CITY OF PORTLAND, MAINE
PLANNING BOARD



Maggie Stanley, Chair
Brandon Mazer, Vice Chair
Justin Barker
Marpheen Chann
Sean Murphy
David Silk
Austin Smith

AGENDA
PORTLAND PLANNING BOARD MEETING

The Planning Board will hold a remote meeting on Tuesday, August 9, 4:30 p.m. This meeting will take place remotely using Zoom pursuant to the Remote Meeting Policy adopted by the Planning Board and as authorized under 1 M.R.S. 403-B because of the existence of an emergency or urgent issue that requires the committee to meet by remote methods. Allow your computer to install the free Zoom app to get the best meeting experience.

If you are not able to attend live, a recording will be available following the meeting. 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 unmuted by the host when it is time for public comment.

For more information on submitting written public comments and participating in the remote meeting, please refer to the document, A Guide to Public Comment, Remote Mtg. and Public Participation, which can be found at https://www.portlandmaine.gov/485/Development-Review. Public comments will be taken for each item on the agenda during the estimated allotted time.

Written Public Comment
Written comments received by email by 12:00 p.m. **the day before** the scheduled meeting date will be included in the agenda backup materials ("agenda packet").

Written comments received **by the aforementioned deadline** will be published in the agenda packet no later than 12:00 p.m. the day of the meeting. Written comments must be submitted to planningboard@portlandmaine.gov. If you have any questions or feedback regarding this process, please email citymanager@portlandmaine.gov

Please note that the placement of each item on the agenda is subject to change. Please check the Agenda & Minutes Center prior to the meeting for the item start time.

ZOOM MEETING INSTRUCTIONS
You are invited to a Zoom webinar.
When: Aug 9, 2022 04:30 PM Eastern Time (US and Canada)
Topic: Planning Board Workshop and Public Hearing 8-9-2022

Please click the link below to join the webinar:
https://portlandmaine-gov.zoom.us/j/85675239916
Or One tap mobile :
US: +13017158592,,85675239916# or +13126266799,,85675239916#
Or Telephone:
Dial(for higher quality, dial a number based on your current location):
US: +1 301 715 8592 or +1 312 626 6799 or +1 646 931 3860 or +1 929 205 6099 or +1 386 347 5053 or +1 564 217 2000 or +1 669 444 9171 or +1 669 900 6833 or +1 253 215 8782 or +1 346 248 7799
Webinar ID: 856 7523 9916
International numbers available: https://portlandmaine-gov.zoom.us/u/kez4rYyXTd

WORKSHOP - 4:30 PM

i. Zoning Map and Text Amendment; 1 Bean Pot Circle; IDEALS (The Initiative for Digital Engineering and Life Sciences), Applicant. (estimated time – 4:30 – 6:30 p.m.) The Planning Board

will hold a remote workshop to consider a zoning map and text amendment application to facilitate the creation of an Institutional Development Plan (IDP) and Institutional Overlay Zone (IOZ) for their Portland campus, to be located at 1 Bean Pot Circle. The IOZ, if approved, will include the 13-acre property located at 1 Bean Port Circle (parcels 447-A001 and A002), currently zoned I-M Moderate Impact Industrial. A related text amendment to modify Land Use Code Section 8.5.2 to add the applicant's parcels to the list of eligible IOZ areas has also been provided.

ii. Major Site Plan; 165 Lambert Street; Maine Cooperative Development Partners, Applicant. (estimated time 6:30 – 7:30 p.m.) The Planning Board will hold a remote workshop to consider the development of a Planned Residential Unit Development (PRUD) with 165 affordable units totaling 143,935 square feet of floor area, along with associated site improvements, located at 165 Lambert Street and 622 Auburn Street. The subject properties total 17.95 acres in size and are zoned R-3 Residential.

PUBLIC HEARING - 7:30 PM

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATION AND REPORTS

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON JULY 26, 2022

Afternoon Workshop
780 Stevens Avenue: Barker, Chann, Murphy, and Stanley present; Silk and Smith absent; Mazer recused.

Evening Hearing
505 Fore Street: Barker, Chann, Murphy, and Stanley present; Mazer, Silk and Smith absent.

4. REPORTS OF DECISIONS AT THE MEETING HELD ON JULY 26, 2022

i. Conditional Use; 505 Fore Street; Bread and Friends, Applicant. Chann moved and Barker seconded a motion to find the Conditional Use consistent with the standards of Land Use Code Section 6.5.2. Vote 4-0, Mazer, Silk, and Smith absent.

5. NEW BUSINESS

i. Master Development Plan and Traffic Movement Permit; 385 Congress Street; 385 Congress Street LLC., Applicant. (estimated time 7:30 p.m.) The Planning Board will hold a remote public hearing to consider a Master Development Plan application for a 365,575 square foot mixed use development to include a 156-room hotel, 297 dwelling units, structured parking, ground-floor retail space, and associated site improvements at 385 Congress Street. The subject property is 2.26 acres in size and is zoned B-3 Downtown Business.

To: Chair Stanley and Members of the Portland Planning Board
From: Zach Powell, Senior Planner
Date: August 5, 2022
Re: Institutional Overlay Zone, Map and Text Amendment: Roux Institute/IDEALS
Applicant: IDEALS/Roux Institute
Project ID: ZN-001934-2022
Meeting Date: August 9, 2022

I. INTRODUCTION


Figure 1: Artist rendering of Campus. View from I-295 NB

The Initiative for Digital Engineering and Life Sciences (IDEALS) has submitted a zoning map and text amendment application on behalf of The Roux Institute at Northeastern University to amend the existing Institutional Overlay Zone (IOZ) regulations to permit The Roux Institute at Northeastern University to pursue an IOZ as an identified major City institution, change the underlying zoning of the site from I-M to B-5, and adopt a new IOZ for this property. The requested actions would facilitate the future development of a mixed-use campus for The Roux Institute, including academic buildings, office, lab, and incubator space, retail, hotel, and housing as well as publicly accessible open space.

The process for designation of an IOZ requires the institution to prepare an Institutional Development Plan (IDP), which is a proactive planning document for identifying and addressing anticipated change and growth by an institution. The IOZ also requires that a Regulatory Framework be submitted, to be included in the Land Use Code, which identifies the land area to be included on the zoning map as the Institutional Overlay Zone along with associated use, dimensional and design requirements. The Planning Board reviews and recommends to City Council the Regulatory Framework and the IOZ boundaries.

Review of the IOZ is anticipated to require multiple Planning Board Workshops, where the first workshop (June 14, 2022) served as an opportunity to provide a comprehensive overview of the project and phasing. This second workshop will focus on the eligibility of the Applicant to submit an IOZ application, along with the site and building design modifications made to address comments from the Planning Board and City Staff. Future workshop topics will include:

- Transportation
- Community engagement
- Infrastructure

For a comprehensive overview of the project, please refer to the memo prepared for the first workshop at the following link: https://portlandme.civicclerk.com/Web/GenFile.aspx?ar=2161

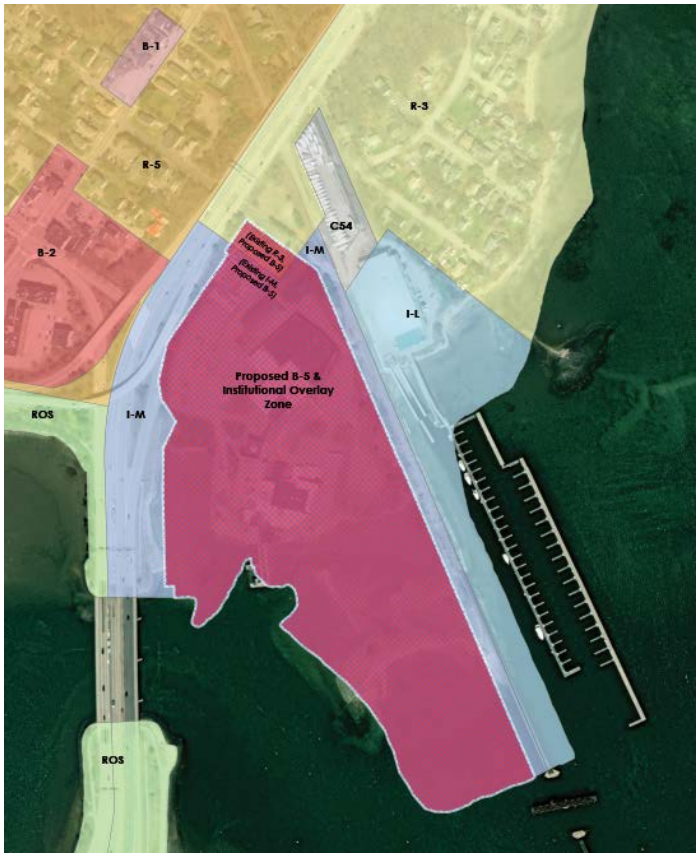


Figure 2: Proposed Map Amendment to B-5. While the B-5 is proposed as the base zoning, the Regulatory Framework permits deviations to B-5 standards.

The subsequent memorandum is primarily focused on the major design elements of the proposal that should be addressed prior to individual site plan submissions. These include: the heights of the proposed buildings, transitions between different functions of the site and the property boundaries, relationship between pedestrian & bicycle connections with the building design, and the implementation of the proposed design through the IDP and Regulatory Framework.

The Planning and Urban Development Department mailed 153 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the August 2, 2022 edition of the *Portland Press Herald*.

II. WHAT IS AN INSTITUTIONAL OVERLAY ZONE?

The Institutional Overlay Zone (IOZ), established in 2017, is a regulatory tool currently available to four of the City's major institutions, which recognizes that the operational and developmental needs of such institutions are often incongruous with the City's base zoning districts, and which provides an opportunity to create a unique overlay district tailored to the needs of each institution. Section 8.5.2 of the Land Use Code currently designates Maine Medical Center (MMC), Northern Light Mercy Hospital, the University of Southern Maine, and the University of New England as the four eligible institutions. Maine Medical Center piloted the first IOZ in 2017, immediately following the adoption of the IOZ regulatory tool. The Maine Medical Center IOZ was adopted by the Portland City Council, and the associated Regulatory Framework can be found under Section 8.5.6 of the City's Land Use Code.

Section 8.5 of the Land Use Code requires the following items as part of an IOZ submission:

- ***Institutional Development Plan (IDP):*** The IDP is a longer-term development or master plan, to be developed by the eligible institutions, which are intended to guide each institution's development over the life of the plan. The IDP is envisioned as the basic building block of the Institutional Overlay Zone. The IDP is intended as a stand-alone document. This would be approved by the Planning Board, subject to a finding that the IDP meets the content and review standards, listed under Sections 8.5.4.(C & D).
- ***Regulatory Framework:*** The Regulatory Framework is essentially the 'zoning' for each institution, and is meant to evolve from the IDP. The Regulatory Framework would establish the parameters to allow each institution to grow as envisioned in the IDP, yet also to formalize requirements, guidelines, and performance measures that address the major ramifications of institutional growth and change. The Regulatory Framework would be adopted into the Land Use Code by the City Council.

- *IOZ - Zoning Map:* The boundaries of each institution's IOZ would be defined as a geographic element represented as an amendment to the city's zoning map. This would be adopted by the City Council.

The application before the Planning Board is contingent upon a text amendment being requested by the applicant, which would add The Roux Institute at Northeastern University to the list of institutions eligible to pursue an IOZ.

The Initiative for Digital Engineering and Life Sciences (IDEALS) is a Maine non-profit corporation, formed in 2018 with the intent of developing a graduate level institute targeting known talent gaps for digital and life-sciences companies in the greater Portland area. Northeastern University was recruited by IDEALS to develop and run this institute, which was announced in 2020 as the Roux Institute at Northeastern University in Portland, Maine. The Institute offers post-graduate degrees and certifications in the key areas of artificial intelligence, computer and data sciences, digital engineering, advanced life sciences, and medicine. Today, the Roux Institute operates out of temporary leased space on Portland's peninsula.

IDEALS is responsible for locating and developing a campus for the Roux Institute at Northeastern University, a campus that would allow for the continued growth of educational and research programs at the Roux Institute at Northeastern University, while providing space for collaborative partnerships, with services and amenities that both support those programs and serve the local community. After a four-year search, IDEALS entered into a purchase and sale agreement for land formerly occupied by the B&M Baked Beans facility along the Portland waterfront.

III. ELIGIBILITY AS A MAJOR INSTITUTION

The City of Portland currently limits the Institutional Overlay Zone (IOZ) as a regulatory tool to four of the city's major medical and higher education institutions; those being Maine Medical Center, Northern Light Mercy Hospital, the University of Southern Maine, and the University of New England. In order to pursue an IOZ, IDEALS and the Roux Institute have submitted a text amendment application in conjunction with their Zoning Map Amendments application, to amend Article 8.5 of the Land Use Code. The amendment reads as follows:

8.5.1 Purpose

"The Institutional Overlay Zone (IOZ) designation provides a regulatory mechanism available to the city's ~~four~~ five major medical and higher education campuses…"

And;

8.5.2 Location and Applicability

The city's ~~four~~ five ~~primary~~ major medical and higher education institutions are eligible to apply for designation as Institutional Overlay Zones. The eligible institutions are the two major hospital institutions of Maine Medical Center and Mercy Hospital and the ~~two~~ three major academic institutions of University of Southern Maine, ~~and~~ University of New England, and The Roux Institute at Northeastern University, their successors and assigns. Designation as an IOZ is the preferred mechanism where the eligible institution's proposed development is inconsistent with the existing zoning.

The proposal to have The Roux Institute at Northeastern University added to the list of institutions eligible to pursue an IOZ is a different model for inclusion of a major institution in that the other four institutions are already established in their respective campuses, and may apply for an IOZ/IDP to support their future physical and programmatic expansion, whereas Roux is still in the early stages of its evolution, and involves a partnership between IDEALS, the non-profit tasked with developing the Roux Campus, with the Roux Institute as primary occupant and

institutional anchor of the site. The proposed campus, as stated in the IDP, is intended to be a space for collaboration and innovation, mutually benefitted by the presence of a major academic institution and its partners, to facilitate a mixed-use space for higher education, research, and ancillary uses in support of The Roux Institute mission. The proposed buildout and purpose of the site make Roux match the type of phased institutional development the IOZ was intended to support.

At the June 14, 2022 Planning Board Workshop, Board members posed questions to the Applicant on the role and function of IDEALS and whether IDEALS qualifies as an eligible major institution for the purposes of submitting an IOZ application. Based on this feedback, the Applicant submitted a restated articles of incorporation for IDEALS and a memorandum of understanding (MOU) between IDEALS and The Roux Institute at Northeastern University, and has removed IDEALS from the list of eligible institutions in the proposed zoning text amendment shown above.

In the restated articles of incorporation, the intent of IDEALS to operate and support The Roux Institute at Northeastern University is:

1. To develop a campus in Greater Portland for a graduate institute (called the "Roux Institute at Northeastern University") instructing students, conducting research, and supporting innovation and entrepreneurialism in the fields of artificial intelligence, digital science, genomics and life sciences;

2. To develop content and pedagogy for a graduate institute in Greater Portland instructing students in the fields of artificial intelligence, digital science, genomics and life sciences;

3. To facilitate the creation of a graduate institute in Greater Portland and recruit and collaborate with Northeastern University to instruct students, conduct research, and support innovation and entrepreneurialism in the fields of artificial intelligence, digital science, genomics and life sciences;

4. To conduct any other activities as are permissible for a corporation organized under the Main Nonprofit Corporation Act and exempt from federal income taxation pursuant to section 501(c)(3) of the Code and for corporations contributions to which are deductible under section 170(c)(2) of the Code that may be necessary, useful, or desirable for the furtherance or accomplishment of the foregoing purposes.

The submitted MOU lays out that the IDEALS is responsible for the development of the campus and will lease land to The Roux Institute at Northeastern University. The submitted documents have established a connection between IDEALS and The Roux Institute, and sufficiently meets the eligibility requirements for submitting an IOZ application.

While the MOU meets this requirement, future site plan applications will need to ensure that right, title, and interest is met to be eligible for the IOZ over the base B-5 zoning. It is anticipated that IDEALS will have a ground lease with The Roux Institute at Northeastern University at the point of the initial major site plan applications. Site plan applications involving ancillary uses and structures to The Roux Institute are anticipated to establish right, title, and interest by having The Roux Institute at Northeastern University sublease portions of the site to the prospective tenants. This approach will help reinforce the ancillary nature of these uses. Should an Applicant submit a site plan application on the property that does not demonstrate right, title, and interest with The Roux Institute at Northeastern University, the application will be bound to the base zoning requirements. If adopted, the IOZ would supersede the underlying zoning for all properties within the IOZ to which The Roux Institute at Northeastern University holds right, title, or interest. For properties not subject to The Roux Institute at Northeastern University's right, title, or interest, the underlying zoning would could continue to control.

IV. JUNE 14 WORKSHOP, PRELIMINARY DESIGN REVIEW & APPLICANT RESPONSE

At the June 14, 2022 workshop, the Board indicated support of the work of the Roux Institute, with the majority of questions relating to the submission requirements for the application. Future discussion topics relating to the design of the site included:

- The decision-making process for determining appropriate building massing and heights based on the configuration and constraints of the site.
- Strengthening the connection between the IDP and Regulatory Framework
- The design in relationship to pedestrian networks and public access points.

Prior to the Workshop, the Applicant submitted an updated application package that was shaped based on initial feedback from the Roux Roundtable events hosted by the Applicant and comments from City Staff. As presented at the June 14, 2022, the overall size of the project was reduced, the height map reduced the maximum permitted heights along I-295 and shifted the bulk of buildings towards the center of the site.

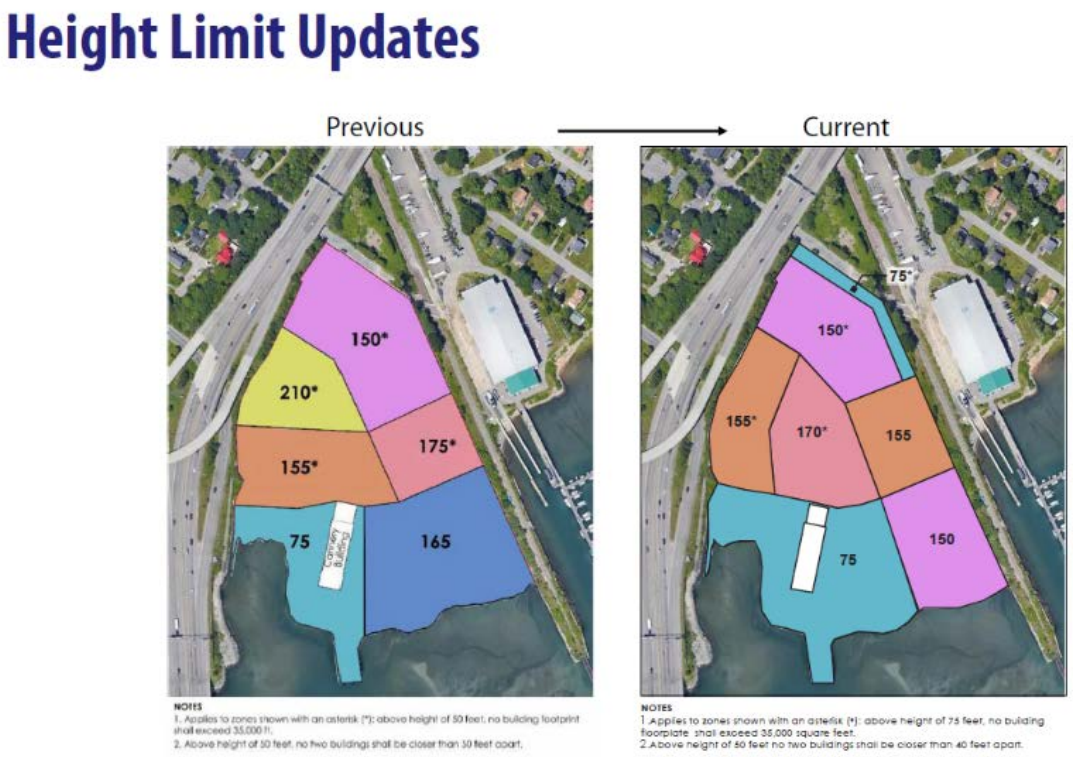


Figure 3: Applicant Slide from June 14, 2022 Workshop showing changes from April Height Map to June 6th Height Map. An updated Height Map is included in Section V of this memorandum.

The proposed IDP and Regulatory Framework was reviewed according to the IOZ criteria and the B-5 design standards. In future Site Plan application, individual building project will be subject to the B-5 and multi-family design standards. A portion of the project area is in the landmark designation (Attachment 1) process with the City Council after receiving a favorable recommendation from the Historic Preservation Board. The designation boundaries shown in Figure 4, will primarily include the Cannery Building and the area immediately surrounding the building to promote the prominence of the structure in the overall design of the site. The designation will not include the traditional 100-foot advisory review for portions of the site within 100 feet of the designation boundary.

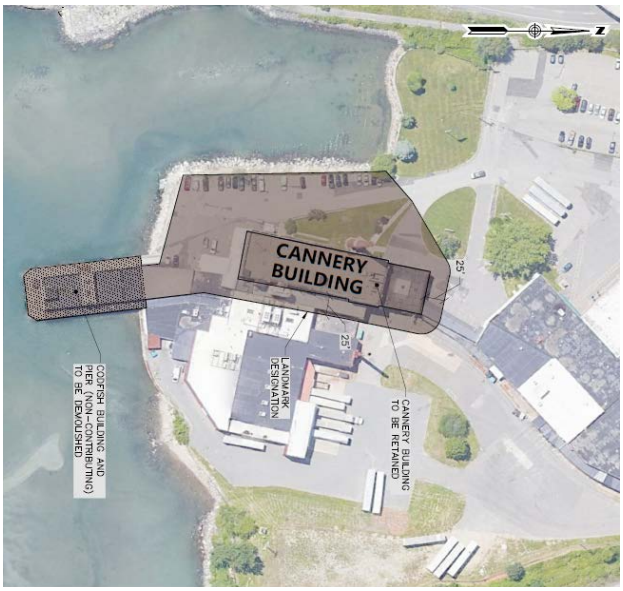


Figure 4: Designation boundaries for the Cannery Building and area immediately surrounding the Building.

A design review was conducted by Sean King, Urban Designer and Zach Powell on June 29, 2022 (Attachment 2).

Major themes from that initial design review included:

- Updating the IDP and Regulatory Framework to more completely satisfy the IOZ review requirements
- Recommendations for design principles that ensure strong connections between buildings and the public realm when B-5 design standards establish relationships between buildings and streets and the campus proposes streets only on the perimeter of the site.
- Establishing a context for the site based on current site features, constraints, proximate industrial waterfront sites, and the East Deering Neighborhood, and design guidelines for transition between areas on- and off-site.
- Demonstrating where and how open space will provided throughout all phases of site development
- Strengthening connections between the design principles in the IDP and the design guidelines in the Regulatory Framework

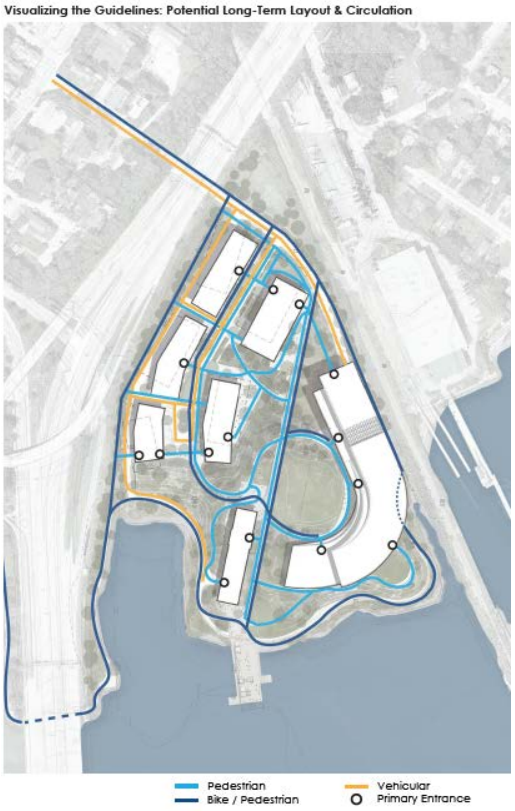


Figure 5: Potential Long-Term Development Plan & Circulation Networks

In response to the preliminary design comments, the Applicant submitted an updated IDP and Regulatory Framework. The following list summarizes the changes made from the June 6th and July 28th application submissions:

IDP

- Addition of a slide discussing how different areas on-site and near the site will be designed to ensure smooth transitions

REGULATORY FRAMEWORK

- Removal of references to IDEALS
- In the Phasing and Monitoring Section, additional standard discussing how interim conditions will be handled for open space and pedestrians connections, and that open space will be provided at the completion of the first project phase
- Addition of overview sections for the Use and Design sections
- Addition of a circulation subsection under Transportation
- Lists the sustainability standards that will inform the charter that will be used for the site
- Expansion of the Design section that now includes an expanded list of design principles that were previously just included in the IDP
- Inclusion of a statement that the shoreline will be protected through grey and green technologies that prevent erosion and enhance natural resource protection.

V. REVIEW OF INSTITUTIONAL DEVELOPMENT PLAN

The table below provides a summary view of IDEALS' IDP content review, with the 'Requirements' column, simplified and consolidated to include one or more sub-requirements of the IOZ ordinance. For a complete list of IOZ content requirements, please see Section 8.5.4.C in the Land Use Code.

Table 1: Required Content of the IDP (8.3.4.C)

Requirements	Provided	Notes
Mission Statement	Yes	IDP clearly identifies the mission statement and vision of the University, and how future development furthers these aims.
Baseline Institutional Data	Yes	All required baseline data is provided in detail.
Institutional Characteristics	Yes	All required baseline data is provided in detail.
Summary of Public Involvement	Partial	Staff requests that meeting minutes be provided for all required neighborhood meetings and additional 'Roux Roundtable' meetings to be included in the public record.
Identify Institutional Needs	Yes	The rationale provided for the program of uses being proposed is consistent with IDEALS' and the Roux Institute's stated values and mission, with key metrics provided for the various phases of development. The Applicant has included requirements for open space to be provided at the completion of the first phase and standards to ensure a comfortable pedestrian experience during subsequent construction phases. Later phases are not completely defined, but the Applicant is continuing to provide additional information related to alternative site designs.
Transportation & Access	Partial	The IDP includes future projections on trip generation and parking demand based upon the program of new uses being introduced to the site, however there is limited information

		regarding thresholds that would trigger roadway improvements as discussed in the IDP. Staff and the Board will need to confirm whether this level of detail is appropriate for the IDP.
Environmental Impacts	Yes	The IDP includes significant baseline data and narrative discussing current environmental conditions, and a detailed overview of strategies being considered which would significantly improve environmental conditions for the site. These include reductions to impervious surfaces, raising of site grades to improve flood resilience, introduction of LID techniques to aid in stormwater treatment, the use of green building technologies in future development, and natural restoration of the shoreline among others. The Applicant has referenced a site-wide compact that will be submitted at the first site plan review which will set sustainability standards for all phases of development. The compact will be based from national and international sustainability standards.
Infrastructure	Yes	The IDP clearly identifies that existing utility infrastructure is sufficient to service the development at full build-out. This is supplemented with additional narrative that describes measures to be taken by the applicant to reduce energy consumption through the use of sustainable design, and reduce stormwater impacts through the introduction of LID techniques. Further, the IDP identifies that while utilities are sufficient to service the development that certain infrastructure may need to be relocated dependent upon the siting of development.
Design	Partial	The IDP sets a vision for the site in terms of the vision for the design principles and design guidelines, which are also included in the Regulatory Framework. Given the length of discussion related to the proposed heights of the building and the relationship with the surrounding area, the IDP has an opportunity to provide additional content to justify the context of the site. Sources such as flood maps, axonometric drawings of existing structures, renderings, reviews of nearby industrial waterfront sites, and the existing Cannery Building can help inform and justify the proposed site and building design. Based on City Staff discussions with the Applicant, the requested materials are anticipated to be developed and included in an upcoming submission package.
Neighborhood Engagement	Yes	The IDP details ongoing mechanisms to ensure continued community engagement, through the upkeep of a project website, to regular updates to community groups as project cycles become active, to the appointment of a community liaison to maintain open lines of communication.

A. Institutional Development Plan Review Standards

The IDP is subject to 13 separate review standards, each of which are intended to ensure first that the IDP contains sufficient information to provide a reasonable, well-calculated depiction of what campus growth will look like in the subsequent 20-year period, providing a strong foundation and basis for the Regulatory Framework. The second

principal element of the IDP is to accurately project impacts before development occurs, so as to facilitate timely and strategic improvements to minimize or mitigate those impacts.
As referenced above under the content section, the emphasis of this workshop is primarily to focus on the design elements of the IDP and Regulatory Framework. Noting this, the discussion of standards below is limited, and intended only to focus future design discussions with the Board and City review team.

1. *Address all content requirements, unless explicitly modified by the planning authority or planning board.*

   Staff Comment: The IDP will need to be revised to incorporate staff's feedback listed under the preceding 'Content' section of this memo, and as needed to address future Board and staff comments.

2. *Reflect the issues/topics identified in the required public process.*

   Staff Comment: Staff understand that the applicant continues to develop new materials in response to feedback received by members of the public, notably around traffic and design impacts. Materials such as concept plans for improvements to Sherwood Street, a massing plan illustrating the impact and visualization of buildings at their maximum permissible scale from multiple vantage points, and a shadow study have been developed

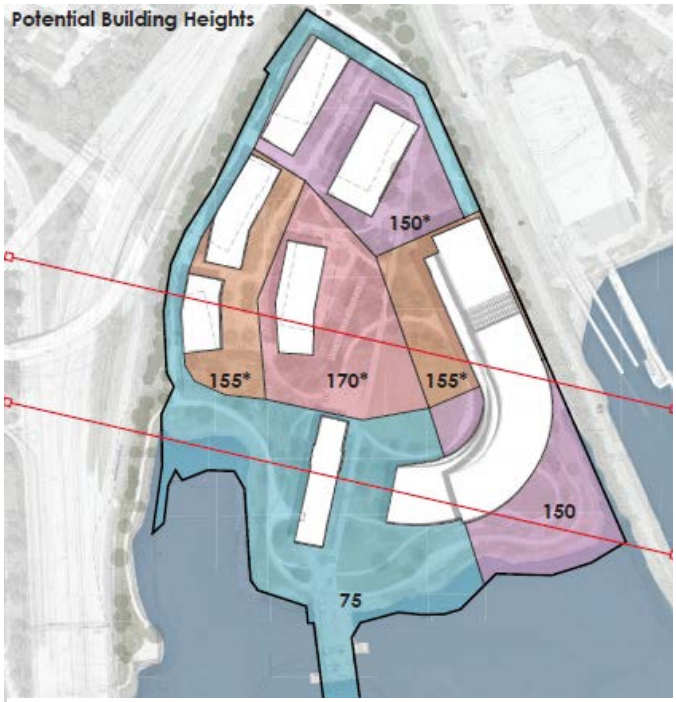
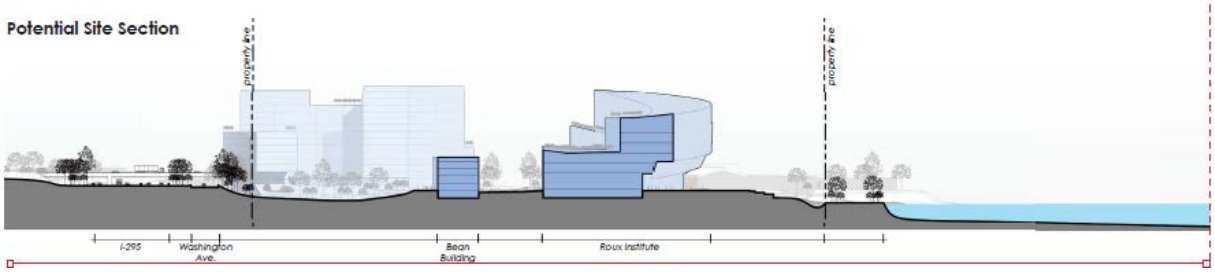
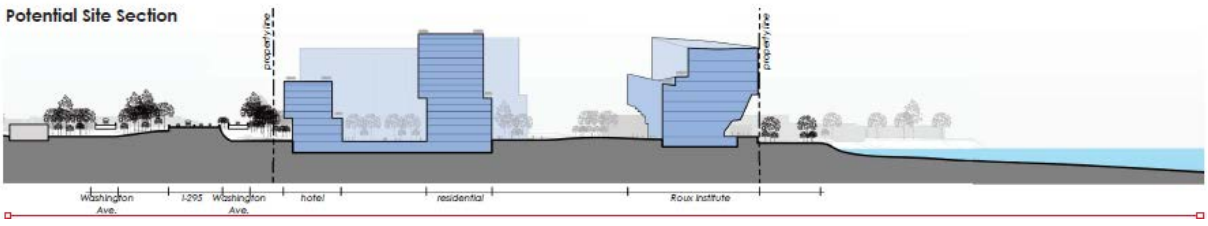


Figure 6: Updated Height Map with Potential Site Sections (below) of the area between the red lines.





and are updated to reflect comments received through Roux Roundtable meetings, meetings with neighborhood groups, and Planning Board public comment. An anticipated synthesis of these materials will help inform and establish a context that is responsive to public comments and informs future building and site design.

3. *Demonstrate consistency with the city's comprehensive plan and the purpose of this ordinance.*

   Staff Comment: The IDP clearly identifies where this development proposal supports and furthers particular goals of Portland's Plan 2030. While all of the previous approved IOZs were established for sites with more expansive and active uses on site, the proposed project aims to proactively plan for the future of the site. As a result, the Applicant is continuing to work and update the proposed IOZ application to both be consistent with other IOZs, while simultaneously providing additional supporting documentation to establish foundational programmatic and design principles.

4. *Demonstrate how the property ownership, proposed growth, and requested regulatory framework relate to the institution's mission.*

   Staff Comment: The IDP establishes a clear mission for both IDEALS and the Roux Institute, which together serve to create a collaborative, mutually supportive space for both their private, public, and non-profit partners and the Roux Institute to further the fields of artificial intelligence, computer and data sciences, digital engineering, advanced life sciences, and medicine, fill existing talent gaps within these areas, and support Maine's economy. The proposed program and regulatory framework appear consistent with this mission, and are sized to be responsive to community concerns around scale.

5. *Demonstrate that traffic and parking impacts have been anticipated and that the proposed parking provision is justified as based on an assessment of options for reducing traffic and parking demands.*

   Staff Comment: While the IDP provides information on how trip generation is calculated, assigns mode split by use type, and provides anticipated peak parking demand, staff would request that all of this information be provided numerically. The IDP further details potential off-site multi-modal improvements and TDM measures to alleviate traffic impacts and on-site parking demand, with a stated reduction goal of 37%. From the information provided, it is difficult to determine whether the strategies listed are sufficient to achieve this target. Future application submissions and workshop discussion will help inform the compliance with this standard.

6. *Outline an approach to open space, natural, and historic resources that supports preservation and enhancement*

   Staff Comment: The IDP outlines an approach to open space, natural resource, and historic resource protection and enhancement. The IDP prioritizes open space as a defining element of the development, with buildings and vehicular circulation concentrated around the perimeter of the site, framing a large open space. Similarly, the Cannery Building, a historic building dating back to 1913, is to be preserved and repurposed. IDEALS has requested that the Cannery Building be designated as a local historic landmark and the on June 1, 2022, the Historic Preservation Board unanimously voted to recommend designation of the B&M Cannery as a local landmark to the City Council. Lastly, areas along the shore are to be maintained for public access, and the shoreline itself is to be restored to a more natural state.

7. *Demonstrate that potential cumulative environmental impacts have been anticipated and can be minimized or satisfactorily mitigated.*

   Staff Comment: Through the use of sustainable design, removal of impervious surfaces, raising of on-site grades, restoration of the shoreline, and introduction of low impact development techniques, the net change in environmental impact from its current state to proposed condition will likely be very positive. Additional review will be needed to determine how transportation impacts in the short-, mid-, and long-term will be minimized and satisfactorily mitigated.

8. *Demonstrate that utility impacts have been anticipated and can be minimized or satisfactorily mitigated.*
   Staff Comment: The IDP identifies existing utility infrastructure that serviced the B&M Baked Beans Facility, which given its industrial nature, required significant utility capacity. Noting this, the IDP states that no upgrades to capacity are required. Further, the IDP details strategies to minimize energy usage, such as through the use of geothermal heating and cooling, photo voltaic panels, high performance building envelopes with triple glazing, green roofs and blue roofs among other strategies.

9. *Reflect a comprehensive design approach that ensures appropriate transitions with the existing or future scale and character of the neighboring urban fabric.*

   Staff Comment: As stated earlier in this memo, the development is geographically constrained on all sides, which provides separation between the development and surrounding uses. While there is separation, the multiple functions of the site and the entrance to the site from Sherwood Street necessitate a thoughtful design approach. Updates to the height map to shift the tallest buildings to the center of the site and wrapping the edges of the site with lower 75 foot maximum heights reinforce the principles and vision for the site. Additional language related to circulation and building design have also taken steps to improve connections between buildings and the public realm, recognized differing needs for pedestrian-oriented design based on the proximity to automobile access on the perimeter of the site, and how functions of the site will differ based on the anticipated site users (e.g., public vs. semi-public, waterfront vs. Roux Institute



Figure 7: Map of Potential Open Space Breaks and Buffers.

facilities). With the future review and development of the IDP related to transportation, the application is taking appropriate steps to meet this standard.

10. *Promote compatibility with existing or future uses in adjacent neighborhoods, maintain housing, and support local amenities.*

    Staff Comment*:* With the separation from adjacent neighborhoods by DOT ROWs and the waterfront, the site have unique considerations in providing compatible uses. As compared to other IOZs, there is physical separation that reduces the impact of the more institutional uses being located near residential zones. The scale of the institutional uses do present areas for mitigation that will be more fully addressed as part of the review of transportation elements for the site.

    IDEALS has indicated that they'd like to foster a close relationship with the neighborhood and are strengthening physical connections with the surrounding neighborhoods, through extension of the Back Cove Trail, potential improvements to Sherwood Street, and the potential for connections for rail or rail trail along the existing rail right-of-way. The site will be open to the public and will feature new public open space, including areas along the waterfront.

    The proposed development does not eliminate any existing housing and includes the construction of up to 650 units at the completion of the long-term phase. With an expected enrollment of ± 4,500 students, the site include amenities and services (restaurants, small grocery retail, improved waterfront and trail connections) that are anticipated to reduce the number of trips off-site and can support existing trail networks.

11. *Anticipate future off-site improvements that would support the integration of the institution into the community and citywide infrastructure.*

    Staff Comment*:* As mentioned elsewhere in this report, the applicant states that off-site improvements may become necessary as the project undergoes development, first to encourage access by pedestrians and cyclists via the Back Cove Trail extension, and improvements to Bates Street and elimination of the sweeping turn lane. The IDP also identifies roadway improvements that could be considered to improve traffic conditions, namely the widening of Sherwood Street and introduction of bicycle, left and right turn lanes, the widening of Veranda Street and introduction of a bicycle lane, and extension of the left turn lane for I-295 southbound, and potentially, the reconfiguration of the two I-295 Exit 8 off-ramps to reduce vehicle queuing lengths and provide direct access northbound to the site. These improvements would be fleshed out in more detail as part of the Traffic Movement Permit (TMP) for the project.

12. *Conform with the standards of Article 17 for designated landmarks or for properties within designated historic districts or designated historic landscapes, if applicable. When proposed adjacent to or within 100 feet of designated landmarks, historic districts, or historic landscapes, the IDP shall be generally compatible with the major character-defining elements of the landmark or portion of the district in the immediate vicinity.*

    Staff Comment: The applicant is pursuing designation of the Cannery Building as a local historic landmark. If this designation occurs, future phases of development will be subject to HP review within the designated area, in the case of work proposed on the Cannery Building itself. The local landmark designation recommended by the Historic Preservation Board includes language that limits Historic Preservation

review to only the portions of the site designated as a local landmark, without 100 foot advisory review. The IDP identifies that the Cannery Building will be prominently featured on the site, with other development set back and limited in height within close proximity of the Cannery Building. New development is expected to deviate in terms of scale, design, and materiality from the Cannery Building.

13. *Incorporate strategies to support clear communication and ongoing public engagement between institutions and nearby neighbors.*

Staff Comment: IDEALS has developed a variety of strategies to engage members of the community in on-going planning work. This includes semi-regularly scheduled 'Roux Campus Roundtable' meetings, which are to be periodically scheduled during active phases of the project development cycle. In addition, IDEALS maintains a website, www.rouxcampusportland.org, where relevant project information is regularly updated, with opportunities to take surveys, provide feedback, or contact a representative to ask questions. Additionally, IDEALS has designated a community contact who serves as direct liaison between IDEALS and members of the public.

VI. REVIEW OF REGULATORY FRAMEWORK

Table 2 includes a summary of the required content for the regulatory framework, along with the current compliance with those submittal standards:

Table 2: Required Content of the Regulatory Framework (8.5.5.D.)

Requirements	Provided	Notes
Zoning boundary of the IOZ	Yes	The zoning boundary is clearly defined in a map on the first page.
Phasing and schedules	Yes	Details relating to amendment thresholds and provisions for open space have been provided to address staff comments.
Uses	Partial	Expansion of permitted uses have been provided. The current language has the potential to be revised to provide more clarity, specifically related to the limitation on the height and scale of the proposed hotel.
Dimensional requirements	Partial	The Applicant has provided a height map. Additional information related to the transition zones and showing the range of potential heights would help support the proposed increase in permitted heights from the base B-5 allowance.
Transportation	Yes	The Transportation section has been expanded to include considerations related to the design for proposed bicycle and pedestrian networks, which will help promote pedestrian-scale design. Additional feedback and revisions are anticipated as the application continues to be reviewed and at the future transportation workshop.
Environment	Yes	The Regulatory Framework provides clarification on how and when open space will be provided during the first phase of construction. Additionally, more specificity has

		been provided on how the development intends to be constructed using sustainable and resilient building practices.
Mitigation measures	Partial	The Regulatory Framework does include a broad approach on identifying mitigation measures. Additional information on thresholds to address deficiencies and goals for preservation/protection will need to be included and will be informed by other larger review topics presented at future workshops.
Design	Partial	The submitted design section provides design guidelines that more clearly translate the design principles into enforceable standards. As mentioned in the review of dimensional requirements, additional information on treatments for transition zones will help support the justification for the context of the site. Additionally, Staff has recommended that overlays of the proposed height map with additional information may help support the increased heights and building placement. The Applicant is still in the process of developing those graphics.
Neighborhood integration	Partial	The Regulatory Framework has begun to discuss outreach strategies as part of neighborhood integration, state that pedestrian linkages and safety will be addressed during the first site plan review, and includes requirements for a pleasant pedestrian experience during construction phases. Future discussion and application materials will help inform the inclusion of required elements related to mitigation of impacts on neighboring properties related to improvements and increased traffic volumes on Sherwood & Veranda Streets.
Monitoring	Yes	The Regulatory Framework has identified a schedule for monitoring and report submittal timeframe. The Applicant may want to consider including additional monitoring related to compact sustainability/resiliency requirements and longevity of building materials as part of that review to inform future minor and major amendments to the IDP.

B. Regulatory Framework Review Standards

The Regulatory Framework is subject to 4 separate review standards, each of which are intended to ensure, consistent, and measureable zoning implementation that aligns with the goals of the Comprehensive Plan. These standards of the Regulatory Framework are anticipated to include parameters that guide the growth and change of the institution, as well as broad strategies to address potential impacts, with plans and details to be developed under site plan review.

As referenced above under the content section, the emphasis of this workshop is primarily to discuss the design elements of the project. Noting this, the discussion of standards below is limited to a discussion on design.

1. Be consistent with the Comprehensive Plan and the Institutional Development Plan

Staff Comment: The submitted Regulatory Framework is consistent with the Comprehensive Plan. The following table lists the proposed design principles in the IDP and the related design guidelines for implementing the principles in the Regulatory Framework. Overall, the connections between the design principles and guidelines are strong, with initial suggested modifications included in the Notes column. Additional modifications may arise based on feedback from the Board, members of the public, and City Staff and future workshops on major project elements.

Table 3: Review of Connection between Design Principles & Guidelines		
Design Principle	**Relevant Design Guidelines**	**Notes**
Connected to the Waterfront, Portland & the World		
Engage the Waterfront	**Sec. 8.5.7.H.2.a.v.**: Buildings shall be organized to take advantage of views, site circulation, and public space along the waterfront **Sec. 8.5.7.H.2.c.vi.**: Open space and public realm shall provide access and amenities to connect the public to the shoreline and ocean **Sec. 8.5.7.H.2.c.vi.**: Open space and public realm shall include meaning public open space between the buildings and the water	
Promote visual and physical connectivity	**Sec. 8.5.7.H.2.a.v.**: Buildings shall be organized to take advantage of views, site circulation, and public space along the waterfront **Sec. 8.5.7.H.2.a.xvi.**: Buildings shall ensure permeability through and within the site for light, air, views & access **Sec. 8.5.7.H.2.a.xviii.**: Buildings shall be oriented toward the open space at the center of the site and shall include prominent facades with windows and entrances oriented toward paths of travel **Sec. 8.5.7.H.2.b.iii.**: Campus circulation shall provide wayfinding and amenities to create a safe and welcoming environment for the community **Sec. 8.5.7.H.2.b.iv.**: Campus circulation shall provide bike and pedestrian connectivity to existing ways where feasible **Sec. 8.5.7.H.2.c.iii.:** Open space and public realm shall enable access to building entrances **Sec. 8.5.7.H.2.c.v.**: Open space and public realm shall provide access and amenities to connect the public to the shoreline and ocean.	
Encourage connections to the waterfront	**Sec. 8.5.7.H.2.a.v.**: Buildings shall be organized to take advantage of views, site circulation, and public space along the waterfront	It is not fully clear if connections are required by the Regulatory Framework through 'diverse' spaces. The

through diverse spaces	**Sec. 8.5.7.H.2.c.vi.**: Open space and public realm shall provide access and amenities to connect the public to the shoreline and ocean	Applicant may want to clarify intent of the word diverse and have that dictate changes to the regulatory framework.
Create a holistically built environment	**Sec. 8.5.7.H.2.a.vi.**: Buildings shall share visual connections with other campus buildings to achieve a holistic campus appearance **Sec. 8.5.7.H.2.b.iii.**: Campus circulation shall provide wayfinding and amenities to create a safe and welcoming environment for the community	
Restore, repurpose, and revitalize the Bean Building		Since the Bean Building is anticipated to be designated as a local landmark, the review of exterior modifications will be reviewed under Chapter 17. While buffers to the building are referenced as standards, the Applicant may want to consider the addition of the general intent of anticipated improvements in the IDP.
Create an iconic architectural expression	**Sec. 8.5.7.H.2.a.i.**: Buildings shall be characterized by excellence in architectural design, sustainability, and craftsmanship **Sec. 8.5.7.H.2.a.iii. & Sec. 8.5.7.H.2.c.i.**: Buildings, open space and the public realm shall create a strong identity and sense of place **Sec. 8.5.7.H.2.a.x.**: Buildings shall identify the primary academic program area through signature architecture	The principle and related guidelines are somewhat subjective and would benefit from an institutional definition of what iconic architecture means for the site.
Places to Gather		
Welcome the surrounding neighborhood	**Sec. 8.5.7.H.2.a.vii.**: Buildings shall support and augment activation of public spaces and public access to the site **Sec. 8.5.7.H.2.a.ix.**: Buildings shall respect the adjacent neighborhood and facilitate a sense of permeability and welcome **Sec. 8.5.7.H.2.b.iii.**: Campus circulation shall provide wayfinding and amenities to create a safe and welcoming environment for the community	

	Sec. 8.5.7.H.2.c.v.: Open space and public realm shall provide access and amenities to connect the public to the shoreline and ocean	
Foster community with shared spaces and interaction	**Sec. 8.5.7.H.2.a.vii.**: Buildings shall support and augment activation of public spaces and public access to the site **Sec. 8.5.7.H.2.a.viii.**: Buildings shall be programmed for activation where they meet the pedestrian realm or feature visually interesting details and activities related to the building **Sec. 8.5.7.H.2.a.ix.**: Buildings shall respect the adjacent neighborhood and facilitate a sense of permeability and welcome **Sec. 8.5.7.H.2.a.xviii.**: Buildings shall be oriented toward the open space at the center of the site and shall include prominent facades with windows and entrances oriented toward paths of travel **Sec. 8.5.7.H.2.b.iii.**: Campus circulation shall provide wayfinding and amenities to create a safe and welcoming environment for the community **Sec. 8.5.7.H.2.c.iii.:** Open space and public realm shall enable access to building entrances **Sec. 8.5.7.H.2.c.v.**: Open space and public realm shall provide access and amenities to connect the public to the shoreline and ocean.	
Build a strong association with the City of Portland	**Sec. 8.5.7.H.2.a.ii.**: Buildings shall incorporate materials, landscape, signage & lighting that reflect Portland's character yet look to a high-tech future	As mentioned in previous comments, the compilation of site information and information on nearby industrial waterfront sites will help inform a stronger association. This may or may not result in additional design guidelines.
Develop purpose-driven spaces that yield regular connections	**Sec. 8.5.7.H.2.a.viii.**: Buildings shall be programmed for activation where they meet the pedestrian realm or feature visually interesting details and activities related to the building **Sec. 8.5.7.H.2.a.xviii.**: Buildings shall be oriented toward the open space at the center of the site and shall include prominent facades with windows and entrances oriented toward paths of travel **Sec. 8.5.7.H.2.b.i.**: Campus circulation shall be bike and pedestrian-centered, with motor vehicle circulation generally at the perimeter where practicable	

	Sec. 8.5.7.H.2.c.vi.: Open space and public realm shall include meaningful public open space between the buildings and the water	
Provide public open space	**Sec. 8.5.7.H.2.c.** – Open Space	
Provide spaces where neighbors can work and read while enjoying the campus's environment	**Sec. 8.5.7.H.2.a.vii.**: Buildings shall support and augment activation of public spaces and public access to the site **Sec. 8.5.7.H.2.c.v.**: Open space and public realm shall provide access and amenities to connect the public to the shoreline and ocean. **Sec. 8.5.7.H.2.c.vi.**: Open space and public realm shall include meaningful public open space between the buildings and the water	While the intent of the design principle is likely to be met, the specificity of the principle may warrant consideration for an equally specific design guideline or broadening to capture other campus goals.
A Sustainable & Resilient Campus		
Employ sustainability benchmarking for environmental stewardship	**Sec. 8.5.7.H.2.a.xi.**: Buildings shall utilize durable materials resistant to the marine climate & which contribute to an attractive public realm **Sec. 8.5.7.H.2.a.xiv.**: Buildings shall employ sustainability benchmarking to foster environmental stewardship and resilience	A description of the proposed compact is included in a separate section of the Regulatory Framework, but may warrant references in Sec. 8.5.7.H.2.a.xiv..
Incorporate state-of-the-art features, systems, and techniques	**Sec. 8.5.7.H.2.a.i.**: Buildings shall be characterized by excellence in architectural design ,sustainability, and craftsmanship **Sec. 8.5.7.H.2.a.ii.**: Buildings shall incorporate materials, landscape, signage & lighting that reflect Portland's character yet look to a high-tech future	The content of the principle is laudable and may benefit from additional specificity as to what the state-of-the-art features will accomplish that is unique compared other design principles.
Minimize energy consumption campus-wide	**Sec. 8.5.7.H.2.a.xi.**: Buildings shall utilize durable materials resistant to the marine climate & which contribute to an attractive public realm **Sec. 8.5.7.H.2.a.xiv.**: Buildings shall employ sustainability benchmarking to foster environmental stewardship and resilience	A description of the proposed compact is included in a separate section of the Regulatory Framework, but may warrant references in Sec. 8.5.7.H.2.a.xiv..
Build for resilience; prepare for extreme weather and climate change	**Sec. 8.5.7.H.2.a.xi.**: Buildings shall utilize durable materials resistant to the marine climate & which contribute to an attractive public realm **Sec. 8.5.7.H.2.a.xiv.**: Buildings shall employ sustainability benchmarking to foster environmental stewardship and resilience	See above.
Maximize green space through appropriate building height	**Sec. 8.5.7.H.2.a.xvi.**: Buildings shall ensure permeability through and within the site for light, air, views, & access	It may be more appropriate for the design principle to speak to bulk and massing as well, as well as providing data on anticipated open space needs

		for the site based on the proposed uses.
Integrated Landscape		
Enhance access through TDM and multi-modal support	**Sec. 8.5.7.H.2.b. –** Campus Circulation	
Contribute to Portland's open space network	**Sec. 8.5.7.H.2.b.iii.**: Campus circulation shall provide wayfinding and amenities to create a safe and welcoming environment for the community **Sec. 8.5.7.H.2.b.iv.**: Campus circulation shall provide bike and pedestrian connectivity to existing ways where feasible **Sec. 8.5.7.H.2.c.v.**: Open space and public realm shall provide access and amenities to connect the public to the shoreline and ocean.	

2. *Provide a clear zoning framework, using graphics and tables as appropriate, to apply to future site plan reviews.*

   Staff Comment: As shown in the table above, the submitted Regulatory Framework has shown strong connections between the design principles in the IDP and the design guidelines. The Applicant has also incorporated staff comments into the design standards to transpose the B-5 design standards that primarily reference connections between buildings and the street, to a site that is primarily connected by pedestrian and bicycle pathways.

   Some of the language included in the Regulatory Framework would benefit from clarification to ensure that the intent of the provision is fully realized. City Staff has recommended the inclusion of additional graphics in the Regulatory Framework to visually reinforce the goals of the development while reducing the number of standards in the Regulatory Framework. The Applicant is still in the process of providing these graphics and intends to use the feedback from the August 9th workshop to inform future graphics.

3. *Provide specific regulatory statements as appropriate that respond to concerns raised during the required public involvement.*

   Staff Comment: Based on comments received during the Roux Roundtable discussion and Planning Board public comments, the Applicant has included limitations on the proposed height and size of the hotel on the site, as well as shifting the taller heights toward the center of the site to reduce shadow and visual impacts on the surrounding neighborhood. As submitted some of this language, as well as the design guidelines provide opportunity for clarification and increased specificity to ensure that the intent of the Applicant and members of the public is fully realized in subsequent site plan reviews.

4. *Outline measurable goals and thresholds for improvements or other actions identified in the IDP to be advanced in subsequent site plan applications.*(*Open Space and Sustainability Compact*)

Staff Comment: City staff quested additional specificity related to when and how open space would be provided on the site, as well as how the site will fulfill the intended sustainability and resiliency goals. The Applicant has updated the Regulatory Framework to specify the size and time (completion of first project phase) when open space will be provided, as well as language to allow for shifts in the configuration of open space in subsequent phases, provided that the total amount of open space remains the same. To respond to question on the sustainability and resiliency goals of the site, the Applicant has provided an overview of how a compact will be developed and submitted during the first site plan review based on leading sustainability standards, to dictate and ensure that the site will meet these standards through all phases of construction. As the project continues to be reviewed, it is anticipated that other topic areas will provide opportunities for modification or inclusion of new measureable goals and thresholds for improvements/actions.

VII. NEXT STEPS

- Address Staff and Board Comments
- Attend content focused review meetings with City staff
- Schedule future Planning Board workshop

VIII. ATTACHMENTS

Staff Attachments

1. Designation Report – Cannery Building
2. City Staff Preliminary Design Review
3. Public Comment
    a. PC1: Kellan Simpson
    b. PC2: Anthony Donovan
    c. PC3: H. Mason Sears
    d. PC4: Memic
    e. PC5: Greater Portland Landmarks
    f. PC6: John Clark
    g. PC7: Edward Libby
    h. PC8: Bonnie Craig
    i. PC9: Ned Swain
    j. PC10: Sandy Comstock
    k. PC11: Tamas Peredy
    l. PC12: East Deering Neighbors

Applicants Submittal

A. Cover Letter
B. Cover Letter for Supplemental Submission
C. Cover Letter for Design Comments
D. Map and Text Amendment Checklist

E. IDP Page Reference Document
F. Right, Title and Interest
G. Right, Title and Interest – Supplemental Memorandum
H. Memorandum of Understanding
I. Restated Articles of Incorporation
J. Institutional Development Plan
K. Regulatory Framework
L. Text Amendment Redline
M. Concept Massing Figures
N. Neighborhood Views
O. Shadow Studies
P. Neighborhood Meeting Summary
Q. Proposed Zoning Map
R. Vicinity Map



Burnham & Morrill Company Office and Cannery
1 Beanpot Circle
Portland, Maine

Historic Landmark Study Report
Prepared by Michael LaFlash of Heritage Consulting
with
Christine Beard of Essex Preservation Consulting

April 2022

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Physical Description

Summary:

The Burnham & Morill Company Offices & Cannery (B&M CanneryCannery), located at 1 Beanpot Circle in Portland's East Deering neighborhood, is a brick and concrete industrial building with a four-story main block and two-story north wing. Constructed in 1913, the building was designed by prominent Portland-based architect George Burnham of the firm Burnham and Higgins. The Cannery building has served for decades as one of Portland's most noteworthy landmarks due to its highly visible location along I-295 at the mouth of Back Cove. The Cannery's design of contrasting red brick and white painted concrete serves as a highly recognizable element situated adjacent to the water.

Setting/Site: The B&M Cannery is located on a 13.6-acre parcel at the southernmost portion of Portland's East Deering neighborhood (City of Portland Parcel ID #447 A001). Due to the Cannery's location, it is largely secluded from the surrounding neighborhood and situated within the former complex of the food packing company. The parcel is irregularly shaped and bound at the west by I-295, at the east by the former Grand Trunk Railroad tracks, at the north by Sherwood Street, and at the south by Casco Bay.

The larger B&M Cannery site consists of additional Cannery buildings, paved driveways and parking areas, and sections of lawn at the perimeter of the site and to the west of the subject building. The B&M Cannery is situated at the south end of the property, located near the water, and is connected to the former codfish canning building, a storage and labeling building, and the 1947 cooking building through late-20th century connectors (see Figure 1). Historic images indicate that the Cannery's original smokestack (no longer extant) was located on the east side of the building (Figure 14). A second brick smokestack was added c. 1958 in front of the B&M Cannery's primary (west) elevation (Figure 21) but was removed in 2021 by B&G foods, the former owner.[1] A round concrete base remains in the location of the former smokestack.

Aside from the subject building and the codfish canning building, the larger complex does not convey the early-20th century industrial architecture found at the B&M Cannery. The codfish canning building was constructed at the same time as the subject building, designed by Burnham and Higgins, and contains many of the same architectural features, including offsetting red brick and white painted concrete, as well as an identical parapet. Constructed upon a wharf, however, the building is no longer structurally sound and has high levels of corrosive chlorides. Additionally, the building has undergone various changes over time, that have resulted in the loss of primary character-defining features, most notably its windows (see Photos 11-13).

[1] Peter McGuire, "B&M Baked Beans leaving Portland after more than 150 years," *Portland Press Herald*, Aug. 30, 2021.

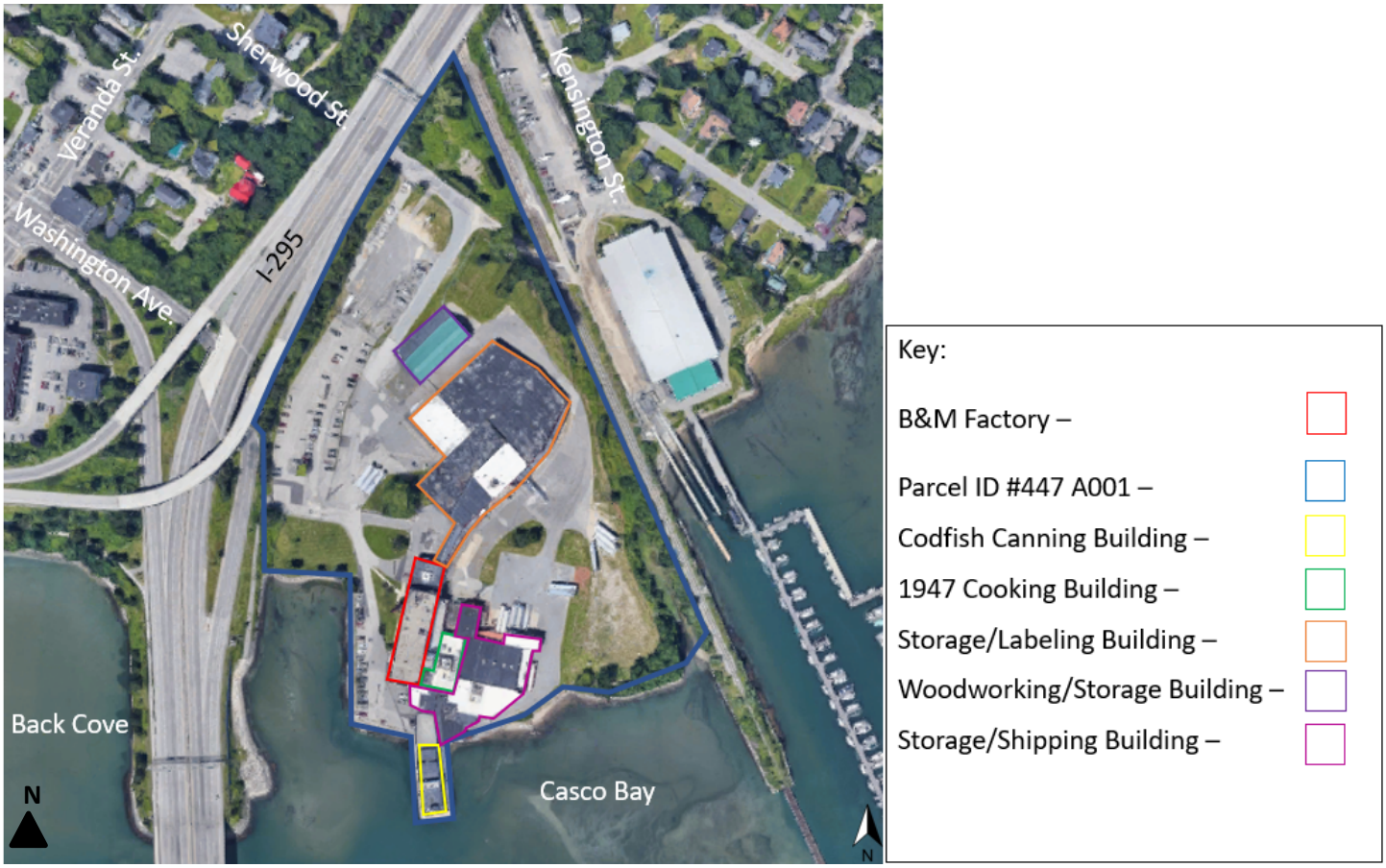


Figure 1: B&M Cannery Site Plan

Structure: The B&M Cannery is of reinforced concrete post and beam construction with an exterior brick veneer and a poured concrete foundation. The internal structure of the building is emphasized on the exterior by the concrete vertical pilasters and horizontal banding. On the interior, the building features an early version of board-formed reinforced concrete mushroom columns that are not as round as their mid-20th century counterparts (see Photos 9-10).

Exterior: The B&M Cannery consists of two sections: the four-story main block of the building that housed the kitchen and Cannery operations, and the smaller two-story office block at the north end of the building (Photo 6). Due to the sloping grade, the basement level is fully exposed at the south end of the building (Photo 3). The building sections are identical in design and only differ in their height. Exterior elevations are divided into window bays by wide concrete pilasters that rise through the decorative parapet. The upper portion of each pilaster is embellished with brick coursing in a stylized pattern (Photo 4). Wide brick panels define the parapet walls. Throughout the building, windows have been largely replaced with modern aluminum-framed hung windows, though some examples of the historic multi-light wood windows remain.

West Elevation: The primary (west) elevation is 15-bays wide, with the main block extending 12-bays at the south end of the building (Photo 1), and the office wing extending three-bays to the north (Photo 2). The six central bays of the main block are slightly recessed, flanked by two shallow pavilions of three bays each. The office wing is recessed slightly from the main block. As the principal facade, the west elevation contains the building's main entrance, located in the second bay from the north end on the main block (Photo 2). The entrance consists of an older glazed wood-framed single-leaf door that appears to be an early replacement, flanked by the original partial sidelights with paneled aprons. The vast majority of windows at this elevation are modern aluminum-framed replacements. In some cases, window openings at both sections of the building have been altered to either increase or decrease the size of the opening. Several window openings above the main entrance retain the historic double-hung wood windows, which were paired eight-over-eight windows. Examples of glass block infill also exist at the elevation. (See Photos 1-2, 5-6)

A large rectangular sign board at the center of the parapet reads "B&M Brick Oven Baked Beans" (Photo 1). The extant sign was installed in 2009. Historic images indicate that the original signage was affixed to the roof and projected well above the parapet (See image on cover page).

North Elevation: The north elevation is three-bays wide and features the same design elements as the west elevation. While the two floors of the office wing are visible, only the third and fourth floors of the main block are exposed on this side of the building. All windows openings hold modern aluminum-framed replacement windows. There are no entrances at this elevation. The easternmost bay of the office wing is joined to the adjacent storage and labeling building by an added wood-frame connector. (See Photos 4-6)

South Elevation: The south elevation consists of four exposed floors of the main block above the exposed raised basement, which is now obscured by a CMU block addition (Photo 3). Like the north elevation, the south consists of three-bays that each contain window openings. The windows on the south elevation have been completely replaced with modern aluminum-framed windows. Within the easternmost bay, windows do not extend the full width of the bay due to the location of the freight elevator on the interior. Similarly, a modern metal-sided addition projects from the easternmost bay at the second floor level, connecting with the later storage and shipping building. This addition connects with the subject building only at the second floor level. (See Photo 3)

East Elevation: Due to later construction, only the office wing and the third and fourth floor levels of the main block are visible on the east elevation. The visible walls area largely mirrors the west elevation, with a similar design and fenestration pattern. At the first and second floor levels, the main block is obscured by later additions that connect the B&M Cannery to the 1947 cooking building and storage and shipping building in the location of the former rail access. The later connections consist of standing seam metal siding and do not convey any of the original Cannery building's materials or design. (See Photos 7-8)

Roof: The B&M Cannery features two roof levels. The roofs are both flat with a modern synthetic membrane. The roof over the office wing features a skylight at its center. Historic images confirm that there was originally a skylight in this location but it is not known if the existing skylight itself is a replacement.

Interior: The interior of the B&M Cannery is largely utilitarian with open floor plans and limited finishes. As such, the former Cannery spaces are primarily open in plan with exposed concrete floors, exposed brick walls, exposed concrete ceiling structure, and painted concrete columns. Instances of modern alterations exist in office areas, where subdivisions have occurred and ceilings have been lowered and consist of dropped acoustic ceiling tiles (Photos 9 and 10).

Historical Overview

City of Portland Minimum Criteria Standards for Designation

The city of Portland has an impressive collection of historic resources that are identified at the local level by the Historic Preservation division of the city's Department of Planning & Urban Development. Many of the city's historic resources are designated either as individual landmarks or as contributing resources to one of twelve local historic districts. Historic designation is covered in Section 17 of the City of Portland Land Use Code, which outlines the designation process and identifies six minimum criteria standards for designation.

A noted visual landmark in the city, the B&M Cannery satisfies the following criteria for individual landmark designation as established in the City of Portland Historic Preservation Ordinance, Sec. 17.4.1.A:

Sec. 17.4.1.A.1 – Its value as a significant example of the cultural, historic, architectural, archaeological, or related aspect of the heritage of the City of Portland, State of Maine, New England region, or the United States.

Throughout the late-19th century and well into the 20th century, the Burnham & Morrill Company grew to become a widely recognized food packing and canning company that sold its products on a national scale. Burnham & Morrill was founded in 1867 by George Burnham, Jr. and Charles S. Morrill, both of whom worked for the earlier Maine-based packing firm of Rumery & Burnham. Burnham & Morrill grew to a national scale through a product line that showcased foods historically associated with Maine and the New England region. With canned corn, clams, lobster, fish flakes, and others, Burnham & Morrill were able to establish packing facilities throughout the State of Maine, employing thousands of Mainers throughout its history. In the 20th century, however, the company expanded its product line to incorporate Boston-style baked beans. With the incorporation of baked beans, B&M became nationally known, distributing and selling in grocery stores from Maine to California. The wide reach of the Burnham & Morrill name, however, extended well beyond the United States, with former president of the company, Charles Morrill, explaining in the 1940s that B&M products were eaten "as far away as India, though we don't know how they got there." Morrill also explained that B&M beans were found in "an igloo just under the Arctic Circle."[2]

The company's growth in the late-19th century and the first decade of the 20th century, necessitated expanded production facilities. Prior to construction of the subject building, the Burnham & Morrill company was headquartered in a combination canning factory/office building on Franklin Street (also known as the W.L. Blake Warehouse, this building is a contributing resource to the Portland Waterfront Historic District). The

[2] Charles S. Morrill, "'B&M' – What two young Maine men founded 80 years ago!" and Address at Portland, ME to the American Newcomen (New York City, NY: Newcomen Society in North America, 1950), p. 15.

company also owned and operated numerous satellite canning facilities throughout the state. In 1913, the B&M Cannery was constructed, providing the company with what was hailed as "a modern, sanitary plant" considered to be "one of the industrial show places" of Maine. Between 1913 and the 1960s, the building remained Burnham & Morrill's office headquarters and primary canning facility, complete with the company's laboratories, which were necessary for the development of additional products and updated sanitation. Following Burnham & Morrill's sale in 1965, the facility continued to operate under the B&M brand name. Operations ceased at the Cannery in 2021.

As the purpose-built headquarters and primary canning facility for the Burnham & Morrill Company, the B&M Cannery satisfies eligibility under Criterion 1.

Sec. 17.4.1.A.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.

The B&M Cannery was designed by the prominent Portland-based architectural firm of Burnham and Higgins, though credit to the design is most often associated with George Burnham. Considered to be "one of Maine's most accomplished architects of the early 20th century," Burnham was responsible for the design of numerous commercial, industrial, municipal, and residential buildings both in Portland and the State of Maine, a number of which are listed in the National Register of Historic Places and designated Portland landmarks. Additionally, the duo grew to become one of the leading firms in all of Maine by the end of the 1910s.

The B&M Cannery serves as one of Burnham and Higgins' most notable examples of industrial architecture. Burnham's use of contrasting areas of red brick and light concrete situated adjacent Casco Bay has resulted in one of Portland's most noteworthy buildings. As such, the B&M Cannery satisfies eligibility under Criterion 5.

History of the Burnham & Morrill Company and the B&M Offices and Cannery

In the Napoleonic era, the French army carried food in small metal boxes that they called canisters. The canisters, or cans for short, functioned more as containers than what we today would consider cans, as they were not sealed. Around the time that Napoleon had waged his war against the European continent, the residents of the greater Portland area were combatting a different kind of enemy, famine. Portland's primary industry in the early-19th century was the lumber industry. When corn failed to grow, the city "had all but starved to death," as was detailed in one retrospective.[3] One Mainer, with ties to France, took it upon himself to experiment with canning corn to ensure that famines would no longer be a major cause for concern.

[3] Morrill, "'B&M, p. 8-9.

During his trips to France in the early-19th century, Isaac Winslow learned about the process of preserving food by canning. Winslow brought the concept back to Portland, Maine, where he took cooked corn and preserved it in a hermetically sealed can.[4] Winslow's experiments highlighted numerous potential challenges to properly preserving food. For years, Winslow's attempts at cooking and canning corn resulted in spoiled products. Then, in 1844, he succeeded in cooking the corn in a common household wash boiler, using an open boiler process, and cut the kernels off the cob with a knife, placing them into the can and sealing it shut. Winslow's son Nathan commercialized the canned corn product and developed a family-run company with his nephew John Winslow Jones.[5] The two operated out of a factory on Fore Street in Portland. The first recorded sale of canned corn was from Nathan Winslow to Samuel S. Pierce of Boston for a dozen cans that cost $4.00.[6] In 1862, John Winslow Jones, then sole owner of the company was granted a patent for the canning process.[7]

Around the same time that the Winslow family was canning corn in the 1840s and 1850s, others in Maine were experimenting with the canning and packing process. In the Bay of Fundy, the Treat, Noble & Company of Eastport was experimenting with packing lobsters and salmon. Similarly, various other firms were established in Portland that packed meats and fish. Among these early firms was the company of Rumery & Burnham who packed meat, fish, clams, poultry, and lobster.[8] Rumery & Burnham was established by Samuel Rumery, who had his start in the industry in the Eastport firm, and George Burnham Jr., who's father was involved in the early years of the food packing industry.[9] The duo took up shop in a factory and warehouse on Franklin Street in the Old Wharf section of Portland (see Figure 2).

[4] "The Canning Industry" in *Fourteenth Annual Report of the Bureau of Industrial and Labor Statistics for the State of Maine 1900* (Augusta, ME: Kennebec Journal Print, 1901), p. 67-68.

[5] Morrill, "'B&M,'" p. 10-11.

[6] "The Canning Industry" in *Fourteenth Annual Report of the Bureau of Industrial and Labor Statistics for the State of Maine 1900* (Augusta, ME: Kennebec Journal Print, 1901), p. 67-68.

[7] Morrill, "'B&M,'" p. 11.

[8] Ibid.

[9] Ibid, p. 11-12.

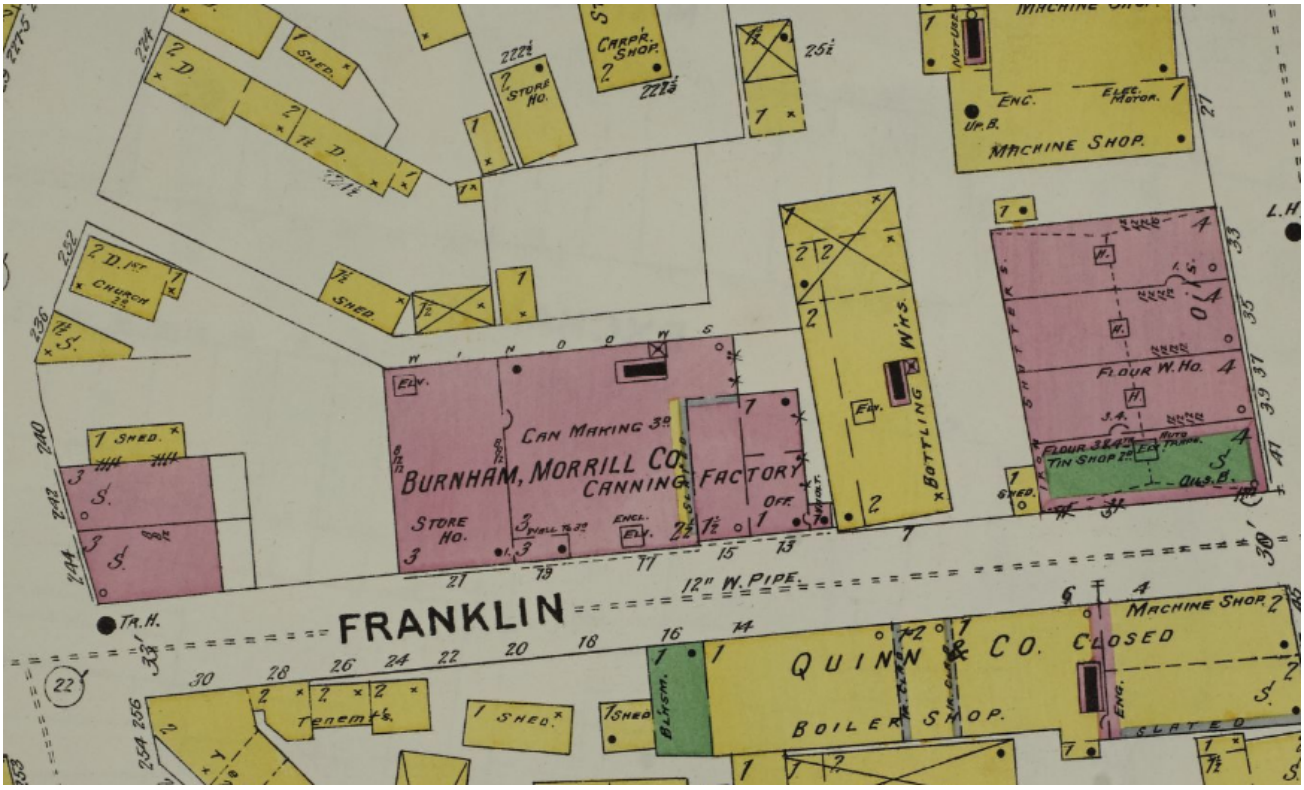


Figure 2: 1896 Sanborn Fire Insurance Map, showing the original location of the Rumery & Burnham Cannery on Franklin Street. Burnham & Morrill, successor to Rumer and Burnham used the Cannery through the remainder of the 19th century.

By the Civil War, even more food packing firms, such as the Portland Packing Company, were established in Maine. In 1867, Rumery & Burnham dissolved, with Samuel Rumery moving to the Portland Packing Company and George Burnham establishing his own firm, named the Burnham & Morrill Company, with his son John E. Burnham and former Rumery & Burnham employee Charles Morrill.[10] Burnham & Morrill maintained operation of the Franklin Street canning factory. This factory building remains extant and is a contributing resource to the Portland Waterfront Historic District (see Figure 3).

[10] "The Canning Industry," p. 68.



Figure 3: 2018 Image of the former Burnham & Morrill Company Cannery on Franklin Street. (Image Source: Google Maps)

The Civil War opened the door for expanded interest in canned foods, which accommodated the early growth of Burnham & Morrill in the late-1860s. Like the earlier Rumery & Burnham, Burnham & Morrill canned meats, vegetables, and seafood products. Beyond the growth of the industry, however, Burnham & Morrill rose above their stiff competition through these highly regarded products. In 1874, the company was awarded the highest medal in excellence for their sweet corn and succotash from the American Institute in New York. Then, in 1876, at the Centennial International Exhibition in Philadelphia the company won another award for excellence. This was shortly followed by a gold medal at the Exposition Universelle Internationale in Paris.[11]

Like many other canning companies in Maine, Burnham & Morrill focused heavily in the 19th century on canned sweet corn (see Figure 4). In a retrospective on the development of the company, however, the grandson of founder Charles Morrill explained that the company found great success in engaging with both farmers and fishermen alike. As he put it, “Burnham & Morrill play no favorites, but open assured markets to the products of both sea and land.” He continued, “the canning of these perishables means stable employment and a solid type

[11] “Sea-Food for Inlanders” in *The Story of a Pantry Shelf: An Outline History of Grocery Specialties* (New York City, NY: Butterick Publishing Company, 1925), p. 45-46.

of citizenship for both the tillers of the soil and the fishers of the Sea."[12] As such, the company also sold canned deep-sea lobsters, mackerel, and clams in addition to corn and succotash (see Figures 5-7).



Figure 4: 1891 Burnham & Morrill trademark label for Paris Sugar Corn. (Image Source: Maine Memory Network)

[12] Morrill, "'B&M,'" p. 13.



Figure 5: 1891 Burnham & Morrill trademark label for Deep Sea Lobster. (Image Source: Maine Memory Network)



Figure 6: 1891 Burnham & Morrill trademark label for Cape Shore Mackerel. (Image Source: Maine Memory Network)

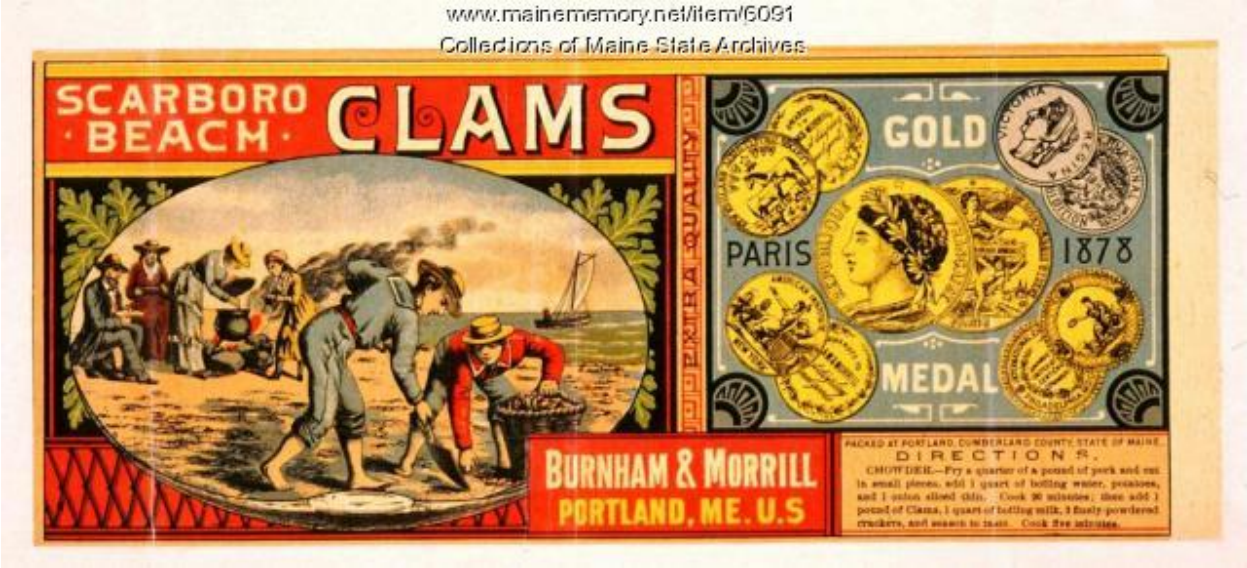


Figure 7: 1891 Burnham & Morrill trademark label for Scarboro Beach Clams. (Image Source: Maine Memory Network)

Throughout the late-19th and early-20th century periods, the company operated primarily out of their Franklin Street plant, with many smaller canning facilities along the "Maine Corn Belt" and the Maine coastline for clam products. Additional factories were established in Nova Scotia, Canada.[13] (see Figure 8)

[13] "Sea-Food for Inlanders," p. 46.

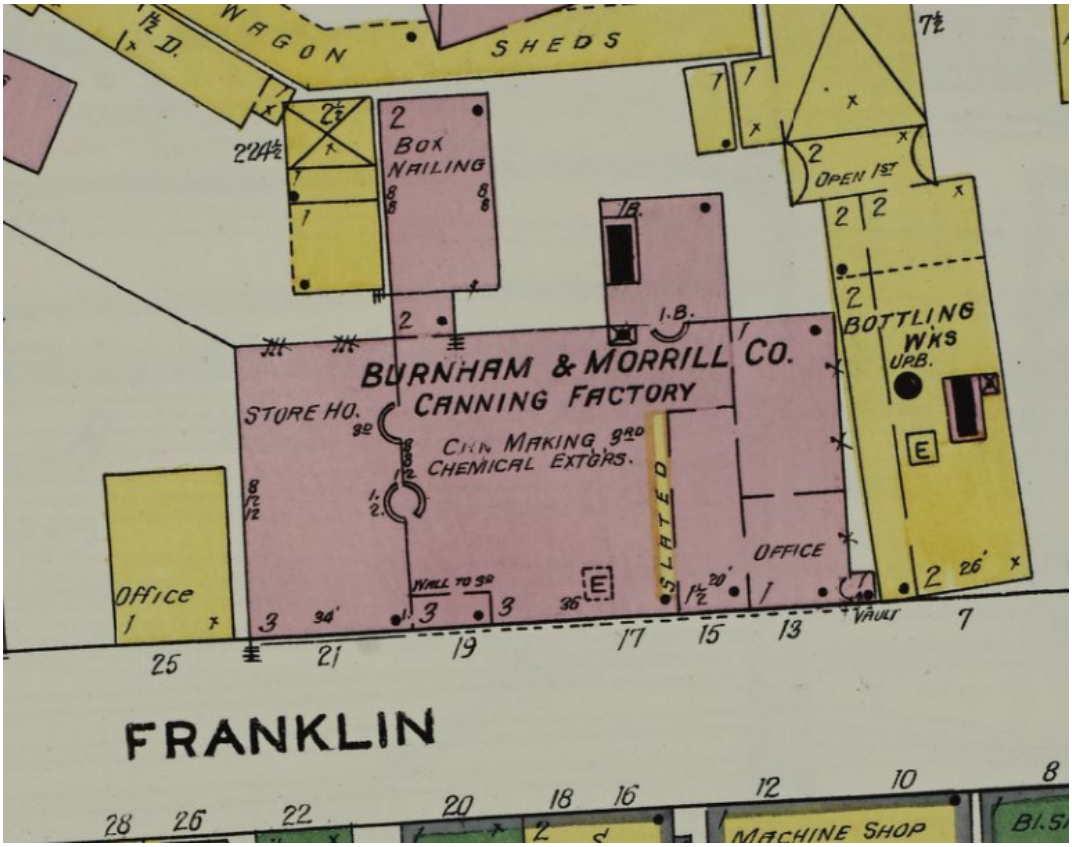


Figure 8: 1909 Sanborn Fire Insurance Map.

