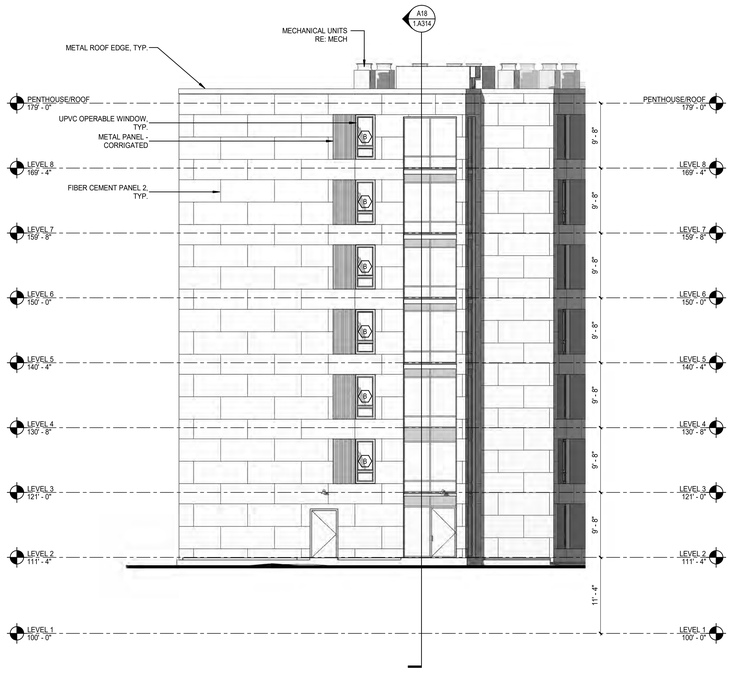
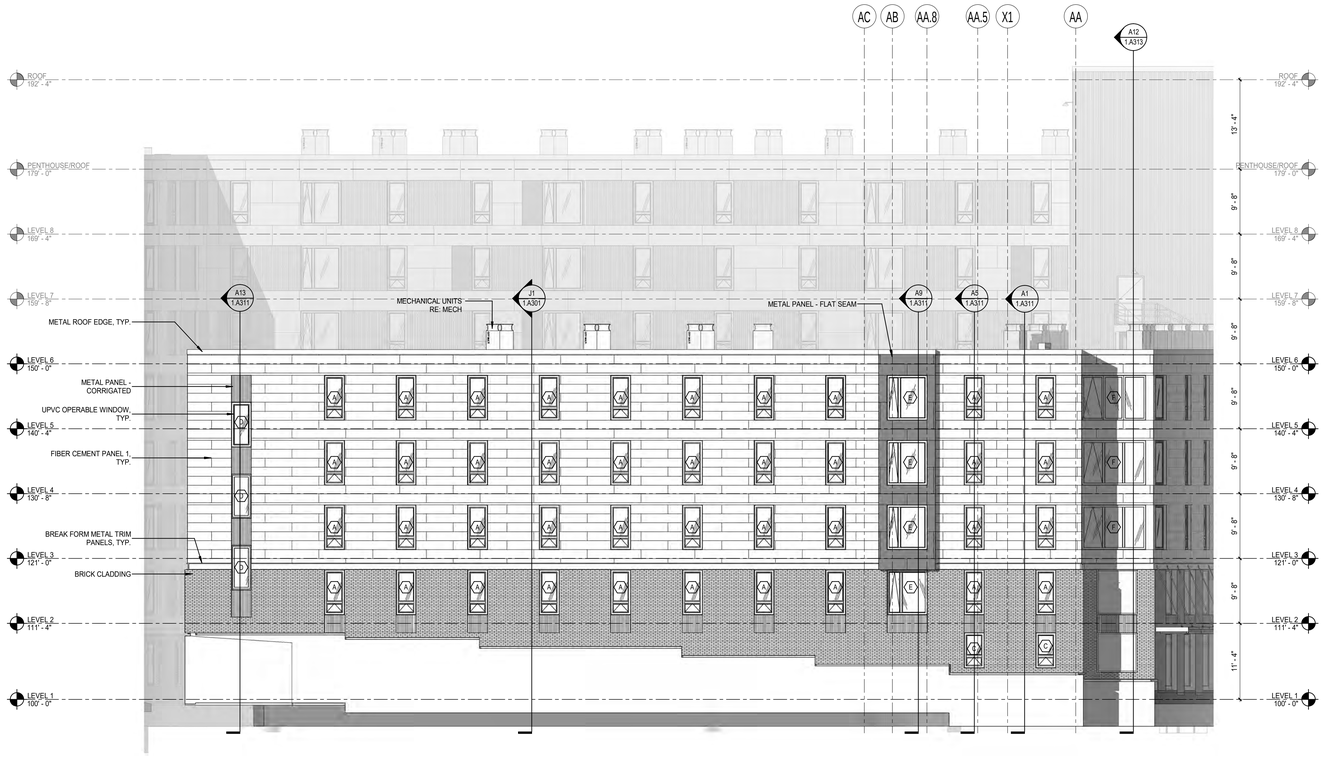


NORTH ELEVATION J1
1/8" = 1'-0"



WEST ELEVATION A14
1/8" = 1'-0"



WEST ELEVATION A1
1/8" = 1'-0"

ELEVATION NOTES:

1. REFER TO FIRE PROTECTION, MECHANICAL, PLUMBING, ELECTRICAL DRAWINGS FOR ALL RESPECTIVE FIXTURE/ DEVICE LOCATIONS, COUNTS, & ASSOCIATED RECESSED BOXES AT EXTERIOR WALLS.
2. SEE SPECIFICATIONS FOR PREPARATION OF WALL MOUNTING SURFACE FOR INSTALLATION OF EXTERIOR FIXTURES.
3. PROVIDE MASONRY CONTROL JOINTS AT ALL INSIDE MASONRY CORNERS AND ALIGN WITH OPENINGS WHEN POSSIBLE.

REV	DESCRIPTION	DATE

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PROJECT LOCATION

EXTERIOR ELEVATIONS

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	PDC		
JOB CAPTAIN:	SDL		1.A202
DRAWN BY:	SDL/CAF		
SMRT FILE:	1.A202-19206	SHEET No.	

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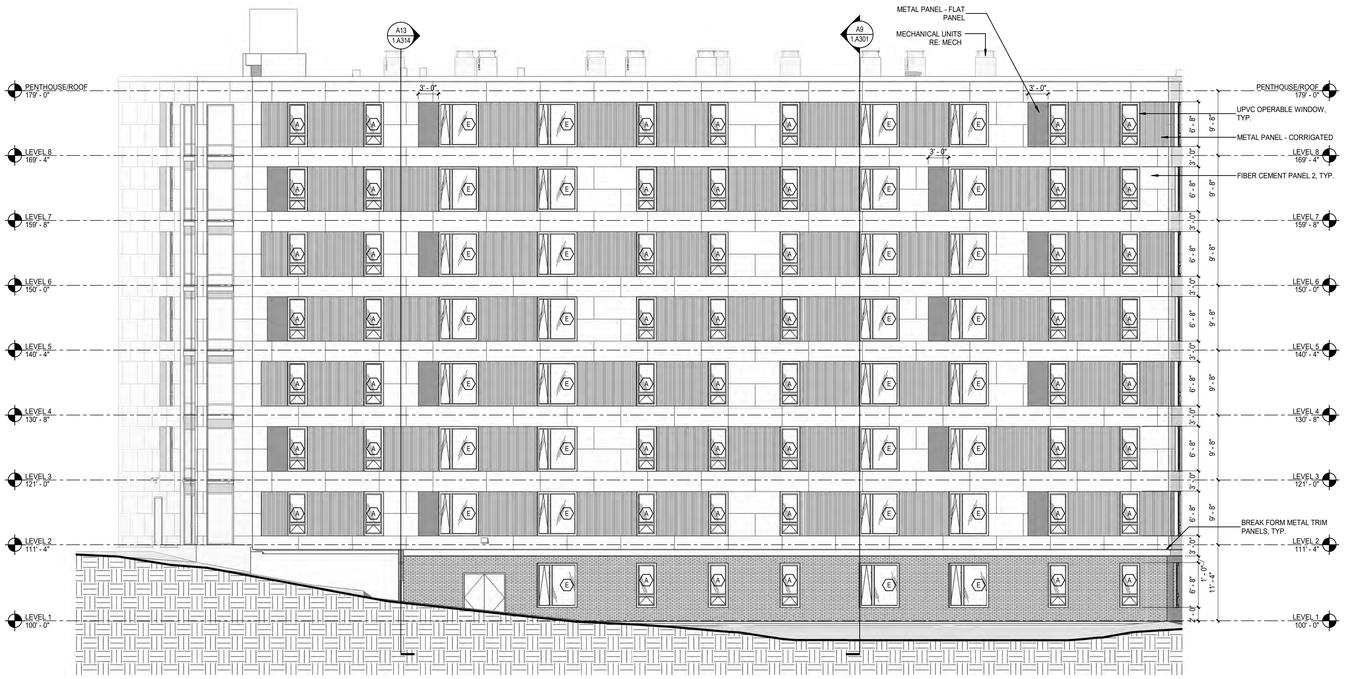
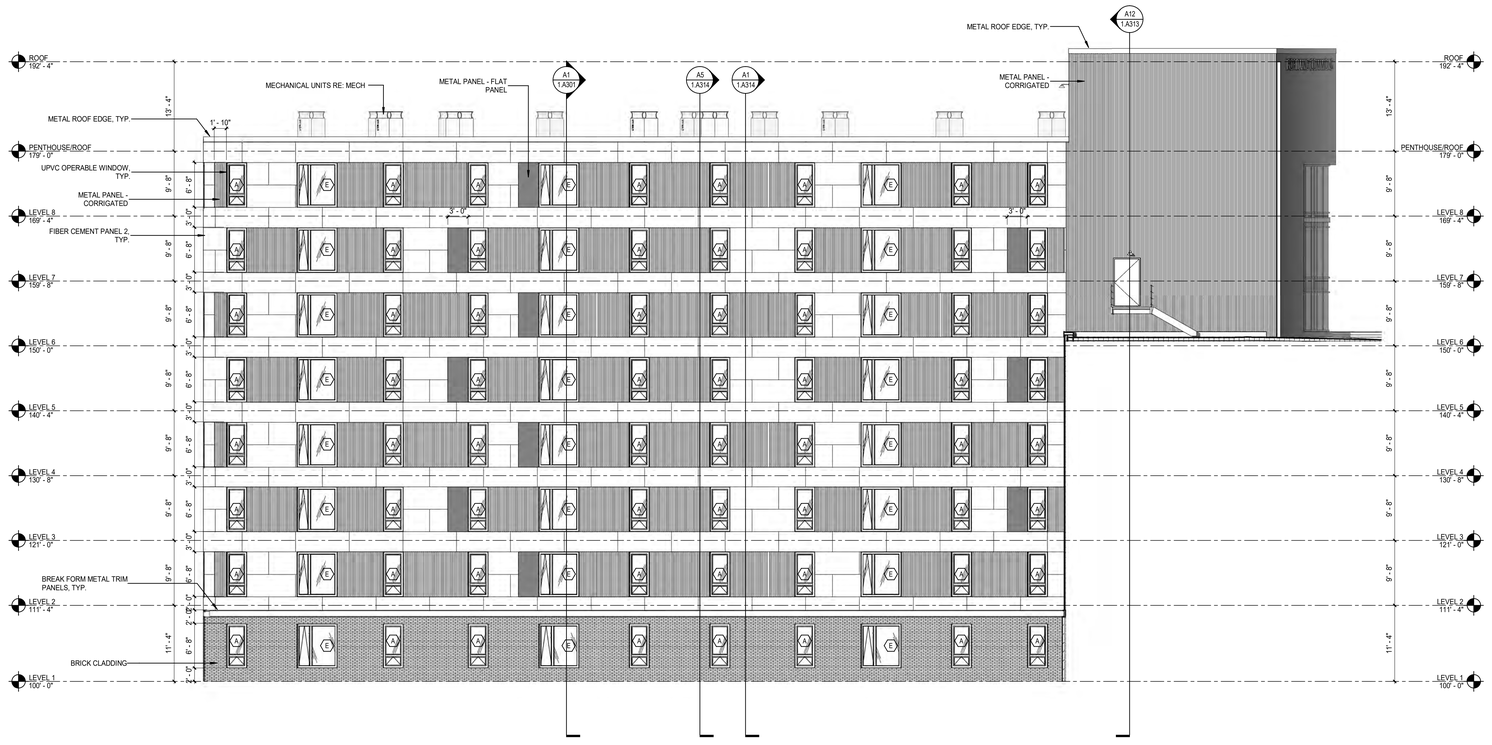


SOUTH ELEVATION - COURTYARD J1
1/8" = 1'-0"



WEST ELEVATION - COURTYARD A1
1/8" = 1'-0"

ELEVATION NOTES:

1. REFER TO FIRE PROTECTION, MECHANICAL, PLUMBING, ELECTRICAL DRAWINGS FOR ALL RESPECTIVE FIXTURE/ DEVICE LOCATIONS, COUNTS, & ASSOCIATED RECESSED BOXES AT EXTERIOR WALLS.
2. SEE SPECIFICATIONS FOR PREPARATION OF WALL MOUNTING SURFACE FOR INSTALLATION OF EXTERIOR FIXTURES.
3. PROVIDE MASONRY CONTROL JOINTS AT ALL INSIDE MASONRY CORNERS AND ALIGN WITH OPENINGS WHEN POSSIBLE.

REV	DESCRIPTION	DATE

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PROJECT LOCATION

EXTERIOR ELEVATIONS
SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"
SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	PDC		
JOB CAPTAIN:	SDL		1.A203
DRAWN BY:	SDL/CAF		
SMRT FILE:	1.A203-19206	SHEET No.	

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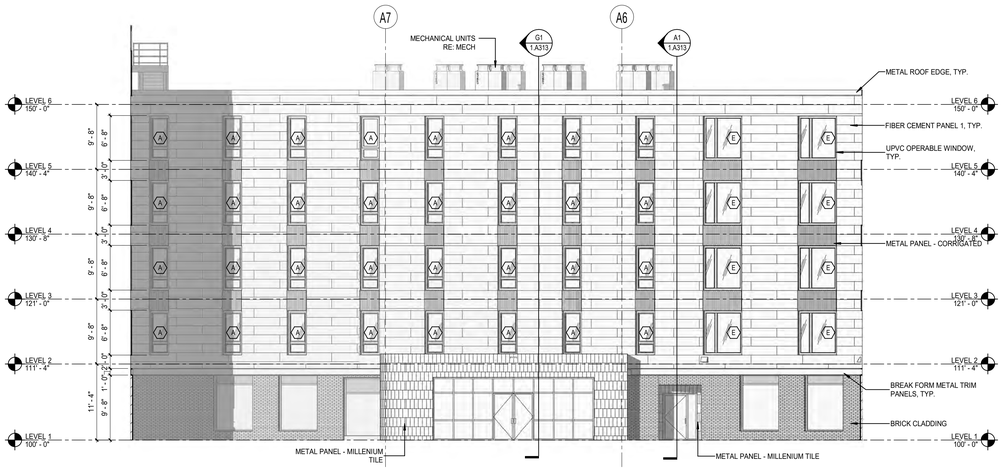
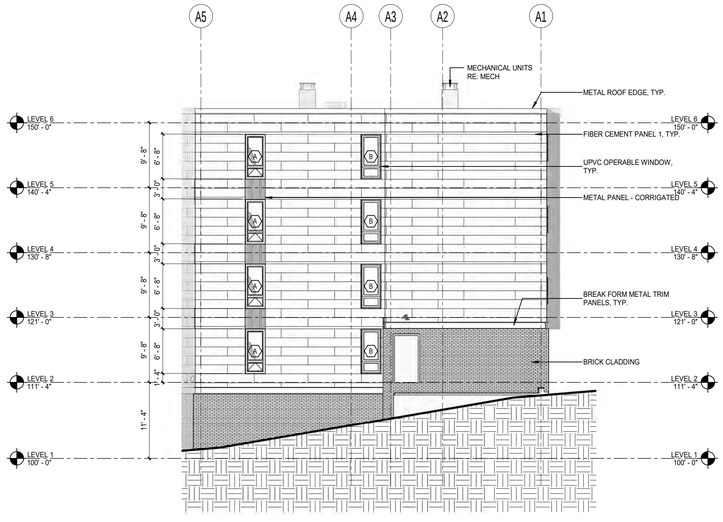


NORTH ELEVATION - COURTYARD J11
1/8" = 1'-0"

EAST ELEVATION - COURTYARD J1
1/8" = 1'-0"



NORTH ELEVATION - PARTIAL A1
1/8" = 1'-0"

ELEVATION NOTES:

1. REFER TO FIRE PROTECTION, MECHANICAL, PLUMBING, ELECTRICAL DRAWINGS FOR ALL RESPECTIVE FIXTURE/ DEVICE LOCATIONS, COUNTS, & ASSOCIATED RECESSED BOXES AT EXTERIOR WALLS.
2. SEE SPECIFICATIONS FOR PREPARATION OF WALL MOUNTING SURFACE FOR INSTALLATION OF EXTERIOR FIXTURES.
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CAREER & STUDENT SUCCESS CENTER & PORTLAND COMMONS
PROJECT LOCATION

EXTERIOR ELEVATIONS
SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"
SCALE: AS NOTED

PROJECT MANAGER:	KD	PROJECT NO:	19206
A/E OF RECORD:	PDC		
JOB CAPTAIN:	SDL		
DRAWN BY:	SDL/CAF		
SMRT FILE:	1.A204-19206	SHEET No.	1.A204

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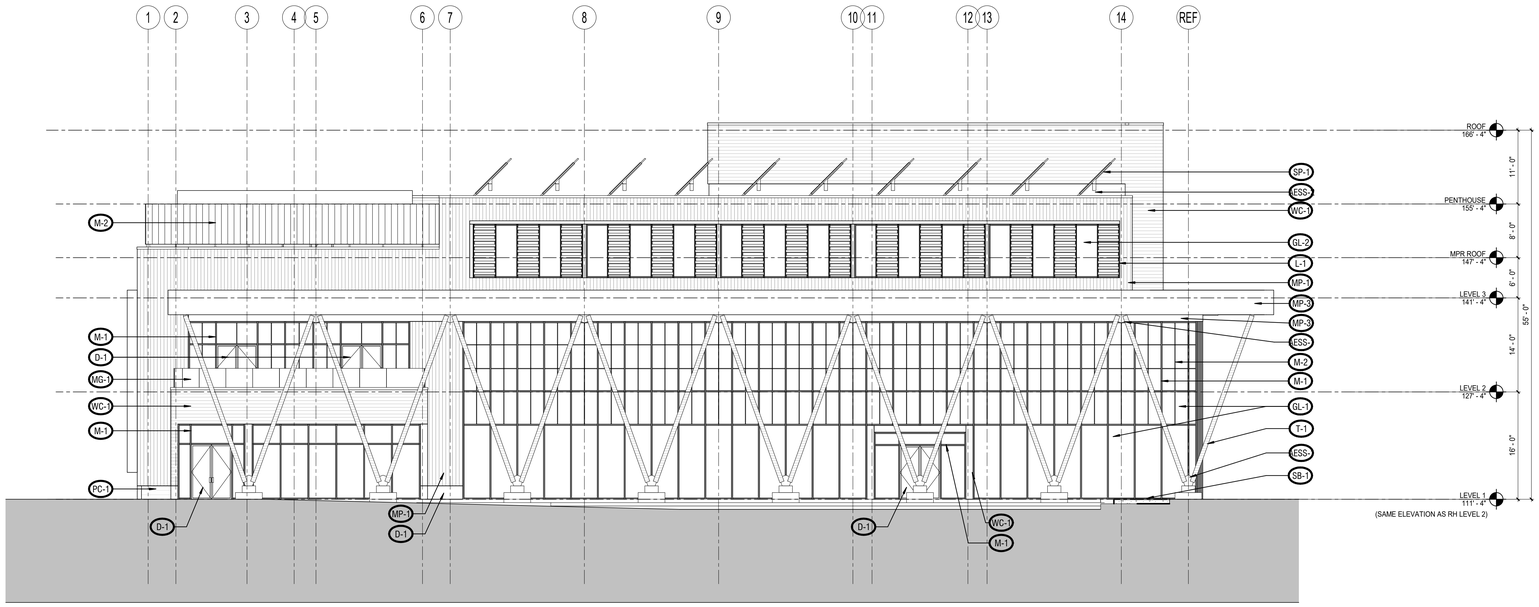

(SAME ELEVATION AS RH LEVEL 2)

South Elevation J6
1/8" = 1'-0"

East Elevation B6
1/8" = 1'-0"

ELEVATION KEY NOTE

NOTE:
SEE EXTERIOR MATERIALS FINISH SCHEDULE ON A200FS FOR COLOR AND FINISH OF EACH KEY NOTE EXTERIOR MATERIAL

TAG	MATERIAL	DESCRIPTION
ESS-1	EXPOSED STRUCTURAL STEEL (PAINTED)	EXPOSED STRUCTURAL STEEL (EXPOSED TO VIEW)
ESS-2	EXPOSED STRUCTURAL STEEL	SOLAR PANEL & SCREEN WALL FRAMING
CP-1	ALUMINUM COPING CAP	
CP-2	ALUMINUM COPING CAP	
D-1	ALUM. FRAMED GLASS DOOR AT CURTAINWALL	HEAVY DUTY ALUM FRAMED DOOR WITH 1" INSULATING GLASS
D-2	HOLLOW METAL DOOR TYPE 1	INSULATED HOLLOW METAL DOOR
D-3	OVERHEAD COILING DOOR	
GL-1	GLAZING TYPE 1	
GL-2	GLAZING TYPE 2	
GL-3	GLAZING TYPE 3	
L-1	WOOD LOUVER TYPE 1	
M-1	CURTAINWALL MULLION TYPE 1	
M-2	CURTAINWALL MULLION TYPE 2	
M-3	CURTAINWALL MULLION TYPE 3	
MG-1	METAL GUARDRAIL	
MP-1	METAL PANEL TYPE 1	CORRUGATED METAL PANEL
MP-2	METAL PANEL TYPE 2	SCREEN WALL
MP-3	METAL PANEL TYPE 3	FLAT METAL WALL PANELS
PC-1	PRECAST CONCRETE	
S-1	SIGNAGE	N.I.C. (BY TENANT)
SB-1	STAINLESS STEEL	STAINLESS STEEL BASE
SP-1	SOLAR PANELS	
SBX	SHADOW BOX ASSEMBLY	TYPE GL-1 GLAZING, ALUMINUM PANEL, INTEGRAL INSULATION AND GALVANIZED STEEL AIR SEAL SHEET (REFER TO PROJECT SPEC. AND DETAILS ON A410-A419)
T-1	TIMBER COLUMNS	8" x 8"
WC-1	RAINSCREEN WOOD SIDING	BASIS OF DESIGN - CAMBIA THERMALLY MODIFIED POPLAR SIDING IN CLIP PROFILE

GENERAL NOTE

1. ALL CURTAINWALL SYSTEM TO BE UNITIZED ALUM. CURTAINWALL WITH HIGH THERMAL PERFORMANCE, REFER TO PROJECT SPECIFICATION FOR DESIGN AND PERFORMANCE CRITERIA.

2. REFER TO PROJECT SPECIFICATION FOR DESIGN AND PERFORMANCE CRITERIA OF GROUND FLOOR STOREFRONT SYSTEM.

3. REFER TO PROJECT SPECIFICATION FOR ASSEMBLY OF GLAZING TYPES 1-6

4. REFER TO PROJECT SPECIFICATION AND PROJECT DETAILS FOR UNITIZED CURTAIN WALL AND STOREFRONT MULLION CONFIGURATIONS, ASSEMBLIES AND PERFORMANCE CRITERIA

REV	DESCRIPTION	DATE

PROGRESS
07-26-20
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PROJECT LOCATION

EXTERIOR ELEVATIONS

SHEET TITLE:

0" 1/4" 1/2" 1" 2" 3"

SCALE: AS NOTED

PROJECT MANAGER:	XXX	PROJECT NO:	00000
A/E OF RECORD:	Checker		
JOB CAPTAIN:	XXX		2.A201
DRAWN BY:	Author		
SMRT FILE:	2.A201-00000	SHEET No.	

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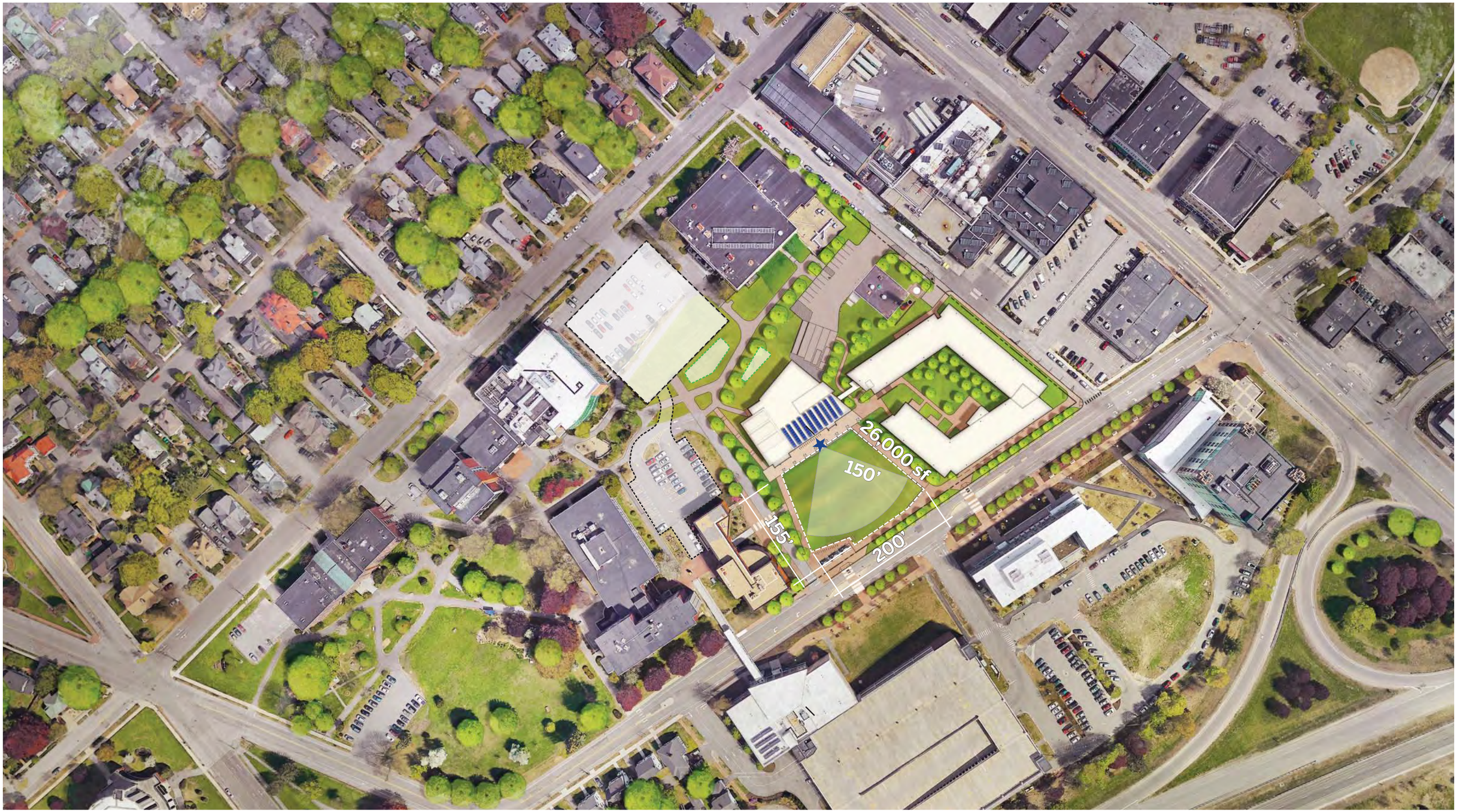
Rendering

Site Plan



Rendering

Site Plan

Existing

Proposed

Rendering

Aerial

Rendering

Aerial

Existing

Proposed

Career & Student Success Center Residence Hall

Overall Bird's Eye

Career & Student Success Center Residence Hall

Bedford Street View in Spring

Career & Student Success Center
Residence Hall
Bedford Street View in Winter

Career & Student Success Center
Residence Hall
Entry View of Residence Community

Career & Student Success Center
Residence Hall
Long View of CSSC from Bedford Street Crosswalk

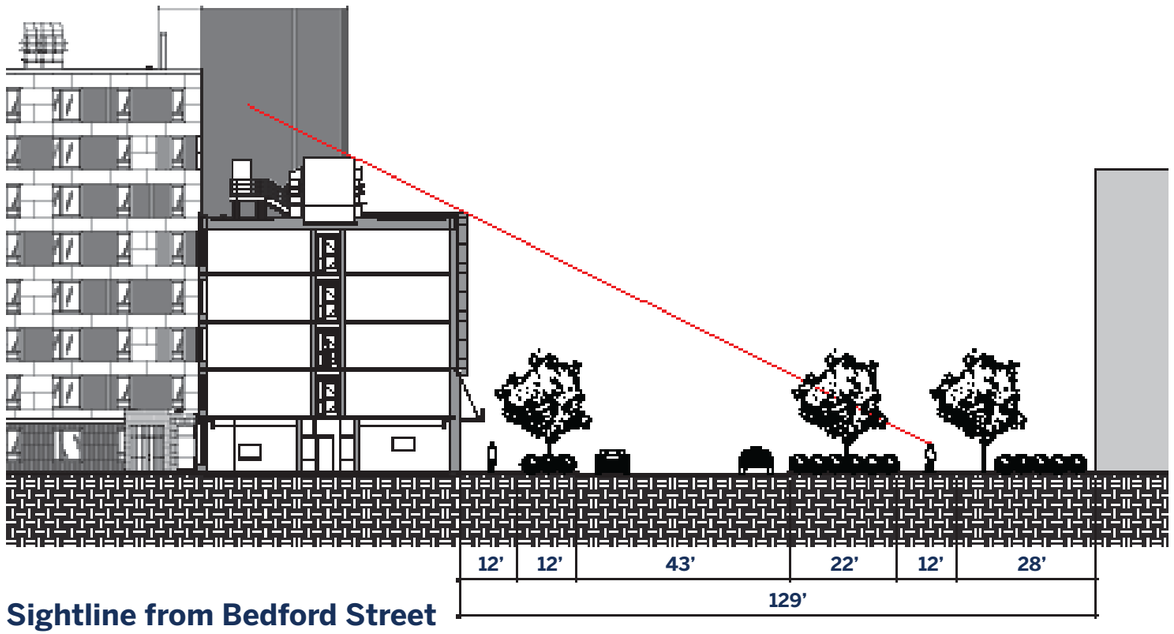
Career & Student Success Center
Residence Hall

Career & Student Success Center South Facade

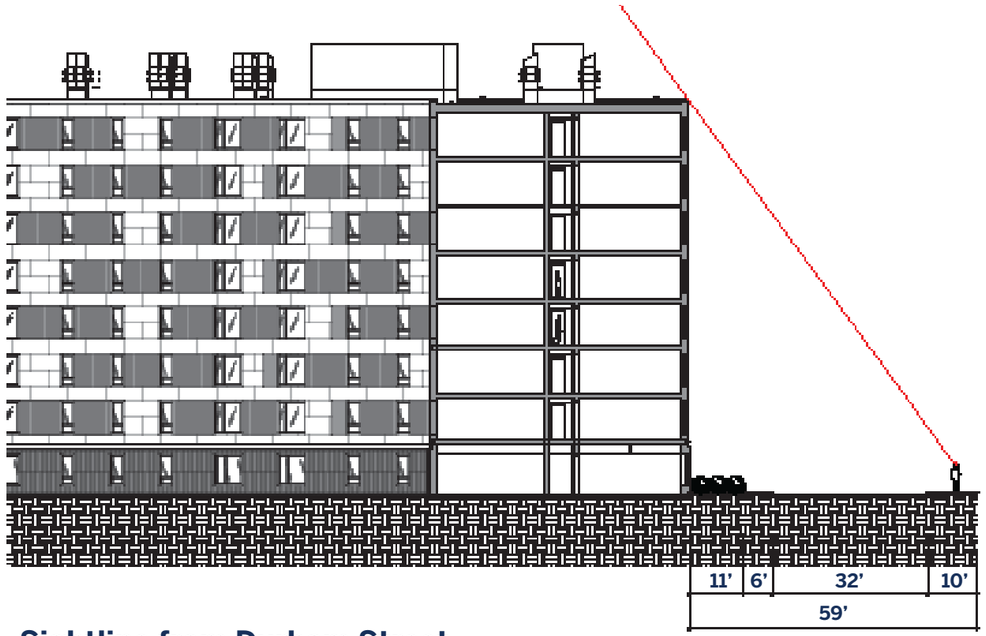
Career & Student Success Center
Residence Hall
Career and Student Success Center Portico

Career & Student Success Center
Residence Hall
Residence Hall View Along Durham Street

Sightline Diagram



Sightline from Bedford Street



Sightline from Durham Street

Portland Maine Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Fwd: USM Traffic Movement Permit

Matthew Grooms <mgrooms@portlandmaine.gov> Thu, Jul 30, 2020 at 10:53 AM
To: Jennifer Munson <jmy@portlandmaine.gov>

Hi Jen,

I am forwarding a public comment for the USM project, PL-001040-2020. Thanks!

Matt

---------- Forwarded message ---------
From: **Elizabeth Burke** <emburke207@gmail.com>
Date: Wed, Jul 29, 2020 at 11:13 PM
Subject: USM Traffic Movement Permit
To: Matthew Grooms <mgrooms@portlandmaine.gov>

From: 5 Oakdale Street
Portland, Maine 04103

29 July 2020

To: Matthew Grooms
Planning Department
City of Portland, Maine
389 Congress Street
Portland, ME 04101

Dear Mr. Grooms,

I would like to request a hearing in the City of Portland regarding USM's desire to move traffic mostly up Falmouth Street.

Most specifically, I want USM to pay for Oakdale Street to become a dead-end street at the junction of Falmouth and Oakdale Street.

Oakdale is a very very old historic neighborhood, now full of families with children. I am not interested in it becoming a part of the fast easy way to get from one way to another.

In fact, so far as I'm concerned, I'd like Falmouth Street to be shut down. Let the University use Bedford Street as its main avenue. Bedford Street belongs to the City of Portland, and also the State of Maine, so the University will have to buy it from the city and/or the State, in order to shut it down. If they want exclusive use of Falmouth Street, they should pay to protect the Oakdale neighborhood.

Very truly yours, Elizabeth M. Burke

--
Matthew Grooms, AICP
Senior Planner
Planning Division
City Hall, 389 Congress Street, 4th Floor
Portland, Maine 04101
(207) 874-8725 (T)
(207) 756-8258 (F)
mgrooms@portlandmaine.gov

Planning and Urban Development Department
Planning Division

Subject: USM Overlay Design Review – 25 Bedford Street

Written by: Caitlin Cameron, Urban Designer

Date of Review: Tuesday, August 4 2020

The USM housing and student center project at 25 Bedford Street was reviewed according to the *City of Portland Design Manual* standards by Caitlin Cameron, Urban Designer against the *USM Campus Design Principles and Standards* (Appendix 3 of the Design Manual).

Design Review Comments*:*
All major and minor development . . . shall be designed to create a ***quality and cohesive campus*** *environment while* ***integrating with and respecting the residential character of surrounding neighborhoods*** *as demonstrated by compliance with the principles and standards . . . included as Appendix 3 of this manual.*

(d) B-2 Commercial Business Zones
Principle A. Campus Design – The project uses contemporary architecture that adequately conveys the uses of the two buildings while relating them to the established campus character in building scale, massing, and the material palette. Overall, the project creates or improves the pedestrian environment with active edges and sidewalk improvements as well as open space amenity. The residential building placement reinforces the street wall and provides an active edge, especially on Bedford Street. The placement of the student center back from the street accomplishes the goal for vital open space and appropriately distinguishes this buildings as having a more public and open use on campus from the more private residential use of the dormitory building. The location of this site is removed from the existing residential context – the buildings are appropriately related to the institutional buildings on Bedford Street.

A1. Campus Edges – the residential hall mediates the need to create active street edges, convey and protect the private use, provide scale transition from low-rise buildings to the mid-rise campus buildings, while also providing a positive gateway entrance experience from the Forest Avenue approach. The project appropriately creates lower height and massing at Bedford Street in dialogue with the Wishcamper and Abromson Center. The building sensitively places the taller portion of the building to the rear/interior of the lot away from the street to make a scale transition. This allows for some visual emphasis at the most visible corner approach with tower elements.

A2. Building Orientation – The buildings are appropriately oriented towards Bedford Street. The student center is creating a distinctive relationship to the street by being set back and allowing for a south-facing quad open space.

A3. Pedestrian Environment – The pedestrian environment on Bedford Street is improved by creating a strong street wall with active frontage and a prominent entry oriented to the street.

The project includes sidewalk and landscape improvements. The quad space creates a flexible open space amenity that provides some relief to the street wall and functional space for many kinds of activity.
A4. Gateways – The two proposed buildings are mid-block from the Forest Ave/Bedford gateway. However, though technically not a gateway location, the residential hall does visually serve as a first impression of the campus for those approaching on Forest Avenue.

A5. Views and Landmarks - The massing arrangement and circulation tower have been well placed, detailed to create visual interest at day and night as viewed from Forest Avenue and Bedford Street. The project does not appear to compete with or interfere with the view corridors to identified landmarks. There are no view corridors here to city buildings or natural resources. See comments below regarding rooftop design and long views.

Principle B. Access and Circulation – This proposal continues to build up an existing street and pedestrian realm. Bedford Street is a primary street on-campus and improvements to the material, circulation, landscape, and open space amenity bring the quality of the streetscape to an appropriate level for this main street status.
B1. Connectivity – The building placement keeps most of the internal campus circulation intact. The quad space does have some grade change but keeps multiple access points and flexibility. The residential buildings, for security reasons, proposes one main entrance oriented to Bedford Street.
B2.Circulation – The circulation diagram shows consideration has been given to the internal circulation through the new quad space and around the student center building. Staff recommend that the university revisit and revise paths through these spaces after observation of desire lines and on-the-ground use of the spaces. The overall building scale and placement allows for reasonable permeability through the campus while improving the experience on Bedford Street.
B3. Multi-modality – The multi-modal nature of Bedford Street is maintained.
B4. Traffic-calming – There is little revision to the roadways. Crosswalk design and pedestrian access along Durham Street are being evaluated by DPW peer review.
B5. Sidewalks - Bedford Street appropriately has wide sidewalks to meet this standard. However, the applicant proposes concrete instead of brick. This standard calls for brick pavers which staff support for visual continuity on Bedford Street where brick was previously introduced with the sidewalk improvements on the opposite side of the street. Durham Street is a secondary street with little anticipated pedestrian traffic.
B6. Street Lights – The proposal will continue with the established fixture selection already found on campus.

Principle C Parking, Loading, and Service Areas – parking structures/lots are not included within this proposal
C1. Structures – n/a
C2. Active Uses – n/a
C3. Decks and Ramps – n/a
C4. Surface Lots – n/a
C5. Loading and Service Areas – the loading and service areas for both buildings are located off Durham Street to the rear/interior of the site and away from street view. The landscape plan

shows minimal landscaping/screening of these features relying on the buildings to provide the screen from the public rights-of-way.
C6. Utility Services – generators and transformers are located in a rear service area between the two buildings and out of view of the public rights of way. Other utilities are provided underground. Rooftop systems are consolidated and placed away from building edges to reduce visual impact from the street. Sight line diagrams show these units will not be visible from the immediate surroundings of the buildings (see sightline diagram and overall birdseye view). However, some long views from eastbound Bedford Street and approaching on Forest Avenue will be able to see these units which are numerous and unscreened. The standard emphasizes impacts to residential areas – the impact on neighboring residential properties is not determined to be adverse.

Principle D Architectural Design – USM chose with this proposal to create visual connection to the more recent campus buildings such as the Wishcamper and Abramson Center since this streetscape and these buildings are the most immediate visual relationship. Buildings on the USM campus do vary in era and style. Some consistent characteristics include buildings of similar scale, massing, and height. Most buildings include a simple material palette (this varies from red brick, yellow brick, and metal panel, curtain wall). Many of these institutional buildings include a high level of fenestration or curtain wall.
D1. Height – The proposed building heights are comparable to the existing scale of campus buildings. The residential hall appropriately places the taller massing back from the street. The student center is a lower height appropriately conveying its use as a more "civic" and open building compared with the residential or academic buildings.
D2. Setbacks – The residential building maintains an urban streetwall with no setback. The campus center is placed back from the street to create the quad open space meeting the standard regarding a landscape design feature as an exception to the setback standard.
D3. Stepbacks – n/a
D4. Massing – The residential building breaks the massing by stepping up the height towards the rear/interior of the lot. This creates a transition of scale as well as a more visually interesting corner condition. Upper story bays on Bedford Street convey the residential use of the building and provide massing variation/visual interest to what is a long façade. High levels of fenestration at the street, circulation towers, and communal spaces provide connection between the street and the building interior. Durham Street includes residential units near the street and is therefore less open, exposed or visually accessible. This reinforces the hierarchy of Bedford as the front orientation for the building. Long expanses of façade are detailed either with bays, material changes, or fenestration.
D5. Entrances – The primary entrance to both buildings are oriented to Bedford Street. In the case f the student center, this is exaggerated by a tall portico space. The high level of fenestration and canopy bring emphasis and legibility to both residential and student center entrances.
D6. Windows - The standards around level of transparency and % fenestration appear to be met. The projects successfully mediate between providing visual interest and connection of activity to the street with balancing the private nature of the residential use.
D7. Materials – The applicant chose a more contemporary palette that visually comports with the Wishcamper and Abramson buildings. This includes a grey material palette with a high level of glazing and use of metal. This is appropriate in this particular streetscape given the immediate context. These buildings are not immediately adjacent to residential neighborhoods

or sensitive uses or historic architecture. The goal of future development here is to convey the 21st century campus which includes goals of sustainability and a commitment to its relationship to Maine – geography, culture, economy. Though elements such as exposed timber are not common in urban architecture or the character of Portland's downtown, staff were able to support this departure from some of the traditional material choices in order to distinguish the student center use and convey the commitment to sustainability and connection to Maine materials and natural resources. See comments above regarding rooftop appurtenances.

D8. Signage – n/a

D9. Historic Structures – n/a

D10 Original Residential Structures – n/a

WRIGHT-PIERCE
Engineering a Better Environment

MEMORANDUM

TO:	Matt Grooms, Planner	**DATE:**	4/14/2020
FROM:	Michael Guethle, PE	**PROJECT NO.:**	20309A
SUBJECT:	25 Bedford Street – Level III Site Plan, PL-001040-2020		

Wright-Pierce has reviewed the initial Level III Site Plan Application information provided for the redevelopment at 25 Bedford Street, as defined in the above subject line. The proposed project is located on a 4.7+/- acre site bound by Bedford Street, Durham Street, and private abutters. The proposed project includes redevelopment of existing campus facilities with new campus facilities, including a student success center, residential uses, developed outdoor spaces, new pedestrian connectivity, and appurtenant needs such as maintenance access and utility connections.

Documents Reviewed by Wright-Pierce:

- Level III Site Plan application, dated (most recent) March 27, 2020
- Engineering Permitting Plans, uploaded (most recent) March 9, 2020

Comments:

For stormwater treatment, Level III Site Plan applications with the City of Portland must submit a stormwater plan pursuant to the regulations of MaineDEP Chapter 500 Stormwater Management Rules. This includes conformance with the Basic, General, and Flooding Standards (Ref: Technical Manual, Section 5. II. Applicability in Portland. C. a.; and Ref: City of Portland Code of Ordinances Sec. 14-526. Site Plan Standards, (b). 3. b.)

1) Basic Standard: Per the City's Technical Manual *Portland Stormwater Management Standards And Maine Dep Chapter 500 Stormwater Management*, an Erosion & Sediment Control management plan, notes, and details per the Chapter 500 Rules must be provided to meet the Basic Standard.
    a. Erosion and Sedimentation Control best practices were observed on the Erosion and Sediment Control Plan and associated Details. An Inspection, Maintenance, and Housekeeping Plan has been provided with the erosion details and notes.

b. In general, application of erosion and sedimentation control devices is appropriate. The following items need revision or review:
    i. Catch basin inlet protection should include catch basin throat inlet protection where necessary.
    ii. Construction Entrance appears to be located in a low area of the site, near or in a catch basin area. Construction Entrances should ideally not be located in stormwater treatment areas or adjacent to catch basins. It is understood that this entrance is likely located at a critical point for vehicle turning movements, and if the construction entrance cannot be moved, additional detailing on sediment transport mitigation in this location should be included in the construction management plan.
    iii. Construction fence/limit of work appears to not be inclusive of some grading and pavement activities at the western boundary. Perimeter erosion control is recommended on this border as well.
    iv. Check dams should be provided on the southwestern boundary swale.

2) General Standard: The applicant has provided information regarding the size and scope of the project, and has indicated the project is subject to the General Standard under the requirements of the Site Location of Development Act (SLODA). The project is being reviewed under the redevelopment guidelines and requirements.
    a. The applicant has provided an impact analysis to compare pre-development and post-development land use pollutant rankings under MaineDEP redevelopment guidelines. The written analysis indicated that the proposed development had a lower pollutant ranking than the existing site and is therefore required to treat 50% of the proposed site's disturbed surface area.
        i. A summary of pollutant rankings was provided. However, it is not clear which land use is being allocated which pollutant ranking. A visual or written description of site improvements and their allocated pollutant rankings should be provided.

1. Please elaborate on the pollutant ranking selected for the roof areas. It is our understanding that the roof areas are flat, which is typically assigned a pollutant ranking of 3.
2. Please also describe the general use of existing and proposed parking areas to better define their use as low-, medium-, or high-turnover parking areas.

b. High-pollutant surface areas should be prioritized for stormwater treatment under the redevelopment standard. Please provide written or visual understanding of how priority for treatment has been assigned to high-ranking pollutants.

c. One stormwater treatment system is provided as a "quad of lawn area". If the area is meant to be accessed by pedestrians as part of the site, it is suggested that the applicant provide a hardened access location to the basin, and review the proposed grasses to be suitable to both foot traffic, as well as submerged conditions.

d. An executed maintenance contract for the BMP systems is required. Given the difficulty in providing maintenance to courtyard-type stormwater treatment systems, please provide the executed maintenance agreement for this system as part of the application. Maintenance agreements for other treatment systems may be provided as a condition of approval.

3) Grassed Underdrained Soil Filter (GUSF) Design:

a. A bioretention cell detail was provided. Please confirm if this detail is incorporated into the design.

b. Additional design information in the stormwater management report is needed showing the following characteristics:

i. The amount of impervious and developed area conveyed to the GUSF;
ii. Confirmation on the BMP sizing being a minimum of 5% of the impervious surface area and 2% of the developed surface area;
iii. Confirmation of basin areas, depth, media layers, and sizing;
iv. Maintenance access to the courtyard basin in accordance with Chapter 7.1 of the BMP manual;

v. Sizing for sediment pretreatment for walkways and other sanded areas.

c. Additional questions were developed from the HydroCAD calculation submission:

i. GUSF outlets should be reviewed. GUSF outlets should include exfiltration rates in accordance with MaineDEP Chapter 500; underdrains conveying to the outlet control structure; and design for the outlet control structure inlets.

ii. Currently, exfiltration is modeled as a discarded value at 0.01 CFS, and outlets include a 20-foot overflow spillway which was not observed on the plans. Please revise.

iii. The filter basin should drain dry in no less than 24-hours and no more than 48-hours. The applicant has indicated that the filter basin drains 24-hours following the beginning of a rain event, but not that the system drains 24-hours following the basin filling, or following a water quality rain event.

1. Please provide calculations indicating the basin draining 24-hours to 48-hours following either the basin filling to the ponding level, or following a 24-hour, 1-inch water quality rain event.
2. Typically, this will require a reducer to the underdrain orifice, which will be adjusted in the field following construction. Please indicate that any reducer will be field-verified and adjusted in accordance with Chapter 7.1 of the BMP manual.

4) Flooding Standard: The applicant has submitted HydroCAD files indicating the post-development do not exceed the pre-development runoff rates for the facility. However, these calculations will need to be revised based on the above review comments for the GUSF designs.

5) Grading and Drainage:

a. A Maine Construction General Permit will likely be required for the project due to the extent of grading.

b. Typical details should show a maximum 2% cross-slope for sidewalks, crosswalks, and crosswalk portions of driveways and maintenance entrances.

c. Locations of level landings, and maximum slopes for regulated maximum distances, should be provided on the plans for ADA access locations.
d. For catch basin grates and frames to be re-set in the roadway, please provide a standard "dishpan" detail in accordance with the City Technical Manual.
e. Type F basins did not have a sump identified. The City Technical Manual includes a 3-foot sump for basins.
f. Not all pipes have inverts or rim elevations at this time, and were not able to be reviewed.

6) Utility Connections
   a. Ability to serve letters have not been provided for utilities impacted by the proposed project, but have been requested by the applicant for applicable utilities. The applicant has indicated that ability to serve letters will be submitted to Planning upon receipt.
   b. It is understood that grease trap sizing is being reviewed by Department of Public Works. Applicant shall defer to comments from Department of Public Works on this item.
      i. A sewer cleanout should be provided at the intersection between the grease trap and the main sewer line.
      ii. An oil-water separator detail was provided, please confirm if this is the detail for the grease trap. If an oil-water separator is proposed, please confirm its location on the plan.
   c. Standard design for the water and fire system has been provided. Adherence to PWD standards is typically provided by the water utility for water connections, and would be addressed in an ability to serve letter and acceptance through PWD.
   d. Standard design for the electrical and gas utilities has been provided.
      i. An existing gas line is located near CB 2235. Please confirm if the gas in this location is to be abandoned or removed, and if the GUSF adjacent to th gas line will have a liner.

e. Connection to Existing Stormwater Systems: E-mail, or otherwise written, confirmation from the Department of Public Works accepting this connection is requested to confirm that this connection is appropriate under Land Use section 14-526 (b) 3 a. (iv); and 14-526 (c) 3 a.

f. Planting impacts to utilities:
    i. Several plantings are located over underground utilities, or beneath overhead wires. Please confirm how the design incorporates mitigation or prevention for roots impacting underground utilities, or canopy expansion impacting overhead wires.
    ii. For installation adjacent to stormwater BMPs, please confirm how stormwater BMP liners (if any) are incorporated into the design.

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

25 Bedford Street - USM Residents Hall - DPW comments

1 message

Mike Tremblay <mtremblay@portlandmaine.gov> Fri, Apr 10, 2020 at 9:56 AM
To: Matthew Grooms <mgrooms@portlandmaine.gov>

Matt,

Here are DPW's comments for the USM Residents Hall and student center.

- DPW suggests that parking be provided along the new residents hall on Bedford Street. This can likely be provided in the currently proposed 12-foot esplanade. The remaining space should be wide enough for a viable esplanade, or could be reallocated to wider sidewalks along this segment of Bedford Street.

- The sidewalk on Durham Street should be widened to the edge of the City ROW. It is likely that Durham Street will see significantly more pedestrian traffic once the residence hall is occupied.

- A maintenance agreement will be required as the Bedford Street sidewalk is located within USM's property.

- The ADA ramp at the corner of Durham Street and Bedford Street should be reconsidered. Its alignment suggests there may be a crosswalk across Bedford Street where none is provided.

- Proposed spot grades should be provided for all new sidewalks, ramps, and driveways.

- A move-in/move-out traffic management plan should be provided. This plan should include, but not necessarily be limited to, the day(s) of the week that such activity will take place; where loading and unloading will take place; how vehicles will be routed to and from the loading zone(s); what, if any, changes to roadway regulations may be necessary (e.g. converting a roadway to one-way to allow for street parking where none would otherwise exists); etc.

Finally, is Wright Pierce reviewing the water resources aspects of this?

Thanks,
Mike

Mike Tremblay, P.E.
Senior Engineer
Engineering Division
Department of Public Works
City of Portland, ME
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P. 207.874.8881 F. 207.874.8852

Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

USM Student Center and Residence Hall - Initial Traffic Comments

Tom Errico <thomas.errico@tylin.com> Thu, Apr 9, 2020 at 2:51 PM
To: Matthew Grooms <mgrooms@portlandmaine.gov>
Cc: Mike Tremblay <mtremblay@portlandmaine.gov>, Jeremiah Bartlett <JBartlett@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>

Hi Matt – I have conducted a review of application materials and offer the following initial traffic comments.

- According to the Traffic Impact Analysis prepared by VHB dated March 5, 2020 the project would generate new peak hour traffic levels that would require a Traffic Movement Permit (TMP). The trip generation estimate was based upon the residence hall and student center facilities and increases in student enrollment in 2027. The applicant shall submit a Traffic Movement Permit application so that a scoping meeting can be scheduled.
- The Applicant should provide documentation if USM has an existing Traffic Movement Permit. The TMP Application should also include trips associated with site changes implemented over the last 10-years.
- According to the analysis, USM will experience an increase of between 95 and 153 trips during the Weekday AM peak hour and between 113 and 174 vehicles during the Weekday PM peak hour. The study compared ITE Trip Generation estimates and local/site specific trip estimates. I have not fully reviewed the trip generation estimate methodology but will provide direction/approval during the TMP process. For the purposes of submitting a TMP Application, I would suggest the applicant use the 7th Edition of the ITE Trip Generation Manual (or the 10th Edition if the pending TMP modified regulations are adopted prior to submitting the application).
- For the purposes of assigning the new vehicle trips to the roadway network, the traffic impact analysis assumed a new parking garage would be constructed on Falmouth Street. The parking garage will not generate new traffic to the USM campus but will likely result in redistribution of vehicles arriving and departing the campus. This will be discussed at the TMP scooping meeting but would likely be required for the traffic study.
- I briefly reviewed the Parking Assessment: Existing and Future Conditions prepared by VHB dated January 17, 2020. The assessment documents existing demand in USM parking facilities but does not appear to account for USM generated parking demand on public streets. The applicant should note if this information has been estimated or included in the assessment.

If you have any questions, please contact me.

Best regards,

Thomas A. Errico, PE
Senior Associate
Traffic Engineering Director
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Portland Maine Yes. Google's good here.

Matthew Grooms <mgrooms@portlandmaine.gov>

Development Review Projects - 25 Bedford (USM Student Center and Dorms)

Benjamin Pearson <bnp@portlandmaine.gov> Thu, Mar 26, 2020 at 2:16 PM
To: Matthew Grooms <mgrooms@portlandmaine.gov>, Mike Tremblay <mtremblay@portlandmaine.gov>
Cc: Stephen Marcotte <smarcotte@portlandmaine.gov>

Hi Matt,

I logged onto energov and the files weren't uploaded yet but after reviewing them in eplan, I have the following initial comments:

A kitchen and pub are proposed but I did not see any grease control equipment planned. A schier great-basin 250 or equivalent high capacity grease interceptor is required to capture all dishwashing fixtures from the proposed food service facilities. There must be a junction manhole with independent channels at the location where the outlet of the grease interceptor connects to the sanitary sewer.

If I have additional comments upon further review, I will make sure to send them your way.

Thanks,
Ben

On Thu, Mar 26, 2020 at 11:19 AM Matthew Grooms <mgrooms@portlandmaine.gov> wrote:
[Quoted text hidden]

--
Benjamin Pearson, PE
Compliance Coordinator
Water Resources, Public Works
bnp@portlandmaine.gov
207-874-8843

Memorandum
Planning and Urban Development Department
Planning Division

To:	Brandon Mazer, Chair and Members of the Portland Planning Board
From:	Matthew Grooms, Senior Planner
Date:	August 7, 2020
Re:	University of Southern Maine Expansion Student Success Center and Residence Hall University of Southern Maine, Applicant
Project #:	PL-001040-2020
Meeting Date:	August 11, 2020

I. INTRODUCTION

The University of Southern Maine has submitted a Level III site plan application for redevelopment of a portion of their Portland Campus in accordance with the Campus Facilities Master Plan, adopted by the Board of Trustees for the University of Southern Maine in 2019. The redevelopment will involve the demolition of two existing buildings, the Woodbury Student Center and a campus facility building and removal of 171 surface parking spaces. In place of this existing development, the university is proposing to construct a new three-story, 43,000 square foot career and student success center, a 580-bed residence hall totaling 220,000 square feet in area and measuring between five- and eight-stories in height, and create a new centrally located campus green space that will serve as the campus quadrangle.

Figure 1: Aerial view of campus with development area highlighted

The project site is located primarily within the R-5 Residential Zone, though a small portion at the easternmost edge of the site is located within the B-2 Community Business Zone. The entire Portland campus also lies within the USM overlay zone; a zone specifically developed to allow the University the flexibility to operate uses typical of an institution of higher education while accounting for its unique context adjacent to the Forest Ave Commercial Corridor and the Oakdale residential neighborhood.

In addition to the City's site plan review requirements, this development is also subject to a Site Location of Development review, a Maine DEP permit for which the City of Portland has delegated review authority, as well as a Maine DOT Traffic Movement Permit, for which again, the City has delegated review over.

Notices have been sent to 190 property owners and a legal advertisement was published in the July 31st and August 2nd editions of the *Portland Press Herald*.

Applicant: Alexander Porteous, University of Southern Maine
Consultants: Darrin Stairs, Woodard & Curran; Keith Brown, Capstone Development Group; Craig Piper, SMRT Architects

II. REQUIRED REVIEWS

Waiver Requests	Applicable Standards
Request: Waiver for the use of materials (fiber cement panel) identified as 'low quality' materials. Staff Comments: Staff agree with the applicant's assessment that the quality of fiber cement paneling products have improved considerably since the standard was adopted well over 10 years ago and recommend granting of this waiver.	City of Portland Design Manual – (e) University of Southern Maine Overlay Zone, Appendix 3 Standard D-7 Materials
Review	**Applicable Standards**
Site Plan	Section 14-526
Site Location of Development & Traffic Movement Permit	Section 14 Technical Manual *Development Standards for SLODA*

III. PROJECT DATA

Existing Zoning	R-5 Residential; B-2 Community Business; and USM Overlay Zone
Existing Use	Student Center, University Facilities building, and off-street parking
Proposed Use	Career and Student Success Center, residence hall, and passive use open space
Parcel Size	673,075 SF – 15.45 acres

	Existing	Proposed	Net Change
Building Footprint	37,320 SF	59,325 SF	22,005 SF
Building Floor Area	37,320 SF	256,350 SF	219,030 SF
Impervious Surface Area	123,178 SF	70,334 SF	- 52,844 SF
Parking Spaces	1,701	1,613	- 88 spaces (future garage will add 425 spaces)
Bicycle Parking Spaces	10 new outdoor bicycle racks are being installed, and there will be bicycle storage interior to the residence hall		

IV. EXISTING CONDITIONS AND PROJECT CONTEXT

The University of Southern Maine's Portland Campus occupies more than 15 acres of land just outside of Portland's peninsula in the Oakdale neighborhood, and is bounded by Forest Avenue and Durham Street to the East, Falmouth Street to the North, Exeter Street to the West and I-295 and Chamberlain Street to the South. The campus operates in conjunction with USM's two other campuses located in Gorham and Lewiston, and at present, largely serves a commuter student population, with residence halls and other residence

Figure 2: View of the development site from Bedford Street with Woodbury Student Center

life facilities being housed on the university's Gorham campus. The campus consists of 34 buildings ranging from repurposed single-family homes to more traditional academic buildings, an integrated pathway system, community garden, ten surface parking lots and one parking garage. As described by the applicant, the existing campus is characterized by ad hoc buildings and landscapes indicative of incremental growth and expedient design; lacking a predominant architectural language and featuring open spaces comprised of areas left over when buildings were situated within the university landscape.

Figure 3: View of the development site from Durham Street with facilities building and Oakhurst Dairy

In 2019, after a lengthy visioning exercise with community partners, the University of Southern Maine adopted its Campus Facilities Master Plan, which envisions the Portland campus as "an iconic academic campus in the heart of Portland that enhances the commuter experience while creating a welcoming residential community". In the plan, the University identifies a series of 'anchor sites' that would reframe the campus edges, increase the visibility of the campus from adjoining areas and reinforce two new green spaces that would serve as campus gathering spaces typical of a traditional college campus. New development identified within the master plan include a career and student success center, residential halls, a new performing arts center and a dedicated graduate student center. The campus plan also envisions the consolidation of parking areas on campus within two separate parking garages, freeing up existing surface lots for future development.

Figure 4: Campus Facilities Master Plan for Portland Campus.

V. DEVELOPMENT PROPOSAL

In line with the Campus Facilities Master Plan, the University of Southern Maine is proposing to redevelop a portion of the campus at the corner of Bedford and Durham Streets, currently occupied by the Woodford Student Center, a Campus Facilities building and 171 surface parking spaces. This new development will consist of a signature three-story, 42,000 square foot career and student success center and a 580-bed residence hall measuring between five and eight stories in height, organized around a new campus quadrangle. The development is intended to serve as the heart of the university's re-envisioned campus, and is designed so as to provide stronger pedestrian connections across the campus with enhanced sidewalks along both Bedford and Durham Streets and between the newly proposed buildings. The loss in surface parking is partially off-set by a separate approval granted by the Planning Board back in May, which would create 91 new parking spaces adjacent to the Wishcamper building located on the

south side of Bedford Street. The University also has plans to construct and open a new parking garage accessible from Falmouth Street, which is anticipated to open prior to occupation of either the career and student success center or residence hall.

Figure 5: Aerial view of proposed development

As opposed with the existing development at the intersection of Bedford and Durham Streets, the proposed development creates a more prominent and tangible corner that marks the entrance to the center of campus. While initially conceived as two separate residence halls in the master plan, the proposal submitted to the City features one larger building that follows the geometry of both Bedford and Durham Streets, and arrayed in a parallelogram so as to partially enclose a half-acre courtyard space accessible to the building's residents. The building features two distinct sections; a five-story portion along Bedford Street and extending towards the student center along the proposed quadrangle and a taller eight-story portion that steps up along the Durham Street frontage and then extends west along the northern side of the residence hall's courtyard. The height of the five-story portion is intended to mirror the height of the Wishcamper Center, across Bedford Street, and to establish a uniform street wall

Figure 6: View of the Residence Hall looking west along Bedford Street with both five-story and eight-story portions shown.

Figure 7: View of Residence Hall entrance

Figure 8: View of Residence Hall courtyard

as one enters the center of campus. The taller portion of the residence hall meanwhile, is positioned along less prominent Durham Street and adjacent to the campus utility plant where its height is less obvious.

The development prioritizes ground-level activation along Bedford Street, where complete building transparency and a prominent front entrance and building canopy creates an inviting and safe pedestrian environment. The residence hall utilizes a light grey color palette and material scheme consisting of fiber cement panel, flat metal panels and corrugated metal panels consistent with the existing Wishcamper Center building. Additionally, the residential use of the building is expressed through its unique window to wall ratio, and use of window bays that break up the building's façade.

Figure 9: View of the Career and Student Success Center with existing Masteron Hall

Figure 10: View from beneath CSSC portico

The Career and Student Success Center is situated at the northern edge of the new campus quad, and is designed to stand apart from other campus buildings. In the campus facilities master plan, a principal focus is to promote sustainability in future building design, which is encapsulated in this building. The building is designed to meet LEED Silver criteria, utilizing passive solar heating, low carbon building materials and an integrated photovoltaic solar array.
In terms of the broader design inspiration, the building is intended to reflect the state's forestry and maritime heritage, and uses a variety of natural, rugged and utilitarian elements to convey this identity. The south facing façade features a large portico with diagonal mass timber columns which are intended as a nod to the state's prominent role in producing timber, and the university's embracement of sustainable building technologies and materials. As described in the design narrative provided by the applicant, this portico would serve as a key focal point for the campus, which

could be used to host events such as graduations and concerts. Inside the building, programming consists of a large dining common, a new and expanded career services center, and a variety of multi-purpose meeting spaces.

Framed between Masterton Hall, the Career and Student Success Center and the new residence hall is a one-acre area of lawn conceived as a new campus quadrangle. The quad features a gentle slope and is intended as a passive use open space area that would become the signature green space for the entire campus.

Aside from the buildings and open space area described within this section, other improvements include an enhanced pedestrian network consisting of concrete pathways and sidewalks between new and existing campus facilities as well as along both Bedford and Durham Streets, substantial new landscaping in and around the residence hall courtyard, campus quad and existing public streets, new site lighting attached to building mounted and ornamental free standing fixtures, and a stormwater management system consisting of grassed underdrained soil filters and bioretention cell soil filters.

VI. NEIGHBORHOOD MEETING AND PUBLIC COMMENTS

The required neighborhood meeting was held virtually via Zoom on July 15, 2020 and was attended by 21 members of the public. Attendees who spoke commented that they appreciated the architecture of the new buildings and that the overall design of the development was attractive, and what USM has needed. The neighborhood meeting notification, sign-in sheet and minutes are included as Attachment Z.

In addition, one written public comment was received (Attachment 6), which requested that the university make Oakdale Street a dead-end street, so as to prevent traffic from the university from moving through the Oakdale neighborhood. The commenter also requested that the University not locate new traffic producing uses off of Falmouth Street on account of its more residential nature.

VII. WEEKLY MEETINGS WITH USM DEVELOPMENT TEAM

Beginning back in April, City staff have met with representatives of the USM Development team on a nearly weekly basis to discuss different aspects of the development; notably building and site design, stormwater and utilities, traffic mitigation and parking demand management, and campus operations/special events and planning for student move-in/move-out. This ongoing dialogue has facilitated a far more collaborative review of the project than would typically be the case, and has largely taken the place of staff review memos and comment response letters from the applicant. Given this review structure, the vast majority of staff review concerns have been addressed in the applicant's most recent submission, which are summarized in greater detail under the site plan review section of this memo.

VIII. ZONING ANALYSIS

The development site is located within the R-5 Residential Zone, the B-2 Community Business Zone, and the USM Overlay Zone. The purpose of the USM Overlay Zone is to allow the University to continue and reasonably expand within defined boundaries, and to recognize the unique qualities of a university campus while at the same time protecting the value and integrity of established neighborhoods. University buildings and structures are subject to the requirements of the underlying zoning districts, except as modified by the USM Overlay Zone. The Overlay Zone allows for an 85' foot building height in the area of the campus where this development is to occur, with required setbacks of 10' feet along Bedford Street, 0' feet along Durham Street, and 20' feet along Falmouth Street.
The uses proposed for this project, which are classified as 'university uses', are permitted within the USM Overlay Zone. These include classrooms, student unions, dining halls, bookstores, auditoriums, outdoor use areas, student housing and offices.

IX. SITE LOCATION OF DEVELOPMENT REVIEW

Technical Manual Section 14.3. Standards

A. *Financial and technical capacity. The developer has the financial capacity and technical ability to develop the project in a manner consistent with state environmental standards and with the provisions of Portland's Code of Ordinances. The Planning Board may issue a permit that conditions any site alterations upon a developer providing the Planning Board with evidence that the developer has been granted a line of credit or a loan by a financial institution authorized to do business in this State or with evidence of any other form of financial assurance the Planning Board determines to be adequate. The Planning Board shall also assess any such application in accordance with the standards set forth in Chapter 373 of the Maine Department of Environmental Protection Site Law Regulations, as may be amended from time to time.*

1. Finding - The applicant has submitted documentation that demonstrates both the technical and financial capacity to complete the project.

B. *Traffic Movement. For any development that generates 100 or more passenger car equivalents at peak hour, the developer has made adequate provision for traffic movement of all types into and out of the development area. Before issuing a permit, the Planning Board shall determine that any traffic increase attributable to the proposed development will not result in unreasonable congestion or unsafe conditions on a road in the vicinity of the proposed development. The Department of Transportation or the Engineer shall provide the Planning Board with an analysis of traffic movement of all types into and out of the development area and with a statement of recommended findings on traffic issues. In making its determination under this subsection, the Planning Board shall consider the analysis and recommendations provided by the City's Traffic Engineer or Department of Transportation.*

1. Finding - A Traffic Movement Permit application has been submitted, and is currently under review. Please see section below on the traffic movement permit for more information.

C. *No adverse effect on the natural environment. The developer has made adequate provision for fitting the development harmoniously into the existing natural environment and that the development will not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipality or in neighboring municipalities. In making a determination under this subsection, the Planning Board shall apply the standards set forth in Chapter 375 of the Maine Department of Environmental Protection Site Law Regulations, as may be amended from time to time.*

1. Finding - This redevelopment project meets all state and local requirements for water quality and treatment, and reduces the overall amount of impervious surface by more than an acre. Both buildings being proposed are designed to be energy efficient, use sustainable building materials and make use of solar arrays to augment campus energy needs.

D. Soil Types. The proposed development will be built on soil types that are suitable to the nature of the undertaking. In making a determination under this subsection, the Planning Board shall apply the standards set forth in Chapter 376 of the Maine Department of Environmental Protection Site Law Regulations, as amended from time to time.

1. Finding - In the geotechnical exploration undertaken by the applicant, it was found that the soil beneath the development site was generally uncontrolled fill overlying native deposits of glaciomarine sand, silt and

clay, overlying a thin veneer of outwash sand, and mantling refusal surfaces. Based upon this composition, the proposed development is feasible, though may require that structural soils be added before building slabs are poured.

E. Ground Water. The proposed development will not pose an unreasonable risk that a discharge to a significant ground water aquifer will occur. In making a determination under this subsection, the Planning Board shall apply the standards set forth in Chapter 500 and 502 of the Maine Department of Environmental Protection Stormwater Management and Direct Watersheds of Waterbodies at Risk from New Development Rules as may be amended from time to time.

1. Finding - According to the application, the development is not located within a significant sand and gravel aquifer, and the land upon which the development is proposed is primarily cut and fill. It is stated that the project will not infiltrate to, extract, or result in any impacts to groundwater.

F. Infrastructure. The developer has made adequate provision of utilities, including water supplies, sewerage facilities, solid waste disposal and roadways required for the development and the development will not have an unreasonable adverse effect on the existing or proposed utilities and roadways in the municipality or area served by those services.

1. Finding - The City has reviewed the site utility plan and found it to be acceptable as shown, though utility ability to serve letters will be required prior to the public hearing.

G. Flooding. The activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties nor create an unreasonable flood hazard to any structure. In making a determination under this subsection, the Planning Board shall apply the standards set forth in Chapter 500 and 502 of the Maine Department of Environmental Protection Stormwater Management and Direct Watersheds of Waterbodies Most at Risk from New Development Rules as may be amended from time to time.

1. Finding - The development is not located within a flood hazard zone, as shown on the FEMA Flood Insurance Rate Map provided in this application. The proposed development is not anticipated to cause or increase flooding or cause an unreasonable hazard to any adjacent structures.

H. Stormwater Management and Erosion and Sedimentation Control. The proposed development meets the standards for stormwater management in 38 MRSA §420-D as amended from time to time and the standard for erosion and sedimentation control in 38 MRSA §420C as amended from time to time. In making a determination under this subsection, the Planning Board shall apply the standards set forth in Chapter 500 and 502 of the Maine Department of Environmental Stormwater Management and Direct Watersheds of Waterbodies Most at Risk from New Development Rules, as may be amended from time to time.

1. Finding - See site plan review standard for stormwater management. The development proposal has been found to meet Maine DEP Ch. 500 and 502 requirements.

X. TRAFFIC MOVEMENT PERMIT OVERVIEW (TMP)

As defined under Maine state statute 704—A, a traffic movement permit is required of any project that generates 100 or more passenger car equivalents at peak hour. Any project surpassing this threshold is required to make adequate provision for traffic movement of all types into and out of the project area such that any traffic increase that is attributable to the project will not result in unreasonable congestion or unsafe conditions within the vicinity of the development.

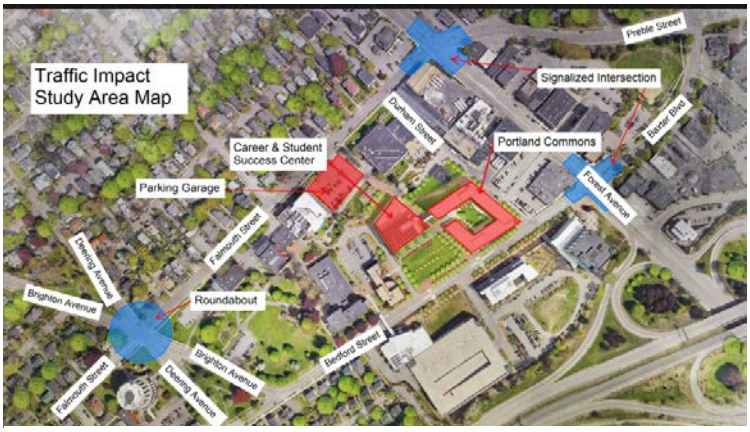

Figure 11: Proposed TMP study area

A preliminary step in this process is the 'scoping meeting', which is a formal review of the application material to determine the scope of impact evaluation required for the proposed project. This meeting was held on August 6, 2020. Given that this meeting occurred on the day before this memo was posted, the evaluation of the TMP application has not yet occurred, and will not be available to present at the August 11th workshop.

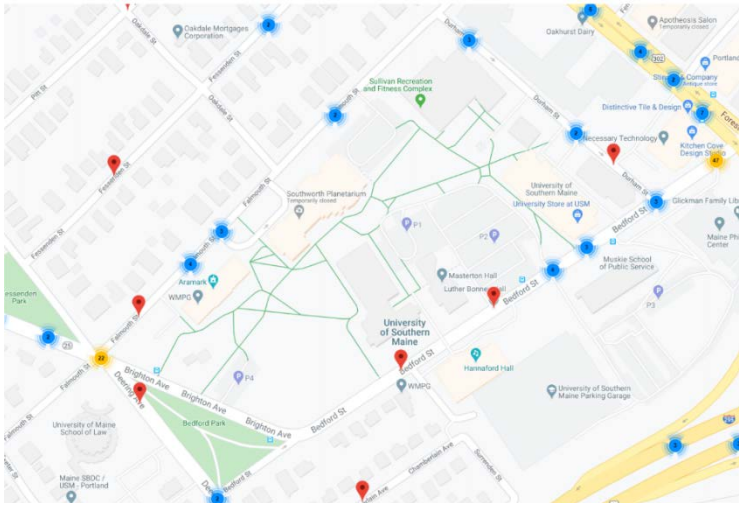

Figure 12: Crash locations in the vicinity of USM

In terms of preliminary findings included within the TMP application, the campus is expected to generate 126 am peak hour trips, and 135 pm peak hour trips. This starting figure assumes all trips by automobile, however when you consider mode split, which the University estimates to be 70% driving alone, 10% using public transit, 10% walking or riding a bike, and then 10% carpooling, the trip generation counts drop further. Under this model, there would be 95 am peak hour trips and 102 pm peak hour trips. With regards to trip distribution, the application assumes that 53% of trips will be to and from Forest Avenue and points south (46% to I-295 and 7% to downtown Portland or South Portland). Of the remaining trips, 30% are either to or from Brighton Avenue and then 14% are to or from points north along Forest Avenue.

At the time of the next meeting, staff will present findings related to the traffic movement permit and recommendations if any for traffic mitigation.

XI. SITE PLAN REVIEW

A. Transportation Standards

1. *Impact on Surrounding Street Systems*

   The development is expected to have minimal impact on the surrounding street system as the proposed uses are not expected to generate more traffic than current uses, in particular as the residence hall may in fact reduce traffic demand on campus. Two separate curb cuts along Bedford Street are being

eliminated, which should improve traffic flow on campus. Prior to the completion of this development, a new roundabout will be completed at the intersection of Brighton Avenue and Deering Avenue, which at present is the most deficient intersection in the vicinity of the university. Once complete, the roundabout is anticipated to dramatically improve traffic flow through that intersection.

2. *Access and Circulation*

The development as proposed fully complies with City requirements for transportation related access and circulation. The University is well situated to take advantage of multiple modes of transportation as it is located along multiple METRO transit lines, is within easy walking and biking distance of Portland's downtown, numerous residential neighborhoods and the Forest Avenue Commercial Corridor. Those driving to the campus have access to numerous off-street parking areas as well as a new pick-up and drop-off area on Bedford Street for more immediate access to the residence hall. Once on campus, most circulation will occur on-foot. Substantial improvements to pedestrian infrastructure and connections are proposed as part of this application which should improve pedestrian mobility and wayfinding.

3. *Public Transit Access*

USM works closely with METRO to ensure convenient public transit access between their Portland and Gorham campus, and in the last several years, partnered with METRO to create the Husky Line, which operates as a circulator between both campuses. In addition, the campus provides immediate access to the #2 and #4 lines, and is within easy walking distance of stops for the #9 route. On campus, riders have access to multiple shelters on either side of Bedford Street while waiting for a bus to arrive.

4. *Parking*

In the short term, this development is expected to result in an overall decrease in the supply of off-street parking, as 171 surface spaces are being eliminated. This decrease in parking is somewhat off-set by an expansion of parking behind the WishCamper Center, where 91 new spaces are being added. The applicant has indicated that prior to occupation of either the Career and Student Success Center or the Residence Hall, a new 425-car parking garage is expected to open adjacent to the Sullivan Gym.

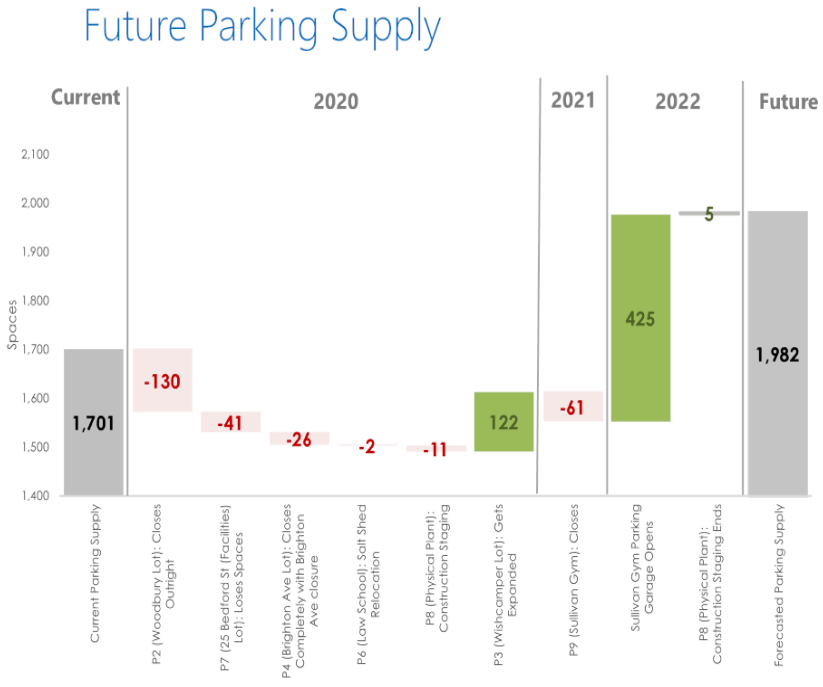

Figure 13: Anticipated future parking supply for USM across various parking areas

This parking structure would be accessible via Falmouth Street, and would provide convenient access to the entire campus. In looking at the parking analysis provided in this application, the supply of parking appears sufficient to meet the University's growing demand, particularly when coupled with other Transportation Demand Management (TDM) measures.

5. *Transportation Demand Management*
A TDM plan prepared by VHB is included as part of this application. The TDM outlines a number of strategies developed to reduce overall demand for the University's limited off-street parking supply. These include University supported carsharing and carpooling, the development of an incentive program to promote alternative modes of transportation, increasing opportunities for telework for both students, staff and faculty, and most notably, free public transit access. The TDM plan as provided meets all City standards.

B. Environmental Quality Standards

1. *Preservation of Significant Natural Features*
The development site is entirely developed, and as such, contains no significant natural features.

2. *Landscaping and Landscape Preservation*
The development site includes two areas of substantial new green space; the one-acre campus quad, and a half-acre courtyard internal to the residence hall. In the case of campus quad, the University envisions this as a passive-use lawn area, and limits additional landscaping to areas around the periphery of the quad along campus walkways. The Residence Hall courtyard meanwhile features more generous plantings. Landscaping is provided as either perennial beds, shrubs or shade trees, and has been coordinated with Jeff Tarling, the City Arborist to account for solar exposure and the unique microclimate found in areas on campus.

Figure 14: Proposed landscaped areas around new development

3. *Water Quality/Stormwater Management/Erosion Control*
Once complete, this redevelopment will in fact substantially reduce the amount of impervious surface for this site, and as such is only subject to the redevelopment standards for Maine DEP Ch. 500, which require that the University treat at least 50% of impervious area. To do this, the applicant is using grassed underdrained soil filters and bioretention cell soil filters. Mike Guethle, P.E. with Wright Pierce has reviewed this application and found this approach to be acceptable and to meet stormwater requirements for the development.

C. Public Infrastructure and Community Safety Standards

1. *Consistency with related Master Plans*
   The project as shown is consistent with all Master Plans adopted by the City.

2. *Public Safety and Fire Prevention*
   The application has been reviewed for compliance with relevant life/safety requirements and has been found to be satisfactory.

3. *Availability and Capacity of Public Utilities*
   The utility plan shows new utility connections for water, gas, electric and sewer. The reviewing Civil Engineer has found these connections to be acceptable as shown and the applicant has indicated that ability to serve letters will be provided for each of these utility services.

D. Site Design Standards

1. *Massing, Ventilation and Wind Impact*
   The proposed building massing has been carefully considered to complement the existing campus environment, and in particular, to create an inviting pedestrian environment along Bedford Street with a uniform street wall. The development is not anticipated to have any adverse impacts related to either ventilation or wind.

2. *Shadows*
   The development is not anticipated to have any adverse impacts related to building shadows.

3. *Snow & Ice Loading*
   Based upon the design of eves, building overhangs and roof forms, snow and ice loading is not of concern.

4. *View Corridors*
   There are no designated view corridors within the project vicinity.

5. *Historic Resources*
   The project site does not contain any known historical or archaeological resources.

6. *Exterior Lighting*
   Lighting proposed meets City standards for light trespass, color temperature and full cutoff fixtures. Lighting consists of bollard, wall pack and pole mounted fixtures, that are concentrated along walkways, at building entrances and within the residence hall courtyard.

7. *Noise and Vibration*
   No adverse impacts related to noise and vibration are anticipated as mechanical equipment is to be roof-mounted and away from public open spaces and other residential areas.

8. Zoning Related Design Standards

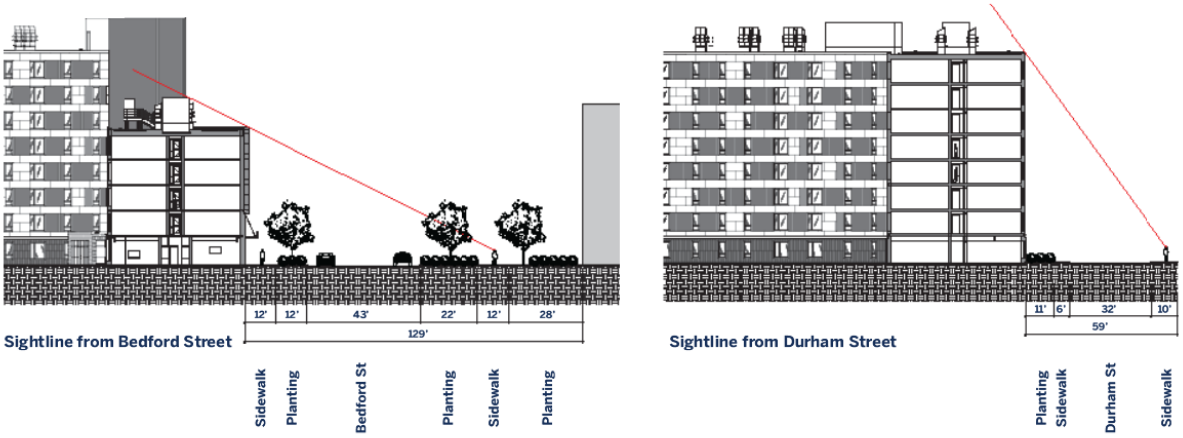

Figure 15: Evaluation of rooftop mechanical visibility

The project was reviewed against the USM Campus Design Principles and Standards (Appendix 3 of the Design Manual). As of the writing of this memo, the project predominantly meets the required standards though staff would highlight two points. First, the applicant is requesting the use of concrete sidewalks where the design manual calls for the use of brick. And second, staff would note that roof mounted mechanical equipment, though centered on the roof of the residence hall, will likely be visible from eastbound Bedford Street and from Forest Avenue.

With regards to the sidewalk material, there are two conflicting city policies. While the design standards call for brick, the technical manual actually identifies the campus as being in a concrete district. Given that the sidewalk materials appendix of the technical manual was updated in just the last few years, and was the result of a systematic and comprehensive review of material prevalence across the City, staff are recommending that concrete be used instead of brick. It is also worth noting that the existing sidewalk material palette on campus is inconsistent, as there are brick sidewalks in front of the Abramson building and Wishcamper Center, while concrete can be found along the north side of Bedford Street.

XII. NEXT STEPS

Following this workshop, City staff recommend that the applicant undertake the following steps:

- Respond to feedback from members of the Planning Board.
- Continue to coordinate with City staff on review of the submitted TMP application.
- Obtain utility ability to serve letters from utility providers
- Evaluate screening of roof-mounted mechanical equipment from locations with long views of the proposed buildings.

XIII. ATTACHMENTS

Attachments to Memorandum

1. Design Review Memo

2. DPW Review Comments
3. Traffic and Parking Review Comments
4. Water Resources Review Comments
5. City Arborist Review Comments
6. Public Comment
    a. PC1: Elizabeth Burke (7.30.2020)

Applicant's Documents

A. Application Cover
B. Application Checklist
C. Application Fees
D. Project Summary
E. Waiver Requests
F. Evidence of Right, Title & Interest
G. Easements & Other Burdens
H. Evidence of State & Federal Permits
I. Evidence of Financial & Technical Capacity
J. Consistency with Portland Design Standards
K. Consistency with USM Design Principles and Standards
L. Zoning Assessment
M. Consistency with Comprehensive Plan
N. Boundary Survey
O. Availability & Adequacy of Public Utilities
P. Portland Fire Department Site Review Checklist
Q. B&D Housing Survey Market Analysis
R. Parking Analysis
S. USM Campus Facilities Master Plan
T. Platz Parking Garage Feasibility Study
U. Cover Letter (Project Summary)
V. Stormwater Report
W. TDM Plan
X. USM Traffic Memo
Y. Design Narrative
Z. Neighborhood Meeting Materials
AA. Street Parking Memo
BB. Lighting Cut Sheets
CC. Revised Stormwater Report
DD. Response to Comments Letter
EE. Preliminary Plan for Student Move-in

Applicant's Plans

P1: Cover Sheet
P2: Site Notes & Legend

P3: Existing Conditions & Removal Plan
P4: Building Demolition Plan
P5: Site Layout Plan
P6: Site Layout Details
P7: Site Layout Details 2
P8: ESC Notes
P9: ESC Plan
P10: ESC Details
P11: Grading & Drainage Plan
P12: Grading & Drainage Details
P13: Grading & Drainage Details 2
P14: Utility Plan
P15: Steam Line Plan
P16: Utility Details
P17: CSSC Exterior Elevations
P18: Photometric Plan
P19: Photometric Plan 2
P20: Planting & Landscape Plan
P21: Planting & Landscape Details & Schedule
P22: Post Development Watershed Plan
P23: Post Development Water Quality Plan
P24: Residence Hall Floor Plan Level 1
P25: Residence Hall Floor Plan Level 2
P26: Residence Hall Floor Plan Level 3
P27: Residence Hall Floor Plan Level 4
P28: Residence Hall Floor Plan Level 5
P29: Residence Hall Floor Plan Level 6
P30: Residence Hall Floor Plan Level 7
P31: Residence Hall Floor Plan Level 8
P32: CSSC Floor Plan Level 1
P33: CSSC Floor Plan Level 2
P34: CSSC Floor Plan Level 3
P32: CSSC Floor Plan Penthouse
P33: Residence Hall Exterior Elevations
P34: Residence Hall Exterior Elevations
P35: Residence Hall Exterior Elevations
P36: Residence Hall Exterior Elevations
P37: CSSC Exterior Elevations
P38: USM Rendering Site Plan
P39: Rendering Aerial View
P40: Rendering Aerial View 2
P41: Overall Birds Eye View
P42: Bedford Street Rendering
P43: Bedford Street Rendering Winter
P44: Bedford Street Entry View
P45: Rendering Crosswalk View
P46: Rendering Student Center
P47: Rendering Portico
P48: Rendering Durham Street

P49: Siteline Diagram

Memorandum
Department of Planning & Urban Development

To: Brandon Mazer, Chair, and Members of the Planning Board
From: Deborah Andrews, Historic Preservation Program Manager
Date: August 4, 2020
Mtg Date: August 11, 2020
RE: Continuation of 3/10/20 Public Hearing on Recommendation of the Historic Preservation Board to Designate Munjoy Hill Historic District

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OVERVIEW

The Planning Board will resume final deliberations on the recommendation of the Historic Preservation Board to designate an area within the Munjoy Hill neighborhood as a local historic district. The August 11th hearing follows a March 10, 2020 public hearing on the proposal, during which 52 residents, property owners and interested parties provided public comment. At the conclusion of the two-hour hearing, the Board tabled deliberations to its March 17 meeting in light of the late hour. The following week, City Hall closed due to the Covid-19 pandemic, public meetings were suspended for a time and Planning Board schedules did not immediately allow for resumption of the hearing. August 11th is a continuation of the March 10th hearing, at which the Board can conclude its deliberations and make a recommendation on the proposed district to the City Council.

The role of the Planning Board in proposed historic district designations is to make a recommendation to the Council based on findings as to whether the proposed district meets the designation criteria included in Portland's historic preservation ordinance and in consideration of the effect of such designation on other aspects of the Comprehensive Plan.

Attached is the staff report prepared for the March 10 public hearing (ATTACHMENT 1). Given the delay in resuming consideration of this matter, links to previous meeting materials are provided below, so that Board members and the public can have ready access to presentations, comment and deliberations on the proposed district. The February 11th workshop memo is also included (ATTACHMENT 3), and addresses a number of key questions raised by Board members and members of the public at the initial workshop, held on December 10, 2019. Recordings of the December 10, February 11 and March 10 meetings, as well as full packet materials can be accessed through the following links:

- December 10:
    - https://townhallstreams.com/stream.php?location_id=42&id=19975 (workshop begins 2hrs.33mins. into mtg)
    - https://portlandme.civicclerk.com/Web/Player.aspx?id=571&key=-1&mod=-1&mk=-1&nov=0
- February 11:
    - https://townhallstreams.com/stream.php?location_id=42&id=26200 (begins at start of meeting)
    - https://portlandme.civicclerk.com/Web/Player.aspx?id=1207&key=-1&mod=-1&mk=-1&nov=0
- March 10 PH
    - https://townhallstreams.com/stream.php?location_id=42&id=26207 (hearing begins 35 mins into mtg.)
    - https://portlandme.civicclerk.com/Web/Player.aspx?id=1219&key=-1&mod=-1&mk=-1&nov=0

During the workshop sessions, staff explained the relationship of this initiative to the Planning & Urban Development Department's larger effort, begun in 2017, to develop effective and appropriate land use tools for Munjoy Hill and that historic district designation for a portion of the Hill was among the slate of tools recommended by Planning staff to the Council in June 2018. At that time the Council directed staff to complete the necessary documentation and analysis required for district designation and return with a proposal for consideration. With this as background, staff described the documentation and analysis that led to the proposal now under consideration, including research into the development history of Munjoy Hill, a detailed building survey, assistance from an independent preservation consultant to help delineate defensible district boundaries, assignment of building classifications based on level of significance and integrity, etc.. Staff also described the significance of Munjoy Hill within the context of Portland's social, architectural and cultural history, as well as its identifiable visual character, and explained the basis upon which the Historic Preservation Board found the proposed district to meet the historic preservation ordinance's criteria for designation. Also explained were the deciding factors in defining the district's boundaries. The proposed district is limited to those blocks where the majority of buildings represent the district's period of significance (1850-1925) and retain sufficient integrity of condition to warrant preservation.

Considerable time was spent during workshops and at the public hearing presentation describing the relationship of the proposed historic district designation to the stated goals of *Portland's Plan 2030*, as the Planning Board is also charged with considering the effect of designation on other aspects of the Comprehensive Plan. Analyses were provided by both historic preservation staff and Christine Grimando, Director of the Department of Planning & Development, with available relevant data and links to numerous studies and articles provided. These analyses focused in

particular on the relationship of historic district designation to housing goals, particularly the provision of affordable housing, and to sustainability goals.

Finally, the February 11 and March 10 staff reports and presentations addressed numerous questions raised by Board members and the public about the historic preservation review process itself, time frames for review, construction activities requiring review, standards by which projects are reviewed, interaction of historic preservation regulations with other code, life safety and site plan requirements, etc. Staff also addressed the relationship of and distinction between the existing Munjoy Hill Neighborhood Conservation Overlay District measures and the proposed historic district regulations and how the respective review provisions would be applied within the proposed district. The Board expressed interest in re-evaluating the Overlay in relation to the proposed new district, and Planning has confirmed that this will be brought back to the Board for consideration following the Council's action on the historic district designation.

At the upcoming meeting, staff will provide another summary of the proposal and address remaining Board questions. No public comment will be taken at the meeting, as the public comment portion of the Board's final review was completed on March 10th. Written public comment received since March 10th is enclosed as ATTACHMENT 4.

The March report for the public hearing provides the full description of the process, the Historic Preservation Board's recommendation including maps of the district, criteria for review, and the Board's motion, which is also included below. Planning staff looks forward to concluding this significant and thorough effort in support of a new, Munjoy Hill Historic District.

MOTION

Based upon the November 20, 2019 recommendation of the Historic Preservation Board; documentation and analysis prepared by staff and consultants; information included in staff reports for the 12/10/19, 2/11/20, 3/10/20 and 8/11/20 meetings and public comment, the Planning Board

A. Finds:

   a. that the proposed Munjoy Hill Historic District [meets/fails to meet] the historic preservation ordinance's minimum criteria for designation as set forth in Sec. 14-610 (a) (1) and (b), as well as the integrity criterion in Sec. 14-611; and

   b. that designation of the Munjoy Hill Historic District [is/is not] consistent with other goals of Portland's Plan 2030; and therefore

B. [Recommends/does not recommend] to the City Council that the proposed Munjoy Hill Historic District be designated a local historic district subject to the provisions of Article IX of the Land Use Code.

ATTACHMENTS

1. March 10, 2020 Public Hearing staff report
2. March 10, 2020 staff presentation
3. February 11, 2020 Workshop staff report
4. Public comment received since March 10

PLANNING BOARD REPORT
PORTLAND, MAINE

Recommendation of Historic Preservation Board to Designate Munjoy Hill Historic District

Submitted to: Portland Planning Board Public Hearing Date: March 10, 2020	Prepared by: Deborah Andrews, Historic Preservation Program Mngr. Date: March 4, 2020

I. INTRODUCTION

The Planning Board will hold a public hearing and final deliberations on a recommendation by the Historic Preservation Board to designate an area within the Munjoy Hill neighborhood (see map on following page) as a local historic district subject to the provisions of Article IX (Historic Preservation) of the Land Use Code. The Planning Board's role in this matter is to determine whether the nominated Munjoy Hill Historic District meets applicable designation criteria in Division 3 of the historic preservation ordinance, specifically the criteria identified in Sec. 14-610 (a) and (b). Additionally, the Planning Board shall consider the effect of such designation on other aspects of the Comprehensive Plan. Based on its findings, the Planning Board will vote on a recommendation to the City Council for a decision regarding the proposed designation.

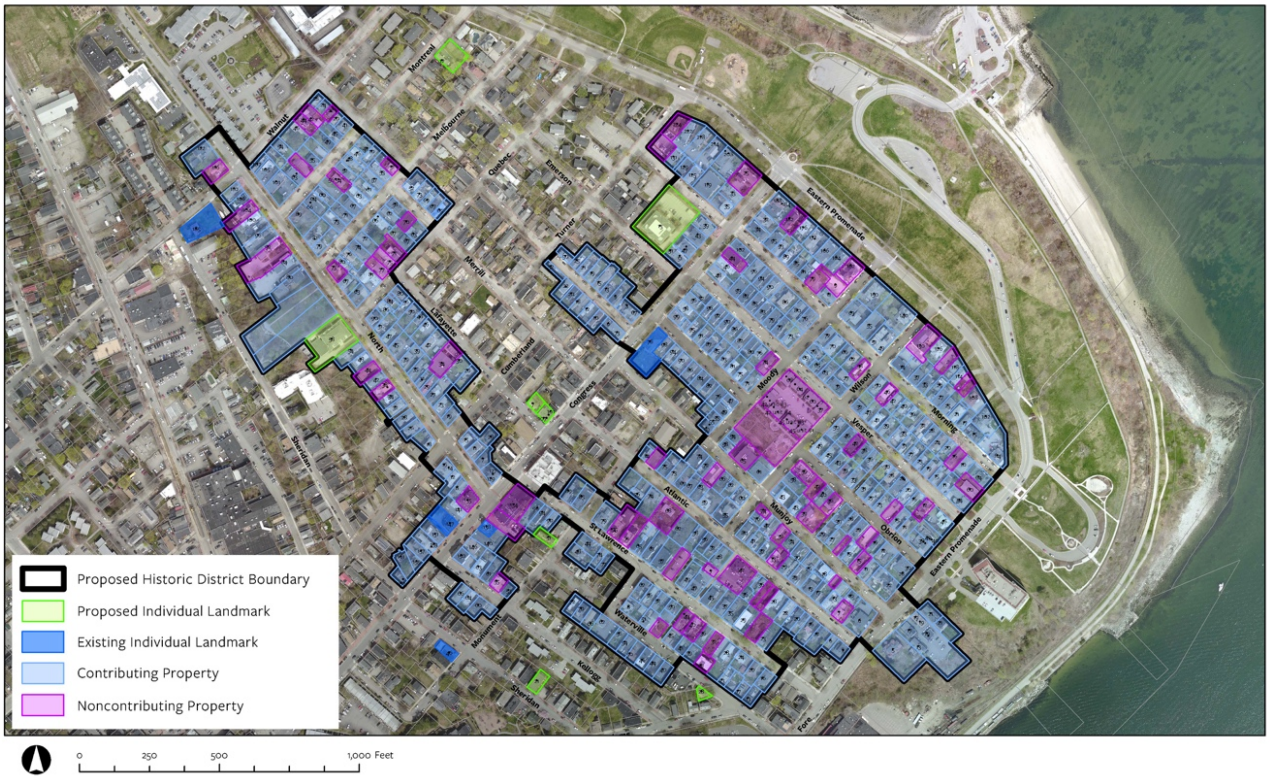
The Historic Preservation Board's formal historic district recommendation is accompanied by the following supporting documents, as required under Sec. 14-617 of the historic preservation ordinance:

- Historic Context Statement describing the development history of Munjoy Hill and its place in the history of Portland, the architectural and cultural significance of the proposed district, a description of predominant architectural styles and a description of the district's visual character. (ATTACHMENT 2)
- Map showing the proposed district boundary, with every property within it color-coded to indicate its preservation classification (Landmark, Contributing, Non-Contributing). (ATTACHMENT 1)
- List of every property within the proposed district, with its classification. (The proposed district encompasses 427 properties.) (ATTACHMENT 3)
- Historic Resources Inventory including a description of every structure in the proposed district together with its date of construction and assigned classification. Each inventory

form includes a current and 1924 view of the building (where available), an architectural description of the building and a summary of alterations since its documentation in 1924. (Sample inventory forms enclosed as ATTACHMENT 4. The full building inventory is available here: https://www.portlandmaine.gov/2451/Munjoy-Hill-Historic-District

Proposed Munjoy Hill Historic District and Individual Landmark Designations

Per Historic Preservation Board Recommendation

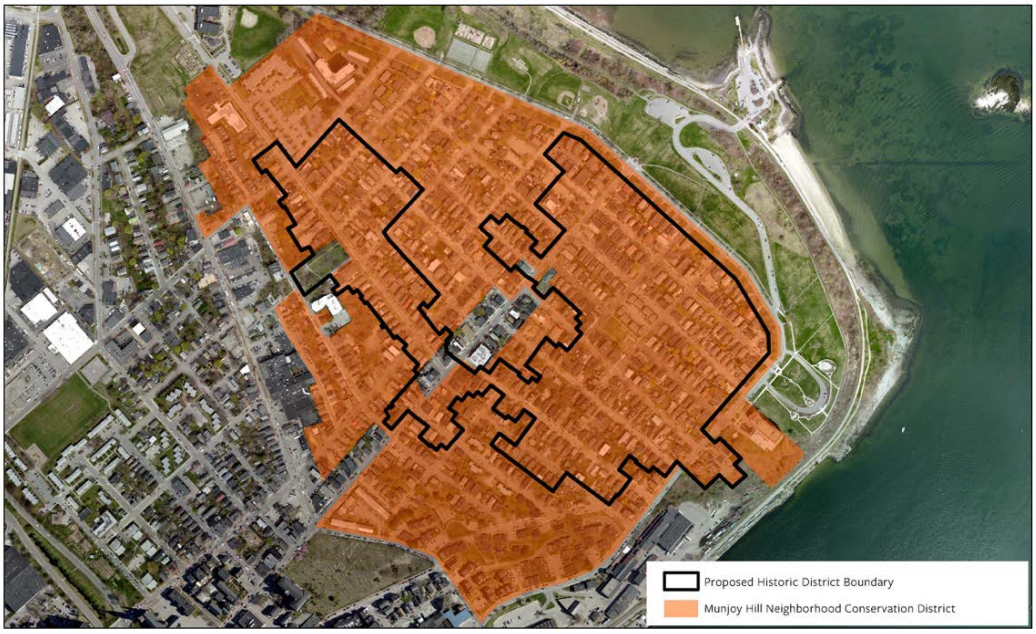


The appearance of the final district map shown above differs somewhat from the maps provided for preliminary workshops, though substantively, the district boundary and major parcel classifications remain unchanged. Distinctions between types of noncontributing parcels have been consolidated into a *single category* of noncontributing. Previous versions of the map were presented during workshops to provide a more detailed breakdown of noncontributing properties: buildings of recent construction, buildings that had lost integrity due to extensive alteration, and undeveloped parcels. (See ATTACHMENT 5.) The final map reflects how parcels will be represented in final documentation. It should also be noted that some parcels within the district include more than one building. If the principal building on site is contributing, but a second building (typically a secondary structure) on the parcel is noncontributing, the parcel is classified as contributing and the noncontributing status of the second building is noted in the *Munjoy Hill Historic District Building Inventory*.

The proposed district is comprised of 427 parcels within the larger Munjoy Hill neighborhood, representing approximately 49% of the Hill's building stock. Most of the properties are located

within the R-6 residential zone, however the proposed district includes ten buildings within the neighborhood's B-1 or B-1b business zones. (Two of the ten buildings are previously-designated Landmarks.) Eighty-eight percent of the parcels (376) within the proposed district are classified as "contributing", and twelve percent (51 parcels) are classified as "noncontributing". Below is a map showing the boundaries of the proposed historic district in relation to the overall area of Munjoy Hill's R-6 zone.

Proposed Munjoy Hill Historic District Boundary in Relation to MHNCD



The Historic Preservation Board has also recommended that six historic structures outside the boundaries of the proposed district be designated as individual Landmarks under the provisions of the preservation ordinance. These include 103 Congress, 7 Lafayette, 12 Montreal, 51 Monument,21 Sheridan and 28 Waterville Street and are identified on the district map. Unlike recommendations for district designations, however, recommendations for individual landmark designations are forwarded directly to the City Council for consideration, per the provisions of Portland's historic preservation ordinance.

II. PLANNING BOARD PROCESS TO DATE

The Planning Board has held two preliminary workshops on the proposed historic district designation. On December 10th, Historic Preservation Board Chair Julia Sheridan presented the Historic Preservation Board's formal recommendation, described the Board's review process and the basis for their recommendation. Following Ms. Sheridan's introduction, staff made a detailed presentation, summarizing information included in the staff report. Topics included:

- Role of the Planning Board in the review of historic district nominations
- Context of designation initiative—what prompted this evaluation?
- Requirements of historic preservation ordinance in considering a potential historic district

- Summary of documentation and preliminary analysis, including detailed architectural survey, research and documentation of Munjoy Hill's development history, identification of area's "period of significance", etc.
- Delineation of the district's boundary--factors considered, input from consultant
- Summary of Historic Preservation Board review process
- Explanation of the historic preservation ordinance's designation criteria
- Findings of the Historic Preservation Board and basis for district recommendation
- Analysis of proposed designation in relation to other Comprehensive Plan goals, including Housing and Sustainability
- Relationship of proposed historic district designation to existing MHNCD measures

For a detailed discussion on each of these topics, the December 10, 2019 staff report can be accessed here: https://portlandme.civicclerk.com/Web/Player.aspx?id=571&key=-1&mod=-1&mk=-1&nov=0

At the request of the Planning Board, a second workshop was held on February 11th to address questions raised by members of the Board and public during the initial review session and to provide additional information and data to aid in the Board's deliberations. As requested, staff reviewed all of the public comment received to date and attempted to address in the staff report the major themes and issues identified in the compilation of Board and public comment. A second analysis of the relationship of district designation to the goals of the Comprehensive Plan was prepared by Planning & Urban Development Director, Christine Grimando.

In addition to the Comp Plan analysis, the second workshop provided information on the following topics:

- Construction and demolition trends on Munjoy Hill. Data was provided for the period between adoption of R-6 zoning amendments in 2015 and the start of the Munjoy Hill moratorium and also from passage of the MHNCD to present.
- Reports, studies and articles consulted regarding the impact of historic districts on housing, property values, taxes, maintenance costs, etc.
- Comparison of existing MHNCD regulations and historic preservation ordinance regulations
- Interaction of the two sets of regulations, should a Munjoy Hill Historic District be established
- Interaction of historic preservation regulations with other code and life safety regulations
- Clarification regarding determination of a historic district's "period of significance". The period of significance for other historic districts in Portland was also provided.
- Availability of state and federal historic tax credits for the rehabilitation of income-producing properties
- Time implications for historic preservation review--in relation to building permit and site plan review

- Process for revisiting or amending historic districts once established
- Effect of site plan ordinance's "100-foot rule" on buildings outside the proposed district boundary
- Effect of historic district designation on opportunity to add additional dwelling units to existing contributing properties
- Impact of designation on existing tools for incentivizing affordable housing
- Effect of historic district designation on tax rate.
- Effect of historic designation on achieving sustainability goals
- Reiteration of purpose/intent of designating portion of Munjoy Hill as a historic district
- Case studies of recent new construction within existing historic districts

For a detailed discussion on each of these topics, the February 11, 2020 staff report can be accessed here: https://portlandme.civicclerk.com/Web/Player.aspx?id=1207&key=-1&mod=-1&mk=-1&nov=0

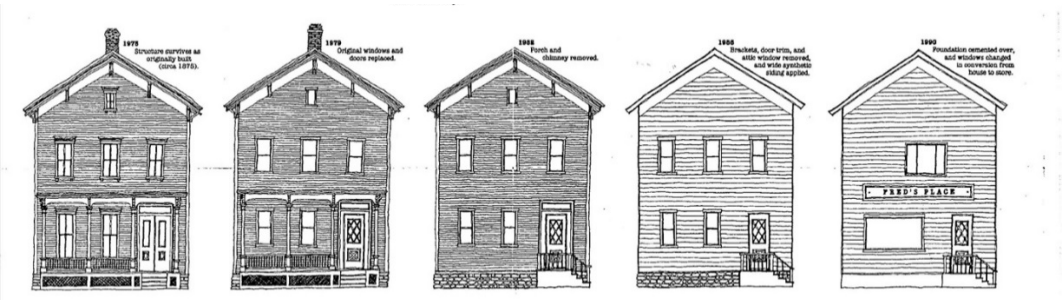
Staff presentations and other supporting materials for the full process can be found on the project webpage: https://www.portlandmaine.gov/2451/Munjoy-Hill-Historic-District

III. OUTSTANDING QUESTIONS

Previous memos and workshops have addressed questions presented in public comment, as well as questions raised by the Planning Board. Below is an overview of outstanding questions since the February workshop.

Given existing regulatory measures, why is designation of a Munjoy Hill historic district warranted?

A question was raised as to why a historic district is necessary considering the zoning and design standards already in place, in particular the Munjoy Hill Neighborhood Conservation Overlay District (MHNCD). The existing MHNCD regulations, while appropriate and effective for portions of the Hill where the historic building fabric is more eclectic and/or fragmented, do not ensure that the 19th and early 20th century buildings that make up the neighborhood's identifiable historic character will be preserved over time. Under the MHNCD, demolition is delayed, but not prohibited and there is no review of alterations and additions to historic properties. There are numerous examples on Munjoy Hill and elsewhere where a major renovation project or addition has had the effect of dramatically altering or diminishing the character a historic building. Far less obvious, but of equal impact in the long run, are Incremental alterations that gradually rob a building. After a few rounds of such changes, it becomes difficult to see the value or potential of the structure. The image that follows, from a 1990 study *Vulnerable Vermont* that documented historic buildings in selected towns over a fifteen-year period, illustrates a common trend.



Historic district designation puts in place regulations that manage the full range of construction activities that affect the long-term stability and appeal of a traditional neighborhood—demolition, alterations, additions as well as new construction. Managing the full range of construction activities does not equate to preventing change. As was illustrated through a number of project case studies at the February 11 workshop, designation does not eliminate the possibility of creating new housing in a historic district, building to the maximum height allowed by zoning, increasing the number of units within existing structures, adding dormers and/or additions, introducing solar panels, building a clearly contemporary new structure, or any number of other changes to existing conditions. Designation puts in place a mechanism to review such changes to ensure that the overall historic character of the neighborhood is preserved and enhanced over time.

As noted elsewhere in this report, historic district designation has been proposed for a portion of Munjoy Hill, not the entire neighborhood. Historic designation is proposed only for the area exhibiting the strongest concentration of historic structures that retain a sufficient degree of integrity and therefore continue to convey the history of Munjoy Hill.

How is a district's "period of significance" determined and why has the period 1850-1925 been selected as the proposed district's period of significance?

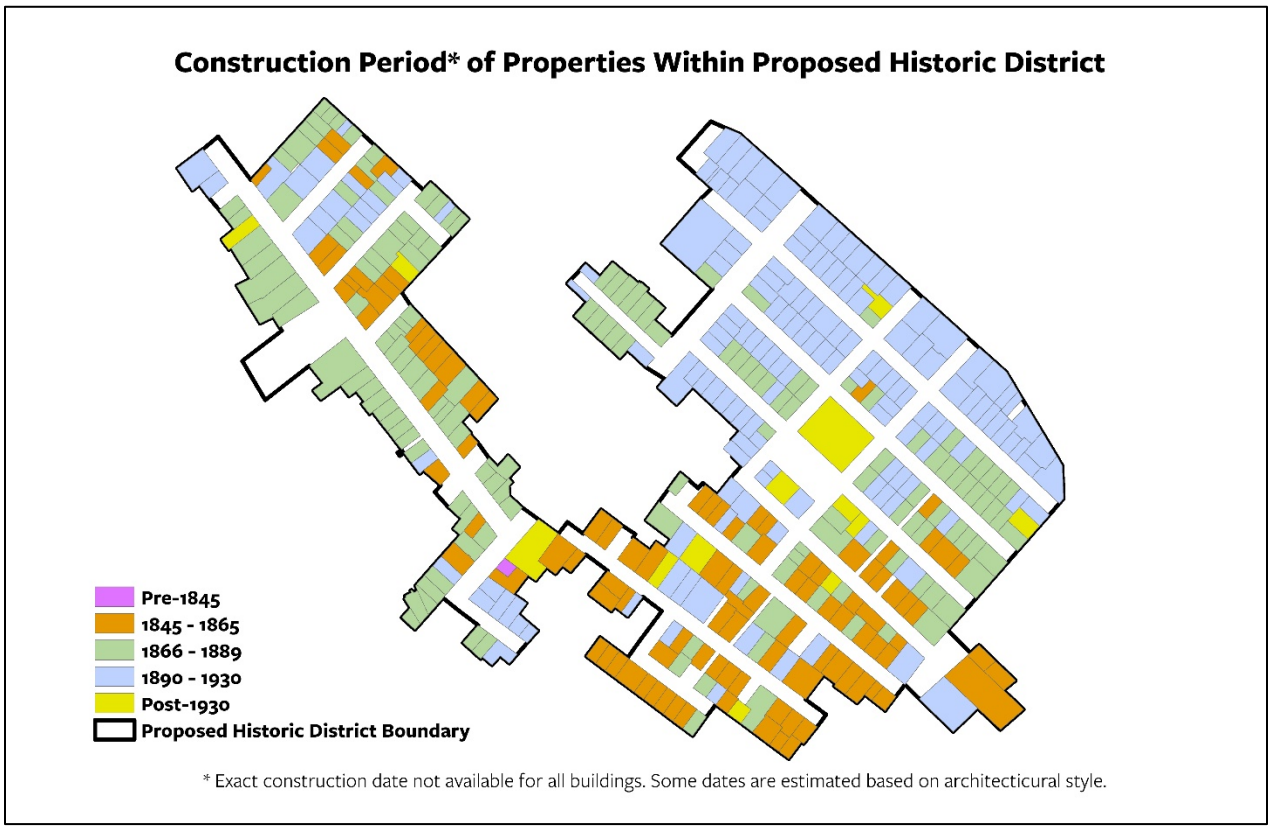
A historic district's "period of significance" is identified by researching the buildings that populate a given area and determining the time frame within which the vast majority of extant buildings were constructed. In the case of Munjoy Hill, the neighborhood was largely developed between 1850 and 1925 to house middle-class and working-class residents and was spurred by a series of specific events and demographic trends. Until 1845, Munjoy Hill was largely undeveloped. It was the establishment of the Atlantic & St. Lawrence Railroad and related Portland Company at the base of Munjoy Hill that led to the first significant residential development on the south slope of the Hill. The founders of the railroad and Portland Company laid out several streets and city directories from 1850 into the twentieth century document that many of the residents of these streets and others on Munjoy Hill worked for one of these two entities.

While the Great Fire of 1866 barely reached the Hill, it greatly influenced the development of neighborhood, as 10,000 Portland residents were made homeless by the fire that destroyed the historic core of the city. Large areas of Munjoy Hill that had previously been open fields were

subdivided and built upon. Given the number of buildings constructed shortly after the Fire, the architectural character of the Hill is shaped in large part by the architectural styles that were popular during this particular period—the Italianate and Second Empire styles.

The next major impetus for development on the Hill was the influx of immigrants from southern and central Europe in the late nineteenth and early twentieth century. Triple deckers and apartment buildings were constructed in the areas not developed until this time period, such as Morning and Vesper streets. It was during this same period (1890-1920) that the larger, grander residential houses on the Eastern Promenade were built. Their late development reveals the fact that there was relatively little appreciation for scenic views prior to that period.

By 1925, the developed pattern of Munjoy Hill was in place and most of the neighborhood had been built out. Though there are buildings that represent other development periods, their numbers are relatively insignificant and they do not appear in sufficient concentration to affect the predominant character of the neighborhood.



As staff explained at the February 11 workshop, the period of significance varies widely from one district to another. In some districts, like Stroudwater or the Old Port, the period is relatively short because most of the extant buildings were constructed during a very finite period. The Congress Street Historic District, on the other hand, includes buildings from virtually every era of Portland's history.

Would it be possible to designate individual structures or create smaller districts in lieu of the current proposal?

Although it might be technically possible to limit historic designation on Munjoy Hill to a collection of individually-designated landmark structures, this approach was not pursued for a variety of reasons. First and foremost, Munjoy Hill derives its significance as a neighborhood, whose building fabric reflects not only key development periods in Portland's history but also a rich social/cultural history as a working-class neighborhood with strong associations to major Portland industries and events. Munjoy Hill is not noteworthy for individual structures that stand out as architectural or historical landmarks, but rather for its overall building fabric, scale, density, consistent pattern of development, and architectural/visual character. To select individual buildings for landmark designation would not capture what the proposed district seeks to preserve. On Munjoy Hill, as in most historic districts, the "whole is greater than the sum of its parts" and therefore designation of a contiguous area is considered the appropriate approach. The intent behind creating a historic district is to steward the area's building *fabric* and thereby preserve the neighborhood's overall sense of place.

Given the fact that are few sharp transitions or visual breaks within the overall Munjoy Hill neighborhood that serve to distinguish one portion of the neighborhood from another, a reasonable argument could have been made for proposing a historic district that encompasses the entire Hill. That option was not pursued for a number of reasons. First and foremost, staff and consultants committed to delineating a historic district that was conservative, not overreaching and fully defensible under the criteria of the historic preservation ordinance. The blocks included within the proposed district represent the neighborhood's period of significance, are visually cohesive and include a high percentage of historic structures that retain their historic/architectural integrity. The blocks not included within the proposed district feature a more fractured development pattern or a higher percentage of buildings that have been significantly altered so as to lose their overall integrity. Notwithstanding the fact that a number of these blocks also include some well-preserved historic structures, the required "integrity test" was not met and they were not included in the district proposal. In staff's view, the provisions of the Munjoy Hill Neighborhood Conservation District are likely adequate and more appropriate for this portion of the Hill. As noted above, 51% of Munjoy Hill's building stock is outside the boundaries of the proposed historic district.

In the event the Planning Board were to favor designation of individual historic structures over historic district designation, the designation process would need to begin again. Selection criteria would need to be developed for choosing among a collection of very similar structures those to designate and a justification for individual designation over district designation made. Individual designations for the quantity of contributing structures in this area would also be administratively laborious, and ultimately not a more streamlined process. Also, individual local designation would

not guarantee owners of designated properties access to state or federal historic tax credits. Tax credits are available only to income-producing contributing properties within a certified local historic district or individual buildings listed in the National Register of Historic Places.

How does this initiative relate to the ReCode initiative?

ReCode will look at zoning requirements citywide, including dimensional standards, permitted uses, performance standards, and to design to the extent that design is addressed in Chapter 14 of the City's Code/the Land Use Code. Planning is also evaluating changes to the City's Design Manual, as a related initiative, but distinct from the changes that may be proposed to the Land Use Code. This is an incredibly important initiative with implications for all of Portland's built environment. However, zoning and preservation are not mutually exclusive tools - as is always the case with any historic designation, there is underlying zoning and other regulations that continue to influence the form and character of what can be built or redeveloped. The ReCode process doesn't supplant the appropriateness of some exceptional areas of the city being designated historic districts or landmarks.

IV. PUBLIC COMMENT

As of this writing, a total of 256 individuals have submitted written comment, provided public testimony and/or signed petitions related to the possible designation of a Munjoy Hill Historic District for and against the district, or wrote to ask questions and concerns (ATTACHMENTS 7 and 8). Responses to previously raised questions have been addressed in previous memos, and in III above. Comments received after the completion of this report are not reflected in the tabulation.

V. FINDINGS AND RECOMMENDATION OF THE HISTORIC PRESERVATION BOARD

In considering the designation of individual buildings as local landmarks and/or the designation of a contiguous area as a historic district, the Historic Preservation Board must find that the proposed landmark or district meets at least one of the six minimum criteria for designation outlined in the historic preservation ordinance (Article IX of the Land Use Code, Sec. 14. 610 a.). In the case of a nominated historic district, the Board must also find that the district meets the criterion for district designations as described in Sec. 14-610 b. Separate from the above criteria, which address the question of *significance*, the Board must also find that the nominated landmark and/or district exhibits sufficient *integrity* to warrant the building's or district's preservation (Sec. 14-611).

Following are the historic preservation ordinance's designation criteria:

Sec. 14-610. Minimum criteria for designation.

(a) The historic preservation board shall limit its consideration to the following criteria in making a determination on a proposed nomination of an area, site, structure or object for designation by ordinance as a landmark or district:

1. *Its value as a significant example of the cultural, historic, architectural, archeological or related aspect of the heritage of the City of Portland, State of Maine, New England region, or the United States;*

2. *Its location as a site of a significant historic or prehistoric event or activity which may have taken place within or which involved the use of any existing structure on the property;*

3. *Its identification with a person or persons who significantly contributed to the cultural, historic, architectural, archeological or related aspect of the development of the City of Portland, State of Maine, New England region, or the United States;*

4. *Its exemplification of a significant architectural type, style or design distinguished by innovation, rarity, uniqueness or overall quality of design, detail, materials or craftsmanship;*

5. *Its identification as the work of an architect, designer, engineer or builder whose individual work is significant in the history or development of the City of Portland, the State of Maine, the New England region, or the United States; or*

6. *Its representation of a significant cultural, historic, architectural, archeological or related theme expressed through distinctive areas, sites, structures or objects that may or may not be contiguous.*

(b) In the case of a nominated historic district, the historic preservation board shall also determine whether a substantial number of the properties, sites, structures or objects have a high degree of cultural, historic, architectural or archeological significance and integrity, many of which may qualify as landmarks, and which may also have within its boundaries other properties, sites, structures or objects which, while not of such cultural, historic, architectural or archeological significance to qualify as landmarks, nevertheless contribute to the overall visual characteristics of the significant properties, sites, structures or objects located within it.

Sec. 14-611. Integrity of landmarks and historic districts.

Any area, structure or object that meets the criteria in section 14-610 must also have sufficient integrity of location, design, condition, materials and workmanship to make it worthy of preservation or restoration.

On November 20, 2019, the Historic Preservation Board held a public hearing on the historic district proposal and voted on a recommendation to be forwarded to the Planning Board and Council. Formal deliberations followed four preliminary workshops and two site walks, review of detailed documentation and analysis of the Munjoy Hill neighborhood's development history and significance, evaluation of the condition of the Hill's existing building stock, the recommendation of consultants and staff regarding boundary delineation, input from area property owners and residents, and consideration of the historic preservation ordinance's minimum criteria for designation.

Following the public hearing, the Historic Preservation Board found that the area delineated on the map shown on ATTACHMENT 1 meets Sec. 14-610 Minimum criteria for designation (a)1 and (b) and Sec. 14-611 Integrity of Landmarks and Districts. Based on these findings, the Historic Preservation Board voted unanimously (Jacob absent) to recommend to the Planning Board and Council that the area shown on

ATTACHMENT 1 be designated a local historic district subject to the provisions of Article IX of the Land Use Code.

VI. PLANNING BOARD CONSIDERATIONS – COMPREHENSIVE PLAN GOALS

In addition to confirming that the Historic Preservation Board's district recommendation is in conformance with the historic preservation ordinance's designation Criteria (Division 3, Sec. 610 and 611), the Planning Board considers the proposed designation as it relates to the stated goals of the Comprehensive Plan, Portland's Plan 2030. Consideration shall include not only the Plan's historic preservation goals, but also other goals applicable to the Munjoy Hill neighborhood. Under Sec. 14-610 (d), "the Planning Board and Council...shall also consider the effect of such designation on other aspects of the comprehensive plan of the city."

The Board has received two separate analyses of the proposed designation's relationship to goals identified in Portland's Plan 2030. Planning & Urban Development Director Christine Grimando provided the most recent analysis, which was included as part of the February 11, 2020 staff report. See ATTACHMENT 6.

VII. MOTION

Based upon the November 20, 2019 recommendation of the Historic Preservation Board; documentation and analysis prepared by staff and consultants; information included in staff reports for the 12/10/19, 2/11/20 and 3/10/20 meetings and public comment, the Planning Board

A. Finds:
   a. that the proposed Munjoy Hill Historic District **[meets/fails to meet]** the historic preservation ordinance's minimum criteria for designation as set forth in Sec. 14-610 (a) (1) and (b), as well as the integrity criterion in Sec. 14-611; and
   b. that designation of the Munjoy Hill Historic District **[is/is not]** consistent with other goals of Portland's Plan 2030; and therefore

B. **[Recommends/does not recommend]** to the City Council that the proposed Munjoy Hill Historic District be designated a local historic district subject to the provisions of Article IX of the Land Use Code.

ATTACHMENTS

1. Map of Proposed Munjoy Hill Historic District
2. Historic Context Statement
3. List of properties within proposed district, with assigned classification
4. Sample building descriptions from *Munjoy Hill Historic Resources Inventory*
5. District map showing detailed breakdown of noncontributing properties
6. Analysis of district designation to Comprehensive Plan goals
7. Public comment received since February 11 workshop
8. Previous public comment

LINKS TO PREVIOUS REPORTS AND PRESENTATIONS

1. Link to 12/10/19 staff report, attachments and live-stream of meeting: https://portlandme.civicclerk.com/Web/Player.aspx?id=571&key=-1&mod=-1&mk=-1&nov=0

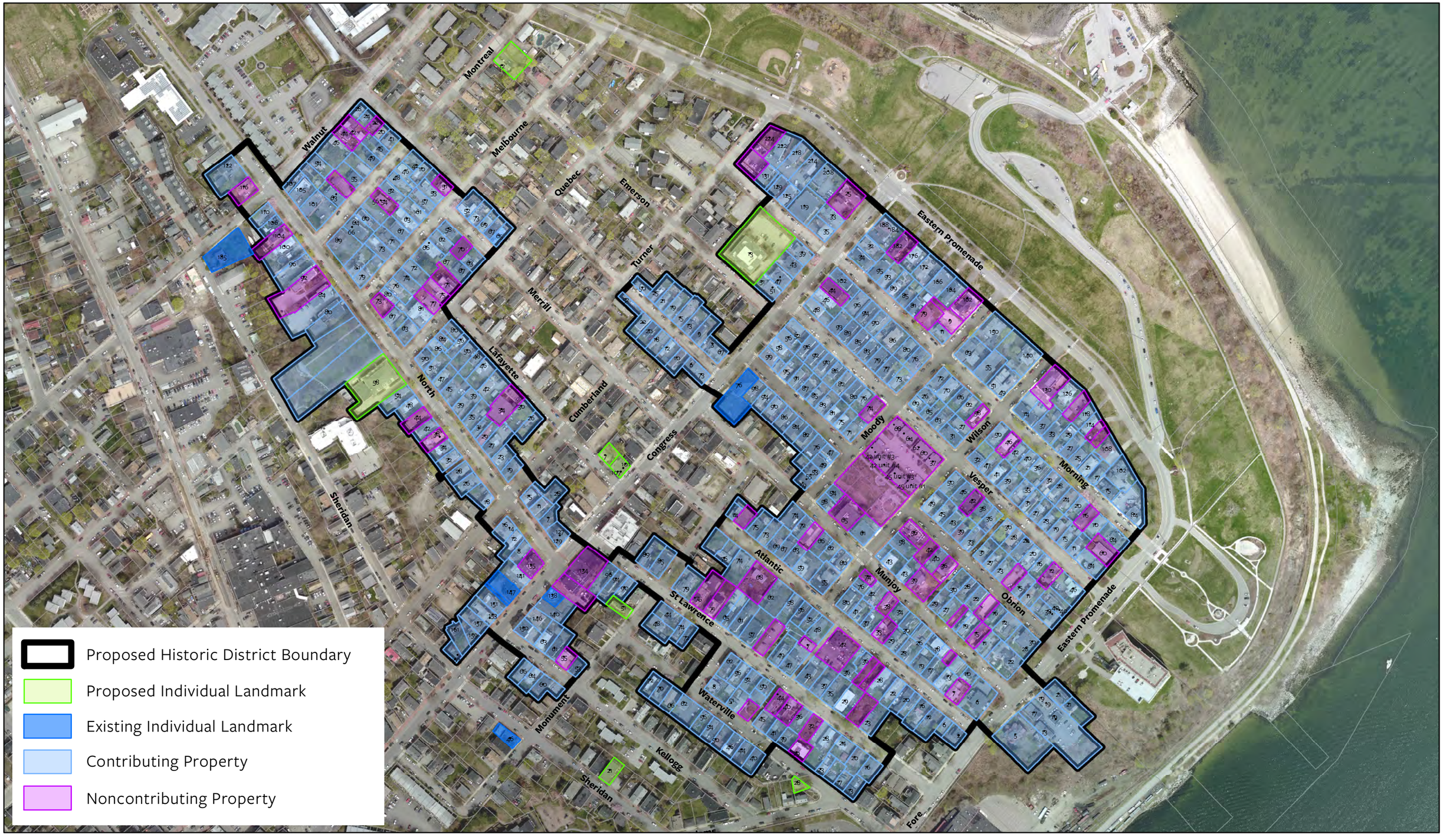
2. Link to 2/11/20 staff report, attachments and live-stream of meeting: https://portlandme.civicclerk.com/Web/Player.aspx?id=1207&key=-1&mod=-1&mk=-1&nov=0

3. Staff presentations and other supporting materials for the full process can be found on the project webpage: https://www.portlandmaine.gov/2451/Munjoy-Hill-Historic-District

Proposed Munjoy Hill Historic District and Individual Landmark Designations

Att. 1

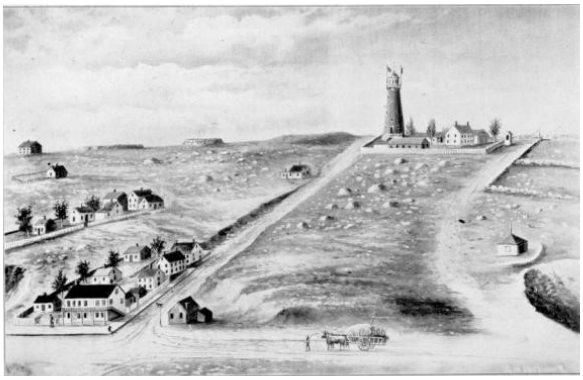
Per Historic Preservation Board Recommendation



Munjoy Hill Architectural Development & Context Statement

April 2019

Development History: 1786-1866



Munjoy Hill in the Forties by Charles Goodhue
Collections of the Maine Historical Society, MMN 4144

Munjoy Hill in 1826 as drawn by Lemuel Moody
Collections of the Maine Historical Society , MMN 100727

Munjoy Hill in 1851 from the H.F. Walling *Map of Cumberland County.*

Munjoy Hill rises 161 feet above Casco Bay on the eastern end of the Portland peninsula. The Hill's namesake George Munjoy (c1626-1680) settled near present day Mountfort and Fore Streets in 1659. He fled Portland after an Indian attack in 1676 and never returned.

The center of activity on Munjoy Hill for many years was the Portland Observatory (1807) which served as a signal communications tower for merchant vessels. Adjacent to the Observatory was a bowling alley and the house of its founder and operator Lemuel Moody.

Although Munjoy Hill came to be the city's most densely populated and ethnically diverse neighborhood, it was one of the last neighborhoods on the peninsula to be developed. Its primary functions from the city's founding in the 1630s until the 1840s were as an occasional gathering place and a pasture for cows. Throughout the mid-18th century a group called the Munjoy Proprietors erected a system of stone walls on the hill, with a gate near the present-day intersection of Washington Avenue and Congress Street. The Munjoy Proprietors sold "cow rights" to locals for pasturing their cattle.

The cow pastures were also the site of large open-air events. The fields between the Observatory and Eastern Cemetery were popular for 4th of July celebrations, circuses, and militia musters.

Early structures on the hill in addition to the Observatory included a hospital for small pox victims, a gun house, and Fort Sumner. The fort was built in 1794 off North Street to protect the city from attacks from the west and Back Cove.

In 1796 Tukey's Bridge was built, connecting the peninsula to the mainland. Washington Avenue was laid out to connect the city to the bridge in anticipation of a residential building boom that didn't immediately materialize.

Instead, groups of structures were scattered across the hill, first near the gate to Munjoy Hill,

Development History: 1786-1866

Munjoy Hill in 1857 from the H.F. Walling *Map of Cumberland County.*

Congress Street on Munjoy Hill after the Fire of 1866
Greater Portland Landmarks

Extent of the Great Fire of 1866
Greater Portland Landmarks

then along Cumberland Avenue, Congress and Lafayette Streets.

As the Hill's population increased, in 1836 City officials bought up land along the shoreline, despite public outcry at the waste of public money. Much of this area is now the Eastern Promenade.

While the Eastern Promenade was preserved for future public use, on the opposite side of Munjoy Hill tons of gravel were removed to fill in Back Cove. Moses Gould, owner of 18 acres on the Hill, formed the Back Cove Land Co. to fill and develop the mud flats in what is now Bayside.

Expansion on the waterfront was precipitated by the founding by John A. Poor of the Atlantic and St. Lawrence Railroad. Chartered in 1845 and opened in 1853, the railroad connected Portland to Montreal, Quebec. Poor also helped found the Portland Company on Fore Street in 1847 to build locomotives for his new railroad. The upsurge in activity along Fore and India Streets in the 1840s and 1850s led to a residential boom on the Hill, attracting workers from the Portland Company and railroad. Many of these homes were built in the Greek Revival Style that predominated during this period.

On the western side of the Hill, the area between Washington Avenue and North Street developed a unsavory reputation in the early 19th century. In 1849 a riot broke out in a bawdy house. During the riots one man was killed and a dance hall was destroyed by fire. This area would be mostly destroyed in a few decades by a catastrophic fire with significant impact on the entire city.

The Great Fire of July 4th and 5th, 1866 spread from Commercial Street to North Street. It destroyed 1,500 buildings and left over 10,000 people homeless. The field below the Observatory was turned into a makeshift tent-city by the Army, then replaced by wooden dormitories until permanent housing could be built.

Several early homes on the east side of North Street survived the fire including the Benjamin Noble House (1856) at 65 North Street and the double house of Eliphalet Clark and Moses Gould at 79 North Street (c1847).

Development History: 1866-1917

Munjoy Hill from a *Bird's-Eye Map of Portland* Published by J. J. Stoner in 1876

The index of a map prepared by the city Tax Assessor 1882-1884 depicts the extent of development on Munjoy Hill.

Following the Great Fire, the city's need for housing drove development on Munjoy Hill. This development was largely middle-class homes, with a few high style residences in the Italianate and Second Empire styles. A few years earlier in 1863 the city's horse drawn street car line had reached Munjoy Hill helping to make the hillside areas attractive for development after the fire. Residential development spread out from existing residential areas eastward toward the Promenade on Turner, Quebec, Melbourne and Montreal Streets, which had been subdivided 1857 and 1858.

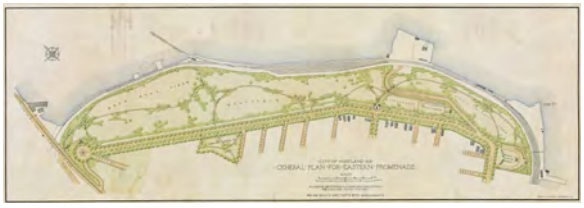
In 1874 the Deering family heirs subdivided their land along Congress, Sheridan and Kellogg Streets. A few years later in 1879 the family subdivided additional land along the east side of Munjoy Street and the north side of Congress Street from Howard Street to the Eastern Promenade.

By the 1880s, Munjoy, Atlantic and St. Lawrence Streets were largely built out. These long streets extended between Fore to Congress and were interconnected by short streets like Sherbrooke Street or small lanes like Gilbert's Lane. To the east, a pond initially blocked the extension of several streets westward to Congress Street. The pond was located in the area generally occupied in the 20th century by the Adams School (*image bottom left*). Within the next ten years the area would be drained and developed. One block within this formerly wet area would become one of four car barns for the Portland Railroad Co. after the street car line expanded its route on the Hill from Congress Street, down Morning Street to the Eastern Prom. It then wended its way back to Congress Street along Beckett, Wilson, and Atlantic Streets. The company's street cars lines were all electrified by 1896.

Development History: 1866-1917

Portland Railroad Company's car barn on Beckett Street.

Munjoy Hill Reservoir c1920.
Portland Water District, MMN 82239



Olmsted Brothers design for Eastern Promenade.

J.J. Nissen House, 286 Eastern Promenade in 1924.

In 1889 the Munjoy Hill reservoir was built at the corner of North and Walnut Streets by the Portland Water Company. The reservoir was built to better serve customers in the East End and had a capacity of 20,000,000 gallons. The reservoir burst a few years later in 1893, killing four people and destroying four homes off Walnut Street. The reservoir remained in operation until 1970 as a water supply; today the site is a parking lot above a large underground reservoir.

In the last decade of the 19th century, wealthy local families began to appreciate the Eastern Promenade's sweeping views and began erecting grand homes opposite the City-owned green space. The residential development followed efforts begun by the city in 1878 to improve the publically owned green space. In 1890 the City acquired Fort Allen to extend the city's park space. The park and perimeter roadway became key elements in the park and boulevard system envisioned by Mayor James Phinney Baxter and the Olmsted brothers landscape firm in 1905.

Twenty-one of the thirty-three single family homes on the Eastern Promenade were built between 1888-1912 in the Queen Anne and Colonial Revival styles. Samuel D. Plummer, a Portland real estate dealer, built his Queen Anne house at 140 Eastern Promenade in 1898. The Griffin Brothers, prominent fruit dealers on Portland's waterfront, built large homes on the Promenade. Lindsay B. Griffin first built a house at 182 Eastern Prom in 1897, then built a new Colonial Revival House at 188 Eastern Prom in 1908. His brother John built a similar home at 150 Eastern Prom in 1910. One of the prominent Colonial Revival homes on the northern end of the Promenade was the 1913 residence of John. J Nissen, founder of Nissen Bakery at 59 Washington Avenue.

Development History: 1866-1917

Samuel D. Plummer House, built 1898 at 140 Eastern Promenade.

Triple deckers on Munjoy Hill.

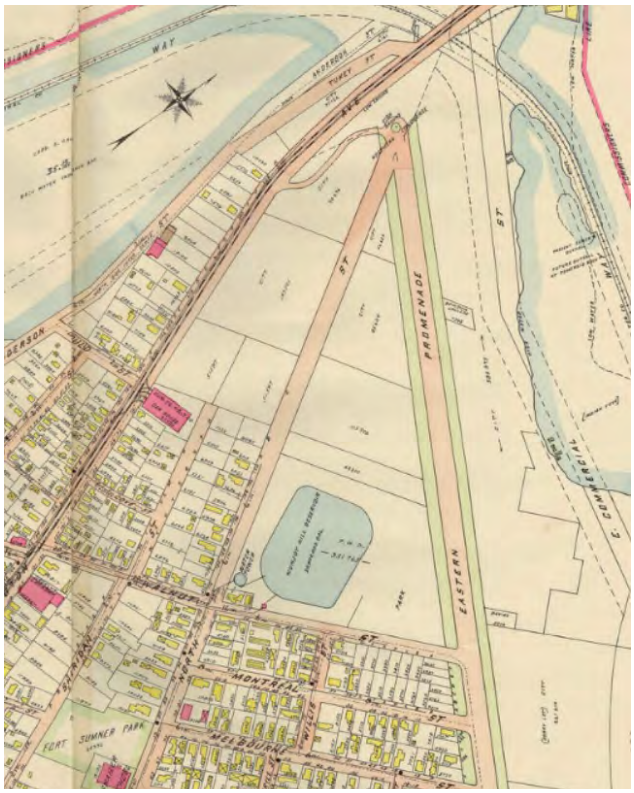
Triple deckers on Munjoy Hill.

Between 1895 and 1917 "triple deckers" or "flat houses" were built in large numbers on Munjoy Hill. They are particularly prevalent on Morning, Vesper and Beckett Streets, as well as Sheridan and Kellogg Streets. The land on Morning, Vesper and Beckett Streets was owned by the Deering and Fessenden families and was some of the last vacant land to be laid out on Munjoy Hill. The triple-deckers and the few apartment buildings built during this period were multi-family residential building types that housed the Hill's increasing immigrant population from Italy and Northern and Eastern Europe.

Portland was a busy maritime port in the early 20th century and served as an immigrant port of entry. Portland's primarily English population was joined by groups from Ireland, Canada, Portugal, Scandinavia, Italy, Eastern Europe, and Greece. Munjoy Hill's close proximity to the downtown made it attractive to many immigrant families. Immigrant families settled on the Hill and often built neighborhood businesses like the Capozza brothers barber shop or Paul Blumenthal's grocery store.

By World War I, most of the neighborhood's residential lots were filled, however land to the west along North Street and the Eastern Promenade remained vacant.

Development History: 1917 – Present



Map of the northern end of Munjoy Hill depicting vacant land. *Richards Standard Atlas of the City of Portland,* 1914.

View of the Munjoy Hill Reservoir and the Jack school beyond. Portland Water District, MMN 94455.

View of Portland House in the distance.

By the late 1920s, although most of the neighborhood's residential lots had been developed, some lots remained vacant, particularly along North Street and the Eastern Promenade. During the 20th century infill development and construction of new institutional and educational buildings slowly filled the remaining land.

In 1929 the Jewish Home for the Aged was designed by architect Herbert Rhodes and built at 158 North Street.

Jack Junior High School was built on North Street near the Munjoy Hill Reservoir on land gifted to the city by the Portland Water District in 1943 for seventh and eighth grade students in the Munjoy Hill neighborhood. The school was later used as an elementary school. The building was closed in 2001 and replaced by the East End Community School built on the same site in 2006.

In 1947 the housing development at 304 Eastern Promenade was built on the site of homes destroyed in the reservoir flood. The development includes seven buildings on a 1.7-acre lot with parking along the perimeter of the development.

A few years later in 1950 at the corner of Eastern Promenade and Quebec Street, six multi-unit buildings were constructed on a one-acre lot. Like the other mid-twentieth century housing project on the Eastern Promenade, it is a low scale development and does not follow the traditional street pattern.

Today, the Munjoy Hill skyline is dominated by two large-scale residential buildings. The Portland House, overlooking the Fore River at 45 Eastern Promenade, was built in 1969 as an apartment building and today houses over 100 residential condominiums.

Promenade East, purportedly the first high rise condominium building in Maine, was built in 1975. The building is fourteen stories high and accommodates 80-units. Its interior has a unique layout with two floors sharing a single hallway.

Architecture

Henry Homer House, 81 Congress Street (c1829) in 1924.

7 Lafayette Street (1849 - 1852) in a 1924 image.

7 Lafayette Street (1849—1852) in 2018.

Architectural styles of the Hill's residences provide useful clues to the development and history of the neighborhood. While few buildings from the Hill's early settlement remain, there are many buildings from the three major periods of construction: early subdivisions for housing for workers along the expanding waterfront (1847-1866), Post Fire development (1866-1890s) and housing for Portland's expanding immigrant population (1890s -1930). Research conducted by Greater Portland Landmarks in the early 1980s provided dates for many of the homes on Munjoy Hill.

A number of buildings on Munjoy Hill exhibit the characteristics of more than one style, either because they are transitional between stylistic periods or due to later additions. Some buildings, altered by the replacement of exterior siding and the removal of exterior features display no particular architectural style.

Early Settlement (1785-1845)

The few buildings that remain from the early settlement on Munjoy Hill are wood–framed, three -bay, side gable capes and are generally located near the crest of the hill. The Henry Homer House (c1829) at 81 Congress Street is a one-and-a-half story three bay cape that has been altered by a side addition. A slightly later example is the dwelling at 7 Lafayette Street (1849-1852).

Another altered example of an early house is located at 62 Munjoy Street. The first floor was a five-bay cape built c1790 in the Federal period. The cape was likely moved and a second floor added c1857 by builder William Hoit.

Early Subdivisions (1845-1866)

Two early subdivisions of land, one off North Street and the other off Fore Street include good examples of the Greek Revival style. These homes typically feature a strong post and lintel door surround. While most homes in this style on Munjoy Hill are wood framed, there are several brick Greek Revival homes in the neighborhood. The brick dwellings usually feature stone lintels over their windows.

Architecture

Moses Gould and Eliphalet Clark at 79-81 North Street (1847).

Joseph Flower House at 87 St. Lawrence Street (c1852).

One of the best examples of a brick Greek Revival is the Robert Dresser House (1850-1851) at 2 Atlantic Street. The two-story building has stone lintels above the windows and a recessed entry door with sidelights. Another early example is the double house of Moses Gould and Eliphalet Clark at 79-81 North Street (1847). Like the Dresser House, the Gould-Clark House has recessed entries. The entry at 81 North Street retains its entry sidelight design. Altered by Italianate entry hoods, the Greek Revival style is evident in the building's strong gable-end pediments, the recessed brick window bays, and the stone lintels and sills at each window.

Additional brick dwellings are located at 16 Atlantic Street (1852-1853), 55 Atlantic Street (1855), 62 Waterville Street (1855) and 66 Waterville Street (1855-1857). A late example of a brick Greek Revival dwelling is the Gabriel Mark House at 74 St. Lawrence Street built in 1872.

St. Lawrence, Atlantic and Waterville Streets contain a high percentage of Greek Revival frame residences. There are thirteen examples of the Greek Revival style built between 1845 and 1855 on Atlantic Street. Nineteen Greek Revival frame dwellings built between 1847 and 1860 are located on St. Lawrence Street and nine built between 1846 and 1867 are located on Waterville Street.

The neighborhood contains examples of both gable front Greek Revival homes and side gable dwellings. Gable front dwellings are usually 2 1/2 stories, while one and two story examples of side gable dwellings are also present.

One of the most prevalent builders on Munjoy Hill in this period was William Hoit. Research indicates he was responsible for the construction of at least ten wood frame homes on Munjoy Hill in the 1850s. Most of these were Greek Revival homes, although two examples of his construction in the Italianate style are extant at 86 and 104 Congress Street.

Ellen Moody York House, 140 Congress Street in 1924.

A Gothic Revival dwelling on North Street in 1924.

Tall narrow paired windows like these at 80 North Street are typical of the Italianate Style.

Another early 19th century architectural style is the Gothic Revival. There are few examples of the Gothic Revival style on Munjoy Hill. 140 Congress Street is the former home of Ellen Moody York, the granddaughter of Lemuel Moody and proprietress of the Portland Observatory until 1925. Her dwelling once featured ornate decorated vergeboards and drop mold window trim that characterized the Gothic Revival style. Many of the dwelling's details were lost when the dwelling was altered by the addition of a church sanctuary in the mid-20th century.

A second example of the style is located at the rear of 21 North Street. Less decorative than 140 Congress Street, the North Street dwelling features decorative verge board, steeply pitched gable wall dormers, and a projecting two story entry bay with a similarly steep gable roof and decorative verge boards.

Post-Fire Development (1866-1890s)

Most of the extant homes built in the aftermath of the Great Fire of 1866 were constructed in the Italianate and Second Empire styles that predominated during that period. Often similar in form to the gable fronted Greek Revivals homes, the typical Italianate house has more elaborate decoration and machine-made details. The details, such as brackets, were more readily available and affordable than earlier hand carved details due to new machinery technology.

Characteristic features of the Italianate style include tall paired windows, arched window openings, decorative door hoods, brackets below the roofline and bay windows.

The Italianate style predominates on Munjoy Hill. Projecting bays and door hoods are common features on both vernacular dwellings as well as more elaborately detailed homes on the Hill. The Italianate style is also found on commercial and civic buildings like the Shailer School (1880-1881) on North Street.

Bay windows on gable front home are a typical feature on the Hill.

The Ann Freeman House on Congress Street is an early example of the Italianate Style. It is a designated local landmark.

While most Italianates style homes have a side hall plan, the Hill also has several examples of an L-plan house with a side entrance like this one at 56 St. Lawrence Street built c1860.

Brick examples of the style include the two-bay, two-story Ann Freeman House (1857) at 147 Congress Street and the three-story double house at 96 St. Lawrence Street. Both examples have hip roofs that formerly were capped by cupolas.

Early examples of the gable end form are the Benjamin Noble House at 63 North Street (1856) and the Jason H Davis House at 23 O'Brion Street (1866-7).

The three bay, one-and-a-half story Cushing House at 83 Munjoy Street (1878) is an unusual example of the Italianate style on Munjoy Hill. Unlike most of its neighbors, the dwelling is set far back on its lot and has an unusual central projecting entry tower form.

A third plan type is the L-shape plan. An example of the L-plan form with side entry, usually off a porch, is the Samuel Libby House at 30 Lafayette Street (late 1870s). Like many dwellings with this form, the Libby House has a narrow gable front form with a projecting bay window on the street façade.

Two of the most prevalent builders on Munjoy Hill in this period were William H. and John Weeks. Research indicates the Weeks family built several Italianate wood-frame houses on Vesper and O'Brien Streets in the last decades of the 19th century.

The Alfred Roberts House (1876) at 80 Quebec Street.

The Second Empire at 60 Kellogg Street retains its historic slate roof, window hoods, and corner boards.

39 and 45 North Street on Munjoy Hill in 1924

The Second Empire style shares many of the Italianate style's characteristics and was popular during the same time period. What distinguishes the Second Empire style, however, is its mansard roof form. It is another predominate style on Munjoy Hill.

Several good examples of small scale, one-and-a-half-story Second Empire dwellings are located on the Hill. The Alfred Roberts House (1876) at 80 Quebec Street and the John C. Main House (1876) at 52 Melbourne Street each have detailed woodwork over the dormers and elaborate brackets supporting the entry hood. The Mains House has a two-bay side hall plan, while the Roberts House has an unusual back hall plan and features bull's eye rosettes as a decorative exterior detail. Like the Mains and Roberts Houses, the Second Empire at 60 Kellogg Street has elaborate dormer and cornice details. It retains its historic slate roof, window hoods, and corner boards.

The late 19th century brought larger scale dwellings to the neighborhood, particularly on North, Congress and Merrill Streets. Larger two-and-a-half-story examples of the Second Empire style are present at 32, 39, 45, 96 North Street. The V.B. Fuller House (1884) at 45 North Street retains its double entry doors, bracketed entry hood, two-story projecting bays with narrow windows, cornice brackets, and dentil molding. The A.L.R. Huston House (1886) at 39 North Street retains its historic carriage house.

Swag detail on entry porch gable at 129 Morning Street.

William N. Taylor House (1895) at 64 Eastern Promenade.

Samuel D. Plummer House (1898) at 140 Eastern Promenade.

Housing a Growing Population (1890s-1930)

The extant homes built on Munjoy Hill at the turn of the century are constructed in the diverse styles that predominated during that period. The two most prevalent styles are Queen Anne and Colonial Revival.

While homes from this era located on the Eastern Promenade are often elaborate and large scale, on interior streets the Queen Anne and Colonial Revival style tend to be smaller scale and follow the same development pattern as earlier homes. Many Queen Anne homes are gable front with a side hall plan, like earlier Greek Revival, Italianate, and Second Empire style homes on the Hill. Only the stylistic details have changed. Similarly, Colonial Revival homes may also have a gable front or may have a hip roof.

The Queen Anne style features a variety of distinctive patterns of decorative detailing. Spindlework with delicate porch details and lace-like brackets is one common type of Queen Anne architectural embellishment found on Munjoy Hill. Another is the Free Classic, with classical columns and decorative details borrowed in part from the early 19th-century Federal period of architecture.

Towers are prominent feature in Queen Anne dwellings and towers are present on the R. Cutler Libby House (1895) at 34 Congress Street, the William N. Taylor House (1895) at 64 Eastern Promenade, the Robert D. Libby House (1901) at 84 Eastern Promenade, and the Samuel D. Plummer House (1898) at 140 Eastern Promenade.

The John E. Farr House (1893) at 39 Congress Street is a good example of a gable front Queen Anne dwelling. The gable front projects beyond the front wall and encompasses the two story projecting window. Typical of the Queen Anne style, the dwelling features a Palladian window, multiple window sizes and styles, panel work, patterned shingles, spindlework, dentil moldings, and gable ornament in the entry portico. A unique feature of the house is the different decorative pattern of the lintels on the first and second floor window trim.

Colonial Revival house at 188 Eastern Promenade.

Colonial Revival house at 150 Eastern Promenade.

Colonial Revival apartment house at 164 Eastern Promenade.

The Colonial Revival style on Munjoy Hill is represented in a wide range of residential building types: large-scale single-family homes, small-scale single-family homes, and on triple decker buildings.

Two excellent examples of the Colonial Revival style are the John W. Griffin House (1910) at 150 Eastern Promenade and the Lindsay B. Griffin House at 188 Eastern Promenade (1908). Both dwellings have a hipped roof with a barrel roof dormer, but one has a full width porch and the other has a central portico. Both have a symmetrical façade and entry door with flanking sidelights that is typical of the Colonial Revival style.

Enoch Richards (1854-1944) was one of the most prolific builders on Munjoy Hill. He built at least sixteen houses on the Eastern Promenade and Beckett, Vesper, and Moody Streets. He built single-family homes, two-units and triple decker apartment buildings in both the Queen Anne and Colonial Revival Styles.

The Colonial Revival Enoch C. Richards Apartment House (1903-1904) at 164 Eastern Promenade features a distinctive element Richards used on many of his buildings--large brackets to support an deep overhanging roofline. This detail is also present on his former home at 162 Eastern Promenade, his triple decker building at 45 Quebec Street and four triple decker buildings at 88-96 Vesper Street.

While most buildings from this turn-of-the-century period of construction are Queen Anne or Colonial Revival, there are other styles present on Munjoy Hill as well, including Folk Victorian, the Shingle Style and Beaux Arts Style.

Folk Victorian architecture has simple detailing inspired by Italianate and Queen Anne Styles. The small home at 100 North Street (1873) has a simple gable roof form, a jig saw cut balustrade, and brackets window hoods typical of the Folk Victorian style.

Architecture

The Emma Fuller House (1892 at 50 Morning Street.

The Emerson School under construction in 1898, above. Collections of the Maine Historical Society, MMN 20355. The Emerson School today, below.

The Emma Fuller House (1892) at 50 Morning Street is a Queen Anne dwelling that exhibits some characteristics of the Shingle Style, including its strip of three windows in the front gable end, shingled pent roof, and shingle clad brackets supporting the projecting gable end.

The Henry F. Merrill House (1898) at 5 Eastern Promenade was designed by John C. Stevens and John H. Stevens. Colonial Revival in style, it also has elements found in the Shingle Style, including the recessed shingle window in the gable bay, the Palladian window, and the shingled exterior siding that unifies the irregular form of the house. Its porch with Ionic columns and decorative cornice detailing are typical Colonial Revival details.

Although not a dwelling, the Emerson School at 13 Emerson Street is an example of the Beaux Arts Style. Built 1897-1898, it was designed by Frederick Thompson in the Beaux Arts Style as an elementary school serving the Munjoy Hill neighborhood.

The Munjoy Hill neighborhood includes many triple decker apartment buildings. The triple decker is a residential building type that provided a greater number of units than early examples of multi-family housing on Munjoy Hill. It proved to be a critically important housing type to provide for Portland's growing population at the turn of the century. The building form is generally three stories high with one family unit on each floor, usually with a rear porch.

One street largely defined by its row of triple-deckers is Vesper Street. The land on Vesper Street wasn't developed until the late 1880s after being owned for many years by the Deering family. Enoch Richards, a prolific builder on Munjoy Hill, built five triple-deckers on the west side of Vesper Street 1896-1899.

An Italianate Triple Decker Building at 101 North Street

An example of the shingle bay form of triple decker buildings.

This apartment building on Morning Street has a similar form and features to a triple decker building, but has a single building entrance.

One of the most ornate triple-deckers on Munjoy Hill is located at 101 North Street. It was built in 1887 by Moses Gould, a prominent real estate developer who lived at 79 North Street. A similar triple-decker, but somewhat altered, is located at 98 Cumberland Avenue, near the Hill's only four -decker at 106 Cumberland Avenue and a brick triple-decker at 102 Cumberland Avenue.

The triple decker at 82 Beckett Street is a good example of a shingled bay style with a bracketed cornice and Italianate details. Particularly striking is its unusual curved brackets at the entry door. It was built in 1891 by Charles W. Cushing, a carpenter who lived at 87 Munjoy Street.

The Colonial Revival triple-decker at 129 Morning Street has a curved three-story bay, unusual on Munjoy Hill where most bays are segmented. The dwelling was built in 1908 for Edward L. Dame, who also owned the more traditional triple-decker next door at 125 Morning Street.

The triple decker is a more dense form of housing than early examples of multi-family housing that was built on Munjoy Hill. It was critical to house Portland's growing population at the turn of the century. In addition, the development of multi-family apartment buildings allowed for greater density in the neighborhood and accommodation for lower middle class residents. One example of a large apartment block is the building at 119 Morning Street, built circa 1926 for the Albert family and formerly known as the "Cleevesland".

The brick apartment building at 55-57 Morning Street, formerly known as the "Raymond Apartments" is an example of a housing type built to accommodate a greater number of units than the multi-family residences and triple deckers on Munjoy Hill. It was built c1912 for Samuel D Plummer and owned for many years by his family. Samuel D Plummer (1858-1917) was a real estate dealer who lived in a Queen Anne house at 140 Eastern Prom in 1898 on land he bought from the Deering heirs in 1897. He later built two apartment buildings at the rear of his house on Morning Street on the remainder of the land he purchased from the Deering family.

Visual Character of the Hill

Munjoy Hill is largely a neighborhood of wood framed dwellings.

Gables, bay windows, and raised stoops are common.

On many blocks, narrow lots contribute to a consistent streetscape.

Although Munjoy Hill exhibits a variety of architectural styles and residential building types, including single-family, multi-family, triple decker and the occasional apartment building, there are a number of shared building characteristics that serve to unify much of the neighborhood and give it its own identifiable visual character.

First and foremost, the neighborhood is distinguished by its dense development pattern. Buildings occupy narrow, deep lots and are closely spaced. With few exceptions, mostly on the Eastern Promenade, buildings are of modest scale, ranging from 1 ½ to 3 stories. Most dwellings are wood-frame construction with clapboard exteriors; the occasional brick building breaks this predominate material palette. Buildings generally have small footprints, with their narrow, usually gable, end facing the street. Most houses are two or three bays wide, often with a projecting one- or two-story front bay. Projecting front entry vestibules are also common.

Most houses sit above a high brick foundation, with a raised stoop and flight of exterior stairs leading to the main entry. Entries are typically located on the street façade and are generally shifted to one side, although there are examples of primary entrances on the side elevation. Most buildings are set back a short distance from the sidewalk, allowing for a shallow front yard. Driveways, where they exist, occupy much of the width of the lot's side yard.

Just as the scale of houses on Munjoy Hill is generally modest, so too is the architecture. Most of the houses, with the exception of those facing the Eastern Promenade, are vernacular expressions of the various architectural styles popular at the time of their construction. The very large number of Italianate buildings throughout the neighborhood, with their tall vertical expression, gable end facing the street, bracketed entry hood, and projecting bays, lends a certain consistency to the blocks.

Visual Character of the Hill

Unique porch details can differentiate a typical gable front dwelling from its neighbors.

Vernacular dwellings often feature a few character defining details, like a entry hood or tall narrow windows, that help identify these dwellings as Italianate.

Streetscapes like this on North Street, depict the typical rhythm created by vertically orientated facades .

Color photography by Greater Portland Landmarks

Certainly, there are some blocks within the neighborhood (Moody Street, for example) that do not follow this typical development pattern. There are also houses that do not exhibit the common building characteristics described above. These are, however, exceptions rather than the rule on Munjoy Hill. That is why later developments such as MacArthur Gardens, which features several separate-but-related brick buildings set back from the street within a campus-like setting, do not feel sufficiently integrated with the neighborhood.

Munjoy Hill is often described as "friendly" and "approachable". While there are no doubt many factors that contribute to this reputation, the neighborhood's distinct visual character is key among them.

Attachment 3

List of Properties within the Proposed Munjoy Hill Historic District

Property Address	Classification	Construction Date	circa date
2 Atlantic Street	Contributing	1851	
6 Atlantic Street	Contributing	1859	
7 Atlantic Street	Non Contributing	1845	
12 Atlantic Street	Contributing	1845	
13 Atlantic Street	Contributing	1845	
16 Atlantic Street	Contributing	1853	
17 Atlantic Street	Contributing	1845	
18-20 Atlantic Street	Contributing	1848	
19 Atlantic Street	Contributing	1879	
22 Atlantic Street	Contributing	1853	
23 Atlantic Street	Contributing	1846	
28 Atlantic Street	Contributing	1897	
29 Atlantic Street	Contributing	1846	
33 Atlantic Street	Non Contributing	1871	
34-36 Atlantic Street	Contributing	1846	
37 Atlantic Street	Contributing	1846	
41 Atlantic Street	Contributing	1855	
42 Atlantic Street	Non Contributing	1872	
48 Atlantic Street	Contributing	1851	
52 Atlantic Street	Contributing	1876	
55 Atlantic Street	Contributing	1855	
58 Atlantic Street	Contributing	1850	
62 Atlantic Street	Contributing	1850	
63 Atlantic Street	Contributing	1855	
67 Atlantic Street	Contributing	1910	
68 Atlantic Street	Non Contributing	1972	
69 Atlantic Street	Contributing	1862	
73 Atlantic Street	Contributing	1851	

Pre-1845
1845-1866
1866-1890
1890-1930
Recent

74 Atlantic Street	Contributing	1890	
75 Atlantic Street	Contributing	1853	
76 Atlantic Street	Contributing	1872	
71 Beckett Street	Contributing	1888	
75 Beckett Street	Contributing	1889	
76 Beckett Street	Contributing	1902	
81 Beckett Street	Contributing	1890	
82 Beckett Street	Contributing	1891	
83 Beckett Street	Contributing	1888	
84 Beckett Street	Contributing	1891	
85 Beckett Street	Contributing	1887	
86 Beckett Street	Contributing	1893	
87 Beckett Street	Contributing	1887	
88 Beckett Street	Contributing	1893	
91 Beckett Street	Contributing	1888	
94 Beckett Street	Contributing	1892	
95 Beckett Street	Contributing	1887	
98 Beckett Street	Contributing	1892	
99 Beckett Street	Contributing	1899	
25 Congress Street	Non Contributing	1891	
32 Congress Street	Contributing	1892	
33 Congress Street	Contributing	1902	
34 Congress Street	Contributing	1895	
35 Congress Street	Contributing	1892	
39 Congress Street	Contributing	1893	
43 Congress Street	Contributing	1892	
44 Congress Street	Non Contributing	1925	
45-47 Congress Street	Contributing	1895	
46 Congress Street	Contributing	1903	
48 Congress Street	Contributing	1880	Y
51-53 Congress Street	Contributing	1886	
52 Congress Street	Contributing	1891	
56 Congress Street	Contributing	1895	

58 Congress Street	Contributing	1892	
67 Congress Street	Contributing	1887	
73 Congress Street	Contributing	1896	
76 Congress Street	Previously Designated Landmark	Not in book or web	
103 Congress Street	Individually Designated Landmark	1887	
127-129 Congress Street	Contributing	1866	
134 Congress Street	Non Contributing	1977	
135 Congress Street	Non Contributing	1867	
138 Congress Street	Previously Designated Landmark	1807	
140 Congress Street	Contributing (House at Rear)	1858	
	Non Contributing (Church)		
141 Congress Street	Contributing	1866	
146 Congress Street	Contributing	1890	Y
147 Congress Street	Previously Designated Landmark	1857	
150 Congress Street	Contributing	1900	Y
151-153 Congress Street	Contributing	1904	Y
155 Congress Street	Contributing	1875	Y
157 Congress Street	Contributing	1875	Y
159 Congress Street	Contributing	1880	Y
161 Congress Street	Contributing	1880	Y
165-167 Congress Street	Contributing	1883	
5 Eastern Prom	Contributing	1898	
6 Eastern Prom	Contributing	1904	
13 Rear Eastern Prom	Contributing	1853	
17 Eastern Prom	Contributing	1849	
19 Eastern Prom	Contributing	1884	
21 Eastern Prom	Contributing	1850	
22 Eastern Prom	Contributing	1888	
28-30 Eastern Prom	Contributing	1867	
38-40 Eastern Prom	Contributing	1867	
46 Eastern Prom	Contributing	1874	
54 Eastern Prom	Contributing	1867	
60 Eastern Prom	Non Contributing	1972	

64 Eastern Prom	Contributing	1895	
84 Eastern Prom	Contributing	1901	
102 Eastern Prom	Contributing	1900	
108 Eastern Prom	Contributing	1912	
114 Eastern Prom	Contributing	1906	
118 Eastern Prom	Contributing	1925	
126 Eastern Prom	Contributing	1910	
130 Eastern Prom	Non Contributing	1902	
140 Eastern Prom	Contributing	1898	
150 Eastern Prom	Contributing	1910	
158-162 Eastern Prom	Non Contributing	1904	
164 Eastern Prom	Contributing	1904	
166-168 Eastern Prom	Contributing	1912	
172-174 Eastern Prom	Contributing	1902	
176 Eastern Prom	Contributing	1912	
182 Eastern Prom	Non Contributing	1897	
188 Eastern Prom	Contributing	1908	
208 Eastern Prom	Contributing	1906	
214 Eastern Prom	Contributing	1895	
218 Eastern Prom	Contributing	1898	
222 Eastern Prom	Contributing	1900	
13 Emerson Street	Landmark	1898	
7 Gilbert Lane	Non Contributing	1850	
9 Howard Street	Contributing	1880	
10 Howard Street	Contributing	1882	
12 Howard Street	Contributing	1885	
13 Howard Street	Contributing	1885	
15 Howard Street	Contributing	1871	
18 Howard Street	Contributing	1882	
19 Howard Street	Contributing	1880	
20 Howard Street	Contributing	1882	
21 Howard Street	Contributing	1882	
22 Howard Street	Contributing	1882	

25 Howard Street	Contributing	1882	
51-53 Kellogg Street	Contributing	1895	
55-57 Kellogg Street	Non Contributing	1915	
60 Kellogg Street	Contributing	1899	
61 Kellogg Street	Contributing	1904	
63 Kellogg Street	Contributing	1899	
64 Kellogg Street	Contributing	1880	
66 Kellogg Street	Contributing	1880	
7 Lafayette Street	Individually Designated Landmark	1849	
26 Lafayette Street	Contributing	1850	
30 Lafayette Street	Contributing	1860	Y
34 Lafayette Street	Non Contributing	1889	
42 Lafayette Street	Contributing	1858	
46 Lafayette Street	Contributing	1850	
48 Lafayette Street	Contributing	1850	
50 Lafayette Street	Contributing	1850	
56 Lafayette Street	Contributing	1850	
51 Melbourne Street	Non Contributing	1905	
52 Melbourne Street	Contributing	1880	
53 Melbourne Street	Contributing	1900	
57 Melbourne Street	Contributing	1875	
58 Melbourne Street	Contributing	1867	
61 Melbourne Street	Contributing	1890	
62 Melbourne Street	Contributing	1869	
63 Melbourne Street	Contributing	1890	
64 Melbourne Street	Contributing	1880	
67 Melbourne Street	Contributing	1910	
71 Melbourne Street	Contributing	1878	
72 Melbourne Street	Contributing	1868	
73 Melbourne Street	Contributing	1866	
74 Melbourne Street	Contributing	1866	
76 Melbourne Street	Contributing	1861	
80 Melbourne Street	Contributing	1855	

65 Merrill Street	Contributing	1871	
67 Merrill Street	Contributing	1867	
69 Merrill Street	Contributing	1902	
70 Merrill Street	Contributing	1880	
73 Merrill Street	Contributing	1882	
8-12 Montreal Street	Individually Designated Landmark	1855	
41 Montreal Street	Contributing	1866	
42 Montreal Street	Contributing	1875	
45 Montreal Street	Contributing	1863	
46 Montreal Street	Contributing	1868	
48 Montreal Street	Contributing	1862	
49 Montreal Street	Contributing	1854	
52 Montreal Street	Contributing	1895	
54 Montreal Street	Non Contributing	1867	
55 Montreal Street	Contributing	1930	
60 Montreal Street	Contributing	1915	
63 Montreal Street	Contributing	1912	
64 Montreal Street	Contributing	1904	
44 Monument Street	Contributing	1856	
48 Monument Street	Contributing	1863	
51 Monument Street	Individually Designated Landmark	1874	
9 Moody Street	Non Contributing	2019	
53-55 and 57-59 Moody Street	Contributing	1912	
52-54 and 56-58 Moody Street	Contributing	1910	
10 Morning Street	Contributing	1897	
11-13 Morning Street	Contributing	1898	
16 Morning Street	Non Contributing	1872	
17 Morning Street	Contributing	1916	
19-21 Morning Street	Contributing	1903	
20 Morning Street	Contributing	1866	
24 Morning Street	Contributing	1873	
25 Morning Street	Contributing	1899	
27 Morning Street	Contributing	1899	

28 Morning Street	Contributing	1872	
29 Morning Street	Contributing	1909	
32 Morning Street	Contributing	1886	
33 Morning Street	Contributing	1899	
36 Morning Street	Contributing	1890	
37 Morning Street	Contributing	1900	
40 Morning Street	Contributing	1868	
42 Morning Street	Contributing	1895	
46-48 Morning Street	Non Contributing	1899	
49-51 Morning Street	Contributing	1897	
50 Morning Street	Contributing	1892	
55 Morning Street	Contributing	1910	
58 Morning Street	Non Contributing	1893	
62 Morning Street	Contributing	1893	
63-65 Morning Street	Contributing (Original Structure) Non Contributing (Addition)	1920	
64-66 Morning Street	Contributing	1892	
68-70 Morning Street	Contributing	1903	
72 Morning Street	Contributing	1892	
76 Morning Street	Contributing	1897	
79 Morning Street	Non Contributing	1893	
80 Morning Street	Contributing	1898	
81 Morning Street	Contributing	1895	
85 Morning Street	Contributing	1893	
86 Morning Street	Contributing	1895	
89 Morning Street	Contributing	1894	
90 Morning Street	Contributing	1910	
93 Morning Street	Contributing	1894	
94 Morning Street	Contributing	1912	
95 Morning Street	Contributing	1925	
96 Morning Street	Contributing	1924	
102 Morning Street	Contributing	1897	
119 Morning Street	Contributing	1925	

125 Morning Street	Contributing	1907	
129 Morning Street	Contributing	1908	
131 Morning Street	Contributing	1908	
10 Munjoy Street	Contributing	1859	
11 Munjoy Street	Contributing	1857	
14 Munjoy Street	Contributing	1884	
15 Munjoy Street	Non Contributing	1859	
18-20 Munjoy Street	Contributing	1858	
19 Munjoy Street	Contributing	1857	
26 Munjoy Street	Contributing	1858	
27 Munjoy Street	Contributing	1855	
29 Munjoy Street	Contributing	1862	
30 Munjoy Street	Contributing	1868	
34 Munjoy Street	Non Contributing	1993	
38 Munjoy Street	Non Contributing	1857	
39 Munjoy Street	Non Contributing	1855	
42 Munjoy Street	Contributing	1851	
43 Munjoy Street	Contributing	1886	
60 Munjoy Street	Contributing	1911	
62 Munjoy Street	Contributing	1857	
66 Munjoy Street	Contributing	1857	
72 Munjoy Street	Non Contributing	1916	
76 Munjoy Street	Contributing	1922	
7 North Street	Contributing	1879	
9 North Street/28 Cumberland Ave.	Contributing	1881	
11 North Street	Contributing	1881	
12 North Street	Contributing	1868	
15 North Street	Contributing	1878	
14-16 North Street	Contributing	1867	
18 North Street	Contributing	1860	
19 North Street	Contributing	1850	
23 North Street	Contributing	1875	
24-26 North Street	Contributing	1895	

27 North Street	Contributing	1877	
28 North Street	Contributing	1888	
29 North Street	Contributing	1869	
31 North Street	Contributing	1867	
32 North Street	Contributing	1879	
34 North Street	Contributing	1882	
35 North Street	Contributing	1850	
36 North Street	Non Contributing	1882	
39 North Street	Contributing	1886	
42 North Street	Contributing	1883	
44 North Street	Non Contributing	1884	
45 North Street	Contributing	1881	
47 North Street	Contributing	1879	
48 North Street	Contributing	1880	
51 North Street	Contributing	1886	
54 North Street	Contributing	mid to late 19th century	
56-60 North Street	Landmark	1882	
63 North Street	Contributing	1856	
67 North Street	Contributing	1888	
73 North Street	Non Contributing	1855	
79 North Street	Contributing	1847	
80 North Street	Contributing	1871	
84 North Street	Contributing	1877	
89 North Street	Contributing	1895	
92 North Street	Non Contributing	1876	
96 North Street	Contributing	1876	
100 North Street	Contributing	1873	
101 North Street	Contributing	1887	
103 North Street	Contributing		
104 North Street	Non Contributing	2013	
105 North Street	Contributing	1891	
106 North Street	Contributing	1878	
107 North Street	Contributing	1864	

110 North Street	Contributing	1867	
116 North Street	Non Contributing	1892	
122 North Street	Contributing	1890	
11 O'Brion Street	Contributing	1864	
12 O'Brion Street	Contributing	1870	
15 O'Brion Street	Contributing (Garage on Adjoining Lot Non Contributing)	1859	
16 O'Brion Street	Contributing	1870	
22 O'Brion Street	Contributing	1907	
27 O'Brion Street	Contributing	1872	
28 O'Brion Street	Contributing	1889	
30 O'Brion Street	contributing	1850	
31 O'Brion Street	Contributing (Outbuilding Non Contributing)	1870	
33 O'Brion Street	Contributing	1879	
36 O'Brion Street	Non Contributing	1868	
39 O'Brion Street	Contributing	1899	
40 O'Brion Street	contributing	1895	
42 O'Brion Street	Non Contributing	2019	
43 O'Brion Street	Contributing	1895	
45 O'Brion Street	Contributing	1894	
49 O'Brion Street	Contributing	1880	
65-67 Quebec Street	Contributing	1866	
71 Quebec Street	Non Contributing	2015	
75 Quebec Street	Non Contributing	1862	
77 Quebec Street	Non Contributing	1862	
80 Quebec Street	Contributing	1876	
81 Quebec Street	Contributing	1860	
84 Quebec Street	Contributing	1877	
86 Quebec Street	Contributing	1888	
90 Quebec Street	Contributing	1868	
8 Sherbrooke Street	Contributing	1856	
21 Sheridan Street	Landmark	1903	

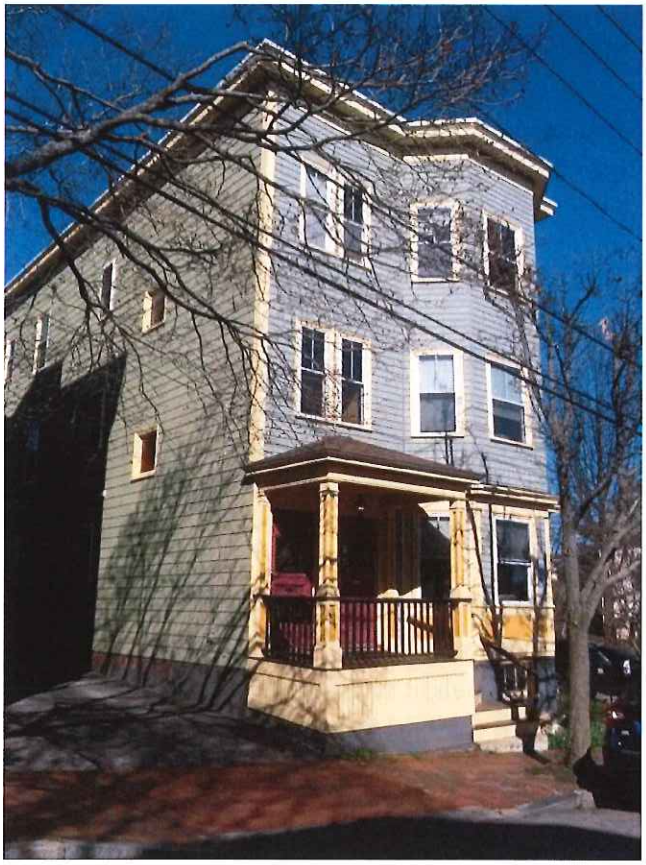
46 Sheridan Street	Previously Designated Landmark	Not in book or web	
16 St. Lawrence Street	Contributing	1858	
20 St. Lawrence Street	Contributing	1855	
23 St. Lawrence Street	Contributing	1852	
24 St. Lawrence Street	Contributing	1851	
28 St. Lawrence Street	Contributing	1871	
29 St. Lawrence Street	Contributing	1898	
35 St. Lawrence Street	Contributing	1850	
36 St. Lawrence Street	Contributing	1855	
37 St. Lawrence Street	Contributing	1867	
40 St. Lawrence Street	Non Contributing	1858	
43 St. Lawrence Street	Contributing	1900	Y
46 St. Lawrence Street	Non Contributing	1860	
47 St. Lawrence Street	Contributing	1863	
49 St. Lawrence Street	Contributing	1858	
50 St. Lawrence Street	Contributing	1849	
52 St. Lawrence Street	Contributing	1871	
56 St. Lawrence Street	Contributing	1860	
57 St. Lawrence Street	Contributing	1898	
61 St. Lawrence Street	Contributing	1898	
62 St. Lawrence Street	Contributing	1896	
65 St. Lawrence Street	Contributing		
71 St. Lawrence Street	Non Contributing	2012	
72 St. Lawrence Street	Contributing	1896	
74 St. Lawrence Street	Contributing	1847	
75-77 St. Lawrence Street	Non Contributing	1861	
83 St. Lawrence Street	Contributing	1847	
87 St. Lawrence Street	Contributing	1852	
91 St. Lawrence Street	Contributing	1850	
94-96 St. Lawrence Street	Contributing	1855	
50 Turner Street	Contributing	late 19th century	
52 Turner Street	Contributing	late 19th century	
11 Vesper Street	Contributing	1867	

12 Vesper Street	Non Contributing	1876	
15 Vesper Street	Contributing	1868	
16 Vesper Street	Contributing	1869	
19 Vesper Street	Contributing	1868	
20 Vesper Street	Contributing	1889	
22 Vesper Street	Contributing	1900	
23 Vesper Street	Contributing	1867	
27 Vesper Street	Contributing	1867	
28 Vesper Street	Contributing	1867	
31 Vesper Street	Contributing	1867	
30-32 Vesper Street	Contributing	1854	
33 Vesper Street	Contributing	1874	
36 Vesper Street	Contributing	1875	
38 Vesper Street	Contributing	1897	
39 Vesper Street	Contributing	1884	
41 Vesper Street	Contributing	1910	
42 Vesper Street	Non Contributing	1913	
46 Vesper Street	Contributing	1904	
47 Vesper Street	Contributing	1888	
50 Vesper Street	Contributing	1889	
73 Vesper Street	Contributing	1897	
74 Vesper Street	Non Contributing	1889	
76 Vesper Street	Contributing	1889	
77 Vesper Street	Contributing	1912	
79 Vesper Street	Contributing	1911	
80 Vesper Street	Contributing	1897	
82 Vesper Street	Contributing	1896	
83 Vesper Street	Contributing	1895	
85 Vesper Street	Contributing	1921	
86 Vesper Street	Contributing	1893	
89 Vesper Street	Contributing	1916	
90 Vesper Street	Contributing	1898	
92 Vesper Street	Contributing	1899	

93 Vesper Street	Contributing	1905	
96 Vesper Street	Contributing	1899	
42 Walnut Street	Non Contributing	1888	
44 Walnut Street	Non Contributing	1866	
46 Walnut Street	Contributing	1869	
54 Walnut Street	Contributing	1880	
13 Waterville Street	Contributing	1856	
17 Waterville Street	Contributing	1859	
23-25 Waterville Street	Contributing	1846	
28 Waterville Street	Individually Designated Landmark	Not in book or web	
29 Waterville Street	Non Contributing	2010	
39 Waterville Street	Contributing	1848	
40 Waterville Street	Contributing	1885	
41 Waterville Street	Contributing	1906	
44 Waterville Street	Contributing	1859	
45 Waterville Street	Contributing	1867	
46 Waterville Street	Contributing	1854	
50 Waterville Street	Contributing	1855	
51 Waterville Street	Contributing	1867	
54 Waterville Street	Contributing	1855	
56 Waterville Street	Contributing	1855	
62 Waterville Street	Contributing	1855	
65 Waterville Street	Contributing	1924	
66 Waterville Street	Contributing	1857	
70 Waterville Street	Contributing	1855	
72 Waterville Street	Contributing	1865	
73 Waterville Street	Contributing	1848	
10 Willis Street	Contributing	1860	Y
20 Willis Street	Contributing	1892	Y
22 Willis Street	Non Contributing	1869	
24 Willis Street	Contributing	1884	Y
26 Willis Street	Contributing	1880	Y
14-16 Wilson Street	Contributing	1905	

27 Wilson Street	Contributing	1898	
29 Wilson Street	Contributing	1908	
32 Wilson Street	Contributing	1896	
56 Wilson Street	Non Contributing	2006	
58 Wilson Street	Contributing	1889	
61-65 Wilson Street	Contributing	1906	
74 Wilson Street	Non Contributing	1875	
76 Wilson Street	Contributing	1875	
80 Wilson Street	Contributing	1868	

Address: 21 Sheridan Street
Approximate/Documented Date of Building: 1903
Surveyed: 8/17/2018
Historic Name: John Ford boyhood home
Landmark, Contributing or Noncontributing: Landmark



Introduction

21-23 Sheridan Street was a boyhood home of John Ford. The noted movie director was born John Feeney at Cape Elizabeth. In 1897 the family moved to Portland and a series of rental accommodations, first at Danforth Street and then at 65 Monument. In 1905 the family moved to this triple decker on Sheridan and lived there until 1917. John was a football hero at Portland High School and in 1914 followed his brother Francis to Hollywood. The Feeney brothers changed their name to Ford and John went on to direct such classic films as " The Informer" (1936) "Stagecoach" (1939), "The Grapes of Wrath" (1940), and "The Searchers" (1956). The building's Landmark classification is based on its association with John Ford.

The building is a classic triple-decker built in 1903. Triple deckers were built in significant numbers on Munjoy Hill at the turn of the twentieth century and proved to be an important building type in providing affordable housing for Portland's growing population, especially immigrant population. Triple deckers allowed for higher density on a narrow building lot. While accommodating a greater number of units, the triple decker also offered numerous amenities such as a generous floor plan, projecting bays, large windows and, oftentimes, decks for each unit. (From the 1924 photo, it appears the 21-23 Sheridan did not include decks.)

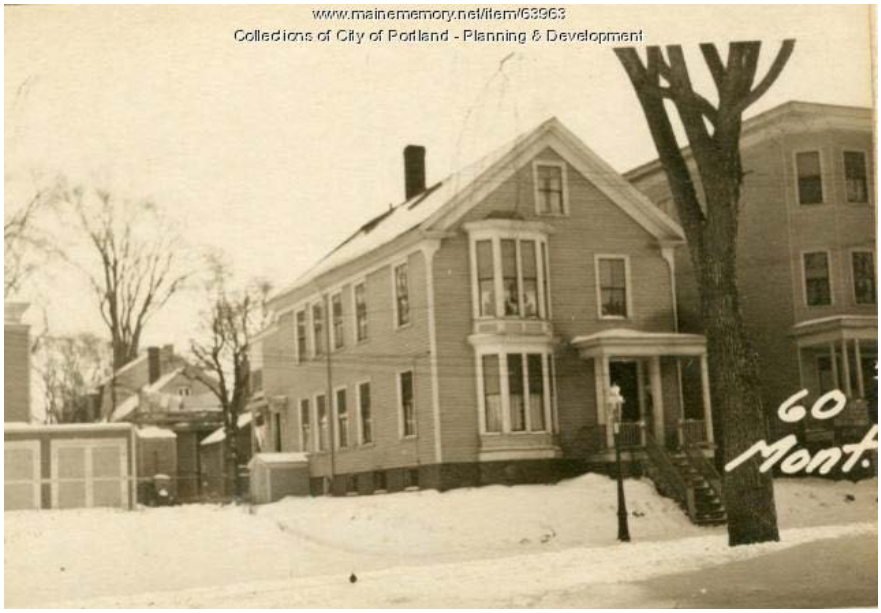
21-23 Sheridan exhibits all the typical elements associated with this building type: a tall, narrow building form; a front porch supported by columns and positioned at the side of the façade; a large faceted bay window that extends the full height of the building; a deep overhanging cornice and generous-size windows. Given the fairly steep grade of Sheridan Street and the building's high foundation, the front porch is located well above the street and is accessed by winding steps.

Alterations and Additions since 1924

21-23 Sheridan remains in well-preserved condition. Although some architectural details are difficult to discern from the 1924 photo, it appears that many of the original details remain. These include the recessed panels at the base of the front bay, the pilasters flanking the bay windows, the front porch's square columns with recessed panels, and the denticulated cornice. Windows remain 2-over-one, however at least some of the windows are vinyl replacements.

Some changes are evident. For example, on the south elevation the single windows near the front corner of the building are now paired. More obvious is the addition of a three-level porch off the south elevation. Interestingly, the porch addition is consistent with what many triple-deckers featured as amenities when they were built. The changes are compatible with the original character of the building and do not diminish its historic integrity.

Address: 60 Montreal Street
Approximate/Documented Date of Building:
Surveyed: 8/17/2018
Historic Name:
Contributing or Noncontributing: Contributing



Introduction
60 Montreal Street is a vernacular Italianate dwelling, and is a good example of the many gable-front houses built on the narrow lots that typify Munjoy Hill's historic character. Distinguishing characteristics include eave returns, wide friezes, corner boards, and the façade's two-story canted bay window and recessed main entrance with partial porch.

The dwelling is two by five bays wide, with fewer bays on the southern elevation, and has vinyl siding and replacement 1/1 vinyl sash windows. The façade's bay window retains cornices on both stories. The entry porch in the second bay has tapered column supports and dentil moldings. The recessed, double-door main entry has a simple entablature with wooden paneling on the interior walls. The northern elevation has a secondary entrance in the first bay, which appears to have a bracketed hood, although it is partially obscured from the roadway by trees.

A shed dormer with three vinyl sliding windows runs the full width of the roof's northern slope. The gabled roof is asphalt and has one chimney adjacent to the interior ridge.

Alterations and Additions Since 1924
Changes since 1924 include loss of wood clapboard siding, the addition of 1/1 windows in place of 2/2 and 2/1 windows, replaced corner boards with some loss of detail, and the addition of the large shed dormer. Wooden paneling below the bay window lights has been replaced with vinyl clapboards. However, these changes do not diminish the dwelling's historic character, as it retains significant period details and its nineteenth-century form.

Address: 44 North
Approximate/Documented Date of Building: 1884
Surveyed: 8/17/2018
Historic Name: A. L. Johnson House
Contributing or Noncontributing: Noncontributing

Introduction

The multifamily residence at 44 North Street is a front-gable, two-and-a-half-story, wood-frame Italianate structure. The building is clad in natural wood clapboards with wood trim. Although the building's form and massing remain unchanged (at least near the street) and a few architectural details remain to convey its original Italianate style, the number and nature of alterations have effectively robbed the building of its historic integrity. The front entry has been altered with the replacement of the original canopy, front doors and entry porch. The prominent two-story bay has changed significantly in appearance with its windows being reduced in size and infill clapboard siding replacing the bay's decorative paneling and intermediate cornice. Other windows on the façade and side elevations have been reduced in size as well and a group of three single-lite casement windows have replaced a pair of taller windows in the front gable. A rear addition extends beyond the face of the south elevation.

While the building's form, scale and gable end-to-the-street orientation are consistent with North Street's prevailing development pattern, the degree of change has led to its classification as a noncontributing structure.

Proposed Munjoy Hill Historic District and Individual Landmark Designations per Historic Preservation Board November 20, 2019 Recommendation

Att. 5

N

Eastern Promenade

Fort Allen Park

Property Classifications

- Designated Landmark
- Proposed Landmark
- Noncontributing based on date of construction
- Noncontributing based on extent of alteration
- Undeveloped parcel
- Historic District, Contributing Buildings

0 250 500 1,000 Feet

For more information about individual properties within the district, go to:
https://www.portlandmaine.gov/munjoyhillhistoricdistrict

Memorandum
Department of Planning & Urban Development
Planning Division

To: Brandon Mazer, Chair, and Members of the Planning Board
From: Christine Grimando, Director, Department of Planning & Urban Development
Date: February 7, 2020
Mtg Date: February 11, 2020
RE: Comprehensive Plan Analysis

INTRODUCTION

The City's Historic Preservation Ordinance states that the Planning Board must consider whether a proposed designation meets the criteria for a district (Sec. 14-610. Minimum criteria for designation), as well as consider the effect of such designation on other aspects of the comprehensive plan of the city. The Historic Preservation Board extensively reviewed the criteria and provided supporting material documenting the basis of their recommendation. Below is analysis of *Portland's Plan 2030* consistency.

PORTLAND'S PLAN 2030

Portland's Plan 2030 has eight Policy Guide chapters: Environment, Historic Resources, Waterfront, Economy, Housing, Recreation & Open Space, Facilities & Services, and Transportation. The Plan's structure is explicit that these are considered linked and mutually supportive, rather than competing goals. Stewardship of Portland's historic, cultural, and architectural assets has been an integral part of the City's planning strategy since the Historic Preservation program began in 1990, was widely supported in public feedback received during Portland's Plan creation, and is supported throughout the document.

Figure 1, Portland's Plan 2030 Vision graphic

Examples follow of policy support for preservation of historic resources in *Portland's Plan 2030.*

Executive Summary

- Our economy, housing, historic resources, transportation system, open space, environment, waterfront, and municipal facilities and services are all dependent on each other and inextricably linked.

Vision Statement

Sustainable:

- Portland has been built and rebuilt to endure; we will balance our historic fabric, sound infrastructure, and the best of new technology and design for the future.

Authentic:

- We will maintain our character through preservation, innovation, and excellence in design for the built environment.
- We will celebrate our city's incredible history.
- The uniqueness and integrity of our neighborhoods will be maintained and enhanced.

Historic Resources Policy Guide

- Identify, document, designate, and preserve Portland's historic resources, including individual structures, neighborhoods, parks, cemeteries, and archaeological resources.

- Educate and engage residents and visitors in appreciation of Portland's unique heritage.

- Promote historic preservation as a key economic, sustainability, and community development strategy.

- Stabilize and enhance historic areas of the city by ensuring quality investment in existing structures and compatible infill development.

- Ensure an appropriate balance of continuity and change as Portland grows and evolves.

- Based on survey findings and input from applicable stakeholders, document and designate resources of

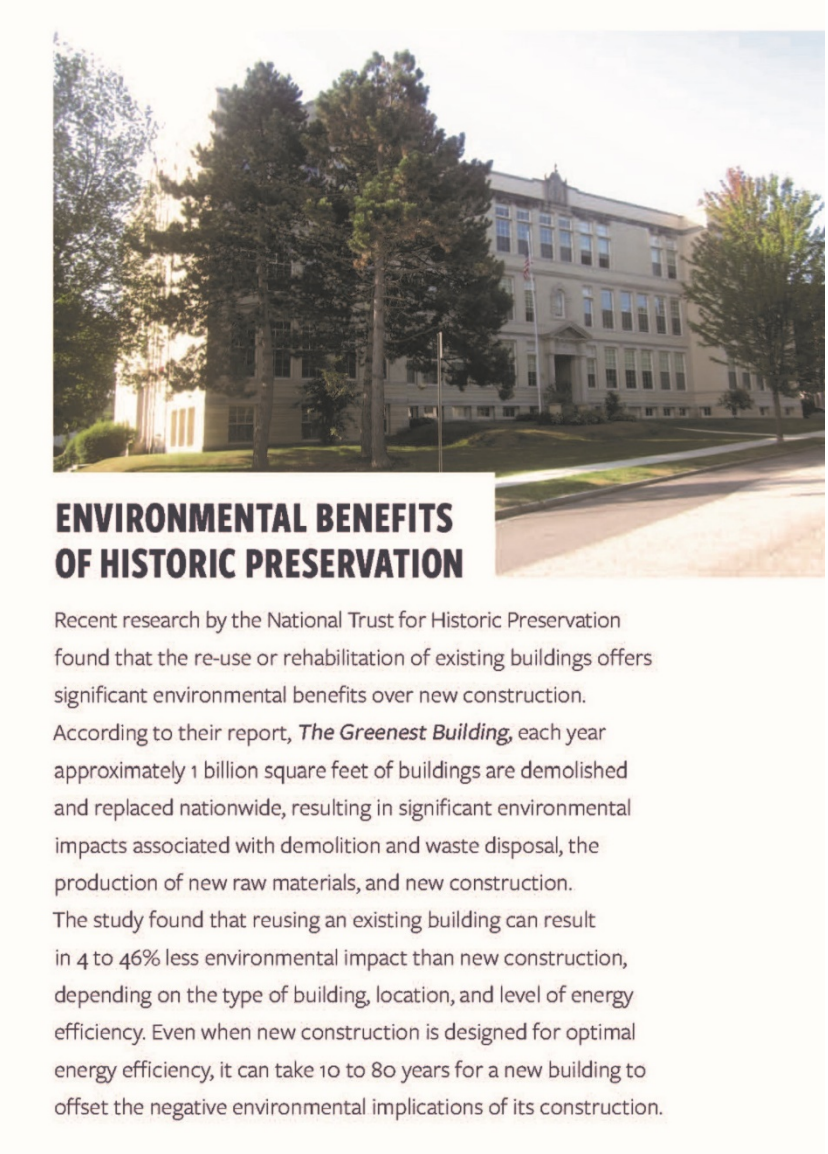


Figure 2, Portland's Plan 2030, environmental benefits of preservation

historic, architectural, and/or cultural significance to encourage thoughtful building rehabilitation, deter demolition, and support neighborhood revitalization.

Environment Policy Guide

- Encourage landowners and developers to incorporate sustainable design, materials, and practices in rehabilitation of historic resources and in new construction.

- Historic Resources: strategy Assess new construction techniques, products, and materials for compatibility with historic structures, and develop policies and guidelines for their use in historic rehabilitation projects.

Economy Policy Guide

- Respect that our unique quality of place is key to our current and future economic success.

Housing

- Increase, preserve, and modify the overall supply of housing city-wide to meet the needs, preferences and financial capabilities of all Portland residents.

- Encourage additional contextually appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods.

- Encourage energy efficiency in new construction and rehabilitation of Portland's housing stock.

- Encourage rehabilitation of existing historic buildings and materials.

From the first pages of *Portland's Plan 2030*, and consistently throughout the document, historic preservation is acknowledged as central to the City's vision, including not only existing local designations but potential future designations. It is also acknowledged as integral to Portland's economic development strategy, its sustainability goals, and to a multidimensional housing strategy.

Google Groups

Munjoy Hill Historic District

abby harvey <ybbarah@netscape.com> Mar 2, 2020 5:56 PM
Posted in group: **Planning Board**

Hi All,

I, Abby Harvey @17 Waterville St, support the proposed Munjoy Hill Historic district intact!

Sincerely,
Abby

Google Groups

Historic District

Anne Manganello <aemanganello@gmail.com> Feb 12, 2020 5:42 PM
Posted in group: **Planning Board**

I attended the more than three hour meeting last evening and have just read Carle Henry's letter of review. I can only add two more comments to this already inclusive and accurate analysis.

I have had an opportunity to speak with one or more builders who are trying to keep a low profile for "fear" of being "blacklisted". That is no avenue to community and diversity that we all propose to desire. I would also urge the planning board to thoroughly review and most importantly document their findings carefully before making a decision.

Comparing one historic district to another does not insure a similar outcome because, indeed, they are all not alike. The West End is staird old dame. There is some activity and complacent growth going on but the East End is a vibrant teenager full of life and ready for the race and burgeoning growth. We can not afford to stymie and constrict this pulsating spirit of creativity that is in play. We will do so to our own detriment.

Respectfully submitted,

Anne E. Manganello
84 Quebec St, Portland, ME 04101

Google Groups

Why Munjoy Hill should not become an Historic District

Anne Manganello <aemanganello@gmail.com> Mar 2, 2020 2:44 PM
Posted in group: **Planning Board**

1. Portland has a housing shortage. Portland should not remove Munjoy Hill from helping to address this challenge.
2. Population on Munjoy Hill is at its lowest point in more than 80 years: it is becoming a place only for the affluent. A Historic District on Munjoy Hill will further that direction.
3. In 2018, the City introduced a Conservation Overlay District. There has only been one active project initiated on the Hill since the Overlay District went into place. The Hill has quickly gone from stimulating new housing to becoming stagnant.
4. A new Historic District will limit new property tax revenues hurting our schools and increasing the burden on current home owners.
5. Supporters can self designate their home thus creating a de facto district without negatively impacting neighbors and City goals.
6. Supporters mistakenly believe a Historic District will stop demolitions and prevent ‘big boxy condos’ from going up. It does neither. Zoning and Design Standards address the quality and aesthetics of new buildings.
7. The 2030 Master Plan has many goals re sustainability, climate change and growth. Putting a vibrant neighborhood under a glass dome runs counter to these goals.

These are the thoughts and concerns of many who live and want to live on Munjoy Hill.

Respectfullly sumbitted

Anne Manganello

84 Quebec Street

Portland Maine 04101

Google Groups

Letter of Support for Munjoy Hill Historic District Designation

Audrey Puleio <APuleio@bnrg.ie>
Feb 28, 2020 9:56 AM
Posted in group: **Planning Board**

To whom it may concern,

Please view this email as a designation of support to the Planning Department for Munjoy Hill Historic District to be preserved as presented in the recent Preservation Alert. I am in support of the benefits of historic district outlined by other members in support of this designation from retaining units for affordable housing to the clear sustainability efforts that the historic district emphasizes.

I currently reside at 27 North Street.

Best,

Audrey

Audrey Puleio

Project Manager

She/Her/Hers

BNRG Renewables Ltd

Unit 1B, No. 3 Custom House Plaza,

Harbourmaster Place,

Dublin 1, IRELAND.

BNRG Dirigo

622 Congress Street, Suite 202

Portland, Maine, USA

e: apuleio@bnrg.**ie** **w:** www.bnrg.ie

m: 1-207-712-0126

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Google Groups

Support for designation of Munjoy Hill Historic District

Barbara Brown <brown.barbaras@yahoo.com> Mar 4, 2020 11:03 AM

Posted in group: **Planning Board**

My name is Barbara Brown and I live at 156 Sheridan St #2C, on Munjoy Hill. I strongly support the creation of the Munjoy Hill Historic District.

We chose to buy our place a year and a half ago primarily because of the neighborhood character of Munjoy Hill. We specifically avoided the new condos down in the India and Newbury Streets area because we fell in love with the mixed use and mixed income nature of the Hill, and have been worried as we see more and more of the older buildings torn down and less affordable “white box” condos put up in place of them.

Continuation of this trend will destroy the character of the neighborhood, both architecturally and socially. I therefore urge the Planning Board to vote in favor of the historic district designation.

Thank you,
Barbara Brown

Google Groups

Historic Preservation of Munjoy His

BARTI BOURGAULT <bbourgault@me.com> Feb 28, 2020 3:28 PM
Posted in group: **Planning Board**

Thank you for considering my comment.

I live in the proposed area. My husband (Richard Gold) and I own 49 & 51 Waterville Street.

While I am all for urban renewal, I am not for the removal of history for the sake of developer profit. I have seen quite a bit of cheap, quick and unsightly new development in the area - big boxes that look like they will be falling apart in 20 years. I have also seen some beautiful and quality new construction and renovations such as the new home on Moody Street. The former bothers me because it lacks vision or care for the community. It feels like the developer laughed all the way to the bank. The latter bothers me because the construction is not in keeping with the historic flavor of the neighborhood.

Designating the recommended areas of Munjoy Hill as historic will hopefully put in place enough restrictions to address both issues.

Please protect the future of the area where the homes are historic and the community is strong.

Barti Bourgault
bbourgault@me.com

Google Groups

Beth Snyder <snyderbes@gmail.com> Mar 5, 2020 5:00 AM
Posted in group: **Planning Board**

Dear Planning Board,

I support the Munjoy Hill Historic District as recommended by the Historic Preservation Board in November and ask you to support it and recommend designation of the proposed historic district to the Portland City Council.

Thank you.

Respectfully,
Beth Snyder
81 North St, Portland, ME 04101

Google Groups

Munjoy Hill Historic District

Bruce Wood <brucesar@yahoo.com> Mar 4, 2020 9:00 AM
Posted in group: **Planning Board**

Chair Mazer and members of the Planning Board:

I would like to express my support for approval of the Munjoy Hill Historic District as approved by the Historic Preservation Board in December 2019, which is before you on March 10, 2020.

This historic district is very much needed to preserve the character of that portion of Portland. The housing stock in this area is different from that in the other historic districts of the city and represents series of different populations from those elsewhere on the peninsula. This area was settled by working class immigrants of many different religious and cultural backgrounds, a history that has played a significant part in Portland's history. The housing stock in this neighborhood is unique in its massing and consistency of character from that of other parts of Portland.

Development that already has occurred in parts of Munjoy Hill has resulted in destruction of many structures representing the city's history, a representation that needs to be protected to fully exhibit the various aspects of our city's background. While any single structure may not be important in its own right or by its own history, the fact that numerous examples remain on the streets included in this district makes the whole more important than its parts.

Another reason to protect this housing stock is to protect middle income housing on Munjoy Hill. The structures that have replaced several buildings on the Hill contain housing stock that is unaffordable to many who live and have lived on Munjoy Hill.

Creating this historic district benefits the city in at least two ways: protection of its history and protection of affordable housing.

I urge your vote in favor of the Munjoy Hill Historic District as presented to you.

Thank you for your time.

Bruce Wood
607 Chandler's Wharf
Portland, ME 04101

Google Groups

Proposed Munjoy Hill Historic District

Candace Myers <dulcemyers@gmail.com> Mar 5, 2020 8:18 AM
Posted in group: **Planning Board**

Dear Deb Andrews,

I am condo owner at 45 Eastern Prom and am writing in support of the proposed historic district on Munjoy Hill. I have been out of state these past few months and wanted to relay my opinion to you as I was unable to attend any meetings.

Thank you for your time,

Candace Myers
45 E Prom unit B-G
Portland House Condominiums

Google Groups

RE Munjoy Hill HD

Carle Henry <cdhenry3@yahoo.com> Feb 12, 2020 12:29 PM
Posted in group: **Planning Board**

Board,

Here is some feedback, including a new tool that I hope will help the Board move forward regarding the question of adding an HD to the Hill.

Thank you,

Carle Henry

Feb 12, 2020

City of Portland
Planning Board

Dear Board,

Last night's workshop on the question of adding a Historic District to Munjoy Hill was informative yet very disappointing. While Deb A did a nice job portraying the best-face-forward on this proposition, Christine added little and the board changed direction significantly from the previous workshop. Why? Why the sudden about face & abandoning of your role?

Here are the areas where I urge you to review as part of your role as Planning and items I wish you would steer away from

1. Dig into 'in kind'…Austin & Maggie asked some questions on this topic and seemed satisfied with staff's responses. Please do NOT settle for the best-face-forward responses and ask about the challenging cases. There are many from every district in this City. Just this week, a builder learning of HD on the Hill, increased their bid on certain line items over 2x on a proposed project just because of HD. These are real costs to real owners. This leads owners to not repair their homes, which is the opposite of the goal of restoring!
    a. Maggie, at the end of the meeting, you comments re tweaking the Overlay were concerning. Adding more work to Staff is unnecessary when you have the Recode opportunity to address many of these overlapping topics (see #2.) Also, please see the attached doc produced by us with the help of Staff.

2. Recode is the answer to detangling the mess of a new R6, the failed Overlay District tweaking & the HD. Christine's answer as to why these are separate initiatives does not mean they cannot be addressed at one time and by the overarching Recode efforts. When Deb A states that 'alterations are not governed by the Recode', ask 'why not'? You're the Planning Board – you can make that happen. HD is not necessary to manage alterations/modifications. Look at other non-HD areas in our city: the Recode can do it!

3. David Silk was surprised that no one had raised the question of whether the Hill satisfies the requirements to consider a HD & the boundaries. Well, that's simply wrong: I've submitted on both topics, as have others. Please do not base your opinion on the public comment from one session. I cannot imagine the amount on all of your plates but there has been significant comment in the past months on both of these topics.

My letter submitted last month (and not included in your packet for some reason) did challenge the HD requirements . Here is an excerpt from my letter on this topic:

> ***Note: re HD on the Hill, it is worth mentioning that the Historic Staff's memo presented in preparation for the December 10, 2019 Planning Board Workshop cites that criteria has been met for both 14-610 and 14-611.*** *However,* ***<u>the memo does not explain how the criterion was met</u>****. Unless the memo is missing significant detail, the information provided does not adequately explain (thus satisfy) that the criterion has been met.*
>
> - *While the Hill does have historic value to our city (14-610), how is its 'value [a] significant example of cultural, historic, architectural, archeological or related aspect of the heritage? Couldn't this be said about any neighborhood in our City?*
> - *Re 14-611, the Staff memo cites a number of individual buildings as justification for the criteria. If individual buildings, why does the City need a large district? <u>Why not simply designate those or recommend voluntary national designation or landmark assignments?</u> It seems a 'stretch' to cite a small number of buildings on various streets as justification to convert a neighborhood.*

As for the topic of boundaries, this has been raised many times by many on the Hill, including me. When Deb says neighbors requested their block be included, that is another ½ truth. Attending the workshops, there were many times when a hill resident would stand up, take the pointer and suggest adding streets or sections where they do not reside. Not only was this a waste of tax money and staff resource, the district has now increased 2 times due to people without standing, requesting expansion with NO input from those impacted. *It's odd that anyone can propose additions but people with standing cannot opt out! Why?*

4. David Eaton's contribution during deliberations should have been stopped. He spoke as a resident in an HD, not as a Planning Board member. We all know some folks like their experience in an HD. We also know some people don't. Board members are supposed to discuss this matter in a professional manner, considering Planning matters. This was very disappointing. Please consider recusing yourself David because you've tarnished any contribution you can offer at this point, due to your impartial testimony last night.

5. The 100-foot rule has become a tool for NIMBY neighbors to intervene in private citizen's lives. Part of the recent expansion of the proposed district is a way of allowing some of the most vocal activists to slow down and intimidate their neighbors. This is a club in our society today and serves no real purpose for the

City since it is only advisory. Why have a 100-foot rule if it only acts to create friction between neighbors? And anxiety to owners who do not understand?

6. Deb A cited 49 Saint Lawrence in her packet as a great example of cooperation between a homeowner and the HPB. While she is right that the HPB was largely supportive, they have recommended that proposed new window not be added to a living room (which the owner will live & she wants sunlight) even though this room will not be clearly visible from the street, once the neighbor completes his major rehab. Also, the HPB, unlike what they say in workshops like yours, asked multiple times for the owner to restore the front of the façade to more closely resemble 1924.

   Please consider the following:

   1. Building on the Hill has slowed down dramatically since the restrictive overlay has gone into place. Most, if not all, work being done today is a result of permits granted years ago. So, why rush to add a 12th HD now? How many pending permits are there now? (The sky is not falling on the hill – the new overlay is doing what people want – as for design, fix it with recode)

   2. The overlay has in essence granted an HD across the entire Hill. It's more restrictive and problematic and has not been properly evaluated. Owners have had to build homes larger than they wanted. Hardship demos were removed from the Overlay area. There is a list of issues from both pro and anti HD people that warrant this Overlay to be redefined/redrafted.

   3. The new R6 that Planning Staff presented recently is another attempt to satisfy the vocal Hillers. It was met with a very negative response from pro HDers.

   4. Combine your efforts and resources to address the actual concerns from the City and the citizens by focusing on the recode.

   5. Consider offering National Designation to the <100 of the contributing homes owners versus adding a District. This will protect the 'fabric', will allow you to focus on recode, R6 and overlay.

   6. Public comment shows great confusion regarding the impacts of an HD. Most who support still believe HD will impact zoning (size of buildings specifically) and will stop demolitions (which an HD could increase demos for non contributing since it's a matter of right and requires no special approval.)

      a. Citizens want to prevent large buildings from being built on side streets. That's really the issue. Can't you simply address that via the

various projects on your table without adversely impacting owners who are already preserving their buildings (remember 85% of the 408 buildings evaluated were deemed contributing – that shows that history is very much reflected today on the hill and has been for 100 years or so)

7. As a process matter, having the manager of HP answer the bulk of the questions is similar to asking a parent to talk about their baby. It's all sunshine and pride. There needs to be an objective, fully transparent resource reporting on facts. While George R exploded a bit last night, his primary message is correct. You're hearing partial answers & you need to push for full answers.
    a. Last month, another citizen, Lori Rounds, and I met with Deb and Andrew Tufts from Planning to understand the differences between overlay and the proposed district. We learned more and pushed harder than your team did last night. Please see the attached draft doc that Deb and Andrew contributed to…we have asked for a subsequent meeting & hope to further collaborate with Staff to provide clarity on this topic

8. Brandon and Sean's questions & comments are 100% on point. Why 'designate' an 80-year period? Why juggle R6 revamp, Conservation Overlay modification, add an HD and work on the Recode work separately? Etc.

9. The upcoming Public Hearing will be more of the same. A large group of emotional, misinformed people will appeal to your hearts and minds while most citizens will not raise their voice for fear of retribution from certain neighbors or from the City. Planning staff will answer redundant questions with their 'best face forward' responses. Architects, Builders and homeowners have all expressed silent support <u>against</u> HD but are fearful (for real reasons) that standing up will cause them some harm. I encourage you to find other ways to gain feedback.

    a. Originally, the Planning Staff committed to a city wide survey but never did it
    b. Belinda Ray supported the initial commitment but never followed through
    c. In early 2019, the MHNO openly discussed that Deb A and Landmarks reached out requesting that the MHNO do not survey the citizens (Jay Norris was President and reported this on multiple occasions during board meetings)
    d. The new MHNO, led by a Historic Renovator, unanimously voted not to survey the citizens.

i. The good news I did and I'm happy to share results with you, if you are interested separately

Finally, my house was built in 1849 and was radically altered in its first 50 years. Now, it's a keepsake. Frankly, it was classic when first built too. Can you imagine if my house could not be altered due to some arbitrary, unnecessary restriction? We spend many thousands of $s each year on the exterior to maintain it and will again this year. Having to pay extra fees to do what is right is exactly why we did not purchase a home in an HD 7 years ago. **Added fees and time may make it impossible for us (and others) to continue making necessary repairs that will create the adverse affect where the building will fall into disrepair vs. restoring it (many examples of this in West End and in other HDs in our city!)**

Thank you again for your consideration and please do not take your foot off the gas when questioning the need for an HD and the bigger picture (housing crisis, sustainability, tenant impact, homeowner expense/hassle, etc.)

Carle Henry

PS This week, we discovered that a number of letters submitted against HD on the Hill were not included in packets. Jennifer confirmed the mix up when she was on PTO. Please confirm your receipt.

Munjoy Hill: Facts re the Current Overlay District and the Potential Historic District

Developed by Lori Rounds & Carle Henry with input from Deb Andrews, Andrew Tufts & Christine Grimando of City of Portland Planning & UrbanDevelopment

January 22, 2020

Section 1: Topics where there is little material difference in protections &/or regulations when comparing the Overlay District to the proposed HD?

	ISSUE	OVERLAY DISTRICT		HISTORIC DISTRICT	
		YES / NO	COMMENTS	YES / NO	COMMENTS
1	Will restrictions be imposed on home owners?	Y	Overlay District Rules Ch. 14-140.5 plus Building Permit rules	Y	Historic District Rules Ch. 14-601 plus Overlay District Rules Ch. 14-140.5 and Building Permit rules
2	Are demolitions allowed?	Y	Overlay District Demolition Rules Ch. 14-140.5(e)	Y	Historic District demolition rules Ch. 14-645
3	Is multi-unit building construction allowed?	Y	If within zoning guidelines, multi-unit buildings are allowed	Y	If within zoning guidelines, multi-unit buildings are allowed
4	Will demolitions be restricted?	Y	Up to 12-month demolition delay required before Planning Dept. approval	Y	Non-contributing bldgs can be demo'd without HPD review; Overlay District demo delay DOES NOT APPLY. Contributing & Landmark buildings (or portions thereof) can be demo'd if reclassified by HPBoard as non-contributing, or if Hardship status is granted
5	Is Condo development allowed?	Y	If within zoning requirements, condo development is allowed	Y	If within zoning requirements, condo development is allowed
6	Is Affordable Housing construction allowed?	Y	If within Zoning/Overlay rules, affordable housing can be built	Y	If within Zoning/Overlay rules, affordable housing can be built
7	Will rules dictate size (overall height, footprint, etc) of building to be built?	Y	Zoning/Overlay rules mandate maximum height, footprint, etc	Y	Zoning/Overlay rules apply, not HD rules
8	Will rules dictate building setbacks from property lines?	Y	Zoning/Overlay rules mandate setbacks from property lines	Y	Zoning/Overlay rules mandate setbacks from property lines, not HD rules
9	Will rules ensure that all new construction contains windows on street level?	Y	Zoning/Overlay rules mandate living space with windows on street level	Y	Zoning/Overlay rules mandate living space with windows on street level, HPD can influence the design
10	Will rules dictate design of additions and new construction?	Y	Zoning/Overlay rules dictate design of additions & new construction, with oversight & approval of Planning Dept and/or Planning Board. OD provides for Alternative Design Review by HPBoard. Building Permit rules apply.	Y	Zoning/Overlay & Historic Preservation design rules apply to alterations, additions & new construction, with oversight & approval of HPD. Building Permit rules apply.
11	Is permission needed to perform alterations to your house?	Y	Overlay/Zoning and City Building Permit rules apply	Y	Overlay/Zoning and City Building Permit rules apply
12	Can you paint the exterior of your house without permission?	Y	No restrictions	Y	No restrictions
13	Are solar panels allowed?	Y	Building Permit needed	Y	Building Permit plus HPD review and approval needed
14	Will property Owners pay fees for City review & approval of alterations, additions & new construction?	Y	https://www.portlandmaine.gov/DocumentCenter/View/2300/Building-Permits-and-Inspections-Fee-Schedule	Y	https://www.portlandmaine.gov/DocumentCenter/View/2300/Building-Permits-and-Inspections-Fee-Schedule
15	Do the rules impact the opportunity to provide affordable housing?	Y	Overlay/Zoning rules require construction of 3 or more units to include affordable unit(s)	Y	Overlay/Zoning rules require construction of 3 or more units to include affordable unit(s)
16	Can Owners apply for Designated Historic Landmark status for a specific property?	Y	Historic Preservation rules apply; HPBoard determines status	Y	Historic Preservation rules apply; HPBoard determines status

Section 2: Where the Conversation Overlay and the Historic Districts differ

	ISSUE	OVERLAY DISTRICT		HISTORIC DISTRICT	
		YES / NO	COMMENTS	YES / NO	COMMENTS
17	Is all of Munjoy Hill covered by the rules?	Y	Overlay District applies to 100% of Munjoy Hill	N	Historic Disctict applies to a portion of Munjoy Hill; remaining area is subject to Overlay rules
18	Are permissions in addition to Zoning & Building Permits needed for alterations to your house?	N	No additional restrictions	Y	HPD Cert. of Appropriateness required for: exterior alteration or new construction requiring a Building Permit; certain roofing alterations; window & door replacement; masonry work; alteration of architectural details; other activities. See 14-634.
19	Do the rules specify the type of materials used for replacement of exterior roofing, gutters, siding, windows and trim?	N	Owners can choose materials that meet their aesthetic and budget needs	Y	HPD Cert. of Appropriateness required for replacement of exterior materials not "in kind". See 14-635(b). CoA NOT required for ordinarry maintenance and/or restoration not otherwise restricted in 14-634 & 14-635
20	Is permission needed to paint the exterior masonry of your house?	N	No restrictions	Y	Permission required from HPD to ensure that masonry is not damaged by proposed cleaning and/or painting

March 4, 2019

Chairman Mazer, Members of the Planning Board,

I am a long time East End resident and homeowner who strongly supports the establishment of an historic district on Munjoy Hill. My 1855 home at 12 Montreal St. is one of the individual landmarks proposed.

This uniquely appealing section of Portland is not just special to those of us who live here, but to a much larger population of those who frequent and appreciate it wholeheartedly. The walking paths, bike trails, city beach, grassy parks, unempeded water views and open spaces aren't all that draw people to this area. It is the unique collection of working class homes, triple deckers and historic structures that create neighborhood character and appeal. This is why people embrace The Hill. It holds a precious slice of architectural history and should be preserved.

Please do not be misguided by those who are opposed to the historic district. Contrary to the pitch made by opposition, owning, renting and living in an historic district does not impose severe restrictions or financial hardship.

New construction is open to modern architecture guided by the design standards and does not insist that it imitate historic styles, only that it be compatible within a 2 block radius.

Demolition in an historic district is **only** easier than in a non-designated district if the building is considered Non-Contributing.

Homeowners are not forced to make costly changes and can keep and replace (in kind) vinyl siding, aluminum windows etc.

Contrary to the critics, research shows that affordable housing is not diminished or reduced by establishing an historic district.

Please focus instead on stewardship, and the positive impact of preserving this historically important area. People love the hill because it has its own special character and can still boast a marvellous collection of original homes that serve as living history for all to enjoy. Please trust the judgement of the Historic Preservation Board and vote yes to endorse the Munjoy Hill Historic District including individually designated landmarks and the 100 ft. rule as proposed.

Respectfully,

Carol M. Connor
12 Montreal Street
Portland, ME 04101

Google Groups

Historic District Designation for Munjoy Hill -

Carol Mccracken <ca10cken@aol.com> Mar 3, 2020 11:09 AM

Posted in group: **Planning Board**

To Whom it May Concern:

This email is to inform you that I am opposed to the designation of Munjoy Hill as a historic district. As a long-time renter on the HIll, rents are excessive and far exceed the incomes of so many. No one has adequately explained why this added tax will only make it more expensive for renters to live on the Hill.

Carol McCracken
North Street Resident
ca10cken@aol.com
munjoyhillnews.com

Google Groups

Re: Historic Districts Make Sense

carolyn swartz <carolynswartz@gmail.com> Mar 3, 2020 9:50 AM
Posted in group: **Planning Board**

Chair Mazer et al,

As a homeowner on Merrill Street, I urge you to vote yes on the Historic District for Munjoy Hill. Our street is not within current boundaries. But I am as strongly in favor of the designation as I am appalled by twisted-logic specious arguments against. it

One of those arguments is that HD would place financial burdens on current homeowners who need make improvements and repairs to their homes. This is a complete fallacy - a scare-tactic red herring. Deb Andrews has stated repeatedly, also offering proof that her group stands ready to work with homeowners on viable and affordable solutions that work both for them and the neighborhood. And the reality of oversight applies only to visible-from-the-street (i.e. mostly front facade) portions of homes.

To the detriment of our neighborhood, we have witnessed the negative impact of no HD designation in an exodus of immigrants and working people as viable structures get torn down and replaced by luxury condo-boxes - like the hideously proportioned, out-of-place (and apparently uninhabitable) monstrosity at 5 Merrill.

No more of this. There is much to preserve and protect on Munjoy Hill.

Thank you.

Carolyn

Carolyn Swartz | Writer/Director | 917.714.5743 | view my films here

Google Groups

Historic District

Christopher Akerlind <chrisakerlind@gmail.com> Mar 3, 2020 11:06 AM
Posted in group: **Planning Board**

To the Planning Board,
I cannot make the hearing on the MH Historic district on March 10, I'm support it wholeheartedly and hope that you will vote to advance it to the City Council.
Christopher Akerlind
44 Monument Street
Portland 04101

Google Groups

Munjoy Hill Historic District

Chris Stewart <stewart.christopher1@gmail.com> Mar 5, 2020 4:59 AM
Posted in group: **Planning Board**

Dear Planning Board,
I live in my home on Munjoy Hill and I support the creation of the Munjoy Hill Historic District.
I hope that you will recommend designation to the Portland City Council.
Thank you for your consideration.

Sincerely,
Christopher Stewart
81 North Street
Portland, Maine 04101

Google Groups

Historical Munjoy Hill

claudia diller <claudiadiller64@gmail.com> Mar 4, 2020 5:58 AM

Posted in group: **Planning Board**

You can’t hold back progress, but you can direct it. Portland has already witnessed a big change. A lot of the Aspects that made the city’s a appealing to so many of us included:

Beautiful architecture
Working waterfront
Access to waterfront
Walk to work convenience
Affordable housing
Unique shops
Local artisans

I landed on Munjoy Hill because it was an affordable place to live for a working artist. I am being priced out. But a part of me is not as sad as I would have been a few years ago because the city is loosing a special feel that drew me here. It used to be a colorful workingman’s city. It has become a vacation destination for the retired and wealthy.

Munjoy Hill is allowing it’s beautiful old buildings to be torn down and replaced by cheap, ugly boxes. I look around now and feel like I could be anywhere USA. So my appeal is to those who think that what makes Portland unique should stay. And part of that is the architecture. If you can’t keep the locals at least keep their history.

Sent from my iPhone

Google Groups

Munjoy Hill Historic District

Cynthia PS <cynthiapsphoto@gmail.com> Mar 4, 2020 11:20 AM
Posted in group: **Planning Board**

Hello,

As a long-time New Orleans resident (and now a thrilled homeowner of a Munjoy Hill condominium!), I have seen first-hand in New Orleans what a lack of historic districts can do to a neighborhood - and what a designation can do to save some architectural gems and maintain beautiful areas of a city.

While there are issues with the historic district designations, these can be resolved with rational thought and members on the Council who serve with integrity. I urge you to support this Historic District designation and recommend it to the Portland City Council.

Sincerely,
Cynthia Schmidt
21 Sheridan Street, #1

From: David Lloyd <lloyd@archetypepa.com>
Sent: Wednesday, March 4, 2020 8:34 AM
To: 'James Rather' <jrather@portlandmaine.gov>
Subject: Munjoy Hill district designation

PC76

Dear Planning board members

'RE Munjoy Hill District

As a resident of Munjoy Hill and an architect that has presented to the board over many years, I do believe I have experience that can hopefully help inform the planning board in this important decision .I would like to list the following :

1 Historic designation clearly helps preserve the indigenous character of the neighborhood.

2 Design critiques by an informed design review board insure quality of material choice , form , scale and texture which insure integration of new architecture into existing neighborhoods .

3 I have been able to successfully design low income housing

Under the guidelines of an historic district .

4 The HP review process moves quickly and I have found that by weaving the HP reviews into the planning board schedule no time is lost in the approval process . Staff is especially helpful and typically available for consultation .

5 Successful design is not burdened or made less-creative by design critiques . Good design is promoted through successful critiques . My experience with the board has resulted in successful traditional architecture and modern architecture . Design type/style is basically controlled by context Which the board considers and understands.

6 I personally believe that historic designation of a neighborhood insures real-estate value by Insuring quality design and integration of new architecture . Basically preserving the architectural character of Portland which we all value

Respectfully

David Lloyd

Archetype Architects

Cell 207 831 8627

Work 207 772 6022

David Lloyd, Architect

Archetype PA | 48 Union Wharf |Portland, Maine 04101 | tel. 207.772.6022 | cell. 207.831.8627

lloyd@archetypepa.com

www.archetype-architects.com

Google Groups

Munjoy Hill historic district

Deborah Cole <debcole1030@gmail.com> Mar 3, 2020 3:18 PM
Posted in group: **Planning Board**

My name is Deborah Cole and I have lived at 71 Walnut st since 1980 when I purchased my home.
I am strongly in favor of the historical district designation for sections of Munjoy Hill. If passed this will contribute to protecting Munjoy Hill's historical integrity.
Please add my vote and voice to passing this initiative.
Thank you,
Deborah Cole
71 Walnut St

Sent from my iPhone

Google Groups

Munjoy Hill

Denise Preisser <depreisser@hotmail.com> Mar 3, 2020 5:54 PM
Posted in group: **Planning Board**

Dear Planning Board,
I am writing you to let you know I support the Historic Preservations recommendation to create a historic district on Munjoy Hill. The character of Munjoy Hill is special to Portland and just another example of how the planning board can preserve some of this history with a favorable recommendation to the city council. Do the right thing and preserve history on the hill.

Best Regards,
Denise Preisser
25 Fore #2

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Google Groups

Vote YES on Munjoy Hill Historic DIstrict

Liz Hays <lizchays@gmail.com> Mar 3, 2020 4:06 PM
Posted in group: **Planning Board**

Dear City of Portland Planning Board

I am a home owner in the proposed Munjoy Hill historic district. I strongly support the Munjoy Hill historic district as recommended by the Historic Preservation Board in November 2019, in order to preserve the unique character of the neighborhood. I ask you to recommend designation of the proposed historic district to the Portland City Council.

Thank you considering my request.

Elizabeth Hays
107 North Street
Portland, ME 04101

Google Groups

Support of Munjoy Hill historic district

Gary Stern <gary@sterninternational.com> Mar 4, 2020 3:09 PM
Posted in group: **Planning Board**

Dear Planning Board members,

I am writing to voice my support of the proposed Munjoy Hill historic district and urge you to recommend designation of such to the City Council. It is so important to maintain Portland's historic character and livability as an affordable community for all. Opportunities for growth and new development abound. Let's protect what can never be replaced.

Thank you for your service and for visionary support of what matters so much to so many of us.

Sincerely,

Gary J. Stern

Gary J. Stern, President

Stern Consulting International

65 Revere Street

Portland, Maine 04103

M: 612-600-9609

gary@sterninternational.com

Google Groups

Public Comment: 1 of 3 (Historical Info Redux from the R-6 Downzoning Debate)

George Rheault <george.rheault@gmail.com> Mar 5, 2020 10:31 AM
Posted in group: **Planning Board**

Please include the information below as part of public comment regarding the proposed Munjoy Hill Historic District.

While the remarks and attachments below were raised as part of the 2017-2018 anti-housing R-6 debacle, they very much remain relevant to the historic district consideration.

That relevance includes:

1) Shining a light on the abuse in this process, to date, of the actual historical record of the physical, social and cultural evolution of Portland's East End.

2) Highlighting how the push behind a historic district designation is simply the latest stage (and perhaps its ultimate culmination) in a 100+ years exclusionary effort to depopulate, de-urbanize and gentrify the Portland peninsula.

---------- Forwarded message ---------
From: **George Rheault** <george.rheault@gmail.com>
Date: Mon, Jun 4, 2018 at 4:33 PM
Subject: The Munjoy Hill R-6 Saga: Part 1 of 4 - The Fall of Portland's East End (a/k/a Portland's Shameful Past...)
To: Ethan Strimling <estrimling@portlandmaine.gov>, Nicholas Mavodones <nmm@portlandmaine.gov>, jduson <jduson@portlandmaine.gov>, Brian Batson <bbatson@portlandmaine.gov>, Pious Ali <pali@portlandmaine.gov>, Spencer Thibodeau <sthibodeau@portlandmaine.gov>, Kim Cook <kcook@portlandmaine.gov>, Councilor Belinda Ray <bsr@portlandmaine.gov>, Justin Costa <jcosta@portlandmaine.gov>
Cc: Jeff Levine <jlevine@portlandmaine.gov>, Tuck O'Brien <sgo@portlandmaine.gov>, Christine Grimando <cdg@portlandmaine.gov>, Caitlin Cameron <ccameron@portlandmaine.gov>

I urge the Portland Council to reject the raft of proposed "down-zoning" changes to the R-6 zoning code being considered tonight. Not only are the R-6 carve-outs specially crafted for Munjoy Hill a slap in the face to the rest of Portland's neighborhoods (both on and off the peninsula), but they are environmentally unsound and violate the sustainability commitments set forth in Portland's recently enacted Comprehensive Plan.

It is amazing, in a process rife with talk of historic preservation and "respect" for history, how little history has actually been entered into the record about how Munjoy Hill came to be a raw diamond waiting to be discovered by people with money. Things like depopulation, deindustrialization and devaluation are all taken for granted rather than reflected upon and assumed to be anonymous forces rather than deliberate choices to favor some and not others.

The Council should recognize the ACTUAL history of Munjoy Hill and why the fall of Munjoy Hill from the 1920s through the 1970s should be laid at the feet of its business and political elite and how the stagnation of Munjoy Hill (and the rest of Portland) was the direct result of selfish, self-interested behavior by incumbent interests that stymied the future of Portland for several generations and is threatening to repeat itself all over again.

Attachments:

- Excerpt (1) from "Closeness: Memories of Mrs. Munjoy's Hill" by Howard C. Reiche, Jr. (2002) - describing the smells of industry, sewage, garbage around the East End in the 1930s/1940s

- Excerpt (2) from "Closeness: Memories of Mrs. Munjoy's Hill" by Howard C. Reiche, Jr. (2002) - describing the hazards of East End swimming

- Excerpts from Portland Renewal Authority (circa 1960s)

- East End Dump Closing Announcement - June 19, 1959 Portland Evening Express

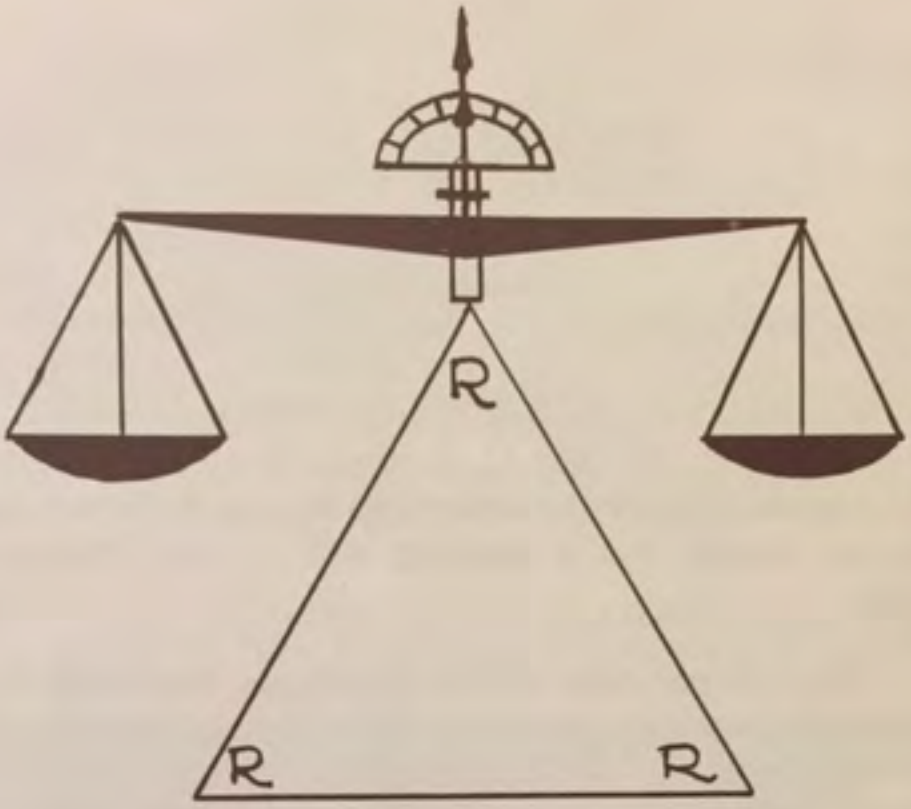
MUNJOY SOUTH, PROJECT NO. ME. R-2

In the Munjoy South Urban Renewal Project, bounded by Congress Street on the North, Mountfort Street on the West, Fore Street on the South and the Eastern Promenade, much has been accomplished to make this area, which is one of the most attractive in the City, a much improved one. Many fine old homes have been successfully rehabilitated, arresting the trend of gradual deterioration. In all, more than 300 dwelling units have been successfully rehabilitated.

Integrated with the old are new dwelling units, both private and HUD sponsored. The Munjoy South Townhouses, middle income units built under the 221-d-3 program, provided 140 new apartments at a time when they were most needed.

The Portland House, a luxury high-rise structure located on the Eastern Promenade overlooking Portland Harbor, is the first of its kind in this city. It opened in the summer of 1969.

One major reuse parcel, located on the corner of Congress and Mountfort Streets, remains to be developed for residential use. At the time of this report, prospects for more new middle income housing look bright. Mutual Projects, Inc. has been named as a redeveloper for this one and a half acre renewal site. It is hoped that thirty townhouse units will be built here, each with full basement, private entryway, refrigerator and range and three bedrooms. These units would be sold with a federal subsidy to reduce the cost to individual homeowners.



The Three **R**'s of Renewal:

Relocation

Rehabilitation

Redevelopment

For a balanced approach in the revitalization of Portland

Briefly Stated...

New Dump To Open, East End One To Close On Monday

The city's new dump off outer Ocean Avenue will open and the troublesome and overloaded East End dump will shut down Monday. The new dump, which will be open seven days a week from 7 a.m. to 7 p.m., is for rubbish only. An entrance road leads from Ocean avenue near the Presumpscot street and Ocean avenue intersection.

The Smells of Munjoy Hill

It is odd how a smell can be remembered, just like the memory of something you saw. The East End Dump was located where the Portland Sewerage Treatment Plant is now. Because it was a burning dump the wind from the northwest would carry the smoke up over the Hill. It smelled just like you would imagine a burning dump would smell.

Burnam and Morrill's plant in East Deering used to can a lot of fish products then. In fact,fishing boats would tie up at their dock between Tukey's bridge and the Grand Trunk Railroad bridge and unload. The odors of fish processing and baking beans were obvious to everyone on the Hill with a northwest wind. This was the same wind that carried the dump smoke. The combination of all of the above was great!

Nissen's Bakery on Washington Avenue brought a whole new array of smells with a west wind—not unpleasant.

The trains below the Hill burned soft coal and produced a lot of black smoke with a very gaseous smell. When you were on the Prom or down near the tracks with an east wind, the smell of smoke mixed with the steam and abundant lubricating oil announced the trains.

The fish and sardine packing plants on Commercial Street had a distinctive smell of cooking steam, fish oil, and cooked fish when they were packing. The south wind handled all this. Also, when there were fish to cook and pack, people were called to work by the steam "work whistle." It didn't smell but it spoke of welcome work.

The waterfront, in general, smelled "fishy." The tarred nets, spoiled fish, fishing boats themselves, salted down barrels of bait for the trawlers, etc. Added to those, were the Portland sewers which emptied under the wharves

When the grain ships were being loaded at the grain

elevators, the dust and taste of the grain rolled over that part of the Hill with the south wind.

Thomas Laughlin Company, on Fore Street, had a drop forge stamping mill, a casting plant, and a galvanizing plant all rolled together. The smell of the hot metal and the steam drop forges was, again, a distinctive one. It was a "must" stop, when walking to or from the docks, to look in on the galvanizing operation which was right at the sidewalk and wide open to view and smell! On a warm spring night, the huge, drop forges could be heard and felt all over the Hill. They would take a large,red-hot, glowing bar of iron and shape it into huge turnbuckles, shackles, cleats, etc.

The trolley cars had a distinctive hot, dry, dusty, electrical taste and smell of their own.

Of all of these smells, the only one which drew consistent complaints was Back Bay at low tide with a West wind.

The East End Bathing Beach

Down below the Eastern Prom on Munjoy Hill is the unusual East End Bathing Beach. It has a good stretch of sand and a great place to swim in the salt water. Amazingly, it is right in the middle of Portland.

Back in the late 1930's and early 40's, it was the least expensive entertainment in town. All we had to do was walk down the hill and across the sets of railroad tracks. Sometimes you had to wait because they were switching rail cars, or you had to crawl under the rows of grain filled boxcars waiting to be emptied at the elevators.

There was a long row of about 25 bath houses between the beach and the tracks. You went in, changed, and then left your clothes in a pile on the beach.

From time to time there would be a controversy about the cleanliness of the water. The City of Portland emptied several sewer lines into Back Bay which flowed by the beach on the outgoing tide. Also, there was another one right beside the beach. Everyone kidded about the East End Breastroke where you pushed things out of the way as you swam. Every so often, there would be a polio scare and there would be a warning about swimming. However, no one really blamed the sewerage. The most commonly offered reason for the polio was,"You shouldn't dive into the cold water if you are too hot."

Google Groups

Public Comment: 2 of 3 (Historical Info Redux from the R-6 Downzoning Debate)

George Rheault <george.rheault@gmail.com> Mar 5, 2020 10:32 AM
Posted in group: **Planning Board**

Please include the information below as part of public comment regarding the proposed Munjoy Hill Historic District.

While the remarks and attachments below were raised as part of the 2017-2018 anti-housing R-6 debacle, they very much remain relevant to the historic district consideration.

That relevance includes:

1) Shining a light on the abuse in this process, to date, of the actual historical record of the physical, social and cultural evolution of Portland's East End.

2) Highlighting how the push behind a historic district designation is simply the latest stage (and perhaps its ultimate culmination) in a 100+ years exclusionary effort to depopulate, de-urbanize and gentrify the Portland peninsula.

---------- Forwarded message ---------
From: **George Rheault** <george.rheault@gmail.com>
Date: Mon, Jun 4, 2018 at 3:37 PM
Subject: The Munjoy Hill R-6 Saga: Part 2 of 4 - Gentrification Arrives in Portland's East End (a/k/a Government Incentives Set the Table for NIMBY Movement...)
To: Ethan Strimling <estrimling@portlandmaine.gov>, Nicholas Mavodones <nmm@portlandmaine.gov>, jduson <jduson@portlandmaine.gov>, Brian Batson <bbatson@portlandmaine.gov>, Pious Ali <pali@portlandmaine.gov>, Spencer Thibodeau <sthibodeau@portlandmaine.gov>, Kim Cook <kcook@portlandmaine.gov>, Councilor Belinda Ray <bsr@portlandmaine.gov>, Justin Costa <jcosta@portlandmaine.gov>
Cc: Jeff Levine <jlevine@portlandmaine.gov>, Tuck O'Brien <sgo@portlandmaine.gov>, Christine Grimando <cdg@portlandmaine.gov>, Caitlin Cameron <ccameron@portlandmaine.gov>

I urge the Portland Council to reject the raft of proposed "down-zoning" changes to the R-6 zoning code being considered tonight. Not only are the R-6 carve-outs specially crafted for Munjoy Hill a slap in the face to the rest of Portland's neighborhoods (both on and off the peninsula), but they are environmentally unsound and violate the sustainability commitments set forth in Portland's recently enacted Comprehensive Plan.

As part of its homework, the Council should examine critically the ACTUAL history of Munjoy Hill especially the last 100 years, which saw a confluence of national trends coalescing, beginning in the late 1970s and accelerating ever since, that set the stage for the gentrification and "revival" of Munjoy Hill.

Throughout this period, government (at all levels) played a key role in providing critical investment on and adjacent to the Hill that allowed private actors to take advantage of the cratered real estate values that 20+ years of stalled and slow motion urban renewal did to the neighborhood along with the larger impacts of our post-WWII society (environmental degradation, suburbanization, de-industrialization).

Attachments:

- Feb 16, 1979 Maine Times Article re: Yuppies Arrive on Munjoy Hill (profiling some real estate players that remain at the forefront of the Munjoy HIll saga including the proposed R-6 "reform" being pushed by Belinda Ray).

- January 17, 1997 Press Herald Article re: New Neighbors Loan Incentives Program for Munjoy Hill Buyers

- 4-26-2001 Maine Times Article re: Development Pressure on Munjoy Hill and rest of Portland (Waterfront, Bayside)

MUNJOY HILL

To the young professionals, it may be Portland's finest neighborhood

MANY residents of Portland's densely populated Munjoy Hill area don't know yet that it's becoming the city's most desirable neighborhood. According to local wisdom, it is still the East End, home to low income and blue collar families trapped by economics.

Yet, it is the economics, specifically the low cost of housing, that is currently drawing Portland's young professionals to throw in their lot with Munjoy Hill's traditional residents.

Newcomers on the "hill," which rises 160 feet above sea level, extol the glory of having Casco Bay at the foot of almost every block. Says young lawyer Ned Chester, "The hill is the reason we moved to Portland. It seemed like a nice neighborhood we could afford. There's not another neighborhood in the country with its amenities: the ocean and accessibility to downtown."

The blue-gray shimmer of Casco Bay dominates any tour of the hill. Its presence is felt on the Eastern Promenade where the neighborhood's most imposing homes face out to sea, and on a modest street like Melbourne, where every front porch offers a glimpse of the bay.

The houses of Munjoy Hill are not, for the most part, the stately Victorian mansions or the 19th century brick homes of the Western Promenade. With few exceptions they were built for the families of merchants, laborers, seamen, and tradesmen. In 1830, the bulk of Portland's population was clustered at the foot of Munjoy Hill. By the turn of the century, Italian, Irish, Polish and Jewish immigrants were settling their families on the hill.

This is not to say that the houses are not interesting and pleasing in form and design. Close examination reveals lattice work, beveled glass, massive oak doors and detailed wrought iron porch railings. Many are three-family, triple-decked houses, slouching one over the other, the slats of each porch railing like so many grinning teeth. Of course, some porches sag and more than a few houses on Munjoy Hill need to be propped up and painted.

Yet, here and there, five or six houses in a row have new siding or are freshly painted with trim grounds. And the imagination of the new young residents can be seen in an occasional third floor roof with a pie-shaped wedge carved out for a deck and window . . . with a view of the ocean, naturally.

What is occurring is not precisely "gentrification," the term used to describe the middle class taking over the homes of the poor and driving real estate prices up. But gentrification could happen on Munjoy Hill. Thus far, rentals and home prices have not escalated greatly because the immigration of young professionals is such a new phenomenon.

(According to a local real estate agent, a three-family wooden frame home which one could move into immediately would range from the high 20's to the high 40's. But the same home which was partially burned or which needed major repairs, could be bought for as little as $10,000.)

The older residents of the hill tend to speak of the neighborhood with a mixture of pride and dismay. They are proud of the many well-kept homes, the beautiful views, the neighborliness which still prevails on many blocks. They are disgusted by what one called the "punks," a group of young street people who vandalize homes and harass small grocery store owners.

One long-time resident couldn't believe young professionals would choose his neighborhood. "Read the Portland paper," he said. "Look at the police reports . . . where are all the tires slashed, windows broken? Munjoy Hill."

Yet, an enthusiastic new resident countered that although the rate of malicious mischief may

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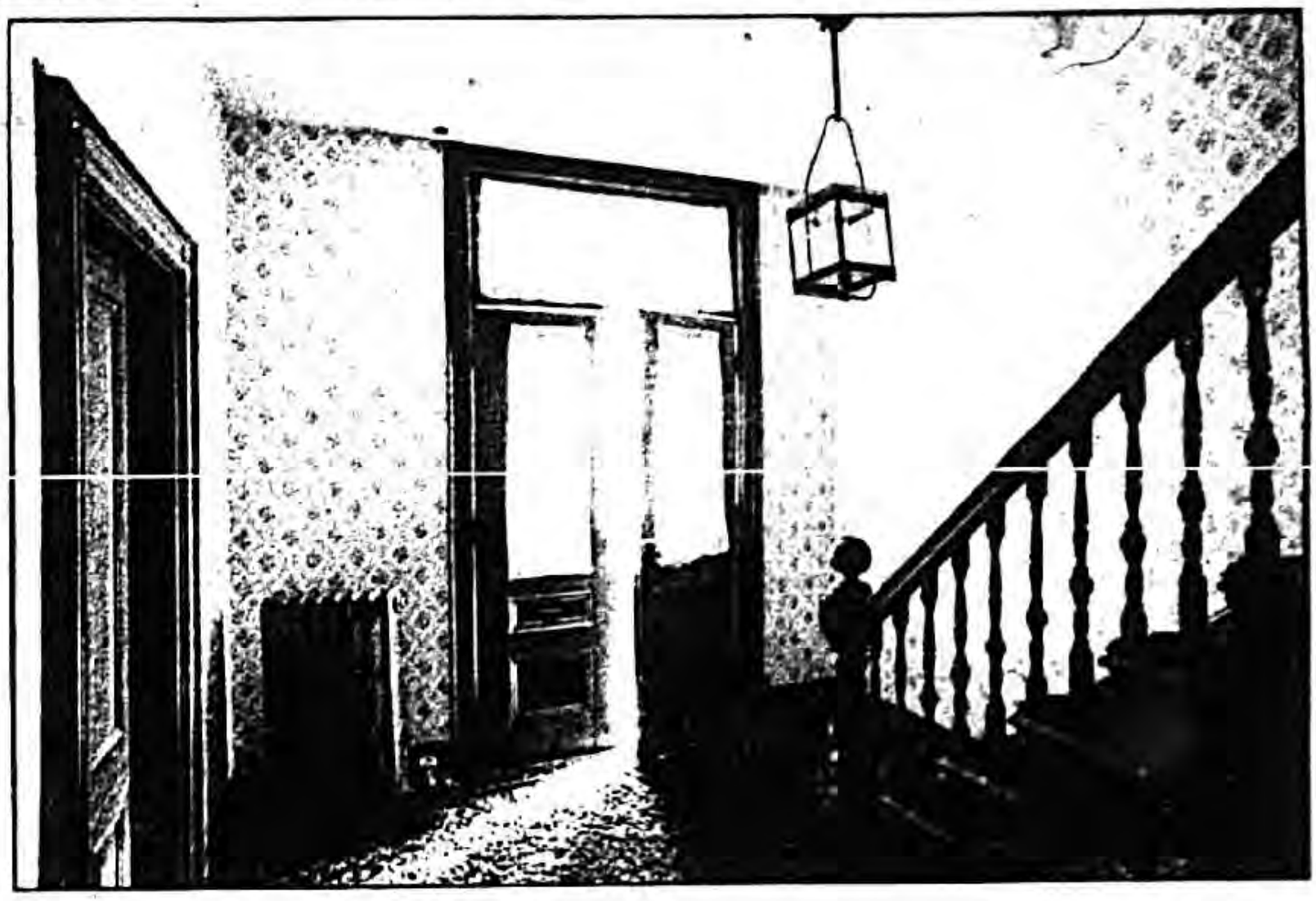
Architect Rick Goduti stands on the porch he built on the third floor of his triple-decked house. Goduti has a sweeping view of Casco Bay with Fort Gorges in the background.



The entrance to Rick Goduti's three-family house with the stairs up to the second floor apartment.

be high, there are virtually no violent crimes committed on the hill. Says lawyer Ned Chester, "It's important to say I'm not afraid to walk the streets."

Chester and his wife and law partner, Barbara Vestal, came from Kansas City and Iowa City respectively. They chose Portland because, "It's a medium sized city on the ocean," said Barbara Vestal.

Vestal and Chester have located their law office on Congress Street, part way up the hill, and are the only lawyers practicing in the neighborhood. Says Vestal, "We asked other lawyers about Munjoy Hill and they said, 'I wouldn't go there if I were you.'" The two young lawyers draw some clients from Munjoy Hill but say most are from outside but with some family tie to the neighborhood.

Vestal says that after she and Chester graduated from law school in the South, "We came here with two cats and as much furniture as we could carry in two cars, looking for a furnished apartment." They were discouraged at first because all the moderately priced apartments they were shown looked "as if somebody had died in the furniture."

But they finally got settled, opened their office and started looking for a home to buy. "We looked at houses with a great view of the bay . . . I guess it's because we're from the Midwest." They found a seven-apartment brick building on Fore Street with just the view they sought and bought it. One apartment will be their home.

Chester says they had to evict one tenant. Another moved out voluntarily but the rest will remain. "Our prime criterion," says Chester, "is that the tenants like the building as much as we do so that they take care of it."

Chester notes that the city is somewhat lax in providing services on Munjoy Hill. He says, "It's been a long tradition here, 20 years or more, that the hill is a terrible place."

Barbara Vestal adds, "The city just got around to snow removal . . ." suggesting that other areas of the city were plowed first.

The young couple has also purchased a building with two empty storefronts, hoping to lure some businesses to the neighborhood. Says

(*Continued on pages 18 and 19*)

(*Continued from page 17*)
Chester, "The only grocery stores on the hill are mostly pizza joints. There are no doctors on the hill — there is a family practice clinic on India Street [near the hill] where they rotate doctors, but people don't have their personal physician. Also there are no branch banks, no dentists and no restaurants. And yet, I estimate there's a $20 million a year earned revenue on the hill."

Says Vestal, "We did have an art gallery . . . it closed after two months."

Vestal and Chester are active in the Munjoy Hill Neighborhood Association whose president is former Bates professor, Jim Price. Price gave up teaching Russian to sell real estate and live in Portland, after a brief detour at the law school. Price says the primary reason he chose Munjoy Hill was an economic one. "To live on the Western Prom you have to have made it."

But Price has another reason for settling on Munjoy Hill: He and his wife have an adopted child of mixed racial heritage and the majority of Portland's small black population lives there. Price feels that the neighborhood association will help bring stability to the area and some clout at City Hall. "There is a good mix of people, both old and new coming to the meetings . . . . but we get most of our energy from new people."

Price is both realistic and optimistic about his neighborhood. His optimism is displayed by a bumper-sticker on his car which reads, "I'm high on Munjoy Hill." He is optimistic because a group of parents he helped organize got the city to reopen a neighborhood elementary school the city had closed down for economic reasons.

"The kids were bussed to another school. That really got us up in arms. What was really remarkable was we succeeded in getting it reopened."

Price's group is now trying to get a new comprehensive elementary school built in the neighborhood, one with a gymnasium and rooms for all the federallly mandated programs. The group is also hoping to convince the city to retain the Munjoy Hill branch of the public library which has been threatened with closure.

The nucleus of the school group formed the neighborhood association which has received some grant money to hire what Price calls a "doorknocker." Mike Conley, a native of the hill, acts as a liaison between the neighborhood and the rest of the city, trying to solve problems, particularly in the area of juvenile crime.

Price says, "I feel there is an element of restraint on the part of the hangers out. They want to stay here . . . but there is some pretty heavy stuff going on in terms of intimidation of shopowners."

One person who does not fear the street kids although she is aggravated by the vandalism is Linda Holland, marketing specialist for the Greater Portland Transit District. Holland may be Munjoy Hill's biggest booster, and it's no wonder. "We have been there for 100 years. My great grandfather, my grandfather, my parents, all were raised there . . . I grew up on Montreal and Quebec Streets."

After leaving the state to live in Europe for a number of years, Holland returned to Portland and bought a house in her old neighborhood. Says Holland, "I recognize a lot of those kids hanging around as brothers and sisters of kids I knew. I have never been afraid to live there. When I came back from Greece I had reached a point in my life when I wanted to settle down and establish myself. I didn't drive so I wanted to live on the bus line. Property was cheap here and I had saved some money to invest." Holland bought a three-family house and is restoring the third floor apartment for herself with the help of a Neighborhood Conservation loan.

"I love Munjoy Hill . . . I live a block from Eastern Prom which is the most beautiful part of the whole city. I wouldn't have even considered moving on Western Prom. Look, I will never sell my house. You can print that."

Holland bristles at criticism of Munjoy Hill from those who have never lived there. "People like that make me mad. They say things about the neighborhood and they don't live up there. There are so many nice, caring people up there. Look, I know the hill is a controversial subject, that it has a bad reputation. I graduated from high school in 1969 and none of my old friends lives around there now."

"I think it was the drugs that changed it . . . but there were always guys hanging around the corner. When my father was in high school, they all hung around the corner. The biggest problem is vandalism."

Holland worries about a big corporation coming in the neighborhood and buying up a whole block, boosting prices on houses out of the range of young working people. "There's no displacement yet," she says. "It is still possible to buy a piece of property to restore. I feel very secure there. I'd really like to see my old friends move back."

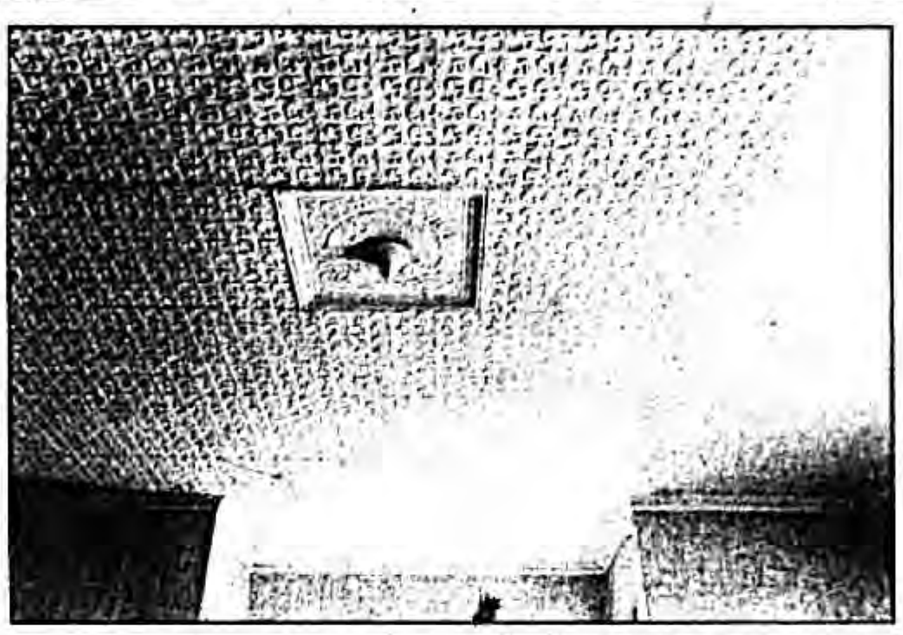
Robin and Robbie Whitten moved to Portland three years ago and took an apartment in town. Robin opened her fabric design store, Linekin Bay Fabrics, and Robbie joined an architectural firm, but both spent spare time househunting. "We were interested in seeing what living in the center of Portland offered," says Robin Whitten. "We looked for areas with architectural interest.

"We looked all over . . . we'd look at an interesting home no matter where it is. We had renovated an old house in Philadelphia. Living there gave us a sense of what living in a neighborhood would be like. We were very attracted to the Eastern Prom area but very few houses came up for sale. People who live there love it. They are not trying to move out to the suburbs. They have a view of the ocean."

Finally, the careful search paid off and the Whittens bought a house on Munjoy Hill. "We found a house that was condemned. All the windows were broken; there was no front door and weeds were growing up all around. It is an absolutely beautiful house. It was built by a shipwright and is beautifully sited. In the condition that it was in, it was extremely reasonable. Of course, it needed a lot of work. There was no hot water, no heat. We managed to buy an extra lot next door."

Whitten says her block consists mostly of owner-occupied, triple-decked homes. "The butcher at the corner store lives across the street . . . we love the neighborhood."

Young architect Rick Goduti has some reservations about the neighborhood because of the



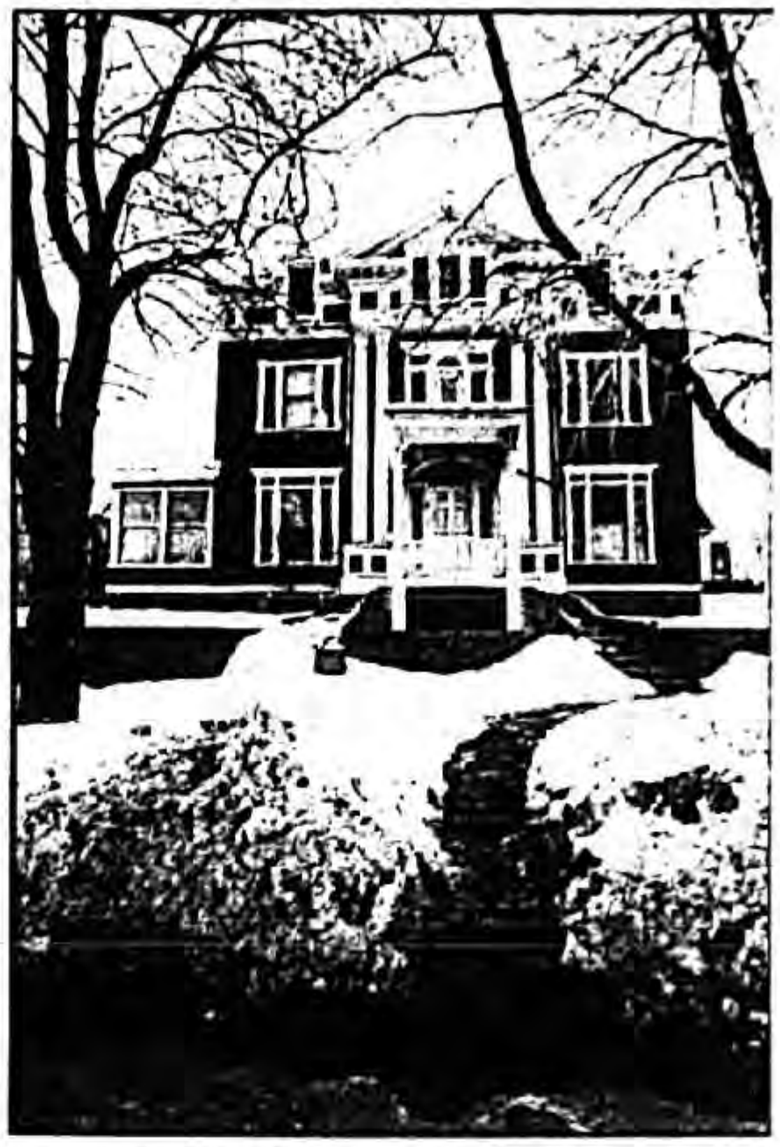
Harriet Dowling In the living room of the house where she was born. She says vandalism makes living there less pleasant than her childhood in the Congress Street house.

The ceilings in two rooms of Harriet Dowling's house are of this decorative hammered tin. The Dowlings were told there are only a few remaining tin ceilings in as good shape as this one.

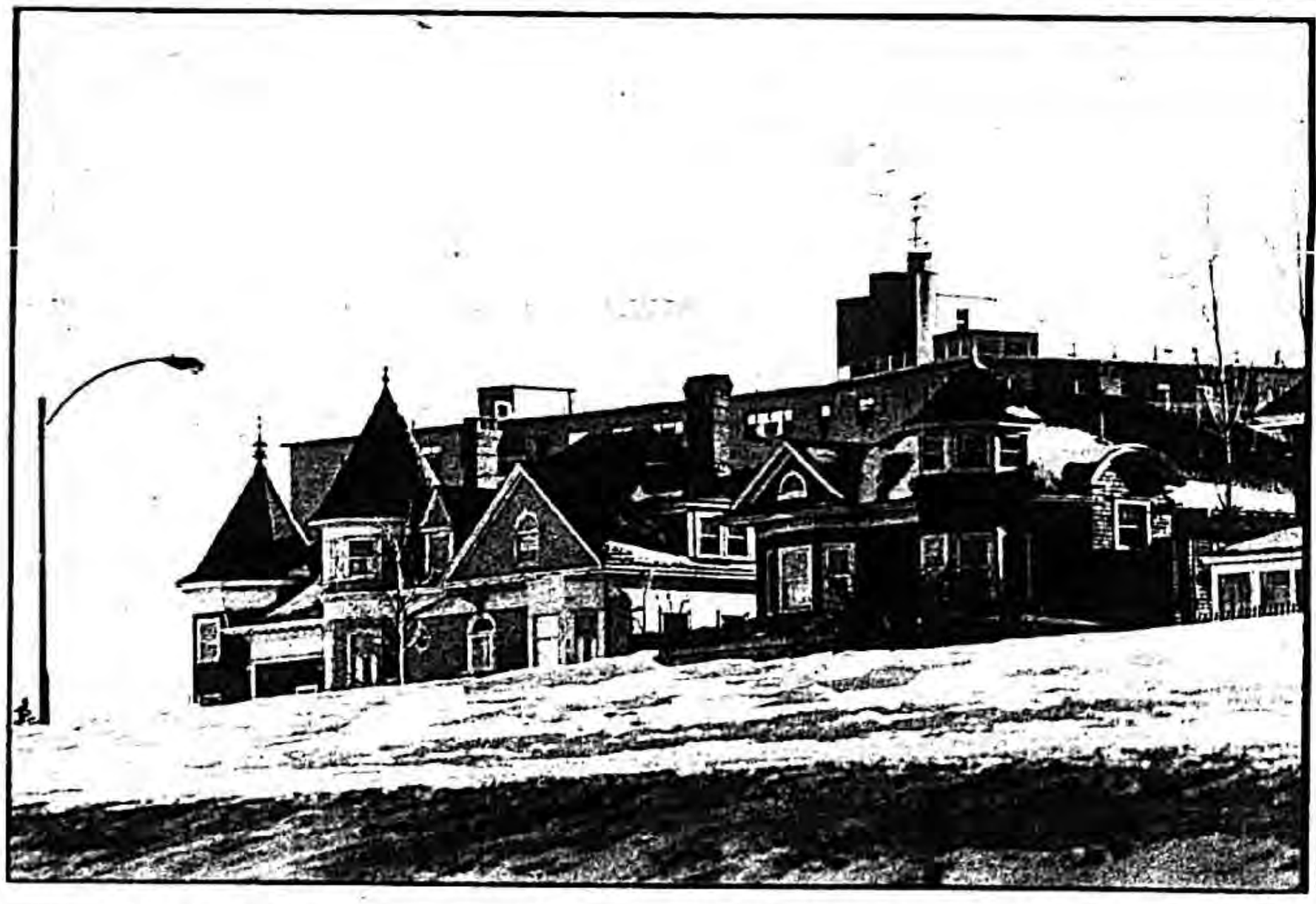
The variety store next to Harriet Dowling's house on Congress Street has been burned out twice.

MUNJOY HILL

Munjoy Hill, the most densely populated neighborhood in Portland, has many streets like this one with multi-family homes.



Portland harbor is the view from the large windows of this Fore Street house.



The turrets and cupolas of these older Munjoy Hill houses are in sharp contrast to the squared off roof of a more recent housing project, Promenade East.

teenagers who loiter near his home which borders the Eastern Promenade. On the other hand, he says he got an interesting home with a terrific water view and two rental units for a price he can manage.

Goduti, who grew up in Falmouth, sees a great deal of potential in Munjoy Hill. "It is an interesting neighborhood. There are some patterns there that don't exist any other place in the city. You find there a less diversified neighborhood economically — Western Prom ranges from much higher to much lower. Consequently, on Munjoy Hill kids really grow up together going to all the same schools." On the Western Prom, some children would go to private schools.

Goduti says that the majority of residents take care of their homes within their economic means. "There are mostly wood frame homes. Many are not architecturally significant so I don't think you will see the dynamic urban renovation like in the Old Port. In keeping with pride in the neighborhood, working class people are proud of their homes . . . they take care of them. You see a lot of vinyl siding going up."

Eighty-one-year-old Marjorie Rowe has lived on Munjoy Hill all her life. A retired school teacher, she thinks the media has not depicted her neighborhood fairly. She lives on Beckett Street which she says is quiet. "It's always been nice here . . . I think they talk too much about the hill being slums."

Down the block from Rowe, on Congress Street, Harriet and Walter Dowling live in the house Harriet was born in more than 60 years ago. But because Congress Street is the main gathering place for street juveniles, the Dowlings say things are far from quiet there. After living out of state for more than 30 years the Dowlings returned to find the empty store next door continually vandalized. Says Harriet, "I have to call the police two and three times a week. There have been two fires next door."

The Dowlings think that most of the young people doing the damage are not from the neighborhood, but are transients. "They are the ones who cause all the trouble," says Walter.

The Munjoy Hill Neighborhood Association is working to bring the vandalism problem under control. Jim Price says that community worker Mike Conley has proved to be effective with some of the youth on the streets. And lawyers Vestal and Chester befriended some of loitering youngsters and put them to work when they renovated their law office. The Dowlings think the city could do a better job of policing Munjoy Hill.

Meanwhile, there is optimism, because young professionals are purchasing and renovating neighborhood homes. They come to Munjoy Hill with fresh views and high hopes. Ultimately they may be the designers of its future.

by Peggy Fisher

[This is the second of two articles.]

PHOTOGRAPHY BY STEPHEN B. NICHOLS

PROGRAM PUTS OWNERS INTO RENTAL PROPERTY THE MAINE STATE HOUSING AUTHORITY AND CITY OF PORTLAND COMBINE ON NEW NEIGHBORS, DESIGNED TO UPGRADE RENTAL NEIGHBORHOODS.

Publication info: Portland Press Herald ; Portland, Me. [Portland, Me]17 Jan 1997: 2.F.

ProQuest document link

ABSTRACT (ABSTRACT)

"It's absolutely fantastic. It's incredible," he says, describing the program that made it possible. New Neighbors, a home ownership program offered by the city of Portland and Maine State Housing Authority since August, assists people with low or moderate income in buying buildings with one-to-four units in Portland's rental neighborhoods.

Without the program [Howard] Sawyer says he couldn't have cleared the down payment hurdle. Typically a buyer must put down from 5 percent to 10 percent of the total price tag. On a $100,000 home that's $5,000-$10,000. Through New Neighbors a qualified buyer needs $750 to $3,000, depending on the purchase price.

The goal is to increase the number of owner-occupied properties in neighborhoods dense with rental units owned by absentee landlords. Eligible neighborhoods in Portland include portions of East and West Bayside, Parkside, Munjoy Hill, the West End, Valley and Gilman Streets, Libbytown, East Deering and Oakdale.

FULL TEXT

Patti Lanigan Horvat is a free-lance writer who lives in Portland.

Howard Sawyer recently bought a 4-unitapartment building on Munjoy Hill with a $750 down payment. He likes his third-floor apartment's architectural angles and the back deck's view of Casco Bay. Rental income pays most of his low-interest mortgage.

"It's absolutely fantastic. It's incredible," he says, describing the program that made it possible. New Neighbors, a home ownership program offered by the city of Portland and Maine State Housing Authority since August, assists people with low or moderate income in buying buildings with one-to-four units in Portland's rental neighborhoods.

Without the program Sawyer says he couldn't have cleared the down payment hurdle. Typically a buyer must put down from 5 percent to 10 percent of the total price tag. On a $100,000 home that's $5,000-$10,000. Through New Neighbors a qualified buyer needs $750 to $3,000, depending on the purchase price.

"It allows people who otherwise would not have the opportunity to purchase a home to buy," explains Mark Adelson, director of Housing and Neighborhood Services in Portland. "People with a stake in the neighborhood become the keepers of the neighborhoods." Three sales in the program have closed since August.

The goal is to increase the number of owner-occupied properties in neighborhoods dense with rental units owned by absentee landlords. Eligible neighborhoods in Portland include portions of East and West Bayside, Parkside, Munjoy Hill, the West End, Valley and Gilman Streets, Libbytown, East Deering and Oakdale.

The MSHA has earmarked$10 million for New Neighbors in Portland, Lewiston and Bangor, according to MSHA Director of Public Information Dan Simpson, who says there are plans to expand to other cities if the program succeeds.

"It should help the cities, the home buyers and the neighborhoods," he says. "A lot of studies have shown one of the things to improve neighborhoods is to have home ownership."

The money comes from tax-exempt bonds the state housing authority sells in the national bond market. It is loaned at lowinterest rates to first-time buyers and others mortgaging and rehabilitating buildings. Mortgage payments pay back the investors.

MSHA's involvement helps the city of Portland to work with more buyers than under Port/Lenders, a home ownership program begun in Portland in 1992.

"New Neighbors has higher than normal income guidelines and a higher purchase prices," says Adelson. "It will broaden the impact of what we can do in these areas."

Participating banks - Atlantic Bank and Peoples Heritage Bank so far - close on the loans and sell 60 percent to MSHA, he explains. Because the risk is shared by the bank and MSHA, mortgage insurance is not required, rental income is figured differently and lower down payments can be applied. Both mortgages amortize over a 30-year-term.

To qualify a household with one or two people may not earn more than $53,280 a year, and the purchase price of a 1-unit in Portland must not exceed $167,424, a 2-unit $188,519, a 3-unit $228,199, and a 4-unit $265,367. The building must lie within the program's boundaries, and the owner must agree to live in the building.

A potential buyer must complete a free course in home buying offered by the city of Portland before applying to buy through New Neighbors. There is no exam, but a certificate is required by participating banks. The 10-hour course covers choosing, buying and managing property.

"The class makes you aware of a lot of the pitfalls," says Kris Clark, a music promoter and bicycle sales associate in the midst of the loan application process. "You can lose a lot of money and make a lot of mistakes if you don't know what you're doing."

After taking the class, Adelson and Housing Coordinator William Tracy suggest looking at houses and choosing one that fits the program's requirements. Tracy screens applicants before sending them to a bank for a loan.

Buyers must have a purchase and sale agreement for a specific property before applying. Having a good credit status, low debt and a steady source of income increase the chances of being approved by a participating lender.

"As part of the preapplication, two rehabilitation specialists look at every house to see that it meets minimal housing quality standards and city code," explains Tracy. "They factor the need for rehabilitation into the project."

Some funding for rehabilitation and closing costs may be borrowed from the city.

"A low income person gets a property that may be a blight on the neighborhood and can get help fixing it up," says Adelson. "Not only will the property shine, but it will have an owner-occupant. The worst rental properties the city has and has to confront are those with absentee landlords who don't maintain them. Those are the properties the police have to return to and the neighbors continually complain about."

Sawyer, a real estate agent, agrees. "I have shown dozens of apartment buildings. (In owner-occupied buildings) things tend to be kept up better. I think the tenants tend to behave better, and the property stays cleaner and neater."

He advises people thinking of buying more than a single-unit to consider the time and skills needed to maintain apartments.

"Three or four units means three or four times as many toilets and kitchens to take care of," he notes. It can also mean more concern for the neighborhood and landlord and tenants share.

"I love the Hill. I think this is one of the best places to live on the East coast - right here in this house," says Sawyer. His living room windows afford a view of the St. Lawrence Church, and he is working toward its restoration.

Clark hopes to close early this year on his West End building. He likes living in the city - close to coffee shops, movie theaters and clubs.

"I think New Neighbors is a really smart program from society's point of view," he says. "It's not that they just want to help people buy houses. They want to fix up transitional neighborhoods."

To register for the City of Portland's home buyer class, call 874-8730. The next session begins in March.

Illustration
PHOTO: b&w; Caption: Staff photo by Jack Milton Howard Sawyer stands on his third-floor deck overlooking Casco Bay. He bought the four-unit Munjoy Hill building through the New Neighbors program, designed to put owner-occupants into downtown buildings, with a $750 down payment.

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There goes the neighborhood

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FULL TEXT

While communities around Maine wrestle with sprawl and development, Portland is embroiled in a bitter battle over citizens' role in planning that could shape state policy.

The dispute has two faces one involving the city's severe affordable housing shortage, the other how to develop the waterfront. But both share a single theme. In each case, a number of residents are stomping mad over a cityblessed development proposal and charge that officials have turned a blind eye to their concerns. In both cases, residents have taken the matter into their own hands with unsettling results.

On May 1, Portland residents will go to the polls to vote on a controversial referendum that would temporarily ban housing projects of 20 units or more and give residents more influence over the planning process. Housing advocates, developers and city officials staunchly oppose the measure, saying it has served only to prevent sorely needed affordable housing projects from moving forward But proponents say the city needed a wake-up call to stop the destruction of their neighborhoods and the ongoing disenfranchisement of residents who want a say in local development.

"I think they don't want citizen involvement," said Janet Ham, one of the referendum's organizers. "I think they are afraid of it. They want citizen involvement on their terms."

he march toward the referendum began in earnest last October, soon after the Portland Planning Board approved construction of a 70-unit mixed-income housing complex on Munjoy Hill, a largely blue-collar residential neighborhood. Residents didn't like the size of the project and argued that its design attached side-by-side units covered with vinyl shingles didn't fit in with the mostly small, multi-unit apartment buildings around it.

They also felt left out of the planning process. While there were plenty of workshops and public hearings on the project, residents often were unaware of the meetings and felt they had no say in the final design, which was initiated by City Hall and its staff.

Neighbors who bitterly fought the project throughout the planning process began collecting signatures on a petition to force a citywide referendum, which would ban development projects in residential neighborhoods until a comprehensive plan for housing is in place. They made their referendum retroactive so it would include the Munjoy Hill project that got the referendum started, and gathered 2,800 signatures, nearly double the amount they needed. Those who signed, from throughout the city, were tired of being left out. The city council was forced to set a referendum date.

Meanwhile, another revolt was brewing, this time over a controversiol proposal to build a new ferry terminal on the waterfront. The project, to be financed in part with $9 million in state transportation bond money, involves relocating the Scotia Prince cruise liner from the west end of the waterfront, where it shares a terminal with cargo operations and is out of the way beneath the bridge to South Portland. The ferry would move to a new terminal at the Maine State Pier on the East End, where Bath Iron Works is getting ready to leave. The new site a so includes a 16acre parcel of land owned by the city that would be primarily used for parking until the city can find the money to build a parking garage, which could be many years down the road.

The idea behind the waterfront proposal is to provide additional space for the burgeoning cargo port while consolidating passenger ship operations. The former BIW site would accommodate, in addition to the Scotia Prince, the rapidly increasing number of cruise ships calling on Portland.

The new terminal will have an enormous impact on Portland and the region. Thousands of tourists will be coming off ships and heading either straight downtown or getting on buses to go to Freeport or elsewhere. Thousands of cars, trucks and buses will be heading into the new terminal as well.

The problem is the Maine State Pier and its adjoining parcel abut the Munjoy Hill neighborhood and the Old Port, the city's thriving downtown. While Old Port businesses say they welcome the changes, nearby residents and others worry that increases in traffic, parking requirements and special security precautions needed for the international ferry would sever the community from the east end of the waterfront and harm the character of the neighborhood.

"The Scotia Prince requires a lot of parking and queuing space that displaces higher value uses up there," said John Carroll, former chairman of the city's planning board and a vocal opponent of the project. Also, since passengers must pass into a secure area for customs inspections, that means fencing for a "vertical separation." It "segregates the land and divides the flow of pedestrian traffic." Carroll said it would look similar to the ferry's facility in Yarmouth, Novia Scotia. There "it occupies a huge section of the waterfront that no one in the community can use. It's a big, isolated, sterile empty space."

It also doesn't help that the current proposal is based on a plan created three years ago, primarily by the major commercial players on the waterfront - the Scotia Prince, Casco Bay Lines, Bath Iron Works, the cargo terminal and the Longshoremen's Union - and ,not residents.

This spring, as the city stepped into high gear to get the project started, and after a number of people felt their concerns continued to go unheeded, a small group created a Web site that provided residents with information on the issue. The Web site also provided contact information for each of Portland's city councilors, who, by some accounts, have been receiving daily e-mails, and phone calls from people opposed to the project ever since. Last May, after heated debate, the city council shifted gears and directed its Master Planning Committee to consider alternatives to its plan to move the Scotia Prince to the new terminal. Web site organizers credit their site for the change.

Opponents of the city's proposal to include the Scotia Prince in its plans to develop the BIW pier still have a long way to go, however. While city councilors OK'd taking a look into alternative sites for the cruise ship, most of them also said they could not envision a viable option.

Portland is now charged with tension as a result of these development battles. Countless newspaper stories, editorials, op-eds and community forums have helped create an atmosphere reminiscent of the last citywide vote on development 14 years ago.

On May 5, 1987, voters approved a referendum 2-to-1 that restricted development to marine-related uses on the city's waterfront. The vote came at a time when the economy was booming and development pressure was high. Along the waterfront's 17 mostly 100-year-old wharves, which had been home primarily to fishing boats, ferries, fish processors and other marine-related businesses, $300,000 condominiums and restaurants had begun to pop up.

Residents worried about the scale of the projects. They worried that housing would be an incompatible use with the working waterfront and would eventually edge out marinerelated businesses. They also feared gentrification, increases to their property taxes and diminished public access to the waterfront. They tried to meet with the mayor at the time to discuss their concerns, but were rebuffed, according to news paper reports. They instead organized a petition drive.

"You'd have thought the city of Portland would have learned its lesson," said Sen. Anne Rand, a Munjoy Hill Democrat and one of the petitioners in favor of the current development referendum. She also actively supported the 1987 referendum and believes similar concerns about a lack of citizen input infect the current waterfront development plan. "I see a lot of similarities," she said, adding that she believes the city should have been ,'more inclusive as far as citizen input when they were planning these large changes over development that have a direct impact on the community. I'm talking about things that have gone on for years. Portland has a bad reputation for citizen input. It comes after the decisions have already been made."

The 1987 referendum "was a direct result of the people of Portland waking up one morning and seeing condominiums on our working waterfront," Rand said. But, she said, "City Hall thought these things were great. When we said, 'What about public access? What about the fishing industry? Are these things compatible?' We were told, 'We will give you view corridors.' That meant that you could stand in the middle of the street and look down at the water. We were told that the waterfront was dead. ... There were a number of us who just couldn't accept that. So we went the initiative route. We took 28 out of 29 polling places."

Rand said referendum supporters were called NIMBYs, -"not in my backyard-ers" the same term the current mayor and other vocal opponents have used to describe today's referendum supporters. But the '87 referendum "proved that people all over the city are concerned with the city as a whole," Rand said. "I think that's the same situation we have now."

City Hall does not support Rand's view. Mayor Cheryl Leeman, who is also opposed to changing the current plan for the waterfront, did not respond to a request for an Interview. But another councilor, Jim Cloutier, said he thinks the city has been inclusive in its planning process.

"I think by and large the city council tries to be pretty careful of giving everybody a chance to speak," Cloutier said. "We understand that sometimes our technical procedures that we go through don't come to everybody's attention," he said referring to the 3-by-5 notices mailed to abutting neighbors on project proposals. "That's what they think on Munjoy Hill for sure." Cloutier added, "I suppose any process can improve."

That Portland can involve citizens in planning is exemplified by the city's response to a housing proposal in the downtown district known as Bayside [see sidebar]. But it didn't happen on Munjoy Hill.

There, the city relied on its usual process for public input, which involved cards to abutters about upcoming hearings and workshops on the project. But many complained later that they never received postcards.

The community felt shut out, in large part because they never saw the project coming. The request for proposal put out by the city wasn't requested by the Munjoy Hill neighborhood and could have resulted in a project anywhere in the city, unlike the Bayside request which was specific to that neighborhood.

A recent newspaper poll found 40 percent of the public supports the referendum, .24 percent are opposed, and 36 percent are undecided, though officials are almost unanimously critical. Evan Richert, director of the State Planning Office, said Portland has been working for years on its comprehensive plan and has had "extensive citizen involvement." As far as developing the rest of the components of its comprehensive plan, including the housing component, "in a city as large and complex as Portland, it is not something that you can do in one fell swoop," he said.

Richert also said that all too often residents don't get involved in setting planning and zoning rules because the concepts involved are too abstract. It's not until a specific project is on the table that they become interested and by then there is nothing city officials can do if a project meets the city's zoning ordinances. That was the case with the Munjoy Hill housing project, which did not require any zoning changes.

But Deb Keenan, a referendum supporter who lives in the Riverton section of Portland, said city officials just don't listen to what residents have to say. "Residents want to have a voice early on in the development process, but the city response seems to be, 'Just because you have your say doesn't mean you get your way,'" Keenan said. "Residents want public participation to be more than a dogand-pony show."

City officials have tried to head the referendum off at the pass by approving several measures included in the initiative. But Mark Swann fears that won't be enough. Swann runs the Preble Street Resource Center, a Bayside nonprofit organization that provides a range of services for homeless people. He is also cochairman of the committee formed in opposition to the referendum, Citizens Protecting Portland's Future, made up of developers, housing advocates, realtors and some residents. Swann said he has seen the number of homeless people increasing, mostly because they can't find an affordable place to live in the city. The vacancy rate in Portland is less than 2 percent, which has forced rents way up. After years of trying to get the city to do something about it, and then seeing some movement with the two affordable housing RFPs that went out, Swann was surprised and dismayed when the petitions for a referendum calling for a moratorium on housing development began circulating.

"Sitting in my mailbox one day was the language for their petition, and my stomach just keyed up," Swann said. "We all looked at that and said, 'What is the thinking here?'" As a result of the moratorium component of the referendum, a number of housing developers who were interested in Portland are no longer talking about doing projects in the city, Swann said.

Swann said he is sympathetic to the petitioners in many ways. "People have had bad experiences with City Hall in the past on process," he said. "They don't feel they have been listened to." Swann said that sentiment, which he has heard over and over on the campaign trail, is making his job of trying to convince people to vote against the referendum a lot harder. But he still feels strongly that "this is the wrong tool for increasing public participation."

The frustrations among residents have been running just as high when it comes to the waterfront. At meetings, some have even joked about getting a referendum going to address the problems there as well. Holt, the city's urban designer, had organized a second major planning excercise for the city, only this time to address issues on the waterfront. It was held last January. Nearly 200 people attended. But the outcome of this was very different from Bayside's. Instead of making people feel good about public input, they eventually came to feel worse.

"Initially, I was very enthusiastic and surprised at the level of neighborhood input they did seek," said Dan Piltch, who lives on a boat in Portland's harbor and owns a marine computer business on the waterfront. "I very quickly became disenchanted after going to a couple of meetings because while, on the one hand, they were asking our opinions, it did seem like, on the other hand, they hadn't altered anything they were doing based on our opinions."

Piltch and others who attended the charrette determined at the workshop that moving the Scotia Prince to the new ferry terminal created too many design problems. They concluded that alternatives to locating the ferry on the East End of the waterfront should be addressed. The problem was that the committee in charge of spending nearly $1 million to come up with a design for the new terminal did not have anything to do with the design charrette. This small technical committee, again made up mostly of representatives of the major commercial interests on the waterfront, like the Scotia Prince, the cargo terminal and others, has been operating independently of the group responsible for the charrette and charged with coming up with a master plan for the waterfront.

So, while the larger planning group has been hosting public forum after public forum, at which hundreds of speakers have said they do not want their beloved waterfront turned into a sea of surface parking lots or to be closed off in any way to the public, the other socalled technical committee has signed off on a plan to build nearly 15 acres of surface parking and to fence off certain areas of the new terminal for security for the Scotia Prince. A much more complex plan to develop parking garages and a bridge over the secure areas to help improve public access are also part of plan approved by the technical committee, but funding is not available and won't be for years to come.

The backlash that has resulted came to a head at a recent city council meeting when one of the councilors who chairs the larger Master Planning Committee, Peter O'Donnell, forced the issue. He repeated a threat he had made public a few days prior to the meeting, which was that he would not continue attending his committee's meetings unless alternatives to relocating the Scotia Prince to the Maine State Pier were placed on the table. This was a result of pressure he was feeling from his constituents, he said. O'Donnell, who did not return repeated phone calls, represents Munjoy Hill.

"'What they are saying to me and have been saying to me [is that] the Scotia Prince will not work on that site. We haven't looked at alternatives," O'Donnell told councilors. The other councilors, who had also been hearing from unhappy residents, yielded. Now the waterfront's future and public satisfaction with the process to design the new terminal hangs in the balance.

For his part, Holt has been renegotiating the contract for the design consultant for the Master Planning Committee, which will look into alternatives to moving the Scotia Prince to the East End. (He also has been quietly planning another charrette for Bayside.)

Carroll, the former Planning Board chairman who opposes the current plan, believes the city should look into buying the vacant land that's available just west of the bridge to South Portland. The city could look into moving

either the Scotia Prince or the cargo terminal there, he said.
Holt said this and other ideas that people come up with will now be researched. And if anything good turns up, it will quickly rise to the surface. "It absolutely makes sense to create a process that's as open as you can stand it to be," Holt said. "And if someone, regardless of their position, has a position that has strong merit, then they shouldn't be concerned because it's going to survive a good process. ... These kinds of things are messy. The will of the people is often a difficult thing to decipher with accuracy.
"In one way, it's much more efficient to have a small number of people making decisions," Holt said. "But certainly it's much more powerful to be as inclusive as possible in that process."
INVOLVING THE COMMUNITY BAYSIDE'S PLANNING CHARRETTE
Long neglected by the city, the Bayside neighborhood, just off the Back Bay, is the city's urban frontier. It is home to dozens of surface parking lots, a couple of scrap yards and other light industry, nonprofits including soup kitchens and homeless shelters, and homes that range from small, rundown multi-units to the exclusive Back Bay Tower apartment building on Cumberland Avenue.
To plan for new housing in the neighborhood, the city has been using an extremely inclusive process that begins with a community planning and design workshop known as a charrette. The charrette is a process that brings lay people and professional architects and designers together in workshops that can last from a few hours to several days. Its purpose is to give a community the opportunity to think about its needs and come up with a planning vision on its own. The approach relies heavily on community input at the outset of any development project, unlike the common approach to public participation used by Portland and cities and towns throughout Maine, which allows for input only after a project is fully formed and often most of the way through the planning process.
Proponents of the charrette process, which has been touted by the American Institute of Architects and is starting to take off nationally, argue that when communities have the chance to give meaningful input at the beginning of a development project, they are much less likely to fight it as it works its way through the permitting process. This has been true in Portland.
In anticipation of the development that is inevitable there, a charrette was organized last year by the city's urban designer, Alan Holt, a maverick in Portland city government who bad introduced the process successfully in New Bedford, Mass. The Bayside community bad just galvanized in opposition to a proposal, supported by the city and put forth by the late Betty Noyce's Libra Foundation, to build a massive sports arena smack in the middle of the neighborhood. After winning the arena battle, local residents welcomed the opportunity to have input into planning for their community. Holt said at the time that he wanted the chance to show the city what a meaningful participatory public process would look like.
One hundred fifty people attended the charrette. Among them were wealthy property owners, homeless people, architects, developers, planrung students from the Muskle School of Public Service, renters and lawyers. One of the many common themes that surfaced was acknowledgment of the critical need for affordable housing,
Out of this workshop and In order to address the growing need for housing throughout the city, a plan was formed by city officials to issue a request for proposals for affordable housing in Portland. That RFP resulted in a 32-unit project in Bayside using city-owned property and $200,000 in city funding and tax credits. Richard Berman of Berman Associates, the developer who was awarded the project, then met several times with the local residents, who asked for and received things like porches and a community room. The residents even named the project Unity Village at Bayside. At the time Bayside Neighborhood Association president Sandy Elder said, "We had a potluck supper and everybody was thrilled that the bulldozers came. ... It's our housing project."