Burnham & Morrill's high-quality products were the result of the company's dedication to experimentation and sanitation. From an early period in the company's history, they developed an experimental laboratory and diet kitchen that allowed for better quality products as better practices in sanitation and food sciences were developed.[14] In the first decade of the 20th century, they introduced a new product, fish flakes. Fish flakes were a combination of cod and haddock that was cooked and boned, season and packing in parchment-lined tin.[15]

The company grew in the early-20th century with a greater demand for their products on a national scale. Advertising played an integral role in this period growth. As they had done with the manufacture of their products, Burnham & Morrill was thorough in their advertising. For example, when fish flakes were introduced in the early 1900s, the company conducted a careful investigation through conservative advertising before

[14] Morrill, "'B&M,'" p. 14.

[15] "Sea-Food for Inlanders," p. 47.

approving a national ad campaign.[16] Advertisements for Burnham & Morrill products, therefore, are found in newspapers as close as New York and as far away as Texas, California, and Montana (see Figures 9-12).

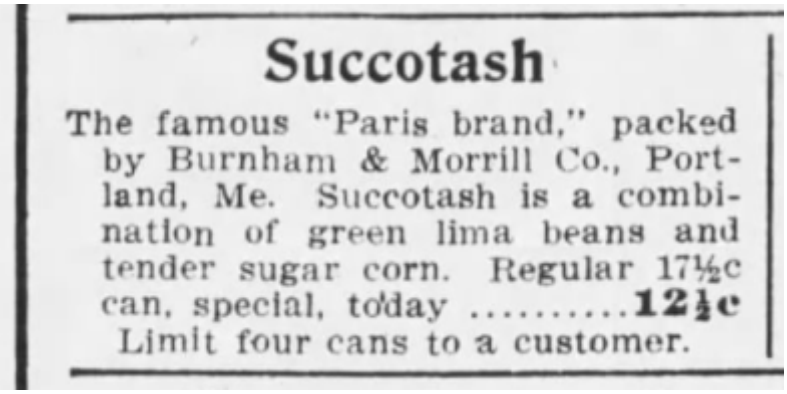


Figure 9: 1908 Burnham & Morrill Advertisement in the *Fort Worth Star-Telegram* (Fort Worth, TX).



Figure 10: 1908 Burnham & Morrill Advertisement in *The Morning Union* (Grass Valley, CA).

[16] "Sea-Food for Inlanders," p. 47.



Succotash

The famous "Paris brand," packed by Burnham & Morrill Co., Portland, Me. Succotash is a combination of green lima beans and tender sugar corn. Regular 17½c can, special, today **12½c**
Limit four cans to a customer.

Figure 11: 1908 Burnham & Morrill Advertisement in *The Anaconda Standard* (Anaconda, MT).



Figure 12: 1910 Burnham & Morrill Advertisement in *The New York Tribune* (New York City, NY).

In 1910, the Burnham family's shares in the company were purchased by George B. Morrill, son of founder Charles Morrill. Morrill's purchase of the company was done on a "character" note, which his son later recalled

that "the bank had confidence in his technical knowledge, his business shrewdness, and his general durability."[17] The Morrill's would go on to take the company to new heights and introduce the company's most well-known product, baked beans.

Demand in Burnham & Morrill goods necessitated the construction of a new, purpose-built, modern canning facility that could take the company into the 20th century. For their factory, Burnham & Morrill turned to local architects George Burnham, no relation to the company's founders, and E. Leander Higgins to design a state-of-the-art headquarters located on the outskirts of Portland in the city's East Deering neighborhood. The subject building was completed in 1913 and situated in a prominent location at the mouth of Back Cove at Casco Bay. The location of the Cannery was advantageous for the company as it was conveniently and strategically located adjacent to the water and the Grand Trunk Railway railroad tracks. As illustrated in the 1914 Richards Atlas of the City of Portland, the complex was designed with direct rail access, as well as a deep-water harbor that allowed for shipping and receiving direct to the Cannery (see Figure 13).

[17] Morrill, "'B&M,'" p. 14.

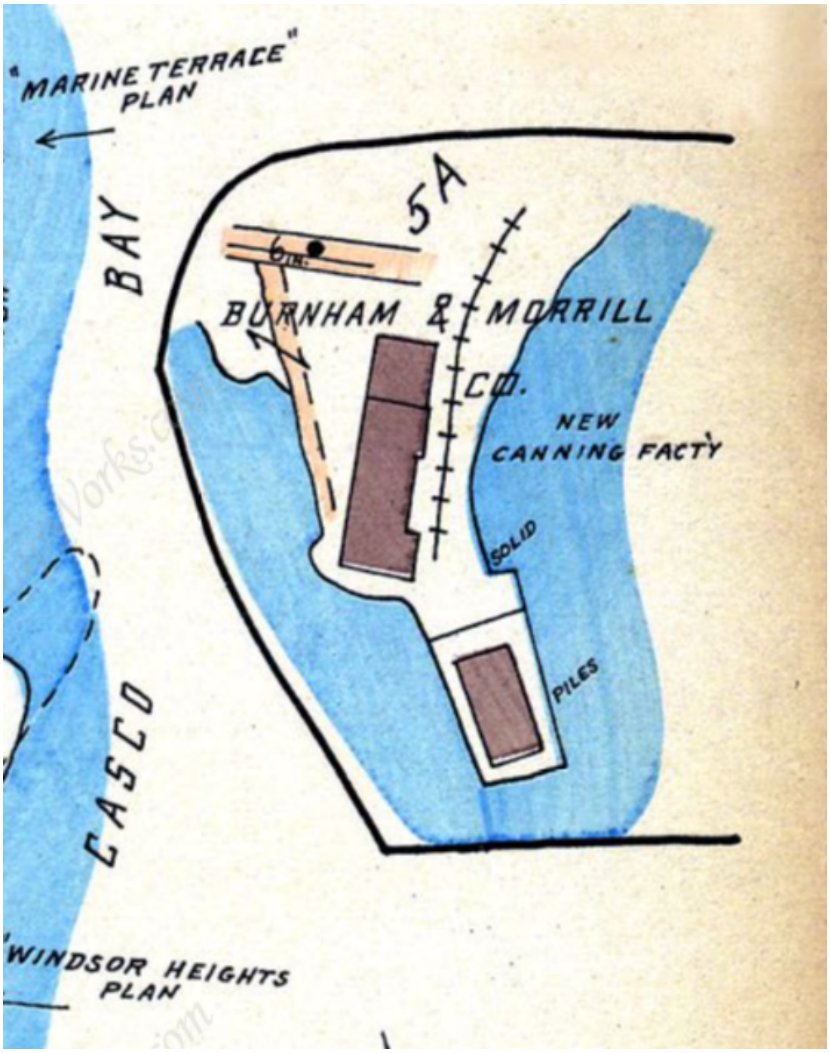


Figure 13: 1914 Richards Atlas of the City of Portland, showing the "New Canning Fact'y" of the Burnham & Morrill Co.

Following construction, the new Cannery building was hailed as “one of the industrial show places of [Maine].”[18] Within the building, the company established a sanitary facility complete with kitchens, packing rooms, ovens, a new laboratory space, and the executive offices “where freshly uniformed employees [worked] under ideal conditions affording an abundance of sunlight and fresh air.”[19]

[18] “Sea-Food for Inlanders,” p. 47.

[19] Ibid.



Figure 14: 1924 Portland Tax Record Photograph, Burnham & Morrill Company Offices and Cannery. (Image Source: Maine Memory Network)

At the same time that the B&M Cannery was constructed, the company also constructed a codfish canning building.[20] The two-story building was also designed by Burnham & Higgins and was constructed on a reinforced concrete wharf by the Aberthaw Construction Company of Boston, Massachusetts.[21]

[20] The codfish building has not been nominated for landmark designation, due to its poor structural condition resulting from high levels of chloride ions in the concrete. The building does not have sufficient integrity of condition, materials or workmanship necessary to make it worthy of preservation or restoration.

[21] "Concrete Wharf To Be Built," *Boston Evening Transcript* (Boston, MA), Nov. 20, 1912.



Figure 15: 1924 Portland Tax Record Photograph, Burnham & Morrill Company Codfish Canning Building. (Image Source: Maine Memory Network)

The original Cannery complex consisted solely of the subject building and the codfish canning building, with landscaped lawns and paved driveways leading up to the B&M Cannery (see Figures 16-18).

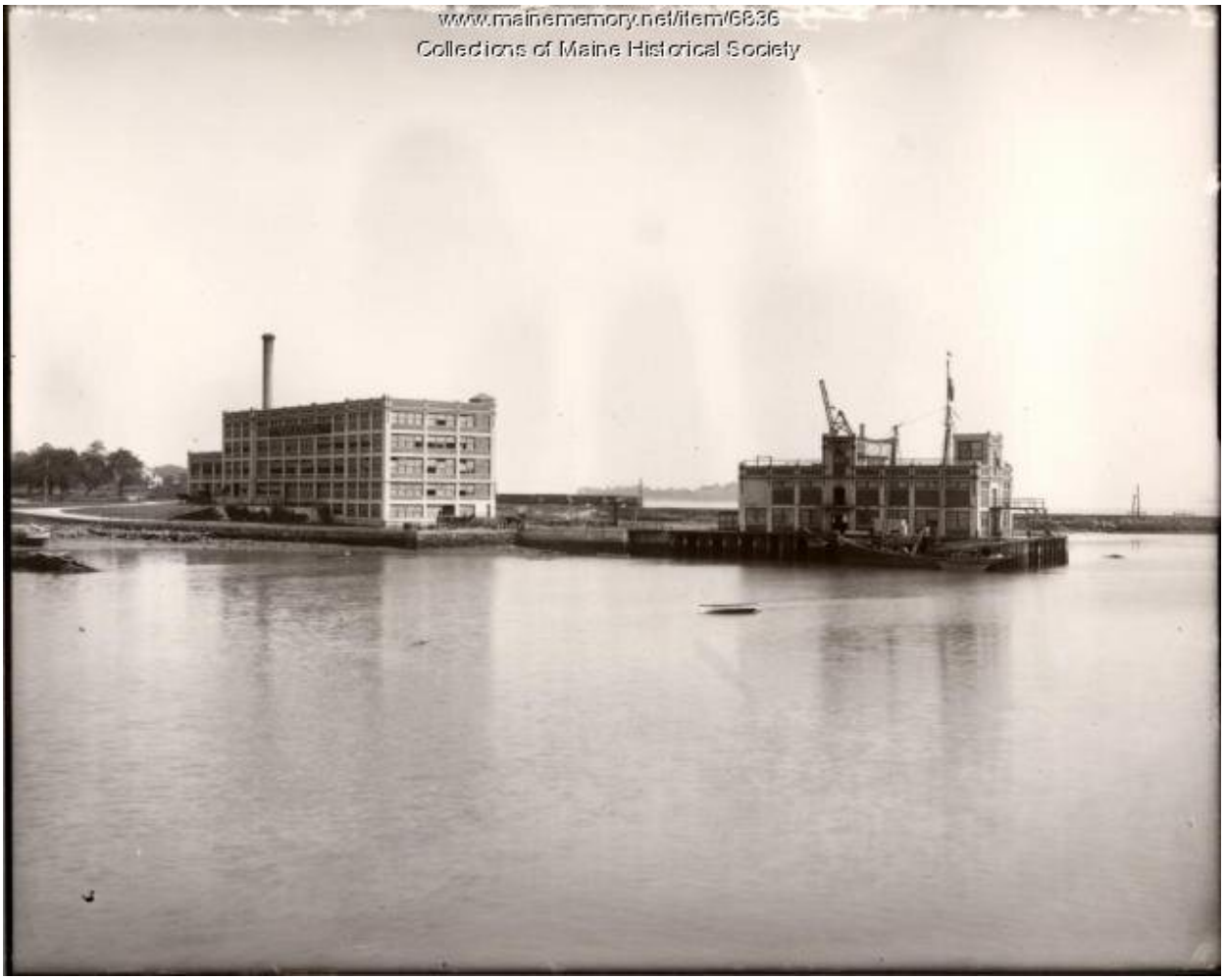


Figure 16: c. 1930 Photograph, Burnham & Morrill Company Plant. (Image Source: Maine Memory Network)



Figure 17: 1930s photograph showing the construction of Tukey's Bridge with the Burnham & Morrill Company Plant at right. (Image Source: Maine Memory Network)



Figure 18: 1930s Photograph, Burnham & Morrill Company Plant. (Image Source: Maine Memory Network)

Completion of the subject building increased Burnham & Morrill's output and increased their employment numbers, but, perhaps most importantly, it also resulted in the introduction of their most notable product, baked beans. Newspaper advertisements indicate that the company was producing baked beans as early as the first decade of the 20th century. It was not until 1927, however, that the company began canning baked beans within the subject building.[22] The famous B&M Brick Oven Baked Beans grew to become a nationally recognized brand name product that was sold on grocery store shelves throughout the United States (see Figure 19).

[22] McGuire, "B&M Baked Beans leaving Portland after more than 150 years."



Figure 19: 1946 B&M Baked Beans advertisement. (Image Source: *Good Housekeeping*, Nov. 1946)

At the company's height in the mid-century period, sources vary, but indicate that they employed between 300 and 500 employees at the B&M Cannery.[23] This total does not account for the number of employees at secondary canning facilities in Maine and Nova Scotia, which included 750 additional employees hired each year for seasonal work, picking and packing string-beans, corn, squash, and blueberries.[24] As further advances in machinery were introduced during that period, the Cannery's filling machines could produce more than 150 cans per minute, depending upon the product.[25]

In that mid-century period, the company undertook their final major construction campaigns at the larger Burnham & Morrill complex. Beginning in 1947, a two-story cooking building was completed to the east of the B&M Cannery. This was followed by the c. 1951 construction of a storage and labeling building to the north of the B&M Cannery and a woodworking and storage building, also constructed c. 1951. Also at that time a one-story CMU block loading dock and connector was built between the B&M Cannery and the codfish canning building. Each of these buildings are illustrated on the 1951 Sanborn Fire Insurance Map (see Figure 20).

[23] Morrill, "'B&M,'" p. 15; McGuire, "B&M Baked Beans leaving Portland after more than 150 years."

[24] Morrill, "'B&M,'" p. 15.

[25] Ibid, p. 14.



Figure 20: 1951 Sanborn Fire Insurance Map.

Following the physical expansion of the plant, Burnham & Morrill was recognized as the "largest food packing organization in the State of Maine and one of the largest in the United States."[26] Further, the company was the largest producer of baked beans in the country. At that time, they employed more than 300 people at the plant.



Figure 21: 1958 aerial image of B&M plant. (Image Source: *Bangor Daily News*)

In 1965, the City of Portland renamed the street address of the building to Bean Pot Circle, honoring the impact of the company and its world-renowned baked beans. That same year, the Burnham & Morrill was purchased by the Watertown, Massachusetts-based food packing and canning company William Underwood Company.[27] Following the initial sale of Burnham & Morrill, the complex continued to expand, and the company changed hands at various points throughout the latter portions of the 20th century. Despite changes in ownership, the B&M Cannery remained in active use until 2021.

[26] "Painstaking, Careful, Non-Rushing Methods Reasons For Great Growth At Burnham, Morrill," *The Bangor Daily News* (Bangor, ME), Nov. 4, 1958.

[27] "Burnham & Morrill Company Records," Located in the Raymond H. Fogler Library Special Collections, The University of Maine.

Throughout the 108 years that the Burnham & Morrill Company called the B&M Cannery home, the company etched a significant place in Portland's industrial history. The canning and food packing industry traces its origins in America to the City of Portland and the State of Maine, becoming one of its largest industries in the 19th century. The Burnham & Morrill Company exemplifies the industry in Portland and Maine as one of its longest lasting companies and one that grew to become one of the largest in the entire United States by the mid-20th century period. As a truly Maine company, for well over 150 years, the Burnham & Morrill Company packed food products are historically associated with the state and larger New England region, placing Boston Baked Beans, Maine lobster, and Atlantic scallops into homes throughout the country. As such, the B&M Cannery stands as the physical representation of the company's impact on Portland and Maine's industrial heritage.

Architects –Burnham and Higgins

Among Maine's most notable architects of the late-19th and early-20th century period, few rise to the prominence of George Burnham. Throughout his career, Burnham designed numerous commercial, industrial, municipal, and residential buildings throughout Maine, with many prominent examples of his work in Portland. With the firm of Burnham and Higgins, Burnham and his partner E. Leander Higgins continued this legacy, and designed some of Portland's most notable homes and buildings.

George Burnham was born in Portland, Maine in 1875. He undertook his architectural training at the Massachusetts Institute of Technology (MIT), graduating in 1898. While studying at MIT, Burnham studied architectural theories made famous at the Ecole des Beaux Arts in Paris. Following his graduation, Burnham first worked in New York City under architect Thomas Tryon.[28]

In 1902, Burnham contracted typhoid and pneumonia forcing him to return to his hometown. In Portland, Burnham went right to work designing homes and commercial buildings in the Colonial Revival and Beaux Arts styles. Among Burnham's earliest commissions were the Perez Burnham House (1902), completed in the Federal Revival style, and the Porteous, Mitchell and Braun Block (1904), designed in the Beaux Arts style.[29] In 1904, Burnham was awarded perhaps his most important and famous contract, the Cumberland County Courthouse. Burnham beat out eight other architects, including John Calvin Stevens, perhaps Maine's most prominent architect. Burnham worked on the courthouse project until 1909, but designed various smaller

[28] Roger G. Reed, "George Burnham" in *A Biographical Dictionary of Architects in Maine*, Jan. 1984.

[29] Ibid.

projects concurrently.[30] The Cumberland County Courthouse is a contributing resource to the Portland Waterfront National Register Historic District and the Portland Waterfront Local Historic District.

In 1909, Burnham hired E. Leander Higgins as a draftsman. Higgins was born in Bar Harbor, Maine in 1879 and, like Burnham, trained at MIT and graduated in 1906.[31] During Higgins' early years working with Burnham, George Burnham completed another of his most well-known designs, the Maine Central Railroad Station in Gardiner, Maine (1911); the station was listed in the National Register of Historic Places in 1982.[32] Higgins was named a partner at the firm in 1912 and the firm subsequently changed its named to Burnham and Higgins.[33]

The firm of Burnham and Higgins was primarily known for their residential designs in Portland. In his biographical sketch of George Burnham, architectural historian Roger Reed explained that the firm's residential designs "characterize the work of the firm."[34] He further explained that their homes followed an established format:

> "Typically this consisted of rectangular structures with broad hipped roofs and over-hanging eaves supported on modillion blocks or exposed rafter ends. Dormers, an important decorative feature in a Burnham and Higgins house, are prominently situated to provide maximum exposure."[35]

Among their many homes Burnham and Higgins designed in the popular revival styles of the period, were the Charles F. Flagg House (1913) in the Mediterranean Revival style, and the Sidney St. Felix Thaxter House (1918) in the Colonial Revival style.

In 1913, Burnham and Higgins designed two industrial buildings, the firm's only recognized industrial examples. The B&M Cannery and its associated codfish canning building highlighted the firm's ability to work outside its comfort zone and resulted in the building's prominent use of concrete at a time when brick and wood framing remained the dominant structural and facing materials in industrial architecture. Additionally, the

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[30] Alessa Wylie, "Architect of the Week: George Burnham," Greater Portland Landmarks, accessed April 4, 2022, https://www.portlandlandmarks.org/blog/2020/5/14/architect-of-the-week-george-burnham.

[31] "Biographical Note," in Higgins (Edward Leander) Architectural Records, located in the Raymond H. Fogler Library Special Collections, The University of Maine.

[32] Frank A. Beard, "Gardiner Railroad Station," National Register of Historic Places Inventory-Nomination Form, 1982.

[33] Reed, "George Burnham."

[34] Ibid.

[35] Ibid.

B&M Cannery's location on the outskirts of Portland afforded the architects the opportunity to incorporate the Cannery into a larger setting. Concurrently, the firm designed the Portland Shoe Manufacturing Company factory on Pearl Street in downtown Portland. The downtown factory building is much more traditional. The narrow, brick building displays minimal ornamentation, which was largely achieved through its fenestration (see Figure 22).



Figure 22: 1924 Portland Tax Record Photograph, Portland Shoe Manufacturing Company. (Image Source: Maine Memory Network)

Through the remainder of the 1910s, the firm continued to design buildings in Portland and throughout Maine. In 1919, Burnham retired.[36] Following Burnham's retirement in 1919, Higgins "went on to become a leading practitioner of his profession in Maine during the 1920s and 1930s." His son, Ambrose S. Higgins, followed in his footsteps, opening his own firm in Bar Harbor after serving in World War II.[37] In his final years, George Burnham suffered from severe mental depression. He took his life in 1931.[38] Higgins passed away in 1951.[39]

[36] "Business Notices," *The American Contractor* (New York City, NY), January 18, 1919.

[37] "Biographical Note."

[38] *Portland Evening Express*, June 3, 1931.

[39] "Biographical Note."

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APPENDIX

Parcel Map



Burnham & Morrill Company Office & Canning Factory
1 Beanpot Circle
Portland, ME
March 2022



Burnham & Morrill Company Office & Canning Factory
1 Beanpot Circle
Portland, ME
March 2022



1. B&M Factory, West Elevation, looking southeast.



2. B&M Factory, West Elevation, looking east.



3. B&M Factory, South Elevation, looking north.



4. B&M Factory, North Elevation, looking south.



5. B&M Factory, North and West Elevations, looking southeast.



6. B&M Factory, North and West Elevations, looking southeast.



7. B&M Factory, North and East Elevations, looking southwest.



8. B&M Factory, North and East Elevations, looking southwest.



9. B&M Factory, Second Floor, looking north.



10. B&M Factory, Fourth Floor, looking south.



11. Site, Codfish Canning Building, looking southeast.



12. Site, Codfish Canning Building looking northwest.



13. Site, Codfish Canning Building, looking southwest.



14. Site, Storage/Labeling Building looking northwest.



15. Site, Woodworking/Storage Building, looking northwest.



16. Site, Entrance and Woodworking/Storage Building looking south.

General Comments

- The submitted Institutional Development Plan (IDP) begins to, but does not completely, address design-related concerns of anticipated growth. As revisions are made to the IDP, keep in mind the following required content of §8.5.4.C.2.b.iv of the City's Land Use Code:

  a) An analysis of project impacts to neighboring properties and public spaces, including potential shadow, wind, and lighting impacts, impacts of height and massing, and impacts to historic resources.
  b) An analysis of transition areas between the institution and adjoining neighborhoods, including identification of key character defining components of the surrounding context
  c) An analysis of existing Crime Prevention Through Environmental Design issues and identification of how these principles would be addressed as part of the proposed campus development.
  d) A conceptual built environment/public realm plan, representing the synthesis of the analysis and including a set of guidelines for urban design, landscape, open space, and streetscape treatments, with particular attention to the treatment of edges (both within and abutting the IOZ boundary) to achieve compatible transitions.

- The submitted Regulatory Framework begins to, but does not completely, address design-related content. As revisions as made to the Regulatory Framework, keep in mind the following requirements of §8.5.5.D of the City's Land Use Code:

  4. *Dimensional Requirements.* Graphics, sketches, or standards, including details for transition zones within the IOZ boundary.

  8. *Design.* Graphics and standards to clarify building placement and envelope (height and massing); guidelines for integration of site features; required treatments for transition zones and treatment for all edges (Both within and abutting the IOZ boundary); guidelines for establishing campus identity.

- Since the IDP proposes automobile access on the perimeter of the site, additional consideration should be taken when revising the IDP and Regulatory Framework on how the dimensional and design elements of buildings will result in pedestrian and bicycle-oriented design, enhance the public realm, and how design requirements will need to differ in areas with and without automobile access.

- While the site is physically removed from the East Deering Neighborhood by I-295 and railroad right-of-ways, the Waterfront, nearby water-related industrial uses, and the Cannery Building can inform contextual design guidelines and standards, especially for transition areas.

- Expanding the height map to a campus concept map that includes elements such as, but not limited to, proposed building envelopes, identification of required transition areas, flood zones, designated open space areas, and automobile and non-automobile street networks & design helps support a more succinct and complete IDP & Regulatory Framework. A similar example of this can be found in the attached Master Development Plan for Thompson's Point.

IDP Comments

- **Phasing.** Describe site interim conditions proposed throughout near - long term. Clarify whether it is the intent to program in the near-term to accommodate a large amount of surface parking and what opportunities for public open space can be allowed within phasing. Explore temporary conditions for areas where public engagement is anticipated.
- **Design guidelines.** Suggest to follow design principles with design guidelines to associate the broad design approach with applicable design standards.
- **Design guidelines.** Encourage an organization of design standards to include Campus circulation (site access, pedestrian connectivity, streetscape design, parking, service and wayfinding), Building design (placement, height, massing, composition, articulation, parking structures, sustainable technologies and materials), Public realm (Waterfront, accessibility, building entries, CPTED, lighting design) and Open Space (public access, buffer adjacent edges, coastal resilience, natural resource enhancement, recreation and integrated private open space).
- **Design guidelines.** Include an additional section for Historic Preservation.

Regulatory Framework Comments

- **C. Uses.** Define the mixed-use intent of the Roux Campus to facilitate the broader vision as a waterfront destination that fosters environmental stewardship, places to gather, connectivity and community engagement. Express how the contribution of mixed-use creates a sustainable and resilient campus and allows for activation of the public realm via building entries, ground-floor accessibility, open space, waterfront access and landscaping at the shoreline and buffers.
- **D. Dimension requirements.** Incorporate transition zone regulations at the edges of the property that define appropriate heights at adjacent uses, such as residential neighbors, along primary circulation vehicular routes, public access trail and shoreline.
- **Figure 8-E Height Map.** Consideration for a (15') stepback requirement above height of 50 feet with no buildings closer than 40 feet apart. Provide cross section massings to illustrate the heights proposed and adjacent conditions of the neighborhood, I-295, shoreline, and structures.
- **E. Transportation.** Encourage a pedestrian access and circulation network within the IDP.
- **F. Environment. 1.** Each phase and/or building shall include open space requirements to allow for recreation, public access, and private gathering spaces.
- **F. Environment. 2.** Utilize a measurable sustainable certification, such as LEED, SITES, WELL, and/or USGBC.
- **F. Environment. 4.** Include a campus concept map within the IDP to minimize the impacts of sea level rise designed to a minimum of the 2-feet above BFE.
- **F. Environment.** Encourage shoreline edge protection through ecological infrastructure to enhance natural resources and habitat restoration.
- **H. Design.** Add design principles and guidelines.



PARKING SUMMARY

PANHANDLE	240
GARAGE	730
PENINSULA	299
RESIDENTIAL UNITS	58 * not included
SERVICE AREA	11 * not included
TOTAL	1,269

PROGRAM KEY

A	MIXED USE	34,000 SF
B1	MULTI-PURPOSE	14,000 SF
B2	RESTAURANT	6,000 SF
B3	FUTURE BUILDING	6,000 SF
C1	EDUCATIONAL	41,000 SF
C2	GYM / SPORTS MEDICINE	11,000 SF
D1	HOTEL	70,000 SF
D2	RESTAURANT	6,000 SF
E	PARKING GARAGE	730 SPACES
F	EVENT CENTER	45,000 SF
G	CULTURAL CENTER	25,000 SF
H	OFFICE	180,000 SF
I	RESIDENTIAL / MIXED USE	TBD
J	RESIDENTIAL / MIXED USE	TBD

GRAPHIC SCALE

80 0 40 80 160

(IN FEET)
1 inch = 80 ft.

REVISED MASTER PLAN

REV	DATE	DESCRIPTION
1	-	- 1 9-17-2013 SUBMIT TO CITY

REVISIONS

P.E.

LIC. #

NORTH

CARROLL ASSOCIATES
LANDSCAPE ARCHITECTS
217 COMMERCIAL STREET, STE 200
PORTLAND, MAINE 04101
207.772.1552 V. F. 207.772.0712

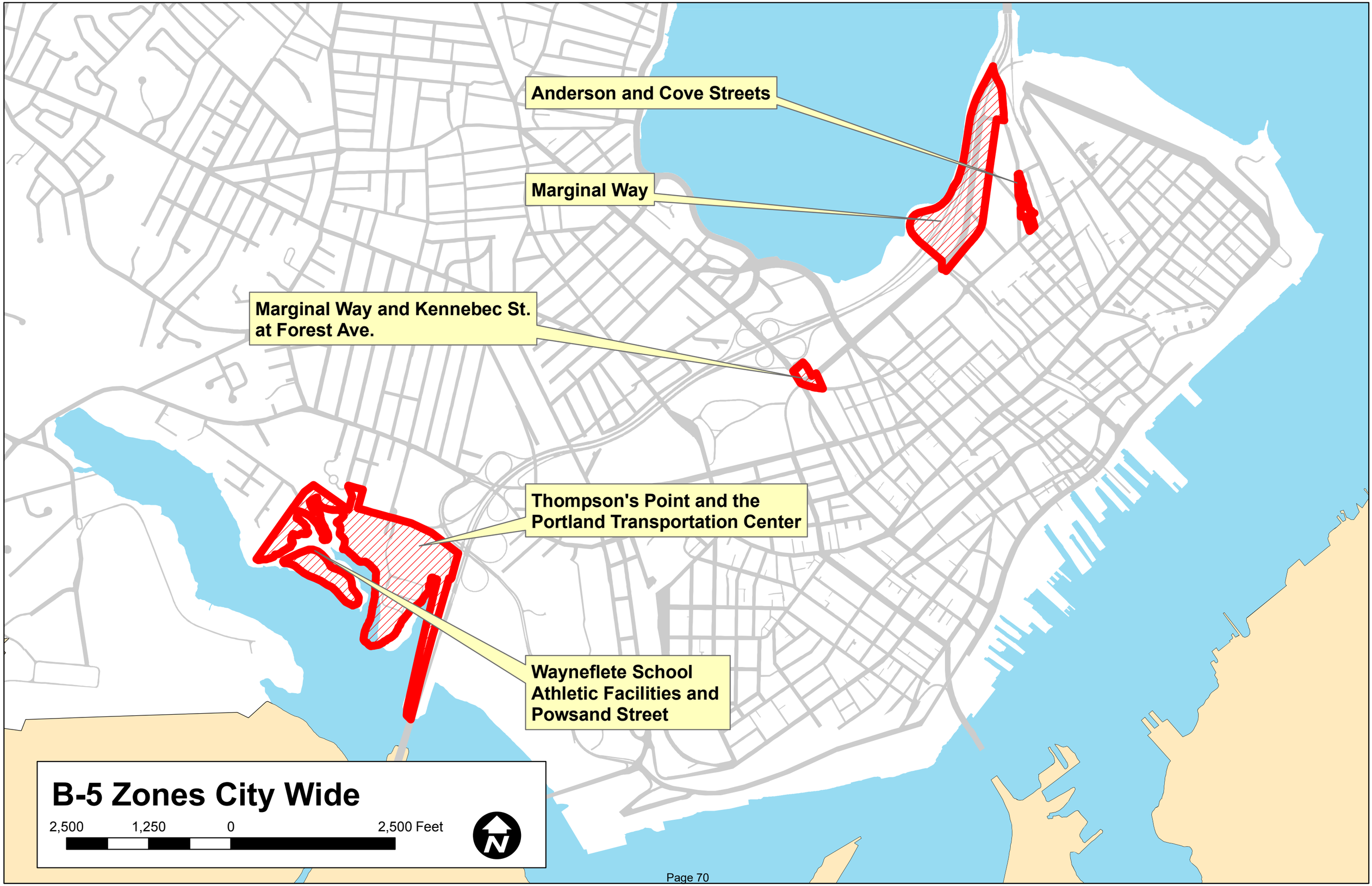
PROJECT
THE FOREFRONT AT THOMPSON'S POINT

SHEET TITLE

CLIENT
FOREFRONT PARTNERS I, LP

ENGINEERS FST Since 1914
FAY, SPOFFORD & THORNDIKE, INC.
ENGINEERS • PLANNERS • SCIENTISTS
778 MAIN ST, SUITE 8, SOUTH PORTLAND, ME 04106

DRAWN:	- EK	DATE:	10-24-2013
DESIGNED:	-	SCALE:	- 1" = 80'
CHECKED:	- PC	JOB NO.	-
FILE NAME:	-		
SHEET	-		


Anderson and Cove Streets
Marginal Way
Marginal Way and Kennebec St.
at Forest Ave.
Thompson's Point and the
Portland Transportation Center
Wayneflete School
Athletic Facilities and
Powsand Street
B-5 Zones City Wide
2,500
1,250
0
2,500 Feet
N

IDEALS
Initiative for Digital Engineering and Life Sciences

Charles E. Hewett, Ph.D.
Executive Director

chuck.hewett@ideals.org

February 25, 2022

Att. A

Christine Grimando, Director of Planning and Urban Development
City of Portland
389 Congress St.
Portland, ME 04101

RE: The Initiative for Digital Engineering and Life Sciences
Application for Text and Map Amendment at 1 Bean Pot Circle

Dear Christine:

We are pleased to submit this application for a text and map amendment on behalf of The Initiative for Digital Engineering and Life Sciences (IDEALS). IDEALS is a Maine non-profit corporation tasked with developing a campus for the Roux Institute at Northeastern University (the "Roux Campus") at the former B&G Foods site at 1 Bean Pot Circle.[1] This application includes: 1) a text amendment to allow IDEALS to utilize the Institutional Overlay Zone ("IOZ") provisions of the Land Use Code; and 2) a map amendment to change the zoning on the site from I-M to an underlying B-5 Mixed-Use Business Zone with an IOZ overlay.

The Roux Institute at Northeastern University ("Roux Institute") is an institution for cutting-edge educational, research and collaborative programs in areas including artificial intelligence, computer and data sciences, digital engineering, advanced life sciences, and medicine. The Roux Institute launched in early 2020 and now offers post-graduate degrees and certifications and conducts research while partnering with private companies and government entities to spur innovation, entrepreneurialism, and workforce talent. In order to fulfill its educational and economic potential, the Roux Institute seeks to develop a campus that will allow for continued growth of the education and research programs of the Roux Institute while providing space for collaborative partnerships, with services and amenities that both support those programs and serve the community.

Consistent with the purpose of the IOZ as a regulatory mechanism to facilitate a consistent, predictable, and clear growth management process, IDEALS seeks designation of an IOZ for the Roux Campus. We have provided documentation to support the two components of an IOZ designation: an Institutional Development Plan (IDP) and a Regulatory Framework. The proposed IDP establishes baseline institutional data for existing land uses and services while also communicating planned growth, forming the basis for the Regulatory Framework. Unlike other institutions for which the IDP process was established, the Roux Institute is in its early years and has not established a stand-alone campus. The IDP allows IDEALS to memorialize its long-term strategic plan in consultation with the Portland community at the very outset of development.

IDEALS will simultaneously seek to change the underlying zone to B-5 Mixed-Use Business. The purpose of the B-5 Zone is "to provide areas of the peninsula near the downtown where a mixture of uses, including

[1] IDEALS is under contract to purchase the property and closing is expected to occur within the month.

IDEALS
Initiative for Digital Engineering and Life Sciences

Charles E. Hewett, Ph.D.
Executive Director

chuck.hewett@ideals.org

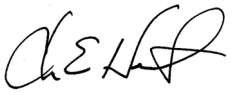
marine, industrial, commercial, and residential, is encouraged. The B- 5 and B-5b zones are characterized by larger underdeveloped lots with great potential for denser, clustered, urban mixed-use development and more efficient reuse of existing land and buildings. It is anticipated that the dense, mixed-uses of the B-5 and B-5b zones will rely on a shared infrastructure system, including service alleys, parking lots, public transportation facilities, stormwater management, and driveways." The Roux Campus fits squarely within this purpose. For point of reference, Thompson's Point is zoned B-5 and has many similarities to the former industrial use and future mixed uses envisioned on this site.

IDEALS intends to create a dynamic, mixed-use campus that contributes to the City of Portland and the East Deering neighborhood without encroaching on them or unduly burdening City resources. Permitted uses on the site will include educational, research, collaboration, and entrepreneurial uses, anchored by a signature academic building, as well as ancillary uses such as office and lab space for institutional partners, housing for students, faculty, and employees, a hotel for visitors, retail and personal services. By providing these ancillary uses on site, the Roux Campus will support the demand created by the Roux Institute and will minimize the impact on existing City resources by, for example, the creation of hundreds of new housing units and minimizing vehicle trips from the site to access services. The Roux Institute offers scholarship funds to students from a wide variety of diverse backgrounds and the campus will offer an accessible venue for them to learn, experiment and grow.

The creation of a new campus provides the opportunity to establish a people-oriented space right from the start. It will prioritize people over cars by creating a pedestrian-friendly landscape supported by multi-modal programs that provide incentives for alternative transportation options. The campus will improve site resilience and sustainability by replacing much of the existing pavement and roof tops with green space and incorporating sustainable building practices. To the extent practicable, the campus will deploy carbon neutral construction and rely on renewable energy. The campus will feature extensive open space for all members of the public to enjoy and to have new opportunities to access Portland's waterfront.

Thank you for your consideration. We look forward to working with you on this exciting new campus.

Sincerely,



Charles E. Hewett, Ph.D.

IDEALS
Initiative for Digital Engineering and Life Sciences

Charles E. Hewett, Ph.D.
Executive Director

chuck.hewett@ideals.org
207.664.3427 cell

June 6, 2022 Att. B

Zachary Powell, Planner
City of Portland
389 Congress St.
Portland, ME 04101

RE: The Initiative for Digital Engineering and Life Sciences
Revisions to Application for Text and Map Amendment at 1 Bean Pot Circle

Dear Zach:

I am writing on behalf of The Initiative for Digital Engineering and Life Sciences (IDEALS) with several updates to our proposed text and map amendment. Since our original submission of the application in February, we have held three meetings with neighbors (in addition to the three meetings held pre-submission) and have had numerous conversations with City planning staff and members of the community regarding our proposal. We revisited a number of aspects of the proposal and continued to refine design concepts for the Roux Campus. As a result, we have made some significant modifications to the proposed Institutional Development Plan ("IDP") and Regulatory Framework.

First, in response to concerns about the scale of development, we have reduced the development program by 468,000 sq. ft., which is a 27% reduction from the original program presented in our application. Next, we have reduced building heights in the Regulatory Framework and have moved the greatest allowable heights to the center of the site. We have also added limitations on the hotel use, which is a permitted use in the proposed underlying zone. In response to concerns about having hotels as a permitted use, we have limited hotel use to only one hotel permitted in the zone, which is limited to a maximum of 130 rooms and maximum of eight floors, not including structured parking. Finally, we have amended some areas of text in the IDP and Regulatory Framework in response to initial feedback received from the planning staff.

The attached revised IDP includes the following changes:

- Page 13: table and image updated to reflect modified development plan
- Page 14: text and sketches updated
- Pages 15-17: edits to text
- Page 22: text and graphic amended to include third high crash location
- Page 23: text and graphic amended
- Page 24: one image replaced, one text change re: Parking Demand and Capacity
- Page 28: text and sketches updated
- Page 30: text updated
- Additional minor, non-substantive edits to text

IDEALS
Initiative for Digital Engineering and Life Sciences

Charles E. Hewett, Ph.D.
Executive Director

chuck.hewett@ideals.org
207.664.3427 cell

The attached revised Regulatory Framework includes the following changes:

- Amended Height Map
- Added limitations on hotel use
- Amended use table limited to include only those uses not permitted in the proposed underlying B-5 Zone
- Edits to environmental standards
- Additional minor edits to text

We have also included, as supplemental information, massing figures, neighborhood views, and shadow studies. Prior to the second workshop we will provide more detailed supplemental information related to transportation.

Thank you for your consideration. Please let us know if you have any questions or need additional information.

Sincerely,



Charles E. Hewett, Ph.D.

41 Hutchins Drive
Portland, Maine 04102
www.woodardcurran.com

T 800.426.4262
T 207.774.2112
F 207.774.6635

Att. C

Via Electronic Mail

August 4, 2022

Zach Powell, Planner
City of Portland Planning Division
389 Congress Street
Portland, Maine 04101

Re: The Roux Campus – 1 Bean Pot Circle – Institutional Development Plan (IDP) and Regulatory Framework Response to City of Portland Planning Staff Comments

Dear Zach:

Thank you for coordinating the review of the Zone Change Application for the Roux Campus located at 1 Bean Pot Circle in Portland, Maine. Enclosed, please find a revised Institutional Development Plan (IDP) and Regulatory Framework. These materials have been updated to reflect the current concept design/visualization of the campus. These updates were developed with consideration of comments received from City Staff, as summarized below.

General Comments

- The submitted Institutional Development Plan (IDP) begins to, but does not completely, address design-related concerns of anticipated growth. As revisions are made to the IDP, keep in mind the following required content of §8.5.4.C.2.b.iv of the City's Land Use Code:

  a) An analysis of project impacts to neighboring properties and public spaces, including potential shadow, wind, and lighting impacts, impacts of height and massing, and impacts to historic resources.

  Response: Page 30 of the IDP, entitled "Environment" has been updated to include additional analysis of shadow, wind, lighting, height and massing. Page 8, entitled "Historic Resources" has also been updated to include analysis of the historical context of the site relative to the East Deering Neighborhood.

  b) An analysis of transition areas between the institution and adjoining neighborhoods, including identification of key character defining components of the surrounding context.

  Response: Page 28, entitled "Transitions" has been added to the IDP.

  c) An analysis of existing Crime Prevention Through Environmental Design issues and identification of how these principles would be addressed as part of the proposed campus development.

  Response: An analysis of Safety & Crime Prevention Through Environmental Design (CPTED) has been included on Page 28 of the IDP.

  d) A conceptual built environment/public realm plan, representing the synthesis of the analysis and including a set of guidelines for urban design, landscape, open

space, and streetscape treatments, with particular attention to the treatment of edges (both within and abutting the IOZ boundary) to achieve compatible transitions.

Response: Page 28, entitled "Transitions" has been added to the IDP and the Design Guidelines on page 15 has been updated accordingly.

- The submitted Regulatory Framework begins to, but does not completely, address design-related content. As revisions as made to the Regulatory Framework, keep in mind the following requirements of §8.5.5.D of the City's Land Use Code:

  4. ***Dimensional Requirements.*** **Graphics, sketches, or standards, including details for transition zones within the IOZ boundary.**

     Response: Standards and narratives related to Design have been added to Section H of the Regulatory Framework. The height map has also been updated to extend the 75-ft max height along the western project boundary.

  8. ***Design.*** **Graphics and standards to clarify building placement and envelope (height and massing); guidelines for integration of site features; required treatments for transition zones and treatment for all edges (Both within and abutting the IOZ boundary); guidelines for establishing campus identity.**

     Response: Standards and narratives related to Design have been added to Section H of the Regulatory Framework.

- Since the IDP proposes automobile access on the perimeter of the site, additional consideration should be taken when revising the IDP and Regulatory Framework on how the dimensional and design elements of buildings will result in pedestrian and bicycle-oriented design, enhance the public realm, and how design requirements will need to differ in areas with and without automobile access.

  Response: Standards and narratives related to these design elements have been added to Section H of the Regulatory Framework. Page 15 of the IDP was also revised to reflect these Design Standards.

- While the site is physically removed from the East Deering Neighborhood by I-295 and railroad right-of-ways, the Waterfront, nearby water-related industrial uses, and the Cannery Building can inform contextual design guidelines and standards, especially for transition areas.

  Response: Page 28, entitled "Transitions" has been added to the IDP and the Design Guidelines on page 15 has been updated accordingly.

- Expanding the height map to a campus concept map that includes elements such as, but not limited to, proposed building envelopes, identification of required transition areas, flood zones, designated open space areas, and automobile and non-automobile street networks & design helps support a more succinct and complete IDP & Regulatory Framework. A similar example of this can be found in the attached Master Development Plan for Thompson's Point.

Response: Figures and narratives have been added to Page 28 of the IDP to help visualize a potential campus concept plan in relation to building height, transition areas, and open space. The site's flood zone is shown on Page 6 of the IDP. A potential campus circulation plan is included on Page 15.

IDP Comments

- **Phasing.** Describe site interim conditions proposed throughout near-long term. Clarify whether it is the intent to program in the near-term to accommodate a large amount of surface parking and what opportunities for public open space can be allowed within phasing. Explore temporary conditions for areas where public engagement is anticipated.

  Response: Page 13 of the IDP, entitled "Phasing" has been updated to include narratives regarding interim conditions and open space.

- **Design guidelines.** Suggest to follow design principles with design guidelines to associate the broad design approach with applicable design standards.

  Response: The IDP has been updated such that Design Guidelines directly follow Design Principals, as suggested.

- **Design guidelines.** Encourage an organization of design standards to include Campus circulation (site access, pedestrian connectivity, streetscape design, parking, service and wayfinding), Building design (placement, height, massing, composition, articulation, parking structures, sustainable technologies and materials), Public realm (Waterfront, accessibility, building entries, CPTED, lighting design) and Open Space (public access, buffer adjacent edges, coastal resilience, natural resource enhancement, recreation and integrated private open space).

  Response: The Design Guidelines has been updated and consolidated into the following four sections: Buildings, Campus Circulation, Public Realm & Open Space, and Parking. We acknowledge that these categories are slightly different than those suggested above.

- **Design guidelines.** Include an additional section for Historic Preservation.

  Response: Design guidelines regarding buffers associated with the historic Bean Building are included in the Building and Public Realm & Open Space Design Guidelines on Page 15 of the IDP.

Regulatory Framework Comments

- **C. Uses.** Define the mixed-use intent of the Roux Campus to facilitate the broader vision as a waterfront destination that fosters environmental stewardship, places to gather, connectivity and community engagement. Express how the contribution of mixed-use creates a sustainable and resilient campus and allows for activation of the public realm via building entrées, ground- floor accessibility, open space, waterfront access and landscaping at the shoreline and buffers.

  Response: Narratives have been added to Section C of the Regulatory Framework

- **D. Dimension requirements.** Incorporate transition zone regulations at the edges of the property that define appropriate heights at adjacent uses, such as residential neighbors, along primary circulation vehicular routes, public access trait and shoreline.

  Response: Standards and narratives related to these design elements have been added to Section H of the Regulatory Framework. The height map has also been updated to extend the 75-ft max height along the western project boundary.

- **Figure 8—E Height Map.** Consideration for a (15') stepback requirement above height of 50 feet with no buildings closer than 40 feet apart. Provide cross section massings to illustrate the heights proposed and adjacent conditions of the neighborhood, I-295, shoreline, and structures.

  Response: Standards and narratives related to these design elements have been added to Section H of the Regulatory Framework. A cross-section of a potential site layout has been added to Page 28 of the IDP for illustrative purposes. The height map has also been updated to extend the 75-ft max height along the western project boundary.

- **E. Transportation.** Encourage a pedestrian access and circulation network within the IDP.

  Response: Design Guidelines related to Site Circulation are included on Page 15 of the IDP and have also been incorporated into Section E-4 of the Regulatory Framework.

- **F. Environment. 1.** Each phase and/or building shaft include open space requirements to allow for recreation, public access, and private gathering spaces.

  Response: This requirement has been added to Section F-1 of the Regulatory Framework and is further described on Page 13 of the IDP.

- **F. Environment. 2.** Utilize a measurable sustainable certification, such as LEED, SITES, WELL, and/or USGBC.

  Response: Text has been added to Section F-2 of the Regulatory Framework.

- **F. Environment. 4** Include a campus concept map within the IDP to minimize the impacts of sea level rise designed to a minimum of the 2-feet above BFE.

  Response: Section F of the Regulatory Framework includes a requirement that the project will be designed to a minimum of the 2-feet above the Base Flood Elevations. The site's flood zone is shown on Page 6 of the IDP.

- **F. Environment.** Encourage shoreline edge protection through ecological infrastructure to enhance natural resources and habitat restoration.

  Response: Standard F-5 has been added to the Regulatory Framework.

- **H. Design.** Add design principles and guidelines.

  Response: Design principles and guidelines have been added to Section H of the Regulatory Framework.

If you have any questions or require additional information, please do not hesitate to contact me at (207) 558-3708 or by email at dcameron@woodardcurran.com.

Sincerely,

WOODARD & CURRAN, INC.



Denise Cameron, PE
Project Manager

Enclosure(s)

CITY OF PORTLAND
Planning & Urban Development Department

MAP AND TEXT AMENDMENT SUBMISSION CHECKLIST * Please submit each document and drawing as a separate PDF file * Please submit 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	
GENERAL APPLICATION DOCUMENTS	
☑	**Project Description** • Cover Letter with detailed project description
☑	**Consistency with Comprehensive Plan** (Please see page 9 of IDP document)
☑	**Proposed Text Amendment** • Provide proposed language for text amendment(s) and cite the relevant sections to be revised in the Land Use code.
☑	**Completed Checklist – Map and Text Amendment Application (this document)**
☑	**Right, Title and Interest** • Deeds, leases, or purchase and sales agreements
PLANS	
☑	**Vicinity Map**
☑	**Proposed Map Amendment** (please use the Portland zoning map as a reference)
☐	**Site Plan (if applicable)** On a separate sheet, please provide a site plan of the property showing existing and proposed improvements, including such features as buildings, parking, driveways, walkways, landscape and property boundaries.

IDP Content Requirements and Corresponding Pages per IOZ Ordinance

1. Context
Generally, see Section 1 (pages 2 – 10).

- **a. Adopted Mission, Vision, or Purpose Statement**
  Page 3

- **b. Relevant Baseline Institutional Data**
  - **i. Neighborhood context plan**
    Page 5
  - **ii. Inventory of current programs and services**
    Page 4
  - **iii. Current census of people using the institution (employees, enrollment), max / min over time**
    Page 4
  - **iv. Inventory of property holdings within Portland; Indicate functional land-use links**
    Page 4
  - **v. Inventory of existing facilities (inc. use, floor area, inter-facility connections)**
    Page 4

- **c. Summary of Existing Campus Characteristics and Context**
  - **i. Summary of existing resources, inc. historic, open space, natural resources**
    Pages 5 - 8
  - **ii. Summary of existing transportation system, inc. mode, demand, utilization, parking**
    Page 22
  - **iii. Summary of existing supporting public infrastructure, inc. demand, utilization, capacity**
    Page 27
  - **iv. Relevant municipal plans/projects/studies that may influence the area, institution's growth**
    Pages 9 and 10

- **d. Summary of Public Involvement, inc. major areas of public concern**
  Page 30

2. Assessment of Future Institutional Growth and Change
Generally, see Sections 2 and 3 (pages 11 – 30).

- **a. Description of institutional needs, areas of future institutional growth and change**
  - **i. Projected census of users (enrollment / employment / visitors, anticipated variations)**
    Page 13
  - **ii. Institutional objectives for property within and outside IOZ, inc. connections outside**
    Pages 12, 14, and 21
  - **iii. Development plan: institutional needs, physical improvements, inc. phasing**

Pages 12 and 13

b. Analysis and Plans for Growth and Impacts Supporting the Regulatory Framework Parameters

i. Transportation and access

a) Analysis of changes in parking demand, supply, impacts to off/on-street parking
Pages 23, 24, and 26

b) Analysis of projected changes in vehicle/ped/transit/bike access / capacity / safety
Pages 18 and 22 - 25

c) Transportation, access, circulation plan inc. potential improvements, TDM, TMP
Pages 18 and 22 – 26

ii. Environment

a) Analysis of potential cumulative impacts on natural resources and open spaces
Pages 7, 17, 19, and 29

b) Analysis of projected energy consumption, hazmat / noise / nuisance generation
Pages 17, 27, and 29

c) Environmental plan inc. program for preservation / enhancement / mitigation
Pages 7, 14 - 17, 19 and 28 -29

iii. Infrastructure

a) Analysis of projected public utility demand and capacity
Page 27

b) Analysis of projected public safety needs, impacts to capacity of these services
Pages 5, 21, and 27

c) Infrastructure plan, inc. program to support sustainable growth
Pages 17, 21, 27, and 29

iv. Design

a) Analysis of projected impacts to area, inc. shadow / wind / light / height / historic
Pages 8 and 28

b) Analysis of transition between institution and neighborhood, inc. defining features
Pages 5, 21, and 28

c) Analysis of existing CPTED issues and CPTED integration into development
Page 29

d) Conceptual built environment plan inc. design guidelines, edge treatments
Pages 14 - 19

v. Neighborhood engagement

a) Plan for ongoing community engagement representing best practices, collaboration
Page 30

b) **Property management framework re: process for handling issues with neighbors**
Page 30

c) **Strategies for assuring communication re: property acquisition & disposition**
Page 30

d) **Construction management principles applying to all institutional construction**
Page 30

[Execution Copy]

AGREEMENT FOR THE PURCHASE AND SALE OF REAL ESTATE

THIS AGREEMENT is effective as of August 30, 2021, by and between **B&G Foods North America, Inc.**, a Delaware Corporation (successor to **Heritage Acquisition Corp.**, herein "Heritage"**)** having a mailing address of 4 Gatehall Drive, Suite 110, Parsippany, New Jersey 07054 ("Seller") and **The Institute for Digital Engineering And Life Sciences**, a Maine non-profit corporation with an address of 100 Commercial Street, Portland, Maine 04101("Buyer"), WHO AGREE AS FOLLOWS:

WITNESSETH AS FOLLOWS:

1. PURCHASE AND SALE. Seller agrees to sell and Buyer agrees to buy, on the terms and conditions hereinafter set forth, approximately 13 acres of land and buildings generally situated at 1 Bean Pot Circle, Portland, Maine, together with all improvements thereon (except as specified below) and all rights and easements appurtenant thereto, which parcel is more particularly referenced by the City of Portland Assessor's Office as Map 447 Lot A001 and Lot A002 (although there is no separate assessed value or tax bill for Lot A-002) and described in certain deeds to Heritage recorded in the Cumberland County Registry of Deeds in Book 14616, at Page 50 and 14616, at Page 57, together with and including all of Seller's interest in abutting or adjacent tidal flats, intertidal lands, and State of Maine Submerged Lands Lease No. 0637-L-34 (together the "Property"). A survey purporting to show the Property as it existed in February of 1999 is recorded in said Registry in Plan Book 199, Page 159.

2. NO CONTINGENCIES. Prior to execution of the Agreement Buyer has completed such due diligence investigations relating the Property as it determined in is discretion to be desirable and it is expressly understood and acknowledged by Buyer that this Agreement and Buyer's obligations hereunder are not contingent or conditioned upon any further due diligence or other investigations. It is also expressly understood and acknowledged by Buyer that this Agreement and Buyer's obligations hereunder are not contingent or conditioned upon obtaining any zoning changes or any governmental permits or approvals or upon obtaining a commitment for or closing any financing for any portion of the Purchaser Price or for any costs to be incurred by Buyer after the Closing.

3. PURCHASE PRICE. Subject to any adjustments and prorations hereinafter described, Buyer agrees to pay for the Property the sum of [redacted] Dollars and 00/100 ($[redacted]) (the "Purchase Price"), payable as follows:

(a) Deposit. The sum of [redacted] Dollars ($[redacted]) as a deposit (the "Deposit") shall be paid to Seller directly within one (1) business day of Seller's acceptance hereof and held in escrow by Seller, which Deposit shall be credited towards the Purchase Price at the closing. The Deposit shall be non-refundable except in the case of Seller's default hereunder.

(b) Closing. The balance of the Purchase Price, [redacted] Dollars ($[redacted]), as adjusted for pro-rations and any other payments referenced herein, shall be paid to Seller at the closing in immediately available funds by a wire transfer to Seller (in accordance with wiring instructions provided to Buyer in writing within a reasonable time prior to the time of closing).

4. TITLE. Seller shall convey the Property to Buyer at the closing in fee simple with good, marketable and insurable title, free and clear of liens and encumbrances and other matters of record except as disclosed in Buyer's Title Commitment issued by Monument Title Company as agent for CATIC, Commitment No. 031521-01 dated March 16, 2021, a copy of which has been provided to Seller. Seller shall deliver the Property free and clear of any leases or occupancies except as otherwise provided herein.

5. CLOSING. Buyer acknowledges the need for the Seller to continue operations at the Property for a period following the date hereof and that Seller will need an additional period after operations cease to remove equipment and perform its other obligations under Section 7 hereof. The Closing Date shall be set forth in a notice to Buyer from Seller based on its schedule for ceasing operations and completing such obligations, provided however, that the closing shall take place in any event at the offices of Bernstein, Shur, Sawyer and Nelson, 100 Middle Street, Portland, Maine, no later than December 31, 2021 (the "Closing Date") or at such earlier or later date and location as Buyer and Seller shall mutually agree in advance and in writing. At the closing, Seller shall execute and/or deliver to Buyer, against payment of the purchase price: (a) a Quitclaim Deed with Covenant to the Property, in accordance with the Short Form Deeds Act, 33 M.R.S.A. § 761 et seq., (the "Deed"), (b) all keys, access cards, security codes and similar items to the Property in Seller's possession and (c) a Bill of Sale (without warranty) for five (5) large steel bean pots of the size and type historically used for the cooking of baked beans (the "Bean Pots"). Seller further agrees to execute and deliver to or cause to be delivered to Buyer and/or its designees at the closing such documents, affidavits and certificates as are otherwise required by this Agreement, required by law and/or reasonably necessary for Buyer's acquisition of the Property, including without limitation a Certificate of Non-Foreign Status (as required by Internal Revenue Service regulations), an affidavit regarding underground storage tanks (as required by Maine Law), applicable Maine State REW forms and satisfactory evidence of Seller's existence and authority to convey the Property. At the closing Seller and Buyer shall execute assignment and assumption agreements that transfer to Buyer, and pursuant to which Buyer assumes all obligations arising after the Closing Date under: (i) the State of Maine Submerged Lands Lease No. 0637-L-34, (ii) the Commercial Lease between Seller as Landlord and [redacted] as tenant relating to a portion of the Property, (iii) Maine Department of Environmental Protection Air Emission License A-77-71-M-R (SM) relating to the Property and (iv) Maine Department of Environmental Protection Maine Pollutant Discharge Elimination System Permit and Waste Discharge License ME0001741 W000980-5R-H-R relating to the Property. The documents to be executed and delivered at the closing as described in this Section are sometimes herein called the "Closing Documents."

6. RISK OF LOSS, DAMAGE AND INSURANCE.

(a) All risk of loss to the Property prior to the closing shall be borne by Seller. Seller shall keep the Property insured against fire and other extended coverage risks as currently insured until the closing and shall name Buyer as an additional insured as its interest may appear.

(b) In the event that, prior to the closing, any part of the Property is damaged by fire or other casualty, then Seller and Buyer shall perform their respective obligations under this Agreement and at closing, Seller shall (x) deliver to Buyer at the Closing any insurance proceeds or condemnation awards received by Seller in respect of or allocable to the Property less any amount for the cost repairs performed by Seller prior to Closing; and (y) assign to Buyer all of Seller's interest in and to any insurance proceeds and/or condemnation awards allocable to the Property which have not yet been received by Seller on that date less any amount for the cost repairs performed by Seller prior to Closing; and (z) refrain from accepting or agreeing upon the amount of any payment of any proceeds or awards without Buyer's prior written consent, which consent shall not be unreasonably withheld. Seller agrees that it shall limit any repairs to be paid from insurance proceeds to repairs needed to continue operations at the Property through the scheduled date for ceasing such operations and thereafter shall be limited to securing the damaged area.

7. PRE-CLOSING OBLIGATIONS.

(a) Although Buyer has completed all of its due diligence investigations, it may have reason for its architects, engineers and consultants to enter upon or in any part of the Property for purposes of taking measurements and similar actions needed to prepare plans for work to be done after the closing or to complete applications for permits and approvals related to such work. Seller agrees to reasonably grant permission to any such entry by Buyer's architects, engineers and consultants provided that (i) such entry will be scheduled in advance through Seller's representative and shall be subject to reasonable restrictions to prevent any interference with Seller's operations or the performance of the obligations set forth in this Section 7, (ii) Buyer shall indemnify and hold Seller harmless from and against any property damage or personal injury claim or any mechanics' lien against the Property that arises out of or in connection with such entry by Buyer's architects, engineers and consultants, and (iii) Buyer's architects, engineers and consultants entering the Property shall carry liability insurance in commercially reasonable amounts, naming Seller as an additional insured and certificates of such insurance in form satisfactory to Seller shall be delivered to Seller prior to any such entry.

(b) Buyer has already conducted due diligence of the Property including environmental site assessments (ESAs) prior to the date hereof and accepts the Property in its as-is condition except as specifically set forth herein. In the event that Seller obtains knowledge of any spill or release of hazardous materials on the Property that occurred after the date hereof and prior to the Closing Date it shall promptly notify Buyer and undertake any remedial actions related thereto that are required by applicable law and the Closing Date hereunder shall be extended to the extent reasonably necessary to complete any such remedial actions.

(c) Seller agrees to pay all contractors and other persons engaged by it to perform work on the Property between the date hereof and the Closing as necessary to prevent any mechanics' liens from being recorded against the Property pursuant to 10 M.R.S.A. §3251. If Seller's title to the Property is further encumbered, Seller shall promptly after obtaining knowledge of any such encumbrances take actions necessary to have such encumbrance released prior to closing, and the Closing Date hereunder shall be extended to the extent reasonably necessary to

obtain such release. The foregoing is not a consent or permission to further encumber the title and Seller specifically agrees it shall not voluntarily further encumber the title to the Property.

(d) Prior to closing Seller shall take all actions required by the federal Worker Adjustment and Retraining Notification Act of 1988 and 26 M.R.S.A. §625-B (together, the "Plant Closure Laws") with respect to the closing of Seller's operations at the Property and shall relocate or terminate the employment of all of its employees working at the Property. Seller shall be solely responsible, and Buyer shall have no obligations whatsoever for, any compensation, severance pay or other amounts payable to any current or former employee of Seller as a result to the closing of Seller's operations at the Property, whether under the Plant Closure Laws (or by reason of Seller's breach thereof), collective bargaining agreements or any applicable employee benefit plans (collectively, "Plant Closure Liabilities"). In the event that Buyer receives notice of the commencement of any action by any person who is not a party to this Agreement or an affiliate of a party claiming that Buyer is liable for any Plant Closure Liabilities due to the fact that Buyer is a successor owner of the Property ("Third Party Claims"), Buyer shall promptly notify Seller and Seller shall indemnify Buyer against any losses damages, costs or expenses (including reasonable attorneys' fees) arising from such Third Party Claims. The provisions of this Section 7(d) are solely for the benefit of Buyer, and nothing herein, express or implied, shall confer upon any employee or former employee of Seller or other person any rights or remedies of any nature whatsoever under or by reason of this this Section 7(d) and nothing contained herein shall be construed to establish, amend or modify any benefit plan, program, agreement or arrangement.

(e) Prior to Closing Seller shall remove all of its production equipment (other than the Bean Pots) and other personal property from the Property, including all trash and debris. At the closing Seller shall deliver possession of the Property to Buyer free and clear of all leases and tenancies other than the Lease to [redacted]. In the event that during the process of removing such personal property Seller discovers any plans, specifications or reports relating to the improvements on the Property that might be useful to Buyer in connection with the renovation or maintenance of such improvements, Seller shall deliver such materials to Buyer prior to the Closing.

(f) In the event that some specific portion of the Seller's obligations set forth in this Section 7 has not been completed as of the Closing Date (other than Section 7(d) which is addressed by the indemnification provision therein) and the parties are able to agree on the estimated cost of completing such uncompleted obligations, the parties may enter into an escrow agreement (the "Escrow Agreement") pursuant to which a portion of the Purchase Price equal to such estimated cost will be held in escrow by a mutually acceptable escrow agent as security for such completion after the Closing Date (the "Escrow Funds"). If the Seller and Buyer do not execute any such Escrow Agreement, the provisions set forth in Section 10(a) shall be applicable with respect to any such uncompleted obligations. Any such Escrow Agreement shall include provisions relating to the remedies available to the parties if the uncompleted obligations are not completed as set forth therein and for the payment to Seller of any unused balance of the Escrow Funds.

8. "AS IS" SALE; RELEASE OF CLAIMS.

(a) Except for Seller's representations and warranties set forth in Section 9, Seller makes no express or implied representation or warranty with respect to the Property, and Buyer agrees that except for Seller's representations set forth in Section 9, and Seller's covenants set forth in Section 7, Buyer is not relying on and has not relied on any statements, promises, information or representations made or furnished by Seller or by any real estate broker, agent or any other person representing or purporting to represent Seller but rather is relying solely on its own expertise and on the expertise of its consultants and on the inspections and investigations Buyer and its consultants have conducted.

(b) Buyer hereby acknowledges and agrees that the acceptance of the Deed and the other Closing Documents by Buyer shall be deemed to be full performance and discharge of every agreement and obligation on the part of Seller to be performed under this Agreement except those, if any, which are herein specifically stated to survive delivery of the Deed and the Closing Documents. No agreement or representation or warranty made in this Agreement by Seller will survive the Closing and the delivery of the Deed or Closing Documents, unless expressly provided otherwise, provided that for the avoidance of doubt, Seller is bound to perform its obligations under Section 7 hereof and Buyer's remedies with respect thereto will survive the Closing to the extent provided in Section 10(a).

(c) EXCEPT AS SPECIFICALLY SET FORTH TO THE CONTRARY IN THIS AGREEMENT, INCLUDING, BUT NOT LIMITED TO, SELLER'S OBLIGATIONS UNDER SECTION 7 HEREOF, BUYER AGREES (A) TO TAKE THE PROPERTY "AS IS, WHERE IS, WITH ALL FAULTS" AND (B) THAT NO REPRESENTATIONS OR WARRANTIES ARE MADE OR RESPONSIBILITIES ASSUMED BY SELLER AS TO THE CONDITION OF THE PROPERTY, AS TO THE TERMS OF ANY LEASES OR OTHER DOCUMENTS OR AS TO ANY INCOME, EXPENSE, OPERATION OR ANY OTHER MATTER OR THING AFFECTING OR RELATING TO THE PROPERTY, NOW OR ON THE CLOSING DATE. BUYER AGREES TO ACCEPT THE PROPERTY IN THE CONDITION EXISTING ON THE CLOSING DATE, SUBJECT TO ALL FAULTS OF EVERY KIND AND NATURE WHATSOEVER WHETHER LATENT OR PATENT AND WHETHER NOW OR HEREAFTER EXISTING. BUYER ACKNOWLEDGES THAT AS OF THE CLOSING DATE, BUYER WILL HAVE INSPECTED THE PROPERTY AND OBSERVED ITS PHYSICAL CHARACTERISTICS AND CONDITIONS AND WILL HAVE HAD THE OPPORTUNITY TO CONDUCT SUCH INVESTIGATIONS AND STUDIES ON OR OVER THE PROPERTY AND ADJACENT AREAS AS IT DEEMS NECESSARY AND, EXCEPT FOR THE EXCEPTED CLAIMS (AS DEFINED BELOW), HEREBY WAIVES ANY AND ALL OBJECTIONS TO OR COMPLAINTS REGARDING THE PROPERTY AND ITS CONDITION, INCLUDING, BUT NOT LIMITED TO, FEDERAL, STATE OR COMMON LAW-BASED ACTIONS AND ANY PRIVATE RIGHT OF ACTION UNDER STATE AND FEDERAL LAW TO WHICH THE PROPERTY IS OR MAY BE SUBJECT, INCLUDING, BUT NOT LIMITED TO, CLAIMS RELATING TO PHYSICAL CHARACTERISTICS AND EXISTING CONDITIONS, INCLUDING STRUCTURAL AND GEOLOGICAL CONDITIONS, SUBSURFACE SOIL AND WATER CONDITIONS, AND SOLID AND HAZARDOUS WASTE AND HAZARDOUS MATERIALS (AS DEFINED BELOW) ON, UNDER, ADJACENT TO OR OTHERWISE AFFECTING THE PROPERTY. BUYER

FURTHER ASSUMES THE RISK OF CHANGES IN APPLICABLE LAWS AND REGULATIONS RELATING TO PAST, PRESENT AND FUTURE ENVIRONMENTAL CONDITIONS ON THE PROPERTY AND THE RISK THAT ADVERSE PHYSICAL CHARACTERISTICS AND CONDITIONS, INCLUDING THE PRESENCE OF HAZARDOUS MATERIALS OR OTHER CONTAMINANTS, MAY NOT HAVE BEEN REVEALED BY ITS INVESTIGATION.

(d) Except with respect to the Seller's fraud, the Seller's representations set forth in Section 9, Buyer's remedies for defaults in Seller's obligations under Section 7 as described in Section 10(a), or as otherwise expressly provided in this Agreement, Buyer hereby fully and forever waives, and Seller hereby fully and forever disclaims and shall not be liable or bound in any manner by, any and all warranties, guarantees, promises, statements, representations or information of whatever type or kind with respect to the Property, whether express, implied or otherwise, including warranties of fitness for a particular purpose, tenantability, habitability or use. Buyer agrees that except for any Claims (as defined below) arising out of a breach of any of Seller's representations and warranties in Section 9 or the Closing Documents executed by Seller and any and all Claims for fraud by Seller ("Excepted Claims"), Buyer and anyone claiming by, through or under Buyer hereby waives its right to recover from and fully and irrevocably releases Seller and Seller's employees, officers, directors, trustees, shareholders, members, partners, representatives, agents, servants, attorneys, affiliates, parents, subsidiaries, successors and assigns ("Released Parties") from any and all claims, responsibility and/or liability that it may now have or hereafter acquire against any of the Released Parties for any and all costs, losses, claims, liabilities, damages, expenses, demands, debts, controversies, claims, actions or causes of actions (collectively, "Claims") arising from or related to the condition (including any construction defects, errors, omissions or other conditions, latent or otherwise, and the presence in the soil, air, structures and surface and subsurface waters of materials or substances that have been or may in the future be deemed to be Hazardous Materials or otherwise toxic, hazardous, undesirable or subject to regulation and that may need to be specifically treated, handled and/or removed from the Property under current or future federal, state and local laws, regulations or guidelines or common law), valuation, salability or utility of the Property, condition of title to the Property, compliance with any applicable federal, state or local law, rule or regulations or common law with respect to the Property, or the Property's suitability for any purposes whatsoever, and any information furnished by the Released Parties in connection with this Agreement. Buyer will indemnify Seller with respect to any environmental liabilities associated with the Property that may be discovered or arise post-closing, regardless of when the action(s) leading to such liabilities occurred.

(e) Seller and Buyer have agreed upon the Purchase Price relating to the Property and other provisions of this Agreement in contemplation and consideration of Buyer's agreeing to the provisions of this Section 8**,** which Section shall survive the closing and the delivery of the Deed and the Closing Documents.

9. REPRESENTATIONS AND WARRANTIES OF SELLER. Seller represents and warrants to Buyer that the following are true as of the date of this Agreement and will be true as of the closing:

(a) Seller is duly organized and in good standing under the laws of the State of Delaware, with full capacity, power and authority to enter into and fully perform the obligations and transactions contemplated by this Agreement;

(b) The execution and delivery of this Agreement and the performance by Seller of its obligations hereunder are within Seller's corporate powers, and have been duly authorized and approved by all necessary actions on behalf of Seller and will not result in a breach of Sellers's articles of incorporation or bylaws, or any injunction, judgment, court order or agreement to which Seller is a party;

(c) The person executing this Agreement on behalf of Seller is duly authorized to do so and the person who will execute the Deed and the other Closing Documents on behalf of Seller will be duly authorized to do so;

(d) To the best of Seller's knowledge, no consent, approval, order or authorization of any court or other governmental entity is required to be obtained by Seller in connection with the execution and delivery of this Agreement or the performance hereof by Seller, other than (i) approvals by the Maine Department of Environmental Protection relating to the transfers of the Air Emission License and the Pollutant Discharge Elimination System Permit and Waste Discharge License relating to the Property and (ii) approval from the Maine Department of Agriculture, Conservation and Forestry relating to the transfer of the Submerged Lands Lease;

(e) There are no litigation, liens, judgments, violations, or proceedings pending, or to the best of Seller's knowledge, threatened in writing against or relating to the Property nor does Seller know or have reasonable grounds to know of any basis for any such action, or of any governmental investigation relating to the Property, and there is no other litigation pending or to the best of Seller's knowledge, threatened in writing against Seller, which if determined adversely would restrain the consummation of the transaction contemplated by this Agreement or would declare illegal, invalid or non-binding any of the obligations or covenants of Seller hereunder;

(f) Seller is not a "foreign person" within the meaning of §1445 of the Internal Revenue Code; and

(g) To the best of Seller's knowledge, there are no purchase options or rights of first refusal relating to any portion of the Property and there are no contracts or agreements between Seller and third parties relating to the Property (other than the Lease to [redacted]) which will be binding on Buyer after the Closing.

For purposes of this Agreement and any Closing Document executed by Seller the phrases "to the best of Seller's knowledge," or the "knowledge" of Seller, or words of similar import are used, they shall be deemed to refer to the actual knowledge of Bruce Wacha or Tyler Wallace, without any independent investigation. The provisions of this Section 9 shall survive the closing and the delivery of the Deed and the Closing Documents for a period of twelve (12) months.

10. DEFAULT AND REMEDIES.

(a) In the event that Seller defaults in the performance of its obligations under Section 7 hereof, Buyer may send Seller a default notice specifying such default at least five (5) days

prior to the scheduled Closing Date. Seller may respond to any such default notice by agreeing to cure such default in which case the Closing Date will be postponed for a period of time not to exceed thirty (30) days in order for Seller to perform such cure. If Seller fails to cure any default set forth in such notice prior to Closing, or if Seller fails to remove any mechanics' liens as required by Section 7(c) whether or not a default notice with respect thereto was given prior to Closing, Buyer's sole remedy shall be to pursue a claim against Seller for actual damages caused by such default including, without limitation, reasonable attorneys' fees, but excluding incidental or consequential damages, and Buyer's right to pursue such a damage claim for such defaults under Section 7 shall survive the closing and the delivery of the Deed and the Closing Documents for a period of twelve (12) months.

(b) In the event that Seller defaults in the performance of its obligation to convey the Property to Buyer hereunder, Buyer's sole remedy shall be to within sixty (60) days of when the Closing Date was to have occurred, to commence and diligently prosecute an action in the nature of specific performance. If such an action in the nature of specific performance is not so commenced within said time, or is unsuccessful, Seller shall refund the Deposit and upon payment of such refund the parties will be released from their obligations under this Agreement. Under no circumstances will Buyer have available to it any remedy that includes the termination of this Agreement or (except as provided in Section 10(a) above) an action at law or otherwise for damages.

(c) In the event that Buyer defaults in its obligation to close hereunder, Seller shall retain the Deposit, as full and complete liquidated damages in lieu of any other legal or equitable remedy, and this Agreement will terminate and neither party will be under any further obligation hereunder. The parties acknowledge that Seller's damages due from Buyer's default hereunder are difficult or impossible to ascertain and that the amount of the Deposit represents a reasonable estimate by both parties of Seller's damages.

11. OFF MARKET. Seller may not list or offer the Property for sale and shall not seek, accept, solicit or negotiate any third party offers for all or any portion of the Property while this Agreement is in effect. This Section does not limit Seller's right to sell its equipment or other personal property located at the Property to others.

12. BROKERAGE. The parties agree that no broker has been involved in this transaction other than Tony McDonald of The Boulos Company ("Broker") representing Buyer, and each agrees to indemnify the other from and against any damages, costs or expenses (including reasonable attorneys' fees) that the other party may suffer as a result of claims made or suits brought by any other broker, finder or agent in connection with this transaction, the obligated party hereunder to be the party whose conduct gives rise to such claims. This indemnity shall survive the closing and any termination of this Agreement. Buyer shall be responsible for and shall pay directly any commission owing to Broker.

13. ADJUSTMENTS, PRORATIONS AND CLOSING COSTS.

(a) Real estate taxes, assessments, rentals, fuel oil, and utilities shall be prorated as of the date of closing based upon amounts thereof actually paid or received (as the case may be) as of the Closing Date.

(b) The Maine real estate transfer tax shall be paid by Seller and Buyer in accordance with 36 M.R.S.A. § 4641-A.

(c) The recording fee for the deed of conveyance will be paid by Buyer.

(d) A portion of the purchase price shall be withheld at the closing by Buyer if required by 36 M.R.S.A. § 5250-A unless Seller furnishes to Buyer an affidavit stating, under penalty of perjury, that Seller is a resident of Maine or that the transfer is otherwise exempt from withholding tax.

(e) If the parties enter into an Escrow Agreement as described in Section 7(e), a portion of the purchase price equal to the Escrow Funds will be paid to the escrow agent named therein.

14. MISCELLANEOUS.

(a) Time. Time is of the essence of this Agreement.

(b) Notices. Any notices required or permitted to be given under this Agreement shall be sufficient if in writing and if sent: (i) by first class mail, postage prepaid, registered or certified, return receipt requested; (ii) by hand delivery; (iii) by FedEx, or similar overnight express mail service, prepaid; or (iv) by electronic mail transmission, each to the addresses listed below:

TO SELLER: B&G Foods North America, Inc.
4 Gatehall Drive
Parsippany, NJ 07054
Attention: Mr. Bruce Wacha,
Executive Vice President and Chief Financial Officer
Email: Bruce.Wacha@bgfoods.com

WITH A COPY TO: B&G Foods North America, Inc.
4 Gatehall Drive
Parsippany, NJ 07054
Attention: General Counsel
Email: corporatesecretary@bgfoods.com

AND WITH A COPY TO: James C. Palmer, Esq.
Verrill Dana, LLP
One Portland Square
Portland, ME 04101-4054
Email: jpalmer@verrill-law.com

TO BUYER: Charles E Hewett, Chief Executive Officer
IDEALS
100 Commercial Street
Portland, ME 04101
chuck.hewett@ideals.org

WITH A COPY TO: James Broder, Esq.
Bernstein Shur
100 Middle Street
PO Box 9729
Portland, ME 04104-5029
jbroder@bernsteinshur.com

All such communication shall be deemed made upon the earlier of (3) business days following deposit with the U.S. Mail or the date of receipt as disclosed on the return receipt (if sent by registered or certified mail), or upon delivery (if hand delivered), or upon delivery as indicated on the proof of delivery (if sent via FedEx or similar overnight express mail service), or if sent via email with proof of receipt by the primary addressee, effective upon the day sent if received prior to 3:00 p.m. local time or the next business day if received thereafter. With respect to any of the above-referenced methods of delivery, rejection or other refusal to accept or the inability to deliver because of a change of address of which no notice was given shall be deemed to be receipt of the notice sent. Either party may change its address for purposes of this subparagraph by giving the other party notice of the new address in the manner described herein.

(c) Binding Effect/Assignment. This Agreement shall not become a binding contract until signed by both parties and that fact has been communicated to all parties or their agents. This Agreement will inure to the benefit of and bind the respective heirs, successors, personal representatives and assigns of the parties hereto and may be cancelled, modified or amended only by a writing executed by the parties hereto or their legal representatives. Buyer shall have the right to assign its interest hereunder to an entity formed and controlled by Buyer prior to closing, provided that any such assignment shall not release the assignor from any its obligations or liabilities hereunder.

(d) Construction. This Agreement sets forth the entire agreement between the parties, and there are no other agreements or understandings between them related to the subject matter hereof. Without limiting the forgoing, the Non-Binding Letter of Intent dated February 2, 2021 between Seller and Buyer is superseded hereby and neither party shall have any further rights, obligations or claims thereunder. As used in this Agreement, the singular number shall include the plural, the plural the singular, and the use of one gender shall be deemed applicable to all genders. This Agreement shall be governed by and construed in accordance with the laws of Maine. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof.

(e) Counterparts/Electronic Signatures. This Agreement may be simultaneously executed in any number of counterparts, each of which when so executed and delivered shall be an original, but such counterparts shall constitute one and the same instrument. This Agreement may be signed electronically and such shall be treated as original signatures.

(f) Attorney's Fees. If any legal action (including without limitation mediation and arbitration) is brought or compelled by either party to enforce any provisions of this Agreement, the prevailing party shall be entitled to recover from the other party its reasonable attorneys' and paralegals' fees and court costs, subject to and limited by the provisions of the Default and Remedies section of this Agreement.

(g) Effective Date. The Effective Date of this Agreement shall be deemed to be the date first set forth above in this Agreement, provided that if no date is filled in, the Effective Date shall be the last date of the signature of either Buyer or Seller.

[*Balance of page intentionally left blank]*

IN WITNESS WHEREOF, Seller and Buyer have executed this Agreement under seal as of the dates indicated above.

SELLER:

B&G Foods North America, Inc.

By: Bruce C Wacha
Print Name: Bruce C. Wacha
Title: Executive Vice President of Finance and Chief Financial Officer

Date: August 30, 2021

BUYER:

The Institute for Digital Engineering and Life Sciences (IDEALS)

By:_____
Print Name: Dr. Charles E. Hewett
Title: Executive Director

Date: August 30, 2021

IN WITNESS WHEREOF, Seller and Buyer have executed this Agreement under seal as of the dates indicated above.

SELLER:

B&G Foods North America, Inc.

By:_____
Print Name: Bruce C. Wacha
Title: Executive Vice President of Finance and Chief Financial Officer

Date: August 30, 2021

BUYER:

The Institute for Digital Engineering and Life Sciences (IDEALS)

By:_____
Print Name: Dr. Charles E. Hewett
Title: Executive Director

Date: August 30, 2021

DLN: 1002240187216

QUITCLAIM DEED WITH COVENANT

B&G Foods North America, Inc., a Delaware Corporation (successor by merger to Heritage Acquisition Corp. as described below), having an address of 4 Gatehall Drive, Suite 110, Parsippany, New Jersey 07054 ("Grantor"), grants to **The Initiative for Digital Engineering and Life Sciences**, a Maine non-profit corporation with an address of 100 Commercial Street, Portland, Maine 04101 ("Grantee") with QUITCLAIM COVENANT, a certain parcel of land, together with the improvements thereon, located on the easterly sideline of Interstate 295 and the southerly sideline of Sherwood Street in the City of Portland, County of Cumberland and State of Maine being further described as follows:

MAINE REAL ESTATE TAX PAID

Beginning at a 6-inch by 6-inch granite monument found inscribed "ECJ #356" marking the southerly sideline of Sherwood Street westerly sideline of the Canadian National Railroad and further described as the most northeasterly corner of described parcel;

THENCE, S 23-36-55 E, along said Railroad 316.33 feet to a 6-inch by 6-inch granite monument found inscribed "ECJ 356";

THENCE, S 23-36-55 E, along said Railroad, 526.90 feet, to a 4-inch by 4-inch granite monument with a drill hole;

THENCE, S 23-36-55 E, along said Railroad, 745 feet, more or less to the low water mark of the Casco Bay,

THENCE, in a general westerly direction along said low water line about 1,685 feet to a point on the easterly sideline of Interstate 295;

THENCE, N 2-23-50 W, along said sideline, 48 feet, more or less to a point;

THENCE, S 87-30-10 W, along said sideline, 30.00 feet to a point;

THENCE, N 2-23-50 W, along said sideline, 61.46 feet to a drill hole found, said drill hole lying on a tie course of S 73-07-39 W, 878.87 feet from the previous mentioned 4-inch by 4-inch granite monument with a drill hole;

THENCE, N 2-23-50 W, along said sideline, 237.87 feet to a 5/8 inch re-bar found capped "ECJ #509";

THENCE, N 89-44-34 E, along said sideline, 1.05 feet to a 5/8 inch re-bar found capped "ECJ #509";

THENCE, N 6-28-53 E, along said sideline, 122.88 feet to a 5/8 inch re-bar found capped "ECJ #509";

THENCE, N 0-24-30 E, along said sideline, 88.91 feet to a 4-inch by 4-inch granite monument found inscribed "ECJ #509";

THENCE, N 24-48-04 E, along said sideline, 60.29 feet to a 6-inch by 6-inch granite highway monument;

THENCE, N 31-29-16 W, along said sideline, 31.96 feet to a 4-inch by 4-inch granite monument inscribed "ECJ #509";

THENCE, N 3-26-49 W, along said sideline, 111.10 feet to a 5/8 inch re-bar found capped "ECJ #509";

THENCE, N 8-40-57 E, along said sideline, 89.05 feet to a 4-inch by 4-inch granite monument inscribed "ECJ #509";

THENCE, N 23-15-05 E, along said sideline, 66.28 feet to a 4-inch by 4-inch granite monument Inscribed "ECJ #509";

THENCE, N 34-47-28 E, along said sideline, 96.68 feet to a 4-inch by 4-inch granite monument inscribed "ECJ #509";

THENCE, N 25-25-29 E, along said sideline, 160.02 feet to a 5/8 inch re-bar found capped "ECJ #509";

THENCE, N 23-37-03 E, along said sideline, 63.03 feet to a 4-inch by 4-inch granite monument inscribed "ECJ #509";

THENCE, N 39-23-04 E, along said sideline, 6.72 feet to a 6-inch by 6-inch granite monument found inscribed "ECJ #509";

THENCE, N 55-32-30 W, along said sideline, 11.67 feet to a 4-inch by 4-inch granite monument inscribed "ECJ #509";

THENCE, N 34-47-50 E, along said sideline, 117.04 feet to a 4-inch by 4-inch granite monument inscribed "ECJ #509";

THENCE, N 34-43-38 E, along said sideline, 15.02 feet to a 5/8 inch re-bar found capped "ECJ #509" marking the southerly sideline of Sherwood Street;

THENCE, S 55-12-08 E, along said Sherwood Street, 288.60 feet to the point of beginning.