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Google Groups

Public Comment: 3 of 3 (Historical Info Redux from the R-6 Downzoning Debate)

George Rheault <george.rheault@gmail.com> Mar 5, 2020 10:32 AM
Posted in group: **Planning Board**

Please include the information below as part of public comment regarding the proposed Munjoy Hill Historic District.

While the remarks and attachments below were raised as part of the 2017-2018 anti-housing R-6 debacle, they very much remain relevant to the historic district consideration.

That relevance includes:

1) Shining a light on the abuse in this process, to date, of the actual historical record of the physical, social and cultural evolution of Portland's East End.

2) Highlighting how the push behind a historic district designation is simply the latest stage (and perhaps its ultimate culmination) in a 100+ years exclusionary effort to depopulate, de-urbanize and gentrify the Portland peninsula.

---------- Forwarded message ---------
From: **George Rheault** <george.rheault@gmail.com>
Date: Mon, Jun 4, 2018 at 9:35 AM
Subject: The Munjoy Hill R-6 Saga: Part 3 of 4 - Gentrification Picks Up Steam (a/k/a The Losing Battle Against Sprawl...)
To: Ethan Strimling <estrimling@portlandmaine.gov>, Nicholas Mavodones <nmm@portlandmaine.gov>, jduson <jduson@portlandmaine.gov>, Brian Batson <bbatson@portlandmaine.gov>, Pious Ali <pali@portlandmaine.gov>, Spencer Thibodeau <sthibodeau@portlandmaine.gov>, Kim Cook <kcook@portlandmaine.gov>, Councilor Belinda Ray <bsr@portlandmaine.gov>, Justin Costa <jcosta@portlandmaine.gov>
Cc: Jeff Levine <jlevine@portlandmaine.gov>, Tuck O'Brien <sgo@portlandmaine.gov>, Christine Grimando <cdg@portlandmaine.gov>, Caitlin Cameron <ccameron@portlandmaine.gov>

I urge the Portland Council to reject the raft of proposed "down-zoning" changes to the R-6 zoning code being considered tonight. Not only are the R-6 carve-outs specially crafted for Munjoy Hill a slap in the face to the rest of Portland's neighborhoods (both on and off the peninsula), but they are environmentally unsound and violate the sustainability commitments set forth in Portland's recently enacted Comprehensive Plan.

As part of its homework, the Council should pay particular attention to the May 2001 referendum that tried to kill the Island View Apartments complex that enabled dozens of families to be affordably housed on Munjoy Hill despite the protestations of the NIMBY crowd (many of whom late became vocal opponents of the 2015 R-6 zoning changes).

Attachments:

- May 3, 2001 Casco Bay Weekly Cover Story: Regional Sprawl and Munjoy Hill Disease

- Nov 4, 202 Press Herald Story: Happy Aftermath of 2001 Referendum on Island View Apartments

3 MAY 2001

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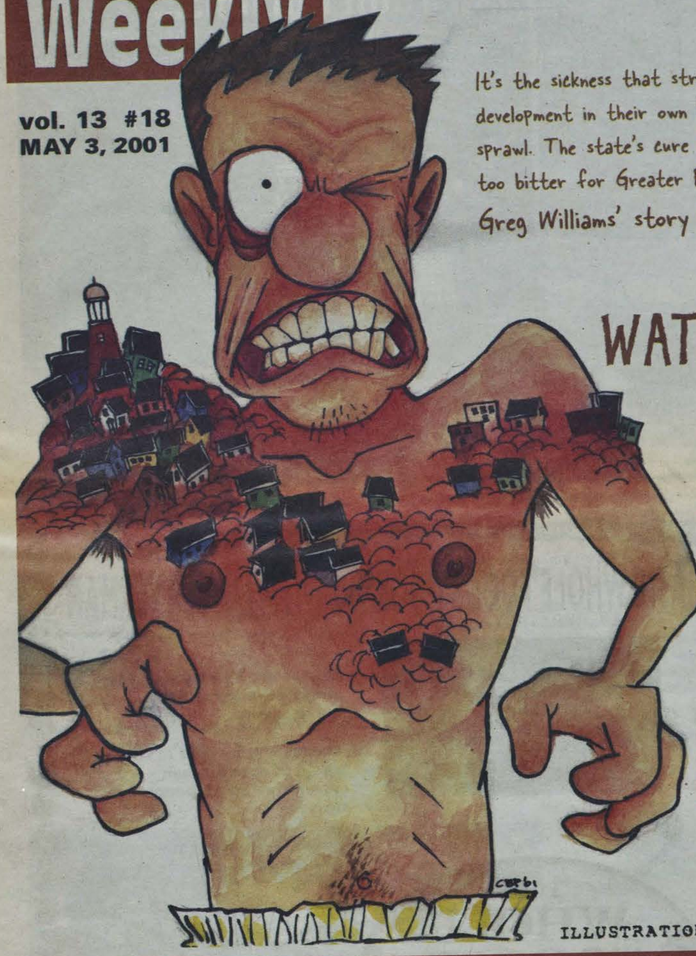
It's the sickness that strikes when neighbors oppose development in their own backyard and end up encouraging sprawl. The state's cure for this condition appears to be too bitter for Greater Portland residents to swallow.

Greg Williams' story starts on page 12



WATCH OUT, it's ...

Munjoy Hill DISEASE!

ILLUSTRATION/COREY PANDOLPH

Portland cop has ties to towing company page 8
Portland cops crack down on performance art page 10
Exposing circus elephants' so-called lives page 20

National Nurses Week Special Recruitment Section SEE PAGE 38

Watch out, it's ... Munjoy Hill DISEASE!

It's the sickness that strikes when neighbors oppose development in their own backyard and end up encouraging sprawl. The state's cure for this condition appears to be too bitter for Greater Portland residents to swallow.

ILLUSTRATIONS/
COREY PANDOLPH

GREG WILLIAMS

A plague has infected Portland, and it's spreading like a nasty rash from its point of origin in the city's East End into neighborhoods in surrounding towns and beyond.

It's called Munjoy Hill disease. It may be incurable.

The symptoms of this illness include a stubborn refusal to allow residential development to take place within the neighborhood's borders and the appearance of activists willing to go to extreme lengths to prevent such new construction.

The state of Maine is trying to stop the spread of Munjoy Hill disease because it exacerbates the unhealthy effects of another serious affliction: sprawl. Like a slow-moving, insidious bacteria, sprawl infects suburban and rural communities, gobbling up large tracts of farmland and scenic open space and leaving a haphazard pattern of single-family homes (often interspersed with strip malls and big-box stores) in its wake.

Sprawl's symptoms include increased traffic and higher taxes, as local governments try to cover the costs of extending sewer lines and building bigger schools in response to growth.

Meanwhile, sprawl literally sucks the life out of urban communities like Portland as it lures people away from the city. Among other problems, the corresponding drop in students attending public schools triggers a reaction in Augusta, where, following the school funding formula, lawmakers cut state education aid, forcing the city to raise taxes to make up the difference. In addition, the traffic that spreads like capillaries into the surrounding suburbs coalesces around Portland, particularly on weekday mornings, to create a frustrating condition: clogged arterials.

One of the ways to cure sprawl is to encourage denser development in urban and suburban centers, but with Munjoy Hill disease ravaging Portland and its symptoms showing up in nearby suburbs, this medicine is proving ineffective.

Nevertheless, State Planning Office director Evan Richert has been touting this idea, traveling around Maine trying to sell the public on his "smart growth" initiatives, which encourage municipalities to create self-contained neighborhoods with a high-density mix of residential and commercial development. But to Munjoy Hill residents like Nancy Guimond, it sounds like Richert is selling snake oil.

"I think we're crammed enough up here," said Guimond, who lives on Waterville Street.

Guimond's apartment sits next door to a vacant lot slated to become a five-story condominium complex with parking for 13 vehicles. She opposes the project on grounds it is out of character with the rest of the neighborhood, will create a parking dilemma and will result in the loss of her harbor view and ocean breezes. "We'll be sucking fumes," she said.

Guimond recognizes the conflict between the state's vision of denser urban living and her neighborhood's resistance to it, but in her opinion, if the city is going to have more housing, it should be someplace not quite so crowded.

"It's a funny clash. I think [state planners] should use a little more common sense," she said. "They want to have us living like rats in a maze. It's crazy."

Such attitudes make it tough for state planners to combat the spread of sprawl. Jaimey Caron, chair of the Portland Planning Board, said it's difficult to convince people to give up something personal for the betterment of the whole. In Caron's opinion, Munjoy Hill disease is "about getting your own way, not what's best for the overall community."

An outbreak of the illness recently flared up in Freeport, where residents forced the Town Council to reject a $50,000 grant from the state intended to create a kind of "smart growth" village — a compact neighborhood in which housing, schools and services would all be within walking distance. When the disease strikes the suburbs, it makes rural communities more susceptible to sprawl.

Though sprawl hasn't hit his community as hard as it has towns closer to Portland, Raymond Town Manager Don Willard said it's coming. According to Willard, taxes in Raymond are already going up, and the town's rural character is in jeopardy. Willard knows the consequences of unheeded sprawl. The dairy farm in Scarborough he grew up on has since been subdivided into house lots.

The latest census data bear witness to a dramatic population shift. From 1990 to 2000, Raymond grew nearly 30 percent. Scarborough and Falmouth saw population increases of over 35 percent. But Portland, with its housing shortage and outbreaks of Munjoy Hill disease, had no growth at all, actually losing a fraction of a percent.

In Windham, where the population grew by over 14 percent in the last decade, town planner George Dycio said the town is struggling to meet the increased demand for services such as police, fire, roads and schools, and is raising taxes as a result.

Dycio said Portland can help reduce the burden on towns like his by attracting more people, but he realizes that isn't happening due to the city's lack of affordable housing.

Anthony Dater, a consultant for the Greater Portland Council of Governments, said many neighborhood activists, who consider themselves progressive on development issues, are against sprawl — that is, until the solution falls in their backyard. "It's ironic," he said, "but it conforms to human nature."

Dater believes long-term education on the benefits of denser housing is the only way to fight Munjoy Hill disease.

It won't be an easy treatment to administer.

"People have it ingrained in them that spreading out is good," Richert said. "It's not all bad, but it has its costs."

Why should we care?

Strains of Munjoy Hill disease have appeared all over Portland. Residents of neighborhoods like Rosemont, Oakdale and Riverton have feuded with developers and city officials over building projects and mixed-use zoning in recent years.

Deb Keenan lives in Riverton, Portland's fastest growing neighborhood. Keenan doesn't think increasing the density of an already crowded city is a good idea. Furthermore, she wondered why Portlanders should even be concerned about growth in other towns. "What do we care about sprawl?" she asked.

Keenan said sprawl is an issue for the lesser-developed and faster-growing rural and suburban areas. Though she likes the idea of stacking apartments on top of businesses in areas like the Old Port, Keenan does not support the smart-growth cure in the more residential parts of the city.

"Is smart growth smart?" she said. "My belief is that it's not."

Keenan questioned the feasibility of the Unity Village project now under construction in Portland's Bayside neighborhood, which will create 33 units of affordable apartments on one small block. "It's a postage stamp piece of land," she said. "I wondered how they would fit so much housing there."

To Keenan, denser living translates into fire hazards, overcrowding and loss of open space. She wondered why city dwellers like herself, who value green space and

> **People are against sprawl, but equally against density. What are you gonna do?"**
>
> — Tom Kane, Portland city councilor

wildlife as much as those living in the country, should have to give that up to make life better in the suburbs.

Portland Mayor Cheryl Leeman has disagreed with Keenan on many issues, but they share some common ground in their suspicions about smart growth. Leeman called the state's efforts to stem sprawl "idealistic," and said greater density is not so great for the city. As she sees it, Portland already has traffic and parking problems, and for denser housing to be acceptable, major changes in societal behavior would have to be made. "People like their space," she said. "I am not sure the public is ready" for denser development.

City Councilor Tom Kane supports attracting more people to Portland by creating more housing within city limits, but realizes that in neighborhoods like Munjoy Hill, residents already feel crowded. Kane thinks once people move to a neighborhood, they like to keep it the way it is. "People are against sprawl, but equally against density," he said. "What are you gonna do?"

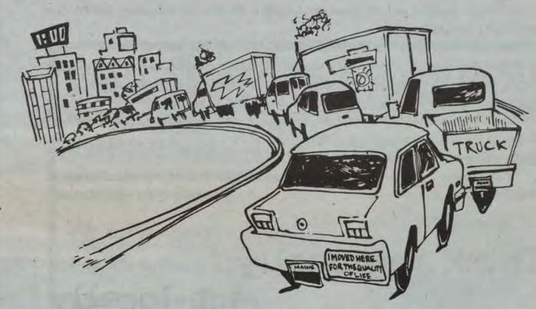
Big city life in Freeport

Munjoy Hill disease seems to be spread by people, who act as carriers of the disease when they move.

Sandy Campbell recently moved from Pownal — which, despite experiencing an 18 percent increase in population last decade, remains relatively rural — to West Freeport, a suburb of Portland she nevertheless refers to as "the city."

Her new apartment is near the rapidly developing area Freeport town planners had eyed for a smart-growth village — the dense, mixed-use project the state had offered Freeport grant money to develop, but which neighbors like Campbell opposed, ultimately forcing the town to turn down the cash. Campbell was against the project because of concerns about increased density and traffic, which predicted would cause a decline in her quality of life.

Though she understands the state's interest in creating affordable housing close to existing schools, stores and other services, Campbell couldn't help but feel "leery" about the development proposal. "People have a hard time dealing with change," she said. "People get angry because they're fearing the unknown .... These units are basically going to be in our backyards."



Regardless of the fears of residents, development will continue to take place. "We're not going to stop growing," said Freeport Town Councilor David Soley. "Doing nothing leads to uncontrolled growth."

In Soley's opinion, residents shouldn't oppose an idea without coming up with a better one. "We all need to chip in," he said, because sprawl "is a community-wide problem."

As Portland officials realized in the wake of the May 1 development referendum, residents need to be a part of the development process in order to accept changes in their neighborhoods.

Richard Berman, the developer of Unity Village, learned this the hard way when he tried to create a transportation/retail hub in Falmouth, near exit 10 of the Maine Turnpike, during the 1990s.

If developers don't design projects with the community's participation and support, they end up with "arrows in the ass," he said.

Town officials and residents subjected his plan to intense scrutiny, a process which ultimately resulted in a project that was less progressive than Berman envisioned. Gone from the final version was the housing (including units for elderly residents) and bus service to Portland.

"That is why developers don't do this shit," Berman said, referring to the arduous process he went through to get residents to accept his proposal. "I could have just done a Lowe's [big box store], but that makes me a sleazebag developer. I have to walk the talk."

Scarborough developers John and Elliott Chamberlain are trying to do just that, in hopes neighbors will approve of their plans for a smart-growth neighborhood in the town's Dunstan Corner area. They've held several public meetings on the project, including a day-long design workshop during which three teams of residents worked together to create visions of how the 150-acre lot should be developed.

The Chamberlains have built cookie-cutter subdivisions in the past, but want to try something different this time by including a variety of housing types, shops, a community center, biking trails

"We're not going to stop growing. Doing nothing leads to uncontrolled growth."
— David Soley, Freeport town councilor

and even a school in the development.

State planners like Richert are hoping their development will become Maine's first modern-day example of the cherished traditional neighborhood, similar to self-contained communities in Camden, Boothbay, Deering Center in Portland and Meetinghouse Hill in South Portland.

Ed Suslovic, a Portland real estate broker hired by the Chamberlains to head their neighborhood design project, said the state has been pushing the concept for the past four years, but, so far, has found no one to actually build such a neighborhood, let alone a community willing to accept it.

"We would like one truly smart-growth development in the ground," Suslovic said.

Mark Maroon, chair of the Scarborough Town Council, said he is intrigued by the Chamberlains' proposal and the principles behind it. He finds it "refreshing that builders are bringing back old ways."

But "refreshing" may not be enough. While town officials have, in Maroon's words, "embraced the concepts" of the Chamberlains' proposal, they haven't yet decided whether to take a crucial step to make the project feasible: suspending Scarborough's zoning requirement that sets a two-acre minimum for house lots in that area of town.

And there's still Munjoy Hill disease to contend with. Maroon said nearby residents have given the proposal a "cautious analysis," and noted there are always going to be those against any and all development.

"This example is a great test of what the state is talking about," he said. "No matter what the result is, [the proposal] is, in essence, the first litmus test of the issue of sprawl" in Maine.

Think regionally, act locally

Attacking Munjoy Hill disease on a project-by-project basis can help make progressive, smart-growth development more palatable to wary neighbors, but many believe a more aggressive approach is necessary to deal effectively with sprawl. For state officials, that means working not just locally, but regionally to solve the problem. Historically, that's been a difficult, if not impossible, task.

"We don't take a regional view," Berman, the developer, said. "People need to see themselves as part of the whole, not as individuals. We're all in this together."

"We don't take a regional view. People need to see themselves as part of the whole, not as individuals. We're all in this together."
— Richard Berman, developer

Mark Adelson, Portland's director of housing and neighborhood services, said regional planning among municipalities will be necessary to shape growth in Greater Portland and beyond. "Because there is no regional cooperation," he said, "it's kind of a free-for-all."

Most communities in the area are pushing for or have implemented growth limits, but such controls have the effect of forcing development into other, less-developed areas, thereby increasing sprawl. There is little indication that situation will be replaced by comprehensive planning anytime soon.

Windham's Dycio said regional zoning is a wonderful idea, but is unlikely, given many residents' wariness of any form of land control. And it may be too late. "It should've started in the 1940s or '50s," Dycio said. "It's hard to go back. I think there would be a revolt."

Dater of the Council of Governments agreed, saying planning for all of Greater Portland would be cheaper and more equitable, but it is not practical in Maine, where localism and individuality reign. Dater said the state has called on municipalities to implement regional planning, but has not pushed the issue because it's so "politically difficult." The Council of Governments does some regional planning, but focuses mainly on transportation issues.

Richard Farnsworth, a member of a 1998 state task force that studied centers of commercial activity and employment in Maine, is one of the few people who's optimistic about regional planning. As Farnsworth sees it, an effective regional governing body with representatives from each municipality makes sense.

Given that Portland supports hospitals (which pay no property taxes) and serves as a cultural hub used by residents of surrounding towns, Farnsworth is in favor of a taxation system that would allow Portland to share the financial burden it shoulders by hosting such services. Leveling the tax burden across the region, Farnsworth said, would make moving to rural towns less financially enticing to city dwellers.

Not surprisingly, that idea isn't popular in less developed towns.

"That sounds like a bad idea," Willard, Raymond's town manager, said. "It would be a difficult idea to sell."

More difficult, apparently, than convincing urban residents to accept more development in their neighborhoods so those in the country can keep their fields and trees and brooks.

For those who fear sprawl, opposition to that idea isn't just wrong — it's sick. And the diagnosis is Munjoy Hill disease.

Greg Williams can be e-mailed at gwmaine@maine.rr.com.

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The Hill softens on apartment complex ; Island V iew Apartments has pr oved to be a better neighbor than Munjoy Hill opponents expected.: [Final Edition]

TOM BELL Staff Writer. Portland Press Herald ; Portland, Me. [Portland, Me]04 Nov 2002: 1A.

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Abstract

Even before the complex was built, residents warned that the Island View Apartments would overwhelm the Munjoy Hill neighborhood, consuming on-street parking and creating traffic hazards.

In a city with a shortage of rental housing, Island View Apartments is the largest single project to be built in a decade. Located on three acres at the corner of Walnut and North streets, it has 29 units with government rent restrictions that will lease from $575 to $787 a month, including heat and hot water. They range from a one-bedroom apartment to three-bedroom townhouses with a garage. The 41 market rate units range from $845 for a one-bedroom to $1,450 for a townhouse.

He disagrees with [Ed Suslovic]'s contention that Silver Street didn't listen to residents. Some of the things people like about the project, he says, such as the way the townhouses face North Street, were put into place in response to residents' concerns. Originally, the townhouses faced inward, he says.

Full Text

"Maybe I was wrong. We'll see. It's certainly not as bad as I anticipated." William Gorham, the former leader, Munjoy Hill Neighborhood Organization

Correction published Thursday, November 7, 2002: A story on Page 1A Monday about Island View Apartments should have said police had responded to three calls, including a nonfatal drug overdose, since the complex opened July 27. Police provided inaccurate information about the overdose and number of incidents.

Even before the complex was built, residents warned that the Island View Apartments would overwhelm the Munjoy Hill neighborhood, consuming on-street parking and creating traffic hazards.

But today, with the complex built and almost fully occupied, even some of the project's harshest critics admit they may have overstated their case.

"Maybe I was wrong," said William Gorham, the former leader of the Munjoy Hill Neighborhood Organization, who had warned that "blood will be on City Hall's hands" should a child be killed in an accident. "We'll see. It's certainly not as bad as I anticipated."

The organization's current president, John Griffin, who was dead set against the "monster housing project," has also softened his views.

"I think people can live with this now," he said. "It's big, but it's not as bad as we portrayed it."

The vehement opposition - which some say was fueled by the developer's attitude - produced a lawsuit and a referendum that delayed the project for a year and brought development to a standstill.

Just a year and a half ago, the debate over the 70-unit complex dominated the city's election. In the end, voters rejected a referendum question aimed at increasing the opportunity for citizens to review - and even plan - development in their neighborhoods. The measure's opponents said it was antithetical to the interests of the city as a whole.

The project produced lessons for both residents and developers, says Ed Suslovic, who was a member of the city's comprehensive housing plan committee, which the city formed in response to the referendum.

Developers must work with neighbors right from the start to avoid a combative situation, he says. But residents must also learn to keep an open mind and realize that development sometimes can add to a neighborhood.

"Just because someone is going to change our neighborhood doesn't automatically mean it's going to be changed for the worse," he said.

In a city with a shortage of rental housing, Island View Apartments is the largest single project to be built in a decade. Located on three acres at the corner of Walnut and North streets, it has 29 units with government rent restrictions that will lease from $575 to $787 a month, including heat and hot water. They range from a one-bedroom apartment to three-bedroom townhouses with a garage. The 41 market rate units range from $845 for a one-bedroom to $1,450 for a townhouse.

Tenants began moving in on July 27, and there is currently one vacant unit.

Deborah Krichels, a Planning Board member who lives across the street from the project, says the complex replaced a desolate, empty lot and has brought new life and more diversity to the neighborhood.

"It's pleasant to see people of different backgrounds who haven't been part of the Hill before," she said, adding, "I certainly like the sound of children playing."

Krichels says that the developer, at the insistence of neighbors and the city's zoning rules, actually built too large a parking lot. It's never filled, she says.

Also, several tenants don't own cars, which has reduced the demand for parking.

The additional traffic has been offset by the closing of Jack Elementary School. That's why traffic has yet to become an issue, Gorham says. He says he's waiting to see what happens to traffic patterns should the school be rebuilt there.

City officials and several residents praised the high quality of the project's construction as well as its design, particularly the 16 townhouses on North Street. Following the style of the traditional development patterns on the Hill, the townhouses' porches are situated near the street edge.

The complex's residents have been relatively quiet, and police calls have been minimal, according to Vern Malloch, head of the community policing unit. There have been four calls since it opened, including calls for a hit-and-run accident, a domestic dispute and a fatal drug overdose.

"That's not bad considering the size of the complex," he said.

The complex is a model for future projects, says Mark Adelson, the city's director of housing and neighborhood services. The mixture of subsidized and market-rate apartments provides an incentive for the managers to maintain their property, he says.

The people who are going to pay $1,450 a month for a townhouse, he says, are going to demand that the complex be well-maintained.

While some Munjoy Hill residents are still upset about the project, they are trying to accept the changes

"We lost the battle, and I just have to move on," said Joe Piergrossi, who was angered that the complex blocked his view of Back Cove. He says the complex still feels out of place when he walks by it. He says he hopes it will be profitable to the owners so they'll continue to maintain it.

Although some people doubted they could do it, the developers were able to get the rents they needed to meet their financial goals, says Chris Poulin, chief operating officer for Silver Street Development, the company that built it. He calls it "astounding" that the complex is almost filled after only three months.

He disagrees with Suslovic's contention that Silver Street didn't listen to residents. Some of the things people like about the project, he says, such as the way the townhouses face North Street, were put into place in response to residents' concerns. Originally, the townhouses faced inward, he says.

Poulin says the process was combative because the city awarded the project $400,000 in federal funds without consulting the neighborhood. By the time Silver Street approached the residents, he says, they were already fired up.

Janet Ham, a resident who helped lead the referendum drive, says her opposition was more about the process than the actual buildings - although she still thinks the complex is too big.

Staff Writer Tom Bell can be reached at 791-6369 or at:

tbell@pressherald.com

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Google Groups

Re: Historic District on Munjoy Hill

Joe Walsh <jwalsh@greencleanmaine.com> Mar 4, 2020 4:54 PM
Posted in group: **Planning Board**

To the Board,

I am writing to urge you to make a "no" recommendation on the proposed Historic District for Munjoy Hill.

I was a resident of Munjoy Hill for 7 years. During that time, I watched as larger condo developments went up, and old, dilapidated multi-family housing was replaced with new, modern building stock.

While on one hand I was sad to see the cheap rents disappearing, these were positive changes. As a renter I had lived in several of these old buildings - they are drafty, loaded with lead paint and pose numerous code and safety hazards. Many (most?) of them were never built to stand the test of time - they are old 2-4 unit multiplexes that have reached the end of their serviceable life. It's time for an update.

In replacing these old buildings, we have an opportunity to maximize density, increase safety and build the new housing this city so desperately needs. Designating Munjoy Hill as a historic district will restrict this positive change and put further regulatory burden on property owners and developers, increasing the cost of housing even more.

If there are any changes to be made on the hill, it should be to *increase density*, as this is already a walkable neighborhood and density can be increased with minimal impact on vehicle traffic.

Regarding affordability - there is a major affordability problem in our city, and while all this new building stock isn't cheap (for renters *or* buyers), creating a historic district will only exacerbate the issue, and limit the City's options when looking to find creative ways to reduce cost. As a city, we have to find a way to create housing that can be made affordable for the working class and working artists - otherwise we risk becoming a shell of a city - inhabited only by the wealthy with second homes or those in subsidized housing.

That would be a tragedy, as Portland has such a unique sense of place - in large part because it's a real living small city, where a wide range of people can live *and work.* A rarity in America, and I would argue a bigger draw for many than low taxes or a favorable regulatory environment, myself included. I started a business here precisely for this reason.

Please, allow Munjoy Hill to grow with the city, and allow property owners to do as they see fit to find the highest and best use of their property, while leaving the most options open for density and redevelopment.

Thank you for your consideration,

--
Joe Walsh
Founder & CEO

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Munjoy Hill Historic District Proposal

John Whitehouse <John.Whitehouse@lgcgroup.com> Feb 12, 2020 10:41 AM
Posted in group: **Planning Board**

Hello Planning Board,

I want to oppose the Munjoy Hill proposal for a Historic District Designation. I attended last night's work shop and spent over three hours there. I waited for the commentary of the Board members and I want to specifically thank Brandon Mazer. He was the only one that looked at the matter critically and did not rely on platitudes and repeated claims of "benefits" to a historic district without specifics. I appreciate Brandon asking the questions about if we can look at alternatives, work with the existing overlay, reduce the map etc.etc. For something as permanent as a historic district designation, this needs not to be rushed or blankly accepted as is without discussion about its necessity or design. Another point Brandon made was one I had brought up during my public comment was the eighty year time period this proposal covers (1850-1930). That is excessive and should be looked at. From a code and safety and technology perspective.

I would also add that out of the several workshops I have attended, there are the same forty something people and the same commentary is made. There are over 300 buildings I believe in this proposed map, so I hope the Board does not consider the opinions and feelings of a select few as evidence of overwhelming support for this proposal, as one person tried to purport with a passed around spreadsheet. That is simply unverified and doubtful. In light of the revaluation where it was already admitted that Munjoy Hill will probably be hit the hardest with tax increases, why is now the time to add more layers or restrictions. One Board member mentioned along the lines that there are already layers almost to say what's one more. There are too many, and one more is a lot. One public comment rang true to me, if the city becomes so restrictive that landlords cannot keep up with the costs and taxes by expanding or adding on and rents hit a ceiling for the existing spaces, there will be a lot more condominiums on Munjoy Hill.

Please look at this critically and look for alternatives and compromises. This is so vague and general and already covered by existing measures. It just feels as a tax payer, if anyone proposes anything, it is always accepted and agreed upon and passed. This is permanent and restrictive. There are other places to develop in the area, and measures like these do not help. There is a reason Portland's population has remained unchanged in 20 years. It cannot afford a decline.

Thank you,

John

John Whitehouse

Senior Account Manager

Clinical Diagnostics Business Unit

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Support for the Munjoy Hill Historic District

Kathryn Yates <kyates1020@hotmail.com> Mar 3, 2020 4:48 PM
Posted in group: **Planning Board**

I am writing to add my support to designating Munjoy Hill as an historic District.

Kathryn A Yates
Portland

Sent from myMail for iOS

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Historic District Designation for Munjoy Hill

The Baileys <bailey100@gwi.net> Mar 4, 2020 7:29 PM
Posted in group: **Planning Board**

We are writing to strongly recommend that you accept the unanimous recommendation of the Historic Preservation Board to designate Munjoy Hill an Historic District.

We live at the bottom of the hill and have watched the degradation of the neighborhood – tearing down homes, allowing incredibly ugly buildings that do not fit in at all with the surrounding area and the growing destruction of the economic diversity here.

Sadly nothing can bring much of that back. But you can at least give our neighborhood a chance to slow it down and manage change more effectively in a way that will help the city as a whole.

Please accept the recommendation of the Historic Preservation Board.

Thank you.

Kenneth and Janice Bailey

59 Mountfort Street

Google Groups

Munjoy Historic District

Kevin Schochat <kevin@kevinschochat.com> Mar 2, 2020 4:45 PM
Posted in group: **Planning Board**

To Whom It May Concern,
As a resident of Portland I fully support the proposed Munjoy Hill Historic District.
Please vote in favor.
Best,
Kevin

Kevin Schochat
215 Sheridan Street
Portland, Maine 04101

T: 917.597.4154

kevin@kevinschochat.com
http://facebook.com/kschochat
kevinschochat on Instagram

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Munjoy Hill Historic District

Leslie Hart <blesliehart@gmail.com>
Mar 2, 2020 9:14 PM
Posted in group: **Planning Board**

Dear Planning Board Members

I am writing to encourage you to recommend the historic district, as proposed, intact.

I believe it's significant that the Munjoy Hill Neighborhood Organization's board has unanimously voted in favor of the historic district. The organization has been representing the neighborhood interests for more than 40 years and I believe their position should be highly regarded on this issue.

The Historic District would not stop new housing from being built on the Hill. And it would not limit property tax revenues. Instead it would preserve the unique character of this neighborhood while at the same time permitting the growth that the city desires.

Thanking you in advance for your consideration.

Leslie Hart
215 Sheridan St.
Portland ME 04101
917.364.3682

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Vote Yes on Munjoy Hill Historic District

Maggy W <mswnola@gmail.com> Mar 3, 2020 10:09 AM
Posted in group: **Planning Board**

Dear members of the Planning Board,

I support the designation of Munjoy Hill as a Historic District for the following reasons:

- Preserve neighborhood character, consistent with the Comprehensive Plan
- Preserve Portland's brand as a vibrant historic city with a high quality of life - tourists and the wave of incoming young residents alike love the historic architecture - this is one of the defining characteristics of our city
- Preserve affordable housing by decreasing the incentive to tear-down existing multi-family rentals - with today's construction costs, the most affordable housing is the building that already exists
- environmental - experts estimate an 80-year timeframe for even the greenest new construction to offset the impact of construction: the greenest building is the one that already exists
- Preserve economic, age and ethnic diversity; slow the trend toward wealthy white retirees
- Encourage new development to respect the character and fabric of the surrounding buildings

Designating individual houses does NOT support these goals. Even one oversized building can disrupt the fabric and streetscape of the entire street.

Finally, if you are still in doubt, you can rely on the incredibly diligent and meticulous work of Deb Andrews and the planning Staff, who have spent over a year researching and preparing this recommendation, and you can respect the judicious oversight of the Historic Planning Board who walked the neighborhood more than once and then voted unanimously to approve this district. We have 11 Historic districts in the city, certainly Munjoy Hill is worthy of standing alongside these others!

Thank you,
Maggy Wolf
28 Saint Lawrence St.

Google Groups

Historic district on Munjoy Hill

martica sawin <martica.sawin@gmail.com> Feb 22, 2020 11:34 AM
Posted in group: **Planning Board**

To: Members of the Planning Board, City of Portland

As the owner of a 150 year old 2 unit building on St. Lawrence Street, I strongly favor the designation of a historic district for that section of Munjoy Hill for the following reasons:

a) its gracious 19th century character will stand as a reminder of the city's history and a welcome relief from the relentless march of out of scale, obnoxiously designed buildings moving inward from the lost waterfront .

b) Without the protection of a historic designation, economic forces will result in unchecked demolition and construction, adding to the mountain of landfill to the west of the city and subjecting residents of the neighborhood to years of noise and air pollution, clogged streets, loss of views, and diminished sunlight--all for the sake of profits for a few.

c)The eastern end of Portland is one of the most beautiful sites on the entire eastern seaboard.
Miraculously It has been kept free of over development and has a generous amount of open space that can be freely enjoyed by Portland residents and visitors. This is a treasure that deserves safeguarding.

Sincerely,

Martica Sawin
28 St. Lawrence Street
Portland 04101

Google Groups

Munjoy Hill Historic District

Nan Cumming <nancumming@gmail.com> Mar 4, 2020 10:32 AM
Posted in group: **Planning Board**

Hello!

I am writing to express my support for the establishment of the Munjoy Hill Historic District. As a homeowner on Munjoy Hill since 1998, I have seen dramatic changes in my neighborhood--many for the better. I don't object to change and progress, but have become alarmed at the rate of new construction which dwarfs neighboring residences in favor of large developments which seem to make our neighborhood even less affordable. The new historic district designation seems to me a sensible way to preserve what we love about our neighborhood without stifling growth.

Please count me in favor.

Nan Cumming
87 Vesper Street
Portland, Maine

Google Groups

Historical District Proposal

Nancy Machesney <dmaches101@aol.com> Mar 3, 2020 6:33 PM
Posted in group: **Planning Board**

This is to formally state that as a resident of Munjoy Hill, I strongly support the making a historical district on Munjoy Hill. Developers need to be held to mindful standards that are respectful and do not change the beauty and the uniqueness of this area of the city. New structures scope and size should fit in with their historical neighbors and not change the vistas of this area. Topography needs to be looked at more seriously, and buildings need to fit in with the area and not squeezed into every square inch.

Respectfully,
Nancy Machesney

Google Groups

Munjoy Hill Historic District

Nancy Thayer <nancy.thayer1@gmail.com> Mar 5, 2020 11:22 AM
Posted in group: **Planning Board**

Hello,
I just got back from Italy and need to stay away from the public for two weeks which is why I am emailing and not showing up to the meeting. I just wanted to say that I support the proposed Munjoy Hill Historic District intact and hope that it passes.

Thank you,
Nancy Thayer
7 Gilbert Lane
04101

Google Groups

Munjoy Hill Historic District recommendation

Edwin Chester <chester@chesterandvestal.com> Mar 1, 2020 6:31 PM
Posted in group: **Planning Board**

Chairman Mazer and members of the Planning Board:

I write in support of the designation of a portion of Munjoy Hill neighborhood as an historic district as recommended by the Historic Preservation Board. It will serve our neighborhood and the City as a whole in a number of significant ways.

An historic district would preserve the architecture of an era 100-160 years ago when the greater part of Munjoy Hill was developed as housing for waves of immigrant workers in need of basic housing and access to the City and its waterfront. There are still streets on Munjoy Hill which are basically intact; you can walk down those streets and, except perhaps for the automobiles, get a sense of what our neighborhood was like those many years ago. That is a phenomenon to be treasured by the current residents of our neighborhood and the other neighborhoods in the City, and the thousands of visitors who come to Portland to feel that sense of history and culture.

Please do not be distracted by the suggestions that an historic district would limit the development of workforce or affordable housing. That is not supported by the research done on those effects in historic districts, and it flies in the face of what we know about the housing market on Munjoy Hill.

- Paradoxically, the people who claim to be most concerned about the impact of an historic district on affordable housing are the developers who have had an opportunity to develop or support low-income or affordable housing for years now, They are exactly the ones who have access to capital and the skills to develop that type of housing. They have made **no** attempts to develop or even propose or support that type of housing, except as it might be required by ordinance in the context of a luxury development. It is disingenuous for them to raise that issue at this point.
- In fact, the major threat to low-income and affordable housing on Munjoy Hill is precisely the type of projects that the developers have been creating. When they tear down a structure that was providing low-income and affordable homes and replace it with luxury condominiums, even if they build one affordable unit to get a height bonus, it is a net loss for workforce housing. Even worse, however, the increase in value of the property from a few hundred thousand to millions of dollars, creates pressure on the neighboring properties, whose valuation and taxes increase without any action on the neighbors' part. It makes it less viable for the neighbors to be able to provide reasonably priced housing for families.

The historic district designation might have a side benefit of making it more difficult for the developers to continue their efforts to reshape the neighborhood. It will protect our heritage and our residents's ability to remain in their homes. As the owner of two buildings within the proposed district and a proposed landmark building just outside the district, I urge you to support the designation.

Thank you for your consideration,

Ned Chester

Sent from Mail for Windows 10

Google Groups

Munjoy Hill Historic District

Paul Flaxman <pflax24@hotmail.com> Mar 3, 2020 9:59 AM
Posted in group: **Planning Board**

Dear Planning Board,

Thank you for the me and eạffort that you commit to supporng the City of P ortland and its residents.

I am wring t o you to express my strong opposion t o the Munjoy Hill Historic District. I would much prefer that the City give the current overlay approach more me and s tudy before taking such a drasc appr oach to development on the hill. The current overlay approach requires a certain level of conformity that already does much to maintain the general character of the neighborhood. It does a good job of specifying building requirements in a manner that sll allows a homeowner to renovate a home while receiving clear guidance from the City.

I'll expand on my reasons for my opposion t o the Historic District, but first a brief bit of history.

My wife and I own and live at 7 Atlanc Str eet:

- Purchased in fall of 2017, the house is circa 1845, and was in tremendous disrepair, requiring all new systems, new roof, new windows, and extensive structural repairs.
- Two out of three contractors suggested it would be be. er (less expensive) to knock the house down.
- My wife is a romanc, f ell in love with the house, and wanted to preserve its character and to renovate it.
- 23 months later we moved into our renovated home. Those 23 months were the most laborious, difficult, stressful, expensive years of our lives; we faced roughly 10 huge setbacks along the way (of which the City was only involved in 1!).
- We modeled the 3rd floor a. er the dormer that is in The Portland Company's large, historic brick building, which is just down the hill from us
- Please see before and after pictures attached. We recognize that the 3rd floor does not conform to 1845 or 1924 design standards, but we view architecture as a living, dynamic expression of mankind - and thus we have honored the original 1845 house and topped it with a circa 2018 3rd floor. My wife calls it an old lady with a new hat.

Since moving in, we have been repeatedly heartened by our neighbors and other strollers who express admiraon f or what we have accomplished and appreciaon thaàt we saved the house rather than knocked it down. The neighborhood approves!

There are two primary reasons for my opposion t o the Historic District. First, as a general statement, placing more control in the hands of the government means that property owners have less control. While some might call this hyperbolic, I do see this as a confiscaon of pr operty (or property rights, in any case).

This brings me to my second reason for opposing the Munjoy Hill Historic District. In late 2019, I went to the Historic Preservaon Boar d to confirm the designaon of our home (the map w as unclear and I wanted to confirm my understanding that it is designated non-contribung). The office per son agreed that the map colors were unclear and confirmed that 7 Atlanc Str eet is non-contribung.

Deb Andrews came out of her office, engaged me in conversaon, and ask ed me my address. When I told her, she said: "I hate what you did to that house." I did not know how to respond. I tried to engage her in a discussion. She proceeded to lecture me on all that was wrong with our project (please imagine my emoons, during this aàttack, based on the amount of effort and careful consideraon w e had put into the house). Upon my departure she said, "please don't tell your wife what I said."

Unprofessional? Certainly. Opinionated? Yes. Unfiltered? Yup. A servant of the people? I don't think so. Unfortunately, a Munjoy Hill Historic District brings with it a Board that will now sit between a property owner and the

City's perming pr ocess. Headed by a person who apparently is ready to guide decisions using her personal opinions rather than building guidelines.

I strongly support the connued use of the o verlay district rules and I am strongly opposed to the establishment of a Historic District.

Please feel free to contact me if you have any quesons. T wo of Deb Andrews colleagues were present if you need to confirm our very startling and very upseng c onversaon.

With best regards,

Paul Flaxman
7 Atlanc Str eet

SILVERADO

Google Groups

Support for the Munjoy Hill historic district

Bob and Jeanne Bull <dabulls@gwi.net> Mar 4, 2020 12:54 PM
Posted in group: **Planning Board**

We are wring t o express our support for the historic district as recommended by the Historic Preservaon Boar d in November. Please recommend designaon of the pr oposed historic district to the Portland City Council.
Thank you, Robert and Jeanne Bull, 68 Atlanc Str eet, Portland

Google Groups

Roof Deck - 51 Morning St., Munjoy Hill

Ryan FitzGerald <ryan.fitzgerald.17@gmail.com> Mar 4, 2020 11:29 AM
Posted in group: **Planning Board**

Good Morning Portland Planning Board,

I am writing to you in regards to the Munjoy Hill Historic Overlay Zone, and the potential for amendments surrounding the building height and appurtenance limitation language. I've tried to keep this email brief; I hope you will take the time to read it and consider my situation.

I bought a fourth-floor condo at 51 Morning St. in 2013. I paid a premium for the condo because it included rights to build a roof deck, which was very exciting for me. I have been saving up to build a deck since. As you can see in the attached images, not only does the building already have a roof deck, the one I hope to build would be even less visible than my neighbor's. In my view, the addition of this deck would not change the character of the neighborhood.

My first contact with the town about my plans to build the deck dates back to the month I bought the condo - February 2013. Jeanie Bourke and I exchanged upwards of 50 emails in the following years as I developed the designs myself, and inquired about the various regulations surrounding it. I went as far as to have engineers stamp my plans, at considerable expense, in 2014, before realizing that I didn't yet have funds to build.

I scheduled a meeting with Anne Machado and Jeanie in the fall of 2018 to discuss next steps, as I intended to build the deck in the Spring of 2019. In this meeting, I learned that my roof deck plan was disallowed by the Munjoy Hill Historic Overlay Zone. I was devastated.

I have been in touch with City Councilor Belinda Ray, who spearheaded the overlay zone legislation, since discovering the problem. She agrees that I should be allowed to build the deck, and has been very helpful in keeping me apprised of the intended amendments to the overlay language. It had been her understanding that language that would allow for "grandfathered" situations like mine, was on the agenda for your February 18th meeting. Through conversations with former Planning Board member and family friend David Eaton, I gather that this language was not introduced or discussed at that meeting.

Can you tell me if this language is still likely to be considered by the Planning Board? And if so, do you know when it will be taken up?

I hope you will consider my situation. Respectfully, I hope it was not the intent of this legislation to limit cases like mine, where the existing property owner whose long-held legal plans would be refused and whose property value (to say nothing of the enjoyment of said property) would be severely diminished. I hope that you can offer me some guidance as to how to move forward.

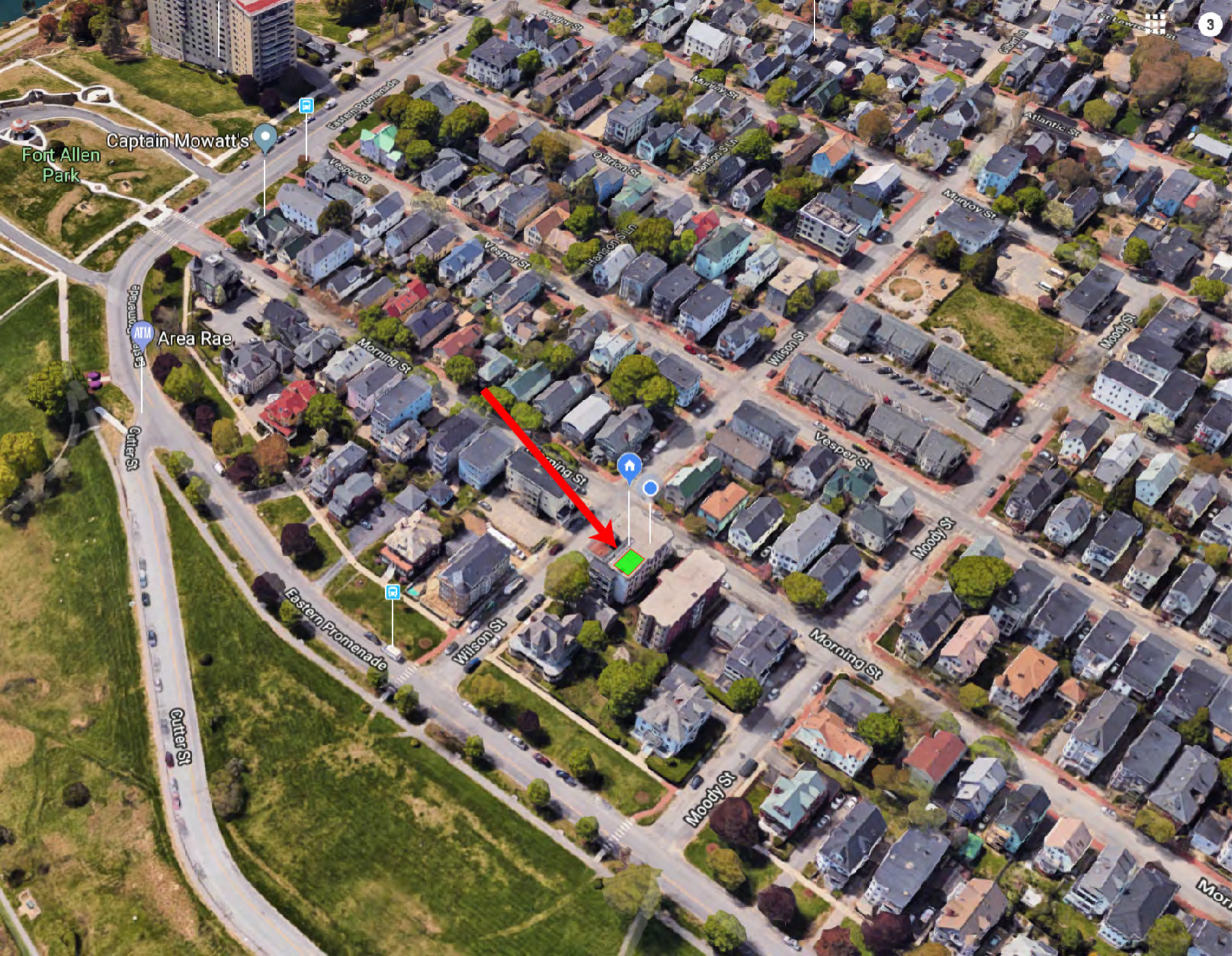
Best Regards,
Ryan FitzGerald

207-317-2354

Proposed language that was purported to be taken up on February 18, 2020:

"For buildings greater than 35' in height in existence as of December 4, 2017, 8' of clearance is allowed to accommodate the installation of the following items only: an elevator designed to make the building ADA compliant; railings for a roof deck; a fire code-compliant vestibule to allow roof access, provided that the vestibule is (a) out of view from public rights-of-way and integrated with the building design; (b) set back at least 5' from the building edge; and (c) no larger than necessary to meet fire code and provide adequate access to the rooftop."

Morning St
Wilson St
Vesper St
Morning St
Wilson St
Morning St
Wilson St
Wilson St
Morning St
Google


Fort Allen Park
Captain Mowatt's
Area Rae
Eastern Promenade
Cutter St
Morning St
Vesper St
Wilson St
Moody St
Munjoy St
Atlantic St
O'Brien St
Hanson S Ln

March 3, 2020

Dear Chair Mazer and members of the Planning Board,

I am writing to encourage you to support the designation of the proposed Munjoy Hill Historic District and to recommend its designation by Portland's City Council. The review and consideration given to this historic district designation has been lengthy and thorough.

There have been numerous public forums to answer questions, to respond to concerns and to hear and consider public comment. Staff and members of the Historic Preservation Board and the Planning Board have devoted significant effort, expertise and consideration to the merits of whether the proposed Historic District meets historic preservation criteria of the City's ordinance and is consistent with the goals of Portland's Plan 2030. Substantial documentation is in the record that supports the conclusion that the Munjoy Hill Historic District meets the required criteria, both for historic significance and integrity and for its clear capacity to meet goals of the Comprehensive Plan.

Public comment both written and oral at the Historic Preservation Board workshops and Public Hearing and the Planning Board's workshops has been extensive and has been overwhelmingly in favor of the historic district designation. **More than 75% of these comments have been in favor of the historic district designation.**

Designation of the Munjoy Hill Historic District will benefit both its residents and residents of all of Portland by managing change within the district's boundaries, while preserving the historic character and unique history of this area of the City. This designation will sustain current affordable housing and allow for further compatible housing development while also supporting the City's sustainability goals,

Thank you for considering my comments.

Sally Oldham
118 Congress Street
Munjoy Hill

March 5, 2020

Chair Mazer and members of the Planning Board,

As an architect and past member for 10 years of Portland's Historic Preservation Board, I would like to encourage you to support the designation of the Munjoy Hill Historic District. An historic district designation allows for alternations and additions to existing buildings within its boundaries and allows professional design review to ensure compatibility of new construction within and adjacent to district boundaries.

These review mechanisms, now with a 30-year track record, have proven to be good tools to manage change within historic districts while preserving the special historic character of these areas and the quality of the neighborhood for our children and grandchildren.

I urge you to support the findings of the Munjoy Hill Historic District designation report as presented and to recommend its designation by the City Council.

Sincerely,

Ted Oldham, Architect
118 Congress Street
Munjooy Hill

Google Groups

tica douglas <outlook_A47FC014D47358FB@outlook.com> Mar 1, 2020 8:43 PM

Posted in group: **Planning Board**

Dear Chairman Mazer and Board Members:

Please approve the proposed historic district for a portion of Munjoy Hill as unanimously approved by the Historic Preservation Board.

I recently visited Amsterdam, a city which has treasured and protected its 17th century buildings and cityscape, and which is thriving, a magnet to both young and old. Amsterdam would not have this tremendous appeal had it not respected its architectural heritage.

Many people – both those who live here and those who visit- believe that Portland has lost a great deal of its character and uniqueness thanks to the generic development that has taken place along the waterfront and on the Hill. To reject or modify the proposed Historic District would be to invite further irreparable harm to the Hill, which is beloved by Portland natives, so many of whose families lived here one or two generations ago.

Munjoy Hill, studded with roofs and crowned by the Observatory, is what everyone sees when approaching the City from the water, Casco Bay Bridge ,and 295, or when viewing the City from South Portland, Falmouth, and even from arriving and departing planes. It is the most distinctive aspect of the cityscape, and its 19th century and early 20th century housing stock connects us to past generations of mostly working-class Portlanders. My house, for example, was built by a “ship’s joiner” in 1855.

Please vote in favor of the proposed District.

Tica Douglas

11 Munjoy St.

Google Groups

Re: Comments on the proposed Historic District AND proposed Individual Landmarks

RD <robert@robertdiamante.com> Mar 2, 2020 3:20 PM
Posted in group: **Planning Board**

Another white guy asking for a hand out. Lol. Seriously it's very compelling and you make a unique and articulate argument. I would take out retired dentist. Being glib doesn't support however true it might be. Down-at-heel should be hyphenated.

Interesting!!! You've made me see that building differently. And it is true that as I glide down 295 in my Subaru my heart goes thump when I see it across the water.

Robert
207-712-9568

On Mar 2, 2020, at 3:09 PM, Tom Kennedy <tom.kennedy@sothebysrealty.com> wrote:

To Whom it May Concern at the Planning Board Portland, ME

I propose that 340 Eastern Promenade be considered for Individual Historic Landmark Status because of its unique aesthetic and cultural value.

Executed in a late Mid-Century Brutalist Style, the twin towers of 340 Eastern Promenade is historically significant in its construction in a neighborhood of working class housing consisting of three family "triple deckers" and more simple cape style vernacular homes seen commonly throughout Northern New England. It was a Revolution of Style in a down at heels district of the city.
340 Eastern Promenade when constructed was avant guard and unique to Monjoy Hill.
Many have commented over the years that its twin towers on the hill can almost be seen as a beacon for hope when approaching Portland from any compass point.

Culturally it is unique in that it is one of only two residential towers compelled to retroactively install sprinkler systems (Portland House is the other). Many Writers, Artists and Retired Dentists have called the towers home over the years.

Normally I am fundamentally opposed to an additional layer of regulation over Individual Property Rights.
But as the residents of 340 Eastern Promenade have their property taxes consistently increased due to gentrification, and we have been compelled to pay stormwater taxes (each condo the same amount without regard to square footage), and under pain of imprisonment, rental property fees, plus the arbitrary demand that 340 E Promenade install sprinklers- We would hope that you would provide this lovely building some relief and its owners special tax abatements to maintain these truly unique towers consistent with the building's cultural patrimony that it provides to the City!

Thank You for your Consideration

Tom
Tom Kennedy
340 E Promenade Unit 213
Portland, ME 04101

Google Groups

Re: Ignored public comments - East End Historic District

me <jmy@portlandmaine.gov> Feb 11, 2020 10:57 AM
Posted in group: **Planning Board**

Good Morning,

I am sorry if you were unable to locate the public comment that you have previously submitted. I realize there are several documents to look through on the web for this item. I can assure you that your public comment is posted to the web and was provided to the Planning Board for the meeting today.

You can find your public comment within the following documents posted to the web. I have also included the page numbers.

within the pdf attachment named "att. 6.10" (page 4)
within the pdf attachment named "att. 6.11 (page 50)
within the pdf attachment named "att. 8" (page 50)

I hope this helps and if you have any questions at all regarding the public comment, please let me know.

Jennifer Munson, Office Manager

Department of Planning and Urban Development

City Hall, 4th Floor, 389 Congress Street, Portland ME 04101

(207) 874-8719

planning@portlandmaine.gov

www.portlandmaine.gov

Office Hours are Monday - Friday 8:00 a.m. - 4:30 p.m.

On Monday, February 10, 2020 at 4:53:45 PM UTC-5, Travis Agaman wrote:

> I have e-mailed the planning board three separate times concerning the topic of the East End historic district question, on the dates November 4 2019, December 6 2019, and February 7 2020.
>
> Upon reviewing the document about tonight's planning board meeting (provided at https://portlandme.civicclerk.com/web/UserControls/DocPreview.aspx?p=1&aoid=748), I see that none of my public comments have been included in the pdf file even though there are plenty of comments supporting the historic district included with dates back to July and August of last year.
>
> How many other anti-historic district voices have been selectively ignored by the historic preservation board, planning board, and/or the city council? Is this how the Portland city government operates?
>
> Travis Agaman
> RESIDENT OF PORTLAND
> 8 Emerson Street, Portland Maine 04101

Google Groups

Proposed Munjoy Hill Historic District

Wendy Cherubini <wcherubini@gmail.com> Feb 17, 2020 7:15 PM
Posted in group: **Planning Board**

Chair Mazer and Members of the Portland Planning Board,

I write urging you to not recommend a historic district on Munjoy Hill to the City Council. Creang aà Munjoy Hill historic district would be an extreme over-reacon t o neighborhood opposion t o change. Creang a dis trict is one tool in the City's tool-box, but it is an unwieldy one that is more restricv e on properes than needed t o address the problems that concern the neighborhood. At a minimum, the proposed district area should be objecv ely analyzed and more narrowly defined with regard to both geographic area and historic me span c overed.

According to the materials prepared by staff, this effort was iniaàted as one of several responses to concerns about the neighborhood changing and in parcular a f ew demolions of eạxisng houses thaàt were replaced with more modern designs.

I listened to and read tesmon y in favor of this district. What struck me was the strong desire to stop change in the form of new construcon of housing thaàt is perceived as ugly and demographic change or who is buying housing in the neighborhood. The first is a concern about design, the second is caused by larger economic forces. Certainly a new HD will help preserve the buildings that currently exist. However, a HD will do nothing, and in fact will hasten, the demographic change that has been going on for over 30 years. Many of those tesf ying have moved to the neighborhood fairly recently and are part of that change.

As a resident and owner in a HD, I have seen these demographic changes first hand. Over me, since theạ establishment of the HD that expanded an older West End HD, we have lost the vast majority of affordable rental units in small 1-4 unit buildings. Were it not for subsidized rental housing developments in my neighborhood, there would be almost no affordable rentals. Would this have happened whether or not there was a defined HD? I suspect the answer is yes, but it might have happened more slowly. Does the neighborhood look pretty much the same as it did 25 years ago? Yes, but do we really want to live in a museum with very high admission fees?

Several people noted the gerrymandered boundaries of the proposed district in tesmon y. While that is quite troubling, of larger concern is the me period c overed: 1850's – 1930's. 80 years of Portland's history are deserving of a special district – Really? This is dangerous and seems the product of result-oriented reasoning rather than an imparal r eview of the ordinance's explicit criteria to determine what especially valuable historic properes merit the special pr eservaon tr eatment of a district.

Portland is an urban center. It needs to evolve and grow to thrive economically, provide housing for more residents, remain urban vis a vis our much faster growing surrounding towns, and prepare for climate change by encouraging redevelopment citywide. Placing a virtual glass globe over a significant secon, on high ground, of the peninsula will hurt the City.

In addion, w e may be setting a bad precedent that comes back to haunt us. What is to prevent owners in any neighborhood with buildings over 50 years old where new developments are being built or proposed from seeking to become a historic district? New development replacing old is what cies mus t

do to remain vibrant. Change is difficult and jarring, but without it cies s tagnate and die. I ask you to take a hard look at what is being designated on the Hill as historic and worth saving forever.

Portland needs housing and it needs a lot of it - much more than most people realize. Efforts to freeze large swaths of the city and prevent meaningful redevelopment will only hurt our ability to grow. Redeveloping on already developed land is sustainable, fights sprawl, supports transit and has a smaller carbon footprint. We all have to do our part and it is not going to be easy. Please don't make it harder than it already is.

Thank you for your service to the City.

Wendy Cherubini

33 May Street

wcherubini@gmail.com

Google Groups

Support for Munjoy Hill Historic District

William Cleaves <wcleaves3@gmail.com> Feb 28, 2020 10:12 AM
Posted in group: **Planning Board**

Hello!

I'm writing to voice my support for the Munjoy Hill Historic District designation!

I see Historic Districts as helping to manage changes to buildings and neighborhoods as they are rehabilitated to meet 21st century needs, and it's certainly true here in Portland!

Thanks so much and I appreciate the work that the Planning Board does for the city!

William Cleaves
27 North Street, Apt 4.
Portland, ME 04101

Google Groups

Please oppose Munjoy Hill historic district

Megan Roberts <m.g.roberts90@gmail.com> Mar 5, 2020 12:08 PM
Posted in group: **Planning Board**

Portland Planning Board,

My name is Megan Roberts, and I'm a (recent, but proud!) Portland resident. I'm writing to ask you to please vote against the establishment of a Munjoy Hill historic district in the upcoming March 10 public forum, and recommend that the City Council ***does not*** move forward establishing this historic district.

Portland has a housing shortage, and is quickly becoming too expensive for many working class Mainers. Establishing Munjoy Hill as a historic district will essentially remove that neighborhood as a locale for building new housing. We should not exempt certain neighborhoods from new housing considerations at a time when the city so badly needs new housing.

I understand that supporters of the proposed historic district are concerned about preserving neighborhood character, however this can be accomplished through the existing channels of Zoning and Design Standards.

Please vote against the Munjoy Hill historic district proposal on March 10.

Best,

Megan Roberts
Portland, ME (Woodfords neighborhood)

Google Groups

Munjoy Hill Historic District

Vana Carmona <vanacarmona@gmail.com> Mar 5, 2020 1:13 PM
Posted in group: **Planning Board**

Attn. Planning Board

We are residents of Munjoy Hill, and want to stress again that we are in full support of the Munjoy Hill Historic District.

It is critical that we save the historic character of this neighborhood, especially since it has been the focus of demolitions and incompatible developments from a number of developers.

We are aware of an organized movement in the City (specifically YIMBY) that is determined to undermine our efforts to establish this much needed Historic District. We feel these organizers are distributing incorrect information in an effort to get the District turned down.

Frankly, we do not even understand why they are so opposed to it. We have Historic Districts all over the City and they are all working just fine. Those neighborhoods are thriving and they are not experiencing the demos and out-of-scale buildings that we are here on Munjoy Hill. Our neighborhood can be developed in an equally amicable way as a Historic District.

Please note that the vast majority of residents here are in favor of the District.

In addition, it is also critical that the new District have the 100-foot rule. Already that has been an issue. In a brief 3-week period last Fall, two houses were demolished that were directly on the border with the proposed new District.

We also want to add that the City must take steps to curtail the building of these massive condo complexes that are scheduled. They do not fit the landscape; they are not intended for Portland's working people; and they will drive up the property taxes for those who call this area home.

Unfortunately, we cannot be at the meeting on the 10th but please take our support into consideration.

Thank you.

Vana and Ralph Carmona
105 North St Apt 1
Portland ME 04101

Google Groups

Full support for current Proposed Historic Boundary

Martha Emerson (Gmail) <marthahhem@gmail.com> Mar 5, 2020 2:04 PM
Posted in group: **Planning Board**

Dear Planning Board,

I approve the designated local historic district map mailed on Feb 27, 2020. Please vote to forward it to the City Council for approval.

Sincerely,

Martha Emerson

340 Eastern Promenade Unit 247

Portland, ME 04101

Google Groups

Supporting the Munjoy Hill Historic District

betts mayer <bettsgmayer@gmail.com> Mar 5, 2020 4:16 PM
Posted in group: **Planning Board**

To The Portland, Maine, Planning Board:

As a resident of Munjoy Hill, I strongly support the proposed Munjoy Hill Historic District intact designation.

I believe there is historical evidence exemplifying that an Historic District like Munjoy Hill in the largest and particularly
attractive city like Portland, Maine, stabilizes the community and preserves its history. History of community in Maine
is extraordinarily important, especially its conservation of individual-living homes.

Thank you for considering my support.

Betts Mayer
211 Sheridan St,
Portland, ME 04101

bettsgmayer@gmail.com

Google Groups

Munjoy Hill Historic District

scannon@myfairpoint.net <scannon@myfairpoint.net> Mar 5, 2020 5:01 PM
Posted in group: **Planning Board**

To the Planning Board:

We represent 30 homes at the foot of Munjoy Hill, and our homeowners and families are highly distressed at the aggressive building of ugly structures that now mar our beautiful city by the sea, and the crippling traffic that will surely follow.

One of our only defenses to mitigate the encroachment of yet more concrete towers--and to return some control back to the people who live here--is to protect Munjoy Hill as a historic district, which we fully support.

Why should only the West End be protected?

Thank you.

Gemma Cannon
Secretary, The WSHA Board of Directors

Google Groups

Munjoy Hill Historic District

Matt Thayer <mthayer777@gmail.com> Mar 5, 2020 8:38 PM
Posted in group: **Planning Board**

Dear Planning Board --

I am writing in wholehearted support of the creation of the Munjoy Hill Historic District. As first renters and now property owners on Munjoy Hill for over 20 years now, my wife and I have been passionate all the way along about protecting the historic architecture of the Munjoy Hill neighborhood as a way to preserve the friendly walkable scale, the neighborhood feel, and the working class architectural heritage of Munjoy Hill.

We also believe that protection of the Munjoy Hill neighborhood through an historic district will help to preserve local affordable housing, as so many of the condos that have gone up when historic buildings in our neighborhood have been torn down or substantially altered have massive price tags attached to them, so they end up being out of reach for long time Munjoy Hill residents, and when they go up, they displace our long-time friends and neighbors on Munjoy Hill.

While we have not been active participants in the public process associated with the development of the proposed district, please don't mistake that for lack of passion for or interest in the creation of the district, as I doubt you could find anybody more supportive of -- or more convinced of the importance of -- the creation of the district than us, and if our schedules had permitted, we would have been at every meeting all the way along advocating for the creation of the district.

Please vote to advance the proposed Munjoy Hill Historic District to the City Council, as creation of the district is such an important step forward for protecting what helps to make the neighborhood and the city special for all.

Thank so much.

Matt

Matt Thayer
Owner, 62 Munjoy St.
Portland
m 207-899-5772

Google Groups

Munjoy Hill historic district

Uschi Carhart <uschicarhart@gmail.com> Mar 6, 2020 8:33 AM
Posted in group: **Planning Board**

Dear Planning Board,

I strongly support the proposed historic district on Munjoy Hill. My husband and I have lived on the hill for 24 years and owned our house at 7 Lafaye e Street for 20 years. The landscape of the hill changed over the last several years. House and apartment prices have reached levels that are no longer affordable to the people who once lived on the hill. And new construcon, buildings that look like they are made of giant Lego blocks, does not fit with the historic landscape of the hill. One of my first jobs was that of a Downtown Guide and many visitors would always comment on the beaufu l historic nature of Munjoy Hill.

A historic district will help to moderate the design of the new construcon within the dis trict, as it has done for years within the other historic districts in Portland. Please vote to recommend that the City Councilors approve the proposed historic district.

Sincerely

Uschi Carhart

To the Planning Board City of Portland
From Mildred Bachrach RN, MN, MFA
211-213 Brackett Street
Portland. Maine

My experience with the employees of the City of Portland, Deb Andrews and Bob Weiner who represent the Historic Preservation Board on a day to day basis has been a negative one. The Board, through them, has not been reasonable about approving normal maintenance and energy upgrades that use modern materials that do not significantly impact the aesthetic appearance of a building.

This maintenance work included the installation of new windows, slate roof repair, an energy efficient heat pump system, the color, shape and size of patio bricks. Future projects will include using cement clapboard siding to reside the entire house and the replacement of a rusty chain link fence with 19th century cast iron fencing. Does the Historic Preservation Board take into consideration affordability, safety, and energy efficiency to its own concept of historical correctness when there is no or little change to ambiance of the building? In my case and from my neighbors the answer is a resounding no.

One only has to look at the outside of the houses in the West End versus the East End (where modern materials have been allowed) and the significant difference in property values between the East and West End in the last two years to see the negative effect. In the West End paint is peeling, vinyl siding is not being replaced, and slate roofs are rotting. Allowing only wood siding ,copper drainage spouts, and replacement of slate with slate will keep the vinyl on the buildings and roofs rotting until the property changes hands. My partial new slate roof cost approximately ninety thousand dollars. And there is at least fifty thousand dollars more that needs to be done.

The Historical Preservation Board by not allowing modern materials and small changes which would not change the ambiance of the building but make it more energy and maintenance efficient drives people to sell. The inability to maintain property at a reasonable cost (which again does not affect the ambiance of the area) leads to the raising of rents and the development of condos which makes them less affordable housing.The Historical Preservation Board actions favors large developers and/or the extremely wealthy.

The rationalization given that the tourist industry needs the Historical Preservation Board to save the ambiance of the West End is a false one. Ninety- nine percent of that tourist could care less whether a window is vinyl versus wood or architectural. They really are not going to think about if a roof is slate verses a slate copy made of modern materials.

I ran an Airbnb for one year. People come for food, entertainment, and the sea coast. Guests did complain about the safety of the brick sidewalks
which cause multiple injuries and are costly to
maintain.

The Historical Preservation Board does not work with the average homeowner. It is a myth that it does. I found them irrational to deal with and would be glad to give specific examples if asked. The Board insists the homeowner/ landlord use materials that are extremely expensive to buy, install and maintain when other materials which (unless you could touch them) have the same visual ambiance.Thus, in no way using modern materials affect the ambiance ie economics of the area which is stated as the main reason the have an Historical Preservation Board.

I am asking that I be told the mechanism (petitions signature, special vote) to have the West End be declassified an Historic District and that the Planning Board not include Munjoy Hill or any of the East End as an Historic District.

I am also volunteering my services to do two research studies. One, a study of why tourists come to Portland and the other a study of does the use of modern man made materials that have the same ambiance as “historical correct” materials, at the distance of 12 inches or more, make any difference to tourists in the number of times they would come to the city, the amount of money they would spend and their enjoyment of the environment.

Sincerely,
Mildred K Bachrach RN, MN ,MFA

Chair Mazur and members of the Portland Planning Board:

I am writing to ask you to recommend to the city council the proposed Munjoy Hill Historic District. The residents of the Hill have worked long and hard for this district. No other neighborhood has had to work this hard for something so beneficial to residents that no current Historic District neighborhood has asked to be eliminated.

Historic District designation will help slow the transformation of the Hill from a traditionally developed neighborhood into a high end condo district, resulting in the displacement of moderate and lower income families. Of equal importance to a city whose economy is largely fueled by its unique charm is the opportunity to preserve of a critical piece of the city's history.

We are not against development. What we are against is the kind of history-numbing development that is occurring right now on Munjoy Hill. We want what the historic preservation process offers.

What you get with the protection of the current Munjoy Hill Conservation Overlay District, is this 14 unit building on Montreal St, with units selling for over a million dollars and none affordable. Affordable housing was demolished to build these units. It clearly does not respect the streetscape around it, which is primarily 1 1/2 story homes.

What you get within a historic district is this 20 unit building in the Deering St Historic District. This happens to be affordable housing—no affordable housing is being built under the predatory development occurring on Munjoy Hill today. It fits harmoniously in its streetscape.

The most affordable and sustainable housing for Munjoy Hill is the housing that is already there. Please help us preserve it and the rich and diverse social environment it has sheltered for over three centuries.

Respectfully,
Jean McManamy
10 Willis St.
March 4, 2020

Comments from Munjoy Hill resident and affordable housing developer Nathan Szanton at Feb. 11, 2020 Portland Planning Board meeting

I am a resident of 22 Eastern Prom, Unit #3, which is within the proposed historic district. I'm also an affordable housing developer based here in Portland. I am very much in support of the proposed district. I think Munjoy Hill is a wonderful expression of what has happened here in Portland during the19th and early 20th centuries; it's a great record of that and has great cultural significance.

I want to speak specifically to the affordable housing piece because I am an affordable housing developer and I've thought a lot about how affordable housing is impacted by historic districts. I think in this case there's three things to keep in mind:

One, if this passes we're not covering all of Munjoy Hill – we're not even covering most of Munjoy Hill – we're covering well under half. So, probably 2/3 of the hill would be left to do teardowns, and build new affordable housing, or housing of any kind.

Secondly, as Deb Andrews made clear in her presentation, if this does pass and is implemented, there's still many, many opportunities to build new housing in the historic district – new construction in the historic district. She showed many, many examples of new construction that's occurred in the West End and Parkside and other historic districts. I myself have done Casco Terrace, which is affordable housing at 41 State Street, which is in the last block before the bridge over to South Portland on the left-hand side. It was built on an existing one-story parking garage that we built a vertical addition on to in 2003. That was in an historic district and went through the historic district review process. I felt as though that process actually made the building better; I was very happy to go through to and it resulted in an improvement.

There are many, many examples of not only housing but affordable housing that has been built in districts: Elm Terrace, Oak Street Lofts, Carlton Street Apartments – I won't belabor that point.

The third point I'd like to make regarding affordability and the impact on affordable housing is this: were this to pass, developers and other small owners could still create more density within existing structures. For example, I live in a condominium that's got three units in it, ours is the carriage house that's connected to a large Victorian at the corner of Munjoy Street and Eastern Promenade. That's right now a single-family home but that could be subdivided into four condominium units or rental units and create a lot more density right there within …

Time up.

Google Groups

Munjoy Hill Historic District

Mary Casale <dirtgirl1@aol.com> Mar 6, 2020 9:10 AM
Posted in group: **Planning Board**

Members of the Portland Planning Board

The designation of The Munjoy Hill Historic District has been a long time coming with many obstacles to straddle along the way. I urge your vote for this designation .
I write to you as a 4 th generation Munjoy Hill Resident with a deep affection and connection to this neighborhood and the community of friends and families that live and lived here.
In 1989 Munjoy Hill was being considered for this designation along with the West End. It was not supported by the neighborhood.
What a mistake we made !
Our intent was to keep our neighborhood affordable and available to families and life long residents . We weren't interested in the best view , or the highest perch to place our new home upon. Clearly all that has changed . Let's learn from the error of Our ways and save what is left of this beautiful historical neighborhood of working class homes with stories inside the walls just waiting to be shared . We deserve it .
Thank you
Mary Westort Casale
Sent from my iPad

Google Groups

Munjoy Hill Local Historic District

Joel S. Harris <JSH@hmpayson.com> Mar 6, 2020 9:18 AM
Posted in group: **Planning Board**

This message was sent securely using Zix®

Good morning –

I am writing in support of the Munjoy Hill Local Historic District as recommended by the Historic Preservation Board.

As we all know, Portland is enjoying an unprecedented wave of population growth and economic development. Its success is attributable in no small part to its rich history and appealing architectural character that make is such a welcoming place in which to live or work. I am a Cumberland resident but part owner of a business in Portland, and consider "Portland" my home. We should all welcome thoughtful economic development that preserves the character of this special city. I urge you to make a favorable recommendation to the City Council next Tuesday, and thank you for your consideration.

Sincerely,

Joel Harris

38 Blanchard Rd.

Cumberland

This message was secured by **Zix**&#174.

PC116

Peter L. Murray
104 North Street
Portland, Me 04101

March 6, 2019

Brandon Mazer, Chair
Members of the Portland Planning Board
City Hall
Portland, Maine 04101

Re: Proposed Munjoy Hill Historic District

Dear Chair Mazer and Members of the Portland Planning Board:

This is submitted for your consideration as you deliberate the unanimous recommendation of the Portland Historic Preservation Board to establish a Historic District on Munjoy Hill.

You are already aware of my strong and continued support for this proposal. The remarkable collection of 19th and early 20th century wood-frame residential architecture on Munjoy Hill is a vital amenity of our beloved city. Even the relatively conservative proposal before you would help preserve this heritage for the enjoyment of Portland residents and visitors alike as well as future generations.

These comments are directed at a document that is being circulated by a group that styles itself YIMBY and that seeks to muster arguments against the establishment of the District. This group appears to consist of luxury real estate developers and others who share their desire for less regulation of development activities on the Hill and elsewhere in Portland. Only one or two of the persons identified with YIMBY live in the proposed district.

The text of YIMBY's broadside against the District is reproduced below, along with my comments and responses. For the reasons stated in italics, the YIMBY arguments simply do not hold water.

Hi YIMBYs,
Please make your voice heard and let the Planning Board and City Council know that Portland can't afford to move forward with the proposed Historic District on Munjoy Hill.

Where do we stand?
On March 10th, the Planning Board will vote up or down on the proposal for a historic district

on Munjoy Hill. No matter how the vote goes, this topic will move to the City Council for consideration and final vote. Let's work together to ensure the City Council receives a 'no' recommendation from the Planning Board and that the City Council ultimately votes down this proposal.

Why is the Historic District on Munjoy Hill a bad move for Portland?

There are a few key reasons:

1 Portland has a housing shortage. Portland should not remove Munjoy Hill from helping to address this challenge.

Portland does have a shortage, particularly of affordable and workforce housing. There are luxury homes in abundance, and more high-end condominiums are coming on the market every day. There is also no evidence whatsoever that establishment of a historic district adversely affects construction and maintenance of affordable homes. In recent years more affordable housing has been constructed in Portland's historic districts than in the entire balance of the City. Responsible developers are able to work within historic districts. It should also be kept in mind that the proposed Historic District includes less than half of Munjoy Hill, leaving more than half of the Hill available for redevelopment in accord with the zoning ordinances and design standards.

2. Population on Munjoy Hill is at its lowest point in more than 80 years: it is becoming a place only for the affluent. A Historic District on Munjoy Hill will further that direction.

Changes in population in Munjoy Hill and the City in general have nothing to do with the existence or non-existence of historic districts. Smaller families, high taxes, short term rental conversion and replacement of traditional residential housing stock by high-end condominiums all bear more plausible responsibility for declining in-town population than does historic district classification.

3. In 2018, the City introduced a Conservation Overlay District. There has only been one active project initiated on the Hill since the Overlay District went into place. The Hill has quickly gone from stimulating new housing to becoming stagnant.

This assertion is simply wrong. As the Planning Board's own agenda in recent months amply shows, the Overlay District has not served to dampen luxury residential development projects. Post-Overlay proposals at 130 Morning Street, 37 Montreal Street, 126-128 North Street, and 43 St. Lawrence Street would add more than forty high-end residences on the Hill, at the expense of a number of affordable dwelling units. There are several others in the pipeline. The Hill is far from "stagnant." There is no reason to believe that the Historic District will dampen compatible development.

4. A new Historic District will limit new property tax revenues hurting our schools and increasing the burden on current homeowners.

This is also a spurious allegation. There is no evidence whatsoever that the eleven existing historic

districts in Portland have limited tax revenues or the development of additional taxable valuation. The evidence nationwide is that historic districts tend to preserve and enhance property values and thereby support municipal finances.

5. Supporters can self designate their home thus creating a de facto district without negatively impacting neighbors and City goals.

This is also a fundamental misconception. While individual landmark designation can protect the designated building itself from demolition or adverse change, it does not affect the ambience of the neighborhood as a whole. The strength of the Munjoy Hill Historic District is the integrity of the architectural fabric of the neighborhood as a whole, not the architectural distinctiveness of individual structures.

6. Supporters mistakenly believe a Historic District will stop demolitions and prevent 'big boxy condos' from going up. It does neither. Zoning and Design Standards address the quality and aesthetics of new buildings.

While a Historic District will not prevent demolition of non-contributing buildings, those that qualify as contributing will receive some protection and new construction within the district will have to be compatible with the defining architectural features of the district. These requirements are in addition to the dimensional and design requirements of the zoning ordinance.

7. The 2030 Master Plan has many goals re sustainability, climate change and growth. Putting a vibrant neighborhood under a glass dome runs counter to these goals.

Preservation of the character and quality of Portland's architectural environment is a foundational element of Portland's current Master Plan as has been repeatedly cited in these proceedings. As has been shown in Portland's other Historic Districts, this goal is fully compatible with goals of sustainability, climate change and growth. To think of a historic district as a "glass dome" is ridiculous.

What can you do?

Send a message to Portland leaders to stop adding regulations and restrictions on neighborhoods that inhibit growth, without even evaluating recent regulations (i.e., the Conservation Overlay District).
Write the City Planning Board at planningboard@portlandmaine.gov and encourage them to vote against HD during their March 10th public forum.
Write the City Council and tell them not to push the housing crisis onto other neighborhoods. You can find their email addresses at: https://www.portlandmaine.gov/Directory.aspx?did=11

Who is *YIMBY Portland?*

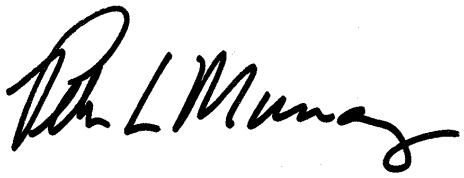
We are a group of volunteers that advocate for a more prosperous, sustainable, livable, and walkable Portland.

It is clear that YIMBY Portland is more concerned with the ability of its real estate developer members to exploit the current popularity of in-town living in Portland than it is with the long term well-being of the City of Portland and its inhabitants. As was the case with the West End, the Portland Waterfront, and the nine other areas of Portland that have been designated as historic districts, the proposed Munjoy Hill Historic District will only add to the quality and amenity of our inner city and of the lives of the Portlanders who live there.

Please approve the Munjoy Hill Historic District as proposed and recommend its adoption by the City Council.

Thank you very much,

Sincerely,



Peter L. Murray

Google Groups

Historic District

Lindsay Steven Mann <lindsaymann@gmail.com> Mar 6, 2020 9:34 AM
Posted in group: **Planning Board**

Planning Board Members -

We fully support the proposed historic district on Munjoy Hill, and encourage the implementation of the 100ft. rule in all scenarios.

While we feel the district's boundary line has been all too conveniently placed in order to allow the ridiculous and contradictory building being proposed at 126/128R North Street, we hope the city will come to its senses and consider the historical context of our house while reviewing that project. We are fully aware that the district would not prevent demolition and/or new construction, but the contradiction in design and scale between our house and this particular condo project is impossible for us to accept.

As relatively new and first-time homeowners, we are stuck in the middle while the city decides these two issues. We have been frustrated with the lack of communication from the city staff, and we hope that improves.

Thank you,

Lindsay & Susan Mann
122 North St.

Google Groups

Munjoy Hill Historic District

e w <eenebw@hotmail.com>
Mar 6, 2020 10:12 AM
Posted in group: **Planning Board**

Dear Portland Planning: As a very concerned Munjoy Hill resident, please review my comments below.

Unfortunately, I have to be part of an after hours work implementation and am hosting a family birthday party on Tuesday PM.

I am unsure if I can attend but if not the following is what I would like to relay:

Hi . My name is Enoch Wenstrom and my wife and I own two 3 units on Beckett street. 88 and 83

In the last 30 years.. I have seen a lot of changes happen on Munjoy Hill both good and bad.

The good is when people take pride in their old houses and restore them.

The bad is when people demolish their 1800 era building and replace it with an expensive cube or box or whatever you want to call it.

So, to promote the good, I fully support a Munjoy Hill historic district.

I believe a District will slow down the demolition of 1800 era buildings which **are** a reflection of our heritage.

These buildings are also a major source of affordable housing on Munjoy hill.

When affordable housing is torn down tenants are forced to move and can never afford to return.

This is because what replaces their apartment would be a near million dollar condo.

The anti-district crowd loves to dwell on the concept that supporters of a district are the few “elites” of the neighborhood.

First off trust me I am not elite and there are many of us supporting a district!!!

Second we don't have a district and the neighborhood **is** becoming a rich elitist area.

To me promoting a district is NOT about blocking progress, it is about retaining a piece of history that future generations can appreciate.

On the other hand, I do see how a district could curb a developer's dream of harvesting Munjoy hill for their profit.

But For the average person like me, I believe a district will encourage sensible renovation vs razing and rebuild and the gentrification that follows.

In summary the fore street complex will create many new "modern" high end dwelling units.

This makes it more important for us to protect historic Munjoy hill's Architecture from being destroyed.

Once this architecture is destroyed it can never be brought back. I also believe Munjoy Hill is Full. I don't understand the point of making it a more crowded congested area when there is a lot of open space in other parts of Portland.

With that said, I urge the planning board to move forward and advance the Munjoy hill district decision to the city council .

Thank you

Google Groups

Munjoy Hill Historic District

Barbara Vestal <vestal@chesterandvestal.com> Mar 6, 2020 10:33 AM
Posted in group: **Planning Board**

Chair Mazer and Planning Board Members,

I write today to address the suggestion that the City should just designate multiple individual landmarks on the Hill rather than designating a cohesive district. That idea is flawed and would be detrimental to the City's historic preservation program as a whole.

Portland, along with 9 other municipalities, has been approved by Maine's Historic Preservation Commission (MHPC) as a "Certified Local Government" (CLG). To become a CLG, a program has to be approved by the State as having a local historic preservation program that is consistent with state and Federal historic preservation standards and guidelines. There are very detailed minimum guidelines.

One of the major benefits of being a CLG is that the municipality is eligible to apply for funds from the State office. Portland receives significant CLG funds each year from the State program. They are used to pay for a portion of the salaries of City historic preservation program staff.

I believe it would be inconsistent with accepted State and Federal designation criteria if the Planning Board were to opt for this highly unusual approach of only designating multiple individual landmarks rather than designating a cohesive Munjoy Hill Historic District as recommended by the Historic Preservation Board. It could jeopardize Portland's status as a CLG, and threaten its eligibility for funds that support a significant part of our City-wide historic preservation program.

For the record, I am in support of the designation of the proposed district and am an owner of 2 contributing buildings in the proposed district. I am also an owner of a building immediately outside of the district that is proposed to be individually designated as a landmark building. I also support that individual designation.

Regards,

Barbara Vestal

--
Barbara A. Vestal, Esq.
Chester & Vestal, PA
107 Congress Street
Portland, Maine 04101
(207) 772-7426 - phone
(207) 761-5822 - facsimile

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Google Groups

munjoy hill historic district

gail wenstrom <gailgaw@hotmail.com>
Mar 6, 2020 10:58 AM
Posted in group: **Planning Board**

As the co-owner of 88 and 83 Becket Street, I support a Historic District.

Thanks

Gail Wenstrom

88 Beckett Street

Sent from Mail for Windows 10

Portland Maine | Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Majority of Portlanders Support the Proposed Munjoy Hill Historic District

1 message

Karen Snyder <karsny@yahoo.com> Fri, Mar 6, 2020 at 11:27 AM
To: Planning Board <planningboard@portlandmaine.gov>
Cc: Belinda Ray <bsr@portlandmaine.gov>, Jennifer Munson <jmy@portlandmaine.gov>

Dear Planning Board members,

I support the proposed Munjoy Hill Historic District intact.

If one analyzes the last 3 meetings held on the proposed Munjoy Hill Historic District, no matter how you slice and dice it, the majority of Portlanders **consistently** support the proposed Munjoy Hill Historic District.

The last 3 meetings held on this topic were:

- **Historic Preservation Board Nomination Meeting - 11/20/2019**
- **Planning Board Workshop #1 - 12/10/2019**
- **Planning Board Workshop #2 - 2/11/2020**

The overall averages from the above 3 meetings are as follows:

	Support	Opposed
Overall Emails Sent	**75.4%**	**24.6%**
If a Munjoy Hill Resident	**79.6%**	**20.4%**
If in the Proposed Historic District	**79.2%**	**20.8%**

Below are the statistics broken down by meeting.

Evidence that Majority of Portland Supports the Proposed Munjoy Hill Historic District

	As of: Wednesday 2/28/2020	Email Sent to HPB or Planning Board					Public Comment at Meeting/Workshop					
#	Portland, ME Meeting/Works Shop Held	HD Yes	HD Yes %	HD No	HD No%	Total	HD Yes	HD Yes%	HD No	HD No%	Total	Comments:
1)	Historic Preservation Board Nomination - 11/20/2019	32	72.7%	12	27.3%	44	14	93.3%	1	6.7%	15	
	-If A Munjoy Hill Resident (Unique Person)	20	71.4%	8	28.6%	28						
	-If In the Proposed Munjoy Hill Historic District (Unique)	20	76.9%	6	23.1%	26						
2)	Planning Board Workshop #1 - 12/10/2019	99	76.7%	30	23.3%	129	23	74.2%	8	25.8%	31	
	-If A Munjoy Hill Resident (Unique Person)	62	79.5%	16	20.5%	78						
	-If In the Proposed Munjoy Hill Historic District (Unique)	48	78.7%	13	21.3%	61						
3)	Planning Board Workshop #2 - 2/11/2020	42	72.4%	16	27.6%	58	19	70.4%	8	29.6%	27	
	-If A Munjoy Hill Resident (Unique Person)	30	75.0%	10	25.0%	40						
	-If In the Proposed Munjoy Hill Historic District (Unique)	19	79.2%	5	20.8%	24						
	OVERALL TOTALS: Total All Emails Sent	141	75.4%	46	24.6%	187	56	76.7%	17	23.3%	73	
	-If A Munjoy Hill Resident (Unique Person)	82	79.6%	21	20.4%	103						
	-If In the Proposed Munjoy Hill Historic District (Unique)	61	79.2%	16	20.8%	77						

Source https://portlandme.civicclerk.com/Web/Player.aspx?id=1207&key=-1&mod=-1&mk=-1&nov=0

Regards,
Karen Snyder
Munjoy Hill Property Owner

Google Groups

Munjoy hill historic district

Gail Wenstrom <gailgaw@gmail.com> Mar 6, 2020 11:10 AM
Posted in group: **Planning Board**

As a co-owner of 88 and 83 Beckett Street, I support a historic district.

Gail Wenstrom
88 Beckett st

Google Groups

Proposed Munjoy Hill Historic District

Pamela Day <pday2304@gmail.com> Mar 6, 2020 11:55 AM
Posted in group: **Planning Board**

We strongly urge the Planning Board to approve the proposed Munjoy Hill Historic District.

As stated in our previous emails, we believe that the historic district will provide much needed protections to Munjoy Hill homes and neighborhoods while guiding changes to buildings within the neighborhood as they are rehabilitated to meet 21st century needs.

The HD will ensure the continuation of affordable housing. Many historic buildings include existing housing units rented at reasonable rates. Retaining these units, rather than replacing them with costly new condominiums, is an important means to meeting housing needs on Munjoy Hill. Historic preservation and affordable housing are compatible: more than 400 new housing units were approved or built in Portland's historic buildings and districts in the last 5 years, and nearly 75% of those units are affordable housing units for low-income residents and seniors.

Finally, the preservation or reuse of historic buildings helps to fulfill Portland's Comprehensive Plan goals to adopt sustainable building and land use polices.
Please approve the Munjoy Hill Historic District as proposed and recommend its adoption by the City Council.

Respectfully,

Pamela Day & Michael Petit
25 Waterville Street
Portland 04101
207-461-1461

Google Groups

Munjoy Hill Historic District

Betty Wuesthoff <jwuest@maine.rr.com> Mar 6, 2020 11:38 AM
Posted in group: **Planning Board**

Mr. Chairman Mazer and Planning Board members:

The City of Portland not long ago spent over $1,000.000.00, and Friends of the Eastern Promenade raised another 1/2 million, or so, to restore our historic Ft. Allen Park with its landscaping, bandstand, canons, benches, trails and lighting.

This refurbished gem sits atop a “string of pearls” along the Eastern Prom, pearls in the form of what preservation consultant, Scott Hanson, in his" Rationale for Delineation of Recommended Boundary” (Pg. 3, July 2018) has referred to as “…many of the most architecturally significant homes on Munjoy Hill “. Consultant Hanson’s comment in relation to structures leading to The Portland Observatory when traveling up Munjoy Hill (Pg.1, July 2018) — that they “protect the historic context for the landmark tower” -- apply even more so to the Eastern Prom’s historic homes relationship to Ft. Allen and the Eastern Promenade.

We urge you to adopt in full the Historic Preservation Boards recommendation to designate the proposed area within the Munjoy Hill neighborhood as a local historic district.

Thank you for your consideration.

Sincerely,

John and Betty Wuesthoff
11 Morning Street
Portland,Me.

Google Groups

Support the Munjoy Hill Historic District

Hilary Bassett <hilarydbassett@gmail.com> Mar 6, 2020 12:01 PM
Posted in group: **Planning Board**

Dear Members of the Planning Board:

I write to ask you to support the proposed Munjoy Hill Historic District as recommended by the Historic Preservation Board.

I think it is the best land use tool for the continued evolution of the neighborhood. It allows for growth and change, while also retaining the scale and character of the building stock that gives the area its distinctive character.

The proposed district boundaries include portions of the neighborhood with the highest concentration of historic properties. They have been carefully researched and vetted with public input from neighborhood residents. As a 14-year resident of the Hill, I am aware of a strong base of neighborhood support for the proposed district.

Furthermore, the proposed district supports the City's comprehensive plan, particularly the goals for historic preservation, sustainability, and housing affordability. Historic districts encourage using and rehabilitating existing buildings, which is a highly sustainable practice. Historic districts support affordable housing and are among the most densely populated in the City. Half of all new affordable housing has been built in historic districts.

Most importantly, historic preservation is a proven tool that has helped Portland achieve a resurgence as a desirable place to live work and visit. The historic preservation review process does not "freeze" the neighborhood, in fact it encourages quality, compatible new construction and provides a more robust opportunity for public input in design review.

Thank you very much for your hard work for our City, and for your consideration.

Hilary Bassett

55 Morning St

Portland

Google Groups

Munjoy Hill Historic District

Carol De Tine <chstudio@maine.rr.com> Mar 6, 2020 11:11 AM
Posted in group: **Planning Board**

Dear Chair Mazer and members of the Portland Planning Board,

I support the proposed Munjoy Hill Local Historic District as recommended by the Historic Preservation Board. I urge you to vote to recommend approval of the District to the City Council.

Thank you,

Carol De Tine
144 Vaughan St
Portland

Google Groups

Munjoy Hill Designation support!

Edmund Gardner <ed@gardnerregroup.com> Mar 6, 2020 11:59 AM
Posted in group: **Planning Board**

Dear Portland Planning Board,

First I want to say I support the proposed designation of a historic district on Munjoy Hill. Second, I would like the thank city staff and their consultants for the enormous amount of work they undertook to prepare the nomination and the opportunities they have provided for members of the public to ask questions and learn more about what a historic district does and doesn't do.

As a real estate professional I see daily that people value Portland's rich social, cultural, and architectural character. This character is in part what attracts new residents and businesses to our city. As a property owner of several buildings in historic districts I know that historic preservation is not about freezing our neighborhoods in time. Rather historic preservation looks to conserve enough of the buildings that establish a neighborhood's sense of place while accommodating new development and the needs of modern life.

Through its commitment to historic preservation Portland has been successful at achieving a balance between old and new. Our city needs both to retain its current vitality and to grow through attracting new residents and businesses. The historic preservation board and staff have permitted alterations and new construction at a variety of scales in our local historic districts. Downtown historic buildings have been altered to provide new housing at 50 Monument Square and 443 Congress Street. New buildings in historic district like the Hiawatha Apartments, Peloton Labs, Mason Block have enhanced our city's streetscapes while accommodating new residential and commercial growth.

The buildings on Munjoy Hill proposed for designation are as worthy of protection as those I have owned in the West End, Congress Street, or India Street districts. I strongly believe that the proposed designations will allow the Hill to retain its sense of place, while accommodating future change. I ask you to support the proposed district on Munjoy Hill and recommend its designation to the city council.

Thank you.

Ed

Ed Gardner

Broker / Owner

Gardner Real Estate Group

511 Congress Street Lobby level

Portland, Me. 04101

207-415-4493 Cell

207-GARDNER Office

GardnerREGroup.com

gardner
REAL ESTATE GROUP

Google Groups

Munjoy Hill Historic District

Francesca <cesca.gs@gmail.com> Mar 6, 2020 1:11 PM
Posted in group: **Planning Board**

Dear Planning Board Members,

I urge you to vote in favor of making Munjoy Hill a Historic District. The Hill is a precious Portland gem and needs to be responsibly preserved for future generations and
to maintain the wonderful "sense of place" that is Portland. Thank you!

Francesca Galluccio-Steele
22 Clifford St
Portland, ME 04102
cesca.gs@gmail.com

Google Groups

Munjoy Hill Historic District

Robert Derry <robertderry40@gmail.com> Mar 6, 2020 12:24 PM
Posted in group: **Planning Board**

As a longtime owner and 'Hill' resident, I am deeply concerned about the apparently unchecked development in Portland. I believe it threatens to diminish the quality of life here.

For that reason I strongly support the type of building review outlined by this Historic District designation.

Regards -
Robert Derry
63 Melbourne St.

March 7, 2020

City of Portland
Planning Board

Dear Board,

After much discussion and evaluation, some board members are making their decision in part based upon apparent support or not from the public. While we could debate why the Planning Board is swayed by the public and not what's best for the City from a planning perspective, it is what it is.

As a reminder, the City committed to surveying in 2018-2019. They did not. The MHNO voted unanimously to not survey their own paying members or any resident but pretend to represent the hill. And, the previous MHNO President stated in many public meetings that City staff and Greater Portland Landmarks pressured him not to support surveying the hill, in early 2019.

Fortunately, some private citizens sponsored a survey anonymously in the summer of 2019. No sponsor was identified on the postcard invitation & it was sent to all residents of the Hill, protecting its objectivity. As a 30+ year business executive and lawyer-by-education, I have worked with surveying for years on a global scale and am considered an expert in this field.

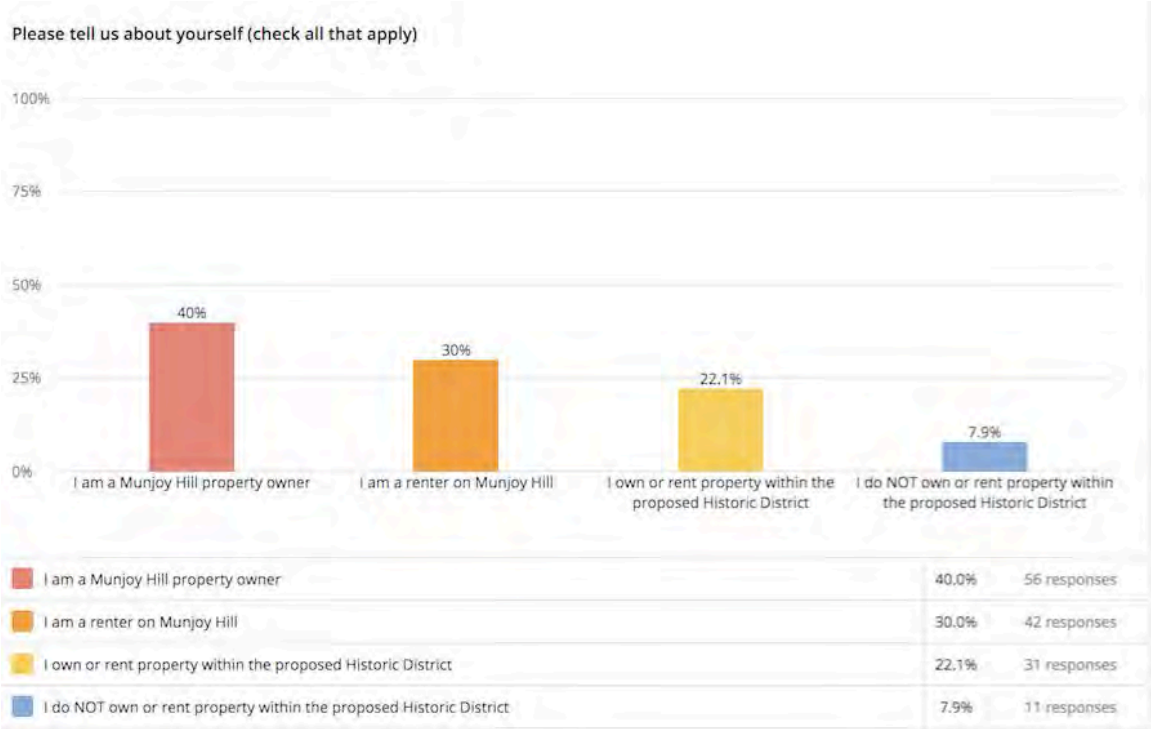
Unlike a signed petition by the pro HD people, these survey results have integrity. Most people who signed a petition for the 12th district still believe HD on the Hill will stop big box condos or demos from occurring because those collecting signatures promoted misinformation (like the MHNO does) to create the appearance of broad support. *[Related, read the public comments for HD on the Hill. Approx 60-70% cite their support for HD because they believe incorrectly that HD will stop big box condos and will reduce demolitions. Please ignore those who advocate for HD based upon false information.]*

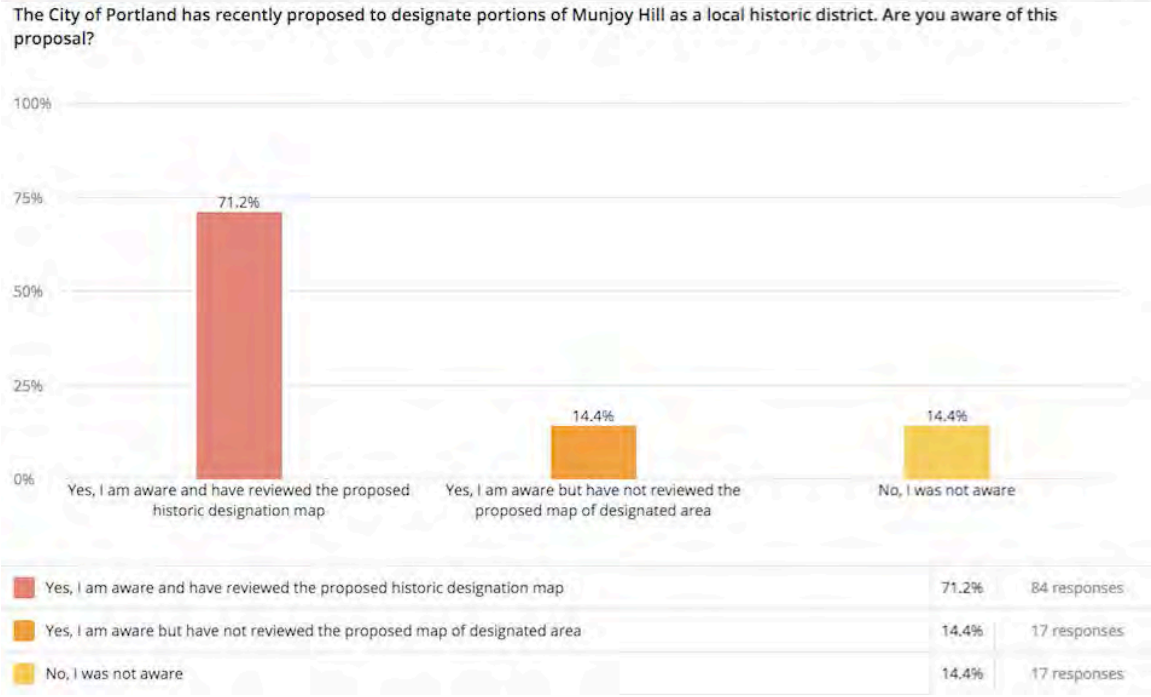
Keep in mind,

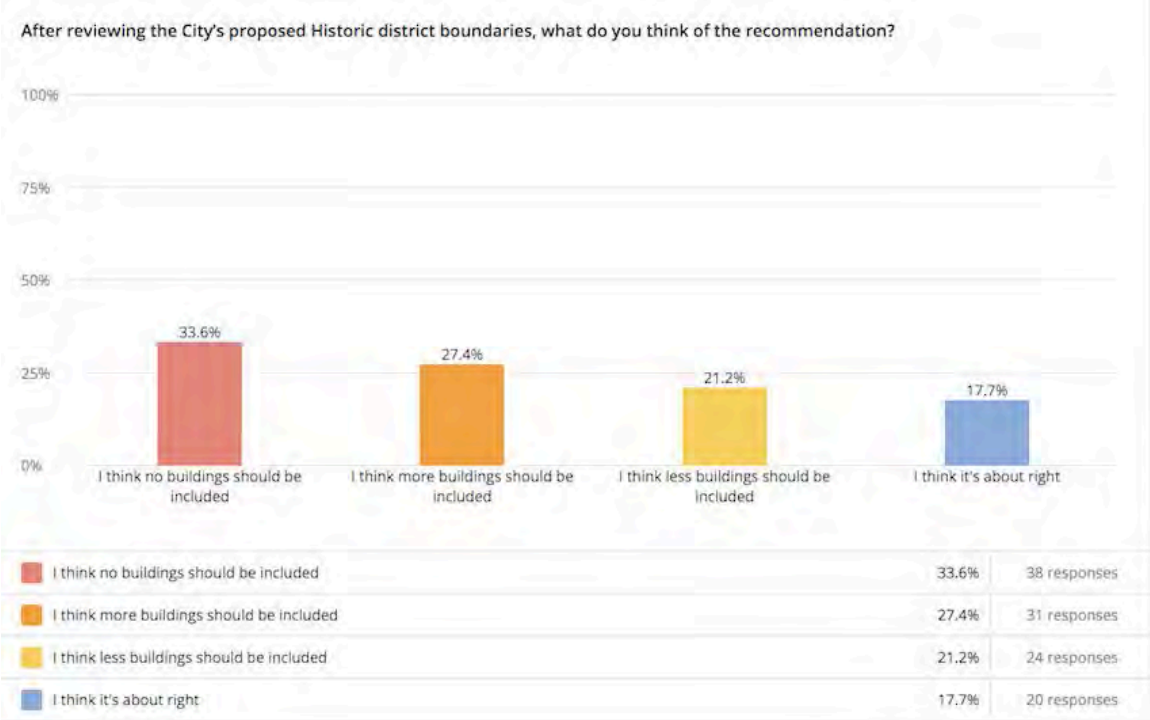
1. a blind survey worked well because many people would never speak publicly for many reasons (uncomfortable in a public format, fear of retribution by the City HD Staff or by some aggressive neighbors)
2. the survey was conducted prior to the 2-3 expansions of the proposed Historic District so the results asking for less buildings to be included is understated

Note: Additional survey results came in via an anonymous POBox in writing after the closing of the survey. These were overwhelmingly opposed to HD and are not reflected in the below numbers. Finally, some Pro HD respondents attempted to sabotage the

results by entering multiple times with fake names, etc. These are also reflected below which has the net result of inflating the pro HD responses.
Here are the statistically significant results:







It is fair to interpret the results as follows

- At a minimum, 54.8% are opposed to the proposed district
    - The largest group of respondents support 0 buildings to be included in the proposed District (33.6%)
    - At least 21.2% of the people want less buildings included (probably higher since these results were derived prior to the 2-3 expansions by staff
    - Results received after the survey period closed were not included (approx. another 25 surveys where 18 of them responded with "I think no buildings should be included."

Your answer is clear: vote NO on this proposal and work on recoding and use other tools to address what the City needs and what the Residents want; a prosperous City that maintains our character.

Thank you,

Carle Henry
Owner of an 1849 Home and a Preservationist

Dear Planning Board members,

I am writing to reiterate my support for the proposed Historic District on Munjoy Hill. In addition to the comments that I have made in my past letters to both the Historic Preservation Board and the Planning Board, I would like to make two further points.

Firstly, those against the district continue to imply that there is no evidence that a historic district will influence the architectural style of any new construction. I would like to point out that the Western part of the peninsula has long been sheltered from ultra-modern nonconforming architecture due to the influence and guidance of the Historic Preservation Board. The developers and architects who have over the years built new buildings in this district, have taken the board's recommendations into consideration and constructed structures that though clearly modern do not vividly standout but blend with the surrounding street scape.

Secondly, it has been implied that a historic district will stymie development on the hill at a time when there is a housing shortage in the city. It is true that there is a housing shortage, but this is a shortage of affordable work force housing, not the expensive condos that are being built on Munjoy Hill. My employer is one of the largest employers in the city and most employees earn between about $36,000 and $62,000 a year depending on longevity of employment. Most of the younger employees do not live in the city because they cannot afford the rental prices and they have no hope of owning a property as the purchase prices are beyond their means. I only live on the hill because I bought a house 20 years ago when you could get a property for under $70,000. How will building new condos, that will cost an average of $795,000, elevate our affordable workforce housing problem?

Please vote to recommend that the Council adopt the proposed historic district on Munjoy Hill.

Best Regards

Dr. George Carhart
7 Lafayette St

Greater Portland Landmarks
Historic character enriches our lives

6 March 2020

Chair Mazer and Members of the Planning Board,

Greater Portland Landmarks strongly believes that the proposed Munjoy Hill Local Historic District is the most effective way to conserve the character of the neighborhood and accommodate public participation in a transparent review process that has proven successful in the West End, Parkside, Old Port, and Congress Street historic districts for thirty years. The proposed Munjoy Hill Local Historic District has emerged from a lengthy and inclusive public process. It meets the designation criteria in the city historic preservation ordinance and is consistent with the City's comprehensive plan, which supports historic preservation as an integral part of the city's planning strategy.

We urge you to accept the historic preservation board's proposal and recommend its approval by the City Council for the following reasons:

1. **The Portland City Council tasked planning staff to pursue a historic district as part of a suite of land use strategies when it approved zoning changes in June of 2018.** The proposed district is meant to work in tandem with the conservation overlay district established at the end of the moratorium, much as the India Street Local Historic District and Form-Based code work together to manage growth and change at the foot of Munjoy Hill.
2. **The Munjoy Hill Local Historic District will not freeze the hill in time.** As we have seen in other historic districts, new construction and alterations allow neighborhoods to grow and change as needed to meet contemporary needs. Since November the Historic Preservation Board has approved alterations at 34-36 North Street and 49 St. Lawrence Street, an alteration that will add a housing unit to an existing multi-family dwelling. They have also conducted preliminary reviews for alterations and additions at 24 St. Lawrence Street and 9 Howard Street.
3. **Our historic neighborhoods are important city assets that should be maintained and enhanced.** Along with our food scene, the physical character of the Old Port, West End and Munjoy Hill contribute to Portland's appeal as a desirable place to live and visit. *Portland's Plan 2030* supports the stewardship of Portland's historic, cultural, and architectural assets as integral to the City's planning strategy and was widely supported in public feedback received during the plan's creation. Design review for alterations and new construction within our historic neighborhoods ensures we will maintain the character that helps support our city's economic vitality.
4. **The preservation or reuse of historic buildings helps to fulfill the City's comprehensive plan goals to adopt sustainable building and land use policies.** Nationwide research studies have found that the re-use or rehabilitation of existing buildings offer significant environmental benefits over new construction. "*The greenest building is the one that is already built*." *Carl Elefante, FAIA*
5. **The historic district will preserve properties associated with underrepresented communities in Portland.** The sites and neighborhoods that represent the cultural and social history of Portland's minority communities deserve preservation. The proposed boundaries of the Munjoy Hill Local Historic District encompass properties that represent the social and cultural history of several underrepresented communities. Portland's immigrant story has been preserved in part

through the recent designations of House Island and India Street. But few properties associated with the city's African American history have been protected, with the exception of the Abyssinian Meeting House and the Green Memorial A.M.E. Zion Church on Munjoy Hill. Some of Munjoy Hill earliest residents were African Americans connected to Portland's maritime history. The neighborhood was later home to residents that came to Portland from the West Indies, Azores, and Cape Verde. Their homes, mostly centered around the northern end of Lafayette and Quebec Streets, deserve to be protected.

6. **The public record indicates significant support in the neighborhood for the proposed district.** Over 170 property owners, residents, and supporters have spoken out or written to the city in favor of the proposed district. Please see the attached list that summarizes the level of support for the historic district.
7.

Thank you for considering our views,

Julie Larry
Director of Advocacy
Greater Portland Landmarks
93 High Street, Portland, ME

MUNJOY HILL HISTORIC DISTIRCT PUBLIC COMMENTS

TOTAL **178** **52**

Last Name	First Name	No.	Street	Yes	No
99fish	Matt				1
Barrett	Mary				1
Dignan	Jenny				1
Gemmill	William				1
Jones	Donna				1
Mills	Sarah				1
Wenstrom	Enoch	83	Beckett		1
Mitchell	Stacy	74	Atlantic		1
Wenstrom	Gail	88	Beckett		1
Waycott	Catherine	91	Beckett Street		1
Harrison	Priscilla		Cape Elizabeth		1
Poirer	Ben		Cape Elizabeth		1
Wood	Bruce		Chandler's Wharf		1
Clark	Elaine		Chebeague Island		1
Steele	Francesca	22	Clifford		1
Jacks	M.[Margaret]	51	Congress		1
Jacks	G.[Grant]	51	Congress		1
Whitaker	John	104	Congress		1
Whitaker	Kerry	104	Congress		1
Brain	Nancy	118	Congress		1
Nixon	Jill	118	Congress		1
Nixon	Henry	118	Congress		1
Oldham	Sally	118	Congress		1
Watson	John	118	Congress		1
Hubert	Robert	147	Congress		1
Hubert	Marianne	147	Congress Street		1
Blackstone	Peter	76	Cumberland		1
Larsdotter	Gunnel	46	Cumberland Avenue		1
Reed	Richard	46	Cumberland Avenue		1
Weatherbee	George	108	Dorset		1
Szanton	Nathan	22	Eastern Prom		1
Manter	Berry	46	Eastern Prom		1
Gardiner	Ed	84	Eastern Prom		1
Paine	Lincoln	150	Eastern Prom		1
Whitten	Robin	188	Eastern Prom		1
Weiss	Alison	292	Eastern Prom		1
Emerson	Martha	340	Eastern Prom		1
Glassberg	Andrews	340	Eastern Prom		1
Von Munkitz-Smith	Jeff	340	Eastern prom		1
Springborn	Janet	340	Eastern Prom Unit 145		1
Neilan	Sadhbh	29	Emerson Street		1
Gorham	Jaye	20	Essex Street		1
Brewer	Katy		former Munjoy Hill resident		1
Rollins	Dick		former Munjoy Hill resident		1
Wadleigh	Annie	74	Grant		1
Barter	Jim	23	Greenway Drive		1
Lyons	Susan	25	High Street		1
Greater Portland L.		93	High Street		1
Marsoco	Michael	9	Howard Street		1
Rogers	Allison	9	Howard Street		1
Brown [Bronn]	Greg	33	Howard Street		1
Barter	Lois	55	Kellogg		1
Carhardt	George	7	Lafayette		1
Carhardt	Uschi	7	Lafayette		1
Ringle	Gail	34	Lafayette		1
Wylie	Jonathan	34	Lafayette		1
Bahlkow	Gary	42	Lafayette		1
Green	Kimble	42	Lafayette		1
Savage	Lydia	19	Melbourne		1

Hoover	Michael		40	Melbourne	1
Derry	Robert		63	Melbourne	1
Stewart	Leslie		63	Melbourne	1
Masiolo	Kelly		71	Melbourne	1
Salon	Richard		71	Melbourne	1
Price	David		24	Mellen	1
Schwartz	Carolyn		27	Merrill	1
Valzania	Wayne		27	Merrill	1
Connor	Carol		12	Montreal	1
McGrath	Vanessa		22	Montreal	1
Johansen	Kevin		41	Montreal	1
Billings	Liane		42	Montreal	1
Cole	James		45	Montreal	1
Cartonio	Marguerite		46	Montreal	1
Woodward	Clarkson		48	Montreal	1
Grey	Alison		55	Montreal	1
Murray	Oliver		55	Montreal	1
Ryan	Patricia		60	Montreal	1
Akerlind	Christopher		44	Monument	1
Yandell	Sue		51	Monument	1
Hambly	James		61	Monument	1
Agopian	Paula		98	Monument	1
Chase	Ariel		4	Monument Street	1
Wuesthoff	John		15	Morning	1
Wuesthoff	Betty		15	Morning	1
Davison	Diane		29	Morning	1
Bassett	Hilary		55	Morning	1
Ciembrowicz	Julius		55	Morning	1
Kamar	Charles		55	Morning	1
Kamar	Norma		55	Morning	1
Reppenhagen	Marlies		55	Morning	1
Jordan	Nancy			Morning	1
Davison	Jeffrey		29	Morning Street	1
Goodman	Steven		59	Morning Street	1
Bayer	Jane		89	Morning Street	1
Jordan	Bob [Robert]			Morning Street	1
Douglas	Tika		11	Munjoy	1
Auld	Sarah		43	Munjoy	1
Brokish	Tom		43	Munjoy	1
Erikson	Patricia			Munjoy Hill	1
Gael	Stephen			Munjoy Hill	1
Burton/York	Diana		190	Munjoy South	1
Pringle	Anne		44	Neal	1
Bender	Kathleen		11	North	1
Carroll	Lorrayne		31	North	1
Cowie	J.D. [James]		32	North	1
Cowie	Annie		32	North	1
Dillingham	Linda		36	North	1
Denny	Justine		56	North	1
Emerson	Susan		56	North	1
Snyder	Beth		81	North	1
Stewart	Christopher		81	North	1
Murray	Peter		104	North	1
Murray	Deborah		104	North	1
Carmona	Vana		105	North	1
Carmona	Ralph		105	North	1
Hays	Liz		107	North	1
Prochaske	Janet		151	North	1
Chester	Ned	14-16		North	1
Booth	Steven		79	North Street	1
Vestal	Barbara		22	O'Brion, 101-107 Congress	1
Hall	Bill			Peaks Island	1
Keating	Tom		166	Pleasant	1

Hammen	Mike			Pleasant Street	1	
Peavey	Elizabeth			Portland	1	
Smith	K.E.		80	Quebec	1	
Austin	Terry		3.5	Sherbrooke	1	
Heffern	Margaret		8	Sherbrooke	1	
Heffern	Richard		8	Sherbrooke	1	
Englart	Michael		193	Sheridan	1	
Englart	Linda		193	Sheridan	1	
Cassidy	Ann		205	Sheridan	1	
Pitegoff	Peter		205	Sheridan	1	
Morse	Robert		208	Sheridan	1	
Morse	Mary		208	Sheridan	1	
Machesney	Nancy		213	Sheridan	1	
Hart	Leslie		215	Sheridan	1	
Schochat	Kevin		215	Sheridan	1	
Pratt	Marianna		224	Sheridan	1	
Lorber	Betty		225	Sheridan	1	
Schmidt	Cynthia		21	Sheridan Street #1	1	
Renschler	Rhonda			South Portland	1	
Renschler	Daryl			South Portland	1	
Hurley	Jayne		11	St. Lawrence	1	
Whitten	Rob		23	St. Lawrence	1	
Sawin	Martica		28	St. Lawrence	1	
Wolf	Maggy		28	St. Lawrence	1	
Holden	Mark		37	St. Lawrence	1	
Tyler	Linda		52	St. Lawrence	1	
Isaacson	James		71	St. Lawrence	1	
DiMatteo	David		72	St. Lawrence	1	
Smith	Charlton		33	Turner	1	
DeTine	Carole		144	Vaughan	1	
Ferrante	M.[Mike]		67	Vesper	1	
Mooney	Edward		77	Vesper	1	
Moser	Greg		80	Vesper	1	
Moser	Catherine		80	Vesper	1	
Koch	Erna		81	Vesper	1	
Inman	Steven	81A		Vesper	1	
Alward	Amy		12	Vesper St	1	
McMillen	Abbie			Vesper Street	1	
Goan	Sarah		54	Walnut	1	
Smith	Debbie		523	Washington Avenue	1	
Schiffman	Stephen		9	Waterville	1	
Flanaghan	Sandra		13	Waterville	1	
Day	Pamela		25	Waterville	1	
Petit	Michael		25	Waterville	1	
Dowe	JoAnn		28	Waterville	1	
Lloyd	David		29	Waterville	1	
Brewer	Katy		39	Waterville	1	
Casale	Mary		39	Waterville	1	
Reiche	George		50	Waterville	1	
Snyder	Karen		72	Waterville	1	
Teel	Steven		76	Watson	1	
Miller	Nina		76	Watson Street	1	
Hillman	Margaret		9	Willis	1	
McNanamy	Nini		10	Willis	1	
McGovern	Frances		23	Willis	1	
Shaw	Susan		28	Willis	1	
Miller	Markos		17	Atlantic		1
Gelfand	Christoph		32	Atlantic		1
Kamar	Alison		73	Atlantic		1
Mahoney	John		73	Atlantic		1
Parker	Jamie		73	Atlantic		1
Cushman	Sarah		99	Beckett, 2nd floor		1
Rutkiewica	Jeremy		161	Congress		1

Gillis	Susan	48-50		Congress	1
Rheault	George			East Bayside	1
Haley	Dan		60	Eastern Prom	1
Stevens	Dan		64	Eastern Prom	1
Chase	Liv		40	Eastern Prom 40A/65 st. Lawrence	1
Rohman	James		57	Elmwood	1
Agawam	Travis		8	Emerson	1
Ashwell	Lauren		8	Emerson	1
Kuzma	Lynn		10	Emerson	1
Barowitz	Zach		22	Huntress	1
Smith	Amy		19	Kellogg #3	1
Kraus	Norma		59	Lafayette	1
Gillis	Edward		24	Montreal	1
Rankin	Marla		24	Montreal	1
Patel	Sanjay		32	Montreal	1
Patel	laura		32	Montreal	1
Carter	Kevin		33	Montreal	1
Wells	Tim		33	Montreal	1
Wells	Meghan		33	Montreal	1
	S?		33	Montreal	1
Montreal St. Realty			64	Montreal	1
Mayo	Timothy		47	Monument	1
Rounds	Lori		47	Monument	1
Googins	Mark		63	Morning & 39 Morning	1
Baston	Joshua		42	Munjoy	1
Santos	Alexis			Munjoy Hill	1
Whitehouse	John		18	North	1
Yale	Deborah		72	Pine	1
Kelly	David			Portland	1
Howe	Kate		38	Quebec	1
Wail	Caitlin		81	Quebec	1
Manganello	Anne		84	Quebec	1
Valentine	Michael	81-83		Quebec	1
Ray	Andrew		86	Quebec St	1
Murray	Nick		40	St. Lawrence	1
Henry	Joanna		50	St. Lawrence	1
Henry	Carle		50	St. Lawrence	1
Adler	Brent		65	St. Lawrence	1
Liebling	Emily		52	Tyng	1
Sullivan	Heather		32	Verrill St	
Body	David		46	Waterville	1
Miller	Elizabeth		46	Waterville	1
Haley	Paul		62	Waterville	1
YIMBY					1
Juris	Andrew				1
McCracken	Carole				1

Comment
PC 36
PB PC28
PC47
PC69
PB PC44
PC76
PC1
public testimony 9/20/2019
PC8
petition 9/28
PC80
PC86
PC70
public testimony 12/10
PC38
petition 9/28
petition 9/28
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petition 9/28
PC96
PC112
PC112
PC41
PB PC56 PC96
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public testimony 2/11
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PC1 - also 84 & 86 Beckett
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PC118
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PB PC57
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PC71
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PC62
PC 21
petition 9/28
PC1
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PC119
PB PC58

PC124
PB PC40
PC92
petition 9/28
PC123
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PB PC21
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PC93
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petition 9/28
petition 9/28
PC126
PC103
PC1
PC 109
PC13
public testimony 2/11
petition 9/28
PC1
PC7
PC1
petition 9/28
petition 9/28
PC29
PC1
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PC66

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PB PC42
PB PC38
PB PC11
PB PC13
PB PC1
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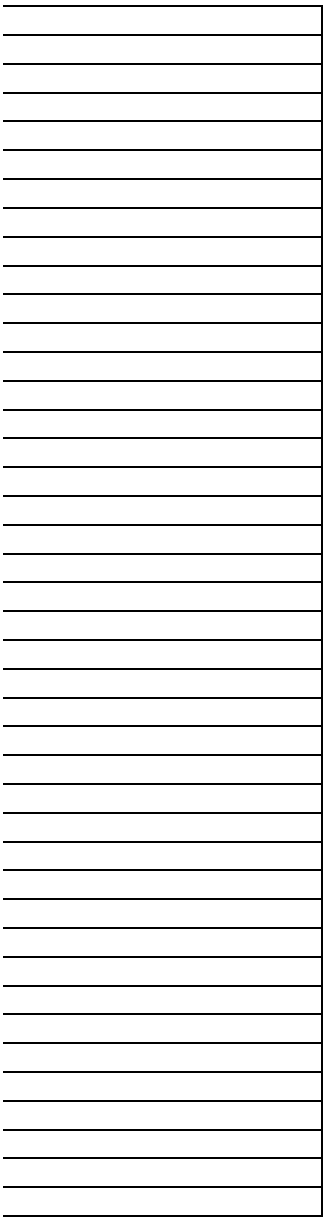

Google Groups

Munjoy Hill Historic District

Debby Murray <debbym@gwi.net> Mar 8, 2020 12:46 PM
Posted in group: **Planning Board**

Dear Portland Planning Board -

This is not my first letter to you on this subject, but I certainly hope that it will be my last. I am so hopeful that on this coming Tuesday night, you will vote to recommend the Munjoy Hill Historic District to our City Council.

As you may already know, I have been a resident of Portland for nearly 48 years, most of that time in the West End. My homes there at 123 Neal Street and 89 West Street were both within the Western Prom Historic District, which I found to be only an enhancement of the quality of my life there. Certainly, we had to jump through some hoops when we wanted to make exterior changes at 89 West Street, but in every case the outcome was for the best.

For the last 7 years in our new home on North Street, I have been out and about in our neighborhood, with our dogs and otherwise, on a daily basis. I have been impressed by the charm and scale of our neighborhood architecture, and have been appalled by some of the recent additions and proposed additions. In particular, structures that have no “eyes on the street”, that lack front porches and front doors, and that include garage doors in their street facades seem to me as serious detractions to the neighborhood. The same is true of oversized “boxes” that loom over their neighbors. A faceless structure, with a garage door and elevator as the only exposure to the street does not contribute much to the neighborhood.

I am not opposed to contemporary architecture, or new houses, or residential density, provided that it is done thoughtfully and with some guidelines so that it does not detract from or overwhelm what is already there.

One of the reasons we moved to Munjoy Hill was the quality of its traditional architecture that preserves the atmosphere of a 19th century residential neighborhood. It is my hope that the establishment of a Historic District might help preserve the remaining traditional architecture of at least a part of the Hill and maintain the charm that brought us and others to the Hill in the first place.

Sincerely,

Deborah D. Murray
104 North Street
Portland, ME 04101
debbym@gwi.net

Google Groups

Munjoy Hill Historic committee.

janie lynch <gertrudeconley@outlook.com> Mar 8, 2020 7:32 PM
Posted in group: **Planning Board**

My vote for this happening is no!

Sent from Mail for Windows 10

Google Groups

Re: Historic District

me <jmy@portlandmaine.gov> Mar 9, 2020 8:37 AM
Posted in group: **Planning Board**

Hello,

Thanks for your email. We appreciate the time you have taken to offer your thoughts, and will include your comments in the materials and as part of the public record.

If you have any questions, please contact our office.

Jennifer Munson, Office Manager
jmy@portlandmaine.gov | (207) 874-8719| Fax (207) 756-8258

City of Portland, Department of Planning and Urban Development
389 Congress St., 4th Floor, Portland, ME 04101

On Sunday, March 8, 2020 at 10:52:08 AM UTC-4, Jo-Ann Kayatta wrote:

> Please consider this proposal seriously! We need to save these buildings and the character of the East End!
>
> Sent from my iPhone

Google Groups

Historic district

Kris Minister <krisminister@me.com> Mar 8, 2020 3:41 PM
Posted in group: **Planning Board**

To the Planning Board:

The proposed historic district for Munjoy Hill will enhance our neighborhood's look, character, and continuity with the past. The measure has been carefully studied and planned. I regret the intrusion of developers' architecture in our way of life. I urge your approval of this project for the City Council's consideration.

Thank you for your diligent work on this matter.

Sincelely yours,

Kristina Minister
101 North Street, Apt. 4
Portland, Maine 04101

59 Moody Street
Portland, ME 04101

Brandon Mazer
Chair, Planning Board
City of Portland, Maine
389 Congress St
4th Floor
Portland, ME 04101

March 5, 2020

Dear Mr. Mazer,

Ahead of the workshop and public hearing on Tuesday, March 10th, we wanted to voice our concerns regarding the Munjoy Hill Historic District recommendation. As property owners within the proposed district, we are unhappy with the communication process surrounding the recommendation and are ultimately concerned about the impact on our property. We specifically want to raise the following issues:

Notification to Property Owners & Inclusion in the Process. We moved into our townhouse at 59 Moody Street on June 6, 2019. We understood there was an already on-going process with the overlay and history district proposal. We tried to follow updates to this proposal in the Portland Press Herald and on the city website, which clearly stated that "*All affected property owners will receive notices prior to each upcoming meeting*."[1] On February 17, 2020, we again checked the city website after reading that the Planning Board was taking up the proposal for a vote. Half of our property appeared to be within the overlay map and half was not. This was doubly confusing as we had not received any notices from the city regarding our property being affected.

Through a number of emails, phone calls, and finally an in-person meeting with Deb Andrews, it was explained to us that an administrative error occurred and that we were never added to the distribution lists that sent the physical mailers to affected property owners. The city employee in charge of these distributions never updated the contact list with the most recent version of affected homeowners. It was also explained to us that the Portland Assessor's Office takes up to four months to update records of new property owners. But even if it took four months, we should've been added to the distribution list by October at the latest – which would have allowed us to participate in several of the workshops and public discussions in which all other notified affected homeowners were invited to participate.

We have several concerns:

- Unclear breadth of impact. We met in-person with Ms. Andrews and Christine Grimando on March 2, and they said they had rectified the issue with the system but did not say how many

[1] As of March 5, 2020 and following our meeting with Ms. Grimando and Ms. Andrews on March 2, 2020, that language was removed from the city website and no longer exists for viewing.

people this administrative issue affected or how outdated the previous list of the affected homeowners was.

- Inability to inform the process. Given the short timeline of us proactively discovering we were excluded and the upcoming March 10th Planning Meeting, we have not been able to participate in the process with other affected homeowners. All the site lines have been drawn and there has been no opportunity for proper debate or input. Ms. Grimando and Ms. Andrews did take time to meet with us on March 2, but the general tone of the meeting was informational and not an opportunity to challenge the version of the map that the Historic Preservation Board had already approved and excluded us from.
- Integrity of the process. This administrative error raises questions about the integrity of the historic district proposal process as a whole. This could have been avoided if the board had been more inclusive in the neighborhood it was potentially impacting. Signs or flyers around the neighborhood with the proposed district map and times of the public hearings would have avoided the situation we find ourselves in today.

District Line Inconsistencies. The recommendation from the Historic Preservation Board splits our property in half (59 Moody St). We own the end unit of a four-unit rowhouse complex. The rowhouse complex is split into two homeowners' associations (59&57 Moody and 55&53 Moody). Behind all four rowhomes is a parking area. The parking area behind our HOA – 59&57 Moody – is paved while the area behind 55&53 Moody is a mix of pavement and gravel ***(see Exhibit 1)***. For some reason, which wasn't clearly articulated by Ms. Andrews or Mr. Grimando, the parking area behind 59&57 Moody is excluded from the Historic District recommendation, while the parking area behind 55&53 Moody is included in the Historic District. Had we been part of the conversation before the recommendation was finalized, we could've had this discussion. Our recommendation would have been to exclude the parking area from both HOAs for consistency as neither should be deemed contributing factors to the historic district.

Our property is on the edge of what is in and what is out of the Historic District. It seems a bit arbitrary about which homes are included and which aren't. We understand from Ms. Andrews and Ms. Grimando that there is an art to the overlay and a "feel" to each street. But the Munjoy Street landscape is nearly identical to Vesper Street, which for some reason are included as contributing buildings ***(see Exhibit 2)***

Recommending 59 Moody as a Non-Contributing property. 59 Moody is currently recommended as a contributing property. We would argue that recent renovations in 2012 and additions to the home would preclude it from the contributing category ***(see Exhibit 3)***. Specifically, the roofdeck is a very visible non-contributing factor. From the street, you can see the protruding staircase and modern railings.

Nor do the Building Inventory notes on the city website make much sense for justifying 59 Moody's inclusion as contributing in the district. "*The westernmost row house has a two-story addition and a rooftop deck. Despite these alterations and losses, the row houses retain their form and scale that are unusual in the neighborhood and contribute to the story of the neighborhood's historic residential development."* We would argue that those alterations are enough to warrant the designation of non-contributing, and if the historic "story" is what matters, it doesn't seem like protecting a rental property from 1910 is of the highest priority. Again, because we were excluded from the process given to other affected homeowners, we were never able to make our case and have it considered in the recommended district map in front of you on March 10th.

We know fellow neighbors who have spent thousands of dollars on lawyers to successfully challenge and have their properties removed from the Historic District zone. While we do not wish to invoke similar action, we demand that a sensible approach to our property is taken, that due process is honored, and that our rights as homeowners in this neighborhood be respected.

We were excited to move to Munjoy Hill and become part of this community. As a younger couple, we look forward to raising a family here in Portland. But we have found this process to be divisive and polarizing and it has soured our opinion of local organization. With the Historic District restrictions and the additional expense it brings to homeowner, we now find it harder to trumpet the benefits of Munjoy Hill to other young couples seeking residency in Portland. We hope the Planning Board and City Council are able hear our concerns and find a way to preserve the community within a Historic District.

We thank you for your time in reading this and hope that the Planning Board will consider our experience and vote to reject the recommended Historic District as is presented by the Historic Preservation Board on March 10th.

With kind regards,

Laura Shen & Will Silton

EXHIBIT 1:

EXHIBIT 2

Multi-unit homes on Vesper Street (proposed contributing buildings)

Multi-unit homes on Munjoy Street (proposed non-contributing buildings)

EXHIBIT 3

Google Groups

Historic district

Lynne Panico <LEPanico@outlook.com> Mar 8, 2020 12:59 PM
Posted in group: **Planning Board**

I support the historic district.

Lynne Panico
49 Moody St

Get Outlook for Android

Google Groups

We do not support the proposed Historical District In Tact - 46 Walnut Street Portland, Maine 04101

Robin Ferrar <rferrar49@gmail.com> Mar 8, 2020 11:32 AM
Posted in group: **Planning Board**

Dear Deb Andrews, Planning Board, and City Council,

My Mom, Dorothy Rodney, just brought to my attention today, the information regarding the meeting on Tuesday, March 10, 2020. I would like to reiterate that she is feeling the same. She is not in favor, about her home being claimed as part of the historical district! We agree with the concept of keeping the character of the Munjoy Hill neighborhood, but the declaration of a historical neighborhood, is both unrealistic and unfair to homeowners.

Our family does not, and did not support what the City of Portland has allowed by having the developers come in and put up oversized, boxy housing on Munjoy Hill. Now the scramble is on to stop this, by claiming homeowners property as a historical landmark with restrictions. There must be some other solution than the burden of a historic district. My parents purchased their home since 1977, and should not be such restrictive demands placed on my Mom. As mentioned in my last email, my parents raised three daughters and filled the space with love & happy memories. We want this to continue for her, and she should not be forced to give this up due to the financial burden of complying with the historical district. We question the legality of this proposal.

Please forward this email to the City Council for Tuesday's meeting on 3/10/20. We feel all views should be considered, and look forward to hearing back from you all.

Thank you,
Robin Ferrar (daughter)
Dorothy Rodney (Mom & homeowner)
Pauline Merrill (daughter)
Maria Rodney (daughter)

.cc Previous Emails:

Dear Deb,

My name is Robin Ferrar and I am writing to you on behalf of my Mom, Dorothy Rodney, and my two sisters regarding our Mom's home at the above address. This past weekend, she shared the letters with us that were sent to her home regarding her home being labeled as "historical property". She is so distraught, angry, and has been in tears every day, ever since she read that her home will have restrictions placed on what she can do with her home now and in the future.

Our Dad and Mom purchased their first and only home back in 1977, with great pride and joy. They raised a family in this home, and have worked very hard work to upkeep their home over the years. My parents have always lived in Portland their whole lives and was very proud to be the owners of their home. Now, this "historical district" label has crushed my Mom, knowing that this decision is being made by people who can do what they want and when they want. This is not fair to place a label on someone's property without their consent. We do not live in a Communist society and should not be dictated on what we can and can't do to our homes in Portland. My Mom requests that her home with the address of 46 Walnut Street Portland, Maine to be taken off your list and be left alone! She, and nor should anyone, be placed under this kind of stress and anxiety, and as her daughters, we fully support her request.

The Final Workshop Hearing that is scheduled for tomorrow night, November 6, 2019 at 5:00pm at City Hall in Portland - Is this meeting to discuss her property and decisions that are going to be made on her property tomorrow night? Also, The Public Meeting on November 20, 2019 at 7:30pm - Is this meeting the public's vote on my Mom's property, or a questions & answer session regarding the decisions made by the City of Portland? Our family can't understand why the meetings are scheduled at City Hall in the evening hours, when the public has a hard time finding parking and not feel safe at night. Why aren't these meeting held at the Community School on the Eastern Prom to be more convenient to the public to meet, as they were in the past? If these two meetings are to discuss my Mom's property, then we hope to make it to the meetings after work at 5pm this week. Please let us know.

Deb, I hope you understand my Mom's concerns, and as her daughters, our concerns for her as well. At this time in our Mom's life, we want her happy for the rest of her life, and not feel like her home is being taken over by the Historic District. If these meetings are to discuss my Mom's home, then please funnel up my Mom's request to those in charge of the decision making. Thank you for taking the time to read my email note, and I look forward to hearing back from you.

Thank you,

Robin Ferrar on Behalf of the Rodney Family

Dear Ms. Ferrar,

Thanks for sharing your concerns about the potential inclusion of your mother's property in the proposed Munjoy Hill Historic District. First, let me address your questions about where and when the meetings are held. To clarify, the meetings that were held last year at the East End School were general informational sessions about the historic district initiative. We held them in the neighborhood so that they would be convenient for area property owners to attend. Starting this fall, however, the official public review process began and we are required by law to hold official public meetings in City Hall where the proceedings can be recorded, etc. I understand the concerns about coming out at night and finding parking, but we are bound to the rules that apply to public meetings.

As for tonight's meeting, the Historic Preservation Board will be discussing a number of specific areas that have been identified by area residents and/or Board members during previous workshops as warranting further consideration for inclusion within the proposed historic district boundaries. Your mother's property is one of three properties located at the center of the block between Willis and North that was not included in the original boundaries. This was largely due to an oversight. It was recommended that the three properties be added to the district to "round out" the boundary in this area.

Rest assured that I will forward your email to members of the Historic Preservation Board for their consideration in advance of tonight's meeting. I know that they will give your input careful thought as they consider these potential boundary revisions. If it is difficult for you to attend tonight, please know that your written input will be read and considered. No formal decision on the proposed historic district will be made until the formal public hearing on November 20th. The meetings up to that point are working sessions to discuss various specific issues.

I know that this email does not address your mother's concerns or questions about how designation might affect her ability to make changes to her home. I would be happy to answer any questions about what it means to own property in a historic district. Please feel free to call me if you wish. My number is 874-8726.

Again, thank you for taking the time to share your mother's concerns.

Deb

Google Groups

Historic district for Munjoy Hill

Sarah Krichels Goan <krichels@hotmail.com> Mar 8, 2020 10:37 AM
Posted in group: **Planning Board**

Dear Portland Planning Board,

As a longtime resident of Portland's East End, I am writing to convey my deep support for the historic district. Please vote in accordance with the desires of the residents of this neighborhood, not developers.

Thank you.

Sarah Krichels Goan
54 Walnut St

Google Groups

Munjoy Hill Historic District

kathleen bender <kabendr@yahoo.com> Mar 7, 2020 11:44 AM
Posted in group: **Planning Board**

Good Morning,

Once again, I am writing to the Planning Board.
Please recommend the City Council approve the proposal suggested by the Historic Preservation Board Historic. Historic Preservation made a unanimous decision in their recommendation.

Property owners have had enough time to understand the intent of a Historic District for Munjoy Hill. It is time for final decision, once and for all.

Thank you for your attention to this.

Kathleen Bender
11 North Street LLC

Google Groups

Munjoy Hill Historic District

Karen Harrison <karen.harrison.me@gmail.com> Mar 7, 2020 2:00 PM
Posted in group: **Planning Board**

I have lived at 34 Munjoy Street (District 1) since 1993. I love my street, and I love my neighborhood, in which people are quick to help one another and respectful of differences. Over the years, I've seen my neighbors modify their houses in many different ways to make them more enjoyable, economical or useful. I like some of the changes and dislike others, but all of them represent people making the best decisions for themselves and their families.

I'm strongly opposed to any historic district designation for this neighborhood for these reasons:

- Historic designation restrictions on additions, renovations and demolitions will prevent people from making the best design and financial decisions for their families and their futures.

- Historic designation restrictions will reduce the energy and vitality of the neighborhood and discourage or prevent the use of high-quality, cost-saving contemporary materials and methods that reduce energy use, such as contemporary glazing products that look different than older glass.

- Historic designation restrictions have a disproportionate financial impact on people with fewer resources. This includes young people using "sweat equity" to fix up a dilapidated building, older people on fixed incomes, and good landlords who try to keep rents reasonable while maintaining their buildings as cost-effectively as possible for their tenants' safety and comfort.

- The historic district guidelines for renovations may not allow homeowners to conform to contemporary building safety standards, for example in the size of egress windows. This appears to be in conflict with Portland's rightful emphasis on tenant safety.

Some additional thoughts:

- Behavior can't be regulated through planning and zoning. Neighborhoods are better when people see each other coming and going – and I'd rather not look at garage doors when I'm walking around -- but if you allow garages to be built, locating them at the side or back of a building doesn't force people to interact with their neighbors if they typically leave and enter their residence through the garage.

- It's always unfortunate when someone loses a wonderful view, but that happens everywhere, and that's why houses and apartments on Eastern Prom (or, for that matter, Central Park West) cost more. It's unreasonable to attempt to freeze all of the current views, many of which are enjoyed by residents whose buildings blocked others' views when they were built.

- It seems that 118 Congress Street has become the poster child for people who are upset about development on the Hill. But there are other ugly buildings on that side of Congress between Munjoy and St. Lawrence, such as the MHNO building at 92 and the bleakly utilitarian Cummings Center and fire station at 134. And 118, for all of its faults, includes street-level retail.

- At a community meeting a couple of years ago, we watched a slide show on the history of development on the Hill. I'm pretty sure that around the turn of the last century, the people living in houses built 50-75 years earlier were horrified by the arrival of the apartment buildings now considered quaint and historic.

I respect the depth of knowledge and tremendous love for Portland's older buildings shown by the staff of Greater Portland Landmarks and the City's Historic Preservation team, but I'm afraid that "if you've got a hammer, every problem looks like a nail." I don't think that the problems presented by development in this neighborhood can be reasonably and fairly addressed by an historic district designation. I'd rather not live in a neighborhood of compulsory architectural styles, frozen during a random year when photographs happened to have been taken. I'd like to continue to live in a vibrant, energetic, live-and-let-live neighborhood.

Thanks for listening,
Karen Harrison

February 2, 2020

Planning Board,

In preparation for the workshop on Feb 11th, I would like to share the following.

1. A 12th Historic District on Munjoy Hill will do NOTHING to address the concerns from citizens about zoning matters such as building height or size.

2. A 12th Historic District on Munjoy Hill will do NOTHING to address the concerns from citizens about demolition. In fact, if a non-contributing building in the district, it would be easier to demo than it is today. And, a contributing status does not stop demolition either.

As you have heard during public comment, many who support a 12th district believe, mistakenly, that zoning changes will result by adding another historic district. They've been sold a lie by a small group of neighbors who want to kill diversity of architecture and diversity of people on the hill.

Also, and I know you are already aware, a 12th Historic District will do nothing positive to help the City attain its goals as it relates to addressing the housing crisis or as it relates to the 2030 goals of making our city more environmentally responsible.

Our neighborhood and the entire City need sensible pro-prosperity zoning for the future. Please focus your time on the Recode and cease entertaining discussions about revising the Hill's R6 again (lose the conservation overlay once and for all) or an unnecessary and unwanted Historic District.

Thank you,

Anne E. Manganello
84 Quebec Street
Portland, Maine 04101

Google Groups

December 10th Historical District Proposal

John Whitehouse <jtwh888@gmail.com> Dec 14, 2019 11:14 AM
Posted in group: **Planning Board**

Dear Planning Board,

I attended the Workshop on December 10th concerning the Historical District Proposal on Munjoy Hill presented by Deb Andrews. I implore the Planning Board to reject this proposal unequivocally. I have attended two previous workshops moderated by Deb Andrews and I appreciate the questions asked by the Planning Board this past Tuesday, because it exposed this proposal as not thorough and disjointed at best. At worst, it is misleading the public and hiding the true cost and negative impact such a proposal would have on property owners like myself for years to come.

I find it misleading because each workshop I have attended is rife with a small sample of the property owners emotionally expressing their concerns with the demolition of old buildings to be replaced by high rise condos or some other development. On Tuesday one woman depicted this visually with a poster board illustration. Another woman cried. I left after two hours so I am not sure if anyone corrected the public but there is already an ordinance concerning new development and demolition on Munjoy Hill. This proposal has nothing to do with the repeatedly stated concerns of the property owners in attendance. Deb Andrews has heard these concerns at other workshops and sat silent to inform the public of the already existing ordinance. That to me is deliberately misleading done to create support for this proposal in order for it to pass. That is taking advantage.

In reality, this proposal will create extensive delays and obstacles in an already lengthy and convoluted system. The fact is the majority of the properties on the Hill including mine on North Street are old. They need work and repair, and that will invariably lead to new construction that can alter the appearance from the original structure. In addition, if I want to go up a floor or increase my square footage, that is my right as a private property owner and a tax payer providing the life blood to this City. Tastefully done new construction enhances a neighborhood, and a mix of old and new is attractive to an area. Plus there are enough existing measures and red tape to review any development, which is why there has not been many recent permits already. That is not good for a city, and another layer like this would make it far worse.

To create a panel, (that has not been talked about by Deb Andrews to the public) to subjectively make decisions on such things will trap the proposed district in a time warp of untouched buildings. Why would I improve my property if I am locked in the ridiculous restrictions of not one time period for decades, but several? The 19th century, early 20th century, and 1950s? What? That is unrealistic and unfair given life and safety concerns and codes, and the need for new development.

Finally, the holes in this proposal are glaring. They were exposed by one member of the planning board who politely said that his questions might be "unanswerable" when asking what data there was about the level of development after the existing ordinance was past. Or the proportion of properties in each time period, or the impact. They are answerable questions and I know at my company, my proposal would not be taken seriously if I had such a lack of information as Deb Andrews did. This proposal is terrible and unnecessary. Please reject it so the neighborhood can grow and thrive. Do not let it decay.

Regards,

John Whitehouse
18 North Street

Google Groups

Munjoy Hill Historic District

Markos Miller <markossmiller@hotmail.com> Jan 31, 2020 10:33 AM
Posted in group: **Planning Board**

Planning Board Chair Sean Dundon and members of the Planning Board,

I'm writing to share my concerns about the proposed Munjoy Hill Historic District. This proposal does not adequately address the needs of Munjoy Hill or the City as a whole. Furthermore, the proposed historic district would exacerbate the housing crisis our city is experiencing, and would result in making it harder for the workers, families, and diverse demographics Portland needs to thrive.

I think it is important to step back at this time and recognize the historic district proposal has gained traction because of inadequate neighborhood planning in the past. As a former president of the Munjoy Hill Neighborhood Organization, I know that hill residents can take their neighborhood issues very seriously. I've found that a robust, transparent, and participatory planning process can build understanding, direction, and support for initiatives (Adams School, Franklin Street). Conversely, processes the are rushed or advanced by a subset of the community result in pre-determined 'solutions' prescribed to a symptom of a more complex problem, and/or resistance in the community. This is what is happening with the historic district proposal.

Proponents of the historic district are claiming that this 'solution' will address all sorts of challenges the neighborhood is experiencing: tear downs, condo-conversions, "ugly" buildings, lower-income residents being pushed out by wealthier newcomers, loss of rental units, etc. It's perceived as the silver bullet against further gentrification of the neighborhood. We know it is no that simple. HD could even accelerate gentrification. If this HD is instated, many of its current supporters will be back protesting the next time there is a tear down or "ugly" building proposed, blaming the system for selling out HD. It's not the fix-all people wish it would be.

There needs to be some analysis before any kit-of-tools is proposed, particularly with HD.

1. There has been no analysis of the effects of an historic district on Munjoy Hill on rents, home costs and values, repair and maintenance, etc. Advancing policy with no due-diligence is not responsible behavior.
2. The community has lumped all the challenges the neighborhood is experiencing into one without understanding the nature of each issue and their interconnectedness.
3. This is a larger planning issue that needs to be addressed holistically. The ReCode process presents one appropriate venue for the development of strategies to establish, maintain, and enhance the neighborhoods that will be desirable to current and future residents. A pro-active, neighborhood based-planning process based on data sharing and collaboration between residents and professionals would provide a transparent, participatory framework to establish a baseline support for neighborhood vision. This is how we should be approaching core issues about the livability of our neighborhoods.

Please vote to not recommend passage of the proposed Munjoy Hill Historic District to the City Council. Furthermore, express to the Council the flawed nature of this proposal and the need to address the underlying issues behind it through the ReCode process and community wide engagement of the neighborhood.

Thank you for your service,

Markos

Markos Miller

17 Atlantic St
Portland, ME
04101
(207) 807-2681

February 4, 2020

Dear Chair Dundon and members of the Planning Board,

I am writing to encourage you to support the designation of the proposed Munjoy Hill Historic District and to recommend its designation by Portland's City Council. The effort to research, document and develop this historic district nomination has been lengthy and thorough. City Council members "instructed staff to move forward with the necessary documentation" for a Munjoy Hill historic district(s) at the June 2018 Council meeting where they adopted zoning amendments including a Conservation District Overlay for the R6 zone on Munjoy Hill.

More than a year passed before the documentation was completed and 6 members of the Historic Preservation Board formally nominated the Munjoy Hill Historic District. The Historic Preservation Board held 4 workshops and 2 site walks over a number of months. City staff held 4 neighborhood meetings to provide information about what a historic district designation is and to answer questions from the public and also held numerous individual meetings with members of the public. The historic district nomination and 6 individual Landmarks were approved unanimously by the Historic Preservation Board.

The documentation for the Munjoy Hill Historic District is detailed and includes both a historic context statement addressing the several areas of significance represented in the district and property-by-property photographs with individual descriptions. All this information is available to the public online. The documentation clearly shows that the historic district meets the City's ordinance designation criteria found in Sec. 14-610 and the integrity criteria in Sec. 14-611.

In addition to confirming that the Historic Preservation Board's district recommendation is in conformance with the historic preservation ordinance's designation criteria, the Planning Board needs to consider the relationship of the proposed designation to the goals of the City's Comprehensive Plan. Without question, the historic district proposal meets the Historic Resources goals of the Plan as staff has ably demonstrated. To quote the plan: "Identifying and preserving historic resources stabilizes neighborhoods, makes economic sense and contributes to a distinct sense of place that helps make Portland such a desirable place in which to live, to visit, and to invest."

Additional relevant goals in considering how this historic district proposal meets Comp Plan goals include providing affordable housing and meeting sustainability goals. Munjoy Hill has historically provided a dense level of housing, much of it affordable housing. Maintaining these units through a historic district designation and increasing numbers of units through compatible renovations and additions is a much better strategy for retaining affordable housing than allowing buildings to be demolished and replaced by unaffordable units that is the current norm.

Regarding sustainability goals in the Comp Plan, retaining buildings rather than demolishing them is a far better "green" practice because it preserves the energy already

embodied in these buildings rather than expending additional energy for new construction. Historic buildings can be retrofitted to incorporate energy efficient systems and take advantage of new energy technologies such as solar power.

The Vision Statement of the Comprehensive Plan is based on six values including being Authentic. Not every part of Portland can achieve all of the values of this Vision Statement or all of the goals of the Plan equally well. Munjoy Hill is a unique section of our city that is rapidly changing. The areas included in the proposed boundaries tell the stories of the people who established and worked at the Atlantic & St. Lawrence Railroad and Portland Company in the mid-to-late 19th century, of residential development prompted by the Great Fire of 1866, of successive waves of immigrants and of early African American residents who contributed much to the development of our City.

Designating the area of Munjoy Hill within the proposed district boundaries can help maintain the Authentic quality of our City and is merited as a means to:

- "…celebrate our city's incredible history."
- Maintain and enhance "the uniqueness and integrity of our neighborhoods." and to
- "…maintain our character through preservation, innovation, and excellence in design for the built environment."*

Thank you for considering these comments.

Sally Oldham
118 Congress Street
Munjoy Hill

* These phrases are quoted from page 6 of "Portland's Plan 2030."

Google Groups

Munjoy Hill historic district being pushed for wrong reasons

Zack Barowitz <zbarowitz@gmail.com>
Dec 19, 2019 7:28 AM
Posted in group: **Planning Board**

Dear Chair Dundon:

At the recent Planning Board workshop I found it somewhat alarming that those who testified in favor of a Munjoy Hill historic district did so on the basis of preserving the social fabric of the neighborhood. It seems that no one even bothered to make the case for *historic* preservation but instead railed against a vague and nebulous concept of change and used the physical landscape as a synecdoche. While many of the pleas were impassioned, they would seem quite tertiary to the question of physical preservation on the basis of architectural, historical, or cultural significance.

And it was unfortunate that at least one of the testimonies evoked the term “people from away.” It stirred in my mind other histories of neighborhood discrimination; including a family story of how when my parents were first looking for a summer rental in the Portland area a realtor subtly but firmly steered us away from Prout’s Neck on the basis of it being an “exclusive area” which quaintly meant “no Jews.” We ended up on Peaks Island and I moved to Portland thirty years later.

While Munjoy Hill is undoubtedly a physically charming neighborhood, but the assertion of its architectural significance as the location of several booms of development of workforce housing is fairly hollow. As was the case of designating Forest Ave buildings of doubtful aesthetic and historic significance, a Munjoy Hill historic district would be a case of diluting the brand of Portland as a place of remarkable historical significance. An accumulation of gentrified 19th and early 20th century workforce housing doesn’t deserve special recognition any more than similar buildings that don’t happen to be on Munjoy Hill or other

examples of workforce development which makes up the majority of the city. Portland has a lot of old housing stock.

What we are seeing, and the proponents have been quite open about it, is historic districting is being used as a back door to over-rule zoning. We are getting to the point that anyone can make the case for anything being “historic.” Sagamore Village is historic WW2 housing, should that preserved? My neighborhood has the first houses built when the city expanded into the swamp, should those be preserved? What about houses built during the ‘80s building boom, should we designate those before they fall apart and become lost forever?

It makes me wonder if during previous building booms whether people bemoaned the loss of pastoral character. Why is this the moment in history when the Hill is perfect and it must be set under glass? There is no imminent threat from a Robert Moses or Baron Haussmann. About 20 years ago there was a movement to preserve Levittown; so they found *one* house that had had minimal changes. They did not cast all 20 thousand homes in amber (much less seek to enforce deed restrictions on skin color).

Portland must adapt to the way we live now. And so we can also look at the matter as if it were in reverse: If an 8-unit $500K per/ condo is torn down and replaced with a $1.5 single family house would anyone call that progress? And who is to say that by enacting design restrictions are we not preemptively destroying some important future architecture? Let time be the judge.

A Historic District is being done for the wrong reasons and will make housing more expensive, not just on Munjoy Hill, but throughout Portland.

--
207-838-6120

917-696-5649
ZacharyBarowitz.com

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Google Groups

Public Comment: Munjoy Hill Historic District - Planning Memo deficiencies

George Rheault <george.rheault@gmail.com> Feb 5, 2020 11:52 AM
Posted in group: **Planning Board**

The Planning Board should absolutely reject the proposed Munjoy Hill Historic District.

It is outrageous that as Portland stagnates economically due in large part to its high cost of housing, within the last 4 years the City Council has decided to deploy a huge chunk of its planning department staff time to coddling and mollifying a small subset of property-owners sitting on top of some of the most valuable land/buildings within the city limits while leaving renters and other low-income residents to fend for themselves.

Various arguments for the historic district are set forth in a Deb Andrews staff memo, dated December 3, 2019 (submitted to the Board for the December 10, 2019 workshop on the proposed district) however this memo was full of unsubstantiated conclusory statements and omissions.

At a minimum, the Planning Board should demand that the planning department provide the necessary information to make sense of the various claims made by Ms. Andrews in her advocacy of this new proposed historic district.

Below is a non-exclusive list of the kinds of things that Ms. Andrews should place into the public record in order to ensure a proper and adequate review of the proposed policy actions.

1) Due to staff "error" no recording of the July 10, 2019 HPB workshop was made. Despite a number of requests in 2019 that a complete and accurate summary of that workshop be created for the public record (including a list of those who provided public comment), no such summary or meeting minutes have been provided. It is particularly unfortunate that no recording exists as this workshop set the entire tone for the remainder of the HPB's biased and myopic rubber-stamping review of the proposed historic district.

2) Ms. Andrews should provide a full listing of the various addresses/projects (including her unit counts) that she used to arrive at her "325 new units of affordable housing were built" calculation on page 9 of her memo (excerpt below). This is essential information to have to corroborate the clear implication that Ms. Andrews is attempting to convey, which is that historic district legislation has a neutral or even positive impact on affordable housing production. But it is impossible to test Ms. Andrews on this point because we have no ability to contextualize the projects she is pointing to as evidence for her supposition. One primary concern is whether she conflated planning "approvals" with "built" as well as, among other things, whether she conflated "new" with "pre-existing but expensively renovated" (for example in the case of the Butler School apartments). Every affordable housing project, due to the highly regulated nature of the affordable housing industry, has a unique story which is inevitably (without question) complicated by historic preservation requirements even if such requirements do not completely destroy their viability. So citing a large sum of "affordable housing" units without being able to evaluate the likely long and tortured journeys taken to complete "affordable housing" projects feels very much like a defensive effort to obscure rather than illuminate the impact of historic preservation on contemporary affordable housing production in Portland. Furthermore, the long list of additional housing types cited suggests there is possibly another considerable sum of uncounted affordable housing being created under these categories when in fact, planning staff are quite aware that virtually none of these categories have yielded "affordable" housing during the last five years since virtually all of these projects would trigger some level of planning staff review/oversight. I am quite sure that the 10 Exchange Street condo project, for example, while an excellent and welcome "conversion of upper floors of existing historic commercial housing units" did not result in much or ANY "affordable" housing.

"During the last five years, approximately 325 new units of affordable housing were built within Portland’s historic districts. That figure does not include conversion of upper floors of existing historic commercial structures into housing units, the creation of additional units within existing residential structures, or the conversion of existing garages or carriage houses into residential units."

3) On page 11 of her memo (excerpt below), Ms. Andrews cites "numerous" instances of "solar panels, heat pumps or other alternative energy measures" being permitted (if not encouraged) in historic districts. It would be great to see a listing of these by address along with date of installation. In the case of solar panels, it is especially important to understand when the HPB or planning staff have EVER approved ANY solar panel installation that is visible from the public frontage on a structure designated as historic and what hurdles and hoops were required in order to conform that installation with the onerous and arbitrary "compatibility" ethos of our historic preservation ordinance. Perhaps many such solar panel installs have taken place, but if Ms. Andrews asks the public to take comfort in her claims, she should not hesitate to identify very clearly where this magnanimous toleration of 21st century energy efficiency measures has recently occurred so we can see for ourselves.

"Portland’s historic preservation ordinance does not prohibit the installation of solar panels, heat pumps or other alternative energy measures, as evidenced by numerous installations in both residential and commercial historic districts."

4) On page 12 of her memo (excerpt below), Ms. Andrews informs the public that "a number" of buildings have had their classifications changed over the years. Again, she puts this out there to suggest a generous flexibility within the preservation regulatory regime. But it is impossible to judge her conclusion without (A) having the precise number (is it in the single-digits?) and (B) the specific project addresses used to arrive at the number. The public deserves to have the backup data here to better understand the context of Ms. Andrews claims which may very well turn out to be the exact OPPOSITE evidence of the vaunted flexibility that Ms. Andrews claims to wield under her expansive regulatory authority.

"Since the ordinance went into effect in 1990, a number of buildings in historic districts have had their classification changed."

Google Groups

Hello, Affordable housing is enough of a problem without taking, I presume, so many blocks out of possible housing development. Dave Kelly.

Kelly, David <david.c.kelly@uconn.edu> Feb 5, 2020 6:07 PM
Posted in group: **Planning Board**

Google Groups

Against historic district on Munjoy Hill

Emily Liebling <eliebling@gmail.com> Feb 5, 2020 7:34 PM
Posted in group: **Planning Board**

Planning Board:

I am opposed to the creation of a historic district on Munjoy Hill. I live in the West End, formerly in the historic district, and currently just outside of it.

The restrictions on building improvements are extremely cost-prohibitive in historic districts. I am a teacher on a tight budget. I care about the environment and my carbon footprint. I also care about affordable housing — both low-income housing and housing that is affordable to working class families.

For all of these reasons, I am against a historic district on Munjoy Hill.

Thank You,
Emily Liebling
54 Tyng St
Portland

Google Groups

Munjoy Hill Historic District

Francesca <cesca.gs@gmail.com> Feb 5, 2020 3:57 PM
Posted in group: **Planning Board**

Dear Planning Board Members,

The Munjoy Hill Historic District proposal is a fabulous opportunity for our City. It will assure that the historic character of Portland will be preserved. Please vote in favor of it.

Francesca Galluccio-Steele
22 Clifford St
Portland, ME 04102
cesca.gs@gmail.com

Historic Districts are not the cause of "Affordable Housing"

Zack Barowitz <zbarowitz@gmail.com> Feb 6, 2020 3:39 AM
Posted in group: **Planning Board**

Dear Chair Dundon and members of the Planning Board:

It is somewhat curious that those making the case for a Munjoy Hill Historic District are now focusing on affordable housing.

While there are some aspects (like tax credits) of historic districting and listing that are compatible with affordable housing the matter is far too complex on the whole to make the assertion based on the mere evidence of correlation. It is likewise confusing that our language does not provide a shorthand distinction between "Subsidized Affordable Housing" vs "housing that is inexpensive and affordable to those making 40%-80% of AMI but is market rate, or available on the open market, or at least an existing tenancy." Owning historic property is a luxury for those with the time and resources to comply with what is often a seemingly arbitrary and inconsistent set of guidelines. There is scant evidence to assert that Historic Districting causes housing prices to lower.

Ultimately, the production of both types of affordable housing have far more to do with what building types are available and what is allowable under the land use code. Munjoy Hill is already a ritzy neighborhood, a historic overlay will cover it with a silk stocking.

Sincerely,
Zack Barowitz

- Historic Districts help manage changes to buildings and neighborhoods as they are rehabilitated to meet 21st century needs. BUT in GOOD WAY?

- Historic preservation is a key part of the City's 2017 Comprehensive Plan, as is affordable housing. Many historic buildings include existing affordable housing units. Retaining these units, rather than replacing them with costly new condominiums, is an important means to meeting affordable housing needs on Munjoy Hill.

- Historic preservation and affordable housing are compatible: More than 400 new housing units were approved or built in Portland's historic buildings and districts in the last 5 years, and nearly 75% of those units are affordable housing units.

- The preservation or reuse of these buildings helps to fulfill City Comprehensive Plan goals to adopt sustainable building and land use polices.

--
207-838-6120
917-696-5649
ZacharyBarowitz.com

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February 5th, 2020

To the Planning Board;

Munjoy Hill does not need restrictive historic preservation. We need more creative, forward looking policies that address real issues in our neighborhood and city rather than restrictive policies that put aesthetics ahead of other community values. This is not something that the hill as a whole wants.

This plan elevates historic preservation over other values we ought to promote. For example, within this proposed ordinance there is no way to balance preservation against environmental sustainability. Sustainability is, of course, supported by not tearing down buildings for no good reason. But in certain cases sustainability may require this; in adopting policies that help drive up prices even further, we continue to force those who work in Portland further out into the suburbs and other towns. This brings more traffic congestion and pollution, which could be alleviated by smart planning of new housing on the peninsula. On Munjoy Hill we have many small single family houses providing shelter to 1 or 2 people that are occupying plots of land which could have 12-16 units built on them – or more, if we did not have such strict height restrictions in our zoning. This kind of concern needs to be taken into account when the city reviews the zoning; putting in a historic district now makes this kind of thoughtful review much more difficult if not impossible.

The proposed districting also effectively prohibit solar panels and solar hot water for most residents (they're allowed, but only if not visible from the street). This is a completely ridiculous restriction even if you are in favor of historic districting for aesthetic reasons. Solar hot water or panels hardly impact the historic aesthetics of a building – less certainly than having modern cars on the street or in our driveways, or modern lightbulbs in our streetlights and over our front doors. In requiring a particular aesthetic, we prevent smartly designed passive solar buildings as well. In a time of increased urgency to slow climate change we should not be adding restrictions on residents doing a small part for sustainability.

My partner and I plan to live on the hill for the next 30 years, at least. However, with the proposed district, **we may not be able to afford to maintain our property**. Also, we want the city to consider this plan in a longer term context than what a small number of residents want now, especially when many others will be here and impacted by this district much longer. **We also urge you to think about the way that Munjoy Hill can contribute to addressing the issues facing the city as a whole**. Munjoy Hill is lovely, and we love it here, but it is only one small part of a city that needs to be thought of as a whole in planning for the future.

Sincerely,

Lauren Ashwell
8 Emerson St, Portland

Google Grou

Munjoy Hill

PC12

Lori Rounds <lor
Posted in group: **P**

To the Planning

I am writing to

Proponents of the Historic District claim that an Historic District will solve multiple alleged problems on the Hill including demolitions; construction of big boxy condo buildings; loss of rental units and workforce housing; and loss of neighborhood character due to new construction designs not compatible wi existing architecture. However, a comparison of existing Overlay District rules with Historic District rules shows that the primary concerns of proponents not be resolved via implementation of an Historic District:

- **Demolitions:** allowed in Overlay and Historic Districts, plus non-contributing structures in Historic Districts can be demolished "as of right" without the same demolition delays of the Overlay District
- **Building Height & Setbacks:** identical in Overlay and Historic Districts
- **Workforce Housing:** identical in Overlay and Historic Districts - construction of three or more dwelling units requires provision of workforce housing
- **New Construction Design:** Overlay District subject to Planning design criteria; Historic District subject to Historic Preservation criteria

Additionally, the Historic District will impose more restrictive and costly maintenance and renovation requirements on homeowners. For example, exterior materials must be replaced in kind (such as wood windows and siding replaced with wood products) rather than using less expensive vinyl or other products that meet homeowner's budgetary needs. In addition to City-required Building Permits, homeowners in an Historic District must obtain approval from the Historic Preservation Dept. for replacement in-kind or for permission to substitute non-in-kind materials. Increased maintenance and repair costs will be borne by homeowners or passed along to renters in the Historic District. Alternatively, Historic District property owners may decide to delay or forego repairs and maintenance due to increased costs. Any homeowner is free to apply for Individual Historic Landmark status of their property, which allows them all perceived benefits of Landmark status while not imposing Historic District restrictions and costs on their neighbors.

The proposed Historic District on Munjoy Hill is a gerrymandered area superimposed on the existing Overlay District, and will not solve the alleged problems claimed by Historic District proponents. The majority of complaints are related to zoning, design and housing issues. Munjoy Hill and in fact the entire City of Portland is best served by a comprehensive review and analysis of issues, and implementation of a strategic solution. Fortunately, the City is undertaking the ReCode project which will provide much-needed analysis and Code changes that will address multiple zoning and planning issues and benefit all of Portland. Rather than imposing an additional set of rules on a portion of Munjoy Hill, I urge the Planning Board and City Councilors to reject the proposed Historic District for Munjoy Hill and instead support the recommendations that will result from the ReCode effort.

Regards,

Lori Rounds
47 Monument Street

PC13

February 5, 2020

To the Planning Board and Portland City Council;

Please vote **against** the proposed historic district on Munjoy Hill. The increased costs on building maintenance will drive up rents in the area, when rents are already well above what the average worker in Portland can afford. Those who purchased property on the hill before the recent boom will not be able to afford to meet the extra costs for siding, windows, and application fees. It is not appropriate to increase the costs for maintenance on properties by appealing to the history of an area that was working class! The city needs to consider ways to make housing more affordable, and this proposed historic district will work against that.

Sincerely,

Lynn M. Kuzma
10 Emerson St. & 10 A Emerson St.
Portland ME, 04101

Google Groups

Munjoy Hill Historic District

w.valzania@munjoyhill.org <w.valzania@munjoyhill.org> Feb 7, 2020 7:17 AM
Posted in group: **Planning Board**

Dear Chairman Mazer and Portland City Planning Board members,

I write to you as presiding President of the Munjoy Hill Neighborhood Organization in regard to the Historic District designation that is pending your approval. The MHNO Board of Directors has unanimously voted to support the proposed Munjoy Hill Historic District and the six individual landmarks as nominated by the Historic Preservation Board on November 20, 2019.

We urge the Planning Board to take into consideration the substantial documentation acquired and recorded by the City Planning Staff with the assistance of the Historic Preservation Board, favoring the adoption of the Munjoy Hill Historic District designation, including the six landmarks. We strongly feel that Munjoy Hill, having played an important role in the history and evolution of Portland, deserves to take its place with the other designated Historic Districts that have served our city well.

Thank you for the work that you do on behalf of the residents of Munjoy Hill, and the City of Portland.

Respectfully Submitted,

Wayne Valzania

Wayne Valzania, President

Munjoy Hill Neighborhood Organization

Celebrating 40 Years of Community Service

92 Congress Street

Portland, ME 04101

207-274-4918

Join Us !! www.MunjoyHill.org

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Letter not posted in the records of the 12/10/2019 meeting

George Carhart <gscarhart@gmail.com> Feb 6, 2020 6:34 PM
Posted in group: **Planning Board**

Dear Planning Board Members,

Multiple copies of this letter were handed to the Planning Board at the 12/10/2019 panning board meeting, however it has not been included in the online records of this meeting. I find this very disturbing and hope that this will be corrected.

Dr. George Carhart
7 Lafayette St
gscarhart@gmail.com

I am a historian and have worked in historic preservation both in the US and Europe.

I am a 23 year resident of the City of Portland. My wife and I have owned our home on Lafayette St for 20 years. Our house was built in 1849 and is one of the oldest houses still standing on Munjoy Hill.

I am in support of a historic district on the East End.

I would ask the council to consider a couple of points:

There are petitioners on both sides of the Historic District argument who would have us believe that it is all about affordable housing. Those in favor think that a historic district will bring back, or maintain, the few remaining affordable units on the hill. Those against would have council believe that the petition is only about stopping them from fulfilling their wish to build more units on the hill, and therefore fulfill the city's plan for affordable housing. This is a myth on both sides, the affordable housing of the late 1990's has long since gone away. Neither a push to increase density, nor a historic district is going to bring affordable housing back to the hill.

The historic district is not about affordable housing - it is about maintaining the historic landscape of the East End. The city has long since protected the upscale large brick houses of the West End and the buildings of the Old Port. In the past it has, however, continually avoided the idea that the vernacular architecture that is indicative of the hill has any true historic value. The history of architecture in Portland is not just that of upscale architecture, such as the plethora of John Calvin Stevens homes that populate the West End, but also the vernacular architecture that is found on Munjoy Hill.

Many of the houses on the East End predate the late 19th and early 20th century architectural baubles that are already protected by the city. We are lucky in that neither the slum removal of the 1950's and 60's, nor the urban renewal of the 80's, has had a large impact on this historic working class neighborhood. There are few New England cities that are so fortunate. Where the West End tells a story of the wealthy

businessmen of the city, the East End tells the story of the city's working class that underpinned the wealth of the city. This is a story worth preserving.

Lastly, The City of Portland is a thriving city today, not because of the industrial aspects of the city and harbor of the 19th century or modern tech industries, but because of its tourism draw – hence the large number of hotels and short term rentals. Tourists come to Portland for a glimpse into New England history through the quintessential architecture that the city still possesses. If we allow this historic architectural cityscape to be eroded, then our main economic draw will disappear, leaving us to become just another sad shadow of a onetime important harbor city.

Thank you for considering to my thoughts,

George Carhart

--

Dr. George S. Carhart, Ph.D
Historian of Cartography
and Early Modern Europe
Antiquarian Map Consultant
Historic Research Consultant

7 Lafayette Street
Portland
ME, 04101
USA
(207) 766-1517

PC16

Google Groups

Munjoy Hill Historic District

Wayne@redhookdesignalliance.com <Wayne@redhookdesignalliance.com> Feb 7, 2020 7:37 AM
Posted in group: **Planning Board**

Dear Chair Mazer and Members of the Portland Planning Board,

My wife and I reside at 27 Merrill Street on Munjoy Hill. I am writing to express our support for the adoption of the proposed Historic District designation, including the additional six Landmark properties. I feel this designation is an important tool in responsible management of the inevitable growth that we are experiencing, not only on Munjoy Hill, but the City of Portland at large.

Thank you for the work that you do on our behalf and for your careful consideration of this issue,

Wayne Valzania

27 Merrill Street

Portland, ME 04101

PC17

Jennifer Munson <jmy@portlandmaine.gov>

Munjoy Hill Historic District

1 message

carolyn swartz <carolynswartz@gmail.com> Fri, Feb 7, 2020 at 10:54 AM
To: planningboard@portlandmaine.gov
Cc: Belinda Ray <bsr@portlandmaine.gov>, Barbara Vestal <vestal@chesterandvestal.com>, Barbara Vestal <B.Vestal@munjoyhill.org>, Ben Thornton <benthornton21@gmail.com>, "Carol M. Connor" <Balsamique@live.com>, Maggy Wolf <MSWNola@gmail.com>, Mary Casale <dirtgirl1@aol.com>, Michael Brennan <Brennan.Michael100@gmail.com>, Michael Brennan <M.Brennan@munjoyhill.org>, Ned Chester <chester@chesterandvestal.com>, Ned Chester <Ned.Chester@munjoyhill.org>, Nina Schmir <ninasch75@gmail.com>, Peter Blackstone <Peterblackstone17@gmail.com>, Peter Murray <pmurray@gwi.net>, Wayne Valzania <Wayne@redhookdesignalliance.com>

To Chairman Mazer and members of the Portland City Planning Board.

I am writing to urge you to approve the Historic District designation proposed for Munjoy Hill.

The character and social fabric of Munjoy Hill have already been compromised and remain critically threatened by developers whose massive condo projects, designed without regard for visual harmony and blending, are at odds with the character of this 19th century working-class neighborhood.

Wanton demolition of viable homes, along with their replacement by luxury condos, is not only visually jarring. It's also environmentally unsound, and detrimental to the fabric of our mixed-income community.

Our simple wood-frame houses speak as eloquently to Portland's heritage as the brick townhouses of the West End. While less elegant, our neighborhood is equally worthy of protection.

Please vote to preserve the integrity of Munjoy Hill: adopt the proposal to designate Munjoy Hill a Historic District.

Sincerely,

Carolyn Swartz
27 Merrill Street

Carolyn Swartz | Writer/Director | 917.714.5743 | view my films here

Carolyn Swartz | Writer/Director | 917.714.5743 | view my films here

Google Groups

Please approve Munjoy hill historic district.

Ejkoch Gmail <ejkoch@gmail.com> Feb 7, 2020 9:21 AM
Posted in group: **Planning and Urban Development**

To the Portland city planning board:

As a 40+ year resident of Munjoy hill, I implore you to approve the Munjoy Hill historic district this Monday. I believe passage of the proposal at this time is critical to the integrity of the city streetscape, and the functional health of our neighborhoods, as it has been on the west end.

Thank you for your attention to this proposal, and the work you do for the city.

Erna koch
81 vesper st
Portland

Meow, and the world meows with you.

Hiss and you hiss alone. ◈

PC19

Google Groups

proposed Munjoy Hill historic areas

Linda Tyler <ltyler8@gmail.com> Feb 7, 2020 9:03 AM
Posted in group: **Planning Board**

Greetings.

I am not only in support of your adoption of the proposed Munjoy Hill historic districts and sites, I plead with you to adopt them!

We in this old neighborhood that we can still manage to love in spite of the so-far changes feel pretty desperate.

Please consider this neighborhood to be worthy of saving.

When I see tourists walk our streets with some puzzlement in their eyes as to why they were directed here to see new, box-shaped condominiums, or when they stop one of us to ask about the neighborhood, its likely further destruction becomes a sad probability.

I ask you not to go the way of some other towns and cities and destroy our character and our coastline—this is Maine. Thank your for your attention.

Sincerely,

Linda P. Tyler
52 Saint Lawrence Street
Portland, ME 04101

PC20

Google Groups

Munjoy Hill Historic District

Mark Holden <mark.k.holden@gmail.com> Feb 7, 2020 10:16 AM

Posted in group: **Planning Board**

Please know that I fully support the creation of the Munjoy Hill Historic District.

Mark Holden
37 Saint Lawrence Street
Portland Maine
Sent from my iPhone

PC21

Google Groups

Munjoy Hill Historic District

Michael Englert <michaeljenglert@gmail.com> Feb 7, 2020 10:18 AM
Posted in group: **Planning Board**

Dear Chairman Mazer and Members of the Portland City Planning Board:

We write in support of the designation of the Munjoy Hill Historic District and six individual landmarks nominated by the Historic Preservation Board.

Munjoy Hill deserves the protection of its historic and aesthetic resources, as enjoyed by the other historic districts in the City. Time and again, not only in Portland but in cities across the country, it has been demonstrated that the protection of a community's heritage enhances its quality of life and economic success. Munjoy Hill, in particular, embodies the character and evolution of Portland's diverse working citizenry, an authentic part of our history that we must preserve.

Sincerely,

Michael and Linda Englert
193 Sheridan Street
Portland, ME 04101

MichaelJEnglert@gmail.com
LinEnglert@gmail.com

PC22

Google Groups

Munjoy Hill Historic District

Richard Rollins <dicrollins@aol.com> Feb 7, 2020 10:27 AM
Posted in group: **Planning Board**

Dear Chairman Mazer and Portland City Planning Board members,

I write to you as a former resident of Munjoy Hill concerning the Historic District designation currently pending your approval. Although I acknowledge my interest is now mainly nostalgic, - isn't that much of what history is? I lived on the Hill for 15 years in the 1940s and '50s, and attended Shailer, Emerson, and Jack Jr. High schools. My parents and my maternal grandparents lived on the Hill before them. We personally knew the Ferguson family (see the book: Munjoy Hill Portland's Scenic Peninsula, by Donald Ferguson.) I was a Hill kid. I support the proposed Munjoy Hill Historic District and the six individual landmarks as nominated by the Historic Preservation Board on November 20, 2019 - or an even expanded version that enhances and protects the area. Much has been lost already.

We urge the Planning Board to take into consideration the substantial documentation acquired and recorded by the City Planning Staff with the assistance of the Historic Preservation Board (favoring the adoption of the Munjoy Hill Historic District designation, including the six landmarks). I strongly believe that Munjoy Hill, having played an important role in the history and evolution of Portland, deserves it. It should take its place with the other designated (and protected Historic) Districts of the city. It will be a huge credit and benefit to the city.

Thank you for the work that you do on behalf of the residents of Munjoy Hill, and the City of Portland.

Dick Rollins

Google Groups

P
C
2
3

Fwd: Munjoy Heights Historic District

mary morse <mrsm1359@outlook.com> Feb 7, 2020 9:20 AM
Posted in group: **Planning Board**

Sent from my iPad

Begin forwarded message:

From: mary morse <mrsm1359@outlook.com>
Date: February 7, 2020 at 09:14:32 EST
To: "dga@portlandmaine.gov" <dga@portlandmaine.gov>
Subject: Munjoy Heights Historic District

We live at 208 Sheridan St and fully support the Munjoy Heights Historic District proposal and hope we can count on your support for this. Thank you, Robert and Mary Morse
Sent from my iPad

Google Groups

Historic District designation --support for approval

Robin Whitten <robin@audiofilemagazine.com> Feb 7, 2020 10:40 AM
Posted in group: **Planning Board**

To Belinda Ray, Jon Jennings, Deb Andrews, Brandon Mazur and Portland Planning Board members,

As a 44-year resident of Munjoy Hill, I urge you to **approve** the Historic District designation proposed by the Historic Preservation Board.

The city agencies, community members and organizations have done a lot of excellent work and are recommending a workable, progressive plan for the Munjoy Hill neighborhoods.

Please do not delay or dilute the proposal, but vote to approve.

With regards,
Robin Whitten

Munjoy Hill resident and property owner since 1976
23 Saint Lawrence St. Portland

PC25

Google Groups

Please vote against the proposed historic district on Munjoy Hill

Heather Sullivan <heathersull@gmail.com> Feb 7, 2020 11:28 AM
Posted in group: **Planning Board**

February 7, 2020

To the Planning Board and Portland City Council;

Please vote **against** the proposed historic district on Munjoy Hill. The increased costs on building maintenance will drive up rents in the area, when rents are already well above what the average worker in Portland can afford.

Those who purchased property on the hill before the recent boom (which include several of my friends and colleagues) will not be able to afford to meet the extra costs for siding, windows, and application fees. It is not appropriate to increase the costs for maintenance on properties by appealing to the history of an area that was working class!

The city needs to consider ways to make housing more affordable, and this proposed historic district will work against that.

Sincerely,
Heather Sullivan
32 Verrill St.

Greater Portland Landmarks
93 High Street
Portland, ME 04101
207.774-.561
portlandlandmarks.org

7 February 2020

Dear Chair Mazer and members of the Planning Board:

As we have stated, Greater Portland Landmarks supports the proposed designation of the Munjoy Hill Historic District. Through this city's commitment to historic preservation we believe Portland has been successful at achieving a balance between old and new that is attractive to new businesses, residents, and tourists alike. The establishment of the Munjoy Hill Historic District will ensure that balance continues on the eastern end of the city that is as historically significant as other neighborhoods already designated as local historic districts.

We believe that after careful study and an eight-month public process the Historic Preservation Board correctly found that the recommended district meets the criteria for designation identified in Division 3 of the historic preservation ordinance. The proposed district meets more than the minimum criteria for designation required in Section 14-610. The proposed boundaries encompass buildings representing key periods of development activity as well as those that represent the cultural and social significance of the African American families and immigrant families that lived and worked on the hill for generations. The boundaries also reflect the areas that retain the level of integrity required in Section 14-611.

Portland's Plan 2030 sets out many goals, including protecting the city's authenticity, enhancing our sustainability, and growing the number of housing units. Historic preservation has helped to conserve our city's authentic feel, but it also contributes to the city's sustainability and housing goals.

The historic preservation ordinance has permitted alterations and new construction at a variety of scales in the city's local historic districts. These new additions within the various districts enhance our city's streetscapes and accommodate new residential and commercial growth. In the last several years new housing units have been approved or built in individually designated buildings and in the West End, Deering Street, India Street, and Congress Street Local Historic Districts including the following larger-scale projects:

Project	**# Units**	**Designation**
27 Carleton Street	37 Units	West End Historic District
62 India Street	29 Units	India Street Historic District
605 Stevens Avenue	88 Units	National Register Historic Places Landmark
1 Joy Place	12 Units	West End Local Historic District
66 State Street	70 Units	West End Local Historic District

510 Cumberland Ave.	75 Units	Deering Street Local Historic District (Parkside)
443 Congress Street	28 Units	Congress Street Local Historic District
667 Congress Street	139 Units	Congress Street Local Historic District

Greater Portland Landmarks was founded on the belief that Portland's future is brighter if it builds upon the rich social, cultural, and architectural character of its past. Historic Preservation is not about freezing any community in time. Rather, historic preservation is about keeping buildings alive, in active use and responsive to the needs of the community. Building additions, ADUs, and new construction are all ways that historic districts accommodate diverse housing options, without destroying the beauty and history of our city's neighborhoods.

Historic preservation is also one tool that helps our city be more sustainable. Preservation and reuse of historic buildings reduces resource and material consumption, puts less waste in landfills, and consumes less energy than demolishing buildings and constructing new ones. In addition, the city's historic preservation program has approved environmentally friendly building systems like heat pumps and solar panels, which help to achieve the city's sustainability goals. Heat pumps and solar panels have been approved in the West End and India Street historic districts in recent years. The Historic Preservation Board also recently approved solar panels and a green roof installation on Munjoy Hill in their role as design reviewers in the Conservation Overlay District. To the left is an example of solar panels installed on a Winter Street dwelling in the West End several years ago.

Please include the contributions Portland's historic districts make to our city's goals to preserve authenticity, create housing, and bolster sustainability as you consider the effect of the proposed Munjoy Hill Local Historic District on other aspects of the city's comprehensive plan.

Thank you for considering our views.

Julie Ann Larry
Director of Advocacy
Greater Portland Landmarks

Google Groups

Munjoy Hill Historic District

Kevin Schochat <kevin@kevinschochat.com> Feb 7, 2020 11:22 AM
Posted in group: **Planning Board**

As a resident of Munjoy Hill I am writing to support the creation of an Historic District in this important and significant neighborhood.

Please do not weaken this proposal. The historic preservation board diligently identified the elements in the neighborhood that support the creation of an historic district and their report should be respected and accepted.

Thank you
Kevin Schochat
215 Sheridan Street

Sent from my iPhone

Google Groups

Munjoy Hill Historic District

mary barrett <jinspec@maine.rr.com> Feb 7, 2020 11:33 AM
Posted in group: **Planning Board**

Dear Chairman Mazer and Portland City Planning Board members,

I write to you as a 22 year resident of Portland in regard to the Historic District designation that is pending your approval. I am aware that the MHNO Board of Directors has unanimously voted to support the proposed Munjoy Hill Historic District and the six individual landmarks as nominated by the Historic Preservation Board on November 20, 2019.

I urge the Planning Board to take into consideration the substantial documentation acquired and recorded by the City Planning Staff with the assistance of the Historic Preservation Board, favoring the adoption of the Munjoy Hill Historic District designation, including the six landmarks. We strongly feel that Munjoy Hill, having played an important role in the history and evolution of Portland, deserves to take its place with the other designated Historic Districts that have served our city well.

Thank you for the work that you do on behalf of the residents of Munjoy Hill, and ALL the City of Portland.

Respectfully Submitted,

Mary Barrett

Google Groups

Munjoy Hill Historical Designation

Nancy Machesney <dmaches101@aol.com> Feb 7, 2020 11:20 AM
Posted in group: **Planning Board**

Dear Planning Board Members,

I am writing to urge you to the approve the Munjoy Hill Designation as it is written.
It is important that we have rules and regulations in place that are adhered to protect these fleeting treasures and protect the beauty and flavor of what is uniquely Munjoy Hill.
Thank you for your consideration of this most important matter.

Respectfully,
Nancy Machesney
213 Sheridan Street

PC30

Google Groups

East End

Steven Inman <kajaido@gmail.com>

Feb 7, 2020 11:17 AM

Posted in group: **Planning Board**

Hello;

I'm writing regarding the Historic District designation that is pending approval as the Munjoy Hill Historic District. I believe that cities are typically areas that develop faster than suburban/rural areas, and this is not only normal but needed to keep the economy strong and people housed and employed. Portland has seen a lot of growth, especially in the East End, with WEX and a number of other projects going on - which I agree with.

However, it's also important that a city be liveable and sustainable. Much of the projects for housing happening on Munjoy Hill tend to remove not just old houses, with their own style, but also remove yards, trees, green space and outdoor space, to fill them with blocks to maximize occupancy. It seems to be rampant as well, with developers hurrying to tear down and build before any designations are put in place...and the city is ten steps behind. As this issue is discussed and debated, more and more quality old structures and green spaces are being torn down and being replaced with monolithic towering places that destroy any sense of neighborhood.

When I walk through the streets, in many older places along Lafayette, Merrill, Kellogg or Sheridan, I see people walking, interacting, kids playing. The newer structures, with no outdoor space, tend to remove people and insulate them, and the streets become empty with no sense of neighborhood.

So I strongly urge you to support this Historic District. Portland needs development and business, and homes for workers...but these homes need to be in liveable neighborhoods, not lifeless blocks.

Thank you!

Steven Inman

81A Vesper Street

PC31

Google Groups

Munjoy Hill

Edward Fiske Mooney <efmooney@syr.edu> Feb 7, 2020 11:37 AM
Posted in group: **Planning Board**

To The Planning Board:

I am a resident of Munjoy Hill and love the relaxed friendly pace of life up here. The declaration of the historic district would preserve what's best in the neighborhood. A continued proliferation of hi-rise apartments adds traffic, and casts shadows over existing structures. The feel of a small, slow-moving neighborhood good for old-folks and kids would be diminished, bit by bit. Munjoy Hill would cease to be Munjoy Hill.

Thank you for your consideration.

Edward F. Mooney
Professor Emeritus,
Departments of Religion and Philosophy, Syracuse University
77 Vesper Street, #1, Portland, ME 04101
207-776-4615
https://syr.academia.edu/edwardmooney

Whatever causes night in our souls may leave stars.
~ Victor Hugo
Whatever causes fright in our souls may leave scars
-- David Morin

PC32

Google Groups

Munjoy Hill Historic District

Susan Yandell <sueyandell@gmail.com> Feb 7, 2020 11:42 AM

Posted in group: **Planning and Urban Development**

Support it .....Please do something GOOD for Portland.....THERE IS STILL TIME BUT MAKE HASTE .
Sue Yandell.51 Monument St.

Google Groups

Munjoy Hill Historic District

Sarah Auld <salauld@gmail.com> Feb 7, 2020 11:59 AM
Posted in group: **Planning Board**

February 6, 2020

Dear Chairman Mazer, Planning Board Members and City Officials,

We support the Historic Preservation Board's recommendation to designate areas within Munjoy Hill as a local historic district

under the provision of the city's historic preservation ordinance.

We are homeowners and longtime residents of Munjoy Hill. Our children have attended Portland Public Schools, both Marada Adams and East End School. As a homeowning family on Munjoy Hill our most valuable investment is our property. We have watched the neighborhood grow and develop, and while we are not against development, we do feel there is a lack of vision and long term planning in the recent development. We feel a historic district would improve these issues. We urge you to respect the families and homeowners of Munjoy Hill—please *approve* the Board's recommendation as is.

Thank you for your consideration and efforts on our behalf.

Sincerely,

Sarah Auld and Tom Brokish

Auld-Brokish

43 Munjoy Street

Portland, ME 04101

207 899 0284

sauld@maine.rr.com

Google Groups

Munjoy Hill Historic District

Carol Connor <balsamique@live.com>
Feb 7, 2020 12:05 PM
Posted in group: **Planning Board**

Dear Chair and Members of the Planning Board,

As a Munjoy Hill resident and homeowner on the East End, I have a vested interest in the establishment of The Munjoy Hill Historic District. I am also in favor of including individual buildings outside the designated district that are deemed appropriate as stand-alone local landmarks. In support of preservation, I have requested that my home at 12 Montreal Street be granted landmark status. Built in 1855, it is one of the earliest working class homes on this part of the hill.

I appreciate the scrutiny that you must impose on the viability of this proposal, and understand it is a big step for the city, however I am heartened by the robust questions asked by the planning board at the last workshop on this topic. Hopefully the answers relieved skepticism and shed a positive light on property owners' rights and responsibilities within the historic district.

The Historic Preservation Board has done extensive research and documentation in developing this district, and I applaud their efforts to present a fair and sound proposal.
I've followed the progress of this initiative over the years and have come to realize that the best hope for preserving the unique quality and character of Munjoy Hill is through the protections provided by establishing this district along with the individual landmarks.

My vision for our city is that it thrives by insightful planning, thoughtful development and preservation of the treasures that define its character. Please support the Historic Planning Board's recommendation and act to establish the Munjoy Hill Historic District and Individual Landmark Designations.

Regards,

Carol M. Connor
12 Montreal St
Portland, ME 04101
balsamique@live.com

Sent from my iPhone

Google Groups

In favor of the Munjoy Hill Historic District

Ann Casady <ann@casadydesign.com> Feb 7, 2020 12:07 PM
Posted in group: **Planning Board**

To: Portland City Planning Board members

I am a resident of Munjoy Hill. Since moving to Munjoy Hill 5 years ago, I can see that the rapid development in Munjoy Hill has the ability to destroy the character and charm of Munjoy Hill. The Munjoy Hill Historic District designation, along with the six landmarks will preserve a neighborhood that has historic significance. Once it is gone it can never be restored. I value those characteristics.

I urge the Planning Board to take into consideration the Historic Preservation Board's recommendations for Munjoy Hill.

Thank you for your consideration and the work that you do on behalf of the residents of Munjoy Hill, and the City of Portland.

Sincerely,
Ann Casady
Munjoy Hill resident

Google Groups

Hunjoy Hill Historic District

George Carhart <gscarhart@gmail.com> Feb 7, 2020 12:09 PM
Posted in group: **Planning Board**

Dr. George Carhart
7 Lafayette St
gscarhart@gmail.com

I am a historian and have worked in historic preservation both in the US and Europe.

My wife and I are 24 year residents of the City of Portland. We have owned our home at 7 Lafayette Street for 20 years. Our house was built in 1849 and is one of the oldest houses still standing on Munjoy Hill.

I am in strong support of a Historic District on the East End/Munjoy Hill.

I would ask the Planning Board to consider a couple of points:

The historic district is about maintaining the historic landscape of the East End. The city has long protected the upscale large brick houses of the West End and the buildings of the Old Port. However, in the past, it has avoided the idea that the vernacular architecture that is indicative of the hill has any true historic value (a view that is not shared by the Historic Preservation Board). The history of architecture in Portland is not just that of upscale architecture, such as the plethora of John Calvin Stevens homes that populate the West End, but also the vernacular architecture that is found on Munjoy Hill. Many of the houses on the East End/Munjoy Hill predate the predominantly late 19th and early 20th century architectural baubles on the Western Prom that were protected by the city under a 1990 historic district.

The housing stock on Munjoy Hill dates to an era of great prosperity in the city, one that would see a century of development of the hill into a landscape of vernacular architecture that defined Portland's working class history. Though some dwellings had already been built on the hill, the subdivision and development truly began with the chartering of John A. Poor's Atlantic and St. Lawrence Railroad in 1845 and his Portland Co. foundry in 1846. The terminus and wharf facilities of this railroad under the shadow of Munjoy Hill, connected Montreal and Portland and gave Canada an ice free winter harbor, which would drive Portland's prosperity for almost a century. The prosperity also created a demand for housing for the thousands of workers who worked in the harbor, which by the late 1900's had become the sixth largest rail sea hub in North America. By the 1870's, the harbor side of the hill was covered by houses, many of which we still see today. Having been spared for the most part the destruction of the great fire of 1866, the development of the hill continued, and by 1900 much of the remaining land was built on. Unfortunately, or perhaps fortunately for today, Munjoy Hill was considered a rough working class, and therefore undesirable neighborhood, a stereotype that would keep it depressed right up until the late 1990's. This is why there are still so many of the original houses still standing on the hill today. Indeed unlike some other neighborhoods in the city, Libby Town and East Bayside, we are lucky in that neither the slum removal of the 1950's and 60's, nor the urban renewal of the 80's, had a large impact on this historic working class neighborhood. There are few New England cities that are so fortunate as to have such a cohesive example of 19th century vernacular working class architecture.

Where the West End tells a story of the wealthy businessmen of the city, the East End tells the story of the city's working class who underpinned the wealth of the city. This is a story worth preserving. I ask the Planning Board not to miss this chance to protect and preserve this historic treasure.

In my 12/10/2019 letter to the Planning Board on this subject, I strongly emphasized that in my opinion, the subject here is not about affordable housing. However I find myself needing to address this issue as those against the historic district are making a large point of it. Those opposed to the historic district, would have us believe that the district will stymie the development of more housing and therefore by association affordable housing. Although the historic district may limit their ability to knock down older buildings containing fewer units than their new buildings could, they are not increasing the number of affordable units/ rental or for sale. Most of the existing buildings in the proposed historic district have three to four units many of which fall within or are close to what is considered today to be affordable. Most of the new construction can be seen to only have the one mandated affordable unit (priced at top end of the affordable market). The developers also claim that the district will adversely affect their ability to offer affordable housing within the 100 foot zone around the historic district. Conceding what the new "affordable" units are being priced at on the hill, I find this disingenuous. For example the workforce/affordable unit (#7) in the new 130 Morning street development is being listed at $695,000, (affordable ?). Well if we consider the range of the other units - $795,000 to 1,495,000 then that is affordable, but not for any of the workforce workers in the City of Portland, Maine! Where were the "socially

concerned" developers during the housing shortage in the late 1990's, when a triple decker on the hill went for $175,000, a single family on a small 2,500 foot lot went for $69,500, and a large single family on the Eastern Prom went for $350,000, not here, because there was no profit to be had. The developers are not interested in affordable housing that is why they pushed back against it in the R6 overlay. Please do not allow yourselves to be influenced against the proposed historic district by smoke and mirrors of the developers who are only interested in a profit.

Lastly, The City of Portland is a thriving city today in a great part because of its tourism draw – hence the large number of hotels and short term rentals. Tourists come to Portland for a glimpse into New England history through the quintessential architecture that the city still possesses. Indeed due to this interest in our quintessential New England city, many firms have moved here and brought with them workers who have bought houses on the hill to be part of this neighborhood. If we allow this historic architectural cityscape to be eroded, then one of our main economic draws will disappear, leaving us to become just another sad shadow of a onetime important harbor city.

Thank you for considering to my thoughts,

With Best Respects

Dr. George Carhart

--

Dr. George S. Carhart, Ph.D
Historian of Cartography
and Early Modern Europe
Antiquarian Map Consultant
Historic Research Consultant

7 Lafayette Street
Portland
ME, 04101
USA
(207) 766-1517

Google Groups

Munjoy Hill Historic District

Lincoln Paine <lincoln.paine@gmail.com> Feb 7, 2020 12:17 PM
Posted in group: **Planning Board**

Dear Chairman Mazer and Portland City Planning Board members,

I am writing to urge your approval of the historic district designation for Munjoy Hill. As you know, this measure is strongly supported by residents of Munjoy Hill. This is most obvious from the fact that the Munjoy Hill Neighborhood Organization's board of directors voted unanimously in favor of the historic district and the six individual landmarks as nominated by the Historic Preservation Board last November.

I have a personal stake in this matter as I have been an owner/occupier of a contributing property for nearly a quarter century. I have seen what the lack of such a designation can result in. Directly across the street are two buildings that are not contributing properties. One could have been, but was gutted and capriciously transformed out of keeping with the neighborhood or Portland generally; the other is a dreary, outsized building that replaced an old triple-decker.

I am not against progress or modernism in any way. (My grandfather was a director of the Guggenheim Museum in New York, so I know a bit about this.) But neighborhoods that have emerged organically over time deserve to have their integrity preserved, especially a neighborhood as rich in history as Munjoy Hill.

A city's physical characteristics define it in many ways, and neighborhoods like Munjoy Hill are as vital as parks. It deserves this historic district designation.

Thank you for your attention to this matter.

Sincerely,

Lincoln

150 Eastern Promenade
Portland, ME 04101 USA
Lincoln.Paine@gmail.com
Cell: 1 207 653-4420
LincolnPaine.com

Trustee, Maine Maritime Museum
Author, *Down East: An Illustrated History of Maritime Maine*
Author, *The Sea and Civilization: A Maritime History of the World*

Google Groups

Historic district and City Council concerns

Travis Agaman <index207@gmail.com> Feb 7, 2020 1:06 PM
Posted in group: **Planning Board**

Hello,
I am a resident of Munjoy Hill in Portland and I'm writing again to express my serious concerns about and opposition to the proposed historic district overlay being proposed in the East End. As someone living on the hill that isn't affluent and/or retired, I feel like my voice has basically been ignored by the small contingent of public persons that are trying to force this issue through the city government. I have written to the Planning Board and City Council before, so I will try not to restate the same concerns again, instead I will ask that a new concern be taken into record:

Discussing the topic with my neighbors I have been informed that some of the people bulldozing the topic through the city planning process have partial or total ownership in companies that do historic renovations and restorations; representative Belinda Ray being one of them, and Deb Andrews of the Historic Preservation Board being another. This is exactly the kind of conflict of interest that should have been brought to public's attention, and should immediately be the end of the proposed overlay. The citizens of Portland's East End do no live here just to fill the pockets of councilors and city hall employees.

The Portland Planning Board has the power to end this historic overlay nonsense immediately. I ask you all to please stop it in its tracks now before more harm is done to the non-affluent and working class residents that still call Munjoy Hill home. At the very least, someone at city hall needs to look into the above mentioned conflict of interest, make it public, and take it into account when considering who is supporting this overlay proposal and why.

Thank you again for your time,
Travis Agaman
8 Emerson Street

Google Groups

Munjoy Hill Historic District

Alward, Amy <AmyAlward@allstate.com> Feb 7, 2020 2:49 PM
Posted in group: **Planning Board**

Dear Portland Planning Board, Belinda Ray, Jon Jennings, and Deb Andrews,

As a 29 year resident of Munjoy Hill, I have lived and visualized the total transformation of our beloved Eastern Prom.

Please vote yes to pass the Munjoy Hill Historic District, so that we may retain some of the character and charm that has written the history on the Eastern Prom of some of the architectural beauties that make up this landscape.

Much time and thought has been spent reviewing this long awaited historical significance to preserve these properties.

Thank you for all that you do and for reading this.

Amy Alward LUTCF ChFC Agency Owner T: 207-767-3334 F: 207-767-6514 95 Ocean Street South Portland, ME 04106

Amy Alward LUTCF ChFC
Agency Owner
T: 207-767-3334
F: 207-767-6514
95 Ocean Street
South Portland, ME 04106

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Munjoy Hill Historic District

Elizabeth Peavey <peavey@gwi.net> Feb 7, 2020 3:59 PM
Posted in group: **Planning Board**

I am writing to voice my support for the establishment of the Munjoy Hill Historic District. Please don't let money crowed out the character of this unique area of our historic city.

Sincerely Yours,

Elizabeth Peavey
Portland, Maine

Google Groups

Opposed to Munjoy Hill Historic District proposal

nick@masomurray.com <nick@masomurray.com> Feb 7, 2020 6:08 PM
Posted in group: **Planning Board**

Feb 7, 2020

Planning Board and Portland City Council:

Hello - I am a property owner in the proposed Historic district on Munjoy Hill:

- I oppose the Historic District designation.

- I ask you to vote against it.

Please vote against the historic district proposal. Please focus on the R6 Portland-wide rezoning project 3 effort. Munjoy Hill already has city zoning and a zoning overlay. The historic district adds a 3rd layer. If the city zoning ordinance is so flawed it requires two additional layers of regulations and review to fix then a revision of the existing zoning ordinance would be more fair and efficient fix.

Please vote to preserve and encourage the Diversity of Munjoy Hill:

- 3 aggregate layers of regulation and review biases home ownership on Munjoy Hill to those who can afford to navigate multiple bureaucracies, regulations and review periods.

- the historic district's pricing discrimination effect on housing ownership effectively rations housing stock on the hill to us older more affluent folks who have moved here from out of town (I'm from LA). The historic district designation represses and discourages existing legacy, younger, working persons and family ownership and the diversity of community on the Hill.

Please take the appearance of conflicts of interest into consideration as you evaluate the merits of the historic district proposal:

- I am concerned that my district councilor Belinda Ray's participation in the historic district process is biased by her employment with and interests in O'brien Wood and Iron, a company that advertises "Historic Renovations". She is my representative and I appreciate her working waterfront policies. But her position and her company's financial and business interests presents a conflict of interest that appears unfairly to benefit her and does not benefit or reflect the view of the majority of her constituency.

Regards,

Nick Murray

40 St Lawrence St.

Google Groups

Historic district on Munjoy Hill

traveltrip622@gmail.com <traveltrip622@gmail.com> Feb 9, 2020 3:31 PM

Posted in group: **Planning Board**

Dear Portland Planning Board,

I'm writing to urge you to vote against creating a historic district on Munjoy hill. This is an ill advised attempt to control development that will have lasting impact on the home owners and the whole of Portland. Any homes that are actually historic can be preserved by designating them individually. The correct way to control growth is to undergo a comprehensive zoning effort to decide what shape Portland will take. There is an affordable housing crisis in Portland and adding blanket restrictions that prevent development.

Thank you very much,

James Rohman

57 Elmwood St.

Portland , Me 04103

Google Groups

Munjoy Hill Workshop Feb 11

James Hambly <jphambly@hotmail.com> Feb 9, 2020 5:32 PM
Posted in group: **Planning Board**

Dear Deb Andrews,

We would again like to express both our support for the Munjoy Hill Historic District and our thanks for the efforts of everyone involved to bring the designaon t o reality.

The Munjoy Hill neighborhood has a look and feel we both love and enjoy every day. Dramac chang es to some of the properes o ver the last few years have, in our opinion, been detrimental to that look and feel. Change does need to take place and, going forward, we look forward to the Historic Preservaon Departmen t having guidance over that change.

We hope that there will not be any further delays implemenng the his toric district.

Thank you.

James Hambly and Jenny Dignan
61 Monument St.
Apt 4
Portland, ME 04101

Google Groups

Munjoy Hill

Donna Jones <donnajjones@gwi.net> Feb 10, 2020 10:55 AM
Posted in group: **Planning Board**

Hello. I am writing to record my support for the proposed Munjoy Hill Historic District.

Thank you for your work and i truly hope the new historic district can become a reality.

best

--
Donna Jones
772 0266
Portland

Google Groups

Support from a property owner on Munjoy Hill

Abbie McMillen <abbiemcmillen@mac.com> Feb 11, 2020 10:33 AM
Posted in group: **Planning Board**

My husband and I own a second home in the proposed historic district. I wholeheartedly support the creation of the district. Some of the recent condo structures are ugly and totally out of character with the neighborhood.

We have friends who grew up there. One of the favorite boyhood activities was pretending to be a squirrel, and traversing the neighborhood as far as possible without feet ever touching he ground. Sounds like great fun, but such activities are impossible with the increasing blight of expensive multi-story condos with ground floor garages and no porches.

Preserve our neighborhood! And while you are at it, someone please fix the potholes on Vesper Street! This was promised more than 2 years ago.

Sincerely,

Abbie McMillen

Google Groups

Proposed Munjoy Hill Historic District

Anne Pringle <oldmayor@maine.rr.com> Feb 11, 2020 10:18 AM
Posted in group: **Planning Board**

I am again unable, due to a meeting conflict, to attend your workshop today on the proposed Historic District. I reiterate the following comments, with emphasis on those in red. To me, these three sentences capture why an Historic District is needed to preserve the essential character of Munjoy Hill. Zoning alone is not the answer.

And -- Remember the refrain from Joni Mitchell's "Big Yellow Taxi"..."That you don't know what you've got 'til it's gone"... Please vote in favor of the proposed Historic District designation.

Anne Pringle

I have lived in the West End for 46 years, both before and after the Historic Preservation Ordinance was adopted by the Council (in 1990, I think) and the Western Prom Historic District created. We have had numerous projects on our home reviewed by the Historic Preservation Board and/or staff. In addition, in connection with my service on our neighborhood association Board, I have attended many HPB meetings over the years on residential, commercial and historic landscape projects.

I have found both the Board and staff to be respectful of applicant's desires and collaborative in finding cost-efficient solutions that meet applicant's needs as well as the Ordinance's guidelines. While some express understandable fear of the review that will come with Historic District designation, I can say from experience that they will find that fear unfounded.

Some oppose the Historic District designation on the basis that "the City shouldn't tell me what I can do with my property". Unfortunately, in recent years, we have seen what that can mean on Munjoy Hill, as the R-6 changes of several years ago have resulted in many unforeseen consequences.

For example, friends of ours who have lived on the Hill for 40+ years and been wonderful stewards of their historic home, saw the potential tear-down of the frame two-family directly across the street. A late Greek revival house, it was built around 1860 and had side and rear setbacks. The scale was totally consistent with the development pattern of the neighborhood. The building provided affordable housing and was in good condition. But it was presented as "unsalvageable" by the owners, who planned to replace it with five high-end condo units in a box-like structure built to the maximums allowed by the revised R-6. If they had succeeded in being able to "do what they wanted" with the property, it would have had a significant impact on all of their neighbors -- as has been the case with numerous other redevelopment projects on the Hill. (There is no question in my mind that the proposal would have been allowed under the existing zoning review process: thankfully, it was withdrawn because of significant site issues.)

So, whose "rights" should prevail when there is a conflict of interests? Should any neighbor be able to so dramatically affect the property context and value of abutters? What is the responsible public policy role in balancing competing interests?

I have been to several of the public hearings on the proposed designation and have heard and weighed the perspectives offered. Based on my personal experience, I believe that the proposed Historic District will provide the protection needed to assure that Munjoy Hill's unique built environment is not transformed in a way from which it will never recover.

Remember the refrain from Joni Mitchell's "Big Yellow Taxi"..."That you don't know what you've got 'til it's gone"... Please vote in favor of the proposed Historic District designation.

Anne Pringle

Neal Street, Western Prom Historic District

Google Groups

Historic district

Daryl Renschler <darhem@msn.com> Feb 10, 2020 8:37 PM
Posted in group: **Planning Board**

I support wholeheartedly the greater Portland landmarks initiative to preserve the character and neighborhoods in Munjoy Hill. Lose the uniqueness of Portland and you have nothing.

Sent from my Samsung Galaxy smartphone.

Google Groups

2/10/2020 - PB Workshop 2 - Support Proposed Munjoy Hill Historic District

Karen Snyder <karsny@yahoo.com> Feb 10, 2020 11:50 AM
Posted in group: **Planning Board**

Dear Chair Mazer and Planning Board Members,

The opposition has been using the below arguments which are not based on validated sources or facts.

Opposition Reason #1: Rents will be More Expensive if in Historic District. (FALSE)

Apartment Guide just rated Portland, ME as the third (3rd) highest rents in the nation for 2019.
https://www.newscentermaine.com/article/money/maine-has-the-3rd-highest-rent-increase-across-the-us-in-2019-a-new-report-shows/97-b38456a1-8e0b-45f9-9d33-2a54848b2ecd

These high rent increases are happening because of the predator developer speculation going on especially on Munjoy Hill which is reducing the long term rental housing supply which is causing rents to increase by replacing long term housing with seasonal luxury condos and luxury single family homes.
-Note: Rents on Munjoy Hill which is NOT in a Historic District are seeing the same rent price increases as on the West End which is in Historic District.

Opposition Reason #2: Maintenance will be more Expensive if in Historic District (FALSE)
In the Portland Historic Districts,
- One doesn't have to make improvements if they don't want to.
- In kind replacements are allowed - If you have vinyl siding and windows, you can replace with vinyl.
- Paint colors are not regulated.
- Mailboxes and landscaping not regulated.
- It is not necessarily more expensive to repair or remodel a home in an historic district.

Note: The majority of the opposition are NOT even in the proposed Munjoy Hill Historic District so this doesn't even apply to them.

Opposition Reason #3: There is only a Handful of People that Want Historic District. (FALSE)
It has been proven over and over again in the multiple City meetings and workshops that the majority of people
and residents want the proposed Munjoy Hill Historic District. The documented public comments and emails sent to the Historic Preservation Board and now Planning Board supporting the proposed Munjoy Hill Historic District is proven below.

	Email Sent to HPB or Planning Board					Public Comment at Meeting/Workshop				
Portland, ME Meeting/Works Shop Held	HD Yes	HD Yes %	HD No	HD No%	Total	HD Yes	HD Yes%	HD No	HD No%	Total
Historic Preservation Board Nomination - 11/20/2019	32	72.7%	12	27.3%	44	15	93.8%	1	6.3%	16
Planning Board Workshop #1 - 12/10/2020	99	76.7%	30	23.3%	129	23	74.2%	8	25.8%	31
Planning Board Workshop #2 - 2/10/2020 as of 11:45am	20	62.5%	12	37.5%	32		#DIV/0!		#DIV/0!	
Overall Total	151	73.7%	54	26.3%	205	38	80.9%	9	19.1%	47

Opposition Reason #4: Affordable Housing Can Not Be Built in Historic Districts (FALSE)
- I believe Portland has shown in the last 5 years that indeed affordable housing can be built in Historic Districts.
- Below chart shows that 40% of the affordable housing has been built in Historic Districts which represent only 8% of Portland area.
- Therfore, this shows a higher probability that affordable housing can be built in Historic Districts versus non historic districts.

Affordable Housing Projects in Portland, ME in Last 5 Years (2015-2019)

Updated: 02/06/2020

Historic District?	Historic District	Building Address	Building Status	Affordable # of Units	Type
N	N/A	58 Boyd St.	Under construction as of 9/2018	44	Apt.
N	N/A	81 East Oxford St. (Bayside Anchor)	Completed 2017	36	Apt.
N	N/A	409 Cumberland Ave.	Completed 2015	57	Apt.
N	N/A	134 Washington Ave. (Thomas Heights)	Completed 2015	18	Apt.
N	N/A	548 St. John St.	Completed	4	Apt.
N	N/A	977 Brighton Ave.	Under construction as of 9/2018	34	Apt.
N	N/A	95 Front St.	Permit Approved on 7/23/2019	63	Apt.
N	N/A	140 Park St. (Rosa True School)	Completed 2016	8	Apt.
N	N/A	605 Stevens Ave. (Motherhouse)	Completed 2018	66	Apt.
N	N/A	65 Munjoy St.	Completd in 2017	8	Condo
N	N/A	178 Kennebec St	Under construction as of 9/2018	40	Apt.
N	N/A	409 Cumberland St.	Completed 2015	46	Apt.
N	N/A	83 Middle St.	Announced not yet permit	49	Apt.
			Affordable Unit Total	**473**	60.03%
Y	West End	77 Pine St. (Butler School and Payson)	Completed 2016	56	Apt.
Y	West End	27 Carlton St.	Completed 2018	37	Apt.
Y	Deering Oaks	510 Cumberland Ave.	Under construction as of 9/2018	75	Apt.
Y	West End	66 State St.	Permit Approved on 8/13/2019	30	Apt.
Y	West End	66 State St.	Permit Approved on 8/13/2019	38	Lodging
Y	West End	160-166 State St.	Announced not yet permit	39	Lodging
Y	West End	99 Winter St.	Announced not yet permit	40	Apt.
			Affordable Unit Total	**315**	39.97%
			Overal Affordable Unit Total	**788**	

Source: https://www.portlandmaine.gov/781/2000-2007-Projects

Please don't be fooled by these unfounded arguments.

Regards,
Karen Snyder
Waterville St Property Owner

Google Groups

M.H. Historic District Proposal

kathleen bender <kabendr@yahoo.com> Feb 11, 2020 9:17 AM
Posted in group: **Planning Board**

Good Morning,

Please recommend the Council approve the Proposal as it is written, with current individual structures outside of the designated area most recently included. Deb Andrews and staff have worked diligently with Historic Preservation Board. It is time for a final decision, once and for all.

Thank you for your attention to this,

Kathleen Bender
11 North St

Google Groups

Munjoy Hill Historic District

mreppenhagen@yahoo.com <mreppenhagen@yahoo.com> Feb 11, 2020 10:58 AM
Posted in group: **Planning Board**

Dear Chair Mazer and Planning Board Members,

As a 23-year resident of Munjoy Hill, I would like to express my unwavering support of the proposed Historic District.

Historic preservation, along with affordable housing, was wisely included in the 2017 Comprehensive Plan for the city. A Munjoy Hill Historic District would achieve both goals. Many of the historic buildings in our area have affordable housing units, and assuring they remain part of "the Hill" is one step in addressing that particular goal of the Comprehensive Plan. Opponents have argued that historic preservation does not address the issue of affordable housing ; however, 75% of new housing units built in the last five years in historic districts are affordable housing units. In addition, 40% of the overall affordable housing units were built in historic districts which represent only 8% of the whole city.

I strongly urge you to support the Munjoy Historic District as previously proposed.

Regards,

Marlies Reppenhagen

55 Morning St. 2-2
Portland, ME 04101

Google Groups

Support for Historic Preservation District on Munjoy Hill

Pamela Day <pday2304@gmail.com> Feb 10, 2020 3:35 PM
Posted in group: **Planning Board**

As homeowners on Munjoy Hill for 15 years, we are writing to voice our continued strong support for the establishment of an Historic Preservation District on Munjoy Hill. For the past several years we have been alarmed at the pace of development on the Hill, especially the demolition of older homes that provide affordable housing to be replaced by expensive condos that darken our streets, obscure the greenspace, and diminish the vitality of the neighborhood.

The current zoning has done nothing to prevent the continuation of this thoughtless approach to building on the hill. Historic preservation will provide important protections for homeowners as well as tools for thoughtful development.

We urge the Board's favorable consideration of this proposal.

Pamela Day & Michael Petit
25 Waterville Street
Portland
207-461-1461

Google Groups

Hearing on Munjoy Hill Historic District

njordan@long-island.lib.me.us <njordan@long-island.lib.me.us> Feb 10, 2020 8:48 PM
Posted in group: **Planning Board**

As property owners on Morning St and Vesper St, we fully support creating a historic district on Munjoy Hill.

The character of the hill matters, and this is a way to preserve it, and to contribute to the specialness of Portland. Big box high end condos are ugly. More important,they cannot provide the more affordable housing that the small 2 and 3 family buildings do, the traditional housing of the hill.

Nancy Jordan
Robert Jordan

Portland Planning
Portland City Council

CC: City Council

January 22, 2020

Hello & Happy New Year,

After December's workshop on this same topic, I walked away seeing a possible path forward. Then, after watching last night's Planning Workshop on R6, next steps for our great City seem clear.

The Planning Board is faced with many intersecting topics in the same season. Revising the R6, reviewing the Conservation Overlay on Munjoy Hill, revamping design documents, finalizing the Recode appear, in total, overwhelming. Add the question of adding a Historic District to Munjoy Hill and the City has a very complex, sometimes overlapping and confusing series of topics on their plate.

The good news is **the Recode rules the day** and is the opportunity the City has to address all of the other needs (both Planning and Citizen based needs.) My advice: Clear your (planning staff's and city council's) plate clean of all distractions except the Recode work. This envelops all other topics & will give your team & Staff focus.

- R6 revamp was an 'olive branch' to the Hill to address the fallout of the poorly constructed (by the City Council) Conservation Overlay District. Clearly, the voices during last night's workshop will not accept this work from Planning staff. Live comments from most in attendance last night were proven incorrect and the belief that the first draft of the new R6 is a 'liberalization of the R6' is preposterous. *Planning Board members, please do NOT support this when it may change in a month or so after implementation due to the Recoding efforts.*

- The Hill Conservation Overlay imposed many unintended consequences and needs to be repealed and addressed via the Recode process. *Planning Board members, please make this part of the Recoding scope.*

- An R6 should be an R6 citywide. The Hill, or any other neighborhood in Portland, does not require its own set of regulations (e.g., overlay or otherwise.) While the Hill has a group of tenacious advocates, please keep in mind they do not represent the entire Hill or the City. The Hill simply does not require special accommodations when compared to other neighborhoods.

- The proposed Historic District is a confused mess of a recommendation that proponents on the Hill believe will address zoning issues like demolition, size of building, etc. It will not. HD on the Hill is a red herring promoted by NIMBYs who attempt to fool others into believing it will address zoning matters. When in reality, it will only increase prices further and push development/housing crisis to other areas of the City. *Planning Board members, please do not support this when adding a 12th district has little-to-nothing to do with the concerns of the citizens &, as documented earlier, has been a process filled with issues.*

Note: re HD on the Hil, it is worth mentioning that the Historic Staff's memo presented in preparation for the December 10, 2019 Planning Board Workshop cites that criteria has been met for both 14-610 and 14-611. However, **the memo does not explain how the criterion was met**. Unless the memo is missing significant detail, the information provided does not adequately explain (thus satisfy) that the criterion has been met.

- While the Hill does have historic value to our city (14-610), how is its 'value [a] significant example of cultural, historic, architectural, archeological or related aspect of the heritage? Couldn't this be said about any neighborhood in our City?
- Re 14-611, the Staff memo cites a number of individual buildings as justification for the criteria. If individual buildings, why does the City need a large district? *Why not simply designate those or recommend voluntary national designation or landmark assignments?* It seems a 'stretch' to cite a small number of buildings on various streets as justification to convert a neighborhood.

Finally, as this new year starts, I want to sincerely thank the Planning Board. Witnessing what your team manages in terms of volume of work and public involvement (borderline harassment) is truly mind-boggling. You all deserve awards from tolerating the avalanche of (sometimes misinformed) comments from the same 12 people on each and every topic before you.

Best,

Carle Henry

Google Groups

Please SUPPORT the Munjoy Hill Historic District

Carol J. De Tine AIA <carol@carriagehousestudio.com> Feb 11, 2020 1:44 PM
Posted in group: **Planning Board**

Dear members of the Portland Planning Board,

Please support the Munjoy Hill Historic District.

I live in a condo at 144 Vaughan St., in the West End Historic District. Twenty years ago when our slate roof needed to be replaced, our condo association couldn't afford to replace with slate. We were pleasantly surprised when the Historic Preservation Board suggested that asphalt shingles would be acceptable. In my experience over several projects, complying with the ordinance is not onerous in terms of time or costs. The significant benefits of retaining, and responsibly modernizing, what remains of our historic neighborhoods is well-documented. Please protect our historic neighborhoods, including those on Munjoy Hill.

Thank you,

Carol De Tine
144 Vaughan Street

Google Groups

Munjoy Hill Historic District

Charlton Smith <charltonsmith@me.com> Feb 11, 2020 2:23 PM
Posted in group: **Planning Board**

To the Members of the Planning Board:

My wife and I have lived on Munjoy Hill from time to time beginning with an apartment on Vesper Street in 1964 and for several years in the 1990s at the Portland House. We presently live at 33 Turner Street in an 1850s farm house that we recently restored (photo below).

We are very much in favor of reasonable protections for the historic character of the historically significant areas. We are also aware that many of the old houses, and even entire neighborhoods, consist of houses that were never very good architecturally and are not worth preserving if the present owners wish to sell their property to developers.

Limiting the historic district to the parts of Munjoy Hill that are architecturally and historically significant is very much in the City's interest. At the same time new buildings on Munjoy Hill that are not in the historically protected areas should be subject to appropriate design standards. The new buildings do not need to be replicas of historic buildings and they may be of substantial size and architecturally modern, but their designs should be reasonably compatible with the buildings in the historically protected areas.

Thank you for your consideration.

Charlton Smith

Google Groups

Munjoy Hill Historic District

jcwcip@icloud.com <jcwcip@icloud.com> Feb 11, 2020 1:59 PM
Posted in group: **Planning Board**

We write in support of the designation of the proposed Munjoy Hill Historic District We see this as an essential technique to manage the growth of the city, and at the same time to preserve Munjoy Hill's current housing stock which is so important to the continued vitality of the city. As former residents of the Western Prom Historic District, we can attest to the fact that the rules and regulations which apply to historic districts in the city are not onerous, and that the city's historic preservation staff are most responsive to the needs of residents who need to work on their properties. It seems to us the the proposed district would be a "win win" for the residents and for the City of Portland.

Very truly yours,

John Watson & Nancy Brain
118 Congress Street, #303
Portland, ME 04101

Google Groups

Portland Planning Board Meeting: Public comment re-Historic District

Justine Denny <pashun4peace@gmail.com> Feb 11, 2020 2:47 PM
Posted in group: **Planning Board**

Dear Planning Board,

Please consider my voice **strongly in favor of voting for the Historic Preservation Board's recommendation to designate an area within the Munjoy Hill neighborhood as a local historic district.**

I attended the last workshop at City Hall in person and spoke up passionately and from my heart as a renter who's lived on Munjoy Hill since August of 2009 both at 81 Vesper (5 years) and currently at 56 North St, Apt 203 (since 2015).
Just as the West End has been preserved as a historic district to which tourists flock year-round, Munjoy Hill is also a precious and ***irreplaceable*** crown jewel of this city Portland we call home.

The beauty and structural integrity of the houses, the multi-layered history that tells their stories and the stories of the neighborhood as a whole are all part of a unique microcosm that make Portland special and a one-of-a-kind attractive destination for visitors from near and far as well as for residents of this city to enjoy when spending time in the neighborhood and on the Eastern Prom.

In addition, designating Munjoy Hill as a historic district will prevent further irreversible erosion of the neighborhood's unique beauty and prevent developers--whose eye only seems to be fixated on financial profit--from tearing down perfectly livable homes and replacing them with box-ey structures one can see anywhere. Please allow these homes to be lovingly cared for so they can be handed down through the generations for our children's children to enjoy.

This is your opportunity to leave a lasting legacy that you can be proud of in years to come.

Please protect Munjoy Hill by voting in favor of a local historic district for Munjoy Hill neighborhood.

Sincerely,
Justine Denny
56 North St, Apt 203
Portland, ME 04101
207-332-5057

Google Groups

Munjoy Hill Historic District

Tom Keating <tjkeat@comcast.net> Feb 11, 2020 12:47 PM
Posted in group: **Planning Board**

I wish to voice my support for the establishment of a Munjoy Hill historic district.

Thomas Keating
166 Pleasant Ave unit #: 4
Portland

Sent from my iPad

Proposal to Designate Munjoy Hill Historic District

March 10, 2020 Planning Board

Public Hearing

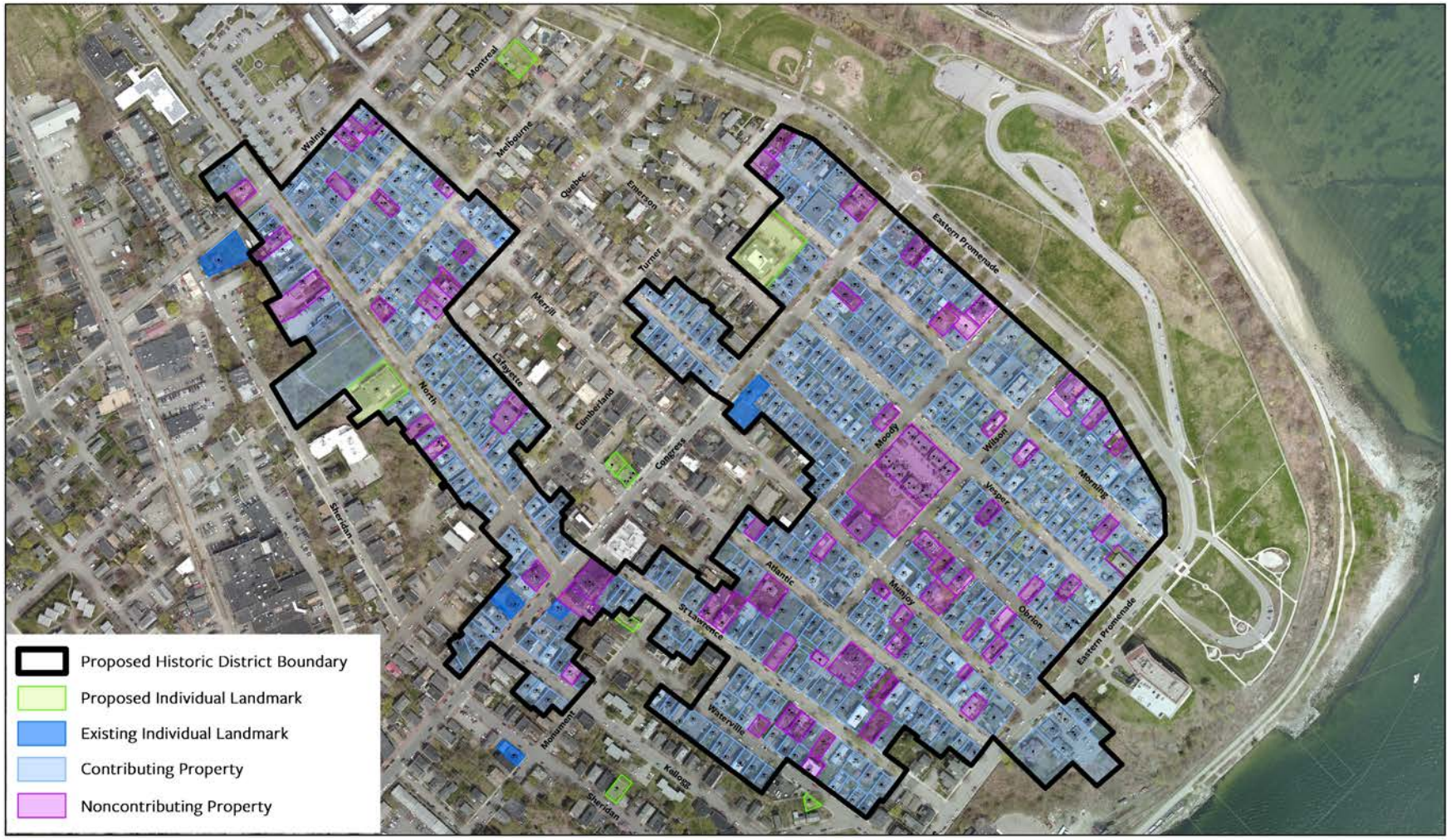
Findings of Historic Preservation Board

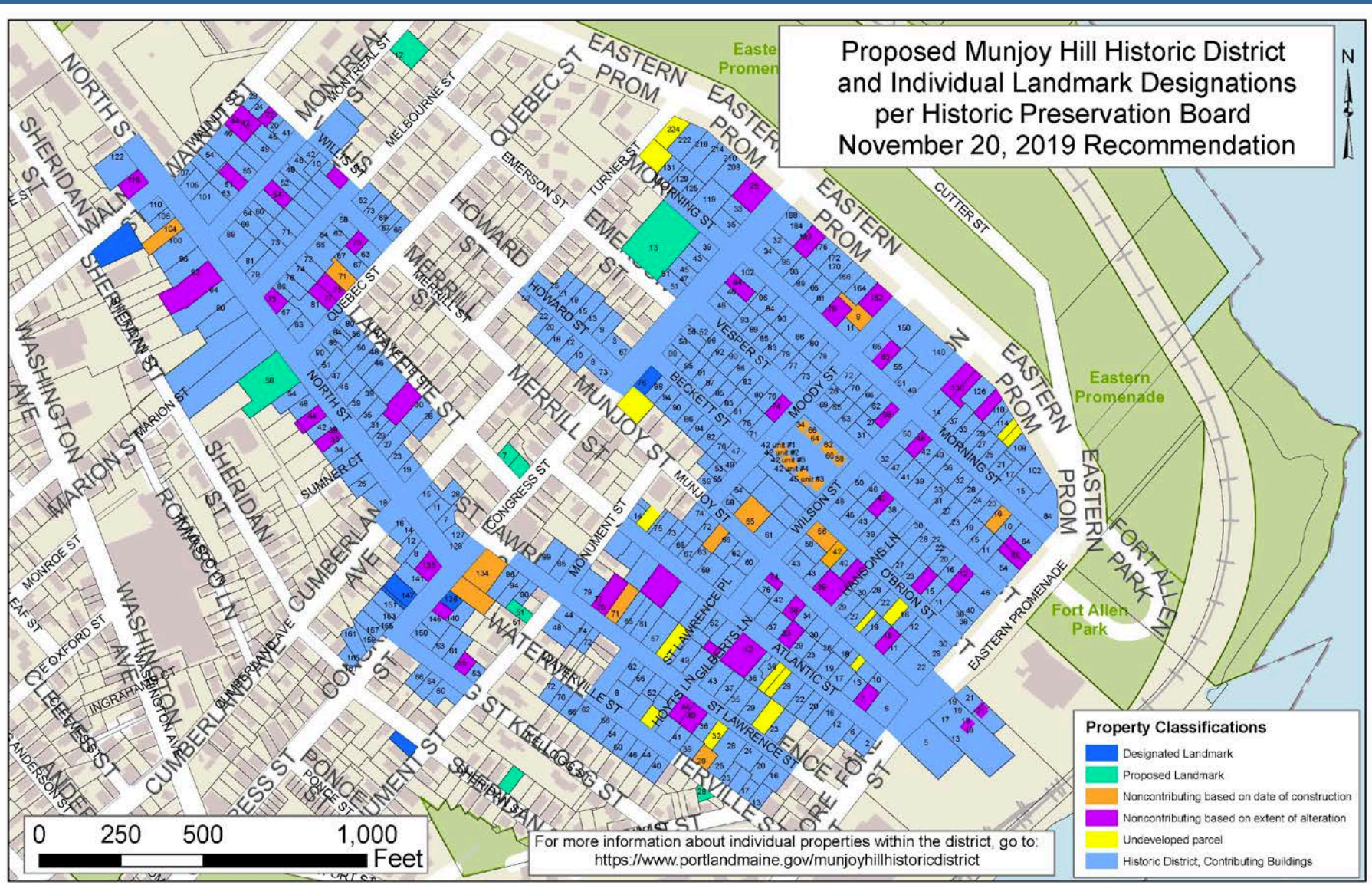
- *Board found that the proposed district meets the minimum criteria for designation under Sec. 14-610 (a) and (b)*

- *Board also found that the proposed district exhibits sufficient integrity to make it worthy of preservation--Sec. 14-611.*

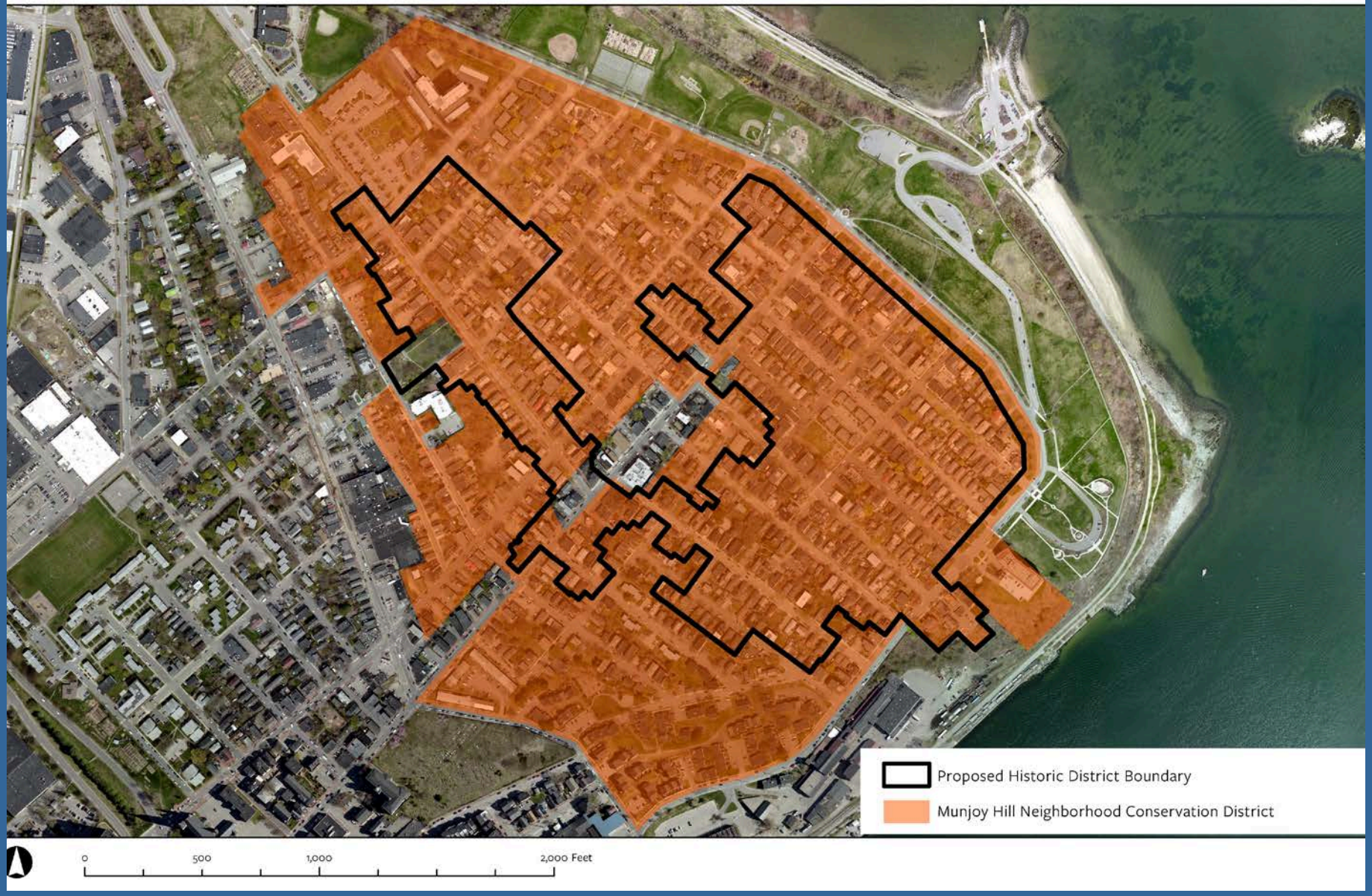
Proposed Munjoy Hill Historic District and Individual Landmark Designations

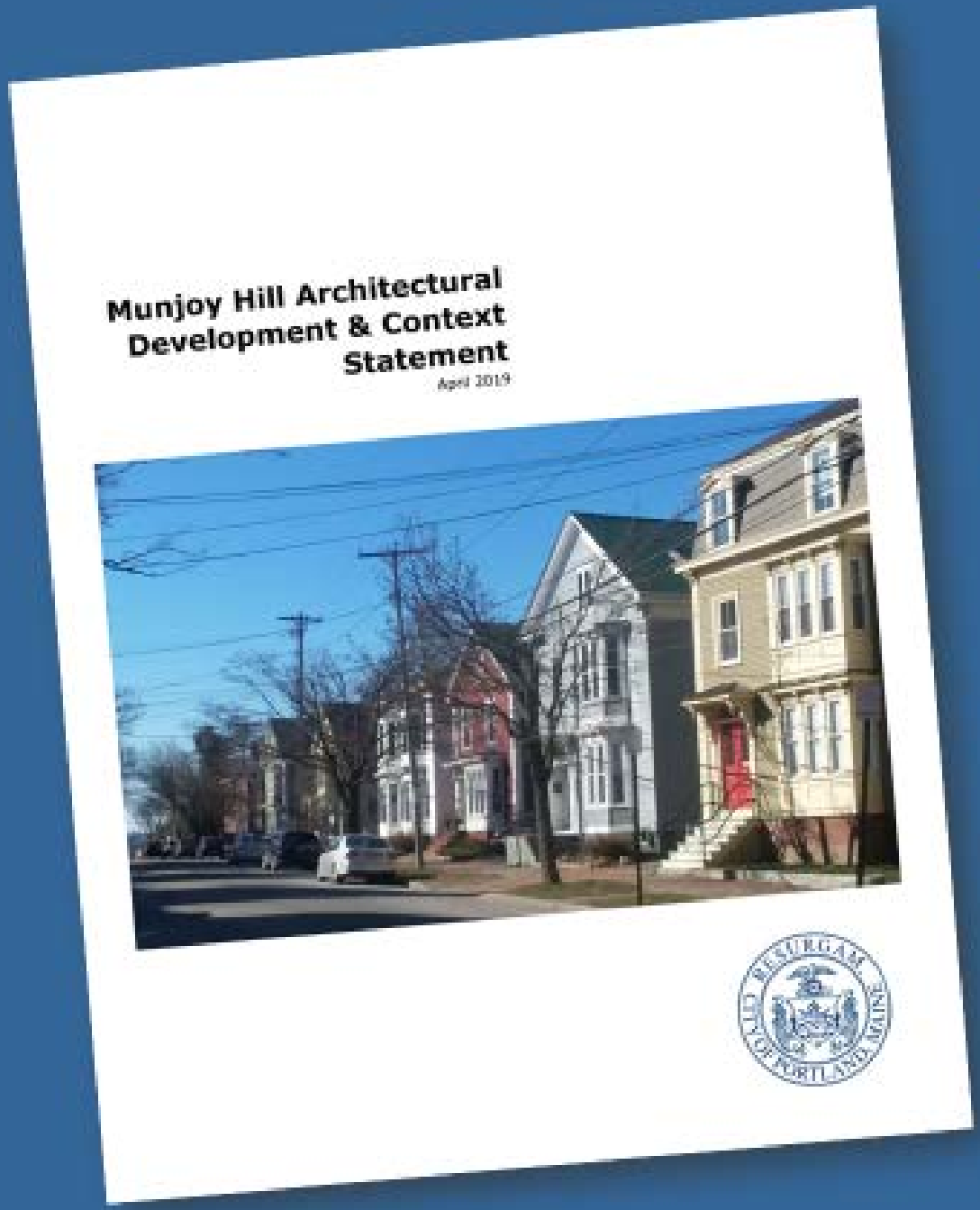
Per Historic Preservation Board Recommendation




Proposed Munjoy Hill Historic District
and Individual Landmark Designations
per Historic Preservation Board
November 20, 2019 Recommendation
N
Property Classifications
Designated Landmark
Proposed Landmark
Noncontributing based on date of construction
Noncontributing based on extent of alteration
Undeveloped parcel
Historic District, Contributing Buildings
0 250 500 1,000
Feet
For more information about individual properties within the district, go to:
https://www.portlandmaine.gov/munjoyhillhistoricdistrict
Eastern Promenade
Fort Allen Park
EASTERN PROM
QUEBEC ST
MONTREAL ST
MELBOURNE ST
WALNUT ST
NORTH ST
SHERIDAN ST
WASHINGTON AVE
MARION ST
HOWARD ST
MERRILL ST
MUNJOY ST
CUMBERLAND AVE
WATERVILLE ST
ST LAWRENCE ST
ATLANTIC ST
MORNING ST
CUTTER ST
EASTERN PROMENADE
FORT ALLEN PARK
VESPER ST
BECKETT ST
MOODY ST
WILSON ST
HANSONS LN
O'BRION ST
ST LAWRENCE PL
HOYTS LN
GILBERTS LN
KELLOGG ST
PONCE ST
SUMNER CT
CONGRESS ST
MONUMENT ST
MONROE ST
E OXFORD ST
INGRAHAM ST
EMERSON ST
TURNER ST
WILLIS ST
MERRILL ST
NORTH ST
SHERIDAN ST
CUMBERLAND AVE
WASHINGTON AVE
CLEVELAND ST
ANDERSON ST
42 unit #1
42 unit #2
42 unit #3
42 unit #4
45 unit #3

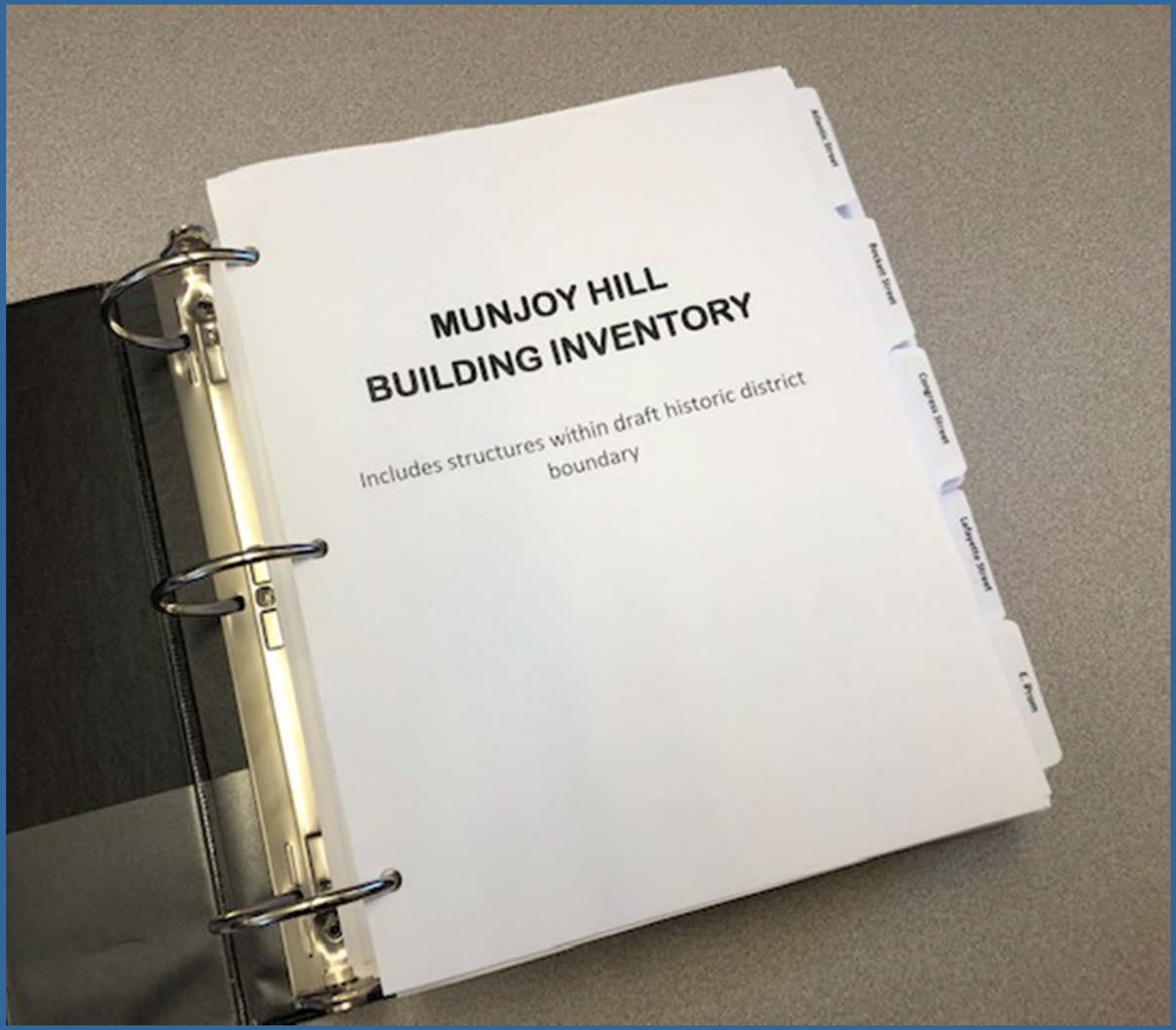
Proposed Munjoy Hill Historic District Boundary in Relation to MHNCD





Context Statement

* Development history
* Architecture
* Visual character of neighborhood


MUNJOY HILL
BUILDING INVENTORY
Includes structures within draft historic district boundary

Address: 95 Beckett
Approximate/Documented Date of Building: 1886-1887
Surveyed: 8/17/2018
Historic Name: Mary A. Bowdren House
Contributing or Noncontributing: Contributing

Introduction
95 Beckett Street is a front-gabled two-and-a-half-story Italianate frame multifamily house clad is asbestos shingles. The dwelling is typical of the many gable front (Italianate, Greek Revival, Greek Revival with Italianate features, Queen Anne) dwellings built on narrow lots that typify Munjoy Hill's historic character. Defining stylistic features include a two-story square bay window, dentil moldings in the cornice of the main roofline, decorative brackets beneath the eaves and in the entablatures of the bay windows, eave returns, and a recessed main entrance protected by a hipped roof hood supported by square columns. The house was owned by Mary A. Bowdren, a first generation Irish-American and her husband James, an Irish immigrant and plasterer.

Current Architectural Description
The façade is two bays wide and includes a recessed main entrance in the first bay and a two-story square bay window in the second. Windows in the façade are 1/1 with vinyl sash and wood trim. The bay windows feature dentil moldings and decorative brackets within the entablatures as well as wood paneling beneath the band of windows. The main entrance consists of a pair of doors made of wood with 1 light over 2 panels on each leaf. In addition, a transom and decorative wood paneling can be seen in the recess. Finally, a pair of Doric columns supports the hood; a set of wooden stairs with square wooden railings connects the entry door to the sidewalk.

The south elevation is four bays wide and includes 1/1 windows with vinyl sash and wood trim. A secondary entrance is located in the fourth bay. Wood steps lined with square wood railings and crossed pattern balusters rise to the small porch and door. A slim, flat roof hood extends out and over and is supported by simple brackets made of two by fours.

The east elevation is not visible from the public way. The north elevation is three bays wide, including a single bay in the rear ell. Windows are 1/1 with vinyl sash and wood trim.

The rear ell is a two-story flat roofed frame addition. It appears to have a roof deck on top protected by a square wood railing.

Finally, the roof of the main structure is asphalt, contains one visible chimney, and a gabled dormer rising from the southern slope. The dormer, like the main structure, is clad in asbestos shingles and also has an enclosed pediment in the gable.

Additions and Alterations Since 1924
The building has suffered losses and alterations typical of this street, style, and era. Such losses include wooden clapboard siding, wooden entablatures above the windows, 2/2 wooden sash windows, shutters, and corner boards. Significantly, many stylistic features are present in both the 1924 and 2018 iterations. These include the dentil moldings, decorative brackets, wood paneling beneath the square bay windows, and the pedimented gable dormer rising from the southern slope of the roof. Although altered the dwelling retains most of its character defining details and contributes to the neighborhood's historic character.

Planning Board Role in Historic District Deliberations

A. Address the following questions:

1) Does the proposed district meet the ordinance criteria for district designation?

2) What is the effect of designation on other other aspects of Comprehensive Plan?

B. Forward recommendation to City Council

1st Workshop, December 10

- *Context of designation initiative*
- *Documentation and analysis*
- *Consultant input*
- *District boundary delineation*
- *HP Board review process*
- *Designation criteria*
- *HP Board Findings*
- *Planning Board Role*
- *Comp Plan Considerations*
- *Relationship of Historic District to MHNCD*

2nd Workshop, February 11

- *Construction and demolition trends*
- *Other studies & articles*
- *Additional policy analysis*
- *Relationship to MHNCD*
- *Period of significance*
- *Building and life safety codes*
- *Can a district be amended*
- *100 foot rule*

- *Housing production impacts*
- *Existing housing incentives*
- *Tax rate*
- *Sustainability goals*
- *Purpose of designation*
- *Property owner consent*
- *Tax Credits*
- *Review times*

\+ *Comp Plan analysis*

Case Studies of Approved Residential Projects in Historic Districts

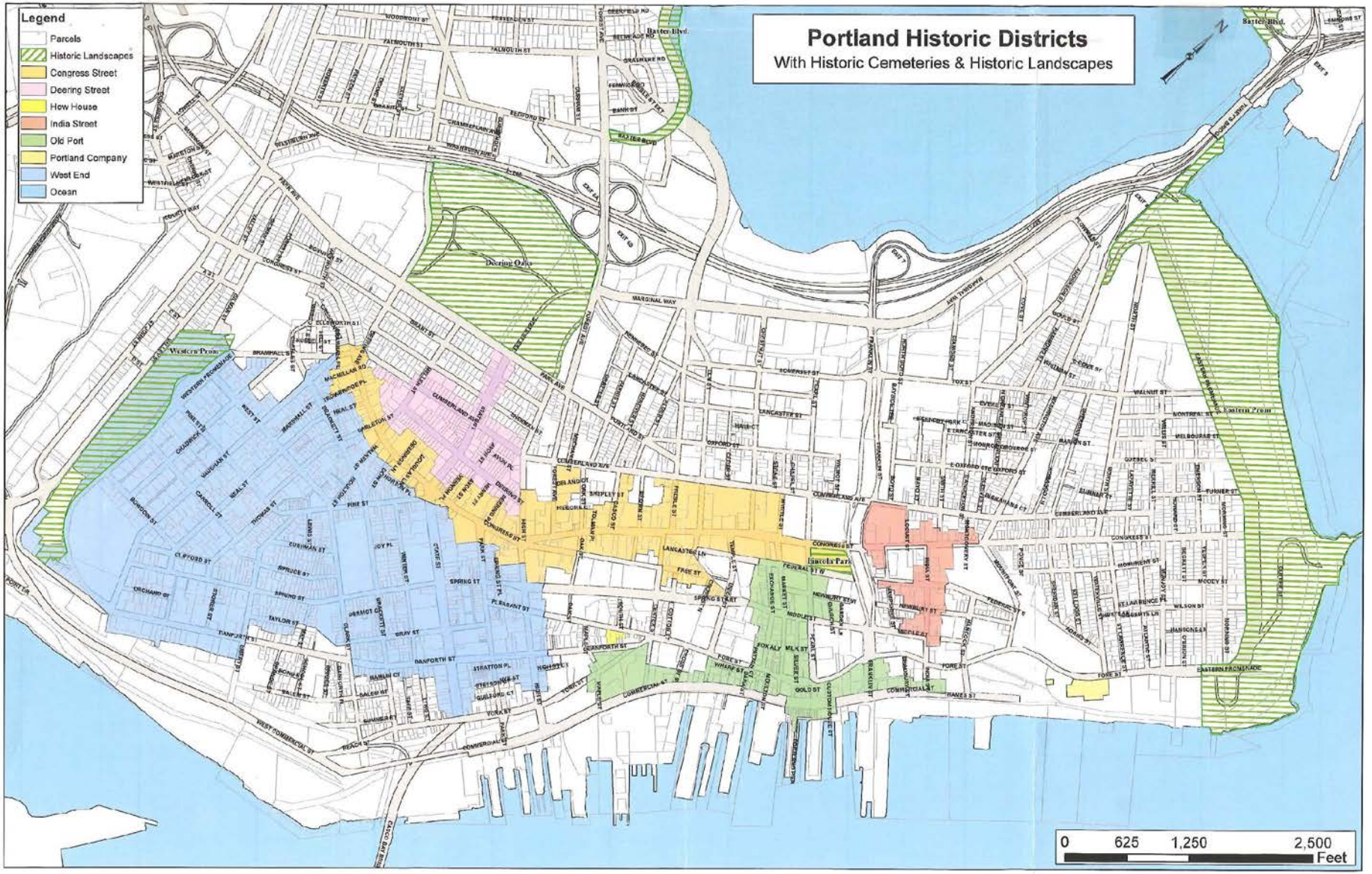
West End Place, approved 2012

Project entailed HP Board rescission of contributing status of 1850's residential structure, based on structural condition. Project is taller and has a much larger footprint than surrounding structures, but was found to be compatible with its context and meet HP ordinance new construction standards.

Outstanding Questions/Issues

- *Why is historic district designation warranted?*
- *How is “period of significance” determined?*
- *Designation alternatives*
- *Relationship to Recode initiative*

Why Pursue Historic District Designation?


Legend
Parcels
Historic Landscapes
Congress Street
Deering Street
How House
India Street
Old Port
Portland Company
West End
Ocean
Portland Historic Districts
With Historic Cemeteries & Historic Landscapes
0 625 1,250 2,500
Feet

vulnerable vermont

How Are Our Historic Buildings Changing?

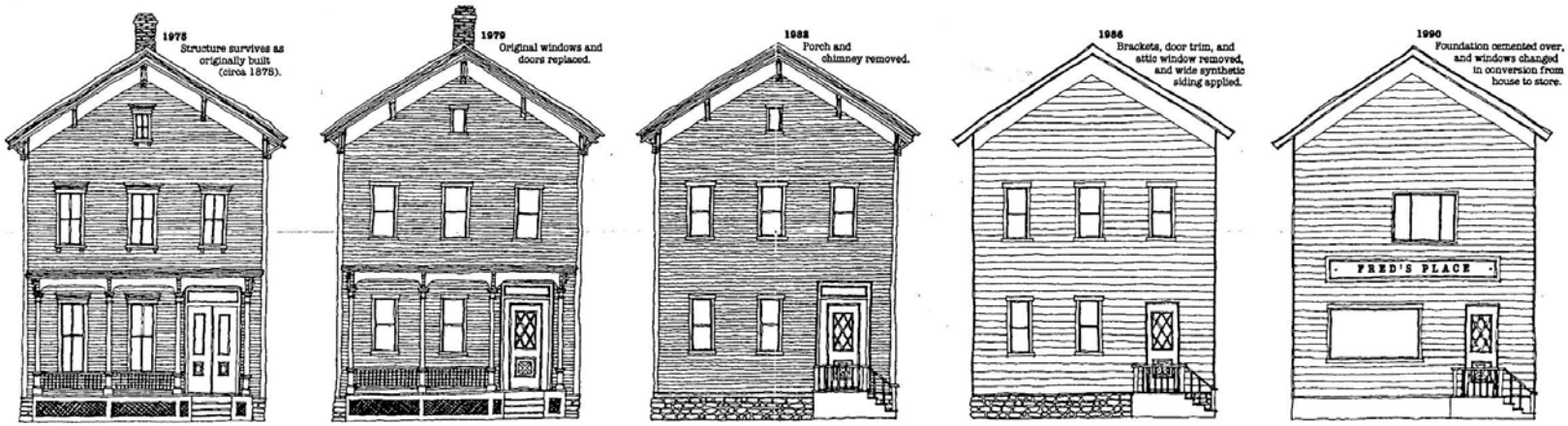
THE STUDY:

Changes are routinely being made to historic buildings by property owners in Vermont and in communities across the nation. These changes generally go unnoticed and uncontrolled. As they accumulate, they alter a valuable record of the past. Eventually, they may erase the visible heritage of an entire community.

During 1989-1990, the University of Vermont Historic Preservation Program in cooperation with the Vermont Division for Historic Preservation undertook a study, **Vulnerable Vermont: A Study of Changes to Historic Buildings in Three Vermont Communities**, to measure the pace and impact of changes made to historic buildings over the past fifteen years in three very different northwestern Vermont communities. The communities studied were: the Battery Street Historic District, an urban neighborhood near Burlington's waterfront; Hinesburg, an exurban town which is rapidly becoming suburban; and Fletcher, a rural community.

Graduate students visited each study community to compare the present appearance of buildings with photographs and data of the same buildings gathered by the Division over a decade ago. The students also interviewed property owners about changes made to their buildings.

This poster presents some of the interesting findings of the project.



IS THE VERMONT YOU KNOW FOREVER?

By projecting into the future the current rates of change to historic buildings found in the study communities, some startling trends were discovered about the way Vermont might look in its "third century."

BY THE YEAR 2004

No single family homes may be left in Hinesburg Village.

BY THE YEAR 2049

All historic siding may be covered over or removed from buildings in the Battery Street Historic District.

BY THE YEAR 2052

No historic barns may be left in Fletcher.

Small Changes Can Add Up To Big Changes In Only Fifteen Years

Most property owners interviewed in the study noticed the large-scale changes made in their communities —buildings demolished for parking lots, condominiums built in fields at the edge of town. Far less obvious, but of equal impact in the long run, were the gradual changes made to places —porches lost here, original windows replaced there. As seen in the composite illustrations above, seemingly small changes to buildings can lead to drastic alterations in the appearance of Vermont's landscape.

Could This Happen To Buildings In Your Community?

While the study revealed a number of unsettling trends, it also uncovered alternatives available to building owners. Here are a few examples:

Windows

Windows were frequently replaced on buildings in the three communities studied. Instead of removing their building's original windows, some owners repaired and caulked the original sash to make them energy efficient. If repair was not possible, they found replacement windows to match the originals.

Porches

While many owners in the study replaced their decorative porches with concrete steps and plain unpainted lumber railings, others took the trouble to regularly paint and maintain their original porches. Many took care of related problems such as leaky roofs which can eventually cause porches to rot. Others replaced failed original features with matching parts.

Siding

The covering of exterior walls with synthetic siding was one of the changes found to have the most dramatic impact on the appearance of historic buildings. However, some building owners preferred the traditional option of regularly repairing and painting their buildings. This approach had the additional benefit of allowing them to check for and correct problems such as rot or insect infestation.

Buildings, Farms, Villages, And Cities Are Part Of The Environment Too!

Probably the most important overall message learned from this study is that buildings, streets, neighborhoods, farms, villages, towns, and cities are as much a part of Vermont's environment as forests, wetlands and air. The decisions made by the individual citizen concerning buildings have a direct and immediate effect on preserving the larger environment.

STATISTICAL SUMMARY

The following statistics illustrate how historic buildings were changed since 1976 in the three communities studied.

Overall Changes:

Buildings Changed:

Burlington	89%
Hinesburg	66%
Fletcher	63%

Changes in Use:

Burlington	38%
Hinesburg	10%
Fletcher	6%

Changes to Elements of Buildings:

PORCHES:

Burlington	61%
Hinesburg	31%
Fletcher	32%

WINDOWS:

Burlington	53%
Hinesburg	24%
Fletcher	28%

SIDING:

Burlington	21%
Hinesburg	10%
Fletcher	15%

This poster was produced by graduate students and faculty of the University of Vermont Historic Preservation Program, Department of History, University of Vermont, Burlington, Vermont 05405, in cooperation with the staff of the Vermont Division for Historic Preservation, Agency of Development and Community Affairs, Montpelier, Vermont 05602. For additional copies of the poster, the study report, or for information on preserving buildings and communities, contact the Division. For information on courses, workshops, and community conservation and research services, contact the Historic Preservation Program.

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Poster Design: Quad Left Graphics

Period of Significance

Congress Street: 1800 –1970

Deering Street District: 1850 – 1890

House Island: 1600s – 1930s

How Houses: 1799 - 1818

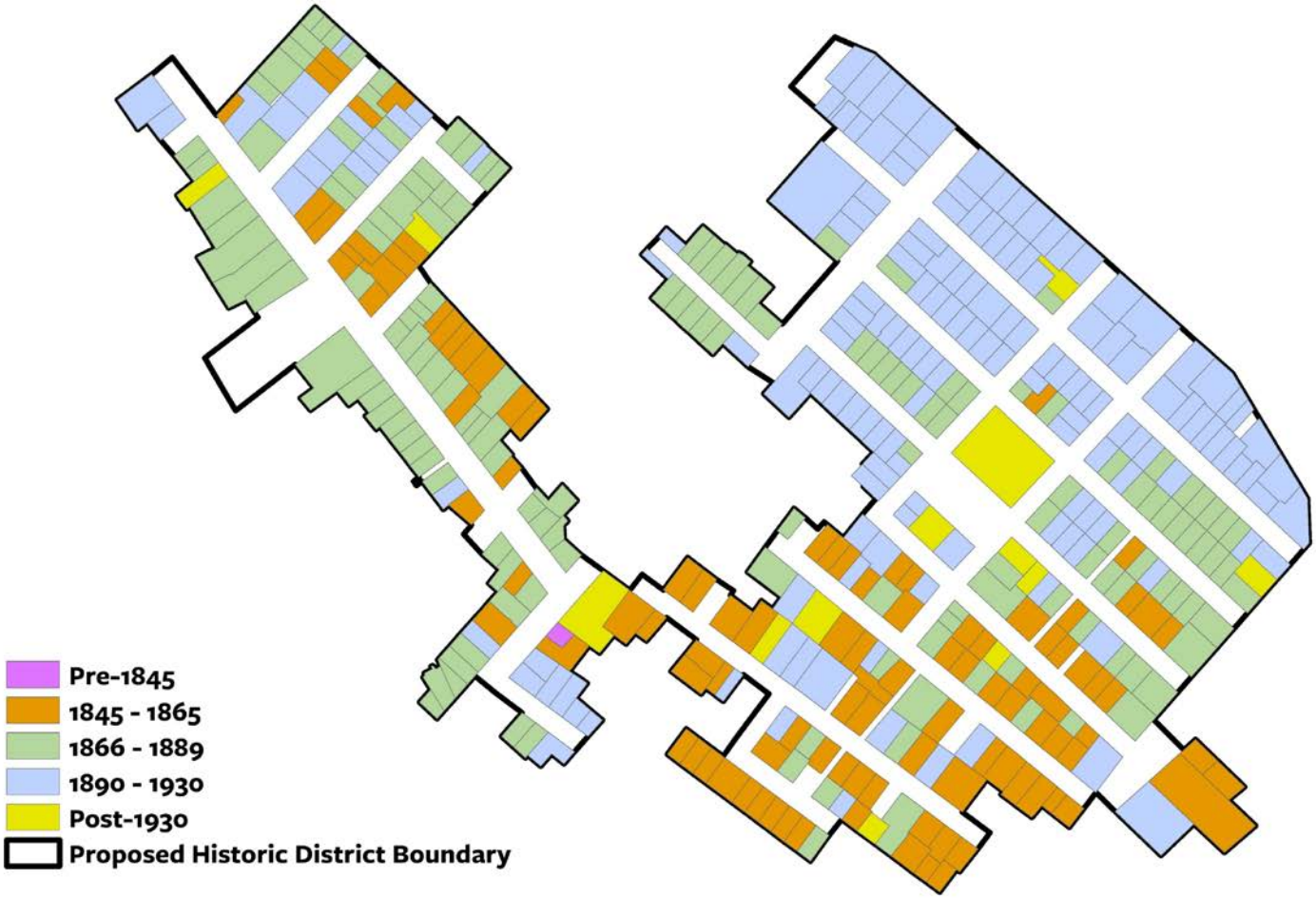
Munjoy Hill: 1850s – 1930

Portland Company: 1847-1924

West End: 1820s -1930s

Westbrook College (UNE): 1830s - 1950s

Construction Period* of Principal Buildings on Proposed Historic District Properties



* Exact construction date not available for all buildings. Some dates are estimated based on architectural style.

Alternatives to District Designation

Relationship to ReCode

Public Review Process for Proposed Historic District Designation

HP Board → Planning Board → Council

Memorandum
Department of Planning & Urban Development
Planning Division

To: Brandon Mazer, Chair, and Members of the Planning Board
From: Deborah Andrews, Historic Preservation Program Manager
Date: February 7, 2020
Mtg Date: February 11, 2020
RE: Recommendation of the Historic Preservation Board to Designate Munjoy Hill Historic District - 2nd Workshop

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INTRODUCTION

A second workshop has been scheduled to continue review of the Historic Preservation Board's recommendation to designate an area within the Munjoy Hill neighborhood as a local historic district. This report will address questions raised to date by members of the public and Planning Board, provide relevant data (to the extent available), and additional information to aid in the Board's deliberations. This report also includes an assessment of the effect of the proposed historic district designation on other aspects of the Comprehensive Plan. This assessment was prepared by Christine Grimando, Director of the Department of Planning & Urban Development.

As noted at the first workshop, the role of the Planning Board in the review of proposed historic district designations is to a) make a determination as to whether the nominated district meets the criteria for designation identified in Division 3 of the historic preservation ordinance—essentially confirming the findings of the Historic Preservation Board; and b) "consider the effect of such designation on other aspects of the comprehensive plan of the city." Much of the Board's discussion at the first workshop was on the relationship of the proposed district designation to other land use policy goals as articulated in *Portland's Plan 2030*.

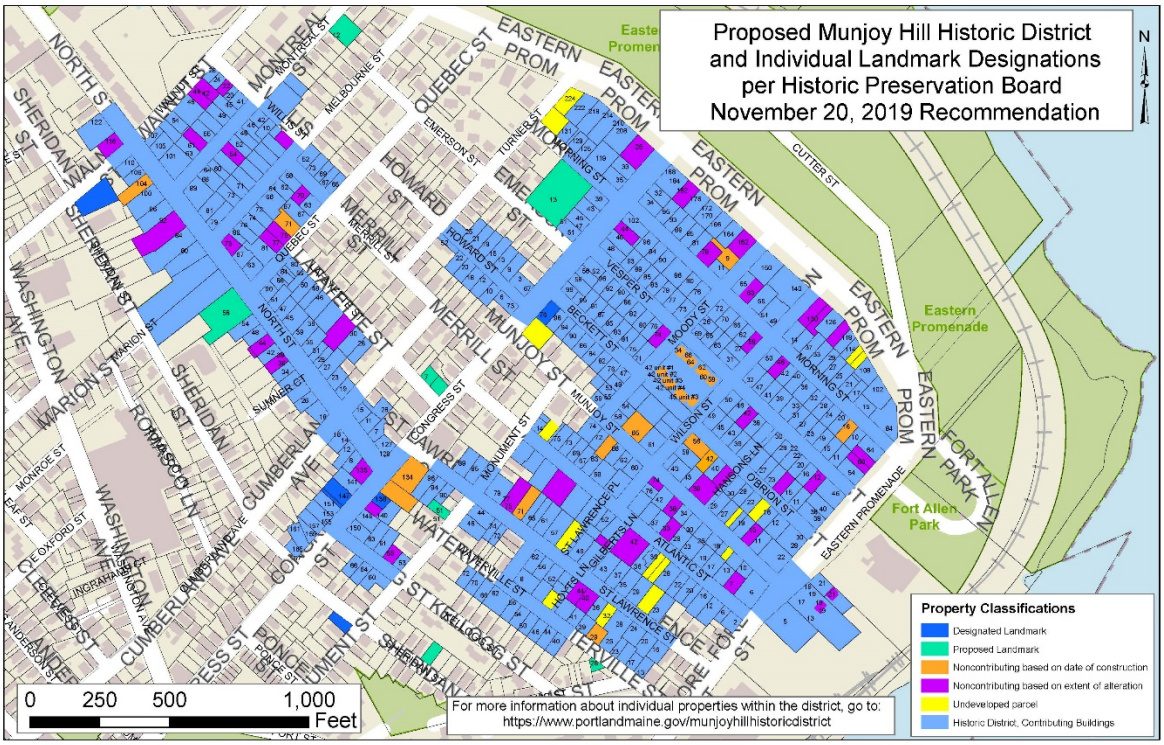
Staff has reviewed all of the public comment submitted in emails and letters to date as well as the questions and concerns raised at the December 10th workshop. As there was a fair amount of repetition in the questions and information requests, staff has consolidated them into common themes and issues for the purposes of this report.

Finally, this report does not further address the individual historic structures outside the proposed district boundary that are recommended for individual designation. Although these properties were identified in the December 10 staff report, recommendations for individual landmark

designations are not reviewed by the Planning Board (they are forwarded directly to the City Council).

BACKGROUND, SUMMARY OF FIRST WORKSHOP

On December 10, 2019, Historic Preservation Board Chair Julia Sheridan and staff presented the recommendation of the Historic Preservation Board to designate an area within the Munjoy Hill neighborhood (shown below) as a local historic district subject to the provisions of Article IX of the Land Use Code (Historic Preservation). See ATTACHMENT 1 for boundaries of proposed district and building classifications within it.



The unanimous November 20, 2019 recommendation of the Historic Preservation Board followed four preliminary review sessions, two site walks and several public meetings held on Munjoy Hill over an eight-month period. The Board's finding that the proposed district meets the historic preservation ordinance's minimum criteria for designation was based on detailed documentation and analysis, including research into the neighborhood's development history, an architectural survey and evaluation of existing building stock, as well as an assessment of the area's relative significance within the context of Portland's cultural, social and architectural heritage. The proposal presented to the Historic Preservation Board reflected not only the work of Historic Preservation staff and interns, but also the analysis and recommendation of an independent preservation consultant with expertise in historic district designations. Once submitted to the Historic Preservation Board, some adjustments to the proposed district boundaries and changes

in building classifications were made as a result of the Board's review and input from the neighborhood.

During the December 10 Planning Board workshop, staff also described the background behind this initiative, noting that initiating the process of a Munjoy Hill Historic District designation was one of the specific recommendations presented to the City Council in June 2018 when Planning staff presented its recommended slate of land use regulatory tools to more effectively manage development on Munjoy Hill. At that time, the Council directed Historic Preservation staff to move forward with the necessary documentation and analysis required for designation and return with a proposal.

The December 10 staff report includes a more detailed description of the background behind this proposal and the Historic Preservation Board's review process (ATTACHMENT 8).

PUBLIC COMMENT & PLANNING BOARD FEEDBACK

- Construction and demolition trends on Munjoy Hill
  Following are key data points in response to requests made by the Board and the public:
  - Between the implementation of the 2015 zoning amendments to the R-6 to the start of the Munjoy Hill moratorium in 2017, 13 demolitions permits were issued.
  - Between implementation of the MHNCOD in June 2018 to present, 6 demolition permits were issued under the new regulations. Some demolitions occurred during this period based on approvals that preceded the new regulations.
  - Between the implementation of the revised R-6 regulations in 2015 and the start of the moratorium in 2017, 15 permits were issued for new construction. Between June 2018 and the present, 7 building permits were issued. These new dwelling units consisted of the following types of residential uses for these periods, respectively:
    - 2 single family; 3 two family; and 2 multi-family (Since June 2018)
    - 5 single family; 3 two family; 7 multifamily (April 2015 to December 2017)

    This data represents permits issued only, and does not indicate Planning Board Approvals that have not yet received permits.

- Cost of property renovations and maintenance
  Cost differences to property renovations and maintenance vary considerably, as these are dependent on numerous factors, including nature and scope of the work and relative condition of the property. Historic Preservation Program staff routinely works with property owners to find suitable materials and design solutions for individual projects. Replacement in-kind of existing materials is always permitted.

- References to reports, studies, and articles regarding the impact of historic districts on housing, property values, taxes, maintenance costs, etc.

Staff consulted a number of studies and articles on the effects of preservation programs across the country and have provided references to these as background for many of the questions and comments made about overall effect of districts. A sample of articles and reports consulted are included below:

- *Opportunity at Risk: San Antonio's Older Housing Stock.* San Antonio Office of Historic Preservation.
- *The Heterogeneous Effects of Historic Districts on Local Housing Markets in New York City.* Wagner School of Public Service, NYU Furman Center. 2014
- *Twenty-Four Reasons Historic Preservation is Good for Your Community.* Economics, P. 2020.
- *The Impact of Age on the Value of Historic Homes*. The Appraisal Journal. Fall 2011.
- *Why Historic Preservation Districts Are Crucial to Cities*. City Lab. Stephanie Meeks. February 10, 2016
- *Density Without Demolition*. City Lab. Stephanie Meeks June 11, 2017
- *Culture, Historic Preservation and Economic Development in the 21st Century*. Donovan Rypkema, September 1999.
- *The Impact of Historic Districts on Residential Property Values*. New York City Independent Budget Office. September 2003
- *Making Normal Neighborhoods Legal Again*. Strong Towns. July 2019
- *The Economic and Fiscal Impact on Maine Of Historic Preservation and The State Historic Preservation Tax Credit.* Maine Preservation. April 2011.
- *The Intersection of Affordable Housing and Historic Districts*. ThinkBrooklyn. March 2016
- *When Historic Preservation Hurts Cities.* New York Times. Benjamin Appelbaum. January 2020.

- How do the current MHNCD regulations compare to Historic Preservation regulations?

  The regulations currently in place under the Munjoy Hill Neighborhood Conservation Overlay District (MHNCD) govern new construction and demolition. The Overlay District contains dimensional and design standards which revise maximum building heights, address rooftop appurtenances, regulate parking placement and its effect on front facades and regulate roof forms. Under the MHNCD, the Alternative Design Review option, which had been suspended during the period the Overlay District was being studied, was reinstated, but with the introduction of procedural and substantive changes.

  The demolition requirements in the Overlay District include a 12-month stay of demolition for structures determined by the Planning Authority to be "preferably preserved". The delay period can be reduced if the applicant elects to have their new construction proposal reviewed by the Historic Preservation Board and the Board finds that the design proposal meets the historic preservation ordinance's new construction standards. In that case, the stay is lifted and the "preferably preserved" building can be demolished and replaced. Alternatively, the applicant can wait and move forward with demolition after the 12-month stay. The premise of the demolition delay is that the delay will encourage parties to explore alternatives to demolition. There is nothing to prevent

demolition, however. If an applicant elects to pursue a more contemporary design in an application for new development, and does not meet the R-6 zone's base design standards (which are relatively prescriptive), the applicant may opt for the Alternative Design Review process. In the MHNCD this review is conducted in by the Historic Preservation Board. The Alternative Design standards were amended to allow for additional design flexibility when social or environmental public benefits are proposed as part of the project, including the provision of sustainable design, affordable housing units or green technology.

Historic District designation puts into place regulations and review standards that govern not only demolition and new construction, but also alterations and additions to the historic structures. A key premise behind historic preservation measures is not only that new construction be reviewed for compatibility, but the that the existing historic buildings warrant stewardship. Historic preservation regulations are not intended to *prevent* changes to historic buildings but rather to provide a mechanism to *manage* change so that the historic character of the buildings and the neighborhood as a whole is maintained and enhanced over time. Alterations and additions to "contributing" structures are reviewed under the *Secretary of the Interior's Standards for Review of Alterations*. These standards are intentionally general in nature, as they are written to address a wide variety of potential alterations and an equally wide range of historic resources.

Each review standard includes language intended to ensure a level of reasonableness when staff or the HP Board applies the standard—language such as "every reasonable effort shall be made...", "wherever feasible...", and "...should be avoided when possible". Under the historic preservation ordinance, alterations or additions that are not readily visible from a public way are not subject to review. Alterations to "noncontributing" structures are governed by a more lenient set of review standards and noncontributing structures may be demolished as-of-right. Any replacement building is subject to review under the historic preservation ordinance's new construction standards which are intentionally general in nature and identify broad areas of compatibility (scale and form; composition of facades; relationship to the street; consideration of surrounding context).

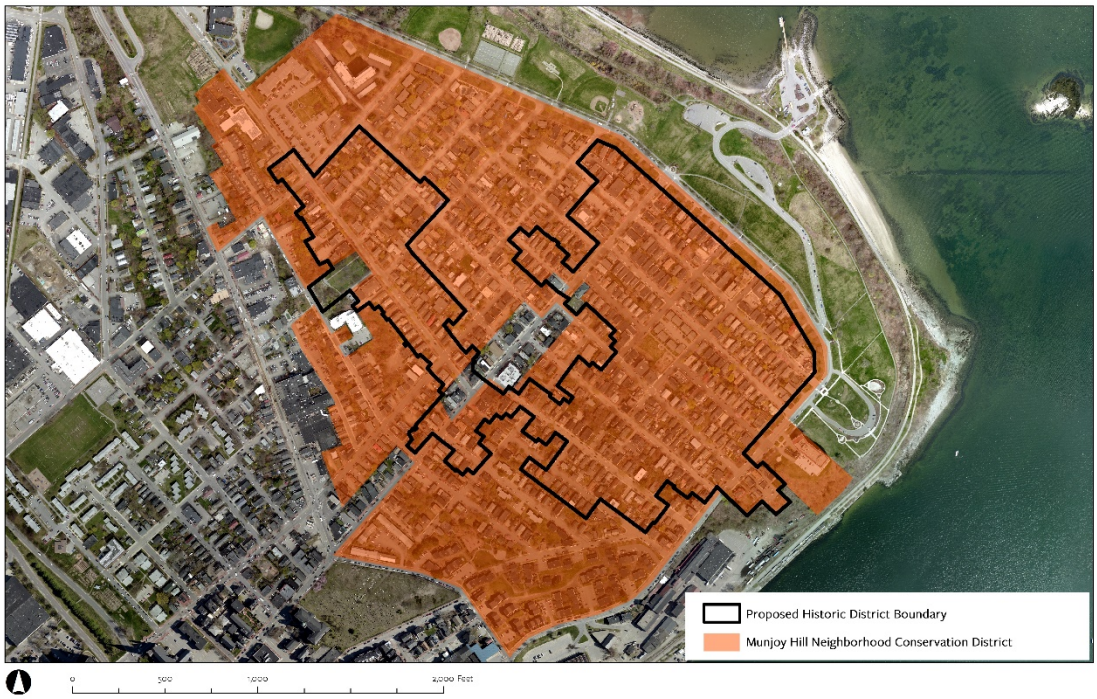
With respect to demolition, landmark or contributing structures cannot be demolished unless 1) the applicant can meet the ordinance's economic hardship test which requires demonstration of "no reasonable use of the structure"; or 2) the Historic Preservation Board, upon request of an applicant, amends or rescinds the original landmark or contributing classification. The ordinance includes a process and review criteria for considering such requests. Since the ordinance went into effect in 1990, a number of buildings in historic districts have had their classification changed. One of the bases for changing a building classification from "contributing" to "noncontributing" is receipt of evidence that the building is structurally unsound. It should be noted that a proposal for *partial* demolition, for example demolition of a rear ell, is typically reviewed as an alteration.

- How would the MHNCD regulations interact with the Historic Preservation ordinance regulations in the proposed historic district?

Within the proposed district, the demolition delay provisions of the MHNCD would not apply. Demolition would be governed by the historic preservation ordinance. Buildings classified as noncontributing could be demolished as of right with no review. See above for discussion of routes to pursue demolition of contributing structures..

For proposed new construction within the district, the dimensional and core design standards included in the underlying MHNCD zoning would still apply, but the R-6 design standards would be superseded by the Standards for Review of New Construction (Sec. 14-651) in the historic preservation ordinance. New construction is reviewed at the Historic Preservation Board level.

Proposed Munjoy Hill Historic District Boundary in Relation to MHNCD



MHNCD & proposed district boundaries

Whereas alterations and additions are not reviewed in the MHNCD, they would be subject to review within the historic district, provided they are visible from a public way and are not considered repair or replacement in kind.

Under Sec. 14-526 5.b of the site plan ordinance, a project located within 100 feet of the historic district boundary or an individually designated landmark which is subject to site plan review would require advisory review by Historic Preservation staff or Board. This review is not binding. Historic Preservation staff summarizes advisory review comments either for the staff or the Planning board, depending on the scale of review.

Included with this report (see ATTACHMENT 6) are examples of residential projects reviewed and approved by the Historic Preservation Board in recent years. As these examples illustrate,

numerous new residential developments have been introduced within Portland's existing historic districts. Projects have ranged from market-rate housing, affordable housing, mixed housing and mixed-use developments. Many of these developments called for buildings substantially larger than the surrounding development (in footprint, height and/or overall scale). As some of the examples illustrate, the historic preservation ordinance provisions have allowed for reclassification of "contributing" structures where a building's structural condition or overall integrity is at issue. In other instances, less significant portions of designated structures, such as rear ells, have been allowed to be removed to provide for additional space or units. And dormer additions are frequently approved to take advantage of previously-underutilized space, often enabling a property owner to increase the number of units in their building.

At the December workshop the Planning Board raised the possibility of changes to the MHNCD. Though evaluating whether any modifications to the overlay are warranted in the event of a new historic district would be an independent zoning amendment, staff is prepared to discuss the topic and the process at the February 11th workshop.

- How do historic preservation rules interact with other code or life safety requirements?
  Most projects reviewed under the historic preservation ordinance standards are also subject to building codes, ADA requirements, fire and life safety codes. Meeting all of the respective requirements is the intent of all reviews. Design adjustments are often made to accommodate code requirements. Double-hung windows have been replaced with casements to meet the required egress opening dimensions. The IEBC is a code adopted by the City of Portland to address existing buildings and allows for flexibility in meeting code requirements for buildings within designated historic districts. Historic Preservation staff work with plan reviewers in the Building Inspections Department on a regular basis to reconcile various requirements in the interest of a successful project.

- Is it typical for a historic district to include structures from numerous eras of development?
  It is common for historic districts to contain within their boundary buildings from numerous eras of development activity. The West End Historic District, for example, includes buildings ranging in construction date from 1799 through the present day. Within any district, however, a "period of significance" is established. This period of significance may be a relatively brief and discrete period, as in the case of an early "auto row" that was developed between 1890 and 1930. For other districts, the period of significance is much longer, reflecting a number of key periods of development activity that shaped the character of the present-day neighborhood. On Munjoy Hill, those key periods of development activity include the 1850's when the establishment of the Atlantic & St. Lawrence Railroad and Portland Company spurred the initial laying out of streets and residential construction; the period immediately following the Fire of 1866 when much of the neighborhood was built out, and the period between 1890 and 1925 when the influx of European Immigrants lead to the construction of numerous triple-deckers and apartment houses. It was during this same time period that the

residential development along the Eastern Promenade was constructed. By the 1930's, the neighborhood as we know it today was largely developed. After that time, a variety of circumstances conspired to slow growth on the Hill.

The basis for the proposed boundary delineation was discussed in a report prepared by preservation consultant Scott Hanson. This report was included as an attachment in the December 10 staff report.

- What weight does property owner opinion carry in historic district designations?
  Portland's historic preservation ordinance does not include a provision requiring consent from a percentage of the property owners within a proposed district. Some ordinances include this provision; Portland's does not. Obviously, affected property owners have the opportunity to make their position known and public opinion is a factor weighed in any final decision on the extent of a district or on a designation proposal.

- Will tax credits be available for property owners on the Hill if a district is approved?
  State and federal historic tax credits are available for the rehabilitation of income-producing properties, including apartment buildings or owner-occupied buildings that also contain rental units (the tax credit would be available for the income-producing portion of the property only). Because the area is being designated as a local historic district (rather than National Register district) Historic Preservation staff would need to seek National Park Service certification in order for the tax credits to become available. The City sought and received NPS certification for the Congress Street Historic District and also for an expanded Portland Waterfront Historic District.

- How much time does historic preservation review add to other review times?
  Most applications requiring historic preservation review also require review and approval under other applicable codes and ordinances. For example, most renovation projects require a building permit. Under the City's application system, an applicant with property in a historic district may submit a single application which is forwarded to plan reviewers in Building Inspections, Fire/Life Safety staff (if applicable) and Historic Preservation Staff. A geo-rule in the application software identifies the property as being located within a historic district and automatically routes applications for exterior alterations to the Historic Preservation Office. A fee for Historic Preservation review ($65 for administrative-level reviews) is added to the building permit fee at the time of application. Building Inspections staff and Historic Preservation staff review the application concurrently, notifying each other if there's an issue that must be resolved. A single permit is issued following review by applicable parties. The permit may or may not include conditions of approval. This concurrent review process has been in place for several years. It avoids the need to submit multiple applications and ensures that City staff are aware of all applicable regulations as they may affect the project. An applicant can also track the progress of their application on line.

For larger projects located within historic districts that also require site plan review, the same concurrent review process is followed. For Board-level reviews, workshops and public hearings of the two boards often run parallel to allow the applicant to move forward in a more compressed time period. Whether a project is reviewed by staff or the Planning Board, Site Plan and Historic Preservation reviewers will meet after an application is received to coordinate their reviews. In short, Historic Preservation review does not add significantly to review times.

Attached is an informational flyer with responses to frequently asked questions about Portland's historic preservation program. Several informational sessions on "*What Does It Mean to Own Property in a Historic District?*" have been held on Munjoy Hill and at City Hall since the proposal to create a historic district was introduced in 2018.

- Can you revisit a historic district once established? How are historic districts amended?
  Historic districts can be amended or eliminated by the City Council, as is the case with any land use regulation. Sec. 14-623 of the historic preservation ordinance, "Amendment and Rescission of Designation" sets for the process and standards for revisiting a district designation.