The foregoing description was prepared based on the Survey prepared by OEST Associates, Inc. dated February, 1999 and last revised February 26, 1999 recorded in in the Cumberland County Registry of Deeds in Plan Book 199, Page 159.

New Survey Description:

Grantor also hereby releases to Grantee, without any covenant of title whatsoever, all right, title and interest in and to the following described lot or parcel of land, together with the buildings and improvements thereon, located in the City of Portland, County of Cumberland, State of Maine, which description is based on a ALTA/NSPS Land Title Survey prepared for Grantee by vhb, dated June 30, 2021, last revised February 28, 2022, and Grantor makes no representations or warranties as to the accuracy of said property description:

Beginning at a granite bound found at the intersection of the southerly sideline of Sherwood Street and the westerly sideline of land now or formerly of the state of Maine as described in the Cumberland County Registry of Deeds in Book 25500, Page 215, and Book 10924, Page 91 being formerly owned by the St. Lawrence & Atlantic Railroad Company, in part, and the Canadian National Railway Company, in part;

THENCE along the westerly sideline of land of the State of Maine South 23°38'41" East for a distance of 316.33 feet to a granite bound found;

THENCE continuing along land of the State of Maine South 23°34'45" East for a distance of 526.95 feet to a granite bound found;

THENCE continuing along the land of the State of Maine South 23°34'45" East for a distance of 745 feet, more or less to the low water mark of Casco Bay,

THENCE in a generally westerly direction along the low water line about 1,720 feet, more or less, to a point in the easterly sideline of Interstate 295;

THENCE along the easterly sideline of Interstate 295 the following courses and distances:

North 2°23'38" West for a distance of 48 feet, more or less to a point;

South 87°36'22" West for a distance of 30.00 feet to a point;

North 2°23'38 West for a distance of 61.46 feet to a point being located South 73°07'57" West at a distance of 878.66 feet from a granite bound found on the westerly sideline of land now or formerly of the State of Maine;

North 2°23'38 West for a distance of 237.87 feet to a point;

North 89°44'46" East for a distance of 1.05 feet to a rebar found;

North 6°29'05" East for a distance of 122.88 feet to a point;

North 0°24'42: East for a distance of 88.91 feet to a granite bound found;

North 24°48'16 East for a distance of 60.29 feet to a granite bound found;

North 31°29'04" West for a distance of 31.96 feet to a point;

North 3°26'37" West for a distance of 111.10 feet to a point;

North 8°41'09" East for a distance of 89.05 feet to a point;

North 23°15'17" East for a distance of 66.28 feet to point;

North 34°47'40" East for a distance of 96.68 feet to a granite bound found;

North 25°25'41" East for a distance of 160.02 feet to a point;

North 23°37'15" East for a distance of 63.03 feet to a point;

North 39°23'16" East for a distance of 6.72 feet to a point;

North 55°32'18" West for a distance of 11.67 feet to a point;

North 34°48'02" East for a distance of 117.04 feet to a granite bound found;

North 34°43'50" East for a distance of 15.02 feet to a rebar found at the southerly sideline of Sherwood Street;

THENCE departing from the easterly sideline of Interstate 295 and running along the southerly sideline of Sherwood Street South 55°12'19" East for a distance of 288.59 feet to the point of beginning.

Meaning and intending to convey the same premises described in a Quitclaim Deed with Covenant from The Pillsbury Company to Heritage Acquisition Corp. dated March 15, 1999 and recorded in the Cumberland County Registry of Deeds in Book 14616, at Page 50 and in the Release Deed from The Pillsbury Company to Heritage Acquisition Corp. dated March 15, 1999 and recorded in the Cumberland County Registry of Deeds in Book 14616, at Page 57. Heritage Acquisition Corp. was a party to a merger described in a document filed with the Secretary of State of Delaware on December 28, 2007 under which the surviving corporation was Burnham & Morrill Company. Burnham & Morrill Company was a party to a merger described in a document filed with the Secretary of State of Delaware on December 28, 2010 under which the surviving corporation was B&G Foods North America, Inc.

The above described property is conveyed subject to the encumbrances listed as items 1-14 on Exhibit A of the Quitclaim Deed with Covenant from The Pillsbury Company to Heritage Acquisition Corp. dated March 15, 1999 and recorded in the Cumberland County Registry of Deeds in Book 14616, at Page 50 and the rights and easements granted by Heritage Acquisition Corp. to Central Maine Power Company and Verizon New England, Inc. by instrument dated February 7, 2006 and recorded in the Cumberland County Registry of Deeds in Book 24049, Page 189.

[Signature Page Follows]

IN WITNESS WHEREOF, B&G Foods North America, Inc. has caused this instrument to be executed by Scott E. Lerner, its Executive Vice President, General Counsel and Secretary thereunto duly authorized, as of this 23rd day of March, 2022.

B&G FOODS NORTH AMERICA, INC.

By: _____
Name: Scott E. Lerner
Title: Executive Vice President,
General Counsel and Secretary

STATE OF NEW JERSEY
COUNTY OF Morris

March 15, 2022

Personally appeared before me the above named Scott E. Lerner, in his capacity as Executive Vice President, General Counsel and Secretary of B&G Foods North America, Inc. and acknowledged that the forgoing is his free act and deed in his said capacity and the free act and deed of B&G Foods North America, Inc.

Shawna D Mobley
Notary Public
Printed name: Shawna D Mobley
Commission Expiration: Sept. 26, 2026

SHAWNA D MOBLEY
NOTARY PUBLIC
NEW JERSEY
No. 2194027
My Comm. Exp. Sept 26, 2026

SEAL

Received
Recorded Register of Deeds
Mar 23,2022 03:28:38P
Cumberland County
Jessica M. Spaulding

BERN
STEIN
SHUR

Bernstein, Shur,
Sawyer & Nelson, P.A.
100 Middle Street
PO Box 9729
Portland, ME 04104-5029

T (207) 774 - 1200
F (207) 774 - 1127

Mary E. Costigan
(207) 228-7147 direct
mcostigan@bernsteinshur.com

June 10, 2022

Christine Grimando
Director of Planning and Urban Development
City of Portland
389 Congress Street
Portland, Maine. 04101

RE: IDEALS/Roux Institute Rezoning Application

Dear Christine:

I am writing in regard to the proposed map and text amendment submitted by the Initiative for Digital Engineering and Life Sciences (IDEALS) for the former B&G Foods site at 1 Bean Pot Circle. Specifically, this letter is submitted to further satisfy Section 8.5.5.B. of Chapter 14 related to right, title or interest.

Section 8.5.5.B. states that "the regulatory framework shall apply only to properties that are within the IOZ boundary and to which the eligible institution holds right, title, or interest." As provided in the documentation with the application, IDEALS is the owner of the 13-acre parcel located at 1 Bean Pot Circle (the "Property"). IDEALS is a Maine non-profit corporation founded for the following specific purposes:

(1) To develop a campus in Greater Portland for a graduate institute instructing students in the fields of artificial intelligence, digital science, genomics and life sciences;
(2) To develop content and pedagogy for a graduate institute in Greater Portland instructing students in the fields of artificial intelligence, digital science, genomics and life sciences;
(3) To facilitate the creation of a graduate institute in Greater Portland and recruit a reputable institution of higher learning to instruct students in the fields of artificial intelligence, digital science, genomics and life sciences; and
(4) To conduct any other activities as are permissible for a corporation organized under the Maine Nonprofit Corporation Act and exempt from federal income taxation pursuant to section 501(c)(3) of the Code and for corporate contributions to which are deductible under section 170(c)(2) of the Code that may be necessary, useful, or desirable for the furtherance or accomplishment of the foregoing purposes.

IDEALS accomplished purposes #2 and #3 above when it helped develop the Roux Institute and recruited Northeastern University to house the Institute. Through the purchase of the Property and the proposed rezoning, IDEALS is on its way to accomplishing the remaining founding purpose of developing a campus for the Roux Institute. For purposes of the requirements of the

Institutional Overlay Zone, IDEALS can be viewed as the development partner of the Roux Institute. As part of the development, the Roux Institute will lease the Academic Building site from IDEALS along with access rights to the entire campus. All other facilities developed on the site (housing for grad students and faculty, a small hotel for visitors, limited retail facilities, and office and lab space for partners of the Roux Institute), will be developed with the approval of the Roux Institute and strictly to create a campus that serves its ends. Said development will occur through ground leases. Such leases will not be in perpetuity and will eventually revert to the Roux Institute. At some point in the future, IDEALS will convey the Property and all of its rights in any developments to the Roux Institute at Northeastern University which will become the fee owner of the Property. It should also be pointed out that the Roux Institute was established with funding from the Roux Family Foundation which is also the primary financial supporter of IDEALS.

Although this ownership structure is unique, it complies with Section 8.5.5.B and is completely consistent with the purpose of the Institutional Overlay Zone. Section 8.5.5.B requires that the eligible institution hold right, title, or interest in all land in the IOZ. Further, and more importantly, including the Roux Institute, along with IDEALS, as an eligible institution and allowing it to utilize the Institutional Overlay Zone provisions of the Code fulfills the purpose of the IOZ to provide a regulatory mechanism to facilitate a consistent, predictable, and clear growth management process.

The specific purposes of the IOZ enumerated in the Code are:

A. Acknowledge that the city's major academic and medical institutions play a prominent role in the health and well-being of the local and regional community, and in order to sustain that role, these institutions need flexibility to change and grow.

    - Although very young, the Roux Institute is quickly playing a prominent role in the health and well-being of the region and the state.

B. Encourage proactive planning for institutional change and growth which identifies and addresses likely long-term institutional needs and cumulative impacts while leveraging potential benefits at the neighborhood, city, and regional level.

    - While not required to adhere to the requirements of the IOZ, IDEALS chose to propose an IOZ in order to provide the City and its residents with a plan for growth and change that identifies its long term needs and impacts.

C. Ensure that institutional change and growth both complements and, as appropriate, integrates adjacent or surrounding neighborhoods through carefully planned transitions.

    - The proposed plan for the Roux Institute campus has been carefully planned to complement the surrounding neighborhood by adding at least three acres of public open space, public waterfront access, and connectivity to existing pedestrian and bike paths, such as the Back Cove and Eastern Prom Trails. The Property has existing natural buffers and also has planned step-downs in building height toward the existing residential neighborhood.

D. Support the formation and continuation of mutually beneficial public-private cooperation.

- Development of the site will form and continue public-private cooperation in the form of the aforementioned areas of public access, as well as other aspects of the development.

E. Support an ongoing public engagement process that benefits both the institutions and nearby neighborhoods.

- IDEALS has begun and will continue a robust public engagement process. With six neighborhood meetings already held prior to the first Planning Board workshop, the proposed development has already benefited from the feedback received.

F. Reflect Comprehensive Plan and other policy objectives.

- The IDP addresses the number of ways the proposed IOZ is consistent with the Comprehensive Plan, reflecting goals in all six of the major categories, such as the economy and historic preservations; the IDP also reflects the Goals of the One Climate Future Plan.

G. Provide a consistent regulatory approach to all major institutions which allows unique regulatory requirements that balance the particular needs of institutions with the needs of the surrounding neighborhood and wider community.

- IDEALS and the Roux Institute share the same particular needs of the City's more established major institutions and shares similar impacts on the surrounding neighborhoods and wider community. Those similarities all point to the Roux Institute as precisely the type of Institution whose campus should be established utilizing the IOZ regulatory tools.

Thank you for your time and consideration. Please contact me if you have any questions or need further information.

Sincerely,



Mary E. Costigan

cc: Chuck Hewett

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MEMORANDUM OF UNDERSTANDING
between
The Initiative for Digital Engineering and Life Sciences (IDEALS)
and
The Roux Institute at Northeastern University

This Memorandum of Understanding ("**MOU**") is entered by and between The Initiative for Digital Engineering and Life Sciences, a Maine non-profit corporation ("**IDEALS**"), and The Roux Institute at Northeastern University, ("**Roux Institute**") as of the 2th day of Jul, 2022 (the "**Effective Date**").

WHEREAS, IDEALS was organized for the purposes of creating a graduate institute **(The Institute)** instructing students in the fields of artificial intelligence, digital science, genomics and life sciences (the "**Academic Fields**"), developing content and pedagogy for the Academic Fields, facilitating the creation of The Institute by recruiting a reputable institution of higher learning (which it has subsequently identified as Northeastern University) to instruct students in the Academic Fields, developing a campus in Greater Portland to serve as the permanent home of The Institute and other supporting infrastructure, and any other activities permitted for a corporation organized under the Maine Nonprofit Corporation Act and exempt from federal income taxation pursuant to section 501(c)(3) of the Internal Revenue Code of 1986 that are necessary, useful or desirable for the furtherance or accomplishment of the foregoing purposes;

WHEREAS, Northeastern University, having met the criteria identified by IDEALS and its founders, David and Barbara Roux (the "**Rouxs**"), entered into an agreement with the Rouxs to create the Roux Institute;

WHEREAS, in collaboration with the Roux Institute and the Rouxs, and consistent with the mission articulated in its organizational documents, as amended, IDEALS agreed to locate, acquire and develop real property to serve as a permanent campus for the Roux Institute;

WHEREAS, in March of 2022, IDEALS acquired the real property located at 1 Bean Pot Circle in Portland, Maine, identified in the City of Portland Assessing records as parcel 447-A-1-2 (the "**Property**"), and is working diligently with the Roux Institute, the Rouxs, the City of Portland, and various development professionals to develop the campus for the benefit of the Roux Institute;

WHEREAS, the Roux Institute has agreed to lease the Property from IDEALS, and IDEALS has agreed to lease the Property to the Roux Institute on terms and conditions to be further negotiated among the parties (the "**Lease**"), with the stated expectation among the parties that the fee interest to the Property will ultimately be gifted to the Roux Institute; and

WHEREAS, in connection with ongoing development of the Property and negotiation of the Lease, the parties hereto wish to reduce to writing the foregoing and agree to certain other terms by entering into this MOU.

NOW, THEREFORE, IDEALS and the Roux Institute, in consideration of the mutual promises and undertakings herein contained, agree as follows:

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I. PURPOSE, SCOPE & EXPECTATIONS

1.1 Articulation of Purpose. The purpose of this MOU is to affirm shared goals and intentions among the parties. The parties hereto desire to create a sustainable and innovative campus on the Property to be a permanent home of the Roux Institute in Portland, Maine. The parties will work to establish and maintain the Roux Institute campus to serve as an environment for collaborative idea sharing, innovation, and education that will have a transformative impact in Maine and beyond. In furtherance of that purpose, it is the expectation of the parties that:

(a) IDEALS, having acquired the Property, will develop the Property in collaboration with the Roux Institute, and IDEALS shall initially bear the costs and expenses of development of said property, including, without limitation: (i) costs of the Property purchase, (ii) expenses related to site preparation and remediation, (iii) equity/costs to support the financing of construction of one or more new buildings and renovation/retrofit of existing buildings, (iv) related professional fees associated with the development of the Property, and (v) other costs and expenses in furtherance of the foregoing.

(b) The Roux Institute, having agreed that the Property is well-situated to ensure the success of the educational programs offered by the Roux Institute, will lease the Property from IDEALS for its operations of the Roux Institute and its anticipated robust campus, with such lease arrangement subject to completion of negotiations of an acceptable Lease consistent with the terms of this MOU.

1.2 Lease. The Parties hereby confirm their commitment to enter into the Lease, and recognize that this MOU will not address every component or aspect of the Lease and they intend that future definitive executed agreements establishing and/or confirming the tasks and responsibilities in connection with the Lease will supersede this MOU with respect to matters related to the lease in its entirety. It is expected that the rent payments under the Lease will be at a rate that covers the amortization and carrying costs of the Roux Institute's facility and related campus infrastructure.

1.3 Transfer of Property. It is also the expectation of the parties that the fee interest to the Property and any combination of land, building and/or other marketable assets on the Property will be gifted by IDEALS to the Roux Institute, though the parties recognize that this MOU will not address every component or aspect of this anticipated gift. It is expected that this transfer of the Property will take place within approximately ten years, concurrent with it being mutually understood that the Roux Institute is meeting its articulated goals, operating successfully in Northeastern University's system of regional campuses, and demonstrating financial sustainability. When assuming ownership of the Property, the Roux Institute will also agree to assume responsibility for any remaining notes or bonds due, including both principal and interest. At such time as the transfer of the Property is complete, it is anticipated that IDEALS will be dissolved, having fulfilled its purposes.

1.4 Dedication to The Institute. IDEALS is committed to the placement and operation of The Institute instructing students, conducting research, and supporting innovation and entrepreneurialism in the Academic Fields in Portland, Maine, and the development of a campus upon which The Institute and supporting facilities and services will operate. If, for any reason beyond the control of IDEALS, its Board of Directors, officers and employees, Northeastern University cannot continue to oversee and operate the Roux Institute (which presently serves as The Institute), or if Northeastern University withdraws for any reason, then the Board of Directors of IDEALS shall select a replacement educational institution to oversee and

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operate The Institute and its campus.

II. COVENANTS.

2.1 Cooperation. The parties shall communicate regularly about the progress of the development and all needs of the Roux Institute with respect to the Property and the development of the campus thereon suitable for instructing students in the Academic Fields. No development shall occur on the Property without authorization and approval from the Roux Institute.

2.2 Publicity. The parties agree that any publicity regarding the Roux Institute, the Lease, or this MOU during the period of this agreement will be mutually agreed upon by the Roux Institute and IDEALS.

2.3 IDEALS Development Assurances. IDEALS represents that IDEALS will make a good faith effort to obtain all necessary approvals prior to the commencement of the Lease to permit the development and operation of the campus by the Roux Institute for the intended uses, including but not limited to, all necessary approvals from any governmental agencies, or any other party with rights to approve the use and development of the Property.

2.4 Support Reporting. No later than May 31 of each year, IDEALS shall prepare or cause to be prepared a report describing the type and amount of support provided by IDEALS to the Roux Institute during the preceding calendar year. IDEALS shall submit such report and a copy of its Form 990 for the prior tax year to the Roux Institute.

III. GENERAL

3.1 Expenses. Except as may otherwise be provided herein, or mutually agreed in a separate writing between the parties, each party shall be solely responsible for expenses incurred by it in connection with this MOU.

3.2 Term and Termination. This MOU shall be effective as of the Effective Date and shall expire or be terminated in accordance with the termination provisions herein.

3.3 Termination.

(a) Termination Upon Written Notice. Any party shall have the right to terminate this MOU upon written notice to the other Party.

(b) Effect of Termination. Upon the termination of the MOU, each party is released from all obligations imposed by this MOU, except the confidentiality obligations herein which shall survive termination of this MOU.

3.4 Amendment. This MOU may be amended only by agreement in writing signed by both parties.

3.5 Governing Law. This MOU shall be governed by and construed in accordance with the laws of the State of Maine.

3.6 Confidentiality. IDEALS and Roux Institute covenant and agree that IDEALS may disclose

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the terms and conditions of this MOU to those parties reasonably necessary to obtain or to assist with obtaining any necessary approvals and consents in connection with the proposed Lease (including, without limitation, the City of Portland), and to persons reasonably necessary to otherwise promote or accomplish the Lease. The parties understand that this MOU will become a public document following submission to the City of Portland.

3.7 Counterparts. This Agreement may be executed in any number of counterparts, each of which, when executed and delivered, shall be an original, but such counterparts shall together constitute one and the same instrument.

[*Signature Page Follows*]

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IN WITNESS THEREOF, IDEALS and Roux Institute, through their duly authorized employees or agents, have caused this MOU to be executed and delivered effective as of:

The Initiative for Digital Engineering and Life Sciences

DocuSigned by:
By: Charles Hewett
4BD16666DAF9434...
Name: Charles E. Hewett, Ph.D.
Title: Executive Director
Date: July 20, 2022

Northeastern University

DocuSigned by:
By: Thomas Nedell
FF682479C14A4DA...
Name: Thomas Nedell
Title: Chief Financial Officer
Date: July 21, 2022

DOMESTIC
NONPROFIT CORPORATION

STATE OF MAINE

RESTATED ARTICLES OF INCORPORATION

File No. 20190035ND Pages 7
Fee Paid $ 10
DCN 2222032330002 REST
-----FILED----------
07/21/2022

Julie L. Flynn
Deputy Secretary of State

A True Copy When Attested By Signature

Deputy Secretary of State

The Initiative for Digital Engineering and Life Sciences
(Name of Corporation as it appears on the records of the Secretary of State)

Pursuant to 13-B MRSA §805, the undersigned corporation adopts these Articles of Restatement:

FIRST: All restated statements required to be set forth in Articles of Incorporation (*MNPCA-6-1) are attached as Exhibit A. Statements as to the incorporator or incorporators and the initial directors may be omitted. This restatement was adopted on July 19, 2022
(date)

("X" one box only)

☐ By the members at a meeting at which a quorum was present and the restatement received at least a majority of the votes which members were entitled to cast.

☐ (If the Articles require more than a majority vote.) By the members at a meeting at which the restatement received at least the percentage of votes required by the Articles of Incorporation.

☐ By the written consent of all members entitled to vote with respect thereto.

☑ (If no members, or none entitled to vote thereon.) By majority vote of the board of directors.

SECOND: The Registered Agent is a: (select either a Commercial or Noncommercial Registered Agent)

☐ Commercial Registered Agent CRA Public Number: _____

_____
(name of commercial registered agent)

☑ Noncommercial Registered Agent

Helen Sterling Coburn Esq.
(name of noncommercial registered agent)

100 Middle Street, Portland, ME 04104
(physical location, not P.O. Box – street, city, state and zip code)

PO Box 9729, Portland, ME 04104-5029
(mailing address if different from above)

Form No. MNPCA-6A (1 of 2)

THIRD: Pursuant to 5 MRSA §108.3, the new commercial registered agent as listed above has consented to serve as the registered agent for this nonprofit corporation.

Dated July 19, 2022

By _____
(signature)

Charles Hewett, Secretary
type or print name and capacity)

By _____
(signature)

type or print name and capacity)

MUST BE COMPLETED FOR VOTE OF MEMBERS

I certify that I have custody of the minutes showing the above action by the members.

_____
(signature of clerk, secretary or asst. secretary)

*Form MNPCA-6-1 **MUST** accompany this filing.

This document **MUST be signed by any duly authorized officer. (13-B MRSA §104.1.B)

Please remit your payment made payable to the Maine Secretary of State.

Submit completed form to: **Secretary of State**
Division of Corporations, UCC and Commissions
101 State House Station
Augusta, ME 04333-0101
Telephone Inquiries: **(207) 624-7752** Email Inquiries: CEC.Corporations@Maine.gov

Form No. MNPCA-6A (2 of 2) Rev. 2/2/2018

Articles of Incorporation

pursuant to **13-B MRSA §403**
to accompany the following:

(Check one box only.)

- ☐ Articles of Nonprofit Conversion (13-C MRSA §933)
- ☐ Statement of Conversion (31 MRSA §1645)
- ☑ Restated Articles of Incorporation (13-B MRSA §805)

FIRST: The name of the corporation:

The Initiative for Digital Engineering and Life Sciences

SECOND: ("X" one box only. Attach additional page(s) if necessary.)

☑ The corporation is organized as a public benefit corporation for the following purpose or purposes:

See Exhibit A.

☐ The corporation is organized as a mutual benefit corporation for all purposes permitted under 13-B MRSA, or, if not for all such purposes, then for the following purpose or purposes:

THIRD: The Registered Agent is a: (select **either** a Commercial or Noncommercial Registered Agent)

☐ Commercial Registered Agent CRA Public Number: _____

(name of commercial registered agent)

☑ Noncommercial Registered Agent

Helen Sterling Coburn, Esq.

(name of noncommercial registered agent)

100 Middle Street, Portland, ME 04104

(physical location, not P.O. Box – street, city, state and zip code)

PO Box 9729, Portland, ME 04104-502

(mailing address if different from above)

FOURTH: Pursuant to 5 MRSA §108.3, the new commercial registered agent as listed above has consented to serve as the registered agent for this nonprofit corporation.

Form No. MNPCA-6-1 (1 of 2)

FIFTH: The number of directors (not less than 3) constituting the initial board of directors of the corporation, if the number has been designated or if the initial directors have been chosen, is 3.

The minimum number of directors (not less than 3) shall be 3 and the maximum number of directors shall be 20.

SIXTH: Members: ("X" one box only.)

☑ There shall be no members.

☐ There shall be one or more classes of members and the information required by 13-B MRSA §402 is attached.

SEVENTH: **(Optional)** ☑ (Check if this article is to apply.)

No substantial part of the activities of the Corporation shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and the Corporation shall not participate in or intervene in (including the publication or distribution of statements) any political campaign on behalf of any candidate for public office.

EIGHTH: **(Optional)** ☑ (Check if this article is to apply.)

Other provisions of these articles including provisions for the regulation of the internal affairs of the corporation, distribution of assets on dissolution or final liquidation and the requirements of the Internal Revenue Code section 501(c) are set out in Exhibit B attached hereto and made a part hereof.

Submit completed form to: **Secretary of State**
Division of Corporations, UCC and Commissions
101 State House Station
Augusta, ME 04333-0101
Telephone Inquiries: **(207) 624-7752** Email Inquiries: CEC.Corporations@Maine.gov

Form No. MNPCA-6-1 (2 of 2) Rev. 2/1/2018

Wed Jul 27 2022 13:31:30

EXHIBIT A

ARTICLES OF INCORPORATION
The Initiative for Digital Engineering and Life Sciences

Article Second

The Corporation is organized and shall always be operated exclusively for charitable and educational purposes within the meaning of section 501(c)(3) of the Internal Revenue Code of 1986, as amended (or the corresponding provision of any future United States Internal Revenue Law).

Within these restrictions, the Corporation is organized and shall always be operated for the benefit of, and to support, The Roux Institute at Northeastern University regarding the following purposes:

1. To develop a campus in Greater Portland for a graduate institute (called the "Roux Institute at Northeastern University") instructing students, conducting research, and supporting innovation and entrepreneurialism in the fields of artificial intelligence, digital science, genomics and life sciences;

2. To develop content and pedagogy for a graduate institute in Greater Portland instructing students in the fields of artificial intelligence, digital science, genomics and life sciences;

3. To facilitate the creation of a graduate institute in Greater Portland and recruit and collaborate with Northeastern University to instruct students, conduct research, and support innovation and entrepreneurialism in the fields of artificial intelligence, digital science, genomics and life sciences;

4. To conduct any other activities as are permissible for a corporation organized under the Maine Nonprofit Corporation Act and exempt from federal income taxation pursuant to section 501(c)(3) of the Code and for corporations contributions to which are deductible under section 170(c)(2) of the Code that may be necessary, useful, or desirable for the furtherance or accomplishment of the foregoing purposes.

The Corporation is solely committed to the placement and operation of a graduate institute instructing students, conducting research, and supporting innovation and entrepreneurialism in the fields of artificial intelligence, digital science, genomics and life sciences in Portland, Maine. Consistent with the purposes above, the graduate institute will be overseen and operated by an educational institution selected by the Board of Directors of the Corporation, anticipated to always be Northeastern University. If, for any reason beyond the control of the Corporation, its Board of Directors, officers and employees, Northeastern University cannot continue to oversee and operate the graduate institute, or if Northeastern University withdraws for any reason, then the Board of Directors shall select a replacement educational institution to oversee and operate the graduate institute.

Exhibit B

ARTICLES OF INCORPORATION
The Initiative for Digital Engineering and Life Sciences

Article Eighth

A. This Corporation shall possess any and all powers granted to it under the laws of the State of Maine which are necessary and expedient to carry out the purposes set forth in Article Second above, but shall not possess or exercise any powers which would (a) cause the Corporation to be ineligible for exemption from income tax under Section 501(c)(3) of the Internal Revenue Code of 1986 (or the corresponding provision of any future United States Internal Revenue Law) (the "Code") or (b) cause contributions to the Corporation to be ineligible for deduction under Section 170(c)(2) of the Code.

B. No part of the net earnings of the Corporation shall inure to the benefit of or be distributed to any director, trustee, employee, or other individual, partnership, estate, trust, or corporation having a personal or private interest in the Corporation. Compensation for services actually rendered and reimbursement for expenses actually incurred in attending to the affairs of the Corporation shall be limited to reasonable amounts.

C. No substantial part of the activities of the Corporation shall be devoted to the carrying on of propaganda or otherwise attempting to influence legislation (except to the extent permitted by section 501(h) of the Code) in a manner or to an extent which would disqualify the Corporation for tax exemption under section 501(c)(3) of the Code. The Corporation shall not participate in or intervene in any political campaign on behalf of or in opposition to any candidate for public office (including publishing or distributing statements).

D. The affairs and business of the Corporation shall be managed and conducted by the Board of Directors, who shall serve as the Board of Directors under Title 13-B of Maine Revised Statutes Annotated and shall be nominated and elected by the incorporator immediately upon the organization of the Corporation and who shall act as the Directors of the Corporation until the election of their successors as provided in the Bylaws of the Corporation. The qualifications, election, number, tenure, powers, and duties of the members of the Board of Directors shall be as provided in the Bylaws.

E. In the event that the Corporation is a private foundation as that term is defined in Section 509 of the Code, then notwithstanding any other provisions of the Articles of Incorporation or the Bylaws of the Corporation, the following provisions shall apply:

1. The Corporation shall not engage in any act of self-dealing as defined in section 4941(d) of the Code.

Wed Jul 27 2022 13:31:30

2. The Corporation shall make distributions for each taxable year at such time and in such manner so as not to become subject to the tax on undistributed income imposed by section 4942 of the Code.

3. The Corporation shall not retain any excess business holdings as defined in section 4943(c) of the Code.

4. The Corporation shall not make any investments in such manner as to subject it to tax under section 4944 of the Code.

5. The Corporation shall not make any taxable expenditure as defined in section 4945(d) of the Code.

F. In the event of the liquidation, dissolution, or winding up of the affairs of the Corporation, whether voluntary, involuntary, or by operation of law, the Board of Directors of the Corporation shall, except as may be otherwise provided by law, transfer all of the assets of the Corporation in such manner as the Directors, in the exercise of their discretion, may by a majority vote determine; provided, however, that any such distribution of assets shall be calculated to carry out the objects and purposes of the Corporation; and, provided further, that all such distributions must be to The Roux Institute at Northeastern University or, at the discretion of the Board of Directors, to a successor organization operating a graduate education and research institute at One Beanpot Circle, Portland, Maine, (a) which is exempt from tax as organizations described in section 501(c)(3) of the Code, and (b) contributions to which are deductible under the provisions of sections 170, 2055 and 2522 of the Code.

G. The Board of Directors shall have power to make, alter, amend, and repeal the Articles of Incorporation or the Bylaws of the Corporation by vote of a majority of all the Directors at any regular or special meeting.

Institutional Development Plan

Att. J

Roux Campus

August 2022



IDEALS
Initiative for Digital Engineering and Life Sciences

The Roux Institute
Northeastern University

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Introduction



Artist Interpretation

The Initiative for Digital Engineering and Life Sciences (IDEALS) is a Maine non-profit corporation tasked with and solely committed to locating and developing a campus for the Roux Institute at Northeastern University in Portland, Maine: a space for cutting-edge educational, research, and collaborative programs in areas including artificial intelligence, computer and data sciences, digital engineering, advanced life sciences, and medicine. IDEALS was formed in 2018 with support from David Roux, a technology entrepreneur and Lewiston native, and his wife Barbara. They sought to create a graduate institute providing opportunities for Maine people to fill talent gaps for growing digital and life sciences companies while ensuring the 21st century success of greater Portland and Maine's economies. IDEALS recruited Northeastern University to establish and run the program, and the Roux Institute at Northeastern University launched in 2020. The Roux Institute now offers post-graduate degrees and certifications, conducts research, assists start-up entities, and partners with private, public, and non-profit entities to spur innovation and develop 21st century workforce talent.

The Roux Institute is temporarily located in leased space in Portland. A permanent campus for the Roux Institute is essential to fulfill its educational and economic potential. The vision for that home - the Roux Campus - is one that allows for continued growth of the education, research, entrepreneurial, and collaborative programs of the Roux Institute while providing space to support those programs and serve the community. After completing an exhaustive four-year search both on and off the Portland peninsula and its surrounding area, IDEALS acquired land formerly occupied by the B&M Baked Beans facility along the Portland waterfront.

Recognizing the prominent role that major educational and healthcare institutions play in the health and well-being of the community, the City of Portland's Land Use Code allows for the creation of Institutional Overlay Zones (IOZ) to "provide a regulatory mechanism where an improved regulatory structure is needed to facilitate a consistent, predictable, and clear growth management process." Consistent with that purpose, we seek designation of an IOZ for the Roux Campus. We will simultaneously seek to change the underlying zone to B-5 Mixed-Use Business. The IOZ designation process requires two components: an Institutional Development Plan (IDP, this document) and a regulatory framework. The purpose of this IDP is to establish baseline institutional data for existing land uses and services while also communicating planned growth; it is the basis of the proposed regulatory framework, submitted under separate cover. The regulatory framework translates the IDP into a set of clear and specific zoning requirements, which will constitute the text and map amendment to the City's Land Use Code. Unlike other institutions for which the IDP process was established, the Roux Institute is in its early years and has not established a stand-alone campus. The IDP allows IDEALS to memorialize the long-term strategic plan for the Roux Campus in consultation with the Portland community at the very outset of development.

Creation of a new campus provides the opportunity to establish a people-oriented space right from the start. It will prioritize people over cars by creating a pedestrian-friendly landscape supported by multi-modal programs that provide incentives for alternative transportation options. The campus will improve site resilience and sustainability by replacing much of the existing pavement and rooftops with green space while improving coastal ecology and incorporating sustainable building practices.

We intend to create a dynamic, mixed-use campus that contributes to the East Deering neighborhood without encroaching on it or burdening City resources. By providing ancillary uses on site (office and lab space for institutional partners, housing for students, faculty, and employees, a hotel for visitors, retail, and personal services), the Roux Campus will meet demand created by the Roux Institute at Northeastern University and its collaborating partners.

1. Establishing the Context

Our Roots



IDEALS
Initiative for Digital Engineering and Life Sciences
Roux Campus

The Roux Campus will be the first of its kind in the Northeast. It will integrate graduate education in technology and science with groundbreaking research and a wide range of collaborations to spark innovation and economic development. The campus is being designed at a scale that will facilitate learning, collaboration, and research breakthroughs and innovations, encourage start-up businesses, and strengthen existing Maine businesses and institutions. Every component of the campus is directly linked to the mission of the Roux Institute, from the housing – keep students and faculty on campus to foster collaboration and reduce traffic, to the hotel – provide a convening space and accommodation for Institute guests from around the globe so that, together, they can spark new ideas. The iconic waterfront location, minutes from downtown Portland (by bike, bus, boat, car, or on foot) with striking architecture and a vibrant community, will attract talent from around the globe and spread economic advancement throughout Portland and beyond.

IDEALS will oversee the design and construction of a primary academic building housing the Roux Institute and will also seek partnerships from the private sector to construct and operate housing, parking, a hotel, and commercial office and laboratory buildings to support the primary academic uses—all of which would be on a ground lease basis.

The Roux Institute
Northeastern University

The Roux Institute at Northeastern University was established to develop talent, conduct research, and encourage innovation to support and attract businesses that will thrive in the 21st century economy.

Vision: The State of Maine will be home to a thriving, high-tech economy fueled by people and businesses leading in experiential artificial intelligence, machine learning, big data, life sciences and medicine, engineering, and data visualization. This new economy will attract people and businesses from around the world to the region and provide unprecedented opportunities for all Mainers in a manner that honors and enriches the Maine lifestyle and culture.

Mission: With a vision to enable the creation of a synergistic technology and life science-driven economy and workforce, the Roux Institute designs, curates, and integrates learning, research, and entrepreneurial solutions in collaboration with industry, academic institutions, and community organizations to catalyze talent development and economic impact throughout Maine.

Institutional Context



The Roux Institute at Northeastern University currently has 72 full-time, Maine-based employees, 50 of whom are faculty and post-doctoral staff. The Institute taught a total of 817 learners during fiscal year 2021. Of these 817 learners, 317 are matriculating graduate students and the remainder are pursuing courses and certificates while working full time. Of Maine's 16 counties, 15 are represented in the student body. The Institute offers 16 graduate programs in computer and data science, analytics, cloud software, cybersecurity, life sciences, and project management.

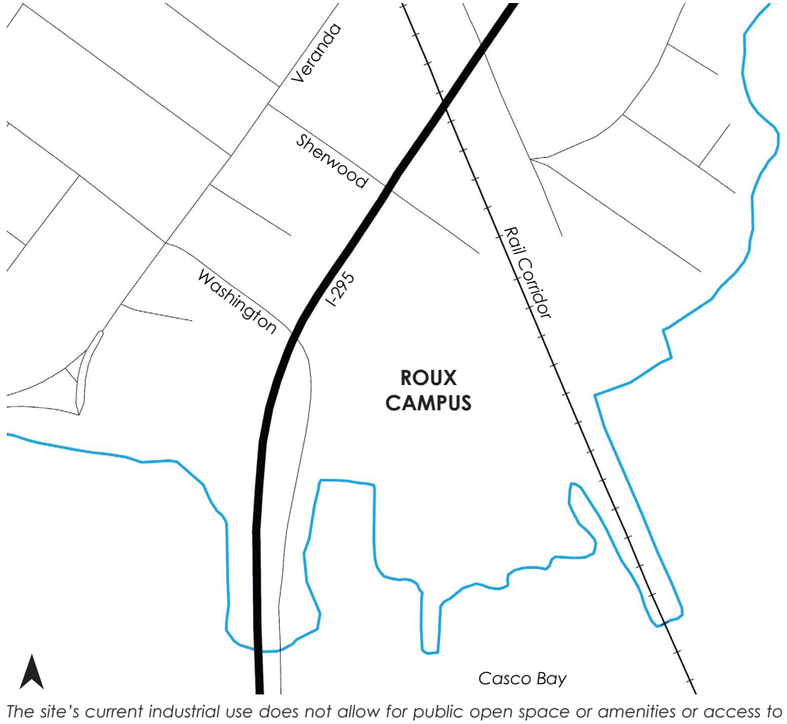
These educational programs are bolstered by collaboration; the Institute has 54 industry partners, 14 academic partners, and 12 community partners. Approximately 450 of these partners' employees have taken courses designed by the Roux Institute in concert with their employers, and over 70% of partners provided paid, cooperative work opportunities for Institute students. Additionally, the Institute has hosted 10 accelerator companies and has 6 established companies in residence. The Roux Institute at Northeastern University currently occupies 44,000 square feet of space leased at 100 Fore Street. This space enabled the Roux Institute to begin providing graduate education services in Portland, but significantly more physical space is needed to meet its Mission & Vision. In the near term (0-5 years), the Roux Institute anticipates enrollment expanding to 1,750 learners; in the medium term (10-20 years), enrollment is anticipated to grow to 2,500 students; and in the long term (20+ years), enrollment is projected to grow to 4,500 students. The Roux Institute intends to transfer all operations from 100 Fore Street to the new Roux Campus.

Neighborhood Context

The proposed Roux Campus is located within Portland's East Deering neighborhood, near a residential area of single-family homes and a commercial node featuring restaurants, bars, mechanics, offices, and three-story apartments. While proximate to these areas, the site is remarkably buffered. I-295 to the west, state-owned vacant parcels to the north, a disused rail corridor and marine business to the east, and Casco Bay to the south collectively surround the property. Access to the site is via Sherwood Street at the intersection with Veranda Street, through a 40-foot-wide highway underpass.

This setting makes for a campus full of potential. Due to its relatively large 13+ acre size and existing buffers, the site lends itself to dense development. Taller buildings with smaller footprints will allow for additional public open space, a mix of landscaped and natural green space, and public waterfront access while helping to reduce impact on Portland's challenged housing stock. The Roux Campus will connect to and enhance the surrounding East Deering neighborhood while simultaneously fostering its own identity.

Future development will acknowledge these advantages and constraints. The site must be planned responsibly to maximize community access while minimizing off-property impacts. The creation of compelling pedestrian, bicycle, water taxi, and public transit connections to the Roux Campus and the waterfront will be particularly crucial.



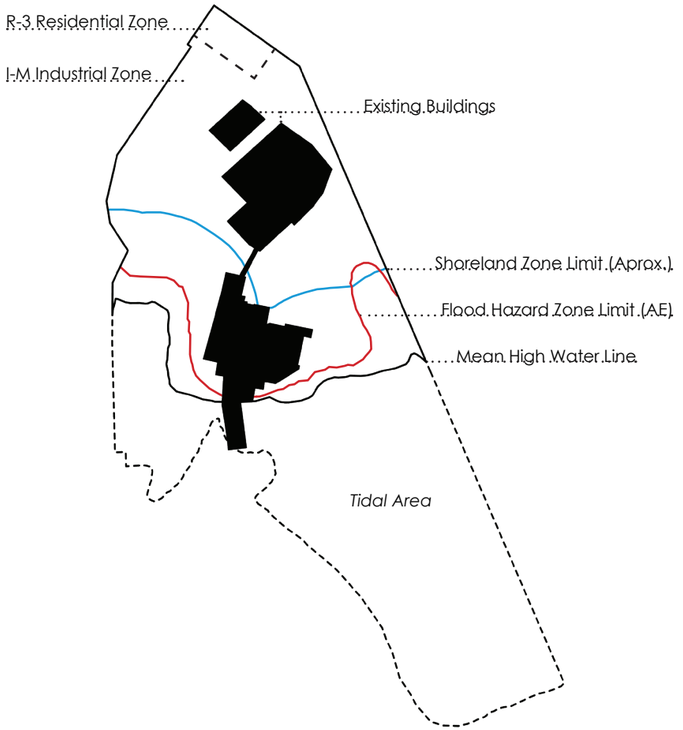
The site's current industrial use does not allow for public open space or amenities or access to considerable shoreline frontage.

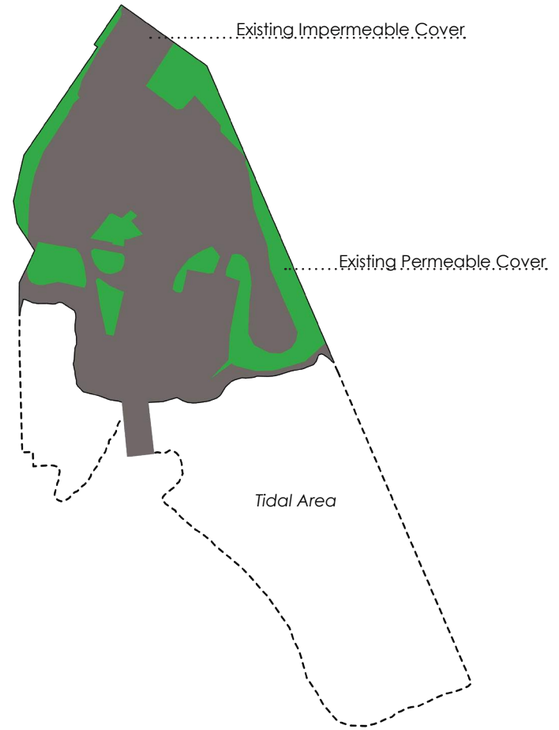


The site is near several of Portland's most popular bike and pedestrian trails, including Back Cove Trail, Bayside Trail, and Eastern Prom Trail. Its redevelopment can facilitate better community access to Portland's waterfront, as public open space enhancement is a key design parameter for the Roux Institute at Northeastern University.

Site Context







Zoning
The majority of the site is currently zoned I-M Moderate-Impact Industrial, with the area immediately adjacent to Sherwood Street zoned R-3 Residential. Parcels adjacent to the site include I-L Low-Impact Industrial at the Maine Yacht Center to the east and R-3 Residential to the north and across the railroad tracks. Parcels west of I-295 are generally zoned R-5 Residential and B-2 Mixed-Use Business.

Relationship to Water
The parcel includes approximately 13+ acres above mean high water line (the site) as well as an adjacent 11 acres of submerged lands. The site has 1,000 linear feet of waterfront, within associated Flood Hazard and Shoreland Zones.

The City of Portland designates a shoreland zone within 250 feet of tidal water bodies. Within the shoreland zone, a minimum setback of 25 feet from the normal high-water level is required for structures, roads, and driveways.

Portions of the site are delineated as Special Flood Hazard Areas according to FEMA's Flood Insurance Rate Map (FIRM). The current and effective FIRMs for Cumberland County, based upon FEMA's 1986 publication, indicate portions of the site are within the AE Zone, representing 1% annual chance of flooding. Base flood elevations range from 9 to 11 feet.

Impervious Areas
The majority of the site is developed land, with limited areas of natural vegetation. Approximately 10 acres of land above the mean high-water line are impervious (paved areas, building roofs, etc.). The remaining 2.5 acres of permeable area include lawn and approximately half an acre of vegetated, early successional non-lawn area adjacent to the rail corridor abutting the site to the east.

Not only is the site largely covered in pavement and building structures, it is also inaccessible to the public. Fencing prevents access to the waterfront and the interior of the site. This security was necessary for industrial use. However, new development can "soften" site edges and provide improved access to the waterfront.



Under current conditions, the site is inaccessible to the public.

Coastal & Natural Resources

Immediately adjacent to this highly developed site are natural resource areas including: an estuarine intertidal emergent marsh located east of the site near the rail corridor; coastal wetlands for all areas below highest annual tide; tidal waterfowl and wading bird habitat, and blue mussel habitat. Portions of the site are delineated as Special Flood Hazard Areas according to FEMA's Flood Insurance Rate Map (FIRM).

Topography of the site slopes downward from the north to the south, toward the water. The highest elevations are near Sherwood Street, at elevation 28 +/-. The lowest grades are near the loading dock at the B&M Bean Building, at elevation 8.5 +/-. These low areas are only 1-foot above Highest Astronomical Tide.

In recognition of existing vulnerabilities and future sea level rise, resiliency will be key to the Roux Campus. The redevelopment will raise site grades and incorporate infrastructure improvements to create a flood resilient landscape. It will also rehabilitate this brownfield site, enhance natural resource areas, and reduce the impacts of current impervious, industrial conditions by creating habitats that foster ecological diversity and productivity at the water's edge.



The coastal wetland includes rockweed anchored to rocks in tidal mudflat.



Stormwater outfalls drain into the wetland where a scour channel cuts across the mudflat.



The tidal flat is home to tidal waterfowl and wading bird habitat.



Blue mussels are abundant under the pier, where soft-shell clams also grow.

The tidal mudflat portion of the site stretches far into the inlet, resulting in dramatic daily change.



Outfall pipes drain to wetlands in the ravine.



The ravine's slope is vegetated with native sumac and invasive Japanese knotweed.



The estuarine system extends up a ravine along the site's eastern boundary.

Historic Resources

The campus was occupied by residences and a lobster cannery prior to 1913, when Burnham & Morrill (B&M) relocated its operations to the site from Franklin Street. The address of the B&M facility at that time was Water Street, which granted access from the west (and is visible on the map below) prior to construction of I-295. By 1913, the five-story B&M Bean Building stood on site, as well as the cod-fish building located on the pier. In the 1920s, B&M began experimenting with brick-oven baked beans in an attempt to offset declines in other product lines (canned fish, meat, and vegetables), and in the 1920s and 1930s began selling brick-oven baked beans in cans. In 1965, B&M's address was designated as 1 Bean Pot Circle. With an appreciation for the B&M history at the site, IDEALS is seeking City Historic Landmark status for the B&M Bean Building. A more extensive description of site history and the preservation of the Bean Building may be found in the Landmark Designation Report for the Burnham & Morrill Company Cannery by Heritage Consulting and Essex Preservation Consulting, dated June 2022.

Bean Building

The Bean Building is the cornerstone and flagship of the B&M food manufacturing facility. Constructed circa 1912 by Aberthaw Construction Co., Boston, MA, the building housed the baked bean manufacturing processes and the plant management offices. It is a robust five-story, reinforced-concrete building with a high live-load floor capacity. The concrete frame is exposed on the exterior of the building with brick and masonry infill walls and glass windows. The building is structurally sound with only minor structural modifications required. The main entry is on the 2nd floor level, which is at elevation 21.5', well above the 100-year flood zone elevation of 10'. This, along with the rugged structure and historic community value, make the building an ideal candidate for reuse. A permanent exhibit of artifacts and photographs is planned for the site.



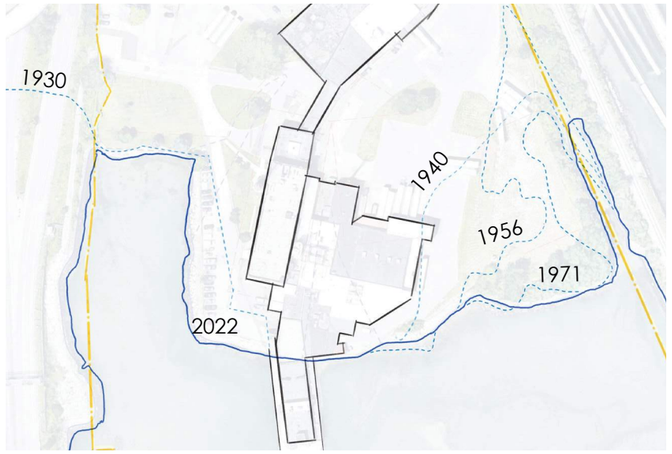
The Bean Building as it stands today

A Changing Shoreline

Buildings are not the only changes that occurred onsite over the last 100-plus years. As indicated in the diagram at right, the shoreline has significantly shifted in reach and shape across decades. Some of the shifts were caused by intentional human manipulation; others appear to have been natural changes where mud flats (with limited salt marshes) extended onto the site.

A New Perspective

The historic relationship of the East Deering neighborhood and B&M site was one of stark contrast between residential and industrial uses. Sudden transitions between residential and manufacturing zones, and from manufacturing to the sea, heightened the disparity. Construction of the Grand Trunk railroad line in the 1860s, and then of Interstate 295 in the 1960s, further isolated the campus's industrial identity. The Roux Campus presents an opportunity for new connections, public access, and thoughtful transitions from the surrounding neighborhoods into a dynamic environment built around the B&M Bean Building.











Views of the B&M campus and related infrastructure earlier in Portland's development (all images from Maine Memory Network)

Municipal Plan Context

The former B&M site is ripe for renewed use and redevelopment. The proposed campus includes adaptive re-use of the B&M Bean Building, facilitates public interaction with the waterfront, creates a new walkable core of diverse uses, and bolsters economic opportunity in East Deering, the City of Portland, and beyond.

Portland's Plan 2030 focuses primarily on eight aspects of Portland's identity and performance: environment, waterfront, transportation, housing, recreation and open spaces, facilities, historic resources, and economy. While the facilities section generally focuses on municipal operations and the waterfront section is focused on the working western, central, and eastern waterfront areas of the peninsula, the other six sections are directly relevant to the proposed plan. Excerpts relevant to the Roux Campus are provided here.



Portland's Plan 2030, adopted in 2017, is the City's comprehensive plan.

Environment
"Adopt sustainable land use and transportation policies that support connectivity, walkable neighborhoods, and multi-modal transportation."

"Plan for the mitigation and redevelopment of brownfields to support productive uses and a healthier environment for residents."

Transportation
"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."

Housing
"Encourage additional contextually appropriate housing density in and proximate to neighborhood centers."

"Identify priority growth areas."

"Allow for a range of housing models in City codes, whether small units, co-housing, or others that may suit changing needs and demographics."

Recreation & Open Space
"Encourage physical and visual access to Portland's waterfront – Casco Bay, Back Cove, and the Stroudwater, Presumpscot, and Fore Rivers – as a "blueway" network and an extension of public space for local and regional recreation and transportation needs."

Historic Resources
"Stabilize and enhance historic areas of the city by ensuring quality investment in existing structures and compatible infill development."

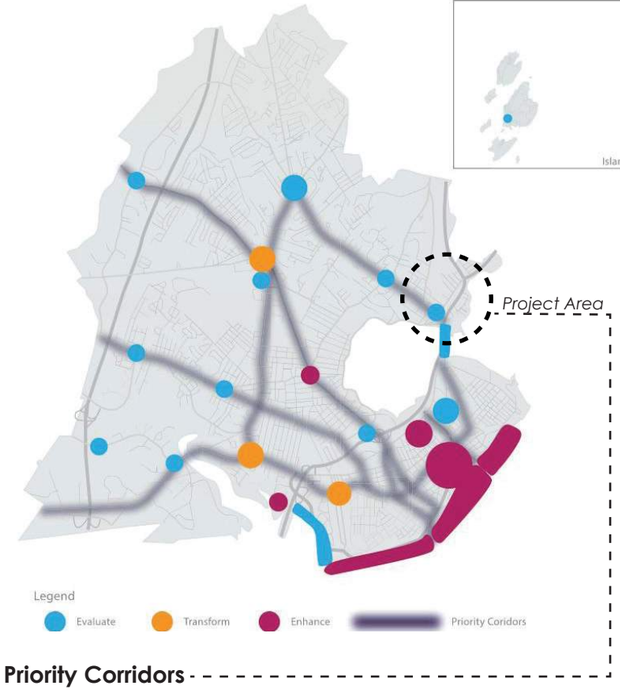
"Ensure an appropriate balance of continuity and change as Portland grows and evolves."

Economy
"Support job creation and business growth through public initiatives and private, institutional, and regional partnerships."

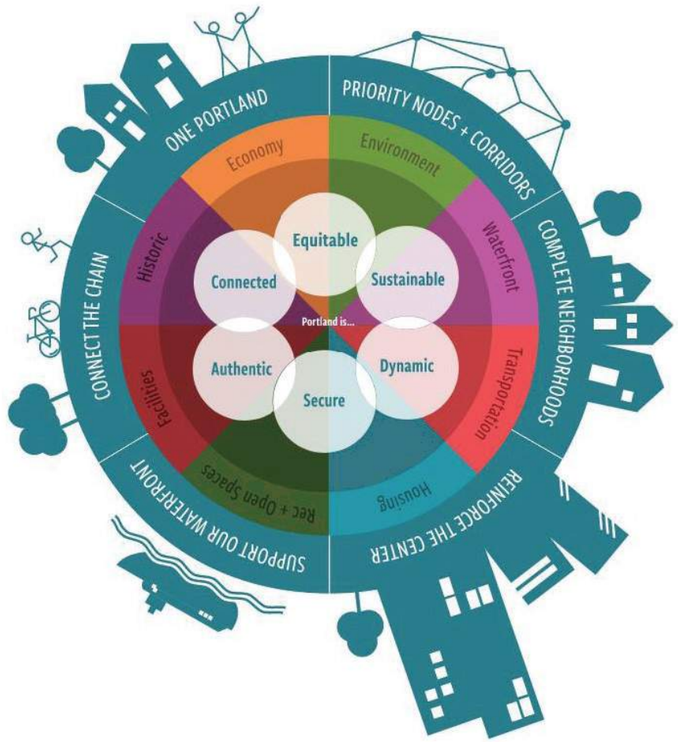
"Develop programs that support industries with high-growth / high-value potential such as life sciences, food production, information technology, and marine-related industries."

"Modify ordinances and make strategic investments to better promote business development and job creation in priority areas."

"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."



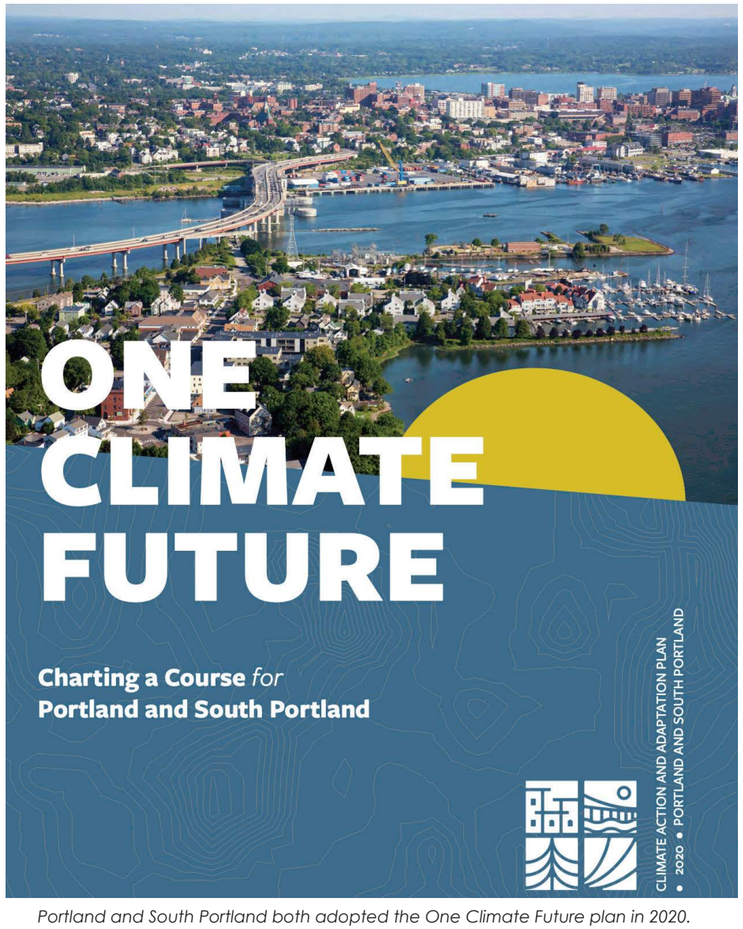
Nodes & Priority Corridors
Portland's Plan 2030 emphasizes potential evolutions in land use. Washington Avenue is identified as a priority corridor, which can provide "additional mixed-use, higher density growth to take advantage of the transit benefits and services that well-designed, diverse corridors can offer." The Washington Avenue / Veranda Street / Tukey's Bridge area is called out for evaluation: such areas "should be assessed for their ability to address neighborhood needs and serve as centers for complete neighborhoods."



One Climate Future

The Roux Campus is an opportunity to showcase sustainable and resilient buildings, fostering a resilient community across East Deering and the region of Portland. Its waterfront location demands proactive planning for extreme weather and storm surge events although it is not located within the FEMA Velocity Zone. Its location on a developed, industrial piece of land with a single point of access/egress, means that campus development must take advantage of existing infrastructure within the East Deering neighborhood, facilitating trips by active alternative, multi-modal and mass-transit options.

In 2020, the Cities of Portland and South Portland both adopted a collaborative sustainability and resilience plan: One Climate Future. The plan addresses many challenges, priorities, and strategies for responsible climate stewardship and mitigation of climate-related public health threats. It includes great specificity and is summarized by six general action items. Following are One Climate Future's "six big moves" and discussion of their relevance to the Roux Campus.



Portland and South Portland both adopted the One Climate Future plan in 2020.

1. Build better buildings.
A new campus of higher education, research, and development deserves thoughtful design; it represents an opportunity to implement best practices for energy efficiency, healthy communities, human comfort, and interaction with the surrounding environment. Aside from the iconic B&M Bean Building, existing on-site buildings are not suitable for adaptive reuse. Much of the site will be redeveloped with new construction. In order to attract and respect climate-conscious students and corporate partners, these new buildings will be created with sustainability and resilience top-of-mind. As described in the design guidelines within this plan, IDEALS is committed to high-performance buildings while setting a standard for design through signature architecture.

2. Connect people to places, to opportunity.
Graduate education, research, and collaboration exist in order to provide opportunity. At their best, they do this in a collaborative and social setting. The Roux Institute at Northeastern University will achieve both. The campus presents this opportunity to the nearby community, where on-site resources become local community resources, as shown on the 15 minute walkshed map. Finally, by establishing itself within and supporting existing public transportation networks, the Roux Campus will be accessible to all Portlanders as well as those in the broader greater Portland region, and beyond.

3. Power everything* with clean renewable electricity.
Electrification allows for appliances, buildings, and systems to support the shift to renewable energy in our power grid, without cementing a need for fossil fuels moving forward. This entails moving away from carbon intensive heating and energy sources, as more energy is produced by clean energy renewable sources like solar and wind. IDEALS will evaluate power purchase agreements for renewable energy sourcing, incorporate passive solar and photovoltaics, consider the use of geothermal heating and cooling for buildings, and encourage EV usage through on-site charging capacity.

4. Grow a circular economy.
Fostering technology knowledge and life-science research in Portland will diversify its economy and help prepare for the future. Yet workers in these fields will still rely on other, existing aspects of the regional economy. Food producers and preparers, makers and artists, essential workers, and support staff, all make the City of Portland a compelling and delightful place to live. On a small scale, the Roux Campus will facilitate a circular economy through mixed-use, neighborhood-scaled urbanism that creates a place to live, learn, work and play. On a broader scale, it will strengthen the region and support other initiatives and opportunities through education and research, an investment in people and collaboration with corporate and community partners that are (and will be) fueling progress through innovation.

5. Nourish ecosystems, which nourish us.
The Roux Campus' tidal waterfront location will allow it to meaningfully contribute to ecological health by designing with nature in mind. While B&M has been a steward of their property, the campus development will result in a significant reduction in impervious surfaces and yield a healthier site that protects and enhances the local ecosystem, which has been diminished through the historically industrial development of the property.

6. Build collaborative capacity to create this future.
The Roux Institute at Northeastern University will develop technology and life science talent, and position Mainers, new Mainers, and international students for financially stable and personally rewarding careers. The campus will connect budding talent with existing corporate and community partners, and thus create opportunity for fresh thinking and an innovative future. The Roux Campus will catalyze tech talent and innovation in Portland.



The Roux Campus will contribute to meaningful stewardship of resources, limit energy consumption with building technnologies, and help Portland prepare for climate and economic stressors.

2. Imagining the Future

Artist Interpretation

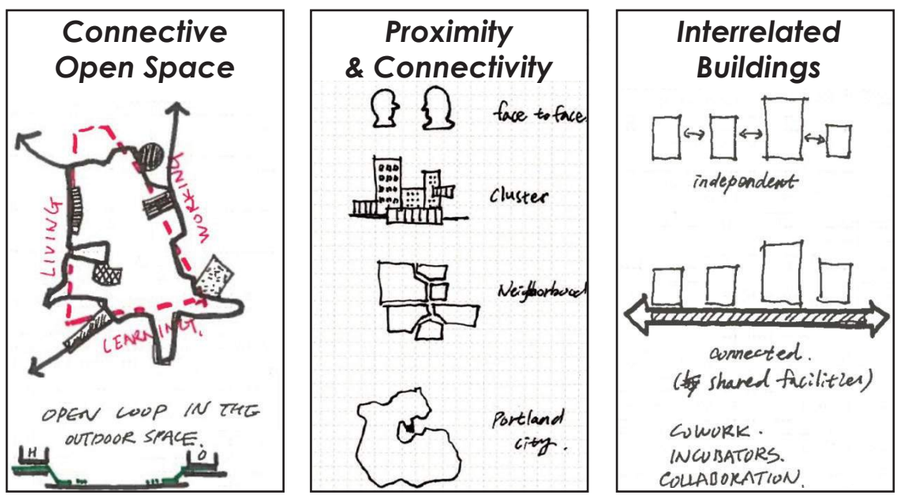
Campus Programming

The Roux Campus will encompass mixed uses regularly associated with graduate education and research: classrooms and laboratories, faculty offices, an incubator, dining areas, convening spaces, fitness centers, neighborhood retail facilities, and housing. As an essential part of the Roux Institute's graduate education programming, the campus will support collaboration with private industry, other institutions, and community organizations. This collaboration is essential to the Roux Institute at Northeastern University's approach to learning through integrated research, student-work opportunities, and entrepreneurial endeavors. Light manufacturing, research and design facilities, and other industry-oriented spaces will allow start-up businesses and established companies to contribute employment opportunities, foot traffic, and dynamism to the area. Hotel rooms will cater to prospective students, start-ups, visiting lecturers, specialists, business partner guests, and parents of students. Most importantly, the hotel will provide the opportunity for unplanned and informal interactions that are so essential to new ideas and innovation.

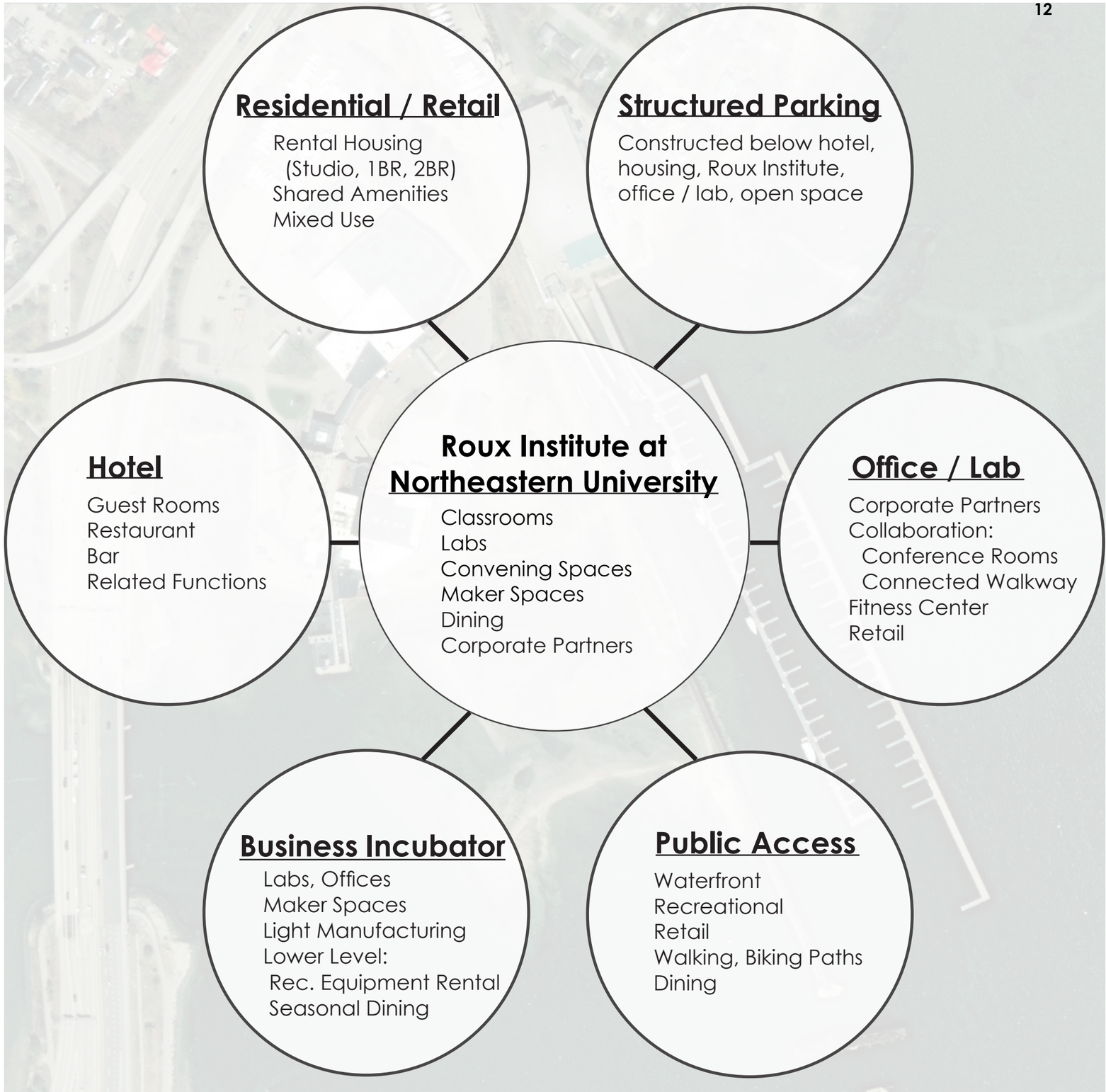
A range of rental housing options will foster community and provide on-site opportunities for students, faculty, staff, and their families. These units will ease some of the housing and traffic pressure that might otherwise result from new residents attracted to Portland by the Institute. Housing units not occupied by residents affiliated with the Roux Institute may be made available to the public.

Public open space, including waterfront access and recreational uses, will foster a sense of community. Restaurant, neighborhood grocery, and/or other limited retail options will provide another means for welcoming the neighborhood while reducing dependence on automobiles. The Roux Institute will incentivize transportation options including buses, bikes, pedestrian access, and water shuttle or taxi connections.

The long-term vision for the site is to maximize green space and public shoreline access. That vision includes a potential bike and pedestrian path under Tukey's Bridge and bicycle and pedestrian connections at Sherwood Street, Veranda Street, and beyond. These would link to the Back Cove, Eastern Promenade, Bayside, Martin's Point Bridge, and future trail systems.



Concept sketches by Tsoi Kobus Design display the intent to build dynamic, community-rooted space.



Phasing

Before shifts in transportation and distribution networks, the site offered a competitive location for food processing and manufacturing in the 20th century. Now, the site's many compelling attributes enable the pursuit of science, education, and entrepreneurship for the 21st century and beyond. The Roux Campus is envisioned as a hotbed of collaboration, innovation, and inspiration that contributes to the education of Roux Institute students, stimulates Maine's economy, and enriches the lives of Portlanders through the resources it offers.

While the proposed vision represents an ambitious undertaking, the entire endeavor is based on simple tenets of placemaking: provide a mix of uses, allow for creativity and entrepreneurship, and encourage recreation. This vision takes time to grow and develop. Understanding that institutional uses have phased planning horizons, this IDP considers near, medium, and long-term growth plans. The resulting phasing of the development is represented in the figure to the right.

Fortunately, the nature of the Roux Institute at Northeastern University lends itself well to phasing strategies. Corporate partnerships are a core part of the Institute's educational strategy, meaning that office and laboratory partners will sit comfortably within the primary academic building during its first years, before extending outward in the longer term. As the site develops and builds its reputation, more and more students, faculty, and employees will be drawn to live and work on site. Like any new campus, as the population of students, residents, and employees grow, so will demand for limited retail and restaurants.

The proposed vision offers a realistic framework for flexible growth. As the Roux Campus evolves, and the world changes, new opportunities and needs may present themselves. Neighborhood feedback will also inform future growth. A core presence of educational, research, incubator, and partner space will provide the Roux Campus with a strong start, around which additional community needs and services can thrive over time.

Anticipated Phasing (Cumulative Totals)

Building Program	Near Term (0-5 Years)	Medium Term (10 Years)	Long Term (20 Years +)
Roux Institute at Northeastern University	1,750 Students 222,000 sf.	2,500 Students 372,000 sf.	4,500 Students 372,000 sf.
Office / Lab Partners	Included in the Roux Institute	Included in the Roux Institute	200,000 sf.
Business Incubation	40,000 - 50,000 sf.	40,000 - 50,000 sf.	40,000 - 50,000 sf.
Residential	175 - 250 Units 150,000 - 200,000 sf.	350 - 425 Units 300,000 - 350,000 sf.	525 - 650 Units 450,000 - 550,000 sf.
Hotel	90,000 sf.	90,000 sf.	90,000 sf.
Retail (Restaurant, Café, Market, Kayak, etc.)	10,000 sf.	15,000 sf.	25,000 sf.

Potential Phasing



At the completion of each phase, the Roux Campus will be a model of comprehensive design. At least three acres of permanent, significant public space will be established early in the development of the campus to ensure public benefit. Interim features such as surface parking lots or construction staging areas will be designed to not detract from the pedestrian experience through planting, lighting, wayfinding, graphics, artwork, or fencing. Other interim areas of the site will be appropriately landscaped or accommodate gathering on lawns and hardscape spaces. Interim features such as parking lots may also be programmed with markets, festivals, or cultural events. Lighting and layout of these spaces will be considered to facilitate flexibility so that they can accommodate a variety of campus events.

Design Principles

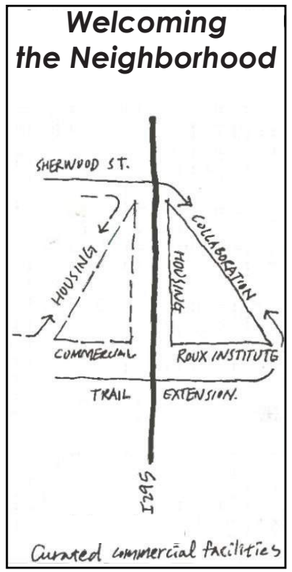
The Roux Campus will be a paradigm for 21st-century education with urban, sustainable, and resilient design. All elements of the campus will be conceived holistically to support the educational program of the Roux Institute. Near and long-term planning supports a vibrant campus environment with views and connections to the waterfront, a variety of public spaces, and site access via bike paths, walkways, and the public pier. Key principles of the design approach include:

Connected to the Waterfront, Portland, & the World
Engage the waterfront
Promote visual and physical connectivity
Encourage connections to the waterfront through diverse spaces
Create a holistically built environment
Restore, repurpose, and revitalize the Bean Building
Create an iconic architectural expression

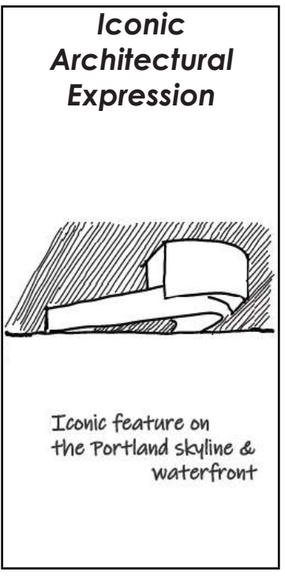
Places to Gather
Welcome the surrounding neighborhood
Foster community with shared spaces and interaction
Build a strong association with the City of Portland
Develop purpose-driven spaces that yield regular connections
Provide public open space
Provide spaces where neighbors can work and read while enjoying the campus's environment

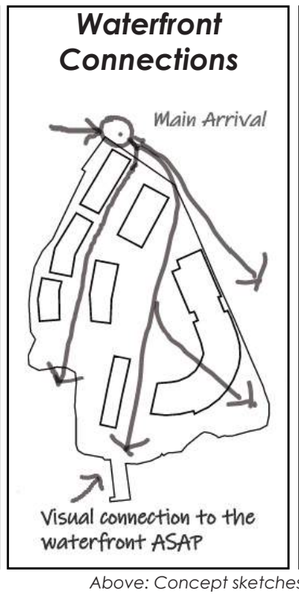
A Sustainable & Resilient Campus
Employ sustainability benchmarking for environmental stewardship
Incorporate state-of-the-art features, systems, and techniques
Minimize energy consumption campus-wide
Build for resilience; prepare for extreme weather and climate change
Maximize green space through appropriate building height

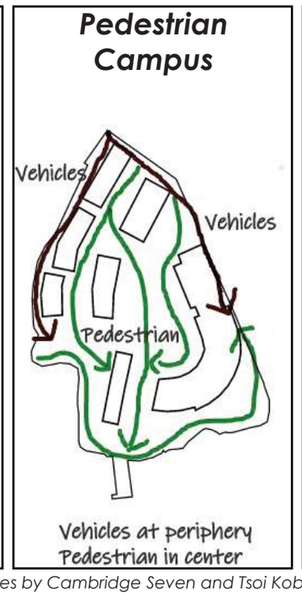
Integrated Landscape
Enhance access through TDM and multi-modal support
Contribute to Portland's open space network

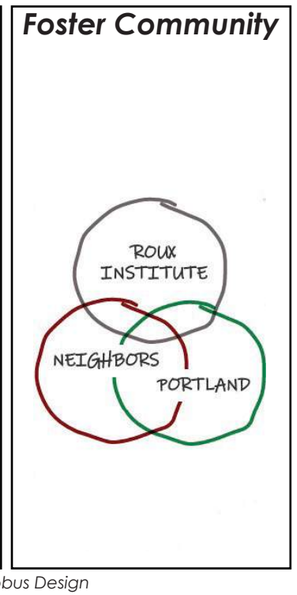












Above: Concept sketches by Cambridge Seven and Tsoi Kobus Design



Artist Interpretation

Design Guidelines

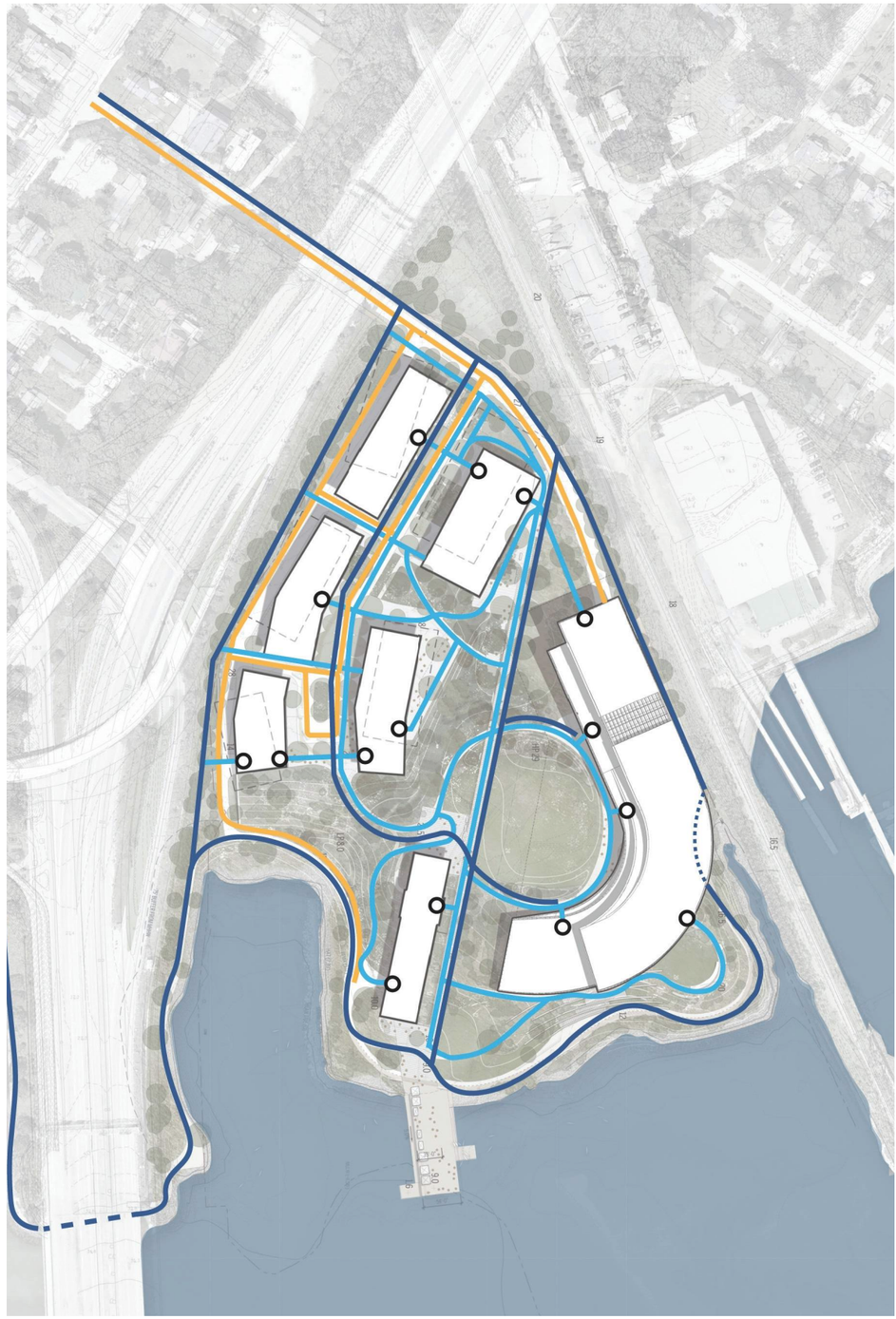
① **Buildings shall:**
- be characterized by excellence in architectural design, sustainability, & craftsmanship
- incorporate materials, landscape, signage, & lighting that reflect Portland's character yet look to a high-tech future
- create a strong identity & sense of place
- vary in height, with the tallest buildings located toward the center of campus
- be organized to take advantage of views, site circulation, & public space along the waterfront
- share visual connections with other campus buildings to achieve a holistic campus appearance
- support & augment activation of public spaces and public access to the site
- be programmed for activation where they meet the pedestrian realm or feature details & activities related to the building
- respect the adjacent neighborhood & facilitate a sense of permeability & welcome
- utilize durable materials resistant to the marine climate & which contribute to an attractive public realm
- screen rooftop appurtenances & set back mechanical enclosures from roof edges to reduce shadow & visual impact
- limit sound transmission and minimize bird strike potential
- employ sustainability benchmarking to foster environmental stewardship & resilience
- utilize building articulation & material selections to provide character and scale
- ensure permeability through & within the site for light, air, views, & access
- be appropriately scaled to support pedestrian activity, utilizing step-backs where appropriate
- be oriented toward open space at the site's center & include prominent facades with windows & entrances oriented toward travel paths
- be oriented to allow for easy pick-up & drop-off
- respect & provide a buffer from the historic B&M Bean Building

② **Campus circulation shall:**
- be bike & pedestrian-centered, with motor vehicle circulation generally at the perimeter where practicable
- serve pedestrians, bicyclists, autos, public transportation, service, & emergency vehicles at each development phase
- provide wayfinding & amenities to create a safe & welcoming environment for the community
- provide bike & pedestrian connectivity to existing ways where feasible

③ **Open space & public realm shall:**
- create a strong identity & sense of place
- be designed for safety, comfort, & year-round enjoyment
- enable access to building entrances
- utilize a combination of planting & hardscape
- provide access & amenities to connect the public to the shoreline & ocean
- include meaningful public open space between the buildings & the water
- support site resilience in consideration of flooding from storm events & sea level rise
- support ecological functions & values
- provide an appropriate buffer adjacent to & complementing the historic B&M Bean building
- include lighting that is full-cutoff and dark sky-friendly

④ **Parking shall:**
- be located to the maximum extent practicable in below-grade garages & daylight basement garages
- when above grade, be architecturally screened to blend in with surrounding buildings & minimize vehicular disturbances of light & sound
- when on surface lots, be located at the rear or side of buildings, & not along the primary facade
- not be located along the water's edge
- ensure EV charging capability meets EV demand & is scalable as demand increases
- be shared to the extent practicable
- support street activation & pedestrian scale when adjacent to public rights-of-way

Visualizing the Guidelines: Potential Long-Term Layout & Circulation



Connected to the Waterfront, Portland, & the World

Artist Interpretation



Development of a new landmark campus, with focus toward the community and the waterfront, will enhance the East Deering neighborhood. New, forward-looking campus buildings adjacent to the restored and repurposed Bean Building will update and respect its legacy. The waterfront will integrate with the entire campus through ecologically focused design. Water views from the ground and buildings will emphasize the site's uniqueness and become an integral part of the campus identity. Pedestrian / bicycle trail connections and water shuttle or taxi service will let the waterfront serve as an entrance to the campus.

Places to Gather

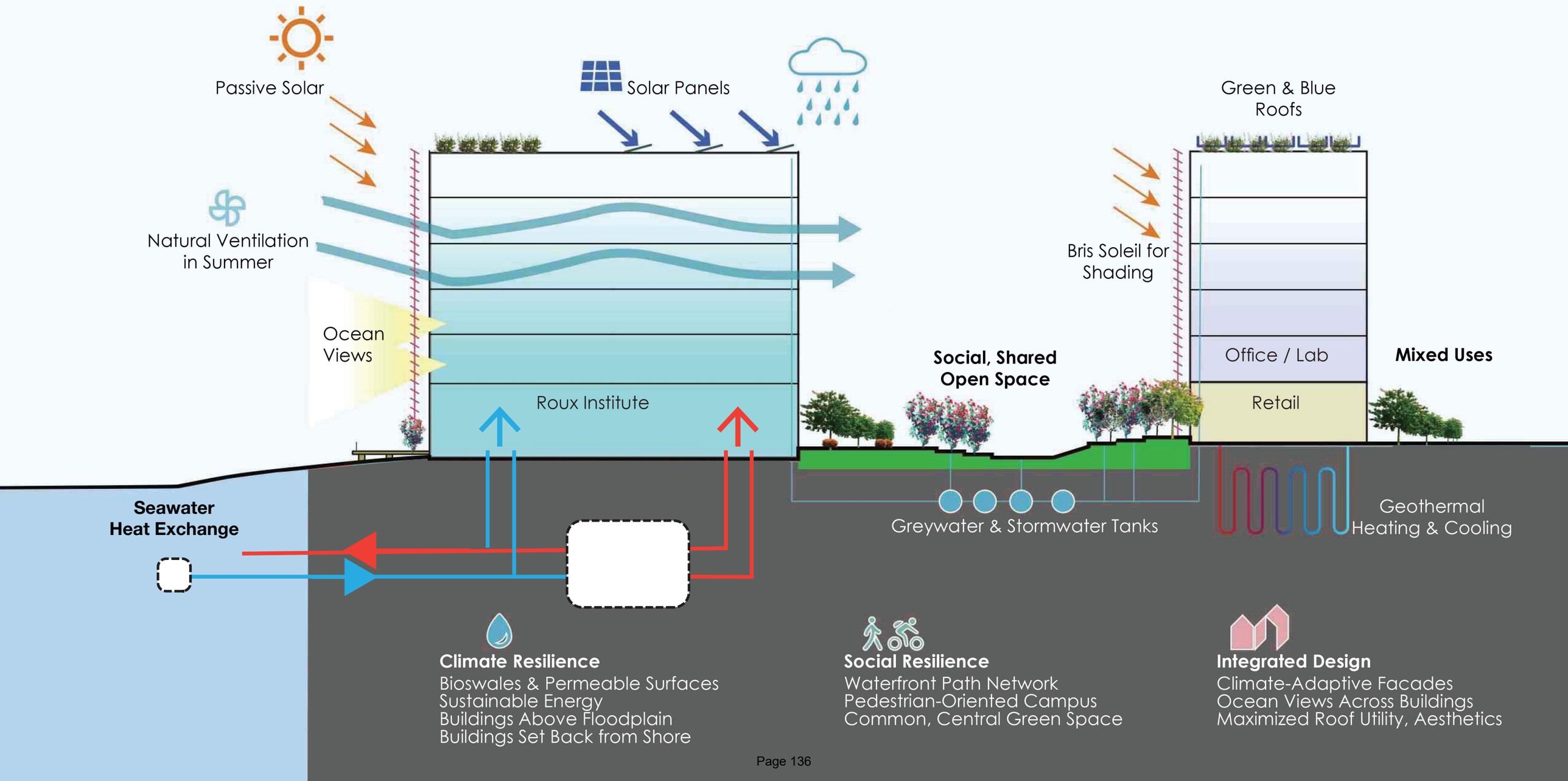
Artist Interpretation



All new buildings will connect through linking landscaped terraces with a central, pedestrian-oriented green space. The campus will maximize publicly accessible open space through building height and density. This plan will foster a mixed-use environment encouraging interaction and innovation. Internal connections are echoed by external circulation and access points (pedestrian, bicycle, public transit, potential water taxi, automobile) that further strengthen the connection with neighboring communities and the City of Portland.

A Sustainable & Resilient Campus

The Roux Campus intends to incorporate state-of-the-art sustainable technologies. Examples of possible technologies (illustrated below) that will be thoroughly studied include geothermal heating and cooling, photovoltaic solar panels, high-performance building envelopes with triple glazing, green roofs, blue roofs, stormwater / greywater management, passive solar gain, sea water cooling, and natural summer ventilation. If necessary, purchase of renewable power produced off-site will supplement on-site sources. Resilience strategies like constructing buildings well above the 100-year flood zone will also be deployed to account for rising sea levels and severe weather events.



Enhance Access

The striking campus is visible from Interstate 295, as well as from its on- and off-ramps which are located nearby. US Route 1 and downtown Portland are both accessible within minutes. Via Sherwood Street, the Roux Campus will connect to the East Deering and Back Cove neighborhoods. Bus routes within easy walking distance, and waterfront pedestrian and bicycle trails (including a potential new connection under Tukey's Bridge and improvements to Sherwood and Veranda Streets) will link the Roux Campus to the neighborhood as well as to the Back Cove Trail, Bayside Trail, Eastern Promenade, and future trail networks. Within the site, ADA pathways and inclusive design principles will ensure the site benefits all users.

Adjacent to the Roux Campus (but not on its property) is the former Grand Trunk Railway line, which could one day provide a new transportation pathway. Connections to Casco Bay ensure water access to the peninsula, islands, and the entire Maine coast.



Contribute to Portland's Open Space Network

The Roux Campus will add significantly to Portland's open space network via a modern waterfront with public amenities such as lawns, a pier, plazas, and a large extended green space. Enhanced sidewalks and bike lanes, a potential direct connection to the Back Cove, Eastern Promenade, and Bayside trails, along with a pier for a water shuttle and / or taxi, will help the public get to the Campus. Gardens, native meadows, trees, and natural areas will offer new, calming spaces and create a variety of healthy habitats.

The primary academic building of the Roux Institute at Northeastern University will anchor a cohesive campus of learning, research, and collaboration along with residential and retail facilities that support them; natural systems will integrate with everyday life. A network of inland pathways across various landscapes will thread uses together.

The Roux Campus will transform an industrial site into an ecologically diverse, urban waterfront setting. Many existing impervious surfaces will give way to open spaces and green roofs inspired by natural landscapes from the Greater Portland area. Stormwater management strategies will further contribute to the environmental function of the site.



3. Creating the Path Forward

Artist Interpretation

Assessment of Growth

The City's Land Use Code establishes content requirements for Institutional Development Plans, including considerations of transportation, environment, infrastructure, design, and neighborhood engagement. The following pages apply these lenses to the Roux Campus, how they interact, and the opportunities they create.

Transportation
With one vehicle entry point, the development must be properly planned to minimize impacts on the surrounding street network. Reductions in trip generation through complementary on site uses, alternative modes of transportation, and transportation demand management are crucial.

Infrastructure
Any development is limited by the capacity of nearby utilities infrastructure. Fortunately, the site's previous industrial demands dovetail nicely with the needs of a mixed-use development. High-performance buildings can help reduce further infrastructure demands.

Environment
One compelling aspect of the Roux Campus is the waterfront location; yet decades of production and transportation-oriented industrial use diminished its ecological function. Thoughtful redevelopment will restore some of this function over time.

Design
While the Roux Institute at Northeastern University seeks to inspire aesthetically, the Roux Campus will be designed with neighborhood context and nature in mind. It can serve as a proving ground for best practices in ecological and urban design.

Neighborhood Engagement
The Roux Institute at Northeastern University cannot thrive without the support and goodwill of its neighbors. By establishing and maintaining community engagement, the organization will incorporate fresh ideas and build trust.

The environment of the site influences its design. That design leads to higher or lesser demands on transportation networks and utility infrastructure, which in turn impact the environment. Underlying the entire process is neighborhood engagement, without which the Roux Institute at Northeastern University cannot succeed.

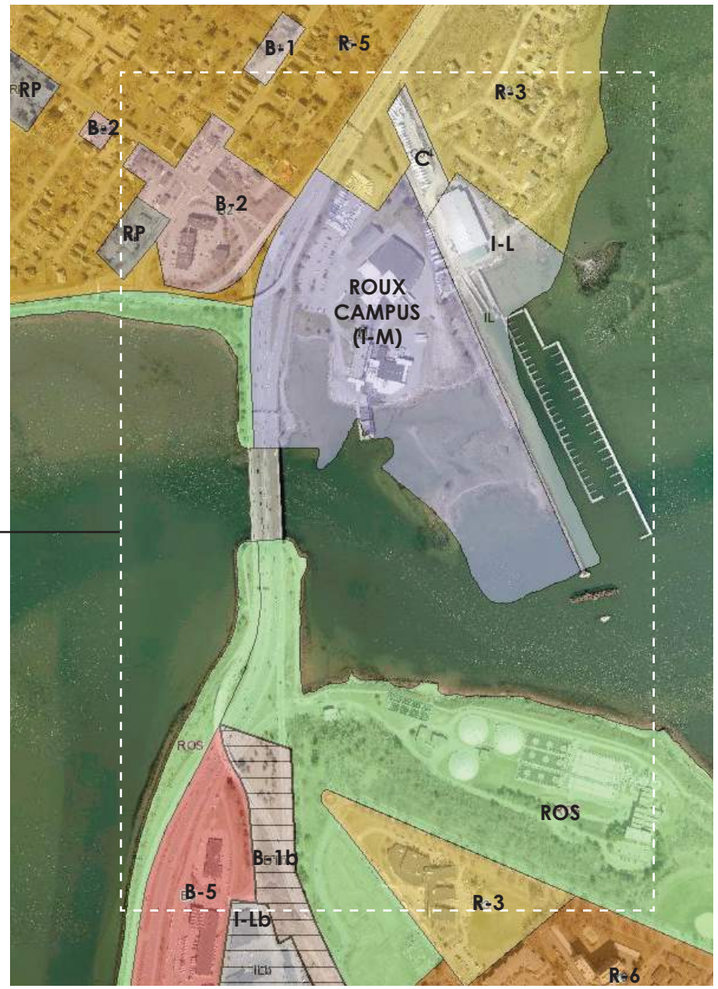
Boundary of Proposed B-5 & IOZ



The proposed Roux Campus aligns well with the B-5 Mixed-Use Business zone's purpose statement in the City of Portland's Land Use Code:

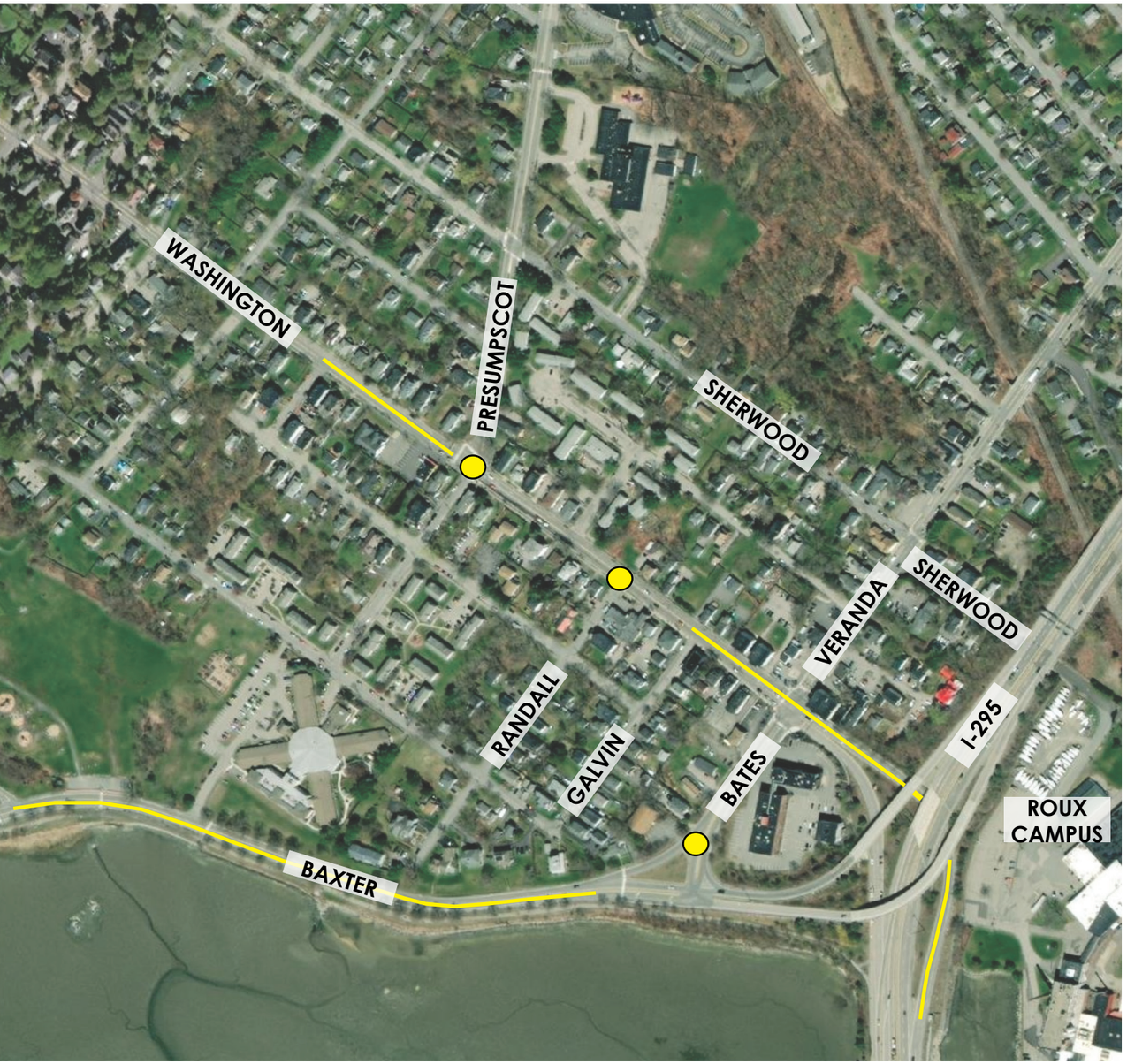
"To provide areas of the peninsula* near the downtown where a mixture of uses, including marine, industrial, commercial, and residential, is encouraged. The B-5 and B-5b zones are characterized by larger underdeveloped lots with great potential for denser, clustered, urban mixed-use development and more efficient reuse of existing land and buildings. It is anticipated that the dense, mixed-uses of the B-5 and B-5b zones will rely on a shared infrastructure system, including service alleys, parking lots, public transportation facilities, stormwater management, and driveways."

**Per the City of Portland's Land-Use Code, "on-peninsula" is defined as all land south of I-295. The proposed Roux Campus is south of I-295.*



Transportation

The Roux Campus is well-situated to several major thoroughfares, including I-295, US Route 1, Washington Avenue, and Baxter Boulevard. The site has a single access point, located on Sherwood Street; that access will continue to provide vehicular access in and out of the site in the future. Access to Sherwood Street is provided via Veranda Street which connects to Washington Avenue, I-295, Baxter Boulevard, and US Route 1.



Washington Avenue accommodates all users, with traffic using two lanes in each direction south of Presumpscot Street, one lane in each direction north of that point, and buffered bike lanes north of Presumpscot. Bus routes run along Washington Avenue and pedestrian accommodations are present. In addition, the traffic signal system along Washington Avenue is a traffic responsive system operating with high efficiency. Intersections of Washington Avenue at Veranda Street, at Presumpscot Street, and at Ocean Avenue are each signalized intersections with pedestrians processed concurrently to traffic.

Veranda Street accommodates vehicular traffic with a single lane in each direction. Sharrows (faded) indicate that bicycles share the travel lane. Sidewalks are provided on both sides of Veranda Street and transit stops are present. Sherwood Street is a two-way roadway that is not striped and allows parking. Sherwood Street intersects Veranda Street to form a slightly offset four-way intersection. Both Sherwood Street approaches are stop-controlled at Veranda Street as well as Presumpscot Street.

Bates Street extends from the intersection of Washington Avenue and Veranda Street toward Baxter Boulevard, and consists of a vehicular traffic lane in each direction and a bike lane from Washington Avenue to Baxter Boulevard. A sidewalk runs along the west side of the street, but narrows and is periodically blocked by utility poles. A single lane in each direction at the intersection of Bates Street and Baxter Boulevard provides access north on I-295. Access south on I-295 is via a two-lane connection in each direction at the intersection of Washington Avenue at Veranda Street and Bates Street. This widens at Washington Avenue for turn lanes.

Adjusted Traffic Volumes at Washington Avenue and Veranda Street (2021)

Approach	Movement	AM Peak Hour Volume	PM Peak Hour Volume
Veranda St. Southbound	Left Through Right	130 65 50	70 95 60
Washington Ave. Eastbound	Left Through Right	35 1195 65	50 995 90
Veranda St. Northbound	Left Through Right	65 45 160	65 95 155
I-295 Exit Ramp Westbound	Left Through Right	100 650 80	150 1090 190

The intersection of Washington Avenue and Veranda Street is critical. Traffic from I-295, Baxter Boulevard, and Washington Avenue all travel through it to reach the site.

Several high crash locations (segments or intersections with eight or more traffic crashes and a critical rate factor exceeding 1.00 over the most recent three-year period) are located near the campus:

Intersections (with Crash Totals):
Washington Ave. at Randall St. (8)
Washington Ave. at Presumpscot St. (32)
Washington Ave. at Bates St. (34)

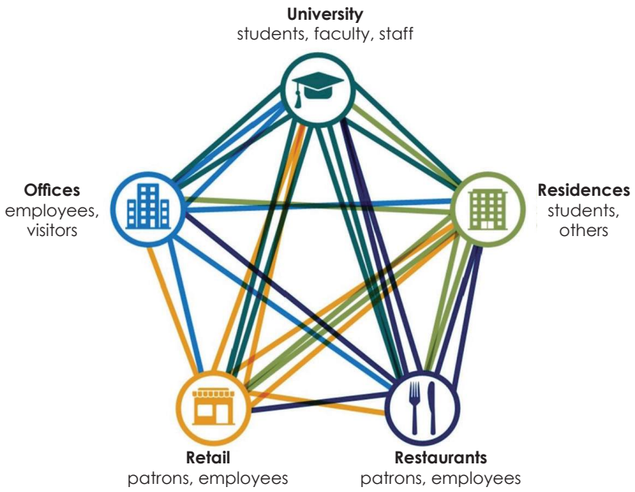
Segments (with Crash Totals):
Washington Ave. from I-295 to Veranda St. (11)
Washington Ave. from Veranda St. to Galvin St. (12)
Washington Ave. from Galvin St. to Randall St. (8)
Washington Ave. from Presumpscot St. to Cummings St. (10)
Baxter Blvd. from Bates St. to Catafalque Dr. (9)

From 2018 to 2020, no fatal crashes occurred at any of these locations. Most were rear end or sideswipe crashes, with some intersection movement crashes. One pedestrian crash occurred, at Washington Avenue and Presumpscot Street. Four bicycle crashes occurred: one each at Washington Avenue and Presumpscot Street, Washington Avenue between Presumpscot Street and Cummings Street, Washington Avenue and Veranda Street, and at Bates Street and Veranda Street.

Trip Generation

Trip generation was evaluated using standard rates and Maine DOT guidance for the long-term development of the site. Trip generation rates were obtained from the Institute of Transportation Engineers Trip Generation Manual, 11th Edition. Relevant uses for the Roux Campus include university / college (LUC 550), general office building (LUC 710), multi-family housing mid-rise (LUC 221), high-turnover sit-down restaurant (LUC 932), strip retail plaza (LUC 822), and hotel (LUC 310). As a mixed-use development, many trips will occur between destinations on the campus. Students, faculty, and staff will eat in on-site restaurants and shop at on-site retail stores. Some students and staff will live in the residential units or work in the office space. Partner employees may travel between offices, university buildings, restaurants, and stores.

Inclusion of ancillary uses on the campus, such as housing, hotel, office space and retail, will reduce the number of external trips to the site; internal trips will not generate external traffic or impact the adjacent road network. For traffic generation purposes, internal trips are separated from total trips estimated using engineering standards.



Vehicle Trip Assignment
Vehicle trips were assigned to area roadways by estimating the proportion of trips arriving or leaving on each approach to the area. Estimates were based on data from several sources, including population density maps and US Census Journey to Work data. The process was repeated using catchment areas of various sizes, with minimal change in results. Trip distribution for people within a commuting distance of the site is shown in the adjacent top graphic.

Approximately 50 percent of trips are anticipated to travel from the south to reach the site and 15 percent are anticipated to approach from the north. (The thicknesses of arrows are scaled to indicate the share of trips that will use that route.)

Anticipated distribution of vehicular trips on neighborhood streets is shown in the adjacent bottom graphic. Almost 90 percent of trips are expected to travel through the intersection of Washington Avenue and Veranda Street. However, to access I-295 southbound, some drivers may choose instead to exit by taking a right and traveling up to the southbound on-ramp.

Additionally, almost 30 percent of the site traffic is oriented to points west /southwest along local roadways or to and from the north on I-295; this will impact the intersection of Bates Street and Baxter Boulevard.





Mode Share
The East Deering Neighborhood is served by multiple bus routes and features a pedestrian and bicycle network. With improvements to these resources, the campus will be well suited for trips by modes other than single-occupant vehicles. We are committed to working with Portland METRO to support increased transit opportunities to and from the campus area. These factors, in addition to a Transportation Demand Management (TDM) plan, will reduce auto mode share.

A transportation engineer developed target mode shares for each envisioned Roux Campus land use, in consultation with City of Portland and Maine Department of Transportation officials. These shares were applied to external trips to determine the likely number of trips by each mode, yielding the estimates in the table at right.

Estimated Mode Split (%)

Land Use	Transit	Ped. & Bike	Vehicle	Carpool Rider
Office	10	10	75	5
Retail	10	50	40	0
Restaurant	10	50	40	0
University	10	20	65	5
Residential	10	20	65	5
Hotel	10	10	75	5



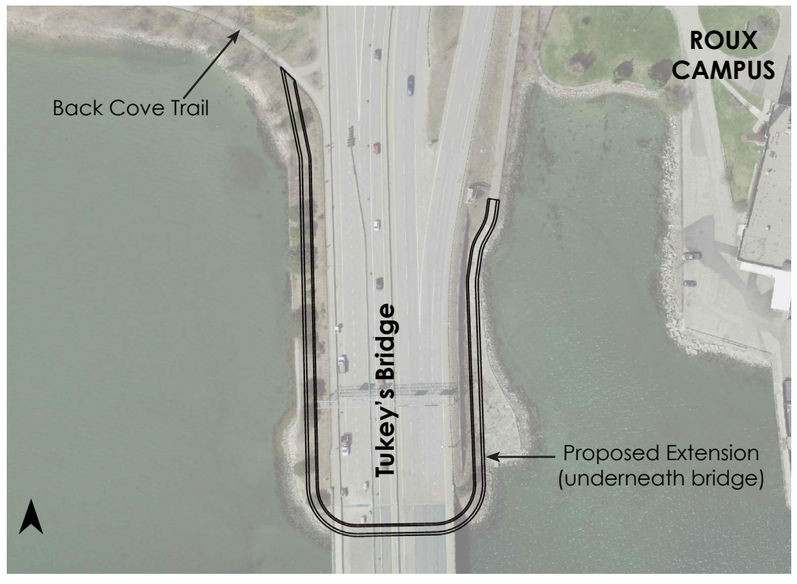
A Portland METRO bus travels north on Veranda Street from a stop near its intersection with Sherwood Avenue.

Transportation Improvement Opportunities

Bicycle and Pedestrian Connection Opportunities
Infrastructure improvements can alleviate some neighborhood traffic impacts. These improvements include roadway reconfigurations, pedestrian and cyclist connections, and additional transit provisions. Two opportunities stand out when considering bicycle and pedestrian improvements (illustrated below and in the map at right).



Above: The Back Cove Trail connects with the Eastern Promenade Trail via Tukey's Bridge.



Above: potential extension of the existing Back Cove Trail to the Roux Campus.

The first is an improved connection between the Back Cove Trail and Washington Avenue. At present, users of the Back Cove Trail face a 90-foot mid-block crossing to reach the northwest side of Bates Street. Converting the intersection of Bates Street and sweeping right-turn maneuver would create a shorter, safer crossing. The second improvement is a direct connection from the Roux Campus to the Back Cove Trail, extending the shared-use path below and alongside Tukey's Bridge and through the site.

Parking Demand and Capacity
Parking will be built over time as part of the development program. All vehicular trips are intended to park on site. As demand increases during the phased development, parking will be introduced incrementally to avoid excess supply and inadvertent encouragement of driving to the site.

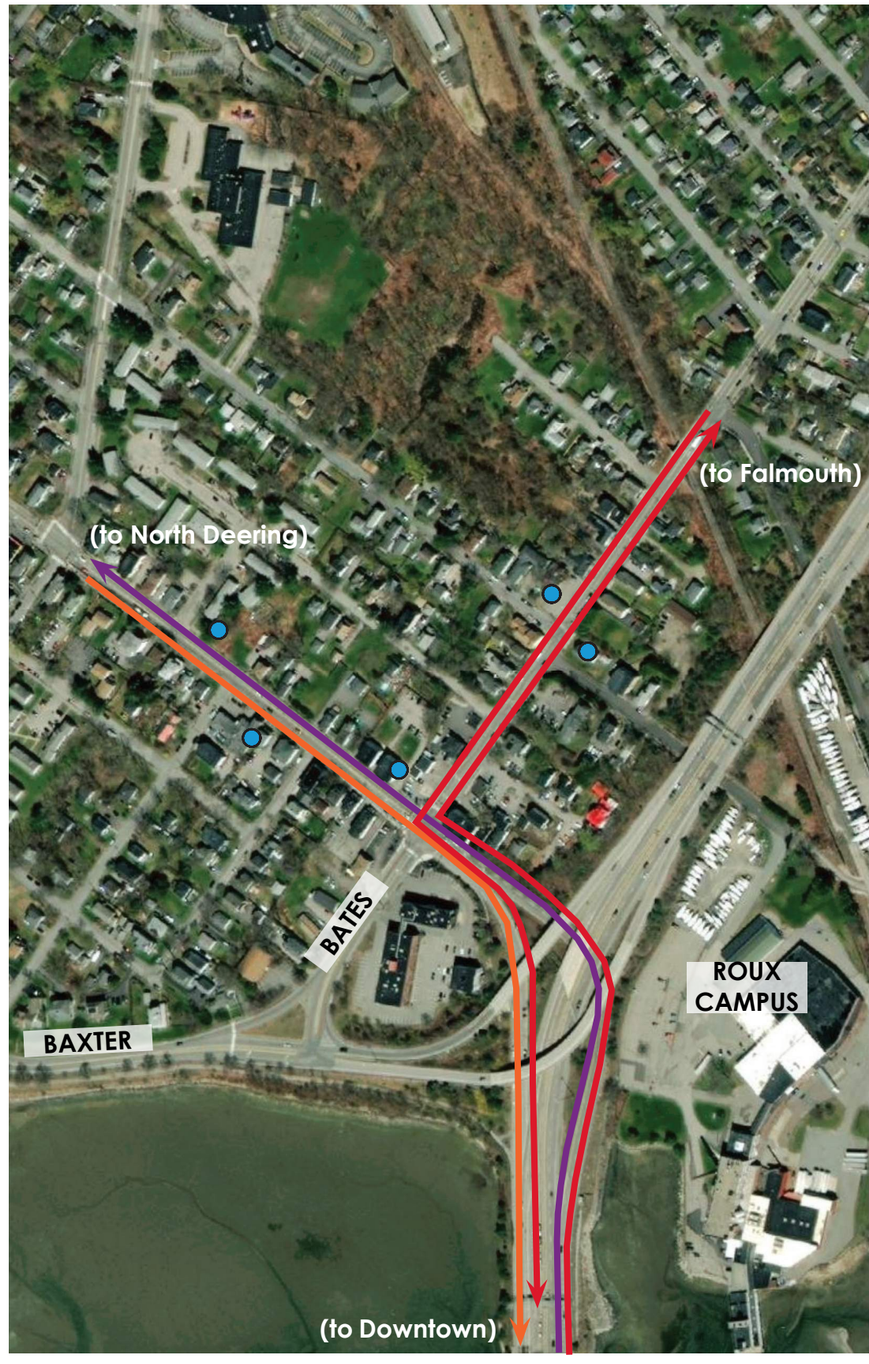
Base parking demand (calculated for each hour of the day using ITE Parking Generation Manual rates, 5th Edition, and the same land use codes as for trip generation) indicate that total parking demand across all uses on the site will peak at 11 AM. At completion of the first phase of development, parking demand is expected to be approximately 700 vehicles. Demand at full build-out could be as high as 1900 vehicles, inclusive of day users and residents. All site parking is intended to be communal; availability in the closest lot to a destination will not be guaranteed. Additionally, uses with opposing peak parking demands will be able to share parking resources.

All parking will be paid parking, and a parking office will be created to handle permitting and enforcement for the campus. Parking costs and regulations may vary between classes of users (students, staff, residents, office tenants, visitors, etc.). The Roux Campus may include on-site car share, enabling travel to and from the site using other modes, with the comfort that vehicles are available if necessary.

Public Transit
Two bus lines currently stop near the site: METRO Route 7 and METRO Routes 9A / 9B. These routes provide direct connections to the peninsula, western Portland, and Falmouth. With a transfer at the Downtown Transportation Center, riders can reach the rest of Portland and several outlying towns.

Buses run continuously throughout the day, readily accommodating the varied schedules of students and other campus users. METRO BREEZ express bus service to Yarmouth, Freeport, and Brunswick and the Husky Line to Westbrook and Gorham establish a regional footprint for transit service. Ten local and express routes connect the campus to most of the Portland area with no more than one transfer.

The Roux Institute at Northeastern University will promote and incentivize transit use. It plans to subsidize transit passes for students and will work with METRO to improve the quality and frequency of transit connections to the Roux Campus.



Other Roadway Improvement Opportunities

The Roux Campus is constrained on three sides by the Bay, I-295, and a rail line, leaving Sherwood Street as the only viable access road. The campus's vehicle traffic will be highly concentrated on certain streets and intersections immediately surrounding the site. Targeted roadway improvements at these locations can increase capacity and prevent excessive congestion.

These improvements are not tied to specific years or development phases. They are held out as possible mitigation measures to be considered as future traffic warrants. As development continues, the Roux Institute will apply for traffic movement permits (TMP). Potential improvements will be evaluated during the TMP process in collaboration with the Maine Department of Transportation and City of Portland.

Traffic from the campus to southbound I-295 will make two lefts, once onto Veranda Street and again at Washington Avenue. The left turn lane from southbound Veranda Street to Washington Avenue currently has a storage length of only 130 feet. At higher traffic volumes, the line of vehicles waiting to turn left may extend beyond this length, delaying through and right turning vehicles from reaching the intersection. If this type of congestion becomes frequent, it may be mitigated by extending the left turn lane further back. This will require widening Veranda Street between Washington Avenue and Sherwood Street within the existing right-of-way. Widening on Veranda Street would also allow bicycle lanes to be added. This impact will also be reduced through use of signs indicating that I-295 South can also be readily reached by turning right and using the Veranda Street on-ramp.

With 100% of campus traffic traveling through the intersection of Sherwood Street and Veranda Street, improvements may become necessary. The intersection is currently controlled with a stop sign on Sherwood Street. To improve traffic flow, Sherwood Street could be widened at the intersection within available city right-of-way to separate outbound traffic into left and right turn lanes. A bicycle lane could also be added within this space. This would substantially increase capacity on the Sherwood Street approach. If traffic volumes eventually exceed this new capacity, a traffic signal could be installed at the intersection.

Traffic approaching the campus from I-295 southbound will exit at Baxter Boulevard and make a right onto Bates Street. There is significant unused right of way on Bates Street between Baxter Boulevard and Veranda Street that could be repurposed to increase capacity. Another northbound turn lane could be added (isolating left, through, and right movements) at the intersection as well as adding a bike lane. A bike lane would also have the benefit of completing the trail connection from the Back Cove Trail. The intersection of Washington Avenue, Veranda Street, and Bates Street may eventually need other mitigating measures to increase capacity, such as reconfiguring lanes on the I-295 exit ramp approach.



Managing Transportation Demand

Active Transportation
In addition to the transit options in the study area, the Roux Campus development will benefit from existing pedestrian and bicycle infrastructure. Sidewalks are in good condition and pedestrians are accommodated at signalized intersections with crosswalks and concurrent pedestrian signal phasing. Future visitors will benefit from upgraded pedestrian accommodation along Sherwood Street. Once on the site, pedestrian connections will link site uses and points along the waterfront.

The Roux Campus can promote human-powered trips to the site through improved connections to this infrastructure. The area is densely populated, bicycle lanes are provided along Washington Avenue and other roadways, and the Back Cove Trail is nearby. In the future, cyclists will be accommodated on Veranda Street and into the site on Sherwood Street via dedicated bicycle lanes.



Transportation Demand Management (TDM)
TDM programs seek reductions in traffic impacts by subsidizing and marketing alternative commute options. IDEALS plans aggressive targets of non-single occupant auto trips and intends to limit on-site parking - the goal is a 37 percent reduction in automobile trips from ITE Trip Generation predictions, and a minimum of 20 percent reduction in parking demand compared to anticipated ITE Parking Generation. As mixed uses are created during development, internal trip-making will increase, and these targets may be revised.

Transportation Coordinator: IDEALS plans to follow industry best practice by appointing a campus-wide transportation coordinator. This person will collect data on the TDM program to ensure it evolves as the site develops. Once aspects of the site are operational, they will conduct a transportation survey to establish a baseline for future trip reduction goals. They will also collect and disseminate information (including non-automobile travel options) among the employers and facility managers on site to encourage TDM participation.

Public Transit Support: IDEALS intends to partner with Portland METRO to subsidize shorter headway service to the Roux Campus. Student subsidies will enable frequent and reliable service to and from the site.

To further support trips via public transit, the Roux Institute at Northeastern University intends to subsidize bus trips for students and employees (for employees, their purchase can also be included as a pre-tax benefit). Lease agreements will encourage transit pass subsidies by other on-site employers.

Carpools: IDEALS will prioritize parking for carpools near building entrances. The transportation coordinator can facilitate carpools by maintaining a database of interested parties; commuters may be matched with others who live near them or can access a park-and-ride location along their route. The coordinator can also participate in the Maine DOT commuter resource program, which facilitates carpools across nearby sites and provides participants with rewards for carpooling.

Parking Fees: Parking is intended to be shared across uses on the Roux Campus, not guaranteed in individual lots.

Bicycle Travel: IDEALS will support active transportation by investing in complete streets and trail connections, bike storage, and shower facilities and lockers.

Water Travel: IDEALS plans to build a modern pier over the footprint of the current pier, in order to accommodate water shuttles and taxies.

Transitions

With I-295 to the west, state-owned vacant parcels to the north, the rail corridor and marine business to the east, and Casco Bay to the south, the Roux Campus is surrounded by existing areas of transition from the campus to the surrounding neighborhoods. In addition to the existing buffers, development will further ease the transition to and from the campus through the following design methods.

Between Site Entrance & Campus
Public open space will ease transition from the smaller scale of Sherwood Street. Views to the water and the Bean Building, and clear wayfinding and circulation of pedestrian and bicycle pathways, will welcome site visitors further into the campus. A smooth transition will also be accomplished through thoughtful facade design at the pedestrian level. Potential nuisance features like dumpsters, air handlers, and parking will be appropriately screened. Buildings will avoid blank walls to respect the adjacent neighborhood and facilitate a sense of permeability and welcome.

Between Buildings & Campus
Building entrances will face major public spaces or circulation paths. Lower stories will be programmed for activation where they meet the pedestrian realm or feature visually interesting details and activities related to the building. Building articulation, massing, and materials will contribute to the sense of a well-textured, connected campus.

Between Campus & Water
The shoreline area between the buildings and the water will serve as meaningful public open space. This open space will contain a combination of pedestrian and bike trails, passive and active gathering spaces, restored and ecologically improved landscape and shoreline to anchor the site's relationship with the water. Building facades facing the water will be considered public-facing, with views designed for interest from the water and Eastern Promenade Trail.

Safety / Crime Prevention Through Environmental Design (CPTED)
Key to these successful transitions is a sense of welcome, comfort, and safety. To ensure this, the campus will incorporate the following CPTED design strategies demonstrated to deter crime:

Mixed Use, multi-tenant 24-hour campus that generates "threshold capacity" for a diversity of places, people, and programs

Ecologically restored, biophilic and publicly accessible campus connected to the wider community

Highly durable, vandal-resistant materials in the public realm to communicate a well-maintained, clean campus

Systematic, clear, and appropriately scaled wayfinding to guide and inform all transportation modes and user groups

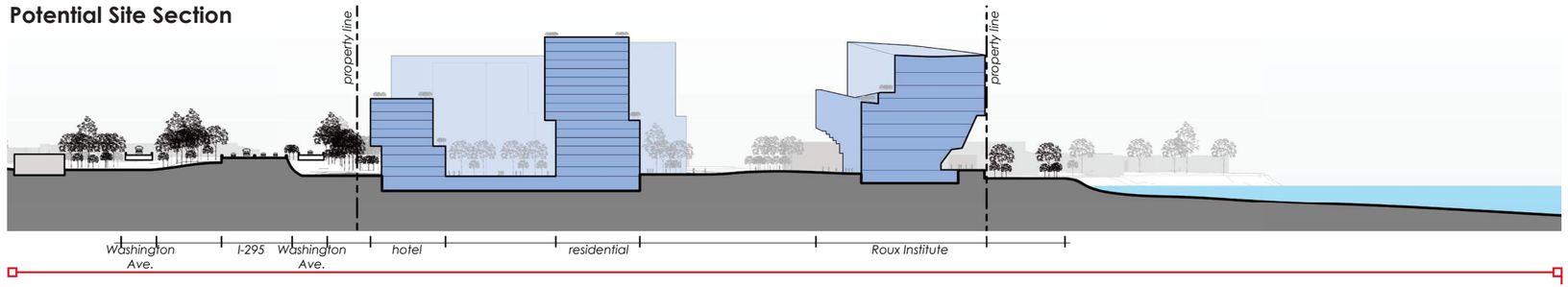
Matrix of pedestrian and bike paths connecting well-lit transit stops, bike storage areas, and parking areas to maintain clear sight lines

Street-level building elevations designed for visibility, minimizing hidden corners and spaces

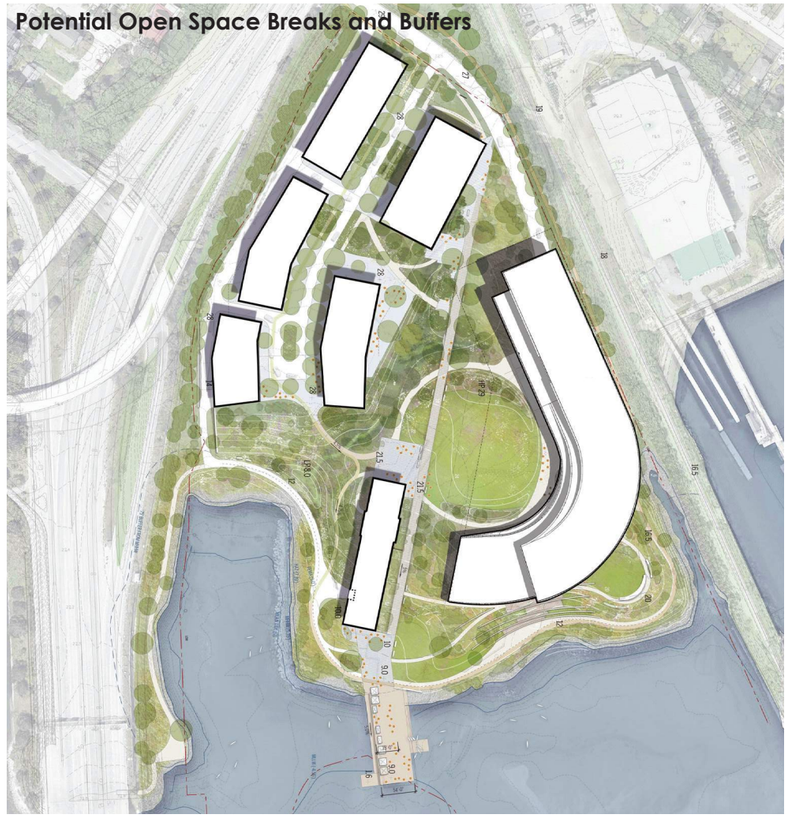
Transparency and openness of buildings at ground levels and entrances to connect with the public realm and create pathways

Controlled campus access points for special events or emergencies

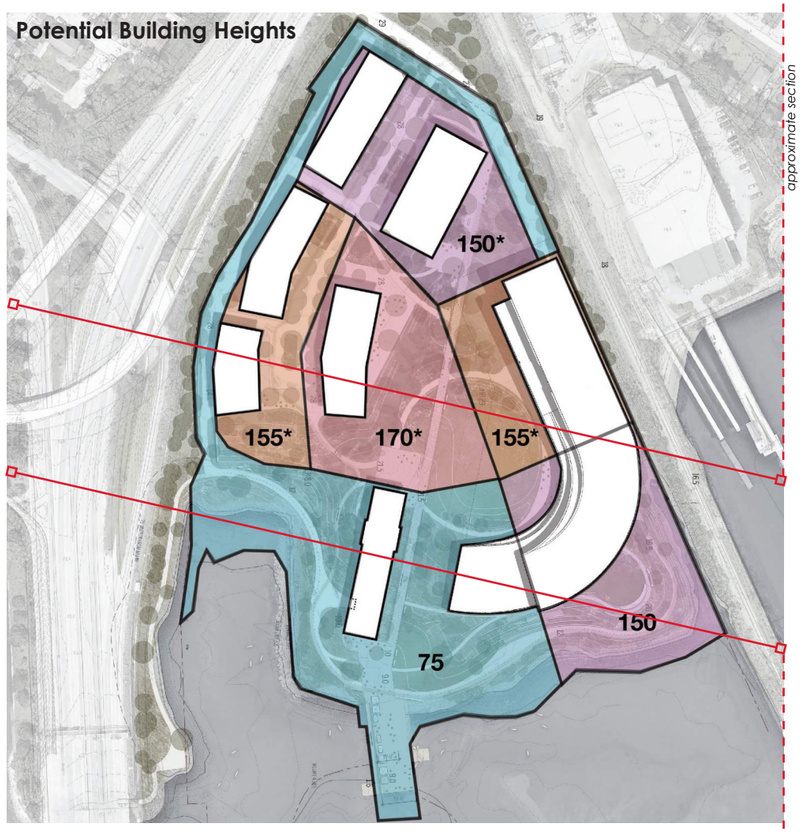
Potential Site Section



Potential Open Space Breaks and Buffers

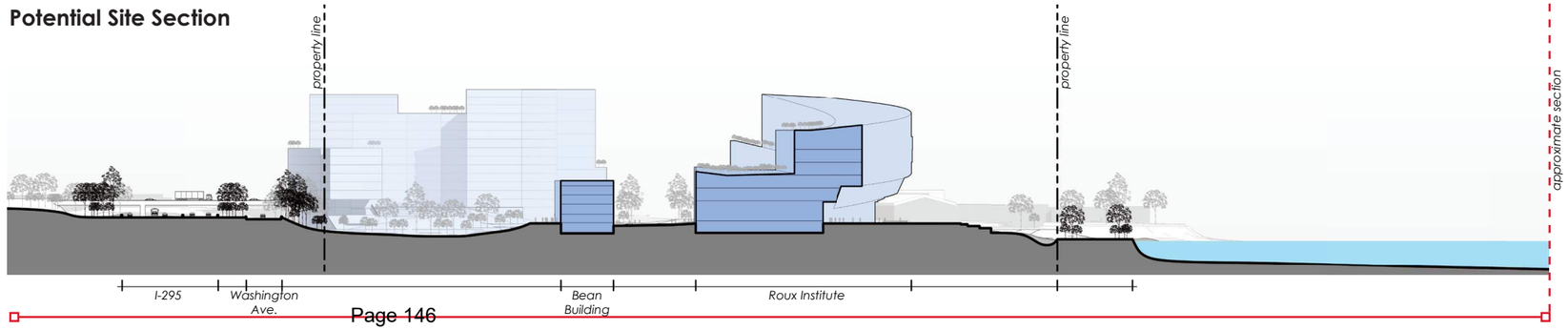


Potential Building Heights



approximate section

Potential Site Section



approximate section

Existing Infrastructure

B&M's facilities required intensive utility and infrastructure development sized appropriately for industrial use. Fortunately, this sizing translates well to re-use in a denser development, as proposed.

Water
Domestic and fire protection services are provided by Portland Water District's (PWD) infrastructure at Sherwood Street. The public water mains nearest to the site are 8-inch and 12-inch, consisting of ductile iron and cast iron. The site is, and will continue to be, serviced by a combined domestic / fire protection loop.

Wastewater
Wastewater will continue to discharge to a gravity public sewer along the I-295 corridor. Downstream of the service connection, public sewer transitions from 15-inch to 48-inch reinforced concrete gravity line conveying combined storm and sanitary sewer from the East Deering neighborhood west of I-295. The 48-inch combined sewer transitions to a 3-barrel (two 18-inch and one 30-inch) siphon along Tukey's bridge and discharges through a pumping station prior to treatment at the East End Wastewater Treatment Facility.

Wastewater is conveyed across a portion of the site near Sherwood Street and I-295 from properties to the northeast (Lennox, Berwick, and Kensington Streets) via an easement benefiting PWD. This easement will remain in place unless otherwise approved by PWD.

Stormwater
Stormwater runoff from the site is managed through a combination of catch basins, buried infrastructure, and overland flow, discharging via outfalls to the bay. The Roux Campus redevelopment allows for reduction of site impervious area and incorporation of low-impact development techniques; these will improve the water quality and reduce the quantity of runoff prior to its discharge into Casco Bay.

In addition to private stormwater outfalls, a public stormwater outfall is located at the site's southwest corner. This outfall will continue to convey drainage from the neighborhood west of I-295 through an easement located near the southwest corner of the site.

Electricity
Central Maine Power provides electric power via an overhead 12.47kV 3-phase distribution system. The facility has two main secondary metered services. New utility corridors will include electrical infrastructure improvements. Energy-saving technologies and renewable energy sources will be incorporated into building and campus design to reduce electricity consumption and advance sustainability goals.

Telephone & Data
Fiber-optic internet is located along Veranda Street and Sherwood Street.

Natural Gas
Unitil provides natural gas service to the site via a 6-inch diameter service. Natural gas infrastructure in the East Deering neighborhood is provided at intermediate pressure and is suitable for campus needs.



Environment

Strengthening Resilience & Ecology
Under current conditions, the site is approximately 75% impervious with approximately 10 acres of building roofs, parking areas, and loading dock space. Minimal shoreline buffer is present at the site, with pavement extending right up to the armored embankment along much of the shoreline. Existing site grades adjacent to the Bean Building are only 1-foot above highest astronomical tide. In recognition of these existing vulnerabilities and with a desire to improve ecological function for the site, the redevelopment will raise interior site grades and soften landscapes to reduce impervious area and increase flood resilience. Living shoreline techniques for landscape will enhance some of the natural resource areas along the water's edge.

Energy Consumption
The development presents an opportunity to mitigate energy consumption through high performance building envelopes, particularly with the likely southern exposure of the Institute building. Similarly, we intend to explore and hopefully incorporate renewable energy sources such as active and passive solar, sea water cooling, and / or geothermal.

Noise Generation
The proposed mixed-use academic campus is compatible in uses with the surrounding East Deering neighborhood. The Roux Campus is buffered by I-295, the abandoned Grand Trunk Railway, and adjacent marine uses. Development will adhere to City of Portland technical standards regarding noise, vibration, and other potential nuisances. Pre-development noise measurements will serve as the baseline of analysis, in order to assess noise impacts accurately and to allow improvements to baseline conditions where possible. Development will employ noise abatement techniques (screening, acoustical attenuation, landscape buffering, etc.) for the benefit of residents, students, and all users of the site.

Hazardous Materials
Use of hazardous materials, if any, will be in academic and laboratory contexts, and managed in conformance with all local, state, and federal requirements.

Heat, Glare, and Radiation
Development studies will include analysis of heat, glare, and radiation impacts in order to understand and eliminate safety hazards and lessen impacts of new development. Development will comply with all City standards regarding heat, glare, and radiation.

Wind
Wind and occupant comfort analysis will be performed during each phase of development when applicable site plans are reviewed, with design modifications as necessary to maintain acceptable conditions. The analysis will include comfort at and around buildings as well as major public spaces. Existing buffers of plantings at property lines will be maintained or replaced where appropriate. This will be coordinated with the City of Portland arborist.



Artist Interpretation

Lighting
Exterior lighting will be full cut-off and dark-sky friendly. Fixture output will comply with all City of Portland lighting regulations to avoid light spill into neighboring areas from the site. Photometric analysis at each phase of development will be used to inform lighting design in accordance with Illuminating Engineering Society of North America (IESNA) Standards.

Height and Massing
The allowable building heights on the Roux Campus are informed by the historic location and prominence of the Bean Building, the desire to create meaningful public open space while meeting all programmatic goals for the Roux Institute, resilient building design, and potential shadow and other impacts to neighboring properties. Building heights will stagger, with the greatest height at the center of campus and lower heights near the site's boundaries. Building heights around the Bean Building and within 35' of the western and northern edges of the campus will be no greater than 75'. Conceptual massing studies based on allowable building heights are attached as Appendix A.

Shadows
Height and massing will minimize shadow impacts to neighbors and avoid negative impacts to nearby existing public open spaces. The campus height map places the greatest heights to the middle of the site and progressively lower zones to the perimeter. Mechanical enclosures will be set back from roof edges to minimize impact. Conceptual shadow studies based on allowable building heights are attached as Appendix B.



Neighborhood Engagement

The Roux Campus is intended to become an extension of the East Deering neighborhood, which is separated from the site by Interstate 295 and the rail corridor. The site will be a walkable addition to the neighborhood, with open spaces, waterfront, retail, and restaurant amenities, but it also represents a change. To ensure the campus is designed in a manner benefiting the neighborhood will require robust communication with interested stakeholders.

The City of Portland requires two Neighborhood Meetings related to the Institutional Overlay Zone and Institutional Development Plan processes. We have used those requirements as a starting point for ongoing dialogue. The first Neighborhood Meeting was held virtually on November 18, 2021, with 23 registered attendants. The feedback was very positive, and attendees expressed interest in construction job opportunities, sought additional information regarding traffic and associated transportation improvements, indicated a desire for bike/pedestrian connectivity, requested that lighting plans be considerate of adjacent neighborhoods, and asked about climate resilience and disturbance during construction. A second Neighborhood Meeting was held in person at the Ocean Avenue Elementary School on April 6, 2022. Although the City only requires that abutters within 500 feet of the campus be notified of the meeting, we have expanded the list of invitees to include a much broader radius and mailed over 1700 meeting notices. Forty-seven people attended the meeting at the school. Many attendees expressed concerns about the scale of the proposed development, building height, and traffic and, as a result, we have reduced our planned square footage of construction by 27%.

In addition to Neighborhood Meetings required by the regulatory process, we are hosting periodic virtual forums called Roux Campus Roundtables as a way to engage with the East Deering neighborhood on an on-going basis. The first such event occurred December 14, 2021. Additional meetings occurred on February 1, March 23, and June 2, 2022. More Roundtables will be scheduled in 2022 and beyond to continue dialogue and keep the neighborhood informed of progress in development.

To keep all potential stakeholders apprised of the development plans, we maintain a website, *www.rouxcampusportland.org*, to showcase up-to-date plans, present information about the Roux Institute at Northeastern University, and provide notice of upcoming events with links to recordings of prior forums. The site is an interactive platform with an email link for questions and a feedback section that probes for input on a wide variety of issues. This platform will also be a valuable communication tool during construction, providing a means to share information related to construction schedule, work hours, management plans, public safety, and site access.

Additionally, we have a designated community contact for members of the public. This contact works closely with neighborhood and city stakeholders to solicit feedback and ensure that any concerns are dealt with promptly, whether reported in person or through the website.

Finally, members of the team are conducting regular outreach to interested stakeholders and potential partners to gain broad input into development plans. This will facilitate assessment and calibration regarding how the Roux Campus can fit into the Portland landscape and ways it can best live up to its potential as a model for education, economic development, recreation, and aesthetics.



Appendix A
Conceptual Massing Studies

Campus Concept | near-term



Campus Concept | near-term



Campus Concept | long-term



Campus Concept | long-term



Appendix B
Conceptual Shadow Studies

Shadow Study | December/June: 9am, 10:30am Noon, 1:30pm & 3pm, near-term & long-term



REGULATORY FRAMEWORK

8.5.7 The Roux Institute at Northeastern University Overlay Zone Regulatory Framework

A. Applicability: All development proposed by the Initiative for Digital Engineering and Life Sciences or The Roux Institute at Northeastern University within the boundary of the Roux Institutional Overlay Zone (IOZ) shall be consistent with the approved Institutional Development Plan (IDP), consistent with the Comprehensive Plan, and meet applicable standards of the Land Use Code, unless such standards are superseded by the following regulatory framework. This regulatory framework shall govern future development by IDEALS and Roux within the IOZ unless amended by the Portland City Council upon formal application of IDEALS and/or Roux. The Roux Institutional Overlay Zone shall have the boundaries depicted below and shall include the approximately thirteen-acre property located at 1 Bean Pot Circle and identified as parcels 447-A001 and A002 in the City's assessing records.

Proposed B-5 & IOZ



B. Phasing and monitoring.

1. The Roux Campus will be developed in phases, as set forth in the IDP. The IDP will be updated on a regular basis to ensure that the data is current and that the document remains accurate. Accordingly, monitoring reports will be filed every three years and shall include a summary of progress on IDP implementation and of acquisitions and divestment since the date of IDP approval. At the time of the submission of the monitoring report, any updates to the IDP shall be identified which may result from updated master planning, changes in baseline information, or changes in the adjacent neighborhood which affect the campus, to allow the IDP to remain current. Updates and minor amendments not described below shall be reviewed administratively by the Planning Authority.

2. At completion of each phase, the Roux Campus shall have the appearance of a complete and comprehensive design. Permanent and significant public space shall be established in the first phase, to ensure public benefit. Interim conditions shall be designed for a pleasant pedestrian experience through planting, lighting, wayfinding, graphics, artwork, or ornamental fencing to provide screening, buffers, and enhancement. Interim areas of the site which are not actively used for parking or construction staging will be appropriately landscaped or accommodate gathering on lawns or other aesthetically hardened spaces.

3. Minor amendments that change the approach to parking, transportation, neighborhood engagement or design shall be reviewed by the Planning Board for consistency with the objectives of the IDP. This review may occur simultaneously with the site plan review of a proposed project.

4. Major amendments shall be reviewed by the Planning Board and are required under the following circumstances:

a. A change to the regulatory framework is required.

b. The IDP is no longer representative of the institutional mission or approach to community as a result of redevelopment in the area or City upgrades to neighborhood planning (such as roadway changes, infrastructure upgrades, community design, lighting).

c. Proposed development is inconsistent with the master facility plan, transportation plan intent, design plan intent, or environment and infrastructure plan intent identified in the IDP.

5. Annual monitoring reports will be submitted for the Transportation Demand Management (TDM) Plan. TDM monitoring reports shall include a summary of progress towards targets established in the TDM Plan.

C. Uses. The Roux Campus will encompass a variety of uses to support the mission of the Roux Institute at Northeastern University to spur innovation, build talent, and drive economic growth. Partnerships with industry, academia, and government are essential components of the Institute's success. Campus uses will include classrooms and laboratories, housing, faculty offices, dining areas, convening spaces, fitness centers, retail facilities, entrepreneurial spaces, light manufacturing, incubator space, research and design facilities, hotel, and office space. The uses on the campus will support collaboration with private industry, other institutions, and community organizations, which is essential to the Roux Institute's approach to learning through integrated research, student work opportunities, and entrepreneurial endeavors. Hotel rooms will cater to prospective students, faculty and staff, visiting

lecturers, specialists, and business partner guests, providing multiple opportunities for informal and unplanned interactions and collaboration that would otherwise not be available if staying in a hotel miles away from campus. A range of rental housing options will foster community and provide on-site opportunities for students, faculty, staff, and their families. These units will ease some of the housing pressure and traffic that might otherwise result from new residents attracted to Portland by the Institute. Housing units not occupied by residents affiliated with the Roux Institute may be made available to the public to further assist in easing the housing pressure.

Recognizing the community value of a large waterfront parcel in close proximity to a primary bike and pedestrian trail system, the Roux Campus will be designed to include those uses that will welcome the neighbors to the campus, including publicly available open space, waterfront access, recreational opportunities, restaurant, dining, small neighborhood grocery, and/or other limited retail options. These uses will provide a means for serving the residents and other users of the campus, as well as welcoming the neighborhood to foster connectivity and community engagement, activating the public realm, and reducing dependence on automobiles.

1. In addition to the uses permitted in the underlying zone, the uses in Table 8-E are permitted as a matter of right. In recognition that The Roux Institute is a graduate-level educational and research institution with a number of corporate partners, and in recognition of its location outside of the downtown, the following uses and many that are permitted in the underlying zone, such as multi-family housing, hotels, offices and retail, are ancillary to and support the vision and mission of the Institution. In addition, ground floor retail, restaurant, or comparable community-oriented uses that provide services to local residents, students, faculty and staff shall be provided. Such uses are expressly permitted whether ancillary to or supporting the educational institution, and shall be open and welcoming to the general public in addition to students, faculty, staff, or visitors of The Roux Institute. All of the following uses shall be permitted in all buildings located within the IOZ that are located on land owned or leased by The Roux Institute.

Table 8-E Permitted Uses
All Uses Permitted in the Underlying B-5 Zone
Laboratory and Research Facilities
Structured Parking
Low-impact Industrial (>10,000 SF)
High-tech Manufacturing

2. Hotels shall be limited as follows:

a. No more than one hotel shall be located in the IOZ.
b. The hotel shall contain no more than 130 rooms.
c. The hotel shall be no more than eight stories in height, not including structured parking.

D. Dimensional requirements.

All buildings and structures located within the IOZ and located on land owned or leased by The Roux Institute shall be subject to the dimensional requirements of the underlying zone, except as set forth in Table 8-F.

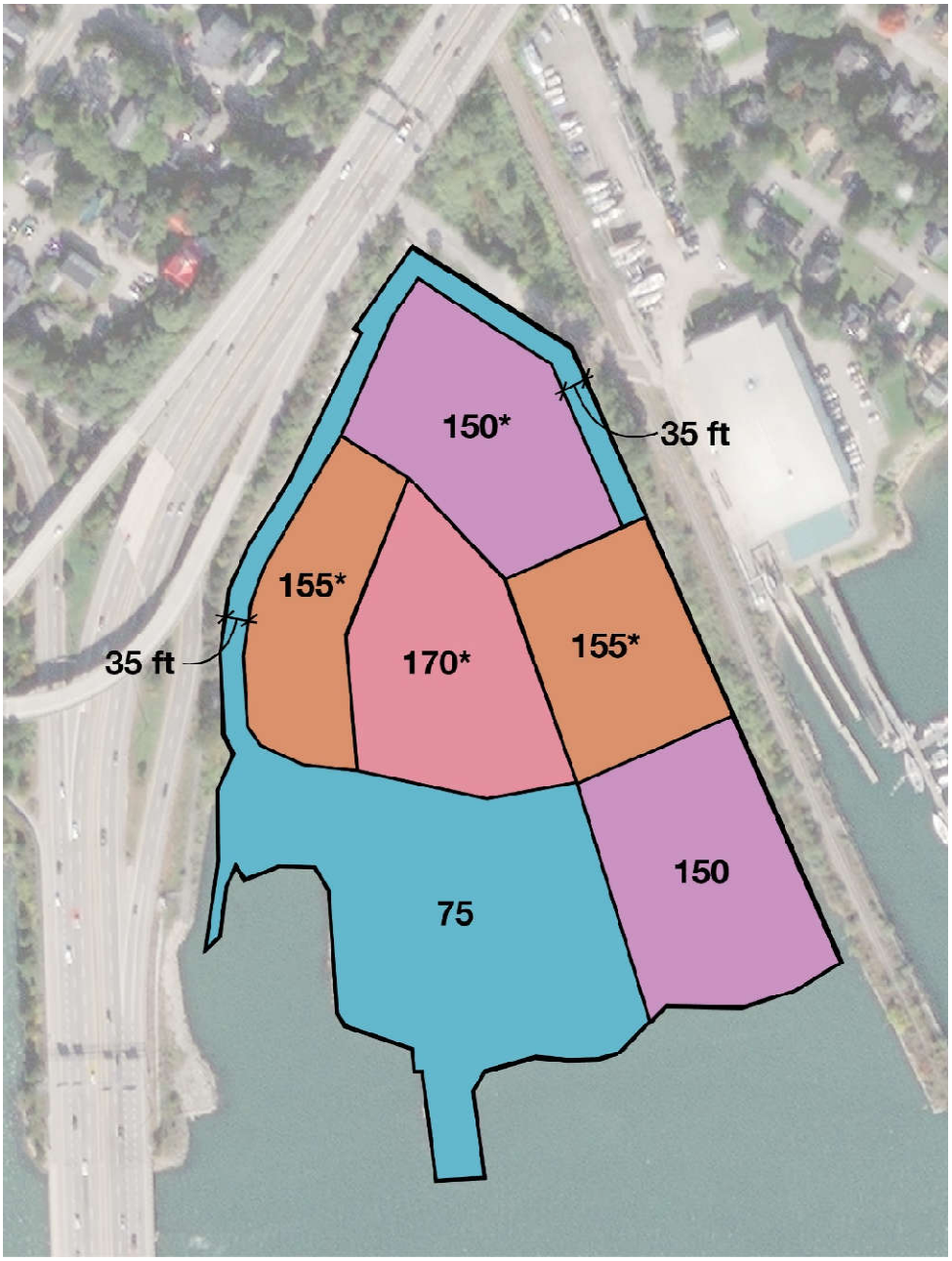
Table 8-F Dimensional Requirements	
Building Height (max.)	Maximum building heights for new buildings in the IOZ shall be governed by the Roux IOZ Height Map (Figure 8-E)

E. Transportation.

1. Transportation Demand Management (TDM)

   a. At the time of the first site plan review following IDP approval, the developer shall submit a campus-wide TDM Plan substantially in accordance with those TDM objectives and strategies identified in the approved IDP. The TDM Plan may be phased into short-, mid-, and long term actions to allow for progressive implementation over time.
   b. The TDM Plan shall be designed to provide transportation choice with the goal of reducing parking demand and single-occupancy vehicle trips to and from the Roux Campus by students, faculty, staff, institutional partners, and visitors.
   c. The TDM Plan shall establish parking, mode share, and trip reduction targets associated with each phase of development, as well as a data collection plan.

Figure 8-E: Height Map



NOTES:

1. Applies to zones shown with an asterick (*): above height of 75 feet, no building floorplate shall exceed 35,000 square feet.
2. Above height of 50 feet, no two buidlings shall be closer than 40 feet apart.
3. Building heights for buildings that span two or more height zones shall be measured by calculating the highest point (as defined in the code) of that portion of the building within a particular height zone. If the roof is sloped, height is measured at the midpoint of that portion of the slope located within the particular height zone.

2. Bicycle and Pedestrian Access and Safety.

a. At the time of the first site plan review following IDP approval, the developer shall submit a bicycle/pedestrian access plan. Where possible, the bicycle and pedestrian access routes shall connect to established accessways. The developer shall look to establish new bicycle and pedestrian accessways where feasible.

3. Parking.

a. Parking requirements in the IOZ shall be established at the time of site plan review for each phase of development based on a parking study that includes a campus-wide analysis of demand and supply. Parking studies shall integrate parking and trip reduction achievements and data contained in the TDM Plan.

4. Circulation

a. The campus shall contain a bike and pedestrian circulation network which includes a perimeter access loop, an internal system of pathways and a major campus “promenade” which serves as a walkway linking campus developments, the upland, and the waterfront.

b. The perimeter access path for bicycles and pedestrians will serve to connect the campus to primary site entry points from the community and provide a continuous recreational loop. Where appropriate, the access loop will be enhanced by wayfinding, lighting, landscaping, and safe crossings at vehicular intersections. Where possible, building facades will respond to the loop for views into the building and periodic activation to building entrances.

c. Internal campus circulation pathways will connect major open spaces, building entrances, and outdoor plazas to create a network of multiple pathways including the perimeter access path. They will be located along or oriented toward facades that have active programs, architectural articulation, appropriately scaled entrances, and windows. They will avoid traveling along stretches of undifferentiated or blank facades back doors or service areas. They will be generally lower-velocity systems than the access loop. Where appropriate, the internal pathways will be enhanced by wayfinding, lighting, landscaping, and safe crossings at vehicular intersections.

d. The campus promenade will serve as a major organizing feature connecting the upland and the water and providing access to open spaces, allowing views of principal campus of buildings, and connecting to the internal and perimeter pathway systems. The promenade will be enhanced by lighting, wayfinding, landscape buffers, major and minor open spaces. Viewsheds and topography will emphasize the Roux Institute and Bean buildings, pier and other principal buildings and spaces.

F. Environment.

1. The IOZ shall contain a minimum of three acres of public open space designed to enhance waterfront access and provide bicycle/pedestrian network connectivity. This open space requirement shall be met

at the completion of phase one and shall be maintained at all phases of development. The three acres need not be contiguous and may be provided in new and/or different locations following completion of development phases.

2. Development shall utilize critical components of industry standard benchmarking systems such as LEED, SITES, WELL, ILFI, and Passive House which will be combined in a sustainability and resilience charter to identify the specific goals and standards for the campus and its buildings. This charter will be submitted to the Planning Authority prior to submission of the site plan application for phase one.

3. Development shall utilize lighting designs required for safety and comfort and that minimize impact to the night sky in accordance with light pollution reduction standards in ANSI/ASHRAE/IESNA 90.1-2007 or its most current edition.

4. Development shall be carried out in such a way as to minimize the impacts of sea level rise, protecting infrastructure and site features by designing to a minimum of 2-feet above the Base Flood Elevation (BFE) as shown on the most current FEMA Flood Insurance Rate Map.

5. The shoreline edge and immediate adjacent upland shall be protected through shoreline armoring and vegetation to prevent erosion and enhance natural resource protection.

5. Design of the exterior building envelope will be in developed in conjunction with the American Bird Conservancy and Cornell Ornithology Lab standards to mitigate bird strikes to the extent practicable.

G. Mitigation measures.

Site plan impacts to off-premise infrastructure shall be mitigated in a manner proportionate to those impacts. Mitigation may include financial or in-kind contributions to existing or planned City projects focused on mitigating the impacts of the development. Mitigation contribution shall be determined based on the City's standard procedure in effect at the time of site plan review.

H. Design.

1. Introduction and intent.

New development in the IOZ shall adhere to the following design guidelines and the site plan standards of the City of Portland. All new development shall be designed to create a visual connection with the goal of achieving a cohesive campus appearance with a strong identity and sense of place. New development may be contemporary and forward looking in architectural style, but shall be informed by or responsive to the iconic Bean Building as an example of Portland's unique legacy of innovation, adaptation and durability. Reference to the building specifically and in general to the early 20th century industrial factory building type may inform the principles of highly functional yet articulated human-centered facades and details, a combination of local and innovative materials, use of natural daylighting, high degree of flexibility and scalability and capacity for long service life. New development shall be characterized by excellence in architectural design, craftsmanship, materials, streetscape, resilience, sustainability and landscape improvements, signage, and lighting appropriate for a campus development on a coastal site.

These principles and standards are intended to regulate the future build out of the Roux Campus while ensuring that new development is sensitive to adjacent residential neighborhoods and commercial areas and successfully integrates the existing site into the public realm while establishing a global beacon for thought leadership in artificial intelligence, computer and data sciences, digital engineering, and advanced life sciences.

2. Standards

a. Buildings shall:

i. be characterized by excellence in architectural design, sustainability, and craftsmanship
ii. incorporate materials, landscape, signage, & lighting that reflect Portland's character yet look to a high-tech future
iii. create a strong identity and sense of place
iv. vary in height, with the tallest buildings located toward the center of campus
v. be organized to take advantage of views, site circulation, and public space along the waterfront
vi. share visual connections with other campus buildings to achieve a holistic campus appearance
vii. support and augment activation of public spaces and public access to the site
viii. be programmed for activation where they meet the pedestrian realm or feature visually interesting details and activities related to the building
ix. respect the adjacent neighborhood and facilitate a sense of permeability and welcome
x. identify the primary academic program area through signature architecture
xi. utilize durable materials resistant to the marine climate & which contribute to an attractive public realm
xii. screen rooftop appurtenances and set back mechanical enclosures from roof edges to reduce shadow & visual impact
xiii. limit sound transmission and limit bird strike potential
xiv. employ sustainability benchmarking to foster environmental stewardship and resilience
xv. utilize building articulation and material selections to provide character and scale
xvi. ensure permeability through and within the site for light, air, views, & access
xvii. be appropriately scaled to support pedestrian activity, utilizing step-backs where appropriate
xviii. be oriented toward the open space at the center of the site and shall include prominent facades with windows and entrances oriented toward paths of travel
xix. be oriented to allow for easy pick-up and drop-off
xx. respect and provide a buffer from the historic B&M cannery building

b. Campus circulation shall:

i. be bike and pedestrian-centered, with motor vehicle circulation generally at the perimeter where practicable
ii. serve pedestrians/bicyclists, autos, public transportation, service vehicles, and emergency vehicles during each phase of development
iii. provide wayfinding and amenities to create a safe and welcoming environment for the community
iv. provide bike and pedestrian connectivity to existing ways where feasible

c. Open space and public realm shall:

i. create a strong identity and sense of place
ii. be designed for safety and comfort
iii. enable access to building entrances
iv. utilize a combination of planting and hardscape
v. provide access and amenities to connect the public to the shoreline and ocean
vi. include meaningful public open space between the buildings and the water
vii. support site resilience in consideration of flooding from storm events and sea level rise
viii. support ecological functions and values
ix. provide an appropriate buffer adjacent to and complementing the historic B&M cannery building
x. include lighting that is full-cutoff and dark sky-friendly

d. Parking shall:

i. be located to the maximum extent practicable in below grade garages and daylight basement garages
ii. when above grade, be architecturally screened to blend in with the surrounding buildings and minimize vehicular disturbances of lights and sound
iii. when on surface lots, be located at the rear or side of buildings, & not along the primary façade
iv. not be located along the water's edge
v. ensure EV charging capability meets EV demand & is scalable as demand increases
vi. be shared to the extent practicable
vii. support street activation & pedestrian scale when adjacent to public open space or rights-of-way

I. Neighborhood integration.

1. For the purpose of keeping surrounding residential areas appraised of its future development plans, and to address any neighborhood issues related to the operations of the Roux Campus, IDEALS and The Roux Institute shall adhere to the ongoing neighborhood engagement principles identified in the IDP.

2. Ongoing community engagement shall be conducted, including the continuation of Roux Campus Roundtables and maintenance of the Roux Campus website.

3. A designated community liaison shall be engaged to be the point of contact for providing information to the neighborhood and receiving feedback.

8.5 INSTITUTIONAL OVERLAY (IOZ)

8.5.1 Purpose

The Institutional Overlay Zone (IOZ) designation provides a regulatory mechanism available to the city's ~~four~~ five major medical and higher education campuses where an improved regulatory structure is needed to facilitate a consistent, predictable, and clear growth management process. The purposes of the Institutional Overlay Zone are to:

A. Acknowledge that the city's major academic and medical institutions play a prominent role in the health and well-being of the local and regional community, and in order to sustain that role, these institutions need flexibility to change and grow.

B. Encourage proactive planning for institutional change and growth which identifies and addresses likely long-term institutional needs and cumulative impacts while leveraging potential benefits at the neighborhood, city, and regional level.

C. Ensure that institutional change and growth both complements and, as appropriate, integrates adjacent or surrounding neighborhoods through carefully planned transitions.

D. Support the formation and continuation of mutually beneficial public-private cooperation.

E. Support an ongoing public engagement process that benefits both the institutions and nearby neighborhoods.

F. Reflect Comprehensive Plan and other policy objectives.

G. Provide a consistent regulatory approach to all major institutions which allows unique regulatory requirements that balance the particular needs of institutions with the needs of the surrounding neighborhood and wider community.

8.5.2 Location and applicability

The city's ~~four~~ five ~~primary~~ major medical and higher education institutions are eligible to apply for designation as Institutional Overlay Zones. The eligible institutions are the two major hospital institutions of Maine Medical Center and Mercy Hospital and the ~~two~~ three major academic institutions of University of Southern Maine, ~~and~~ University of New England, and The Roux Institute at Northeastern University, their successors and assigns. Designation as an IOZ is the preferred mechanism where the eligible institution's proposed development is inconsistent with the existing zoning.

Campus Concept | near-term



Campus Concept | near-term



Campus Concept | long-term



Campus Concept | long-term



Neighborhood View | Back Cove Trail & city panorama looking East: near-term



Neighborhood View | Back Cove Trail & city panorama looking East: long-term



Neighborhood View | Washington Avenue at Veranda Street looking East: near-term



Neighborhood View | Washington Avenue at Veranda Street looking East: long-term



View | I-295 looking Northeast: near-term



View | I-295 looking Northeast: long-term



Neighborhood View | Berwick Street view looking West: existing condition



Neighborhood View | Berwick Street view looking West: near-term



Neighborhood View | Berwick Street view looking West: long-term



Neighborhood View | Kensington Street looking South: long-term



Neighborhood View | Kensington Street looking South: near-term



Neighborhood View | Veranda Street at rail corridor looking South: near-term



Neighborhood View | Kensington Street looking South: long-term



Shadow Study | December/June: 9am, 10:30am Noon, 1:30pm & 3pm, near-term & long-term



IDEALS
Initiative for Digital Engineering and Life Sciences

Charles E. Hewett, Ph.D.
Executive Director

chuck.hewett@ideals.org
207.664.3427 cell

June 6, 2022

Att. P

Zachary Powell, Planner
City of Portland
389 Congress St.
Portland, ME 04101

RE: The Initiative for Digital Engineering and Life Sciences
Neighborhood Meeting Information

Dear Zach:

On behalf of The Initiative for Digital Engineering and Life Sciences (IDEALS), I have enclosed the required information pertaining to our two formal Neighborhood Meetings held prior to and following submission of our application in accordance with Section 8.5.3(B) of the Land Use Code. The meetings were held on November 18, 2021 (23 attendees) and April 6, 2022 (47 attendees). Although the Code only requires that abutters within 500 feet of the project be notified of the public meeting, we expanded that radius for the second meeting and mailed over 1700 meeting notices.

In addition to the required neighborhood meetings, we have also held informal meetings with the neighborhood that we have called "Roux Campus Round Tables." These meetings were each also noticed to over 1,000 property owners and tenants. To date, we have held four Round Table meetings, for a total of six public meetings regarding our application. We were able to hold the April 6th meeting in public, but the other meetings have been held via Zoom, due to public health concerns. The first Round Table was held on December 14, 2021 and we had 36 attendees from the public; the second was held on February 1, 2022 with 44 attendees from the public; the third was held on March 23, 2022 with 44 attendees; and the fourth was held on June 2, 2022 with 50 attendees.

Please let us know if you have any questions or need additional information.

Sincerely,

Charles E. Hewett, Ph.D.
Executive Director

THE INITIATIVE FOR DIGITAL ENGINEERING AND LIFE SCIENCES
PROPOSED INSTITUTIONAL OVERLAY ZONE FOR THE ROUX INSTITUTE
PRE-APPLICATION SUBMISSION NEIGHBORHOOD MEETING
November 18, 2021

The Neighborhood Meeting was held via Zoom Webinar, beginning at 6:30 pm and lasting approximately one hour. Twenty-three members of the public were in attendance, as well as eight representatives of the applicant, IDEALS.

The public comment and questions are summarized below. Major areas of focus included traffic, construction impacts and sustainability.

- I am with the Laborers International Union of North America. This is a big opportunity for construction in this town. I'd like to hear more about the employment opportunities for our union workforce, in terms of construction and environmental work.
- I am so excited that this institution has chosen our neighborhood. I live behind the Martins Point Bridge. We knew it would become something other than the Bean factory, and we are thrilled it's you. There is a big construction project on Veranda Street. Part of that is a multi-use pathway, from the Martins Point Bridge, possibly to connect to Back Cove. Have there been any discussions about connecting into that short span? MDOT had a plan to connect but it never came to fruition. It would be a big deal for those of us nearby.
- I was just wondering about the bridge at Kensington Street, and the rail and trails. It would be possible to have a walkway, but the trail takes a steep drop. That path is supposed to be done, but the MDOT has not completed it. As an alternative commuter, I want to know if you are invested in that? The connection to the rail/trail has not occurred.
- We own one of the two multi-families on the street from Veranda to Sherwood. We think it's wonderful to repurpose this facility. We have concerns about access on Sherwood Street, which is very narrow. And we are also concerned about the duration of construction for our tenants.
- I am a neighbor and a data scientist for one of your partner companies, and very excited about what the Roux Institute means for Portland. Veranda Street can back up a lot from Washington Ave traffic.
- I am really grateful to be a part of this conversation. I'd like to recognize that I'm most impressed that you are going above and beyond what is required for public engagement and planning the roundtables (Roux Campus Roundtables) to make sure people are heard and their input is requested. Being open and honest is very refreshing. There is a lot of excitement, about the Roux Institute potential for education and the city. Hopefully we can get as many residents and businesses as possible to participate.
- How are you going to build the physical infrastructure with respect to climate change. We all know the flood zone figures will be changing.
- What will the area lighting be? We already have the lights from Rt 295.

Neighborhood Meeting for the IDEALS Roux Campus Project
Thursday, November 18, 2021
Via Zoom

First Name	Last Name	Email	Address	City
Christopher	Bruni	chrisbruni111@gmail.com	32 Lennox street,	Portland
Nancy	Olmstead	nancy_olmstead@hotmail.com	14 Berwick St	Portland
SA	Scott	shaesby@gmail.com	100 Kensington St.	Portland
Cheryl	Leeman	cal4161@yahoo.com	37 Savoy Street	Portland
Brian.Harris		BRIAN@MAINEYACHT.COM	100 Kensington Street	PORTLAND
Denise	Kaserman	dkaserman@me.com	4 Country Lane	Falmouth
Julie	Carling	captainjulie225@gmail.com	81 Sherwood St	Portland
Jason	Shedlock	jshedlock@LNEROF.org	93 High Street #303	Portland
Jeraldine	Herrera	jeraldine.herrera@powereng.com	45 Harpswell Rd	Brunswick
Mike	McGuigan	mmcguigan@nasrcc.org	65 Rainmaker Dr	Portland
Michael	Flaherty	michaelflaherty58@yahoo.com	45 Berwick St.	Portland
John	Napolitano	johnlocal716@gmail.com	86 Walnut Hill Rd	N. Yarmouth
Justin	Desmond	jdesmond@iupatdc35.org	DC 35 Member Representative	DC 35 Member Representative
Patrick	Carroll	pcarroll@tcco.com	218 Eastern Promenade, Apt #4	Portland
Adam	Parys	aparys@tcco.com	177 Paradise Road	Bethel
Jaime	Parker	jaime@trails.org	305 Commercial St	Portland
Kathy	Spiegelman	K.Spiegelman@northeastern.edu	360 Huntington Avenue	Boston
Grant	Provost	gprovost@iwlocal7.org	131 spring streetSuite 2C	Portland
Aura	Russell-Bedder	arussellbedder@gmail.com	8 Arcadia St	Portland
Robert	Burr	r.burr@iuoelocal4.org		
cheri	juniewicz	cj@maine.rr.com	38 Bismark St	Portland
Andrew	Zarro	azarro@portlandmaine.gov	389 Congress St	Portland
Paul	Goodrich	paulgoodrich@yahoo.com		

THE INITIATIVE FOR DIGITAL ENGINEERING AND LIFE SCIENCES
PROPOSED INSTITUTIONAL OVERLAY ZONE FOR THE ROUX INSTITUTE
POST-APPLICATION SUBMISSION NEIGHBORHOOD MEETING
APRIL 6, 2022

The Neighborhood Meeting was held at the Ocean Avenue School, beginning at 5:30 pm and lasting approximately two and a half hours. Forty-seven members of the public were in attendance, as well as eight representatives of the applicant, IDEALS.

The public comment and questions are summarized below. Major areas of focus included traffic, parking, proposed uses, and scale and height of buildings.

- When did you first become interested in buying this property?
- When do you plan to break ground?
- Will there be blasting?
- We haven't talked about the new construction on Dalton Street, a large apartment complex with 48 units, that will empty out onto Sherwood Street. And the school is also growing, both of which will increase pedestrian and vehicular traffic. I have concerns about all the additional traffic. It's pretty heavy as it is. I want all of it to be taken into consideration.
- How would the hotel add to traffic concerns? There's one way in and out. I drive on Sherwood Street twice a day. Is there secondary access? Are there any traffic predictions?
- Do you have data about the current use of cars at the Roux Institute?
- The height and scale of the buildings do not respect the neighborhood context.
- What will stop people from parking in the neighborhood?
- There is a lot of missing information – wind studies, shadow studies. These are missing from your IDP.
- What percent on campus will be using the hotel and what will be outsiders?
- I am conflicted on this project. While it seems like just what this city needs, no one wants an industrial site in their back yard. How will it change access to the water? I am also concerned about increased traffic.
- We are concerned about traffic as there is only one egress. We think what you say you will do about the traffic (turning lane, etc.) is unrealistic. I suspect you have a backup plan we do not know about. I don't believe the traffic will only be impacted by 10
- Your plans go far beyond what is needed for an educational technology center. You are a developer. You wouldn't be developing this area if there wasn't a profit.
- I don't trust that one hotel will be enough.
- I have friends and family who have had to move out of Portland, because working class people can't afford to live here anymore. We feel you are taking something symbolic of Portland and replacing it with something that has gutted other cities.

- Maine Med has a micro bus system that maybe you could partner with. And consider a satellite parking lot.
- Do you have an estimate of trips in and out of Sherwood Street? How many cars will be coming and going?
- At the last meeting you had a drawing of ideas for Veranda Street. Do you have one for Sherwood?
- This is a nice use of the space. You guys are being considerate. However, the large scale of your plans doesn't seem appropriate for that space.
- I'm excited about your vision but I am very concerned about the traffic and the scale of the project. We have a quiet neighborhood and what you are proposing is going to completely change it. I don't know who came up with the 10% traffic increase, but if the study was done from May-October, it would be much higher. The traffic just sits there.
- We are working on bringing battery electric train power, from Portland to Lewiston. This might alleviate the serious traffic impact on not only this neighborhood, but the climate. This is a solution that is environmentally friendly and economically feasible.
- We have a number of questions that you say are in process, undetermined, etc. It makes us a little nervous that you are pursuing maximum zoning flexibility before you figure those things out.
- As a result of the study, is there a bottom line where the City says "no" to Sherwood Street, that this is not going to work for IDEALS?
- What is the tax gain for a non-profit in this location?
- What is the current waterfront access for the neighborhood? How will that be impacted? How is the neighborhood using that waterfront right now?
- What was your impression of our neighborhood when you were there? Did you notice the noise? As our neighbor, we want to know that you care about our lives and our homes.
- Human behavior being what it is, people aren't going to use public transportation. Have you considered the symbolic impact of building on this property? It represents Maine, as people drive past on I-295. What gives you the right to put the Roux Institute there?
- I want to compliment Roux for meeting with me. I'm offering an alternative for public transportation – Micro Rail. Metro has a long history of keeping people waiting. Have you looked into possible pollutants inside and outside the B&M building?
- At times it sounds like it's going to be a conference center maybe being supported by an education facility. At what point are you able to scale back the project if you're not able to overcome some of the objections? Would you continue with the project if the only thing that was approved was the Roux Institute? Would Phase 1 just be for the Roux Institute, hotel, housing, etc.? And Phase 2 would be to expand all that?
- What advantages are you going to bring to the neighborhood?
- Will you want more space than what you have right now?

- The process I have seen you display in these round tables, has been more transparent than most development projects. You're doing a good job.
- Have you guys purchased other land or intend to?
- What is the % of domestic/international learners?