  In 1997, following a comprehensive review of the boundaries of all of the historic districts designated when the historic preservation ordinance was adopted in 1990, the Historic Preservation Board recommended boundary adjustments to most of the districts. The City Council approved the amendments. More recently, a property owner just outside the boundaries of the India Street Historic District requested that the district be expanded to include his building. He wished to take advantage of historic tax credits available to income-producing historic buildings in designated districts. This expansion was approved by the Council.

- How does the site plan ordinance's "100-foot rule" affect buildings beyond the district boundary?
  As noted above, the "100-foot rule" comes into play for projects *subject to site plan review* that are located within 100 feet of a district boundary or individually designated landmark. Under Sec. 14-526 5.b of the site plan ordinance, the project would require advisory review. Advisory reviews have sometimes been carried out by the Historic Preservation Board, but the Code allows for this to be conducted by staff. This review is advisory only and not binding. For Level I and Level II site plans reviewed at the administrative level, Historic Preservation staff participates in the review process and provides feedback to the assigned planner. For Level III site plans subject to Planning Board review, staff may simply provide input to the Planning Board where issues of compatibility are less sensitive or schedule an advisory review session with the Historic Preservation Board. In that case, staff summarizes HP Board comment and forwards it to the Planning Board for its consideration.

- Will historic district designation constrain the opportunity to add additional dwelling units?

Designation in and of itself does not prohibit an owner from increasing the number of units within their building, convert an accessory structure to residential use or build a new accessory structure on site if the property can accommodate it within the underlying zone's dimensional requirements. Historic designation would also not prohibit additions, though it would subject them to historic preservation review, and require those changes to demonstrate they are not incompatible with the building's historic character. Certain changes would likely not be approved – a proposal to remove a historic building's gable roof and add another full story with a flat roof, for instance, would have difficulty meeting the standards, though introducing long shed dormers on both roof planes of a gable-roof building to provide another floor of living space, would likely be approved. Removal or expansion of a rear ell would also be a possibility under the historic preservation ordinance. There are numerous examples of these types of changes in the West End Historic District.
For buildings classified as "contributing" within a historic district, it is unlikely that the building could be demolished in order to build a structure that would accommodate more units. Demolition would be a possibility only if the building proved to be fundamentally unsound, warranting reclassification, or the owner could demonstrate "no reasonable use" of the property.

Within the proposed historic district, there are 64 parcels representing noncontributing buildings or open lots that could be entirely redeveloped. Maximum allowable density and other dimensional standards on the lot, are unchanged for all properties in a district.

- What is the impact on existing tools for incentivizing affordable housing? Will this help or hinder that?
  In the MHNCD, a height bonus is allowed for developments of 3 units or more on lots over 2000 sq. ft. that include at least one workforce housing unit for rent or for sale. As currently proposed, the underlying MHNCD zoning, including dimensional standards, would remain in place and not change with the designation of a historic district. Inclusionary Zoning requirements, applicable city-wide for projects of 10 or more dwelling units would also still apply.

  Affordable Housing Tax Credits, while not a City incentive, would be available for new projects as well as for rehab of existing historic structures for affordable housing. The Affordable Housing Tax Credit has often been combined with the Historic Tax Credit. Avesta Housing and CHOM have used both credits in combination in a number of their projects in the West End Historic District and Deering Street Historic District.

  In terms of resources to assist property owners with home improvements, the Munjoy Hill neighborhood is a CDBG-eligible neighborhood. As such, property owners meeting applicable income requirements would be eligible for CDBG grants or loans. This would also apply to property owners who may not meet the income requirements themselves, but whose tenants do. CDBG grants have assisted with a number of residential rehabilitation projects in the West End Historic District and the Deering Street Historic District.

- How do historic districts affect the tax rate, if at all?
  The City Tax Assessor, Chris Huff, has confirmed that Historic Designation is not a factor included in property valuation, and nothing changes in a property assessment before and after designation. As for ways that a designation might influence property values, a designation is not considered a decisive factor among the many variables that might ultimately influence values.

  Mr. Huff also indicated that district designation, if approved by the Council, will have no impact on the City's current revaluation initiative as they will be using sales from January 2017 through January 2019.

- How does historic district designation affect sustainability goals?
  Portland's historic preservation ordinance does not prohibit the installation of solar panels, heat pumps or other alternative energy measures, as evidenced by numerous installations in both residential and commercial historic districts. Examples are included in ATTACHMENT – and will be presented at Tuesday's workshop. These installations were also shared with the Council's Transportation and Sustainability Committee last year.

  As noted in the December 10 staff report, recent research found that the re-use or rehabilitation of existing buildings offers significant environmental. According to a report published by the National Trust for Historic Preservation, ***The Greenest Building,*** each year approximately 1 billion square feet of buildings are demolished and replaced nationwide, resulting in significant environmental impacts associated with demolition and waste disposal, the production of new raw materials, and new construction. The study found that reusing an existing building can result in 4 to 46% less environmental impact than new construction, depending on the type of building, location, and level of energy efficiency. Even when new construction is designed for optimal energy efficiency, it can take 10 to 80 years for a new building to offset the negative environmental implications of its construction.

- Purpose of Munjoy Hill District Designation
  Some of the recent public comments on this proposal have raised basic questions such as: "What is the rationale behind Planning staff's recommendation to designate a portion of the Munjoy Hill neighborhood as a local historic district in addition to the other land use tools put in place on Munjoy Hill?" "Why is it necessary, given the fact that these other measures have been put in place?" As noted above, designation of a Munjoy Hill Historic District was among the slate of tools recommended by Planning Staff to the City Council in June 2018. This slate also included the new zoning provisions, the demolition delay ordinance and the option for "alternative design review"—measures contained within the conservation overlay district. The historic district recommendation was deferred for later action to allow time to document the building stock, delineate boundaries and present a detailed proposal, which is required for formal consideration of district designations.

Historic district designation provides a mechanism to steward the existing historic building stock within an area determined to have historic, cultural and/or architectural significance. Historic districts not only meet the criteria for significance within the context of a community's history and architectural development, they typically exhibit an identifiable visual character that contributes to a strong "sense of place". In order to be considered a historic district, a majority of buildings within its defined boundary must also retain sufficient integrity to communicate the period in which they were constructed. The area proposed for historic designation within the larger Munjoy Hill neighborhood meets these tests.

While much of the public comment received of late has focused on the issue of demolition and new construction—which are addressed in part in the MHNCD—designation of a historic district provides a more comprehensive regulatory program within the district boundaries addressing alterations and additions, as well as demolition and new construction. Regarding demolition, the classifications assigned to buildings within a historic district provide clarity as to which buildings are considered noncontributing (and can be demolished as of right) and which are proposed to be preserved.

NEXT STEPS

Staff looks forward to receiving Board comments on the proposed Munjoy Hill Historic District designation. Following the second workshop on the proposal, a public hearing is tentatively slated for March 10th.

ATTACHMENTS

1. Map of Proposed Munjoy Hill Historic District boundary and building classifications.
2. Memo Re: Comprehensive Plan Consistency
3. *"Why Do Old Places Matter? Economics",* by Tom Mayes from Preservation Leadership Forum blog
4. Case Studies of Approved Residential Development Projects within Historic Districts
5. Flyer: "*Frequently Asked Questions about Portland's Historic Preservation Program*"
6. December 10, 2019 staff report with attachments
7. Sec. 14-140.5 Munjoy Hill Neighborhood Conservation Overlay District
8. Public Comment rec'd since December 10 workshop

Proposed Munjoy Hill Historic District and Individual Landmark Designations per Historic Preservation Board November 20, 2019 Recommendation

N

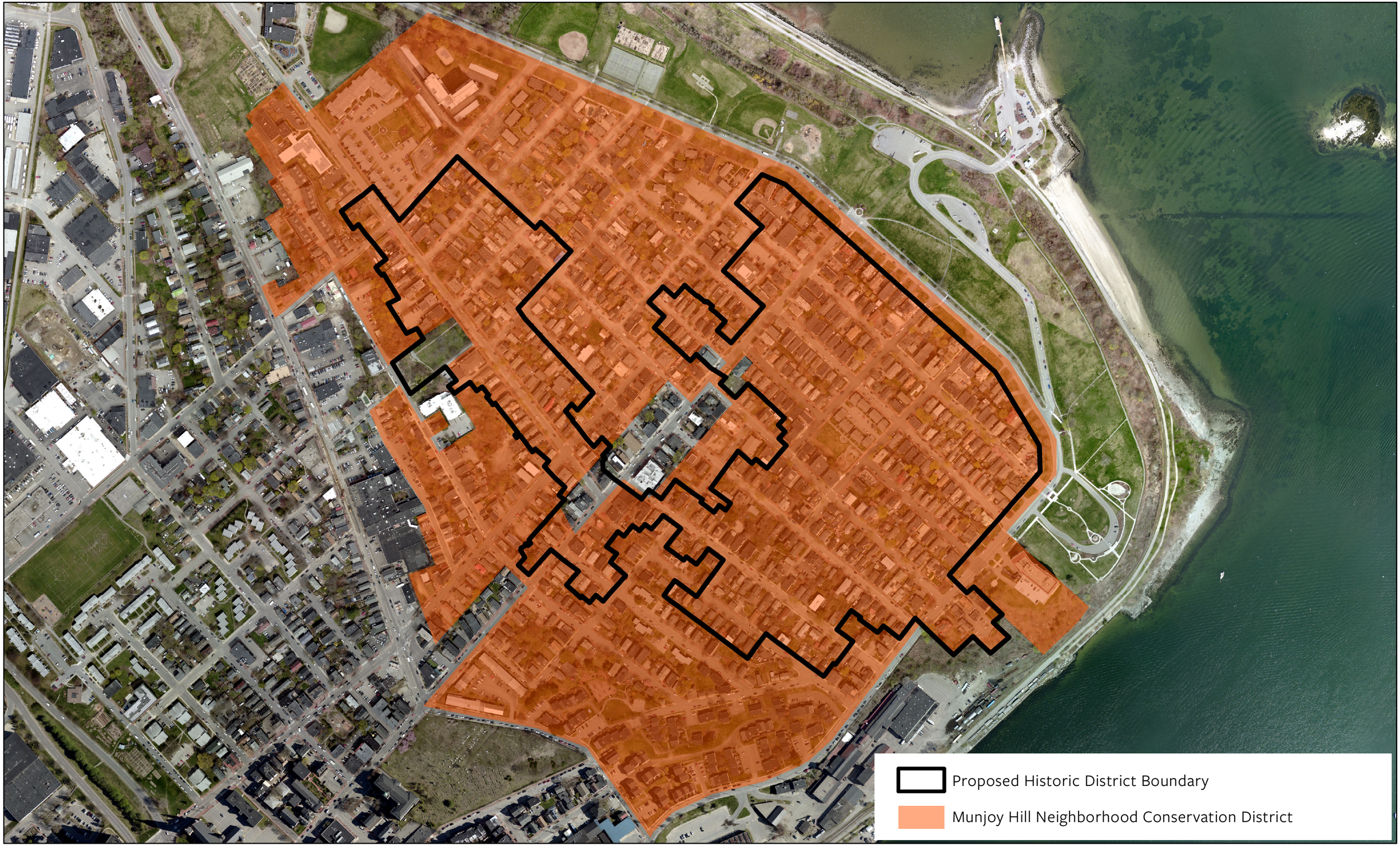
0 250 500 1,000 Feet

For more information about individual properties within the district, go to:
https://www.portlandmaine.gov/munjoyhillhistoricdistrict

Property Classifications

- Designated Landmark
- Proposed Landmark
- Noncontributing based on date of construction
- Noncontributing based on extent of alteration
- Undeveloped parcel
- Historic District, Contributing Buildings

Proposed Munjoy Hill Historic District Boundary in Relation to MHNCD



Memorandum
Department of Planning & Urban Development
Planning Division

To: Brandon Mazer, Chair, and Members of the Planning Board
From: Christine Grimando, Director, Department of Planning & Urban Development
Date: February 7, 2020
Mtg Date: February 11, 2020
RE: Comprehensive Plan Analysis

INTRODUCTION

The City's Historic Preservation Ordinance states that the Planning Board must consider whether a proposed designation meets the criteria for a district (Sec. 14-610. Minimum criteria for designation), as well as consider the effect of such designation on other aspects of the comprehensive plan of the city. The Historic Preservation Board extensively reviewed the criteria and provided supporting material documenting the basis of their recommendation. Below is analysis of *Portland's Plan 2030* consistency.

PORTLAND'S PLAN 2030

Portland's Plan 2030 has eight Policy Guide chapters: Environment, Historic Resources, Waterfront, Economy, Housing, Recreation & Open Space, Facilities & Services, and Transportation. The Plan's structure is explicit that these are considered linked and mutually supportive, rather than competing goals. Stewardship of Portland's historic, cultural, and architectural assets has been an integral part of the City's planning strategy since the Historic Preservation program began in 1990, was widely supported in public feedback received during Portland's Plan creation, and is supported throughout the document.

Figure 1, Portland's Plan 2030 Vision graphic

Examples follow of policy support for preservation of historic resources in *Portland's Plan 2030.*

Executive Summary

- Our economy, housing, historic resources, transportation system, open space, environment, waterfront, and municipal facilities and services are all dependent on each other and inextricably linked.

Vision Statement

Sustainable:

- Portland has been built and rebuilt to endure; we will balance our historic fabric, sound infrastructure, and the best of new technology and design for the future.

Authentic:

- We will maintain our character through preservation, innovation, and excellence in design for the built environment.
- We will celebrate our city's incredible history.
- The uniqueness and integrity of our neighborhoods will be maintained and enhanced.

Historic Resources Policy Guide

- Identify, document, designate, and preserve Portland's historic resources, including individual structures, neighborhoods, parks, cemeteries, and archaeological resources.

- Educate and engage residents and visitors in appreciation of Portland's unique heritage.

- Promote historic preservation as a key economic, sustainability, and community development strategy.

- Stabilize and enhance historic areas of the city by ensuring quality investment in existing structures and compatible infill development.

- Ensure an appropriate balance of continuity and change as Portland grows and evolves.

- Based on survey findings and input from applicable stakeholders, document and designate resources of

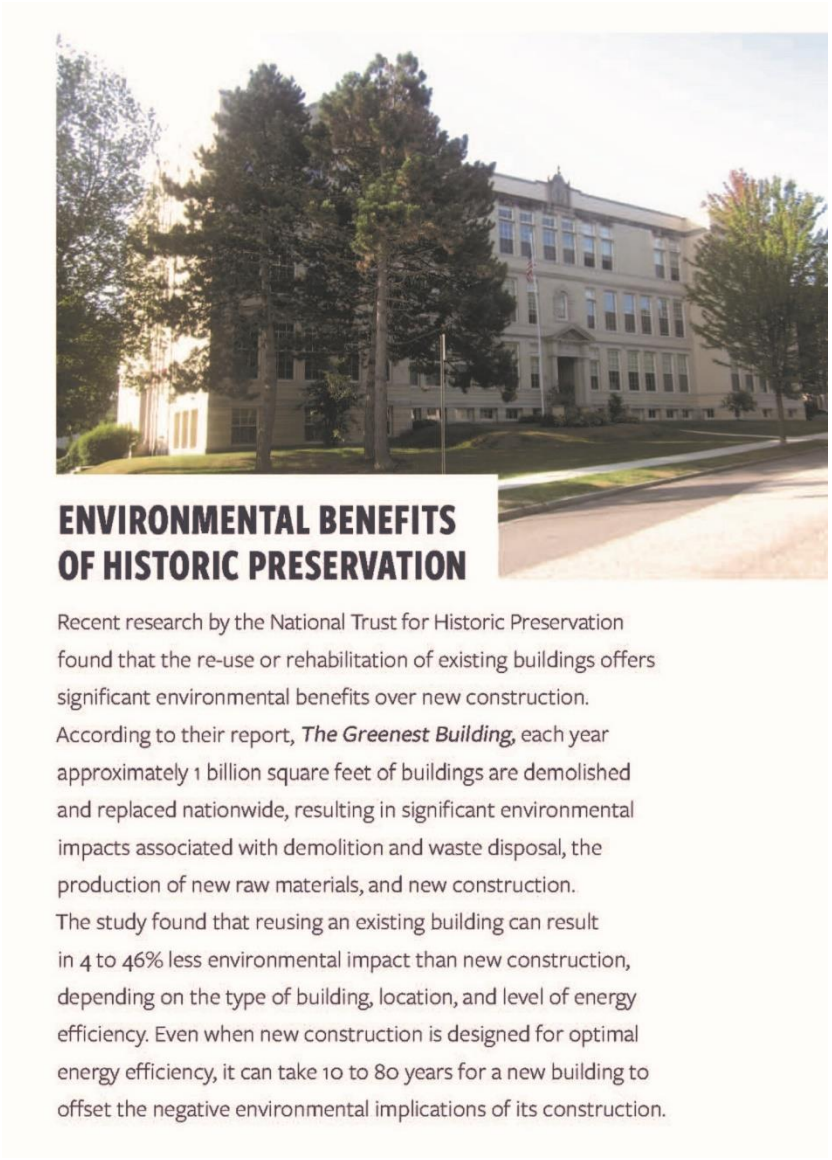


Figure 2, Portland's Plan 2030, environmental benefits of preservation

historic, architectural, and/or cultural significance to encourage thoughtful building rehabilitation, deter demolition, and support neighborhood revitalization.

Environment Policy Guide

- Encourage landowners and developers to incorporate sustainable design, materials, and practices in rehabilitation of historic resources and in new construction.

- Historic Resources: strategy Assess new construction techniques, products, and materials for compatibility with historic structures, and develop policies and guidelines for their use in historic rehabilitation projects.

Economy Policy Guide

- Respect that our unique quality of place is key to our current and future economic success.

Housing

- Increase, preserve, and modify the overall supply of housing city-wide to meet the needs, preferences and financial capabilities of all Portland residents.

- Encourage additional contextually appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transit nodes and corridors as a means of supporting complete neighborhoods.

- Encourage energy efficiency in new construction and rehabilitation of Portland's housing stock.

- Encourage rehabilitation of existing historic buildings and materials.

From the first pages of *Portland's Plan 2030*, and consistently throughout the document, historic preservation is acknowledged as central to the City's vision, including not only existing local designations but potential future designations. It is also acknowledged as integral to Portland's economic development strategy, its sustainability goals, and to a multidimensional housing strategy.

Att. 3

Preservation Leadership Forum Blog
Insights and Information for Preservation Professionals

Why Do Old Places Matter? Economics

Posted on: April 16th, 2015 *by* Tom Mayes | 3 Comments

Editor's Note: Click here for full coverage on the Why Do Old Places Matter? series including the Spring 2015 issue of Forum Journal.

Tom Mayes, a 2013 Rome Prize winner in Historic Preservation from the American Academy in Rome, is back in Washington, D.C., these days. But he hasn't stopped thinking and writing about why old places matter. His series of essays about his experiences and research concludes here. Check back next week for information on the spring 2015 issue of Forum Journal *which looks at "Why Do Old Places Matter?" from a variety of different perspectives.*

Old places support a sound, sustainable and vibrant economy.

View of downtown Athens, Georgia.| Credit: National Trust for Historic Preservation

In writing this series of essays about why old places matter, I have intentionally saved the discussion of how old places support a sustainable and vibrant economy to the last. Why? Because the other fundamental reasons for keeping, using, reusing and preserving old places are given short shrift, and professional preservationists often jump right to the argument that saving old places is economically beneficial, assuming that the economic argument is the only one decision-makers will want to hear. But it seems to me that starting a discussion about the importance of saving an old place with the economic rationale, immediately positions people who care about old places on the defensive, as if old places are only worth keeping for economic reasons or if they can justify themselves economically. And often the economic justification is assessed by narrow and limited economic measurements that don't fully take the broader economic—and other—values of old places into account.[1]

Old places are deeply beneficial to people because of the way they give us a sense of continuity, identity and belonging, because they inspire us with awe, beauty and sacredness, because they tell us about history, ancestry and learning, and because they foster healthy, sustainable communities. Not all of these "non-use values," can (yet) be fully measured economically—although increasingly, people are trying. Keeping and using old places is good for people for those reasons even if the historic places can't fully pay for themselves or if they require subsidies or other public support. Fortunately, there seems to be a growing desire to measure and weigh "non-use values," as economists call these not-easily-measurable values.

As Randall Mason, chair of the Graduate Program in Historic Preservation at the University of Pennsylvania, wrote in a study on preservation and economics for the Brookings Institution in 2005, "Historic preservation is organized primarily to sustain and create cultural values, like historical associations, senses of place, cultural symbolism, the aesthetic and artistic qualities of architecture, and the like. Studying the economics of this (or any other part of the cultural sector) amounts to calculating the incalculable, or pricing the priceless. Economic analyses can easily determine partial or proxy values for the full value of historic preservation, but what do these tell us? Are they sufficient or even useful?"[2] It's a sign of just how wholly commercial our American society is, that we must justify saving the old places that give us a sense of belonging and identity by showing that they support our economy.

But justify we must. Although I don't think we should lead with the economic rationales, we still need to have them in the toolbox for those who won't accept the other reasons that old places are

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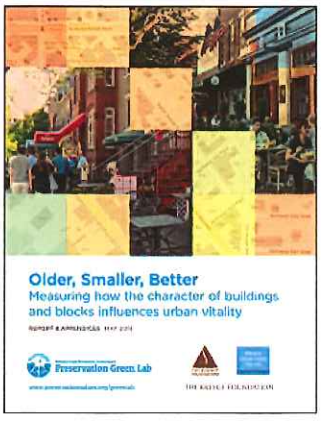
beneficial. Fortunately as Donovan Rypkema, real estate consultant and principal of PlaceEconomics puts it, "The good news is historic preservation is good for the economy. In the last 15 years dozens of studies have been conducted throughout the United States, by different analysts, using different methodologies. But the results of those studies are remarkably consistent—historic preservation is good for the local economy. From this large and growing body of research, the positive impact of historic preservation on the economy has been documented in six broad areas: **1)** jobs, **2)** property values, **3)** heritage tourism, **4)** environmental impact, **5)** social impact, and **6)** downtown revitalization."[3]

Although I won't follow Rypkema's list of six reasons exactly (the National Trust's website lists 12 reasons),[4] here's a quick review of six key reasons that keeping and reusing old places is good for the economy.

1. **Jobs, income, state and local taxes.** Rehabilitation of older buildings produces higher-paying jobs than new construction and the money tends to stay in the local economy. Because rehabilitation of historic buildings generally requires a higher skill set, wages produced with rehabilitation generally are higher, and remain in the local economy more. As the FY 2012 annual report on the economic impact of the rehabilitation tax credit states: "Numerous studies conducted by Rutgers University have shown that in many parts of the country, a $1 million investment in historic rehabilitation yields markedly better effects on employment, income, GSP, and state and local taxes than an equal investment in new construction or many other economic activities (e.g., manufacturing or services)."[5]
2. **Heritage tourism.** Whether people go to old places to experience the awe of the sacred or transcendental beauty, for incomparable opportunities to learn, to spur their imaginations or simply to experience a place that has maintained a sense of distinctiveness, old places are destinations for tourism, and have been so for millennia. The economic benefits of heritage tourism are unparalleled. As Donovan Rypkema has said, "Wherever heritage tourism has been evaluated, this basic tendency is observed: heritage visitors stay longer, spend more per day, and, therefore, have a significantly greater per trip economic impact."[6] The World Bank report, *The Economics of Uniqueness*, emphasizes that heritage tourism is an important economic development strategy, particularly because "tourism development... requires less capital, infrastructure, and skilled labor."[7] And there's the sustainable benefit—for everyone—of saving a community's sense of history, distinctiveness and identity.
3. **Revitalization.** For decades, older communities have used their historic buildings and streetscapes as assets for revitalization, providing a greater diversity of income and cultural background in neighborhoods, increasing property values, increasing job opportunities.[8] As the website for the Main Street program says, "the cumulative success...of the Main Street programs on the local level has earned a reputation as one of the most powerful economic revitalization tools in the nation."[9]
4. **Attracting talent and investment.** According to the World Bank report, *The Economics of Uniqueness*, "[heritage-related projects] contribute to urban livability, attracting talent, and providing an enabling environment for job creation." As Richard Florida and others have emphasized, creative people are the talent that drives the new economy, and creative people are attracted to places that have authenticity. Businesses located in places that are perceived of as good places to live, with a sense of authenticity, have an edge in attracting talent and investment. Or as the World Bank report puts it: "...heritage is a differentiator that attracts talent to cities."[10]
5. **Property values.** One of the main purposes cited in preservation statutes as a rationale for historic preservation is that it stabilizes and supports property values. Studies throughout the United States show that this is generally true, with property values in historic districts rising more consistently than in areas that are not historic districts. In addition, studies show that historic districts maintain their value during times of real estate devaluation, such as the recent recession, and recover more rapidly.[11]



6. **Business incubation.** As the Preservation Green Lab report *Older, Smaller, Better* recently concluded, older smaller buildings are critical to the incubation of small

[Q&A] Susan Wissler, Executive Director, The Mount on Surviving Debt and the Future of Historic Sites

Valuing Diversity at Heart Mountain: Carrying the Lessons of Yesterday into Today

Links to Preservation

American Institute of Architects

American Planning Association: Recovery News

American Planning Association: Sustaining Places

CityLab

History@Work

Next City

NRDC Switchboard: Kaid Benfield

Rooflines: The Shelter Force Blog

Smart Growth America

Sustainable Cities Collective

The Dirt (American Society of Landscape Architects)

The Field (American Society of Landscape Architects)

Treehugger

Urban Green Council

Urban Land Online (Urban Land Institute)

The Fine Print

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businesses that are the primary job creators in the U.S. economy.[12]

This is the briefest summary of some of the economic benefits of old places, yet it makes a powerful and forward-looking case for the economic benefits of keeping and reusing old places. Scores of studies and reports provide both backup and caveats for these conclusions and can be found from a wide variety of sources.[13] Combined with the many other benefits—the benefits that are hard to measure economically, which are deeply beneficial for people, keeping and retaining old places seems like a no-brainer.

I object to the notion that everything in life has to be reduced to an economic equation, but imagine if these studies could capture the full *value* of the benefits old places give people—the sense of identity and belonging, the awe of beauty, the creativity and imagination? The valuation would be, as Randall Mason put it, "calculating the incalculable, or pricing the priceless."

Notes:

1. For insightful discussions of the limits, opportunities and current innovations in measuring the economics of preservation, see Guido Licciardi and Rana Amirtahmasebi, Eds., *The Economics of Uniqueness* (Washington, DC: The World Bank, 2012).

2. Mason, Randall. "Economics and Historic Preservation: A Guide and Review of the Literature." (The Brookings Institution, 2005). www.brookings.edu/research/reports/2005/09/metropolitanpolicy-mason. Accessed March 29, 2015.

3. Cheong, Caroline and Donovan Rypkema. "Measuring the Economics of Preservation: Recent Findings. (Advisory Council on Historic Preservation June, 2011).

4. "12 Economic Benefits of Historic Preservation," my.preservationnation.org/site/DocServer/Economic_Benefits_of_HP_April_2011.pdf?docID=9023. Accessed April 8, 2015.

5. National Park Service and Rutgers University, Edward J. Bloustein School of Planning and Public Policy, "Annual Report on the Economic Impact of the Federal Historic Tax Credit for FY 2012." ntcic.webfactional.com/rutgers/. 2013. Accessed April 5, 2015.

6. Rypkema, Donovan. "The Economics of Historic Preservation," Keynote Address, Alexandria Historic Preservation Conference and Town Meeting, May 5, 2007.

7. Licciardi, Guido and Rana Amirtahmasebi, Eds., *The Economics of Uniqueness* (Washington, DC: The World Bank, 2012), 183.

8. I note the concern that revitalization strategies may result in gentrification, the displacement of existing residents because of increased rents or property taxes. Although the complex topic is outside the scope of this brief essay, it deserves additional attention, and has been, and will continue to be, addressed and studied. For an introduction, see Donovan Rypkema's discussion in *The Economics of Uniqueness*, 125-138.

9. The National Main Street Center conducts research to document this by annually collecting statistical information on the preservation, revitalization, and economic activities in local Main Street programs throughout the country. These estimates are based on cumulative statistics gathered from 1980 to December 31, 2013 for all designated Main Street communities nationwide.

Dollars Reinvested:Total reinvestment in physical improvements from public and private sources.	$59.6 billion
Number of building rehabilitations:	246,158
Net gain in jobs:	502,728
Net gain in businesses:	115,381
Reinvestment Ratio (i):	$33.28:$1

www.preservationnation.org/main-street/about-main-street/reinvestment-statistics-1.html#.VSGWPoIh6sE. Accessed April 5, 2015.

10. *The Economics of Uniqueness*, xxiii.

11. See several studies at www.placeeconomics.com/resources/publications. Accessed April 8, 2015.

12. National Trust for Historic Preservation, Preservation Green Lab, Older, Smaller, Better (Washington, DC, 2014).

Case Studies of Approved Residential Development Projects within Historic Districts

West End Place, approved 2012

- 45,344 sq. ft. development; 3,329 sq. ft footprint
- 4 stories, 39 apartments, 1990 sq. ft. retail , 34 parking spaces
- B1 zone's allowable height: 45'
- Project height: 43'

Project entailed HP Board rescission of contributing status of 1850's residential structure, based on structural condition. Project is taller and has a much larger footprint than surrounding structures, but was found to be compatible with its context and meet HP ordinance new construction standards.

Existing building on site demolished following rescission of contributing status

17 Carleton, approved 2015

- 25,247 sq. ft. site
- 37 affordable housing units, 31 parking spaces
- R6 zone allowable height: 45’
- Project height: 43’

Affordable housing development features 120’ long frontage on block characterized by single family homes and duplexes. Although the building footprint is much larger than that of surrounding structures, the building’s scale is broken down through massing and other architectural devices.

Rear as viewed from Pine Street

Hiawatha, approved 2015

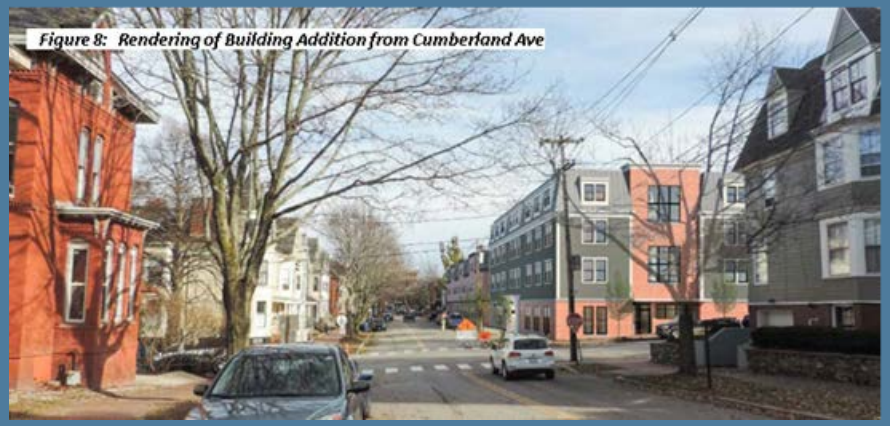
- 25,740 sq. ft. lot
- 8 stories, 139 apartments, ground floor retail, 81 parking spaces
- Lot straddles Deering Street Historic District and Congress Street Historic District. Property was rezoned from B3 and R6 to B3 throughout.
- B3 zone allowable height: 65’ at street edges, 85’ beyond required stepback
- Project height: 65’, 85’ beyond stepback

Development introduces a much larger scale building than existing structures within Deering Street Historic District. Various design mitigation measures were successful in lowering apparent scale as viewed from Deering.

Deering Place, approved 2017, under construction

- 1.23 acre site with frontages on three residential streets
- 75 units - 45 affordable 30 market rate, 52 parking spaces
- R-6 zone allowable height: 45’
- Approved height: 39’ Deering Street bldg., 43’ Cumberland/Mellen addition

Project entails renovation of existing warehouse on Cumberland with 4-story addition and 3-story new construction on Deering. See surrounding context. In response to neighborhood input, one floor of Deering Street building was eliminated. Units were redistributed.



One Joy Place, approved 2017

- 5,851 sq. ft. lot. behind street-facing structure
- 3-story structure, 12 residential units
- B-zone's allowable height:
- Approved height:

Project entailed demolition of noncontributing structure on site. New building takes visual cues from triple-decker directly in front, but is a contemporary interpretation.

Ronald McDonald House Expansion, approved 2019, under construction

Adaptive reuse/renovation of existing two-family residential structure to provide 13 rooms for long-term stays. Project includes expansion of building footprint, expansion/addition of large shed dormers on both roof planes and physical connection to abutting RMDH building complex.

Existing RMDH (left) and abutting house (right) proposed for adapttive reuse and expansion

467 Danforth Street, approved 2016

Construction of 2-family residence on open parcel. Historic Preservation Board supported a slightly taller building to allow for a more contextual roof pitch, but a taller building would have exceeded R-4 zone's 35' height limit.

197 Spring Street, approved 2016

Project called for the conversion of former single-family home, which had operated as a 9-room rooming house for many years, into a seven-unit apartment building, In conjunction with the building's comprehensive rehabilitation, the applicant received Historic Preservation Board approval to demolish an existing rear ell and replace it with a larger ell to provide more units. Construction has not yet begun.

Adaptive Reuse of Existing Garages for Principal or Accessory Dwelling Units

Solar panel installations within historic districts

City of Portland
Department of Planning and Urban Development
Historic Preservation Office

About the City's Historic Preservation Program

In 1990, the City of Portland adopted a historic preservation ordinance to recognize and preserve one of the city's major assets—its rich collection of historic buildings, neighborhoods and landscapes. To date, 11 local historic districts, five historic landscape districts and 110 individual landmarks have been designated by the Portland City Council, protecting historic properties in neighborhoods as diverse as the Old Port, Stroudwater, Congress Street, the West End, and House Island.

The intent of historic district designation is not to prevent change, but to thoughtfully manage it so that the unique, identifiable character of each of the designated neighborhoods is retained over time. Many small projects are reviewed by staff, and others reviewed by a board whose members have demonstrated expertise and/or experience in architecture, historic preservation, or neighborhood conservation.

Frequently Asked Questions about Local Historic Districts

How are historic districts established?

Designation of a local historic district comes after documentation, analysis and public review.

- ✓ *A survey of existing structures within a defined study area is conducted to determine the relative "preservation value" of individual buildings. Based on the findings of the survey, draft historic district boundaries are delineated.*
- ✓ *Each building within the proposed boundaries is then thoroughly documented and a classification of "landmark", "contributing" or "noncontributing" is assigned.*
- ✓ *Throughout this process, there is public outreach to property owners in the area.*
- ✓ *The proposed district is formally reviewed by the Historic Preservation Board, the Planning Board and ultimately the City Council. Notices are sent prior to every meeting and public comment is invited throughout the designation process.*

Are all buildings within a local historic district necessarily historic?

No. Within the boundaries of any historic district, some buildings do not contribute to the qualities that give the district its historic or architectural significance. These may have been built within the last 50 years or been so altered that the overall integrity of the building has been lost. These buildings are identified as "noncontributing" when the district is established and may be demolished as-of-right.

Can a building in a local historic district be demolished?
Buildings classified as noncontributing structures may be demolished without review. To demolish a contributing or landmark structure, the property owner is required to demonstrate there is no reasonable use of the property or request reconsideration of the building's original classification based on information not known at the time of its original classification.

Will inclusion in a local historic district prevent me from making changes to my property?
Buildings sometimes need to be modified or expanded to meet changing needs or the desires of occupants. In reviewing a proposed alteration or addition, the architectural characteristics of the existing building are considered under the City's ordinance review. Additions do not have to duplicate the original style and materials, but must be compatible in massing, scale, & other visual characteristics.

Will I have to fix up my building if it is included in a local historic district?
Owners do not have to rehabilitate their building or reverse any previous work.

What types of building activities require review in historic districts?
Ordinary maintenance or replacement-in-kind does not require review, nor does changing a building's paint color. Exterior or site alterations (e.g. installing a new driveway) that will be readily visible from a public way require advance review and approval. Similarly, additions and new construction require review.

Does every application need to be reviewed by the Historic Preservation Board?
Routine or minor alterations, such as porch or window replacement, are typically reviewed and approved by staff. Approximately 70% of applications each year are approved administratively.

Where can I go for help in tailoring a proposal for alterations for my property?
Staff are available for consultation as you develop your plans and often meet with applicants on site to get a better understanding of existing conditions and the owner's goals.

Will I have to hire an architect for my proposed alteration?
Many projects do not require an architect. Larger or more complicated projects such as building additions or new construction usually call for a design professional.

Can new buildings be constructed in a local historic district?
Yes, on undeveloped lots and on lots where noncontributing buildings have been removed.

Do new buildings need to match closely the historic buildings around it?
The historic preservation ordinance's new construction standards encourage contemporary design, however new buildings must also relate to key visual characteristics of the surrounding development.

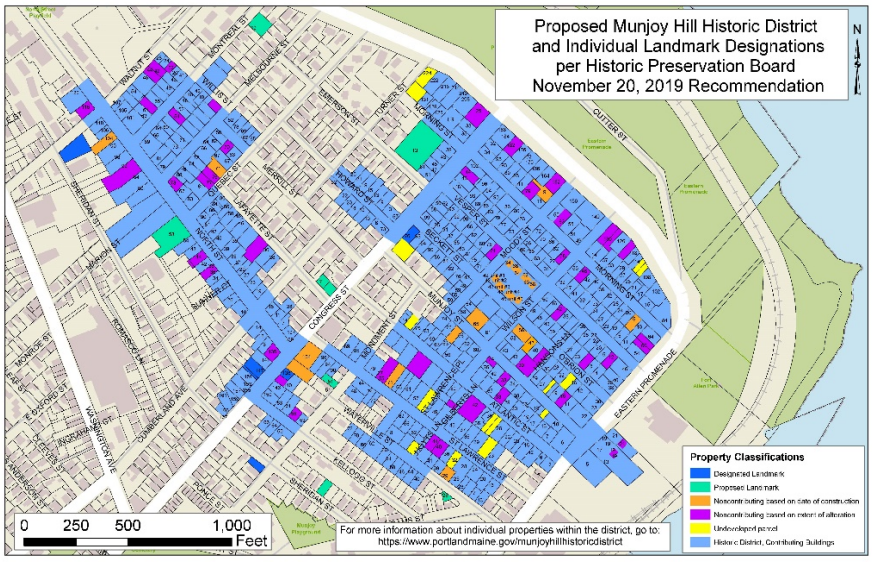
How do I apply for approval and is there a fee?
You can apply on line. If your project also requires a building permit, you can file one application for both reviews. The application fee for small, staff-reviewed projects is $65. The fee for Historic Preservation Board review is typically $125, except for large-scale, major projects.

Memorandum
Department of Planning & Urban Development
Planning Division

To: Sean Dundon, Chair, and Members of the Planning Board
From: Deborah Andrews, Historic Preservation Program Manager
Date: December 3, 2019
RE: **Recommendation of the Historic Preservation Board to Designate Munjoy Hill Historic District and Six Individual Landmarks**
Mtg Date: December 10, 2019

INTRODUCTION

On November 20, 2019, the Historic Preservation Board voted unanimously (Jacob absent) to recommend to the Planning Board and Council that the area delineated on the map shown below be designated a local historic district subject to the provisions of Article IX of the Land Use Code (Historic Preservation). The Historic Preservation Board also voted unanimously to recommend that six individual historic structures located within the Munjoy Hill neighborhood but outside the boundary of the proposed district be designated as individual landmarks under the provisions of Article IX. The properties recommended for individual designation are 103 Congress Street, 7 Lafayette Street, 12 Montreal Street, 51 Monument Street, 21 Sheridan Street and 28 Waterville Street. The Historic Preservation Board's recommendations were based on findings that the district and the individual structures meet applicable designation criteria under Sec. 14-610 a and b and Sec. 14-611 of the historic preservation ordinance.



(see ATTACHMENT 1 for larger map)

The Historic Preservation Board's formal recommendation follows four preliminary workshops and two site walks. Public comment was taken at all review sessions. Additional public outreach consisted of four neighborhood meetings prior to and during the Historic Preservation Board review process.

The Historic Preservation Board's recommendation includes a number of supporting documents, including:

- Historic Context Statement describing the development history of Munjoy Hill and its place in the history of Portland, the architectural and cultural significance of the proposed district, a description of predominant architectural styles and a description of the visual character of the proposed district (ATTACHMENT 2)
- Map of the proposed district boundary, with every building color-coded to indicate its preservation classification (Landmark, Contributing, Non-Contributing). (ATTACHMENT 1)
- List of every property within the proposed district, with its classification. (The proposed district includes 425 structures.) (ATTACHMENT 3)
- Historic Resources Inventory including a description of every building in the proposed district together with its assigned classification. Each inventory form includes a current and 1924 view of the building (where available), a current description of the building and a summary of alterations since it was documented in 1924. (Sample forms are enclosed as ATTACHMENT 4)

ROLE OF THE PLANNING BOARD

Under the provisions of the historic preservation ordinance, proposed designations of local historic districts follow a three-step review process. Upon receipt of the Historic Preservation Board's recommendation, the Planning Board makes a determination as to whether the nominated district meets the criteria for designation identified in Division 3 of the historic preservation ordinance and "also consider(s) the effect of such designation on other aspects of the comprehensive plan of the city." Following deliberations, the Planning Board forwards its recommendation and report, together with the recommendation of the Historic Preservation Board, to the City Council for final consideration and a formal decision.

Unlike recommendations for district designations, recommendations for individual landmark designations are recommended directly to the Council for consideration. Given that the nominated buildings were identified as part of the overall Munjoy Hill neighborhood analysis and are closely related to the proposed district, the landmark recommendations are included in this report as well.

BACKGROUND, IMPETUS FOR HISTORIC DISTRICT EVALUATION

Consideration of a potential Munjoy Hill Historic District is the final component of a comprehensive planning initiative that began in late 2017 in response to residents' concerns about the scale and character of recent development as well as a rise in the number of buildings demolished on the Hill. In December 2017, the City Council approved a 180-day moratorium on

demolition within the R-6 zone of Munjoy Hill to allow time for Planning staff to conduct an analysis of the impacts and effectiveness of then-current zoning and design review standards on Munjoy Hill development. Staff was instructed to return to the Council by June 2018 with its recommendation for any amendments to the current zoning and/or adoption of additional planning tools to more effectively manage development.

When Planning staff returned to the Council in June 2018, staff recommended a number of new and revised planning tools to better manage development on Munjoy Hill. These included the creation of a "Munjoy Hill Neighborhood Conservation Overlay District" to implement new dimensional, design, and performance standards related to new construction and demolitions within the R-6 zone on Munjoy Hill. Also included was a recommendation to designate one or more historic districts within the larger Munjoy Hill neighborhood.

While the zoning amendments, demolition delay provisions and revised R6 design standards and process were adopted by the Council in June, the advance work necessary to formally consider designation of a historic district had not yet been undertaken. As staff explained, Portland's historic preservation ordinance requires that detailed documentation and analysis be conducted in order to delineate district boundaries, evaluate individual buildings within the district and make the case for designation. As such, the Council was not yet in a position to make a final decision on the recommendation to create a historic district on Munjoy Hill. At the June 2018 Council hearing, staff was simply seeking the Council's support for moving forward with consideration of a district. The Council instructed staff to move forward with the necessary documentation and return with a proposal.

DOCUMENTATION AND ANALYSIS

A detailed survey and analysis of Munjoy Hill's building stock got underway in late summer of 2018 with assistance from project interns and a preservation consultant. From this work, a draft district boundary was delineated, building classifications (landmark, contributing, non-contributing) were assigned, and a building inventory was prepared that includes a building description as well as current and historic views of every structure within the proposed district boundary and every proposed landmark outside the contiguous district. Finally, a report on Munjoy Hill's history, architectural and cultural significance and visual character was prepared for consideration by the Historic Preservation Board, Planning Board and Council as well as property owners and area residents. A number of informational meetings were held in the neighborhood during this preliminary documentation period. Once complete, Staff presented its draft historic district proposal to the neighborhood on April 30th. The April 30 presentation was followed by additional neighborhood meetings to answer questions and invite feedback. The proposal was formally introduced to the Historic Preservation Board on July 10th.

DISTRICT BOUNDARY DELINEATION—FACTORS CONSIDERED

Early on in the documentation/analysis phase, staff retained the services of preservation consultant Scott Hanson of Sutherland Conservation & Consulting to assess the building stock on Munjoy Hill and provide an independent recommendation regarding appropriate and defensible

district boundaries consistent with best practices in the preservation field. Mr. Hanson reviewed information from previous "windshield" surveys of the neighborhood and information provided by Greater Portland Landmarks including historical research and preliminary assessments of individual buildings in terms of their relative "preservation value". Mr. Hanson also walked the area to observe the current condition of buildings and changes in the development pattern. Mr. Hanson's report and preliminary boundary recommendation is enclosed as ATTACHMENT 5. The boundary recommended by Mr. Hanson includes structures representative of the key periods of development activity on Munjoy Hill, as well as other relevant considerations. Those include:

- 1850's development associated with the establishment of the Atlantic & St. Lawrence Railroad and Portland Company
- residential development prompted by the Great Fire of 1866
- 19th century blocks settled by African American residents
- late 19th and early 20th century development associated with influx of European Immigrants
- late 19th and early 20th century residential development along the Eastern Promenade

In terms of the scope of the proposed district, from the outset of this initiative, staff and project consultant Scott Hanson took an intentionally conservative approach to defining the limits of the district, focusing on those blocks within the larger Munjoy Hill neighborhood that are a) representative of the major periods of development that have shaped the current character of the Hill; *and* b) clearly retain most of their historic character. During the Historic Preservation Board's review process, some neighborhood residents questioned why the district does not include most of the neighborhood, arguing that there are a number of structures clearly related to those within the proposed district that have not been included. Staff explained that any area being considered for historic district designation should not only meet the test of architectural, historical and/or cultural significance, *but also* contain within its boundary a clear majority of structures that retain sufficient *integrity* to warrant preservation. Areas or blocks that exhibit a significant number of extensively altered buildings or where the historic development pattern is broken or inconsistent are generally not included within in the district boundary. Obviously, there are a number of individual buildings outside the proposed Munjoy Hill district boundaries that are similar to buildings within the district and that retain their historic integrity, however the general area around these structures was not found to meet the requirements for designation. As noted below in this report, four owners of historic structures outside the proposed boundaries have nominated their buildings for individual designation.

Another factor that contributed to the conservative approach taken was consideration of the need to balance a number of municipal goals as they apply to the Munjoy Hill neighborhood, including the goal of increased housing production. Staff recognized that other land use tools, in particular the demolition delay provision, zoning regulations and modified design standards provided in the recently-adopted Munjoy Hill Neighborhood Conservation Overlay District, were effective tools in their own right and likely more appropriate for other areas within Munjoy Hill.

The final proposed boundary is largely consistent with Mr. Hanson's recommendation, but reflects some adjustments by Staff based on additional analysis, public input as well as feedback from the Historic Preservation Board during its review process (described below).

FORMAL NOMINATION OF DRAFT DISTRICT

On July 10, 2019, following the introductory workshop on the draft district proposal, six members of the Historic Preservation Board formally nominated the proposed Munjoy Hill Historic District and two individual historic structures outside the district boundaries as individual landmarks. Nomination by at least two members of the Board is required under the provisions of Portland's historic preservation ordinance in order to move forward with the formal designation review process. Prior to the formal nomination, a petition signed by 23 Munjoy Hill property owners was submitted to the City requesting designation of a Munjoy Hill historic district.

Nomination of a district, while required to begin the official designation review process, does not limit the Historic Preservation Board's ability to amend the draft boundaries, change any building classification or make any modifications to associated ordinances as they affect the district. The same is true for the Planning Board and Council when they consider the Historic Preservation Board's recommendation. Additionally, nomination does not preclude the HP Board or Planning Board from deciding not to recommend designation.

SUMMARY OF HISTORIC PRESERVATION BOARD REVIEW PROCESS

The Historic Preservation Board held four preliminary workshops on the historic district proposal, including an introductory session on July 10th and three working sessions on September 4th, October 2nd and November 6th. Following the introductory session on July 10th and in preparation for subsequent workshops, two site walks were scheduled (July 31st and August 28th) to familiarize Board members with the neighborhood's building stock, observe proposed district boundaries and review the classification (or "preservation value") assigned to each building within proposed district.

The focus of the subsequent workshops was on specific sections of the boundary and individual properties that had been identified by Board members or area residents as meriting further discussion. During the workshops, staff described the rationale behind the boundary as originally delineated and noted some specific sections of the boundary that, upon further consideration, warranted adjustment. To aid the Board in its discussions, staff provided the building descriptions of those structures for which the assigned classification (contributing/noncontributing) was questioned. Where a potential expansion of the district was being considered, staff provided descriptions and photographs of the subject buildings in order for the Board to determine the relative merits of adjusting the boundary. Finally, staff brought to the Board's attention four buildings outside the proposed district boundary for which the property owner had requested individual designation. (This was in addition to the original two properties located outside the boundary that been proposed for individual landmark status—21 Sheridan and 101 Congress.)

DESIGNATION CRITERIA

In considering the designation of individual buildings as local landmarks and/or the designation of a contiguous area as a historic district, the Historic Preservation Board must find that the proposed landmark or district meets at least one of the six minimum criteria for designation outlined in the historic preservation ordinance (Article IX of the Land Use Code, Sec. 14. 610 a.). In the case of a nominated historic district, the Board must also find that the district meets the criterion for district designations as described in Sec. 14-610 b.. Separate from the above criteria, which address the question of *significance*, the Board must also find that the nominated landmark and/or district exhibits sufficient *integrity* to warrant the building's or district's preservation (Sec. 14-611).

Following are the ordinance's designation criteria:

Sec. 14-610. Minimum criteria for designation.

(a) The historic preservation board shall limit its consideration to the following criteria in making a determination on a proposed nomination of an area, site, structure or object for designation by ordinance as a landmark or district:

1. *Its value as a significant example of the cultural, historic, architectural, archeological or related aspect of the heritage of the City of Portland, State of Maine, New England region, or the United States;*

2. *Its location as a site of a significant historic or prehistoric event or activity which may have taken place within or which involved the use of any existing structure on the property;*

3. *Its identification with a person or persons who significantly contributed to the cultural, historic, architectural, archeological or related aspect of the development of the City of Portland, State of Maine, New England region, or the United States;*

4. *Its exemplification of a significant architectural type, style or design distinguished by innovation, rarity, uniqueness or overall quality of design, detail, materials or craftsmanship;*

5. *Its identification as the work of an architect, designer, engineer or builder whose individual work is significant in the history or development of the City of Portland, the State of Maine, the New England region, or the United States; or*

6. *Its representation of a significant cultural, historic, architectural, archeological or related theme expressed through distinctive areas, sites, structures or objects that may or may not be contiguous.*

(b) In the case of a nominated historic district, the historic preservation board shall also determine whether a substantial number of the properties, sites, structures or objects have a high degree of cultural, historic, architectural or archeological significance and integrity, many of which may qualify as landmarks, and which may also have within its boundaries other properties, sites, structures or objects which, while not of such cultural, historic, architectural or archeological significance to qualify as landmarks, nevertheless contribute to the overall visual characteristics of the significant properties, sites, structures or objects located within it.

Sec. 14-611. Integrity of landmarks and historic districts.

Any area, structure or object that meets the criteria in section 14-610 must also have sufficient integrity of location, design, condition, materials and workmanship to make it worthy of preservation or restoration.

FINDINGS OF THE HISTORIC PRESERVATION BOARD

During deliberations following the November 20, 2019 public hearing, the Historic Preservation Board found that the proposed Munjoy Hill Historic District as delineated in ATTACHMENT 1 meets the minimum criteria for designation, specifically Criterion #1 under Sec. 14-610 (a). The Board also found that the proposed district meets the criterion applicable to nominated districts under Sec. 14-1610 (b). Finally, the Board found that the proposed Munjoy Hill Historic District meets the integrity criterion as defined in Sec. 14-611.

Although not specifically before the Planning Board for consideration (landmark recommendations are forwarded directly to the City Council), the Historic Preservation Board also found as follows:

*the Munjoy Block at 103 Congress meets Criteria #1 and #6 under Sec. 14-610 (a), also Sec. 14-611;

*the Henry Rowe House at 7 Lafayette Street meets Criterion #6, also Sec. 14-611;

*the James B. Newell House at 12 Montreal Street meets Criterion #6, also Sec. 14-611;

*the residential structure at 51 Monument Street meets Criterion #6, also Sec. 14-611;

*the John Ford boyhood home at 21 Sheridan Street meets Criterion #3 and #6, also Sec. 14-611; and

*the residential structure at 28 Waterville Street meets Criterion #6, also Sec. 14-611

Based on the supporting documents in the 11/20/19 staff report and the above findings, the Historic Preservation Board voted 6-0 (Jacob absent) to recommend that the area delineated on the map in Attachment 1 be designated as the Munjoy Hill Historic District and the six individual structures listed above be designated as individual landmarks under the provisions of Article IX of the Land Use Code (Historic Preservation).

PLANNING BOARD CONSIDERATIONS – COMPREHENSIVE PLAN GOALS

In addition to confirming that the Historic Preservation Board's district recommendation is in conformance with the historic preservation ordinance's designation criteria (Division 3, Sec. 610 and 611), the Planning Board considers the relationship of the proposed designation as it relates to the stated goals of the Comprehensive Plan, Portland's Plan 2030. Consideration shall include not only the Plan's historic preservation goals, but also other goals applicable to the Munjoy Hill neighborhood. Under Sec. 14-610 (d) of the preservation ordinance, "The Planning Board and

Council .... shall also consider the effect of such designation on other aspects of the comprehensive plan of the city."

Historic Preservation Goals:

The recently-adopted Portland's Plan 2030 speaks to the significant role Portland's historic neighborhoods and commercial districts play in establishing its unique and authentic sense of place. Portland's Plan also speaks to the importance of the City's historic preservation program in sustaining and enhancing this sense of place. The report notes that "identifying and preserving historic resources stabilizes neighborhoods, makes economic sense and contributes to a distinct sense of place that helps make Portland such a desirable place in which to live, to visit, and to invest."

The Plan's chapter on historic resources includes the following goals and strategies applicable to the current Munjoy Hill historic district initiative:

Goals

- *Identify, document, designate and preserve Portland's historic resources, including individual structures, neighborhoods, parks, cemeteries and archaeological resources.*
- *Educate and engage residents and visitors in appreciation of Portland's unique heritage.*
- *Promote historic preservation as a key economic, sustainability, and community development strategy.*
- *Stabilize and enhance historic areas of the city by ensuring quality investment in existing structures and compatible infill development.*
- *Ensure an appropriate balance of continuity and change as Portland grows and evolves.*

Strategies

- *Based on survey findings and input from applicable stakeholders, document and designate resources of historic, architectural, and/or cultural significance to encourage thoughtful building rehabilitation, deter demolition, and support neighborhood revitalization.*

The proposal to designate a Munjoy Hill Historic District is pursuant to these stated goals and strategies.

Other Comprehensive Plan Goals

A number of other land use goals addressed in Portland's Plan are relevant to the discussion of a potential Munjoy Hill historic district. They include:

Housing:

- *Increase, preserve, and modify the overall supply of housing city-wide to meet the needs, preferences and financial capabilities of all Portland residents.*

- *Encourage additional contextually appropriate housing density in and proximate to neighborhood centers, concentrations of services, and transportation nodes and corridors as a means of supporting complete neighborhoods.*

- *Pursue policies to enable people who work in Portland to have the option to live in Portland.*

- *Encourage quality, sustainable design in new housing development.*

The residential building stock within the proposed district provides for a broad range of household types, including small-scale single family homes; larger-scale former single family homes, many of which have been or could be converted into two or more units; double-houses or duplexes, also which have been or could be subdivided; triple-deckers and apartment buildings. As has been observed in portions of the West End Historic District, small-scale houses offer opportunities for homeownership for those at more modest income levels and the continued presence of these smaller, often vernacular, homes in the neighborhood promotes income diversity within the neighborhood over the long term.

There is nothing inherent in historic district designation that precludes the construction of affordable housing. Within the proposed district, there are a number of open parcels as well as buildings classified as "non-contributing", which can be demolished as of right. Depending on the land cost and availability of affordable housing subsidies, an affordable housing project is possible, as has been shown in several such projects in the West End and Deering Street historic district.

During the last five years, approximately 325 new units of affordable housing were built within Portland's historic districts. That figure does not include conversion of upper floors of existinghistoric commercial structures into housing units, the creation of additional units within existing residential structures, or the conversion of existing garages or carriage houses into residential units.

Regarding the general issue of affordability, a common assumption is that owning property in a historic district will inevitably lead to more expensive repairs or renovations. Nothing in the ordinance requires that a property owner undertake work or reverse previous alterations. Additionally, replacement-in-kind is specifically exempt from review under the historic preservation ordinance. That means, for example, that first-generation vinyl windows can be replaced with second-generation vinyl windows. Work on less visible building faces are often allowed more flexibility in terms of material choices, etc. Staff and the Historic Preservation Board work with property owners on a regular basis to find reasonable, cost-effective measures to meet their needs.

Enclosed as background information on the relationship between housing affordability and historic preservation is a report prepared by economist Donovan Rypkema for the National Trust for Historic Preservation, *Historic Preservation and Affordable Housing: The Missed Connection.*

Similarly, historic district designation does not preclude the creation of additional units within existing structures, the adaptive reuse of accessory structures such as garages and carriage houses for housing or the construction of accessory dwelling units on existing larger lots. Maximum densities remain unchanged. Building additions are allowed, as is the demolition and replacement of non-contributing rear building ells to provide more units. In the West End Historic District, for example, several existing garages or former carriage houses have been converted to housing, rear ells have been removed for larger additions, dormers have been added to accommodate an additional unit within the attic, etc.

Historic district designation also does not preclude increasing housing density through new construction and additions. As noted above, there are opportunities within the proposed district for new construction, as well as outside the district boundaries on Munjoy Hill. Larger-scale, multi-unit developments, if sensitively designed, can be accommodated within historic districts dominated by smaller scale historic structures and there are a number of examples within the city that demonstrate an effective historic preservation design review process for compatible contemporary new development. Historic designation is not intended to freeze new development or provide prescriptive design solutions for new development or renovations, and has provided a flexible framework to guide preservation and change in Portland since the program was first established in 1990.

Sustainability:

- *Make energy efficiency and renewable energy measures a city-wide priority.*

- *Minimize the generation and environmental impacts of solid waste.*

As noted in the Portland's Plan, recent research by the National Trust for Historic Preservation found that the re-use or rehabilitation of existing buildings offers significant environmental benefits over new construction. According to the Report, *The Greenest Building,* each year approximately 1 billion square feet of buildings are demolished and replaced nationwide, resulting in significant environmental impacts associated with demolition and waste disposal, the production of new raw materials, and new construction. The study found that reusing an existing building can result in 4 to 46% less environmental impact than new construction, depending on the type of building, location, and level of energy efficiency. Even when new construction is designed for optimal energy efficiency, it can take 10 to 80 years for a new building to offset the negative environmental implications of its construction.

Portland's historic preservation ordinance does not prohibit the installation of solar panels, heat pumps or other alternative energy measures, as evidenced by numerous installations in both residential and commercial historic districts.

RELATIONSHIP OF PROPOSED HISTORIC DISTRICT DESIGNATION TO MHNCD MEASURES

The regulations currently in place under the Munjoy Hill Neighborhood Conservation Overlay District govern new construction and demolition. The Overlay District contains dimensional and design standards which revise maximum building heights, address rooftop appurtenances, regulate parking placement and its effect on front facades and regulate roof forms. Under the MHNCD, the Alternative Design Review option, which had been suspended during the period the Overlay District was being studied, was reinstated, but with the introduction of procedural and substantive changes.

The demolition requirements in the Overlay District include a 12-month stay of demolition for structures determined by the Planning Authority to be "preferably preserved". The delay period can be reduced if the applicant elects to have their new construction proposal reviewed by the Historic Preservation Board and the Board finds that the design proposal meets the historic preservation ordinance's new construction standards. In that case, the stay is lifted and the "preferably preserved" building can be demolished and replaced. Alternatively, the applicant can wait and move forward with demolition after the 12-month stay. The premise of this demo delay ordinance is that the delay will encourage parties to explore alternatives to demolition. There is nothing to prevent demolition, however, unless the Historic Preservation Board nominates the building for individual landmark designation and the Council approves such designation.

With respect to design review of new construction *not* involving demolition of a preferably preserved structure, the dimensional and design standards included in the Overlay District apply. If an applicant elects to pursue a more contemporary design than would be allowed under the R-6 zone's base design standards (which are relatively prescriptive), the applicant may opt for the Alternative Design Review process which allows for more flexibility in design. Under this process, the review is conducted in a public meeting and the Historic Preservation Board is charged with conducting the review. The applicant must meet the *intent* of the R6 design principles and standards and demonstrate that the project will be compatible with its immediate context. The R-6 Alternative Design Review was further amended to allow for additional design flexibility when social or environmental public benefits are proposed as part of the project, including the provision of sustainable design, affordable housing units or green technology.

Historic District designation puts into place regulations and review standards that govern not only demolition and new construction, but also alterations and additions to the historic structures that make up the bulk of the neighborhood. A key premise behind historic preservation measures is that the historic buildings that define a historic neighborhood and give it its valued character warrant stewardship. It is not enough to implement regulations that require infill construction to be compatible with its historic context if the historic structures that make up that context may be altered without any form of review or guidance. Diminishment or destruction of historic character can result from major renovations or from incremental changes over time. Historic preservation regulations are not intended

to *prevent* changes to historic buildings but rather to provide a mechanism to *manage* change so that the historic character of the buildings and the neighborhood as a whole is maintained and enhanced over time.

When a historic district is established, every building is assigned a classification or "preservation value" at the time of designation that determines the type, standards and limits of jurisdiction that will apply in any future review. Alterations and additions to "contributing" structures are reviewed under the *Secretary of the Interior's Standards for Review of Alterations*. These standards, which are applied in historic districts throughout the country, are intentionally general in nature, as they are written to address a wide variety of potential alterations and an equally wide range of historic resources.

Each review standard includes language intended to ensure a level of reasonableness when staff or the HP Board applies the standard—language such as "every reasonable effort shall be made…", "wherever feasible…", and "…should be avoided when possible". Under the historic preservation ordinance, alterations or additions that are not readily visible from a public way are not subject to review. Alterations to "noncontributing" structures are governed by a more lenient set of review standards and noncontributing structures may be demolished as-of-right. Any replacement building is subject to review under the historic preservation ordinance's new construction standards.

The historic preservation ordinance's new construction standards are, likewise, intentionally general in nature and identify broad areas of compatibility (scale and form; composition of facades; relationship to the street) that must be considered by both the applicant and the Board in developing or reviewing a design proposal. The review process for new construction makes careful analysis of a project's surrounding context a high priority. To that end, all design proposals submitted for review are required to be shown *in context.*

The *Historic Resources Design Manual*, which was adopted by reference as a component of the preservation ordinance, includes a chapter on new construction that elaborates on the individual review standards and provides examples of successful and unsuccessful responses to the standards. The preamble to the chapter summarizes the intent behind the ordinance's new construction review standards. The preamble makes clear that while the ordinance requires a context-sensitive solution, the design standards are intended to provide a level of flexibility in responding to the design cues present in a given context. The review process itself is conducted by members of a board comprised of individuals with expertise in historic rehabilitation, construction, architecture and/or design.

With respect to demolition, landmark or contributing structures cannot be demolished unless 1) the applicant can meet the ordinance's economic hardship test which requires demonstration of "no reasonable use of the structure"; or 2) the Historic Preservation Board, upon request of an applicant, amends or rescinds the original landmark or contributing classification. The ordinance includes a process and review criteria for considering such requests. Since the ordinance went into effect in 1990, a number of buildings in historic districts have had their classification changed. One of the bases for changing a building classification from "contributing" to "noncontributing" is receipt of evidence that the building is structurally unsound. It should be noted that a proposal for *partial* demolition, for example demolition of a rear ell, is typically reviewed as an alteration.

NEXT STEPS

At Tuesday's workshop, Historic Preservation Board Chair Julia Sheridan will briefly present the Board's recommendation and Staff will review the review process to date, the basis for the proposed boundary, etc. At this time, Staff seeks feedback from the Planning Board regarding the proposed district designation, including any requests for additional information or responses to specific questions. Following Tuesday's session, the Planning Board may elect to proceed to a public hearing and formal recommendation or schedule an additional workshop.

ATTACHMENTS

1. Map of Proposed Munjoy Hill Historic District and Nominated Landmarks
2. Historic Context Statement
3. List of Properties within Proposed District
4. Sample forms from Munjoy Hill Historic Resources Inventory
5. Report and Boundary Recommendation from Scott Hanson, Sutherland Conservation &
6. "*Historic Preservation and Affordable Housing: The Missed Connection"*, by Donovan Rypkema for the National Trust for Historic Preservation
7. Public Comment

Att. 6.2

Proposed Munjoy Hill Historic District and Individual Landmark Designations per Historic Preservation Board November 20, 2019 Recommendation

N

Eastern Promenade

Fort Allen Park

Property Classifications

- Designated Landmark
- Proposed Landmark
- Noncontributing based on date of construction
- Noncontributing based on extent of alteration
- Undeveloped parcel
- Historic District, Contributing Buildings

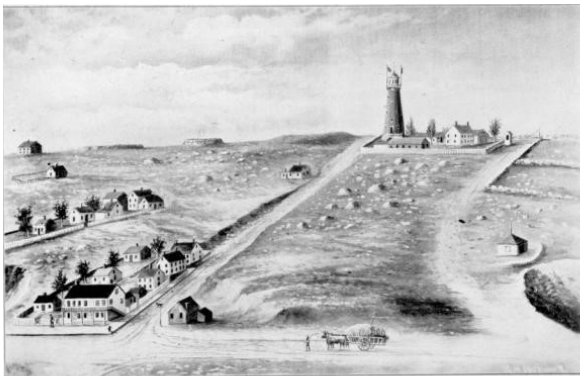
0 250 500 1,000 Feet

For more information about individual properties within the district, go to:
https://www.portlandmaine.gov/munjoyhillhistoricdistrict

Munjoy Hill Architectural Development & Context Statement

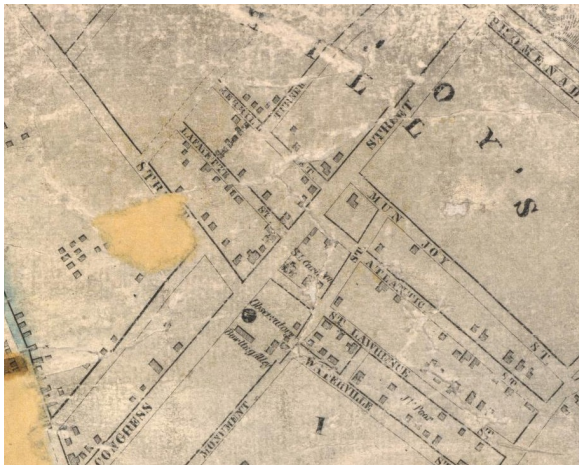
April 2019

Development History: 1786-1866



Munjoy Hill in the Forties by Charles Goodhue
Collections of the Maine Historical Society, MMN 4144

Munjoy Hill in 1826 as drawn by Lemuel Moody
Collections of the Maine Historical Society , MMN 100727



Munjoy Hill in 1851 from the H.F. Walling *Map of Cumberland County.*

Munjoy Hill rises 161 feet above Casco Bay on the eastern end of the Portland peninsula. The Hill's namesake George Munjoy (c1626-1680) settled near present day Mountfort and Fore Streets in 1659. He fled Portland after an Indian attack in 1676 and never returned.

The center of activity on Munjoy Hill for many years was the Portland Observatory (1807) which served as a signal communications tower for merchant vessels. Adjacent to the Observatory was a bowling alley and the house of its founder and operator Lemuel Moody.

Although Munjoy Hill came to be the city's most densely populated and ethnically diverse neighborhood, it was one of the last neighborhoods on the peninsula to be developed. Its primary functions from the city's founding in the 1630s until the 1840s were as an occasional gathering place and a pasture for cows. Throughout the mid-18th century a group called the Munjoy Proprietors erected a system of stone walls on the hill, with a gate near the present-day intersection of Washington Avenue and Congress Street. The Munjoy Proprietors sold "cow rights" to locals for pasturing their cattle.

The cow pastures were also the site of large open-air events. The fields between the Observatory and Eastern Cemetery were popular for 4th of July celebrations, circuses, and militia musters.

Early structures on the hill in addition to the Observatory included a hospital for small pox victims, a gun house, and Fort Sumner. The fort was built in 1794 off North Street to protect the city from attacks from the west and Back Cove.

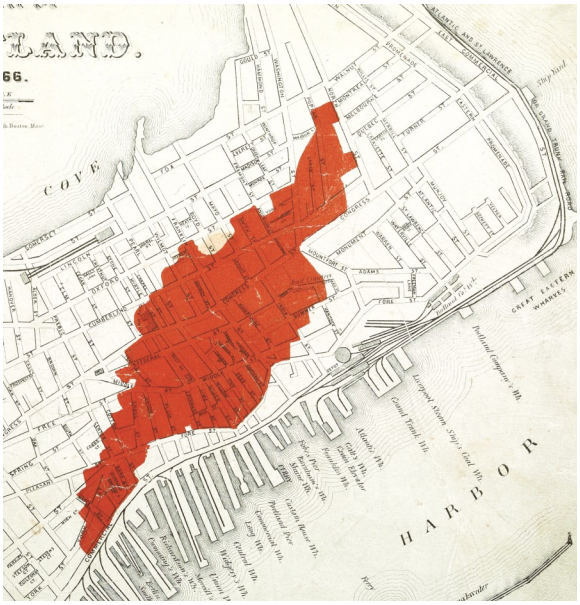
In 1796 Tukey's Bridge was built, connecting the peninsula to the mainland. Washington Avenue was laid out to connect the city to the bridge in anticipation of a residential building boom that didn't immediately materialize.

Instead, groups of structures were scattered across the hill, first near the gate to Munjoy Hill,

Development History: 1786-1866

Munjoy Hill in 1857 from the H.F. Walling *Map of Cumberland County.*

Congress Street on Munjoy Hill after the Fire of 1866
Greater Portland Landmarks



Extent of the Great Fire of 1866
Greater Portland Landmarks

then along Cumberland Avenue, Congress and Lafayette Streets.

As the Hill's population increased, in 1836 City officials bought up land along the shoreline, despite public outcry at the waste of public money. Much of this area is now the Eastern Promenade.

While the Eastern Promenade was preserved for future public use, on the opposite side of Munjoy Hill tons of gravel were removed to fill in Back Cove. Moses Gould, owner of 18 acres on the Hill, formed the Back Cove Land Co. to fill and develop the mud flats in what is now Bayside.

Expansion on the waterfront was precipitated by the founding by John A. Poor of the Atlantic and St. Lawrence Railroad. Chartered in 1845 and opened in 1853, the railroad connected Portland to Montreal, Quebec. Poor also helped found the Portland Company on Fore Street in 1847 to build locomotives for his new railroad. The upsurge in activity along Fore and India Streets in the 1840s and 1850s led to a residential boom on the Hill, attracting workers from the Portland Company and railroad. Many of these homes were built in the Greek Revival Style that predominated during this period.

On the western side of the Hill, the area between Washington Avenue and North Street developed a unsavory reputation in the early 19th century. In 1849 a riot broke out in a bawdy house. During the riots one man was killed and a dance hall was destroyed by fire. This area would be mostly destroyed in a few decades by a catastrophic fire with significant impact on the entire city.

The Great Fire of July 4th and 5th, 1866 spread from Commercial Street to North Street. It destroyed 1,500 buildings and left over 10,000 people homeless. The field below the Observatory was turned into a makeshift tent-city by the Army, then replaced by wooden dormitories until permanent housing could be built.

Several early homes on the east side of North Street survived the fire including the Benjamin Noble House (1856) at 65 North Street and the double house of Eliphalet Clark and Moses Gould at 79 North Street (c1847).

Development History: 1866-1917

Munjoy Hill from a *Bird's-Eye Map of Portland* Published by J. J. Stoner in 1876

The index of a map prepared by the city Tax Assessor 1882-1884 depicts the extent of development on Munjoy Hill.

Following the Great Fire, the city's need for housing drove development on Munjoy Hill. This development was largely middle-class homes, with a few high style residences in the Italianate and Second Empire styles. A few years earlier in 1863 the city's horse drawn street car line had reached Munjoy Hill helping to make the hillside areas attractive for development after the fire. Residential development spread out from existing residential areas eastward toward the Promenade on Turner, Quebec, Melbourne and Montreal Streets, which had been subdivided 1857 and 1858.

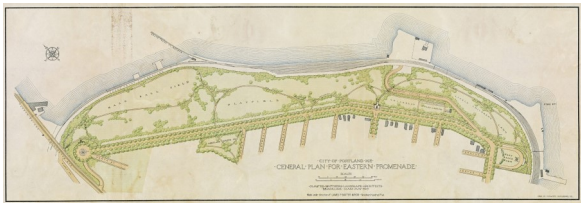
In 1874 the Deering family heirs subdivided their land along Congress, Sheridan and Kellogg Streets. A few years later in 1879 the family subdivided additional land along the east side of Munjoy Street and the north side of Congress Street from Howard Street to the Eastern Promenade.

By the 1880s, Munjoy, Atlantic and St. Lawrence Streets were largely built out. These long streets extended between Fore to Congress and were interconnected by short streets like Sherbrooke Street or small lanes like Gilbert's Lane. To the east, a pond initially blocked the extension of several streets westward to Congress Street. The pond was located in the area generally occupied in the 20th century by the Adams School (*image bottom left*). Within the next ten years the area would be drained and developed. One block within this formerly wet area would become one of four car barns for the Portland Railroad Co. after the street car line expanded its route on the Hill from Congress Street, down Morning Street to the Eastern Prom. It then wended its way back to Congress Street along Beckett, Wilson, and Atlantic Streets. The company's street cars lines were all electrified by 1896.

Development History: 1866-1917

Portland Railroad Company's car barn on Beckett Street.

Munjoy Hill Reservoir c1920.
Portland Water District, MMN 82239



Olmsted Brothers design for Eastern Promenade.

J.J. Nissen House, 286 Eastern Promenade in 1924.

In 1889 the Munjoy Hill reservoir was built at the corner of North and Walnut Streets by the Portland Water Company. The reservoir was built to better serve customers in the East End and had a capacity of 20,000,000 gallons. The reservoir burst a few years later in 1893, killing four people and destroying four homes off Walnut Street. The reservoir remained in operation until 1970 as a water supply; today the site is a parking lot above a large underground reservoir.

In the last decade of the 19th century, wealthy local families began to appreciate the Eastern Promenade's sweeping views and began erecting grand homes opposite the City-owned green space. The residential development followed efforts begun by the city in 1878 to improve the publically owned green space. In 1890 the City acquired Fort Allen to extend the city's park space. The park and perimeter roadway became key elements in the park and boulevard system envisioned by Mayor James Phinney Baxter and the Olmsted brothers landscape firm in 1905.

Twenty-one of the thirty-three single family homes on the Eastern Promenade were built between 1888-1912 in the Queen Anne and Colonial Revival styles. Samuel D. Plummer, a Portland real estate dealer, built his Queen Anne house at 140 Eastern Promenade in 1898. The Griffin Brothers, prominent fruit dealers on Portland's waterfront, built large homes on the Promenade. Lindsay B. Griffin first built a house at 182 Eastern Prom in 1897, then built a new Colonial Revival House at 188 Eastern Prom in 1908. His brother John built a similar home at 150 Eastern Prom in 1910. One of the prominent Colonial Revival homes on the northern end of the Promenade was the 1913 residence of John. J Nissen, founder of Nissen Bakery at 59 Washington Avenue.

Development History: 1866-1917

Samuel D. Plummer House, built 1898 at 140 Eastern Promenade.

Triple deckers on Munjoy Hill.

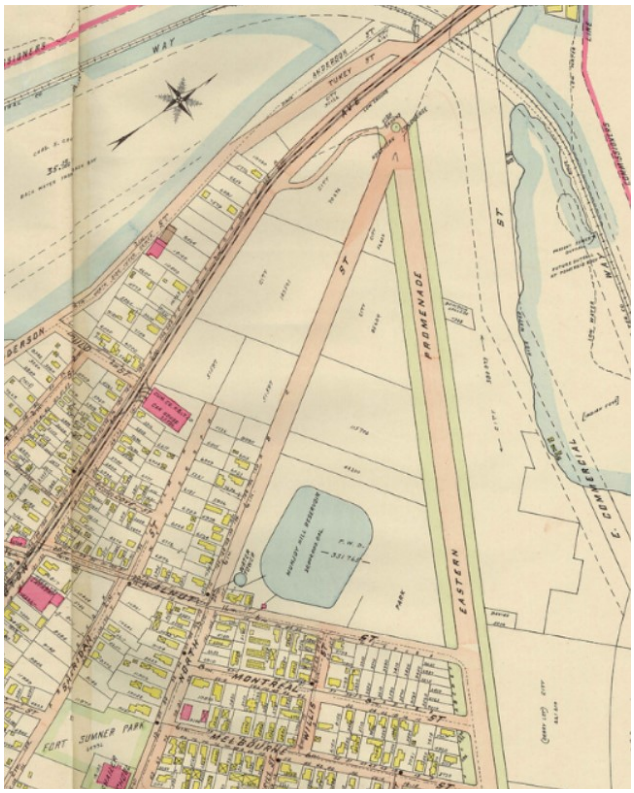
Triple deckers on Munjoy Hill.

Between 1895 and 1917 "triple deckers" or "flat houses" were built in large numbers on Munjoy Hill. They are particularly prevalent on Morning, Vesper and Beckett Streets, as well as Sheridan and Kellogg Streets. The land on Morning, Vesper and Beckett Streets was owned by the Deering and Fessenden families and was some of the last vacant land to be laid out on Munjoy Hill. The triple-deckers and the few apartment buildings built during this period were multi-family residential building types that housed the Hill's increasing immigrant population from Italy and Northern and Eastern Europe.

Portland was a busy maritime port in the early 20th century and served as an immigrant port of entry. Portland's primarily English population was joined by groups from Ireland, Canada, Portugal, Scandinavia, Italy, Eastern Europe, and Greece. Munjoy Hill's close proximity to the downtown made it attractive to many immigrant families. Immigrant families settled on the Hill and often built neighborhood businesses like the Capozza brothers barber shop or Paul Blumenthal's grocery store.

By World War I, most of the neighborhood's residential lots were filled, however land to the west along North Street and the Eastern Promenade remained vacant.

Development History: 1917 – Present



Map of the northern end of Munjoy Hill depicting vacant land. *Richards Standard Atlas of the City of Portland,* 1914.

View of the Munjoy Hill Reservoir and the Jack school beyond. Portland Water District, MMN 94455.

View of Portland House in the distance.

By the late 1920s, although most of the neighborhood's residential lots had been developed, some lots remained vacant, particularly along North Street and the Eastern Promenade. During the 20th century infill development and construction of new institutional and educational buildings slowly filled the remaining land.

In 1929 the Jewish Home for the Aged was designed by architect Herbert Rhodes and built at 158 North Street.

Jack Junior High School was built on North Street near the Munjoy Hill Reservoir on land gifted to the city by the Portland Water District in 1943 for seventh and eighth grade students in the Munjoy Hill neighborhood. The school was later used as an elementary school. The building was closed in 2001 and replaced by the East End Community School built on the same site in 2006.

In 1947 the housing development at 304 Eastern Promenade was built on the site of homes destroyed in the reservoir flood. The development includes seven buildings on a 1.7-acre lot with parking along the perimeter of the development.

A few years later in 1950 at the corner of Eastern Promenade and Quebec Street, six multi-unit buildings were constructed on a one-acre lot. Like the other mid-twentieth century housing project on the Eastern Promenade, it is a low scale development and does not follow the traditional street pattern.

Today, the Munjoy Hill skyline is dominated by two large-scale residential buildings. The Portland House, overlooking the Fore River at 45 Eastern Promenade, was built in 1969 as an apartment building and today houses over 100 residential condominiums.

Promenade East, purportedly the first high rise condominium building in Maine, was built in 1975. The building is fourteen stories high and accommodates 80-units. Its interior has a unique layout with two floors sharing a single hallway.

Architecture

Henry Homer House, 81 Congress Street (c1829) in 1924.

7 Lafayette Street (1849 - 1852) in a 1924 image.

7 Lafayette Street (1849—1852) in 2018.

Architectural styles of the Hill's residences provide useful clues to the development and history of the neighborhood. While few buildings from the Hill's early settlement remain, there are many buildings from the three major periods of construction: early subdivisions for housing for workers along the expanding waterfront (1847-1866), Post Fire development (1866-1890s) and housing for Portland's expanding immigrant population (1890s -1930). Research conducted by Greater Portland Landmarks in the early 1980s provided dates for many of the homes on Munjoy Hill.

A number of buildings on Munjoy Hill exhibit the characteristics of more than one style, either because they are transitional between stylistic periods or due to later additions. Some buildings, altered by the replacement of exterior siding and the removal of exterior features display no particular architectural style.

Early Settlement (1785-1845)

The few buildings that remain from the early settlement on Munjoy Hill are wood–framed, three -bay, side gable capes and are generally located near the crest of the hill. The Henry Homer House (c1829) at 81 Congress Street is a one-and-a-half story three bay cape that has been altered by a side addition. A slightly later example is the dwelling at 7 Lafayette Street (1849-1852).

Another altered example of an early house is located at 62 Munjoy Street. The first floor was a five-bay cape built c1790 in the Federal period. The cape was likely moved and a second floor added c1857 by builder William Hoit.

Early Subdivisions (1845-1866)

Two early subdivisions of land, one off North Street and the other off Fore Street include good examples of the Greek Revival style. These homes typically feature a strong post and lintel door surround. While most homes in this style on Munjoy Hill are wood framed, there are several brick Greek Revival homes in the neighborhood. The brick dwellings usually feature stone lintels over their windows.

Architecture

Moses Gould and Eliphalet Clark at 79-81 North Street (1847).

Joseph Flower House at 87 St. Lawrence Street (c1852).

One of the best examples of a brick Greek Revival is the Robert Dresser House (1850-1851) at 2 Atlantic Street. The two-story building has stone lintels above the windows and a recessed entry door with sidelights. Another early example is the double house of Moses Gould and Eliphalet Clark at 79-81 North Street (1847). Like the Dresser House, the Gould-Clark House has recessed entries. The entry at 81 North Street retains its entry sidelight design. Altered by Italianate entry hoods, the Greek Revival style is evident in the building's strong gable-end pediments, the recessed brick window bays, and the stone lintels and sills at each window.

Additional brick dwellings are located at 16 Atlantic Street (1852-1853), 55 Atlantic Street (1855), 62 Waterville Street (1855) and 66 Waterville Street (1855-1857). A late example of a brick Greek Revival dwelling is the Gabriel Mark House at 74 St. Lawrence Street built in 1872.

St. Lawrence, Atlantic and Waterville Streets contain a high percentage of Greek Revival frame residences. There are thirteen examples of the Greek Revival style built between 1845 and 1855 on Atlantic Street. Nineteen Greek Revival frame dwellings built between 1847 and 1860 are located on St. Lawrence Street and nine built between 1846 and 1867 are located on Waterville Street.

The neighborhood contains examples of both gable front Greek Revival homes and side gable dwellings. Gable front dwellings are usually 2 1/2 stories, while one and two story examples of side gable dwellings are also present.

One of the most prevalent builders on Munjoy Hill in this period was William Hoit. Research indicates he was responsible for the construction of at least ten wood frame homes on Munjoy Hill in the 1850s. Most of these were Greek Revival homes, although two examples of his construction in the Italianate style are extant at 86 and 104 Congress Street.

Ellen Moody York House, 140 Congress Street in 1924.

A Gothic Revival dwelling on North Street in 1924.

Tall narrow paired windows like these at 80 North Street are typical of the Italianate Style.

Another early 19th century architectural style is the Gothic Revival. There are few examples of the Gothic Revival style on Munjoy Hill. 140 Congress Street is the former home of Ellen Moody York, the granddaughter of Lemuel Moody and proprietress of the Portland Observatory until 1925. Her dwelling once featured ornate decorated vergeboards and drop mold window trim that characterized the Gothic Revival style. Many of the dwelling's details were lost when the dwelling was altered by the addition of a church sanctuary in the mid-20th century.

A second example of the style is located at the rear of 21 North Street. Less decorative than 140 Congress Street, the North Street dwelling features decorative verge board, steeply pitched gable wall dormers, and a projecting two story entry bay with a similarly steep gable roof and decorative verge boards.

Post-Fire Development (1866-1890s)

Most of the extant homes built in the aftermath of the Great Fire of 1866 were constructed in the Italianate and Second Empire styles that predominated during that period. Often similar in form to the gable fronted Greek Revivals homes, the typical Italianate house has more elaborate decoration and machine-made details. The details, such as brackets, were more readily available and affordable than earlier hand carved details due to new machinery technology.

Characteristic features of the Italianate style include tall paired windows, arched window openings, decorative door hoods, brackets below the roofline and bay windows.

The Italianate style predominates on Munjoy Hill. Projecting bays and door hoods are common features on both vernacular dwellings as well as more elaborately detailed homes on the Hill. The Italianate style is also found on commercial and civic buildings like the Shailer School (1880-1881) on North Street.

Bay windows on gable front home are a typical feature on the Hill.

The Ann Freeman House on Congress Street is an early example of the Italianate Style. It is a designated local landmark.

While most Italianates style homes have a side hall plan, the Hill also has several examples of an L-plan house with a side entrance like this one at 56 St. Lawrence Street built c1860.

Brick examples of the style include the two-bay, two-story Ann Freeman House (1857) at 147 Congress Street and the three-story double house at 96 St. Lawrence Street. Both examples have hip roofs that formerly were capped by cupolas.

Early examples of the gable end form are the Benjamin Noble House at 63 North Street (1856) and the Jason H Davis House at 23 O'Brion Street (1866-7).

The three bay, one-and-a-half story Cushing House at 83 Munjoy Street (1878) is an unusual example of the Italianate style on Munjoy Hill. Unlike most of its neighbors, the dwelling is set far back on its lot and has an unusual central projecting entry tower form.

A third plan type is the L-shape plan. An example of the L-plan form with side entry, usually off a porch, is the Samuel Libby House at 30 Lafayette Street (late 1870s). Like many dwellings with this form, the Libby House has a narrow gable front form with a projecting bay window on the street façade.

Two of the most prevalent builders on Munjoy Hill in this period were William H. and John Weeks. Research indicates the Weeks family built several Italianate wood-frame houses on Vesper and O'Brien Streets in the last decades of the 19th century.

The Alfred Roberts House (1876) at 80 Quebec Street.

The Second Empire at 60 Kellogg Street retains its historic slate roof, window hoods, and corner boards.

39 and 45 North Street on Munjoy Hill in 1924

The Second Empire style shares many of the Italianate style's characteristics and was popular during the same time period. What distinguishes the Second Empire style, however, is its mansard roof form. It is another predominate style on Munjoy Hill.

Several good examples of small scale, one-and-a-half-story Second Empire dwellings are located on the Hill. The Alfred Roberts House (1876) at 80 Quebec Street and the John C. Main House (1876) at 52 Melbourne Street each have detailed woodwork over the dormers and elaborate brackets supporting the entry hood. The Mains House has a two-bay side hall plan, while the Roberts House has an unusual back hall plan and features bull's eye rosettes as a decorative exterior detail. Like the Mains and Roberts Houses, the Second Empire at 60 Kellogg Street has elaborate dormer and cornice details. It retains its historic slate roof, window hoods, and corner boards.

The late 19th century brought larger scale dwellings to the neighborhood, particularly on North, Congress and Merrill Streets. Larger two-and-a-half-story examples of the Second Empire style are present at 32, 39, 45, 96 North Street. The V.B. Fuller House (1884) at 45 North Street retains its double entry doors, bracketed entry hood, two-story projecting bays with narrow windows, cornice brackets, and dentil molding. The A.L.R. Huston House (1886) at 39 North Street retains its historic carriage house.

Swag detail on entry porch gable at 129 Morning Street.

William N. Taylor House (1895) at 64 Eastern Promenade.

Samuel D. Plummer House (1898) at 140 Eastern Promenade.

Housing a Growing Population (1890s-1930)

The extant homes built on Munjoy Hill at the turn of the century are constructed in the diverse styles that predominated during that period. The two most prevalent styles are Queen Anne and Colonial Revival.

While homes from this era located on the Eastern Promenade are often elaborate and large scale, on interior streets the Queen Anne and Colonial Revival style tend to be smaller scale and follow the same development pattern as earlier homes. Many Queen Anne homes are gable front with a side hall plan, like earlier Greek Revival, Italianate, and Second Empire style homes on the Hill. Only the stylistic details have changed. Similarly, Colonial Revival homes may also have a gable front or may have a hip roof.

The Queen Anne style features a variety of distinctive patterns of decorative detailing. Spindlework with delicate porch details and lace-like brackets is one common type of Queen Anne architectural embellishment found on Munjoy Hill. Another is the Free Classic, with classical columns and decorative details borrowed in part from the early 19th-century Federal period of architecture.

Towers are prominent feature in Queen Anne dwellings and towers are present on the R. Cutler Libby House (1895) at 34 Congress Street, the William N. Taylor House (1895) at 64 Eastern Promenade, the Robert D. Libby House (1901) at 84 Eastern Promenade, and the Samuel D. Plummer House (1898) at 140 Eastern Promenade.

The John E. Farr House (1893) at 39 Congress Street is a good example of a gable front Queen Anne dwelling. The gable front projects beyond the front wall and encompasses the two story projecting window. Typical of the Queen Anne style, the dwelling features a Palladian window, multiple window sizes and styles, panel work, patterned shingles, spindlework, dentil moldings, and gable ornament in the entry portico. A unique feature of the house is the different decorative pattern of the lintels on the first and second floor window trim.

Colonial Revival house at 188 Eastern Promenade.

Colonial Revival house at 150 Eastern Promenade.

Colonial Revival apartment house at 164 Eastern Promenade.

The Colonial Revival style on Munjoy Hill is represented in a wide range of residential building types: large-scale single-family homes, small-scale single-family homes, and on triple decker buildings.

Two excellent examples of the Colonial Revival style are the John W. Griffin House (1910) at 150 Eastern Promenade and the Lindsay B. Griffin House at 188 Eastern Promenade (1908). Both dwellings have a hipped roof with a barrel roof dormer, but one has a full width porch and the other has a central portico. Both have a symmetrical façade and entry door with flanking sidelights that is typical of the Colonial Revival style.

Enoch Richards (1854-1944) was one of the most prolific builders on Munjoy Hill. He built at least sixteen houses on the Eastern Promenade and Beckett, Vesper, and Moody Streets. He built single-family homes, two-units and triple decker apartment buildings in both the Queen Anne and Colonial Revival Styles.

The Colonial Revival Enoch C. Richards Apartment House (1903-1904) at 164 Eastern Promenade features a distinctive element Richards used on many of his buildings--large brackets to support an deep overhanging roofline. This detail is also present on his former home at 162 Eastern Promenade, his triple decker building at 45 Quebec Street and four triple decker buildings at 88-96 Vesper Street.

While most buildings from this turn-of-the-century period of construction are Queen Anne or Colonial Revival, there are other styles present on Munjoy Hill as well, including Folk Victorian, the Shingle Style and Beaux Arts Style.

Folk Victorian architecture has simple detailing inspired by Italianate and Queen Anne Styles. The small home at 100 North Street (1873) has a simple gable roof form, a jig saw cut balustrade, and brackets window hoods typical of the Folk Victorian style.

Architecture

The Emma Fuller House (1892 at 50 Morning Street.

The Emerson School under construction in 1898, above. Collections of the Maine Historical Society, MMN 20355. The Emerson School today, below.

The Emma Fuller House (1892) at 50 Morning Street is a Queen Anne dwelling that exhibits some characteristics of the Shingle Style, including its strip of three windows in the front gable end, shingled pent roof, and shingle clad brackets supporting the projecting gable end.

The Henry F. Merrill House (1898) at 5 Eastern Promenade was designed by John C. Stevens and John H. Stevens. Colonial Revival in style, it also has elements found in the Shingle Style, including the recessed shingle window in the gable bay, the Palladian window, and the shingled exterior siding that unifies the irregular form of the house. Its porch with Ionic columns and decorative cornice detailing are typical Colonial Revival details.

Although not a dwelling, the Emerson School at 13 Emerson Street is an example of the Beaux Arts Style. Built 1897-1898, it was designed by Frederick Thompson in the Beaux Arts Style as an elementary school serving the Munjoy Hill neighborhood.

The Munjoy Hill neighborhood includes many triple decker apartment buildings. The triple decker is a residential building type that provided a greater number of units than early examples of multi-family housing on Munjoy Hill. It proved to be a critically important housing type to provide for Portland's growing population at the turn of the century. The building form is generally three stories high with one family unit on each floor, usually with a rear porch.

One street largely defined by its row of triple-deckers is Vesper Street. The land on Vesper Street wasn't developed until the late 1880s after being owned for many years by the Deering family. Enoch Richards, a prolific builder on Munjoy Hill, built five triple-deckers on the west side of Vesper Street 1896-1899.

An Italianate Triple Decker Building at 101 North Street

An example of the shingle bay form of triple decker buildings.

This apartment building on Morning Street has a similar form and features to a triple decker building, but has a single building entrance.

One of the most ornate triple-deckers on Munjoy Hill is located at 101 North Street. It was built in 1887 by Moses Gould, a prominent real estate developer who lived at 79 North Street. A similar triple-decker, but somewhat altered, is located at 98 Cumberland Avenue, near the Hill's only four -decker at 106 Cumberland Avenue and a brick triple-decker at 102 Cumberland Avenue.

The triple decker at 82 Beckett Street is a good example of a shingled bay style with a bracketed cornice and Italianate details. Particularly striking is its unusual curved brackets at the entry door. It was built in 1891 by Charles W. Cushing, a carpenter who lived at 87 Munjoy Street.

The Colonial Revival triple-decker at 129 Morning Street has a curved three-story bay, unusual on Munjoy Hill where most bays are segmented. The dwelling was built in 1908 for Edward L. Dame, who also owned the more traditional triple-decker next door at 125 Morning Street.

The triple decker is a more dense form of housing than early examples of multi-family housing that was built on Munjoy Hill. It was critical to house Portland's growing population at the turn of the century. In addition, the development of multi-family apartment buildings allowed for greater density in the neighborhood and accommodation for lower middle class residents. One example of a large apartment block is the building at 119 Morning Street, built circa 1926 for the Albert family and formerly known as the "Cleevesland".

The brick apartment building at 55-57 Morning Street, formerly known as the "Raymond Apartments" is an example of a housing type built to accommodate a greater number of units than the multi-family residences and triple deckers on Munjoy Hill. It was built c1912 for Samuel D Plummer and owned for many years by his family. Samuel D Plummer (1858-1917) was a real estate dealer who lived in a Queen Anne house at 140 Eastern Prom in 1898 on land he bought from the Deering heirs in 1897. He later built two apartment buildings at the rear of his house on Morning Street on the remainder of the land he purchased from the Deering family.

Visual Character of the Hill

Munjoy Hill is largely a neighborhood of wood framed dwellings.

Gables, bay windows, and raised stoops are common.

On many blocks, narrow lots contribute to a consistent streetscape.

Although Munjoy Hill exhibits a variety of architectural styles and residential building types, including single-family, multi-family, triple decker and the occasional apartment building, there are a number of shared building characteristics that serve to unify much of the neighborhood and give it its own identifiable visual character.

First and foremost, the neighborhood is distinguished by its dense development pattern. Buildings occupy narrow, deep lots and are closely spaced. With few exceptions, mostly on the Eastern Promenade, buildings are of modest scale, ranging from 1 ½ to 3 stories. Most dwellings are wood-frame construction with clapboard exteriors; the occasional brick building breaks this predominate material palette. Buildings generally have small footprints, with their narrow, usually gable, end facing the street. Most houses are two or three bays wide, often with a projecting one- or two-story front bay. Projecting front entry vestibules are also common.

Most houses sit above a high brick foundation, with a raised stoop and flight of exterior stairs leading to the main entry. Entries are typically located on the street façade and are generally shifted to one side, although there are examples of primary entrances on the side elevation. Most buildings are set back a short distance from the sidewalk, allowing for a shallow front yard. Driveways, where they exist, occupy much of the width of the lot's side yard.

Just as the scale of houses on Munjoy Hill is generally modest, so too is the architecture. Most of the houses, with the exception of those facing the Eastern Promenade, are vernacular expressions of the various architectural styles popular at the time of their construction. The very large number of Italianate buildings throughout the neighborhood, with their tall vertical expression, gable end facing the street, bracketed entry hood, and projecting bays, lends a certain consistency to the blocks.

Visual Character of the Hill

Unique porch details can differentiate a typical gable front dwelling from its neighbors.

Vernacular dwellings often feature a few character defining details, like a entry hood or tall narrow windows, that help identify these dwellings as Italianate.

Streetscapes like this on North Street, depict the typical rhythm created by vertically orientated facades .

Color photography by Greater Portland Landmarks

Certainly, there are some blocks within the neighborhood (Moody Street, for example) that do not follow this typical development pattern. There are also houses that do not exhibit the common building characteristics described above. These are, however, exceptions rather than the rule on Munjoy Hill. That is why later developments such as MacArthur Gardens, which features several separate-but-related brick buildings set back from the street within a campus-like setting, do not feel sufficiently integrated with the neighborhood.

Munjoy Hill is often described as "friendly" and "approachable". While there are no doubt many factors that contribute to this reputation, the neighborhood's distinct visual character is key among them.

List of Properties within the Proposed Munjoy Hill Historic District

Property Address	Classification
2 Atlantic Street	Contributing
6 Atlantic Street	Contributing
7 Atlantic Street	Non Contributing
12 Atlantic Street	Contributing
13 Atlantic Street	Contributing
16 Atlantic Street	Contributing
17 Atlantic Street	Contributing
18-20 Atlantic Street	Contributing
19 Atlantic Street	Contributing
22 Atlantic Street	Contributing
23 Atlantic Street	Contributing
28 Atlantic Street	Contributing
29 Atlantic Street	Contributing
34-26 Atlantic Street	Contributing
33 Atlantic Street	Non Contributing
37 Atlantic Street	Contributing
41 Atlantic Street	Contributing
42 Atlantic Street	Non Contributing
48 Atlantic Street	Contributing
52 Atlantic Street	Contributing
55 Atlantic Street	Contributing
58 Atlantic Street	Contributing
62 Atlantic Street	Contributing
63 Atlantic Street	Contributing
67 Atlantic Street	Contributing
68 Atlantic Street	Non Contributing
69 Atlantic Street	Contributing
73 Atlantic Street	Contributing
74 Atlantic Street	Contributing
75 Atlantic Street	Contributing
76 Atlantic Street	Contributing
71 Beckett Street	Contributing
75 Beckett Street	Contributing
76 Beckett Street	Contributing
81 Beckett Street	Contributing

82 Beckett Street	Contributing
83 Beckett Street	Contributing
84 Beckett Street	Contributing
85 Beckett Street	Contributing
86 Beckett Street	Contributing
87 Beckett Street	Contributing
88 Beckett Street	Contributing
91 Beckett Street	Contributing
94 Beckett Street	Contributing
95 Beckett Street	Contributing
98 Beckett Street	Contributing
99 Beckett Street	Contributing
25 Congress Street	Non Contributing
32 Congress Street	Contributing
33 Congress Street	Contributing
34 Congress Street	Contributing
35 Congress Street	Contributing
39 Congress Street	Contributing
43 Congress Street	Contributing
44 Congress Street	Non Contributing
45-47 Congress Street	Contributing
46 Congress Street	Contributing
48 Congress Street	Contributing
51-53 Congress Street	Contributing
52 Congress Street	Contributing
56 Congress Street	Contributing
58 Congress Street	Contributing
67 Congress Street	Contributing
73 Congress Street	Contributing
103 Congress Street	Landmark
127-129 Congress Street	Contributing
134 Congress Street	Non Contributing
135 Congress Street	Non Contributing
138 Congress Street	Landmark
140 Congress Street	Contributing (House at Rear)
	Non Contributing (Church)
141 Congress Street	Contributing

146 Congress Street	Contributing
147 Congress Street	Landmark
150 Congress Street	Contributing
151-153 Congress Street	Contributing
155 Congress Street	Contributing
157 Congress Street	Contributing
159 Congress Street	Contributing
161 Congress Street	Contributing
165-167 Congress Street	Contributing
5 Eastern Prom	Contributing
6 Eastern Prom	Contributing
13 Rear Eastern Prom	Contributing
17 Eastern Prom	Contributing
19 Eastern Prom	Contributing
21 Eastern Prom	Contributing
22 Eastern Prom	Contributing
28-30 Eastern Prom	Contributing
38-40 Eastern Prom	Contributing
46 Eastern Prom	Contributing
54 Eastern Prom	Contributing
60 Eastern Prom	Non Contributing
64 Eastern Prom	Contributing
84 Eastern Prom	Contributing
102 Eastern Prom	Contributing
108 Eastern Prom	Contributing
114 Eastern Prom	Contributing
118 Eastern Prom	Contributing
126 Eastern Prom	Contributing
130 Eastern Prom	Non Contributing
140 Eastern Prom	Contributing
150 Eastern Prom	Contributing
158-162 Eastern Prom	Non Contributing
164 Eastern Prom	Contributing
166-168 Eastern Prom	Contributing
172-174 Eastern Prom	Contributing
176 Eastern Prom	Contributing
182 Eastern Prom	Non Contributing

188 Eastern Prom	Contributing
208 Eastern Prom	Contributing
214 Eastern Prom	Contributing
218 Eastern Prom	Contributing
222 Eastern Prom	Contributing
13 Emerson Street	Landmark
7 Gilbert Lane	Non Contributing
9 Howard Street	Contributing
10 Howard Street	Contributing
12 Howard Street	Contributing
13 Howard Street	Contributing
15 Howard Street	Contributing
18 Howard Street	Contributing
19 Howard Street	Contributing
20 Howard Street	Contributing
21 Howard Street	Contributing
22 Howard Street	Contributing
25 Howard Street	Contributing
51-53 Kellogg Street	Contributing
55-57 Kellogg Street	Non Contributing
60 Kellogg Street	Contributing
61 Kellogg Street	Contributing
63 Kellogg Street	Contributing
64 Kellogg Street	Contributing
66 Kellogg Street	Contributing
7 Lafayette Street	Contributing
26 Lafayette Street	Contributing
30 Lafayette Street	Contributing
34 Lafayette Street	Non Contributing
42 Lafayette Street	Contributing
46 Lafayette Street	Contributing
48 Lafayette Street	Contributing
50 Lafayette Street	Contributing
56 Lafayette Street	Contributing
51 Melbourne Street	Non Contributing
52 Melbourne Street	Contributing
53 Melbourne Street	Contributing

57 Melbourne Street	Contributing
58 Melbourne Street	Contributing
61 Melbourne Street	Contributing
62 Melbourne Street	Contributing
63 Melbourne Street	Contributing
64 Melbourne Street	Contributing
67 Melbourne Street	Contributing
71 Melbourne Street	Contributing
72 Melbourne Street	Contributing
73 Melbourne Street	Contributing
74 Melbourne Street	Contributing
76 Melbourne Street	Contributing
80 Melbourne Street	Contributing
65 Merrill Street	Contributing
67 Merrill Street	Contributing
69 Merrill Street	Contributing
73 Merrill Street	Contributing
8-12 Montreal Street	Individually Designated Landmark
41 Montreal Street	Contributing
42 Montreal Street	Contributing
45 Montreal Street	Contributing
46 Montreal Street	Contributing
48 Montreal Street	Contributing
49 Montreal Street	Contributing
52 Montreal Street	Contributing
54 Montreal Street	Non Contributing
55 Montreal Street	Contributing
60 Montreal Street	Contributing
63 Montreal Street	Contributing
64 Montreal Street	Contributing
44 Monument Street	Contributing
48 Monument Street	Contributing
51 Monument Street	Individually Designated Landmark
9 Moody Street	Non Contributing
53-55 and 57-59 Moody Street	Contributing
52-54 and 56-58 Moody Street	Contributing
10 Morning Street	Contributing

11-13 Morning Street	Contributing
16 Morning Street	Non Contributing
17 Morning Street	Contributing
19-21 Morning Street	Contributing
20 Morning Street	Contributing
24 Morning Street	Contributing
25 Morning Street	Contributing
27 Morning Street	Contributing
28 Morning Street	Contributing
29 Morning Street	Contributing
32 Morning Street	Contributing
33 Morning Street	Contributing
36 Morning Street	Contributing
37 Morning Street	Contributing
40 Morning Street	Contributing
42 Morning Street	Contributing
46-48 Morning Street	Non Contributing
40-51 Morning Street	Contributing
50 Morning Street	Contributing
55 Morning Street	Contributing
58 Morning Street	Non Contributing
62 Morning Street	Contributing
63-65 Morning Street	Contributing (Original Structure) Non Contributing (Addition)
64-66 Morning Street	Contributing
68-70 Morning Street	Contributing
72 Morning Street	Contributing
76 Morning Street	Contributing
79 Morning Street	Non Contributing
80 Morning Street	Contributing
81 Morning Street	Contributing
85 Morning Street	Contributing
86 Morning Street	Contributing
89 Morning Street	Contributing
90 Morning Street	Contributing
93 Morning Street	Contributing
94 Morning Street	Contributing

95 Morning Street	Contributing
96 Morning Street	Contributing
102 Morning Street	Contributing
119 Morning Street	Contributing
125 Morning Street	Contributing
129 Morning Street	Contributing
131 Morning Street	Contributing
10 Munjoy Street	Contributing
11 Munjoy Street	Contributing
14 Munjoy Street	Contributing
15 Munjoy Street	Non Contributing
18-20 Munjoy Street	Contributing
19 Munjoy Street	Contributing
26 Munjoy Street	Contributing
27 Munjoy Street	Contributing
29 Munjoy Street	Contributing
30 Munjoy Street	Contributing
34 Munjoy Street	Non Contributing
38 Munjoy Street	Non Contributing
39 Munjoy Street	Non Contributing
42 Munjoy Street	Contributing
43 Munjoy Street	Contributing
60 Munjoy Street	Contributing
62 Munjoy Street	Contributing
66 Munjoy Street	Contributing
72 Munjoy Street	Non Contributing
76 Munjoy Street	Contributing
7 North Street	Contributing
9 North Street/28 Cumberland Ave.	Contributing
11 North Street	Contributing
12 North Street	Contributing
15 North Street	Contributing
14-16 North Street	Contributing
18 North Street	Contributing
19 North Street	Contributing
23 North Street	Contributing
24-26 North Street	Contributing

27 North Street	Contributing
28 North Street	Contributing
29 North Street	Contributing
31 North Street	Contributing
32 North Street	Contributing
34 North Street	Contributing
35 North Street	Contributing
36 North Street	Non Contributing
39 North Street	Contributing
42 North Street	Contributing
44 North Street	Non Contributing
45 North Street	Contributing
47 North Street	Contributing
48 North Street	Contributing
51 North Street	Contributing
54 North Street	Contributing
56-60 North Street	Landmark
63 North Street	Contributing
67 North Street	Contributing
73 North Street	Non Contributing
79 North Street	Contributing
80 North Street	Contributing
84 North Street	Contributing
89 North Street	Contributing
92 North Street	Non Contributing
96 North Street	Contributing
100 North Street	Contributing
101 North Street	Contributing
103 North Street	Contributing
104 North Street	Non Contributing
105 North Street	Contributing
106 North Street	Contributing
107 North Street	Contributing
110 North Street	Contributing
116 North Street	Non Contributing
122 North Street	Contributing
11 O'Brion Street	Contributing

12 O'Brion Street	Contributing
15 O'Brion Street	Contributing (Garage on Adjoining Lot Non Contributing)
16 O'Brion Street	Contributing
22 O'Brion Street	Contributing
27 O'Brion Street	Contributing
28 O'Brion Street	Contributing
30 O'Brion Street	contributing
31 O'Brion Street	Contributing (Outbuilding Non Contributing)
33 O'Brion Street	Contributing
36 O'Brion Street	Non Contributing
39 O'Brion Street	Contributing
40 O'Brion Street	contributing
42 O'Brion Street	Non Contributing
43 O'Brion Street	Contributing
45 O'Brion Street	Contributing
49 O'Brion Street	Contributing
65-67 Quebec Street	Contributing
71 Quebec Street	Non Contributing
75 Quebec Street	Non Contributing
77 Quebec Street	Non Contributing
80 Quebec Street	Contributing
81 Quebec Street	Contributing
84 Quebec Street	Contributing
86 Quebec Street	Contributing
90 Quebec Street	Contributing
8 Sherbrooke Street	Contributing
21 Sheridan Street	Landmark
16 St. Lawrence Street	Contributing
20 St. Lawrence Street	Contributing
23 St. Lawrence Street	Contributing
24 St. Lawrence Street	Contributing
28 St. Lawrence Street	Contributing
29 St. Lawrence Street	Contributing
35 St. Lawrence Street	Contributing
36 St. Lawrence Street	Contributing

37 St. Lawrence Street	Contributing
40 St. Lawrence Street	Non Contributing
43 St. Lawrence Street	Contributing
46 St. Lawrence Street	Non Contributing
47 St. Lawrence Street	Contributing
49 St. Lawrence Street	Contributing
50 St. Lawrence Street	Contributing
52 St. Lawrence Street	Contributing
56 St. Lawrence Street	Contributing
57 St. Lawrence Street	Contributing
61 St. Lawrence Street	Contributing
62 St. Lawrence Street	Contributing
65 St. Lawrence Street	Contributing
71 St. Lawrence Street	Non Contributing
72 St. Lawrence Street	Contributing
74 St. Lawrence Street	Contributing
75-77 St. Lawrence Street	Non Contributing
83 St. Lawrence Street	Contributing
87 St. Lawrence Street	Contributing
91 St. Lawrence Street	Contributing
94-96 St. Lawrence Street	Contributing
50 Turner Street	Contributing
52 Turner Street	Contributing
11 Vesper Street	Contributing
12 Vesper Street	Non Contributing
15 Vesper Street	Contributing
16 Vesper Street	Contributing
19 Vesper Street	Contributing
20 Vesper Street	Contributing
22 Vesper Street	Contributing
23 Vesper Street	Contributing
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31 Vesper Street	Contributing
30-32 Vesper Street	Contributing
33 Vesper Street	Contributing
36 Vesper Street	Contributing

38 Vesper Street	Contributing
39 Vesper Street	Contributing
41 Vesper Street	Contributing
42 Vesper Street	Non Contributing
46 Vesper Street	Contributing
47 Vesper Street	Contributing
50 Vesper Street	Contributing
73 Vesper Street	Contributing
74 Vesper Street	Non Contributing
76 Vesper Street	Contributing
77 Vesper Street	Contributing
79 Vesper Street	Contributing
80 Vesper Street	Contributing
82 Vesper Street	Contributing
83 Vesper Street	Contributing
85 Vesper Street	Contributing
86 Vesper Street	Contributing
89 Vesper Street	Contributing
90 Vesper Street	Contributing
92 Vesper Street	Contributing
93 Vesper Street	Contributing
96 Vesper Street	Contributing
42 Walnut Street	Non Contributing
44 Walnut Street	Non Contributing
46 Walnut Street	Contributing
54 Walnut Street	Contributing
17 Waterville Street	Contributing
23-25 Waterville Street	Contributing
29 Waterville Street	Non Contributing
39 Waterville Street	Contributing
40 Waterville Street	Contributing
41 Waterville Street	Contributing
44 Waterville Street	Contributing
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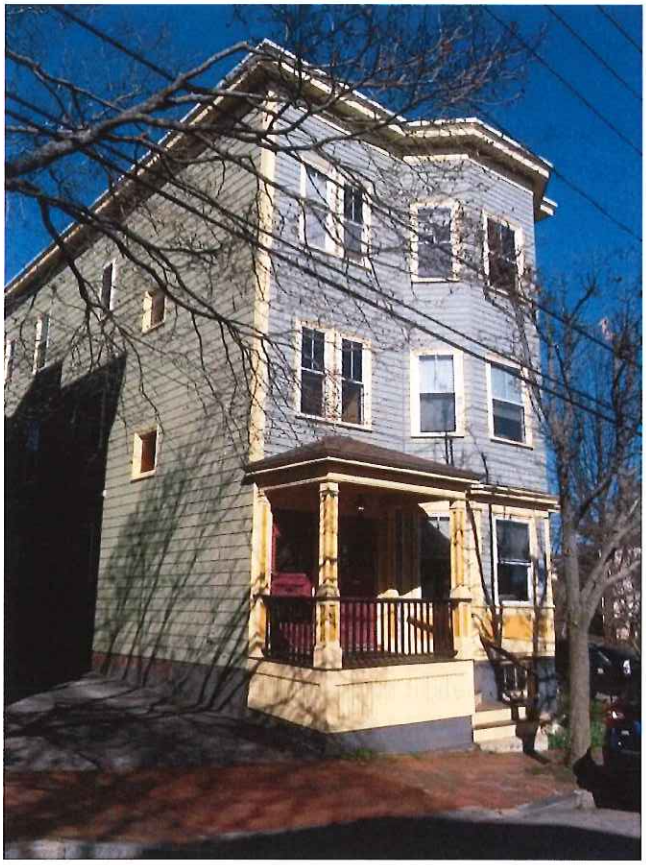
51 Waterville Street	Contributing

54 Waterville Street	Contributing
56 Waterville Street	Contributing
62 Waterville Street	Contributing
65 Waterville Street	Contributing
66 Waterville Street	Contributing
70 Waterville Street	Contributing
72 Waterville Street	Contributing
73 Waterville Street	Contributing
10 Willis Street	Contributing
20 Willis Street	Contributing
22 Willis Street	Non Contributing
24 Willis Street	Contributing
26 Willis Street	Contributing
14-16 Wilson Street	Contributing
27 Wilson Street	Contributing
29 Wilson Street	Contributing
32 Wilson Street	Contributing
56 Wilson Street	Non Contributing
58 Wilson Street	Contributing
61-65 Wilson Street	Contributing
74 Wilson Street	Non Contributing
76 Wilson Street	Contributing
80 Wilson Street	Contributing

Address: 21 Sheridan Street
Approximate/Documented Date of Building: 1903
Surveyed: 8/17/2018
Historic Name: John Ford boyhood home
Landmark, Contributing or Noncontributing: Landmark



Introduction

21-23 Sheridan Street was a boyhood home of John Ford. The noted movie director was born John Feeney at Cape Elizabeth. In 1897 the family moved to Portland and a series of rental accommodations, first at Danforth Street and then at 65 Monument. In 1905 the family moved to this triple decker on Sheridan and lived there until 1917. John was a football hero at Portland High School and in 1914 followed his brother Francis to Hollywood. The Feeney brothers changed their name to Ford and John went on to direct such classic films as " The Informer" (1936) "Stagecoach" (1939), "The Grapes of Wrath" (1940), and "The Searchers" (1956). The building's Landmark classification is based on its association with John Ford.

The building is a classic triple-decker built in 1903. Triple deckers were built in significant numbers on Munjoy Hill at the turn of the twentieth century and proved to be an important building type in providing affordable housing for Portland's growing population, especially immigrant population. Triple deckers allowed for higher density on a narrow building lot. While accommodating a greater number of units, the triple decker also offered numerous amenities such as a generous floor plan, projecting bays, large windows and, oftentimes, decks for each unit. (From the 1924 photo, it appears the 21-23 Sheridan did not include decks.)

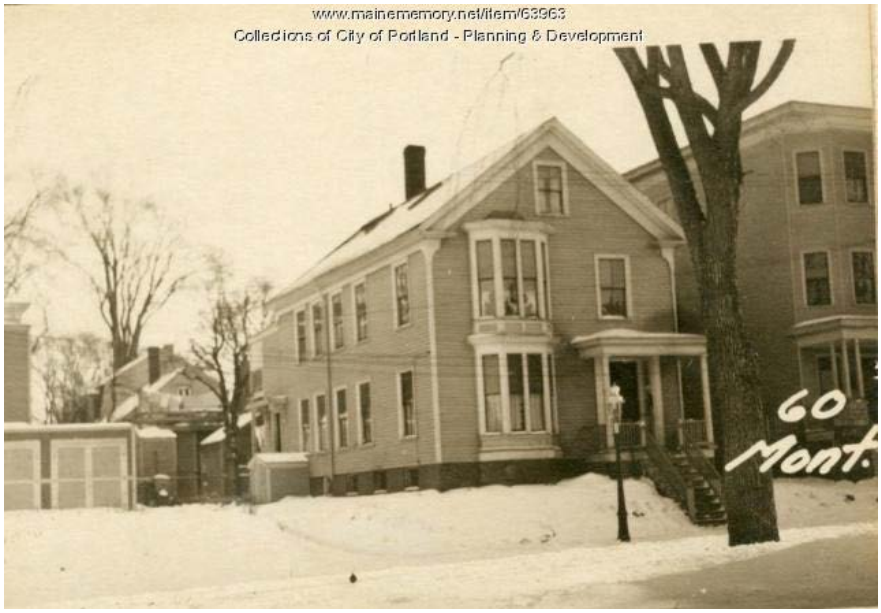
21-23 Sheridan exhibits all the typical elements associated with this building type: a tall, narrow building form; a front porch supported by columns and positioned at the side of the façade; a large faceted bay window that extends the full height of the building; a deep overhanging cornice and generous-size windows. Given the fairly steep grade of Sheridan Street and the building's high foundation, the front porch is located well above the street and is accessed by winding steps.

Alterations and Additions since 1924

21-23 Sheridan remains in well-preserved condition. Although some architectural details are difficult to discern from the 1924 photo, it appears that many of the original details remain. These include the recessed panels at the base of the front bay, the pilasters flanking the bay windows, the front porch's square columns with recessed panels, and the denticulated cornice. Windows remain 2-over-one, however at least some of the windows are vinyl replacements.

Some changes are evident. For example, on the south elevation the single windows near the front corner of the building are now paired. More obvious is the addition of a three-level porch off the south elevation. Interestingly, the porch addition is consistent with what many triple-deckers featured as amenities when they were built. The changes are compatible with the original character of the building and do not diminish its historic integrity.

Address: 60 Montreal Street
Approximate/Documented Date of Building:
Surveyed: 8/17/2018
Historic Name:
Contributing or Noncontributing: Contributing



Introduction
60 Montreal Street is a vernacular Italianate dwelling, and is a good example of the many gable-front houses built on the narrow lots that typify Munjoy Hill's historic character. Distinguishing characteristics include eave returns, wide friezes, corner boards, and the façade's two-story canted bay window and recessed main entrance with partial porch.

The dwelling is two by five bays wide, with fewer bays on the southern elevation, and has vinyl siding and replacement 1/1 vinyl sash windows. The façade's bay window retains cornices on both stories. The entry porch in the second bay has tapered column supports and dentil moldings. The recessed, double-door main entry has a simple entablature with wooden paneling on the interior walls. The northern elevation has a secondary entrance in the first bay, which appears to have a bracketed hood, although it is partially obscured from the roadway by trees.

A shed dormer with three vinyl sliding windows runs the full width of the roof's northern slope. The gabled roof is asphalt and has one chimney adjacent to the interior ridge.

Alterations and Additions Since 1924
Changes since 1924 include loss of wood clapboard siding, the addition of 1/1 windows in place of 2/2 and 2/1 windows, replaced corner boards with some loss of detail, and the addition of the large shed dormer. Wooden paneling below the bay window lights has been replaced with vinyl clapboards. However, these changes do not diminish the dwelling's historic character, as it retains significant period details and its nineteenth-century form.

Address: 44 North
Approximate/Documented Date of Building: 1884
Surveyed: 8/17/2018
Historic Name: A. L. Johnson House
Contributing or Noncontributing: Noncontributing

Introduction

The multifamily residence at 44 North Street is a front-gable, two-and-a-half-story, wood-frame Italianate structure. The building is clad in natural wood clapboards with wood trim. Although the building's form and massing remain unchanged (at least near the street) and a few architectural details remain to convey its original Italianate style, the number and nature of alterations have effectively robbed the building of its historic integrity. The front entry has been altered with the replacement of the original canopy, front doors and entry porch. The prominent two-story bay has changed significantly in appearance with its windows being reduced in size and infill clapboard siding replacing the bay's decorative paneling and intermediate cornice. Other windows on the façade and side elevations have been reduced in size as well and a group of three single-lite casement windows have replaced a pair of taller windows in the front gable. A rear addition extends beyond the face of the south elevation.

While the building's form, scale and gable end-to-the-street orientation are consistent with North Street's prevailing development pattern, the degree of change has led to its classification as a noncontributing structure.

Munjoy Hill Historic District – Rationale for Delineation of Recommended Boundary

Scott T. Hanson

Sutherland Conservation & Consulting

July 2018

Munjoy Hill is a primarily residential neighborhood on the east end of the Portland peninsula that was largely developed between 1850 and 1925 to house middle-class and working-class residents. As its development was spread over a large area and a span of 75 years, several aspects or areas of historical and architectural significance are represented by the buildings in the neighborhood. Due to this development history there are concentrations of buildings related to different areas of significance and/or architectural styles. In delineating the boundary of the Munjoy Hill Historic District the range of styles, areas of significance, and concentrations of related buildings were taken into consideration, seeking to include examples of all areas of significance and architectural styles without attempting to include every example. Where there are similar concentrations of buildings with the same areas of significance and/or architectural styles, the objective was to select the representative concentration with the greatest architectural integrity that could reasonably be part of a contiguous district.

Congress Street is the "spine" of the Portland peninsula, including Munjoy Hill. As a primary transportation corridor for the neighborhood, it was the location of most commercial and institutional development on the "the hill." Several significant commercial structures remain on Congress Street and have been included in the recommended district boundary or recommended as individual landmarks. Congress Street is also the location of the Portland Observatory, the oldest and most significant structure in the neighborhood. The Observatory was built in 1808 and is a National Historic Landmark, the highest level of recognition for historic significance in the United States. The district boundary was delineated to include the buildings leading to the Observatory when traveling up Munjoy Hill in order to protect the historic context for the landmark tower. This also happens to be one of the best concentrations of residential buildings with good architectural integrity along Congress Street on the hill, making their inclusion in the district more important than other concentrations of similar buildings with less integrity on Congress Street.

There are a few buildings of high historic or architectural significance that are located outside the recommended boundary which are recommended as individual landmarks as allowed under the preservation ordinance. These are important buildings surrounded by buildings of lesser significance and/or integrity and located some distance from the contiguous concentrations of significant buildings. Individual landmark status will allow for the protection of these buildings without including significantly more non-contributing buildings in the district. These individual landmark buildings include the childhood home of noted Hollywood movie director John Ford, early 20th century triple-decker at 21-23 Sheridan Street, and the Munjoy Block, an architecturally significant 1887 mixed use commercial and residential structure with a high degree of integrity, located at 101-107 Congress Street.

Portland's Historic Preservation Ordinance includes a provision that requires a lesser level of review by the Historic Preservation Board for new construction within 100-feet of a district boundary. This provision was waived for the India Street district when it was created in 2015. The boundary delineation recommended for the Munjoy Hill Historic District is based upon the assumption that the "100-foot rule" will apply in this new district. The rule ensures that if buildings are torn down and replaced at the edges of the district the new buildings will be respectful of the scale and character of the abutting district. If the rule were to be waived for this district, the recommended boundaries should be increased to include abutting buildings of the same period but which have lost architectural integrity. This would be for the same purpose – to ensure that the transition into the district is respectful of scale and character of the building with more integrity.

Areas of Significance Considered in Delineating the Boundary:

Atlantic and St. Lawrence RR and the Portland Company

Few events in Portland's history were more significant than the establishment of the Atlantic and St. Lawrence (later Grand Trunk) Railroad and the related Portland Company to manufacture steam locomotives. The railroad made Portland the winter port for Canada and provided a solid economic foundation for the Victorian prosperity that allowed the city to construct Commercial Street and a modern seaport infrastructure in the 1850's and then to rapidly rebuild and expand after the Great Fire of 1866. The development of the Atlantic and St. Lawrence Railroad and the Portland Company on filled land below Munjoy Hill led to the first significant residential development on the south slope of the hill above the Portland Company. The relationship between the arrival of the railroad and the development of houses nearby is clearly reflected in the names of Atlantic Street and St. Lawrence Street, two of the streets laid out and developed at the time the railroad and Portland Company were being established. Census records and city directories from 1850 into the twentieth century document that many of the residents of these streets and others in the area worked for one of these two entities. The houses built in response to the railroad and Portland Company represent the greatest concentration of pre-Great Fire development on Munjoy Hill and also the greatest concentration of Greek Revival style houses. As Greek Revival style houses they have particular relevance as surviving examples of the style in Portland, where hundreds of examples were lost to the Great Fire of the 1860's and to Urban Renewal projects of the 1950's and 1960's.

Great Fire of 1866

Although the Great Fire of 1866 barely touched the areas being recommended for inclusion in the Munjoy Hill Historic District, it greatly influenced the development of much of the district. Ten thousand Portland residents were made homeless by the fire that destroyed the historic core of the city. It was possibly the single most significant event in the creation of the city of Portland as it exists today. In addition to being the catalyst for construction of the Victorian era Old Port, the fire provided the impetus for the development of residential buildings on both Munjoy Hill and the West End. Large areas of Munjoy Hill that had previously been open fields were subdivided and built upon. This development

typically reflected the popular styles of the period, particularly the Italianate and Second Empire styles, leaving concentrations of houses in these styles.

African American Residents

The history of Portland's African-American residents is less well known than that of many other ethnic groups. The city's population has included people of African descent since the Colonial era and during the nineteenth century there were several areas with concentrations of black residents, including a portion of Lafayette Street on Munjoy Hill. Several of these modest homes that retain a fair to good degree of integrity to the nineteenth century have been included in the district to reflect the significance of this often-overlooked aspect of the city's history.

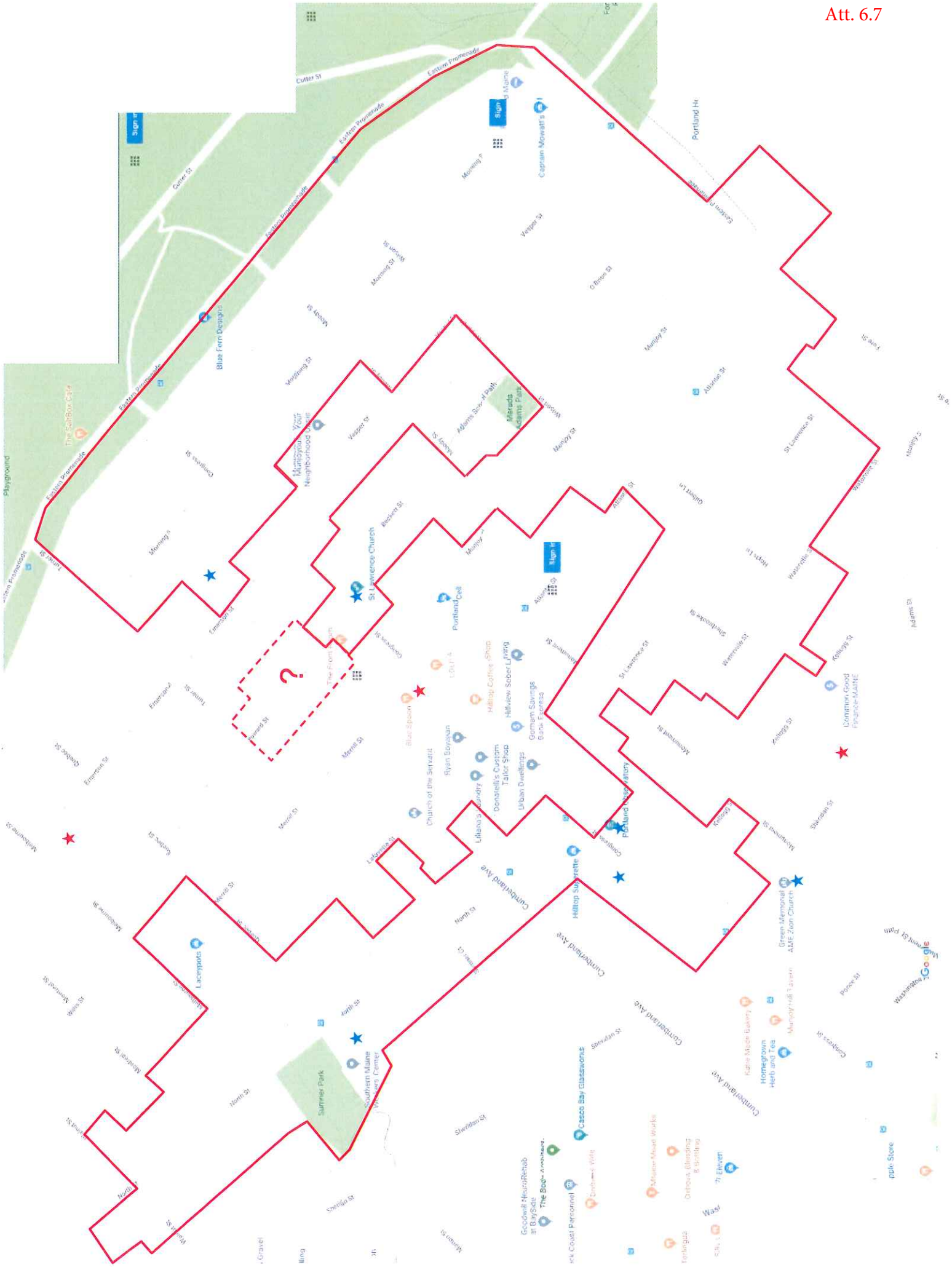
Late 19th and Early 20th Century European Immigrants

As Portland's population swelled with immigrants from southern and central Europe in the late nineteenth and early twentieth century, the triple-decker tenement buildings built in large numbers during the period provided housing for many of them. Often owner-occupied, the rents from tenants (often extended family members) allowed people of modest means to own their homes. As a type, triple-deckers were primarily an urban New England building form that was often ornamented with Queen Anne or Colonial Revival style detailing but could also be very simple and vernacular in architectural expression. The greatest concentrations of triple-deckers on Munjoy Hill are in the areas not developed until the beginning of the twentieth century, such as Morning and Vesper streets. The boundary has been delineated to include the group of these buildings retaining the highest degree of integrity.

The Eastern Promenade

Although the Eastern Promenade itself is already a designated historic landscape district, the houses built along Eastern Promenade are not included in that district. They reflect the appreciation for public landscapes and vistas that developed in the United States in the late nineteenth century. The relatively late development period for both the Eastern and Western Promenades in Portland (primarily 1890's though 1920's) documents how little appreciation of scenic views there was prior to that period. In general, the houses built on sites overlooking the Promenade are larger and grander than the majority of the houses built on Munjoy Hill. While a few of them could be considered mansions, the majority were large upper-middle-class single-family homes – mostly less grand than those on the Western Promenade. Many of the most architecturally significant homes on Munjoy Hill are located on the Prom and are included within the boundary due to that significance.

Att. 6.7



Eastern Promenade
Cutter St
Sign In
Captain Mowatt's
Portland Ho
Blue Fern Designs
The SalBox Cafe
Playground
Munjoy Your Neighborhood Union
Mirada Adams Park
Adams School Park
St Lawrence Church
Portland Cell
Hilltop Coffee Shop
Hillview Sober Living
Gorham Savings Bank Express
Blue Spoon
Ryan Boyajian
Church of the Servant
Donatelli's Custom Tailor Shop
Urban Dwellings
Portland Observatory
Hilltop Supervette
Cumberland Ave
Common Good Finance MAINE
Green Memorial AME Zion Church
Laceypots
Sumner Park
Southern Maine Workers Center
Casco Bay Glassworks
Homegrown Herb and Tea
Munjoy Hill Tavern
Kate Mace Bakery
Goodwill NeuroRehab at BaySide
The Body Architect
Maine Mead Works
Oxbow Blending & Bottling
Eleven
Google

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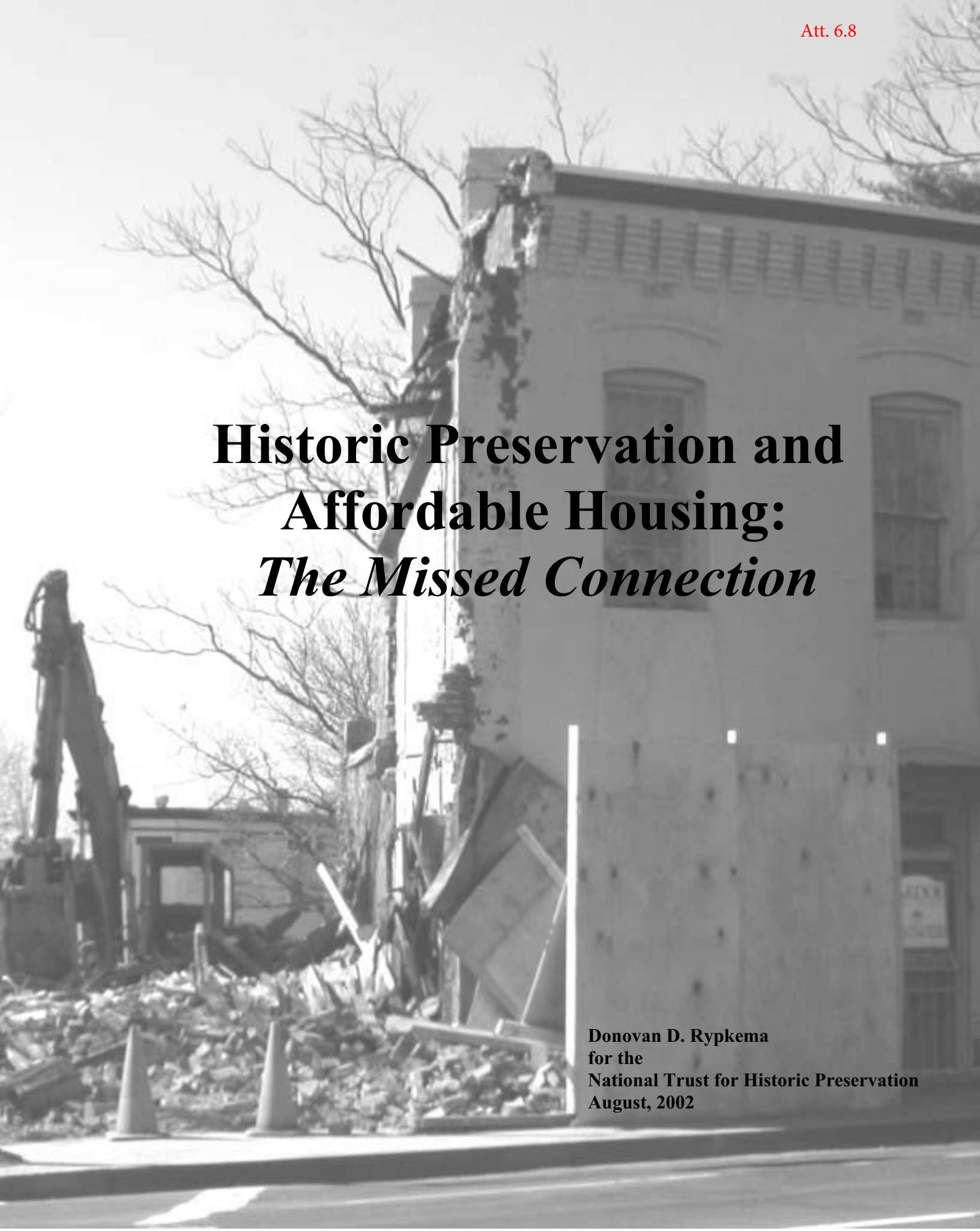


Historic Preservation and Affordable Housing: *The Missed Connection*

Donovan D. Rypkema
for the
National Trust for Historic Preservation
August, 2002

There is a crisis in housing in the United States

Headlines herald new levels of homeownership in America – recently reaching 68 percent. And that is indeed reason to celebrate. The National Association of Home Builders proclaims that the United States is the best housed country in the world – and they are no doubt correct.

But beneath the celebratory headlines another story is emerging – the story of a prosperous nation that is not meeting the housing needs of far too many of its citizens.

Voices are beginning to be heard on this other story – from real estate organizations to low income housing advocates, from columnists to business groups, from Mayors to the White House. There are a variety of identified causes and an assortment of proposed solutions, but there is one consistent description of the problem – *Crisis.*

> *America is facing a silent housing affordability crisis*.[i]
> National Association of Home Builders
>
> *Rental Housing Assistance – The Worsening Crisis*[ii]
> U.S. Department of Housing and Urban Development
>
> *We have reached a point of crisis that will be solved only with sustained and dramatic action*.[iii]
> National Low Income Housing Coalition
>
> *Despite our nation's unprecedented economic prosperity, there is a continuing, growing crisis in housing affordability and ownership that is gripping our nation.*[iv]
> National Association of Realtors
>
> *Housing crisis worsens as construction lags demand* [v]
> USA Today
>
> *This is an American crisis whose solution can't be postponed much longer.*[vi]
> Columnist Neal Pierce
>
> *Our nation's affordable housing crisis*.[vii]
> U.S. Conference of Mayors

Historically lack of adequate and affordable housing has been seen as essentially a social service issue – taking care of the least fortunate among us. And that portion of the affordable housing problem is increasingly desperate. Of the over twelve million Americans with worst-case needs, 1.5 million are elderly, 2 million are disabled and 4.3 million are children.[viii] The need for affordable rental housing by the poorest households exceeded the available supply by 1.8 million units in 1999.[ix]

But today the crisis in affordable housing is not confined to the poorest of the poor. Today the housing crisis affects virtually every American family because it affects our children, our parents, our employees, and our public servants.

It is not just the unemployed who are being affected. In 1999 there were 3.7 million <u>working</u> families who were paying at least 50 percent of their income for housing.[x]

Record numbers of adult children are living with their parents. Today 3.8 million adults aged 25 to 34 are living at home[xi], a pattern largely driven by rent levels too high to be affordable with their current incomes.

Nor is the problem confined to the bottom of the pay scale. Our communities cannot survive without teachers or police officers or nurses. But in two-thirds of metropolitan areas a household dependent on one teacher's or police officer's salary cannot afford to buy a median priced home, and licensed practical nurses are priced out of all but the lowest cost-to-income markets.[xii]

> *The result is that people who provide the bulk of the services in these communities – teachers, policemen, firemen, laundry and restaurant workers – cannot themselves afford to live there*[xiii].
> Center for Housing Policy

The Urban Land Institute has noted that this need for "workforce housing" is not only critical today but is growing more rapidly than the need for any other type of housing.[xiv]

While the affordable housing crisis is particularly apparent in urban areas, the problem is not confined there. Nearly 41 percent of low-to moderate-income families with critical housing needs live in the suburbs and another 16 percent live in non-metropolitan areas.[xv]

The affordable housing crisis affects renters, homeowners, and those who would like to be homeowners. In America today there are 2.3 million lowest-income households who own their home but subject to a mortgage. 73 percent of these households are paying more than half of their income for housing.[xvi] The standard for housing affordability has been generally accepted as being no more than 30 percent of income but today some 6 million families pay more than half of their income for rent.[xvii] And for those who would like to be homeowners the U.S. Conference of Mayors points out that "moderate and middle income families increasingly struggle to afford a median-priced home in more than three-quarters of our nation's largest housing markets."[xviii]

Thus affordable housing is no longer just a social service issue. It has become an issue of urban policy, of environmental protection, of community development and particularly an issue of economic development.

> *In some parts of the country where economic growth is the strongest, the labor force critical to sustaining the economy either cannot find housing that is reasonably priced or cannot locate within an appropriate commuting distance of their jobs.*[xix]
> Center for Housing Policy

> *The lack of workforce housing has become an economic development issue as corporations decide not to locate in areas where their employees cannot acquire decent, safe, and affordable housing.*[xx]
> Urban Land Institute

> *Corporate moves are prompted, as often as not, by the impact of the high cost of housing on available employees and the excessive burden commuting imposes on employees.*[xxi]
> Center for Housing Policy

So the problem of affordable housing is wide-spread geographically, concerns renters, homeowners, and potential homeowners, has adverse impacts far beyond the poorest of the poor, affects young and old, and consequently is beginning to catalyze a diverse confluence of interests.

But this diverse array of interests has also reached another conclusion: without fundamental changes in programs and policies the problem is going to get much worse in coming years.

Over the next ten years around 20 million net new jobs are going to be created in America. But nearly seven million of those jobs – 34 percent of the total – are going to pay less than $20,000 per year.[xxii] What can those seven million workers afford as rent? About $500 per month. But two-thirds of two-bedroom apartments built in 2000 rented for more than $750 per month. In fact 87 percent of those units weren't affordable to renters earning the median income, let alone a minimum wage.[xxiii] Researchers have noted that the affordability problem is particularly severe for new entrants to the workforce and those trying to get off welfare.[xxiv]

Some would argue that as America moves into the "new economy" with high tech jobs and large paychecks, the affordability problem will solve itself. Well, in the next ten years for every new job for a computer programmer we'll need 7 clerical workers; for every chemist we'll need 43 cashiers; for every operations research analyst we'll need 73 janitors.[xxv] Even today in ninety percent of the largest metropolitan areas those janitors are unable to rent a one-bedroom apartment within the range of affordability[xxvi]. When one can't afford to rent a one-bedroom apartment, the American Dream of homeownership becomes a fading mirage.

Furthermore those so-called new economy workers are driven by quality of life issues on where they want to live. Quality of life means good childcare, and childcare workers make less than $11,000 a year. Quality of life means nice restaurants – and waiters and waitresses, and we'll need 300,000 more of them over the next ten years, make $12,730. Quality of life means clean and safe buildings, which require janitors and guards and they make less than $16,000 a year.[xxvii]

Without significant program and policy changes those who will be left out in the coming years are the same groups who have been left out in the past – minorities, families with modest incomes, inner city residents, the young and new immigrants.

Homeownership is widely seen not only as the fulfillment of the American Dream, but a crucial component of building household wealth, stabilizing neighborhoods, increasing citizen participation, improved property maintenance, and revitalizing cities. There is good cause to celebrate new records of homeownership. But there is a wide divergence in who those homeowners are.