IDEALS
Initiative for Digital Engineering and Life Sciences
Roux Campus

Neighborhood Meeting Sign-In Sheet

Wednesday April 6, 2022

Ocean Avenue Elementary School - 150 Ocean Ave, Portland, ME 04103

IDEALS: Roux Campus 1 Bean Pot Circle, Portland, ME

Developer and Consultant Team in Attendance:

Name:	Email:
Chuck Hewett IDEALS	
Sam Reiche IDEALS	
Elizabeth Swain IDEALS	
Jenn Conley VHB	
Mary Costigan Bernstein Shur	
Jamie Broder Bernstein Shur	
Barry Sheff Woodard & Curran	
Denise Cameron Woodard & Curran	

IDEALS
Initiative for Digital Engineering and Life Sciences
Roux Campus

Neighborhood Meeting Sign-In Sheet

Wednesday April 6, 2022

Ocean Avenue Elementary School - 150 Ocean Ave, Portland, ME 04103

IDEALS: Roux Campus 1 Bean Pot Circle, Portland, ME

Members of the Public in Attendance:

Name:	Email:
Doug Colt	CG4DTC@Gmail.Com
JOAN O'NEIL	101 @Arcadia ST
Ashley Lepre	Ashley.Lepre@gmail.com
Todd Zukowski	tzukowski@hotmail.
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JAMES PRATT	jpratt@hotmail.com

IDEALS
Initiative for Digital Engineering and Life Sciences
Roux Campus

Neighborhood Meeting Sign-In Sheet

Wednesday April 6, 2022

Ocean Avenue Elementary School - 150 Ocean Ave, Portland, ME 04103

IDEALS: Roux Campus 1 Bean Pot Circle, Portland, ME

Members of the Public in Attendance:

Name:	Email:
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Nick VAUGHN	nvaughn@smrtinc.com
Ben Carling	gbencarling@gmail.com
Ken Capron	watchdog@maine.rr.com
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Callan Cassidy	callan@waypointbrokers.com
Daniel Cassidy	dan@danielcassidy.com
Jen Whitley	jwhickball@gmail.com

IDEALS
Initiative for Digital Engineering and Life Sciences
Roux Campus

Neighborhood Meeting Sign-In Sheet

Wednesday April 6, 2022

Ocean Avenue Elementary School - 150 Ocean Ave, Portland, ME 04103

IDEALS: Roux Campus 1 Bean Pot Circle, Portland, ME

Members of the Public in Attendance:

Name:	Email:
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Tom CARTER	TOM CARTER agent gmail.com
Christopher Brun	chrisbrunilll@gmail.com
JAMES TROTT	James.Trott58@gmail
Chris Briley	cbriley@briburn.com

IDEALS
Initiative for Digital Engineering and Life Sciences
Roux Campus

Neighborhood Meeting Sign-In Sheet

Wednesday April 6, 2022

Ocean Avenue Elementary School - 150 Ocean Ave, Portland, ME 04103

IDEALS: Roux Campus 1 Bean Pot Circle, Portland, ME

Members of the Public in Attendance:

Name:	Email:
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STEVE BUSEN	SBUSENIE GMAIL.COM
Joshua Loring	loringjoshua@gmail.com
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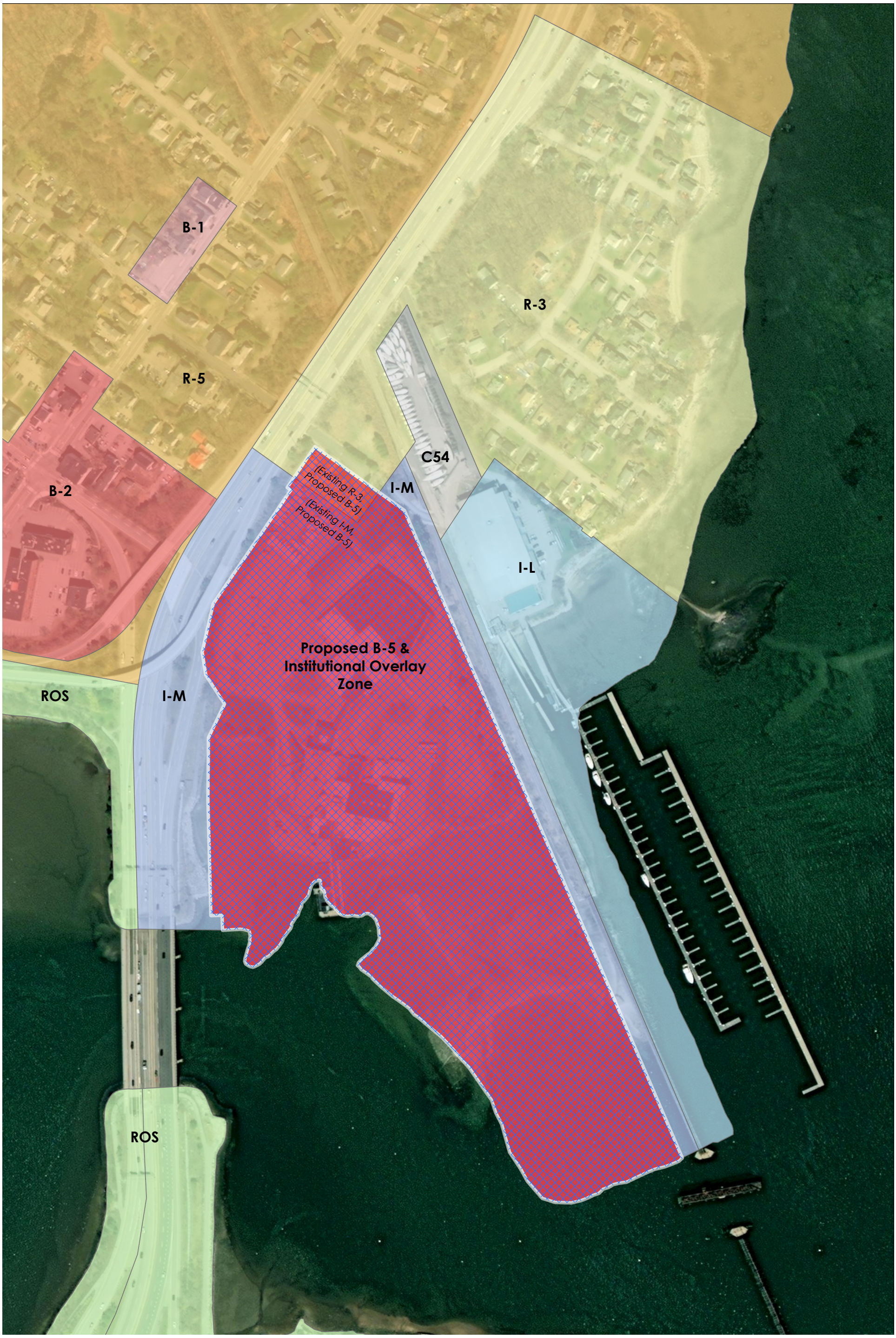
John Darling	jdarlin2@Maine.rr.com
Diane Lawton	efinsterwald@gmail.com
Ben Chipman	Ben.Chipman@legislature.maine.gov
Sandy Comstock	sandycomstock3@gmail.com
James Mayher	jimboats1@yahoo.com
Victoria Fisk	vickifiskshop@gmail.com

Proposed Zoning



0 1,000 feet

Property Line

Vicinity Map



0 1,000 feet

PC1

Kellan Simpson <kmsimp1@gmail.com> Jun 14, 2022, 5:56:18 PM (14 hours ago)

to planningboard@portlandmaine.gov

Two comments

1. Every conversation seems to be focused around cars and building new exits and making wider roads. I hope the board can stop planning around cars for site access and thinking only about cars and traffic. We should be pushing for complete solutions to access the site without cars.
2. Please push for revitalizing the old rail bridge and applying for federal funding to get that done

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Memo

To: City of Portland Maine Planning Board
Maggie Stanley, Chair

CC: Portland City Councilor Andrew Zarro, Chair
City of Portland Sustainability and Transportation Committee

From: Maine Rail Transit Coalition
Anthony Donovan, Managing Director DS AD

Date: June 14, 2022

RE: Zoning Map and Text Amendment; 1 Bean Pot Circle; IDEALS

Chair Stanley and Members of the Portland Planning Board,

The Maine Rail Transit Coalition (MRTC) would like to express our support for the proposed zone change for the development of the IDEALS' Roux campus at the former B and M Bean site. The MRTC is currently engaged in a project to bring a light rail passenger train service on the state-owned railroad adjacent to the development, and therefore has a strong interest in this projects impact on the railway, as well as the potential to benefit the climate, reducing congestion and provide equitable economic benefits to the region.

The developer has presented strategies for reducing the number of vehicle trips and to alleviate the impacts of vehicles on the environment and surrounding community. In addition to its proposed bicycling and pedestrian infrastructure, the strategies include a concept for expanding the Interstate highway to include a new highway interchange into the development and a conceptual idea for a ferry service operating from a pier on the site.

The MRTC advocates for expanding multi-modal systems of mobility, while seeking to discourage expanding highway use and our societal dependency on automobiles. As per the Governors recent Climate Change report, transportation is responsible for 54% of the Greenhouse Gas Emissions contributing to Climate Change.

While the strategy of connecting the development by ferry is innovative and in line with the City of Portland as a working waterfront community, we are genuinely concerned that the strategy of expanding I-295 will only lead to more traffic congestion at great cost. A 2011 state DOT study projected 40,000 vehicles entering the city every morning from the Interstate highways. This will only lead to further expansion and widening of I-295, and more highway congestion and pollution.

We do however appreciate the strategy of innovation to resolve critical transportation issues.

DS AD

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The state-owned St. Lawrence & Atlantic railroad is an existing transportation infrastructure in place and can be restored for a passenger train service. Reconstruction of the trestle bridge into the city has been evaluated by a number of engineers and can be done, at a reasonable cost. Passenger train service can, and should, be provided on this route into the City.

The IDEALS development has engaged the services of VHB as their transportation consulting firm. VHB is also the go-to firm for the state in all the state rail studies, including a recent report on a passenger train service into downtown Portland from Westbrook. VHB has the ability, and data for determining passenger train benefits, ridership and impacts on congestion.

The MRTC respectively requests that the Portland Planning Board directs the IDEALS development to include in their traffic impact analysis the potential for a passenger train service to the site on the adjacent state railway.

No less innovative than the idea of a ferry, or expanding bike-ped pathway, and far more innovative than expansion of a highway, the concept of a passenger train service must not be left out of the evaluation of this development.

The proposed IDEALS development has the potential to not only provide an institution of higher learning, jobs, housing and services, but also to address the serious issue of Climate Change.

MRTC would also like to request a meeting with members of the Planning Board, as well as those responsible for transportation components of the project, to provide in-depth input on the proposal for a multi-modal system of transportation using the existing railroad infrastructure.

Sincerely,

DocuSigned by:
Anthony Donovan
3BCCBAB5764449F...

Anthony Donovan, Director
Maine Rail Transit Coalition

PC3

Zachary Powell <zpowell@portlandmaine.gov>

Bean Pot Rd development

HMason Sears <hmasonsears@gmail.com> Tue, Jun 14, 2022 at 6:36 AM
To: zpowell@portlandmaine.gov

Zach,

i'm writing to express my concerns about the proposed development at the former B&M bean factory.
I am a neighbor (72 veranda st)
My first major concern is the traffic impact to the the Veranda st area. Will the city conduct their own traffic study or have a consultant review the proposed traffic plan? we all know alternative traffic reducting measures such as carpooling, share cars, biking , buse etc are far from a solution to alleviate single rider car trips. A worst case I would imagine is a cold post snow storm day, with limited sidewalks and a lot of cars flooding the area while kids are walking to school..

My second concern is the Institutional overlay zone is not in keeping with other examples of it in the city. it appear that this a commercial for profit development with a "school" as the development vehicle. while I understand some other housing and mixed use is part of a campus, it feels like the city is getting gamed on this.

my final point is more of a overall concern for this type of industrial water front site being converting to non industrial uses (this project does not need a water front location, and could be developed on a none working waterfront location)
while people have grown up with beans being made at the site (not a waterfront activity), I belive there is a good argument for the preservation of this working waterfront. as the pressures of development increase on the commercial st. corridor the city would be well balanced with an outlet for existing waterfront activities. commercial fishing, offshore support, recreation / commercial vessels repair, aquaculture, offshore wind, the list goes on to activities yet to be known but history has shown new water based industries will emerge.
I know the city has had a desire to relocate the commercial barge service loading to the islands from the eastern prom. as it would decrease industrial traffic thru the park, help with parking, (witha little dredging this site could accommodate a barge transfer ramp) I would imagine a public private partnership could be developed to create multi -use site to serve the needs of many diverse industries that could be supported at that site

Thank you,

Mason Sears

Bourque, Michael <mbourque@memic.com> Jun 14, 2022, 5:26:33 PM (15 hours ago)
to planningboard@portlandmaine.gov

Good afternoon:

My name is Michael Bourque and I live at 137 Noyes Street in Portland. I also serve as the president and CEO of MEMIC, a workers' compensation insurance company with offices on Commercial Street and based here in Portland. At this location, we have about 300 employees.

I am here to offer my support for this incredibly important project for Portland, and for Maine. Already, in a few short years, in small leased space, Roux has started to show its potential. At MEMIC, we have already begun to enjoy this partnership. Last summer, our entire senior leadership team (about 25 people) did a 6-part program called "Leadership in Analytics. " That offering, right here locally, helped prepare my mid-career team with exposure to important innovations in the use of data through world class instruction.

Think about multiplying that simple experience by hundreds of Maine-based companies. Think of hundreds of students who can have access to cutting-edge faculty in life sciences and data analytics. Think of the incredible opportunity incubate dozens and dozens of small businesses – some who could become the next Idexx or Jax. Think about being known as the home to ground-breaking research. The opportunity for Portland and for Maine is nothing like we have seen certainly in my 30+ years in Portland.

I walk and run the Back Cove Trail on a nearly-daily basis. I look forward with pride for Portland as I think about passing this incredible development every day. Please support this important project for the Roux Institute, which respects Portland heritage while inspiring --and helping create-- a great future!

Thank you.

Michael P. Bourque, APR, WCP

President and CEO

The MEMIC Group

PO Box 11409

Portland, ME 04104

(o) 207.791.3301 | (m) 207.749.8815

Greater Portland Landmarks

Historic character enriches our lives

P
C
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June 14, 2022

Dear Chair Stanley and Members of the Planning Board:

Founded in 1964, Greater Portland Landmarks is a non-profit advocacy organization that works toward the preservation and revitalization of greater Portland's built environment. Our goal is to save greater Portland's historic places through preservation and adaptive use while promoting creative new architecture that enhances historic neighborhoods. We appreciate the opportunity to comment on projects that impact the historic character of the city.

Landmarks is pleased to support IDEALS/The Roux Institute's application to amend the existing Institutional Overlay Zone (IOZ) regulations to permit IDEALS/The Roux Institute at Northeastern University to pursue an IOZ as an identified major City institution, change the underlying zoning of the site from I-M to B-5, and adopt a new IOZ for this property. We think this is a great way to manage the site for its new uses, in conjunction with the applicant's recently approved nomination to the City Council by the Historic Preservation Board as a local landmark. We are excited for the rehabilitation of the Burnham & Morrill Cannery and the applicant's overall reactivation of an important component of the fabric of Portland. Thank you for the opportunity to comment.

Sincerely,

C. Ian Stevenson
Director of Advocacy

93 High Street, Portland ME 04101 | 207.774.5561 | info@portlandlandmarks.org | portlandlandmarks.org

portlandbikeped
PORTLAND BICYCLE AND PEDESTRIAN ADVISORY COMMITTEE

Chair Stanley and Members of the Portland Planning Board,

The Portland Bicycle & Pedestrian Advisory Committee (PBPAC) would like to express our support for the proposed improvements to multi-modal transportation presented by the Roux Institute Institutional Development Plan (IDP). We would also like to request a meeting with members of the Planning Board, as well as those responsible for transportation components of the project, to provide in-depth input on the proposed bicycling and pedestrian infrastructure.

The proposed Roux Institute development has the potential to not only increase Portland's green space and ocean-front trails, but also to extend Portland's existing bicycling network and better connect parts of the city and neighboring communities that are currently best served by car traffic. The potential to connect the Institute to the Back Cove Trail and to the peninsula by creating a path on the east side of Tukey's Bridge would greatly reduce the dangers of bicycling or walking to the Institute.

One of the main concerns of a development this size is the negative impact it may have on traffic in the area. By ensuring, from the beginning, that the campus is designed around bicycling, walking, and public transportation rather than cars, the need to drive to access the campus can be reduced, thus reducing traffic impacts and creating a safer, more vibrant neighborhood.

PBPAC has had a number of discussions regarding the potential for improved infrastructure since the initial announcement of this project, and we would like to request a walk audit with members of the planning board and project planners to ensure that the needs of pedestrians and bicyclists are met and duly prioritized. We look forward to providing feedback as the project progresses.

Thank you for your consideration,

John Clark
Chair
Portland Bicycle & Pedestrian Advisory Committee

The Portland Bicycle and Pedestrian Advisory Committee is an ad-hoc group of Portland-area residents working to make the city and region a better place to walk, bicycle, and wheelchair. We advocate and educate on bicycle, transit, and pedestrian issues, including handicap accessibility. We work in collaboration with other organizations including the Bicycle Coalition of Maine, Portland Trails, PACTS, the Portland Department of Public Works and the Portland Planning Department.

PC7

Edward F. Libby <Ed_Libby@msn.com> 8:50 AM (1 hour ago)

to planningboard@portlandmaine.gov

Let's not sell ourselves short. While the amount of private commercial development seems disproportionate to a premier education facility that was the initial "sell" that the Roux Institute may have given for the site, here is a VERY similar proposal for a VERY similar site with a different developer than IDEALS. Divcowest is offering tremendous public benefits compared to IDEALS. Please take this slowly so that the city gets the most bang for its buck, rather than lining the pockets of a few slick developers who many believe are in the middle of a "bait and switch" foisted on the city of Portland.

The development would also deliver a number of sizeable benefits to the city. The project team is proposing $54 million in one-time fees, which would incorporate a $35 million affordable housing fee, a $4.5 million Bayfront development fee and a $14.5 million public facilities impact fee.

In addition, the City is looking to gain approximately $3.1 million in annual revenue along with 4,000 to 5,000 high-earning life science jobs and another 300 jobs that would be created during the construction phase of the project.

See full article here:

https://news.theregistrysf.com/divcowest-woodstock-unveil-grand-plans-for-a-5-building-1-46mm-sqft-life-science-tech-hub-in-burlingame/

Roux 0 views

Subscribe

Bonnie Craig <craig.portland@yahoo.com> Jul 3, 2022, 3:34:54 PM (yesterday)
to planningboard@portlandmaine.gov

I was glad to see that some planning board members were questioning Roux zoning request in the paper.

I am totally against these building heights and all the commercial uses. The traffic is going

To be one great problem for all of us.

Thx

As a long time Portlander and resident of North Deering I've been following the Roux Institute's plans to redevelop the old B&M Baked Beans facility. Since moving to Portland in 2002 I've often wondered what would happen to the building. It was clear the building was slowly decaying and with the coming sea level rise I thought it might end up being abandoned and become an environmental and safety hazard. It certainly didn't seem like a great use of waterfront property in Portland. I was excited to hear that the Roux Institute had purchased the site; it seemed like a best case scenario. I think it's great that the property is going to be used by an institution of higher education focused on cutting edge disciplines that are what Maine needs to keep our economy strong and diverse. There's also the benefit to me personally that it will help revitalize that area and most likely increase property values. I understand that some residents are worried about increased traffic and a change to the view there. Traffic is a valid concern but with two highway access points right there and the already high traffic capacity of Washington Avenue it shouldn't be too hard to address that issue. As to the changing view: it is a change but I'll be happy to see a newer building that I know is full of people working and learning instead of an underutilized piece of Portland's past.

Portland's failure to add housing over the past 20 years has caused a housing shortage that has driven longtime residents out and made it difficult for young people to re-locate here. For a long time Portland has benefitted from being a cultural capital of northern New England and drawn in young people from the surrounding region. Those young people staffed our local service economy and went on to start their own businesses. That influx of young people is one of the bedrock reasons the city has been so dynamic and economically successful. The housing shortage and accompanying high housing costs erode this dynamic and threaten the city's long term health. Therefore the inclusion of apartments and dorms on the Roux campus is a big benefit to the city and helps with a problem the city has been unable to address.

I'm excited to have the Roux Institute here in Portland contributing to and expanding our diverse community. Their redevelopment plans specifically help the city by bringing new high paying jobs, creating housing, and taking care of an old industrial building that could have become a burdensome environmental and safety hazard to the city. I feel lucky that the Institute decided to come here instead of Lewiston or Biddeford. I hope the city will balance the concerns of a minority of residents against the major benefits this project brings to the whole city. Portland should work with the Roux Institute to help them be as successful as possible.

Ned Swain
15 South Grafton ST
Portland

PC10

Sandy Comstock <sandycomstock3@gmail.com> Aug 2, 2022, 2:59:11 PM (18 hours ago)

to planningboard@portlandmaine.gov

As a resident of the East Deering neighborhood, I feel that our neighborhood has repeatedly been put in a position of responding to IDEALS' plans, as opposed to working together. It is my hope that IDEALS will engage the neighborhood as required in -IDP, Section 8.5.4 and 8.5.5 requiring "comments from the neighborhood meetings shall provide direction for the content of the IDP" and that the -IOZ requires that the IDP have "a plan for ongoing community engagement that best represents best practices, promotes collaborative problem solving around community issues, fosters transparency, and identifies mechanisms for neighborhood feedback and institutional accountability." Unfortunately, this has not happened.

We would like a more collaborative process of inclusion, transparency and accountability to the neighborhood of which IDEALS hopes to become a part. The Maine Medical Center model set the standard for a great model of partnership with the neighborhood from the beginning of their process with great success for all involved. We would expect nothing less for our neighborhood.

Respectfully,

Sandra Comstock
57 Watson Street
Portland, ME 04103

PC11

Tamas Peredy <peredy.tamas@gmail.com> 2:36 AM (6 hours ago)
to planningboard@portlandmaine.gov

My wife and I vehemently oppose the grandiose proposal by IDEALS and the Roux institute. While not opposed in general to development of the Bean Factory property, the size of the project is outrageous compared to the local conditions: traffic, access, environmental impact.

It would destroy the surrounding neighborhoods.

It would cause permanent damage to the waterfront.

It would create dangerous conditions on Washington Avenue and Veranda street.

Please, please reject the proposed development.

Call me for any questions or concerns: 207-233-2388.

EastDeering Neighbors <ednfrd@gmail.com> Aug 4, 2022, 2:31:47 PM (18 hours ago)
to Planning@portlandmaine.gov, planningboard@portlandmaine.gov, zpowell@portlandmaine.gov, EastDeering Neighbors

Dear Members of the Portland Planning Board:

As you can see below in the thread of emails, we responded to the request for a meeting by reaching out to Sam Reiche of IDEALS. We asked for a written response to our proposed language for inclusion/consideration in their IDP (Institutional Development Plan - attached) prior to a meeting so we have something of substance to discuss.

Sam responded to our request, stating that "to avoid creating a parallel process, we would prefer to hold off on written response to these requests at this point.." By both email and a phone conversation, we conveyed our frustration with their approach to date, which seems to be creating an adversarial tone to the process.

As a Neighborhood Organization, we ask that the Planning Board direct IDEALS to engage with the EDNRD in accordance with procedures outlined in the IOZ process and exemplified by the Maine Medical Center process and other processes previously carried out under the IOZ framework:

-IDP, Section 8.5.4 and 8.5.5 requires "comments from the neighborhood meetings shall provide direction for the content of the IDP"

-IOZ requires that the IDP have "a plan for ongoing community engagement that best represents best practices, promotes collaborative problem solving around community issues, fosters transparency, and identifies mechanisms for neighborhood feedback and institutional accountability."

We are concerned that this has not happened and that IDEALS persists in piecemeal discussions with selected individuals that are not collaborative but reactive.

We request that the Planning Board direct IDEALS to engage in a well documented and collaborative process that secures neighborhood input in a systematic and public fashion.

Thank you for your consideration.

Steve Von Vogt
East Deering Neighbors for Responsible Development

RESPONSE FROM IDEALS TO E-MAIL SENT 7-18-22

Steve,

Thank you again for your willingness to meet, and for laying out these thoughtful comments. We are in the midst of updating our proposed IDP and Regulatory Framework now and will do our best to address these thoughts and questions in those documents. To avoid creating a process parallel of the City's we would prefer to hold off on written responses to these requests at this point, and also to ensure we are being as thorough as possible. Of course, we will make sure you have our updated documents as soon as they are ready, and it would also be a great help to meet in the meantime to ensure we understand the various points and perspectives. I shared your document with the City too, to ensure they have them for their own review. Would you still be open to meeting, so that we can better understand your comments and be as responsive as possible?

Best,
Sam

Sam Reiche

Initiative for Digital Engineering and Life Sciences (IDEALS)

www.rouxcampusportland.org

Cell: 207-939-6308

From: EastDeering Neighbors <ednfrd@gmail.com>
Sent: Monday, July 18, 2022 6:42 PM
To: Sam Reiche <sam.reiche@ideals.org>
Subject: Meet with EDNFRD

Sam,

Please find attached the language developed by the neighborhood for consideration in the development of the IDP. We would appreciate a written response prior to setting up a meeting with you; that way we'll have something substantive to discuss.

Look forward to hearing from you.

Steve

East Deering Neighbors for Responsible Development

Windsor Heights

Portland, ME 04103

Consideration of Inclusion in the IDEALS Institutional Development Plan (IDP)

Scooping meeting, Section 8.5.4 and 8.5.5 requires "comments from neighborhood meetings shall provide direction for the content of the IDP."

1.) **Purpose** statement should include language to establish an overlay zone that protects the values and integrity of established residential neighborhood with a compatible development at medium densities appropriate to the existing neighborhood in meeting the city's Comprehensive Plan.

2.) **Permitted Uses** as described in approved overlays for USM and Waynflete as School Uses (Sections 8.10.3 and 8.11.4) and other buildings customarily incidental to an academic institution.

- Include regulatory standards to define "substantially" supportive uses.
- Faculty and student housing shall not be considered Residential housing.
- Prohibited uses to include hotel, retail, commercial and other uses not specific to the function and operation of an academic institution (ample supply for access to all to of these amenities currently exist in our downtown).
-

3.) **Dimensional Requirements** subject to the underlying B-5 zone of 65ft height of buildings except for 85 ft buildings (similar to USM Overlay restriction for height of buildings).

4.) **Parking/Transportation** studies shall determine parking and transportation requirements to sufficiently accommodate the short-term and long-term needs of IDEALS high-tech hub and the neighborhood to be considered by the Planning Board including the following:

- Applicant shall provide 'actual' # of vehicle trips generated by the project and the methodology used including MDOT required trip generation based on trip tables in the 11th edition of Trip Manual.
- Plan shall provide trip generation data for 'actual' # of internal trips & public traffic into the site.
- Applicant shall provide Mitigation Plan to improve safety at high crash location of Washington and Veranda Street intersection and along school walking routes in the area.
- Applicant shall develop a "Trips Model' to define travel routes more accurately.
- Plan to include data-based evidence of proposed 37% reduction in cars from ITE trip generation and 20% reduction in parking demand and address seasonal impact.

- Applicant shall provide specific off-site improvements to maintain acceptable and safe levels of service and provide data-based detail regarding the far-reaching traffic impacts.

Applicant shall develop a Parking Management Plan which discourages on-street parking (example UNE experience) and seek alternative ways to reduce traffic demand including a second point of access to the site.

- Requirement as to specific details of garage capacity, availability to who, and terms of contractual agreement with privately run operation of garage.

5.) Parking Demand and Capacity shall provide plan for meeting long-term implications rather than building parking demand over time.

- Include projections for all vehicular trips intended to park on-site.

6.) Campus Housing shall require a campus housing analysis as outlined in Section 8.10.10 from USM Overlay requirements

- Contractual agreement with privately operated housing to provide housing for student and faculty (not the public).

7.) Neighborhood Integration and Engagement to include language that IDEALS shall "adhere to ongoing community engagement going community engagement principles" to be identified in the IDP. And IDEALS shall "conduct ongoing community engagement, including the **formation of a Neighborhood Advisory** comprised of members from the East Deering Residents for Responsible Development and the East Deering Neighborhood Association.

- Specific plan in IDP for community engagement principles.
- A process that represents best practices, promotes problem solving around community issues, fosters transparency and identifies mechanisms for neighborhood feedback beyond a web page approach and institutional accountability.

8.) Mitigate site impacts on surrounding neighborhood infrastructure including, but not limited to the older storm/sewer system. Mitigation plan shall include financial obligation to pay for these impacts outside the site.

9.) Shoreline zoning runs through the site; therefore, a **geological study** should be required as to impact of proposed build-out of the site.

10.) Legal contractual documentation of future ownership transfer to Roux as requirement for approval of an IOZ change to meet the IOZ requirement that property owner must be held in right, title, or interest by eligible institution.

11.) **Clear description and clarifying language** related to IDEALS plan to design on a **"build to suit" basis** and will lease it to IDEALS. They also plan to develop partnerships with the private sector to construct and operate housing, parking, hotel, commercial office, and laboratory buildings to support the primary academic uses – all of which will be on a ground lease basis.
    - Specific language as to how the privately operated and leased facilities will guarantee adherence to academic uses supportive of the Roux Institute.
    - Language regarding taxes/payments to the city in lieu of property taxes.

List of clarifying questions:

1.) **If zoning change granted, how will the city guarantee that the Roux Institute building will be built in the project time frame is projected of 2025 or 2026? The first phase of site development appears to include hotel and retail components but not all the academic/tech facilities.**

2.) **Clarification on IDEALS paying property taxes which is relevant to the city and taxpayers getting something in return for a tradeoff for expanded uses?**

3.) **The standards for requesting an IOZ rezoning includes language that "comments from neighborhood meetings shall provide direction for the content" of the IDP. What specific changes has IDEALS made to address neighborhood concerns and provide direction for the content of the IDP?**

4.) **How does Shoreland Zoning affect the development of the site in terms of the placement of buildings?**

5.) **Is the B-5 zone restricted to the peninsula and are there design standards for the B-5?**

6.) **There are lingering questions about the garage, as to where it is to be located, capacity and who will it serve. Can this be clarified?**

7.) **How will issues of transformation of the East Deering neighborhood as an existing middle- and working-class neighborhood be protected from gentrification similar to what has happened in Portland on the East End and other neighborhoods.**

7.) **When and where can the public get the detailed documentations and studies required in the IDP and as part of the approval process? The application itself is lacking in detail nor has specific detail been provided by the applicant at neighborhood roundtable forums.**

Memorandum
Planning and Urban Development Department

To:	Chair Stanley & Members of the Planning Board
From:	Sean King, Urban Designer
Date:	August 5, 2022
Re:	Lambert Woods Housing Development
Project ID:	PL-002078-2022; CU-002083-2022
CBL:	385 A001001
Meeting Date:	August 9, 2022

I. INTRODUCTION

Maine Cooperative Development Partners have submitted a Major Site Plan and Inclusionary Zoning Conditional Use application to facilitate construction of eighteen new residential buildings totaling approximately 142,000 square feet of floor area and creating 165 affordable units at 165 Lambert Street. The proposed development is bisected by Washington Avenue Extension with the north and south development to include a mix of residential housing types with 2-story townhouses, 3-story rowhouses and 3-story community flat buildings. The total quantity of dwelling units includes five studios, 64 1-bedrooms, 50 2-bedrooms, and 46 3-bedrooms. Site improvements are proposed throughout to include but not limited to parking, communal outdoor spaces, landscaping, and a new shared-street "mews" network between the buildings. The site is located in the North Deering neighborhood and within the R-3 Residential zone.

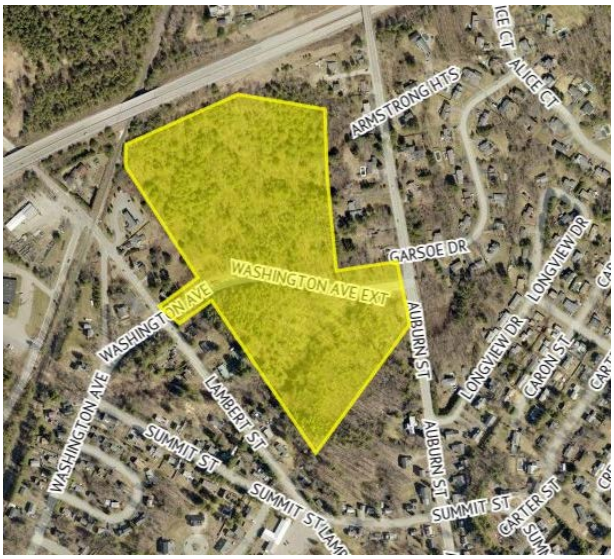

Figure 1: Development Site

This application is being referred to the Planning Board for compliance with the City of Portland's Land Use Code Site Plan Standards, Section 14.1 and Inclusionary Zoning Conditional Use Standards, Section 18.2.3. The workshop will focus specifically on transportation-related elements of the project, including the configuration of the Washington Avenue Extension right of way, parking, site access, and requested waivers.

The Planning and Urban Development Department mailed 261 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the August 2nd and 3rd editions of the *Portland Press Herald*, along with the agenda posted to City of Portland webpage August 1st, 2022.

Applicants:	Maine Cooperative Development Partners
Engineer:	Sam Lebel, Acorn Engineering
Architects:	Phil Kaplan, Kaplan Thompson Architects
Landscape Architect:	Nick Aceto, Aceto Landscape Architects



Figure 2: Aerial View of Site (facing north)

II. REQUIRED REVIEWS

Review	*Applicable Standards*
Site Plan	Section 14.6
Inclusionary Zoning Conditional Use	Section 18.2.3
Design Review	City of Portland Design Manual Section (h) Planned Residential Unit Development (PRUD)

Waiver Requests	*Applicable Standards*
Request: To reduce drive aisle width from 24 feet to 22 feet	Technical Manual, Section 1.7.2.3 & 1.14.3.: Drive aisle and parking lot layout shall provide a minimum drive aisle of 24 feet.
Request: To install slipform concrete curb in lieu of granite curbing in the public right-of-way	Technical Manual Appendices A:
Request: To waive curb and sidewalk requirements along Auburn Street and Lambert Street (curbed sidewalk along Washington Ave. only)	Land Use Code 14.6.1.B.3.a:

III. PROJECT DATA

Existing Zoning	R-3 Residential
Property Size	17.95 acres (Portland)
Existing Use	Vacant Lot
Proposed Use	Planned Residential Unit Development (PRUD), Multi-family housing

	Existing	*Proposed*	*Net Change*
Building Footprint	0	51,012 SF	+51,012 SF
Building Floor Area	0	142,000 SF	+142,000 SF

Impervious Surface Area	0	117,000SF	+117,000 SF
Parking Spaces	0	67	+67
Bicycle Parking Spaces	0	66	+66
EV Charging Stations	0	13	+13

IV. BACKGROUND

A. RFP for Disposition of 165 Lambert Street

In 2020, the City of Portland released an RFP to dispose of two separate City-owned properties, with the property at 165 Lambert divided by Washington Avenue Extension. (Attachment A11). The criteria for consideration centered around the ability to provide high quality, age inclusive, mixed income affordable homeownership or rental housing that should be integrated within the environmental value of the property.

The RFP identified the current R-2 Residential zoning, which allows single-family detached dwelling units, as an impediment to a future buildout of this site for affordable housing development and recommended a rezoning may be necessary for the property to accommodate higher density that further City goals to increase the overall supply of housing city-wide.

On December 21, 2020, the City Council approved the sale of the property (Resolve 140-20/21) located at 165 Lambert Street to Maine Cooperative Development Partners LLC based on a recommendation from the City Council's Housing Committee to market the property to help meet the City's goals of constructing affordable housing.

B. Purchase and Sales Agreement for 165 Lambert Street

On January 4th, 2021 & May 10th, 2022 the applicant entered into a Purchase and Sale agreement with the City and conducted an Environmental Site Assessment to define the existing wetlands on the property site. The sale is contingent upon a number of conditions, one of which requires a 25-month due diligence period, so the transfer of the property from the City to the applicant is expected to occur no later than June of 2024.

The agreement specifies additional contingencies that include financing obligation, rezoning (R-3 approved July 19, 2021), development restrictions on existing wetlands, creation of no less than (44) forty-four dwelling units with total units no to exceed 100% AMI being deed restricted for affordability.

C. Zoning Map Amendment

On June 8th, 2021 the Planning Board unanimously recommended to the City Council a Zoning Map Amendment to rezone the site from an R-2 zone to an R-3 zone as well as Zoning Text Amendments to allow vertical or horizontal unit configurations within PRUDs, to amend the definition of 'Neighborhood Center' to allow food-service as part of a neighborhood center, and to simplify requirements for common open space requirements associated with PRUDs to include passive and active recreation, including natural, landscaped or hardscaped elements. On June 19th, 2021 the City Council approved the Zoning Map Amendment (Order 302-20/21) and Zoning Text Amendments (Order 303-20/21).

V. EXISTING CONDITIONS AND SURROUNDING AREA

The subject property is comprised of two vacant parcels at 622 Auburn Street (4.85 acres within City limits) and 165 Lambert Street (3.39 acres within City limits) that are divided by Washington Avenue Extension. The

property is bounded by City roadways Auburn Street & Lambert Street and bordered by single-family residential abutting the property on all sides.

The site is currently vacant and entirely forested, with 5.43 acres of delineated wetlands. Washington Avenue Extension was constructed to accommodate car and truck traffic to connect the Riverside community and industrial uses with access to I-95. Washington Avenue Extension currently lacks sidewalks.

The site is located along existing METRO service (routes 9A, 9B) at Washington Avenue Extension that connects to Portland center in either direction. The surrounding context of the neighborhood has a suburban character of lower density with the majority of housing being single-family on lot sizes ranging from .25 – 1 acres in the R-2 zone. Areas of industrial and commercial uses exist both to the west along Riverside Industrial Parkway and Riverside Street, and to the north and south, and along Auburn Street.

VI. PROPOSED DEVELOPMENT

The applicant has provided an overall development plan (Plan 6) proposing eighteen new buildings creating 165 affordable residential units. Maine Cooperative Development Partners LLC are developing the project, and proposing a complete buildout of the project over a 25-month period.

The applicant has submitted plans and documents for the full development proposal to include 67 parking spaces, 13 EV charging stations, 66 bicycle racks and 49,995 square feet of open space area.



Figure 3: Development rendering along Washington Avenue Extension

The proposal includes constructing a collection of eighteen residential buildings that range in typologies to include three 2-story townhouses with a total of 12 dwelling units, five 3-story rowhouses with a total of 48 dwelling units, and ten 3-story community flat buildings with a total of 105 dwelling units for a total of 165 dwelling units. The composition of dwelling units includes 5 studios, 64 1-bedrooms, 50 2-bedrooms, and 46 3-bedrooms. The applicant's intent is to gradually decrease the scale of the buildings from the center of

the site to the southwestern and northeastern extents of the property, where the shorter buildings are closer to the current residential neighborhoods. All dwelling units are for sale under the affordable housing requirement of 100% AMI with 25% of the units as workforce housing units at 80% AMI with 41 deed restricted pursuant to the Inclusionary Zoning requirements (Section 18.2.3). The development is structured as a limited equity cooperative model managed by Maine Cooperative Development Partners LLC, in partnership with Cooperative Development Institute (CDI) & The Urban Homesteading Assistance Board (UHAB).



Figure 4: Development rendering with 2-story townhouse and 3-story rowhouse buildings along Mews shared street

A shared use path ranging from 5-feet to 8-feet is proposed along Washington Avenue Extension to connect residents to an existing Portland Trail link for the Sebago to Sea Trail. The proposed open-space includes common areas allocated at both the north and south development with buildings proposed to activate the edges of the common space. Internal site circulation includes a loop and turnaround for emergency vehicles to/from the site, three site driveways , three crosswalks with curb bulb outs to reduce traffic speeds and pedestrian pathways and a "Mews" to connect residents to parking areas and unit entries.

VII. RIGHT, TITLE, & INTEREST

The City of Portland is currently under a purchase and sale agreement for the land at 622 Auburn Street in Portland, Maine, 165 Lambert Street in Portland, Maine & 0 Gray Street in Falmouth, Maine with Maine Cooperative Housing Partners LLC which serves as sufficient right-title-interest documentation for the purposes of reviewing a site plan application (Attachment C).

The applicant's documents summarize existing drainage easements benefitting MaineDOT as recorded in the Cumberland County Registry of Deeds Books 3901/31. The City of Portland Council Order 226-21/22 approved the first amendment to the purchase and sale agreement to identify (4) drainage easements with

rights on the western side line of Auburn Street, recorded in City Clerk Volume 43, Page 77 / City Clerk Volume 154, Pages 10 & 11 and eastern side line of Lambert Street, recorded in the Cumberland County Commissioners Record Volume 10, Page 46. (Attachment C)

VIII. FINANCIAL & TECHNICAL CAPACITY

The applicant has submitted a letter of financial capacity from each applicant's financial institutions as well as documentation from the Secretary of State stating both applicants are in good standing.

The applicant's representatives have provided descriptions for each property as indicated by Lambert Woods North at 622 Auburn Street and FHA financing for the Lambert Woods Cooperative demonstrating their ability to undertake the project (Attachment G).

IX. ZONING ANALYSIS

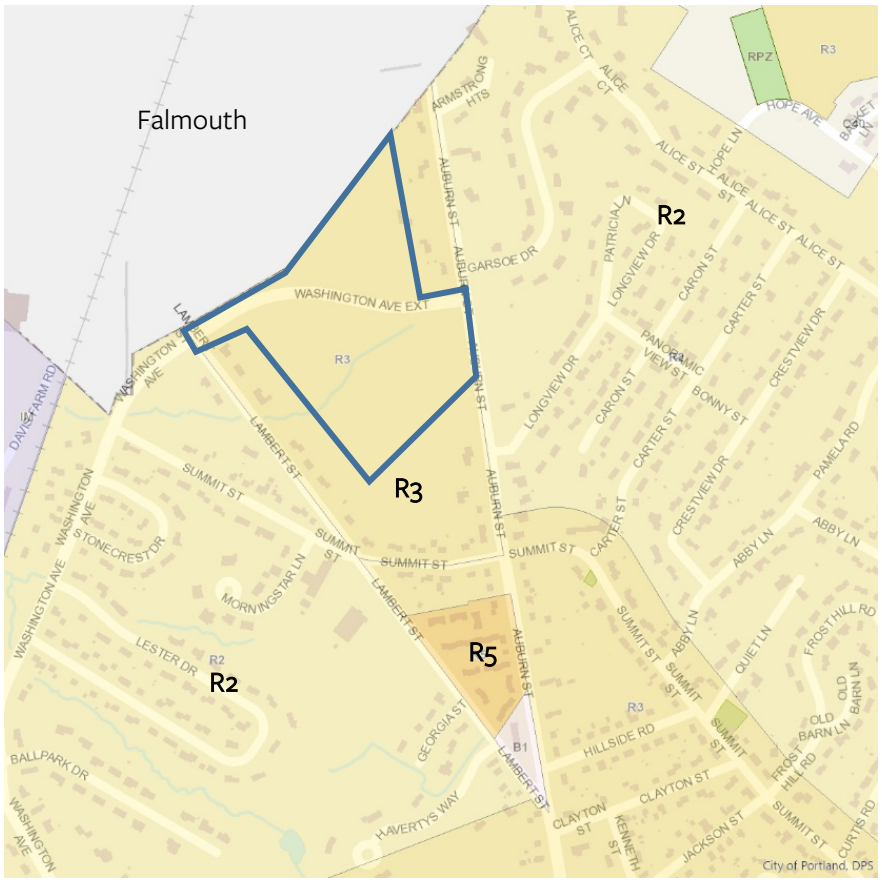

Figure 5: Zoning Map with Subject Parcel Outlined in Blue

The subject property is located in the R-3 Residential zone (Figure 4).

The proposed development proposes 165 units of housing which falls under a Planned Residential Unit Development (PRUD) use. According to Land Use Code Table 6-A, PRUDs are a permitted use in the R-3 Residential Zone.

Table 7-B of the City's Land Use Code, describes the PRUD dimensional standards. In addition to the base dimensional standards, any PRUD in which more than 50% of the units are low-income or workforce units

for rent or for sale may utilize affordable housing density and dimensional bonuses and reductions as described in Section 18.2.4.B. and include the following provisions:

1. Minimum lot area per dwelling unit is reduced by 50%.
2. Maximum number of units and maximum length of buildings do not apply but may be set through site plan review.
3. Minimum building setbacks may be reduced to 10 feet.
4. The PRUD may cross public rights of way provided that the right of way does not count towards the minimum lot size nor towards any open space requirements.
5. Minimum recreation open space area is reduced to 200 square feet per dwelling unit of common area designated for recreational purposes by the residents. Minimum contiguous size and setbacks do not apply and shall be set through site plan review.
6. The Planning Board's Design Manual, design standards, and guidelines with respect to PRUDs shall apply in full to PRUDs utilizing this subsection.

The project provides more than 50% of the units as low-income or workforce units for rent or for sale[1] and therefore it may utilize dimensional bonuses available to PRUD developments under Section 18 of the City's Land Use Code, which is incorporated into the zoning review. Staff analyzed the proposal and found that the project complies with all dimensional requirements for principal structures which are summarized below:

R-3 Residential Zone	*Permitted*	*PRUD Dimensional Bonus Applied*[1]	*Proposed*
Street Frontage (min.)	50 feet	N/A	>50 feet
Lot Width (min.)	65 feet	N/A	>65 feet
Front Setback (min.)	25 feet	10 feet	<10 feet
Rear Setback (min.)	25 feet	10 feet	>25 feet
Right Side Setback (min.)	14-16 feet (varies)	10 feet	>16 feet
Left Side Setback (min.)	14-16 feet (varies)	10 feet	>16 feet
Stepbacks	N/A	N/A	N/A
Lot Coverage (max.)	35%	N/A	22%
Off Street Parking Spaces	N/A	N/A	67 spaces
Lot Area (min.)	3 acres	N/A	17.94 acres
Net land area per dwelling unit (min.)	6,500 sq. ft.	3,250 sq. ft.	3,256 sq. ft.
Units per building (max) PRUD > 5 acres	6	N/A	6
Average number of units per building (max.) PRUD > 5 acres	5	N/A	5
Structure Height	35 feet	N/A	35 feet
Building length (max.)	100 feet	N/A	N/A

[1] Planned Residential Unit Developments (PRUD) developments with more than 50% of the units as low-income or workforce units for rent or for sale may utilize dimensional bonuses and changes listed under Land Use Code Section 18.2.4.B.

Bldg setback from external subdivision property lines (min.) 4 or more D.U. in bldg.	35 ft.	10 feet	24.5 feet
Distance between detached PRUD dwelling units (min.)	16 ft.	10 feet	16 feet
Common recreation open space area (min.)	300 sq.ft./D.U	(200 sq. ft./D.U - Minimum contiguous size and setbacks do not apply and shall be set through site plan review)	303 sq. ft./D.U.

X. CONDITIONAL USE INCLUSIONARY ZONING (IZ)

As required by Section 18.2.3 of the City's Land Use Code, the City's Inclusionary Zoning Ordinance, residential developments with ten or more units are required to provide a minimum of twenty-five percent of the dwelling units as Workforce Housing units. Alternatively, the applicant may pay a fee-in-lieu for those units.

Given the project proposes a total of 165 units, a minimum of 41 workforce housing units (25% at 80% AMI) are required to meet the IZ requirement. The applicant proposes making the remaining 124 units low-income (affordable) units (75% at 100% AMI).

The City's Housing Program Manager reviewed the application (Attachment A1,A2, A3) and determined the proposed project would meet the minimum requirements set forth in Section 18.2.3.2 to require 25% workforce housing units at 80% AMI and low-income housing units per section 18.2.4.B to allow for density and dimensional bonuses and reductions for PRUD developments.

XI. SITE PLAN REVIEW STANDARDS (Section 14.6)

The proposed development has been reviewed by staff for conformance with the relevant review standards of the City of Portland's Site Plan Ordinance, Section 14.6. Staff comments are below.

1. Transportation Standards (Section 14.6.1)

A. Impact on surrounding street systems

The proposed development is located off of Washington Avenue Extension, a major collector, which connects Auburn Street, a principal arterial to the east and Lambert Street, a major collector, to the west.

The site is along Metro transit routes 9A and 9B on Washington Avenue Extension and the applicant is proposing two transit shelters on each side of the street along with restroom facilities for Metro drivers during layover periods. The site has existing bus stops immediately available at the intersection of Auburn Street that Metro is requiring to remain in place. Metro has indicated that this will facilitate convenient access to bus service clockwise and counter-clockwise into downtown Portland.

The application anticipates minimal increases to traffic, and to mitigate truck turning at the intersections to accommodate proposed sidewalks and parking along Washington Avenue Extension. The applicant's traffic analysis has been reviewed by the City's Consulting Traffic Engineer who finds it to be reasonable to anticipate 83 peak hour trips, below the Traffic Movement Permit (TMP) threshold of 100 trips at peak hour. Additional investigation into high crash locations is requested in the vicinity,

along with traffic analysis at the Auburn Street / Washington Avenue Extension and the Lambert Street / Washington Avenue Extension intersections based on the proposed street improvements.

The applicant has proposed to include three driveways from Washington Avenue Extension to provide access to proposed off-street parking lots. Applicant shall provide additional information in support of a waiver to observe Washington Avenue Extension classification as a major collector to note that minimal access points are preferred.

New site circulation through the site includes main drive aisles connecting to a shared street and parking areas throughout the site, as well as a restricted access lane kept clear for emergency vehicles and pedestrians which runs through the site looping back to the shared street. Fire access is proposed with (2) points of access towards the center of the site that include a materiality of grass pavers to distinguish emergency access only. No drive-up services or loading needs are proposed except from Washington Avenue Extension where a pull-off is proposed in tandem with bus loading to be striped per Metro standards. The application also includes providing common open recreation areas with grass pavers, concrete pavers at shared streets and concrete pavers / bituminous pavement sidewalks throughout the site.

B. Access and circulation

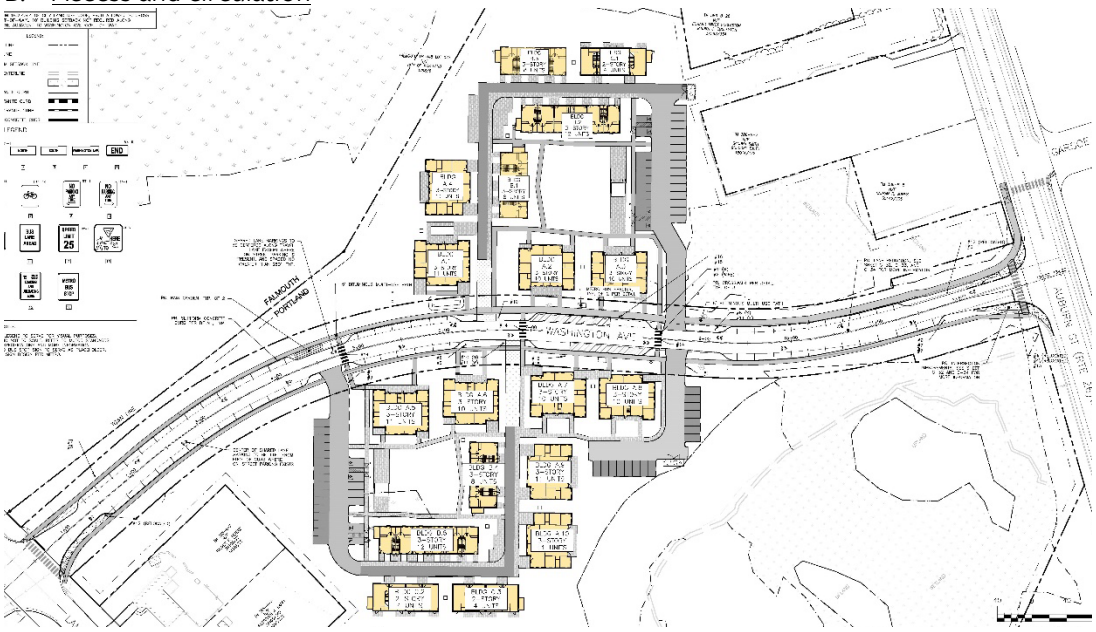

Figure 6: Overall Site Plan

The applicant has requested one waiver relevant to the parking lot and space design:

Technical Manual Section 1.14.3 – Drive Aisle Width

The applicant is requesting to reduce the drive aisle width from the required 24 feet to 22 feet, a two foot reduction. Section 1.14.3 of the City's Technical Manual requires a minimum drive aisle width of 24 feet.

C. Public transit access

Existing transit access along Washington Avenue Extension includes Route 9A & 9B, along with existing bus stops at the Auburn Street intersection. The applicant will provide (2) bus shelters located towards the center of the development with convenient access, live feed display screens, and restroom facilities for Metro drivers during laydown periods.

D. Parking

In general, residential units are required to provide one parking space per dwelling unit unless the project is eligible for parking requirement exceptions listed in Table 19-B of the Land Use Code. Per Table 19-B, transit proximate development and uses categorize an exception for no off-street parking required within ¼ mile of fixed route transit service, along with new uses of more than 10,000 square feet to require a Transportation Demand Management plan to access this provision. The applicant has chosen to seek the off-street parking exception, and has included 67 off-street parking throughout the north and south developments. According to the applicant they will prioritize parking for residents at the 60% AMI range and allocate remaining parking permits for a monthly cost. In addition, 55 parking spaces are proposed within the public right-of-way to accommodate for additional residence and guest parking.

E. Transportation demand management (TDM)

The applicant has provided a TDM plan as a requirement for the categorical vehicular exception listed in Table 19-B of the Land Use Code. (Attachment U). The City's Transportation Program Manager is generally supportive of the TDM plan and observes a 25% multimodal trip target for all resident trips to and from the site for 3 years, clear strategies for infrastructure, incentives and information and annual surveying of residents to produce an annual TDM monitoring report.

2. Environmental Quality Standards (Section 14.6.2)

A. Preservation of significant natural features

The site is undeveloped and forested with extensive invasive species and several wetlands that are considered significant due to period of establishment. The contiguity of wetlands are proposed to be preserved to the greatest extent, and the development includes minimal disturbance with proposed grading and site improvements.

B. Landscape preservation

The site includes multiple existing tree species and thus the development shall minimize tree loss to the greatest extent possible. The City Arborist has reviewed the proposed development and provided recommendations as conditions of approval that include designation of limit of work at existing trees to remain, invasive plant management, native plant palette, addition of multiple tree species, and adequate landscape buffers.

C. Site landscaping and buffers

The applicant has submitted Landscape/Planting (Plans 53, 54, 55, 56) plans which include tree and shrub planting, quantity of proposed plant material shall be indicated. Existing trees loosely buffer all sides of the property site, the City Arborist encourages a high percentage of native species that reinforce the woodlands character of the site with groupings of plant material and more natural arrangement.

The creation of 165 residential units requires either planting a total of 165 street trees or an acceptable alternative as recommended by the City Arborist. The applicant to provide quantities of proposed trees for staff review.

D. Water quality/storm water management/erosion control

The project proposes managing stormwater by a series of systems including underdrained subsurface soil filters, porous pavement, proprietary rain gardens, and routing all stormwater outfalls and pipe sizes proposed at the existing drainage swale within the public right-of-way.

The applicant has submitted a Stormwater Management Report and Erosion and Sedimentation Control Report, which has been reviewed by the City's consulting civil engineer for compliance with MaineDEP Chapter 500 and City of Portland Section 5 for stormwater management requirements (Attachment A9). The City's consulting civil engineer has requiring erosion and sedimentation controls on proposed work along Washington Avenue Extension, depth of groundwater for additional underdrained subsurface sand filter system, and further evaluation of the proposed soil filters proposed along Washington Avenue Extension. Additional concerns related to flooding standards including the method of evaluating flow though porous pavement, post-development models in TC value, adequate naming distinction of drainage structures, and revisions to the drainage structure rim elevations.

Public Works and Water Resources has reviewed the development in observance of stormwater standards and has concerns regarding the level spreader flow, proposed catch basin inlet improvements, the rip-rap energy dissipation pads, stabilization and erosion within the existing drainage ditch, location of proposed rain garden and a request for City of Portland permanent drainage easements on private property.

3. Public Infrastructure and Community Safety Standards (Section 14.6.3)

A. Consistency with City Master Plans

Portland's Plan 2030

Comprehensive Plan goals and policies (state and local) relevant to the proposed development are included below. The development proposal aligns with these vision statements and goals, by creating a new opportunity for an affordable, and well-connected new housing development accessible to public transit supporting the Plans goal of *increasing, preserving, and modifying the overall supply of housing city-wide.* In addition, the proposed project supports the City's desire to *leverage underused properties* owned by the City. The proposed development allows for maximizing development on an underutilized lot, which creates the opportunity to provide affordable homes, with access to public transit, services, and open space. Relevant Comprehensive Plan goals have been excerpted below:



Vision Statements:

- Secure - We will be committed to accessible housing and healthy food for all our residents.
- Authentic - The uniqueness and integrity of our neighborhoods will be maintained and enhanced.
- Connected - We will foster accessible linkages between where we live, work, shop, and play.

- Connected - We will enable meaningful access to the natural world and recreational opportunities as a central component of community health.
- Sustainable – Growth should respect and seek to preserve our spectacular natural resources.

Housing: A Livable City

- Increase, preserve, and modify the overall supply of housing city-wide to meet the needs, preferences and financial capabilities of all Portland residents.
- Pursue policies to enable people who work in Portland to have the option to live in Portland.
- Reinforce existing housing tools, policies, and programs while continuing to explore emerging best practices.
- Consider the sale of City-owned land that may be appropriate for housing development.
- Consider incentivizing affordability restrictions as part of City-owned property transactions, as well as the potential to return improved properties to the City's tax rolls.
- Create, promote, and facilitate safe, affordable, and practical housing solutions that will meet the evolving needs of Portland residents as they age.

Recreation & Open Space

- Pursue opportunities, in collaboration with partners, to create new open spaces in areas that are currently underserved.
- Pursue opportunities for new and enhanced walking and biking trails as a means of filling existing gaps and investigate paper streets, vacant land, medians, and other often overlooked areas for the potential for park linkages, trails, and other improvements to the urban landscape.
- Prioritize open space acquisition and programming toward creating linkages where there are gaps in the network.

Future Land Use

- *Connecting the Chain* – Portland's Plan recognizes that physically integrated transportation systems, utilities, and open spaces provide the structure for the city's growth, and that a well-connected system is more efficient and more resilient. An integrated transportation system allows residents to access jobs, food, healthcare, and recreation from their homes while planning for an unbroken network of open space connects neighborhoods and improves access to the outdoors.
- *One Portland* - Portland's Plan is a vision for One Portland, where the form and characteristics of neighborhoods vary, but the city functions as a cohesive whole. No one area of the city carries all the expectations for accommodating development and all areas can expect appropriate City services and amenities.

B. Public safety and fire prevention

The applicant has stated that the project has been designed to promote safe and inviting public access connections to the development site with sidewalks, as well as providing adequate emergency access to new buildings via the restricted access loop road. Staff has requested a lighting plan and photometrics for review in accordance to site plan standards.

The proposal includes a new public hydrant assembly at the south side of Washington Avenue Extension to serve the buildings onsite within 450 feet from the furthest structure. The City's Fire Marshal will confirm that this location and single hydrant is sufficient.

The City's Fire Marshal has reviewed the application materials, and generally finds the project to provide adequate emergency access based on the precedent of Douglass Commons but shall incorporate the Fire Department's feedback from staff comments and provide an Autoturn analysis at the secondary parking area to confirm sufficient maneuvering is available for emergency vehicles.

C. Availability and capacity of public utilities

The applicant has submitted ability to serve letters to all respective utility providers with official responses forthcoming. The applicant proposes installing a new 8" sewer lateral from the existing 10" sewer line in Washington Avenue Extension at both the north and south development to accept the wastewater from each unit. Wastewater Capacity Authorization from Public Works is under review.

The applicant proposes electrical and communications (telephone, fiber and cable) service underground via a new pad-mounted transformers to serve each unit, single phase pole and riser proposed at both north and south development.

The applicant proposes new 6" water service at both the north and south development to tap into existing 12" water main along Washington Avenue Extension.

4. Site Design Standards (Section 14.6.4)

A. Massing, ventilation, and wind impact

The massing of the proposed townhouse, rowhouses, and courtyard flats address the abutting single-family residents by locating 2-story buildings at the edges and 3-story buildings more central to Washington Avenue Extension and internal common spaces. The City Arborist has provided comments to recommend appropriate landscape buffering to achieve a more wooded quality with native plant material and groupings.

B. Shadows

A shadow study has not been submitted, as any shadows cast by the buildings at the site will not affect adjacent properties or City-owned parkland.

C. Snow and ice loading

The applicant has indicated the locations of snow storage areas on the plans and stated that structures will not distribute snow and ice onto adjacent properties. Staff will continue to review the application for compliance with this standard in conjunction with reviewing the stormwater management and emergency access standards above.

D. View corridors

There are no designated view corridors within the project vicinity.

E. Historic resources

The proposed development is not located in or within a 100 feet of a historic district or historic landmark. Not applicable.

F. Exterior lighting

The applicant shall submit a lighting plan, lighting cut sheets and photometrics for staff review to meet the requirements contained in Section 12 of the City's Technical Manual.

G. Noise and vibration

The applicant has stated that the HVAC system will meet the applicable state and federal emissions requirements and will also be screened and directed away from abutters. The applicant will provide HVAC locations and details/cut sheets at each proposed location for staff review.

H. Signage and wayfinding

No wayfinding signage is currently proposed, and the only signage shown on the plans is related to vehicular access.

I. Zoning-related design standards

The proposal is subject to meeting the applicable PRUD design standards under Section (h) of the City's Design Manual. The applicant has submitted elevations, floor plans and renderings with an accompanying architectural narrative. The City's Urban Designer generally finds the proposed building types, placement and materiality to be consistent with the PRUD design standards that support the neighborhood character the applicant has submitted. The applicant shall revise the plans and architectural narrative based on review comments, with a design review memo to follow prior to the next planning board meeting.

XII. PUBLIC COMMENT

At the time this report was written Planning staff have received four written comments (PC1 through PC4). In general feedback included concerns of improvements proposed along Washington Avenue Extension related to the existing truck route, seeking more information about snow management operations, and concerns about landscape buffering at adjacent residential properties.

XIII. NEXT STEPS

At this time staff are specifically seeking Board feedback on the proposed access, circulation, parking and street improvements located along Washington Avenue Extension and intersecting streets and waivers being sought.

Following the workshop, the application will:

1. Continue to address staff and Board review comments
2. Prepare follow-up plan and document submission
3. Schedule and hold a Planning Board workshop

XIV. ATTACHMENTS

REPORT ATTACHMENTS

A1. Inclusionary housing
A2. Inclusionary housing-supplemental
A3. Inclusionary housing-supplemental
A4. Zoning review
A5. City arborist review
A6. Traffic analysis
A7. Public Works review
A8. Metro transit review

A9. Consulting Stormwater Engineer review
A10. Staff comment letter
A11. RFP-165 Lambert Street
A12. Transportation program manager review

APPLICANT'S SUBMITTAL

A. Cover letter
B. Site plan checklist
C. Right, title and interest – Purchase and sale agreement
D. Zoning assessment
E. Easements
F. Waivers
G. Financial capability
H. Technical capability
I. Conformity with land use ordinance
J. Stormwater management report
K. Erosion and sedimentation control
L. Fire department letter
M. Wastewater capacity
N. Not Used
O. Architectural design narrative
P. Utility cover letter
Q. Construction management plan
R. Solid Waste
S. Traffic Report
T. Turning Templates
U. Transportation Demand Management Report
V. Public Meeting Notice Sign
W. Applicant Comment Response Letter 8-2-2022

PLANS

1. Cover sheet and legend
2. General notes
3. Existing conditions plan
4. Construction management and erosion control plan – North
5. Construction management and erosion control plan - South
6. Overall site plan
7. Site plan – North
8. Site plan – South
9. Utility plan – North
10. Utility plan – South
11. Grading and utility plan – North
12. Grading and utility plan – South
13. Right of Way grading and site plan - +0 - +6
14. Right of Way grading and site plan - +6 - +12
15. Right of Way grading and site plan - +11 - +13.5
16. Subdivision Plat

17. Site details – 1
18. Site details – 2
19. Site details – 3
20. Utility details – 1
21. Utility details – 2
22. Drainage details – 1
23. Drainage details – 2
24. Drainage details – 3
25. Erosion control details and notes
26. Not used
27. Not used
28. Not used
29. Not used
30. Architectural cover sheet
31. A-.01 Wall types
32. A-0.2 Floor types and roof types
33. A-1.1 Community flats plans
34. A-1.2 Townhomes plans
35. A-1.3 Rowhomes plans
36. A-1.4 Community flats Enlarged ground floor
37. A-1.5 Community flats Enlarged upper floor
38. A-1.6 Townhomes Enlarged ground floor
39. A-1.7 Townhomes Enlarged upper floor
40. A-1.8 Rowhomes Enlarged ground floor
41. A-1.9 Rowhomes Enlarged second floor
42. A-1.10 Rowhomes Enlarged third floor
43. A-2.1 Community flats elevations
44. A-2.2 Townhomes elevation
45. A-2.3 Rowhomes elevations
46. A-3.1 Building sections
47. A-4.1 Wall sections
48. Not used
49. Not used
50. Landscape cover sheet
51. Landscape notes
52. Landscape overall materials plan
53. Landscape overall planting plan
54. Landscape North site planting plan enlargement
55. Landscape South site planting plan enlargement
56. Landscape enlarged ROW planting plans
57. Landscape site details
58. Landscape planting details

PUBLIC COMMENT

PC1- Ed Eggleston
PC2- Anonymous
PC3- Phil Requia

PC4 – Lauren Manera

Sean King <sking@portlandmaine.gov>

165 Lambert Street

Victoria Volent <vvolent@portlandmaine.gov> Mon, Jul 11, 2022 at 2:09 PM
To: Sean King <sking@portlandmaine.gov>, Ann Machado <amachado@portlandmaine.gov>

Hi Sean and Ann,

A Phase I Environmental Site Assessment was conducted on the site on March 26, 2021. The following information is from the report:

Site location: 165 Lambert
Upland Area: 4.53 acres
1,830 feet from the Presumpscot River
Site is not located in a FEMA Special Floor Hazard Area
An tributary stream (MEDEP Category B stream) flows from the east to the west of the site (see attached map)

Also attached is the wetland sketch by Jones Associates; narrative from the zoning amendment application; and "developable area" map from New paradigm.

As for the Citizens' Referendum; attached is the ballot enclosure indicating the proposed amendments. Please note, on page 8, the definition of "workforce housing unit for rent" and "workforce housing unit for sale" were proposed for amended from 100% to 80% and 120% to 80% respectively. The definition of low-income housing for sale was not proposed for amendment which I believe was an oversight by the people who drafted the referendum rather than an error by Corporation Counsel and the City Clerk.

Thank you,

Victoria

Victoria Volent
Housing Program Manager
City of Portland
389 Congress Street
Phone: 207-482-5028
www.portlandmaine.gov
housing & economic development

5 attachments

Perennial stream.pdf
286K

Jones Associates Report 165 Lambert Street.pdf
1333K

Lambert Woods - Zoning Matrix.pdf
506K

Developable-Area-12-11-2020.pdf
232K

City of Portland Ballot Enclosure 9 10 20 V3.pdf
125K

Sean King <sking@portlandmaine.gov>

165 Lambert Street

Ann Machado <amachado@portlandmaine.gov> Mon, Jul 11, 2022 at 3:57 PM
To: Victoria Volent <vvolent@portlandmaine.gov>
Cc: Sean King <sking@portlandmaine.gov>

Thanks Victoria.

This information is helpful.

Whether those drafting the "green new deal" omitted changing the definition of low-income housing by accident, section 18.2.4.B allows the developers to use the density and dimensional bonuses and reductions for a PRUD. They are providing more than 50% of low income housing units for sale that are affordable to a household earning 100% or less of AMI.

Maybe the 25% of workforce housing units at 80% AMI are to satisfy section 18.2.3.2.that was changed as part of the green new deal.

The report from Jones Associates states that there is approximately 236,727.92 sf (5.43 acres) of delineated wetlands on the two properties. That is part of what needs to be subtracted from the net land area, but we still need to know the square footage of the watercourse (stream) and the slopes of 25% or greater. The overall site plan (sheet C-09) under Net Land Area states that 244,738 sf has been deducted from the property area to reach the netland area of 537,251 sf. The number deducted is less than the delineated square footage of the wetland area.

Ann

Ann Machado
Zoning Administrator
Permitting and Inspections Department
City of Portland, Maine
(207) 874-8709
amachado@portlandmaine.gov

[Quoted text hidden]

Sean King <sking@portlandmaine.gov>

165 Lambert Street

Ann Machado <amachado@portlandmaine.gov> Mon, Jul 11, 2022 at 3:57 PM
To: Victoria Volent <vvolent@portlandmaine.gov>
Cc: Sean King <sking@portlandmaine.gov>

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Ann

Ann Machado
Zoning Administrator
Permitting and Inspections Department
City of Portland, Maine
(207) 874-8709
amachado@portlandmaine.gov

On Mon, Jul 11, 2022 at 2:10 PM Victoria Volent <vvolent@portlandmaine.gov> wrote:

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>
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Thank you,

Victoria

Victoria Volent
Housing Program Manager
City of Portland
389 Congress Street
Phone: 207-482-5028
www.portlandmaine.gov



Sean King <sking@portlandmaine.gov>

165 Lambert St - PL-002078-2022

Ann Machado <amachado@portlandmaine.gov> Mon, Jul 11, 2022 at 2:08 PM
To: Sean King <sking@portlandmaine.gov>

Sean -

Here are some of my initial zoning comments for the site plan.

1. As discussed with Victoria, what is the "correct" definition of low-income housing unit for sale? Article 3 defines low-income housing as:*A dwelling unit for which:*

> *A. The sale price is affordable to a household earning 100% or less of Area Median Income (AMI).*
> *B. The unit is sold to a household earning 100% or less of AMI.*
> *C. The requirements of (A) and (B) above are limited by deed restriction or other legally binding agreement for future sales for the applicable length of time in this ordinance*.

Was there a definition for a low-income housing unit for sale in the "green new deal" referendum that changed the definition for low-income housing from a household earning 100% AMI to a household earning 80% of AMI, and it was not changed in the ordinance in Article 3? Victoria is looking into this. This is important because it determines whether the applicants can use section 18.2.4.B.

2. They need to provide their net land area calculations and show the areas on a site plan.

3. With the dimensional requirements, Table 7-B outlines the R-3 PRUD requirements. If 50% or more of the units in the development are low income or workforce housing, then section 18.2.4.B can be used to reduce the minimum net land area by 50% per dwelling unit and.setbacks and open space area can be reduced as well.

3. Section 18.2.4.B does not allow for the minimum distance of 16' between buildings in Table 7-B.to be reduced. The developer needs to confirm that there is a minimum distance of 16' between the footprints of each building.

4. The applicant needs to designate the recreation open space areas and provide the overall square footage of recreation open space.

5. The applicant is going to need to provide the elevation from average grade for each of the buildings.

6. Table 19-A requires one space per dwelling unit. There are two exceptions under Table 19-B. Under affordable housing the Planning Board can establish a parking requirement that is less than one space per workforce or low-income housing unit. The second is for Transit Proximate development and uses but a Transportation Demand Management Plan must be provided to allow this exception.

We will continue to work together on this review as we receive more information.

Ann

Ann Machado
Zoning Administrator
Permitting and Inspections Department

City of Portland, Maine
(207) 874-8709
amachado@portlandmaine.gov

Sean King <sking@portlandmaine.gov>

165 Lambert Street

Jeff Tarling <jst@portlandmaine.gov> Thu, Jul 14, 2022 at 1:15 PM
To: Sean King <sking@portlandmaine.gov>
Cc: "lswett@woodardcurran.com" <lswett@woodardcurran.com>, Jodie Keene <jkeene@portlandmaine.gov>, Alex Marshall <amarshall@portlandmaine.gov>

Hi Sean -

This is a big project site on a challenging somewhat native forest with numerous invasive plants as well.
The proposed 165 Lambert Street residential project on both the north and south sides of the Washington Avenue connector road is located on an existing forested landscape that also contains wetlands.

Thus we would ask as a condition of approval that recommendations include:

a) TREE SAVE / Limit of Work - The final plan should include a 'Tree Save' / Limit of Work designation and plan to be used prior to clearing and during construction. This would include a written plan, signage and construction fencing to prevent off site storage or materials and equipment. "Tree Save' trees should be protected with signage and fencing around the drip line. To date the plan does not show either a tree save or limit of work. The proposed project clears an extensive amount of existing forest without any tree saves or forest management suggestions? The site work clearing should include nearby forest thinning improvements for sustainable landscape and safety.

b) Invasive plant management - The northern side of the project especially contains extensive Common Buckthorn shrubs, the project should identify, plan and remove all invasive plants as part of their clearing portion of site work. This has been a standard on other project sites where high numbers of invasive plants are located.

c) Tree & Landscape treatment - We encourage high percentage use of native plants on wood sites like the proposed 165 Lambert Street project. Stevens Commons for example next to Baxter Woods successfully modified their landscape plan to a higher percentage of native species. This should be a condition of approval. The site is surrounded by natural appearing woodlands, the project should appear part of the surrounding landscape vs 'suburban'. The 'Woods at Canco' development is another successful landscape example.

Thus we would ask the project not to use plants like 'Feather Reed Grass' and 'Maiden Grass' for example, and increase the native grasses like 'Little Bluestem', 'Prairie Dropseed' and other plants compatible to the New England region.
The proposed tree pallet should also diversify, currently over 100 trees using only four species, recommend reducing numbers on the 'Armstrong' Red Maples from 40 to perhaps half of that and consider other tree types like the 'Beacon' and 'Regal Prince' Oak, though they are cultivars it would be nice to have a greater mix of tree types. Tree types missing: Red Oak, Swamp White Oak (use instead of the hard to establish White Oak), Tupelo, Shagbark Hickory, River Birch, Yellow Birch, White Spruce, Larch, 'Bowall', 'Red Pointe', 'Karpick' Red Maples offer a variety of other maple types depending on the desired planting space size.

Tree planting spacing and sizes - While regular spaced trees all in certain order adds a degree of structure to the landscape, this site might be better served by including groves of trees in a more natural arrangement. This might include a mix of plant heights like 5-6' conifers and 2" caliper trees with the larger sizes proposed. Knowing the more orderly plantings might be closer to the buildings and the natural groves of trees near the edges.

Street trees - We would like to work closer with the project team to review the public 'Street tree' portion of the project. This would include species types, spacing.

Buffering - The proposed site contains existing residential boundaries with Auburn Street, and Falmouth properties on the North side and Auburn Street and Lambert Street residents on the South side, the landscape plan should address adequate buffer planting and treatment.

Wetlands / drainage treatment - the use of restored wetlands, intermittent streams, raingardens was not noticed during my review and wanted to check to see if the project is favoring natural drainage features?

d) Recreational / Open Space - It is essential to include a variety of on site recreational and trail amenities for this project. The geographic location is out of walking distance to existing playgrounds and trails. (The future Haverty Field may in time offer somewhat close trails). Recreation features for youngsters could include playground structure, adventure play items, benches. Walking trails on or around the existing site should be a requirement and could match up with Fire Safety access.

I am willing to meet to discuss and recommend modificiations.

Thanks,

Jeff

==========

Extras -

https://www.maine.gov/dacf/mnap/features/invasive_plants/invasives.htm

Buckthorn -
https://www.maine.gov/dacf/mnap/features/invasive_plants/rhamnus.htm

Invasive Plants - Why should you care?

Invasive plants are a direct threat to what we value about Maine's natural and working landscapes. The aggressive growth of invasive plants increases the costs of agriculture, can affect forest regeneration, threatens our recreational experiences, and potentially decreases property values. Species like Japanese barberry and multiflora rose can form thorny, impenetrable thickets in forests and agricultural fields. Aquatic invasives can choke waterways, making it difficult to boat or swim.

Invasive species are the second-greatest threat to global biodiversity after loss of habitat. Invading plants outcompete native species by hogging sunlight, nutrients, and space. They change animal habitat by eliminating native foods, altering cover, and destroying nesting opportunities. Some invaders are so aggressive they leave no room for our natives.

[Quoted text hidden]

Sean King <sking@portlandmaine.gov>

Lambert Woods Residential Development - Initial Traffic Review Comments DRAFT

Tom Errico <thomas.errico@tylin.com> Mon, Jul 18, 2022 at 9:34 AM
To: Sean King <sking@portlandmaine.gov>
Cc: Jeremiah Bartlett <jbartlett@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>, Justin Pellerin <jrp@portlandmaine.gov>

Sean - These are **draft** for others to comment on. I wanted to be sure that we don't have conflicting comments from the reviewers. Thanks

Hi Sean – Please find below my initial traffic review comments following a review of the application materials.

- The following comments are related to the Traffic Assessment prepared by Barton & Loguidice dated June 28, 2022.
  - The applicant has conducted a Trip Generation analysis and assuming an Affordable Housing development 83 peak hour trips will be generated by the project during the worst-case peak hour. I find the methods used to estimate trip generation to be reasonable. I would further note that this level of trip generation does not require a Traffic Movement Permit.
  - As noted in the report acceptable sight distance will be provided from the proposed driveways assuming vehicle speeds of 25MPH. I find conditions to be acceptable.
  - The Traffic Assessment did not identify any High Crash Locations. Although the Washington Avenue/Lambert Street intersection is not a High Crash Location (Historically it has been a High Crash Location), I would like to understand the contributing factors for crashes. The applicant shall provide the requested information.
  - Given the level of traffic generation by the project, the applicant shall conduct a traffic analysis at the Auburn Street/Washington Avenue Extension and Lambert Street/Washington Avenue Extension intersections. This shall include conducting existing traffic counts. The counts and analysis shall be performed for the weekday AM and PM peak hours.
- Three driveways are proposed to the development. The applicant shall provide information in support of a waiver from the City's Technical Standards. I would note that Washington Avenue Extension is classified as a Major Collector and thus minimizing access points is preferred.
- The plans depict a shared use path from the site to Auburn Street. The minimum width for a shared use path without constraints is 10 feet.
- The use of on-street parking spaces to meet parking demand requirements for a project has not been permitted during project reviews. It is also my understanding that zoning requires parking demand to be accommodated on site.
- If parking is provided on-site – I don't see a need for on-street parking. I would suggest on-road bike facilities.
- The number of crosswalks – I think two would seem sufficient from a spacing perspective.
- The waiver for aisle width (24'to 22') is being justified on reducing impervious surface. This has come up several times on Acorn projects. Any project can make this case – reducing pavement.
- In terms of cross-section – they are proposing 11-foot lanes and 8-foot parking lanes. The exception is at the bus stop where it will be 10.5' lanes and 10-foot shoulders. This seems okay to me.
- The improvements at Auburn Street need a detailed review and approval. ADA ramps need to be revised. I don't understand the truck apron and curbing (I understand they are trying to narrow the intersection). I would like to see turning templates and assumed design vehicle. They are eliminating an approach lane (I asked for a traffic analysis previously).
- Lambert also need detailed design review. They are also proposing a truck apron. And the curb alignment is strange. Again, understanding turning template movements is important.
- They are proposing slipform concrete curbing.

Please contact me if you have any questions.

Best regards,

Tom Errico, PE

NE TRAFFIC ENGINEERING DIRECTOR

T +1 207.347.4354
M +1 207.400.0719
E thomas.errico@tylin.com

TYLin

12 Northbrook Drive Building A, Suite One
Falmouth, ME 04105, United States

TYLin.com



Sean King <sking@portlandmaine.gov>

PL-002078-2022 165 Lambert DPW Preliminary Review Comments

Justin Pellerin <jrp@portlandmaine.gov> Wed, Jul 27, 2022 at 1:25 PM
To: Sean King <sking@portlandmaine.gov>
Cc: "Thomas.errico@tylin.com" <thomas.errico@tylin.com>, Lauren Swett <lswett@woodardcurran.com>, Jeremiah Bartlett <jbartlett@portlandmaine.gov>

Hi Sean
Please see DPW's preliminary review comments below for the Lambert Woods Project. Let me know if you want me to put these on the project Dev Rev spreadsheet.

Project Number: PL-002078-2022
165 Lambert Street (Lambert Woods)
DPW Development Review Comments
Justin Pellerin, P.E- DPW
7/27/2022

DPW Transportation Comments

- Accommodations for on-road bike facilities in this section of Washington Avenue Extension shall be implemented as part of the design. There appear to be two outcomes to provide consistent bike facilities through this corridor:
  - Eliminate the proposed curb extensions and on-street parking to provide an 8' wide dedicated bike lane on each side of the street.
  - Create shared bike/motor vehicle travel lanes as currently being proposed with additional traffic calming measures such as reducing the travel lane widths down to 10'-10.5' in an effort to provide more space between on-street parking stalls and the travel lane. This could be accomplished by striping an outer fog lane line to the desired width.
  - DPW would like further rationale for the development's proposed parking strategy before providing formal comments/acceptance of the proposed Washington Avenue Extension layout.
- The applicant should revise the width of the proposed curb extensions to 6'-7' to provide more lane width for cyclists using the proposed shared travel lane on Washington Avenue Extension. The applicant should provide a minimum transition length of 20' at the start/end of each curb extension.
- DPW suggests eliminating the easterly and westerly mid block Washington Avenue Extension crossings and consider creating one raised crosswalk at the crossing location near station 6+80 to provide enhanced pedestrian visibility and further traffic calming in this corridor.
- DPW will not be supportive of the applicant's waiver request to utilize slip form concrete curbing on Washington Avenue Extension in lieu of granite curbing. The applicant should also note that the full radius of each driveway entrance shall be constructed of granite curbing per tech manual standard 1.7.2.5.
- DPW is requesting that the applicant install a RRFB unit at the proposed Auburn Street at Garsoe Drive crosswalk location.
- **DPW is requesting to meet with the applicant's engineer to better understand the design intent of the proposed horizontal alignment and curbing changes being proposed at the Washington Avenue intersections with Lambert Street and Auburn Street.**
- Changes to the design of the Washington Avenue ADA ramps at Lambert Street should be considered to better align the ramp with the direction of egress across the proposed crosswalk.
- DPW is requesting further information to better understand the design intent of the multi-use path being proposed on the northside of Washington Avenue Extension. If implemented, the path would ideally be a minimum of 10' wide and extend the entire length of Washington Avenue from Lambert Street to Auburn Street to help provide further connectivity for the Portland Trail network.
- The applicant should consider ways to provide a 3' minimum esplanade for the proposed sidewalks and pathways being proposed on Washington Avenue extension.

- The applicant should provide further information on how proposed tree placement within the Washington Avenue Extension right of way could affect site line visibility of pedestrians at proposed crosswalk ramp locations.
- The site plan refers to a driveway detail which could not be located in the plan set. The applicant should provide this driveway detail and provide information how the proposed driveway designs will meet sidewalk ADA requirements.
- Per section 10 of the City's technical manual *"Developments subject to site plan review, with the exception of minor residential or low impact site development projects, as defined in Chapter 16 of this Technical Manual, that are on an existing or proposed street that is not currently illuminated with street lighting meeting City standards shall install the requisite type and number of street lights along all frontages."* The applicant should address this standard.