- The white, non-Hispanic homeownship rate is 73.9 percent while the black rate is 47.8 percent and the Hispanic rate is 47.5 percent[xxviii]

- The homeownership rate in the suburbs is 73.8 percent, while in the central city it is less than 50 percent.[xxix]

- Households with incomes greater than $120,000 per year have a homeownership rate of 92.3 percent while those with less than $20,000 in annual income 47.2 percent.

- In spite of the increase in overall ownership rates over the last two decades, the percentage of young families owning their own home has actually fallen from 44.7 percent in 1979 to 41.2 percent today.[xxx]

- Likewise with the immigrant population, in 1980 51.2 percent of immigrant households owned their own home but by 2000 that fraction fell to 47.4 percent.[xxxi]

Over the next two decades most of the increase in both population and in households is going to be among precisely those groups that today are being left behind in homeownership growth. An estimated 24 million households will be formed between 2000 and 2020[xxxii], and 64 percent of those will be minority households[xxxiii]. The population aged 20 to 24 will grow nearly twice as fast as the overall population in the next five years.[xxxiv] Even if the rates of immigration begin to decline as predicted, newcomers to America will constitute a third of the net growth in Hispanic households and almost two-thirds of the growth in Asian households.[xxxv] White families will make up less than 30 percent of net new homeowners in the next 20 years.[xxxvi]

President Bush has recognized this divergence and has noted, "We must begin to close this homeownership gap by dismantling the barriers that prevent minorities from owning a piece of the American dream."[xxxvii]

What are the solutions?

So can America build itself out of this housing crisis? Certainly new construction of both single-family homes and apartment houses will need to be a key component of addressing this issue. But there is one fact-of-life in real estate that must be reckoned with – you can't build new and rent (or sell) cheap – it can't be done. At least it can't be done without either massive subsidies or very low quality units. In the first half of 2002 the median new house price approached $185,000 [xxxviii], meaning it is out of reach for over 60 percent of American households. For rental housing the same problem exists. "The private sector cannot produce apartments in most areas that are affordable to households with incomes under 70 percent of area median (and sometimes even higher) without a subsidy."[xxxix]

Furthermore, when affordable housing can be built, it's often in locations that exacerbate other problems. As the Urban Land Institute's housing expert notes, "It's not how much we produce, it's where it's produced. In market after market, affordable housing is being built, but it's in the fringes. Workers are being forced to move way out, and this compounds the cycle of sprawl."[xl]

Federal Reserve official Ron Feldman has noted, "Building new housing units appears to be a relatively expensive method of providing low-cost housing compared to the alternatives."[xli]

Manufactured housing provides an affordable homeownership alternative to traditional new construction. Today, greatly improved quality and technology are increasingly strengthening the role that factory-built homes play in long-term affordable homeownership. Such innovations along with continued design advances that heighten market appeal and integrate manufactured housing with site-built homes could someday place factory-built homes on par with traditional units as a means for acquiring wealth through homeownership.

But today a sizeable percentage of "manufactured housing" is, in fact, mobile homes. Between 1997 and 1999, 72 percent of new units built within affordable price ranges were mobile homes.[xlii] As with new construction, additional mobile homes will, in some parts of the country, be an important part of the affordable housing solution. But certain other issues with mobile homes have to be considered. Two-thirds of mobile home units do not include the ownership of the land upon which they sit[xliii]. The asset building character of homeownership may be more problematic without title to the underlying real estate. The steady rise of overall homeownership in the United States has been helped immeasurably by the availability of low cost mortgage

money. That economic boon hasn't always translated to buyers of mobile homes, however. "Many recent buyers of manufactured homes – especially with the lowest incomes who had the least ability to withstand household budget shocks – pay well above the prime mortgage rate."[xliv]

Our older and historic neighborhoods

So new construction and mobile homes will be critical to addressing the affordable housing crisis in the next two decades, but clearly those are insufficient solutions given the magnitude of the problem. Where, then, can we find affordable housing? Exactly where it is being found today, in our older and historic neighborhoods.

The phrase *older and historic neighborhoods* refers to those buildings constructed prior to 1950. Certainly not every structure built before 1950 has been designated historic, and many do not merit that formal identification. However fifty years is time frame when the question, "Is it historic?" is appropriately asked. Furthermore, the historic preservation movement in recent years has moved beyond focusing on simply saving individual landmarks to being concerned, instead, with the conservation of neighborhoods. Historic preservation now encompasses more than the mansions of the rich and the homes of the famous. Historic preservation today celebrates and champions the neighborhoods, downtowns, and rural areas that are less grand architecturally, but perhaps even more significant in the building of America.

But older and historic neighborhoods contribute far more to America today than a sense of evolution and history. Older and historic neighborhoods, unlike any other areas, are providing homes for families from every financial strata, but particularly for those in need of affordable housing.

How significant are older and historic neighborhoods in providing affordable housing? Consider this:[xlv]

- 32 percent of households below the poverty line live in older and historic homes
- 31 percent of homeowners whose household income is less than $20,000 per year live in older and historic homes
- 34 percent of renters whose household income is less than $20,000 per year live in older and historic homes
- 31 percent of black homeowners and 24 percent of Hispanic homeowners live in older and historic homes
- 29 percent of elderly homeowners live in older and historic homes
- 53 percent of all owner occupied older and historic homes have monthly housing costs less than $500
- 48 percent of tenant occupied older and historic homes rent for less $500 per month

To put it another way, if today we had to replace the older and historic homes currently occupied by households below the poverty level, using the most cost-effective of Federal housing programs, it would cost American taxpayers $335 Billion. Numbers that large often lose their

meaning. How much is $335 Billion? Nearly $1,200 for every man, woman, and child in America.

Are we saving our older and historic neighborhoods?

So with the exceptional contribution not just to the culture, history, aesthetic quality and social fabric of our nation but to our desperate need for affordable housing, surely our older and historic neighborhoods are being protected and preserved, right? Unfortunately the numbers tell a different story.

In the last three decades of the 20th century we lost from our national inventory of older and historic homes 6.3 million year-round housing units![xlvi] Over 80 percent of those units were single-family residences. Now a few of those burned down or were lost to natural disasters. But the vast majority of them were consciously torn down – were thrown away as being valueless. And today millions of American families are paying the cost by paying for housing they cannot afford. Certainly not every one of those houses could or should have been saved. But if even half were retained instead of razed, the picture today would be much different for the millions of Americans inadequately or unaffordably housed.

For the last thirty years, every day, seven days a week, 52 weeks a year we have lost 577 older and historic houses. We as a nation can afford this no more. The Bipartisan Millennial Housing Commission almost got it right when they reported, "These units are disappearing at an alarming pace." But these units aren't disappearing – they are being intentionally torn down!

For our most historic houses – those built before 1920 – in just the decade of the 1990s 772,000 housing units were lost from our built national heritage. In fact we are moving backwards as we demolish a valuable part of the potential affordable housing inventory. Between 1997 and 1999 we lost over 160,000 older and historic homes. We will never address the crisis in affordable housing if this pattern is not reversed. President Bush is right – we have to dismantle the barriers to affordable homeownership. But we cannot do that if we are dismantling the very homes that could be affordable.

There is today almost universal agreement that the Urban Renewal demolition of large tracts of downtowns was misguided, self-defeating, and ultimately a failure as a revitalization strategy. The sustained success stories in downtown revitalization today are found in those cities that maintained and reinvested in their historic buildings and recognized their character, quality, and ultimate durability.

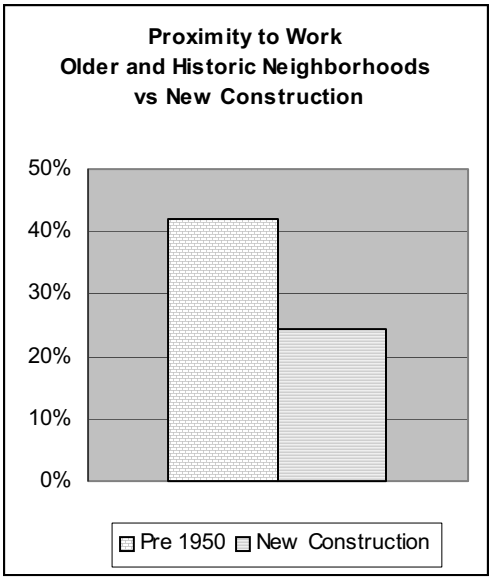
But today the same approach of wholesale destruction is being taken in neighborhoods in far too many American cities. And almost verbatim the same arguments are being made: "Those structures are about to fall down anyway." "Those old buildings don't meet the needs of today's market." "Once you fix them up you still have nothing but old buildings." "They are an eyesore and we have to get rid of them." "As soon as we tear those buildings down and have a clean site the developers will be lining up for a chance to redevelop the property." The most charitable description of those arguments from the Urban Renewal days is that they were well intended but patently wrong. When George Santayana wrote that those who cannot remember the past are condemned to repeat it, he couldn't possibly have imagined that the past would be forgotten so quickly. It is hard to conceive that cities are using what is a demonstrated failure in Urban Renewal as the strategy of choice in neighborhood renewal. It is not that no building should ever be torn down, rather that demolition should be the last resort not the first option.

Older and Historic Neighborhoods – Beyond the Architecture

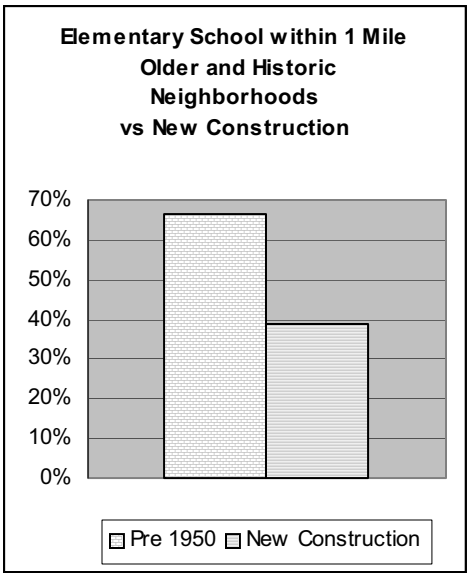
Preservationists are often accused of wanting to save buildings just because they are old, of valuing aesthetics over practicality, of standing in the way of progress for the sake of a bit of history.

So let's look at older and historic neighborhoods for a moment without the lens of the educational, cultural, social, and architectural values of preservation. There is a growing recognition that the affordable housing crisis can't be addressed with just housing – it must be addressed on the neighborhood level. So instead of looking at architectural styles, let's look instead at the needs of families, particularly families of modest means, and look at the nature of the neighborhood rather than the building. Families need proximity – to work, to schools, to shopping, and to public transportation. So compare older and historic neighborhoods to new housing.

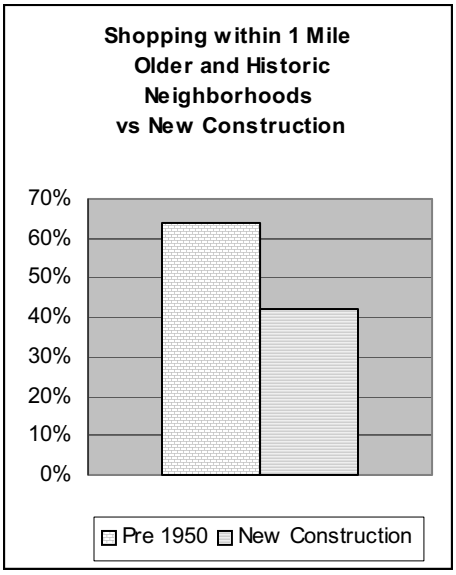
Over 40 percent of residents in older and historic neighborhoods are within five miles of work. Less than one resident in four in new housing is that close to their place of employment[xlvii]



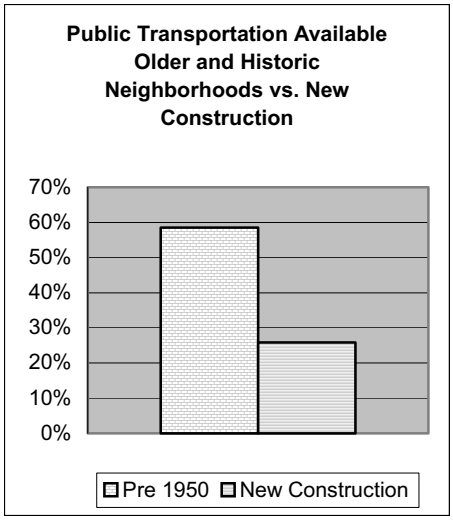
Over two-thirds of older and historic neighborhoods have an elementary school within one mile. Less than 40 percent of new construction does.



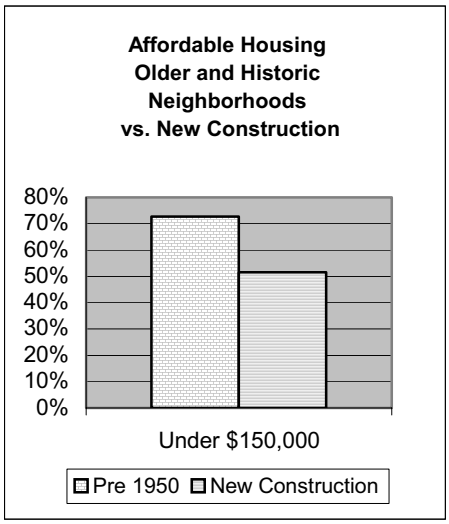
Over 60 percent of houses in older and historic neighborhoods have shopping within one mile. Barely 40 percent of new houses do.



Public transportation is available to residents in nearly 60 percent of older and historic neighborhoods. Three quarters of new housing has no public transportation available nearby. Recently lenders have recognized a household can, in fact, afford “more house” than would be the case under standardized formulas when public transportation is within walking distance.



And finally returning to the critical issue of affordability compare the percent of housing under $150,000 in older and historic neighborhoods (over 70%) with the new units in that affordability range (barely half).



Taking Care of the Neighborhood

Public policy has not served older and historic neighborhoods well. The first step in reversing this pattern is to make the decision that "We have to destroy this neighborhood in order to save it" is no longer acceptable public policy. But stopping rampant demolition is not sufficient. We have to find ways to reinvest so that existing neighborhoods are stabilized. The National Association of Home Builders has identified the proximity of vandalized and abandoned housing as the variable having the greatest adverse impact on the value of single-family residences[xlviii]. But where is that vandalized and abandoned housing found? Disproportionately in older and historic neighborhoods. Nearly 10 percent of our older housing stock is within half a block of vandalized and abandoned housing. What does that mean for property values? It means we are literally stealing an average $8,000 of housing equity from each of those homeowners through our neglect. Twenty six billion dollars is missing from the value of housing because we have been

negligent. How can it possibly be fiscally responsible public policy to have simultaneously a housing affordability crisis and have empty and abandoned buildings? How can it possibly be fiscally responsible public policy to be building what is not affordable while we tear down what is affordable?

Will addressing these issues be cheap? No. But as the *Christian Science Monitor* has pointed out, "Affordable housing costs money. But a lack of it costs even more."[xlix]

It will cost money, but just as an important lesson is finally being learned regarding the loss of federally subsidized units, there are similar parallels in the demolition of privately owned buildings:

> *U.S. housing policy must recognize that preservation is cheaper than new construction, that the rehabilitation and preservation of units returns the units to low-income families faster than new construction can provide such units, and that maintaining and renovating existing units combats blight and contributes to healthy communities*
> Bipartisan Millennial Housing Commission

That's what preservationists have been saying all along.

Why Preserving Older and Historic Houses Won't Work

To put it mildly there exists considerable skepticism about a strategy that focuses on conserving and preserving our older and historic neighborhoods. In some quarters skepticism gives way to outright hopelessness. "…the prospects for preserving much of the older unsubsidized stock are dismal."[l] But not as dismal, one suspects, has having millions of American families priced out of the housing they desperately need.

But the issues raised about older and historic neighborhoods are legitimate and deserve being answered. Below are the most commonly heard.

Those old houses are in terrible shape and need to be torn down.

In fact, only 3 percent of pre-1950 occupied housing is identified as having severe physical problems and another 8 percent having moderate physical problems. Leaving fully 89 percent as being adequate.[li]

But it's just too expensive to fix them up.

A recent HUD sponsored study estimated that the cost of repairing an older home with severe physical problems at $75,000 and one with moderate physical problems at $25,000.[lii] Clearly the specific costs on a particular unit will vary widely. But the point is this: 1) only 11 percent of the older housing stock suffers from moderate or severe physical problems, and 2) the $75,000 figure is comparable to the most cost effective of Federal housing programs and significantly cheaper than some programs.[liii] It is sometimes possible to build *something* more cheaply than the rehabilitation of an historic building. But when quality is part of the equation, historic rehabilitation is always a competitive alternative.

Those old neighborhoods, they just aren't safe.

Well there is certainly crime in neighborhoods. And there is a public responsibility to address crime. But the assumptions should be tested against the reality. In fact 16 percent of residents in older and historic housing say there is crime in the neighborhood. But nearly as many (11.2%) of residents in all neighborhoods say the same.[liv] That is not to minimize the issue, but it does mean that 84 percent of older housing residents don't see crime as a neighborhood problem. More importantly 89% of the residents of older and historic neighborhoods view police protection as satisfactory, virtually the identical percentage as do residents of new construction.

Those historic districts are enclaves of rich people, not a place where you could find affordable housing.

There are more than 11,000 historic districts in the country, which include over 850,000 buildings. About 60 percent of those buildings are in census tracts with a poverty level of 20 percent or more.[lv]

We need a housing program to also be an economic development program – creating jobs – so we need a new construction strategy.

The affordable housing crisis will not be solved solely through the rehabilitation of older and historic housing – new construction will be a critical component of a comprehensive strategy. The National Association of Home Builders has well documented the economic impact of the housing industry. They have calculated that the construction of 1,000 single-family homes generates 2,448 jobs in construction and construction-related industries and approximately $79.4 million in wages – impressive indeed.[lvi]

The same amount of money spent on housing rehabilitation, however – which would create two to three times more housing units – would generate 2,838 jobs and $88.7 million in wages[lvii] – certainly a major economic impact.

Nobody would choose to live in those old neighborhoods if they didn't have to.

Why did residents of older and historic neighborhoods choose the neighborhood? For the best of reasons: convenient to job (22.8%), the house was an important consideration (20.7%), the looks and design of the neighborhood (14.4%) and convenient to friends and family (14%).[lviii]

Those old buildings just don't fit the needs of the marketplace.

Again it is worth finding out why those choices were made. Affordability again emerges as important with 32.1% choosing their particular housing unit for financial reasons. But the next two most common responses were the size of the unit (14.6%) and the design and layout of the house (14.5%).[lix] Not everyone is in the market for the two-story, 2,265 square foot, 3+ bedroom, 2+ bath, 2+ car garage house that is the typical new home built today.[lx]

And there is a public policy reason to be glad that the typical new home is not what everyone is searching for.

> *Finding solutions to the growing nationwide shortage of workforce housing hinges on …a fundamental shift in the public mindset that has been programmed to equate the American Dream with large houses on large lots*.[lxi]
> John McIlwain, Urban Land Institute

Furthermore, the changing demographics of the next two decades will increase demand for a different kind of housing than is typically being built today. By 2020 72 percent of households will be made up of three categories: families without children (39.7%) single person households (27.3%) and adults living with others (4.8%). Married couples with children will be only one household in five.[lxii]

But our problem is that there just isn't enough housing. We have to add to the supply.

There certainly is going to be a need for additional housing. The National Association of Home Builders estimates a need for over 18 million additional housing units during the first decade of the 21st century[lxiii] and many of them will have to be created through new construction – many of them, but not all of them. An interesting pattern has emerged in the development of rental housing under the Historic Rehabilitation Tax Act. Over the last five years over 44,000 units of housing have been created (27,851 of them low and moderate income apartments)[lxiv]. Over 40 percent of the housing units came from historic buildings that weren't originally built as residential structures – warehouses, factories, department stores, office buildings, previously vacant upper floors of downtown buildings. This is a strategy that adds to the supply of housing, within existing cities, without the demolition of existing structures and without adding to the problems of sprawl.

Additionally there are nearly 3 million vacant older and historic housing units that ought to be brought back into use.[lxv] There certainly has to be an increase in supply, but reusing our existing older and historic buildings can add significantly to that housing inventory.

Those rules for fixing up historic houses are just too stringent to be practical for affordable housing.

This is an argument frequently heard – most frequently heard from those who have never redeveloped an historic property. While there are – and should be – standards to maintain the quality and integrity of historic buildings, preservationists are increasingly accommodating other considerations. The Advisory Council on Historic Preservation has issued specific recommendations for historic rehabilitation projects that are geared toward affordable housing.

> *Exterior rehabilitation should emphasize the preservation and stabilization of the streetscape of a district or community.*
>
> *Recognizing funding constraints, exterior and interior treatments should balance architectural character with the objectives of providing safe, livable, and marketable housing units.* [lxvi]

But what about these new approaches for housing – Transit Oriented Design, New Urbanism, Neo-Traditionalism, and New Community Design – shouldn't we be pursuing those avenues instead of trying to fix up this old stuff.

Over the last decade some members of the building and design professions have rethought how towns and cities have been built over the last fifty years. They have concluded that the predominant current pattern is not economically or environmentally sustainable and is not conducive to healthy cities and neighborhoods. They recommend, instead, a return to development patterns that have stood the test of time not for five decades but for five thousand years. And they are right. To the extent that Transit Oriented Development, and New Urbanism, Neo-Traditionalism, and New Community Design represent infill construction within existing

towns and cities they should certainly be encouraged. Even the greenfield development that falls under their respective banners is superior to most conventional suburban development. So are Transit Oriented Development, New Urbanism, Neo-Traditionalism, and New Community Design good ideas? Absolutely.

But older and historic neighborhoods are *already* transit oriented.

But older and historic neighborhoods aren't the new urbanism, they are the real urbanism.

But older and historic neighborhoods aren't neo-traditional, they are traditional.

But older and historic neighborhoods aren't new community design, they are the model upon which new community design is based.

As part of the comprehensive strategy for affordable housing and better towns and cities these approaches are welcomed. But we shouldn't be erecting the replica in one part of town while we are razing the original in another.

We need to have neighborhoods that are diverse, economically and racially, so that affordable housing is not concentrated in isolated locations.

Indeed we do, and that may be the greatest strength particularly of historic neighborhoods. In fact in many communities the *only* place where there is racial, educational, economic, and occupational diversity is the historic districts.[lxvii] A HUD commissioned analysis looked around the country at neighborhoods that, over an extended period, managed to maintain ethnic and racial diversity.[lxviii] Virtually every neighborhood was made up of older and historic housing and the vast majority of the diverse neighborhoods were either National Register Historic Districts, local historic districts, had a concentration of historic structures, or a combination of all three.

Historic neighborhoods are diverse for two simple reasons: 1) the building stock, regardless of its current condition, is usually of a quality, scale, and design that appeals to wide segments of the market, and 2) unlike newer neighborhoods, historic districts typically have a wide variety of housing sizes, conditions, ages, quality and price. When you have a wide diversity of housing options you get a wide variety of human beings who choose those options.

Nobody would live in those old neighborhoods if they didn't have to.

Certainly older and historic neighborhoods have their drawbacks. Mostly because of a failure of public commitment there are more abandoned and boarded up buildings, streets are in worse condition, crime is slightly worse and other adverse impacts are apparent. But in spite of those deficiencies residents in older and historic neighborhoods like where they live. When asked to rate their neighborhood on a scale of 1 to 10, residents of older and historic neighborhoods give and average rating of 7.7, just slightly less than all neighborhoods rating of 8.0.[lxix]

Everyone knows that when you have a historic neighborhood there is gentrification.

Gentrification is a serious issue, especially when discussing affordable housing and merits a reasoned response.

First, diverse neighborhoods should be a public policy goal. Neighborhoods that are all poor can, in no sense of the definition, be considered diverse. What all neighborhoods need is economic integration.

Second, the ultimate defense against gentrification is homeownership, and historic preservation strategies for neighborhood revitalization consistently strive for homeownership by existing residents as a top priority.

Third, recent analysis indicates that far from having a negative impact on low-income residents, the revitalization of historic urban neighborhoods can improve the quality of life among disadvantaged households.[lxx]

Fourth, since there is often significant vacancy in older and historic neighborhoods, there can be significant in-migration while keeping long-term residents in place.

Fifth, the reality of what happens in "gentrifying" neighborhoods is decidedly different than the rhetoric would suggest.

> *Low-income households actually seem less likely to move from gentrifying neighborhoods than from other communities. Improving housing and neighborhood conditions appear to encourage the housing stability of low-income households to the degree that they more than offset any dislocation resulting from rising rents.*[lxxi]
> Citizens Housing and Planning Council

Sixth, historic preservation is often the erroneous target in the gentrification debates.

> *Clearly gentrification is occurring in our city…I don't chock that problem up to historic preservation, in fact I think in some ways by preserving and upgrading and restoring the housing in a neighborhood you can keep the prices more affordable than when new construction comes into a neighborhood.*[lxxii]
> Seattle Mayor Greg Nickels.

Finally, "gentrification" is the result of too little historic preservation, not too much. People of all income brackets are attracted to historic neighborhoods because of the quality of the housing, because of the investment protection that a local historic district often provides, because there is usually a wide range of housing styles and sizes available, because typically there are citizen activists committed to advocating for the neighborhood, and because there are few tools other than local historic districts that can defend a neighborhood against inappropriate uses, out-of-scale development, low quality construction, and the encroachment of objectionable uses. Because the number of households looking for neighborhoods with those characteristics exceeds the supply, historic neighborhoods are in high demand. The answer is not to have fewer historic districts – the answer is to provide historic district protections to more neighborhoods

The 10 Policy Initiatives for Older and Historic Neighborhoods

The Bipartisan Millennial Housing Commission was very clear on the urgency to address the issue of "disappearing" affordable housing. They stated

> *The need to preserve at-risk units is immediate and pressing. Because time is of the essence, any proposed tools or approaches that can quickly and efficiently preserve*

> *housing should receive heightened attention, support, and funding from the federal government*.[lxxiii]

The historic preservation community should respond with a policy agenda for older and historic neighborhoods that would include, but not be limited to the following:

On the local level:

1. Create more local historic districts to protect valuable cultural resources and preserve a rapidly vanishing inventory of affordable housing.
2. Inaugurate a fast-track system for the acquisition and redevelopment of vacant, abandoned, and tax-foreclosed properties.
3. Give priority to older and historic neighborhoods for infrastructure improvements, police attention, recreation and park facilities, and especially schools.

On the state level:

4. Adopt a rehabilitation-friendly building code as in New Jersey that has had an immediate and dramatic impact on the feasibility of the renovation of older and historic structures.
5. Institute Smart Growth initiatives that give priority to redevelopment within current municipalities.
6. Give priority to Low Income Tax Credit projects that utilize historic buildings.
7. Create state tax credits for the rehabilitation of historic properties as have been successfully enacted in Maryland, Missouri, Virginia, North Carolina and elsewhere.

On the national level:

8. Allocate bonus points for all competitive federal housing programs for building rehabilitation projects.
9. Take the suggestion of the Bipartisan Millennial Housing Commission to "undertake a study of the Davis-Bacon requirements and make improvements in such areas as the accuracy of the wage data, the applicability threshold, and the reporting requirements"[lxxiv]
10. Adopt tax credits and other incentives, particularly those that would expand the use of the existing historic tax credit for commercial properties and provide for a historic homeownership equivalent. One example is the "Historic Homeownership Assistance Act."

The Historic Homeownership Assistance Act

The proposed Historic Homeownership Assistance Act is modeled after the Historic Rehabilitation Tax Credit that has been operating successfully for over twenty-five years having spurred over $25 Billion in private investment. Like the commercial rehabilitation this act would provide a 20 percent tax credit for the qualified expenditures made in rehabilitating a historic residence. But unlike the current credit which only applies to income-producing property, the HHAA would provide the credit for owner occupied housing.

The credit could be used in five different ways:

1. The homeowner could do the rehabilitation and take the credit him/herself if there was a sufficient federal income tax liability.

2. The housing developer could rehabilitate a historic house and pass the credit onto the buyer.
3. The housing developer could take the credit, which would effectively lower the required selling price.
4. The homeowner could assign the credit to a regulated lending institution in exchange for a lower interest rate.
5. The homeowner could assign the credit to a regulated lending institution as a down payment on the purchase price of the property.

Three separate barriers have been identified for increasing affordable home ownership: supply of units, affordability (purchase price and/or amount of monthly payment), and wealth (down payment capacity). The Historic Homeownership Assistance could, in the alternative, deal with each of these.

1. If the homeowner uses the credit – increased affordability.
2. If the developer passes the credit to the buyer – increased affordability.
3. If the developer keeps the credit – increased supply and increased affordability.
4. If the bank takes the credit in exchange for lower interest rate – increased affordability.
5. If the bank takes the credit in exchange for down payment – increased wealth.

What impact might the Historic Homeownership Assistance Act have? One analysis concluded that a $10,000 asset infusion [the amount that a $50,000 rehabilitation could produce] could allow more than one-third of all renters (and 20 percent of Hispanic and 30 percent of black renters) to realize moderately priced homeownership.[lxxv]

The Three Principles for Housing Initiatives

Three principles should guide policy makers in seeking additional solutions to the housing crisis – quality, affordability, and responsibility. The best alternatives should meet all three principles.

Consider the possible combinations:

- We could build very low cost housing in existing neighborhoods. That would meet the affordability test and the responsibility test (not adding to the problems of sprawl) but would fail the quality test – and likely have an additional adverse impact on surrounding properties.[lxxvi]

- We could build cheaply constructed housing far out where the land is inexpensive. That would meet the affordability test but fail the quality and responsibility standards.

- We could build well-constructed, traditionally-built housing out on the periphery, meeting the quality and affordability principles but failing on responsibility.

- We could build mobile homes and place them out of town, and only the affordability test is met.

- We could tear down older and historic homes and replace them with large new houses, which would pass the quality and responsibility measures, but at the expense of affordability.

- Or we could commit to the rehabilitation of older and historic houses and achieve affordability, quality, and responsibility.

The Time is Now

If the battle for conserving and preserving our older and historic neighborhoods were a battle fought only by preservationists, the outlook might be dismal indeed. But more voices are being heard – voices beyond the traditional preservation movement – that have grasped the lessons as well.

> *When they're done correctly [historic rehabilitation projects] make the finest affordable housing projects you can come across. The biggest advantage is that it's much more situated for mixed-income housing, if your basic premise is that mixed-income housing is a good objective. The kind of apartments created are so superior that they're attractive to people of a variety of income levels*. [lxxvii] Developer Richard Arnesen, Stone House Development, Inc.
>
> *Resuscitating dilapidated housing stock must become a priority if city neighborhoods are to thrive and support business.*[lxxviii]
> PriceWaterhouseCooper's
>
> *By 71% to 24%, the public supports the idea of state and local governments giving tax credits to for-profit housing development companies if they build housing for low- to moderate-income working families*[lxxix].
> Fannie Mae Foundation Affordable Housing Survey
>
> *Revitalizing older neighborhoods is the perfect antidote to sprawl*.[lxxx]
> Sierra Club
>
> *Restoring life to "undesirable" areas helps us make better use of our resources and reduces the pressure to develop new areas.*[lxxxi]
> Miriam Axel-Lute, National Housing Institute
>
> *Common Ground's effort to restore old New York City buildings – preferably historic landmarks – to their former splendor and then place them into the care of homeless or low-income individuals seemed like a "far fetched vision" in the early 1990's when the nonprofit started out. Four projects later, and one on the way, its innovative approach has not only proven to be a success, it shows the path to cost-effective supportive affordable housing in the city and elsewhere.*[lxxxii]
> National Mortgage News Daily
>
> *Provide tax credits and low-interest loans for people to rehabilitate historic houses and revitalize neighborhoods in cities and older suburbs – Strongly Favor – 44%, Somewhat Favor – 35%.*[lxxxiii]
> Smart Growth America
>
> *The nexus of historic preservation and housing would be furthered by extending tax credit benefits, now limited to income-producing properties, to rehabilitation of historic structures occupied by the taxpayer as a principal residence.*[lxxxiv]
> Housing Facts & Findings*,* Fannie Mae Foundation

Conclusion

America's historic resources have long been recognized for their contribution to our nation's cultural, aesthetic, educational, and social character. Many of our historic buildings are the physical manifestation of the challenges overcome in years past.

Today there is another challenge – the challenge of securing affordable housing for every family in America. Our older and historic neighborhoods have served generations of families well. Our older and historic neighborhoods now have a new mission – to provide homes for the young, homes for new immigrants, homes for those of limited means, homes for first homebuyers, homes for the retired citizen.

We can no longer throw away our older houses and our historic neighborhoods. They are needed today, they will be needed tomorrow, but they demand our attention right now.

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[i] *Decent, Affordable Housing: It's the American Dream.* National Association of Home Builders, July 2002.
[ii] *Rental Housing Assistance – The Worsening Crisis: A Report to Congress on Worst Case Housing Needs*, Office of Policy Development and Research, U.S. Department of Housing and Urban Development, March 2000
[iii] *Out of Reach2001,* National Low Income Housing Council, Washington, DC 2001
[iv] *Affordable Housing Production Initiatives*, National Association of Realtors, http://www.realtor.org, 2002
[v] *Housing crisis worsens as construction lags demand,* USA Today, July 21, 2002
[vi] *Housing: Back into the Political Limelight,* Neal Peirce Column, July 7, 2002
[vii] U.S Conference of Mayors news release, May 22, 2002
[viii] *Rental Housing Assistance – The Worsening Crisis: A Report to Congress on Worst Case Housing Needs*, Office of Policy Development and Research, U.S. Department of Housing and Urban Development, March 2000
[ix] *Meeting Our Nation's Housing Challenges*, Report of the Bipartisan Millennial Housing Commission, May 2002
[x] *Paycheck to Paycheck: Working Families and the Cost of Housing in America,* Barbara J. Lipman et.al., Center for Housing Policy, Washington, DC 2001
[xi] *The State of the Nation's Housing 2002*, Joint Center for Housing Studies of Harvard University, 2002
[xii] *Paycheck to Paycheck: Working Families and the Cost of Housing in America*, Barbara J. Lipman et.al., Center for Housing Policy, Washington, DC 2001
[xiii] *Paycheck to Paycheck: Working Families and the Cost of Housing in America*, Barbara J. Lipman et.al., Center for Housing Policy, Washington, DC 2001
[xiv] *Challenges to Developing Workforce Housing*, Urban Land Institute, Washington, DC 2002
[xv] *Paycheck to Paycheck: Working Families and the Cost of Housing in America*, Barbara J. Lipman et.al., Center for Housing Policy, Washington, DC 2001
[xvi] *The State of the Nation's Housing 2002*, Joint Center for Housing Studies of Harvard University, 2002
[xvii] *National Housing Agenda: A Springboard for families, for communities, for our nation*, The United States Conference of Mayors, Washington, DC, May 2002
[xviii] *National Housing Agenda: A Springboard for families, for communities, for our nation*, The United States Conference of Mayors, Washington, DC, May 2002
[xix] *Paycheck to Paycheck: Working Families and the Cost of Housing in America,* Barbara J. Lipman et.al., Center for Housing Policy, Washington, DC 2001
[xx] *Challenges to Developing Workforce Housing*, Urban Land Institute, Washington, DC 2002

[xxi] *Paycheck to Paycheck: Working Families and the Cost of Housing in America,* Barbara J. Lipman et.al., Center for Housing Policy, Washington, DC 2001
[xxii] *Employment Outlook: 1998-2008,* U.S. Department of Labor, Bureau of Labor Statistics, September 2000
[xxiii] *Meeting Our Nation's Housing Challenges*, Report of the Bipartisan Millennial Housing Commission, May 2002
[xxiv] *Paycheck to Paycheck: Working Families and the Cost of Housing in America,* Barbara J. Lipman et.al., Center for Housing Policy, Washington, DC 2001
[xxv] *Employment Outlook: 1998-2008,* U.S. Department of Labor, Bureau of Labor Statistics, September 2000
[xxvi] *Paycheck to Paycheck: Working Families and the Cost of Housing in America,* Barbara J. Lipman et.al., Center for Housing Policy, Washington, DC 2001
[xxvii] *Employment Outlook: 1998-2008,* U.S. Department of Labor, Bureau of Labor Statistics, September 2000
[xxviii] *Housing Policy Debate*, Volume 12, Issue 3, Fannie Mae Foundation, 2001. "The Potential and Limitations of Mortgage Innovation in Fostering Homeownership in the United States." David Listokin, et. al., Rutgers University
[xxix] *American Housing Survey for the United States - 1999*, U.S. Department of Commerce, U.S. Department of Housing and Urban Development, 2000
[xxx] *Housing: Facts, Figures and Trends*, National Association of Home Builders, Washington, DC 2001
[xxxi] *Homeownership in the Immigrant Population*, Douglas G. Duncan for the Research Institute for Housing America, 2002
[xxxii] *The State of the Nation's Housing 2002*, Joint Center for Housing Studies of Harvard University, 2002
[xxxiii] *Keeping the American Dream Alive: Proceedings of the Home Ownership Summit 2001*, Summit 2001, Washington, DC, 2001
[xxxiv] *The Next Decade for Housing*, NHAB Economics, Washington, DC 2001
[xxxv] *The State of the Nation's Housing 2002*, Joint Center for Housing Studies of Harvard University, 2002
[xxxvi] *The State of the Nation's Housing 2002*, Joint Center for Housing Studies of Harvard University, 2002
[xxxvii] *White House press release*, June 15, 2002.
[xxxviii] http://www.nahb.com/facts/forecast/New_Home_Prices_monthly.html
[xxxix] *Meeting Our Nation's Housing Challenges*, Report of the Bipartisan Millennial Housing Commission, May 2002
[xl] *ULI press release*, "Have House, Have Job, Have Awful Commute: ULI Looks at Ways to Build Housing Closer to Jobs", Urban Land Institute, Washington, DC, July 1, 2002
[xli] *The Affordable Housing Shortage: Considering the Problem, Causes and Solutions*, Ron Feldman, Federal Reserve Band of Minneapolis, 2002
[xlii] *Examining Supply-Side Constraints to Low-Income Homeownership*, Michael Collins, et. al, Joint Center for Housing Studies of Harvard University, 2001
[xliii] Minding the Gap: Issues in Overcoming the Information, Income, Wealth, and Supply Gaps Facing Potential Buyers of Affordable Homes, J. Michael Collins, Doug Dylla, Neighborhood Reinvestment Corporation, 2001
[xliv] *The State of the Nation's Housing 2002*, Joint Center for Housing Studies of Harvard University, 2002
[xlv] *American Housing Survey for the United States 1999*, U.S. Department of Commerce, U.S. Department of Housing and Urban Development, Washington, DC, 2000
[xlvi] *American Housing Survey for the United States 1999*, U.S. Department of Commerce, U.S. Department of Housing and Urban Development, Washington, DC, 2000
[xlvii] Data from *American Housing Survey for the United States 1999*, which defines "new construction" as units built within the last four years. Unless otherwise noted that definition is used here.
[xlviii] "Explaining House Prices", *Housing Economics*, Paul Emrath, National Association of Home Builders, 2002
[xlix] *Christian Science Monitor*, "Affordable housing – the nest still unbuilt", May 29, 2002
[l] *The State of the Nation's Housing 2002*, Joint Center for Housing Studies of Harvard University, 2002
[li] *American Housing Survey for the United States 1999*, U.S. Department of Commerce, U.S. Department of Housing and Urban Development, Washington, DC, 2000

[lii] *Barriers to the Rehabilitation of Affordable Housing*, David Listokin, Barbara Listokin, Center for Urban Policy Research, Rutgers University, U.S. Department of Housing and Urban Development, 2001
[liii] *Federal Housing Assistance: Comparing the Characteristics and Costs of Housing Programs*, United States General Accounting Office, 2002
[liv] *American Housing Survey for the United States 1999*, U.S. Department of Commerce, U.S. Department of Housing and Urban Development, Washington, DC, 2000
[lv] *Address to the U.S. Conference of Mayors – Madison, Wisconsin*, Richard Moe, National Trust for Historic Preservation, Washington, DC 2002
[lvi] *Housing: The Key to Economic Recovery*, National Association of Home Builders, 2001
[lvii] Based on relationship between new construction and rehabilitation multiplier from *Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS II)*, US Department of Commerce, 1992
[lviii] *American Housing Survey for the United States 1999*, U.S. Department of Commerce, U.S. Department of Housing and Urban Development, Washington, DC, 2000
[lix] *American Housing Survey for the United States 1999*, U.S. Department of Commerce, U.S. Department of Housing and Urban Development, Washington, DC, 2000
[lx] *Housing: Facts, Figures and Trends*, National Association of Home Builders, Washington, DC 2001
[lxi] *ULI press release*, "Have House, Have Job, Have Awful Commute: ULI Looks at Ways to Build Housing Closer to Jobs", Urban Land Institute, Washington, DC, July 1, 2002
[lxii] *The Implications of Changing U.S. Demographics for Housing Choice and Location in Cities*, Martha Farnsworth Riche, for the Brookings Institution Center on Urban and Metropolitan Policy, March 2001
[lxiii] *The Next Decade for Housing*, National Association of Home Builders, Washington, DC 2001
[lxiv] *Federal Tax Incentives for Rehabilitating Historic Buildings*, U.S. Department of the Interior, Washington, DC 2001
[lxv] *American Housing Survey for the United States 1999*, U.S. Department of Commerce, U.S. Department of Housing and Urban Development, Washington, DC, 2000
[lxvi] *Affordable Housing and Historic Preservation*, Advisory Council on Historic Preservation, Washington, DC 1995
[lxvii] *The Economic Benefits of Preserving Philadelphia's Past*, Donovan D. Rypkema, Preservation Alliance for Greater Philadelphia, 1998 and *Preservation & Property Values in Indiana*, Donovan D. Rypkema, Historic Landmarks Foundation of Indiana, 1997
[lxviii] *Cityscape: A Journal of Policy Development and Research*, Volume 4, Number 2, US Department of Housing and Urban Development, Washington, DC 1998
[lxix] *American Housing Survey for the United States 1999*, U.S. Department of Commerce, U.S. Department of Housing and Urban Development, Washington, DC, 2000
[lxx] *Housingonline*, "Two Studies Challenge the Notion That Gentrification Harms Low-Income Residents", National Housing and Rehabilitation Association, June 19, 2002
[lxxi] *The Urban Prospect*, "Gentrification and Displacement", Citizens Housing and Planning Council, Volume 8, Number 1, January/February 2002
[lxxii] *Historic Seattle*, "Gentrification and Historic Preservation", 2001
[lxxiii] *Meeting Our Nation's Housing Challenges*, Report of the Bipartisan Millennial Housing Commission, May 2002
[lxxiv] *Meeting Our Nation's Housing Challenges*, Report of the Bipartisan Millennial Housing Commission, May 2002
[lxxv] *Housing Policy Debate*, Volume 12, Issue 3, Fannie Mae Foundation, 2001. "The Potential and Limitations of Mortgage Innovation in Fostering Homeownership in the United States." David Listokin, et. al., Rutgers University
[lxxvi] *The Affordable Housing Shortage: Considering the Problem, Causes and Solutions*, Ron Feldman, Federal Reserve Band of Minneapolis, 2002
[lxxvii] *Shelterforce Online*, National Housing Institute, July/August 1999
[lxxviii] *Emerging Trends in Real Estate*, PriceWaterhouseCooper's, 2002
[lxxix] *Results of the Fannie Mae Foundation Affordable Housing Survey*, Hart/Teeter, Fannie Mae Foundation, 2002
[lxxx] *Solving Sprawl: 1999 Sierra Club Sprawl Report*, Sierra Club, 1999
[lxxxi] *Solving Sprawl: 1999 Sierra Club Sprawl Report*, Sierra Club, 1999

[lxxxii] *National Mortgage News Daily*, "Common Ground Weds Affordable Housing with Historic Preservation", April 8, 2002
[lxxxiii] *National Survey on Growth and Land Development*, Belden Russonello & Stewart, Smart Growth America, 2000
[lxxxiv] *Housing Facts & Findings*, Volume 3 Issue 2., Fannie Mae Foundation.

(c) Shoreland and flood plain management regulations: Any lot or portion of a lot located in a shoreland zone as identified on the city shoreland zoning map or in a flood hazard zone shall be subject to the requirements of division 26 and/or division 26.5.

(Ord. No. 538-84, 5-7-84; Ord. No. 85-88, § 5, 7-19-88; Ord. No. 15-92, § 11, 6-15-92; Ord. No. 37-98, § 1, 5-4-98; formerly §14-145--renumbered per Ord. No. 122, 12-20-99; Ord. No. 78-03/04, 10-20-03; Ord. No. 254-05/06, 6-5-06; Ord. No. 240-09/10, 6-21-10; Ord. 209-14/15, 5/4/2015)

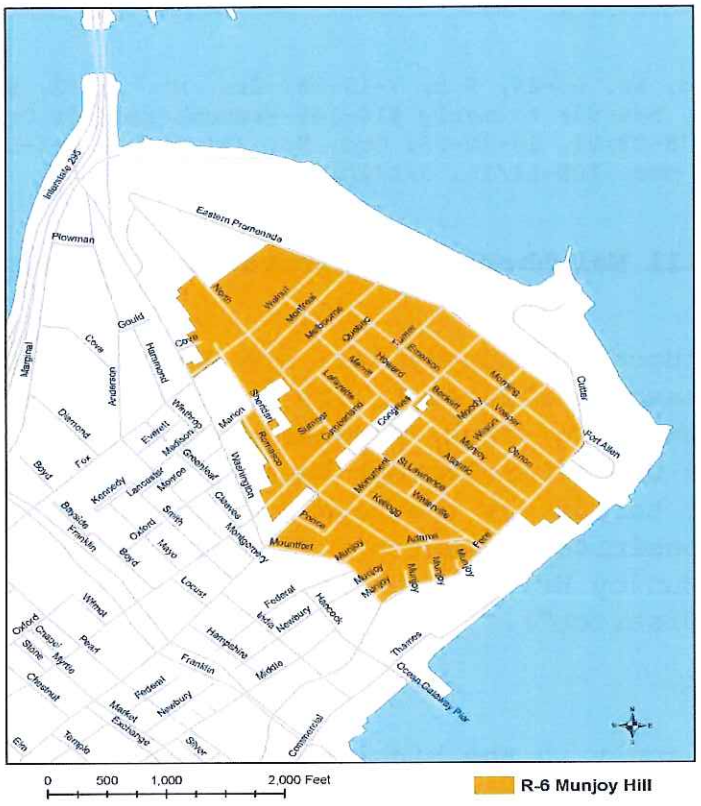
Sec. 14-140.5. Munjoy Hill Neighborhood Conservation Overlay District.

The residential neighborhoods on Munjoy Hill are experiencing specific development pressures related to its location and the nature of the existing building stock, further documented in work by the City's Planning & Urban Development Department in the winter of 2018. In order to address the negative impacts of these pressures and create a positive framework for investment in the area, there shall be a Munjoy Hill Neighborhood Conservation Overlay District (the "District").

(a) Area of Effect.

This District will apply in the highlighted area depicted on the map below and includes all properties in the R-6 zoning district in an area east of Washington Avenue and Mountfort Street, north of Fore Street, and west of the Eastern Promenade.

Diagram 14-140.5.a.: Munjoy Hill Neighborhood Conservation District Boundaries



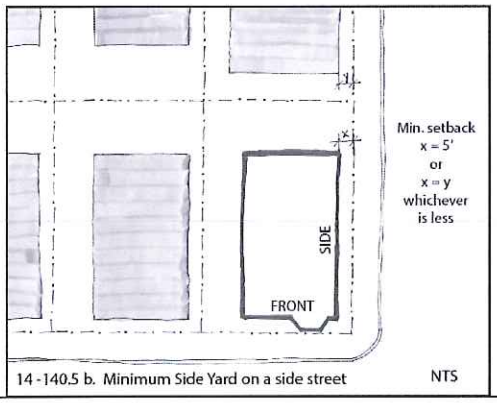
(b) Effect of the District.

In addition to the standards contained in Chapter 14, Division 7 of the Portland City Code that are applicable to properties in the R-6 zone all properties within this District shall meet the standards in this Section 14-140.5. Where this Section imposes a standard that differs from the standards contained in Articles III, IV, and V of Chapter 14, the *City of Portland Design Manual* or *City of Portland Technical Manual,* the standards in this Section shall control.

(c) Dimensional Standards.

Within the District, the following dimensional standards requirements supersede those dimensional standards outlined elsewhere in Chapter 14:

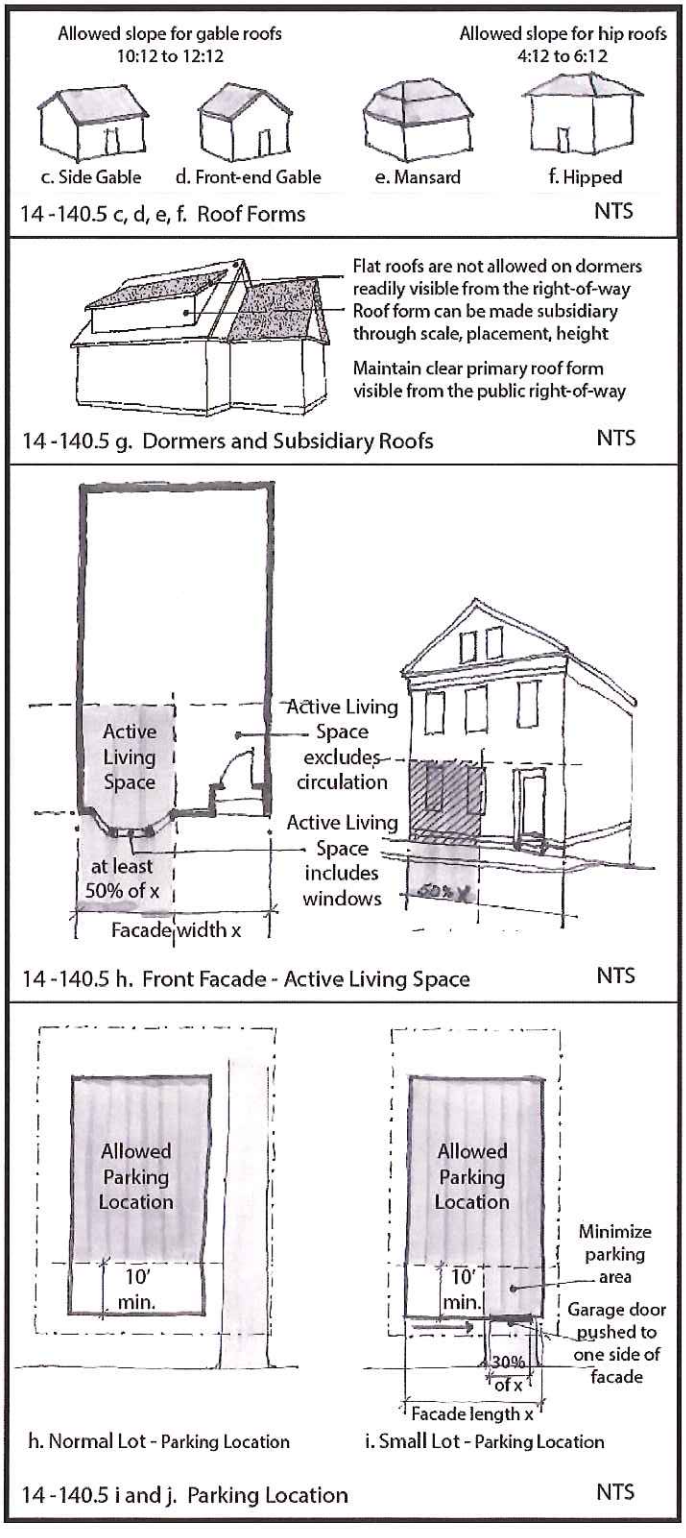
Maximum Height	35′; 45′ for developments of 3 units or more on lots over 2000 sf. that include at least one "workforce housing unit for rent" or "workforce housing unit for sale", defined elsewhere in this ordinance. Workforce units shall be no smaller than 50% of the average size of the other units in the development, must meet the definition for such units and only be sold or rented to a household at or below the applicable income levels. These requirements shall be deed restricted for affordability for the longest term possible under state and federal law. Rooftop appurtenances other than chimneys shall not exceed permitted heights, except that HVAC equipment is permitted for up to 5′ above these maximum heights if (a) out of view from public rights-of-way, screened adequately, and integrated with the building design and (b) set back at least 5′ from the building edge. In addition, height limits and placement of alternative energy equipment is permitted as specified in 14-430, Height Limits, and as specified in Article X, Alternative Energy.
Minimum Side Yard Setback	Buildings of height up to 35′: As per the underlying zoning Buildings more than 35′: 10′ for all side yards, except that a side yard no less than 5′ is permitted when used to continue a documented built pattern of the surrounding streetscape, in which case a proportional increase in another side yard must be provided.
Stepbacks	None

Minimum Side Yard Setback on a side street	5′; or the minimum depth of the immediately abutting street-facing yard (see Diagram 14-140.5.b.), whichever is less. 0′ when demonstrated that reduced setbacks are necessary to facilitate the provision of underground parking. 
Minimum Rear Yard Setback	Buildings of height up to 35′: 10′ Buildings more than 35′: 15′ As measured from rear decks, porches, or similar unenclosed space: 7.5′ As measured from accessory structures with a ground coverage of 144 square feet or less: 5′

(d) Design Standards.

1. In addition, the following design standards shall apply in the District and shall supersede any conflicting design standards:

a. All buildings shall use simple, traditional roof forms as illustrated in Diagrams 14-140.5.c-f., except that flat roofs are permitted in buildings of 3 or more units. This requirement may also be modified through (d)2 below. Dormers and cross gables are allowed but where readily visible from the public right-of-way shall be clearly subsidiary to the primary roof form (see Diagram 14-140.5.g);



b. The first floor shall contain active living space, such as a living room or bedroom, with

windows for at least 50% of the width of the front façade in total (see Diagram 14-140.5.h). Active living space does not include space intended primarily for circulation or storage;

c. Use of tandem spaces to meet desired parking levels, consistent with the built pattern of the neighborhood, is strongly preferred. Parking shall be located on the side or in the rear of a building, and not within the front 10′ depth of the building. The only exception shall be for lots smaller than 2,000 sf., which shall be permitted one garage door on the front façade no wider than 30% of the building width, but no less than 9′. In that case, the garage door shall (1) be of high quality design, consistent with the character and pattern of the rest of the façade, including windows as appropriate; and (2) be located on one side of the façade (see Diagrams 14-140.5.i-j).

2. Within the District, developments are only eligible for the R-6 "Alternative Design Review" as outlined by the following process, which shall supersede the process in the *City of Portland Design Manual* in cases of conflict:

a. Any use of Alternative Design Review must be approved by a majority of the Historic Preservation Board after a required public hearing;

b. Alternative Design Review does not permit waivers of the additional design requirements in section (d)1 above except as explicitly stated; and

c. Alternative Design Review is a privilege and is granted at the discretion of the Historic Preservation Board. The applicant has the burden of demonstrating that their proposal meets the criteria for Alternative Design Review Design Certificate.

(e) Demolition Review.

1. The purpose of this section is to preserve and protect buildings within the District that contribute significantly to one's understanding and appreciation of the

architectural, cultural, and/or social history and development pattern of Munjoy Hill and which are outside any designated historic district ("Preferably Preserved Buildings") encouraging owners of such Preferably Preserved Buildings to explore alternatives to demolition. To achieve this purpose, the issuance of demolition permits for Preferably Preserved Buildings is regulated and may be delayed as provided below.

2. Definitions: For the purposes of this section, the following words and phrases shall have the meanings set forth below:

Demolition: Removal of more than 10% of the front façade of any building, removal of the primary roof line, or removal of 50% or more of the building surface, determined cumulatively over a three year period. In kind replacement or similar replacement (such as new windows or siding that may differ from the original) is not considered demolition.

Preferably Preserved Building: Any building which is determined to be in the public interest to be preserved or rehabilitated rather than demolished based on findings that the building meets the following criteria:

a. It was constructed prior to 1930;

b. It is representative of a building type and/or architectural style that contributes to the identifiable historic visual character of Munjoy Hill; and

c. It retains sufficient integrity of design, materials, condition and craftsmanship that adaptive reuse is a viable option.

Voluntarily Demolished: Any act(s) done by design or intention, which is proposed, intended, or not accidental, that result in demolition. Results of weather events or natural hazards are not considered voluntary demolition. For the purposes of this chapter, the destruction of a preferably preserved building for failure to properly secure it or by neglect shall be considered voluntary demolition.

3. Exclusions: This section shall not apply to (a) any building either individually designated as a local landmark or located within the boundaries of any designated historic district; (b) accessory structures with a ground coverage of 144 square feet or less; (c) buildings that the Building Authority has determined are dangerous to life or property due to fire, accidental catastrophic damage, or a natural disaster; and (d) buildings that have received a previous determination that they are not Preferably Preserved.

4. Procedure: When the Building Authority receives a demolition permit application for a building within the District, s/he shall, within three business days, notify the Planning Authority in writing that a demolition permit application has been received.

a. Determination of Preferably Preserved.

i. Initial Determination: The Planning Authority shall make an initial written determination as to whether the building that is the subject of the demolition permit application is a Preferably Preserved Building within thirty days of receiving a copy of the application. In making this determination, the Planning Authority may request additional information from the applicant, including photos of the existing building and the surrounding context or other data that s/he determines may be relevant to making an initial determination. If the Planning Authority determines that the building is not Preferably Preserved, this determination shall be transmitted to the Building Authority and the applicant of record. The applicant will not be required to take any further steps and the permit may be reviewed by the Building Authority under the standards in Chapter 6.

ii. If the Planning Authority makes an initial determination that the building is Preferably Preserved, it shall notify the Building Authority and the applicant.

iii. If the Planning Authority fails to act in accordance with this section or within the prescribed time periods, the Building Authority may grant the demolition permit, provided that the applicant has met all other required by Chapter 6 for a permit, and shall notify the Planning Authority that the permit has been granted.

iv. Right to Appeal Planning Authority Determination: After the Planning Authority's initial determination that a demolition permit application involves a Preferably Preserved Building, the applicant for a demolition permit may appeal the determination to the Historic Preservation Board with any background information regarding the structure and its context that may be deemed relevant to or appropriate for that review. Such material shall include plans for any replacement use of the parcel that may assist in making a determination. Such appeal must be made within thirty days of the initial determination.

v. Public Hearing: The Historic Preservation Board shall conduct a hearing on the appeal and the initial determination within forty-five days of the Planning Authority's initial determination. The Board shall give the public notice of the hearing at least fourteen days prior to the hearing. The Board shall also mail a notice of the public hearing to the applicant, the building owner and all property owners within 100 feet of the subject property at least ten days prior to the hearing.

vi. Final Determination of Preferably Preserved Building: Within twenty-one days following the date of the public hearing, the Historic Preservation Board shall file a final determination with the Building Authority. If the Board determines that the demolition of the building would be detrimental to the architectural, cultural, or social heritage of Munjoy Hill, it must uphold the initial

determination of the Planning Authority of a Preferably Preserved Building. In a case where the initial determination of the Planning Authority is not appealed, that determination shall be considered a final determination upon lapse of the appeal period in 4., above, in which case the Planning Authority shall forward a final determination to the Building Authority.

5. Upon the final determination of Preferably Preserved status, the Building Authority shall not issue a demolition permit for a period of up to 12 months except as specified in b. below. During this period, the applicant and the owner should actively pursue alternatives to demolition of the Preferably Preserved Building. Should the Historic Preservation Board determine that the building is of sufficient historic and/or architectural significance that it should be designated a landmark or otherwise gain historic designation, that process will proceed as it would for any other building.

a. Upon a determination of Preferably Preserved status, the owner shall be responsible for properly securing the building.

b. Notwithstanding the preceding, the Building Authority may issue a demolition permit for all or any portion of subject building at any time upon authorization from the Planning Authority in the event the Historic Preservation Board approves a development for the site as consistent with the Historic Resource Design Standards as applied to a new building prior to the conclusion of the 12-month delay period. Examples of such proposals may include but are not limited to:

- Demolition of a portion of the building while maintaining the principal structure and/or most architecturally significant portion of the building;

- Demolition of the Preferably Preserved Building but with a replacement proposal that is acceptably contextual in the surrounding neighborhood. In

this case, the Board may condition demolition on construction of a project substantively consistent with the approved replacement proposal, and any substantive variation from that plan would be treated as a violation under 7. below; or

- Notwithstanding the initial determination, demonstration by the applicant, substantiated by the written opinion of a licensed engineer with experience in renovation, restoration or rehabilitation and confirmed by the Building Authority, that the structural condition of the building is so severe as to make it infeasible to rehabilitate.

6. Emergency demolition: Nothing in this article shall interfere with the ability of the Building Authority to permit demolition of buildings determined dangerous to life or property due to a condition that pre-dates the effective date of this section or is the result of fire, accidental catastrophic damage, or a natural disaster.

7. Enforcement.

a. The Planning Authority and Building Authority are each specifically authorized to institute any and all actions and proceedings, in law or in equity, as they deem necessary and appropriate to obtain compliance with the requirements of this article, or to prevent a threatened violation thereof.

b. No building permit shall issue for a new building on any premises where a significant building is voluntarily demolished in violation of this ordinance for a period of two years after the date of demolition.

8. A demolition review shall be reported to the City Council annually as a Communication.

(Ord. No. 141-17/18, 2-5-2018, expired on June 5, 2018; Order 221-17/18, 6-4-2018)

DIVISION 7.01. R-7 COMPACT URBAN RESIDENTIAL OVERLAY ZONE

Section 14-141. Purpose.

Google Groups

Munjoy Hill Historic District

abby harvey <ybbarah@netscape.com> Aug 6, 2020 9:26 PM
Posted in group: **Planning Board**

To whom it may concern,

I am a home owner/resident of Munjoy Hill and I support the Munjoy Hill Historic District & six landmarks with NO changes or modifications to what the Historic Planning Board nominated on 11/20/2019.

Sincerely,

Abby Harvey

Google Groups

Munjoy Hill Historic District

Adair O'Reilly <daysmill@me.com> Aug 7, 2020 11:51 AM
Posted in group: **Planning Board**

Dear Planning Board Members,

My name is Adair O'Reilly and I am the Senior Warden at St. Paul's Anglican Church located at 279 Congress St., Portland, Maine. On behalf of St. Paul's Church, I am writing this letter in support of the proposed Munjoy Hill Historic District.

St. Paul's Church has been part of the East End and Munjoy Hill neighborhood for over 150 years. We strongly believe it is important to preserve the architectural integrity and cultural history of Munjoy Hill. In 1978, St. Paul's Church was listed on the National Register of Historic Places. The Church and Parish Hall are also part of the India Street Historic District.

On a personal level, I lived on the Eastern Prom for 16 years from 1981 to 1997. Over the last several years, I have been dismayed at the changes to the character of the neighborhood. Classic three deckers and duplexes have been replaced with rectangular boxes and new condo projects. The vibrancy and feel of the neighborhood is disappearing.

We urge the Portland Planning Board to approve the Munjoy Hill Historic District.

Thank you.

Sincerely,

Adair Kathleen O'Reilly
Senior Warden
St. Paul's Anglican Church

Google Groups

Munjoy Hill Historic District

Adrien Duroc-Danner <adurocdanner@gmail.com> Aug 5, 2020 10:30 AM
Posted in group: **Planning Board**

Dear Board Members, Planners, and Commissioners,

I'm writing to urge you to accept the proposal to designate Munjoy Hill a Historic District.

Although I'm only a recent transplant, my wife is a native of Maine and has lived in Portland for years. Most of her family lives in Portland, as do many of our friends - and many of our out-of-town friends talk about moving here. We're all on the younger side, and only now transitioning from being renters to potential homeowners - but I still strongly back the move to declare Munjoy Hill a Historic District.

Portland is a wonderful city, and deserves its increasing popularity. But I hope Portland continues to grow wisely and sustainably. Please resist the siren song of (self-styled) luxury condo developers. They overestimate their own market, and add little of value architecturally or socially. They have done enormous damage to New York (where I lived for five years) and San Francisco (where I lived for two years).

Cities need affordable housing; beautiful, human-scale spaces; and a sense of beauty, community, and history. Portland has done a great job of all three - and I hope you will encourage developers to focus on retrofitting, rebuilding, and keeping new construction in line with existing architecture. Especially with a jewel of a neighborhood like Munjoy Hill, I sincerely hope you will approve Munjoy Hill's designation as a Historic District.

Sincerely,

Adrien Duroc-Danner
13 Atlantic Street

Google Groups

Munjoy Hill Historic District

Al Hirst <capitalh373@yahoo.com> Aug 6, 2020 6:21 PM
Posted in group: **Planning Board**

To Whom it May Concern,

I am contacting you to express my complete disapproval of the proposed Munjoy Hill Historic District as the proposal now stands. I am a huge proponent of history of any kind, and in fact, back in college, I volunteered at the Portland Historic Society, but instead of taking steps to educate and demonstrate the importance of history, this proposal forces it down the throats of property owners and then makes them pay for it. I have been reading the specifics and micro-management within the guidelines and payments for living in this proposed district and it has prompted several questions. For example, how does charging $65, in order to receive approval, to simply re-point some bricks, demonstrate historic preservation? Why does replacing old or broken windows or stairs come with a fee, when a property owner simply wants to make their building look better or be safer? A huge number of property owners are small-time, family-oriented people and this proposal seeks to take more money from the hands of these hard-working citizens. What if, while waiting for this approval, a tenant trips or falls because the re-pointing hasn't taken place? Will the Historic Society take responsibility since it is their guidelines that a landlord is awaiting approval of? Since the Historic Society and their proposal seek to take away partial ownership of these buildings with the stipulations of allowable and unallowable repairs and replacement, will the Historic Society also be taking on partial responsibility

of taxes? Why is this proposal not being put to a public vote for the citizens of Portland to decide?

As I previously stated, I am a great advocate of the teaching, education and preservation of history, but this proposal, as it is now written, is just one more way to push hard-working, small-time owners out of Portland who are already inundated with taxes and fees and does nothing to educate the public on the importance of history, other than the historical repetition of the big city organization quashing the local family and forcing them to subdue and give up their rights as property owners. This proposal should be voted down with a unanimous, "No", until it can be revised to get rid of the micro-management and fees levied on the properties and to show that "little guy's" voice is also very important to the City of Portland.

Most Sincerely,
Albert Hirst

Google Groups

Munjoy Hill Proposed Historic. District.

Alec Jaegerman <alecjaegerman@gmail.com> Aug 7, 2020 11:35 AM
Posted in group: **Planning Board**

Chair Mazer and Members of the Portland Planning Board:

My name is Alex Jaegerman and I reside at 398 Spring Street in Portland. I own a two-family home on Morning Street, which I have owned since the early 1980's.

I support the proposed Munjoy Hill historic district. I have done repair, rehabilitation, and an addition to my properties, with the Spring Street house subject to local historic preservation review. The process is reasonable and ensures that alterations preserve the historic character of the property and surrounding neighborhood.

Munjoy Hill is a historic neighborhood deserving of protection. With values rising and development activity on the rise it is important to put these provisions in place. Loss of historic fabric diminishes the sense of place and unique identity of the neighborhood. The historic preservation regulations do not prevent change and development, but ensure that the change taking place is a positive contribution to the area and does not detract from or erode the character and qualities that define the Munjoy Hill neighborhood.

Please add my voice in support of the Munjoy Hill Historic District.

Thank you for considering this comment as you deliberate your recommendation to the City Council.

Alex Jaegerman
398 Spring Street
Portland, ME 04102

Sent from my iPhone

Google Groups

Munjoy Hill Historic District

Alice Gauvin <alicesgauvin@gmail.com> Aug 5, 2020 9:27 AM
Posted in group: **Planning Board**

Hi there,

I have lived in Maine for most of my life and had family living on Munjoy Hill since I was born. Now, my husband and I live on beautiful, quiet Atlantic Street, and I am writing to you today to advocate for the proposed Munjoy Hill Historic District.

My husband and I are both under thirty, and are hoping to stay in Portland, preferably on Munjoy Hill, indefinitely, but if the neighborhood continues to allow new condo development instead of refurbishing old buildings, I doubt whether the hill will continue to be an option for us, both in terms of lifestyle and cost. I also know several other young professional couples who are considering vacating Munjoy Hill if the neighborhood becomes overtaken with new luxury condos. My husband and I spent two years in San Francisco, and over the course of those years saw families displaced or voluntarily leave neighborhoods due to the construction of luxury condominiums--condos that (once built) sat empty because over-eager developers had sorely overestimated buyer enthusiasm.

These days, housing is needed by many, but these condos will not address those needs. Furthermore, from a sustainability perspective, the construction of new buildings rather than the refitting and refurbishing of old ones is unconscionable. Globally, the cities most focused on sustainability are focusing almost exclusively on reuse and refitting.

Portland is lucky to be a city on the rise, and I would urge that local leaders prioritize social and environmental sustainability as they plan for the city's future. Speaking personally, Munjoy Hill is one of my favorite neighborhoods in any city I've lived in or visited. The architecture is a uniquely diverse blend of different New England styles, and the socioeconomic diversity of the neighborhood (even now, despite its growing popularity) is laudable and cannot be reconstructed after the dreams of luxury condo developers are disappointed when the housing market is flooded with identical units and the neighborhood has lost the character that attracted buyers in the first place.

Healthy growth is steady, thoughtful, and sustainable. A majority of studies show that historic districts are a boon to cities, bolstering tourism and attracting full-time residents. Finally, over the years Portland has shown itself to be a city that is committed to its residents, and to fostering a close and supportive community. The creation of a Munjoy Hill Historic District would be a huge step in this direction.

I ask that you please approve the Munjoy Hill Historic District.

Respectfully,
Alice Gauvin
13 Atlantic Street

Google Groups

Munjoy Hill Historic District

aglassberg733@earthlink.net <aglassberg733@earthlink.net> Aug 5, 2020 3:56 PM
Posted in group: **Planning Board**

I write in strong support of the designation of the Munjoy Hill Historic District. I think this is an essential step, both for the environment in which we all live, but equally important, for the economic future of our city. Neighborhoods such as Munjoy Hill are a key element in the city's draw for visitors and if we erode this we threaten the most robust part of our local economy.

Although we live just outside the historic district boundaries, we walk through it all the time. The "value added" to residents' lives from the atmosphere of Munjoy Hill should not be discounted when you're considering the impact of the designation.

So I again urge your support.

Andrew D. Glassberg, Ph.D.

340 Eastern Promenade #125

Portland, ME 04101

Virus-free. www.avast.com

Google Groups

Munjoy Hill Historic District

Angela Adams <aaa@angelaadams.com> Aug 5, 2020 9:16 AM

Posted in group: **Planning and Urban Development**

Dear Members of the Planning Board,

I am writing to support the Historic District designation for Munjoy Hill.

Our home at 2 Atlantic Street is within the proposed district and I have lived there for 27 years.

The architecture and character of Portland is what makes Portland a unique place to live and visit. Our history is told in our buildings, piers, wharfs and neighborhoods.

We all know that Munjoy Hill has been experiencing a significant surge in interest and excitement for the neighborhood and the quality of life. We see more people strolling the streets than ever in our history of living there.

While Portland has experienced significant changes in recent years, it is important that we take measures to protect and preserve what makes Portland unique and special. Once it is gone – it is gone forever and it would be a shame to have Portland turn into “Anytown, USA”.

I encourage you to please vote in favor of the Munjoy Hill Historic District.

Thank you and Be Well,

Angela Adams Hamill

2 Atlantic Street

Portland, Maine 04101

Google Groups

Munjoy Hill

Anne Manganello <aemanganello@gmail.com> Mar 16, 2020 12:34 PM
Posted in group: **Planning Board**

MPACT! IMPACT! IMPACT! Deb Andrews said there had never been an independent study done on the social, cultural and especially economic impact on any of the historical districts in the city of Portland. Why isn't this important when we are deciding the fate of the most important piece of real estate in the state?

Don't you see how crucial doing this would be to the fate of Munjoy Hill and the East End, the "crown jewel" of Portland. This part of the city is experiencing diversity and growth as never before and as in no other part of Maine and perhaps all of New England. To do anything to stunt this growth based on sentiment and "no facts" will be stultifying.

For the sake of the future of Portland, please take the time to investigate further. A modest investment of time and money now may insure the diversity we so propose to desire and millions or even billions of dollars of income in the future for this beloved and last grand municipality on the East Coast.

Anne Manganello
84 Quebec Street
Portland Maine 04101

This message was sent 4 days ago. Somehow, it did not get delivered. I believe this is the correct address.

Google Groups

Diversity and The Historic District

Anne Manganello <aemanganello@gmail.com> Jul 15, 2020 2:46 PM
Posted in group: **Planning and Urban Development**

Diversity seems to be the topic of the day, and the movement to support and promote the prosperity of our Black and Brown brothers and sisters is a societal priority.

In alignment, Portland's 2030 Plan states the city should be Equitable, as one of its priorities and principles. However, adding another Historic District does not align with those principles. As evidence, please read the attached article drafted by a Preservationist with over 30 years experience.

I have lived on the Hill my entire life. 50 years ago, most Black and Brown people were mostly "corralled" on Lafayette Street and one particularly helpful and friendly family, the Gaskells, were next door neighbors to my parents and my brother and me. There are fewer black families now, and, as the article says, **'preservation is essentially an elitist, class, and racially divisive activity whose result is a form of economic bias and segregation."** If the Planning Board approves this step, you are directly inhibiting diversity and opportunity for many, which is against the 2030 Plan. You have an opportunity to stop the systemically racist HD activity in our City.

Please vote unanimously against the question of adding a 12th Historic District to our already over-preserved/economically restrictive City. The single exclusionary act of passing HD on the Hill will ensure that elitism and separatism will only increase in Portland.

Sincerely,

Anne E. Manganello
84 Quebec St, Portland, ME 04101

Systemic Bias & Racism of Preservation

POSTED ON JUNE 2, 2020

TWISTED PRESERVATION ON TWITTER

RT @museumbums: Poetry in motion!! ð ð ð ¦ð
1 day ago

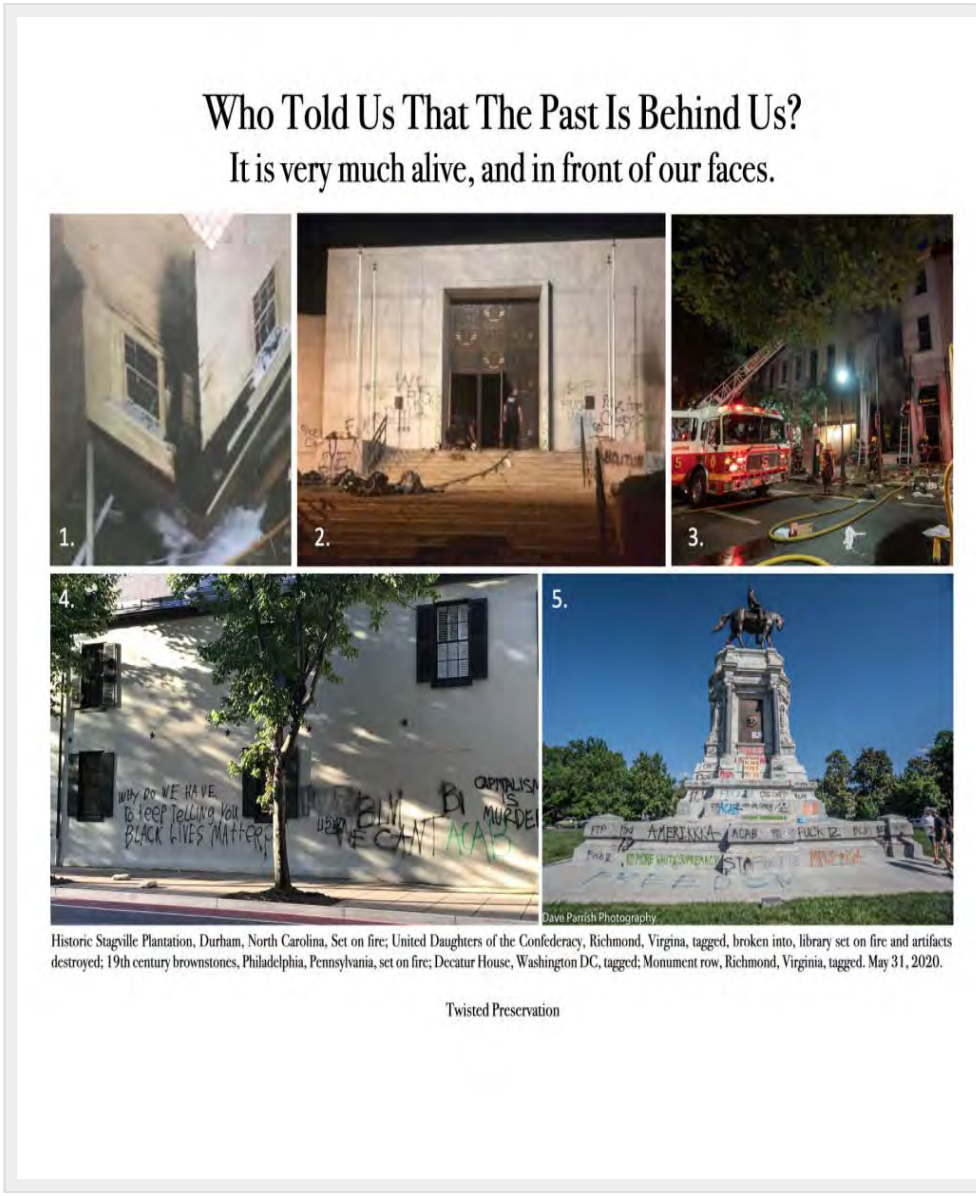
@AAMers @AASLH @SavingPlaces twitter.com/oldsaleminc/stâ ¦
1 day ago

RT @OldSalemInc: This Week at Old Salem with President Frank for the week of July 13, 2020. Everything you need to stay in the know #wsnc #â ¦ 1 day ago

RT @EArchaeol: Day 8 on the Early Medieval House Reconstruction at UCD Centre for Experimental Archaeology & Material Culture. Sorting throâ ¦
2 days ago

@Apollo_magazine twitter.com/franklinvagnonâ ¦
2 days ago

RT @FranklinVagnone: A detailed outline of the steps we



As someone who has been privileged to help run history & preservation organizations for the last 30 years, I feel compelled to call out, from my experience,Â what I see as not only my own but a larger institutional bias & racism in the preservation field. I love the study of history and the practice of preservation. Please donâ t respond to defend preservation, historic districting, or Main Street Preservation Projects etc.Â I know there are good things about the field â but these have come later in its life and I am speaking to the underlying structure of the effort.

I am simply trying to open up an honest conversation.

1. Preservation can be essentially an elitist, class, and racially divisive activity whose result is a form of economic bias and segregation.
2. History sites can perpetuate a divisive form of nostalgia that supports and validates racism and exclusion.
3. Preservation can limit inclusion and perpetuate racial & social bias by regulating cultural narratives to simple themes.

4. Historic District Codes and Restrictions are implicitly economically

took to analyze the COVID-19 effects on our historic living history site and decoraâ ¦
2 days ago

RT @bernarddonoghue:
Returned from a trip out to find a note & photo album from 2 lady owners of our house in the â 70s, chronicling how theâ ¦
2 days ago

RT @CuratorJournal:
"Archaeology too often operates in a kind of splendid academic isolation. There is a great need for archaeologists to dâ ¦
2 days ago

Reinventing a history site A detailed outline of the steps we took to analyze the COVID-19 effects on our historicâ ¦
twitter.com/i/web/status/1â ¦
5 days ago

RT @ITweetMuseums:
Interesting insight & analysis from @OldSalemInc's @FranklinVagnone & team. Will your museum be sharing the "why" behiâ ¦ 5 days ago

Follow @franklinvagnone

restrictive and exclusionary benefitting only the wealthiest of individuals allowing a form of aesthetically gated communities.

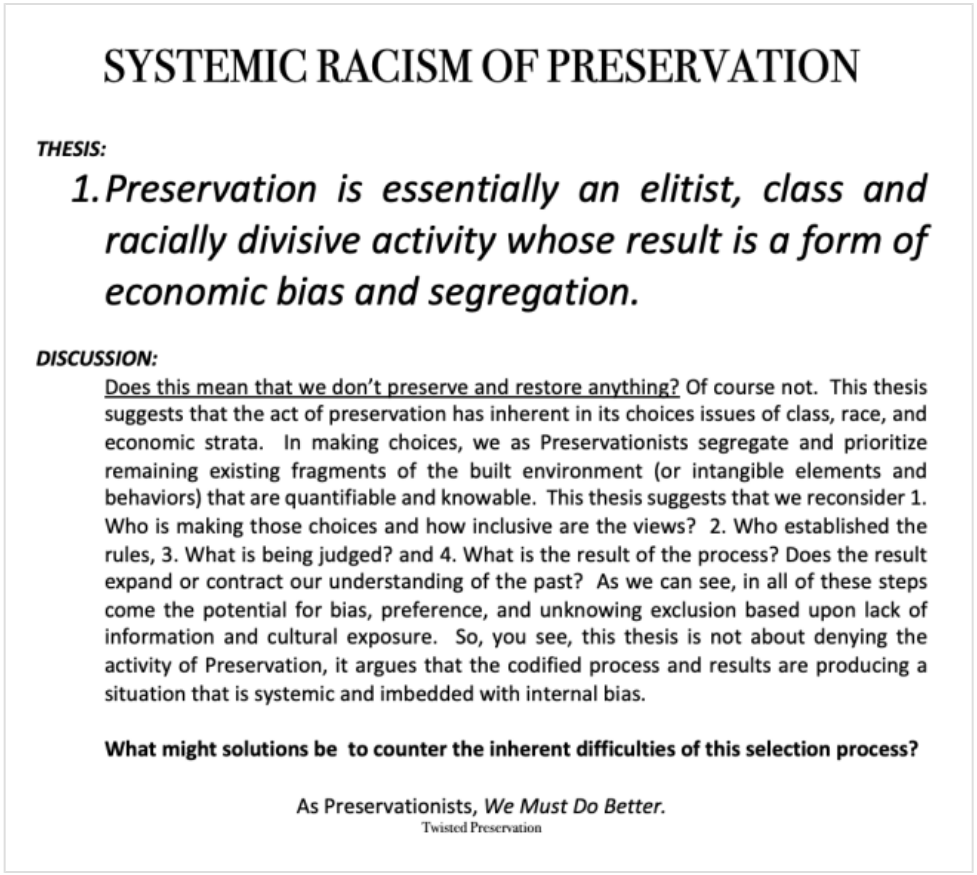
5. Historic districting, Code requirements, and forced single-family residential building types are a contemporary form of â redliningâ which excludes a diverse economic group of people from actual land ownership.
6. Preservation is susceptible to the harshest form of capitalism in that only those historic sites that are targeted with money actually get preserved.Â Preservation choices are a matter of economics, not just history. The most revealing, unglamorous sites have rarely survived, nor have they been preserved.
7. As Preservation has become more professional, education has become more expensive and thus restricting the possibility of equitable professional practice. Free internships, hiring practices, job requirements are all biased toward wealthy, mainstream backgrounds.
8. Preservationists, right nowâ today, need to stop fetishizing the built environment and begin considering how our hidden, internalized systems of Preservation are producing an environment of exclusion.
9. Look at the money in Preservation. A budget reflects our priorities.Â Money goes where it is told.Â There is nothing natural about the market economy or what gets preserved. **Wealth Preserves Wealth.**

As Preservationists, *We Must Do Better.*

Twisted Preservation

ANARCHIST GUIDE TO HISTORIC HOUSE MUSEUMS

> Anarchist Guide to Historic House Museums



SYSTEMIC RACISM OF PRESERVATION

THESIS:

1. *Preservation is essentially an elitist, class and racially divisive activity whose result is a form of economic bias and segregation.*

DISCUSSION:

Does this mean that we don't preserve and restore anything? Of course not. This thesis suggests that the act of preservation has inherent in its choices issues of class, race, and economic strata. In making choices, we as Preservationists segregate and prioritize remaining existing fragments of the built environment (or intangible elements and behaviors) that are quantifiable and knowable. This thesis suggests that we reconsider 1. Who is making those choices and how inclusive are the views? 2. Who established the rules, 3. What is being judged? and 4. What is the result of the process? Does the result expand or contract our understanding of the past? As we can see, in all of these steps come the potential for bias, preference, and unknowing exclusion based upon lack of information and cultural exposure. So, you see, this thesis is not about denying the activity of Preservation, it argues that the codified process and results are producing a situation that is systemic and imbedded with internal bias.

What might solutions be to counter the inherent difficulties of this selection process?

As Preservationists, *We Must Do Better.*

Twisted Preservation

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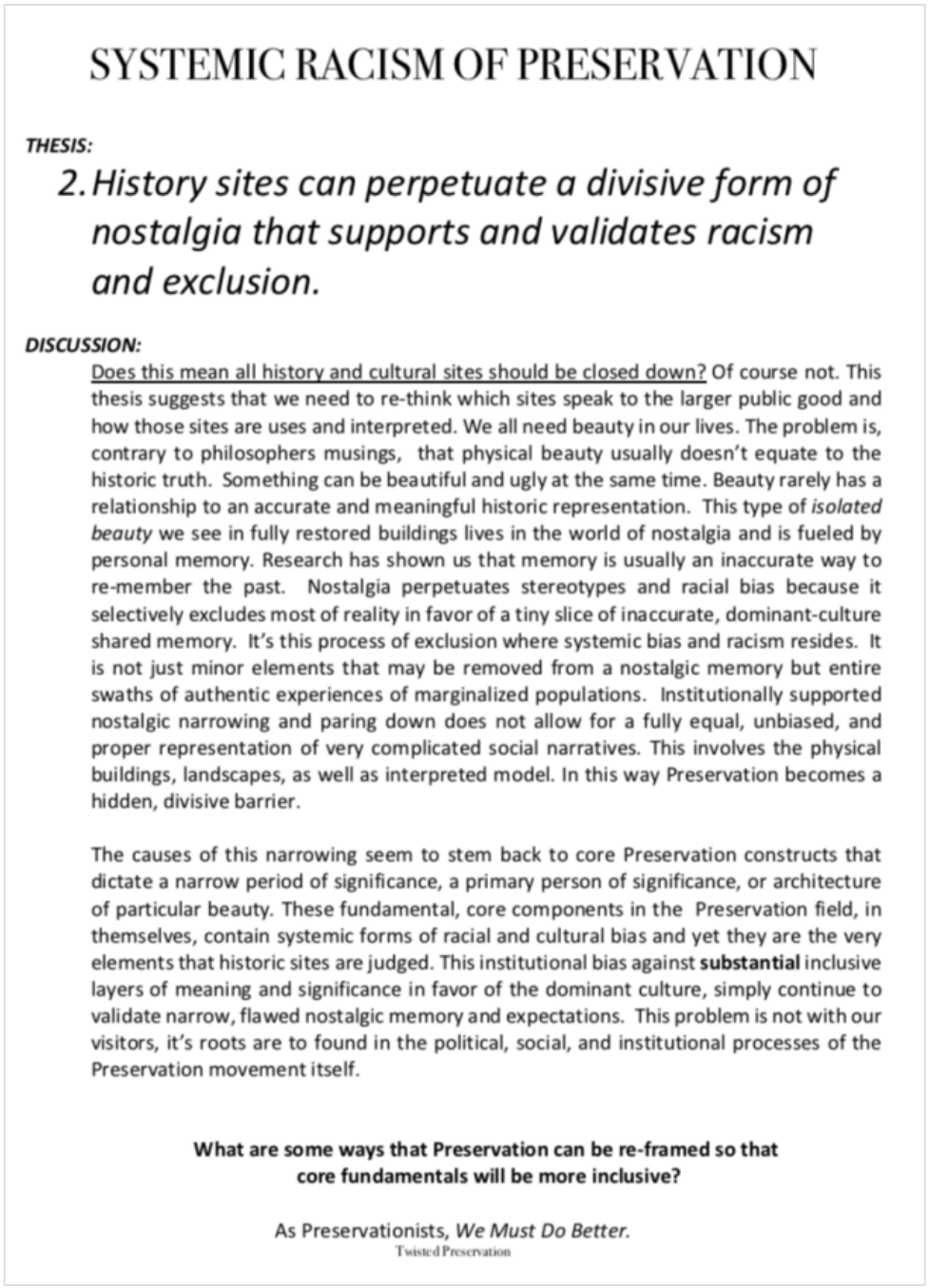

SYSTEMIC RACISM OF PRESERVATION

THESIS:

2. *History sites can perpetuate a divisive form of nostalgia that supports and validates racism and exclusion.*

DISCUSSION:

Does this mean all history and cultural sites should be closed down? Of course not. This thesis suggests that we need to re-think which sites speak to the larger public good and how those sites are uses and interpreted. We all need beauty in our lives. The problem is, contrary to philosophers musings, that physical beauty usually doesn't equate to the historic truth. Something can be beautiful and ugly at the same time. Beauty rarely has a relationship to an accurate and meaningful historic representation. This type of *isolated beauty* we see in fully restored buildings lives in the world of nostalgia and is fueled by personal memory. Research has shown us that memory is usually an inaccurate way to re-member the past. Nostalgia perpetuates stereotypes and racial bias because it selectively excludes most of reality in favor of a tiny slice of inaccurate, dominant-culture shared memory. It's this process of exclusion where systemic bias and racism resides. It is not just minor elements that may be removed from a nostalgic memory but entire swaths of authentic experiences of marginalized populations. Institutionally supported nostalgic narrowing and paring down does not allow for a fully equal, unbiased, and proper representation of very complicated social narratives. This involves the physical buildings, landscapes, as well as interpreted model. In this way Preservation becomes a hidden, divisive barrier.

The causes of this narrowing seem to stem back to core Preservation constructs that dictate a narrow period of significance, a primary person of significance, or architecture of particular beauty. These fundamental, core components in the Preservation field, in themselves, contain systemic forms of racial and cultural bias and yet they are the very elements that historic sites are judged. This institutional bias against **substantial** inclusive layers of meaning and significance in favor of the dominant culture, simply continue to validate narrow, flawed nostalgic memory and expectations. This problem is not with our visitors, it's roots are to found in the political, social, and institutional processes of the Preservation movement itself.

What are some ways that Preservation can be re-framed so that core fundamentals will be more inclusive?

As Preservationists, *We Must Do Better.*

Twisted Preservation

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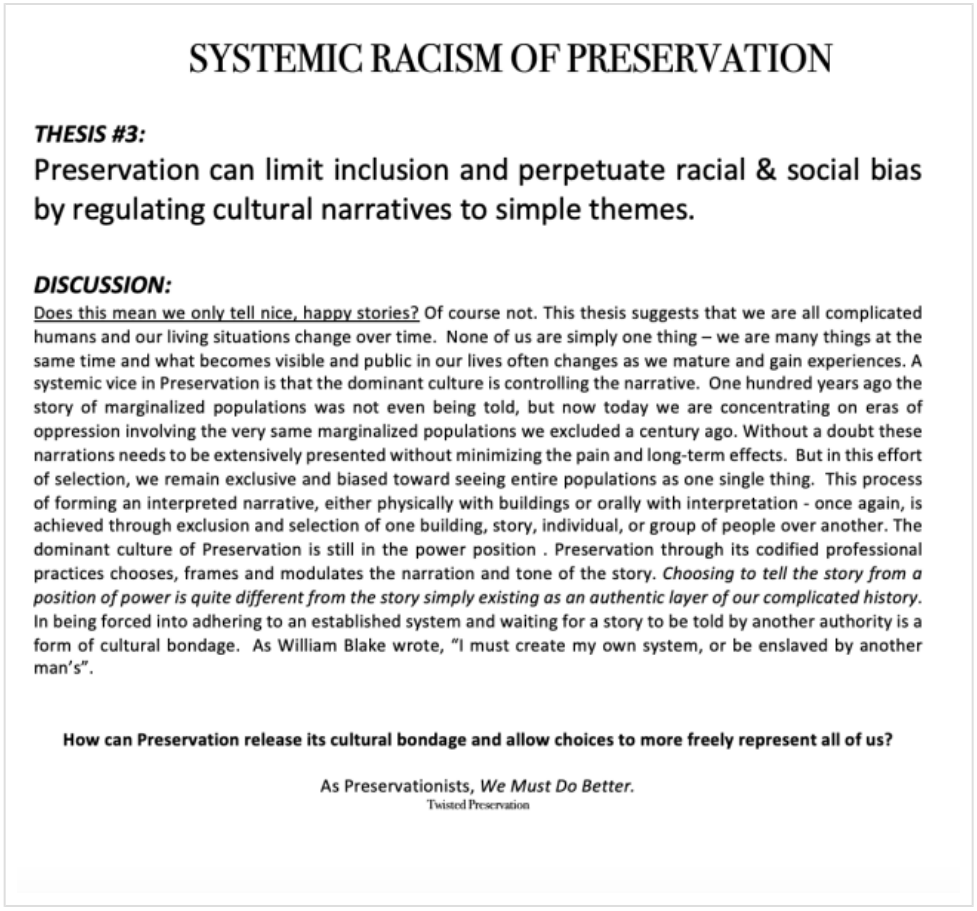

SYSTEMIC RACISM OF PRESERVATION

THESIS #3:

Preservation can limit inclusion and perpetuate racial & social bias by regulating cultural narratives to simple themes.

DISCUSSION:

Does this mean we only tell nice, happy stories? Of course not. This thesis suggests that we are all complicated humans and our living situations change over time. None of us are simply one thing – we are many things at the same time and what becomes visible and public in our lives often changes as we mature and gain experiences. A systemic vice in Preservation is that the dominant culture is controlling the narrative. One hundred years ago the story of marginalized populations was not even being told, but now today we are concentrating on eras of oppression involving the very same marginalized populations we excluded a century ago. Without a doubt these narrations needs to be extensively presented without minimizing the pain and long-term effects. But in this effort of selection, we remain exclusive and biased toward seeing entire populations as one single thing. This process of forming an interpreted narrative, either physically with buildings or orally with interpretation - once again, is achieved through exclusion and selection of one building, story, individual, or group of people over another. The dominant culture of Preservation is still in the power position . Preservation through its codified professional practices chooses, frames and modulates the narration and tone of the story. *Choosing to tell the story from a position of power is quite different from the story simply existing as an authentic layer of our complicated history.* In being forced into adhering to an established system and waiting for a story to be told by another authority is a form of cultural bondage. As William Blake wrote, "I must create my own system, or be enslaved by another man's".

How can Preservation release its cultural bondage and allow choices to more freely represent all of us?

As Preservationists, *We Must Do Better.*

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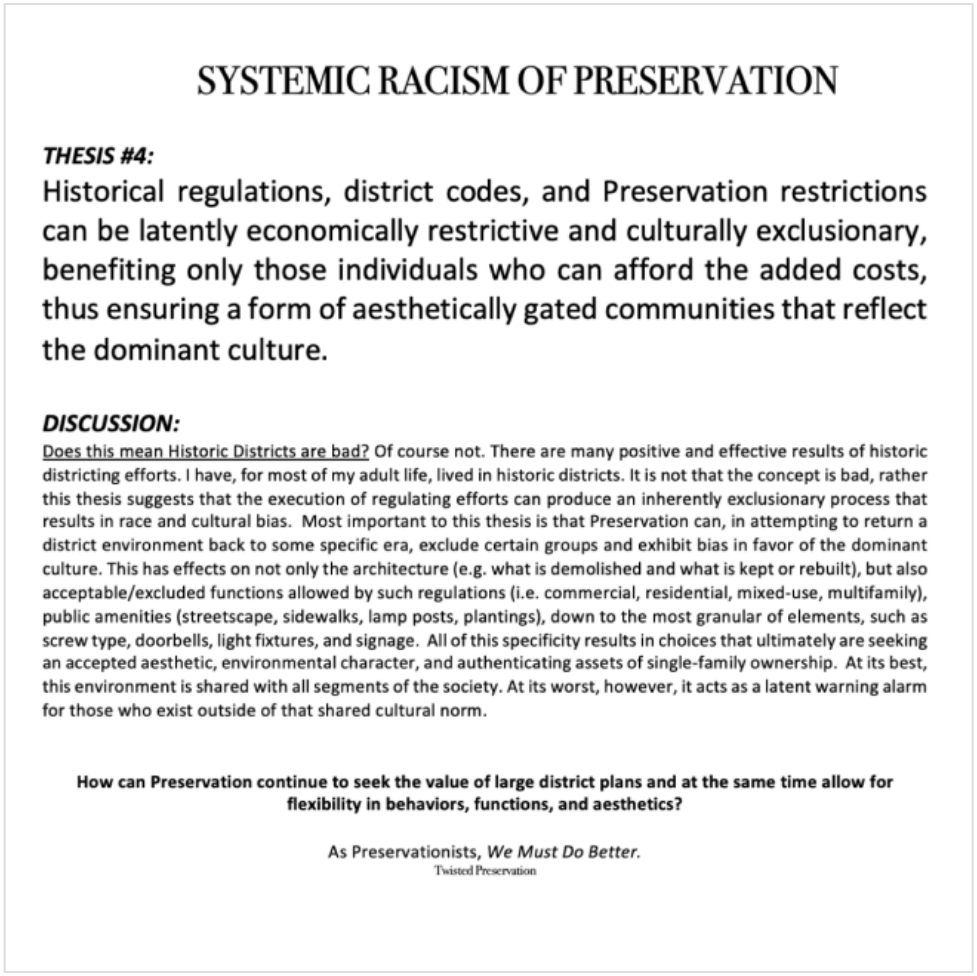

SYSTEMIC RACISM OF PRESERVATION

THESIS #4:

Historical regulations, district codes, and Preservation restrictions can be latently economically restrictive and culturally exclusionary, benefiting only those individuals who can afford the added costs, thus ensuring a form of aesthetically gated communities that reflect the dominant culture.

DISCUSSION:

Does this mean Historic Districts are bad? Of course not. There are many positive and effective results of historic districting efforts. I have, for most of my adult life, lived in historic districts. It is not that the concept is bad, rather this thesis suggests that the execution of regulating efforts can produce an inherently exclusionary process that results in race and cultural bias. Most important to this thesis is that Preservation can, in attempting to return a district environment back to some specific era, exclude certain groups and exhibit bias in favor of the dominant culture. This has effects on not only the architecture (e.g. what is demolished and what is kept or rebuilt), but also acceptable/excluded functions allowed by such regulations (i.e. commercial, residential, mixed-use, multifamily), public amenities (streetscape, sidewalks, lamp posts, plantings), down to the most granular of elements, such as screw type, doorbells, light fixtures, and signage. All of this specificity results in choices that ultimately are seeking an accepted aesthetic, environmental character, and authenticating assets of single-family ownership. At its best, this environment is shared with all segments of the society. At its worst, however, it acts as a latent warning alarm for those who exist outside of that shared cultural norm.

How can Preservation continue to seek the value of large district plans and at the same time allow for flexibility in behaviors, functions, and aesthetics?

As Preservationists, *We Must Do Better.*

Twisted Preservation

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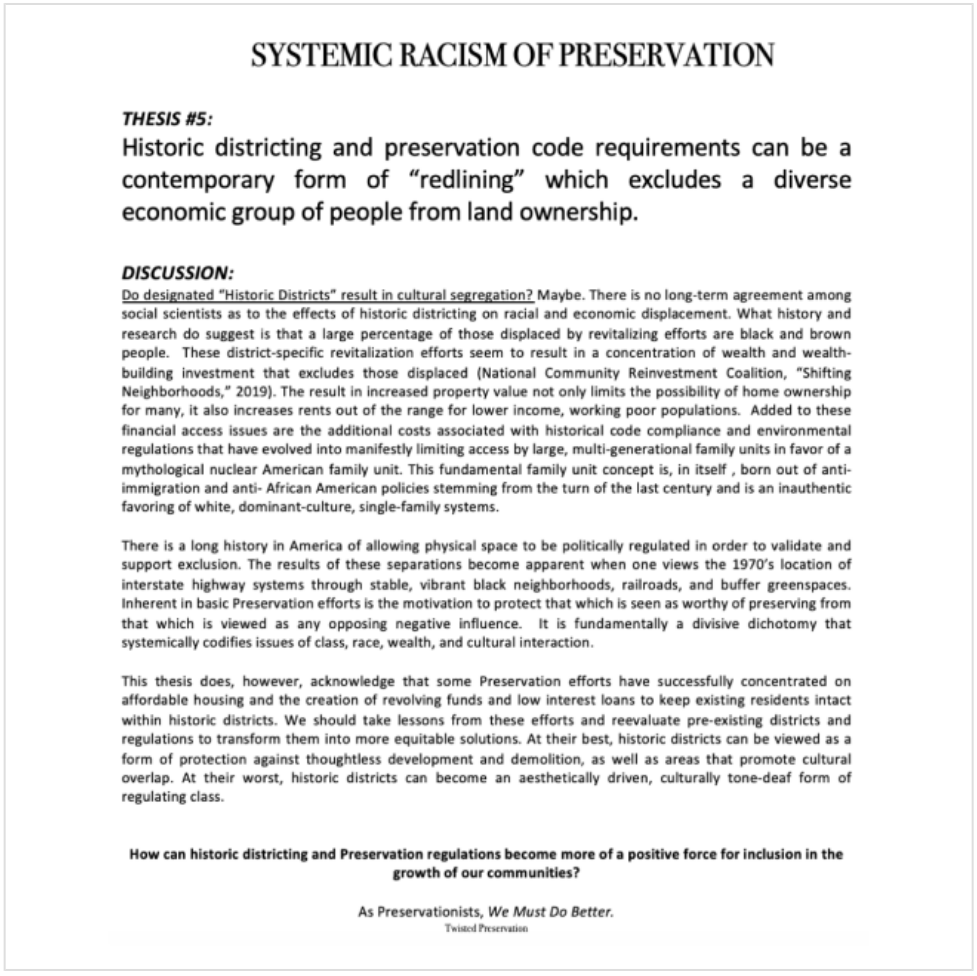

SYSTEMIC RACISM OF PRESERVATION

THESIS #5:

Historic districting and preservation code requirements can be a contemporary form of "redlining" which excludes a diverse economic group of people from land ownership.

DISCUSSION:

Do designated "Historic Districts" result in cultural segregation? Maybe. There is no long-term agreement among social scientists as to the effects of historic districting on racial and economic displacement. What history and research do suggest is that a large percentage of those displaced by revitalizing efforts are black and brown people. These district-specific revitalization efforts seem to result in a concentration of wealth and wealth-building investment that excludes those displaced (National Community Reinvestment Coalition, "Shifting Neighborhoods," 2019). The result in increased property value not only limits the possibility of home ownership for many, it also increases rents out of the range for lower income, working poor populations. Added to these financial access issues are the additional costs associated with historical code compliance and environmental regulations that have evolved into manifestly limiting access by large, multi-generational family units in favor of a mythological nuclear American family unit. This fundamental family unit concept is, in itself , born out of anti-immigration and anti- African American policies stemming from the turn of the last century and is an inauthentic favoring of white, dominant-culture, single-family systems.

There is a long history in America of allowing physical space to be politically regulated in order to validate and support exclusion. The results of these separations become apparent when one views the 1970's location of interstate highway systems through stable, vibrant black neighborhoods, railroads, and buffer greenspaces. Inherent in basic Preservation efforts is the motivation to protect that which is seen as worthy of preserving from that which is viewed as any opposing negative influence. It is fundamentally a divisive dichotomy that systemically codifies issues of class, race, wealth, and cultural interaction.

This thesis does, however, acknowledge that some Preservation efforts have successfully concentrated on affordable housing and the creation of revolving funds and low interest loans to keep existing residents intact within historic districts. We should take lessons from these efforts and reevaluate pre-existing districts and regulations to transform them into more equitable solutions. At their best, historic districts can be viewed as a form of protection against thoughtless development and demolition, as well as areas that promote cultural overlap. At their worst, historic districts can become an aesthetically driven, culturally tone-deaf form of regulating class.

How can historic districting and Preservation regulations become more of a positive force for inclusion in the growth of our communities?

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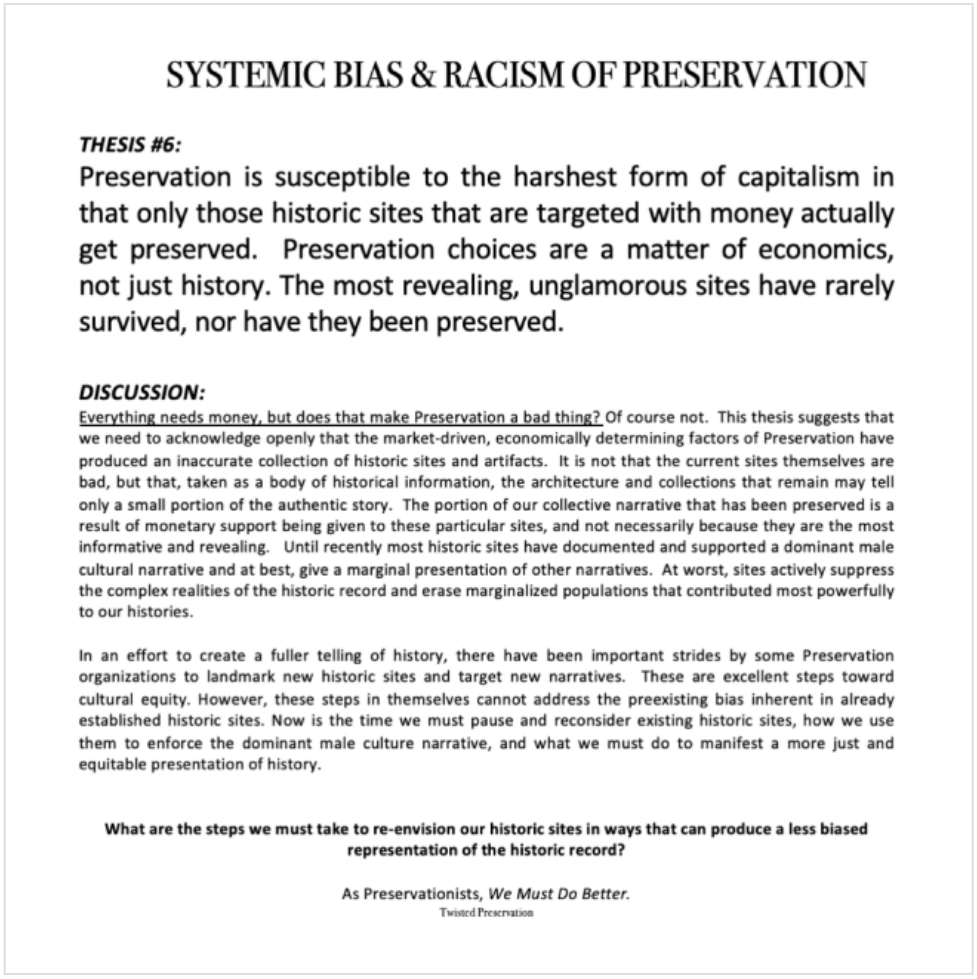

SYSTEMIC BIAS & RACISM OF PRESERVATION

THESIS #6:

Preservation is susceptible to the harshest form of capitalism in that only those historic sites that are targeted with money actually get preserved. Preservation choices are a matter of economics, not just history. The most revealing, unglamorous sites have rarely survived, nor have they been preserved.

DISCUSSION:

Everything needs money, but does that make Preservation a bad thing? Of course not. This thesis suggests that we need to acknowledge openly that the market-driven, economically determining factors of Preservation have produced an inaccurate collection of historic sites and artifacts. It is not that the current sites themselves are bad, but that, taken as a body of historical information, the architecture and collections that remain may tell only a small portion of the authentic story. The portion of our collective narrative that has been preserved is a result of monetary support being given to these particular sites, and not necessarily because they are the most informative and revealing. Until recently most historic sites have documented and supported a dominant male cultural narrative and at best, give a marginal presentation of other narratives. At worst, sites actively suppress the complex realities of the historic record and erase marginalized populations that contributed most powerfully to our histories.

In an effort to create a fuller telling of history, there have been important strides by some Preservation organizations to landmark new historic sites and target new narratives. These are excellent steps toward cultural equity. However, these steps in themselves cannot address the preexisting bias inherent in already established historic sites. Now is the time we must pause and reconsider existing historic sites, how we use them to enforce the dominant male culture narrative, and what we must do to manifest a more just and equitable presentation of history.

What are the steps we must take to re-envision our historic sites in ways that can produce a less biased representation of the historic record?

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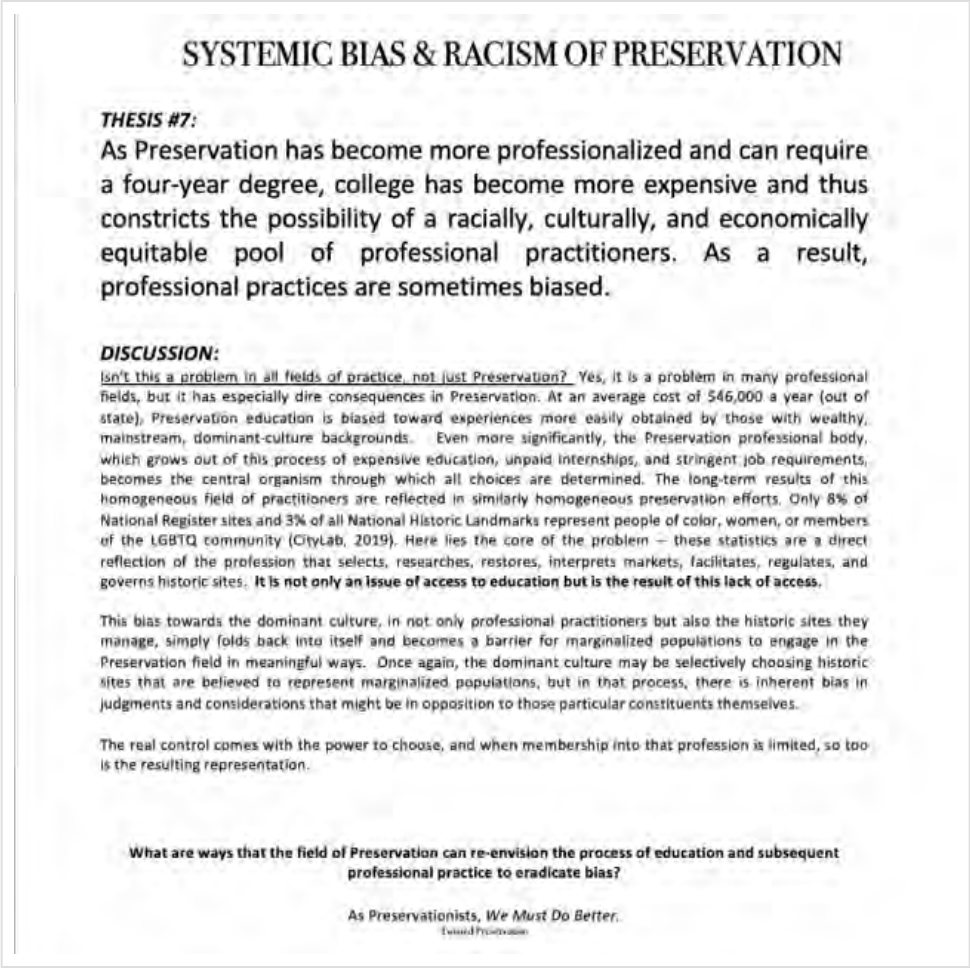

SYSTEMIC BIAS & RACISM OF PRESERVATION

THESIS #7:

As Preservation has become more professionalized and can require a four-year degree, college has become more expensive and thus constricts the possibility of a racially, culturally, and economically equitable pool of professional practitioners. As a result, professional practices are sometimes biased.

DISCUSSION:

Isn't this a problem in all fields of practice, not just Preservation? Yes, it is a problem in many professional fields, but it has especially dire consequences in Preservation. At an average cost of $46,000 a year (out of state), Preservation education is biased toward experiences more easily obtained by those with wealthy, mainstream, dominant-culture backgrounds. Even more significantly, the Preservation professional body, which grows out of this process of expensive education, unpaid internships, and stringent job requirements, becomes the central organism through which all choices are determined. The long-term results of this homogeneous field of practitioners are reflected in similarly homogeneous preservation efforts. Only 8% of National Register sites and 3% of all National Historic Landmarks represent people of color, women, or members of the LGBTQ community (CityLab, 2019). Here lies the core of the problem – these statistics are a direct reflection of the profession that selects, researches, restores, interprets markets, facilitates, regulates, and governs historic sites. **It is not only an issue of access to education but is the result of this lack of access.**

This bias towards the dominant culture, in not only professional practitioners but also the historic sites they manage, simply folds back into itself and becomes a barrier for marginalized populations to engage in the Preservation field in meaningful ways. Once again, the dominant culture may be selectively choosing historic sites that are believed to represent marginalized populations, but in that process, there is inherent bias in judgments and considerations that might be in opposition to those particular constituents themselves.

The real control comes with the power to choose, and when membership into that profession is limited, so too is the resulting representation.

What are ways that the field of Preservation can re-envision the process of education and subsequent professional practice to eradicate bias?

As Preservationists, *We Must Do Better.*

THESIS #7:

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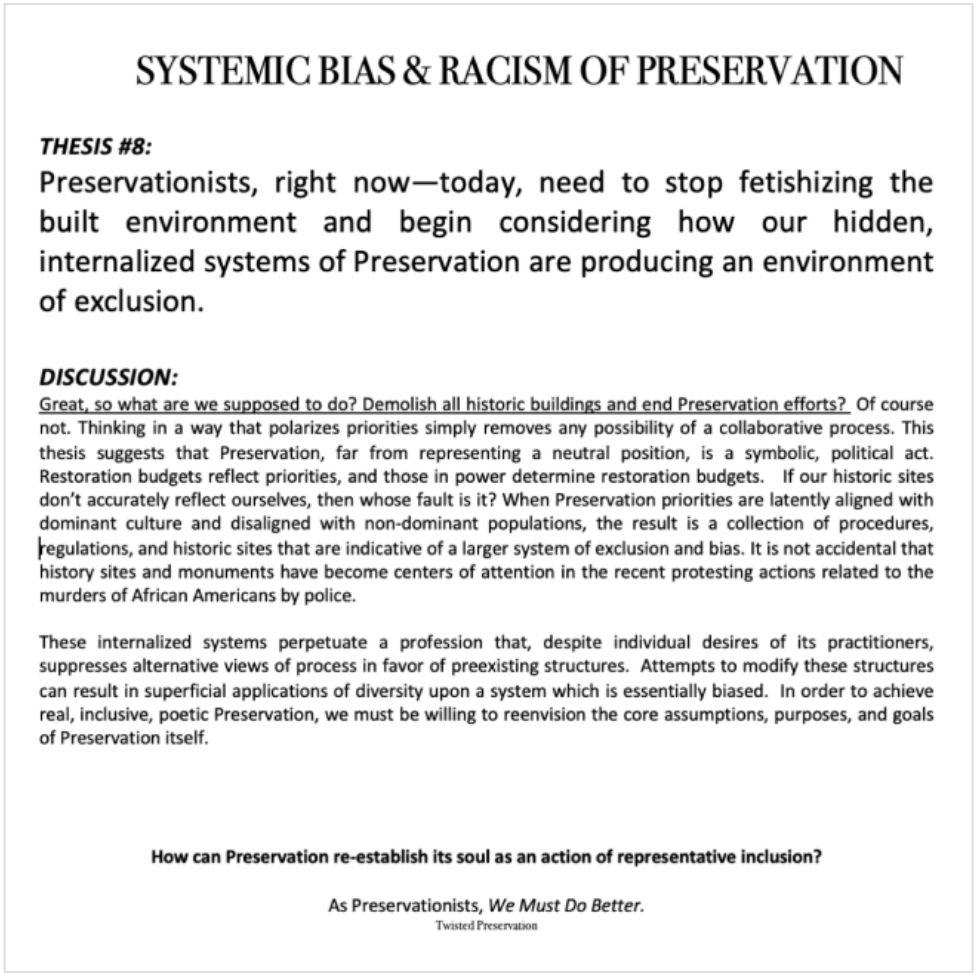

SYSTEMIC BIAS & RACISM OF PRESERVATION

THESIS #8:

Preservationists, right now—today, need to stop fetishizing the built environment and begin considering how our hidden, internalized systems of Preservation are producing an environment of exclusion.

DISCUSSION:

Great, so what are we supposed to do? Demolish all historic buildings and end Preservation efforts? Of course not. Thinking in a way that polarizes priorities simply removes any possibility of a collaborative process. This thesis suggests that Preservation, far from representing a neutral position, is a symbolic, political act. Restoration budgets reflect priorities, and those in power determine restoration budgets. If our historic sites don't accurately reflect ourselves, then whose fault is it? When Preservation priorities are latently aligned with dominant culture and disaligned with non-dominant populations, the result is a collection of procedures, regulations, and historic sites that are indicative of a larger system of exclusion and bias. It is not accidental that history sites and monuments have become centers of attention in the recent protesting actions related to the murders of African Americans by police.

These internalized systems perpetuate a profession that, despite individual desires of its practitioners, suppresses alternative views of process in favor of preexisting structures. Attempts to modify these structures can result in superficial applications of diversity upon a system which is essentially biased. In order to achieve real, inclusive, poetic Preservation, we must be willing to reenvision the core assumptions, purposes, and goals of Preservation itself.

How can Preservation re-establish its soul as an action of representative inclusion?

As Preservationists, *We Must Do Better.*

Twisted Preservation

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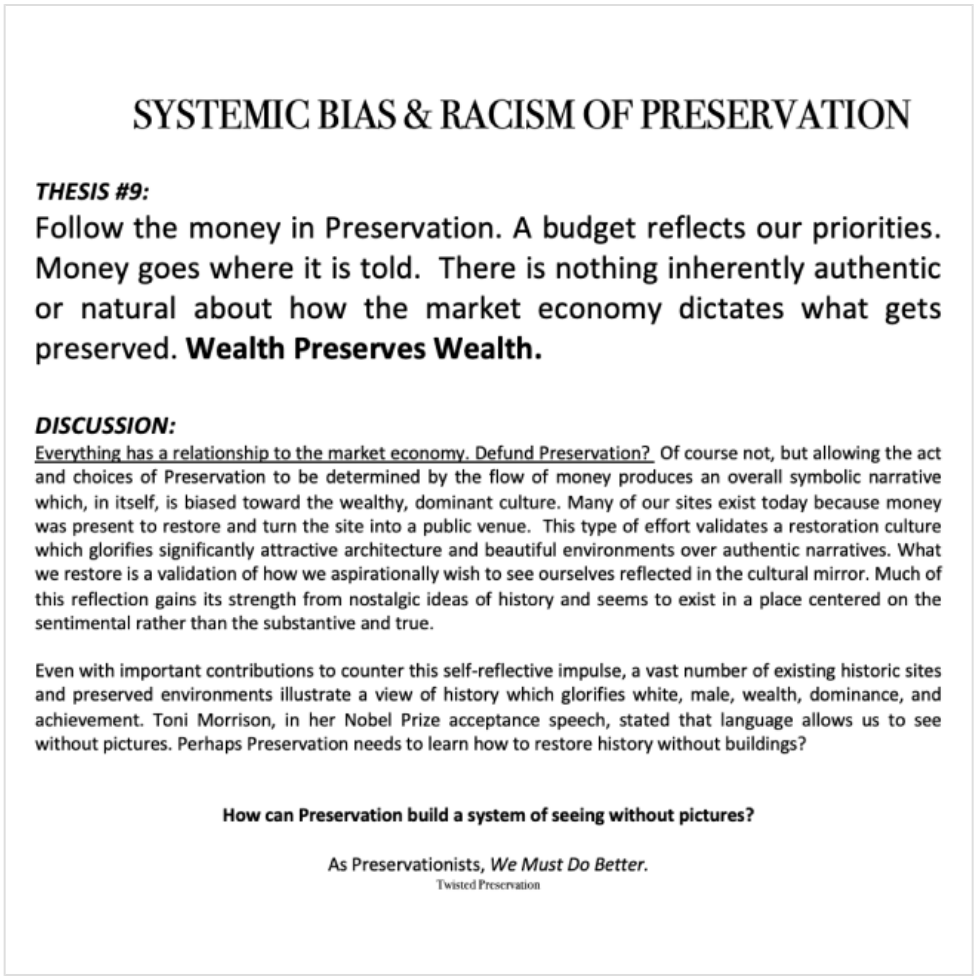

SYSTEMIC BIAS & RACISM OF PRESERVATION

THESIS #9:

Follow the money in Preservation. A budget reflects our priorities. Money goes where it is told. There is nothing inherently authentic or natural about how the market economy dictates what gets preserved. **Wealth Preserves Wealth.**

DISCUSSION:

Everything has a relationship to the market economy. Defund Preservation? Of course not, but allowing the act and choices of Preservation to be determined by the flow of money produces an overall symbolic narrative which, in itself, is biased toward the wealthy, dominant culture. Many of our sites exist today because money was present to restore and turn the site into a public venue. This type of effort validates a restoration culture which glorifies significantly attractive architecture and beautiful environments over authentic narratives. What we restore is a validation of how we aspirationally wish to see ourselves reflected in the cultural mirror. Much of this reflection gains its strength from nostalgic ideas of history and seems to exist in a place centered on the sentimental rather than the substantive and true.

Even with important contributions to counter this self-reflective impulse, a vast number of existing historic sites and preserved environments illustrate a view of history which glorifies white, male, wealth, dominance, and achievement. Toni Morrison, in her Nobel Prize acceptance speech, stated that language allows us to see without pictures. Perhaps Preservation needs to learn how to restore history without buildings?

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POSTED IN FRANK VAGNONE | 9 COMMENTS |

← The Usefulness of Things

One-night Stand: Burying the Lead →

9 thoughts on “Systemic Bias & Racism of Preservation”

jaimepartsch says: June 2, 2020 at 4:43 pm

I have worked with historic preservation projects for years and this is the most eloquent statement of what I have felt for a long, long time.

Like

Reply

twistedpreservation - F. Vagnone says:
June 2, 2020 at 5:01 pm
Thank you. I would be happy to be wrong.

Like

Reply

Pingback: Systemic Racism of Preservation | Hetty Startup, public historian

artcultures says: June 3, 2020 at 3:46 am
Well said.

Like

Reply

Charles C. says: June 3, 2020 at 11:47 am
You raise many excellent points but I would push back on the suggestion that historic districting is a form of redlining when in New York City you have black and minority homeowners and renters in Brooklyn and Upper Manhattan begging for the attention of the Landmarks Preservation Commission to calendar their neighborhoods.

Like

Reply

twistedpreservation - F. Vagnone says:
June 3, 2020 at 11:54 am
Thank you for your comment. And YES That's why I mentioned the good in a lot of these points. I am not absolutely saying that good does not exist in preservation – I love history and preservation! I think you may know that I lived in NYC for last 10 years and I am aware of great work by Historic District Council and LPC. It is not the act of districting that I wish to reconsider, it's the expectations and codes after the fact. We must also realize that NYC is always an exception – not the rule – as preservation in NYC has been exemplary at landmarking a wide variety of structures (Stonewall to name just one).

Like

Reply

Jennifer Betsworth says: June 6, 2020 at 9:35 am
There's a lot of good food for thought here. While preservation can be a flawed tool, it is a tool that can be used to positive and negative ends. Regarding historic districts and designation, at NY SHPO we're increasingly seeing historic district projects (local, state/national register) led by communities of color. I've helped shepherd through several projects in recent years where local groups have pursued

preservation designation with the aim of exerting more control over their communities and pushing back against developers. A few examples are Bethel Christian Avenue HD, SANS (Sag Harbor Hills, Azurest, and Ninevah Subdivisions) HD, and Dorrance Brooks HD. People of color have been historically wary of institutions and state agencies, and not unreasonably so, but I am hopeful this trend will continue. At its best, preservation is about sharing and preserving everyone's stories, not just the prettiest and least "controversial" ones.

Like

Reply

jlbetsworth says: June 6, 2020 at 9:36 am

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Like

Reply

Pingback: SystÃ©movÃ© pÅ edsudky a rasismus pamÃ¡tkovÃ© pÃ©Ä e - Artalk.cz

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Google Groups

Munjoy Hill Historic Districg

April Wernig <aprilwernig@gmail.com> Aug 6, 2020 1:20 PM
Posted in group: **Planning Board**

Hello,
As a resident of Portland since 2002, I am writing to show support for the creation of a historic district in Munjoy Hill. The neighborhood is one of my favorite places to walk in the City because of its scale and the interesting front porches and entries of all the homes. Many recent homes are built like fortresses with a garage door facing the street while residents of the box that acts as a house, have their outdoor porch situated high above the street. The buildings like this make the neighborhood streets seem like a collection of self storage buildings rather than a community of people. I hope the new historic district will encourage people who redevelop homes in this neighborhood to design them so there is a human component to them.
Sincerely,

April Wernig
69 Brookside Road
207-653-8059

*please phone or text should you need my immediate response.

Google Groups

In favor of historic district

Ava Gurekian <avagurekian@gmail.com> Aug 4, 2020 6:56 PM
Posted in group: **Planning Board**

Hi Planning Board,

I'm writing to express my position with regards to the historic district proposal on Munjoy Hill.

I support the historic district as it would stabilize renters in my neighborhood and provide longer term opportunities to Mainers and folks moving here (not vacationing here).

Thanks for listening and I look forward to seeing your action on this matter.

Best,
Ava

--
Ava M. Gurekian
c: +1 617-697-9407
w: +1 207-553-7652
ava.gurekian@gmail.com

Google Groups

Approval of the Munjoy Hill Historic District

Barbara Goodbody <bargoodb@gmail.com> Aug 6, 2020 8:48 AM
Posted in group: **Planning Board**

I support the proposed Preservation of theMUNJOY HILL HISTORIC DISTRICT and six landmarks with NO changes to what the Historic Preservation Board nominated back in 11/20/2019.

As a Resident of the EAST END! THE preservation of the HISTORIC DISTRICTS on the EAST END are CRITICAL to the SPECIAL BEAUTY and HEALTHy ENVIRONMENT that makes PORTLAND'S EAST (and WEST END) residential neighborhoods Environmental treasures and an EXample for PORTLAND to our STATE and to OUR WORLD!

Please VOTE to approve the Munjoy Hill Historic District

Thank YOU'
Barbara Goodbody

Google Groups

Munjoy Hill Historic District

Barbara Vestal <vestal@chesterandvestal.com> Jul 31, 2020 4:22 PM
Posted in group: **Planning Board**

Hello Chair Mazer and Planning Board Members,

I write to urge you to recommend that the City Council designate a Munjoy Hill Historic District as recommended by the Historic Preserva on Board. For the record, I am directly affected by the designa on. My husband and I own two buildings that will be contribu ng structures in the district. We own one buildable vacant lot within the district. And our office is in another building that will be an individually designated landmark. We value these buildings and welcome the idea that we and other building owners in the neighborhood will be adhering to the same standards to protect them going forward.

To my mind, **one of the major advantages** of historic district designa on is that it will **promote and encourage preserva on, restora on and rehabilita on of exis ng structures**. This is an important, but some mes overlooked, tool in the array of strategies to retain affordable housing.

It is important to remember that the most affordable housing unit is the one that is already built. New construc on does not create affordable housing unless there is a deep governmental subsidy involved. Portland's workforce housing tools have been largely ineffec ve on Munjoy Hill. For rare large developments with 10 or more units, developers typically buy out of the 10% workforce housing requirement.

On Munjoy Hill there is currently a 10' height bonus in exchange for one workforce housing unit. This height bonus fails to factor in housing that is being destroyed to make way for the new construc on. When demoli on of exis ng housing is factored in, new construc on proposed on Munjoy Hill since 2015 making use of the height bonus has resulted in a net loss of affordable housing.

Designa ng a por on of Munjoy Hill as a historic district will keep the exis ng landmark and contribu ng structures from being demolished for new, luxury housing. That will do much more to protect workforce housing than the current inclusionary zoning requirements or height bonus for a workforce unit in new construc on.

Many of the people speaking in favor of a historic district designa on are small landlords, like me. We have exis ng buildings with basic, non-luxury apartments in older structures with 2-6 units. We provide housing for regular, working people. We have maintained these buildings for many years, and value the historic building stock, the design to

encourage social interac on, and the close-knit character of the Munjoy Hill neighborhood.

In evalua ng the importance of historic district designa on, **it is important to remember the unprecedented market forces that were unleashed by the City on Munjoy Hill in 2015**. In 2015 the City dras cally changed the dimensional requirements in the R-6 zone. The minimum lot size was reduced from 4,500 square feet to 2,000 square feet. The minimum lot area per dwelling unit was significantly decreased from 1,000 to 725 square feet. The ostensible intent was to promote infill development, but in a major mistake, it was not limited to vacant lots or lots without houses. And the height was kept at 45', greatly above the scale of most of the exis ng housing.

Before the 2015 changes, almost all of the housing on the Hill consisted of grandfathered nonconforming structures of 1.5 to 2.5 stories on undersized lots. With the 2015 changes, much of the exis ng housing suddenly had a demoli on target on it – there was a lot of money to be made by tearing down exis ng housing and replacing it with luxury boxes that maximized the allowable 4-story building envelope.

Several tear-downs followed, resul ng in a neighborhood outcry. The Council agreed to impose a moratorium at the end of 2017 in an a empt to recalibrate the zoning. In **June, 2018** the City Council responded by adop ng a **demoli on delay ordinance**, by adop ng a **Munjoy Hill Conserva on overlay district** with new dimensional and design standards, ***and by direc ng the Historic Preserva on Board to look at the designa on of an historic district on Munjoy Hill***. An historic district could not have been adopted right then, in June of 2018, because of all of the survey work and research that has to be done prior to any designa on. **That third prong of what was an cipated by the Council in June of 2018 as what was necessary to recalibrate the zoning is what is before you now.**

Unfortunately, the demoli on delay ordinance is very weak. And, disappoin ngly, the design standards of the overlay district have not been applied in such a way as to provide much protec on. Hopefully the historic district, which is proposed to apply to about ½ of the Hill, will go much further to protect the important exis ng housing stock and the unique social fabric, at least in part of the Hill.

There are mul ple purposes to be advanced by a historic district designa on for Munjoy Hill. It will protect the dis nct architectural and historic character of this iconic neighborhood. It will prevent the demoli on of designated landmarks and contribu ng historic structures within the district. It will extend the protec ons which have been used so successfully in the West End for 30 years to a por on of the East End. And, in a win-win situa on, it will protect a significant por on of the exis ng workforce housing from being demolished to make way for very expensive new construc on.

As has been shown over the last three decades, Portland's successful historic preserva on program manages change to prevent the unnecessary loss of the community's historical features and to encourage compa ble preserva on, restora on and rehabilita on. This is precisely what is needed on Munjoy Hill at this me.

I encourage you to recommend passage of the Munjoy Hill Historic District and designa on of several associated landmark structures as recommended by the Historic Preserva on Board.

Regards,

Barbara Vestal

--
Barbara A. Vestal, Esq.
Chester & Vestal, PA
107 Congress Street
Portland, Maine 04101
(207) 772-7426 - phone
(207) 761-5822 - facsimile

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Google Groups

Why a Munjoy Hill Historic District now?

Berry Manter <berrymanter@yahoo.com> Aug 7, 2020 10:06 AM
Posted in group: **Planning Board**

Dear Planning Board members,

The value of a Munjoy Hill Historic District is more compelling now than when the initial inquiry and studies for this district designation began.

The architectural fabric of Portland's peninsula has rapidly changed with current development, resulting in the a decline in our city's unique visual integrity. This is not consistent with good development, and serves no one. EVERY city construction should be vetted to ensure it complements, adds visual value, along with meeting standards of durability and contemporary energy standards to meet future needs.

A recent mid-harbor water view towards the new construction of Fore Street, (including the WEX) buildings reveals an ominous "penitentiary" mass of rambling gray construction. This sort of '60's architecture fails all standards. More disheartening, is that this waterfront, off-putting industrial strip has consumed prime residential area (walkable, ocean views), adding traffic issues on Franklin, and putting unreasonable pressure on Munjoy Hill for those seeking walkable, urban residential living in our city.

The post-pandemic question leads to asking "the future of doing business" and the need for large office space. A recent trip to the surrounding Maine Mall area revealed untold lease signs, large commercial properties overgrown with weeds, vacant windows. Will this outlying area become a commercial desert and financial burden? (WEX adds no "value" to the city downtown while their former property still stands empty).

The above underscores the value of protecting Munjoy Hill as well as supporting residential construction over commercial growth within the penninsula . I write this in part, because the future Portland will find increasing value in the protection of the historic and aesthetic character of Munjoy Hill I write this in part, because without protection the pressure to destroy and condo-ize this community will be unbearable.

Per Deb Andrew's many excellent presentations with her patient in-depth explanations, answering our concerns, a "historic district" does NOT freeze a community in time, nor prevents growth or new construction. Portland Planners owe the public this modest protection of a small section of neighborhood that brings people from all over the city (not a NIMBY issue), and outlying areas to walk our streets.

Please, consider a vote of YES on the proposed MUNJOY HILL HISTORIC DISTRICT.

Thank you and Sincerely,

BERRY MANTER

46 E. Prom
Portland

Google Groups

in support of the Munjoy Hill Historic District

Beth Snyder <snyderbes@gmail.com> Aug 6, 2020 2:17 PM
Posted in group: **Planning Board**

I'm writing to urge you to vote for the Munjoy Hill Historic District and six landmarks with no changes or modifications of the proposal nominated on November 20, 2019.

After the careful and thorough work by the Planning staff and the Historic Preservation Board, it is time for us to commend their efforts; and to legitimize the support and endorsement of the Munjoy Hill Historic District by the Historic Preservation Board by voting 'yes.'

Historic districts do not hinder or reduce affordable housing. Repairing and reusing historic buildings is better for our environment than new construction. Historic districts manage change rather than prevent it. These favorable arguments cannot be ignored.

Finally, let's take the long view. Our historic districts are critical to the stewardship of what makes Portland a livable and desirable city now and for years from now.

Please vote in favor of our historic district.

Thank you,
Beth Snyder
81 North Street
Munjoy Hill

Google Groups

Portland's Proposed Historic District

betsy elliman <betsyelliman@msn.com> Aug 5, 2020 8:55 AM

Posted in group: **Planning Board**

Maine has been my home for 33 my 75 years. Portland has been my home for the last 13. I have always appreciated Portland's profound sense of place with its stair-step houses going down hilly streets to the water and with its sight lines to the water from various parts of the city. The East End's compact grid of streets provide neighbors with little communities, all part of the greater community. I am convinced that the proposed historic district will protect all these qualities. Historic districts are a compatible way of managing change, they allow for affordable housing as well as maintenance of existing buildings. Just walking around Munjoy Hill we can see where change has gone awry. Please help us to protect the precious qualities that still exist on the East End..

Betsy Elliman

207-400-6871 - cell

Google Groups

public comment 8/7/20 Historic District Munjoy Hill

Brent Adler <brentadler@gmail.com> Aug 6, 2020 2:44 PM

Posted in group: **Planning Board**

Hi. My name is Brent Adler, 91 Walnut Street. I am not in support of any Historic District on Munjoy Hill. Knowing that this Historic District will pass, my question is. Will all my properties on munjoy Hill receive those fancy plaques that all the west end mansions have that say something historical about the property. Like "1838, John Johnson, Mason"? Do we get these cool fancy historic plaques for free? I sure hope so because this is the only benefit I see in a historic district.

Brent

--
Brent Adler
cell 207-518-7038
PO Box 15372
Portland, ME 04112

Google Groups

Munjoy Hill Historic District

Bruce Wood <brucesar@yahoo.com> Aug 5, 2020 10:58 AM
Posted in group: **Planning Board**

I urge support of the Munjoy Hill Historic District as approved by the Historic Preservation Board in December 2019. The district includes many properties very much in need of protection so that the Hill continues to reflect its 19th and early 20th century beginnings. Our great city has protected early commercial areas (Congress Street, Commercial Street, and India Street) and the upper class area (the West End - Bramhall Hill). Protection of what started as a working class community is essential to tell the story of Portland's past.

Bruce Wood
607 Chandler's Wharf
Portland, ME 04101

Google Groups

Historic District, Munjoy Hill

Candice Lee <cthorntonlee@gmail.com> Aug 5, 2020 9:12 AM

Posted in group: **Planning and Urban Development**

As a long time member and two time Board member of Greater Portland Landmarks, I support wholeheartedly the Historic District proposals for Munjoy Hill. Munjoy Hill is a unique place in Portland, now enhanced by some very good contemporary additions. Little tweaks here and there to strive to keep what is authentic to the older buildings of the area will enrich the whole area and make it a wonderful addition to Portland's landscape/streetscape for decades to come. This is a very exciting time for Munjoy Hill, we must do the right thing by saving it's essence.
Candice Lee, Trustee, Greater Portland Landmarks

July 30, 2020

Planning Board,

As you make your final vote this month, please consider the following Executive Summary.

1. Is 14-610(a)(1) met?
2. The City's Legal exposure
3. Business & other reasons against

1. Did the HPB Satisfy the Requirements of 14-610(a)(1).

In sharp contrast to the other Portland HDs, no justification has been provided to date.

Re **14-610(a)(1),** Staff presented a lot of documents but no reasoning why the criteria has been met. Check the record: there is ZERO justification provided by Staff, unlike other districts in our City where ample reasoning was presented. Yes, Staff spent a lot of tax money and produced many documents but in the hundreds of pages, there is no justification provided. Effort & hard work does not equal justification.

2. Procedural/Legal Exposure

The City finds itself legally exposed due to negligent practices, which have been entered into the formal record by the public and by staff.

1. **Legal notice was not given to, at least, 56 property owners** in the proposed area. One property owner raised this issue during the last public PB meeting. Staff admitted on the record that an issue existed in May/June of 2019 thru Jan 2020 but did not research further. Upon pulling all sales records for properties sold on the hill since May 2019, we found 56. Since Staff does not know when the 'list issue' started, there could well be many more affected predating May 2019. ***[See Addendum A for details.]***

2. As reported in the Phoenix pre COVID and currently under investigation by Corporation Council, voting records show that a **member of the HPBoard is not a legal resident of Portland** (which is a qualification to serve.) This member has tainted any work product completed by the board throughout this process. This issue was reported to the City Clerk in the fall of 2019 and she dismissed the accusation without properly investigating. ***[See Addendum B for details.]***

3. The City Planning Staff made a public commitment in 2018 to independently survey the Hill residents & failed to do so. As presented earlier this year, an independent survey was done in July of 2019. The results were conclusive and statistically significant: the residents of Munjoy Hill voted against the district.

3. Business Reasons to Oppose the HD Recommendation

Many business & economic reasons exist to vote against this proposal.

Proposed District Boundary Issues & Proliferation of HDs

1. **The proposed district is NOT contiguous**. 38 & 39 Munjoy Street are Non Contributing buildings across the street from one another. This causes a break in the district. Check the map to verify.

2. **Questionable designations** connect other sections of the proposed district. Take just one example; 43 Saint Lawrence. It is categorized as a contributing building but that is a 'stretch' AND across the street, two non-contributing structures stand. [The two non-contributing have very similar non-contributing features as the 3 story flat top (43).] ***[See Addendum C for more details.]***

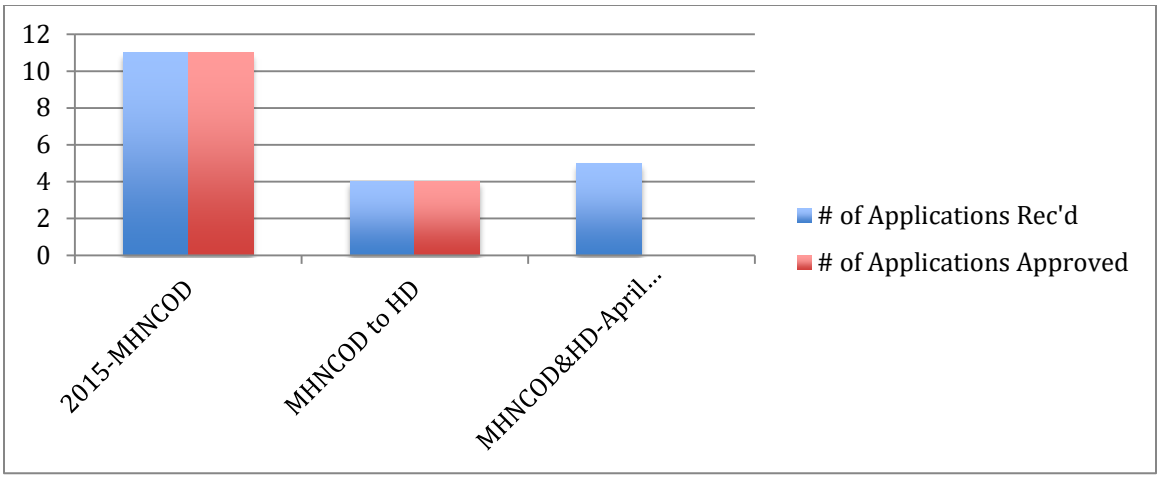
3. The proposed district map has a large section of non-contributing and vacant lots from Moody Street to Fore Street (Vesper, O'Brion, Munjoy.) If an HD comes to pass, dozens of buildings are non-contributing and can be knocked down as a matter of 'right' – imagine the outcry from the public because Planning may approve a plan enabling more demolition (the primary concern.)

4. Further, Portland's peninsula is overwhelmed by HDs. Like Boston, we are an old city. Unlike Boston, we have more HDs than they do and less square footage. ***[See Addendum D for details and a follow up to the Boston HD comparison.]***

5. If this 12th HD passes, the **precedent is set & the criteria to pass additional HDs will become very low**. There will be nothing stopping additional HDs from springing up across Portland. (PGL is already meeting with Peaks Island) Addressing the housing crisis will become even more challenging.

6. **Development has declined on Munjoy Hill since the Overlay**: The Hill is not at risk of losing its 'fabric', as evidenced by data provided by Staff

    - On May 11th, other Staffers (Samantha, Jimmy) provided the Planning Raw Application Data to quantify building trends on the Hill.
        - From 2015 – thru May 31, 2018 (prior to MHNCOD), the City received 11 Applications for Level I, II, III Reviews on Munjoy Hill. All 11 were approved.
        - From June 1, 2018 – June 20, 2019 (MHNCOD but prior to HD being invoked), the City received 4 applications for Level I, II, III Reviews on Munjoy Hill. All 4 were approved.
        - From July 1, 2019 thru April 15, 2020 (MHNCOD & HD regulations in place), the City received 5 applications. 0 have been approved, as of 4/15/20.