DPW Water Resources Comments:

- DPW is seeking further clarification and rationale for the number of stormwater outfalls and the corresponding pipe sizes being proposed to tie into the City's existing ditch lines on Washington Avenue Extension. It appears that the applicant is anticipating greater stormwater flows leaving the development site than what is indicated in the stormwater management report post development POI # 1 flow rate. The existing closed storm drain system at the SW corner of Lambert and Washington is a 15" circular pipe. DPW is concerned that any additional flows may cause downstream system capacity issues especially during large/high intensity rain events.
- The applicant shall provide further information regarding flows anticipated within the ditch lines and shall complete an analysis to determine if further improvements to the existing ditch lines are necessary to accommodate the additional stormwater flow and to protect against potential scouring of the ditch channel and embankments.
- The storm water pipe discharge angles of SD 1.1, 6.1 and 8.1 into the Washington Avenue Extension ditch lines should be revised such that flow is discharged more in line with the main flow line of the ditch.
- DPW has concerns that the proposed south side level spreader # 2 discharge will flow towards private property.
- The applicant shall provide further detail about the proposed catch basin inlet improvements at the end of the southerly and northerly Washington Ave extension ditch lines. The applicant should specify a beehive grate with proper inlet capacity to drain the proposed ditch line flows. These proposed inlets should be surrounded with a 5' riprap/geotextile fabric perimeter at least 12"-18" thick below the proposed inlet rim elevations. The applicant should provide a detail in the plan set for the proposed improvements to this inlet.
- The applicant shall submit further information and design detail for the rip-rap energy dissipation pads at locations where the development's proposed storm drain systems daylight into the existing Washington Avenue ditch line.
- The applicant should specify on the plans how the southerly and northerly ditch lines will be permanently stabilized.
- The applicant should update the project erosion control and construction management plans to include work in the right of way and specify measures to prevent erosion of the City's ditchline and sediment transport into the City's separated storm drain system.
- DPW Water Resources is not supportive of the proposed rain gardens located within the Washington Avenue Extension right of way. If further treatment/flow attenuation is needed to meet regulatory requirements, it shall be provided on the development site.
- DPW is requesting that the applicant grants the City of Portland permanent drainage easements for any proposed stormwater inlet or discharge points on private property providing drainage for the Washington Avenue Extension Street right of way. These drainage easements shall be a minimum of 30' long by 30' wide.

DPW General Site Comments:

- It appears that a fire truck will have trouble circulating through the site without driving over proposed curbing based on a review
- DPW suggests moving the development's proposed internal sanitary sewer outside of the footprint of the proposed porous pavement system.
- The applicant should consider signage to discourage on-site drivers from driving down and parking along the proposed emergency access roads corridor.

Justin Pellerin, P.E.
Senior Engineer
Department of Public Works

jrp@portlandmaine.gov
207-874-8881

public works

Sean King <sking@portlandmaine.gov>

Re: Fore Street

Mike Tremblay <mtremblay@gpmetro.org> Wed, Jul 27, 2022 at 10:12 AM
To: Justin Pellerin <jrp@portlandmaine.gov>
Cc: Sean King <sking@portlandmaine.gov>

Justin (and Sean, copied):

This applicant has regularly engaged Metro in discussions about this project, including in the site design and in discussions about providing residents with discounted or free Metro fares.

This project is located along two existing Metro routes, the 9A and 9B, which run clockwise and counterclockwise, respectively. While not obvious from the schedules, both routes often use this segment of Washington Avenue as a brief layover spot, as it is the turnaround point for both routes before they converge again near Morrill's Corner. The Applicant has enthusiastically offered to make this layover location more formal, with dedicated pull-offs and shelters for buses, and a restroom that would be available to drivers during most or all of the service period. The applicant would also provide shelter pads for both the 9A and 9B. No written agreement has been signed, but we believe the Applicant is enthusiastic about a transit-oriented site here, despite its suburban location.

Metro plans to improve off-peak service on the 9A and 9B routes with ARPA funding in the short term. Assuming that is successful, we would hope to maintain this improved service. This would mean that residents of this development would have bus service roughly every 15 minutes throughout the day, if they are not picky about which direction they are going (e.g. if their destination is downtown Portland). That said, GPCOG is conducting a study called Transit Together, which is recommending route changes. We do not expect the 9A/9B service to change substantially; however, there is a possibility that these routes, including service to this site, would be affected by system service optimizations. In this case, Metro would likely look to serve this area with an on-demand transit alternative, which can be more efficient at serving low-density areas. Recommendations on Transit Together are expected this fall.

Comments on the site plan:

- Bus shelters should be placed closer to the front of the bus stop pull-offs, if possible. Passengers wait to board the bus, which occurs at the front door.

- Metro supports the lower parking ratio proposed. The additional ridership generated by residents who are not exceedingly incentivised to drive due to being provided abundant parking will support continued, and hopefully improved, bus service to this area in the future.

- Metro supports the aprons being proposed at the intersections as a traffic calming measure. These aprons should be sized so that buses do not need to mount them in order to turn, which would be very uncomfortable for bus passengers. The turns in question are the right turn from Lambert onto Washington, and the right turn from Washington onto Auburn.

- Existing bus stop signs should be used.

- Bus stops may be denoted with specialty pavement markings (BUS STOP legends) to help reinforce that no parking is permitted in bus stops (this is recommended city/systemwide).

- The Applicant will be required to submit a Transportation Demand Management (TDM) plan as part of this project. Metro-specific items to support reduced automobile dependence include, but are not necessarily limited to, providing bus passes to all residents; providing shelter infrastructure as proposed, providing real-time information signage at shelters and in common spaces, and providing bus schedules and maps in common spaces.

Please let me know if you have any questions. I'm happy to review again if anything changes to the transit elements on this plan.

-Mike

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Mike Tremblay, P.E. *(he, him, his)*

Director of Transit Development

Greater Portland Metro

114 Valley Street | Portland, ME 04102

Office: 207.517.3023 | Mobile: 508.451.0208

e-mail: mtremblay@gpmetro.org | website: www.gpmetro.org

Sean King <sking@portlandmaine.gov>

165 Lambert Street Comments

Lauren Swett <lswett@woodardcurran.com> Wed, Jul 27, 2022 at 4:51 PM
To: Sean King <sking@portlandmaine.gov>
Cc: Justin Pellerin <jrp@portlandmaine.gov>

Hi Sean,

I have reviewed the 165 Lambert Street project, and have the following comments.

- The project is required to comply with MaineDEP Chapter 500 and City of Portland Section 5 standards for stormwater management.
  - Basic Standards – The project is providing for erosion and sedimentation controls on the site, and has provided two plans one each for the areas north and south of Washington Avenue. On Plan C-04, some of the work area extends off of the page and there is also an area where site drainage could exit the site that does not have perimeter erosion control – these areas should be updated. Work is also proposed for areas along Washington Avenue, and similar erosion control measures should be identified for those impact areas as well.
  - General Standards – Stormwater treatment is being provided on the site using underdrained subsurface sand filters and porous pavement.
    - The Applicant should address the depth of groundwater. The subsurface sand filter and soil filter details include an impermeable liner, but the porous pavement detail does not.
    - The report does not address the design of the proposed soil filters along Washington Avenue. The City has expressed some concern with utilizing these underdrained soil filters, so further coordination will be required.
  - Flooding Standards – The Applicant has noted that the Flooding Standard has been met, primarily maintaining flows at the pre-development condition. I have reviewed the HydroCAD model and have the following comments.
    - The Applicant is utilizing a method of evaluating flow through porous pavement with a large time of concentration that I am not familiar with, but I am continuing to review. I am specifically interested in understanding more about how the use of the large time of concentration works with also separately modeling the porous pavement's storage and flow-through. I will continue to review and will provide additional comment as required.
    - The Applicant should review the time of concentration calculations for areas that are remaining as undeveloped. In some cases it appears that surface types may have been modified from the pre-development to post-development models resulting in larger TC values in the post-development condition.
    - The North and South grading and drainage plans both include drainage structures and stormdrain pipes. The numbering of these structures and pipes includes the same numbers on both the north and south project areas. It is suggested that the Applicant consider some kind of naming distinction as there could be some confusion when distinguishing the different project areas.
    - The Applicant should review the drainage structure rims with the proposed site grading that is shown on the plans – in some areas of the site the grades seem to be different than the structure rims. For example, CB6 on the southern project area appears higher than site grades; similarly CB2 on the northern project area is also slightly higher. The catch basins will provide the overflow backup for the permeable pavement, so they should be set at low points to be able to collect stormwater in higher intensity storm events or in the event that areas of the permeable pavement becomes clogged.
- The utility plan shows the proposed locations of an electric utility pole and guywire east of the driveway and north of Washington Avenue. Please clarify what work may be necessary to install this utility infrastructure, and if this is part of the identified wetland impacts.
- The potential snow storage locations that have been identified on the plans should be reviewed with proposed landscaping for conflicts. It appears that some areas may overlap with proposed trees.
- The proposed landscape plans for the Washington Avenue work should be coordinated with the site plans. The landscape plans do not appear to show the entire area, they do not account for proposed stormwater features, and it appears that trees are proposed within stormwater swales, and in some cases on slopes that are identified on the site plans as rip rap. Any proposed on-street vegetation should also be coordinated with utilities.
- City of Portland Department of Public Works has provided a number of comments about the proposed stormwater management system, in particular for the work proposed within the Washington Avenue Right of Way. I would echo their comments, and would note that one area that needs some further clarification is the section from stations 9+00 to 13+50. Based on the grading plan, it is not completely clear where drainage will be directed, and what impacts drainage my have on off-site areas.

Please let me know if you have any questions!

Thanks,

Lauren

Lauren Swett, PE
Technical Manager | Principal

Woodard & Curran

207-558-3763 207.219.3591 woodardcurran.com

lswett@woodardcurran.com

41 Hutchins Drive, Portland, ME 04102

Project: 165 Lambert Street (PL-002078-2022)

Planner: Sean King

Comments (originally shared with applicant 7/22/2022, items in red dated 7/27/2022):

Planning

- Kevin Kraft (Deputy Director)
  - Document the existing conditions by boundary and ownership of the 0 Gray Street property in Falmouth, ME. Indicate the property and acreage for conservation use on a surveyed plan.
- Sean King (Urban Designer)
  - Advance design of proposed facilities for the Community Pavilion, and include the intent for use. With the majority of household services (ie. grocery, playground, community and social such as child care services) are beyond the 1-mile radius, consider community pavilion as building for access to essential goods and services within the development.
  - Maine Cooperative Development Partners plans to provide a list of major employers within a 1/4 mile of bus stops on the 9A/9B, for sharing with residents and to conduct outreach to those employers regarding housing availability at Lambert Woods.
  - Provide rationale for the proposed surface material selection, consider the addition of more concrete pavers (potentially permeable) for the mews to connect building entries and assist to delineate vehicular and pedestrian use. Maintain parking and driveways as asphalt.
  - Clarify the interior circulation pathway materials, it appears asphalt is proposed at the north and concrete pavers proposed at the south. Consider a unified surface material of concrete for the interior pathways and building entries with concrete pavers.
  - Provide site lighting locations and photometrics. Provide street lighting locations and photometrics along Washington Ave Extension.
  - Indicate where storage is provided for each dwelling unit per building type.
  - Building design comments:
    - Confirm Guest suite as Studio apartments in Community Flats
    - Provide variation in façade character along building facades that face Common (Building B.5, B.4, B.2 & B.1) as a more activated elevation. Consider delineation of first floor (ie. window awning, secondary entry or variation in façade material) that breaks horizontal scale of buildings longer than 40 feet.
  - Outline the organization structure of the Co-op development to acknowledge common area maintenance vs. tenant responsibilities. Applicant to describe or direct planner to documents submitted.

Transportation & Traffic

- Tom Errico (traffic consultant with TYLin)

  The following comments are related to the Traffic Assessment prepared by Barton & Loguidice dated June 28, 2022.

- The Traffic Assessment did not identify any High Crash Locations. Although the Washington Avenue/Lambert Street intersection is not a High Crash Location (Historically it has been a High Crash Location), I would like to understand the contributing factors for crashes. The applicant shall provide the requested information.
- Given the level of traffic generation by the project, the applicant shall conduct a traffic analysis at the Auburn Street/Washington Avenue Extension and Lambert Street/Washington Avenue Extension intersections. This shall include conducting existing traffic counts. The counts and analysis shall be performed for the weekday AM and PM peak hours.

- Three driveways are proposed to the development. The applicant shall provide information in support of a waiver from the City's Technical Standards. I would note that Washington Avenue Extension is classified as a Major Collector and thus minimizing access points is preferred.
- The plans depict a shared use path from the site to Auburn Street. The minimum width for a shared use path without constraints is 10 feet, although existing constraints by drainage system shall be considered. Applicant shall provide the design intent of the proposed multi-use path on the north side of Washington Avenue Extension. Confirm if share use path provides linkage of the Portland Trails Sebago to the Sea trail head and the Presumpscot Falls portion of the trail.
- The use of on-street parking spaces to meet parking demand requirements for a project has not been permitted during project reviews, zoning requires parking demand to be accommodated on site. Applicant to provide rationale behind the proposal to include the amount of on-street parking along with further justification for the amount of total parking provided for the development with the exemption for 1/4 mile from a fixed transit route.
- Suggest on-road bike facilities in this section of Washington Avenue Extension with the following options:

  1.) Eliminate the proposed curb extensions and on-street parking to provide a dedicated 8' wide bike facility (6' width bike lane, 2' width buffer) on each side of the street.

  2.) Create a shared lane bike facility as they are proposing with additional traffic calming measures such as reducing the travel lane width's down to 10.5' to provide more space between the on-street parking stalls and the travel lane by striping an outer fog lane line.

- The waiver for aisle width (24'to 22') is being justified on reducing impervious surface. Any project can make this case – reducing pavement. The development is proposing to create 2.69 acres of impervious area. The threshold of a Maine DEP SLODA permit is the creation of 3 acres of impervious area. So that could be the angle here.

Public Works & Engineering

- Justin Pellerin (Public Works Senior Engineer)

- Recommend to eliminate the easterly and westerly crossing and have one dedicated crossing at the middle location with an RRFB, it seems like westerly and easterly crossing locations are in very close proximity to driveways being proposed.
- DPW will **NOT** supportive of slip form curbing to be installed on a major collector such as Washington Avenue Extension.

- Accommodations for on-road bike facilities in this section of Washington Avenue Extension shall be implemented as part of the design. There appear to be two outcomes to provide consistent bike facilities through this corridor:
    - Eliminate the proposed curb extensions and on-street parking to provide an 8' wide dedicated bike lane on each side of the street.
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    - DPW suggests moving the development's proposed internal sanitary sewer outside of the footprint of the proposed porous pavement system.
    - The applicant should consider signage to discourage on-site drivers from driving down and parking along the proposed emergency access roads corridor.

- Jeremiah Bartlett (Public Works Transportation Systems Engineer)
    - Current configuration of Washington Ave Ext. not sufficient. Cross section needs revisions by the applicant to consider curb bump out to account for a reduced bike lane width, striping travel lane and reduce to 10', elevated crosswalks for traffic calming. On-street parking should accommodate the development and not create overflow into the adjacent neighborhood.

DPW Water Resources Comments:

- DPW is seeking further clarification and rationale for the number of stormwater outfalls and the corresponding pipe sizes being proposed to tie into the City's existing ditch lines on Washington Avenue Extension. It appears that the applicant is anticipating greater stormwater flows leaving the development site than what is indicated in the stormwater management report post development POI # 1 flow rate. The existing closed storm drain system at the SW corner of Lambert and Washington is a 15" circular pipe. DPW is concerned that any additional flows may cause downstream flooding issues, especially during large events.
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Stormwater

- Lauren Swett (Stormwater management consultant with Woodard and Curran)

  - The project is required to comply with MaineDEP Chapter 500 and City of Portland Section 5 standards for stormwater management.
    - Basic Standards – The project is providing for erosion and sedimentation controls on the site, and has provided two plans one each for the areas north and south of Washington Avenue. On Plan C-04, some of the work area extends off of the page and there is also an area where site drainage could exit the site that does not have perimeter erosion control – these areas should be updated. Work is also proposed for areas along Washington Avenue, and similar erosion control measures should be identified for those impact areas as well.
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      - The Applicant should address the depth of groundwater. The subsurface sand filter and soil filter details include an impermeable liner, but the porous pavement detail does not.
      - The report does not address the design of the proposed soil filters along Washington Avenue. The City has expressed some concern with utilizing these underdrained soil filters, so further coordination will be required.

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      - The Applicant is utilizing a method of evaluating flow through porous pavement with a large time of concentration that I am not familiar with, but I am continuing to review. I am specifically interested in understanding more about how the use of the large time of concentration works with also separately

modeling the porous pavement's storage and flow-through. I will continue to review and will provide additional comment as required.

  - The Applicant should review the time of concentration calculations for areas that are remaining as undeveloped. In some cases it appears that surface types may have been modified from the pre-development to post-development models resulting in larger TC values in the post-development condition.
  - The North and South grading and drainage plans both include drainage structures and stormdrain pipes. The numbering of these structures and pipes includes the same numbers on both the north and south project areas. It is suggested that the Applicant consider some kind of naming distinction as there could be some confusion when distinguishing the different project areas.
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- The utility plan shows the proposed locations of an electric utility pole and guywire east of the driveway and north of Washington Avenue. Please clarify what work may be necessary to install this utility infrastructure, and if this is part of the identified wetland impacts.
- The potential snow storage locations that have been identified on the plans should be reviewed with proposed landscaping for conflicts. It appears that some areas may overlap with proposed trees.
- The proposed landscape plans for the Washington Avenue work should be coordinated with the site plans. The landscape plans do not appear to show the entire area, they do not account for proposed stormwater features, and it appears that trees are proposed within stormwater swales, and in some cases on slopes that are identified on the site plans as rip rap. Any proposed on-street vegetation should also be coordinated with utilities.
- City of Portland Department of Public Works has provided a number of comments about the proposed stormwater management system, in particular for the work proposed within the Washington Avenue Right of Way. I would echo their comments, and would note that one area that needs some further clarification is the section from stations 9+00 to 13+50. Based on the grading plan, it is not completely clear where drainage will be directed, and what impacts drainage my have on off-site areas.

- Jodie Keene (Public Works Stormwater Coordinator)

  - Recommends a realistic limit of work to include staging, equipment and earthwork anticipated adjacent to wetlands to accurately depict disturbance area. Riprap is not recommended as a permanent solution and promotes a robust vegetated solution and

erosion matting solution at steep grades adjacent to wetland. Consider appropriate vegetated buffers at wetland edges.

Open Space & Trails

- Jeff Tarling (Parks Operational Manager / City Arborist)
    - Advocate for trails in passive wooden areas, applicant to clarify how open space requirement is being met. Coordinate with Falmouth Land Trust & Portland Trails for potential opportunities for trail connections and future recreation use.
    - **TREE SAVE / Limit of Work -** The final plan should include a 'Tree Save' / Limit of Work designation and plan to be used prior to clearing and during construction. This would include a written plan, signage and construction fencing to prevent off site storage or materials and equipment. "Tree Save' trees should be protected with signage and fencing around the drip line. To date the plan does not show either a tree save or limit of work. The proposed project clears an extensive amount of existing forest without any tree saves or forest management suggestions? The site workclearing should include nearby forest thinning improvements for sustainable landscape and safety.
    - **Invasive plant management -** The northern side of the project especially contains extensive Common Buckthorn shrubs, the project should identify, plan and remove all invasive plants as part of their clearing portion of site work. This has been a standard on other project sites where high numbers of invasive plants are located.
    - **Tree & Landscape treatment -** We encourage high percentage use of native plants on wood sites like the proposed 165 Lambert Street project. Stevens Commons for example next to Baxter Woods successfully modified their landscape plan to a higher percentage of native species. This should be a condition of approval. The site is surrounded by natural appearing woodlands, the project should appear part of the surrounding landscape vs 'suburban'. The 'Woods at Canco' development is another successful landscape example. Thus we would ask the project not to use plants like 'Feather Reed Grass' and 'Maiden Grass' for example, and increase the native grasses like 'Little Bluestem', 'Prairie Dropseed' and other plants compatible to the New England region. The proposed tree pallet should also diversify, currently over 100 trees using only four species, recommend reducing numbers on the 'Armstrong' Red Maples from 40 to perhaps half of that and consider other tree types like the 'Beacon' and 'Regal Prince' Oak, though they are cultivars it would be nice to have a greater mix of tree types. Tree types missing: Red Oak, Swamp White Oak (use instead of the hard to establish White Oak), Tupelo, Shagbark Hickory, River Birch, Yellow Birch, White Spruce, Larch, 'Bowall', 'Red Pointe', 'Karpick' Red Maples offer a variety of other maple types depending on the desired planting space size.

        - **Tree planting spacing and sizes -** While regular spaced trees all in certain order adds a degree of structure to the landscape, this site might be better served by including groves of trees in a more natural arrangement. This might include a mix of plant heights like 5-6' conifers and 2" caliper trees with the larger sizes

proposed. Knowing the more orderly plantings might be closer to the buildings and the natural groves of trees near the edges.

- **Street trees -** We would like to work closer with the project team to review the public 'Street tree' portion of the project. This would include species types, spacing. Applicant to include total tree count proposed.

- **Buffering -** The proposed site contains existing residential boundaries with Auburn Street, and Falmouth properties on the North side and Auburn Street and Lambert Street residents on the South side, the landscape plan should address adequate buffer planting and treatment.

- **Wetlands / drainage treatment -** the use of restored wetlands, intermittent streams, raingardens was not noticed during my review and wanted to check to see if the project is favoring natural drainage features?

- **Recreational / Open Space -** It is essential to include a variety of on site recreational and trail amenities for this project. The geographic location is out of walking distance to existing playgrounds and trails. (The future Haverty Field may in time offer somewhat close trails). Recreation features for youngsters could include playground structure, adventure play items, benches. Walking trails on or around the existing site should be a requirement and could match up with Fire Safety access.

Fire & Life Safety

- Jason Grant (Fire Prevention staff)
  - Fire truck access shall be well marked and visible from public street.
  - Indicate appropriate snow storage and maintenance agreement to ensure fire access is clear at all times.
  - Consider loop connection at the south development lot to gain access behind back of buildings to eliminate backing out onto Washington Ave Extension.
  - Prefer alignment of fire truck access lanes where grasscrete is proposed, applicant to justify design intent.

Zoning

- Ann Machado (Zoning Administrator)
  - Applicant to quantify and show on plans the net land area. The report from Jones Associates states that there is approximately 236,727.92 sf (5.43 acres) of delineated wetlands on the two properties. That is part of what needs to be subtracted from the net land area, but we still need to know the square footage of the watercourse (stream) and the slopes of 25% or greater. The overall site plan (sheet C-09) under Net Land Area states that 244,738 sf has been deducted from the property area to reach the netland area of 537,251 sf.

- Applicant to confirm density bonus under section 18.2.4.B for PRUDs. Applicant to outline minimum lot area per dwelling unit in table.
- Applicant to confirm if seeking minimum recreation open space reduction to 200/square feet of common area.
- Proposed 122 parking (67 off street, 55 on street). The proposed 55 on-street parking stalls would not be counted towards required parking. R3 requires 1 parking stall per unit. Planning Board may establish a parking requirement less than 1 per unit based on affordable housing development. Applicant has provided TDM to pursue Land Use Code, Article 19, Table 19-B: Categorical Exceptions to Off-Street Parking Minimums, "No off-street parking shall be required within ¼ mile of fixed route transit service. New uses or changes of use of more than 10,000 SF taking advantage of this exception shall be required to provide a Transportation Demand Management Plan if they use this provision in lieu of parking requirements."
- Confirm the minimum building setbacks being observed for the development, zoning requirement for PRUD is 16 foot separation between buildings. Affordable housing of more than 50% can be reduced to 10 feet.

Inclusionary Housing

- Victoria Volent (Housing Coordinator)
    - 165 Lambert Street would meet the IZ requirement of 25% of the units being workforce housing at 80% AMI and over 50% low income housing at 100% AMI for the density allowed under section 18.2.4.B. There will be 12 two-story townhouses, 48 three-story rowhomes, and 105 three-story flats - consisting of a total of 5 studios, 64 one-bedroom, 50 two-bedroom, and 46 three-bedroom units.

Observations:

Transportation & Traffic

- Tom Errico (traffic consultant with TYLin) –

  The following comments are related to the Traffic Assessment prepared by Barton & Loguidice dated June 28, 2022.

    - The applicant has conducted a Trip Generation analysis and assuming an Affordable Housing development 83 peak hour trips will be generated by the project during the worst-case peak hour. I find the methods used to estimate trip generation to be reasonable. I would further note that this level of trip generation does not require a Traffic Movement Permit.
    - As noted in the report acceptable sight distance will be provided from the proposed driveways assuming vehicle speeds of 25MPH. I find conditions to be acceptable.

- In terms of cross-section – they are proposing 11-foot lanes and 8-foot parking lanes. The exception is at the bus stop where it will be 10.5’ lanes and 10-foot shoulders. This seems okay to me.

Further Review Required:

Planning

- R3 PRUD Design Review Memo

Transportation & Traffic

- The improvements at Auburn Street need a detailed review and approval. ADA ramps need to be revised.
- The improvements at Lambert Street need a detailed review and approval. DPW observes that the curbing alignment at this intersection might have an adverse impact on plowing operations.

CITY of PORTLAND, MAINE
Request for Proposals for Disposition of City-Owned Property
Located at 165 Lambert Street

I. NOTICE AND SPECIFICATIONS

The City of Portland, Maine seeks proposals from qualified developers for the creation of residential housing at 165 Lambert Street. The site is designated on the City of Portland Tax Assessor's Map as lots CBL 385 A001, and 386 C001.

Sealed proposals for the project, including an original, seven (7) copies, and one (1) digital copy, as specified herein, will be received by the Purchasing Office, Room 103, City Hall, 389 Congress Street, Portland, Maine 04101, until 3:00 p.m., Tuesday May 12, 2020, at which time they will be publicly opened.

Proposals shall be submitted, and returned in sealed envelopes plainly marked on the outside "Disposition and Development of Property Located at 165 Lambert Street".

Proposals that are late, unsigned or submitted via fax will not be accepted. Proposals from individuals not registered with the Purchasing Office may be rejected; receipt of this document directly from the City of Portland indicates registration. Should a person receive this Request from a source other than the City, please contact 207-874-8654 to ensure that you are listed as a recipient for this proposal.

All questions must be submitted in writing to the Purchasing Office. These may be mailed, hand delivered, faxed to (207) 874-8652 or e-mailed to mff@portlandmaine.gov and be received no later than five (5) business days prior to the opening date. Questions received after this time will not be addressed. Any interpretation, correction, or change of this document will be made only by written addenda. Changes in any other manner will not be binding on the City and proposers should not rely on. Proposers should not have contact with any City staff with regard to this proposal unless to obtain general public information as specified in the document.

The disposal of this real estate shall be on the basis of a negotiated proposal, with the City of Portland reserving the right to refuse any and all proposals. *All proposers are advised that the property will be sold "as-is" and "where is", in its existing condition, with no warranties either expressed or implied.* The City makes no representations or warranties about of any of the information about the property set forth herein, which is provided to proposers for their convenience only. The successful proposer shall be responsible to inspect the property, or to hire its own professionals to do so. The City, and its agents, make no representations or warranties with respect to the title of the property, the accuracy of any statement as to boundaries or acreage, or as to any other matters contained in any description of the property, or as to the fitness of the property for a particular purpose, or as to development rights, merchantability, habitability, or as to any other matter, including without limitation, land use, zoning and subdivision issues or the environmental, mechanical, or structural condition of the property. The City disclaims any and all responsibility for injury to proposers, their agents or others while examining the property or at any other time. The City will not be responsible for any broker's commission.

Any and all improvements made to said property must be done in accordance with existing City Codes and Ordinances.

II. GENERAL INFORMATION

Summary of Request:

The City of Portland is committed to providing housing opportunities and has set a goal to evaluate the use of City-owned property to construct housing. As one-step in accomplishing this goal, the City of Portland will accept proposals for the development of housing on the lot located at 165 Lambert Street, which currently is vacant.

This request for proposals results from the December 16, 2019 approval by the Portland City Council (Resolve 10-19/20) of the recommendations of the Housing Committee to market the City-owned vacant property located at 165 Lambert Street.

The City of Portland uses the RFP process to ensure that public resources are utilized for maximum public benefit while accomplishing specific objectives and providing fair access to all applicants.

Site Information:

a. **Location:** 165 Lambert Street, as identified in the City of Portland Assessor's records as lot CBL 385 A001and 386 C001 (See Attachment 2).

b. **Existing Conditions:** 165 Lambert Street is located on two parcels totaling 13.3874 acres with frontage on Lambert Street in the North Deering neighborhood. The surrounding context is predominantly residential with the majority of homes in the area being one-family structures. The topography is quite steep and much of the parcel is designated as wetlands. A large portion of Auburn Street storm drain discharges to this area.

c. **Current use:** Vacant lot.

d. **General Dimensions:** Together these lots are approximately 13.3874 acres or 583,157 square feet.

e. **Current Zoning:** R-2. The R-2 zone allows for the creation of single-family detached dwelling units on minimum lot sizes of 10,000 square feet. At 13.39 acres (583,157 square feet), this parcel could permit a maximum residential density of 58 single-family homes. However, there are extensive wetlands on approximately 8 acres on the site that will limit maximum development potential. For complete zoning requirements, please refer to Chapter 14, Land Use, of the City Code.

f. **Rezoning**: Higher density zoning that furthers exceptional projects and city goals as outlined in Section III will be considered. For example, the R-3 residential zone allows for Planned Residential Unit Development (PRUD) on properties of 3 acres of more, and a higher maximum residential density of 6,500 square feet per dwelling unit. A PRUD would allow for alternative site layouts, and the ability to avoid impacts to on-site wetlands. It should be noted that changes to zoning require both Planning Board and City Council approval.

g. **Condition of the property at the time of disposition:** Wetlands present. See Boyle

Associates report and Jones Associates report available online.

h. Environmental Conditions: Boyle Associates conducted a wetland delineation in July of 2009 and prepared a wetland sketch plan for the City of Portland; 4.53 acres of uplands were identified during their review. During a site visit in October of 2019, Jones Associates confirmed there had been no changes to the wetlands and the wetland delineations done by Boyle Associates were still appropriate to use. The City of Portland reserves the right to establish a conservation easement on the non-developable portions of the parcel. The Jones Associates report is available on-line.

i. Proposers are urged to investigate water sources and utility connection requirements with the Department of Public Works.

III. CITY GOALS

The City's primary goals for the use of the property are:

1. Developments shall provide mixed income units. All units must be affordable to households earning 60% to 120% of the area median income – which 60% is now $55,800 for a family of four and 120% is now $111,600 for a family of four.

   Affordable means that the percentage of income a household is charged in rent and other housing expenses including utilities, or must pay in monthly mortgage payments (including real estate taxes, mortgage insurance, condominium/HOA fees, insurance and utilities), does not exceed 30% of a household's gross income, or other amount established in city regulations that does not vary significantly from this amount.

   Restrictions on the affordability of units must be in place for a minimum of 30 years for homeownership units, and the longest period allowed by law for rental units.

2. Development of mixed income homeownership or rental housing of excellent building and site design. Design principles should promote efficient use of land to create a development that is compatible with the existing pattern, scale, massing, and materials of the surrounding neighborhood. The development's buildings shall be designed to meet the City's Green Building Code.

3. Environmental preservation should be identified to retain a balance between development and conservation of open space important for wildlife, ecological, and environmental values.

4. Rezoning may be considered to support increase housing development opportunities or maximize the number of allowable housing units on the property.

5. Developments shall create housing options that are age inclusive.

The general terms for this real estate transaction include:

- Units must be used as the principal residence of the owner/tenant and owner/tenant shall not use the unit for the conduct of business (except for a home occupation allowed under the City of Portland zoning ordinance) or as an investment property. Units shall not be rented for short-term periods of one to thirty days.
- The sale or long term lease of the property below fair market value may be considered to support housing development that meets the City's stated goals.
- Alternative Ownership Models. Alternative ownership models that will encourage a mixed income community with long term affordability for the maximum number of units, such as limited equity units, co-housing, cooperative, or a community land trust, may be considered in order to ensure the units affordability over time.
- Proposals must outline how they will maintain affordability.
- Other City Incentives. Other city financial incentives may be considered to support increase housing development opportunities or maximize the number of allowable housing units on the property.

IV. PROPOSED SCORING

An internal staff Committee will review proposals received, and will apply the following selection criteria in reviewing and scoring the applications.

Proposed use to achieve the City of Portland's goals **40 points**

1. Market Demand - 20 points
    a. 20 points - all units meet the City's Goals and Terms noted in Section III
    b. 15 points - at least 75% of the units meet the City's Goals and Terms noted in Section III
    c. 10 points - at least 50% of the units meet the City's Goals and Terms noted in Section III
    d. 0 points - project does not does not meet the City's Goals and Terms noted in Section III
2. Economic diversity - 10 points
    a. 10 points - creates housing options which promote economic diversity in the neighborhood in which the development is located
    b. 0 points - does not promote economic diversity
3. Age Inclusive – 10 points
    a. 10 points – creates housing which is age inclusive
    b. 0 points – does not create housing which is age inclusive

Impact on surrounding neighborhood, including design. 25 points

1. Project Design - 15 points
    a. 15 points - the proposal is consistent with design characteristics
    b. 10 points - the proposal is an adequate fit with neighborhood characteristics
    c. 0 points - the design is a significant outlier
2. Amenities and unit design -- 10 points
    a. 10 points - amenities & unit design are well thought out and appropriate for residents
    b. 5 points - amenities & unit design are adequate

c. 0 points - amenities and unit design raise significant concerns that resident needs will not be adequately addressed

Applicant's ability to complete project, including financial feasibility, development team experience, capacity, and timeframe for completion. 35 points

1. Readiness to proceed - 15 points
    a. 15 points - all projected sources of funding include letters of commitment or interest are projected at terms and conditions consistent with the City's prior experience with the funder
    b. 10 points - most projected sources of funding include letters of commitment, letters of interest, or, if no letter is included, are projected at terms and conditions consistent with the City's prior experience with this funder
    c. 0 points - one or more sources are projected on terms that are not consistent with the City's prior experience with the funder and are not documented by letter(s) from funder(s)
2. Track record of development team - 10 points
    a. 10 points - every development team member has a successful track record with this type of project and at this scale
    b. 8 points - all but one development team members have a successful track record with this type of project and at this scale; one development team member has relevant experience but at a smaller scale or not of this project type
    c. 5 points - two development team members, while having relevant experience, are new to this type of project or this scale of development
    d. 0 points - the development team does not meet the criteria above
3. Current Capacity of development team - 10 points
    a. 10 points - development team members have exceptional depth of human and financial resources to complete this project
    b. 8 points - development team members have the human and financial resources to complete this project
    c. 5 points - development team has a staffing gap in a significant role and a plan to address that gap, OR there are some concerns about the financial resources of the team to move the development forward
    d. 0 points - the development team does not meet the criteria described above

SUMBMISSION INFORMATION

Interested parties are asked to submit a concept development (including preliminary drawings) and a brief description of the project, no longer than two pages, to include the number and type of units, occupants (owners/renters) to be served, special features, the impact on the neighborhood and other ways the proposal meets the primary goals of the City. A general project budget with projected funding sources, development timeline, and development team qualifications and financial capabilities is also required. This RFP does not require detailed architectural drawings or development pro formas.

Photographs and maps of the site and area are required.

a) **Developer:** Name, address, telephone, email, fax number of the proposed owner/developer and the name(s) of an alternative contact person(s).

b) **Proposal:** Each proposal submitted must specifically outline the proposed use of the property and any proposed rezoning requests.

c) **Financial Feasibility:** Provide a business plan, which shall include prospective and committed sources of funding, development and operating budgets; a letter from a lending institution indicating the applicant's ability to finance the projected costs; and provide examples of prior projects that indicate the proven ability to develop a project of similar type and scale from a fiscal perspective.

d) **Timetable:** Provide an overview of how the proposal will be implemented. Include approximate schedule for completion of each element, closing, construction start-up, substantial completion, final completion, and occupancy. Include applications for public or private financing.

e) **Developer Capacity:** Identify the qualifications and experience of the development team for the project including a list of previously completed projects similar to the proposed project. This team may include key staff of the developer, architect, general contractor and future property management. Also, discuss the ability to complete the project including the qualifications of the development team, management plan, experience, capacity, project readiness to proceed, and timeframe for completion.

f) **Occupancy and Management Plan:** Present a plan detailing the ownership structure (condominium, cooperative, etc.), resale restrictions and resale process to ensure mixed income and long-term affordability.

g) **Purchase Price or Lease Terms:** Proposed purchase price or lease terms for this property.

h) **Copies:** Seven (7) copies, with the original so marked, of each proposal shall be submitted.

V. DISPOSITION INFORMATION

After proposals are opened, city staff will make a recommendation to the City Council's Economic Development Committee (EDC) and the Housing Committee (HC). The EDC and HC will make a recommendation to the City Council.

VI. OTHER INFORMATION

Confidentiality: Proposals received by the City shall become a matter of public record, subject to public inspection, except to the extent, which an applicant designates in writing, proprietary data to be confidential and submits that data under separate cover, such information may, to the extent permitted by law, be held from public inspection, as provided in applicable Maine law, including, without limitation, 5 MRSA Sections 13119-A and 13119-B.

VII. LEGAL REQUIREMENTS

The contract for the disposition of the property will be executed only after review and final approval by the City Council.

VIII. RESERVATION of RIGHTS

The City of Portland reserves the right, at its sole discretion, to award as well as reject any and all proposals for the city-owned property, based on the quality and merits of the proposals received, or when it is determined to be in the public interest to do so. Furthermore, the City may extend deadlines and timeframes, as needed.

The City reserves the right to substantiate any proposer's qualifications, capability to perform, availability, past performance records, and to verify that the proposer is current in its financial obligations to the City.

The City of Portland, Maine, reserves the right to waive any informalities in proposals, to accept any proposal or portion thereof, and, to reject any and all proposals, as well as negotiate with the successful proposer(s) should it be in the best in the best interest of the City to do so for a final purchase and sale agreement and ultimate sale or lease of the property.

Pursuant to City procurement policy and ordinance, the City is unable to contract with businesses or individuals who are delinquent in their financial obligations to the City. These obligations may include but are not limited to real estate and personal property taxes and sewer user fees.

Proposers who are delinquent in their financial obligations to the City must do one of the following: bring the obligation current, negotiate a payment plan with the City's Treasury office, or agree to an offset, which shall be established by the contract, which shall be issued to the successful proposer

April 1, 2020

Matthew F. Fitzgerald
Purchasing Manager

Attachments:
A. Proposal Signature Page
B. Portland Assessor's Record
C. GIS Map
D. Boyle Report available online
E. Jones Associate Report available online

PROPOSAL
NOTE: THIS PAGE IS TO BE COMPLETED AND RETURNED

The UNDERSIGNED hereby declares that he/she or they are the only person(s), firm or corporation interested in this proposal as principal, which it is made without any connection with any other person(s), firm or corporation submitting a proposal for the same.

The UNDERSIGNED hereby declares that they have read and understand all conditions as outlined in the Request for Proposals, and that the proposal is made in accordance with same.

The UNDERSIGNED hereby declares that any person(s) employed by the City of Portland, Maine, who has direct or indirect personal or financial interest in this proposal or in any portion of the profits which may be derived therefrom has been identified and the interest disclosed by separate attachment. (Please include in your disclosure any interest which you know of. An example of a direct interest would be a City employee who would be paid to perform services under this proposal. An example of an indirect interest would be a City employee who is related to any officers, employees, principal or shareholders of your firm or to you. If in doubt as to status or interest, please disclose to the extent known).

The proposer acknowledges the receipt of Addenda numbered _____
If Applicable

COMPANY NAME: _____
(Individual, Partnership, Corporation, Joint Venture)

AUTHORIZED SIGNATURE: _____ DATE: _____
(Officer, Authorized Individual or Owner)

PRINT NAME & TITLE: _____

ADDRESS: _____

TELEPHONE: _____ E-MAIL: _____

FEDERAL TAX ID #: _____ DUNS #: _____

STATE OF INCORPORATION _____
(If incorporated in another State, businesses must be authorized to do business in the State of Maine.)

In your organizations preceding completed fiscal year, did the organization receive:
(1) 80 percent or more of its annual gross revenues in U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements; AND
(2) $25,000,000 or more in annual gross revenues from U.S. federal contracts, subcontracts, loans, grants, subgrants, and/or cooperative agreements? ☐ Yes ☐ No

Does the public have access to information about the compensation of the executives in the organization through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (18 U.S.C. 78m(a), 78o(d) or section 6104 of the Internal Revenue Code of 1986? ☐ Yes ☐ No

NOTE: All bids must bear the handwritten signature of a duly authorized member or employee of the organization making the bid. **This sheet must be signed and returned with the application package**.

Sean King <sking@portlandmaine.gov>

Lambert Woods Coop. Housing Project (PL2078-2022): Draft TDM Plan Initial Review Comments

Bruce Hyman <bhyman@portlandmaine.gov> Thu, Aug 4, 2022 at 1:55 PM
To: Sean King <sking@portlandmaine.gov>
Cc: James Rather <jrather@portlandmaine.gov>

Good afternoon, Sean,

I have done an initial review of the Draft TDM Plan (dated June 15, 2022) for PL2078-2022, Lambert Woods Cooperative Housing Project. I have the following preliminary comments on the draft Plan:

- provides a very comprehensive overview of the transportation context of the proposed project including transportation opportunities and challenges of the site related to TDM
- provides a 25% multimodal/mode share trip target for all resident trips to and from the site for 3 years after occupancy in addition to ongoing monitoring of the 0.45 parking spaces per unit proposed
- includes a strong menu of potential TDM strategies in the areas of Infrastructure, Incentives and Information - many of these need to become more definitive in the TDM Plan final form such as proposed transit pass incentives for residents
- provides for annual surveying of residents and producing an annual TDM monitoring report to the City.

I held a meeting with the TDM consultant on July 19th to discuss my preliminary comments on the draft plan.

Following the workshop, please don't hesitate to let me know of any comments by the Planning Board or additional follow-up that is requested. Once I receive a revised draft I will be able to finalize my comments.

Bruce
--
Bruce Hyman
Transportation Program Manager
City of Portland
Department of Planning and Urban Development
389 Congress Street, 4th Floor
Portland, Maine 04101
(207) 874-8717 phone
bhyman@portlandmaine.gov

ACORN ENGINEERING, INC.

Planning Division
Attn: James Rather, Development Review Manager
City of Portland, Maine
389 Congress Street, 4th Floor
Portland, ME 04101

July 15, 2022

Subject: Major Site Plan Application – 165 Lambert St

James:

On behalf of Maine Cooperative Development Partners, we are pleased to submit this application for the proposed development of two lots located at 165 Lambert Street and 622 Auburn Street in the North Deering neighborhood. The combination of the parcels yields 17.95 acres and was recently put under a Purchase & Sale agreement between the City and the Applicant after a competitive public RFP process. As part of the RFP, the owner was also awarded the property located at 0 Gray Road in Falmouth, although this parcel is not currently proposed to be developed at this time and will result in conservation of approximately 13 acres of forest, wetlands, and streams. The design team has held numerous neighborhood meetings and informational sessions, as well as achieved a map amendment which converted the R-2 zoning district to R-3 for the purposes of increasing the allowable residential density and therefore contributing a larger number of units to Portland's affordable housing supply.

The existing traffic condition along the project's frontage on Washington Ave, as well as the intersections at Auburn and Lambert Streets will be improved through a combination of transportation strategies including narrowing the lane widths along Washington Ave, reducing the paved turning radius at both intersections, and providing a concrete apron to facilitate larger truck traffic. Additionally, a link to the Portland Trails network by way of a multi-use path is proposed. Two new bus shelters at the center of the development will be designed and constructed in tandem with METRO. Currently, the #9 Route travels by this location in both directions with an anticipated increased frequency in coming years.

The project proposes a total of 165 affordable residential units, all of which will be income restricted with 75% of the total units falling at 100% AMI and 25% at 80% AMI. After utilizing the PRUD standards and capitalizing on affordable housing incentives, the project will create a clustered village campus on both sides of Washington Avenue that maximizes housing, allows for pleasant outdoor space for residents, and conserves much of the mature canopy and wetland/stream habitat. We are pleased to present this project as it falls directly in line with the comprehensive plan by creating quality affordable housing and transforming the suburban feel of this corridor into a sense of place.

Sincerely,

Sam Lebel

Samuel J. Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

The following documents and drawings will be uploaded onto the City's electronic submission site per the procedure outlined in the application:

Documents:

- Section A: Cover Letter
- Section B: Major Site Plan Application & Checklist
- Section C: Right, Title, Interest
- Section D: Zoning Assessment
- Section E: Easements
- Section F: Waiver Table
- Section G: Financial Capacity
- Section H Technical Capacity
- Section I: Conformity with Land Use Ordinance
- Section J: Stormwater Management Report
- Section K: Erosion & Sedimentation Control Report
- Section L: Fire Department Letter
- Section M: Wastewater Capacity Letter
- Section N: Lighting
- Section O: Architectural Design Narrative
- Section P: Utility Cover
- Section Q: Construction Management Plan
- Section R: Solid Waste
- Section S: Traffic Report
- Section T: Turning Templates
- Section U: Transportation Demand Management Report
- Section V: Stormwater Management Law – Delegated Review Application

Drawings:

- Civil Site Plan Set
- Architectural Plan Set

CITY OF PORTLAND
Planning & Urban Development Department

MAJOR SITE PLAN
GENERAL DOCUMENT AND DRAWINGS CHECKLIST

Please submit each document as a separate PDF file.
Please confirm by electronically checking the boxes in the left-hand column.

** PLEASE FILL OUT AND UPLOAD THE ZONING ASSESSMENT TABLE AND WAIVER TABLE SEPARATELY AS NOTED BELOW **

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

GENERAL APPLICATION DOCUMENTS	
Yes NA	**Project Description** • Cover letter with detailed project description
Yes NA	**Completed Checklist** (this document)
Yes NA	**Evidence of 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** (see Zoning Assessment Table) Summary of compliance with use and dimensional standards of the land use code
Yes NA	**Site Plan Standards Assessment** (see Section 14.6 of the land use code) • Summary of project compliance with site plan standards of the land use code
Yes NA	**Summary of Existing and/or Proposed Easements or Covenants, applicable.** • Evidence of existing easements and any proposed easements, covenants, public or private rights-of-way
Yes NA	**Waiver Requests** (see Waiver Table) • Written request for waiver describing request and compliance with applicable waiver standards
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

MAJOR SITE PLAN STANDARDS AND SUBMISSION CHECKLIST Provide assessment of compliance with standards and include supplemental documentation, as applicable. Please submit each document as a separate PDF file.	
TRANSPORTATION	
Yes (NA)	**Impact on Surrounding Street Systems (14-14.6.1(A))** ● Describe incremental volume of traffic impacts and mitigation measures. If needed
(Yes) NA	**Access and Circulation (14-14.6.1(B))** Identify and describe the following: ● Site access and internal circulation, including ADA access ● Drive-up features, if applicable ● Loading and servicing needs, routes, and geometry, providing turning templates for delivery vehicles, if applicable ● Sidewalks and condition along street frontages and internal walkways ● Engineered details for ADA ramps and public sidewalks, meeting sidewalk material policy and construction requirements (Technical Manual, Section 1)
(Yes) NA	**Public Transit (14-14.6.1(C)), if applicable** Identify and describe the following: ● Existing available transit service and proposed transit improvements, including design details, such as easement, pad base, and shelter
(Yes) NA	**Off-Street Parking (14-14.6.1(D)), if applicable** Identify and describe the following: ● Proposed vehicular and bicycle parking supply (including ADA-compliant parking) in relation to applicable parking requirements in Article 19 of the land use code ● Curb cut separation and parking layout (Technical Manual, Section 1) ● Construction details for bicycle racks ● Management plan for snow storage and removal
(Yes) NA	**Transportation Demand Management (TDM) (14-14.6.1(E)), if applicable** ● Provide TDM plan drafted in accordance with Technical Manual Section 1 requirements

ENVIRONMENTAL	
Yes NA	**Preservation of Significant Natural Features (14-14.6.2(A)), if applicable** Identify and describe the following: ● High and moderate value waterfowl and wading habitat ● Aquifers (for Casco Bay Islands) ● Waterbodies (including wetlands, watercourses, significant vernal pools and floodplains) ● Proposed preservation areas and protection measures ● Documentation from environmental compliance consultants and determinations from applicable state and federal agencies
Yes NA	**Landscape Preservation (14-14.6.2(B))** Identify and describe the following: ● Measures to preserve trees, including within required zoning setbacks (Technical Manual, Section 4) ● Measures to protect existing vegetation during construction
Yes NA	**Site Landscaping and Buffers (14-14.6.2(C))** Identify and describe the following: ● Overall landscaping approach and consistency with standards ● The use of screening and buffering of service areas and between non-residential and residential uses ● Existing Heritage or Feature Trees on site and measures to preserve ● Compliance with street tree requirements
Yes NA	**Water Quality, Stormwater Management, and Erosion Control (14-14.6.2(D))** Identify and describe the following: ● Erosion and sedimentation control plan and measures ● Evidence of compliance with Urban Impaired Stream Standards pursuant to DEP Chapter 500 stormwater law, as applicable ● Subsurface sanitary sewage disposal and groundwater protection measures

PUBLIC INFRASTRUCTURE AND COMMUNITY SAFETY	
Yes NA	**Consistency with City Master Plans (14-14.6.3(A))** ● Describe proposed easements, rights and improvements to connect or continue off-premises public infrastructure, as applicable
Yes NA	**Public Safety and Fire Prevention (14-14.6.3(B))** Identify and describe the following: ● Compliance with Crime Prevention through Environmental Design (CPTED) requirements (Technical Manual, Section 3) ● Emergency vehicle access ● Consistency with public safety standards (Technical Manual, Section 3)
Yes NA	**Availability and Adequacy of Public Utilities (14-14.6.3(C)) (Technical Manual, Sections 2 & 9)** Identify and describe the following: ● Electrical services, including providing underground services ● Existing and proposed connections for public utilities and required public utility upgrades ● Sewer line connections
SITE DESIGN	
Yes NA	**Massing, Ventilations and Wind Impact (14-14.6.4(A))** Identify and describe the following: ● Wind and ventilation impacts on adjoining structures and/or adjacent public spaces, including wind study, if applicable ● Bulk, location, or height impacts on adjoining structures
Yes NA	**Shadows (14-14.6.4(B)), if applicable** ● Provide shadow analysis of impacts on publicly accessible open space (Technical Manual, Section 11)
Yes NA	**Snow and Ice Loading (14-14.6.4(C))** ● Describe building design measures to prevent snow and ice from loading or falling onto adjacent properties or public ways
Yes NA	**View Corridors (14-14.6.4(D)), if applicable** ● Describe any protection of designated view corridors (Portland Design Manual, Appendix. 1)
Yes NA	**Historic Resources (14-14.6.4(E)), if applicable** Identify and describe the following: ● The site's status as a designated landmark, within a historic district or historic landscape district, or within 100 feet of any designated landmark, historic district, or historic landscape district ● Compliance with standards for preservation and documentation of archaeological resources

Yes NA	**Exterior Lighting (14-14.6.4(F))** ● Describe how the proposed site lighting will adhere to photometrics requirements as it relates to light trespass and full cutoff fixture design, pursuant to Technical Manual Section 12
Yes NA	**Noise and Vibration (14-14.6.4(G))** ● Provide data on noise levels for HVAC and other mechanical equipment, such as design specifications, to demonstrate consistency with state and federal noise emissions requirements as well as City code
Yes NA	**Signage and Wayfinding (14-14.6.4(H)), if applicable** ● Provide signage plan showing the location, dimensions, height and setback of all existing and proposed signs ● Provide drawings of all commercial and directional signage on site
Yes NA	**Zone-Related Design Standards (14-14.6.4(I))** ● Address any applicable design review standards by zone, including compliance with Design Manual

MAJOR SITE PLAN
DRAWINGS CHECKLIST

Please upload the following DRAWINGS with the listed details into e-Plan as separate pdfs.

All drawings must be submitted in a 24 x 36 sheet size.

BOUNDARY SURVEY (stamped by a Maine Licensed Surveyor and drawn as per Technical Manual Sec. 13)

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

All sheets – Include a title block with project title and the following information:

- Project street address
- Name and address of property owner & applicant
- Licensed design professional, incl firm that produced plans
- North arrow
- Date of preparation and revision history block
- Tax parcel (chart, block, and lot) number

Existing Conditions Plan with the following:

- Existing structures, with distance from primary building façade(s) to the property line
- Approximate location of structures on abutting properties
- All streets and intersections adjacent to the site
- Existing driveways, pedestrian ways, and bicycle infrastructure, including dimensions and materials
- Existing public transit infrastructure
- Existing vehicle & bicycle parking areas
- Existing utilities on site and within adjacent rights-of-way
- Existing grades (two-foot contours preferred)
- Location of water courses, wetlands, and vegetation, or other significant natural features
- Existing soil conditions and location of test pits and borings
- Zoning boundary lines, including overlays
- Location of all existing easements and rights-of-way

Proposed Site Plan with the following:

- Proposed structures, including distance from primary building façade(s) to property lines
- Ground floor area, and finished floor elevations for all buildings
- Any proposed geometric modifications to streets and intersections adjacent to site
- Location, dimensions and materials of all proposed driveways, vehicle, bicycle, & pedestrian access ways with corresponding curb lines
- Engineered specifications/ cross-sections for proposed driveways, sidewalks & paved areas
- Location and dimensions of proposed loading areas, including turning templates
- Proposed transit infrastructure with dimensions/ engineering specifications
- Location of vehicle and bicycle parking with dimensions and engineering specifications
- Location of all snow storage areas
- Exterior lighting (please see Technical Manual Sec. 12 for photometrics requirements)
- Location of fire hydrants

- Location of solid waste management receptacles
- Location of all proposed HVAC and mechanical equipment, including proposed screening, where applicable
- Location of proposed easements and rights-of-way, including dimensions
- Please utilize color-coding and/or hatches and shading to delineate changes between the pre and post development condition as needed

UTILITY PLAN including:

- Proposed electrical infrastructure
- Location, sizing and directional flows of all proposed sewer and stormwater infrastructure
- Location and dimensions of off-premises public or publicly accessible infrastructure adjacent to site
- Electric utility infrastructure

GRADING AND DRAINAGE PLAN including:

- Proposed grades
- Proposed stormwater management measures meeting Technical Manual (Section 5) standards
- Any proposed alteration of a watercourse or wetlands
- Any groundwater protection measures
- Proposed buffers and preservation measures for wetlands or significant natural features

LANDSCAPE PLAN including:

- Existing vegetation to be preserved and preservation measures
- Proposed landscaping, screening, and street trees, including caliper widths for trees
- Planting schedule, including street trees

ARCHITECTURAL PLANS AND RENDERINGS including:

- Exterior building elevations, color renderings, illustrations of all sides
- Axonometric and street-level views for structures greater than three stories in height
- Provide context drawings, if applicable (Design Manual, page 1)
- Floor plans

CONSTRUCTION MANAGEMENT PLAN including:

- Specifics on traffic control, sidewalk sheds, and pedestrian rerouting
- Include a drawing and written narrative

OTHER

- Details and cross-sections, as necessary

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PURCHASE AND SALE AGREEMENT

THIS PURCHASE AND SALE AGREEMENT IS made this 10th day of May, 2022 by and between the City OF PORTLAND, a body politic and corporate located in Cumberland County, Maine, (hereinafter referred to as "Seller" or "City"), and MAINE COOPERATIVE DEVELOPMENT PARTNERS LLC, a Maine limited liability company, having a mailing address of 6 City Center, Fl. 3, Portland, Maine 04101 (hereinafter referred to as "Buyer").

RECITALS

WHEREAS, the City is the owner of approximately 4.85 acres of land at or near 622 Auburn Street, Portland, Maine (the "Portland Premises") and 13.3 acres of land at or near 0 Gray Road, Falmouth, Maine (the "Falmouth Premises") (the Portland Premises and the Falmouth Premises are referred to herein collectively as the "Premises") and did advertise RFP #21042 dated February 24, 2021, entitled Request for Proposals for Disposition and Development of City-Owned Property Located at 622 Auburn Street, Portland and 0 Gray Road, Falmouth, a copy of which is attached hereto as Exhibit A and made a part of this Agreement (the "Request for Proposals") (the Portland Premises is identified in the City of Portland's tax records as CBL 385 D008001, including 386-B-12 and 386-B-15, and the Falmouth Premises is identified in the Town of Falmouth's tax records as Lot U48-027 and is generally depicted on Attachments B,C, D and E to the Request for Proposals); and

WHEREAS, Buyer submitted a proposal dated May 2, 2021 in response to the Request for Proposals, a copy of which is attached hereto as Exhibit B and incorporated herein (the "Proposal"); and

WHEREAS, Buyer desires to purchase and develop the Premises, and the City desires to convey the Premises to Buyer, subject to the terms and conditions set forth herein.

NOW THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties, intending to be legally bound, hereby agree as follows:

1. **SALE.** City agrees to sell the Premises to Buyer, and Buyer agrees to purchase the Premises in accordance with the terms and conditions set forth in this Agreement. This Agreement is for the sale of land only.

2. **CONSIDERATION**. The purchase price for the Premises shall be One Dollar ($1.00) (the "Purchase Price").

3. **TITLE AND DUE DILIGENCE.**

    a. Due Diligence Period. Buyer will have from the date of this Agreement until 4:00 PM Eastern Daylight Savings Time on the day that is twenty-five (25) months after the date of this Agreement (the "Due Diligence Period") to complete any surveys, environmental review, inspections, and title examinations, and to obtain any zone change, site plan approval, and any other permits and regulatory approvals required for the Project.

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b. Property Description. The legal description of the Premises contained in the deed to the Premises will be a survey description based upon a survey plan that will more specifically describe the Premises. The survey and description of the Premises will be prepared by the Buyer at its sole expense and provided to the City for review two months prior to the expiration of the Due Diligence Period. City shall notify Buyer of any objections to the survey and description prior to the expiration of the Due Diligence Period.

c. Rezoning Contingency. Buyer proposes to obtain the Portland City Council's approval to rezone the Premises (the "Rezoning Approval") to maximize residential density for its development of the Premises as described in the Proposal (the "Project"). The Buyer will be responsible for obtaining, at its sole expense, the Rezoning Approval and any other regulatory approvals required for the Project prior to Closing.

d. Financing Contingency. The Buyer's obligation to close is contingent on obtaining construction and permanent financing for the Project that the Buyer, in its discretion, determines is sufficient to put the Project on a sound financial footing. That financing is anticipated to include, but not be limited to, the following: (i) permanent financing for the Coop in the form of a HUD Section 213 loan; and (ii) affordable housing tax increment financing from the City.

e. Title and Survey Objections. Buyer will have until the end of the Due Diligence Period to deliver to City any written objections to title, environmental, or survey matters (other than the permitted exceptions identified herein) that materially affect insurability or use. Objections not made prior to the end of the Due Diligence Period will be deemed waived; provided, however, that objections pertaining to matters of record first appearing after the end of the Due Diligence Period may be made at any time prior to the closing.

f. Option to Cure. In the event of a title or survey objection, City will have the option, but not the obligation, to cure the objection and will notify Buyer of its election within ten (10) business days after receipt of the objection. In the event that the City elects to cure the objection, it will have sixty (60) days from the date of the notice of election, or such other reasonable time as the parties may agree, to cure the objection. In the event that the City does not elect to cure the objection, or, having elected to cure the objection fails to timely do so to Buyer's reasonable satisfaction, Buyer will have the option to (1) terminate this Agreement (after which neither party will have any further obligation or liability to the other under this Agreement), (2) waive the objection and close, or (3) undertake the cure of such objection at its own expense (in which case it shall have 60 days to do so).

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g. Deed. City shall convey the Premises to Buyer at the closing in fee simple by a municipal quitclaim deed without covenant. Title shall be good and insurable title, free and clear of all encumbrances except (i) easements of record and the Development Restrictions described in this Agreement and it attachments,; (ii) easements for utilities servicing or located on the property, (iii) zoning ordinances, and (iv) real estate taxes not yet due and payable. Further, Buyer acknowledges that the deed shall contain a restriction stating that in the event that the Portland Premises or any portion thereof shall be exempt from real and personal property taxes, by transfer, conversion, or otherwise, then the then-owner of the exempt portion shall make annual payments to the City in lieu of taxes in the amount equal to the amount of property taxes that would have been assessed on the exempt portion of the real and personal property situated on the Premises had such property remained taxable. Such restriction shall also confirm that Buyer and its successors and assigns shall possess and be vested with all rights and privileges as to abatement and appeal of valuations, rates, and the like as are accorded owners of real and personal property in Maine.

h. Development Restrictions on the Portland Premises. The Portland Premises shall be conveyed subject to an easement in form and substance reasonably satisfactory to the City preventing the development for purposes other than passive recreation within the wetland areas located on the Portland Premises; provided however, that the City shall release its easement rights to permit minor wetland alterations affecting less than 10,000 square feet of the wetland areas if the Buyer determines such alterations to be reasonably necessary for the development of the Portland Premises as required by this Agreement.

i. Development Restrictions on the Falmouth Premises. The Falmouth Premises shall be conveyed subject to an easement in form and substance reasonably satisfactory to the City preventing the development of the Falmouth Premises for any purposes other than passive recreation thereon. The easement shall be held by the City or another entity reasonably acceptable to the City and Buyer; provided, however, that the City shall release such easement rights to the extent necessary to permit the development of affordable housing on the Falmouth Premises, subject to the rent and income restrictions set forth in sections 11(b) and (c) below.

j. Buyer's Right to Assign. The Buyer may assign its rights under this Agreement to an affiliated limited partnership or other affiliated entity for purposes of securing financing and/or tax credits for the project with the City's prior written consent, which shall not be unreasonably withheld, delayed or conditioned, provided any such assignee agrees to be bound to the terms of this Agreement.

k. Buyer's Right to Terminate. The Buyer may terminate this Agreement at any time during the due diligence period if, in the exercise of its sole discretion, it decides to not proceed with the Project by giving written

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notice of termination to the City in which case neither party shall have any further obligations to the other.

l. Zoning. The parties agree that the Falmouth Premises shall not be included in any lot coverage or other calculations with respect to the development of the Portland Premises.

4. INSPECTIONS.

a. During the Due Diligence Period, Buyer and its employees, consultants, contractors and agents shall have the right, at Buyer's expense, to enter on the Premises at reasonable times in order to (i) inspect the same, (ii) conduct engineering studies, percolation tests, geotechnical exams, environmental assessments, and other such studies, tests, exams, and assessments, and (iii) do such other things as Buyer determines, it is sole discretion, to be required to determine the suitability of the Premises for Buyer's intended use (collectively, the "Inspections"). The City acknowledges that such Inspections may include the digging of test pits, which the City hereby approves.

b. Buyer agrees to defend, indemnify and hold harmless the City against any mechanics liens that may arise from the activities of Buyer and its employees, consultants, contractors and agents on the Premises.

c. Buyer shall exercise the access and inspection rights granted hereunder at its sole risk and expense, and Buyer hereby releases the City from, and agrees to indemnify, defend, and hold the City harmless against, any and all losses, costs, claims, expenses and liabilities (including without limitation reasonable attorney fees and costs) (collectively, "Damages") suffered by the City on account of any injury to person or damage to property arising out of the exercise by Buyer of its rights hereunder, except to the extent that such Damages result from the act or omission of the City.

d. Buyer shall cause any contractors, consultants or any other party conducting the Inspections to procure automobile insurance, if applicable, and commercial general liability insurance coverage in amounts of not less than Four Hundred Thousand Dollars ($400,000.00) per occurrence for bodily injury, death and property damage, listing the City as an additional insured thereon, and also Workers' Compensation Insurance coverage to the extent required by law; the forms of all such insurance to be subject to City's Corporation Counsel's reasonable satisfaction.

e. In the event that Buyer does not purchase the Premises, Buyer agrees to either return the Premises as nearly as possible to its original condition after conducting the Inspections; provided, however, the City hereby acknowledges and agrees Buyer shall have no obligation to clean-up, remove or take any other action with respect to any disturbance of any pre-existing environmental contamination on the Premises caused by such

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inspections, studies, tests, exams, and assessments, and that Buyer shall have no obligation to clean-up, remove or take any other action with respect to any pre-existing environmental contamination disturbed thereby.

f. The parties hereto acknowledge and agree that it is a condition to Buyer's obligations under this Agreement that the results of the Inspections be acceptable to Buyer in its sole discretion. If the results of such due diligence are not acceptable to Buyer in its sole discretion, and if Buyer exercises its right to terminate this Agreement, and neither party shall have any further obligations or liabilities under this Agreement except as expressly set forth in this Agreement.

5. **REAL ESTATE TAXES, PRORATIONS AND TRANSFER TAX.** Buyer shall be liable for all real estate taxes beginning as of the start of fiscal year following the closing and continuing thereafter. Because the Property is currently owned by the City of Portland, which is exempt from real estate taxes, no taxes were assessed or will be due for any portion of the current fiscal year, and no taxes will be prorated at the closing. Any utilities for the Property shall be prorated as of the closing. The Maine real estate transfer tax shall be paid for by Buyer in accordance with 36 M.R.S.A. § 4641-A. City is exempt from paying the transfer tax pursuant to 36 M.R.S.A. § 4641-C. The recording fee for the deed of conveyance and any expenses relating to Buyer's financing or closing shall be paid for by Buyer.

6. **DEFAULT AND REMEDIES**. In the event that Buyer defaults hereunder for a reason other than the default of the City, City may terminate this Agreement, and neither party shall have any further obligation to the other. In the event City defaults under this Agreement, and if Buyer is not then in default hereunder, Buyer shall have the right to pursue specific performance or terminate this Agreement, in which case neither party shall have any further obligation to the other.

7. **RISK OF LOSS.** The risk of loss or damage to the Premises by fire, eminent domain, condemnation, or otherwise, until transfer of title hereunder, is assumed by the City. The Premises is to be delivered in substantially the same condition as of the date of this Agreement unless otherwise stated. In the event City is not able to deliver the Premises as stated, Buyer may terminate this Agreement, and neither party shall have any further obligations or liabilities under this Agreement except as expressly set forth in this Agreement.

8. **PROPERTY SOLD "AS IS, WHERE IS**." Buyer acknowledges that Buyer has had an opportunity to inspect the Premises, and to hire professionals to do so, and that Premises will be sold "as is, where is" and "with all faults." City, and its agents, make no representations or warranties with respect to the accuracy of any statement as to boundaries or acreage, or as to any other matters contained in any description of the Premises, or as to the fitness of the Premises for a particular purpose, or as to development rights, merchantability, habitability, or as to any other matter, including without limitation, land use, zoning and subdivision issues or the environmental, mechanical, or structural condition of the Premises. Acceptance by Buyer of the Deed at closing and payment of the purchase price shall be deemed to be full

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performance and discharge by the City of every agreement and obligation contained herein.

9. **ENVIRONMENTAL INDEMNIFICATION**. Buyer covenants and agrees to indemnify, defend, and hold the City harmless from and against any and all claims, damages, losses, liabilities, obligations, settlement payments, penalties, assessments, citations, directives, claims, litigation, demands, defenses, judgments, costs, or expenses of any kind, including, without limitation, reasonable attorneys', consultants', and experts' fees incurred in investigating, defending, settling, or prosecuting any claim, litigation or proceeding, that may at any time be imposed upon, incurred by or asserted or awarded against Buyer or the City and relating directly or indirectly to the violation of or compliance with any federal, state, or local environmental laws, rules, or regulations governing the release, handling or storage of hazardous wastes or hazardous materials and affecting all or any portion of the Premises, except to the extent that such a claim results directly from the City's release, handling or storage of hazardous wastes or hazardous materials on the Premises. This duty to indemnify, defend, and hold harmless shall be included in a covenant in the deed and shall run with the land conveyed and be binding upon Buyer's successors, assigns, and transferees.

10. **CLOSING**. Time is of the essence in the performance of this agreement. The closing shall be held at the offices of Buyer's counsel at a time agreeable to the parties on or before the day that is twenty-sseven (27) months after the date of this Agreement (the "Closing Date"). At the Closing:

    a. the City shall execute, acknowledge and deliver to Buyer a municipal quitclaim deed conveying to Buyer good and insurable title to the Premises, free and clear of all encumbrances except as otherwise set forth herein.

    b. Buyer shall deliver the Purchase Price to the City.

    c. Each party shall deliver to the other such other documents, certificates and the like as may be required herein or as may be necessary to carry out the obligations under this Agreement.

    d. Buyer shall deliver evidence, reasonably satisfactory to City's Corporation Counsel, that the entity receiving title to the Premises is in good standing under Maine law, and that the individuals acting at Closing and executing documents on behalf of Buyer are authorized to do so.

11. **BUYER'S POST CLOSING OBLIGATIONS; RIGHTS OF CITY TO REPURCHASE PROPERTY.**
    a. Within twelve (12) months after the Closing Date, Buyer shall commence construction of the Project, as the Project is generally described in the Proposal. The Project shall include no less than forty-four (44) dwelling units, no less than 25% of which shall be three-bedroom units or larger.
    b. Upon the issuance of a certificate of occupancy for all or a portion of the first phase of the Project or at such earlier time as the Buyer, in its

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discretion, may determine, the Buyer shall convey the Project or provide a master lease of the Project with a right to purchase to a Cooperative Affordable Housing Corporation (the "Coop") organized in accordance with the Maine Cooperative Affordable Housing Ownership Act, 13 M.R.S.A. §1741-1762, as may be amended (the "Act").

c. Rent Restrictions. For a period of 99 years after the Project has been transferred to the Coop, all units and cooperative interests in the Project shall be affordable to low- and moderate-income households earning less than or equal to 100% of the area median income (AMI), adjusted for family size, in accordance with federal standards generally accepted at the time of incorporation under the Act. For purposes of this Agreement, "affordable" means that the percentage of income a household is charged in connection with its cooperative interest and other housing expenses, including utilities, shall not exceed 30% of the household's gross monthly income. Minimum household size allowed per unit and the formula for calculating maximum allowable monthly rent is detailed on Exhibit C, which is attached hereto and made a part hereof.

d. Income Restrictions. In order to purchase a cooperative membership interest in, and reside in a unit owned by the limited equity cooperative, a household must not earn more than 100% of the AMI, adjusted for family size, as published by the U.S. Department of Housing and Urban Development ("HUD"). Household income is defined as adjusted gross income used by the IRS. This income test will be used only at the time of the household's purchase, and excludes transfers to family members or an estate beneficiary. At the time of initial sale of cooperative membership interests in the Coop, up to 20% of the cooperative membership interests may be sold to households earning up to 120% of AMI. All other sales and all subsequent sales of cooperative membership interests must be to households earning no more than 100% of AMI.

e. Option to Repurchase. Unless the Project has been transferred to the Coop as set forth above, if Buyer, its successors, assigns, or transferees fails to commence construction of the Project on the Premises within 12 months after the closing, and construct the buildings which are part of the first phase of the Project within thirty (30) months after closing, the City shall have the right, but not the obligation, to repurchase the Premises and the Project at the Purchase Price plus all documented, design, development, construction, and approval expenses incurred by Buyer, or successors, to that juncture. If the City exercises this right to repurchase, Buyer shall convey the Premises to the City and assign to the City all contracts, plans, and other documents related to the design, construction, and regulatory approvals for the Project. This right to repurchase shall be assignable by the City.

f. The articles of organization for the Coop shall provide that in the event the Coop shall be dissolved, it assets will be distributed in accordance with § 1754(6) of the Act to the City or, at the City's option, to another organization permitted under § 1754(6) of the Act reasonably acceptable to the City.

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g. The provisions of this Section 11 will survive closing and will be included in greater detail in the City's deed to Buyer or in a Declaration of Covenants, Conditions and Restrictions executed before or at the time of Closing, which shall be recorded in the Cumberland County Registry of Deeds.

12. **ENTIRE AGREEMENT.** This Agreement represents the entire and complete Agreement and understanding between the parties and supersedes any prior agreement or understanding, written or oral, between the parties with respect to the acquisition or exchange of the Property hereunder. This Agreement cannot be amended except by written instrument executed by City and Buyer.

13. **NON-WAIVER**. No waiver of any breach of any one or more of the conditions of this Agreement by either party shall be deemed to imply or constitute a waiver of any succeeding or other breach hereunder.

14. **HEADINGS AND CAPTIONS.** The headings and captions appearing herein are for the convenience of reference only and shall not in any way affect the substantive provisions hereof.

15. **BINDING EFFECT**. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, administrators, successors and assigns.

16. **TIME.** The City and Buyer each confirm and agree that each of the time periods set forth herein are essential provisions of the terms of this Agreement.

17. **GOVERNING LAW**. This Agreement shall be construed in all respects in accordance with, and governed by, the laws of the State of Maine. All parties hereto hereby consent to the exclusive jurisdiction of the Superior Court for the County of Cumberland in the State of Maine, for all actions, proceedings and litigation arising from or relating directly or indirectly to this Agreement or any of the obligations hereunder, and any dispute not otherwise resolved as provided herein shall be litigated solely in said Court. If any provision of this Agreement is determined to be invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof.

18. **NOTICE**. All notices, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the first business day after the notice is delivered to an overnight delivery service with delivery confirmation, addressed to the recipients at the addresses set forth below. Either party may change addresses for purposes of this paragraph by giving the other party notice of the new address in the manner described herein.

FOR THE City: City of Portland
ATTN: City MANAGER
389 Congress Street
Portland, ME 04101

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With a copy to:	The Office of the Corporation Counsel at the same address.
FOR Buyer:	Maine Cooperative Development Partners, 6 City Center, Fl. 3 Portland, ME 04101
With a copy to:	David C. Pierson, Esq. Eaton Peabody P.O. Box 15235 Portland, ME 04112-5235

19. **SIGNATURES; MULTIPLE COUNTERPARTS.** This Agreement may be executed in any number of counterparts and by different parties in separate counterparts. Each counterpart when so executed shall be deemed to be an original and all of which together shall constitute one and the same agreement.

20. **BROKERS.** The CITY and Buyer each represent and warrant that they have not dealt with a real estate broker in connection with this transaction. Buyer agrees to indemnify and hold harmless City from any claims made by any broker should Buyer's representation in this paragraph be false. Subject to the limitations of liability set forth in the Maine Tort Claims Act, City agrees to indemnify and hold harmless Buyer from any claims made by any broker should City's representation in this paragraph be false. The foregoing indemnities shall include all legal fees and costs incurred in defense against any such claim, and shall survive closing.

21. **RECITALS INCORPORATED BY REFERENCE**. The recitals set forth above are incorporated herein by reference and made a part of this Agreement.

Signature page follows.

IN WITNESS WHEREOF, the parties have caused this instrument to be executed on their behalf by their duly authorized offices or representatives, on the day and year first written above.

City OF PORTLAND

DocuSigned by:
Danielle P. West
ACEE67828A27428...

WITNESS

Danielle West
Its Interim City Manager

BUYER: MAINE COOPERATIVE DEVELOPMENT PARNTERS, LLC

DocuSigned by:
[signature]
11F9CD9E0B8E4E5...

WITNESS

Printed Name: Brian Eng
Its Principal

DocuSigned by:
Approved as to Form:
Michael Goldman
6BDA6A4DE5584E...

Corporation Counsel's Office

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PURCHASE AND SALE AGREEMENT

THIS PURCHASE AND SALE AGREEMENT IS made this 4th day of January 2021 by and between the City OF PORTLAND, a body politic and corporate located in Cumberland County, Maine, (hereinafter referred to as "Seller" or "City"), and Maine Cooperative Development Partners, a Maine corporation, having a mailing address of 6 City Center, Fl. 3., Portland, Maine 04101 (hereinafter referred to as "Buyer").

RECITALS

WHEREAS, the CITY is the owner of approximately 13.3874 acres of land at or near 165 Lambert Street, Portland, Maine (the "Premises") and did advertise RFP #20068 dated April 10, 2020, entitled Request for Proposals for Disposition of City-Owned Property Located at 165 Lambert Street, a copy of which is attached hereto as Exhibit A and incorporated herein (the "Request for Proposals") (the Premises is identified in the City's tax records as CBL 385 A001 and 386 C001 and is generally depicted on Attachment C to the Request for Proposals); and

WHEREAS, Buyer submitted a proposal dated June 16, 2020 in response to the Request for Proposals, a copy of which is attached hereto as Exhibit B and incorporated herein (the "Proposal"); and

WHEREAS, Buyer desires to purchase and develop the Premises, and the City desires to convey the Premises to Buyer, subject to the terms and conditions set forth herein.

NOW THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties, intending to be legally bound, hereby agree as follows:

1. **SALE.** City agrees to sell the Premises to Buyer, and Buyer agrees to purchase the Premises in accordance with the terms and conditions set forth in this Agreement. This Agreement is for the sale of land only.

2. **CONSIDERATION**. The purchase price for the Premises shall be One Dollar ($1.00) (the "Purchase Price").

3. **TITLE AND DUE DILIGENCE.**

    a. Due Diligence Period. Buyer will have from the date of this Agreement until 4:00 PM Eastern Daylight Savings Time on the day that is thirteen (13) months after the date of this Agreement (the "Due Diligence Period") to complete any surveys, environmental review, inspections, and title examinations, and to obtain any zone change, site plan approval, and any other permits and regulatory approvals required for the Project.

    b. Property Description. The legal description of the Premises contained in the deed will be a survey description based upon a survey plan that will more specifically describe the Premises. The survey and description of the

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Premises will be prepared by the Buyer at its sole expense and provided to the City for review two months prior to the expiration of the Due Diligence Period. City shall notify Buyer of any objections to the survey and description prior to the expiration of the Due Diligence Period.

c. Rezoning Contingency. Buyer proposes to obtain the Portland City Council's approval to rezone the Premises (the "Rezoning Approval") to maximize residential density for its development of the Premises as described in the Proposal (the "Project"). The Buyer will be responsible for obtaining, at its sole expense, the Rezoning Approval and any other regulatory approvals required for the Project prior to Closing.

d. Financing Contingency. The Buyer's obligation to close is contingent on obtaining construction and permanent financing for the Project that the Buyer, in its discretion, determines is sufficient to put the Project on a sound financial footing. That financing is anticipated to include, but not be limited to, the following: (i) permanent financing for the Coop in the form of a HUD Section 213 loan; and (ii) affordable housing tax increment financing from the City.

e. Title and Survey Objections. Buyer will have until the end of the Due Diligence Period to deliver to City any written objections to title, environmental, or survey matters (other than the permitted exceptions identified herein) that materially affect insurability or use. Objections not made prior to the end of the Due Diligence Period will be deemed waived; provided, however, that objections pertaining to matters of record first appearing after the end of the Due Diligence Period may be made at any time prior to the closing.

f. Option to Cure. In the event of a title or survey objection, City will have the option, but not the obligation, to cure the objection and will notify Buyer of its election within ten (10) business days after receipt of the objection. In the event that the City elects to cure the objection, it will have sixty (60) days from the date of the notice of election, or such other reasonable time as the parties may agree, to cure the objection. In the event that the City does not elect to cure the objection, or, having elected to cure the objection fails to timely do so to Buyer's reasonable satisfaction, Buyer will have the option to (1) terminate this Agreement (after which neither party will have any further obligation or liability to the other under this Agreement), (2) waive the objection and close, or (3) undertake the cure of such objection at its own expense (in which case it shall have 60 days to do so).

g. Deed. City shall convey the Premises to Buyer at the closing in fee simple by a municipal quitclaim deed without covenant. Title shall be good and insurable title, free and clear of all encumbrances except (i) easements of record and easements described herein; (ii) easements for utilities servicing the property, (iii) zoning ordinances, and (iv) real estate taxes not yet due

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and payable. Further, Buyer acknowledges that the deed shall contain a restriction stating that in the event that the Premises or any portion thereof shall be exempt from real and personal property taxes, by transfer, conversion, or otherwise, then the then-owner of the exempt portion shall make annual payments to the City in lieu of taxes in the amount equal to the amount of property taxes that would have been assessed on the exempt portion of the real and personal property situated on the Premises had such property remained taxable. Such restriction shall also confirm that Buyer and its successors and assigns shall possess and be vested with all rights and privileges as to abatement and appeal of valuations, rates, and the like as are accorded owners of real and personal property in Maine.

h. Buyer's Right to Terminate. The Buyer may terminate this Agreement at any time during the due diligence period if, in the exercise of its sole discretion, it decides to not proceed with the Project by giving written notice of termination to the City in which case neither party shall have any further obligations to the other.

4. INSPECTIONS.

a. During the Due Diligence Period, Buyer and its employees, consultants, contractors and agents shall have the right, at Buyer's expense, to enter on the Premises at reasonable times in order to (i) inspect the same, (ii) conduct engineering studies, percolation tests, geotechnical exams, environmental assessments, and other such studies, tests, exams, and assessments, and (iii) do such other things as Buyer determines, it is sole discretion, to be required to determine the suitability of the Premises for Buyer's intended use (collectively, the "Inspections"). The City acknowledges that such Inspections may include the digging of test pits, which the City hereby approves.

b. Buyer agrees to defend, indemnify and hold harmless the City against any mechanics liens that may arise from the activities of Buyer and its employees, consultants, contractors and agents on the Premises.

c. Buyer shall exercise the access and inspection rights granted hereunder at its sole risk and expense, and Buyer hereby releases the City from, and agrees to indemnify, defend, and hold the City harmless against, any and all losses, costs, claims, expenses and liabilities (including without limitation reasonable attorney fees and costs) (collectively, "Damages") suffered by the City on account of any injury to person or damage to property arising out of the exercise by Buyer of its rights hereunder, except to the extent that such Damages result from the act or omission of the City.

d. Buyer shall cause any contractors, consultants or any other party conducting the Inspections to procure automobile insurance, if applicable, and commercial general liability insurance coverage in amounts of not less than Four Hundred Thousand Dollars ($400,000.00) per occurrence for

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bodily injury, death and property damage, listing the City as an additional insured thereon, and also Workers' Compensation Insurance coverage to the extent required by law; the forms of all such insurance to be subject to City's Corporation Counsel's reasonable satisfaction.

e. In the event that Buyer does not purchase the Premises, Buyer agrees to either return the Premises as nearly as possible to its original condition after conducting the Inspections; provided, however, the City hereby acknowledges and agrees Buyer shall have no obligation to clean-up, remove or take any other action with respect to any disturbance of any pre-existing environmental contamination on the Premises caused by such inspections, studies, tests, exams, and assessments, and that Buyer shall have no obligation to clean-up, remove or take any other action with respect to any pre-existing environmental contamination disturbed thereby.

f. The parties hereto acknowledge and agree that it is a condition to Buyer's obligations under this Agreement that the results of the Inspections be acceptable to Buyer in its sole discretion. If the results of such due diligence are not acceptable to Buyer in its sole discretion, and if Buyer exercises its right to terminate this Agreement, and neither party shall have any further obligations or liabilities under this Agreement except as expressly set forth in this Agreement.

5. **REAL ESTATE TAXES, PRORATIONS AND TRANSFER TAX.** Buyer shall be liable for all real estate taxes beginning as of the start of fiscal year following the closing and continuing thereafter. Because the Property is currently owned by the City of Portland, which is exempt from real estate taxes, no taxes were assessed or will be due for any portion of the current fiscal year, and no taxes will be prorated at the closing. Any utilities for the Property shall be prorated as of the closing. The Maine real estate transfer tax shall be paid for by Buyer in accordance with 36 M.R.S.A. § 4641-A. City is exempt from paying the transfer tax pursuant to 36 M.R.S.A. § 4641-C. The recording fee for the deed of conveyance and any expenses relating to Buyer's financing or closing shall be paid for by Buyer.

6. **DEFAULT AND REMEDIES**. In the event that Buyer defaults hereunder for a reason other than the default of the City, City may terminate this Agreement, and neither party shall have any further obligation to the other. In the event City defaults under this Agreement, and if Buyer is not then in default hereunder, Buyer shall have the right to pursue specific performance or terminate this Agreement, in which case neither party shall have any further obligation to the other.

7. **RISK OF LOSS.** The risk of loss or damage to the Premises by fire, eminent domain, condemnation, or otherwise, until transfer of title hereunder, is assumed by the City. The Premises is to be delivered in substantially the same condition as of the date of this Agreement unless otherwise stated. In the event City is not able to deliver the Premises as stated, Buyer may terminate this Agreement, and neither party shall have any further obligations or liabilities under this Agreement except as expressly set forth in this Agreement.

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8. **PROPERTY SOLD "AS IS, WHERE IS**." Buyer acknowledges that Buyer has had an opportunity to inspect the Premises, and to hire professionals to do so, and that Premises will be sold "as is, where is" and "with all faults." City, and its agents, make no representations or warranties with respect to the accuracy of any statement as to boundaries or acreage, or as to any other matters contained in any description of the Premises, or as to the fitness of the Premises for a particular purpose, or as to development rights, merchantability, habitability, or as to any other matter, including without limitation, land use, zoning and subdivision issues or the environmental, mechanical, or structural condition of the Premises. Acceptance by Buyer of the Deed at closing and payment of the purchase price shall be deemed to be full performance and discharge by the City of every agreement and obligation contained herein.

9. **ENVIRONMENTAL INDEMNIFICATION**. Buyer covenants and agrees to indemnify, defend, and hold the City harmless from and against any and all claims, damages, losses, liabilities, obligations, settlement payments, penalties, assessments, citations, directives, claims, litigation, demands, defenses, judgments, costs, or expenses of any kind, including, without limitation, reasonable attorneys', consultants', and experts' fees incurred in investigating, defending, settling, or prosecuting any claim, litigation or proceeding, that may at any time be imposed upon, incurred by or asserted or awarded against Buyer or the City and relating directly or indirectly to the violation of or compliance with any federal, state, or local environmental laws, rules, or regulations governing the release, handling or storage of hazardous wastes or hazardous materials and affecting all or any portion of the Premises, except to the extent that such a claim results directly from the City's release, handling or storage of hazardous wastes or hazardous materials on the Premises. This duty to indemnify, defend, and hold harmless shall be included in a covenant in the deed and shall run with the land conveyed and be binding upon Buyer's successors, assigns, and transferees.

10. **CLOSING**. Time is of the essence in the performance of this agreement. The closing shall be held at the offices of Buyer's counsel at a time agreeable to the parties on or before the day that is fifteen (15) months after the date of this Agreement (the "Closing Date"). At the Closing:

    a. the City shall execute, acknowledge and deliver to Buyer a municipal quitclaim deed conveying to Buyer good and insurable title to the Premises, free and clear of all encumbrances except as otherwise set forth herein.

    b. Buyer shall deliver the Purchase Price to the City.

    c. Each party shall deliver to the other such other documents, certificates and the like as may be required herein or as may be necessary to carry out the obligations under this Agreement.

    d. Buyer shall deliver evidence, reasonably satisfactory to City's Corporation Counsel, that the entity receiving title to the Premises is in good standing

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under Maine law, and that the individuals acting at Closing and executing documents on behalf of Buyer are authorized to do so.

11. BUYER'S POST CLOSING OBLIGATIONS; RIGHTS OF CITY TO REPURCHASE PROPERTY.

a. Within twelve (12) months after the Closing Date, Buyer shall commence construction of the Project, as the Project is generally described in the Proposal. The Buyer, in its discretion, may develop the Project in two phases. The first phase of the Project shall include the greater of 20 three-bedroom dwelling units or the maximum number of dwelling units feasible under the current zoning.

b. Upon the issuance of a certificate of occupancy for all or a portion of the first phase of the Project or at such earlier time as the Buyer, in its discretion, may determine, the Buyer shall convey the Project to a Cooperative Affordable Housing Corporation (the "Coop") organized in accordance with the Maine Cooperative Affordable Housing Ownership Act, 13 M.R.S.A. §1741-1762, as may be amended (the "Act"). Notwithstanding anything to the contrary in the foregoing, the Buyer may retain the right to develop additional units on the Premises as a second phase of the Project which shall be conveyed to the Coop.

c. Rent Restrictions. For a period of 99 years after the Project has been transferred to the Coop, all units and cooperative interests in the Project shall be affordable to low- and moderate-income households earning less than or equal to 100% of the area median income (AMI), adjusted for family size, in accordance with federal standards generally accepted at the time of incorporation under the Act. For purposes of this Agreement, "affordable" means that the percentage of income a household is charged in connection with its cooperative interest and other housing expenses, including utilities, shall not exceed 30% of the household's gross monthly income. Minimum household size allowed per unit and the formula for calculating maximum allowable monthly rent is detailed on Exhibit C, which is attached hereto and made a part hereof.

d. Income Restrictions. In order to purchase a cooperative membership interest in, and reside in a unit owned by the limited equity cooperative, a household must not earn more than 100% of the AMI, adjusted for family size, as published by the U.S. Department of Housing and Urban Development ("HUD"). Household income is defined as adjusted gross income used by the IRS. This income test will be used only at the time of the household's purchase, and excludes transfers to family members or an estate beneficiary. At the time of initial sale of cooperative membership interests in the Coop, up to 20% of the cooperative membership interests may be sold to households earning up to 120% of AMI. All other sales and all subsequent sales of cooperative membership interests must be to households earning no more than 100% of AMI.

e. Option to Repurchase. Unless the Project has been transferred to the Coop as set forth above, if Buyer, its successors, assigns, or transferees fails to commence construction of the Project on the Premises within 12 months after the closing, and construct the buildings which are part of the first

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phase of the Project within thirty (30) months after closing, the City shall have the right, but not the obligation, to repurchase the Premises and the Project at the Purchase Price plus all documented, design, development, construction, and approval expenses incurred by Buyer, or successors, to that juncture. If the City exercises this right to repurchase, Buyer shall convey the Premises to the City and assign to the City all contracts, plans, and other documents related to the design, construction, and regulatory approvals for the Project. This right to repurchase shall be assignable by the City.

f. The articles of organization for the Coop shall provide that in the event the Coop shall be dissolved, it assets will be distributed in accordance with § 1754(6) of the Act to the City or, at the City's option, to another organization permitted under § 1754(6) of the Act reasonably acceptable to the City.

g. The provisions of this Section 11 will survive closing and will be included in greater detail in the City's deed to Buyer or in a Declaration of Covenants, Conditions and Restrictions executed before or at the time of Closing, which shall be recorded in the Cumberland County Registry of Deeds.

12. **ENTIRE AGREEMENT.** This Agreement represents the entire and complete Agreement and understanding between the parties and supersedes any prior agreement or understanding, written or oral, between the parties with respect to the acquisition or exchange of the Property hereunder. This Agreement cannot be amended except by written instrument executed by City and Buyer.

13. **NON-WAIVER**. No waiver of any breach of any one or more of the conditions of this Agreement by either party shall be deemed to imply or constitute a waiver of any succeeding or other breach hereunder.

14. **HEADINGS AND CAPTIONS.** The headings and captions appearing herein are for the convenience of reference only and shall not in any way affect the substantive provisions hereof.

15. **BINDING EFFECT**. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective heirs, administrators, successors and assigns.

16. **TIME.** The City and Buyer each confirm and agree that each of the time periods set forth herein are essential provisions of the terms of this Agreement.

17. **GOVERNING LAW**. This Agreement shall be construed in all respects in accordance with, and governed by, the laws of the State of Maine. All parties hereto hereby consent to the exclusive jurisdiction of the Superior Court for the County of Cumberland in the State of Maine, for all actions, proceedings and litigation arising from or relating directly or indirectly to this Agreement or any of the obligations hereunder, and any dispute not otherwise resolved as provided herein shall be litigated solely in said Court. If any provision of this Agreement is determined to be

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invalid or unenforceable, it shall not affect the validity or enforcement of the remaining provisions hereof.

18. **NOTICE**. All notices, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the first business day after the notice is delivered to an overnight delivery service with delivery confirmation, addressed to the recipients at the addresses set forth below. Either party may change addresses for purposes of this paragraph by giving the other party notice of the new address in the manner described herein.

FOR THE City:	City of Portland ATTN: City MANAGER 389 Congress Street Portland, ME 04101
With a copy to:	The Office of the Corporation Counsel at the same address.
FOR Buyer:	Maine Cooperative Development Partners, 6 City Center, Fl. 3, Portland, ME 04101
With a copy to:	David C. Pierson, Esq. Eaton Peabody P.O. Box 15235 Portland, ME 04112-5235

19. **SIGNATURES; MULTIPLE COUNTERPARTS.** This Agreement may be executed in any number of counterparts and by different parties in separate counterparts. Each counterpart when so executed shall be deemed to be an original and all of which together shall constitute one and the same agreement.

20. **BROKERS.** The CITY and Buyer each represent and warrant that they have not dealt with a real estate broker in connection with this transaction. Buyer agrees to indemnify and hold harmless City from any claims made by any broker should Buyer's representation in this paragraph be false. Subject to the limitations of liability set forth in the Maine Tort Claims Act, City agrees to indemnify and hold harmless Buyer from any claims made by any broker should City's representation in this paragraph be false. The foregoing indemnities shall include all legal fees and costs incurred in defense against any such claim, and shall survive closing.

21. **RECITALS INCORPORATED BY REFERENCE**. The recitals set forth above are incorporated herein by reference and made a part of this Agreement.

IN WITNESS WHEREOF, the parties have caused this instrument to be executed on their behalf by their duly authorized offices or representatives, on the day and year first written above.

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City OF PORTLAND

DocuSigned by:
Jon P. Jennings
4F521A7E9E0344B...

Jon P. Jennings Its City Manager

MAINE COOPERATIVE DEVELOPMENT PARTNERS

DocuSigned by:
Brian Eng
14E9ED0E0B984B5...

Brian Eng
Its Principal

Approved as to Form:

DocuSigned by:
Michael Goldman
5BDA6A4DB5B4E1...

Corporation Counsel's Office

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

ZONING ANALYSIS Relevant Zone(s) R3 - PRUD

All Projects:

	Required	Proposed
Lot Size	3 acres	17.94 acres
Area Per Dwelling Unit	3,250 SF	3,256 SF
Minimum Street Frontage	N/A	
Front Yard Minimum	N/A	
Front Yard Maximum	N/A	
Rear Yard	10'	>10'
Yard Right	10'	>10'
Yard Left	10'	>10'
Side Street Setback	N/A	
Step Back	N/A	
Maximum Lot Coverage	N/A	
Minimum Lot Coverage	N/A	
Maximum Height	35'	<35'
Open Space	300 S.F / D.U.	303 S.F/D.U.
Maximum Impervious Area	N/A	
Pavement Setback	N/A	
Floor Area Ratio	N/A	
Off Street Parking Spaces	N/A	67
Loading Bays	N/A	
Other 1		
Other 2		
Other 3		

E. Summary of Written Easements

Existing easements on site as identified by Owen Haskell, Inc. include:

- A drainage easement benefitting Maine DOT as recorded in the Cumberland County Registry of Deeds Book 3901/31.

Proposed Easements:

- There are several proposed drainage easements currently being coordinated on which will benefit the City of Portland.

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.
Technical Manual 1.7.2.3	24' Drive Aisle Width	We are requesting to reduce the drive aisle width from 24' to 22'.	Based on the proposed land use, the residents' familiarity with the site, and a low rate of turnover, a width of 24' is not necessary to accommodate a functional parking lot. 22' allows for a reduction in impervious area.
Technical Manual Appendices A	All curb material shall be granite curb	We are requesting to install slipform concrete curb in lieu of granite curbing in the public right-of-way	Given the project's significant frontage along Washington Ave, we are requesting to install slipform concrete curb in lieu of granite curbing. This will help reduce the total cost of this affordable housing project while also providing for a vertical barrier to enhance pedestrian safety.

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.
Land Use Code Ch 14.6.1.B.3.a	All development shall provide curb and sidewalks along all frontages	We are requesting to provide a curbed sidewalk along the project's frontage on Washington Ave.	The waiver is being sought to focus funds to enhance pedestrian safety along Washington Ave, at the Auburn and Lambert intersections, and the link to the existing sidewalk network where there is the greatest density of existing pedestrian infrastructure. There is not a sidewalk along Lambert Street within 1,000 ft of the project.

G. Financial Capacity

Please find attached the status of good standing from the Secretary of State for the Maine Cooperative Development Partners and a letter of financial capacity from the Applicant's bank.



Corporate Name Search

Information Summary

Subscriber activity report

This record contains information from the CEC database and is accurate as of: Wed May 11 2022 10:31:06. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
MAINE COOPERATIVE DEVELOPMENT PARTNERS LLC	20212626DC	LIMITED LIABILITY COMPANY (DOMESTIC)	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
10/01/2020	N/A	MAINE

Other Names **(A=Assumed ; F=Former)**

NONE

Clerk/Registered Agent

DAVID C. PIERSON
PO BOX 15235

PORTLAND, ME 04112 5235

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Click on a link to obtain additional information.

List of Filings	View list of filings	
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Additional Addresses	Plain Copy	Certified copy
Certificate of Existence (more info)	Short Form without amendments ($30.00)	Long Form with amendments ($30.00)

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If you encounter problems, visit the troubleshooting page.



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evernorth
Investing in communities. Building possibilities.

June 2, 2022

Mr. Matthew Peters
Maine Cooperative Development Partners, LLC
c/o Elysian Enterprises LLC
P.O. Box 4341
Portland, ME 04101

RE: Letter of Interest – Lambert Woods North, Portland, Maine

Dear Matthew:

Thank you for the opportunity to review the Lambert Woods North project, the new construction of affordable family housing in Portland, Maine.

Evernorth is pleased to provide this letter of interest. As you know, Evernorth invests in community-based projects receiving the federal Low-Income Housing Tax Credit (LIHTC). The below pricing and investment estimates are based upon preliminary information provided by you.

The information provided describes an approximate $29.3 million construction of a 74-unit project located at 622 Auburn Street.

The project proposes 4% federal LIHTC equity.

We understand the project may qualify for up to $1,103,161 in annual federal LIHTCs. Upon satisfactory resolution of any identified funding needs, we would be interested in investing approximately $9,596,538 in LIHTCs (approximately $0.87 equity pricing) in exchange for a 99.99% limited partnership interest in the Partnership to be formed.

Changes in project timing or assumptions relied upon by Evernorth may result in changes to equity pricing. A more detailed equity letter of intent will be provided once all capital sources have been secured.

As this is not a commitment letter, Evernorth's investment is conditioned upon successful completion of underwriting, due diligence review, tax credit award, and pro-forma approved by Maine State Housing Authority.

We wish you success as you further define the project and look forward to working with you.

Sincerely,

Beth Boutin

100 Bank Street, Suite 400, Burlington, VT 05401
Phone: 802.863.8424 Fax: 802.660.9034

120 Exchange Street, Suite 600, Portland, ME 04101
Phone: 207.772.8255 Fax: 207.772.8241

evernorthus.org

Vice President, Community Investments

100 Bank Street, Suite 400, Burlington, VT 05401
Phone: 802.863.8424 Fax: 802.660.9034

120 Exchange Street, Suite 600, Portland, ME 04101
Phone: 207.772.8255 Fax: 207.772.8241

evernorthus.org

April 1, 2021

Matthew Peters
Principal
Maine Co-op Development Partners
6 City Ctr, Fl 3
Portland, ME 04101

RE: Lambert Woods Cooperative

To whom it may concern:

Centennial Mortgage has been engaged by Maine Co-op Development Partners to secure mortgage insurance through the FHA 213 program for cooperative housing and fund a construction/permanent mortgage for Lambert Woods Cooperative, a new cooperative housing project in Portland, ME. We have reviewed a financing request, including initial plans, pro forma operating budget, the construction budget and initial market information for Lambert Woods Cooperative in Portland, ME. In addition, we have reviewed the experience of the overall development team. Based on this review, we feel that this project is an excellent candidate for financing and will conform to all the requirements to qualify for construction and permanent financing through the FHA 213 program. We feel that this is the right time and place to create a new affordable cooperative given the advantages this particular form of housing provides to its members, primarily sustainable, affordable housing, democratic control and a greater sense of community.

Having now completed this structuring phase, we have now entered the formal application stage for the FHA 213 mortgage insurance and believe that Lambert Woods Cooperative has a high likelihood of success over the coming year in obtaining a 40-year, low interest loan for the project of approximately $25,210,000. Additional subordinated financing would serve to further increase that likelihood. We also believe that success at Lambert Woods Cooperative will open an entirely new avenue for affordable housing finance in the state of Maine by making the FHA 213 program finance accepted in the market.

Centennial Mortgage has substantial expertise and experience completing FHA financing transactions. We are very active in lending to cooperative housing projects throughout the country. Cooperative housing provides a unique form of democratically controlled housing and we are actively working with several groups to create new communities at affordable prices. Personally, I have been involved in cooperative housing for over 20 years, through financing and serving on the board of the National Association of Housing Cooperatives.

Phone: 202-415-1862 Email: hjeffers@centennialmortgage.com

We encourage other funding sources to join us in supporting this innovative project and creating up to 98% leverage for future projects through this program. Please let me know should you have any questions or require any additional information.

Sincerely,



Hugh Jeffers
Vice President of Originations

Phone: 202-415-1862 Email: hjeffers@centennialmortgage.com

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COOPERATIVE DEVELOPMENT INSTITUTE
P.O. Box 1051, Northampton, Massachusetts 01061-1051
PH 413-665-1271 • FX 413-541-8300 • www.cdi.coop • info@cdi.coop

April 29, 2020

To whom it may concern:

The Cooperative Development Institute (CDI) is excited to support the Maine Cooperative Developers' proposal for Lambert Woods II (at 622 Auburn Street, Portland and at 0 Gray Road, Falmouth). CDI believes this will be a beneficial addition to the adopted plan at the 165 Lambert St. parcel, which we also enthusiastically support.

CDI is a 501(c)3 nonprofit founded in 1994 by co-op leaders to work with people in the Northeast to create cooperative businesses and networks that grow a prosperous, equitable economy.

CDI provides expert assistance, organizational development, and support to groups undertaking cooperative development. In the past decade, CDI has helped create 49 new Resident Owned Communities (ROCs) in New England, representing 4,479 households. 10 of the ROCs are conversions of manufactured home parks in Maine. CDI's role is to help form new cooperatives, train residents, and ensure that the cooperative has the support it needs to remain permanently affordable.

Our intention is that at Lambert Woods II, CDI will:

- Lead the creation of the new Co-op entity.
- Lead resident training and resident participation in the construction phase.
- Create and administer a long-term management plan that would meet the city's TIF requirements to ensure that the property meets the city's affordability metrics for at least 30 years.
- Be the long term training & support organization for the Co-op.

We are pleased with the proposal and the development team, and hope to be part of this exciting project!

Sincerely,

Noémi Giszpenc
Executive Director

In accordance with Federal law and U.S. Department of Agriculture policy, this institution is prohibited from discrimination on the base of race, color, national origin, sex, age, or disability. (Not all prohibited bases apply to all programs.) To file a complaint of discrimination write USDA, Director, Office of Civil Rights, 1400 Independence Avenue SW, Washington, DC 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (voice and TDD).

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ANDREW REICHER EXECUTIVE DIRECTOR

April 29, 2021

To whom it may concern:

UHAB is pleased to support the Lambert II Project to create a Limited Equity Cooperative providing affordable home ownership on Lambert Street in Portland.

The Urban Homesteading Assistance Board was created to assist neighborhood residents in NYC to create, own and operate their own housing. Our original projects were Homesteading Projects where residents would take over abandoned buildings in NYC's low-income neighborhoods and rehab them using their own sweat equity and owning and operating them as affordable housing cooperatives. Since that time UHAB has assisted with the creation of about 1,200 limited equity cooperatives providing affordable homeownership to almost 30,000 households. We continue to support these co-ops with stewardship services, ongoing training and technical assistance as well as group insurance, fuel buying, green energy services, bookkeeping and election services.

Throughout our nearly 50-year history, UHAB has occasionally provided, training, capacity building and services to organizations and developers creating affordable co-ops in cities around the country. Six years ago, we began a census and survey of all limited equity housing co-ops in the nation. The results and a map of the 320,000 units can be found at www.sixthprinciple.coop. But also, as a result we have received requests for our capacity building, technical assistance, and services from organizations, local governments, and housing developers around the country. It has become part of our mission and our work to serve and grow the cooperative housing community not only in NYC but nationwide.

UHAB has also agreed to provide pre-development financing for the Lambert Woods I at 165 Lambert Street and would be open to considering additional support as Lambert Woods II moves forward.

Our work on the Lambert II project in support of CDI and MCDP is part of this national effort and we couldn't be more excited to be part of this effort. Lambert II is a great proposal with a strong development team.

Sincerely,

Andrew Reicher
Executive Director

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EXHIBIT C
Minimum Household Size and Maximum Allowable Monthly Rent Calculation

The Minimum household size for a unit in the Coop is based on the number of bedrooms in the unit, as set forth in the table below. The maximum allowable monthly rent for a unit is 1/12 of 30% of the Area Median Income, based on the minimum household size for a unit, less the Coop member's costs for utilities.

	Studio/One-Bedroom Unit	**Two-Bedroom Unit**	**Three-Bedroom Unit**	**Four-Bedroom Unit**
Minimum Household Size	1	2	3	4

For Example, utilizing 2021 AMI levels, and assuming no out of pocket utility costs for the Co-op member, the maximum allowable monthly rent at 100% AMI would be as follows:

Studio/One Bedroom Unit: 1/12(0.30 x $69,950) = $1,748.75

Two Bedroom Unit: 1/12(0.30 x $79,950) = $1,998.75

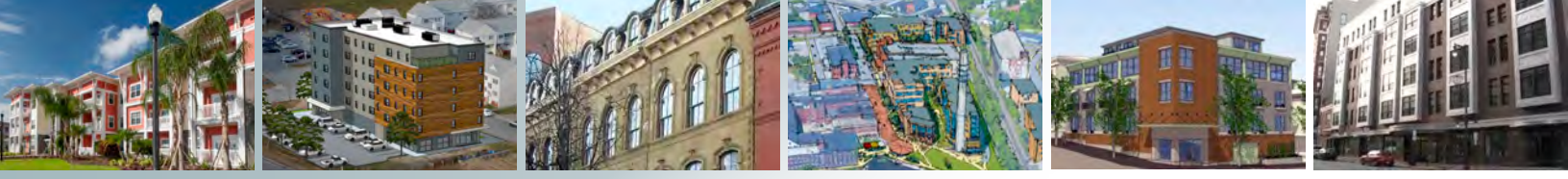
Three Bedroom Unit: 1/12(0.30 x $89,950) = $2,248.75

In the event that the Co-op member has out of pocket utility expenses, the maximum allowable monthly rent would be decreased by the amount of those utility expenses. For example, for a two bedroom unit with $300 in monthly utility expenses, the maximum allowable monthly rent would be $1,998.75 - $300 = $1,698.75.

Utility allowance will be calculated in one of two ways: (1) using the utility allowance established by the Portland Housing Authority or (2) based on actual documented utility usage at the property.

H. Technical Capacity

Please find attached descriptions and examples of technical capacity for the Maine Cooperative Development Partners, Aceto Landscape Architects, and Acorn Engineering.



Maine Cooperative Development Partners

MAINE COOPERATIVE DEVELOPMENT PARTNERS build neighborhoods where the elements that constitute quality of life—access to green space, healthy lifestyles, community, privacy, and affordability—are not at odds with each other. Grounding principles for this work are creating equitable communities; complementing walkable neighborhoods; building healthy buildings; and celebrating beauty, art, and the natural environment. We use Limited Equity Cooperatives as a form of ownership to create options for people of all ages, backgrounds, and incomes to live in harmony with nature and their neighbors.

WE ENVISION small towns, urban neighborhoods, and suburban neighborhood centers that are walkable to daily needs and adjacent to recreational facilities, trails, and transit corridors; homes that use energy efficient construction, and shared gardens, patios, and play spaces for people to get to know and enjoy their neighbors.

WE GIVE BACK by partnering with organizations that support trails and green space, transit, local businesses, social equity, and efforts to mainstream energy efficient building and land use.

PRINCIPALS



MATTHEW PETERS has been involved in the completion of over 20 new construction, major rehab, and acquisition deals. Matt worked for eight years at Avesta Housing, one of Northern New England's largest non-profit housing developers and owners, project managing affordable housing developments, building out and overseeing the Asset Management department, and ending in an executive role overseeing the entire development and acquisitions pipeline as Vice President of Real Estate Services. In 2018 he began to consult for Housing Authorities, housing non-profits, and Community Development Finance Institutions in Maine supporting these organizations in acquisition, ground-up development, and underwriting of affordable housing properties. Matt also is the Executive Director of Freeport Housing Trust based in Freeport, Maine. He has strong working relationships with MaineHousing, Rural Development, lenders, tax credit syndicators, and other professionals in the design and construction field, holds a Masters in Urban Planning from the University of Washington, and certifications such as Spectrum's C3P and Rural Development STAR trainings and LEED Accredited Professional.



BRIAN ENG is a real estate investor who has worked on commercial projects in Florida, Connecticut, New Jersey, and Maine. He has worked as a principal on developments of over 200 units, is a principal on redeveloping the MERC site in Biddeford, and has redeveloped several smaller properties in Portland. He brings strong expertise in financials, fundraising, advocacy, and public speaking. He grew up in a co-op in New York City, and is on the board of UHAB, the entity that manages 20,000 units of cooperative housing in New York.



LIZ TRICE is a policy professional who builds multidisciplinary partnerships across real estate, economic development, entrepreneurship, and public health. Liz holds a masters degree in Public Policy & Management with a certificate in Community Planning & Development from the Muskie School at the University of Southern Maine. She has worked on multi-unit projects in Portland to obtain zone changes, lead the public engagement process with neighboring residents and businesses, apply for TIFs and grants, and direct the design of shared spaces. Her work includes award-winning research on the regulatory barriers to people living alone achieving home ownership, leading the process to redesign Bramhall Square, and working with medical and economic development institutions to develop strategic plans. Her projects to re-envision urban spaces for livability and natural ecosystems won two of three awards given by the 2019 Portland Society of Architecture's Complete City Competition. Liz trained as a cohousing developer and Passive House Design Consultant and has visited over 20 cohousing developments in the United States. She is currently the owner of PelotonLabs, a coworking space in Portland.

PROJECTS



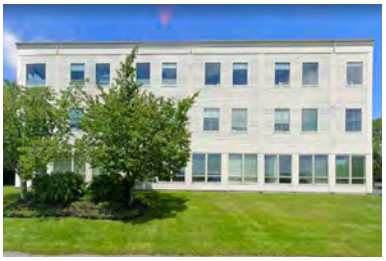
M NORTH ORLANDO—As a principal of Clay Cove Capital, Brian was the control capital partner in the ground-up development of M North in Orlando, a $37.1M, 288-unit multifamily development in Orlando, Florida. www.mnorthorlando.com



BIDDEFORD MERC REDEVELOPMENT Brian worked with Jim Brady of Fathom Companies, to serve as master developer of city-owned land on the former Maine Energy Recovery Corp. incinerator through a public-private partnership with the City of Biddeford.



6 CITY CENTER IN PORTLAND—Brian redeveloped and retenanted a largely vacant Old Port mixed use building including executive office suites. www.sixcitycenter.com, and bringing in a law firm condo, law firm tenant, Lio Restaurant, and HE Paintbar nail salon.



1685 CONGRESS IN PORTLAND—Brian redeveloped a 50% vacant office/medical building and retenanted it including Maine Plastic Surgery Center and Maxim Healthcare. www.maineplasticsurgery.com

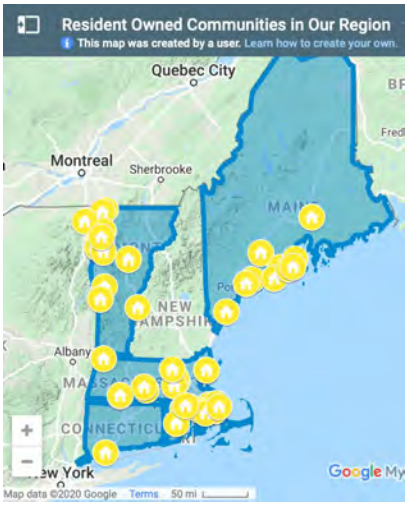


645 CONGRESS STREET—This former downtown college dormitory was converted to 55 one-bedroom and studio apartments with retail on the first floor. Liz worked for developers Shinberg and Alfond on the initial concept, conducted a market analysis, developed relationships and communication with neighbors and businesses, creating a bike storage and parking plan, created a community management plan, and assisted with lease-up.

COOPERATIVE DEVELOPMENT INSTITUTE

The Cooperative Development Institute (CDI) is a regional 501(c)3 non-profit founded in 1994 by co-op leaders in the Northeast. CDI's mission is to build a cooperative economy through the creation and development of successful cooperative enterprises. We are transforming ownership of our economy, so all people can meet their basic needs. CDI has 30 staff across the Northeast including six staff members in Southern Maine.

New England Resident Owned Community Projects (NEROC)



One of our primary activities is creating cooperative housing in Maine and the Northeast. When a park is for sale we help residents form a cooperative, get financing to buy the park, and learn how to run it with democratic resident control. This program gives residents control of the land beneath their homes and protects the affordability of their housing.

The Resident Owned Community (ROC) model began in NH with the NH Community Loan Fund and became a national model with the formation of ROC USA in 2008. The program has helped people in over 50 parks – comprising more than 4,800 homes — convert to resident ownership. Those communities are part of the ROC USA Network, which has helped secure over 15,000 units of affordable housing nation-wide. CDI provides ongoing support as trainers and advisers for the ROCs and other cooperatives in the region. We assist in governance, management, financial oversight, communications, conflict resolution, compliance, and securing financing.

Charter Oaks Village Cooperative



With the support and technical assistance of the Cooperative Development Institute (CDI), the residents of Charter Oaks Village acquired the land on the 40 unit Arundel manufactured housing park on June 11, 2019 for $1,170,000, helping to preserve the affordable housing community within it.

Charter Oaks Village joins nine other Maine manufactured housing communities supported by CDI and financed by Genesis Community Loan Fund, representing 440 homes now under resident control. The newly formed housing cooperative was a recipient of a GrowSmart Maine's honorary 2019 Smart Growth Award.

Mountainside Community Cooperative

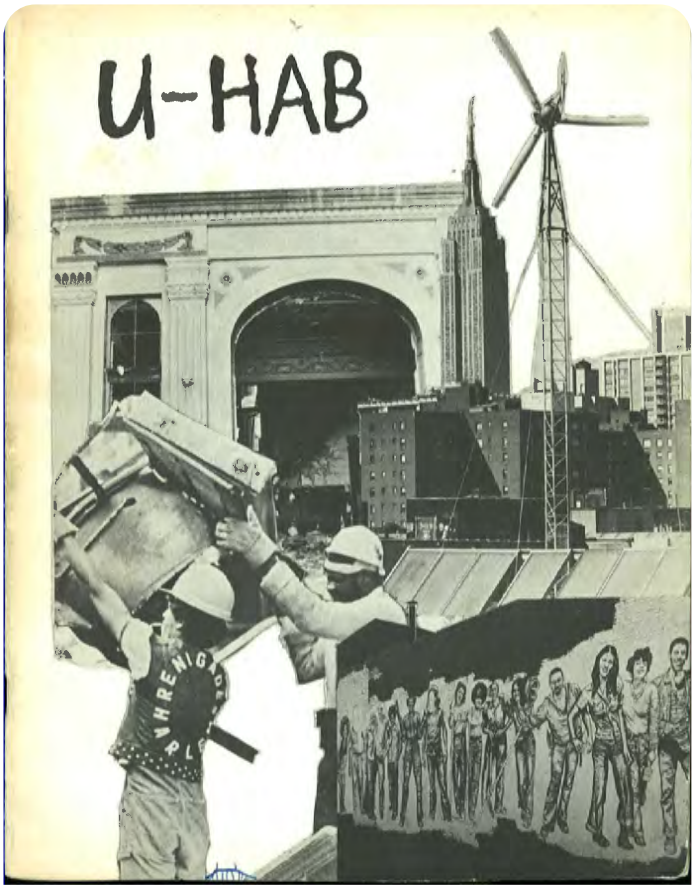


CDI's newest Maine Cooperative is the 52-unit Mountainside Community Cooperative in Camden, Maine. Securing affordable housing in a community like Camden is increasingly challenging as housing costs escalate and its population ages. The residents of Mountainside Community purchased the community on December 11, 2019 for $1,900,000 with financing provided by Camden National Bank, Genesis Community Loan Fund and the Local Enterprise Assistance Fund. "We are so pleased to be able to help the residents of the Mountainside Community Cooperative become property owners today," said Bill Floyd, Executive Director of the Genesis Fund.

Wardtown Mobile Home Cooperative

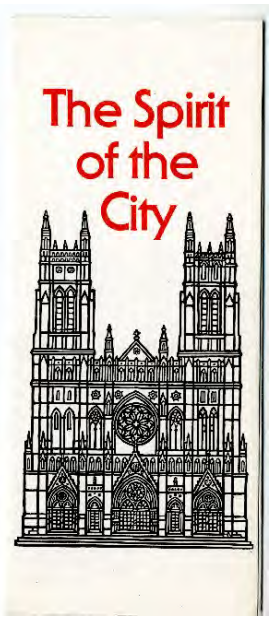


The residents of the 60-unit Wardtown Mobile Home Cooperative voted to form the cooperative and purchase the community in May 2015, with assistance from CDI, and combined financing from Maine State Housing and The Genesis Community Loan Fund. As with all of the CDI's Resident Owned Communities (ROCs), Wardtown members continue to engage in extensive training and organizational development. As Bill Hodgkins, Cooperative Treasurer explains, "We all gained valuable new skill sets as we went through the process of establishing and financing our cooperative...Now we have a very strong board of directors and feel very organized, to the point we are able to assist other ROC mobile home parks with advice about the process."









2019 UHAB ANNUAL REPORT

Building for Us

This year, UHAB made a considerable effort to build an archive. In doing so, the lesson we learned from decades of growth is very simple: what has always mattered most for affordable housing is community. It is the strength and support that comes from the community inside a co-op that is just as essential as the affordable housing itself.

With this in mind, UHAB is proud to offer new and expanded programs to low-income homeowners with a refined lens on our work. We have more data and research than ever on the long-term impacts of redlining policies and how communities of color have been resilient in their efforts to remain in their homes, whether in the 1970s or today. By building new affordable co-ops, strengthening tenants' rights statewide, making share loans through our HomeOwnership Lending program, and working in cooperation with our Interboro Community Land Trust partners to create the first Citywide CLT in New York City, we are actively working to dismantle the detrimental legacies of redlining and community disinvestment.

As we look toward the future, our work is expanding in several ways. We are offering more services like Co-ops Go Solar and our energy programs that are tackling the most pressing issue of our lifetime: the climate crisis. Without renewable energy and carbon reduction, low-income residents more than anyone will be affected. Most importantly, we need to recognize that it is not just low-income communities, but people of color in particular who are disproportionately affected by this crisis, just as they have been marginalized from fair and stable housing. UHAB's CDFI, HomeOwnership Lending, helps ensure that a family is not denied the opportunity to purchase because they don't have the money to be an all cash buyer. This program makes small loans where other lenders are reluctant and in this way supporting our HDFC and Mitchell Lama co-op communities in continuing to provide affordable housing.

The interest in co-ops and our work is expanding not just in New York City, but in upstate New York where residents can securely remain in their mobile homes; to New Haven, CT where the nearly 50-year old Seabury Co-op struggles to keep up with its aging infrastructure; and to Seattle, WA where a new permanently affordable co-op is being created. UHAB is excited to be assisting a new City financed co-op development program in Oakland, CA and we continue to meet with organizations and officials in other cities who are seriously considering the limited-equity model.

We have come a long way and welcome our next chapter of growth.

Sincerely,

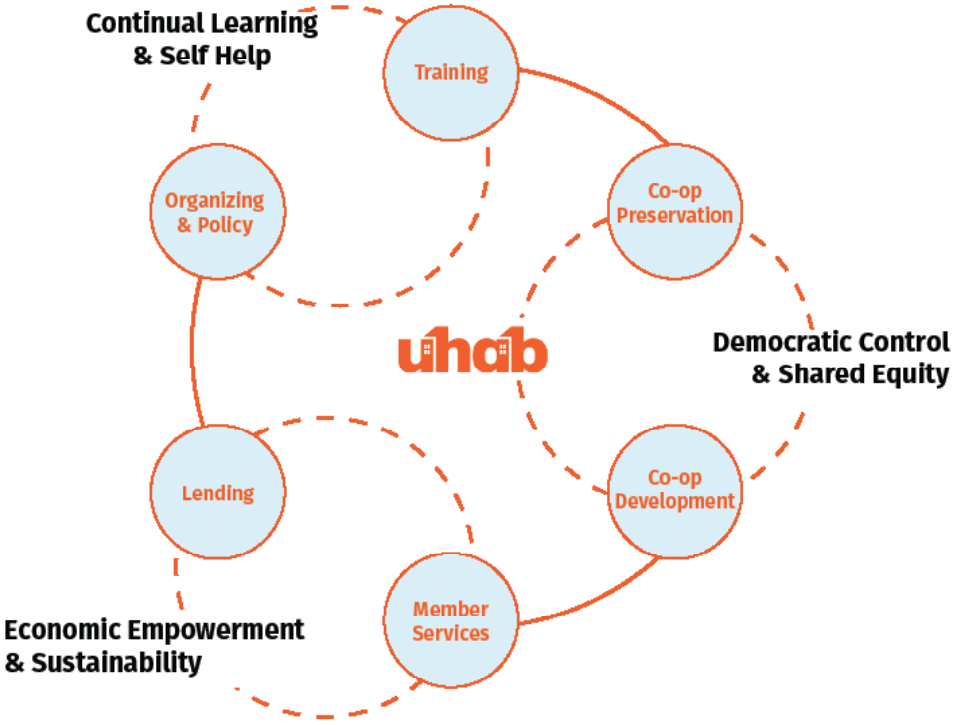


Andrew Reicher, Executive Director

Community through Cooperation

UHAB empowers low- to moderate-income residents to take control of their housing and enhance communities by creating strong tenant associations and lasting affordable co-ops.

Our Principles



I. Continual Learning & Self Help

When residents take the lead on everything from creating, managing, and preserving their own co-ops to advocating for affordable housing policy reform, this not only improves buildings and neighborhoods, but it transforms lives as well. Ongoing education and training is the key to preserving affordable housing cooperatives and strong tenant associations.

II. Democratic Residential Control & Shared Equity

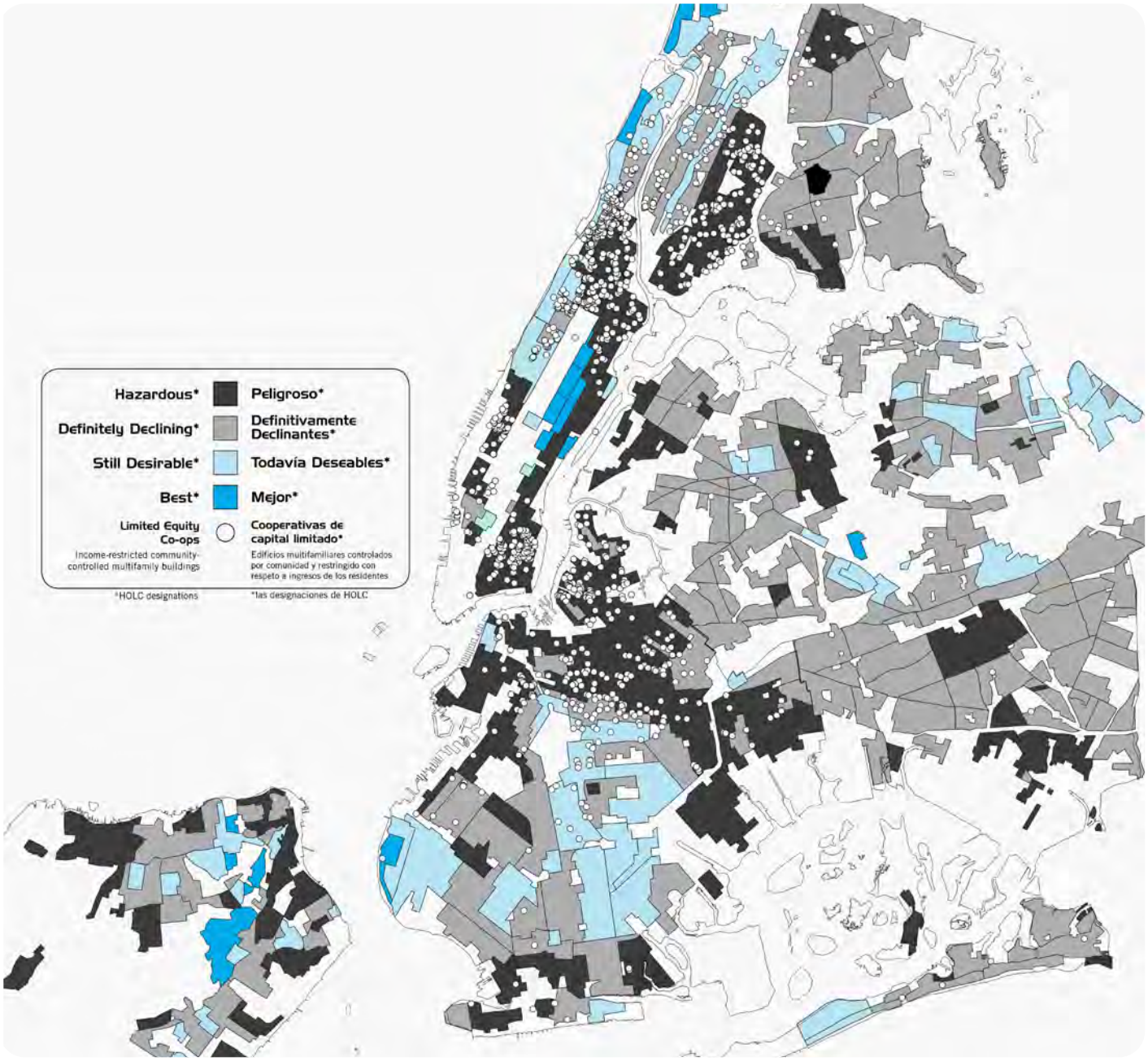
Transparent leadership and the participation of a majority of residents—each contributing unique skills and perspectives—make democratic governing and organizing possible. This collective control of housing helps prioritize a shared equity that keeps affordabiilty manageable for future incoming residents.

III. Economic Empowerment & Sustainability

UHAB provides access to affordable, high-quality resources covering areas of energy, finance, democratic participation and education. These tools help residents maintain lower costs of living while helping to demystify financial technicalities. With support and guidance, all residents should be able to read and manage their finances, in order to make informed decisions about their operating costs.

Housing Justice is Racial Justice

This map overlays the location of modern-day HDFC co-ops with redlined neighborhoods from the 1930s. Redlining was a discriminatory housing practice that devalued neighborhoods where people of color lived and made it difficult for people of color to secure safe, affordable housing. In this map, the deepest shade of grey represents the least economically desirable neighborhoods. In the 1970s and 1980s, landlord abandonment and arson led to City foreclosure on thousands of occupied buildings in these same neighborhoods, creating the conditions for the self-help housing movement and the creation of thousands of HDFCs.



Through organizing and self-help initiatives, community-controlled housing arose as a way for low-income people and people of color to take control of their housing solutions when the government and private sector would not. Today, neighborhoods like Harlem, the South Bronx, and Central Brooklyn still struggle with the legacy of redlining; high air pollution, increased heat waves, higher poverty rates, and gentrification all threaten to displace longtime residents from neighborhoods that were once widely abandoned.

Through it all, community control remains a tool to provide New Yorkers with decent, affordable housing. HDFC co-ops are anchors in their neighborhoods, providing a safe haven to raise families and age in place. Tenant unions build power among renters and win victories like stronger rent laws.



Through our work, UHAB helps people of color control, manage, and improve their homes. We know from experience that most of the low- to moderate- income residents in the buildings we serve are Black or Latinx. Our goal is to have as many people from the communities we serve reflected in our organization's leadership and programs.

Currently, around 60% of our Board and program staff are people of color, and more than half of our organization is bilingual in English and Spanish, fulfilling an essential need for our Spanish-speaking HDFC board members and residents. We provide our technical assistance, homeownership advisement, energy advisement, bookkeeping services, quarterly newsletter, and entire training curriculum in both English and Spanish.

UHAB BY THE NUMBERS: 2019

125 fair elections monitored in practice of democratic community control





3,500,000 tenants protected under stronger rent laws



9 HDFCs adopted solar, bringing the total number to **28**



5 affordable homeowner-ship loans totaling **$242,011**



115 budgets planned to preserve HDFCs' financial stability & affordability

203 trainings for affordable co-op residents





$9,197,000 secured in loans to help HDFCs make capital improvements



Our Co-op Preservation team helped **15 co-ops** secure necessary loans to avoid City foreclosure last year.

This represents over **350 families** that were able to retain their equity and control of their homes through technical assistance and guidance from UHAB staff.







To date, UHAB is the foremost developer of limited-equity housing co-ops in NYC. we have developed **over 1,300 units** of affordable housing with the support of a variety of City and State programs.



FIRM BIO



ACETO LANDSCAPE ARCHITECTS

ALA is a process-driven, landscape architecture and urban design firm ommi ed to thoughtful, c eati e intervention t the intersection of e vironment, economics, art, and culture. ALA was founded on the notion that great design is a product of careful listening, inclusive decision-making, and unrelenting passion for enduring built spaces. We believe landscape architecture lies at the nexus of the built form and the ephemeral qualities of an ever-changing environment. ALA's team o ers a unique set of skills and perspecti e, well-equipped to harmonize and reconcile the roles and value systems of varied design disciplines. We integrate expertise and intuition o craft p werful places, built upon a commitment to resiliency and sustainability. Our studio's passion for craft and echnical savvy a ords us the opportunity to collaborate across a broad geographic range and myriad project scales from intim te private spaces to large-tract master plans.

ALA was founded in 2014 by Principal, Nick Aceto. ALA has 5 employees, all of which are landscape architects, licensed in the states of Maine, Massachusetts, N w York and Colorado.

PROJECT TEAM KEY PERSONNEL



NICK ACETO, PLA, ASLA

ACETO LANDSCAPE ARCHITECTS
FOUNDING PARTNER, LANDSCAPE ARCHITECT | NA@ACETOLA.COM

Nick is a licensed landscape architect and urban designer with a deep passion for the creati e process. Nick believes in landscape as a framework for organizing the pa erns and behaviors through which we live. From the private garden to the region, Nick has the ability to recognize and translate pa erns into visual narrati es which tell the unique story of a place through built form. Nick grew up in Portland, Maine where he developed an deep appreciation or the rich and varied New England landscape, from rocky shorelines of the Atlantic o the forested peaks of the Appalachians. As both a consummate urbanist and adventure-seeking outdoorsman, Nick is intrigued by the interplay between urban form, economics, wild nature, and ecology.



CAITLIN ACETO, PLA, ASLA

ACETO LANDSCAPE ARCHITECTS
FOUNDING PARTNER, LANDSCAPE ARCHITECT | CA@ACETOLA.COM

Caitlin is a licensed landscape architect in the states of Maine, New Hampshire, and Colorado, who's passion for art and design began in the Chicagoland area where she was exposed to the architectural works of Frank Lloyd Wright and Olmsted's historic planned community of Riverside. Caitlin's project experience ranges in scale from circulation and ayfinding design t Grand Canyon National ark, to security barrier conceptualization or the Thomas Je erson Memorial, to signage programming and design. Caitlin brings a distilled clarity o design that strives to embody the contextual heritage, textural richness and cultural integrity of place.



SETH KIMBALL, PLA, ASLA

ACETO LANDSCAPE ARCHITECTS
PRINCIPAL, LANDSCAPE ARCHITECT | SK@ACETOLA.COM

Seth has been practicing Lands ape Architecture for over 15 years. He has a Bachelor's degree in Landscape Architecture from the University of Massachusetts Amhe st. Seth's project experience includes serving as project manager/lead designer for a master plan for the new Al Guhair University in Dubai, the Al Ain Oasis Cultural Quarter Master Plan in Abu Dhabi, institutional xperience including Phillips Andover Academy, Bates College, George Stevens Academy, and Southern New Hampshire University, and a range of residential p oject including homes in Texas, Idaho, Montana, New York, Arizona, and several throughout the northeast. Seth joined ALA in 2018, bringing to the practice his experience in civic, institutional, and esidential p ojects. further ALA's commitment to achieve sustainable and resilient project outcomes.

LIST OF SELECT CURRENT & ONGOING OR COMPLETED ALA PROJECTS

ALA has been fortunate to have made meaningful contributions o a vast array of projects across a wide gamut of scales over the last 5-6 years. Below is an abbreviated list of select project examples intended to provide a sense of our professional skill set, experience, and range as a design studio. We would be happy to provide more information about a y of the below projects upon request.

RESIDENTIAL

DBX 11 RESIDENCE	ASPEN, CO
WHITE HORSE SPRINGS RESIDENCE	ASPEN, CO
TELLURIDE AGUIRRE ROAD RESIDENCE	TELLURIDE, CO
PRIVATE RESIDENCE	SOUTH FREEPORT, ME
SHADOW MOUNTAIN CONDOMINIUMS	ASPEN, CO
SMYTH RESIDENCE	SNOWMASS, CO

COMMERCIAL/CAMPUS

100 FORE STREET OFFICE BUILDING	PORTLAND, ME
66 STATE STREET	PORTLAND, ME
LAAM 525 LIVE-WORK	BASALT, CO
HOTEL ASPEN	ASPEN, CO
MEMORIAL PLAZA	QUANTICO, VA
CUMBERLAND CLUB SITE PLAN	PORTLAND, ME
RIVERSIDE LIVE-WORK	PORTLAND, ME
WILLITS BEND LIVE-WORK	BASALT, CO
RED HAWK ELEMENTARY SCHOOL	ERIE, CO
CSU UNDERPASS STUDY	FORT COLLINS, CO
ANDERSON RANCH ARTS CAMPUS	SNOWMASS VILLAGE, CO

HOUSING & DEVELOPMENT

SCARBOROUGH DOWNS MASTER PLAN	SCARBOROUGH, ME
THE TREE FARM	BASALT CO
66 STATE STREET	PORTLAND, ME
BLOCK 11 MASTER PLAN	BRECKENRIDGE, CO
BROKEN COMPASS BREWERY	BRECKENRIDGE, CO
RIVERBEND COMMERCIAL CENTER	TIMNATH, CO
CUMBERLAND MULTI-GEN	CUMBERLAND, ME

PUBLIC

COMMERCIAL STREET TRANS. STUDY	PORTLAND, ME
LIBBYTOWN PLAYSCAPE	PORTLAND, ME
PORTLAND DOWNTOWN SQUARE	PORTLAND, ME
BASALT POST SIGNAGE	BASALT, CO
TOWN WAYFINDING SIGNAGE	BASALT, CO
BAYSIDE ADAPTS MASTER PLAN	PORTLAND, ME
ARBANEY PARK MASTER PLAN	BASALT, CO
BASALT OUR TOWN	BASALT, CO
TIMNATH COMMUNITY PARK	TIMNATH, CO
PACTS SMART CORRIDOR STUDY	PORTLAND, ME
LIBBYTOWN VISIONING	PORTLAND, ME
BERTHOUD PARKS & OPEN SPACE PLAN	BERTHOUD, CO

REFERENCES

CAITLIN CAMERON
CITY OF PORTLAND, URBAN DESIGNER
207-874-8901
CCAMERON@PORTLANDMAINE.GOV

"In my capacity as Urban Designer for the City of Portland, I interacted with Aceto Landscape Architects (ALA) on the 100 Fore Street project where they demonstrated thoughtful and c eati e design strategies for a challenging urban site. Speaking from my experience working with a diversity of landscape and urban design professionals in Southern Maine, I found ALA to have an innovati e approach that demonstrates a value for and understanding of the role of public space and urban landscape for the livability and resiliency of cities and owns." - Caitlin Cameron

BRUCE HYMAN
CITY OF PORTLAND. TRANSPORTATION PROGRAM MANAGER
207-874-8717
BHYMAN@PORTLANDMAINE.GOV

"Aceto Landscape Architecture's compelling graphics as part of the Portland-South Portland Smart Corridor Plan e ort in 2017 enabled the public to readily visualize the benefits and t ade-o s of various transportation al ernati es being considered and highlighted the opportunities those al ernati es could also have for placemaking, a key goal of the Plan."- Bruce Hyman

RICH CIECIUCH
PROJECT WORKSHOP
970-729-0126
RICH@PROJECT-WORKSHOP.COM

"ALA is a key design collaborator in our design build approach, helping to navigate complex approval issues, particip ting seamlessly in the i erati e design process that succeeds best when site attribu e identi ation and organization melds with building design oncepts. They are excellent listeners and always come back with creati e and unexpected solutions. Community and Neighbor impacts of a y development must be carefully contemplated and negoti ted to a successful outcome, and ALA has all the skills and experience to shape and illustrate how new projects relate to the existing abric of community and neighborhoods." - Rich Cieciuch

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DEVELOPMENT DIRECTOR MR.HOLDINGS
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JAY CHACE
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207.756.8362









THE DOWNS | 510-ACRE MASTER PLAN & TOWN CENTER

SCARBOROUGH ME

ALA has worked collaborati ely with Gorrill Palmer Consulting Enginee s along with a large team of consultants and stakeholders in developing a master plan for this 500+ acre former harness racing facility. The project was recently granted a TIF agreement based in large part on the attribu es ALA visualized in their plans for the proposed Town Center which included a 4 acre community park with music venue, playground, and sport courts.

KEY STAFF	Nick Aceto, Seth Kimball
SERVICES	Master Planning, Urban Design, Landscape Architecture, Visualizatio
STATUS	Planned
REFERENCE	Jay Chace, Planning Director, Town of Scarborough | Jchace@Scarboroughmaine.org















GRIST MILL NEIGHBORHOOD

SCARBOROUGH ME

ALA worked with closely with an experienced Southern Maine builder to develop a neighborhood plan which begins to challenge conventional subdivision de elopment rules with a compact pa ern and highly walkable streetscape organized around a central woodland preserve which serves as a neighborhood playscape.

KEY STAFF	Nick Aceto, Seth Kimball
SERVICES	Master Planning, Urban Design, Landscape Architecture, Visualizatio
STATUS	Completed Fall 2019
REFERENCE	Jay Chace, Planning Director, Town of Scarborough | Jchace@Scarboroughmaine.org





FRONTRUNNER PARK

SCARBOROUGH ME

This third phase of The Downs master plan includes over 200 homes across a broad range of a ordability inclu-diing compact, lane-loaded single family and pocket homes as well as more than 75 apartment units and ground floor office space. The plan is ganized around a series of small parks and a highly-walkable street grid.

KEY STAFF	Nick Aceto, Seth Kimball
SERVICES	Master Planning, Urban Design, Landscape Architecture, Visualizatio
STATUS	Permi ed, Expected Construction all 2020
REFERENCE	Jay Chace, Planning Director, Town of Scarborough | Jchace@Scarboroughmaine.org





LAAM 525

BASALT CO

Aceto Landscape Architects worked closely with architect, owner and contractor on this urban infill d velopment, providing creati e streetscape and urban plaza design interventions. The p oject included 8 a ordable residential units, 5,000 SF of ommerical / light industrial space, parking, and integration with the owns transit system.

KEY STAFF	Caitlin Aceto, Nick Aceto
SERVICES	Landscape Architecture, Urban Design
STATUS	Under Way Summer 2020
REFERENCE	Glenn Rappaport| grappa@blackshack.net





FREEPORT LIVE-WORK

FREEPORT ME

Freeport Live-Work is a community master plan envisioned as a series of mixed-density neighborhoods including more compact, single-family pocket homes as well as mixed-use townhomes and commercial-office buildings

KEY STAFF	Nick Aceto, Caitlin Aceto
SERVICES	Landscape Architecture, Urban Design, Planning
STATUS	Planned
REFERENCE	Undisclosed





BASALT ON-CALL PLANNING

BASALT CO

ALA was tasked with the study of two parcels within the Town of Basalt Growth Management Area for feasibility of alternati e ‘a ainable’ housing development options. ALA xplored options or pocket neighborhoods, compact lot scenarios, and consolidation of i frastructure as a means to o set development cost and in turn reduce home pricing.

KEY STAFF	Lisa Cowan, Caitlin Aceto
SERVICES	Landscape Architecture, Visualizatio
STATUS	Planning Document Complete 2016
REFERENCE	Undisclosed | Undisclosed

ACORN ENGINEERING, INC.

COMPANY PROFILE

Acorn Engineering, Inc. is a Portland-based civil and environmental engineering firm of nine full-time employees and four construction inspectors. Acorn's team has a diverse portfolio providing Maine with quality engineering and environmental services as well as state-wide construction administration on behalf of the Maine Department of Transportation.

A cornerstone of Acorn Engineering is the attention to quality and exceptional level of service on every project, regardless of size. Our engineers and scientists pride themselves on their extensive experience, which is backed by a broad knowledge of civil and environmental engineering practices from smaller residential projects to larger commercial projects that integrate environmental assessment and site redevelopment.

Acorn Engineering has demonstrated the ability to breakdown and synthesize widely disseminated regulations into accepted engineering practices and practical site assessment and development. As a result of Acorn's efforts, the Cumberland County Soil & Water Conservation District recently recognized Acorn as the Contractor of the Year. This was the first award associated with the nationally recognized Long Creek Restoration Project and the first time the Cumberland County Soil & Water Conservation District ever recognized an engineering firm as their Contractor of the Year.

Acorn's expertise covers the areas of: civil/site design, evaluation, development, and permitting; and construction phase services such as construction administration, construction documents, project bidding, and site inspection including erosion and sedimentation control. Acorn's experience also includes the field of environmental engineering and compliance such as: Phase I and Phase II environmental site assessments, soil and groundwater remediation planning and design; Maine's Voluntary Response Action Program (VRAP); and stormwater treatment system design and permitting.

Acorn's engineers have designed, permitted, and overseen construction on numerous single-family and multifamily residential projects including traditional subdivision designs featuring on-site sewage/septic disposal and drilled wells. Furthermore, Acorn has demonstrated extensive experience and capabilities with municipalities, the Maine Department of Transportation (MDOT), Maine Department of Environmental Protection (MDEP), soil & water conservation districts, conservation commissions, municipalities, and the private sector on environmental and site development projects as demonstrated by the following:

- Listed on Maine DEP's Pre-Qualified Vendor List for Environmental Consulting Services
- Listed on Maine DOT's Pre-Qualified Consultants for eight service areas (listed under Section I.D)
- Cumberland County Soil & Water Conservation District Contractor of the Year for work on the Long Creek Restoration Project

- **Public Works Redevelopment – Meeting House Hill**



Over the past two years, Acorn Engineering has worked in close association with the City of South Portland, neighbors, and private clients on the re-development of the former Public Works facility. The 6-acre site is nestled in the middle of the Meeting House Hill residential neighbor-hood and is currently a mix of storage buildings, fuel fill stations, miscellaneous stockpiles, and pavement. The site will be redeveloped into a mix of multifamily townhomes and single-family dwellings comprising 38 units along with a public park and community gardens.

In addition to the environmental remediation, Voluntary Response Action Program (VRAP), and other environmental considerations given the previous land use, the project is subject to a Maine DEP stormwater management law. The redevelopment design results in a reduction in impervious area of over 50% and reduces land use intensity across the site. Though not required, several stormwater BMP's have been implemented into the site as a best practice, further attenuating and treating stormwater runoff. In addition to the significant redevelopment plan, Acorn has designed an infrastructure plan to separate the storm and sewer mains. This will include installing 400 feet of new storm drain along the existing O'Neil Street right-of-way and 700 feet of new storm drain along the proposed O'Neil Street right-of-way extension. Overall, this effort will reduce the effects of combined sewer overflows (CSO) into Casco Bay which occur due to wet-weather events and the wastewater treatment plant's inability to provide capacity for both storm and sanitary sewer flows.

As part of this project, Acorn held a multitude of meetings with the City including the assistant City manager, the former Mayor, the entire planning division, and the chief engineer of Public Works. Furthermore, Acorn has collaborated with department heads of the Fire, Parks, Public Works, and Water Resource departments to ensure a feasible and ideal project for all parties. As a result, the process was truly a collaborative effort with a number of stakeholders weighing in on the design.

- **Munjoy Heights**



Acorn provided civil/site engineering and permitting for the design of Munjoy Heights – a six townhome, 29-unit development on the steep slopes of Munjoy Hill in the City of Portland. Acorn designed and developed construction drawings for the sanitary sewers, storm drains, water mains, driveways and pedestrian circulation, retaining wall locations, building locations, and drainage infrastructure to be built in compliance with City standards.

A key component to the project was coordinating with the City on the future combined sewer separation project and the site's overall stormwater management. Additionally, discussions with neighbors and stakeholders were paramount in the project's success.

The innovative urban infill project compliments the Munjoy Hill neighborhood with a communal design and plentiful native landscaping that replaced invasive species which previously dominated the eroding banks prior to the development. The $22 million project features a courtyard, terraced landscaping, a Portland Trails-maintained path that connects the redevelopment to the existing trail system, and low impact development (LID) techniques that meet MDEP Chapter 500 regulations. The stormwater management includes an underdrained sand filter and chambers that detain and treat stormwater on site in tandem with strategically placed rain gardens.

The project required extensive coordination and collaboration between the client, City of Portland, Portland Trails, the structural engineer, the architect, and the contractor to successfully complete the project with the first "woonerf" in the state and maintaining the existing public walking path through the property.

- **200 Valley St**



Working with Avesta Housing, Acorn Engineering provided civil engineering and permitting for Avesta's 60-unit project in the St. John Valley neighborhood. This urban infill project replaces the existing single-family house and abutting vacant lots into new affordable housing opportunities with two levels of covered parking, amenities, and a rebuilt project frontage with new sidewalks, street trees, and bicycle hitches.

As part of the project, Acorn developed a transportation and parking analysis to ensure that the provided parking will adequately serve the redevelopment. Furthermore, the design team identified and implemented multiple strategies to encourage residents to efficiently utilize the many modes of transportation available on the Portland peninsula.

- **Little Dolphin Drive & Jocelyn Place**



In collaboration with the South Portland Housing Authority and Risbara Holdings, Acorn provided civil engineering design and permitting of a multi-use subdivision at the end of Little Dolphin Drive in Scarborough. Proposed uses include a two-story office building and a three-story 60-unit senior housing facility with associated parking and landscaped areas.

In addition to a voluntary neighborhood meeting, the project went through a 3-step master plan phase with the Town of Scarborough in which the project was collaborated on with Planning Staff, the Planning Board, and neighbors.

The project is subject to Maine DEP and US Army Corps permits. To adequately treat stormwater on the site, Acorn has designed multiple stormwater BMPs meeting Maine DEP Chapter 500 regulations resulting in a low impact design.

- **89 Anderson Street**



In collaboration with Redfern properties and the East Bayside neighborhood, Acorn developed the civil/site engineering design of a mixed use 53-unit redevelopment of an existing under-utilized, urban infill lot in the East Bayside neighborhood. Acorn's scope of services included in the initial phase applying for and obtaining a zone change and conducting Phase I and Phase II Environmental Site Assessments to evaluate potential environmental contamination at the site.

After conducting the environmental remediation efforts, Acorn developed the site layout and design of sanitary sewers, storm drains, water mains, site driveway, retaining wall locations, building locations, parking lot design, building drainage structures, utility connections and landscaping plan (with a landscape architecture subconsultant) to meet the City of Portland Technical Standards. Acorn also integrated sidewalk and improvements associated with the project into the City's Anderson Street ByWay project. Furthermore, the project team worked with a non-profit organization, the Telling Room, to provide public art along the Fox Street streetcape in lieu of traditional fencing.

Overall, the project established an important mixed use building on a prominent corner lot adjacent to Kennedy Park which contains popular recreation space. The building houses a restaurant and the Gear Hub bicycle school on the first floor with residential apartments above which encourages an active street presence with housing, goods, and services that help tie the neighborhood together and keep eyes on the street.

- **667 Congress Street – The Hiawatha**



The $28 million project included the civil/site engineering design for the 8-story, first floor retail and 139-unit apartment building on Congress Street in Portland. Vehicle parking is served by two levels with separate access from Vernon and Avon St. The project featured building and site design in an historic district adjacent to Longfellow Square.

Services included, but is not limited to, permitting with the City of Portland, layout and design of sanitary sewers, storm drains, water mains, pedestrian and vehicle entrances, building locations, parking lot design, and parking garage grading and drainage. Acorn provided significant coordination between the Architect, Structural Engineer, Geotechnical Engineer, Construction Management Company, Owner, and the City.

I. Conformity with Land Use Ordinance

The following outline is made in accordance with the City of Portland Code of Ordinances, Chapter 14 Land Use, Article V Section 14.6.1-4

OVERVIEW

The proposed mixed-use residential buildings have been designed to conform to City standards where possible, as well as improve upon existing non-conformities. This project conforms with the majority of the applicable standards of Portland's Land Use Ordinance Section 14-526 as demonstrated in the following narrative.

14.6.1 Transportation Standards

A. Impact on Surrounding Street Systems:

a. The project will not create any significant hazard to safety on the surrounding street network. The site is located along Washington Avenue Extension. It is classified as a Major Urban Collector according to the City of Portland Federal Street Classification map.

b. A moderate traffic increase is expected for this project due to the change in use of the property. Intersection improvements are proposed at the Auburn and Lambert intersections to help mitigate any impacts from increased trip generation.

B. Access and Circulation:

1) In general

a. The development will provide safe access and internal circulation for both pedestrians, vehicles and emergency vehicles as seen on the Site Plan.

b. Continuous internal walkways will be provided and will connect to the proposed transit stops along Washington Avenue.

c. The proposed parking areas can be accessed from Washington Avenue. Points of access have been located to avoid conflicts with turning movements and traffic flows on the site.

d. The site does not feature drive up services as mentioned in this requirement.

2) Loading and Servicing:

A designated space has been signed along the northern and southern portion of Washington Ave near the proposed bus stops. It is proposed that delivery vehicles use this space for delivery purposes in lieu of

circulating through the site. Ample space has been provided both for short-term unloading and bus loading/unloading to exist in one location.

3) Curbs and Sidewalks:

   a. Bituminous pavement sidewalks are proposed throughout the site, as seen on the Site Plan, and will connect to the proposed bus-stops on Washington Avenue. Curb and sidewalks will be provided along the property frontage and continuing to the Portland Trails connection on Garsoe Drive.

   b. There are no existing sidewalks along Washington Avenue. Utility connections within the road will be required and will be rebuilt in conformance with City standards.

   c. Not applicable

   d. We will be requesting a waiver from curb installation requirements as it is proposed to install slipform concrete curb in lieu of granite.

C. Public Transit Access:

1) As part of the development, two bus stop/shelters are proposed along the properties Washington Avenue frontage.

2) The bus stop/shelters will be connected to the internal sidewalks within the site.

3) Not applicable.

D. Parking:

1) Vehicular Parking

   a. The proposed project will provide 122 parking spaces which is anticipated to meet the requirements of the proposed uses within the new buildings.

   b. Although not specifically required within this zone or land use, Transportation Demand Management (TDM) strategies will be implemented as identified in Section U.

   c. Not applicable.

   d. The parking space and aisle dimensions are in conformance with the Technical Standards with the exception of a waiver request to reduce the drive aisle width from 24' to 22' given the residential use and low turnover rate. Please refer to the Site Plan for more information.

2) Location and Required Number of Bicycle Parking Spaces:

   a. A minimum of 66 bicycle spaces are proposed for the 165 residential units. Please refer to the Landscape Plan for more information.

   b. Not applicable

3) Snow Storage:

   a. Snow storage area is provided throughout the site. The Owner will be responsible for managing snow at their discretion and/or coordinating snow removal from the site when necessary.

   b. Snow storage areas will not encroach on parking, walkways, or stormwater management systems.

4) Electric Vehicle (EV) charging

   a. The development will adhere to applicable EV standards, as it will provide 20% of parking spaces with charging.

E. Transportation Demand Management (TDM):

1) A Transportation Demand Management (TDM) plan will be provided as part of the site plan application.

2) The plan will comply with the transportation systems and street design standards of the technical manual.

14.6.2 Environmental Quality Standards

A. Preservation of Significant Natural Features:

1. The site is completely wooded and undeveloped. Wetlands traverse the site and are considered a significant natural feature due to the life they have the potential to house. There are no known endangered species or plants existing on the site.

2. The contiguity of the wetlands will be preserved to the greatest extent feasible.

3. Not applicable

B. Landscape Preservation:

1) There are many existing trees on site, a portion of the existing trees will need to be removed to accommodate the building. Given the compact development scheme, a significant portion of the existing trees and vegetation will be preserved. This effort will be further acted upon by hiring a forester to help select tree saves in tandem with the proposed

2) Measures will be taken in accordance with Section 4 of the Technical Manual.

3) It's anticipated a minimum of 30% of existing trees ten inches DBH or greater within the setback area will be preserved as a result of the efficient development scheme.

4) A waiver is not requested.

5) Not applicable.

C. Site Landscaping and Buffers

1) The development will include a minimum of one shade tree or six plantings per 30 linear feet of all frontages as measured along the property line. Where applicable it is proposed to utilize the existing vegetation to remain in order to satisfy this requirement.

2) Buffers

a. The solid waste locations will be located adjacent to the parking lots on the east sides of the development on both sides of the street. The proposed solid waste containers are anticipated to be screened by a decorative fencing, screening, and landscape plantings.

b. Not applicable

c. The existing buffers are to remain or be replanted along all residential abutters.

3) Parking Landscaping

a. The proposed development will include one (1) tree and three (3) shrubs for every five (5) parking spaces within landscaped islands to screen shade and break up parking.

b. Uninterrupted parking spaces do not exceed forty (40) parking spaces.

a. Not applicable.

4) Street Trees

a. Street trees along the property frontage will be provided per the standards of the technical manual.

b. Not applicable.

D. Water Quality, Stormwater Management and Erosion Control:

a. The site drainage will not be directed to flow or pond onto adjacent lots. The runoff created from the site will be collected, attenuated, and released at a rate that does not exceed the existing condition.

b. Provisions are in place to ensure stormwater from the development will not exceed the pre-development flows.

c. Not applicable

ii. A site-specific Stormwater Management Plan has been developed for the project to show compliance with Section 5 of the Technical Manual, including the basic standards of MEDEP Chapter 500. Please refer to sections J and K, the Erosion & Sedimentation Control and Stormwater Management Plans, respectively, for more information.

iii. The development is not anticipated to pose a contamination risk to groundwater during or after construction. The project will be serviced by a public wastewater system.

The development will provide for adequate and sanitary disposal of sewage in accordance with Section 2 of the Technical Manual.

14.6.3 Public Infrastructure and Community Safety Standards

1. Consistency with City Master Plans:

a. The project has been designed to be consistent with the City's Zoning Ordinance and off-site infrastructure.

b. Not applicable.

2. Public Safety and Fire Prevention:

    a. The site has been designed to allow for long viewing aisles and minimal spaces obscured from view. An open space area has been provided at the center of both site's to reinforce a sense of community. Lighting will be provided to create a safe environment at nightime.

    b . Emergency access has been provided. Fire trucks and ambulance will be able to access all of the site and buildings, the grass paver access aisle has been included in the site design to promote efficient emergency access circulation.

3 . Public Utilities
    a . Ability to Serve letters have been sent to the respective companies. Responses are forthcoming.
    b . The electrical service will be wired underground via a new pad-mounted transformer as shown on the Utility Plan.
    c . The new sewer and stormwater infrastructure will meet the provisions of the Technical Manual.
    d . The project will be served by connection to the public sewer system within Washington Avenue. The stormwater management system is designed to meet the standards of Chapter 500.
    e . A space allocated for solid waste storage can be seen on the Site Plan (C-09, C-10, and C-11). The solid waste containers will be fully enclosed and screened from the public view.

16.4.4 Site Design Standards

A. **Massing, Ventilation and Wind Impact**:

    a. Please refer to Section O, Architectural Design Narrative.

B. Shadows:

    a. Not applicable.

C. Snow and Ice Loading:

    a. The structure will not distribute snow and ice onto adjacent properties.

D. View Corridors:

Please refer to Section O. Architectural Design Narrative.

E. Historic Resources:

    a. The development is not located in a historic district, historic landscape district or City designated landmark.

b. The development is not located adjacent to designated landmarks, historic district, or historic landscape district.

c. There are no known archaeological resources on the site.

F. Exterior Lighting:

a. Exterior lighting will be designed to meet the requirements of Section 12 of the Technical Manual.

b. Any lighting that may adversely impact the abutting residential properties will feature house-side shielding.

c. Architectural and Specialty Lighting.

d. No architectural or specialty lighting is proposed.

e. No up-lighting is proposed.

f. No new street-lights are proposed.

G. Noise and Vibration:

a. The HVAC system will meet the applicable state and federal emissions requirements and will also be screened and directed away from abutters.

H. Signage and Wayfinding:

a. All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

b. The project is not located in a historic district or subject to Article IX.

c. Signage will only be related to vehicular access.

d. All street and wayfinding signage shall meet the requirements of the Manual on Uniform Traffic Devices (MUTCD) and Division 22 of the City Code.

I. Design Standards.

a. The project has been designed to meet the standards set forth in the R-3 zone. Please refer to the Site Plan for more information on the Space & Bulk Standards.

A C O R N
ENGINEERING, INC.

STORMWATER MANAGEMENT REPORT

Prepared For:

Maine Cooperative Development Partners
Portland, Maine 04103

Prepared By:

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PO Box 3372
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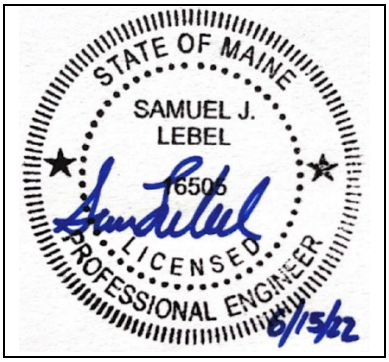


June 2022

INTRODUCTION

Acorn Engineering, Inc. has been retained by The Maine Cooperative Development Partners to provide civil engineering services for the proposed development at 165 Lambert Street and 622 Auburn Street. The property consists of approximately 17.95 acres of land and contains the following parcels (Chart, Book, Lot, 385-A-1, 386-C-1, 386-B-12, and 386-B-15).

A stormwater analysis was prepared to demonstrate that the project will meet the requirements set forth by Maine DEP Chapter 500 Basic and General Standards and the following requirements from the City of Portland (the City):

- City of Portland Land Use Ordinance Article 14.6.2.D.
- City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and Maine DEP Chapter 500 Stormwater Management.

EXISTING CONDITIONS

The project site is bordered by Lambert Street, Auburn Street, and Washington Ave. A boundary plan has been prepared by Owen Haskell Inc., dated June 14th, 2021 and revised December 21st, 2021. Two wetland investigations were performed (separate investigations for both parcels) by Jones Associates Inc., dated June 2021 and October, 2021. As shown in the reports there are two wetlands on the south parcel, one of the identified wetlands is within 25 feet of a stream and therefore is classified as a Wetland of Special Significance (WOSS). There are also two wetlands within the northern parcel where one is considered a WOSS due to its proximity to an identified stream. Jones Associates identified multiple streams in both parcels. the southern parcel consists of four streams, with two converging at the eastern portion of the parcel creating one larger stream flowing from the east to west. These streams are a result of culverts flowing onto the property. Two feeder streams also contribute to the large stream and drain from the south to the north. One stream is located on the northern parcel and flows from east to northwest, this stream is formed from a culvert draining onto the property. The site is not in the watershed of an urban impaired stream.

The site primarily consists of wooded, undeveloped area with six subcatchments.

- SC 1N – This subcatchment consists of wooded land and a vegetated ditch alongside Washington Ave. This subcatchment drains to an existing catch basin at the end of the ditch which outlets runoff to another existing catch basin located at the end of the southern Washington Ave ditch.
- SC 1S – This subcatchment consists of wooded land, a vegetated ditch, and an isolated wetland pocket. This subcatchment drains to the south roadside ditch which is collected by an existing catch basin at the end of the ditch. The catch basin outlets to an existing cross culvert beneath Lambert Street.
- SC 2N – This subcatchment consists of undeveloped land, a portion of the single family lots along Auburn Street, and existing wetlands. This subcatchment includes area from the northeastern portion of Washington Ave as well as the Washington Ave / Auburn Street

intersection. The subcatchment crosses Washington Ave via a 12" culvert that outlets into the south parcel and flows to the existing 18" culvert.

- SC 2S - This subcatchment consists of the southern portion of the south parcel and is primarily wooded and undeveloped land. Multiple stream exist in this subcatchment and serve as the primary drainage conveyance system. The confluence of the stream occurs near the western portion of the parcel upstream of an 18" culvert off Lambert Street.
- SC 3N – This subcatchment consists of wooded area along the northern parcel. The area drains to an existing wetland within the Falmouth parcel as identified by Jones Associated.
- SC 4N – This subcatchment consists of wooded area along the northern parcel as well as a portion of the single family lots located along Auburn Street. This area drains to the stream flowing east to west and bisects the parcel.

It should be noted that the USGS soil survey has soil types HSG A and HSG D in SC 1S. The delineated wetland located in this subcatchment falls in the HSG A area. We believe that the wetland pocket should be replaced with HSG D soils in lieu of HSG A to better represent the existing site conditions. As such the stormwater model has been updated to reflect the above.

PROPOSED DEVELOPMENT

The project features the development of a planned unit residential development (PRUD) which a development program outlined within the land use ordinance and generally follows the principles of cluster subdivision planning where infrastructure is denser and more efficient in lieu and as a result, grater open space opportunities are available. The site will consist of eighteen separate residential buildings with a total of 165 dwelling units, each building will be served with associated parking and utilities. Overall, the project proposes to develop 4.75 acres of the lots with 2.69 acres consisting of impervious area.

The site has been graded to slope with the existing topography while providing for appropriate slopes in the parking areas. The slopes on the outside of the parking areas that are not part of a stormwater system will be appropriately stabilized per the specifications in the plans and are anticipated to be heavily landscaped for further slope protection and buffering. The majority of the site's runoff, including 95% of the new impervious area, will be either piped to the two proposed Underdrain Subsurface Sand Filters (USSF), or graded to flow to the three proposed porous pavement sections. The USSFs consist of a pretreatment isolator row which provides initial settlement and filtration of contaminants. Water will then flow vertically through the sand filter providing water quality improvements and outlet via an underdrain. At each outlet to the downstream drain manhole, orifices through the use of drilled holes in pipe caps will be utilized to help reduce the flow rate leaving the USSFs.

A portion of the parking areas and mews will consist of porous pavement with filter media and stone beneath the pavement profile. Traditional pavement will be used in the parking lot areas in the higher portions of the site and will runoff onto the porous pavement. In the mews, it is proposed for pavers or traditional pavement to be located upgradient of the porous pavement. Underdrains will be provided to collect and convey water with catch basins being

located at the low points to serve as overflows for extreme storm events as well as an access point for inspection and maintenance purposes.

The discharge from these systems will ultimately flow to a level lip spreader or riprap apron before entering the roadside ditch or surrounding woods.

The development will be served by the Portland Water District, CMP, Spectrum, Consolidated Communications, and municipal sewer and storm systems. Utility mains and services have been coordinated with each respective utility company.

GENERAL STANDARDS – WATER QUALITY

All treatment BMPs proposed as part of this development were designed in accordance with The Maine Stormwater Management Design Manual Chapter 7.3 and 7.7.

Treatment Area

In accordance with Chapter 500, General Standard rules, treatment must be provided for no less than 95% of the impervious area and 80% of the developed area. As such, it is proposed that treatment is required via the Underdrained Subsurface Sand Filter (USSF) and Porous Pavement BMPs. The USSF provides initial treatment of the larger sized pollutants. The stormwater will flow vertically through the sand filter layer. The treated stormwater will then be collected within perforated pipes and released slowly into the downstream system. The Porous Pavement will collect runoff through the top bituminous paved surface where it will then filter through several layers of media before being collected by an underdrain and transported to the downstream system.

The treatment of the impervious and developed surfaces by the BMPs are as follows:

Table 1 – New Impervious Area Treatment Area Table

Existing Imp. Area (SF)	Proposed Total Imp. Area (SF)	Net Change in Imp. Area (SF)	Proposed Imp. Area with Treatment (SF)	% Overall New Imp. Area Treated
0	117,000	117,000	111,504	95%

Table 2 – New Developed Area Treatment				
Existing Dev. Area (SF)	Proposed Total Dev. Area (SF)	Net Change in Dev. Area (SF)	Proposed Dev. Area with Treatment (SF)	% Overall New Dev. Area Treated
0	207,065	207,065	174,750	84%

Underdrain Subsurface Sand Filter

The underdrained subsurface sand filters were sized to meet or exceed the requirements set forth within the MDEP Volume III BMPs Technical Design Manual, Chapter 7.3. Filter BMP systems have shown to be effective at filtering out and removing a wide range of pollutants from stormwater runoff.

As shown above, the project anticipates meeting the required treatment for new impervious and developed surfaces with the filter BMPs.

Filter Area Sizing

A calculation for sand filter area is necessary to meet the requirements below the surface of the USSF. As defined in the Volume III: BMPs Technical Design Manual, Chapter 7, the surface area of the filter shall be no less than the sum of 5% of the tributary impervious area and 2% of the tributary vegetated area. The filter area is calculated by the following formula:

[(Imp. SF x 0.05) + (Veg. SF x 0.02)] = Filter Area (SF)

Please refer to Table 2 below.

Table 2 – Total Filter Surface Area, displays the proposed USSF sizing requirements, actual size and the percentage of required area.

Table 3 – Total Filter Surface Area				
	Vegetated Area (SF)	Impervious Area (SF)	Required Filter Area (SF)	Actual Filter Area (SF)
USSF 1	17,347	28,060	1,750	1,765
USSF 2	13,520	32,342	1,888	2,294

As shown, the size of the soil filter area will meet and exceed the surface area requirements.

Isolator Row Sizing

The isolator row was sized based upon a letter from Mark Bergeron, Director of the MDEP Bureau of Land Resources, to StormTech dated July 29, 2016. The calculation that Mr. Bergeron references to determine the minimum number of stormwater chambers needed for

the isolator row is defined as the one-year peak flow rate divided by the specific flow rate of the chamber.

Table 4 – Isolator Row Sizing			
	1-Year Peak Flow (cfs)	Required Chambers	Provided Chambers
USSF 1	1.29	4.3	5
USSF 2	1.77	5.9	7

Water Quality Volume

In accordance with the Volume III: BMPs Technical Design Manual, a water quality volume of 1.0 inches times the tributary impervious area plus 0.4 inches times the tributary vegetated area is required to be treated by the USSF. The water quality volume is calculated by the following formula:

$$\left(\frac{\text{Imp. SF x 1.0”}}{\text{12”/1’}}\right) + \left(\frac{\text{Veg. SF x 0.4”}}{\text{12”/1’}}\right) = \text{Treatment Volume (CF)}$$

The proposed water quality volume is as follows:

Table 5 – Water Quality Volume Table				
	Vegetated Area (SF)	Impervious Area (SF)	Treatment Volume Required (CF)	Treatment Volume Provided (CF)
USSF 1	17,347	28,060	2,917	3,293
USSF 2	13,520	32,342	3,146	3,755

As shown, the size of the combined water quality volume will meet and exceed the treatment volume requirements. Values from the HydroCAD calculations are attached to this report.

The treatment volume was calculated by using the HydroCAD model and the rainfall that produces 18” of ponding within the chambers. The storage volume within the crushed stone and chambers – the two layers above the filter sand – is then added together to calculate the water quality volume.

A vertical orifice is modeled in HydroCAD at the end of the underdrain outlet to detain the stormwater for an approximate 24-hour time frame. The orifice is intended to be a PVC cap placed on the outfall pipe (no glue) with the orifice drilled into the cap eccentrically. The PVC cap can be easily inspected, removed, or replaced if necessary.

Porous Pavement

The porous pavement subsurface media was sized to meet or exceed the requirement set forth within the MDEP Volume III BMPs Technical Design Manual, Chapter 7.7. The system has proven to be effective at filtering and removing a wide range of pollutants contained in stormwater runoff.

Filter Area Depth

Per the requirement for porous pavement in Chapter 7.7 of the MDEP Stormwater BMP manual, the filter depth shall be a minimum of 4 inches. The proposed design incorporates a filter depth of 10 inches with an assumed void ratio of 5%.

FLOODING STANDARD – WATER QUANTITY

The proposed project was modeled using HydroCAD to verify that the post-development conditions do not exceed the pre-development conditions. A 24-hour SCS Type III storm distribution for the 2, 10, and 25-year storm events were used. The corresponding rainfall amounts for these storms are 3.10", 4.60", and 5.80" respectively. Due to the numerous variables, and inherent inaccuracies with the modeling program used to calculate stormwater runoff it is custom at Acorn Engineering, Inc. to round to the nearest whole number. However due to the small size of the project and the minimal existing flows, the stormwater runoff shall be rounded to the nearest tenth of a cubic feet per second (cfs).