In addition, the following facts have already been reported by Staff showing the decline in development on the Hill

- With MHNCOD, new applications dropped by 64%
- Since HD was added, ZERO applications have been approved by the City (as of April 15, 2020)
- Demolitions are down by more than 50% since 2015
- Re new construction permits,
  - From 2015 to the MHNCOD, 15 new construction permits were issued
  - Post MHNCOD thru Feb 2020, 7 were issued
  - Only 1 since HD regs went into place in July of 2019 (as of 4/15/20)

Munjoy Hill have gone from a thriving neighborhood to a stagnant one in 5 years due to over regulation by the City.

[See Addendum E for the City provided data]

7. During the last public meeting, we learned that the City has no data on the impacts of the 11 other districts on taxes, tenants and homeowners from the past 30 years. The good news is (as submitted separately) a study was done 4 years ago looking at several US Cities.

   In the "Extracts from the Literature on the Effects of Historic Preservation on Property Values" paper by Richard Schmidt, it provides documents from several cities and institutions that researched HD impacts thoroughly. Sources include the UPenn, the TN Preservation Trust, PhDs from various markets, NJ Historic Trust, CT Trust for HP, Washington Dept of Archaeology and HP, etc. In summary, the paper states

- **Home values increase**
- **Rents increase**

- **Taxes increase**

8. Four of the leading **Affordable Housing companies** in town state that HD on the Hill **'closes the door'** on them for any future development in that area.

9. <u>The 2030 Master Plan</u>

   "***We will remain an open and inclusive City, celebrating diversity and providing a welcoming and safe place for residents and visitors alike."***

   Key to our plan is creating an **<u>Equitable City</u>**. This critical aspect of our 2030 Plan was not included in Staff's memo, as a response to your recent request for a Comprehensive Plan Analysis. Creating a 12th Historic District which caters to only one class of people does not promote an 'open and inclusive City'.

   With the BLM movement and the Affordable Housing recent advocacy, please refer to submitted articles on the Systemic Bias & Racism of Preservation. One example is https://twistedpreservation.com/2020/06/02/systemic-racism-of-preservation/

Viable alternatives exist to address the needs of the City and the citizenry

- Home owners/Preservationists, like myself, can self-designate. I own an 1849 home and spend a lot of money to preserve it. Ironically, the original homeowner significantly altered the façade of my home in the 1850s. The 'new features' are celebrated today but would not be allowed if HD were in place then

- The Conservation Overlay was never evaluated and adding additional regulations on the Hill without a comprehensive review is negligent. The Overlay is flawed and needs this Board's attention to remedy. You can do this during the Recode project. Remove the proposed Hill R6 Changes, the Overlay and this proposal from your plates. Address the public's zoning concerns via the Recode project.

- Finally, looking at this proposal since COVID-19 has hit us all and impacted our economy, it is more important that we do not impose additional expense and burden on this neighborhood and/or push the housing crisis into other neighborhoods.

Please send the City Council a clear message by voting 'no' unanimously.

Carle Henry

Addendum A

Legal Notice Details

Based upon Staff testimony on March 10th, **proper notice could not occur** to any of these homeowners due to a universal list error, as confirmed by Staff in Feb

Note: The City does not know when this issue started, so will assume May 2019 for this discussion….however, more homeowners may be affected

If the problem/error started in May 2019, here are the events owners were unaware of because the City, per its own process/legal obligation, did not provide notice. Without knowledge of proceedings, the following events were missed:

1. June 13, 2019: Neighborhood Informational Meeting held by the City
2. July 10, 2019: The HPB 1st Workshop on the Proposed District
3. July 18, 2019: Notification of District Nomination
4. July 31, 2019: Historic Preservation Board Walking Tour
5. August 28, 2019: 2nd Walking Tour
6. September 4, 2019: HPB 2nd Workshop on the Proposed District
7. October 2, 2019: HPB 3rd Workshop on the Proposed District
8. November 6, 2019: HPB 4th Workshop on the Proposed District
9. November 20, 2019: HPB Public Hearing on the Proposed District
10. December 10, 2019: Planning Board Workshop on the Proposed District
11. Feb 11, 2020: Planning Board's 2nd Workshop
12. March 10, 2020: Planning Board's 3rd Workshop
13. TBD: Deliberations and Voting

Note: There is no cure for these homeowners. Many homeowners had no opportunity to give their voice in this process due to the City's error. It's too late to start this project over and too expensive (the inventory report is already 2+ years old/outdated, etc.) If you'd like a list of addresses impacted, please advise.

Addendum B

HPB Board Challenge

Under state law, (title 21-A within section 112(1)(a)), one can only have 1 domicile, thus 1 voting residence. By her action of voting in CE for (at least) the last few elections, Ms. Pollard is a Cape Elizabeth resident under the eyes of the law, even is she sleeps in Portland.

As the article states, this matter was raised in 2019 and quickly dismissed by the City Clerk, without researching the state law. In other words, the City was put on notice, did little research and went on the record closing this matter without doing its due diligence. The lack of effort shown opens the City to legal action (in addition to the fact that a unqualified member of the public is serving on HPB.)

Here is the March 25th, 2020 article link for your reference: https://portlandphoenix.me/munjoy-hill-historic-district-proposal-has-supporters-but-questions-remain/

Addendum C

The City is potentially creating a huge HD based upon lynchpin structures like this 3 story, flat roofed, significantly altered, historically unimportant building.

- Two non contributing buildings sit across the street
- The City's Inventory Report description of this Contributing Structure is incorrect
- It is a spectacularly uninteresting multi unit and provides little to anything to the character of the hill.

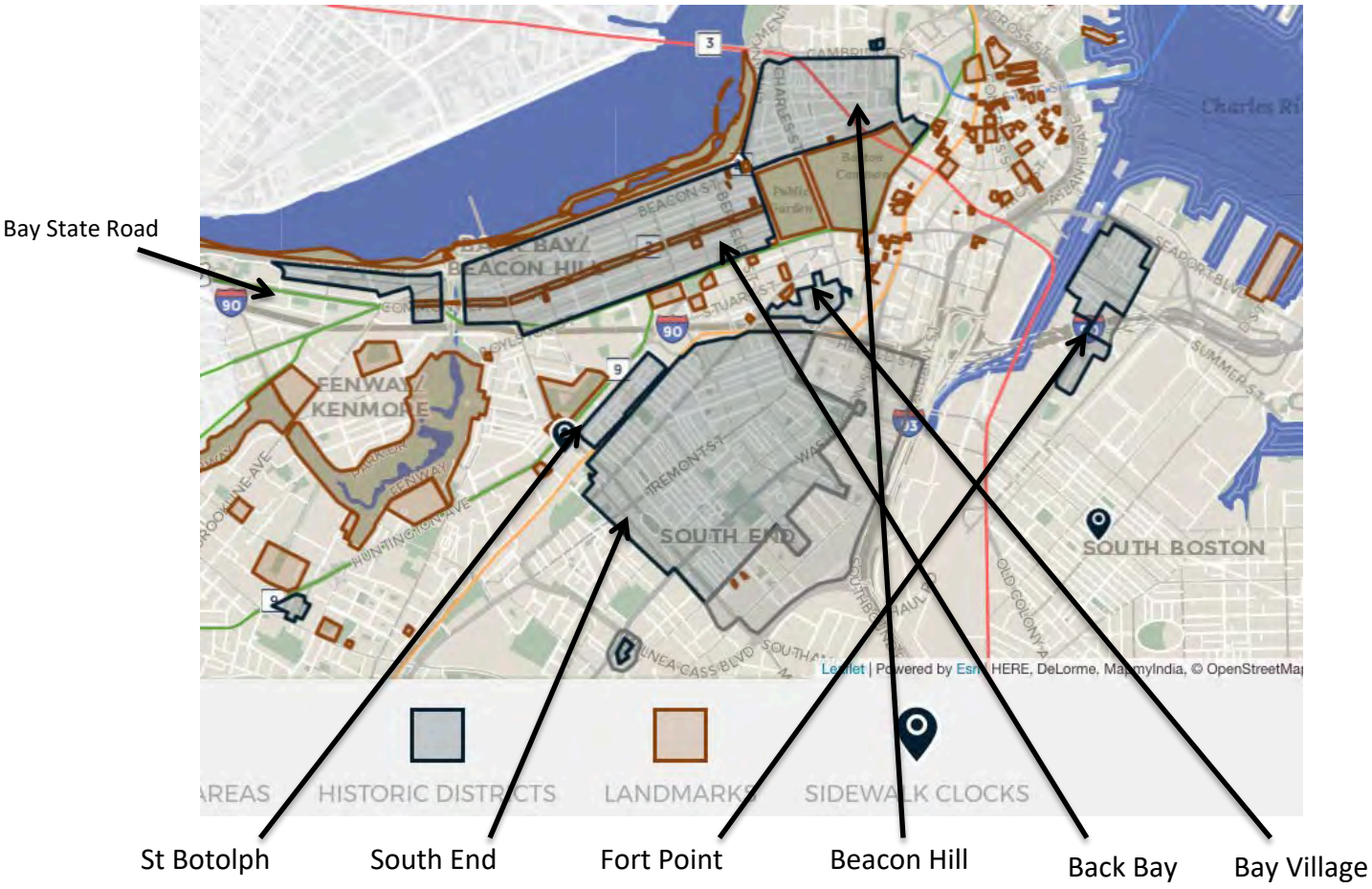
This should be non-contributing and once challenged and reclassified, this corridor will be another break (in addition to the existing break) in the gerrymandered district.

Address: 43 St. Lawrence
Approximate/Documented Date of Building: Unknown
Surveyed: 8/17/2018
Historic Name: Unknown
Contributing or Noncontributing: Contributing

Addendum D

Re **<u>comparing the # of HDs in Portland to Boston</u>**, I agree with Staff, in part, that it is an apple-to-orange discussion. 3 min is not enough time to give proper context. Here are some data points to make it more of an apple-to-apple comparison:

- Boston has 9 historic districts, within their 89.63 square miles or 1 HD for every 9.95 square miles roughly
- Portland has 11 HDs today. With a 12th, we will have 1 HD for every 5.75 square miles
- Of the 7 HDs in Boston proper, 6 are HDs while one is a Landmark District



- In Portland, our Peninsula is littered with HDs
  - Deering Street
  - West End
  - Congress Street District
  - Waterfront District
  - India Street District

- How House District
- Portland Company

The map shown by Staff on March 10th illustrated how HD consumes our peninsula, especially if a 12th is added. I requested the map for this document but received no response from Staff.

Addendum E

As stated by staff, the City has **never measured the impact of the 11 HDs** over the past 30 years on tenants, owners, development, diversity, etc. While it's too late to conduct a study, here is some relevant, free data as shared by Samantha Chapin, the City's Principal Administrative Officer & Jimmy Dealaman (City Planner) about the last 5 years on the Hill.

Location	Applied	Approved	Other
93 Saint Lawrence St	July 22 2015	Sept 29 2015	
72 Munjoy St	July 23 2015	Sept 29 2015	
65 Munjoy St	Dec 14 2015	Feb 9 2016	
31 Fore Street	Jan 16 2016	March 22 2016	
5 Romasco Ln	Jan 27 2016	March 8 2016	
30 Merrill St	July 18 2016	Oct 25 2016	
5 Cumberland Ave	March 8 2017	May 23 2017	
155 Sheridan St	March 29 2017	Sept 12 2017	
88 Walnut St	April 27 2017	July 25 2017	
24 Saint Lawrence St	Oct 11 2017	July 24 2018	
25 Monument St	Oct 13 2017	April 24 2018	
94 Walnut St	Oct 15 2018	Dec 19 2018	MHNCOD
57 Saint Lawrence St	Feb 21 2019	Aug 13 2019	MHNCOD
130 Morning St	June 21 2019	Oct 22 2019	MHNCOD
42 Lafayette St	July 11 2019	(submitted)	MHNCOD/HD
40 Obrion St	July 17 2019	(in review)	MHNCOD/HD
128 North St	Aug 5 2019	(in review)	MHNCOD/HD
33 Montreal St	Aug 13 2019	(in review)	MHNCOD/HD
49 Saint Lawrence St	Feb 18 2020	(in review)	MHNCOD/HD
33 Montreal St	Aug 15 2018	(in review)	MHNCOD

Staff is right that development can technically occur in an HD. No one questions this blanket statement. However, due to regulations, development has stopped on the hill. 0 approvals have been granted (as of 4/15/20) since HD went into place in July of 2019.

MHNCOD went into place on June 1, 2018
HD went into place on July 1, 2019

Google Groups

Munjoy Hill Historic District

Carol Connor <balsamique@live.com> Aug 1, 2020 11:26 AM
Posted in group: **Planning Board**

August 1, 2020

Chair Mazer and members of the planning board,

My name is Carol Connor and I am privileged to live at 12 Montreal Street overlooking the eastern Promenade. As I write to you I reflect on the Department of Planning & Urban Development's mission statement which is, "to strengthen and revitalize the City of Portland's neighborhoods and communities and to preserve and positively transform our physical, social and economic environment, while protecting the health, safety and welfare of our residents and visitors."

In light of that statement, I assert that the establishment of historic districts in Portland has shown to be in compliance with that intention. Revitalizing a neighborhood is most effective if affordable existing housing stock is maintained, improved and preserved, encouraging young families to become part of our community. In addition, the health, safety and welfare of our residents is best served by a thriving community of "doorstep" neighbors who actually know and greet each other on a regular basis. Mega-box dwellings do not lend themselves to this kind of close knit community life where folks look out for each other.

I am writing to express my wholehearted support for the establishment of the Munjoy Hill Historic District and for the individually proposed landmarks as well. I applaud the detailed research and study by the Historic Preservation Board and planning staff, and support their proposal as written. This plan has been carefully and conservatively crafted to include a fair portion of the documented historic homes along with the 6 others put forth by individual owners including me. We are fortunate to have a city whose 2015 Comprehensive Plan values and supports our historical landmarks, buildings, parks, green spaces, and iconic family homes.

Munjoy Hill is a rare gem, and one of the most admired, appreciated and frequented areas of Portland. It is geographically and historically unique not only because of its majestic seaside setting, but for the charm and enduring appeal of the many early homes that have survived destruction and development.

In order to protect and preserve the history, character and unique qualities of Munjoy Hill, I respectfully request that you make our city and state proud by voting in favor of the Munjoy Hill Historic District.

Thank You,

Carol M. Connor
12 Montreal St.
Portland, Maine 04101
Balsamique@live.com

Sent from my iPad

5 August 2020

Dear Chair Mazer and members of the Planning Board:

On March 13th of this extraordinary year, I emailed you my comment on the Munjoy Hill Historic District. I am quoting it here. I think the line of reasoning is even stronger today.

> "The days of top-down planning are over. That method of making decisions brought us the "arterials" Franklin Street and Spring Street and destroyed neighborhoods in the name of progress in far too many places in Portland and around the world.
>
> Our City staff practice a new method, where the residents of the City are consulted at the beginning of every planning initiative and throughout the process until the proposed planning initiative is approved by the Planning Board and the City Council. This process was followed for the Comprehensive Plan and it has been followed for the proposed Munjoy Hill Historic District.
>
> Portland residents expressed a strong desire to protect our historic resources and neighborhoods in the Comp Plan process. They have reinforced that strong desire throughout the Munjoy Hill process. An overwhelming majority of written and spoken comments to the Planning Board favor the historic district. An overwhelming majority. The neighborhood wants this.
>
> I urge you not to dismiss the desires of the neighborhood. Don't take a top-down approach. Recommend the proposed Munjoy Hill Historic District to the City Council with your strong support."

Thank you for all of the time, energy and thoughtfulness that you give to the City.

Carol De Tine
144 Vaughan Street

Google Groups

Munjoy Hill Historic District

Carol De Tine <chstudio@maine.rr.com> Mar 13, 2020 11:25 AM
Posted in group: **Planning Board**

Dear Chair Mazer and members of the Planning Board:

The days of top-down planning are over. That method of making decisions brought us the “arterials” Franklin Street and Spring Street and destroyed neighborhoods in the name of progress in far too many places in Portland and around the world.

Our City staff practice a new method, where the residents of the City are consulted at the beginning of every planning initiative and throughout the process until the proposed planning initiative is approved by the Planning Board and the City Council. This process was followed for the Comprehensive Plan and it has been followed for the proposed Munjoy Hill Historic District.

Portland residents expressed a strong desire to protect our historic resources and neighborhoods in the Comp Plan process. They have reinforced that strong desire throughout the Munjoy Hill process. An overwhelming majority of written and spoken comments to the Planning Board favor the historic district. An overwhelming majority. The neighborhood wants this.

I urge you not to dismiss the desires of the neighborhood. Don’t take a top-down approach. Recommend the proposed Munjoy Hill Historic District to the City Council with your strong support.

Thank you.

Carol De Tine
144 Vaughan Street

Carol De Tine AIA

Maine Licensed Architect

Carriage House Studio Architects LLC
144 Vaughan Street
Portland Maine 04102
207 318 0731

www.carriagehousestudio.com

Google Groups

Munjoy Hill

CHUCK <cvkamar@comcast.net> Aug 6, 2020 9:23 PM
Posted in group: **Planning Board**

I am a resident of Munjoy Hill. I support the proposed Munjoy Hill Historic District and six landmarks with NO changes or modifications to what the Historic Preservation Board nominated back in November 20, 2019.
Sincerely,
Charles V. Kamar
55 Morning Street
Portland, 04101 ME

Sent from Xfinity Connect Application

✉

P.O. Box 4825
Portland, ME
04112-4825

Date: August 6, 2020

To: Brandon Mazer, Chair and the Members of the City of Portland Planning Board
Via e-mail: planningboard@portlandmaine.gov

From: Christine C. Cantwell
Highland Street, Portland

RE: Munjoy Hill Local Historic District Designation

I strongly support the Munjoy Hill Local Historic District as proposed and urge you to approve its historic designation. These are my thoughts

Heritage. The Munjoy Hill Historic Preservation District delineates a tangible repository of significant cultural history. Although there are few buildings in it designed by notable nineteenth and early twentieth-century architects, there remains a consistent display of sturdy American building characteristics, street landscape dimensions, and view corridors that demonstrate how closely the Hill's occupants were tied to the sea to the east and the mountains and forest to the north.

A City Neighborhood. The recent well documented inventory and studies of Munjoy Hill by Greater Portland Landmarks and others makes the case that the vernacular domestic architectural trends of distinct periods are intact. Structures in the Greek revival, Italianate styles, and early twentieth century wood triple-decker construction, some with brick facades contain the cultural memory of the movement of people in and out of Portland. Many of them were working class immigrants. The disposition of buildings - often compactly and awkwardly placed next to one another - without consideration for village-like scale and context that are fought over today - demonstrate a history of people moving into middle class homeownership, the provision of suitable rental units for families, and proximity to provisioners. Even the finest architectural examples of historic residences on the Hill fall short of architectural artistry. They do not employ understated Classical, English, or Japanese references seen in the architecture of upper-class residential development in Portland, but they are well built successes of people with ambition, and together they speak to earlier times when workers contributed to the prosperity and customs of Maine.

Ground Plan. I view the Munjoy Hill District overlay map figure - in the way an anthropologist regards a fragment of woven cloth – as evidence with which to amplify and dignify the past so that it can enrich contemporary development and urban texture. As I see it, understanding land use patterns and historical rootedness are the geometric and social basis for advancing construction in Portland. The community is full of concern about preservation of our architectural inheritance and simultaneous social justice angst. Because the Munjoy Hill District is a small-scale, tightly packed, and primarily residential zone, it is crucial that the City not only protect the historical urban fabric and key artifacts, but foster and incentivize well-designed, sustainable new architecture to address need and can become landmark buildings and designed interstitial zones of the future.

Review Authority. If contemporary architectural projects are proposed and need to be reviewed within or at the edge of the district where the urban fabric is not as historically intact, the HP Review Board and staff enforcement authority can be reinforced with adjunct, civically-minded design reviewers who can offer technical and artistic insight concerning contemporary design in historical settings. The Department of Interior Guidelines that historic preservation relies upon do not always cover the interface of old and new; but because they offer principles for interpreting architecture, it is helpful to exercise dialogue that can raise knowledge of what effect the results of proposals will have on the public realm.

Google Groups

MH Historic District

Christopher Akerlind <chrisakerlind@gmail.com> Aug 5, 2020 8:34 AM
Posted in group: **Planning Board**

To whom it may concern:
I'm a Munjoy Hill resident who is fully supportive of the Historic District plan. Hoping you will lass it along to the City Council with your approval.
Christopher Akerlind
44 Monument Street
Portland 04101

Google Groups

Supporting the Munjoy Hill Historic District

Chris Stewart <stewart.christopher1@gmail.com> Aug 6, 2020 4:49 PM
Posted in group: **Planning Board**

Dear Planning Board,

I'm a resident of Munjoy Hill and I hope you will vote for the Munjoy Hill Historic District and six landmarks with no changes or modifications of the proposal nominated on November 20, 2019.

I support the Munjoy Hill Historic District. Historic districts do not hinder or reduce affordable housing. Repairing and reusing historic buildings is better for our environment than new construction. Historic districts manage change rather than prevent it. These favorable arguments cannot be ignored. Those who come after us will be grateful if we preserve the character of this vital community.

Thank you,
Christopher. R Stewart
81 North Street
Munjoy Hill

Google Groups

Historic preservation

CHUCK <cvkamar@comcast.net> Aug 4, 2020 9:54 PM
Posted in group: **Planning Board**

Dear Board Members,
Please endorse the recommendation of the HPC that the Munjoy Hill Historic District be adopted.

Thank you,

Charles V. Kamar
55 Morning St.
Unit 2-1
Portland, ME 04101

Sent from Xfinity Connect Application

Google Groups

Munjoy Hill Historic District

Clare LaVergne <clare.lavergne@gmail.com> Aug 3, 2020 4:49 PM
Posted in group: **Planning Board**

Dear Chair Mazer and Planning Board members,

I write to urge you to recommend that the City Council designate a Munjoy Hill Historic District as recommended by the Historic Preservation Board.

As a renter for 5+ years on Munjoy Hill, I stand to be directly affected by the designation. The building in which I rent an apartment is one of many rental properties that will be contributing structures in the District. Anyone who has rented in Portland in the last 10 years knows that the market is tight and the prices are high, especially in this neighborhood. **Historic districts stabilize neighborhoods for long-term renters** like me and many others who contribute to keeping a neighborhood thriving.

Historic districts also protect residents, property owners, and their investments from insensitive development that block views, eat up off-street parking space, and become eye-sores in otherwise beautiful and historic neighborhoods. How many bland, boxy luxury condos for seasonal residents do we need?

Historic districts are also better for the environment. The carbon emissions footprint for renovating an existing building is 10 times less than that for demolishing and building new construction. This makes good sense.

Maintaining economic diversity on Munjoy Hill is paramount for preserving this vibrant and thriving neighborhood and keeping it accessible to as wide a cross-section of our population as possible. Because of the historic tax credits that exist, **there is a greater chance that affordable housing will be built in a historic district**.

These and many other sound reasons point toward the need for a historic district designation for Munjoy Hill. It will protect the distinct architectural and historic character of this iconic neighborhood, one of Portland's many gems. It will prevent the demolition of designated landmarks and contributing historic structures within the district. It will extend the protections which have been used so successfully in the West End for 30 years to a portion of the East End. And it will protect a significant portion of the workforce housing from being demolished to make way for very expensive new construction.

As has been shown over the last three decades, Portland's successful historic preservation program manages change to prevent the unnecessary loss of the community's historic features and to encourage compatible preservation, restoration, and rehabilitation. This is precisely what is needed on Munjoy Hill.

I encourage you to recommend passage of the Munjoy Hill Historic District and designation of several associated landmark structures as recommended by the Historic Preservation Board.

Kind regards,

Clare LaVergne

--
Clare LaVergne
clare.lavergne@gmail.com
210-621-8816

Google Groups

Munjoy Hill Historic District

Curt Sachs <sachsarch@gmail.com> Aug 5, 2020 8:39 AM
Posted in group: **Planning Board**

I am an architect living in the West End. With nearly 40 years in profession, I have supported the establishment of such districts and maintaining their character. I am currently the Owners Representative for restoring the Maine Jewish Museum on Congress Street, a priceless piece of Munjoy Hill's fabric.

The City would be remiss if it didn't support creating and sustaining Munjoy Hill.

Curt Sachs
--
M. Curt Sachs
Studio Curt Sachs

sachsarch@gmail.com
207.615.6628
Maine Licensed Architect

Google Groups

Re: Munjoy Hill Preseration

Dave Haeger <d.haeger@roadrunner.com> Aug 5, 2020 11:47 AM
Posted in group: **Planning Board**

To Whom it may concern:

Our Grandson just moved to Munjoy Hill and we hope that the unique beauty of Munjoy Hill will be preserved. It is indeed a unique area and it must be preserved.

Mary Haeger

69 Knickerbocker Lane

Peaks Island, ME 04108

Google Groups

Support Proposed Munjoy Hill Historic District

David Machesney <dmachesney@prattabbott.com> Aug 7, 2020 8:51 AM
Posted in group: **Planning Board**

To All:

I am a resident of Munjoy Hill. I support the proposed Munjoy Hill Historic District and six landmarks with No /changes or modifications to what the Historic Preservation Board nominated in 11/20/2019.

Thanks for your attention to this important issue.

David Machesney

213 Sheridan Street

Dear Chair Mazer and Members of the Planning Board,

I write to encourage you to support the designation of a portion of Munjoy Hill as an Historic District. There are so many good reasons to support this designation. I am currently a resident of an historic district in Portland, but previously I lived in New Hampshire.

I've attached a fact sheet from the New Hampshire Division of Historical Resources titled, "What Are Historic Districts Good For, Anyway?"" Most of the information in this document is directly relevant to the consideration of Munjoy Hill for historic designation.

Relating to the issue of the economic benefits to communities of supporting the designation of historic districts, here are some statistics from Donovan Rypkema, a principal in a nationally known real estate & economic development consulting firm:

"Historic preservation does have a measurable economic effect on a community. This impact is not only as an economic activity in general, but in comparison to new construction in particular...Suppose a community is choosing between spending $1,000,000. in new construction and spending $1,000,000. on rehabilitation. What would the differences be?

- $120,000. more dollars will initially stay in the community with rehabilitation than with new construction. (
- 5 to 9 more construction jobs will be created with rehabilitation than with new construction. (
- 4.7 more new jobs will be created elsewhere in the community with rehabilitation than with new construction. (
- Household incomes in the community will increase $107,000. more with rehabilitation than with new construction. (
- Retail sales in the community will increase $142,000. as a result of that $1 million of rehabilitation expenditure -- $34,000. more than with $1,000,000. of new construction. (
- Real estate companies, lending institutions, personal service vendors, and eating and drinking establishments will all receive more monetary benefit from $1,000,000. in rehabilitation than from $1,000,000. in new construction..." ([he goes on to say:] ("Historic preservation makes sense in large measure because historic preservation makes dollars and cents, but it also saves dollars and cents. Historic preservation is a rational and effective economic response to overconsumption. To make a new brick today to build a building on a site where there is already a building standing steals from two generations.

> It steals from the generation that built the brick originally by throwing away (their asset before its work is done, and it steals from a future generation by using increasingly scarce natural resources today that should have been saved for tomorrow. Perhaps we have already consumed enough of somebody else's assets -- it's time for us to make better use of our own. Historic preservation is a way for us to do that."

Thank you for considering my views,

Deb Chase
Orchard Street
Portland

NEW HAMPSHIRE DIVISION OF HISTORICAL RESOURCES

State of New Hampshire, Department of Cultural Resources
19 Pillsbury Street, Concord, NH 03301-3570
TDD Access Relay NH 1-800-735-2964
www.nh.gov/nhdhr

603-271-3483
603-271-3558
FAX 603-271-3433
preservation@dcr.nh.gov

WHAT ARE HISTORIC DISTRICTS GOOD FOR, ANYWAY?

Daniel Webster once said that a person who doesn't respect the past isn't performing his [or her] duty to the future. Perhaps it was Webster's eloquence that inspired the 1963 session of the New Hampshire General Court when it established New Hampshire's historic district enabling legislation. The legislators could have been very straightforward and perfectly legal by saying something prosaic like "New Hampshire municipalities may establish historic districts according to the following procedures..." What they actually DID say was:

> ***"The preservation of structures and places of historic and architectural value is hereby declared to be a public purpose. The heritage of the municipality will be safeguarded by:***
>
> ***I. Preserving a district in the municipality which reflects elements of its cultural, social, economic, political and architectural history;***
> ***II. Conserving property values in such district;***
> ***III. Fostering civic beauty;***
> ***IV. Strengthening the local economy; and***
> ***V. Promoting the use of a historic district for the education, pleasure, and welfare of the citizens of the municipality."***
>
> *[RSA 31:89-a (1963), now RSA 674:45]*

In 1992, these purposes were broadened to include cultural resources and community history, and to recognize multiple districts. It's clear that the legislators didn't intend historic districts to be isolated shrines forever frozen in white paint. Instead, they deliberately described historic districts as centers of civic and economic activity.

Historic districting is a strategy that WORKS -- literally and figuratively -- to preserve both the character *and* the tax base of a community.

Historic districts have the paradoxical twin virtues of stability and flexibility. They encourage continuity and the care of existing properties, while respecting changes over time -- layers of life -- that add architectural richness and visual variety to townscapes. But they do not prevent new construction, nor should they prohibit contemporary design that is respectful of existing resources.

What about the reasons NOT to have a local historic district? Whenever the idea of historic districting comes up locally, "historic district horror stories" are sure to follow. Most of them are either misinterpretations, or misunderstandings, or just plain wrong -- and they usually happened in some other state, anyway. What happens in other states is their business. What happens here in New Hampshire follows New Hampshire laws and policies, administered by New Hampshire people, in New Hampshire communities.

RESISTING A HISTORIC DISTRICT SHOWS A LACK OF TRUST IN YOUR OWN COMMUNITY'S COLLECTIVE COMMON SENSE.

Historic district horror stories seem to circulate most freely in communities that haven't adopted a historic district. Once a district *is* established, criticism almost always dies down, and the positive realities of historic districting chase the myths away.

Sometimes historic districts are portrayed as anti-business. That's not true! Historic districts encourage reinvestment. And historic preservation is a GOOD investment. Here are some statistics from Donovan Rypkema, a principal in a real estate & economic development consulting firm:

"Historic preservation does have a measurable economic effect on a community. This impact is not only as an economic activity in general, but in comparison to new construction in particular...Suppose a community is choosing between spending $1,000,000. in new construction and spending $1,000,000. on rehabilitation. What would the differences be?

- ***$120,000. more dollars will initially stay in the community with rehabilitation than with new construction.***
- ***5 to 9 more construction jobs will be created with rehabilitation than with new construction.***
- ***4.7 more new jobs will be created elsewhere in the community with rehabilitation than with new construction.***
- ***Household incomes in the community will increase $107,000. more with rehabilitation than with new construction.***
- ***Retail sales in the community will increase $142,000. as a result of that $1 million of rehabilitation expenditure -- $34,000. more than with $1,000,000. of new construction.***
- ***Real estate companies, lending institutions, personal service vendors, and eating and drinking establishments will all receive more monetary benefit from $1,000,000. in rehabilitation than from $1,000,000. in new construction..."***

[he goes on to say:]

"Historic preservation makes sense in large measure because historic preservation makes dollars and cents, but it also saves dollars and cents. Historic preservation is a rational and effective economic response to overconsumption. To make a new brick today to build a building on a site where there is already a building standing steals from two generations. It steals from the generation that built the brick originally by throwing away their asset before its work is done, and it steals from a future generation by using increasingly scarce natural resources today that should have been saved for tomorrow. Perhaps we have already consumed enough of somebody else's assets -- it's time for us to make better use of our own. Historic preservation is a way for us to do that."

That's the dollars; now for the sense: If the activities of historic district commissions were truly controversial, there would have been dozens of court cases in the more than 30 years that New Hampshire has had historic districts. But there have been only a few cases in which the role of historic district commissions has been specifically addressed by the New Hampshire Supreme Court.

The most important case is already several years old: *Victorian Realty Group v. City of Nashua*, 130 N.H. (1987), unanimously affirmed that the planning board may draw on a historic district commission's expertise "based on factors related to the historic character and significance of the buildings at issue" in making decisions on subdivisions and site plan approvals involving a historic district.

The Court stated, "The members of the historic district commission are the most familiar with the historic district, and are uniquely suited to provide recommendations to the planning board. We conclude that the planning board may properly consider the recommendations of the historic district commission..."

This is a clear assertion that historic district commissions can help planning boards implement the community's desire to safeguard its historic districts.

Furthermore, New Hampshire state law requires that "all districts and regulations shall be compatible with the master plan and zoning ordinance of the city, town, or county in which they exist" [RSA 674:46-a, IV.]. Many planners and local officials see historic districts as important tools for maintaining local character and for strengthening property values.

Historic district regulations are quality assurance standards, so that one owner's major investment (or treasured homestead) isn't negated by a "sleaze job" next door.

At the state level, developers, investors, planners, and architects who want to be known for excellent work purposely seek out properties in historic districts. It reduces their risk factors; they know up front what the rules are; and they know that the historic district acts as an early warning system to insure that any changes to surrounding properties (which could affect the value of their investment) will be subject to consistent ground rules and community standards, administered through an open public process in which they or their clients, as abutters, can participate.

A historic district commission can be an important source of expert technical assistance for property owners, helping them to cope with the creatures that think of historic buildings as Old Home Day dinner; educating owners about good and bad historic preservation techniques; and sharing simple but effective advice about getting maximum benefit from the effort and expense involved in preservation work.

Historic district members can provide professional-level architectural and historical expertise which might be otherwise unavailable or unaffordable for many applicants.

Generally -- unless the citizens demand it -- historic districts do NOT regulate paint colors, since paint is cosmetic and colors, no matter how jarring, can be changed in a day or two. In communities with historic districts, the more frequent complaint is that the commission isn't able to do enough, *not* that it's doing too much.

One of the things a historic district commission *must* do, as part of developing a proposed district and ordinance, to conduct a local historical resources survey which is linked to statewide as well as local historical themes and contexts. (The Division of Historical Resources can provide how-to advice and some assistance.)

Communities that have established a local survey process, a historic district or heritage commission, a historic district ordinance, and a historic district, are eligible to apply for "Certified Local Government" status. If the local historic district ordinance, regulations, and procedures meet special state and federal program standards, the municipal government enters into a "Certification Agreement" to establish the basic historic preservation performance standards that the *entire municipality* -- not just the historic district commission alone -- must fulfill in order to become and remain certified. After they meet the certification standards, the "CLGs" become part of a technical assistance and information-sharing network with the DHR and other CLGs, which strengthens the local preservation program. They are also eligible to apply for federal matching grants from a special pass-through fund set aside for the exclusive use of Certified Local Governments. CLGs are monitored regularly to insure that they continue to meet program requirements and can remain eligible for CLG funds and services.

The CLG program is a federal incentive. The 1992 state legislative session enacted a new state incentive: heritage commissions, which give local governments in New Hampshire new abilities to recognize and protect historical and cultural resources. Unlike historic district commissions, whose responsibilities are limited to specific parts of a community, heritage commissions are intended to have a town-wide or city-wide scope, and a range of activities that is determined by each individual municipality.

Heritage commissions do for cultural resources what conservation commissions do for natural resources. Functionally, heritage commissions are somewhere between historical societies and historic district commissions, with their precise role determined locally. And while their primary duties are to advise and assist other local boards and commissions, including the planning board, heritage commissions are also empowered to accept and expend funds for a non-lapsing heritage fund, and to acquire and manage property and property rights.

Some communities have heritage commissions that are only advisory, but others want their commissions to take a much more active role, and to assume the responsibilities of a historic district commission. And all of these are local decisions, authorized by the state enabling legislation: it gives communities a menu, not a mandate.

When communities consider creating heritage commissions or historic districts, it's easy to get distracted by procedures and processes and legalistic technicalities; but those are details. The principal reason for having a historic district (or several) is that a historic district is a community's way of taking a deep breath and a long look around at itself and saying, "*THIS IS SPECIAL. THIS IS IMPORTANT TO ALL OF US IN MANY DIFFERENT WAYS. THIS IS TOO GOOD TO WASTE. THIS IS A PLACE WE SHOULD TAKE CARE OF TOGETHER.*"

Taking time to establish historic districts is a good investment. A historic district helps citizens to recognize and appreciate the often-overlooked (or taken-for-granted) values of time and place, and helps to keep those values in place. It reminds us to look for richness of detail in our "everyday" environment.

Most important, a historic district is a way of recognizing that books aren't our only source of information about the past.

When we lose the storytelling capability of a building or a place, we may be silencing historical voices that can't communicate with us in any other way. And the danger here is not only the dramatic demolition of a well-known landmark. It is also the gradual but pervasive erosion (or perversion) of historical character that can happen with the accumulation of incremental changes to buildings and places. Yet often those causing the losses would have made different (and more respectful) choices with only the slightest encouragement, or better information.

Historic districts are an ideal tool for focusing a community's attention and fostering wise decisions that, over the years, add up to a whole that has value and meaning greater than any of its separate parts.

Making the effort to establish and to maintain historic districts is an effective way to acknowledge the character and meaning of our community life, with its three-dimensional heritage of people, places, and patterns.

Historic districts help us to recognize and fulfill our responsibility both to the past and, simultaneously, to the future.

So, how do you DO it? What you need to know is in the two books cited below; consider them cookbooks or instruction manuals or field guides -- and then study them, and follow them. When you're puzzled, call the Division of Historical Resources. And always remember: historic districting is a public process for the public benefit. The more people who are involved in the process, the better -- and the more popular -- the final results will be.

FOR MORE INFORMATION:

New Hampshire Planning and Land Use Regulation:. Issued by the New Hampshire Office of Energy and Planning, Concord, New Hampshire. Charlottesville, Virginia: © Matthew Bender & Company, Inc., a member of the LexisNexis Group. (New editions issued annually.)

Preserving Community Character: A Preservation Planning Handbook for New Hampshire. Concord, New Hampshire: New Hampshire Preservation Alliance, 2006.

Copies of the New Hampshire Revised Statutes Annotated (RSAs) are online at *http://www.gencourt.state.nh.us/rsa/html/indexes/default.html.*

"This publication has been financed in part with a federal 'Historic Preservation Fund' matching grant from the National Park Service of the United States Department of the Interior, through the New Hampshire Division of Historical Resources / State Historic Preservation Office. However, its contents and opinions do not necessarily reflect the views or policies of the Department of the Interior. New Hampshire's state historic preservation program receives federal financial assistance for identification and protection of historic properties. Under Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, and the Age Discrimination Act of 1975, as amended, the U. S. Department of the Interior prohibits discrimination on the basis of race, color, national origin, or disability or age in its federally assisted programs. The State of New Hampshire (under RSA 275 and RSA 354-A) prohibits discrimination on the basis of age, sex, race, creed, color, marital status, physical or mental disability or national origin. If you believe that you have been discriminated against in any program, activity, or facility as described above, or if you desire further information, please write to: Office for Equal Opportunity, National Park Service, 1849 C Street, NW, Washington D.C. 20240."

Google Groups

Historic district for Munjoy Hill

Deborah Cole <debcole1030@gmail.com> Aug 5, 2020 2:38 PM
Posted in group: **Planning Board**

To:
Portland Planning board
From: Deborah Cole Munjoy Hill homeowner since 1980
Date: August 5, 2020
Dear Planning board,
I am strongly in favor of your passing this initiative.
The benefits have been outlined and reviewed and support for this initiative is broad-based and well articulated.
These benefits include:
Stable neighborhood infrastructure
Tax benefits to home owners
Historical preservation
Quality of design and street scape integrity
To name a few.
Please add my name to those in favor of your “yes”
Vote and without further adieu pass this historic district designation for Munjoy Hill and we can all breathe a sigh of relief that our wonderful city is in sensible hands.
Thank you,
Deborah Cole
71 Walnut
St
Portland 04101

Sent from my iPhone

Google Groups

Munjoy Hill historic district

Denise Preisser <depreisser@hotmail.com> Aug 5, 2020 9:35 PM
Posted in group: **Planning Board**

To whom it may concern:
I am informing you that as a resident on Munjoy Hill I am in favor or the Munjoy Hill Historic Désignation As was outlined on the card I received in the mail. I feel this designation will help preserve the history and charm for future generations.
Best Regards,
Denise Preisser
25 Fore Street #2

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Google Groups

Munjoy Hill preservation

Derek Campbell <derekc76@gmail.com> Aug 5, 2020 12:30 PM
Posted in group: **Planning Board**

I am a resident of Munjoy Hill. I support the proposed Munjoy Hill Historic District and six landmarks with NO changes to what the Historic Preservation Board nominated back in 11/20/19.

I feel Munjoy Hill is historically significant and worthy of preservation. It is clear the rules as presently written have loopholes that are too easily exploited by developers eager to make a quick buck and without regard to history and architectural heritage. There is real value in preserving Munjoy Hill as a historical district that continues to offer somewhat affordable housing options.

Thank you for your consideration,

Derek Campbell
Sent from my iPhone

Google Groups

Historic District

Diane Davison <dmdavison5@gmail.com> Aug 6, 2020 11:28 AM
Posted in group: **Planning Board**

Planning Board Members;

The Munjoy Hill neighborhood borders Portland's premier historic Olmsted park, the Eastern Promenade.

Brandon- having recently served as President for Friends of the Eastern Promenade, I trust you understand and value the integrity of this beloved historic landmark and the long overdue historic district covenant for the architecture within this region of Portland.

NOW is the time to support the efforts and wisdom of our Historic Preservation Board's recommendation for protection of the historically and architecturally significant buildings in Portland's premier location; the Eastern Promenade.

I urge the planning board do the right thing and preserve the dignity of Munjoy Hill by supporting inclusion of our neighborhood as one of Portland's historic districts.

Better late than never.
Respectfully,

Diane Davison
Morning Street
Munjoy Hill

Google Groups

Munjoy Hill Historic District Designation

Edmund Gardner <ed@gardnerregroup.com> Aug 5, 2020 3:30 PM
Posted in group: **Planning and Urban Development**

Dear Members of the Planning Board,

I want to voice my vote for being very much in favor of the proposed Historic District on Munjoy Hill. This peninsula neighborhood is peppered with many notable historic structures that help keeping to tell the story of Portland. I have had the pleasure and benefit of owning and renovating several Hill buildings including the John Ford house at 21 Sheridan St, the “BOX BAY” triple decker at 101 North Street and the Victorian at 84 Eastern Promenade, the backdrop of historic Ft. Allen Park. Hopefully these buildings, along with several other contributing ones, can be saved by a district for decades to come, so that future generations can enjoy the necessary fabric of Portland’s creation and beauty. Let us never be sorry that the history of Portland, is irresponsibly erased forever.

Thank you!

Ed

Ed Gardner

Broker / Owner

Gardner Real Estate Group

511 Congress Street Lobby level

Portland, Me. 04101

207-415-4493 Cell

207-GARDNER Office

GardnerREGroup.com

Google Groups

Munjoy Hill

Edward Fiske Mooney <efmooney@syr.edu> Aug 4, 2020 9:17 PM
Posted in group: **Planning Board**

From: Edward F Mooney
Date: August 4, 2020
To: Planning Board <planningboard@portlandmaine.gov>, Deb Andrews <dga@portlandmaine.gov>, Christine Grimando <cdg@portlandmaine.gov>
Subject:Munjoy Hill Historic District

An historic district preserves architectural heritage – buildings worthy of preserva on. It also preserves a neighborhood, and a neighborhood isn't just streets and buildings.

A neighborhood is a place where neighbors know each other, greet each other in passing, walk to the local grocery store, push baby carriages and walk dogs that we know as well as we know their owners.

When new construc on reaches six and eight stories, with the concentra on of inhabitants piled backward and skyward, streets will not be neighborly, traffic will not be leisurely, there will be too many cars spiri ng owners away, fewer walkers and carriage pushers and dog walkers. A quiet and friendly neighborhood will morph into a noisy, busy, urban melee.

Sincerely, Edward F Mooney
77 Vesper Street #1, Munjoy Hill

Google Groups

Support for Munjoy Hill Historic District

Edwin Chester <chester@chesterandvestal.com> Aug 6, 2020 10:21 AM
Posted in group: **Planning Board**

Chair Mazer and Members of the Planning Board:

I support the designa. on of a Historic District for Munjoy Hill and support the designation of several individual landmark buildings, all as recommended by the Historic Preservation Board. I own property in the proposed district that would be classified as contributing, and own one of the buildings proposed to be designated as a local landmark.

A lot of misinformation has been generated by some opponents. For example, it was recently asserted that a historic district would not prevent developers from demolishing old buildings "as of right" to make way for new construction. This simply isn't accurate.

It is clear in the Historic Preservation Ordinance, and has been the experience in Portland's existing historic districts (e.g., Parkside, West End, Congress Street, India Street, etc.), over the last 30 years, that **landmark and contribu ng buildings in a designated district may not just be demolished as a ma er of right.**

It is true that "**noncontribu ng buildings**" in a district may be demolished as a ma□er of right. But noncontributing buildings are a small fraction of the total number of buildings in a historic district. **In the proposed Munjoy Hill Historic District, of 433 structures, only approximately 52 structures (12%) are "noncontribu ng."** The ordinance would not prevent any of those 52 structures from being demolished. However, economic considerations would probably reduce the likelihood that many of those 52 structures will actually be candidates for demolition. Of the 12%, many are deemed "noncontributing" because they are relatively new (e.g. less than 50 years old). Even if not protected by the ordinance, outright demolition of those buildings constructed after 1970 is probably unlikely.

In the proposed Munjoy Hill Historic District, **88% of the structures**, the vast majority of the buildings, are either "**contribu ng"** or "**landmarks."** Under the terms of Portland's Historic Preservation Ordinance, if an owner wants to demolish one of those buildings, the owner **will have to apply to the Zoning Board of Appeals (ZBA) for a cer ficate of economic hardship to allow the demoli on.** (Sec. 14-660 (a)) **The ZBA will not grant a demoli on permit unless the owner proves that denying the demoli on "will result in the loss of all reasonable use of the structure."** (Sec. 14- 661) The owner has to prove, by clear and convincing evidence, that "denial of a demolition permit would result in a hardship to the property owner so great that it would effectively deprive the owner of all reasonable use of the structure." (Sec. 14-664(b)(2). This is a very high bar to meet. That hardly qualifies as demolition "as of right."

In fact, there have been a mere handful of demolitions of contributing or landmark structures allowed in Portland's historic districts over the last 30 years on the basis of economic hardship. A few owners have pursued an alternative path of asking the Historic Preservation Board to determine that the structure shouldn't have been categorized as contributing or landmark in the first place. Only a few structures have been recategorized and demolitions allowed on that basis over the last 30 years.

It is true that new buildings can be constructed in a historic district. They may even be high end residential units. A historic district designation does not freeze the district in time, nor does it regulate type of use. It does not prevent change. But due to limits on demolition of landmark and contributing buildings, the scale and pervasiveness of new construction is moderated. New construction will be limited to infill development on already vacant lots or on lots created by the demolition of noncontributing structures. Those lots are likely to be smaller and sca□ered,

minimizing the opportunity for consolidation of multiple lots for large out of scale new construction. And the design of new construction will be subject to review by the Historic Preservation Board using standards intended to ensure that new construction is compatible with and respectful of the historic architectural fabric of the neighborhood. The combined limits on which buildings can be demolished, and the review standards regulating exterior design of new construction, additions, and renovations will protect the valued, historical character of our neighborhood.

Finally, an opponent continues to complain that the City has not polled the residents of Munjoy Hill to get our opinion on the historic district designation. This has not been done for any of the other historic districts. The overwhelming support (about 80% or more of all testimony and wri□en comments) is clear evidence of the support of neighborhood residents for a historic district designation.

The City has established an admirable track record over the last 30 years of using its historic preservation program to positively manage change in large portions of the peninsula. It is past time for Munjoy Hill to have the benefit of the same level of stewardship.

Sincerely,

/s/ Edwin P. Chester

Edwin P. Chester

--

Edwin P. Chester, Esq.
Chester & Vestal, PA
107 Congress Street
Portland, Maine 04101
(207) 772-7426 - phone
(207) 761-5822 - facsimile

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Google Groups

Munjoy Hill historic district

Einar Juhlin <ejuhlin1@maine.rr.com> Aug 5, 2020 11:20 AM
Posted in group: **Planning Board**

I support the planning board.
Ruth G. Hansen

Sent from my iPad

Google Groups

Munjoy Hill Historic District

Elaine Clark <elaineplclark@gmail.com> Aug 5, 2020 7:56 PM

Posted in group: **Planning and Urban Development**

As a member of Greater Portland Landmarks, I have attended many public informational sessions and meetings about the Munjoy Hill Historic District designation, and attended one Planning Board meeting where I spoke in favor of the designation. The mix of housing on Munjoy Hill (aside from being completely charming) allows for a range of incomes to coexist in beautiful Portland. The Historic District will help to retain the character of the Hill along with its diverse community. Please support the designation and encourage the City Council to do the same. Thank you for considering my comments.

Elaine Clark

Google Groups

Munjoy Hill

Eleanor Morse <eleanor.morse@gmail.com> Aug 5, 2020 9:51 AM
Posted in group: **Planning Board**

Dear Planning Board,

Please help preserve and protect Munjoy Hill. It is a special part of Portland, and if developers come in and change its character, we can never get that beauty back.

Thank you,

Eleanor Morse
Peaks Island, Maine

Google Groups

Vote NO on the Munjoy Hill historic disctrict

Emma Holder <president@parksideneighborhood.org> Aug 7, 2020 1:44 PM
Posted in group: **Planning Board**

Dear Planning Board members,

Thank you for your work juggling the needs of growth with the preservation of character in Portland. It is no mean feat.

Portland is transitioning from a medium sized town to a small city, and with that comes growing pains. Humans really hate change; evidently it takes global calamity to even consider shutting a few streets down to improve pedestrian access to local businesses. We'll see if that sticks - I hope it does.

But I am writing to urge you to vote NO on the NIMBY'ism evident in the possible creation of a Munjoy Hill Historic District. In this case, a group of affluent folks with expensive properties wish to use a historic district moniker to maintain property value and eliminate possibilities of increased housing density in the Munjoy Hill area. We all have to face reality and acknowledge that Portland is growing, whether we want it to or not. It can grow evenly and together, or disproportionately and askew. Restricting the development of residential possibilities in a particular neighborhood will have the eventual effect of unfairly pressurizing others.

We are all going to have to make compromises. Some of us will lose the views/peace/space/property value we thought we were entitled to forever.

Prohibiting certain types of development under the mantle " historic district" to protect a few folk's property values is not only unfair and biased toward a particular class/race, its also bad for the health and growth of a city in transition.

I urge the planning board to support policies that are fair to all, be ready for lots of squawking from the "haves", and keep the 5,10 and 30 year view in mind when bracing against waves of entitlement.
History is there to teach us, but was cannot live in it, we have to live in the present and plan for the future.
Onward. Not backward.

Thanks, and I hope you and your families stay well,

Emma

Emma Holder
Parkside Prez
207 415 7204
president@parksideneighborhood.org
http://parksideneighborhood.org

Google Groups

Munjoy Hill Historic district

e w <eenebw@hotmail.com> Aug 6, 2020 9:53 PM
Posted in group: **Planning Board**

Dear Planning Board Members:

I am writing this comment to affirm my support for a Historic District on Munjoy Hill. As long term ~30 year property owner of two 3 units within the proposed district, I believe it is a win - win deal for landlords/property owners and tenants. I have attended many meetings on the proposed district and am fully aware of the advantages and disadvantages of being in a district. However, in my judgement the advantages far out weigh any disadvantages. The main advantage I see that benefits tenants is the continued ability for landlords to provide affordable rents in terms of what affordable means in Portland. The trend that has occurred on Munjoy Hill in the past few years has been to tear down and rebuild huge expensive Condos. Even if people end up renting these condos out, the monthly rents on these are massive and well beyond any rent that would have been paid by tenants in the building that stood in its place previously. This trend tears down community spirit and well being of most Munjoy Hill residents. I also believe it is important as a society to maintain a certain level of historical architecture in a community so it does not turn into a glass and metal jungle like so many cities and towns across the country. I realize, there are many people that believe old buildings should be replaced vs. preserved but if we don't work as a community to preserve our heritage it will soon be gone. I also believe tourists flock to Portland and Munjoy hill because they like the look and feel of a Historic Area.

In the last few months it is apparent there is a lot of instability in many aspects of our day to day lives. I believe small things like designating parts of Munjoy Hill as a Historic area is a good step in healing the community vs. creating more division by allowing the old buildings to be torn down only for the profit of a few developers, real estate agents and other like minded individuals promoting the redevelopment of Munjoy Hill.

Thanks

Enoch Wenstrom

88 and 83 Beckett St

Google Groups

Munjoy Hill Historic District!

Francesca <cesca.gs@gmail.com> Aug 5, 2020 3:59 PM
Posted in group: **Planning and Urban Development**

Dear Members of the Planning Board,

Although time has elapsed since you last considered making Munjoy Hill an Historic District, for those of us who think it's a great idea whose time has come and worked hard to make it happen, our enthusiastic support for the designation has not waned.

Portland is a city full of historic charm - and many long time residents as well. Preserving the character of Munjoy Hill is imperative to sustaining and celebrating Portland's long-time sense of place and attracting visitors from all over the world who appreciate it's historic nature.

Likewise, by preserving this working class neighborhood, and it's affordable housing which has always been available to residents, the Planning Board can make a statement about the importance of sustaining affordable housing on the "Peninsula" and having it be an inherent part of our community.

I encourage each of you to take this "historic" action and vote in favor of the Munjoy Hill Historic District.

Thank you!

Francesca Galluccio-Steele
22 Clifford St
Portland, ME 04102
cesca.gs@gmail.com

Google Groups

Re: Munjoy Hill

me <jmy@portlandmaine.gov> Jul 17, 2020 8:06 AM
Posted in group: **Planning Board**

Hello,

Thanks for your email. We appreciate the time you have taken to offer your thoughts, and will include your comments in the materials and as part of the public record.

If you have any questions, please contact our office.

Jennifer Munson, Office Manager
jmy@portlandmaine.gov | (207) 874-8719| Fax (207) 756-8258

City of Portland, Department of Planning and Urban Development
389 Congress St., 4th Floor, Portland, ME 04101

On Thursday, July 16, 2020 at 9:42:20 AM UTC-4, Fraser Nelson wrote:

> Dear members of the Planning Board,
>
> My mother and father Norm and Sally Nelson retired to Munjoy Hill and spent the last years of their lives reveling in all the pleasures of the neighborhood - the restaurants and shops, the theater, and the houses that make this place so unique. They enjoyed walking from their home at 38 Eastern Prom, and my Dad even has a tree planted in his honor at the park he loved so much.
>
> My dad served on the board of Portland Landmarks and I continue to appreciate their work all the way from Utah. Please add this western voice to those that are asking the Planning Board to heed the advice of this exceptional agency and the residents of this very special place.
>
> Though my parents are now both gone, Munjoy Hill is a place of wonderful memories. We'd love it to be preserved for generations to enjoy the way they did.
>
> Most sincerely,
>
> Fraser Nelson
> 230 East Broadway #709
> Salt Lake City, Utah 84111

Google Groups

Munjoy Hill Historic District

George Carhart <gscarhart@gmail.com> Aug 6, 2020 7:24 PM
Posted in group: **Planning Board**

Dear Planning Board,

My wife and I are 24 year residents of Munjoy Hill and have owned our 1849 house on Lafaye e St. for twenty one years. We strongly support the proposed Munjoy Hill Historic District and six landmarks with NO changes or modifica ons to what the Historic Preserva on Board nominated previously on 11/20/2019. The Historic Preserva on Board and Historic Preserva on Office have done their due diligence in laying out the argument for the proposed Historic District. They have clearly shown at the mul ple and extended Planning Board reviews of the proposed Historic District, that it meets the required benchmarks for nomina on. We therefore ask that you, without further delay, pass the proposal along to the City Council with your full support.

With Best Regards

Dr. George Carhart and Uschi Carhart.

--

Dr. George S. Carhart, Ph.D
Historian of Cartography
and Early Modern Europe
Antiquarian Map Consultant
Historic Research Consultant

7 Lafayette Street
Portland
ME, 04101
USA
(207) 766-1517

Google Groups

PUBLIC COMMENT: Say No to Exclusion; Say No to Historic Preservation as Pretext for Exclusion

George Rheault <george.rheault@gmail.com> Aug 7, 2020 12:00 PM
Posted in group: **Planning Board**

Just say no to the Munjoy Hill Historic District.

It is amazing that the Planning Board has dragged its feet for months on finishing the public hearing and vote that began on the evening of March 10, 2020.

Many projects that had not even made it on a planning board agenda pre-pandemic have already been expedited by Team Jennings and approved by this planning board, but the subject of the proposed Munjoy Hill Historic District sat untouched so the City Council could avoid having to deal with it for as long as possible.

We all know that historic districting as practiced in the United States is a mere pretext for NIMBY exclusion to artificially elevate property values thereby worsening housing insecurity and structural inequality.

This abuse of history is made even worse in this episode because those arguing for it (mostly white people aged 55+) have attempted to justify the urgency of the historic designation using the light presence of African American Portlanders in Munjoy Hill's past.

This, despite the fact that no attempt was made to meaningfully contextualize this African-American history (including telling the full and honest story post-1920 including even mentioning the Munjoy South urban renewal project and other more recent governmental interventions meant to gentrify and flush the area of low-income inhabitants including its few historical pockets of BIPOC).

This, despite ZERO acknowledgement that the BENEFITS of this historic district will NOT accrue to BIPOC and will indeed ensure that BIPOC as a group (and low-income people of any heritage) will almost certainly be denied occupancy in the district long into the future if the Planning Board or City Council endorses any part of the district's proposed boundaries.

Watching the Planning Board members bob and weave during the winter, trying to rationalize how the proposed district is sound policy while avoiding its true purposes (protecting the investments of affluent incumbent property-owners and guaranteeing them an even greater windfall into the future) is now its own historical record on which they will be judged, both by history, and if there is true justice, perhaps in a civil courtroom as well. The Planning Board at a minimum should put the burden of the politics squarely on the shoulders of the City Council and admit the district does nothing to preserve Portland's history (unless amnesia is the goal) and vote against it as bad planning policy that actively harms any progress on denser housing development (a requirement for effective economic development and the fight against worsening climate change). At least this way the Planning Board can retain its integrity and hold their heads high no matter what the City Council ultimately does.

As a final note, while I have largely refused to do the work that the planning staff and the Planning Board SHOULD have done in analyzing the policy implications and underlying justifications of the proposed Munjoy Hill historic district, I saw a news article this week involving Sausalito, CA that is really perfect even though it is not precisely on-topic. I attach it here to include it with the public comment above.

Everyone who is honest knows that Portland's whole "working waterfront" debate is also a pretext for NIMBY anti-development politics just like historic preservation is a pretext for NIMBY anti-development politics.

While Sausalito is much smaller population-wise than Portland, it was one of the inspirations for Portland's waterfront exclusionary efforts (one where the highest paid municipal employee in the state of Maine, Jon Jennings, can easily afford to rent a Chandler's Wharf condo to gain the Portland residency required by his contract, while low-income Portlanders have been PROHIBITED BY ZONING LAW since the late 1980s from ever getting the same opportunity to live waterside). What is encouraging in Sausalito is that some members of

that community are admitting the obvious pretexts behind their land-use policies and trying to ensure more equitable outcomes (and isn't this all about good outcomes versus mere empty rhetoric?) even if it risks upsetting the white economic privilege many Sausalito incumbent property-owners currently enjoy in their exclusionary enclave created through explicit government action.

The big question right now is whether anyone among Portland's elite political class has the courage to follow in the footsteps of Sausalito...

Sausalito confronts historic inequities

City reconsiders strict zoning rules to make way for affordable housing

By J.K. Dineen

Photos by McArdle Hankin / The Chronicle

Floating homes under construction in Sausalito, where officials are weighing new housing proposals.

For 32 years, Sausalito has protected its scrappy industrial waterfront, banning both housing and offices in the 225-acre Marinship district, which stretches for about a mile north of downtown.

And, for the most part, it's worked. Instead of expensive condos and trinket-filled tourist shops, Marinship remains a place where vessels are hauled out and repaired, houseboats built, sails sewn and outboard motors tuned up. Hundreds of maritime workers and artists live and toil on the water, a world apart from the glass towers visible across the bay.

But with the Black Lives Matter movement forcing cities to confront historic racial, social and economic inequality, Sausalito officials are debating

Brenda Berg (right) and her family, property owners in the Marinship district, would like the area to convert some land to senior housing.

whether some land in Marinship might be appropriate for low-income or senior housing. In July, during a contentious, eight-hour meeting that focused on both racial justice and a new, 20-year general plan — a state-mandated document meant to guide development — the City Council voted 4-1 to erase language that barred land-based housing there.

At the meeting, Vice Mayor Ray Withy said: "We cannot hope to increase diversity in Sausalito if you don't increase the diversity of available housing for a multitude of income levels."

Mayor Susan Cleveland-Knowles agreed, saying, "We are an overwhelmingly white community" and that opening select sites to housing "is the only way we can increase diversity in our town."

The conflict between preserving light industry and meeting the need for housing has played out across the Bay Area, from San Francisco's central waterfront to West Oakland to South San Francisco. Supporters of zoning restrictions say prohibiting residential and office development preserves often well-paying bluecollar jobs and ensures a diverse economic base. Housing advocates say opposition to residential development will continue to drive up prices and force thousands of workers to relocate.

On the website of the Sausalito Working Waterfront Coalition, which advocates for "those whose livelihoods are linked to the Marinship," Bob Silvestri lashed out at consultants working on the general plan, saying the vision laid out "a predictable, banal, soulless celebration of consumerism, bereft of character or sense of place."

Coalition members say current Marinship protections are not just about preserving the city's maritime legacy but about supporting its economic future. The area has a strong base of manufacturers, something that became apparent during the early days of the coronavirus pandemic when two Marinship companies — Universal Sonar Mount and Starbuck Canvas Works — collaborated to quickly manufacture 1,300 plastic face shields that were donated to first responders.

To Planning Commissioner Janelle Kellman, the collaboration showed that the Marinship is vital as a center of industry and that the city should seek to encourage the growth of those companies rather than replace them with housing.

Marinship, she said, “has a history of contributing to the safety and security of our nation.”

Sausalito resident John DiRe, a retired engineer, said that instead of relaxing the zoning to allow for residential development, the city should expand the district’s light industrial space, which generates about 41% of the city’s business taxes. He said the new general plan should seek to convert some of the office space allowed in the 1970s and ’80s to arts and light industry.

“People in the Marinship are welcoming of change if that change is reducing office uses,” he said. “What is going on down here is so special, up and down the Marinship. The working waterfront is booming. It has never been busier.”

But the question of who is benefiting from the busy Sausalito waterfront is especially charged, given its history as a jobs center for Black Americans during World War II. More than 2,200 Black workers, mostly transplants from the South, migrated to Marin County during the war, working to pump out 92 cargo ships in about five years. But while Blacks were allowed to work alongside whites in Sausalito, they were barred from buying or renting property there, and instead were housed in Marin City, an unincorporated area a mile northwest of the shipyards.

Today, Marin City remains poor and isolated from Sausalito and the rest of Marin County, economically, geographically and racially. Marin City is 40% Black, 13% Latino and 7% other minority groups, and about 40% white. Its median household income of just under $43,000 is less than half the county’s median. Sausalito, by contrast, is 92% white and just 1.5% black. Its median household income is $110,000.

Marin City — physically cut off from Sausalito by Highway 101 — has four major affordable housing complexes, including 300 units at Golden Gate Village, 225 at Ridgeway Apartments and 56 at Ponderosa Estates. Sausalito has just 38 units of affordable senior housing.

Paul Austin, who runs Play Marin — a Marin City nonprofit dedicated to bringing kids of different racial and economic backgrounds together — said that allowing some affordable housing in the Marinship flatlands “would do wonders for the entire ZIP code” by integrating schools and creating housing opportunities for teachers and nurses who can’t currently afford to stay in Marin County.

He said that he welcomes the racial justice discussion Sausalito City Council has embarked on, but that “we have to put the onus back on the residents in Sausalito” to make sure the debate is followed by action.

“If it gets shot down, it would show me that Sausalito is very much a place where people say the right things about diversity and inclusion, but when it comes to their own backyard, it’s a different matter,” Austin said. “If they vote yes, that will show me that they are ready to set a higher standard for justice and equity.”

Pastor Marcus Small, who leads Peoples Inter-Cities Fellowship in Marin City, said many in his congregation have been forced to move to Vallejo, Sacramento or Vacaville because Marin is so expensive. Sausalito homes average $1.5 million, according to Zillow, and an average two-bedroom apartment rents for $4,000.

"As American citizens, Black folks should have the right to live wherever, and that includes Sausalito," Small said. "And that would require some more affordable housing."

If some housing is allowed in the Marinship, the question of where exactly it would go is sure to be controversial. The city's traditional hillside neighborhoods are largely built out and the flatlands that stretch along the waterfront represent some of the only large parcels on which new housing could be constructed.

Others point to several office complexes that were built in the 1980s, before the 1988 Marinship plan banned new offices. One of these properties is Marina Office Plaza, an 86,000-square-foot facility. Property owner Brenda Berg would like to explore converting the land to senior housing, a need she discovered firsthand a few years ago when her husband developed Lewy body dementia and had to be placed in an assisted living facility in Santa Rosa.

Sausalito has an unusually large senior population — 37% of residents are over 60 — and replacing an office building with senior housing would not interfere with maritime or arts uses, the Bergs argue.

"Nobody wants to replace the arts or light industry or maritime, nobody is saying, 'Let's build a gleaming condo tower 150 feet tall,' " said Carlo Berg, who manages the property with his mother. "You can't have an age-friendly city if you don't have agefriendly land-use policy and won't even consider housing."

Meanwhile, the debate over whether Sausalito will open up some of its flatlands for housing will be decided this fall as the general plan goes before the Planning Commission in September and the City Council in October.

At the July City Council meeting, Mayor ClevelandKnowles acknowledged that it would be a tough political fight.

"I have met a lot of resistance in town and continue to meet a lot of resistance in town to expanding our housing opportunities," she said.

J.K. Dineen is a San Francisco Chronicle staff writer. Email: **jdineen@sfchronicle.com** Twitter: @sfjkdineen

Google Groups

Proposal regarding Munjoy Hill

Grace Braley <gbraley55@gmail.com> Aug 5, 2020 3:54 PM

Posted in group: **Planning Board**

I moved to Portland nearly twenty years ago, finding it to be a city with many interests, good history, waterfront, varied neighborhoods, diversity.

Also, I have found interesting the varying neighborhoods of Portland, and Munjoy Hill is a particularly interesting asset to the city.

I have noticed the needs and changes since coming. I have felt the needs and concerns for a wider selection of housing opportunities and neighborhood possibilities. I was concerned, and still am, when the number of tear-downs and rebuilds was (and is) going too fast and at considerable price escalation. This has been a trend that limits the diversity and options for people who wish to live and perhaps work in Portland.

Changing it too radically takes away from its quality and therefore does not enhance the city. I made a decision to attend many of the meetings and heard the serious struggles, discussions, workshops of the last couple of years, which brought forth a solution that seems as fair as possible and beneficial to Portland. I went to the Planning Meeting, only to see the vote postponed.

I urge that the vote be to support the agreement that has been worked out because, hopefully, it will retain the positive dynamic of Munjoy Hill, this interesting
sector of the city.

Grace Braley

Google Groups

Munjoy Hill Historic District

Herb Adams <hadams@smccme.edu> Aug 7, 2020 11:36 AM
Posted in group: **Planning and Urban Development**

What a difference day makes.

The board's public forum on the Munjoy Hill Historic District back in March was one of the last hearings held in City Hall before the COVID-19 curtain came down.
It seems long ago now -- but was not.

It is also symbolic of why the Munjoy Historic District is so important.
Things can change overnight, and permanently -- there is no going back
The Hill looks solid but is a fragile place that can change overnight. It holds a huge amount of Portland's heritage . It escaped the Great Fire but has seen more development in one decade than in a century.

The time is here for a reasonable, thoughtful historic plan that allows change but preserves the best of what we are. The proposed plan does that and comes at the right moment -- now, just in time.

Change Is inevitable -- progress is not. We have to work for progress. The proposed historic district gives us that tool as the Hill changes and our City grows.

Time will not wait for us --- we work with change ,or it will just overwhelm us. The proposed historic district works with time, heritage, and the future, all in mind at once.
For the sake of all three things I urge the board to endorse the Munjoy Hill Historic District proposal.
The time will not come again.
Sincerely yours,
Herb Adams
Former State Representative

Google Groups

Munjoy Hill

Jamie Hogan <jamiehogan58@gmail.com> Aug 5, 2020 12:30 PM
Posted in group: **Planning Board**

Dear Chair Mazer,

I am writing in support of designating Munjoy Hill an Historic District.
As a resident of Peaks Island and owner of a house built in 1844, I am well aware of Portland's need to retain and value historic properties. The steady demolition of Portland's history on the hill must STOP. Portland's identity is told in it's historic houses, and those stories must be kept intact. The reuse of antique buildings is environmentally cheaper and wiser, and will only increase in value.

Thank you,

Jamie

Jamie Hogan illustrator

instagram: https://www.instagram.com/jamiepeaks/
website: www.jamiehogan.com
email: jamiehogan58@gmail.com
shop: https://www.etsy.com/shop/Jamiehoganstudio
blog: http://www.jamiepeeps.com/
phone: 207-766-9726

Google Groups

Munjoy Hill Historic District

Jenny Potter Scheu <jpscheu@gwi.net> Aug 5, 2020 12:19 PM
Posted in group: **Planning Board**

Greetings Planning Board,

I do not see the need for a Munjoy Hill Historic District.

I DO see the need for affordable housing on Munjoy Hill/throughout the city.

Thanks for your work,
JENNY SCHEU

Home address:
29 Waterville Street, #3
Portland ME 04101
Work address:
REDHOUSE ARCHITECTS + STUDIO
61 Pleasant Street, Portland ME 04101

Google Groups

NO on Munjoy Hill Historic Designation

Jeremy Rutkiewicz <jeremyrutkiewicz@gmail.com> Aug 5, 2020 1:35 PM
Posted in group: **Planning and Urban Development**

Dear City of Portland Planning Board,

I am writing to urge you to please, please vote against the Munjoy Hill Historic Designation.

Several years ago, I was lucky enough to be able to purchase the house I was renting - a 920sq foot single family home situated on the back of a 4234sq foot lot. Having rented on Munjoy Hill since I was a teenager, it was a dream for me to be able to stay in the community I love so much.

As my family grew, we began working with a local architect to plan a renovation project that would give us some of the extra space we desired, whilst keeping the charm and character of the house. Despite the irregular lot lines, non-conforming setbacks, and myriad of other issues to troubleshoot (all common on Munjoy Hill), the Planning Board was extremely adept at helping us through this process.

We worked through many design iterations to create something that was comfortable and energy efficient... something that was both classic and contemporary... something that created a dialogue between past and present. Our design preserved the mature trees in front of the house that make our lot unique, and (at less than 2000sq feet overall) was tailored specifically to fit gracefully between our neighbors without overwhelming them or the lot. For context, our small house is surrounded by:

- 4732sq foot home on a 4913sq foot lot
- 2144sq foot home on a 2515sq foot lot
- 3702sq foot home on a 2847sq foot lot
- 3455sq foot home on a 1993sq foot lot

Our design did not even come close to any of these land-to-building ratios! And yet, in the last year, it has become clear that, unlike Planning, the Historic Preservation Board is ill-equipped to deal with the unique situations that ours and so many other eclectic Munjoy Hill properties face. The Historic Preservation Board is so focused on the front-facing facade, it seemed they would be more satisfied with us moving the entire house to the front of the lot and doing "whatever we want" behind the house - regardless of the enormous financial implications, or the fact that this would destroy the unique relationship between buildings that we and our neighbors have all enjoyed.

Moreover, the methods and standards of the Historic Preservation Board have made it extremely difficult to work with contractors. Many are reluctant to even consider a project when it is bound by the Historic Preservation rules - especially while we are in some sort of bureaucratic limbo between when HP enacted the district, and City Council votes to confirm it. Despite having purchased my home long before these rules were ever in place, it appears we are likely to lose a massive amount of architectural and engineering work that we patiently and carefully crafted over several years. Given the way the market has gone, it is extremely unlikely we could ever find another property on Munjoy Hill within our budget and we have essentially been forced to start looking in other communities. This is heartbreaking, and we have been financially and emotionally blindsided by it.

Planning and Zoning have shown themselves to be capable of flexibly working with homeowners to navigate the many interests of the neighborhood as a whole. Historic Preservation has not. **Now, especially during the time of increased work-from-home, it is crucially important that we and other families are able to make our homes work for us. Please vote against the Munjoy Hill Historic Designation so that people like me, who live and love the Munjoy Hill way of life, are not pushed out.**

Thank you for your service,
Jeremy Rutkiewicz
161 Congress St

Google Groups

Munjoy Hill Historic District

jeremy smith <octahonk@yahoo.com> Aug 7, 2020 3:29 PM
Posted in group: **Planning and Urban Development**

To whom it may concern.

I would like it to be known that I strongly oppose the proposed Munjoy Hill Historic District Overlay.
Thank you for your time.

Jeremy Smith
100 Sheridan St
Portland, ME

Sent from my iPhone

Google Groups

Munjoy Hill Historic District Support

Jill Terranova <jterrart@gmail.com> Aug 7, 2020 4:47 AM
Posted in group: **Planning Board**

Chair Mazer and Members of the Planning Board:

I live on Munjoy Hill, own proper es here, and strongly support the designa on of a Historic District for Munjoy Hill which includes the designa on of several individual landmark buildings.

Munjoy Hill is a special neighborhood which is reflec ve of the historical architectural character of the neighborhood. This character needs to be preserved through the designa on of the Historic District.

Public support has been strong for the Historic District. Please vote to approve this proposal.

Sincerely,
Jill Terranova
Portland Maine

Google Groups

In support of Munjoy Hill Historic Designation

Jo Israelson <welcomingthestrangerart@gmail.com> Aug 7, 2020 9:08 AM
Posted in group: **Planning Board**

TO: Chair Mazer and Members of the Planning Board

FR: Jo Israelson
59 Moody St family home for 30+ years
8 Grassy Path, Peaks Island

RE: In Support of the Historic Designation of Munjoy Hill

Once again, I am writing to the Portland Planning Board to support historic designation of an important iconic neighborhood – known as “The Hill” – Munjoy Hill.

I grew up on the Hill: attended public schools, played on the Prom, made life-long friends and learned that it does take a village to raise a child. Our doors were always open to our neighbors. We shared both happy moments as well as sorrows. Our homes contained our family histories – often 3 generations living under one roof – as well as the histories of those that preceded us.

The current trend to demolish and/ or conduct extensive re-design of many of the existing structures does not take into consideration the incongruous nature of those projects. Fort Allen is restored to its original configuration. Yet a few blocks away, a glass faced structure is built without regard to the cultural heritage of the place.

Two years ago, I worked with residents of the City of Portland, Munjoy Hill, Maine Jewish Museum, Peaks Island and other groups to obtain historic designation for House Island. Discovering that it served as a quarantine station and was known at the ‘Ellis Island of the North’ convinced me to coordinate the effort to prevent development of the island and to preserve the existing structures. Further research uncovered the stories of immigrants – one in particular – whose life was saved by the actions of Portland police and others helped by the National Council of Jewish Women.

Although we were successful in our efforts, we were unable to save the quarantine station itself – it had already been demolished. The stories within walls that once contained the lives of immigrants coming to and through Portland – were lost forever.

We could not preserve the India Street corridor where our immigrant relatives walked, shopped and worshipped. The rush to development changed the architectural face of that neighborhood. Once the buildings were removed, there was no opportunity to preserve that cultural heritage.

In 1972 I wrote my first letter to the Editor decrying a plan to develop the Eastern Prom. Fortunately, the plan never materialized. Almost 50 years later, I am once again advocating for preservation of land, structures, and buildings that comprise the cultural history of our city – specifically “the Hill.” Please protect the heritage of this part of Portland for those of us who once lived there and for future residents.

Once something is ‘gone’, it’s gone forever.

Portland Maine | Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Re: Historic District on Munjoy Hill

Joe Walsh <jwalsh@greencleanmaine.com> Mon, Mar 9, 2020 at 5:04 PM
To: jmy <jmy@portlandmaine.gov>
Cc: Planning Board <planningboard@portlandmaine.gov>

Thank you very much.

On Thu, Mar 5, 2020 at 11:24 AM jmy <jmy@portlandmaine.gov> wrote:

> Hello,
>
> Thanks for your email. We appreciate the time you have taken to offer your thoughts, and will include your comments in the materials and as part of the public record.
>
> If you have any questions, please contact our office.
>
> Jennifer Munson, Office Manager
> jmy@portlandmaine.gov | (207) 874-8719| Fax (207) 756-8258
>
> City of Portland, Department of Planning and Urban Development
> 389 Congress St., 4th Floor, Portland, ME 04101
>
> On Wednesday, March 4, 2020 at 4:54:34 PM UTC-5, Joe Walsh wrote:
>
> > To the Board,
> >
> > I am writing to urge you to make a "no" recommendation on the proposed Historic District for Munjoy Hill.
> >
> > I was a resident of Munjoy Hill for 7 years. During that time, I watched as larger condo developments went up, and old, dilapidated multi-family housing was replaced with new, modern building stock.
> >
> > While on one hand I was sad to see the cheap rents disappearing, these were positive changes. As a renter I had lived in several of these old buildings - they are drafty, loaded with lead paint and pose numerous code and safety hazards. Many (most?) of them were never built to stand the test of time - they are old 2-4 unit multiplexes that have reached the end of their serviceable life. It's time for an update.
> >
> > In replacing these old buildings, we have an opportunity to maximize density, increase safety and build the new housing this city so desperately needs. Designating Munjoy Hill as a historic district will restrict this positive change and put further regulatory burden on property owners and developers, increasing the cost of housing even more.
> >
> > If there are any changes to be made on the hill, it should be to *increase density*, as this is already a walkable neighborhood and density can be increased with minimal impact on vehicle traffic.
> >
> > Regarding affordability - there is a major affordability problem in our city, and while all this new building stock isn't cheap (for renters *or* buyers), creating a historic district will only exacerbate the issue, and limit the City's options when looking to find creative ways to reduce cost. As a city, we have to find a way to create housing that can be made affordable for the working class and working artists - otherwise we risk becoming a shell of a city - inhabited only by the wealthy with second homes or those in subsidized housing.
> >
> > That would be a tragedy, as Portland has such a unique sense of place - in large part because it's a real living small city, where a wide range of people can live *and work.* A rarity in America, and I would argue a bigger draw for many than low taxes or a favorable regulatory environment, myself included. I started a business here precisely for this reason.
> >
> > Please, allow Munjoy Hill to grow with the city, and allow property owners to do as they see fit to find the highest and best use of their property, while leaving the most options open for density and redevelopment.
> >
> > Thank you for your consideration,
> >
> > --
> > Joe Walsh
> > Founder & CEO

Green Clean Maine
583 Warren Ave.
Portland, ME 04103

Ph: (207) 221-6600

www.greencleanmaine.com

facebook.com/greencleanmaine

instagram.com/greencleanmaine

Please consider the environment before printing this email

Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

--

Joe Walsh
Founder & CEO

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Portland, ME 04103

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instagram.com/greencleanmaine

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Portland Maine | Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Re: Munjoy Hill Historic District

1 message

John Johnstone <johnstoneguitar@gmail.com> Fri, Jul 17, 2020 at 8:32 AM
To: jmy <jmy@portlandmaine.gov>

You're welcome!

On Fri, Jul 17, 2020, 8:07 AM jmy <jmy@portlandmaine.gov> wrote:

> Hello,
>
> Thanks for your email. We appreciate the time you have taken to offer your thoughts, and will include your comments in the materials and as part of the public record.
>
> If you have any questions, please contact our office.
>
> Jennifer Munson, Office Manager
> jmy@portlandmaine.gov | (207) 874-8719| Fax (207) 756-8258
>
> City of Portland, Department of Planning and Urban Development
> 389 Congress St., 4th Floor, Portland, ME 04101
>
> On Thursday, July 16, 2020 at 1:41:06 PM UTC-4, John Johnstone wrote:
>
> > To whom it may concern,
> >
> > Portland has many diverse districts and all of them are significant in their own way however the uniqueness of Munjoy Hill cannot be denied. As a resident of Portland for 40 years after moving down from Camden to go to USM I was struck by the beauty, originality and variety that the Hill had to offer. There were a myriad of house styles on the Hill that just made it fascinating to walk there, not to mention the ocean views that popped up around every corner. There was a common refrain years ago that you heard if you were a student, artist, musician or working class person: "if you don't have much money move to the Hill" and so I moved there. Ironically these people who were low on the economic ladder, myself included, helped preserve this neighborhood. They simply wanted to live in a beautiful and affordable neighborhood without any desire to destroy or alter its character.
> >
> > Of course nothing like the Hill lasts forever. Developers are like heat seeking missiles, always trying to figure out where artists and musicians and original types are moving to so they can buy everything up, tear it down, build an ugly metal box with garage doors on the street and no front yard and then convince everyone this is the new hip look that everyone from away is looking for and must have to be in the new cool and hip Portland. Yes, this tactic has worked in every city in America and has usually been supported by the city in the name of economic development and urban renewal. Basically get the poor and working class out and bring the money in.
> >
> > Occasionally, to the dismay and surprise of the city, the residents stand up and say they've had enough. They don't want the history and soul of their neighborhood erased by greedy developers for homes for seasonal visitors and others that have no love of their wonderful and quirky neighborhood. Most of the residents of the Hill have had enough and say no more! This began the movement to make Munjoy Hill a Historic District.
> >
> > I fully support turning Munjoy Hill into a Historic District and hope that the city of Portland will make it become a reality. I lived for 20 years on Park Street, a very obvious Historic District but I believe that the Hill with its mixture of Victorian homes side by side with simple cottages and a little further down a ramshackle mix and match home all exist in a harmony that is unique not just to Portland but to every city in America. Please preserve the heart and soul of Portland and say no to the developers who don't care about the community and yes to Portlanders.
> >
> > Thank you and I hope Portland does the right thing!
> > John

Notice: Under Maine law, documents - including e-mails - in the possession of public officials or city employees about government business may be classified as public records. There are very few exceptions. As a result, please be advised that what is written in an e-mail could be released to the public and/or the media if requested.

Google Groups

Munjoy Hill Historic District

John Whitehouse <jtwh888@gmail.com> Aug 7, 2020 3:34 PM
Posted in group: **Planning Board**

Dear Planning Board Members,

It pains me to see that Private sector tax dollars are still being used to support Deb Andrew's crusade to turn a swath of Munjoy Hill into a historic district during this unprecedented pandemic. Is the Public sector so insulated in their bubble of security that the rest of us do not matter? This proposal will handcuff property owners with ANOTHER level of bureaucracy when it comes to renovating, improving and adding more space for tenants during the worst economic times since the Great Depression. This on the heels of a talked about substantial tax increase for Munjoy Hill!? Tenants will be levied with higher rents to offset the tax increase, and since this proposal will effectively halt any development or renovations, the rents will surpass affordability for everyone. Munjoy Hill could soon be all Condos.

In addition to the terrible timing, the proposal is terribly written! There is a 90 year block of history for Deb and company to subjectively deny projects or stretch out for months and extract more and more fees with. Given the substantial loss of revenue to the City during this pandemic, this is what you spend money on? Portland must have deep tax revenue coiffers.

Is Deb Andrews trying to maintain her job security? As the Planning Board highlighted during one of the workshops, this concern for change and loss of character to the neighborhood is unfounded and is not shown in the facts. Building permits have been dwindling in the neighborhood. What was the count last year, 8? Her proposal was so desperate for examples she had to go back to the late 1980s in completely different areas of Portland to even hint at making her case. This is a permanent designation that will affect this neighborhood for years to come,and for owners like myself who are decades away from retirement it is just unfair. At least consider re-writing her proposal to a less ridiculously broad level, or better yet stop it. It is not the time to make these hard times harder on tenants or taxpayers. It is time for the Public Sector to care about the Private Sector.

Thank you,
John W.

Google Groups

Munjoy Hill Local Historic District.

Jon Hall <cbbhall@maine.rr.com> Aug 5, 2020 10:09 AM
Posted in group: **Planning Board**

To: Portland Planning Board.

Re. Munjoy Hill Local Historic District

I am writing this letter in support of the proposed Historic District. As a longtime Portland resident, having grown up here, and having returned here to live in 1979, I am strongly in support of Portland's Historic Districts, not for preventing change, but for controlling change. I'm afraid that all too often new projects are pushed in the interest of profit, and not in the interest in the livability and attractiveness of our cityscape and cherished neighborhoods. I do hope that the Board will consider Portland's best interests as an attractive city with a long history and a lot to offer.

Jon F. Hall

44 Belfield Street

August 7, 2020

Chair Mazer and Members of the Planning Commission:

I am writing this letter in support of designating Munjoy Hill a historical district.

I was born and raised on the "Hill" in the 1950's through 1960's. Although I no longer live in Maine, I return often to Portland and always visit Munjoy Hill. I consider the "Hill" my home. It is to me the very essence of what "neighborhood" means.

As anyone who's moved a few times recognizes all neighborhoods are not equal. Munjoy Hill is unique in that it supported and continues to support characteristics found in great neighborhoods. With the help and dedication of the Munjoy Hill Neighborhood Organization, there is a pride in ownership on the "Hill" whether owners or residents that is obvious to those of us who return to visit. Homes are maintained and demonstrate true caring of the historical roots of the "Hill" in design and renovation. Neighbors participate to connect and create local groups that bring the residents together for the betterment of the area. There is something about an area with history that makes it very desirable. New developments are wonderful, however; the value of a great neighborhood is stability with longtime residents and community support which helps encourage safety and low crime rates.

Another great aspect of a neighborhood is walkability. Being able to leave the car keys at home and walk to markets, shopping, restaurants and the Promenade creates a deeper connection to the neighborhood.

The "Hill" gives me a sense of my history and the history made by my great grandparents and grandparents who lived on the "Hill" too. Friends, relatives, uniquely designed houses with people sitting on their stoops give this area much more than historical value. It is a true neighborhood.

Please protect the "Hill" and its history.

Thank you. Judith Perry (former resident of 123 Congress St.)

Google Groups

Munjoy Hill Historic District

Judith Tierney <judy.tierney@gmail.com> Aug 6, 2020 2:22 PM
Posted in group: **Planning Board**

Dear Planning Board members,

I am a long time resident of Munjoy Hill. I support the proposed Munjoy Hill Historic District and six landmarks with NO changes or modifications to what the Historic Preservation Board nominated back in 11/20/2019.

Thank you,
Judith Tierney

Greater Portland Landmarks

Historic character enriches our lives

13 March 2020

Chair Mazer and Members of the Planning Board:

Greater Portland Landmarks strongly supports the proposed Munjoy Hill Historic District. It meets the minimum criteria for designation in Division 3 of the historic preservation ordinance and is consistent with Portland's comprehensive plan, which supports historic preservation as an integral part of the city's planning strategy.

- The proposed Munjoy Hill Historic District meets the historic preservation ordinance's minimum criteria for designation as set forth in Sec. 14-610 (a) (1) and (b), as well as the integrity criterion in Sec. 14-611 for its value as a significant example of the cultural, historic, & architectural aspect of the heritage of the City of Portland.
    - "The neighborhood's dense development pattern, shared building characteristics, and history as a working-class neighborhood for generations of maritime workers and immigrant families unifies much of the neighborhood and gives it its own identifiable visual character."
      (12/3/2019 Staff Memo, Attachment 2: Context Statement, Attachment 3: List of Properties with Classifications and the 3/10/2020 district boundary map)
- The designation of the Munjoy Hill Historic District is consistent with the Sustainability, Housing, Economy, & Historic Resources goals of Portland's Plan 2030.
    - "Stewardship of Portland's historic, cultural, and architectural assets has been an integral part of the City's planning strategy since the Historic Preservation program began in 1990, …and is supported throughout the document."
      (2/7/2020 *Staff Memo, Attachment 2: Comp plan analysis)*

More than 200 residents, property owners and supporters offered support for the historic district in oral and written testimony, demonstrating overwhelmingly that:

- Munjoy Hill has a strong visual character that defines the neighborhood.
- The stories of its current residents, a number of whose families have connections to past generations of residents on the Hill, illustrate how the physical fabric of this proposed historic district embodies a unique sense of place that is invaluable to Portland's citizens and visitors.
- Professionals in the fields of history, planning, preservation, and architecture have reinforced the documented findings of the staff and Historic Preservation Board members that the proposed historic district meets the criteria for significance and integrity contained in the City's ordinance.
- The value and benefit of historic preservation is central to achieving the multi-faceted vision in *Portland's Plan 2030* because it is integral to the City's economic development strategy, sustainability goals, and affordable housing goals. Designation of the Munjoy Hill Historic District will materially advance achieving these goals.

The Hill's visual character is defined by its streetscapes and the collection of buildings more than by individual buildings. Individual local landmarks are not an appropriate substitute for a district. Local landmarks are not equivalent to individual buildings listed on the National Register of Historic Places and could not be certified by the city for historic tax credits.

We strongly urge members of the Planning Board to recommend to the City Council that the proposed Munjoy Hill Historic District be designated a local historic district subject to the provisions of Article IX of the Land Use Code.

Thank you for considering our views,

Julie Larry
Director of Advocacy

Greater Portland Landmarks
93 High Street, Portland, ME

Google Groups

Munjoy Hill Historic District

Julius Ciembroniewicz <jciemb@gmail.com> Aug 5, 2020 10:00 AM
Posted in group: **Planning and Urban Development**

City of Portland Planning Board:

I'm writing with regards to the Munjoy Hill Historic District. I support the Historic District. A large majority of my fellow MH residents and neighbors also support the historic district.

I am not opposed to development in our City, of which I've lived for 25 years. However, I am opposed to irresponsible development, which in the last five years the City has allowed to occur unchecked on Munjoy Hill. Some of the new construction projects have threatened the integrity of our historic neighborhoods. Without a historic district, new construction for these types of new projects will continue.

My 100 year old building on MH, which has 8 large condominium units, is similar in size to some of the newly constructed buildings on MH. However, currently the City's only requirement for new construction projects is that they host two units. So, technically, much of the new construction in the historic district is resulting in less available housing. Is this the planning we want in our overcrowded peninsula?

If the City allows development to continue to go unchecked in our historic neighborhoods, the historic integrity of our neighborhoods will soon be gone forever. There will be no way to turn back the clock. Accordingly, I respectfully ask that you vote in favor of the Munjoy Hill Historic District.

Thank you for your attention to this issue.
Julius

Julius Ciembroniewicz
55 Morning Street

Please Support Tonight 7/10/2019-Nomination of Proposed Munjoy Hill Historict District

Karen Snyder <karsny@yahoo.com> Jul 10, 2019 8:05 AM
Posted in group: **Planning and Urban Development**

Dear Historic Preservation Board Members,

Please nominate the proposed Munjoy Hill Historic District in the Historic Preservation Board Workshop that will be held tonight on 7/10/2019. The City Planning Dept/Planning Board continues to ignore adhering to the R6 infill design standards and protecting the street scape as well as to consider how the pre-existing community is affected by these oversized luxury cubes that are being built next to them.

It is bad enough affordable housing is being removed without being replaced but for the City to ignore the surrounding street scape and to not consider how these new structures affect the surrounding property owners is morally and ethically not right and potentially legally not right based on pending lawsuits.

Below are comments sent to the Planning Dept, PPH, and the new property owners by existing property owners that made this neighborhood a home and community rather than an investment flip. It is to show you how upset they are with this trend on Munjoy Hill and what happens when design standards, streetscape, and considering surrounding properties are being ignored by the City Planning Department/Planning Board.

Comment #1:
****

> Dear xxxx and xxxx,
> Not only is your monster house blocking light and air from my and the neighbors homes the much beloved and cherished views of the observatory from the street and gardens have now gone forever.
> Maybe the rules and guidelines approved your plans but does that really,morally give you the right to do what you have done helping to turn our beautiful Munjoy Hill into Munjoy Hell.
> I am someone who has dedicated the last ten years to beautifying the streets and gardens and providing affordable housing to this neighborhood.
> I am heartsick and disgusted to witness your callous ,selfishness.I had hoped for something so much better.

****

Comment #2:
****

City Representatives:

I'm writing in connection with the Demolition/Construction Project at 9 Moody Street on Munjoy Hill.

I'm the owner of a condominium unit at xx Morning Street, a building with 8 condominium units that has existed for more than 100 years with uninterrupted views of the western mountains and daily sunsets. Until now.

The City exempted this 9 Moody Street Demolition/Construction project from its new construction moratorium. However, by allowing this single-family 4 1/2 story tower project, the City (perhaps unwittingly) enabled the views in our historic Munjoy Hill neighborhood to be decimated. Rather than explain in words, the best evidence is seeing it for yourself. Accordingly, I've attached pictures taken with an iPhone from my kitchen window across the street.

The ***before*** and ***after*** pictures are dramatic. Attached please find:

1) One picture from Summer 2018 before demolition and construction (the rainbow actually rests on the prior house located on the lot)
2) Three pictures from the last couple days outside my kitchen window at xx Morning Street
3) A compilation of pictures in a Word document

It is sad and frustrating that the City allowed this to occur; for a single-family personal residence no less. I'm not sure how the owners of this house tower (developer Jim Brady according to the architect drawings) described the project to the City, but I can't imagine the City would have allowed it to go forward if it had any idea it would look so dramatically obstructionist, in a historic Portland neighborhood no less.

A couple of you have kindly met with me on this issue. I appreciate it, but steps need to be taken to avoid this occurring again, particularly in Portland's residential neighborhoods. Once the City allows projects like this, there is no way to turn back. Historic districts are one option, if properly adopted. Also, perhaps going forward the City should consider view easement protections to protect residents from developers like Mr. Brady who aren't interested in protecting the integrity of our City's residential neighborhoods.

While I appreciate your personal efforts, more needs to be done to preserve our communities and the residential neighborhoods in the City of Portland.

Thank you for your time and attention to this matter.

****

Comment #3:

LETTERS » Posted July 3

INCREASE FONT S

Letter to the editor: Historic district will help save what makes the Hill special

Share

When I first walked into the house on Munjoy Hill that I would buy and begin to restore 23½ years ago, one of the first charms I noticed was the view from its front windows of one of our city's icons, the Portland Observatory.

Yesterday, I witnessed the total erasure of these views by the construction of the third floor of the building going up at 47 Monument St., a voluminous behemoth that occupies every possible square foot of the lot and grows as tall as it's allowed, apparently. Sad day for me.

RELATED HEADLINES

› Letter to the editor: Medical costs prevent expatriate Mainer's return

› Permanently pay for vital conservation fund

› Rein in Cumberland's proposed building, paving spree

Though mostly pro-development, I'm shocked by the lack of concern for local context in allowing these giant structures to be built with no concern for impact on others' property – in other words, for the pre-existing community. I look forward to actively participating in the consideration of a Munjoy Hill Historic Preservation District and hope that the City Council will urge it on.

Christopher Akerlind

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****

In conclusion, I sincerely hope you take into consideration how these demolitions and poorly designed oversized buildings that are being allowed affect existing property owners that have lived here for decades and don't consider this an investment flip but their home and community.

Once again, please nominate the proposed Munjoy Hill Historic District before the "Hill", it's character, and it's history are erased for good.

Regards,
Karen Snyder
72 Waterville

Google Groups

For 8/11/2020 -Planning Board Hearing: Please Vote YES for Proposed Munjoy Historic District & 6 Landmarks

Karen Snyder <karsny@yahoo.com> Aug 4, 2020 11:30 AM
Posted in group: **Planning Board**

Dear Portland Planning Board Members,

I support the proposed Munjoy Hill Historic District and the 6 Landmarks and I am in the proposed Historic District.

It has been 5 long months since the Planning Board was to actually vote on the proposed Munjoy Hill historic back on 3/10/2020.

A lot has changed in this world but some things are still clear and more important than ever.

1) Because of COVID-19 virus pandemic, it should show the Planning Board it is important to stabilize a neighborhood and that is what Historic Districts do.

2) Because of the developer speculation that is still rampant on Munjoy Hill, the average rents for studio, 1 BR, and 2 BR are actually higher on Munjoy Hill which is not in a Historic District vs. West End which is in a Historic District. We need to stabilize rents for long term residents and that is what Historic Districts do.

3) In the previous 4 meetings (1 Historic Preservation Board and 3 Planning Board workshops) that were previously held on the proposed Munjoy Hill Historic District, **around 80% of Munjoy Hill residents were and are consistently in support of** the proposed Munjoy Hill Historic District and the 6 landmarks.

Please review the evidence illustrated in below chart and I have also attached the detail for you to review.

Item Summary From The Past 4 Meetings/Workshops Held that Show Majority of Portland Supports the Proposed Munjoy Hill Historic District & 6 Landmarks

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	-If In the Proposed Munjoy Hill Historic District (Unique)	20	76.9%	6	23.1%	26						
2)	Planning Board Workshop #1 - 12/10/2019	99	76.7%	30	23.3%	129	23	74.2%	8	25.8%	31	
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4)	Planning Board Hearing - 3/10/2020 downloaded 3/10 4:14p	80	78.4%	22	21.6%	102	41	80.4%	10	19.6%	51	
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Sources:

HPB Nomination- 11/20/2019	https://portlandme.civicclerk.com/Web/Player.aspx?id=533&key=-1&mod=-1&mk=-1&nov=0
PB Workshop-12/10/2019	https://portlandme.civicclerk.com/Web/Player.aspx?id=571&key=-1&mod=-1&mk=-1&nov=0
PB Workshop-02/11/2020	https://portlandme.civicclerk.com/Web/Player.aspx?id=1207&key=-1&mod=-1&mk=-1&nov=0
PB Workshop-03/10/2020	https://portlandme.civicclerk.com/Web/Player.aspx?id=1219&key=-1&mod=-1&mk=-1&nov=0

4) Munjoy Hill can preserve more affordable housing if designated in a Historic District because right now more affordable housing is being removed and not being replaced because of our neighborhood is NOT in a Historic District.

5) If Munjoy Hill goes into Historic District, there is a greater chance that affordable housing will be created or maintained due to the Historic Tax Credits.

6) Historic Districts protects property owner's residence from insensitive developments such as the luxury cubed condos.

7) Historic Districts are better for the environment since the carbon emissions is 10x greater demolishing than renovating.

8) Historic Districts gives neighborhood's voices rather than behind closed door deals and ignoring public comments.

In conclusion, there is no reason for the Portland Planning Board members to vote against the proposed Munjoy Hill Historic District and the 6 landmarks based on above bullet points. All your questions raised to the Planning Dept Historic Preservation Department in the previous 3 Planning Board workshops were answered that ultimately favored Historic Districts for various reasons.

It is finally time now for the Planning Board to vote in support for the proposed Munjoy Hill Historic District and the 6 landmarks. In the time of Covid-19 pandemic and racism awakening, Munjoy Hill Historic District would be to not only stabilize our community but also to maintain long term immigrant/working class/middle class tenants before they are entirely pushed out and replaced with seasonal visitors in large cubed luxury condos. It would also preserve the houses where the immigrants/minorities/poor and working class Mainers use to live and some still do on Munjoy Hill. Munjoy Hill use to be a United Nations on the hill. It is important to save that story but also to save and/or create affordable housing for the people that can't afford these seasonal luxury condos. This conflict on Munjoy Hill now may not be about specifically about racism since we are the only high density residential zone district but it is about classism which is about the poor/immigrant/working class/middle class versus the wealthy.

As such, I urge you to vote in support for the proposed Munjoy Hill Historic District and 6 landmarks at the 8/11/2020 Planning Board Hearing.

Regards,

Karen Snyder,

Property Owner providing affordable housing on Munjoy Hill

72 Waterville St

Attachment: PublicCommentSummary2PBFinalVoteMHHD_20200811.xls

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HPB Nomination- 11/20/2019	PC 1	Barbara Vestal	X		7-9 Fore St., 14-16 North St, 101 Congress	X	X	Petition signatures to nominate. 21 signatures representing 21 properties	PC 1	Tom Abbott		X	21 Sheridan St.	X	X
HPB Nomination- 11/20/2019	PC2	Johanna Henry		X	50 St. Lawrence St.	X	X		PC 3	Gail Rengel	X		34 Lafayette St.	X	
HPB Nomination- 11/20/2019	PC 3	Carol Conner	X		12 Montreal St.	X	X	Individual Landmark Request	PC 4	Sive Nelson	X		29 Emerson St.	X	
HPB Nomination- 11/20/2019	PC 4	Karen Snyder	X		72 Waterville St.	X	X		PC 5	Wayne Valzania	X		27 Merrill St.	X	
HPB Nomination- 11/20/2019	PC 5	George Rheault		X	East Bayside				PC 6	Peter Murray	X		104 North St.	X	X
HPB Nomination- 11/20/2019	PC 6	George Reiche	X		50 Waterville St.	X	X		PC 7	Karen Snyder	X		72 Waterville St.	X	X
HPB Nomination- 11/20/2019	PC 7	Enoch Wenstrom	X		88 Beckett St.	X	X		PC 8	Paula Agopian	X		91 Monument St.	X	
HPB Nomination- 11/20/2019	PC 8	Berry Manter	X		46 Eastern Promenade	X	X		PC 9	Carol Conner	X		12 Montreal St.	X	X
HPB Nomination- 11/20/2019	PC 9	Mark Googins		X	63 Morning St.	X	X		PC 10	Nini McManamey	X		10 Willis St.	X	X
HPB Nomination- 11/20/2019	PC 9	Mark Googins			39 Morning St.				PC 11	Stacey Mitchell	X		74 Atlantic St.	X	X
HPB Nomination- 11/20/2019	PC 10	Susan Yandell	X		51 Monument St.	X	X	Individual Landmark Request	PC 12	George Carhart	X		7 Lafayette St.	X	X
HPB Nomination- 11/20/2019	PC 11	Christopher Akerlind	X		44 Monument St.	X	X	Individual Landmark Request	PC 13	Pam Days	X		25 Waterville St.	X	X
HPB Nomination- 11/20/2019	PC 12	Joanne Dow	X		28 Waterville St.	X	X	Individual Landmark Request	PC 14	Sally Oldham	X		118 Congress St.	X	
HPB Nomination- 11/20/2019	PC 13	Julius Ciembroniewicz	X		55 Morning St.	X	X		PC 15	Barbara Vestal	X		7-9 Fore St.	X	X
HPB Nomination- 11/20/2019	PC 14	Linsay Steven Mann		X	122 North St.	X	X								
HPB Nomination- 11/20/2019	PC 15	Alexis Santos		X											
HPB Nomination- 11/20/2019	PC 16	George and Ushi Carhart	X		7 Lafayette St.	X	X	Individual Landmark Request							
HPB Nomination- 11/20/2019	PC 17	Carl Henry		X	50 St. Lawrence St.	X	X	Opposition petition signatures; 25							
HPB Nomination- 11/20/2019	PC 18	Markos Miller		X	17 Atlantic St.	X	X								
HPB Nomination- 11/20/2019	PC 19	Peter and Deb Murray	X		104 North St.	X	X								
HPB Nomination- 11/20/2019	PC 20	Liz Hayes	X		107 North St.	X	X								
HPB Nomination- 11/20/2019	PC 21	Markos Miller		X	17 Atlantic St.	X	X								
HPB Nomination- 11/20/2019	PC 22	Carol Conner	X		12 Montreal St.	X	X								
HPB Nomination- 11/20/2019	PC 23	Berry Manter	X		46 Eastern Promenade	X	X								
HPB Nomination- 11/20/2019	PC 24	Nini McMananmy	X		10 Willis St.	X	X								
HPB Nomination- 11/20/2019	PC 25	Mike Hoover	X		40 Melbourne St.	X	X								
HPB Nomination- 11/20/2019	PC 26	Live Chase/Brent Adler		X	65 St. Lawrence St.	X	X								
HPB Nomination- 11/20/2019	PC 27	Karen Snyder	X		72 Waterville St.	X	X	Petition submitted; 80 signatures							
HPB Nomination- 11/20/2019	PC 28	Nini McMananmy	X		10 Willis St.	X	X	Petition submitted- small petition							
HPB Nomination- 11/20/2019	PC 29	Susan Yandell	X		51 Munjoy St.	X	X								
HPB Nomination- 11/20/2019	PC 30	Adam Frederick	X		75 W. Commercial St.	X	X								
HPB Nomination- 11/20/2019	PC 31	EJ Koch	X		81 Vesper St.	X	X								
HPB Nomination- 11/20/2019	PC 32	Lauren Ashwell		X	8 Emerson St.	X									
HPB Nomination- 11/20/2019	PC 33	Travis Agaman		X	8 Emerson St.	X									
HPB Nomination- 11/20/2019	PC 34	Liz Hayes	X		107 North St.	X	X								
HPB Nomination- 11/20/2019	PC 35	Mart99	X												
HPB Nomination- 11/20/2019	PC 36	Barbara Vestal	X		107 Congress St.	X	X								
HPB Nomination- 11/20/2019	PC 37	Francesca Gallucio-Steele	X		22 Clifford St.										
HPB Nomination- 11/20/2019	PC 38	Julie Larry	X		Greater Portland Landmark										
HPB Nomination- 11/20/2019	PC 39	Rhoda Renschler	X		37 Channel Road, SoPo										
HPB Nomination- 11/20/2019	PC 40	Sally Oldham	X		118 Congress St.	X	X								
HPB Nomination- 11/20/2019	PC 41	Ed Gardner	X		84 Eastern Promenade										
HPB Nomination- 11/20/2019	PC 42	Maggy Wolf	X		28 St. Lawrence St.	X	X								

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HPB Nomination- 11/20/2019	**PC 43**	Diane Davison	X		29 & 33 Morning St.	X	x								
PB Workshop-12/10/2019	**PC 1**	Barbara Vestal	X		7-9 Fore St.	X	X	Petition signatures to nominate.	**PC1**	Enoch Wenstrom	X		88 Beckett St.	X	X
PB Workshop-12/10/2019	**PC 2**	Johanna Henry		X	50 St. Lawrence St.	X	X		**PC2**	Jake Halpert	X		74 Atlantic St.	X	X
PB Workshop-12/10/2019	**PC 3**	Carol Conner	X		12 Montreal St.	X	X	Individual Landmark Request	**PC3**	George Carhart	X		7 Lafayette St.	X	X
PB Workshop-12/10/2019	**PC 4**	Karen Snyder	X		72 Waterville St.	X	X		**PC4**	Berry Manter	X		46 Eastern Promenad	X	X
PB Workshop-12/10/2019	**PC 5**	George Rheault		X	East Bayside				**PC5**	Josh Baston		X	42 Munjoy St.	X	X
PB Workshop-12/10/2019	**PC 6**	George Reiche	X		50 Waterville St.	X	X		**PC6**	John Wuestoff	X		11 Morning St.	X	X
PB Workshop-12/10/2019	**PC 7**	Enoch Wenstrom	X		83 Beckett St.	X	X		**PC7**	Zack Barowitz		X	Libby Town		
PB Workshop-12/10/2019	**PC 8**	Berry Manter	X		46 Eastern Promenade	X	X		**PC8**	Greg Shinberg	X		Outside Portland		
PB Workshop-12/10/2019	**PC 9**	Mark Googins		X	63 & 39 Morning St.	X	X		**PC9**	Nini McManamy	X		10 Willis St.	X	X
PB Workshop-12/10/2019	**PC 10**	Susan Yandell	X		51 Monument St.	X	X	Individual Landmark Request	**PC10**	Wayne Valzania	X		27 Merrill St.	X	
PB Workshop-12/10/2019	**PC 11**	Christopher Akerlind	X		44 Monument St.	X	X	Individual Landmark Request	**PC11**	Carl Henry		X	50 St. Lawrence St.	X	X
PB Workshop-12/10/2019	**PC 12**	Joanne Dow	X		28 Waterville St.	X	X	Individual Landmark Request	**PC12**	Ann Manganello		X	84 Quebec St.	X	X
PB Workshop-12/10/2019	**PC 13**	Julius Ciembroniewicz	X		55 Morning St.	X	X		**PC13**	John Whitehouse		X	18 North St.	X	X
PB Workshop-12/10/2019	**PC 14**	Linsay Steven Mann		X	122 North St.	X	X		**PC14**	Justine Denny	X		56 North St.	X	X
PB Workshop-12/10/2019	**PC 15**	Alexis Santos		X					**PC15**	Peter Murray			104 North St.	X	X
PB Workshop-12/10/2019	**PC 16**	George and Ushi Carhart	X		7 Lafayette St.	X	X	Individual Landmark Request	**PC16**	Mark Holden	X		37 St. Lawrence St.	X	X
PB Workshop-12/10/2019	**PC 17**	Carl Henry		X	50 St. Lawrence St.	X	X	Opposition petition signatures; 25 signaturs representing 15 properties	**PC17**	Erna Koch	X		81 Vesper St.	X	X
PB Workshop-12/10/2019	**PC 18**	Markos Miller		X	17 Atlantic St.	X	X		**PC18**	Ned Chester	X		7 Fore St.	X	X
PB Workshop-12/10/2019	**PC 19**	Peter and Deb Murray	X		104 North St.	X	X		**PC19**	Maggy Wolf	X		28 St. Lawrence St.	X	X
PB Workshop-12/10/2019	**PC 20**	Liz Hayes	X		107 North St.	X	X		**PC20**	Beth Snyder	X		81 North St.	X	X
PB Workshop-12/10/2019	**PC 21**	Markos Miller		X	17 Atlantic St.	X	X		**PC21**	Julie Larry	X		GPL		
PB Workshop-12/10/2019	**PC 22**	Carol Conner	X		12 Montreal St.	X	X		**PC22**	Carol Conner	X		12 Montreal St.	X	X
PB Workshop-12/10/2019	**PC 23**	Berry Manter	X		46 Eastern Promenade	X	X		**PC23**	Caroly Swartz	X		27 Merrill St.	X	
PB Workshop-12/10/2019	**PC 24**	Nini McMananmy	X		10 Willis St.	X	X		**PC24**	Lori Round		X	47 Monument St.	X	
PB Workshop-12/10/2019	**PC 25**	Mike Hoover	X		40 Melbourne St.	X	X		**PC25**	Barbara Vestal	X		7 Fore St.	X	X
PB Workshop-12/10/2019	**PC 26**	Live Chase/Brent Adler		X	65 St. Lawrence St.	X	X		**PC26**	Pamela Day	X		25 Monument St.	X	X
PB Workshop-12/10/2019	**PC 27**	Karen Snyder	X		72 Waterville St.	X	X	Petition submitted; 80 signatures representing 60 properties.	**PC27**	Sue ?	X		122 North St.	X	X
PB Workshop-12/10/2019	**PC 28**	Nini McMananmy	X		10 Willis St.	X	X	Petition submitted- small petition on Willis St.	**PC28**	Julie Larry	X		GPL		
PB Workshop-12/10/2019	**PC 29**	Susan Yandell	X		51 Munjoy St.	X	X		**PC29**	George Rheult		X	Bayside		
PB Workshop-12/10/2019	**PC 30**	Adam Frederick	X		75 W. Commercial St.	X	X		**PC30**	Tim Wells		X	33 Montreal St.	X	X
PB Workshop-12/10/2019	**PC 31**	EJ Koch	X		81 Vesper St.	X	X		**PC31**	Oliver Murray	X		55 Montreal St.	X	X
PB Workshop-12/10/2019	**PC 32**	Lauren Ashwell		X	8 Emerson St.	X			**PC32**						
PB Workshop-12/10/2019	**PC 33**	Travis Agaman		X	8 Emerson St.	X			**PC33**						
PB Workshop-12/10/2019	**PC 34**	Liz Hayes	X		107 North St.	X	X								
PB Workshop-12/10/2019	**PC 35**	Mart99	X												
PB Workshop-12/10/2019	**PC 36**	Barbara Vestal	X		107 Congress St.	X	X								
PB Workshop-12/10/2019	**PC 37**	Francesca Gallucio-Steele	X		22 Clifford St.										
PB Workshop-12/10/2019	**PC 38**	Julie Larry	X		Greater Portland Landmar										
PB Workshop-12/10/2019	**PC 39**	Rhoda Renschler	X		37 Channel Road, SoPo										

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	-If A Munjoy Hill Resident (Unique Person)	20	71.4%	8	28.6%	28						
	-If In the Proposed Munjoy Hill Historic District (Unique)	20	76.9%	6	23.1%	26						
2)	Planning Board Workshop #1 - 12/10/2019	99	76.7%	30	23.3%	129	23	74.2%	8	25.8%	31	
	-If A Munjoy Hill Resident (Unique Person)	62	79.5%	16	20.5%	78						
	-If In the Proposed Munjoy Hill Historic District (Unique)	48	78.7%	13	21.3%	61						
3)	Planning Board Workshop #2 - 2/11/2020	42	72.4%	16	27.6%	58	19	70.4%	8	29.6%	27	
	-If A Munjoy Hill Resident (Unique Person)	30	75.0%	10	25.0%	40						
	-If In the Proposed Munjoy Hill Historic District (Unique)	19	79.2%	5	20.8%	24						
4)	Planning Board Hearing - 3/10/2020 downloaded 3/10 4:14p	80	78.4%	22	21.6%	102	41	80.4%	10	19.6%	51	
	-If A Munjoy Hill Resident (Unique Person)	67	87.0%	10	13.0%	77						
	-If In the Proposed Munjoy Hill Historic District (Unique)	50	86.2%	8	13.8%	58						
	OVERALL TOTALS: Total All Emails Sent	221	76.5%	68	23.5%	289	97	78.2%	27	21.8%	124	
	-If A Munjoy Hill Resident (Unique Person)	159	85.9%	26	14.1%	185						
	-If In the Proposed Munjoy Hill Historic District (Unique)	117	81.8%	26	18.2%	143						

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Meeting Date on Proposed Munjoy Hill Historic District	#	Email Sent By	HD Yes	HD No	Address	Munjoy Hill Resident	In Proposed HD?	Comment	#	Public Comment At Meeting	HD Yes	HD No	Address	Munjoy Hill Resident?	In Proposed HD?
PB Workshop-12/10/2019	**PC 40**	Sally Oldham	X		118 Congress St.	X	X								
PB Workshop-12/10/2019	**PC 41**	Ed Gardner	X		511 Congress St St.										
PB Workshop-12/10/2019	**PC 42**	Maggy Wolf	X		28 St. Lawrence St.	X	X								
PB Workshop-12/10/2019	**PC 43**	Diane Davison	X		29 Morning St St.	X	X								
PB Workshop-12/10/2019	**PC 44**	Julius Ciembroniewicz	X		55 Morning St St.	X	X	Note: Included in PB packet were previous were from HPB 11/20/2019 meeting. This Starts to address Planning Board for 12/10/2019 workshop.							
PB Workshop-12/10/2019	**PC 45**	Enoch Wenstrom	X		88 Beckett St.	X	X								
PB Workshop-12/10/2019	**PC 46**	James Hambley /Jenny Dig	X		61 Monument St.	X	X								
PB Workshop-12/10/2019	**PC 47**	Wayne Valzania	X		27 Merrill St.	X									
PB Workshop-12/10/2019	**PC 48**	Marlies Reppenhagan	X		55 Morning Stl, Unit 2-2	X	X								
PB Workshop-12/10/2019	**PC 49**	Paula Agopian	X		91 Monument St.	X									
PB Workshop-12/10/2019	**PC 50**	Anita Stewart	X		25 A Forest Ave.										
PB Workshop-12/10/2019	**PC 51**	Lori Rounds		X	47 Monument St.	X									
PB Workshop-12/10/2019	**PC 52**	Kate Howe		X	40 Quebec St.	X									
PB Workshop-12/10/2019	**PC 53**	Berry Manter	X		46 Eastern Promenade	X	X								
PB Workshop-12/10/2019	**PC 54**	Carle Henry		X	50 St. Lawrence St.	X	X								
PB Workshop-12/10/2019	**PC 55**	Carol Conner	X		12 Montreal St.	X	X								
PB Workshop-12/10/2019	**PC 56**	Joshua Baston		X											
PB Workshop-12/10/2019	**PC 57**	Nancy/Bob Jordan	X			X		Owns 6 Buildings on Munjoy Hill?							
PB Workshop-12/10/2019	**PC 58**	Carolyn Swartz	X		27 Merrill St.	X									
PB Workshop-12/10/2019	**PC 59**	YIMBY		X											
PB Workshop-12/10/2019	**PC 60**	Erna Koch	X		81 Vesper St.	X	X								
PB Workshop-12/10/2019	**PC 61**	Vana Carmona	X		105 North St., Unit 1	X	X								
PB Workshop-12/10/2019	**PC 62**	David Kelly		X	Portland, ME										
PB Workshop-12/10/2019	**PC 63**	Debrah Yale		X				Broker for Tom Landry							
PB Workshop-12/10/2019	**PC 64**	Gary Bahlkow	X		42 Lafayette St.	X									
PB Workshop-12/10/2019	**PC 65**	Jeremy Rutkiewicz		X	161 Congress St.	X	X								
PB Workshop-12/10/2019	**PC 66**	Lorraine Carrol	X		31 North St.	X	X	30 yr resident							
PB Workshop-12/10/2019	**PC 67**	Lydia Savage	X		19 Melbourne St.	X									
PB Workshop-12/10/2019	**PC 68**	William Gemmill	X												
PB Workshop-12/10/2019	**PC 69**	Bruce Wood	X		Old Port										
PB Workshop-12/10/2019	**PC 70**	Beth Snyder	X		81 North St.	X	X								
PB Workshop-12/10/2019	**PC 71**	Stephen Gaal	X		176 Eastern Promenade	X	X								
PB Workshop-12/10/2019	**PC 72**	Diane Davison	X		29 Morning St.	X	X								
PB Workshop-12/10/2019	**PC 73**	Robin Whitten	X		23 St. Lawerence St.	X	X								
PB Workshop-12/10/2019	**PC 74**	Elizabeth Miller		X	46 Waterville St.	X	X								
PB Workshop-12/10/2019	**PC 75**	Sara Mills	X												
PB Workshop-12/10/2019	**PC 76**	Sally Oldham	X		118 Congress St.	X	X								
PB Workshop-12/10/2019	**PC 77**	Leslie Hart	X		215 Sheridan St.	X									
PB Workshop-12/10/2019	**PC 78**	Betty Lorber	X		225 Sheridan St.	X									

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PB Workshop-12/10/2019	**PC 79**	Priscilla Harrison	X					Moved off of Munjoy Hill 6 yrs ago							
PB Workshop-12/10/2019	**PC 80**	Chris Stewart	X		81 North St.	X	X								
PB Workshop-12/10/2019	**PC 81**	Susan Gillis		X	48 Congress St.	X	X								
PB Workshop-12/10/2019	**PC 82**	Carol McCracken		X	Portland, ME			Doesn't live on the Hill.							
PB Workshop-12/10/2019	**PC 83**	Oliver Murray	X		55 Montreal St.	X	X								
PB Workshop-12/10/2019	**PC 84**	Patricia Erikson	X					3rd generation Munjoy Hill							
PB Workshop-12/10/2019	**PC 85**	Ben Poirer	X		Cape Elizabeth										
PB Workshop-12/10/2019	**PC 86**	Susan Yandell	X		51 Monument St.	X	X								
PB Workshop-12/10/2019	**PC 87**	Liz Hayes	X		107 North St.	X	X								
PB Workshop-12/10/2019	**PC 88**	Anne Manganello		X	84 Quebec St.	X	X								
PB Workshop-12/10/2019	**PC 89**	Jonathan Wylie/Gail Ringel	X		34 Lafayette St.	X	X								
PB Workshop-12/10/2019	**PC 90**	Martha Emerson	X		340 Eastern Promenade	X	X								
PB Workshop-12/10/2019	**PC 91**	KE Smith	X		80 Quebec St.	X	X								
PB Workshop-12/10/2019	**PC 92**	Ann Casady	X		205 Sheridan St.	X									
PB Workshop-12/10/2019	**PC 93**	Peter and Deb Murray	X		104 North St.	X	X								
PB Workshop-12/10/2019	**PC 94**	Abbie McMillen	X		26-28 Vesper St.	X	X								
PB Workshop-12/10/2019	**PC 95**	Nancy Brian	X		118 Congress St.	X	X								
PB Workshop-12/10/2019	**PC 96**	Carol J. DeTine	X		144 Vaughn St.	X	X								
PB Workshop-12/10/2019	**PC 97**	Marianne Pratt	X		224 Sheridan St.	X									
PB Workshop-12/10/2019	**PC 98**	Hillary Bassett	X		55 Morning St.	X	X								
PB Workshop-12/10/2019	**PC 99**	Dan Haley		X	140 Eastern Promenade	X	X								
PB Workshop-12/10/2019	**PC 100**	Betty and John Wuestoff	X		15 Morning St.	X	X								
PB Workshop-12/10/2019	**PC 101**	Katy Brewer	X					Grew Up on the Hill							
PB Workshop-12/10/2019	**PC 102**	Nancy Guimond	X		13 Waterville St.	X	X								
PB Workshop-12/10/2019	**PC 103**	Greater Portland Landmarl	X												
PB Workshop-12/10/2019	**PC 104**	Tica Douglas	X		11 Munjoy St.	X	X								
PB Workshop-12/10/2019	**PC 105**	Lori Rounds		X	47 Monument St.	X									
PB Workshop-12/10/2019	**PC 106**	Mary Casale	X		39 Waterville St.	X	X								
PB Workshop-12/10/2019	**PC 107**	Enoch Wenstrom	X		88 Beckett St.	X	X								
PB Workshop-12/10/2019	**PC 108**	Pamela Day	X		25 Waterville St.	X	X								
PB Workshop-12/10/2019	**PC 109**	Travis Agaman		X	8 Emerson St.	X									
PB Workshop-12/10/2019	**PC 110**	Andrew Glassberg	X		340 Eastern Promenade	X	X								
PB Workshop-12/10/2019	**PC 111**	Jill Nixon	X		118 Congress St.	X	X								
PB Workshop-12/10/2019	**PC 112**	Rob Whitten	X		188 Eastern Promenade	X	X								
PB Workshop-12/10/2019	**PC 113**	Paul Haley		X	62 Waterville St.	X	X								
PB Workshop-12/10/2019	**PC 114**	Nini McMananmy	X		10 Willis St.	X	X	0							
PB Workshop-12/10/2019	**PC 115**	Carl Henry		X	50 St. Lawrence St.	X	X								
PB Workshop-12/10/2019	**PC 116**	Peter Pitegoff			205 Sheridan St.	X		Referring to 128R North/ 126 North							
PB Workshop-12/10/2019	**PC 117**	Anne Pringle	X		Neal St										
PB Workshop-12/10/2019	**PC 118**	William Hall	X		Pleasant Ave.			Use to be on Planning Board							
PB Workshop-12/10/2019	**PC 119**	Gail Ringle	X		34 Lafayette St.	X	X								
PB Workshop-12/10/2019	**PC 120**	Karen Snyder	X		72 Waterville St.	X	X								
PB Workshop-12/10/2019	**PC 121**	Markos Miller		X	17 Atlantic St.	X	X								

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PB Workshop-12/10/2019	PC 123	Mike Hammen	X		127 Pleasant St.	X									
PB Workshop-12/10/2019	PC 124	Nancy Machesney	X		213 Sheridan St.	X									
PB Workshop-12/10/2019	PC 125	Stephen Shiffman	X		9 Waterville St.	X	X								
PB Workshop-12/10/2019	PC 126	Wayne Valzania - MHNO	X		MHNO										
PB Workshop-12/10/2019	PC 127	Chuck Kamr	X		55 Morning St.	X									
PB Workshop-12/10/2019	PC 128	Lauren Ashwell		X	8 Emerson St.	X		Downloaded packet on noon 12/10/2019							
PB Workshop-02/11/2020	PC 1	Ann Manganello		X	84 Quebect St.	X	X		PC1	Zack Barowitz		X	Libbytown		
PB Workshop-02/11/2020	PC2	John Whitehouse		X	18 North St.	X	X		PC2	Nathan Z.	X		22 Eastern Promenad	X	X
PB Workshop-02/11/2020	PC 3	Markos Miller		X	17 Atlantic St.	X	X		PC3	David Lloyd	X		29 Waterville St.	X	X
PB Workshop-02/11/2020	PC 4	Sally Oldham	X		118 Congress St.	X			PC4	John Wuestoff	X		11 Morning St.	X	X
PB Workshop-02/11/2020	PC 5	Zack Barowitz		X	Libby Town				PC5	John White		X	18 North St.	X	X
PB Workshop-02/11/2020	PC 6	George Rheault		X	West Bayside				PC6	Vanna Carmona	X		105 North St.	X	X
PB Workshop-02/11/2020	PC 7	David Kelly		X	Portland				PC7	Rob Whitten	X		29 St. Lawrence St.	X	X
PB Workshop-02/11/2020	PC 8	Emily Liebling		X	54 Tyng St.				PC8	Mike Hoover	X		40 Melburne St.	X	X
PB Workshop-02/11/2020	PC 9	Francesa Galluccio-Steele	X		22 Clifford St.				PC9	Carol Conner	X		12 Montreal St.	X	X
PB Workshop-02/11/2020	PC 10	Zack Barowitz		X	Libby Town				PC10	Anne Manganello		X	84 Quebec st.	X	X
PB Workshop-02/11/2020	PC 11	Lauren Ashwell		X	8 Emerson St.	X			PC11	Tica Douglas	X		11 Munjoy St.	X	X
PB Workshop-02/11/2020	PC 12	Lori Rounds		X	47 Monument St.	X			PC12	Sally Oldham	X		118 Congress St.	X	
PB Workshop-02/11/2020	PC 13	Lynn Kuzma		X	10 Emerson St.	X			PC13	Juli Larry	X		GPL		
PB Workshop-02/11/2020	PC 14	Wayne Valzania (MHNO)	X		MHNO				PC14	Nini McManamey	X		10 Willis St.	X	X
PB Workshop-02/11/2020	PC 15	George Carhart	X		7 Lafayette St.	X	X		PC15	Lori Round		X	47 Monument St.	X	
PB Workshop-02/11/2020	PC 16	Wayne Valzania	X		27 Merrill St.	X			PC16	Maggy Wolf	X		28 St. Lawrence St.	X	X
PB Workshop-02/11/2020	PC 17	Carolyn Swartz	X		27 Merrill St.	X			PC17	Wayne Valzania	X		23 Merrill St.	X	
PB Workshop-02/11/2020	PC 18	Erna Kocth	X		81 Vesper St.	X	X		PC18	Enoch Wenstrom	X		88 Beckett St.	X	X
PB Workshop-02/11/2020	PC 19	Linda Tyler	X		52 St. Lawrence St.	X	X		PC19	karen Snyder	X		72 Waterville St.	X	X
PB Workshop-02/11/2020	PC 20	Mark Holden	X		37 St. Lawrence St.	X	X		PC20	Smith - female developer		X	?		
PB Workshop-02/11/2020	PC 21	Michael Englerbert	X		193 Sheridan St.	X			PC21	George Carhart	X		7 Lafayette St.	X	X
PB Workshop-02/11/2020	PC 22	Richard Rollins	X		Hill Boy				PC22	Tim Wells		X	33 Montreal St.	X	
PB Workshop-02/11/2020	PC 23	Mary Morse	X		208 Sheridan St.	X			PC23	George Rheault		X	Bayside		
PB Workshop-02/11/2020	PC 24	Robin Whitten	X		23 St. Lawrence St.	X	X		PC24	Carl Henry		X	50 St. Lawrence St.	X	X
PB Workshop-02/11/2020	PC 25	Heather Sullivan		X	32 Merrill St.	X			PC25	Peter Murray	X		104 North St.	X	X
PB Workshop-02/11/2020	PC 26	Julie Larry	X		GPL				PC26	Barry Manter	X		46 Eastern Promenad	X	X
PB Workshop-02/11/2020	PC 27	Kevin Schochat	X		215 Sheridan St.	X			PC27	Sive Nelson	X		29 Emerson St.	X	
PB Workshop-02/11/2020	PC 28	Mary Barrett	X		27 Parson St.										
PB Workshop-02/11/2020	PC 29	Nancy Machesney	X		213 Sheridan St.	X									
PB Workshop-02/11/2020	PC 30	Steven Inman	X		81A Vesper St.	X	X								
PB Workshop-02/11/2020	PC 31	Edward Fiske Mooney	X		77 Vesper St.	X	X								
PB Workshop-02/11/2020	PC 32	Susan Yandell	X		51 Monument St.	X	X								
PB Workshop-02/11/2020	PC 33	Sara Auld	X		43 Munjoy St.	X	X								
PB Workshop-02/11/2020	PC 34	Carol Connor	X		12 Montreal St.	X	X								
PB Workshop-02/11/2020	PC 35	Ann Casady	X		213 Sheridan St.	X									
PB Workshop-02/11/2020	PC 36	George Carhart	X		7 Lafayette St.	X	X								
PB Workshop-02/11/2020	PC 37	Lincoln Payne	X		150 Eastern Promenade	X	X								

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2)	Planning Board Workshop #1 - 12/10/2019	99	76.7%	30	23.3%	129	23	74.2%	8	25.8%	31	
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3)	Planning Board Workshop #2 - 2/11/2020	42	72.4%	16	27.6%	58	19	70.4%	8	29.6%	27	
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4)	Planning Board Hearing - 3/10/2020 downloaded 3/10 4:14p	80	78.4%	22	21.6%	102	41	80.4%	10	19.6%	51	
	-If A Munjoy Hill Resident (Unique Person)	67	87.0%	10	13.0%	77						
	-If In the Proposed Munjoy Hill Historic District (Unique)	50	86.2%	8	13.8%	58						
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	-If A Munjoy Hill Resident (Unique Person)	159	85.9%	26	14.1%	185						
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PB Workshop-02/11/2020	**PC 38**	Travis Agaman		X	8 Emerson St.	X									
PB Workshop-02/11/2020	**PC 39**	Amy Alward	X		South Portland										
PB Workshop-02/11/2020	**PC 40**	Elizabeth Peavey	X		Portland										
PB Workshop-02/11/2020	**PC 41**	Nick Murray		X	40 St. Lawrence St.	X	X								
PB Workshop-02/11/2020	**PC 42**	James Rohman		X	57 Elmwood St.										
PB Workshop-02/11/2020	**PC 43**	James Hambley	X		61 Monument St.	X									
PB Workshop-02/11/2020	**PC 44**	Donna Jones	X		Portland										
PB Workshop-02/11/2020	**PC 45**	Abbie McMillen	X		26-28 Vesper St.	X	X								
PB Workshop-02/11/2020	**PC 46**	Anne Pringle	X		Neal St.										
PB Workshop-02/11/2020	**PC 47**	Daryl Renschler	X		Portland										
PB Workshop-02/11/2020	**PC 48**	Karen Snyder	X		72 Waterville St.	X	X								
PB Workshop-02/11/2020	**PC 49**	Kathleen Bender	X		11 North St.	X	X								
PB Workshop-02/11/2020	**PC 50**	Marlies Reppenhagen	X		55 Morning St.	X	X								
PB Workshop-02/11/2020	**PC 51**	Pamela Day	X		25 Waterville St.	X	X								
PB Workshop-02/11/2020	**PC 52**	Nancy & Robert Jordan	X		13-15 Vesper St.	X	X								
PB Workshop-02/11/2020	**PC 52**	Nancy & Robert Jordan			17-19 Vesper St.	X	X								
PB Workshop-02/11/2020	**PC 52**	Nancy & Robert Jordan			91-93 Morning St.	X	X								
PB Workshop-02/11/2020	**PC 52**	Nancy & Robert Jordan			26-30 Eastern Promenade	X	X								
PB Workshop-02/11/2020	**PC 52**	Nancy & Robert Jordan			19 Locust St.										
PB Workshop-02/11/2020	**PC 53**	Carl Henry		X	50 St. Lawrence	X	X								
PB Workshop-02/11/2020	**PC 54**	Carol J. De Tine	X		144 Vaughn St.										
PB Workshop-02/11/2020	**PC 55**	Charlton Smith	X		33 Turner St.	X									
PB Workshop-02/11/2020	**PC 56**	John Watson & Nancy Brai	X		118 Congress St.	X									
PB Workshop-02/11/2020	**PC 57**	Justine Denney	X		56 North St.	X	X								
PB Workshop-02/11/2020	**PC 58**	Tom Keating	X		166 Pleasant Ave.										
PB Workshop-03/10/2020	**PC59**	Abby Harvey	X		17 Waterville St.	X	X		PC1	Jake Halpert	X		74 Atlantic St.	X	X
PB Workshop-03/10/2020	**PC60**	Anne Manganello		X	84 Quebec St.	X	X		PC2	David Cowie	X		32 North St.	X	X
PB Workshop-03/10/2020	**PC61**	Anne Manganello		X	84 Quebec St.	X	X		PC3	Gemma Cannon	X		204 Congress St.		
PB Workshop-03/10/2020	**PC62**	Audrey Puleio	X		27 North St.	X	X		PC4	Pam Plum	X		104 Park St.		
PB Workshop-03/10/2020	**PC63**	Barbara Brown	X		156 Sheridan St., #2C	X			PC5	Nini McManamy	X		10 Willis St.	X	X
PB Workshop-03/10/2020	**PC64**	Barti Bourgault	X		49 Waterville St.	X	X		PC6	Saura Shannon		X	59 Moody St.	X	X
PB Workshop-03/10/2020		Barti Bourgault			51 Waterville St.	X	X		PC7	George Rheult		X	West Bayside		
PB Workshop-03/10/2020	**PC65**	Beth Snyder	X		81 North St.	X	X		PC8	Josh Baston		X	42 North St.	X	X
PB Workshop-03/10/2020	**PC66**	Bruce Wood	X		607 Chandler's Wharf				PC9	Lauren Ashwell		X	8 Emerson St.	X	
PB Workshop-03/10/2020	**PC67**	Candace Myers	X		45 Eastern Promenade, Unit B-G	X			PC10	Mark Holden	X		37 St. Lawrence	X	X
PB Workshop-03/10/2020	**PC68**	Carl Henry		X	50 St. Lawrence	X	X		PC11	Mildred Bachrach		X	211 Brackett St.		
PB Workshop-03/10/2020	**PC69**	Carol Conner	X		12 Montreal St.	X	X		PC12	Dianne Davison	X		29 Morning St.	X	X
PB Workshop-03/10/2020	**PC70**	Carol McCracken		X	Portland				PC13	Bill Hall	X		Peaks Island		
PB Workshop-03/10/2020	**PC71**	Carolyn Swartz	X		27 Merrill St.	X	X		PC14	Michelle Polacsek	X		167 Newbury St., Unit 406		
PB Workshop-03/10/2020	**PC72**	Christopher Ackerland	X		44 Monument St.	X	X		PC15	Robin Whitten	X		23 St. Lawrence St.	X	X
PB Workshop-03/10/2020	**PC73**	Christopher Stewart	X		81 North St.	X	X		PC16	Sherwin Hamill	X		2 Atlantic St.	X	X
PB Workshop-03/10/2020	**PC74**	Claudia Diller	X		Munjoy Hill?	X			PC17	Stacy Mitchell	X		74 Atlantic St.	X	X
PB Workshop-03/10/2020	**PC75**	Cynthia Schmidt	X		21 Sheridan St, #1	X	X		PC18	Beth Snyder	X		81 North St.	X	X
PB Workshop-03/10/2020	**PC76**	David Lloyd	X		29 Waterville St.	X	X		PC19	Angela Adams	X		2 Atlantic St.	X	X
PB Workshop-03/10/2020	**PC77**	Debra Cole	X		71 Walnut St.	X	X		PC20	Keri lord	X		Deering St.		

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PB Workshop-03/10/2020	**PC78**	Debra Pressier	X		25 Fore St.	X	X		PC21	Ann Mangenello		X	84 Quebec St.	X	X
PB Workshop-03/10/2020	**PC79**	Liz Hays	X		107 North St.	X	X		PC22	Lindsey Mann	X		122 North St.	X	X
PB Workshop-03/10/2020	**PC80**	Gary Stern	X		65 Revere St.				PC23	Richard Heffern	X		8 Sherbrooke St.	X	X
PB Workshop-03/10/2020	**PC81a**	George Rheult		X	Bayside				PC24	Hilary Bassett	X		55 Morning St.	X	X
PB Workshop-03/10/2020	**PC82**	Joe Walsh		X	Portland, Munjoy ?Green Clean Maine?				PC25	Thomas Brokish	X		43 Munjoy St.	X	X
PB Workshop-03/10/2020	**PC83**	John Whitehouse		X	1 Cumberside Falmouth				PC26	Sally Oldham	X		118 Congress St.	X	X
PB Workshop-03/10/2020	**PC84**	Kathryn Yates	X						PC27	Rob Whitten	X		23 St. Lawrence St.	X	X
PB Workshop-03/10/2020	**PC85**	Kenneth and Joyce Baily	X		59 Mountfort St.	X			PC28	Berry Manter	X		46 Eastern Promenad	X	X
PB Workshop-03/10/2020	**PC86**	Kevin Schochat	X		215 Sheridan St.	X			PC29	Carol Swartz	X		27 Merrill St.	X	X
PB Workshop-03/10/2020	**PC87**	Leslie Hart	X		215 Sheridan St.	X			PC30	Wayne Valzania	X		27 Merrill St.	X	X
PB Workshop-03/10/2020	**PC88**	Maggy Wolf	X		28 St. Lawrence	X	X		PC31	Steve Cannon	X		204 Congress St.		
PB Workshop-03/10/2020	**PC89**	Martica Swain	X		28 St. Lawrence	X	X		PC32	Mike Hoover	X		40 Melbourne St.	X	X
PB Workshop-03/10/2020	**PC90**	Nan Cumming	X		87 Vesper St.	X	X		PC33	Carol Conner	X		12 Montreal St.	X	X
PB Workshop-03/10/2020	**PC91**	Nancy Machesney	X		215 Sheridan St.	X			PC34	Oliver Murray	X		40 Montreal St.	X	X
PB Workshop-03/10/2020	**PC92**	Nancy Thayer	X		7 Gilbert Lane	X	X		PC35	Sive Whelan	X		29 Emerson St.	X	X
PB Workshop-03/10/2020	**PC93**	Ned Chester	X		11 Fore St.	X	X		PC36	John Wuestoff	X		17 Morning St.	X	X
PB Workshop-03/10/2020	**PC94**	Paul Flaxman	X		7 Atlantic St.	X	X		PC37	John Mahoney		X	73 Atlantic St.	X	X
PB Workshop-03/10/2020	**PC95**	Bob and Jeanne Bull	X		68 Atlantic St.	X	X		PC38	Ned Chester	X		7 Fore St.	X	X
PB Workshop-03/10/2020	**PC96**	Ryan Fitzgerlad		X	51 Morning St.	X	X		PC39	Herb Adams	X		Parkside		
PB Workshop-03/10/2020	**PC97**	Sally Oldham	X		118 Congress	X			PC40	Pam Day	X		25 Waterville St.	X	X
PB Workshop-03/10/2020	**PC98**	Ted Oldham	X		118 Congress	X			PC41	George Carhart	X		7 Lafayette St.	X	X
PB Workshop-03/10/2020	**PC99**	Tica Douglas	X		11 Munjoy St.	X	X		PC42	Barbara Vestal	X		7 Fore St.	X	X
PB Workshop-03/10/2020	**PC100**	Tom Kennedy	X		340 Eastern Promenade, Unit 213	X			PC43	Lori Round		X	47 Monument St.	X	
PB Workshop-03/10/2020	**PC101**	Travis Agaman		X	8 Emerson St.	X			PC44	Peter Blackstone	X		76 Cumberland Ave	X	X
PB Workshop-03/10/2020	**PC102**	Wendy Cherubini		X	33 May St.				PC45	Lorrayne Carroll	X		31 North St.	X	X
PB Workshop-03/10/2020	**PC103**	William Cleaves	X		27 North St, Apt 4	X	X		PC46	Mary Casale	X		39 Waterville St.	X	X
PB Workshop-03/10/2020	**PC104**	Megan Roberts		X	Portland, Woodsford				PC47	Tim Wells		X	33 Montreal	X	
PB Workshop-03/10/2020	**PC105**	Vana Carmona	X		105 North St., Apt 1	X	X		PC48	Peter Murray	X		104 North St.	X	X
PB Workshop-03/10/2020	**PC106**	Martha Emerson	X		340 Eastern Promenade, Unit 247	X			PC49	Carl Henry		X	50 St. Lawrence St.	X	X
PB Workshop-03/10/2020	**PC107**	Betts Mayer	X		211 Sheridan St.	X			PC50	Maggy Wolf	X		28 St. Lawrence St.	X	X
PB Workshop-03/10/2020	**PC108**	Gemma Cannon	X		WHSA Secretary?	X			PC51	Karen Snyder	X		72 Waterville St.	X	X
PB Workshop-03/10/2020	**PC109**	Matt Thayer	X		62 Munjoy St.	X	X								
PB Workshop-03/10/2020	**PC110**	Uschi Carhart	X		7 Lafayette St.	X	X								
PB Workshop-03/10/2020	**PC111**	Mildred Bachrach		X	211 Brackett St.										
PB Workshop-03/10/2020	**PC112**	Nini McManamy	X		11 Willist St.	X	X								
PB Workshop-03/10/2020	**PC113**	Nathan Szanton	X		22 Eastern Promenade, Unit #3	X	X								
PB Workshop-03/10/2020	**PC114**	Mary Casale	X		39 Waterville St.	X	X								
PB Workshop-03/10/2020	**PC115**	Joel Harris	X		38 Blanchard St, Cumberland										
PB Workshop-03/10/2020	**PC116**	Peter Murray	X		104 North St.	X	X								
PB Workshop-03/10/2020	**PC117**	Lindsay Swann	X		122 North St.	X	X								
PB Workshop-03/10/2020	**PC118**	Enoch Wenstrom	X		88 Beckett St.	X	X								
PB Workshop-03/10/2020	**PC119**	Barbara Vestal	X		11 Fore St.	X	X								
PB Workshop-03/10/2020	**PC120**	Gail Wenstrom	X		83 Beckett St.	X	X								
PB Workshop-03/10/2020	**PC121**	Karen Snyder	X		72 Waterville St.	X	X								
PB Workshop-03/10/2020	**PC122**	Gail Wenstrom	X		83 Beckett St.	X	X								

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PB Workshop-03/10/2020	**PC123**	Pam Day	**X**		25 Waterville St.	X	X								
PB Workshop-03/10/2020	**PC124**	Betty Wuestoff	**X**		11 Morning St.	X	X								
PB Workshop-03/10/2020	**PC125**	Hillary Bassett	**X**		55 Morning St.	X	X								
PB Workshop-03/10/2020	**PC126**	Cara DeTign	**X**		144 Vaughn St.										
PB Workshop-03/10/2020	**PC127**	Ed Gardner	**X**		511 Congress St.										
PB Workshop-03/10/2020	**PC128**	Francesca Galluccio-Steele	**X**		22 Clifford St.										
PB Workshop-03/10/2020	**PC129**	Robert Derry	**X**		63 Melbourne St.	X	X								
PB Workshop-03/10/2020	**PC130**	Carl Henry		**X**	50 St. Lawrence	X	X								
PB Workshop-03/10/2020	**PC131**	George Carhart	**X**		7 Lafayette St.	X	X								
PB Workshop-03/10/2020	**PC132**	Greater Portland Landmark	**X**		GPL										
PB Workshop-03/10/2020	**PC133**	Debby Murray	**X**		104 North St.	X	X								
PB Workshop-03/10/2020	**PC134**	Janie Lynch		**X**	???										
PB Workshop-03/10/2020	**PC135**	Jo-Ann Kayatta	**X**		????										
PB Workshop-03/10/2020	**PC136**	Kristina Minister	**X**		101 North St, Apt 4	X	X								
PB Workshop-03/10/2020	**PC137**	Laura Shen & Will Stilton		**X**	59 Moody St.	X	X								
PB Workshop-03/10/2020	**PC138**	Lynne Panico	**X**		49 Moody St.	X	X								
PB Workshop-03/10/2020	**PC139**	Robin Ferrar		**X**	46 Walnut St.	X	X								
PB Workshop-03/10/2020	**PC140**	Sarah Goan	**X**		54 Walnut St.	X	X								
PB Workshop-03/10/2020	**PC141**	Kathleen Bender	**X**		11 North St.	X	X								
PB Workshop-03/10/2020	**PC142**	Karen Harrison		**X**	34 Munjoy St.	X	X								
PB Workshop-03/10/2020	**PC143**	Brent Adler		**X**	92 Walnut St.	X									
PB Workshop-03/10/2020	**PC144**	Eleanore Houghton	**X**		Portland										
PB Workshop-03/10/2020	**PC145**	Erna Koch	**X**		81 Vesper St.	X	X								
PB Workshop-03/10/2020	**PC146**	George Rheault		**X**	Bayside										
PB Workshop-03/10/2020	**PC147**	George Rheault		**X**	Bayside										
PB Workshop-03/10/2020	**PC148**	Jen Micoleu	**X**		61 Mountfourt St.	X									
PB Workshop-03/10/2020	**PC149**	John Carolan		**X**	28 North St.	X	X								
PB Workshop-03/10/2020	**PC150**	Julian Ciembroniewicz	**X**		55 Morning St.	X	X								
PB Workshop-03/10/2020	**PC151**	Kate Howe		**X**	40 Quebec St.	X									
PB Workshop-03/10/2020	**PC152**	Kelly Worster	**X**		52 Monument St.	X									
PB Workshop-03/10/2020	**PC153**	Mary Barret	**X**		Portland										
PB Workshop-03/10/2020	**PC154**	Mike Cavenaugh	**X**		39 Munjoy St.	X	X								
PB Workshop-03/10/2020	**PC155**	MJ Hill?	**X**		Fake?										
PB Workshop-03/10/2020	**PC156**	Paula Agopian	**X**		90 Monument St.	X									
PB Workshop-03/10/2020	**PC157**	Robert Morse	**X**		Portland										
PB Workshop-03/10/2020	**PC158**	Sophie Samuels	**X**		46 Howard St.	X									
PB Workshop-03/10/2020	**PC159**	Willliam Alcorn	**X**		125 Morning St.	X	X								
PB Workshop-03/10/2020	**PC160**	Barbara Keppel	**X**		141 North St.	X	X								

Sources:

HPB Nomination- 11/20/2019 **https://portlandme.civicclerk.com/Web/Player.aspx?id=533&key=-1&mod=-1&mk=-1&nov=0**
PB Workshop-12/10/2019 **https://portlandme.civicclerk.com/Web/Player.aspx?id=571&key=-1&mod=-1&mk=-1&nov=0**
PB Workshop-02/11/2020 **https://portlandme.civicclerk.com/Web/Player.aspx?id=1207&key=-1&mod=-1&mk=-1&nov=0**
PB Workshop-03/10/2020 **https://portlandme.civicclerk.com/Web/Player.aspx?id=1219&key=-1&mod=-1&mk=-1&nov=0**

Google Groups

Munjoy Hill Preservation

Katy Brewer <katycasalebrewer@yahoo.com> Aug 6, 2020 11:25 AM

Posted in group: **Planning Board**

Planning board members-
As a resident of Munjoy Hill I support the proposed Munjoy Hill Historic District and six landmarks with NO CHANGES to what the Historic Preservation Board nominated back in 11/20/2019.
-proud member of the Munjoy Hill community
Sent from my iPhone

Google Groups

Re: Advocacy Alert: Planning Board to Vote on Munjoy Hill Historic District

KenCapron1 <kcapron1@maine.rr.com> Aug 5, 2020 11:09 AM
Posted in group: **Planning Board**

You ask “Did you know that over 324 new units of affordable housing were built in Portland’s historic landmarks and districts in the last five years?”

I ask “How many landmarks are or could be owned rather than rented by people with disabilities? Doesn’t this landmark designaon kind of rule out certain segments of the populaon who are less well off?”

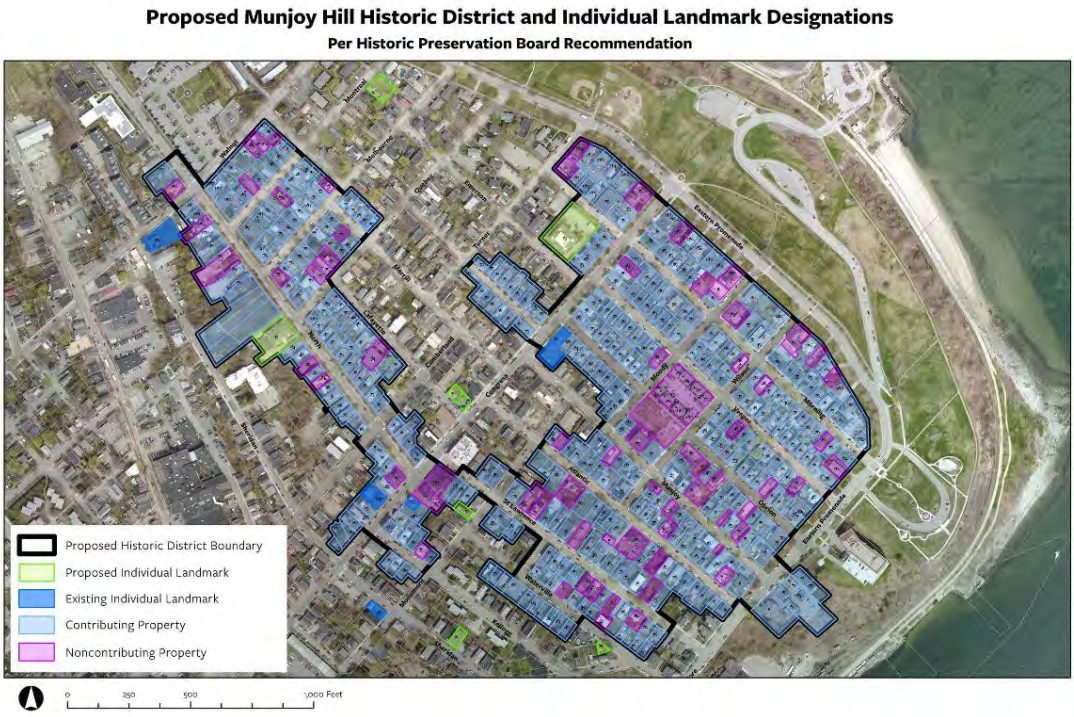
Would MHNO be willing to accept having a homeless shelter in their Historic District?

Kenneth A. Capron, ret. CPA, MCSE
1375 Forest Avenue D-11
Portland, Maine 04103
Phone: 207-797-7891
Email: kcapron1@maine.rr.com

From: Julie Larry
Sent: Wednesday, August 05, 2020 8:29 AM
To: maglev@maine.rr.com
Subject: Advocacy Alert: Planning Board to Vote on Munjoy Hill Historic District

Greater Portland Landmarks
Historic character enriches our lives

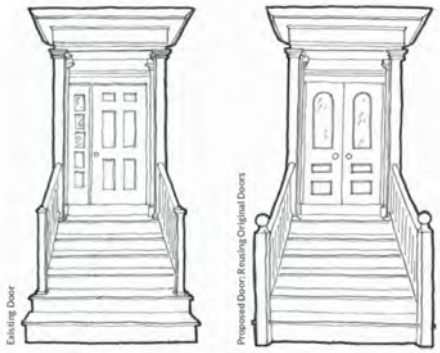
The Planning Board will vote on the proposed Munjoy Hill Historic District next week and we need your support. *Public comments due Friday at noon!*



Portland's Planning Board will reconvene its public hearing on the proposed Munjoy Hill Local Historic District on **Tuesday, August 11**. The public hearing was tabled at a March meeting just before city meetings were canceled due to the COVID-19 pandemic.

The planning board is still accepting written public comment on the proposed district. Please take this last opportunity to show your support!
Emails need to be submitted by noon this Friday, August 7th to planningboard@portlandmaine.gov**.**

Email your support!



Did you know that historic district protections have been temporarily in effect since the Historic Preservation Board recommended the district move forward last year? Read about the projects that have already been reviewed and approved by the Historic Preservation Board.

Historic Districts are good for our communities!

Read about the economic and environmental benefits of Local Historic Districts on our blog.

Affordable housing and historic districts are compatible goals.

Did you know that over 324 new units of affordable housing were built in Portland's historic landmarks and districts in the last five years?

Reusing historic buildings is better for the environment than new construction.

Re-using historic buildings reduces the energy needed to manufacture and transport new materials as well as conserving the embodied energy in our existing buildings. Portland's Historic Preservation Board has approved the installation of solar panels on buildings in historic districts and routinely approves projects that make historic buildings more energy efficient.

Historic districts don't prevent change, they manage change.

Projects are rarely denied. According to Portland's Historic Preservation Program Report, in 2016 only 2 of the 429 projects reviewed in Portland's local historic districts were denied.

Ordinary maintenance is not reviewed, and replacement of in-kind of existing materials is allowed in Portland's Local Historic Districts.

You don't need permission to repaint your house! And if you have vinyl siding, you don't need to revert to wood siding if it needs to be replaced - you can install new vinyl siding.

Help us advocate for places that matter.

Our advocacy work, from surveying and research to working with neighborhood organizations and attending public meetings, is made possible by the support of our members and donors.

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Google Groups

Before and After the Historic District

KenCapron1 <kcapron1@maine.rr.com> Aug 5, 2020 11:02 AM
Posted in group: **Planning Board**

Dear Sirs,
Before we start carving out more “districts”, the public should be fully informed about the short and long term financial impacts of a Historic District.
What are the tax implicaons? Wha t do taxpayers become obligated to do? Or not? Doesn’t such designaon r esult in a disparate impact on people with disabilies
who are less able to afford “historical” standards.

What other potenal his toric districts exist in Portland? Certainly the Deering Center has great historic value.
Even the islands – which have a much greater historic value than Munjoy. Before we leap into this permanent designaon,
we need to know the repercussions that could come up later and perhaps regret.
What are the polic al mov aons behind this e ffort?

Kenneth A. Capron, ret. CPA, MCSE
1375 Forest Avenue D-11
Portland, Maine 04103
Phone: 207-797-7891
Email: kcapron1@maine.rr.com

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proposed Munjoy Hill Historic District

Kevin Johannen <kjohannen@iknow.net> Aug 7, 2020 10:23 AM
Posted in group: **Planning Board**

To the Portland Planning Board, City Manager, and City Council,

I am a resident of Munjoy Hill. I support the proposed Munjoy Hill Historic District and six landmarks with NO changes to what the Historic Preservation Board nominated back in 11/20/2019.

I urge you to vote in support for the proposed Munjoy Hill Historic District and 6 landmarks at the 8/11/2020 Planning Board Hearing.

Sincerely,

Kevin Johannen

Munjoy Hill Resident at 41 Montreal St.

Google Groups

Proposed Munjoy Hill Historic District

Kevin Schochat <kevin@kevinschochat.com> Aug 5, 2020 12:20 PM
Posted in group: **Planning Board**

To Whom It May Concern,
As a resident of Munjoy Hill I am writing to you to tell you I support the proposed Munjoy Hill Historic District and six landmarks with **NO** changes to what
the Historic Preservation Board nominated back in 11/20/2019.
This is a crucial decision on your part and should not be taken lightly.
When I first moved to Portland I told everyone I knew that this city was very progressive and forward thinking.
Please don't disappoint me!
Best,
Kevin Schochat

Kevin Schochat
215 Sheridan Street
Portland, Maine 04101

Google Groups

Historic district Munjoy Hill

Kirsten Platt <kirstenplatt@gmail.com> Aug 7, 2020 8:18 AM

Posted in group: **Planning and Urban Development**

When will you be making your decision about the proposed historic district on Munjoy HIll? I hope you will vote to preserve the neighborhood and limit the ever higher luxury condos for part-time residents. Thank you
Kirsten Platt
61 Montreal St #3
Portland Maine 041010

Google Groups

letter opposing historic district on Munjoy Hill

Lauren M Ashwell <lashwell@gmail.com> Aug 4, 2020 10:30 AM

Posted in group: **Planning Board**

Please find my full letter attached. I am opposed to the historic district; it will prevent us from thoughtfully balancing the concerns and challenges of the city as a whole and elevates aesthetic value over other values we ought to promote, and the Planning Board and City Council needs to be able to target the promotion of affordable housing and sustainability in a more effective way than this will allow.

August 3rd, 2020

To the Planning Board;

Munjoy Hill does not need restrictive historic preservation. We need more creative, forward looking policies that address real issues in our neighborhood and city rather than restrictive policies that put aesthetics ahead of other community values. The Planning Board and City Council needs to have the flexibility to effectively target policies for development that promotes the good of the whole city, and Munjoy Hill needs to be able to contribute to that good for the whole city.

This plan elevates historic preservation over other values we ought to promote. For example, within this proposed ordinance there is no way to balance preservation against environmental sustainability. Sustainability is, of course, supported by not tearing down buildings for no good reason. But in certain cases sustainability may require this; in adopting policies that help drive up prices even further, we continue to force those who work in Portland further out into the suburbs and other towns. This brings more traffic congestion and pollution, which could be alleviated by smart planning of new housing on the peninsula. This kind of concern needs to be taken into account when the city reviews the zoning; putting in a historic district now makes this kind of thoughtful review much more difficult if not impossible.

The proposed districting also effectively prohibit solar panels and solar hot water for most residents (they're allowed, but only if not visible from the street). This is a completely ridiculous restriction even if you are in favor of historic districting for aesthetic reasons. Solar hot water or panels hardly impact the historic aesthetics of a building – less certainly than having modern cars on the street or in our driveways, or modern lightbulbs in our streetlights and over our front doors. In requiring a particular aesthetic, we prevent smartly designed passive solar buildings as well. In a time of increased urgency to slow climate change we should not be adding restrictions on residents doing a small part for sustainability.

I have lived on the hill for a decade and my partner and I plan to live on the hill for the next 30 years, at least. However, if we are held to the standards under the proposed district, **we may not be able to afford to maintain our property and many others will not as well**. This plan is being built on working-class history, yet there is no provision in this plan to assist any people who would find the restrictions too costly (I have been told by the historic district's proponents that Deb Andrews will personally provide me with options that I can afford, but this is simply not possible for all working families within the proposed restrictions. As I have mentioned before in public meetings, the cost to re-side our house is more than doubled by this plan; when one considers the cost of maintenance of wood siding as well it will be even more). We want the city to consider this plan in a longer term context than what a small number of residents want now, especially when many others will be here and impacted by this district much longer. **We also urge you to think about the way that Munjoy Hill can contribute to addressing the issues facing the city as a whole**. Munjoy Hill is lovely, and we love it here, but it is only one small part of a city that needs to be thought of as a whole in planning for the future.

Sincerely,
Lauren Ashwell, 8 Emerson St, Portland

Google Groups

Munjoy Hill Historic District

Leslie Hart <blesliehart@gmail.com> Aug 6, 2020 6:00 PM
Posted in group: **Planning Board**

Dear members of the Planning Board

I am writing to urge you to support the proposal in front of you to create the Munjoy Hill Historic District, with no changes or modifications.

An historic district on Munjoy Hill is a good idea for many reasons including a greater chance that affordable housing will be created or maintained as a result of tax credits, and because it can prevent affordable housing from being removed and replaced by more expensive housing. Plus there is the positive effect of preserving the character and stability of the neighborhood.

Thank you for your consideration.

Leslie Hart
215 Sheridan St.
Portland ME 04101
917.364.3682

Google Groups

Proposed Munjoy Hill Historic District

Linda Bancroft <linda@aquariuspm.com> Aug 7, 2020 9:06 AM
Posted in group: **Planning and Urban Development**

Aquarius Property Management manages a number of rental units in the proposed historic district, in both newer buildings and very old buildings. We are strongly opposed to the proposed historic district, as it will have a significant negative impact on landlords' ability to maintain and improve their rental units cost-effectively. This will of course have a negative impact on landlords' ability to continue to offer rentals at affordable rates. If implemented, the historic district will elevate the interests and desires of wealthy property owners over the needs of Munjoy Hill renters, particularly those in long-term, stable housing situations.

Thank you,
Linda Bancroft

Linda Bancroft, President & COO
Aquarius Property Management

p: (207) 899-3845
e: linda@aquariuspm.com
w: aquariuspm.com
m: PO Box 4910, Portland ME 04112

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Munjoy Hill: Historic District

Linda Tyler <ltyler8@gmail.com> Jul 31, 2020 1:51 PM
Posted in group: **Planning Board**

Please enable Munjoy Hill to become a Historic District.

I support the idea for several reasons; most important to me, however, is to deny unnecessary demolition which has, as we all know, detrimental environmental effects. As well, we have so far seen disastrous aesthetic results from overly large, ill-designed projects that belong somewhere else if anyway.

Thank you.

Linda P. Tyler
52 Saint Lawrence Street
Portland, ME 04101

Google Groups

Munjoy Hill

Linda Tyler <ltyler8@gmail.com> Aug 7, 2020 6:26 AM
Posted in group: **Planning Board**

Whoops! Sorry; forgot to add the following clause to my previous email. Thanks.

I am a resident of Munjoy Hill. I support the proposed Munjoy Hill Historic District and six landmarks with NO changes to what the Historic Preservation Board nominated back in 11/20/2019.

Liz Hays <lizchays@gmail.com> Mar 24, 2020 11:33 AM
Posted in group: **Planning Board**

Let Planning Board members know that you support the district as recommended by the Historic Preservation Board in November and ask them to recommend designation of the proposed historic district to the Portland City Council.

Google Groups

Vote Yes for the Munjoy Hill Historic District

Liz Hays <lizchays@gmail.com> Jul 31, 2020 8:04 PM
Posted in group: **Planning Board**

Dear City of Portland Planning Board

I am a home owner in the proposed Munjoy Hill Historic District. I strongly support the Munjoy Hill Historic District as recommended by the Historic Preservation Board in November 2019, in order to preserve the unique character of the neighborhood. I feel this designation will protect the investment I have made in buying my home by controlling insensitive development. I ask you to recommend designation of the proposed historic district to the Portland City Council.

Thank you considering my request.

Elizabeth Hays
107 North Street
Portland, ME 04101

Google Groups

Proposed Munjoy Hill Historic District

Lori Rounds <lori.j.rounds@gmail.com> Aug 7, 2020 10:51 AM
Posted in group: **Planning Board**

To the Planning Board:

I am writing to urge you to vote AGAINST the proposed Munjoy Hill Historic District.

Recent communications with two Munjoy Hill homeowners illustrate the financial impact of Historic District rules on their ability to repair and renovate their homes. One long time MH homeowner seeks to replace the deteriorating wood shingle siding on her house with a cost effective alternative. Vinyl siding is the least costly replacement material but historic district rules require replacement in-kind with wood shingles or clapboards, resulting in a labor and materials cost differential of $30k for wood vs vinyl. The homeowners budget cannot manage the additional cost of wood siding so she has not made needed repairs to her existing shingle siding. A second homeowner, who bought his MH house well before the historic district rules were imposed last year, has spent considerable time, energy and money over the past several years on architectural and engineering services to design an expansion of his < 1000 square foot MH home to accommodate his growing family. Potential renovations would be in compliance with Munjoy Hill Conservation Overlay District requirements. Unfortunately he is finding the HD rules and process and (in his words) the Historic Preservation Board to be inflexible, all resulting in significant additional cost and time to the project. Additionally, the homeowner is discovering that many contractors are unwilling to accept projects in an historic district due to the complexity (and sometimes subjectivity) of the rules. Although the homeowner has lived on the Hill for many years first as a renter and then homeowner, he is now forced to consider moving off of Munjoy Hill in order to find a home that is suitable for his family because the costs of complying with HD-required design and construction changes are beyond his means.

Portland has a housing affordability crisis. Adding a 12th historic district to the City will increase maintenance and renovation costs to HD homeowners and those costs will be passed along to renters. Some homeowners will decide to forego maintenance and repairs due to increased costs. Neither outcome is desirable. I respectfully urge Planning Board members to reject the proposed Munjoy HIll Historic District.

Regards,
Lori Rounds
47 Monument Street

Google Groups

Portland resident and hopeful future property owner against Historic Districts

Lucas Blom <lfblom@mykolab.com> Aug 5, 2020 11:39 AM
Posted in group: **Planning Board**

Hello Planning Board,

I'm a 32 year old web app developer who can't afford to own property on the peninsula. I'm leaving Portland for my second time in a decade to chase after opportunity (again) via a masters in information systems in the hopes I can come back here and finally make my forever home here. My fiancee is in middle of acing all her prerequisite class work for starting a masters in speech pathology. We both come from a long line of successful people and in theory should be able to garner down payment funds from our parents yet, because property values are so darn high even that support isn't enough.

We love it here yet are leaving so we can theoretically some day afford the ridiculous living costs here. We're smart, hardworking, honest civically engaged children of privilege and still need housing costs to go down. The only healthy way to do so that helps all is to build thousands of quality housing units year after year for the next 8-10 years. This means your board should be focusing on:

- removing parking minimums
- expanding mixed use zoning through out ALL of Portland
- allowing for much higher height maximums
and
- doing everything you can to make walking, biking and public transport use the de-facto forms transportation

Much of the above is the antithesis of what it means to be a Historic District which is what the Munjoy Hill people are looking to enact. These people are blocking Portland's long and midterm prosperity by trying to limit housing in one of the most valuable spots north of Boston. They're also looking to prevent my generation's future and in turn are helping to force a likely property valuation free fall once housing in Biddeford and Westbrook get all their housing built.

Please do not make the Munjoy Hill area a Historic District. The future of Portland likely depends on it never happening.

Best,

Lucas Blom
183 Brackett Street
Unit 401
Portland, ME 04102

Google Groups

Munjoy Hill historic designation

Lynne Mason <lynnemason108@yahoo.com> Aug 5, 2020 9:10 PM
Posted in group: **Planning Board**

Dear Planning Board

Thank you for the opportunity to express my support for creating a Historic designation distrIct for Munjoy HIll.
Whats good enough for the west end of the city is also deserving of the east end..

I am a proud 4th generation from Munjoy Hill My mother Caroline Barofsky Israelson spent practically all of her 86 years on Munjoy Hill. My father swam in the race from East end Beach. As a child I attended Adams School, Emerson School and the former Jack Junior. Our teachers like Mrs Bowery lived in our neighborhood with us. In summer we swam at the East End beach, laid pennies down on the train track and waved to the conductor, roller skated down Moody streets, picnicked and played Monopoly on the eastern promenade , attended the 4th of July celebration, played tennis on the courts and picked blueberries and black berries behind the tennis courts. In winter I sledded down the the hill and trudged up the hill again with my flying saucer, ice skated on North street, learned to baton twirl at Adams school on Saturdays with Portland High school majorettes, and later cross country skied across the prom and beach. My brother played basket ball in the school yard and visited the "Bakery" on the Hill for cupcakes and "elephant ears" pastry. As a teen I started to learn to sail off the east end beach in a community program, worked in the kitchen of the old Jewish Home for the Aged and as a Peace corps/Vista Volunteer for the Munjoy Hill Neighborhood association. We worked on tree planting of Gingko trees , flower boxes, historic research of the Observatory, Historic research of the Black community on Munjoy Hill with Representative Gerald Talbot, and a community Garden with donations to the Cummings center senior citizens.
What a great community I could walk everywhere and walk to all my friends on Moody Street, Becket Street, Monument street ,Atlantic Street and North Street. As a young adult I had apartments on Monument street and others as I didn't want to leave my beloved Munjoy Hill. Our police personnel were from the neighborhood and knew us and used to be the kids that got into trouble hanging out at the " corner" on Congress.

Please do all you can to maintain the unique character of Munjoy Hill, her special historic roots and her culture.
As you have read there are many positive practical aspects of designating Munjoy Hill as a Historic District.

Please recommend the Munjoy Hill Historic District Historic Preservation to the City Council for designation on Tuesday, August 11.

Please maintain the working class structures and neighborhoods. Please be respectful to all those families that through the years maintained their hard earned homes secured with VA loans that they lovingly fixed up. These families grew up poor with cardboard in their shoes and worked for the american dream of owning a home or part of a duplex and making it a beautiful place with sweat equity. First generation ownership. The Cavallaros house so neat and orderly freshly painted humble but well maintained, The Carter house planting gorgeous roses by Robert, The Espositoes grapes vines for wine, and turning dirt into safe gardens and yards for their children grandchildren and now great grand children to play in. I almost can see all those grandmothers from Italy Mrs Montibello near Becket Street , and Mrs Laponis from Greece on Moody st , Mrs Walsh from Ireland with her Irish setter, on Morning st The Talbots, Cummings, and "Kippy", families from the Black Community on the Hill. The longshoremen going to work at the wharf, The factory workers at Nissens, the nursing aids in their uniforms, and those on 3rd shift at the Bean factory. The Israelsons, Brennermans, Benjamins and Crasnicks from the Jewish community inviting their Catholic neighbors to Passover Sedar, the Intersex person that drove the Big Delivery truck, the gay couples and inter racial couples that found refuge on the Hill when the rest of the city did not offer them a safe home. Our corner stores, the veterans at the Post on the lane near Atlantic st helping each other cope with war stress.. Everyone gathering at the Myhavers house on the prom on bread making day. The families gathering on their stoops on hot summer nights watching over their children and their neighbors children. playing hearts and gin rummy. We ere so proud of my mother working the voting polls with the Connellys and everyone voting at Adams School. Everyone from all faiths attending their neighbors Christenings, weddings , bar mitzvahs and funerals in the neighborhood churches and temples. Marching from Munjoy hill to City Hall for civil Rights and poor peoples rights Listening as a white little girl outside the door of the AME church while my friends sang inside . This is the fabric of the Hill. My mother distributing big blocks of government cheese and helping families with neglectful landlords.

As you are aware and I have been reading there is research and evidence to support Historic Districts because they Keep the community buildings for the community, ensure we don't demolish historic houses but at the same time allow

for density, keep the historic record of all the diversity and rich history. Can be better for the enviroment than new construction, and can allow for renewable energy technologies.

Munjoy Hill when I was growing up was always a bit neglected by the city, last to be plowed in the winter storms, last to have the pot holes fixed, last for new sidewalks, and last to get grants etc. We were the poorer working class part of the city. The Dodgy side of the city.

I urge you please don't repeat the mistake of the past don't neglect Munjoy Hill don't leave Munhoy Hill to rampart development without protecting her history, her soul, her character with this important Historic Preservation decision.

Sincerely Lynne Mason, Ph.D
Sailing Vessel Ocean Stars
PO box 26
Newburyport, Ma. 01950

Google Groups

Munjoy Hill Historic District

Maggy W <mswnola@gmail.com> Aug 4, 2020 11:50 AM
Posted in group: **Planning Board**

On March 10th, the Planning Board adjourned prior to voting on the Historic District, intending to take it up the following week - nobody in that crowded room guessed that it would be five months later and via internet that we would be reconvening to proceed with that vote. At the time, the majority of the public who live or work or own property on Munjpy Hill who voiced an opinion - about 80% of the public comment and emails - supported this designation. The Planning staff had made a very compelling case as to how these historic preservation designations are compatible with the Comprehensive Plan and enhance Portland's brand and vision for the future. The Historic Preservation Board spent months studying and reviewing the case for the Historic District and also resoundingly endorsed it. Please do not ignore all of the expert work that has gone into this proposal.

Despite the dramatic changes in the world in those intervening months due to the global pandemic, nothing has changed the case for the Historic District for Munjoy Hill. Its diverse history is represented in its mix of architecture, from the grand houses on the Prom to the working class triple deckers; from the pre-fire New England farmhouses to the early 1900s immigrant workforce housing, this neighborhood's arhcitecture tells the story of Portland. In recent years, we have lost some important buildings - important because they were typical of the neighborhood, and important because they housed multiple working families. Houses like these have been replaced by characterless boxes containing luxury condos which are occupied part of the year only. These often-empty condos contribute little, if anything, to the city of Portland, and only further the loss of diversity in our neighborhoods.

Short of government subsidized housing, the most affordable housing is the housing which already exists. Building costs are so high that developers are building for the wealthiest segment of society. None of the affordable housing that has been torn down in the past 5 years has been replaced with affordable housing, or even family-friendly housing. There are groups which are advocating for urban density, but that is not the housing that is being built either.

Please vote to approve the Munjoy Hill Historic District.

Thank you,
Maggy Wolf
28 Saint Lawrence

Google Groups

Marianne Chapman <mjchapman@maine.rr.com> Aug 5, 2020 10:53 AM
Posted in group: **Planning Board**

I am a resident of Munjoy Hill. I support the proposed Munjoy Hill Historic District and six landmarks with NO changes to what the Historic Preservation Board nominated back in 11/20/2019.

Marianne J. Chapman

Portland Maine | Yes. Google's good here.

Jennifer Munson <jmy@portlandmaine.gov>

Re: Letter to Planning Board RE: Munjoy Hill HD

jmy <jmy@portlandmaine.gov> Mon, Jul 27, 2020 at 11:42 AM
To: Planning Board <planningboard@portlandmaine.gov>
Cc: cdg@portlandmaine.gov, markossmiller@hotmail.com

Hello,

Thanks for your email. We appreciate the time you have taken to offer your thoughts, and will include your comments in the materials and as part of the public record.

If you have any questions, please contact our office.

Jennifer Munson, Office Manager
jmy@portlandmaine.gov | (207) 874-8719| Fax (207) 756-8258

City of Portland, Department of Planning and Urban Development
389 Congress St., 4th Floor, Portland, ME 04101

On Saturday, July 25, 2020 at 10:19:54 AM UTC-4, Markos Miller wrote:

> Please include my attached letter re: the Munjoy Hill Historic District in the appropriate packet for Planning Board review.
>
> Many thanks,
>
> Markos
>
> Markos Miller
> 17 Atlantic St
> Portland, ME
> 04101
> (207) 807-2681
>
> Planning Board Chair Mazier and Esteemed Planning Board Members,
>
> I am writing again to express my grave concerns about the proposed Munjoy Hill Historic District (HD). I have lived and owned rental property on Munjoy Hill for over two decades. I have strived to provide high quality affordable housing to local artists, musicians, and families, including people of color and recipients of housing assistance. The socio-economic diversity of my community is important to me. It's what makes Portland special, and is at the foundation of our city's recent success. This asset is under threat on Munjoy Hill and throughout the city. I love the social and architectural character of the Hill. I also see a valuable role for HD in cities. However, the proposed historic district does nothing to address the current threat; to the contrary, it will make housing on the Hill more expensive for owners and renters, with ripple effects that will push more middle and low-income residents further and further away. I've written about these concerns in my previous letters the the Historic Preservation Board and the Planning Board, and ask you to refer to those for more detail.

The review process has failed to examine a number of critical issues that must be understood before consideration of the proposed historic district, or any other significant housing or zoning initiative. Portland has been experiencing a slow brewing housing crisis that only recently could not be ignored. From census-based housing data to homeless encampments on the steps of City Hall, it is clear that we must be taking action to create more housing, particularly for middle and low-income residents. Addressing this crisis should be the priority, not establishing a historic district that will increase housing costs and barriers to affordable housing.

The Planning Board has not been informed of the following critical issues regarding the proposed historic district:

- How will the district impact the rental market in the neighborhood and city?
- How will the district effect sale prices in the neighborhood and the city?
- How will the district impact the cost of building maintenance?
- How will the district impact renovation costs?
- How will the district effect new construction?
- How will the district effect the creation of the low and middle income housing we know we most desperately need?

Responsible policy development would address these essential concerns. This proposal has failed to address any of these, and thus should not receive the recommendation of the Planning Board.

Finally, we should all be examining current and proposed housing policy through the lens of systemic racism, which we finally can not ignore. I doubt local HD advocates have any racist intentions, but that does not mean HD will not have consequences that will perpetuate structural racism in our community. Zoning and districting have a long history of being used for racial segregation and oppression. Just because we do not have that intent does not mean it does not have that result. I'm attaching one of a plethora of available articles that discusses the structural racism that we must address in our land-use policies. HD on the Hill will do nothing to address this issue. Portland can do better.

I value your public service and regret that the Planning Board has to spend time and energy on an issue that makes no attempt to address the critical housing crisis our city faces. Please vote to not recommend this proposal to the City Council and ask the Council, the Mayor, the City Manager, and the Planning Department to prioritize pro-housing policy solutions to address the ongoing housing crisis for low and middle-income housing and to expedite the ReCode process so that Portland has the 21st century zoning we need to address today's real problems and plan for our city's future.

Thank you for your service,

Markos Miller

17 Atlantic St.

Google Groups

Munjoy Hill Historic District

mreppenhagen@yahoo.com <mreppenhagen@yahoo.com> Aug 5, 2020 6:35 PM
Posted in group: **Planning Board**

Dear Chair Mazer and Members of the Planning Board, Historic Preservation Program Manager Deb Andrews, City Manager Jennings, Mayor Snyder, and Councilor Ray,

I am a long-time resident of Munjoy Hill. I strongly support the proposed Munjoy Hill Historic District and six landmarks with NO changes to what the Historic Preservation Board nominated back in 11/20/2019.

Thank you for your consideration,
Marlies Reppenhagen

55 Morning St. 2-2
Portland, ME 04101
mreppenhagen@yahoo.com

Google Groups

Munjoy Hill Historic District

Martha Emerson (Gmail) <marthahhem@gmail.com> Aug 5, 2020 3:57 PM
Posted in group: **Planning Board**

Dear Portland Maine Planning Board,

I support the plan developed by the Historic Preservation Board. Please vote to approve the proposed Munjoy Hill Historic District.

Sincerely,

Martha Emerson

340 Eastern Promenade #247

Portland, ME 04101-2672

Google Groups

Munjoy Hill Historic District

MARY K CASALE <dirtgirl1@aol.com> Aug 7, 2020 9:10 AM

Posted in group: **Planning Board**

Mr. Chairman and members of the Planning Board ,
I respectfully ask you to vote in favor of the proposed Munjoy Hill Historic District and designated Landmarks as presented to you in their entirety.
I make this plea as a 4th generation Munjoy Hill resident. I was a homeowner in 1989 when this was first proposed for our beautiful Hill . The essence of our neighborhood was working class with a “live and let live “attitude. And that worked for quite sometime.
But as folks(developers, investors,realtors) began to recognize the natural beauty, aging residents & charming buildings, and zoning that was the least restrictive in our city -an all out assault began . This was aided and abetted by the disastrous 2015 R6 Zone Changes.
The attempt to mitigate those changes with the Munjoy Hill Overlay was a futile attempt to appease the continued rise in neighborhood concern .
While I fully embrace progress , it is the families and their homes who make up our neighborhoods . By designating this Historic District in its entirety you will be allowing this Munjoy Hill that I know and love to continue. Grant the respect for the history of families who created it , and acknowledge the care of the homes they made -it is so deserved .

Thank you for your time and consideration
Mary Westort Casale
39 Waterville St.

Sent from my iPhone

Google Groups

MUNJOY HILL HISTORIC DISTRICT

Melissa Sweet <melissa@melissasweet.net> Aug 5, 2020 5:11 PM
Posted in group: **Planning Board**

Good afternoon:

I'll keep this short.

I live on Munjoy Hill on Saint Lawrence St.
I've been to countless meetings at city hall and witnessed the overwhelming support of the historic district.

I support the proposed Munjoy Hill Historic District and six landmarks with NO changes to what the Historic Preservation Board nominated back in 11/20/2019.

Please, listen to the people and make this happen.

Thank you,

Melissa Sweet

Google Groups

Support For The Munjoy Hill Historic District

Mike Hoover <chzstk@gmail.com> Aug 6, 2020 5:49 PM
Posted in group: **Planning Board**

Chair Mazer and Members of the Planning Board:

I live on Munjoy Hill, own two proper es here, and strongly support the designa on of a Historic District for Munjoy Hill which includes the designa on of several individual landmark buildings. I believe that the Planning Board should approve the Historic District currently under considera on without any changes to this proposal.

The current architectural fabric of Munjoy Hill is clearly deserving of being designated a Historic District, and this land planning tool will provide the most effec ve management tool to guide future development which recognizes and enhances the historic nature of this neighborhood. The technical experts represen ng the City have also come to this conclusion, which is reflected in their recommenda on to the Planning Board for the adop on of this Historic District.

As you may recall, the current proposal was also approved UNANIMOUSLY by the members of the City's Historic Preserva on Board. In addi on, your Historic Preserva on Program Manager, Deb Andrews, has led a thorough evalua on of the merits of the architectural characteris cs of the neighborhood which included an analysis by a Na onal Historic Preserva on Act qualified architectural historian and mul ple public mee ngs solici ng feedback from city residents. The result of this analysis has resulted in a recommenda on that the Planning Board approve the proposal currently under considera on. In simpler terms, the City's experts clearly recommend that the Planning Board adopt this Historic District.

In addi on to the City's own experts recommending the crea on of the Historic District, it should also be noted that throughout the public involvement process, between 75 and 80 percent have indicated, both in wri ng and verbal comments during public mee ngs and hearings, that they are in favor of the designa on of the Munjoy Hill Historic District.

I would also like to note that the City's Comprehensive Plan an cipates and encourages the crea on of Historic Districts throughout the City. The Munjoy Hill Historic District clearly fits into the land use planning goals outlined by the City's Comprehensive Plan.

The technical experts and public have been extremely clear in their strong support of the proposed Historic District. I urge the members of the Planning Board to vote to recommend the adop on of the Historic District, which again is consistent with your technical experts and THE WILL OF VAST MAJORITY OF THE CITY'S RESIDENTS WHO PARTICIPATED IN THIS PROCESS.

The City has recognized and implemented historic preserva on land use tools to manage the unique and a. rac□ve nature of the City. I look forward to the adop□on of the Munjoy Hill Historic District so that this neighborhood will also benefit from this effec□ve stewardship.

In closing, a large part of the concern I have for the absence of the planning tools provided by the designa□on of a Historic District for Munjoy Hill are reflected in the recent trend of permitting large high end condo developments on Munjoy Hill, which does not reflect the exis□ng built fabric that is so crucial to the neighborhood. In the sweeping changes we have experienced in our society since the last public mee□ng, I think we can all agree that new condos currently for sale priced at 1.3 to 1.6 MILLION dollars on Munjoy Hill (25 Monument Street) will not augment the historic architectural fabric or societal concerns of the current neighborhood residents, nor help solve the significant issues we now face.

Michael Hoover

Melbourne Street, Portland Maine

Google Groups

Munjoy Hill Historic District Public Opinion

Michael St. Pierre <mdstpierre@yahoo.com> Aug 6, 2020 2:19 PM
Posted in group: **Planning Board**

Hello,

I am writing in opposition to the proposed Munjoy Hill Historic District. Munjoy Hill has one of the most difficult building environments in the world because of its restrictive building code and zoning overlays. This makes it extremely expensive to build in this location. With another zoning overlay like the Munjoy Hill Historic District it would make the difficulty of building or renovating in this area even more restrictive and difficult. This would push Portland further from its goal of building affordable housing which it desperately needs. Also, I believe many (most) of the structures in this area do not warrant any historic designation or preservation. I am strongly for the preservation of historic buildings and believe many of the historic buildings in Portland are what make it great however, I do not believe a vinyl wrapped building is worth preserving no matter what tie it may have to history.

Sincerely,

A long time Portland resident, amateur builder/developer in Portland/Boston and Portland's future,

Michael St. Pierre

Google Groups

Historic Distric

Mike <mkeweb@gmail.com> Aug 5, 2020 9:13 AM
Posted in group: **Planning Board**

Hi there,

As a property owner on Munjoy Hill that is unaffected by the proposed changes for the historic district, I'm probably less passionate than most about this issue. From my perspective, if you have individually selected historic landmarks prior, why not just select those exact buildings you want to protect and leave out other properties? Protecting a poorly built, aesthetically displeasing building doesn't do anyone any favors. It makes it harder on the homeowner for upgrades and repairs.

I would recommend picking individual buildings to protect rather than a sweeping change of the district. Thanks for your consideration.

Mike Webster
175 Congress St, Portland

BARBA+WHEELOCK
ARCHITECTURE SUSTAINABILITY PRESERVATION

13 March 2020

Planning Board
City of Portland
389 Congress Street
Portland, Maine 04101

Via email: planning@portlandmaine.gov.

To Whom it May Concern:

As an architect and former seven-year member of the Portland Historic Preservation Commission, I am writing to support the need for an historic district on Munjoy Hill.

I know from first-hand experience that each of the projects we reviewed as a board, and each of the projects that we've brought to the board as architects, are reviewed on a case-by-case. The nature of the historic preservation standards in the ordinance is that there is inherent flexibility in the standards. This flexibility allows for lower cost solutions when needed or alternative solutions.

Many of the houses on Munjoy Hill are vernacular and non-high style buildings with siding and replacement windows. These are all taken on a case-by-case basis. When there is already a substitute, or false material on a house, the Board is at liberty to review alterative substitute materials in replacement. Of course, they would be remiss if they failed to highlight the option of returning to the original material that sometimes is hidden under, say, as with vinyl siding over wood clapboards, but they by no means can dictate that outcome.

With the in-kind replacement standard wood siding and high-end wood windows are not required. Modern materials can also be considered, such as Hardiplank or Boral. Most window manufacturers' have the ability to create products similar to original materials without trying to replicate the original appearance.

One of the aspects that I have come to really appreciate about the Historic Preservation Commission is that they represent a deep resource of information. Together, they comprise a wealth of knowledge that can offer homeowners resources and free advice. They have a thirty (30) year record of offering reasonable and fair information to assist homeowners in achieving the goals of the ordinance and respecting the best of Portland's historic buildings.

Another key aspect is that the Commission really understands design and especially how to work with new buildings and additions within historic districts. History doesn't stop in the nineteenth century, but in the case of the reviews that the Portland Historic Preservation Commission, they understand that the buildings built today will become beloved designs in the future IF they are designed and built well. Their review will assure that the Munjoy Hill neighborhoods will maintain their cohesiveness for many years to come.

I strongly urge you to consider granting historic district status to the Munjoy Hill District.

Sincerely,

Nancy L. Barba, AIA, LEED AP, NCARB
Maine Licensed Architect #1288
Principal, Barba + Wheelock

Google Groups

Historic Preservation

Nancy Thayer <nancy.thayer1@gmail.com> Aug 5, 2020 10:09 AM
Posted in group: **Planning Board**

I am a resident of Munjoy Hill. I support the proposed Munjoy Hill Historic District and six landmarks with NO changes to what the Historic Preservation Board nominated back in 11/20/2019.

Nancy Thayer

Google Groups

Proposed Munjoy Hill Historic District

Stevens, Nate <nstevens@boulos.com> Aug 7, 2020 11:04 AM
Posted in group: **Planning and Urban Development**

Dear members of the Portland Planning Board,

I am writing in support of the proposed historic district on Munjoy Hill. While I am not a resident of the Hill I am a longtime resident of Portland and am heavily involved in the real estate industry throughout the City, including Munjoy Hill. I believe the timing is right for the Board to support the designation of the Munjoy Hill Historic District as proposed and to recommend its designation by Portland's City Council. Through my relationships in the City I have heard strong support from residents of the neighborhood and outside the neighborhood, real estate agents, developers, landlords, and business owners. This will have a positive impact on the neighborhood and city as a whole as well as provide responsible stewardship for generations to come.

Thank you for your commitment and hard work on this matter.

Nate Stevens

80 Best Street, Portland

(207) 272-2385

Google Groups

Munjoy Hill Historic District

Nathan Szanton <nszanton@szantoncompany.com> Aug 7, 2020 11:05 AM

Posted in group: **Planning Board**

Dear Planning Board members,

As a resident of Portland since 1987 and a current resident of Munjoy Hill, I urge a vote to recommend creating the proposed historic district on portions of the Hill. This district will help preserve an important part of Portland's history and culture for future generations to think about, interpret, and enjoy.

Thank you for considering my views.

Very best,

Nathan Szanton

22 Eastern Prom #3

Portland, ME

Google Groups

Please do not vote for the Munjoy Hill Historic Designation

nick@masomurray.com <nick@masomurray.com> Aug 5, 2020 3:27 PM
Posted in group: **Planning and Urban Development**

City of Portland Planning Board,

I am writing to ask you to please vote against the Munjoy Hill Historic Designation. I am a homeowner in the proposed district.

In talking to contractors about improvements to my property many don't want to deal with the Historic Preservation Board. Those who will do so specialize in working with Historic Preservation Boards, specialize in historic renovation, and charge specially high premiums to do so. My home has no historic architectural features so the extra expense, time and hurdles to make simple repairs and improvements are an unnecessary burden on me. Those who invest in architecturally historic buildings and homes are unlikely to destroy their investment. This seems like a solution looking for a problem.

Planning and Zoning seems has worked with homeowners on Munjoy Hill so far. Not so the methods and standards of the Historic Preservation Board – we hear many complaints and sad stories from neighbors and friends. The extra expense, burden, wait times and difficulty of working with the Historic Preservation Board in this interval of home-improvement-suspension is discouraging my neighbors who have grown up on the Hill and younger working families who would like to live here from moving in and/or improving existing properties to be able to work from home (especially relevant in the current pandemic environment) and/or expand for growing families.

It is especially important families are able to responsibly make their homes work for their needs, that we do not prevent young and diverse homeowners from moving to the Hill and that long time residents can afford to stay where they grew up. Please vote against the Munjoy Hill Historic Designation so that people like them are not pushed out of Munjoy Hill and older more affluent homeowners are not overburdened when we need repairs and improvements on our property.

Kind Regards

Nick and Caron Murray

40 Saint Lawrence St.

Google Groups

Testimony in support of the Munjooy Hill Historic District

JEAN MC MANAMY <ninimaine@aol.com> Aug 7, 2020 11:21 AM

Posted in group: **Planning Board**

Members of the Portland Planning Board
This week I had the privilege of signing up for an alert system for a neighbor with Alzheimer's who has begun to get lost on the Hill. He lives in a multigenerational three unit building, and we the neighbors are committed to looking out for one another.
It is this social fabric on Munjoy Hill which we seek to preserve, and the buildings that house and support that social fabric.
Recent changes on the Hill have removed much of the traditional family housing that sheltered its population, well known for its stable, safe, and close knit demographic. Unfortunately, well-meant zoning changes have started a cascade of tear downs and renovations which have brought in part time residents and short term renters. Hoped for construction of moderate income housing has not occurred, and will not occur on the Hill with vacant lots now listing for over a million dollars.
The end goal of zoning is to preserve and enhance the quality of life for residents. A historic district will help protect what is here. Speaking personally, I would have done some things differently to my house had I been aware of Historic Preservation and the resources available. When I spent a lot of money as a new homeowner replacing siding and trim I could easily have preserved the pillar post on the front porch, and built a rear porch addition differently. I always thought HIstoric Preservation was skewed toward the wealthy.
Left to its own devices, the market has not worked to protect what we have, and perhaps we need to promote our city differently. Just since the beginning of this process, on the edge of the proposed Historic District, a very fine single family house on my block was torn down (it is a vacant lot today), a 19th century house across the street had traditional windows replaced with picture windows, and another 19th century house had its traditional bay window replaced with casement windows. More discordant change is surely on the way.
As one of the founders of the Friends of Fort Sumner Park, I urge you to provide it with Historic District Protection. North St. is clearly a special and grand street, with rich history.
But so is my humbler block, with its neighborhood cellar speakeasy, remnants of a greenhouse business, and houses built by and for the working people who built Portland.
Please vote to support the Historic District.

Nini McManamy
Sent from my iPad

Google Groups

Support for Munjoy Hill Historic District

Pamela Day <pday2304@gmail.com> Aug 6, 2020 2:52 PM
Posted in group: **Planning Board**

We are residents of Munjoy Hill who have written to the Planning Board previously in support of the proposed Munjoy Hill Historic District designation. We urge the Planning Board to approve this designation as well as the six proposed landmarks with NO changes or modifications as it was recommended by the Historic Preservation Board on November 20, 2019.

Written and public testimony provided at the March 2020 Planning Board meeting overwhelmingly spoke to the importance of this designation for Munjoy Hill property owners and residents. Now more than ever the Planning Board should let this initiative move forward.

Pamela Day & Michael Petit

25 Waterville Street
Portland
207-461-1461

Google Groups

Development/West End

pamela w shelton <pamelashelp@aol.com> Aug 7, 2020 3:06 PM
Posted in group: **Planning Board**

To Whom It May Concern,

My name is Pamela Shelton, resident of 225 York Street since 1982, writing as a concerned citizen, to express my concerns r/t what seems like out of control development, not only in the West End but, in Portland, in general.
I strongly oppose the idea of cold storage development, of any height, on Commercial Street.
Traffic is unmanageable .. as it is.
The gateway to the heart of the Old Port.
Congested..an eyesore.
Shame on us for destroying such beauty entering Portland.
We need to stop the mindless development ...
Portland is losing it's heart! Becoming a hub of huge hotels! Swallowed up by greed.
I was made ill when viewing the slash and burn of Nature, where land raised for development of the Veteran's Center is happening. It is dreadful to witness such development when alternative options exist!
There will be no balance soon for man, animals and nature .. Better planning is essential as we are presented with the crisis of climate change. Covid19.. Both will require long term, mindful planning. Tomorrow's children, grandchildren, for seven generations, deserve this attention to detail!

Pamela W Shelton

Google Groups

Munjoy Hill Histoic District proposal

Paul Lafavore <plafavore@earthlink.net> Aug 5, 2020 8:48 AM
Posted in group: **Planning Board**

Dear Planning board:

I am very much in favor of the proposed historic district in the Munjoy Hill area. I have been concerned over the last few years regarding the overdevelopment in my opinion of some of our residential areas in the city which seem to have little regard to blend in with thier historic neighbors. Like other cities in this country, it would be very easy for Portland to lose its historic charm and structures at the hands of overzealous development. Once this occurs, the city will become like any other concrete and glass place that has little historic value.

Portland Maine has a long and rich history as a seacoast city. The pockets of historic structures that have survived fire.,overdevelopment and even war should be preserved and cherished. It is this history that makes the town so attractive not only to residents but to the many thousands of visitors which support the local economy.

I strongly urge the planning board to do what's right in this situation and preserve Portlands historic structures and neighborhoods for future generations

Paul Lafavore MD

Portland, ME

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Google Groups

HP for Munjoy Hill

Pa Ag <pagopian1@yahoo.com> Aug 7, 2020 11:25 AM
Posted in group: **Planning Board**

Good morning friends,
I am a longtime property owner, landlord and realtor. I am writing in support for an Historic Preservation District for “The Hill”. It has been long overdue! I support no changes for now. I would have liked to have seen a Conservation District for the entire “Hill” but luck was not with me. However meager the area covered now, it’s better than nothing and I hope it will be expanded in the future.
Sincerely,
Paula Guillemette Agopian✌

Sent from my iPhone

Google Groups

Munjoy Hill Historic District,

Peter Monro <jpmonro@me.com> Aug 5, 2020 8:43 AM
Posted in group: **Planning Board**

Hello Planning Board members,

I support the creation of the Munjoy Hill Historic District. It's only unfortunate that it is taken this long to create it does not encompass more of the Hill. Several of the buildings created without the district make it clear of the need for the district.

I live in historic District on the West End, and only regret the exclusions.

Here's hoping you again support the creation of this needed district.

Peter

Peter Monro, 32 May St., Portland, ME 04102
jpmonro@me.com (207) 318-6052

Google Groups

Munjoy Hill Hist District

Philip Pendleton <pependle@gmail.com> Aug 5, 2020 8:58 AM
Posted in group: **Planning Board**

A citizen of Portland and advocate of Livable Communities, I enthusiastically support the creation of the Munjoy Hill Historic District in the form proposed by Greater Portland Landmarks.

Portland needs to maintain the character of a viable community with an intact historic and scenic urban environment that is welcoming and nourishing to creative and aesthetically minded residents as well as visitors. Portland is clearly “special” — but a balanced (that is, somewhat restrained) approach to development is needed if we are to preserve that unique character for our city.

Philip E. Pendleton
77 Park Street
Portland

Sent from my iPhone

Google Groups

Munjoy Hill Historic District

Betty Wuesthoff <jwuest@maine.rr.com> Aug 4, 2020 7:10 AM
Posted in group: **Planning Board**

Chairman Mazer and Planning Board Members:

As long time Mainers we have a serious interest in preserving Portland's history . (John's family, his mother's side, sailed from Gloucester and settled here in 1745). We are blest to live on Munjoy Hill, something affirmed by numbers of Portlanders and those "from away" coming here daily to picnic and stroll our streets.

Probably the most important vote of your tenure will occur on August 11 when you consider the Munjoy Hill Historic District. The establishment of the district is supported by many of us who were co-founders and/or supporters of Friends of the Eastern Promenade, the rehabilitation of historic Ft. Allen Park, the crown jewel of Munjoy Hill, the relocation/rehabilitation of the Jacob Cousin' s Memorial and the protection of the Eastern Prom, Portland''s "signature park".

The district will preserve for the pleasure of future generations of residents, and travelers alike, the present allure of the Hill while memorializing our forbearers. "One of the great things about the city of Portland, " said John R. Moon in his book City By The Sea, A Photographic History of Portland, Maine (2010), "is that you can still walk about town and see many of these wonderful 19th century buildings one hundred to one hundred fifty years after they were built." The sense of author Moon's comment will be greatly enhanced by a Munjoy Hill Historic District and be complementary of historic Ft. Allen…pearls to Ft. Allen's crown…drawing resident and traveller alike to this historic place.

We ask you, Chairman Mazer and members of our Planning Board, to leave a legacy, as did the Baxters, City Engineer Goodwin and the Olmsteds before you, and endorse the action of Portland's Historic Preservation Commission. Let present and future Portlanders refer to you with the respect, appreciation and admiration often expressed for those predecessors who had the foresight to protect Portland's heritage for us and our heirs.

Sincerely,

R. John and Betty J. Wuesthoff
11 Morning Street
Portland, Maine 04101

Google Groups

Munjoy Hill Historic District

Rebecca Stephans <rebecca.stephans@gmail.com> Aug 5, 2020 9:01 AM
Posted in group: **Planning Board**

Greetings,

I'm writing in support of a designated historic district on Munjoy Hill. I have lived on Vesper Street for 7 years, and in Portland for 34 years.

I worked on the committee that tried to block the development of the Portland Complex on Fore Street, and now that it is underway, I see how correct we were. Those gigantic luxury yachts littering the harbor are reason enough to cringe and dread what is coming next.

This spring I watched two projects that excited me. Across the street, two workers slowly rebuilt a brick stairway to the front door. Diagonally on the other side, I have watched a building be completely restored. Yes, it's noisy and dirty, and I am delighted to live in a construction zone for this kind of work. Then there is Moody Street, where a huge, aesthetically bizarre building went up.

There are more than enough condo boxes on Munjoy Hill already - let's keep some semblance of history alive by preserving and restoring the beautiful character of this neighborhood.

Thank you,
Rebecca Stephans

Google Groups

Munjoy Hill Historic District: vote Yes and include 6 Landmarks

Rob Whitten <rob@whittenarchitects.com> Aug 4, 2020 1:02 PM
Posted in group: **Planning Board**

To the Members of the Portland Planning Board,

As a Munjoy Hill home owner, a Munjoy Hill apartment owner, and as a Portland architect who specializes in residential design; I support the proposed Munjoy Hill Historic District and the designation of six landmarks.

Over the past four years the City of Portland Planning staff, volunteers, Greater Portland Landmarks, and public funds have researched and identified a distinct area of Munjoy Hill to be a Historic District and an area of traditional, affordable housing.

The Munjoy Hill Historic District has a period of historic significance from 1840 (well before the Portland fire of 1866) through the creation of group housing in the early 1950's. It presents a co-hesive, liveable neighborhood of affordable housing, green spaces, and commercial services that does not require an automobile. It is a fabric of housing that is not dominated by a single type of residential living or a dominant architectural "style". It evolved over 100 years as a unique neighborhood and as a distinct area of affordable housing.

The mapping of the proposed Munjoy Hill Historic District has been carefully documented, and it has been the subject of four public meetings. The proposed Munjoy Hill Historic District is supported by the homeowners who have identified Munjoy Hill as a good place to live, as a good environment to raise family, and as as a neighborhood that supports a sustainable lifestyle. The proposed Munjoy Hill Historic District does not represent the special interests of investors, businesses, or people of influence. The attached files represent the attendance at those meetings and the comments of the citizen-participants.

Thank you for your support.

Sincerely,

Rob Whitten
23 Saint Lawrence Street
Portland, Maine 04101

Rob Whitten / Founder & Principal

Whitten Architects
207.774.0111 x101
37 Silver Street
Portland, Maine 04101
www.whittenarchitects.com

Item Summary From The Past 4 Meetings/Workshops Held that Show Majority of Portland Supports the Proposed Munjoy Hill Historic District & 6 Landmarks

	As of: Tuesday 3/10/2020 at 4:47pm	Email Sent to HPB or Planning Board					Public Comment at Meeting/Workshop					
#	Portland, ME Meeting/Works Shop Held	HD Yes	HD Yes %	HD No	HD No%	Total	HD Yes	HD Yes%	HD No	HD No%	Total	Comments:
1)	Historic Preservation Board Nomination - 11/20/2019	32	72.7%	12	27.3%	44	14	93.3%	1	6.7%	15	
	-If A Munjoy Hill Resident (Unique Person)	20	71.4%	8	28.6%	28						
	-If In the Proposed Munjoy Hill Historic District (Unique)	20	76.9%	6	23.1%	26						
2)	Planning Board Workshop #1 - 12/10/2019	99	76.7%	30	23.3%	129	23	74.2%	8	25.8%	31	
	-If A Munjoy Hill Resident (Unique Person)	62	79.5%	16	20.5%	78						
	-If In the Proposed Munjoy Hill Historic District (Unique)	48	78.7%	13	21.3%	61						
3)	Planning Board Workshop #2 - 2/11/2020	42	72.4%	16	27.6%	58	19	70.4%	8	29.6%	27	
	-If A Munjoy Hill Resident (Unique Person)	30	75.0%	10	25.0%	40						
	-If In the Proposed Munjoy Hill Historic District (Unique)	19	79.2%	5	20.8%	24						
4)	Planning Board Hearing - 3/10/2020 downloaded 3/10 4:14p	80	78.4%	22	21.6%	102	41	80.4%	10	19.6%	51	
	-If A Munjoy Hill Resident (Unique Person)	67	87.0%	10	13.0%	77						
	-If In the Proposed Munjoy Hill Historic District (Unique)	50	86.2%	8	13.8%	58						
	OVERALL TOTALS: Total All Emails Sent	221	76.5%	68	23.5%	289	97	78.2%	27	21.8%	124	
	-If A Munjoy Hill Resident (Unique Person)	159	85.9%	26	14.1%	185						
	-If In the Proposed Munjoy Hill Historic District (Unique)	117	81.8%	26	18.2%	143						

Itemized Detail Of All the People Who Emailed or Public Comment in the Last 4 Workshops/Meetings regarding the Proposed Munjoy Hill Historic District & 6 Landmarks

Meeting Date on Proposed Munjoy Hill Historic District	#	Email Sent By	HD Yes	HD No	Address	Munjoy Hill Resident	In Proposed HD?	Comment	#	Public Comment At Meeting	HD Yes	HD No	Address	Munjoy Hill Resident?	In Proposed HD?
HPB Nomination- 11/20/2019	PC 1	Barbara Vestal	X		7-9 Fore St., 14-16 North St, 101 Congress	X	X	Petition signatures to nominate. 21 signatures representing 21 properties	PC 1	Tom Abbott		X	21 Sheridan St.	X	X
HPB Nomination- 11/20/2019	PC2	Johanna Henry		X	50 St. Lawrence St.	X	X		PC 3	Gail Rengel	X		34 Lafayette St.	X	
HPB Nomination- 11/20/2019	PC 3	Carol Conner	X		12 Montreal St.	X	X	Individual Landmark Request	PC 4	Sive Nelson	X		29 Emerson St.	X	
HPB Nomination- 11/20/2019	PC 4	Karen Snyder	X		72 Waterville St.	X	X		PC 5	Wayne Valzania	X		27 Merrill St.	X	
HPB Nomination- 11/20/2019	PC 5	George Rheault		X	East Bayside				PC 6	Peter Murray	X		104 North St.	X	X
HPB Nomination- 11/20/2019	PC 6	George Reiche	X		50 Waterville St.	X	X		PC 7	Karen Snyder	X		72 Waterville St.	X	X
HPB Nomination- 11/20/2019	PC 7	Enoch Wenstrom	X		88 Beckett St.	X	X		PC 8	Paula Agopian	X		91 Monument St.	X	
HPB Nomination- 11/20/2019	PC 8	Berry Manter	X		46 Eastern Promenade	X	X		PC 9	Carol Conner	X		12 Montreal St.	X	X
HPB Nomination- 11/20/2019	PC 9	Mark Googins		X	63 Morning St.	X	X		PC 10	Nini McManamey	X		10 Willis St.	X	X
HPB Nomination- 11/20/2019	PC 9	Mark Googins			39 Morning St.				PC 11	Stacey Mitchell	X		74 Atlantic St.	X	X
HPB Nomination- 11/20/2019	PC 10	Susan Yandell	X		51 Monument St.	X	X	Individual Landmark Request	PC 12	George Carhart	X		7 Lafayette St.	X	X
HPB Nomination- 11/20/2019	PC 11	Christopher Akerlind	X		44 Monument St.	X	X	Individual Landmark Request	PC 13	Pam Days	X		25 Waterville St.	X	X
HPB Nomination- 11/20/2019	PC 12	Joanne Dow	X		28 Waterville St.	X	X	Individual Landmark Request	PC 14	Sally Oldham	X		118 Congress St.	X	
HPB Nomination- 11/20/2019	PC 13	Julius Ciembroniewicz	X		55 Morning St.	X	X		PC 15	Barbara Vestal	X		7-9 Fore St.	X	X
HPB Nomination- 11/20/2019	PC 14	Linsay Steven Mann		X	122 North St.	X	X								
HPB Nomination- 11/20/2019	PC 15	Alexis Santos		X											
HPB Nomination- 11/20/2019	PC 16	George and Ushi Carhart	X		7 Lafayette St.	X	X	Individual Landmark Request							
HPB Nomination- 11/20/2019	PC 17	Carl Henry		X	50 St. Lawrence St.	X	X	Opposition petition signatures; 25							
HPB Nomination- 11/20/2019	PC 18	Markos Miller		X	17 Atlantic St.	X	X								
HPB Nomination- 11/20/2019	PC 19	Peter and Deb Murray	X		104 North St.	X	X								
HPB Nomination- 11/20/2019	PC 20	Liz Hayes	X		107 North St.	X	X								
HPB Nomination- 11/20/2019	PC 21	Markos Miller		X	17 Atlantic St.	X	X								
HPB Nomination- 11/20/2019	PC 22	Carol Conner	X		12 Montreal St.	X	X								
HPB Nomination- 11/20/2019	PC 23	Berry Manter	X		46 Eastern Promenade	X	X								
HPB Nomination- 11/20/2019	PC 24	Nini McMananmy	X		10 Willis St.	X	X								
HPB Nomination- 11/20/2019	PC 25	Mike Hoover	X		40 Melbourne St.	X	X								
HPB Nomination- 11/20/2019	PC 26	Live Chase/Brent Adler		X	65 St. Lawrence St.	X	X								
HPB Nomination- 11/20/2019	PC 27	Karen Snyder	X		72 Waterville St.	X	X	Petition submitted; 80 signatures							
HPB Nomination- 11/20/2019	PC 28	Nini McMananmy	X		10 Willis St.	X	X	Petition submitted- small petition							
HPB Nomination- 11/20/2019	PC 29	Susan Yandell	X		51 Munjoy St.	X	X								
HPB Nomination- 11/20/2019	PC 30	Adam Frederick	X		75 W. Commercial St.	X	X								
HPB Nomination- 11/20/2019	PC 31	EJ Koch	X		81 Vesper St.	X	X								
HPB Nomination- 11/20/2019	PC 32	Lauren Ashwell		X	8 Emerson St.	X									
HPB Nomination- 11/20/2019	PC 33	Travis Agaman		X	8 Emerson St.	X									
HPB Nomination- 11/20/2019	PC 34	Liz Hayes	X		107 North St.	X	X								
HPB Nomination- 11/20/2019	PC 35	Mart99	X												
HPB Nomination- 11/20/2019	PC 36	Barbara Vestal	X		107 Congress St.	X	X								
HPB Nomination- 11/20/2019	PC 37	Francesca Gallucio-Steele	X		22 Clifford St.										
HPB Nomination- 11/20/2019	PC 38	Julie Larry	X		Greater Portland Landmark										
HPB Nomination- 11/20/2019	PC 39	Rhoda Renschler	X		37 Channel Road, SoPo										
HPB Nomination- 11/20/2019	PC 40	Sally Oldham	X		118 Congress St.	X	X								
HPB Nomination- 11/20/2019	PC 41	Ed Gardner	X		84 Eastern Promenade										
HPB Nomination- 11/20/2019	PC 42	Maggy Wolf	X		28 St. Lawrence St.	X	X								

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	-If In the Proposed Munjoy Hill Historic District (Unique)	20	76.9%	6	23.1%	26						
2)	Planning Board Workshop #1 - 12/10/2019	99	76.7%	30	23.3%	129	23	74.2%	8	25.8%	31	
	-If A Munjoy Hill Resident (Unique Person)	62	79.5%	16	20.5%	78						
	-If In the Proposed Munjoy Hill Historic District (Unique)	48	78.7%	13	21.3%	61						
3)	Planning Board Workshop #2 - 2/11/2020	42	72.4%	16	27.6%	58	19	70.4%	8	29.6%	27	
	-If A Munjoy Hill Resident (Unique Person)	30	75.0%	10	25.0%	40						
	-If In the Proposed Munjoy Hill Historic District (Unique)	19	79.2%	5	20.8%	24						
4)	Planning Board Hearing - 3/10/2020 downloaded 3/10 4:14p	80	78.4%	22	21.6%	102	41	80.4%	10	19.6%	51	
	-If A Munjoy Hill Resident (Unique Person)	67	87.0%	10	13.0%	77						
	-If In the Proposed Munjoy Hill Historic District (Unique)	50	86.2%	8	13.8%	58						
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	-If A Munjoy Hill Resident (Unique Person)	159	85.9%	26	14.1%	185						
	-If In the Proposed Munjoy Hill Historic District (Unique)	117	81.8%	26	18.2%	143						

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Meeting Date on Proposed Munjoy Hill Historic District	#	Email Sent By	HD Yes	HD No	Address	Munjoy Hill Resident	In Proposed HD?	Comment	#	Public Comment At Meeting	HD Yes	HD No	Address	Munjoy Hill Resident?	In Proposed HD?
HPB Nomination- 11/20/2019	**PC 43**	Diane Davison	X		29 & 33 Morning St.	X	x								
PB Workshop-12/10/2019	**PC 1**	Barbara Vestal	X		7-9 Fore St.	X	X	Petition signatures to nominate.	**PC1**	Enoch Wenstrom	X		88 Beckett St.	X	X
PB Workshop-12/10/2019	**PC 2**	Johanna Henry		X	50 St. Lawrence St.	X	X		**PC2**	Jake Halpert	X		74 Atlantic St.	X	X
PB Workshop-12/10/2019	**PC 3**	Carol Conner	X		12 Montreal St.	X	X	Individual Landmark Request	**PC3**	George Carhart	X		7 Lafayette St.	X	X
PB Workshop-12/10/2019	**PC 4**	Karen Snyder	X		72 Waterville St.	X	X		**PC4**	Berry Manter	X		46 Eastern Promenad	X	X
PB Workshop-12/10/2019	**PC 5**	George Rheault		X	East Bayside				**PC5**	Josh Baston		X	42 Munjoy St.	X	X
PB Workshop-12/10/2019	**PC 6**	George Reiche	X		50 Waterville St.	X	X		**PC6**	John Wuestoff	X		11 Morning St.	X	X
PB Workshop-12/10/2019	**PC 7**	Enoch Wenstrom	X		83 Beckett St.	X	X		**PC7**	Zack Barowitz		X	Libby Town		
PB Workshop-12/10/2019	**PC 8**	Berry Manter	X		46 Eastern Promenade	X	X		**PC8**	Greg Shinberg	X		Outside Portland		
PB Workshop-12/10/2019	**PC 9**	Mark Googins		X	63 & 39 Morning St.	X	X		**PC9**	Nini McManamy	X		10 Willis St.	X	X
PB Workshop-12/10/2019	**PC 10**	Susan Yandell	X		51 Monument St.	X	X	Individual Landmark Request	**PC10**	Wayne Valzania	X		27 Merrill St.	X	
PB Workshop-12/10/2019	**PC 11**	Christopher Akerlind	X		44 Monument St.	X	X	Individual Landmark Request	**PC11**	Carl Henry		X	50 St. Lawrence St.	X	X
PB Workshop-12/10/2019	**PC 12**	Joanne Dow	X		28 Waterville St.	X	X	Individual Landmark Request	**PC12**	Ann Manganello		X	84 Quebec St.	X	X
PB Workshop-12/10/2019	**PC 13**	Julius Ciembroniewicz	X		55 Morning St.	X	X		**PC13**	John Whitehouse		X	18 North St.	X	X
PB Workshop-12/10/2019	**PC 14**	Linsay Steven Mann		X	122 North St.	X	X		**PC14**	Justine Denny	X		56 North St.	X	X
PB Workshop-12/10/2019	**PC 15**	Alexis Santos		X					**PC15**	Peter Murray			104 North St.	X	X
PB Workshop-12/10/2019	**PC 16**	George and Ushi Carhart	X		7 Lafayette St.	X	X	Individual Landmark Request	**PC16**	Mark Holden	X		37 St. Lawrence St.	X	X
PB Workshop-12/10/2019	**PC 17**	Carl Henry		X	50 St. Lawrence St.	X	X	Opposition petition signatures; 25 signaturs representing 15 properties	**PC17**	Erna Koch	X		81 Vesper St.	X	X
PB Workshop-12/10/2019	**PC 18**	Markos Miller		X	17 Atlantic St.	X	X		**PC18**	Ned Chester	X		7 Fore St.	X	X
PB Workshop-12/10/2019	**PC 19**	Peter and Deb Murray	X		104 North St.	X	X		**PC19**	Maggy Wolf	X		28 St. Lawrence St.	X	X
PB Workshop-12/10/2019	**PC 20**	Liz Hayes	X		107 North St.	X	X		**PC20**	Beth Snyder	X		81 North St.	X	X
PB Workshop-12/10/2019	**PC 21**	Markos Miller		X	17 Atlantic St.	X	X		**PC21**	Julie Larry	X		GPL		
PB Workshop-12/10/2019	**PC 22**	Carol Conner	X		12 Montreal St.	X	X		**PC22**	Carol Conner	X		12 Montreal St.	X	X
PB Workshop-12/10/2019	**PC 23**	Berry Manter	X		46 Eastern Promenade	X	X		**PC23**	Caroly Swartz	X		27 Merrill St.	X	
PB Workshop-12/10/2019	**PC 24**	Nini McMananmy	X		10 Willis St.	X	X		**PC24**	Lori Round		X	47 Monument St.	X	
PB Workshop-12/10/2019	**PC 25**	Mike Hoover	X		40 Melbourne St.	X	X		**PC25**	Barbara Vestal	X		7 Fore St.	X	X
PB Workshop-12/10/2019	**PC 26**	Live Chase/Brent Adler		X	65 St. Lawrence St.	X	X		**PC26**	Pamela Day	X		25 Monument St.	X	X
PB Workshop-12/10/2019	**PC 27**	Karen Snyder	X		72 Waterville St.	X	X	Petition submitted; 80 signatures representing 60 properties.	**PC27**	Sue ?	X		122 North St.	X	X
PB Workshop-12/10/2019	**PC 28**	Nini McMananmy	X		10 Willis St.	X	X	Petition submitted- small petition on Willis St.	**PC28**	Julie Larry	X		GPL		
PB Workshop-12/10/2019	**PC 29**	Susan Yandell	X		51 Munjoy St.	X	X		**PC29**	George Rheult		X	Bayside		
PB Workshop-12/10/2019	**PC 30**	Adam Frederick	X		75 W. Commercial St.	X	X		**PC30**	Tim Wells		X	33 Montreal St.	X	X
PB Workshop-12/10/2019	**PC 31**	EJ Koch	X		81 Vesper St.	X	X		**PC31**	Oliver Murray	X		55 Montreal St.	X	X
PB Workshop-12/10/2019	**PC 32**	Lauren Ashwell		X	8 Emerson St.	X			**PC32**						
PB Workshop-12/10/2019	**PC 33**	Travis Agaman		X	8 Emerson St.	X			**PC33**						
PB Workshop-12/10/2019	**PC 34**	Liz Hayes	X		107 North St.	X	X								
PB Workshop-12/10/2019	**PC 35**	Mart99	X												
PB Workshop-12/10/2019	**PC 36**	Barbara Vestal	X		107 Congress St.	X	X								
PB Workshop-12/10/2019	**PC 37**	Francesca Gallucio-Steele	X		22 Clifford St.										
PB Workshop-12/10/2019	**PC 38**	Julie Larry	X		Greater Portland Landmar										
PB Workshop-12/10/2019	**PC 39**	Rhoda Renschler	X		37 Channel Road, SoPo										

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2)	Planning Board Workshop #1 - 12/10/2019	99	76.7%	30	23.3%	129	23	74.2%	8	25.8%	31	
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PB Workshop-12/10/2019	**PC 40**	Sally Oldham	X		118 Congress St.	X	X								
PB Workshop-12/10/2019	**PC 41**	Ed Gardner	X		511 Congress St St.										
PB Workshop-12/10/2019	**PC 42**	Maggy Wolf	X		28 St. Lawrence St.	X	X								
PB Workshop-12/10/2019	**PC 43**	Diane Davison	X		29 Morning St St.	X	X								
PB Workshop-12/10/2019	**PC 44**	Julius Ciembroniewicz	X		55 Morning St St.	X	X	Note: Included in PB packet were previous were from HPB 11/20/2019 meeting. This Starts to address Planning Board for 12/10/2019 workshop.							
PB Workshop-12/10/2019	**PC 45**	Enoch Wenstrom	X		88 Beckett St.	X	X								
PB Workshop-12/10/2019	**PC 46**	James Hambley /Jenny Dig	X		61 Monument St.	X	X								
PB Workshop-12/10/2019	**PC 47**	Wayne Valzania	X		27 Merrill St.	X									
PB Workshop-12/10/2019	**PC 48**	Marlies Reppenhagan	X		55 Morning Stl, Unit 2-2	X	X								
PB Workshop-12/10/2019	**PC 49**	Paula Agopian	X		91 Monument St.	X									
PB Workshop-12/10/2019	**PC 50**	Anita Stewart	X		25 A Forest Ave.										
PB Workshop-12/10/2019	**PC 51**	Lori Rounds		X	47 Monument St.	X									
PB Workshop-12/10/2019	**PC 52**	Kate Howe		X	40 Quebec St.	X									
PB Workshop-12/10/2019	**PC 53**	Berry Manter	X		46 Eastern Promenade	X	X								
PB Workshop-12/10/2019	**PC 54**	Carle Henry		X	50 St. Lawrence St.	X	X								
PB Workshop-12/10/2019	**PC 55**	Carol Conner	X		12 Montreal St.	X	X								
PB Workshop-12/10/2019	**PC 56**	Joshua Baston		X											
PB Workshop-12/10/2019	**PC 57**	Nancy/Bob Jordan	X			X		Owns 6 Buildings on Munjoy Hill?							
PB Workshop-12/10/2019	**PC 58**	Carolyn Swartz	X		27 Merrill St.	X									
PB Workshop-12/10/2019	**PC 59**	YIMBY		X											
PB Workshop-12/10/2019	**PC 60**	Erna Koch	X		81 Vesper St.	X	X								
PB Workshop-12/10/2019	**PC 61**	Vana Carmona	X		105 North St., Unit 1	X	X								
PB Workshop-12/10/2019	**PC 62**	David Kelly		X	Portland, ME										
PB Workshop-12/10/2019	**PC 63**	Debrah Yale		X				Broker for Tom Landry							
PB Workshop-12/10/2019	**PC 64**	Gary Bahlkow	X		42 Lafayette St.	X									
PB Workshop-12/10/2019	**PC 65**	Jeremy Rutkiewicz		X	161 Congress St.	X	X								
PB Workshop-12/10/2019	**PC 66**	Lorraine Carrol	X		31 North St.	X	X	30 yr resident							
PB Workshop-12/10/2019	**PC 67**	Lydia Savage	X		19 Melbourne St.	X									
PB Workshop-12/10/2019	**PC 68**	William Gemmill	X												
PB Workshop-12/10/2019	**PC 69**	Bruce Wood	X		Old Port										
PB Workshop-12/10/2019	**PC 70**	Beth Snyder	X		81 North St.	X	X								
PB Workshop-12/10/2019	**PC 71**	Stephen Gaal	X		176 Eastern Promenade	X	X								
PB Workshop-12/10/2019	**PC 72**	Diane Davison	X		29 Morning St.	X	X								
PB Workshop-12/10/2019	**PC 73**	Robin Whitten	X		23 St. Lawerence St.	X	X								
PB Workshop-12/10/2019	**PC 74**	Elizabeth Miller		X	46 Waterville St.	X	X								
PB Workshop-12/10/2019	**PC 75**	Sara Mills	X												
PB Workshop-12/10/2019	**PC 76**	Sally Oldham	X		118 Congress St.	X	X								
PB Workshop-12/10/2019	**PC 77**	Leslie Hart	X		215 Sheridan St.	X									
PB Workshop-12/10/2019	**PC 78**	Betty Lorber	X		225 Sheridan St.	X									

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PB Workshop-12/10/2019	**PC 79**	Priscilla Harrison	X					Moved off of Munjoy Hill 6 yrs ago							
PB Workshop-12/10/2019	**PC 80**	Chris Stewart	X		81 North St.	X	X								
PB Workshop-12/10/2019	**PC 81**	Susan Gillis		X	48 Congress St.	X	X								
PB Workshop-12/10/2019	**PC 82**	Carol McCracken		X	Portland, ME			Doesn't live on the Hill.							
PB Workshop-12/10/2019	**PC 83**	Oliver Murray	X		55 Montreal St.	X	X								
PB Workshop-12/10/2019	**PC 84**	Patricia Erikson	X					3rd generation Munjoy Hill							
PB Workshop-12/10/2019	**PC 85**	Ben Poirer	X		Cape Elizabeth										
PB Workshop-12/10/2019	**PC 86**	Susan Yandell	X		51 Monument St.	X	X								
PB Workshop-12/10/2019	**PC 87**	Liz Hayes	X		107 North St.	X	X								
PB Workshop-12/10/2019	**PC 88**	Anne Manganello		X	84 Quebec St.	X	X								
PB Workshop-12/10/2019	**PC 89**	Jonathan Wylie/Gail Ringel	X		34 Lafayette St.	X	X								
PB Workshop-12/10/2019	**PC 90**	Martha Emerson	X		340 Eastern Promenade	X	X								
PB Workshop-12/10/2019	**PC 91**	KE Smith	X		80 Quebec St.	X	X								
PB Workshop-12/10/2019	**PC 92**	Ann Casady	X		205 Sheridan St.	X									
PB Workshop-12/10/2019	**PC 93**	Peter and Deb Murray	X		104 North St.	X	X								
PB Workshop-12/10/2019	**PC 94**	Abbie McMillen	X		26-28 Vesper St.	X	X								
PB Workshop-12/10/2019	**PC 95**	Nancy Brian	X		118 Congress St.	X	X								
PB Workshop-12/10/2019	**PC 96**	Carol J. DeTine	X		144 Vaughn St.	X	X								
PB Workshop-12/10/2019	**PC 97**	Marianne Pratt	X		224 Sheridan St.	X									
PB Workshop-12/10/2019	**PC 98**	Hillary Bassett	X		55 Morning St.	X	X								
PB Workshop-12/10/2019	**PC 99**	Dan Haley		X	140 Eastern Promenade	X	X								
PB Workshop-12/10/2019	**PC 100**	Betty and John Wuestoff	X		15 Morning St.	X	X								
PB Workshop-12/10/2019	**PC 101**	Katy Brewer	X					Grew Up on the Hill							
PB Workshop-12/10/2019	**PC 102**	Nancy Guimond	X		13 Waterville St.	X	X								
PB Workshop-12/10/2019	**PC 103**	Greater Portland Landmarl	X												
PB Workshop-12/10/2019	**PC 104**	Tica Douglas	X		11 Munjoy St.	X	X								
PB Workshop-12/10/2019	**PC 105**	Lori Rounds		X	47 Monument St.	X									
PB Workshop-12/10/2019	**PC 106**	Mary Casale	X		39 Waterville St.	X	X								
PB Workshop-12/10/2019	**PC 107**	Enoch Wenstrom	X		88 Beckett St.	X	X								
PB Workshop-12/10/2019	**PC 108**	Pamela Day	X		25 Waterville St.	X	X								
PB Workshop-12/10/2019	**PC 109**	Travis Agaman		X	8 Emerson St.	X									
PB Workshop-12/10/2019	**PC 110**	Andrew Glassberg	X		340 Eastern Promenade	X	X								
PB Workshop-12/10/2019	**PC 111**	Jill Nixon	X		118 Congress St.	X	X								
PB Workshop-12/10/2019	**PC 112**	Rob Whitten	X		188 Eastern Promenade	X	X								
PB Workshop-12/10/2019	**PC 113**	Paul Haley		X	62 Waterville St.	X	X								
PB Workshop-12/10/2019	**PC 114**	Nini McMananmy	X		10 Willis St.	X	X	0							
PB Workshop-12/10/2019	**PC 115**	Carl Henry		X	50 St. Lawrence St.	X	X								
PB Workshop-12/10/2019	**PC 116**	Peter Pitegoff			205 Sheridan St.	X		Referring to 128R North/ 126 North							
PB Workshop-12/10/2019	**PC 117**	Anne Pringle	X		Neal St										
PB Workshop-12/10/2019	**PC 118**	William Hall	X		Pleasant Ave.			Use to be on Planning Board							
PB Workshop-12/10/2019	**PC 119**	Gail Ringle	X		34 Lafayette St.	X	X								
PB Workshop-12/10/2019	**PC 120**	Karen Snyder	X		72 Waterville St.	X	X								
PB Workshop-12/10/2019	**PC 121**	Markos Miller		X	17 Atlantic St.	X	X								

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	-If A Munjoy Hill Resident (Unique Person)	20	71.4%	8	28.6%	28						
	-If In the Proposed Munjoy Hill Historic District (Unique)	20	76.9%	6	23.1%	26						
2)	Planning Board Workshop #1 - 12/10/2019	99	76.7%	30	23.3%	129	23	74.2%	8	25.8%	31	
	-If A Munjoy Hill Resident (Unique Person)	62	79.5%	16	20.5%	78						
	-If In the Proposed Munjoy Hill Historic District (Unique)	48	78.7%	13	21.3%	61						
3)	Planning Board Workshop #2 - 2/11/2020	42	72.4%	16	27.6%	58	19	70.4%	8	29.6%	27	
	-If A Munjoy Hill Resident (Unique Person)	30	75.0%	10	25.0%	40						
	-If In the Proposed Munjoy Hill Historic District (Unique)	19	79.2%	5	20.8%	24						
4)	Planning Board Hearing - 3/10/2020 downloaded 3/10 4:14p	80	78.4%	22	21.6%	102	41	80.4%	10	19.6%	51	
	-If A Munjoy Hill Resident (Unique Person)	67	87.0%	10	13.0%	77						
	-If In the Proposed Munjoy Hill Historic District (Unique)	50	86.2%	8	13.8%	58						
	OVERALL TOTALS: Total All Emails Sent	221	76.5%	68	23.5%	289	97	78.2%	27	21.8%	124	
	-If A Munjoy Hill Resident (Unique Person)	159	85.9%	26	14.1%	185						
	-If In the Proposed Munjoy Hill Historic District (Unique)	117	81.8%	26	18.2%	143						

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PB Workshop-12/10/2019	PC 122	Peggy Hefferen	X		8 Sherbrook St.	X	X								
PB Workshop-12/10/2019	PC 123	Mike Hammen	X		127 Pleasant St.	X									
PB Workshop-12/10/2019	PC 124	Nancy Machesney	X		213 Sheridan St.	X									
PB Workshop-12/10/2019	PC 125	Stephen Shiffman	X		9 Waterville St.	X	X								
PB Workshop-12/10/2019	PC 126	Wayne Valzania - MHNO	X		MHNO										
PB Workshop-12/10/2019	PC 127	Chuck Kamr	X		55 Morning St.	X									
PB Workshop-12/10/2019	PC 128	Lauren Ashwell		X	8 Emerson St.	X		Downloaded packet on noon 12/10/2019							
PB Workshop-02/11/2020	PC 1	Ann Manganello		X	84 Quebect St.	X	X		PC1	Zack Barowitz		X	Libbytown		
PB Workshop-02/11/2020	PC2	John Whitehouse		X	18 North St.	X	X		PC2	Nathan Z.	X		22 Eastern Promenad	X	X
PB Workshop-02/11/2020	PC 3	Markos Miller		X	17 Atlantic St.	X	X		PC3	David Lloyd	X		29 Waterville St.	X	X
PB Workshop-02/11/2020	PC 4	Sally Oldham	X		118 Congress St.	X			PC4	John Wuestoff	X		11 Morning St.	X	X
PB Workshop-02/11/2020	PC 5	Zack Barowitz		X	Libby Town				PC5	John White		X	18 North St.	X	X
PB Workshop-02/11/2020	PC 6	George Rheault		X	West Bayside				PC6	Vanna Carmona	X		105 North St.	X	X
PB Workshop-02/11/2020	PC 7	David Kelly		X	Portland				PC7	Rob Whitten	X		29 St. Lawrence St.	X	X
PB Workshop-02/11/2020	PC 8	Emily Liebling		X	54 Tyng St.				PC8	Mike Hoover	X		40 Melburne St.	X	X
PB Workshop-02/11/2020	PC 9	Francesa Galluccio-Steele	X		22 Clifford St.				PC9	Carol Conner	X		12 Montreal St.	X	X
PB Workshop-02/11/2020	PC 10	Zack Barowitz		X	Libby Town				PC10	Anne Manganello		X	84 Quebec st.	X	X
PB Workshop-02/11/2020	PC 11	Lauren Ashwell		X	8 Emerson St.	X			PC11	Tica Douglas	X		11 Munjoy St.	X	X
PB Workshop-02/11/2020	PC 12	Lori Rounds		X	47 Monument St.	X			PC12	Sally Oldham	X		118 Congress St.	X	
PB Workshop-02/11/2020	PC 13	Lynn Kuzma		X	10 Emerson St.	X			PC13	Juli Larry	X		GPL		
PB Workshop-02/11/2020	PC 14	Wayne Valzania (MHNO)	X		MHNO				PC14	Nini McManamey	X		10 Willis St.	X	X
PB Workshop-02/11/2020	PC 15	George Carhart	X		7 Lafayette St.	X	X		PC15	Lori Round		X	47 Monument St.	X	
PB Workshop-02/11/2020	PC 16	Wayne Valzania	X		27 Merrill St.	X			PC16	Maggy Wolf	X		28 St. Lawrence St.	X	X
PB Workshop-02/11/2020	PC 17	Carolyn Swartz	X		27 Merrill St.	X			PC17	Wayne Valzania	X		23 Merrill St.	X	
PB Workshop-02/11/2020	PC 18	Erna Kocth	X		81 Vesper St.	X	X		PC18	Enoch Wenstrom	X		88 Beckett St.	X	X
PB Workshop-02/11/2020	PC 19	Linda Tyler	X		52 St. Lawrence St.	X	X		PC19	karen Snyder	X		72 Waterville St.	X	X
PB Workshop-02/11/2020	PC 20	Mark Holden	X		37 St. Lawrence St.	X	X		PC20	Smith - female developer		X	?		
PB Workshop-02/11/2020	PC 21	Michael Englerbert	X		193 Sheridan St.	X			PC21	George Carhart	X		7 Lafayette St.	X	X
PB Workshop-02/11/2020	PC 22	Richard Rollins	X		Hill Boy				PC22	Tim Wells		X	33 Montreal St.	X	
PB Workshop-02/11/2020	PC 23	Mary Morse	X		208 Sheridan St.	X			PC23	George Rheault		X	Bayside		
PB Workshop-02/11/2020	PC 24	Robin Whitten	X		23 St. Lawrence St.	X	X		PC24	Carl Henry		X	50 St. Lawrence St.	X	X
PB Workshop-02/11/2020	PC 25	Heather Sullivan		X	32 Merrill St.	X			PC25	Peter Murray	X		104 North St.	X	X
PB Workshop-02/11/2020	PC 26	Julie Larry	X		GPL				PC26	Barry Manter	X		46 Eastern Promenad	X	X
PB Workshop-02/11/2020	PC 27	Kevin Schochat	X		215 Sheridan St.	X			PC27	Sive Nelson	X		29 Emerson St.	X	
PB Workshop-02/11/2020	PC 28	Mary Barrett	X		27 Parson St.										
PB Workshop-02/11/2020	PC 29	Nancy Machesney	X		213 Sheridan St.	X									
PB Workshop-02/11/2020	PC 30	Steven Inman	X		81A Vesper St.	X	X								
PB Workshop-02/11/2020	PC 31	Edward Fiske Mooney	X		77 Vesper St.	X	X								
PB Workshop-02/11/2020	PC 32	Susan Yandell	X		51 Monument St.	X	X								
PB Workshop-02/11/2020	PC 33	Sara Auld	X		43 Munjoy St.	X	X								
PB Workshop-02/11/2020	PC 34	Carol Connor	X		12 Montreal St.	X	X								
PB Workshop-02/11/2020	PC 35	Ann Casady	X		213 Sheridan St.	X									
PB Workshop-02/11/2020	PC 36	George Carhart	X		7 Lafayette St.	X	X								
PB Workshop-02/11/2020	PC 37	Lincoln Payne	X		150 Eastern Promenade	X	X								

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PB Workshop-02/11/2020	**PC 38**	Travis Agaman		X	8 Emerson St.	X									
PB Workshop-02/11/2020	**PC 39**	Amy Alward	X		South Portland										
PB Workshop-02/11/2020	**PC 40**	Elizabeth Peavey	X		Portland										
PB Workshop-02/11/2020	**PC 41**	Nick Murray		X	40 St. Lawrence St.	X	X								
PB Workshop-02/11/2020	**PC 42**	James Rohman		X	57 Elmwood St.										
PB Workshop-02/11/2020	**PC 43**	James Hambley	X		61 Monument St.	X									
PB Workshop-02/11/2020	**PC 44**	Donna Jones	X		Portland										
PB Workshop-02/11/2020	**PC 45**	Abbie McMillen	X		26-28 Vesper St.	X	X								
PB Workshop-02/11/2020	**PC 46**	Anne Pringle	X		Neal St.										
PB Workshop-02/11/2020	**PC 47**	Daryl Renschler	X		Portland										
PB Workshop-02/11/2020	**PC 48**	Karen Snyder	X		72 Waterville St.	X	X								
PB Workshop-02/11/2020	**PC 49**	Kathleen Bender	X		11 North St.	X	X								
PB Workshop-02/11/2020	**PC 50**	Marlies Reppenhagen	X		55 Morning St.	X	X								
PB Workshop-02/11/2020	**PC 51**	Pamela Day	X		25 Waterville St.	X	X								
PB Workshop-02/11/2020	**PC 52**	Nancy & Robert Jordan	X		13-15 Vesper St.	X	X								
PB Workshop-02/11/2020	**PC 52**	Nancy & Robert Jordan			17-19 Vesper St.	X	X								
PB Workshop-02/11/2020	**PC 52**	Nancy & Robert Jordan			91-93 Morning St.	X	X								
PB Workshop-02/11/2020	**PC 52**	Nancy & Robert Jordan			26-30 Eastern Promenade	X	X								
PB Workshop-02/11/2020	**PC 52**	Nancy & Robert Jordan			19 Locust St.										
PB Workshop-02/11/2020	**PC 53**	Carl Henry		X	50 St. Lawrence	X	X								
PB Workshop-02/11/2020	**PC 54**	Carol J. De Tine	X		144 Vaughn St.										
PB Workshop-02/11/2020	**PC 55**	Charlton Smith	X		33 Turner St.	X									
PB Workshop-02/11/2020	**PC 56**	John Watson & Nancy Brai	X		118 Congress St.	X									
PB Workshop-02/11/2020	**PC 57**	Justine Denney	X		56 North St.	X	X								
PB Workshop-02/11/2020	**PC 58**	Tom Keating	X		166 Pleasant Ave.										
PB Workshop-03/10/2020	**PC59**	Abby Harvey	X		17 Waterville St.	X	X		PC1	Jake Halpert	X		74 Atlantic St.	X	X
PB Workshop-03/10/2020	**PC60**	Anne Manganello		X	84 Quebec St.	X	X		PC2	David Cowie	X		32 North St.	X	X
PB Workshop-03/10/2020	**PC61**	Anne Manganello		X	84 Quebec St.	X	X		PC3	Gemma Cannon	X		204 Congress St.		
PB Workshop-03/10/2020	**PC62**	Audrey Puleio	X		27 North St.	X	X		PC4	Pam Plum	X		104 Park St.		
PB Workshop-03/10/2020	**PC63**	Barbara Brown	X		156 Sheridan St., #2C	X			PC5	Nini McManamy	X		10 Willis St.	X	X
PB Workshop-03/10/2020	**PC64**	Barti Bourgault	X		49 Waterville St.	X	X		PC6	Saura Shannon		X	59 Moody St.	X	X
PB Workshop-03/10/2020		Barti Bourgault			51 Waterville St.	X	X		PC7	George Rheult		X	West Bayside		
PB Workshop-03/10/2020	**PC65**	Beth Snyder	X		81 North St.	X	X		PC8	Josh Baston		X	42 North St.	X	X
PB Workshop-03/10/2020	**PC66**	Bruce Wood	X		607 Chandler's Wharf				PC9	Lauren Ashwell		X	8 Emerson St.	X	
PB Workshop-03/10/2020	**PC67**	Candace Myers	X		45 Eastern Promenade, Unit B-G	X			PC10	Mark Holden	X		37 St. Lawrence	X	X
PB Workshop-03/10/2020	**PC68**	Carl Henry		X	50 St. Lawrence	X	X		PC11	Mildred Bachrach		X	211 Brackett St.		
PB Workshop-03/10/2020	**PC69**	Carol Conner	X		12 Montreal St.	X	X		PC12	Dianne Davison	X		29 Morning St.	X	X
PB Workshop-03/10/2020	**PC70**	Carol McCracken		X	Portland				PC13	Bill Hall	X		Peaks Island		
PB Workshop-03/10/2020	**PC71**	Carolyn Swartz	X		27 Merrill St.	X	X		PC14	Michelle Polacsek	X		167 Newbury St., Unit 406		
PB Workshop-03/10/2020	**PC72**	Christopher Ackerland	X		44 Monument St.	X	X		PC15	Robin Whitten	X		23 St. Lawrence St.	X	X
PB Workshop-03/10/2020	**PC73**	Christopher Stewart	X		81 North St.	X	X		PC16	Sherwin Hamill	X		2 Atlantic St.	X	X
PB Workshop-03/10/2020	**PC74**	Claudia Diller	X		Munjoy Hill?	X			PC17	Stacy Mitchell	X		74 Atlantic St.	X	X
PB Workshop-03/10/2020	**PC75**	Cynthia Schmidt	X		21 Sheridan St, #1	X	X		PC18	Beth Snyder	X		81 North St.	X	X
PB Workshop-03/10/2020	**PC76**	David Lloyd	X		29 Waterville St.	X	X		PC19	Angela Adams	X		2 Atlantic St.	X	X
PB Workshop-03/10/2020	**PC77**	Debra Cole	X		71 Walnut St.	X	X		PC20	Keri lord	X		Deering St.		

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PB Workshop-03/10/2020	**PC78**	Debra Pressier	X		25 Fore St.	X	X		PC21	Ann Mangenello		X	84 Quebec St.	X	X
PB Workshop-03/10/2020	**PC79**	Liz Hays	X		107 North St.	X	X		PC22	Lindsey Mann	X		122 North St.	X	X
PB Workshop-03/10/2020	**PC80**	Gary Stern	X		65 Revere St.				PC23	Richard Heffern	X		8 Sherbrooke St.	X	X
PB Workshop-03/10/2020	**PC81a**	George Rheult		X	Bayside				PC24	Hilary Bassett	X		55 Morning St.	X	X
PB Workshop-03/10/2020	**PC82**	Joe Walsh		X	Portland, Munjoy ?Green Clean Maine?				PC25	Thomas Brokish	X		43 Munjoy St.	X	X
PB Workshop-03/10/2020	**PC83**	John Whitehouse		X	1 Cumberside Falmouth				PC26	Sally Oldham	X		118 Congress St.	X	X
PB Workshop-03/10/2020	**PC84**	Kathryn Yates	X						PC27	Rob Whitten	X		23 St. Lawrence St.	X	X
PB Workshop-03/10/2020	**PC85**	Kenneth and Joyce Baily	X		59 Mountfort St.	X			PC28	Berry Manter	X		46 Eastern Promenad	X	X
PB Workshop-03/10/2020	**PC86**	Kevin Schochat	X		215 Sheridan St.	X			PC29	Carol Swartz	X		27 Merrill St.	X	X
PB Workshop-03/10/2020	**PC87**	Leslie Hart	X		215 Sheridan St.	X			PC30	Wayne Valzania	X		27 Merrill St.	X	X
PB Workshop-03/10/2020	**PC88**	Maggy Wolf	X		28 St. Lawrence	X	X		PC31	Steve Cannon	X		204 Congress St.		
PB Workshop-03/10/2020	**PC89**	Martica Swain	X		28 St. Lawrence	X	X		PC32	Mike Hoover	X		40 Melbourne St.	X	X
PB Workshop-03/10/2020	**PC90**	Nan Cumming	X		87 Vesper St.	X	X		PC33	Carol Conner	X		12 Montreal St.	X	X
PB Workshop-03/10/2020	**PC91**	Nancy Machesney	X		215 Sheridan St.	X			PC34	Oliver Murray	X		40 Montreal St.	X	X
PB Workshop-03/10/2020	**PC92**	Nancy Thayer	X		7 Gilbert Lane	X	X		PC35	Sive Whelan	X		29 Emerson St.	X	X
PB Workshop-03/10/2020	**PC93**	Ned Chester	X		11 Fore St.	X	X		PC36	John Wuestoff	X		17 Morning St.	X	X
PB Workshop-03/10/2020	**PC94**	Paul Flaxman	X		7 Atlantic St.	X	X		PC37	John Mahoney		X	73 Atlantic St.	X	X
PB Workshop-03/10/2020	**PC95**	Bob and Jeanne Bull	X		68 Atlantic St.	X	X		PC38	Ned Chester	X		7 Fore St.	X	X
PB Workshop-03/10/2020	**PC96**	Ryan Fitzgerlad		X	51 Morning St.	X	X		PC39	Herb Adams	X		Parkside		
PB Workshop-03/10/2020	**PC97**	Sally Oldham	X		118 Congress	X			PC40	Pam Day	X		25 Waterville St.	X	X
PB Workshop-03/10/2020	**PC98**	Ted Oldham	X		118 Congress	X			PC41	George Carhart	X		7 Lafayette St.	X	X
PB Workshop-03/10/2020	**PC99**	Tica Douglas	X		11 Munjoy St.	X	X		PC42	Barbara Vestal	X		7 Fore St.	X	X
PB Workshop-03/10/2020	**PC100**	Tom Kennedy	X		340 Eastern Promenade, Unit 213	X			PC43	Lori Round		X	47 Monument St.	X	
PB Workshop-03/10/2020	**PC101**	Travis Agaman		X	8 Emerson St.	X			PC44	Peter Blackstone	X		76 Cumberland Ave	X	X
PB Workshop-03/10/2020	**PC102**	Wendy Cherubini		X	33 May St.				PC45	Lorrayne Carroll	X		31 North St.	X	X
PB Workshop-03/10/2020	**PC103**	William Cleaves	X		27 North St, Apt 4	X	X		PC46	Mary Casale	X		39 Waterville St.	X	X
PB Workshop-03/10/2020	**PC104**	Megan Roberts		X	Portland, Woodsford				PC47	Tim Wells		X	33 Montreal	X	
PB Workshop-03/10/2020	**PC105**	Vana Carmona	X		105 North St., Apt 1	X	X		PC48	Peter Murray	X		104 North St.	X	X
PB Workshop-03/10/2020	**PC106**	Martha Emerson	X		340 Eastern Promenade, Unit 247	X			PC49	Carl Henry		X	50 St. Lawrence St.	X	X
PB Workshop-03/10/2020	**PC107**	Betts Mayer	X		211 Sheridan St.	X			PC50	Maggy Wolf	X		28 St. Lawrence St.	X	X
PB Workshop-03/10/2020	**PC108**	Gemma Cannon	X		WHSA Secretary?	X			PC51	Karen Snyder	X		72 Waterville St.	X	X
PB Workshop-03/10/2020	**PC109**	Matt Thayer	X		62 Munjoy St.	X	X								
PB Workshop-03/10/2020	**PC110**	Uschi Carhart	X		7 Lafayette St.	X	X								
PB Workshop-03/10/2020	**PC111**	Mildred Bachrach		X	211 Brackett St.										
PB Workshop-03/10/2020	**PC112**	Nini McManamy	X		11 Willist St.	X	X								
PB Workshop-03/10/2020	**PC113**	Nathan Szanton	X		22 Eastern Promenade, Unit #3	X	X								
PB Workshop-03/10/2020	**PC114**	Mary Casale	X		39 Waterville St.	X	X								
PB Workshop-03/10/2020	**PC115**	Joel Harris	X		38 Blanchard St, Cumberland										
PB Workshop-03/10/2020	**PC116**	Peter Murray	X		104 North St.	X	X								
PB Workshop-03/10/2020	**PC117**	Lindsay Swann	X		122 North St.	X	X								
PB Workshop-03/10/2020	**PC118**	Enoch Wenstrom	X		88 Beckett St.	X	X								
PB Workshop-03/10/2020	**PC119**	Barbara Vestal	X		11 Fore St.	X	X								
PB Workshop-03/10/2020	**PC120**	Gail Wenstrom	X		83 Beckett St.	X	X								
PB Workshop-03/10/2020	**PC121**	Karen Snyder	X		72 Waterville St.	X	X								
PB Workshop-03/10/2020	**PC122**	Gail Wenstrom	X		83 Beckett St.	X	X								

Item Summary From The Past 4 Meetings/Workshops Held that Show Majority of Portland Supports the Proposed Munjoy Hill Historic District & 6 Landmarks

	As of: Tuesday 3/10/2020 at 4:47pm	Email Sent to HPB or Planning Board					Public Comment at Meeting/Workshop					
#	Portland, ME Meeting/Works Shop Held	HD Yes	HD Yes %	HD No	HD No%	Total	HD Yes	HD Yes%	HD No	HD No%	Total	Comments:
1)	Historic Preservation Board Nomination - 11/20/2019	32	72.7%	12	27.3%	44	14	93.3%	1	6.7%	15	
	-If A Munjoy Hill Resident (Unique Person)	20	71.4%	8	28.6%	28						
	-If In the Proposed Munjoy Hill Historic District (Unique)	20	76.9%	6	23.1%	26						
2)	Planning Board Workshop #1 - 12/10/2019	99	76.7%	30	23.3%	129	23	74.2%	8	25.8%	31	
	-If A Munjoy Hill Resident (Unique Person)	62	79.5%	16	20.5%	78						
	-If In the Proposed Munjoy Hill Historic District (Unique)	48	78.7%	13	21.3%	61						
3)	Planning Board Workshop #2 - 2/11/2020	42	72.4%	16	27.6%	58	19	70.4%	8	29.6%	27	
	-If A Munjoy Hill Resident (Unique Person)	30	75.0%	10	25.0%	40						
	-If In the Proposed Munjoy Hill Historic District (Unique)	19	79.2%	5	20.8%	24						
4)	Planning Board Hearing - 3/10/2020 downloaded 3/10 4:14p	80	78.4%	22	21.6%	102	41	80.4%	10	19.6%	51	
	-If A Munjoy Hill Resident (Unique Person)	67	87.0%	10	13.0%	77						
	-If In the Proposed Munjoy Hill Historic District (Unique)	50	86.2%	8	13.8%	58						
	OVERALL TOTALS: Total All Emails Sent	221	76.5%	68	23.5%	289	97	78.2%	27	21.8%	124	
	-If A Munjoy Hill Resident (Unique Person)	159	85.9%	26	14.1%	185						
	-If In the Proposed Munjoy Hill Historic District (Unique)	117	81.8%	26	18.2%	143						

Itemized Detail Of All the People Who Emailed or Public Comment in the Last 4 Workshops/Meetings regarding the Proposed Munjoy Hill Historic District & 6 Landmarks

Meeting Date on Proposed Munjoy Hill Historic District	#	Email Sent By	HD Yes	HD No	Address	Munjoy Hill Resident	In Proposed HD?	Comment	#	Public Comment At Meeting	HD Yes	HD No	Address	Munjoy Hill Resident?	In Proposed HD?
PB Workshop-03/10/2020	**PC123**	Pam Day	**X**		25 Waterville St.	X	X								
PB Workshop-03/10/2020	**PC124**	Betty Wuestoff	**X**		11 Morning St.	X	X								
PB Workshop-03/10/2020	**PC125**	Hillary Bassett	**X**		55 Morning St.	X	X								
PB Workshop-03/10/2020	**PC126**	Cara DeTign	**X**		144 Vaughn St.										
PB Workshop-03/10/2020	**PC127**	Ed Gardner	**X**		511 Congress St.										
PB Workshop-03/10/2020	**PC128**	Francesca Galluccio-Steele	**X**		22 Clifford St.										
PB Workshop-03/10/2020	**PC129**	Robert Derry	**X**		63 Melbourne St.	X	X								
PB Workshop-03/10/2020	**PC130**	Carl Henry		**X**	50 St. Lawrence	X	X								
PB Workshop-03/10/2020	**PC131**	George Carhart	**X**		7 Lafayette St.	X	X								
PB Workshop-03/10/2020	**PC132**	Greater Portland Landmark	**X**		GPL										
PB Workshop-03/10/2020	**PC133**	Debby Murray	**X**		104 North St.	X	X								
PB Workshop-03/10/2020	**PC134**	Janie Lynch		**X**	???										
PB Workshop-03/10/2020	**PC135**	Jo-Ann Kayatta	**X**		????										
PB Workshop-03/10/2020	**PC136**	Kristina Minister	**X**		101 North St, Apt 4	X	X								
PB Workshop-03/10/2020	**PC137**	Laura Shen & Will Stilton		**X**	59 Moody St.	X	X								
PB Workshop-03/10/2020	**PC138**	Lynne Panico	**X**		49 Moody St.	X	X								
PB Workshop-03/10/2020	**PC139**	Robin Ferrar		**X**	46 Walnut St.	X	X								
PB Workshop-03/10/2020	**PC140**	Sarah Goan	**X**		54 Walnut St.	X	X								
PB Workshop-03/10/2020	**PC141**	Kathleen Bender	**X**		11 North St.	X	X								
PB Workshop-03/10/2020	**PC142**	Karen Harrison		**X**	34 Munjoy St.	X	X								
PB Workshop-03/10/2020	**PC143**	Brent Adler		**X**	92 Walnut St.	X									
PB Workshop-03/10/2020	**PC144**	Eleanore Houghton	**X**		Portland										
PB Workshop-03/10/2020	**PC145**	Erna Koch	**X**		81 Vesper St.	X	X								
PB Workshop-03/10/2020	**PC146**	George Rheault		**X**	Bayside										
PB Workshop-03/10/2020	**PC147**	George Rheault		**X**	Bayside										
PB Workshop-03/10/2020	**PC148**	Jen Micoleu	**X**		61 Mountfourt St.	X									
PB Workshop-03/10/2020	**PC149**	John Carolan		**X**	28 North St.	X	X								
PB Workshop-03/10/2020	**PC150**	Julian Ciembroniewicz	**X**		55 Morning St.	X	X								
PB Workshop-03/10/2020	**PC151**	Kate Howe		**X**	40 Quebec St.	X									
PB Workshop-03/10/2020	**PC152**	Kelly Worster	**X**		52 Monument St.	X									
PB Workshop-03/10/2020	**PC153**	Mary Barret	**X**		Portland										
PB Workshop-03/10/2020	**PC154**	Mike Cavenaugh	**X**		39 Munjoy St.	X	X								
PB Workshop-03/10/2020	**PC155**	MJ Hill?	**X**		Fake?										
PB Workshop-03/10/2020	**PC156**	Paula Agopian	**X**		90 Monument St.	X									
PB Workshop-03/10/2020	**PC157**	Robert Morse	**X**		Portland										
PB Workshop-03/10/2020	**PC158**	Sophie Samuels	**X**		46 Howard St.	X									
PB Workshop-03/10/2020	**PC159**	Willlliam Alcorn	**X**		125 Morning St.	X	X								
PB Workshop-03/10/2020	**PC160**	Barbara Keppel	**X**		141 North St.	X	X								

Sources:

HPB Nomination- 11/20/2019 **https://portlandme.civicclerk.com/Web/Player.aspx?id=533&key=-1&mod=-1&mk=-1&nov=0**
PB Workshop-12/10/2019 **https://portlandme.civicclerk.com/Web/Player.aspx?id=571&key=-1&mod=-1&mk=-1&nov=0**
PB Workshop-02/11/2020 **https://portlandme.civicclerk.com/Web/Player.aspx?id=1207&key=-1&mod=-1&mk=-1&nov=0**
PB Workshop-03/10/2020 **https://portlandme.civicclerk.com/Web/Player.aspx?id=1219&key=-1&mod=-1&mk=-1&nov=0**

Google Groups

MUNJOY HILL

Robert Morse <rmorse52@yahoo.com> Aug 6, 2020 2:17 PM
Posted in group: **Planning Board**

I FULLY SUPPORT THE HISTORIC DISTRICT PROPOSED FOR MUNJOY HILL.

ROBERT MORSE 208 SHERIDAN STREET

Google Groups

Munjoy Hill Local Historic District

Ronald Savitt <rsavitt43@gmail.com> Aug 5, 2020 10:50 AM
Posted in group: **Planning Board**

Portland Planning Board

I fully support the proposal to enact a Munjoy All Historic District. I lived in the area for two years and believe it will be an important addition for Portland.

I spent nearly ten years in Portland, Oregon as a volunteer for the Architectural Heritage Center. During that time I had several opportunities to appreciate the development of Historic Districts, some that had existed for over a decades, some less so and applications for new districts.

I was privy to submissions by land owners, residents and interested parties and while I had only informal input to the AHC's portion, I took no part in the decision itself. What I learned is that historic districts are an important addition to the preservation of a community. The ideal historic districts respects the rights of property owners but in doing that it also protects the integrity of a community. Some restrictions on what can be done should be considered; in Oregon local governments provided advice and in some case architectural and financial support. One of the roles the AHC played was the library which had extensive resources to help describe the buildings, what they were constructed of and what type of repairs would fit. I am not familiar enough with Portland or Maine to contemplate what policies are available. In any case, support for property owners within reason is necessary as long as it provides rewards for them.

You might want to look at the AHC web page to learn about how they are now handling historic districts. In the current economic times where there is a greater probability that areas and building will fall into decay, historic districts make great sense.

Please feel to contact me if you have further questions.

Best,

Ron Savitt

Dear Chair Mazer and Members of the Planning Board,

The process of considering the designation of a portion of Munjoy Hill as an Historic District has been a long one. There has been extensive public input and public education. The support from both Munjoy Hill residents and from Portland citizens has been very strong. **75% to 80% of the comments** at each step of the way before the Historic Preservation Board and Planning Board **have been in favor of designation**.

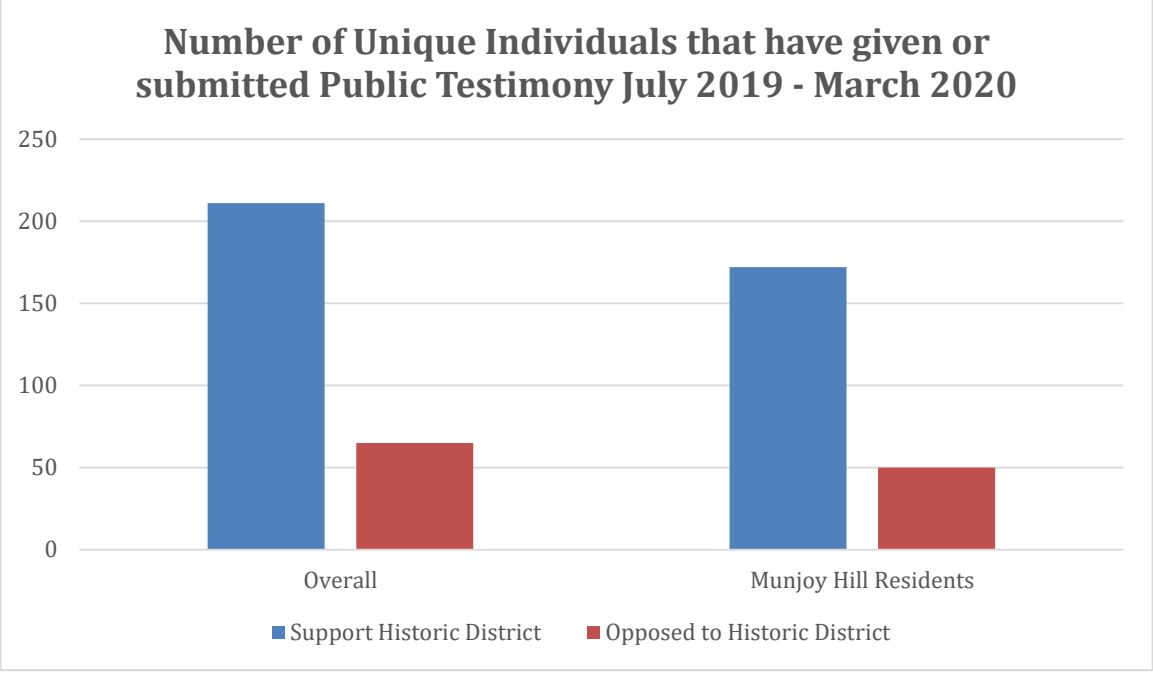
The statements below draw from testimony offered at the Planning Board's Pubic Hearing on March 10. They are representative of the comments offered and illustrate:

- **The workability of the Historic Preservation Board's review process from both architects' and owners' viewpoints**
- **The benefits of designation in retaining affordable and workforce housing on the Hill and the ability to build affordable housing in historic districts.**
- **The unique identity of Munjoy Hill that merits historic designation including its ability to tell the stories of Portland's multi-ethnic and multi-racial residents.**

I urge you to support the designation of the Munjoy Hill Historic District as proposed and to recommend its designation by Portland's City Council.

Thank you for you dedicated efforts as members of this Planning Board,

Sally Oldham
118 Congress Street
Portland



David Lloyd, 29 Waterville Street, local architect and resident of Munjoy Hill

"[As an] architect that has presented to the board over many years… I have been able to successfully design low income housing under the guidelines of an historic district. The HP review process moves quickly, and I have found that by weaving the HP reviews into the planning board schedule no time is lost in the approval process. Successful design is not burdened or made less-creative by design critiques. Good design is promoted through successful critiques. My experience with the board has resulted in successful traditional architecture and modern architecture."

Nathan Szanton, 22 Eastern Prom, affordable housing developer and resident of Munjoy Hill

"I am very much in support of the proposed district…. I've thought a lot about how affordable housing is impacted by historic districts. If this [district] is implemented, there's still many, many opportunities to build new housing...I myself have done Casco Terrace, which is affordable housing at 41 State Street. That [is] in an historic district and went through the historic district review process. I felt as though the process actually made the building better. There are many, many examples of not only housing but affordable housing that has been built in districts: Elm Terrace, Oak Street Lofts, Carlton Street Apartments…"

Michelle Policheck, 167 Newbury Street, Portland resident and new owner of 24 St. Lawrence Street

"I am speaking in support of the historic district and from personal experience having just undergone review by the Portland Historic Preservation Board. My husband and I recently purchased a two-unit home on the hill. The goal of our project includes an extensive remodel of the back of the house, which is designed to be modern, bring in light, and maximize views. We presented our project… then we submitted additional information to answer the board's questions and the board approved our project at their next meeting. This process was not onerous."

Nini McNanamy, 10 Willis Street

"Munjoy Hill has had such a strong enduring identity over the last couple of hundred years. It has its own historic literature! Numerous local magazines have profiled the hill. What other neighborhood in Portland has bumper stickers - *This car climbed Munjoy Hill!* Or announces it milestones like this obituary last week for our wonderful neighbor Tommy Joyce, whose house is in the district, "*he grew up in the melting pot of Irish, Italian, and Jewish immigrants on Munjoy Hill*" There is no mention of Portland, Munjoy Hill alone does it.

Gemma Cannon, 204 Congress Street, Portland Resident

"I am someone that loves walking up there, you talk about a sense of place… I think for all of us in Portland there are places that make us say, oh this is why I love living here. And when you talk about bringing new people into Portland…they want to live here because of that sense of place that we have. This is rare, please don't give it away."

Beth Snyder, 81 North Street, Munjoy Hill resident

"I own the Moses Gould House built in 1854. I want to be a good steward of my house. I had many, many questions about the historic preservation district. I went to so many of the workshops at the East End School and I've attended your meetings. My questions were

answered…. I have a lot of renovations I need to do. I am convinced that if we are a historic preservation neighborhood, designated, the city will work with me, it will be affordable, that I can meet with Deb Andrews and others to help me replace in kind. I urge you to support this."

Angela Adams Hammill, 2 Atlantic Street, business owner and Munjoy Hill resident

"I think it's a really important time right now, with all the development that's been going on over the years to continue to develop Portland as we will, but to do it as thoughtfully as possible. I think it is time especially to protect Munjoy Hill, to keep that quality, integrity, and character that we have here in Portland."

Stacy Mitchell, 74 Atlantic, Munjoy Hill resident and landlord

"My husband and I have lived there since 2003. We have a four unit building, so…we rent the other three units. The number one reason to vote in favor of this district tonight is because of housing affordability. Preserving our existing affordable housing is the most important thing we need to do in addition to building new housing that is affordable. My building with our three other units, we currently have a cook that works at a local restaurant, a librarian, and a letter carrier for the postal service. If we were to sell our building, what would happen to it…even though it's in great condition, it would be torn down. In its place would be luxury condominiums. We know this because we see it happening all around us. So that's the threat. The underlying financial reality is that my building is worth more dead than alive. If we don't take a stand now… to preserve a mix in our neighborhood…I strongly encourage you to vote in favor of this."

Keri Lord, 58 Deering Street, Deering Street Historic District resident and landlord

"I live on Deering Street and have for over 40 years. I own my building. I have… two apartments. I've done a lot of restoration on my building. When I was still working I was a Special Ed teacher…And I have managed to do a lot of restoration work on my building… I have not found that costs were onerous. Historic preservation is not a problem, it's the reason we are Portland."

Pam Plumb, 104 Park Street, former Mayor of Portland

"I don't live on the hill, but I live in one of the city's first historic districts…As a person who has lived in a historic district I want to say, it's great. New modern buildings have been built…change has happened. We put a modern ell on the back of our 1833 Greek Revival townhouse, that was permitted."

Google Groups

Munjoy Hill Historic District

Sarah Auld <salauld@gmail.com> Aug 7, 2020 7:32 AM
Posted in group: **Planning Board**

Dear Chairman Mazer, Planning Board Members and City Officials,

We are residents and homeowners of Munjoy Hill. We support the proposed Munjoy Hill Historic District and six landmarks—

please approve the Preservation Board's recommendation with no changes or modifications.

We are grateful for your time and consideration.

Sincerely,

Sarah Auld and Tom Brokish

43 Munjoy Street

Portland, ME 04101

207 899 0284

sauld@maine.rr.com

Greater Portland Landmarks

Historic character enriches our lives

August 7, 2020

Chair Mazer and Members of the Planning Board:

In their November decision the Historic Preservation Board found that **the proposed Munjoy HIll Historic District meets the applicable designation criteria under Section 14-610 a and b as well as Section 14-611.** Specifically they cited Section 14-610 a.1., finding that the documentation presented to them demonstrated that the proposed Munjoy Hill Historic District has, *"value as a significant example of the cultural, historic, architectural, archeological or related aspect of the heritage of the City of Portland, State of Maine, New England region, or the United States".*

Designation of the proposed Munjoy Hill Historic District clearly supports the goals of Portland's Plan 2030, as stated in the February 7, 2020 Memorandum to the Planning Board from Christine Grimando, Director, Department of Planning and Urban Development, "*From the first pages of Portland's Plan 2030, and consistently throughout the document, historic preservation is acknowledged as central to the City's vision, including not only existing local designations but potential future designations. It is also acknowledged as integral to Portland's economic development strategy, its sustainability goals, and to a multidimensional housing strategy."*

As with the 11 other historic districts in Portland, buildings within the proposed district have been altered over time, but the board found enough buildings within the proposed boundaries had sufficient integrity of location, design, materials, condition and workmanship to be worthy of preservation. Greater Portland Landmarks supported this decision and found that in addition to the inclusive public input process, the detailed discussions and deliberations of the board over four workshops, two site walks and a public hearing were thorough and well-reasoned.

We support the historic district for myriad reasons:

- it will conserve mid-19th century residential buildings developed to house the families of workers associated with the Portland Company (1846) and the Atlantic & St. Lawrence Railroad (1845).

- it will be the first district in Portland that will protect homes of the city's early Black and immigrant residents, a powerful step that will ensure we can tell the complete story of the history of our waterfront community.
- it will ensure that the dwellings that serve as a backdrop to the historic Eastern Promenade and Fort Allen will be protected from demolition.
- it will ensure that new construction, as well as building alterations, within the proposed district will be undertaken in a manner that is complementary to the scale, massing, and character of the existing housing stock, while meeting the modern needs of its residents.
- Portland faces many challenges, including preparing for the impacts of climate change. Historic Preservation is recycling on a large scale. **Re-use matters.**

In the last five years nearly 400 units of new housing were created in Portland's landmark buildings and historic districts, including 324 units of affordable housing. **While only 8% of Portland's land area is protected under the historic district ordinance, those 324 affordable units represent nearly 30% of the affordable new units created or approved in the city during the same period.**

The historic district has been **overwhelmingly supported** in public comment throughout the designation process. More than 70% of the written and in-person public comment has been *in favor* of the proposed district. This designation is an important final step in a comprehensive planning initiative begun in late 2017. We urge you to now recommend the historic district to the City Council.

Thank you for considering our views.

Cordially,

Sarah Hansen, Executive Director
Greater Portland Landmarks

Google Groups

Munjoy Hill Historic District

S Hamill <SHamill@angelaadams.com> Aug 6, 2020 8:19 AM
Posted in group: **Planning Board**

Dear Planning Board Members,

I am writing to you today to support the Munjoy Hill Historic District as proposed on 11-20-19. I have lived in the proposed district since 1982 in a building built in 1850 and believe it's important to protect the history of the hill and our city for future generations.

Please vote FOR this Historic District and the six Landmarks.

Thank you,

Sherwood Hamill

2 Atlantic Street

Google Groups

Munjoy Hill Historic District

Stephen Gaal <steve@gaal.com> Aug 6, 2020 7:55 AM
Posted in group: **Planning Board**

Dear Planning Board,

I STRONGLY SUPPORT the creation of the proposed Historic District on Munjoy Hill and the 6 landmark designations **without modification**. Let's just get on with this initiative that has been delayed for far too long.

Respectfully

Stephen Gaal
Munjoy Hill,
Portland ME
steve@gaal.com
(603) 651-9183 mobile

The Russian dissident and chess grandmaster Garry Kasparov drew upon long familiarity with that process when he tweeted: "The point of modern propaganda isn't only to misinform or push an agenda. It is to exhaust your cric al thinking, to annihilate truth."

Google Groups

Munjoy Hill Historic District Analysis

Susan Bristol <spbarch@gmail.com> Aug 4, 2020 9:37 AM
Posted in group: **Planning Board**

Dear Planning Board of Portland Maine:

As a new resident of Portland (but life long visitor), I am writing to thank you for the notice of your upcoming meeting. WE ARE IN FAVOR OF THE MUNJOY HILL HISTORIC DISTRICT PROPOSAL.

Before we bought our new home here, I visited the City Hall (pre-Covid) and was very impressed with the staff and the help I was given when I investigated the zoning surrounding our building. I am an Architect and Planner who has been Chair of a municipal planning board that was charged with implementing an Historic Preservation Ordinance, therefore have professional and personal experience with these matters.

Managing change in architecturally diverse, vibrant cities makes sense and is a fulfillment of your duties as Planning Board members. Preservation is good for the community and provides visible evidence of the heritage of the city. Preservation makes economic sense and enriches our sense of place. A healthy city is able to enjoy its past while imagining its future.

Thank you for accepting our comments.
Susan Pikaart Bristol
Henry Platt Bristol
31 Fore Street, Portland, Maine

--
SPB Architecture LLC
SPBArchitecture.com

Susan Pikaart Bristol Architect
R.A., LEED AP, NJ P.P.
P.O. Box 814
Rocky Hill, NJ 08553
609.924.7989

Google Groups

Munjoy Hill Historic Preservation District

welmaurya@gmail.com <welmaurya@gmail.com> Aug 7, 2020 1:16 PM
Posted in group: **Planning Board**

Dear Planning Board Members,

I urge you to vote to recommend to the City Council to reject the proposed Historic District on Munjoy Hill.

This simply is not the time to make such a permanent decision. Portland is struggling with the lack of housing and the low production of housing, and the Country is struggling with the effects of decades of racial and economic injustice, voting to support the Munjoy Hill Historic District would only reinforce and strengthen these barriers to economic and social prosperity of disenfranchised citizens and continue the ever widening economic inequality gap. Munjoy Hill is not the right area to designate as a Historic District. Historic Districts work best in mixed-use districts. This is where HDs can really have the greatest impact. We have seen this in Portland's Old Port. Portland needs to keep areas of the City open to change, to innovation and creativity and Munjoy Hill is one of those neighborhoods. It historically has attracted the disenfranchised, the artistic, imaginative set and spawned many creative people and ideas. Allowing Munjoy Hill to continue to evolve and continue to attract new, different and diverse groups of people is actually paying homage to Munjoy Hill's heritage. It is showing respect to its historic role in the City of Portland. Let this continue.

Now that we are through a building moratorium, zoning changes and full analysis of the buildings on Munjoy Hill is over, it is also time to repeal the Conservation District Overlay. The CD Overlay was put into place while the evaluation of the Historic District was ongoing. That process is

now complete. If you look at the new rules implemented in the CD Overlay it is clear that it is simply a Historic District with a different name and is significantly more restrictive for new construction. In either possible outcome the CD Overlay District should be removed from Munjoy Hill:

1. If the City Council votes to accept the HD then those areas of the Hill identified as being worthy of historic protection are properly designated for protection. This makes the CD Overlay redundant and unnecessary for the parts of Munjoy Hill that were not identified as worthy of historic designation.
2. If the Munjoy Hill HD is rejected, and since the CD Overlay is modeled and creates similar restrictions/conditions as a historic district, it follows logically that the CD Overlay should also be lifted. The HD will have been rejected on the grounds that it is deemed to be more destructive than constructive and is counter to the needs and goals of the City. This means the CD Overlay is also counter to these goals.

The CD Overlay has stopped all new development on Munjoy Hill. It is the most restrictive zoning in the entire City and effectively places more rigid rules on new construction than a Historic District. It heavily penalizes the production of more housing which is counter to the Comprehensive Plan and to the urgent needs of this City. It has paused construction for 3 years and now it is time to for the Conservation District Overlay to be repealed and for Munjoy Hill to revert back to R6 Zoning.

Now is also the time to address the many issues with the current land use regulations (Zoning). What people value in the physical built environment cannot be replicated with the City's current zoning. Current zoning regulations are stifling the production of housing, jobs, the protection of the environment and the development of a rich cultural/social experience in Portland. Now is the time for a comprehensive rethinking and re-imagining of our land use policy. The current ReZone process needs to think big and act bold. Portland is

already 20 years late on this issue it cannot let this opportunity pass it by and accept the status quo for another 20, 30 or 40 years.

Planning should consider its organizational structure. The definition of Strategy is ***The Effective Allocation of Scarce Resources***. How much resources does the City commit to looking backwards in time? The City staff and Council has spent a significant amount of time on the Munjoy Hill Historic District. How much time is spent imagining and creating a vision for the future? Why isn't there a position within the Planning Department focused solely on the future? It would be a much better allocation of resources. It will be a valuable investment for the citizens of this City to make that will reap rewards. People, time, money and land are the scarce resources the City can effect. Land is a precious resource and how it is used should be well thought through.

While I care greatly about historic preservation and feel that Historic Districts can be a very useful tool, when misused they can be very harmful. The areas in Portland of obvious historic and architectural significance have already been protected. These areas were the low-hanging fruit that all could see were worthy of protection. Munjoy Hill was never regarded in this way and that is because most of the housing stock does not rise to the level intended for historic preservation. With a few exceptions the housing and architecture is simply commonplace in Portland and other areas of Maine and New England.

Thank you for your time.

Best regards,

Tim Wells

Montreal Street

Google Groups

Munjoy Hill Historic District

Travis Agaman <index207@gmail.com> Aug 7, 2020 3:20 PM
Posted in group: **Planning and Urban Development**

To the City of Portland Planning Board,

I am writing today to strongly urge you all to reject the proposal for another Historic District in Portland, over the Munjoy Hill area. Right now is not the time (or ever, to be honest) for the Portland City government to be so overly concerned with protecting the property values of a few affluent members of one neighborhood. It is distressing to see that this issue has advanced to this point as it is another clear move by the city against low-income and less-than-affluent citizens.

Arguments that a Historic District will preserve a community is both wrong and sad. It will break apart existing communities and destroy a sense of neighborhood...at least it will for anyone that is not so wealthy that they can comply with this type of regulation. Although I did not catch her name at the time, one of the speakers in the early Munjoy Hill historic district proposal meetings put it best “I used to live in the West End until the historic district was put in place. So I moved to the East End to escape it. And now you’re doing this again.”

Those that support the historic district on Munjoy Hill could have gone the route of a city-wide referendum to be voted upon by everyone. They have chosen the current method specifically because it circumvents the will of many Portland residents. Please stop this proposal NOW, and tell the wealthy elite in Portland they do not get to trod on the rights of those who aren’t rich *enough to live near them.*

Travis Agaman

8 Emerson Street

Portland

Google Groups

Munjoy Historic District

Vana Carmona <vanacarmona@gmail.com> Aug 7, 2020 9:13 AM
Posted in group: **Planning and Urban Development**

Re. The meeting on August 11th for the Munjoy Hill Historic District

I am happy that this issue is finally proceeding. I feel that the Covid pandemic has delayed this far too long and that this postponement is playing into the hands of the developers.

Please rest assured, that **everyone on the Hill who was supporting the new District back in March has not changed their minds.** We still very much want this to pass.

It is critical that it does pass as soon as possible.

We, the residents of the Hill, are being threatened by a rash of demolitions and new developments. They may have slowed temporarily but they are all waiting in the wings to start up again.

Munjoy Hill does not need their million dollar condos. We need the neighborhood we have had, that can accommodate people from all spectrums.

And we certainly do not need that huge increase in property taxes that is coming because of these developments that are putting dollars into a few people's pockets while driving out of their long time homes those who can no longer afford to live here.

So much of Portland is under historic districts and that has been so beneficial to the City and its residents to keep our unique character. This is the very character that brings in the tourists and their much needed dollars. It maintains why we stay here, came here in the first place, or (as in my case) returned after living elsewhere.

There is no reason to not include Munjoy Hill as a historic district. Our history here has been just as important as that of the other districts. In fact, our history is unique to this City and should be recognized. We need to be included.

Our neighborhood should not be left as the last fertile ground for unbridled development on the peninsula.

And lastly, we do need that 100 foot rule. Nothing proves that more than the proposed developments at 128R and 126 North St. and that on Montreal St/Willis.

Please vote for the Munjoy Hill Historic District.

Thank you.

Vana Carmona
105 North St. Apt 1
Portland, ME 04101
207 420 6962

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Munjoy Hill Proposed Historic District

w.valzania@munjoyhill.org <w.valzania@munjoyhill.org> Aug 4, 2020 3:31 PM
Posted in group: **Planning Board**

Chair Mazer and Planning Board Members:

I have the pleasure of serving as the President of the Munjoy Hill Neighborhood Organization (MHNO). Throughout the long process of refining the proposal for designation of a historic district on Munjoy Hill, the MHNO has supported the concept as one of several important tools to productively manage real estate redevelopment on Munjoy Hill.

The MHNO continues to be strongly in support of a historic district designation for a portion of Munjoy Hill as recommended by the Historic Preservation Board. The MHNO also supports the designation of several individual landmarks as recommended by the Historic Preservation Board.

Munjoy Hill represents a remarkably intact example of working-class residential architecture of the 19th and early 20th century. The plethora of vernacular frame houses on small lots in Hill streets has survived past economic trends and contributes greatly to the ambience, sense of place and quality of life. We believe designation of at least the recommended portion of Munjoy Hill as a local Historic District is an important way to protect the rich architectural heritage of Munjoy Hill, while thoughtfully managing change. We also believe it will help stabilize our neighborhood's character, and protect existing affordable housing. Historic preservation protections are an important tool for managing compatible change while also protecting the important character-defining features of Munjoy Hill's built environment.

The MHNO urges you to support the recommendation from the Historic Preservation Board.

Regards,

Wayne Valzania, President

Munjoy Hill Neighborhood Organization

Celebrating 40 Years of Community Service

92 Congress Street

Portland, ME 04101

207-274-4918

Join Us !! www.MunjoyHill.org

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Munjoy Hill Historic District

Wayne@redhookdesignalliance.com <Wayne@redhookdesignalliance.com> Aug 4, 2020 9:21 AM
Posted in group: **Planning Board**

Good Morning Members of the Planning Board, City Manager Jennings, Mayor Snyder, and Councilor Ray,

I am writing to reaffirm my support for the designation of “Historic District” for the area of Munjoy Hill as proposed. Further, and as a point for future reference, I support the expansion of that Historic District to be all inclusive of the Munjoy Hill area.

As I have stated in the past, in letter, in workshops, and at numerous city meetings, I feel that Munjoy Hill is as historically significant, important, and worthy of preservation, as any of the other eleven designated Portland Historic Districts. It is part of a whole Portland, having a rich history and architectural heritage, and is of social significance. It remains as a somewhat affordable place to live, to work, and to contribute to our city. There is value in that, worthy of protection.

Despite what has been argued as anti-progressive, there is no proven downside to a “Historic District” designation. It will only serve to protect what we have and love as “Munjoy Hill”.

Thank you for your consideration,

Wayne Valzania

27 Merrill Street

Portland, ME 04101

207-274-4918

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Munjoy Hill Historic Overlay District

Wendy Cherubini <wcherubini@gmail.com> Aug 7, 2020 3:36 PM
Posted in group: **Planning Board**

Chair Mazer and Members of the Portland Planning Board,

I write urging you not to recommend passage of the Munjoy Hill Historic District.

The proposal covers a ridiculous amount of time (80 years!) and building types that are common around the city and not of great historical significance.
Proponents have been clear; they are opposed to any and all change and development on the hill. But change, development and higher density are necessary if we are to address the housing crisis and reduce, not exacerbate, economic disparities in Portland.

Change is what cities do or they stagnate and die. Thoughtful change, not exclusive districts, will make Portland better and livable for all its residents, not a select few. Creating opportunities for new housing and affordable housing development on already developed land supports transit, fights sprawl and is sustainable.

This proposal will do nothing to increase the supply of housing, mitigate gentrification or address affordability. It will increase rehabilitation costs and restrict development.
A more reasoned approach might take a more narrow look at individual buildings constructed over a shorter period of time and identify those few worthy of preservation.

However, now is clearly not the time to preserve in amber another huge swath of the peninsula.

Thank you for your consideration.

Wendy Cherubini
33 May Street
Portland

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Munjoy Hill Historic District

William Hall <bh6671@icloud.com> Aug 7, 2020 11:42 AM
Posted in group: **Planning Board**

I urge you to approve the Munjoy Hill Historic District.
- The issue has been thoroughly vetted over a long, very open process of consideration that has involved your board deliberation, neighborhood meetings, and public - including business - input through multiple channels.
- I believe that the majority of the residents of Munjoy Hill support the designation.
- An historic district will benefit the city as a whole, and Portland's record with other historic districts has been a positive one. Historic districts have helped make Portland a more interesting, vibrant, and prosperous community.
- Portland's unique and attractive character owes a lot to careful, well-reasoned preservation of our historic structures and neighborhoods. It's a successful strategy that's in our interest to continue.

Thanks for your hard work on this important issue,
Bill Hall
317 Pleasant Avenue
Peaks Island

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Please do not recommend the Munjoy Hill Historic Overlay

Zack Barowitz <zbarowitz@gmail.com> Aug 7, 2020 10:22 AM
Posted in group: **Planning Board**

Chair Mazer and Members of the Planning Board:

I am writing to ask that you not recommend passage of the Munjoy Hill Historic Overlay District.

Many proponents of the Munjoy Hill Historic Overlay District have stated on multiple occasions and in a variety of ways that the basis of the district is as a form of social preservation, a defense against keeping "new" and other named and unnamed groups of people out (including “rich people”). This is a form of exclusionary zoning which, whether conscious, unconscious, or unwitting, has the effect of (further) racial and economic segregation. Whether exclusion is the feeling of all supporters of the district is of course uncertain. But regardless, the case for preservation on the basis of aesthetic/historical significance is weak as the proposed zone spans an inordinate period of time and contains styles in great abundance, and little significance, throughout the City of Portland.

As with many things housing related; economics is a major factor, with two likely outcomes:

1. If the historic district passes, we will continue to see *gentrification though scarcity* and prices will continue to rise (as will the cost of work done to the exteriors of homes in order to meet historic guidelines) and little supply will be added.
2. If the measure does not pass, prices will continue to rise as the value of the land will increase due to the viability of multi-unit housing. However, the supply of housing will increase as well which would (eventually) stabilize prices. Moreover, more units mean additional tax revenue for the city which lessens the burden on owners and renters alike.

As much as people disparage "luxury condominiums," condo units are a cheaper form of home ownership than single family housing. Moreover, the historic district would make rental housing (including affordable rental housing) less viable if not illegal; although the current Conservation District Overlay has had much the same effect.

The historic bell jar seems less about preservation and more about stopping change; but as all planners know, change is inevitable, the question is who controls it.

Thank you,
Zack Barowitz
Huntress Street

--
207-838-6120
917-696-5649
ZacharyBarowitz.com

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Munjoy Hill Historic District

zane peterson <zane.arah.peterson@gmail.com> Aug 6, 2020 10:16 AM

Posted in group: **Planning and Urban Development**

Dear council,

I would like to strongly suggest that you don't change Munjoy Hill to a historic district. I have lived in Munjoy Hill for ten years at this point, and in that time I have seen Portland change a lot. As most of you are aware COVID-19 has effected this city in more ways than one, and a huge issues from that is housing. We are at a time were a large percentage of people (including everyone on this board) are either working from home or not working at all, which inturn means that income has also decreased.
With a new historic district in place on Munjoy Hill it is inevitable that expenses and cost of living will increase. If you want the Historic Preservation Board to look at your plans, there is a one hundred twenty-five dollar fee. Approved or not, which is a fee that has never had to be paid.
If there is a landlord who has to pay a free to get their plans looked at, to then have to use more expensive materials to fit within the historic parameters, the only logical next step would be to charge more for rent to cover your cost. That is going to push out anyone who is a low to middle income level, leaving what feels to be another gentrified neighborhood.
As someone who is considered slightly above low income, this is not reassuring. The renting market for people like myself is unreal. And I'm not talking avesta housing. People like to justify this district by saying there is avesta housing still. That is great, it should be, but it's the people right above that who are the workers of your local restaurants who are effected. Where are they supposed to live? The average rent for a two bedroom on the hill is around 2000-2500 dollars a month. If I am making an average of 15 dollars (on the high side) working a 40 hour week, that gives me 2400 dollars before taxes. That means over half of all the money I make has to go rent, that's not including heat, wifi, or electric. Not to mention groceries or trying to enjoy yourself. And now with our COVID rent freeze soon to be over landlords are free to kick people to the streets.
Over the past month we have truly seen how homeless is running rapid in this city and how they need our help. There are much bigger issues tat we need to be addressing and this is not one of them. We need to be providing housing for people in need, not telling people what color they can and can't paint their house. Please do the right thing and not pass this so we can get back to providing housing for everyone in our community.

Thank you,
Zane