Time of Concentration (Tc)

The times of concentration for subcatchments in both the pre and post conditions were calculated by entering the flow path with the associated ground cover and slopes. HydroCAD then calculated the Tc's and incorporated the total Tc for each subcatchment into the model. When the calculated Tc was less than six minutes (0.1 hours), a direct entry of six minutes was used as advised by the TR-55 model. Consistent with previous submissions and best practices, the sheet flow length for any Tc path was capped at 100 feet.

Curve Number (CN)

Within the pre-development model, the wooded and vegetated ditches were conservatively considered good condition with appropriate underlying soil hydrologic group. In particular, the woods were given a "good" condition throughout the entire development. Based upon the understory, the CN value contained either light underbrush or dense underbrush, depending on the location as verified by multiple site visits. The site generally features denser underbrush towards the back of the parcels and less dense underbrush closer to Washington Avenue. Lastly, the wetlands were modeled as Woods in the D condition in both the pre and post.

The post development landscaped areas were given a good rating within the appropriate underlying hydrologic soil group. This assumption is reinforced given the aggressive landscape plan which will feature more porous conditions that are appropriately mulched along with future extensive root systems and canopy cover that will exist once the landscaping has matured.

Pre-development Calculations

The site consists of wooded area and wetlands in the predevelopment condition, for the purpose of this analysis the land has been divided into six separate sub catchments.

The existing cross culvert underneath Washington Ave, as well as the catch basin outlet for the northern Washington Ave ditch have been included in the model as reaches. The intent of this is to measure the capacity of the existing infrastructure down stream of any proposed peak flow alterations.

Peak flow rates for the pre-development storm events are as follows:

Table 6 – Pre-Development Peak Stormwater Flows

Drainage Area	2-Year Storm Event (cfs)	10-Year Storm Event (cfs)	25-Year Storm Event (cfs)
POI #1	1	3	6
POI #2	8	19	27
POI #3	0	0	0
POI #4	0	0	1

Post-development Calculations

The post condition features the same four point of interests that exist in the pre-development condition, but with multiple BMPs throughout the north and south parcel dedicated for the treatment of runoff generated primarily by roof and pavement via porous pavement and the two (2) USSFs. The subcatchments are as follows:

- Subcatchment 1.1N – This subcatchment consists of primarily undeveloped land that flows to the roadside ditch along the northern side of Washington Ave.
- Subcatchment 1.1S, 1.4S, 1.7S – This subcatchment consists of the roof area contained within the southern parcel, the open space in the center of the southern parcel consisting of landscaping and lawn area, and a small portion of area behing building A.9 and A,19. The roofs will be equipped with downspouts to underground storm drains that are routed to USSF 2. SC 1.4S and 1.7S will be collected via a series of field inlets and piped to USSF 2.
- Subcatchment 1.2N – This subcatchment consists of a portion of Washington Ave and a small portion of the northern parcel. These subcatchments flow to a proposed rain garden located near Sta 4+25 along Washington Ave. The rain garden will help cool, detail, and filter out any pollutants before slowly discharging to the roadside ditch

along the northern side of Washington Ave.

- Subcatchment 1.3S, 1.5S – This subcatchment of the western parking lot in the south parcel, as well as the mews section and grass paver emergency access aisle. The porous pavement segments are split up into two different low points and will collect and filter the runoff. The runoff will be conveyed via underdrains to the existing ditch along the south side of Washington Ave.
- Subcatchment 1.3N, 1.2S, 1.4N – These subcatchments consists of a portion of Washington Ave, and a small portion of the northern parcel. These subcatchments flow to a proposed rain garden near Sta 6+00 and is used to cool, detain, and filter out any pollutants before slowly discharging to the roadside ditch along the northern side of Washington Ave.
- Subcatchment 1.6S – This subcatchment consists of undeveloped land, single family lots off Lambert Street, and the western portion of the south parcel's frontage along Washington Ave. This area drains to the existing roadside ditch along the southern side of Washington Ave.

- Subcatchment 2.1N – This subcatchment consists of the eastern portion of Washington Ave, the wetland within the north parcel, a portion of the single family lots off Auburn Street, and the intersection of Washington and Auburn. The low point of this subcatchment consists of an existing 12" cross culvert that outlets into the southern parcel. It is proposed for this culvert to remain, with the peak flow rate for the 2, 10, and 25 year storms being reduced or maintained in the post development condition.
- Subcatchment 2.1S – This subcatchment consists of the eastern parking lot with porous pavement located at the low spot. The runoff will be collected via underdrains and outlet into a wooded area before draining towards POI #2.
- Subcatchment 2.2S – This subcatchment consists primarily of undeveloped wooded land. This area drains to POI #2.
- Subcatchment 3.1N – This subcatchment consists primarily of undeveloped land and drains to POI #3.
- Subcatchments 1.1N, 1.7N, 1.8N, 1.9N – These subcatchments consist of the roof area within the north parcel, the common space in the center of the site, and small areas to the rear of Buildings A.4 and C.1 consisting of landscaping, lawn area, and impervious patios. The roofs will be conveyed to USSF 1 via a series of downspouts and underground storm drains. The open space areas will be collected via a series of field inlets and storm drains and routed to USSF 1.
- Subcatchments 4.1N and 4.2N – These subcatchments make up the parking lot and mews section. The porous pavement is located at the low point of this subcatchment and is collected via underdrains and piped to POI #4.
- Subcatchment 4.3N – This subcatchment consists primarily of undeveloped land that flows to POI #4.

The post-development calculations include changes to the land use, and the compensation provided by the USSF's and associated engineered orifices.

The ideology HydroCad uses to model porous pavement assumes the pavement has no surface runoff under ideal conditions and accepts several inches of precipitation. An extended Tc is used to simulate the travel time through the base and the pavement is modelled as a pond which represents storage in the base material. Our analysis of porous pavement uses a time of concentration based on the UNHSC's (University of New Hampshire Stormwater Center) research in which the time of concentration for porous pavement is equal to following ratio:

Tc = 790 minutes / 41" of base above the underdrain

Taking a conservative approach, the Tc was calculated using only the depth of the filter course while excluding the stone layers. The equivalent ratio yielded a Tc of 328 minutes based upon the 17" filter course.

Source: Ballestero, Thomas, UNHSC. "*Real Time Hydrology of Permeable Pavements*" Philadelphia Low Impact Development Symposium, 2011.

Peak flow rates for the storm events are as follows:

Table 7 – Post-Development Peak Stormwater Flows

Drainage Area	2-Year Storm Event (cfs)	10-Year Storm Event (cfs)	25-Year Storm Event (cfs)
POI #1	1	3	6
POI #2	8	18	27
POI #3	0	0	0
POI #4	0	0	1

The post-development calculations include changes to the land use and the compensation provided by the stormwater BMPs. The following table represents comparison of pre-development and post-development condition peak runoff rates for the proposed development and tributary area.

Table 8 – Comparison of Peak Flows

POI	2-Year Storm Event (cfs)		10-Year Storm Event (cfs)		25-Year Storm Event (cfs)	
	Pre	Post	Pre	Post	Pre	Post
POI #1	1	1	3	3	6	6
POI #2	8	8	19	18	27	27
POI #3	0	0	0	0	0	0
POI #4	0	0	0	0	1	1

As shown in Table 7 and 8, the net impact of the post development peak flows will remain at or below the predevelopment levels. This is due to the attenuating effect of the USSD's and the proposed underdrained storage and filter layers beneath the porous pavement. Peak water elevations for a 100-year storm remain below pavement elevations. A maintenance agreement in accordance with Chapter 7.7 and UNHSC specifications will be established.

Maintenance activities may include inspections, sweeping, vacuuming, and the limiting of salt and sediment transport to the porous pavement.

A post-development watershed map developed for this project can be viewed in Attachment B, and a copy of the HydroCAD calculations is included within Attachment C of this report.

SOILS

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County
- United States Department of Agriculture Web Soil Survey

Given the soils information, listed above, no onsite wastewater is proposed; the applicant does not intend to perform a more intense hydric soil boundary delineation because the waiver requirements set forth in the City of Portland Technical Manual – Section 7 – Soil Survey, Rev. 6/17/11 are met.

The area within and surrounding the project includes soil types listed in the table below. The susceptibility of soils to erosion is indicated on a relative "K" scale of values over a range of 0.02 to 0.69. Higher "K" values indicate more erodible soils.

Table 1 - "K" Value		
Soils Type	**Subsurface**	**Substratum**
Elmwood fine sandy loam (EmB)	.32	.49
Hinkley Loamy Sand (HIC)	.17	.17
Suffield Silt Loam (SuE2)	.49	.49
Scantic silt loam (SN)	.49	.49
Swanton Fine Sandy Loam (SZ)	.32	.49

The soil "K" value for the soil, listed above, shows a low to medium susceptibility to erosion. The site's susceptibility to erosion is sourced from the Soil Conservation Service Medium Intensity Soil Survey for Cumberland County. Although the soil "K" value shows a low to medium susceptibility to erosion, implementation of the proposed Erosion & Sedimentation Measures by the contractor will be of the utmost importance given the sustained slope throughout the site.

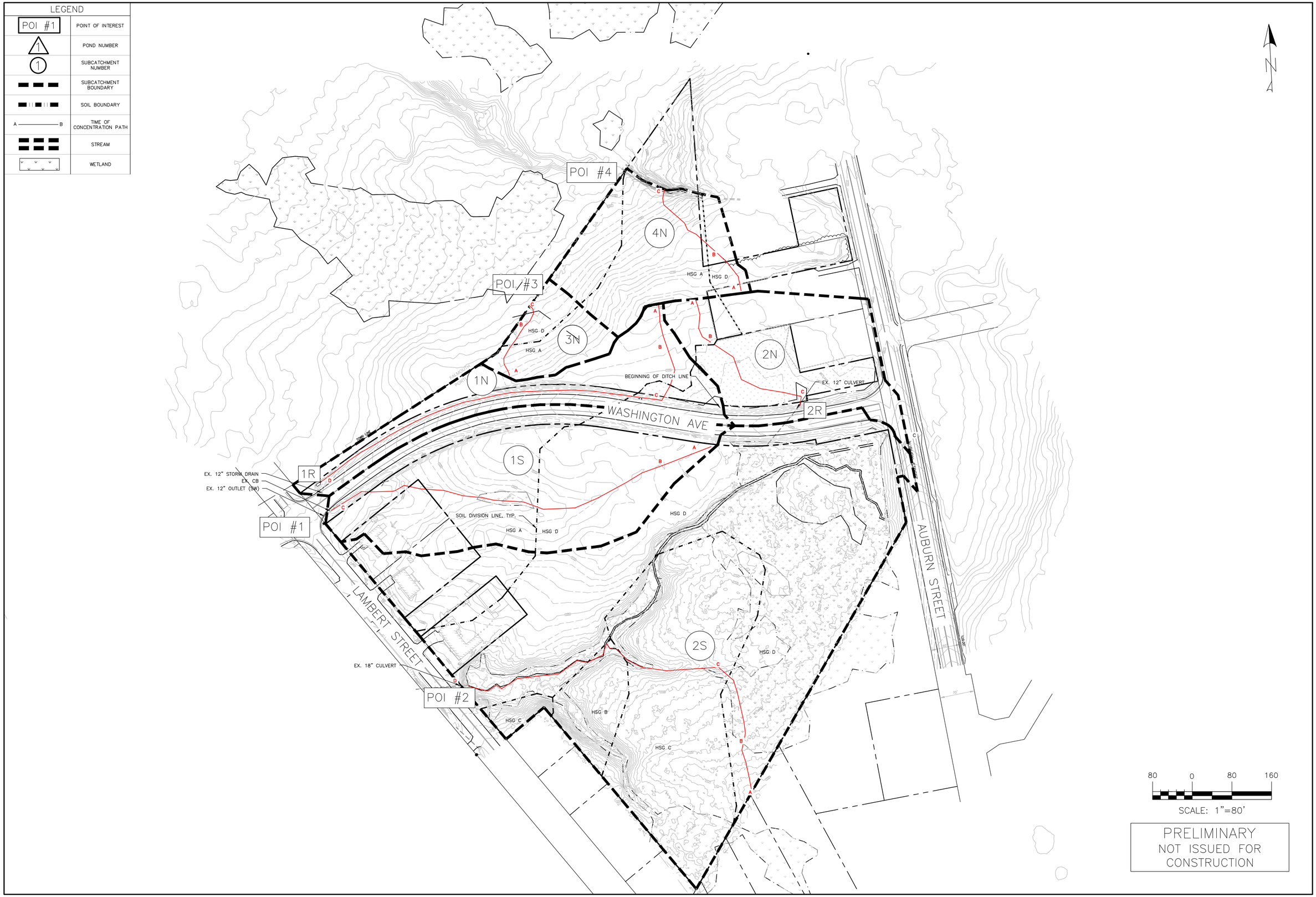
CONCLUSION

The proposed development was designed to meet the requirements implemented by the MDEP under the Stormwater Management Statute (38 M.R.S.A. § 420-D) as well as the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards. The proposed project as designed is not anticipated to cause flooding or erosion problems

within the subject site, abutters' sites, nor within the right-of-way. Overall, the project will provide an improvement to stormwater runoff and overall management from several perspective as outlined above.

ATTACHMENTS

Attachment A: Pre-Development Watershed Map
Attachment B: Post-Development Watershed Map
Attachment C: HydroCAD Calculations
Attachment D: Soil Survey



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SITE/SUB		6/17/22

DRAWING NAME: PRE-DEVELOPMENT WATERSHED MAP

PROJECT NAME: 165 LAMBERT ST

CLIENT: MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

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SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

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SAMUEL J. LEBEL
6505
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PROFESSIONAL ENGINEER
6/15/22

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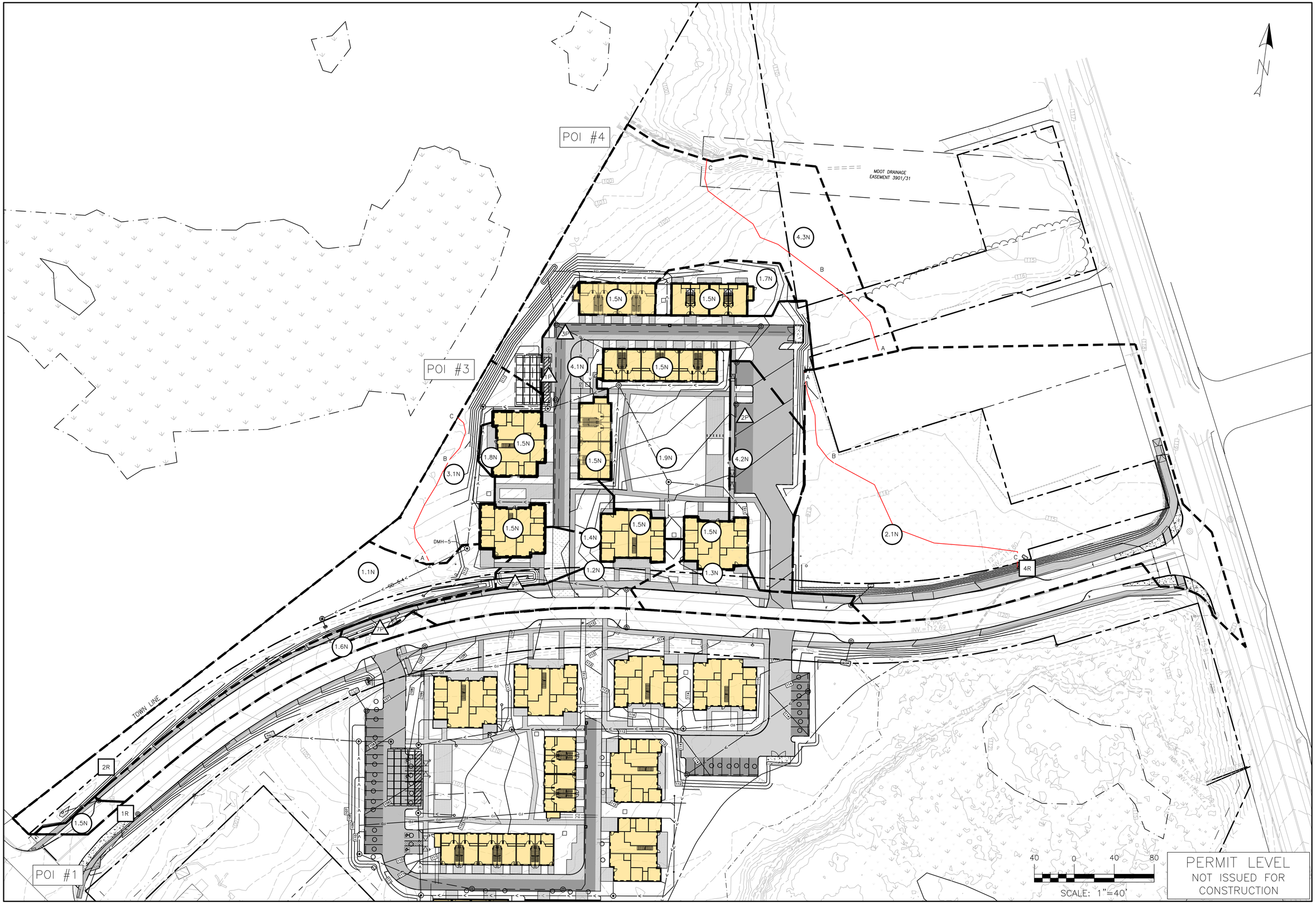

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	SJL	

DRAWING NAME: POST-DEVELOPMENT MAP – NORTH PARCEL

PROJECT NAME/ADDRESS: 165 LAMBERT ST CO-OP
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

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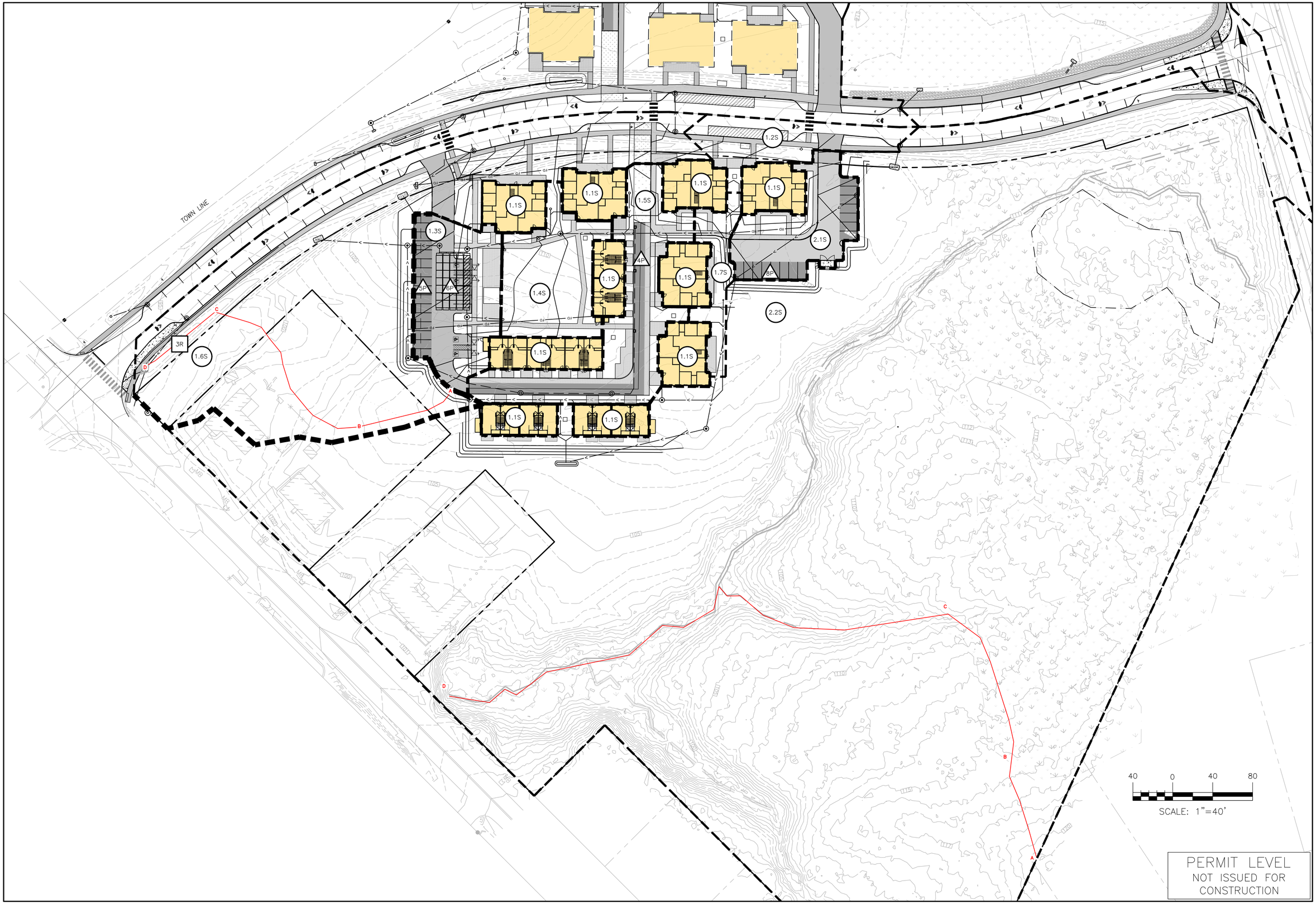

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ISSUED FOR	BY	DATE
SITE/SUB	SJL	8/17/22

DRAWING NAME: POST-DEVELOPMENT MAP – NORTH PARCEL

PROJECT NAME/ADDRESS: 165 LAMBERT ST CO-OP
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

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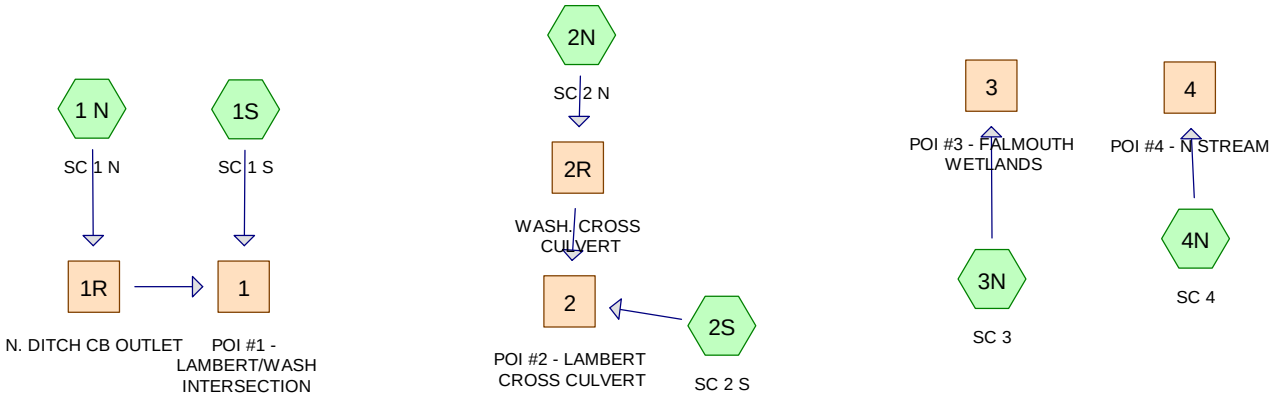

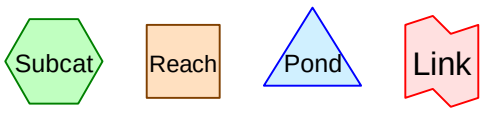

Routing Diagram for 1145_PRE
Prepared by HP Inc., Printed 6/17/2022
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.708	39	>75% Grass cover, Good, HSG A (2S)
0.249	80	>75% Grass cover, Good, HSG D (2S)
0.041	98	Auburn, paved ROW (2S)
0.529	80	Lawns HSG D (2N)
1.277	98	Paved ROW and gravel shoulder (1 N, 1S, 2N)
0.131	80	Road sideslope HSG D (2N)
0.321	39	Roadside ditch and shrubs, HSG A (1 N)
0.065	80	Roadside ditch and shrubs, HSG D (1 N)
0.197	39	Roadside ditch, HSG A (1S)
0.282	80	Roadside ditch, HSG D (1S, 2S)
0.032	98	Roofs, HSG A (1S)
0.089	98	Roofs/driveways/patios (HSG A) (2S)
0.080	98	Roofs/driveways/patios (HSG D) (2S)
0.165	98	Rooftops and driveways (2N)
0.177	98	Wash. paved ROW and gravel shoulder (2S)
0.057	77	Wetland pocket, assumed HSG D (1S)
4.493	30	Woods, Good, HSG A (1 N, 1S, 2N, 2S, 3N, 4N)
0.555	55	Woods, Good, HSG B (2S)
3.516	70	Woods, Good, HSG C (2S)
8.889	77	Woods, Good, HSG D (1 N, 1S, 2N, 2S, 3N, 4N)
21.854	**65**	**TOTAL AREA**

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Summary for Subcatchment 1 N: SC 1 N

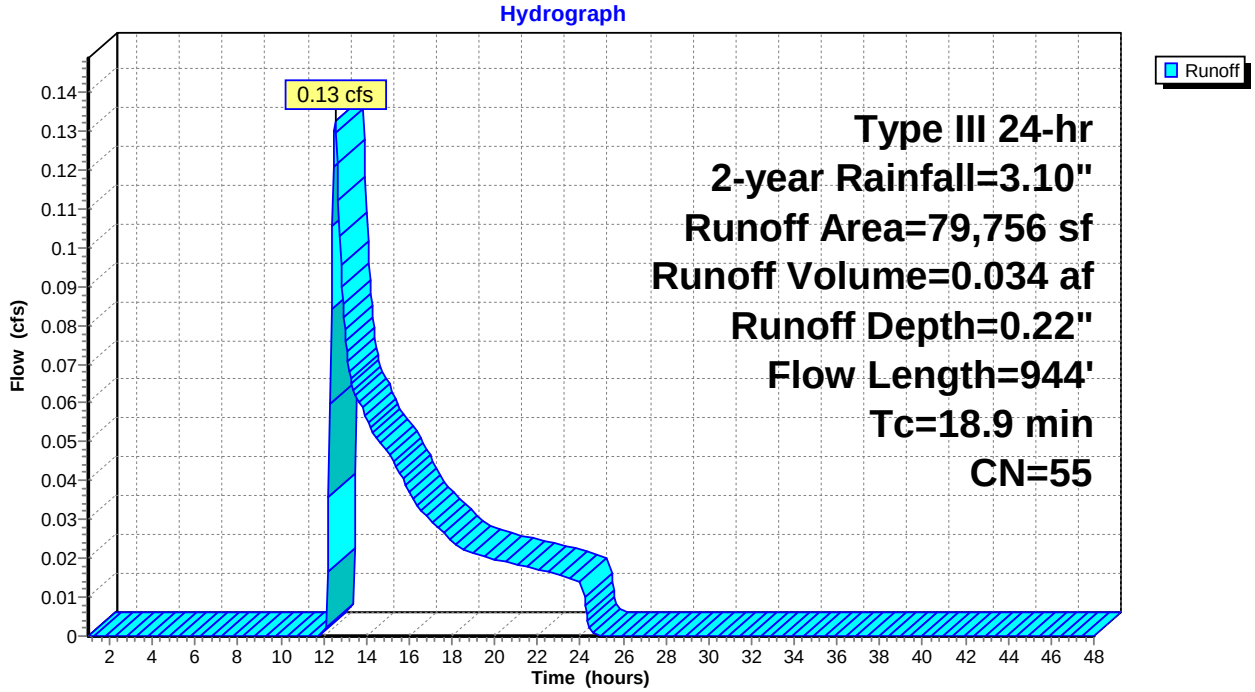
Runoff = 0.13 cfs @ 12.55 hrs, Volume= 0.034 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	13,977	39	Roadside ditch and shrubs, HSG A
*	21,422	98	Paved ROW and gravel shoulder
	35,717	30	Woods, Good, HSG A
	5,802	77	Woods, Good, HSG D
*	2,838	80	Roadside ditch and shrubs, HSG D
	79,756	55	Weighted Average
	58,334		73.14% Pervious Area
	21,422		26.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	100	0.0500	0.11		**Sheet Flow, Sheet Flow (A to B)** Woods: Light underbrush n= 0.400 P2= 3.27"
1.6	106	0.0500	1.12		**Shallow Concentrated Flow, SCF (B TO C)** Woodland Kv= 5.0 fps
2.6	738	0.0310	4.64	17.83	**Trap/Vee/Rect Channel Flow, Ditch Flow (C to D)** Bot.W=2.00' D=0.80' Z= 2.5 & 4.5 '/' Top.W=7.60' n= 0.035 Earth, dense weeds
18.9	944	Total			

Subcatchment 1 N: SC 1 N



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Summary for Subcatchment 1S: SC 1 S

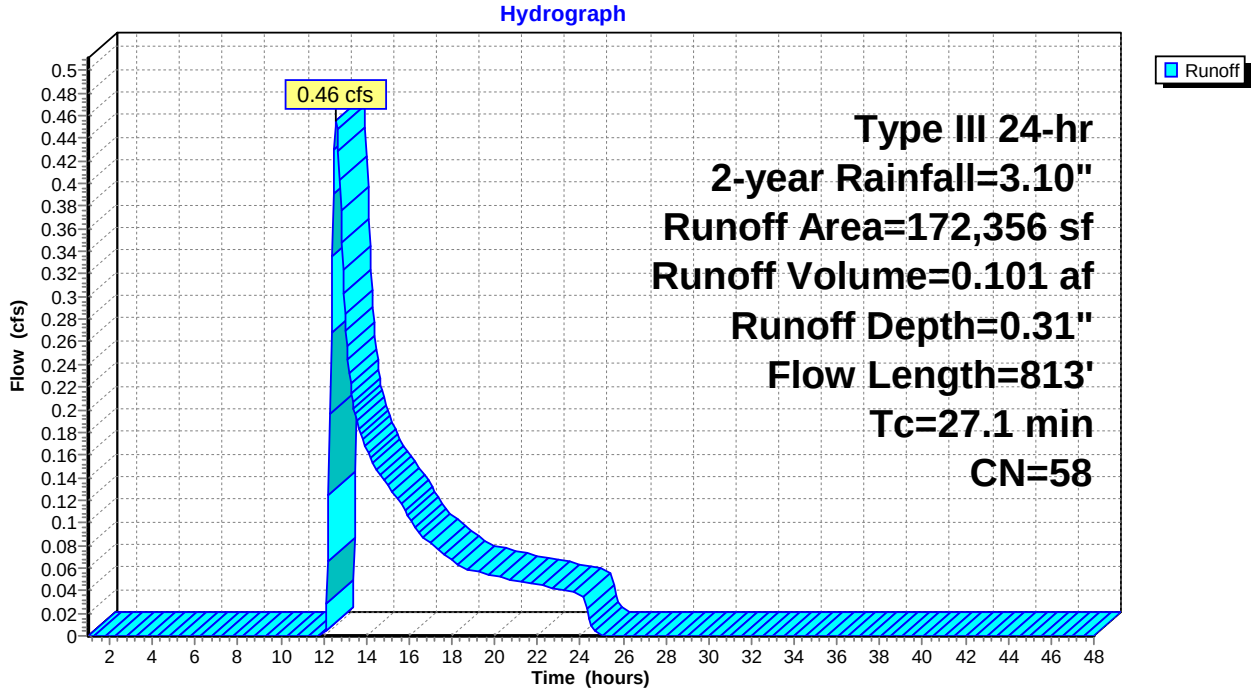
Runoff = 0.46 cfs @ 12.59 hrs, Volume= 0.101 af, Depth= 0.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	72,886	30	Woods, Good, HSG A
*	61,363	77	Woods, Good, HSG D
*	1,387	98	Roofs, HSG A
*	2,490	77	Wetland pocket, assumed HSG D
*	8,584	39	Roadside ditch, HSG A
*	4,340	80	Roadside ditch, HSG D
*	21,306	98	Paved ROW and gravel shoulder
	172,356	58	Weighted Average
	149,663		86.83% Pervious Area
	22,693		13.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.1	100	0.0300	0.09		**Sheet Flow, Sheet flow (A to B)** Woods: Light underbrush n= 0.400 P2= 3.27"
9.0	713	0.0700	1.32		**Shallow Concentrated Flow, SCF (B to C)** Woodland Kv= 5.0 fps
27.1	813	Total			

Subcatchment 1S: SC 1 S



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Summary for Subcatchment 2N: SC 2 N

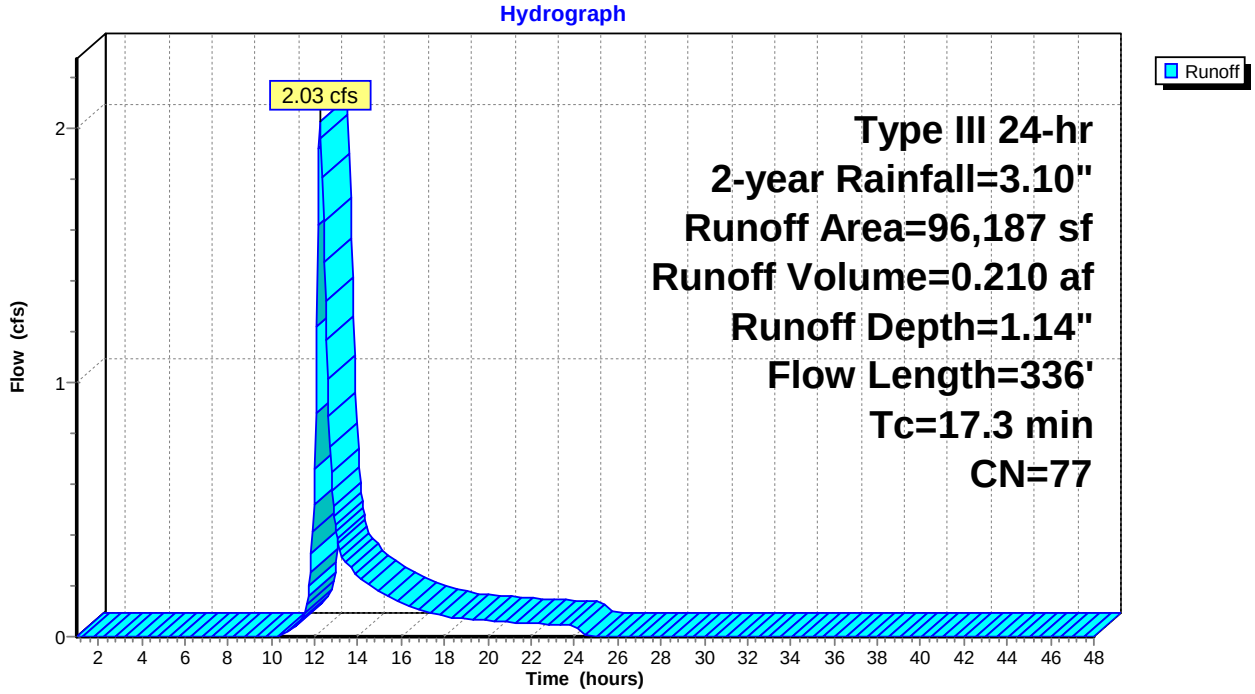
Runoff = 2.03 cfs @ 12.26 hrs, Volume= 0.210 af, Depth= 1.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	11,790	30	Woods, Good, HSG A
	35,555	77	Woods, Good, HSG D
*	5,690	80	Road sideslope HSG D
*	12,892	98	Paved ROW and gravel shoulder
*	7,208	98	Rooftops and driveways
*	23,052	80	Lawns HSG D
	96,187	77	Weighted Average
	76,087		79.10% Pervious Area
	20,100		20.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	100	0.0500	0.11		**Sheet Flow, Sheet Flow (A TO B)** Woods: Light underbrush n= 0.400 P2= 3.27"
2.6	236	0.0100	1.50		**Shallow Concentrated Flow, Wetlands** Grassed Waterway Kv= 15.0 fps
17.3	336	Total			

Subcatchment 2N: SC 2 N



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Summary for Subcatchment 2S: SC 2 S

Runoff = 6.41 cfs @ 12.40 hrs, Volume= 0.826 af, Depth= 0.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	5,912	30	Woods, Good, HSG A
	30,826	39	>75% Grass cover, Good, HSG A
*	3,896	98	Roofs/driveways/patios (HSG A)
	24,173	55	Woods, Good, HSG B
	6,557	70	Woods, Good, HSG C
	146,595	70	Woods, Good, HSG C
	247,584	77	Woods, Good, HSG D
	10,866	80	>75% Grass cover, Good, HSG D
*	3,503	98	Roofs/driveways/patios (HSG D)
*	7,726	98	Wash. paved ROW and gravel shoulder
*	7,931	80	Roadside ditch, HSG D
*	1,794	98	Auburn, paved ROW
	497,363	72	Weighted Average
	480,444		96.60% Pervious Area
	16,919		3.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.4	100	0.0700	0.07		**Sheet Flow, Sheet Flow (A to B)** Woods: Dense underbrush n= 0.800 P2= 3.27"
0.7	170	0.0700	3.97		**Shallow Concentrated Flow, SCF (B TO C)** Grassed Waterway Kv= 15.0 fps
2.6	565	0.0350	3.56	3.92	**Channel Flow, Stream** Area= 1.1 sf Perim= 3.0' r= 0.37' n= 0.040 Winding stream, pools & shoals
25.7	835	Total			

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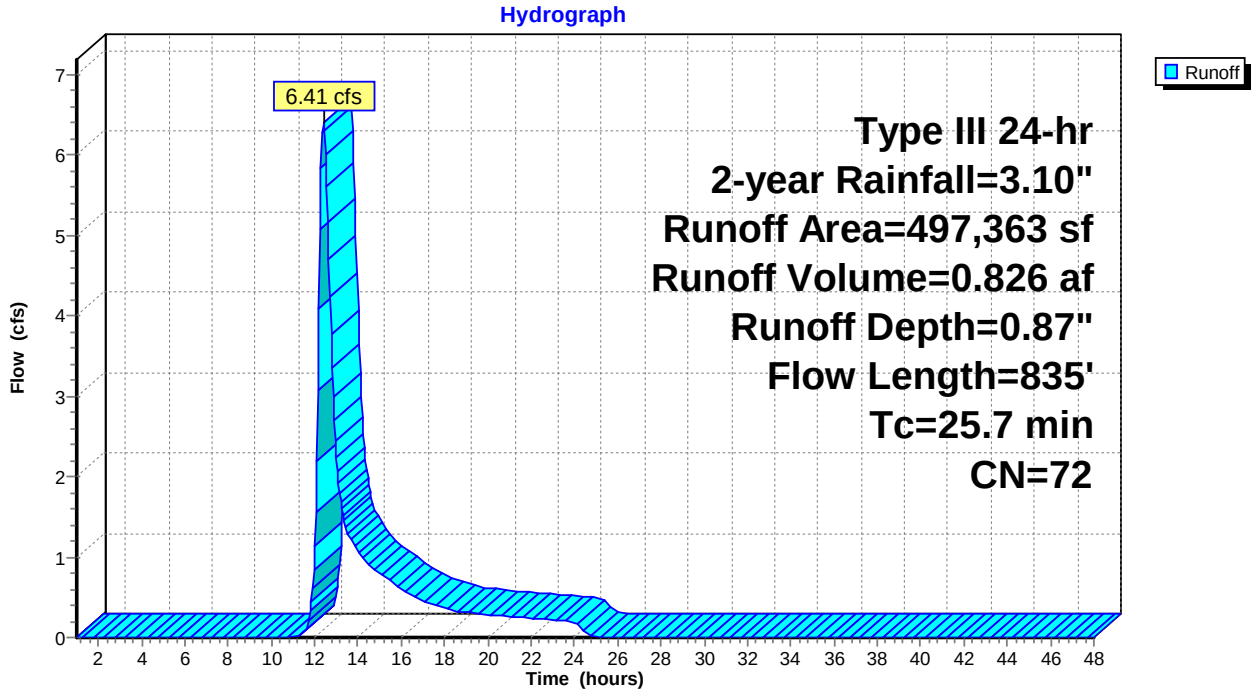
Subcatchment 2S: SC 2 S



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Summary for Subcatchment 3N: SC 3

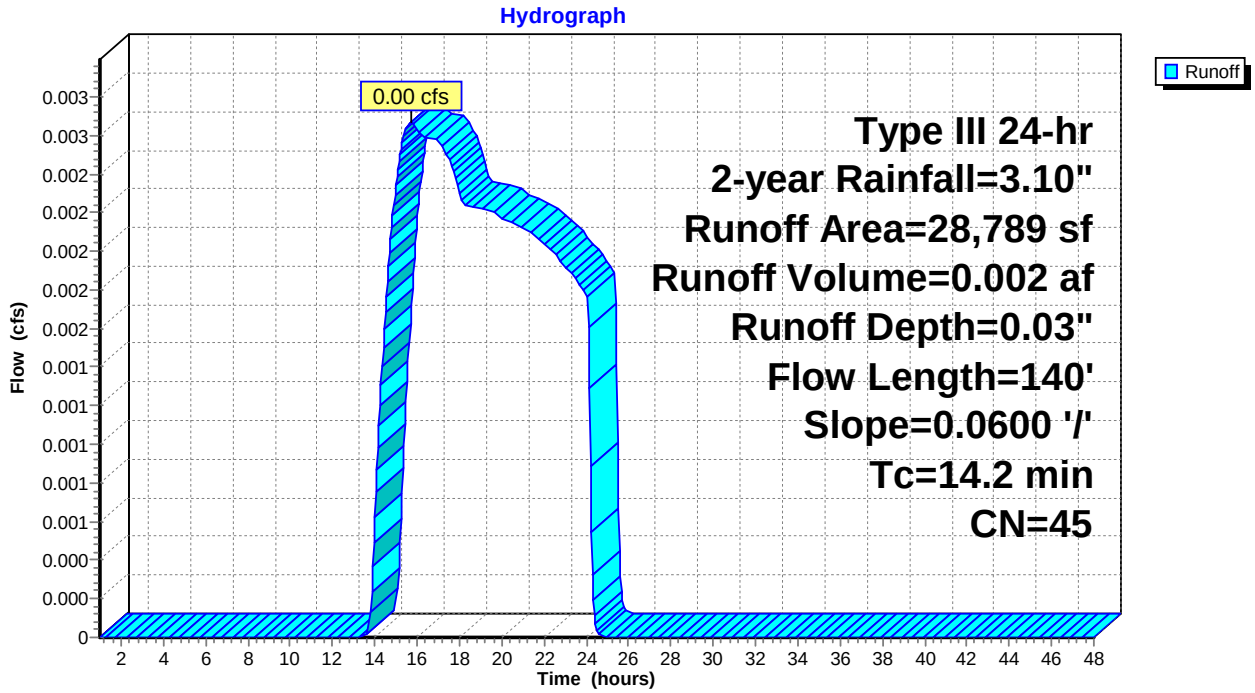
Runoff = 0.00 cfs @ 15.75 hrs, Volume= 0.002 af, Depth= 0.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

Area (sf)	CN	Description
19,623	30	Woods, Good, HSG A
9,166	77	Woods, Good, HSG D
28,789	45	Weighted Average
28,789		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0600	0.12		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.27"
0.5	40	0.0600	1.22		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
14.2	140	Total			

Subcatchment 3N: SC 3



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Summary for Subcatchment 4N: SC 4

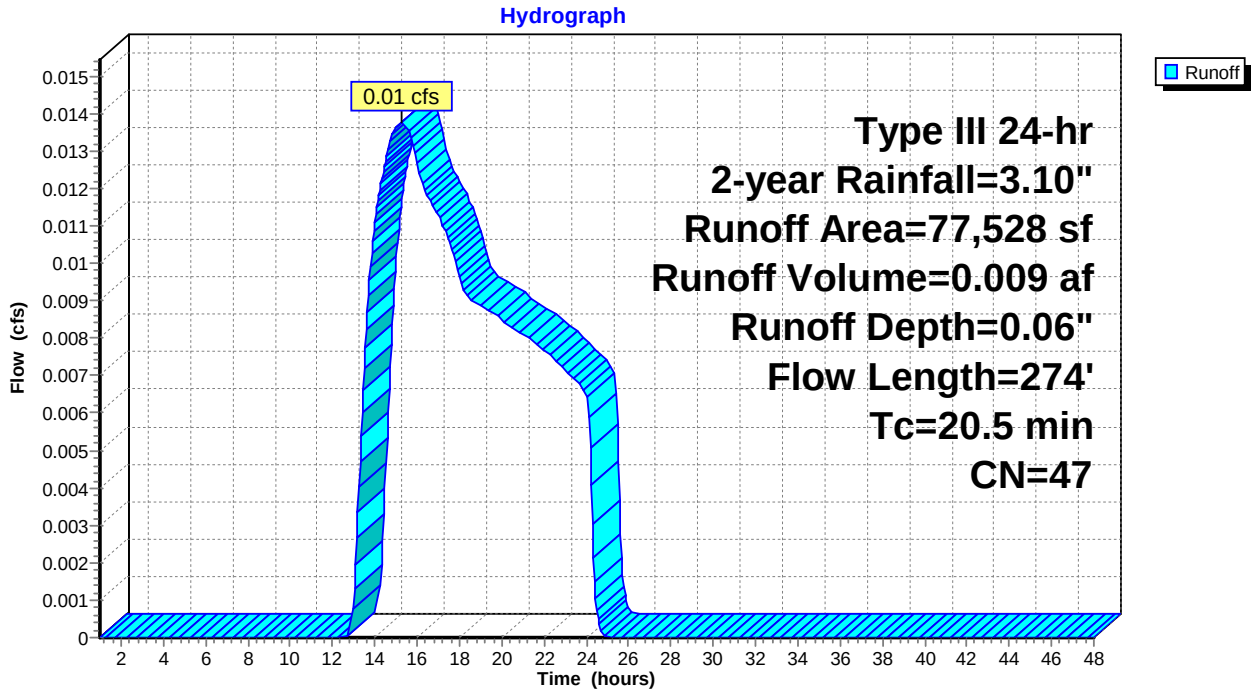
Runoff = 0.01 cfs @ 15.23 hrs, Volume= 0.009 af, Depth= 0.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	49,772	30	Woods, Good, HSG A
	17,107	77	Woods, Good, HSG D
*	10,649	77	Woods, Good, HSG D
	77,528	47	Weighted Average
	77,528		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.1	100	0.0300	0.09		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.27"
2.4	174	0.0600	1.22		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
20.5	274	Total			

Subcatchment 4N: SC 4



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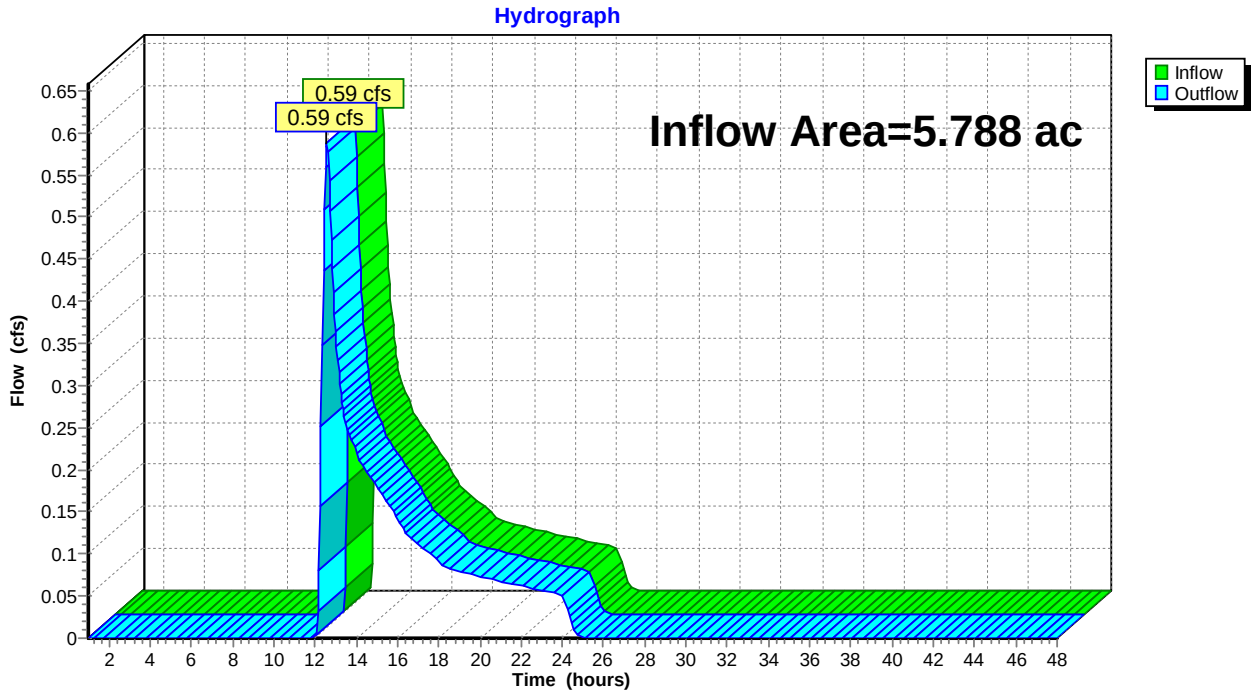
Summary for Reach 1: POI #1 - LAMBERT/WASH INTERSECTION

Inflow Area = 5.788 ac, 17.50% Impervious, Inflow Depth = 0.28" for 2-year event
Inflow = 0.59 cfs @ 12.58 hrs, Volume= 0.135 af
Outflow = 0.59 cfs @ 12.58 hrs, Volume= 0.135 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach 1: POI #1 - LAMBERT/WASH INTERSECTION



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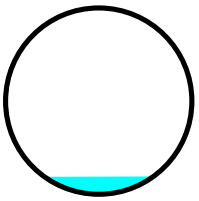
Summary for Reach 1R: N. DITCH CB OUTLET

Inflow Area = 1.831 ac, 26.86% Impervious, Inflow Depth = 0.22" for 2-year event
Inflow = 0.13 cfs @ 12.55 hrs, Volume= 0.034 af
Outflow = 0.13 cfs @ 12.55 hrs, Volume= 0.034 af, Atten= 0%, Lag= 0.4 min

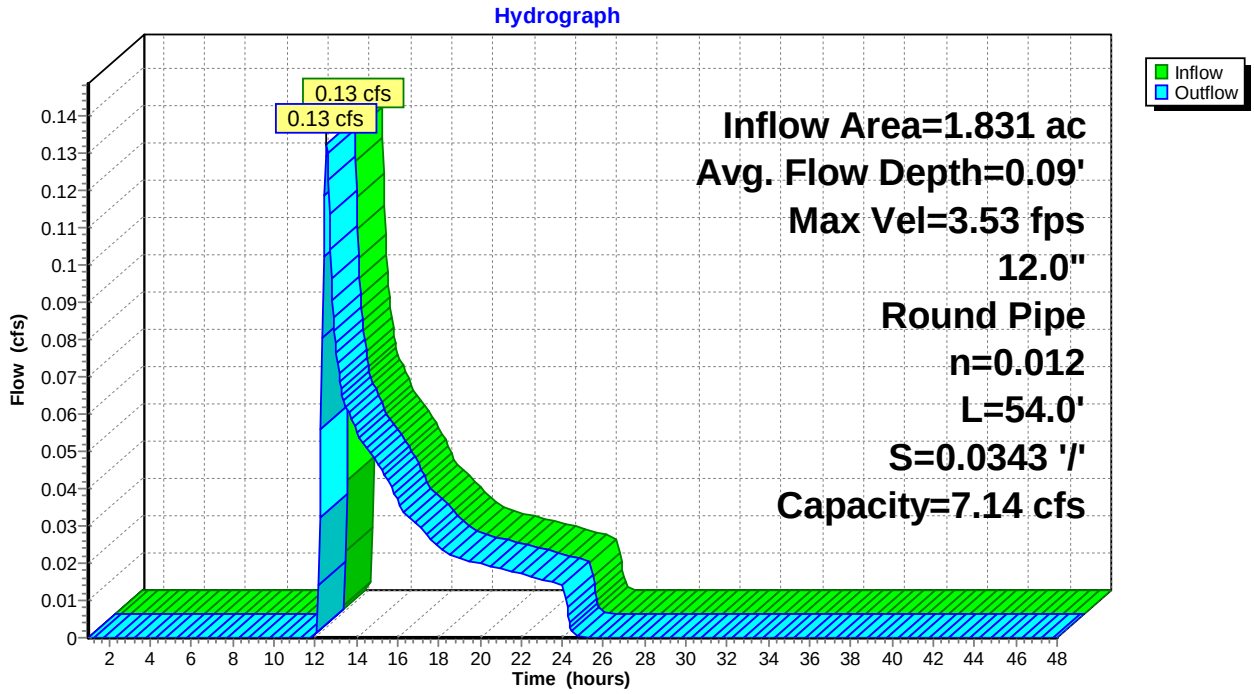
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.53 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.18 fps, Avg. Travel Time= 0.4 min

Peak Storage= 2 cf @ 12.55 hrs
Average Depth at Peak Storage= 0.09'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.14 cfs

12.0" Round Pipe
n= 0.012
Length= 54.0' Slope= 0.0343 '/'
Inlet Invert= 87.63', Outlet Invert= 85.78'



Reach 1R: N. DITCH CB OUTLET



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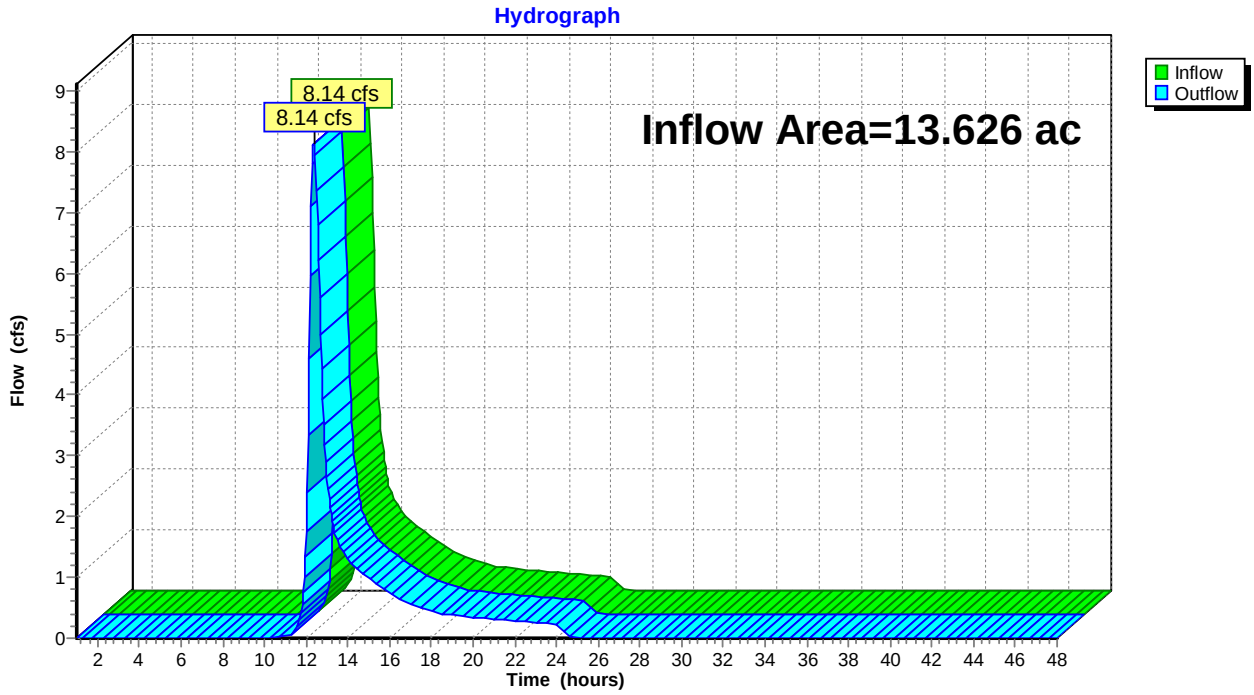
Summary for Reach 2: POI #2 - LAMBERT CROSS CULVERT

Inflow Area = 13.626 ac, 6.24% Impervious, Inflow Depth = 0.91" for 2-year event
Inflow = 8.14 cfs @ 12.37 hrs, Volume= 1.036 af
Outflow = 8.14 cfs @ 12.37 hrs, Volume= 1.036 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach 2: POI #2 - LAMBERT CROSS CULVERT



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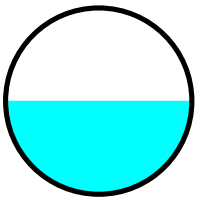
Summary for Reach 2R: WASH. CROSS CULVERT

Inflow Area = 2.208 ac, 20.90% Impervious, Inflow Depth = 1.14" for 2-year event
Inflow = 2.03 cfs @ 12.26 hrs, Volume= 0.210 af
Outflow = 2.02 cfs @ 12.27 hrs, Volume= 0.210 af, Atten= 0%, Lag= 0.6 min

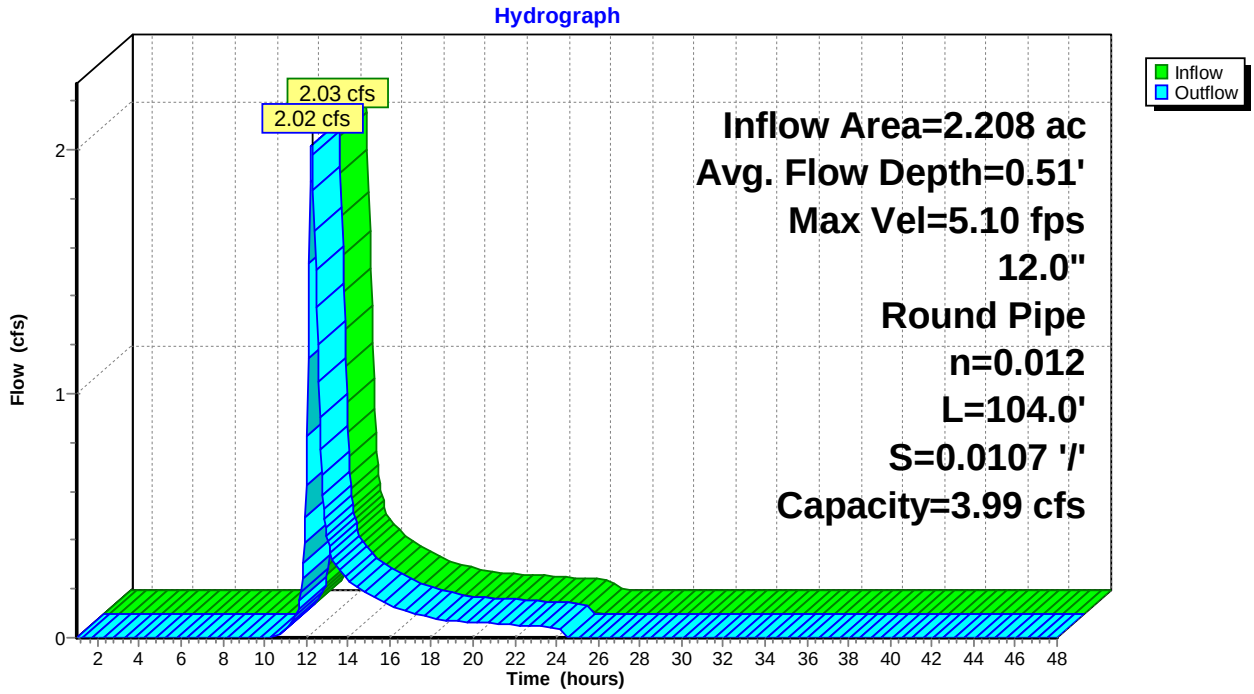
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.10 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.15 fps, Avg. Travel Time= 0.8 min

Peak Storage= 41 cf @ 12.26 hrs
Average Depth at Peak Storage= 0.51'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.99 cfs

12.0" Round Pipe
n= 0.012 Corrugated PP, smooth interior
Length= 104.0' Slope= 0.0107 '/'
Inlet Invert= 113.80', Outlet Invert= 112.69'



Reach 2R: WASH. CROSS CULVERT



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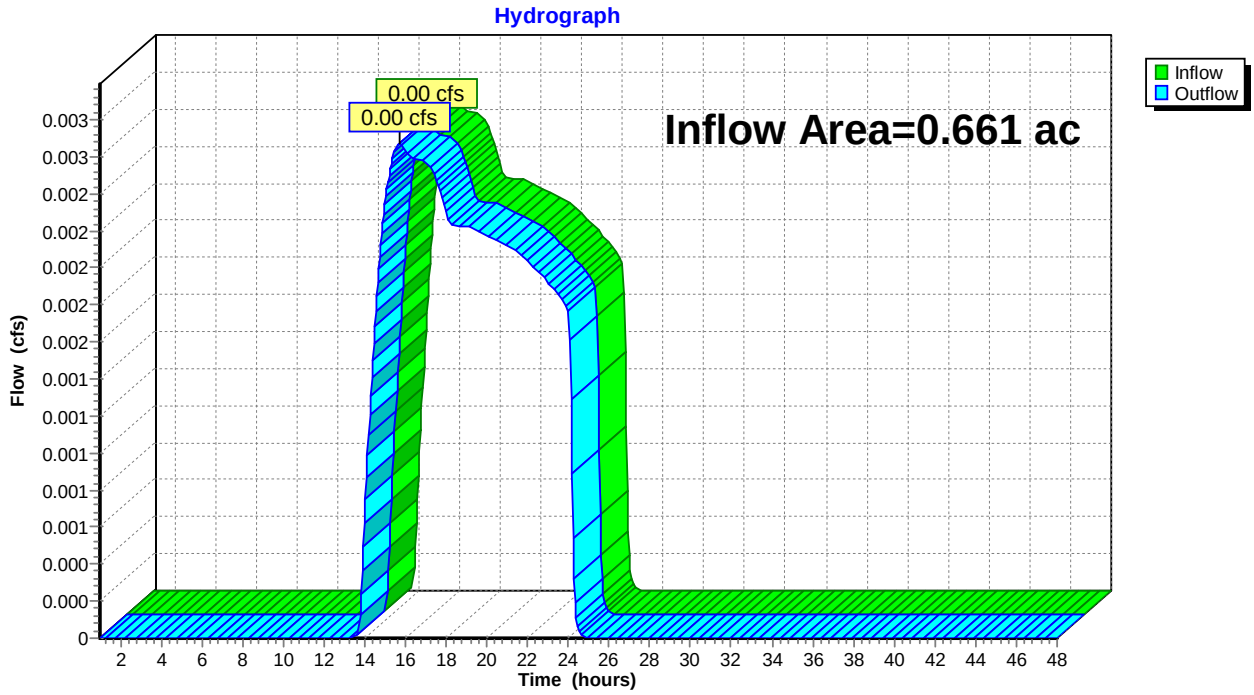
Summary for Reach 3: POI #3 - FALMOUTH WETLANDS

Inflow Area = 0.661 ac, 0.00% Impervious, Inflow Depth = 0.03" for 2-year event
Inflow = 0.00 cfs @ 15.75 hrs, Volume= 0.002 af
Outflow = 0.00 cfs @ 15.75 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach 3: POI #3 - FALMOUTH WETLANDS



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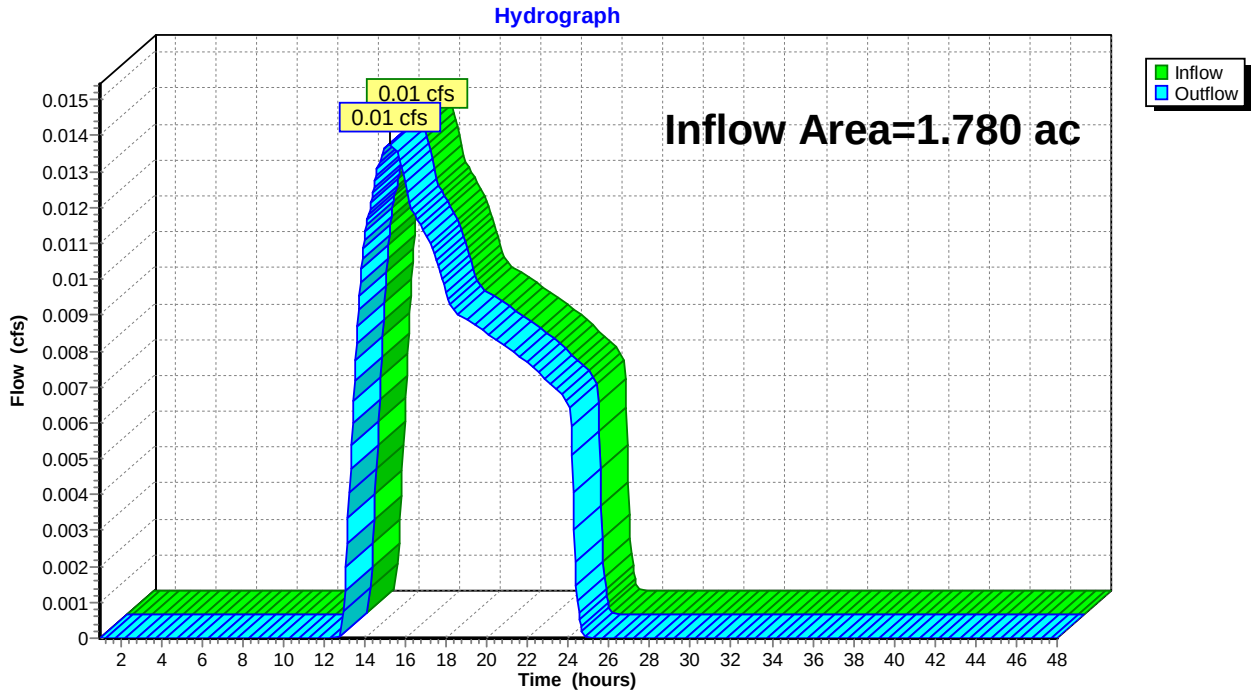
Summary for Reach 4: POI #4 - N STREAM

Inflow Area = 1.780 ac, 0.00% Impervious, Inflow Depth = 0.06" for 2-year event
Inflow = 0.01 cfs @ 15.23 hrs, Volume= 0.009 af
Outflow = 0.01 cfs @ 15.23 hrs, Volume= 0.009 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach 4: POI #4 - N STREAM



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Summary for Subcatchment 1 N: SC 1 N

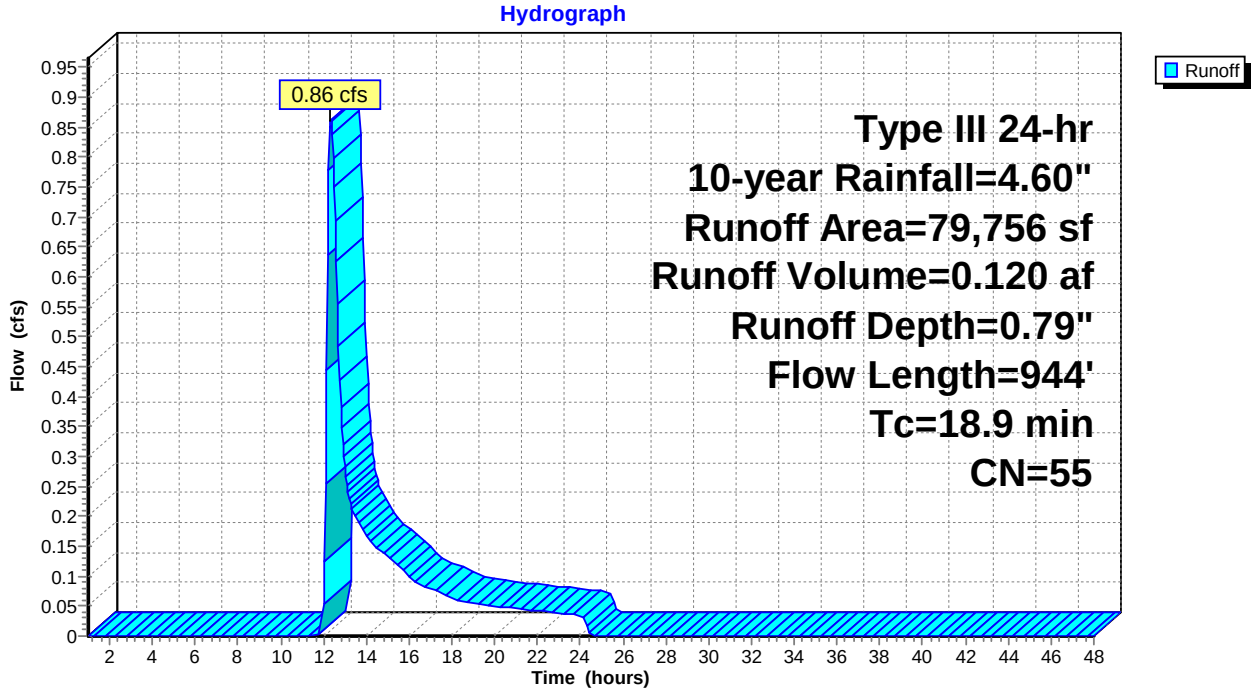
Runoff = 0.86 cfs @ 12.34 hrs, Volume= 0.120 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	13,977	39	Roadside ditch and shrubs, HSG A
*	21,422	98	Paved ROW and gravel shoulder
	35,717	30	Woods, Good, HSG A
	5,802	77	Woods, Good, HSG D
*	2,838	80	Roadside ditch and shrubs, HSG D
	79,756	55	Weighted Average
	58,334		73.14% Pervious Area
	21,422		26.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	100	0.0500	0.11		**Sheet Flow, Sheet Flow (A to B)** Woods: Light underbrush n= 0.400 P2= 3.27"
1.6	106	0.0500	1.12		**Shallow Concentrated Flow, SCF (B TO C)** Woodland Kv= 5.0 fps
2.6	738	0.0310	4.64	17.83	**Trap/Vee/Rect Channel Flow, Ditch Flow (C to D)** Bot.W=2.00' D=0.80' Z= 2.5 & 4.5 '/' Top.W=7.60' n= 0.035 Earth, dense weeds
18.9	944	Total			

Subcatchment 1 N: SC 1 N



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Summary for Subcatchment 1S: SC 1 S

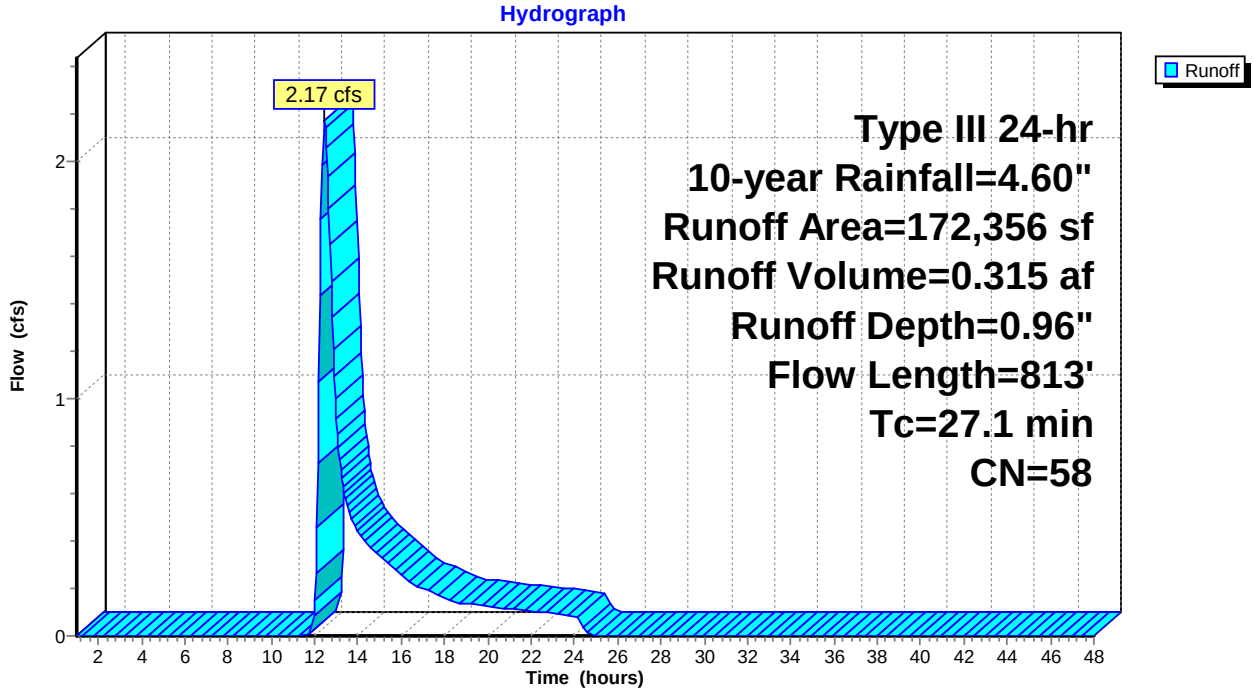
Runoff = 2.17 cfs @ 12.46 hrs, Volume= 0.315 af, Depth= 0.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	72,886	30	Woods, Good, HSG A
*	61,363	77	Woods, Good, HSG D
*	1,387	98	Roofs, HSG A
*	2,490	77	Wetland pocket, assumed HSG D
*	8,584	39	Roadside ditch, HSG A
*	4,340	80	Roadside ditch, HSG D
*	21,306	98	Paved ROW and gravel shoulder
	172,356	58	Weighted Average
	149,663		86.83% Pervious Area
	22,693		13.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.1	100	0.0300	0.09		**Sheet Flow, Sheet flow (A to B)** Woods: Light underbrush n= 0.400 P2= 3.27"
9.0	713	0.0700	1.32		**Shallow Concentrated Flow, SCF (B to C)** Woodland Kv= 5.0 fps
27.1	813	Total			

Subcatchment 1S: SC 1 S



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Summary for Subcatchment 2N: SC 2 N

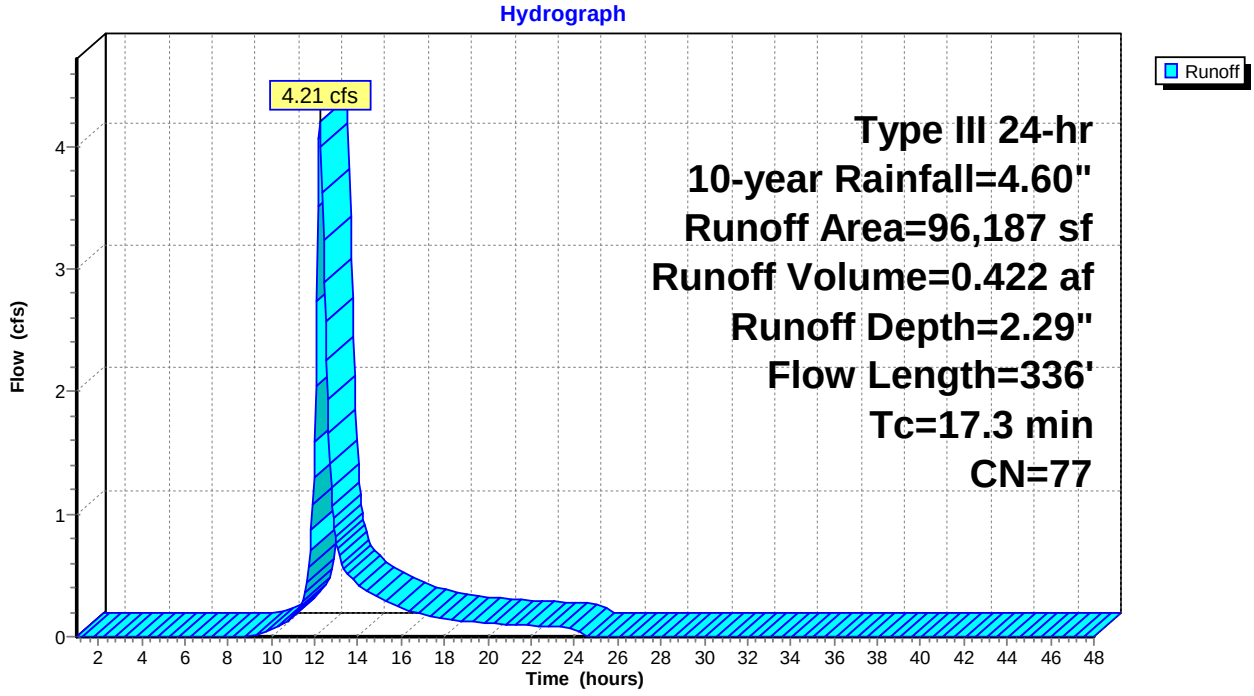
Runoff = 4.21 cfs @ 12.25 hrs, Volume= 0.422 af, Depth= 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	11,790	30	Woods, Good, HSG A
	35,555	77	Woods, Good, HSG D
*	5,690	80	Road sideslope HSG D
*	12,892	98	Paved ROW and gravel shoulder
*	7,208	98	Rooftops and driveways
*	23,052	80	Lawns HSG D
	96,187	77	Weighted Average
	76,087		79.10% Pervious Area
	20,100		20.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	100	0.0500	0.11		**Sheet Flow, Sheet Flow (A TO B)** Woods: Light underbrush n= 0.400 P2= 3.27"
2.6	236	0.0100	1.50		**Shallow Concentrated Flow, Wetlands** Grassed Waterway Kv= 15.0 fps
17.3	336	Total			

Subcatchment 2N: SC 2 N



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Summary for Subcatchment 2S: SC 2 S

Runoff = 15.03 cfs @ 12.37 hrs, Volume= 1.803 af, Depth= 1.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	5,912	30	Woods, Good, HSG A
	30,826	39	>75% Grass cover, Good, HSG A
*	3,896	98	Roofs/driveways/patios (HSG A)
	24,173	55	Woods, Good, HSG B
	6,557	70	Woods, Good, HSG C
	146,595	70	Woods, Good, HSG C
	247,584	77	Woods, Good, HSG D
	10,866	80	>75% Grass cover, Good, HSG D
*	3,503	98	Roofs/driveways/patios (HSG D)
*	7,726	98	Wash. paved ROW and gravel shoulder
*	7,931	80	Roadside ditch, HSG D
*	1,794	98	Auburn, paved ROW
	497,363	72	Weighted Average
	480,444		96.60% Pervious Area
	16,919		3.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.4	100	0.0700	0.07		**Sheet Flow, Sheet Flow (A to B)** Woods: Dense underbrush n= 0.800 P2= 3.27"
0.7	170	0.0700	3.97		**Shallow Concentrated Flow, SCF (B TO C)** Grassed Waterway Kv= 15.0 fps
2.6	565	0.0350	3.56	3.92	**Channel Flow, Stream** Area= 1.1 sf Perim= 3.0' r= 0.37' n= 0.040 Winding stream, pools & shoals
25.7	835	Total			

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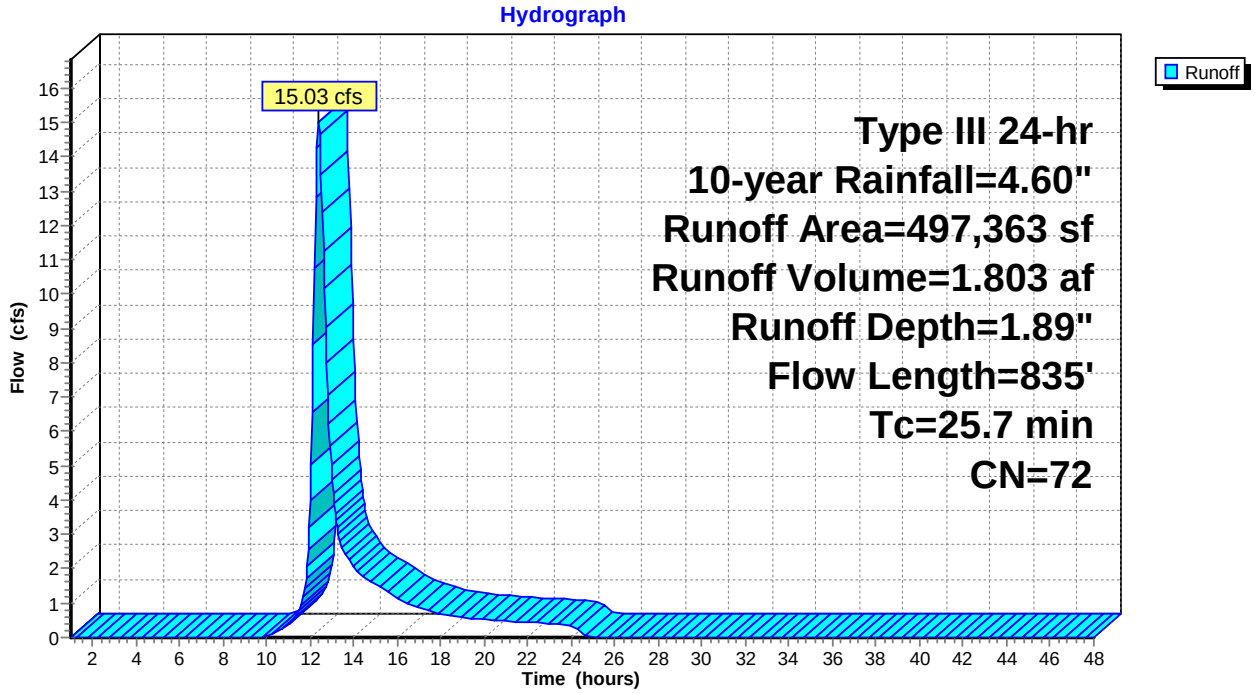
Subcatchment 2S: SC 2 S



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Summary for Subcatchment 3N: SC 3

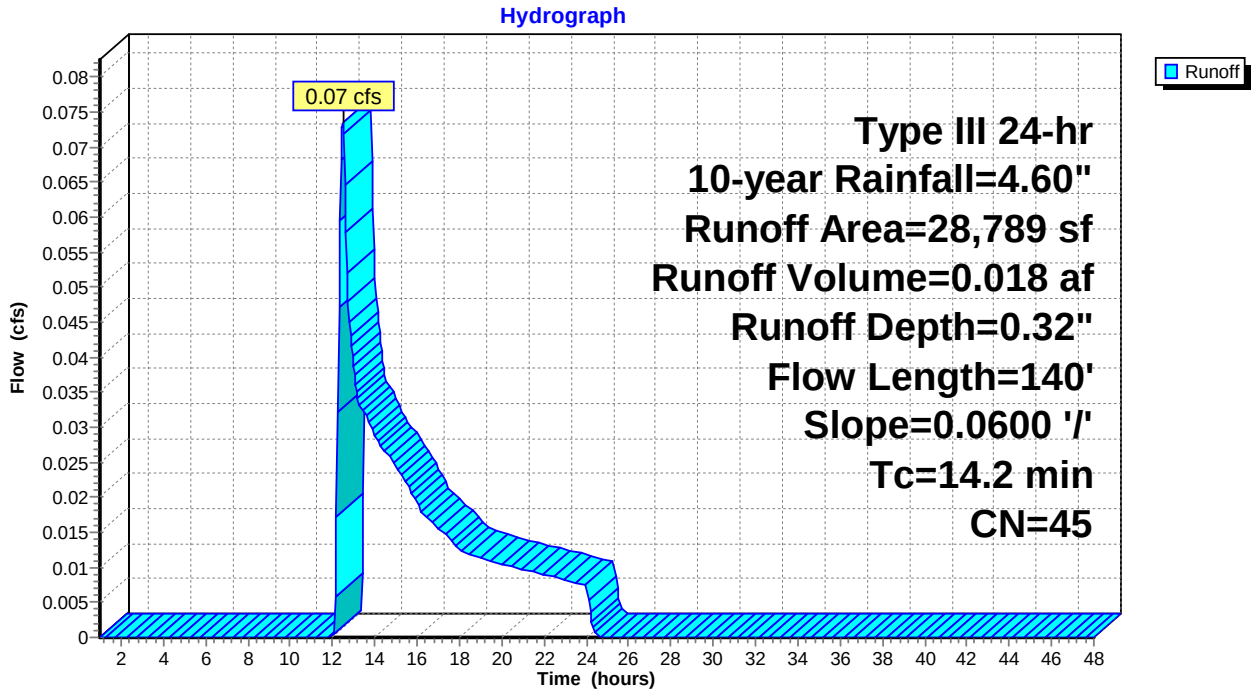
Runoff = 0.07 cfs @ 12.48 hrs, Volume= 0.018 af, Depth= 0.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

Area (sf)	CN	Description
19,623	30	Woods, Good, HSG A
9,166	77	Woods, Good, HSG D
28,789	45	Weighted Average
28,789		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0600	0.12		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.27"
0.5	40	0.0600	1.22		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
14.2	140	Total			

Subcatchment 3N: SC 3



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Summary for Subcatchment 4N: SC 4

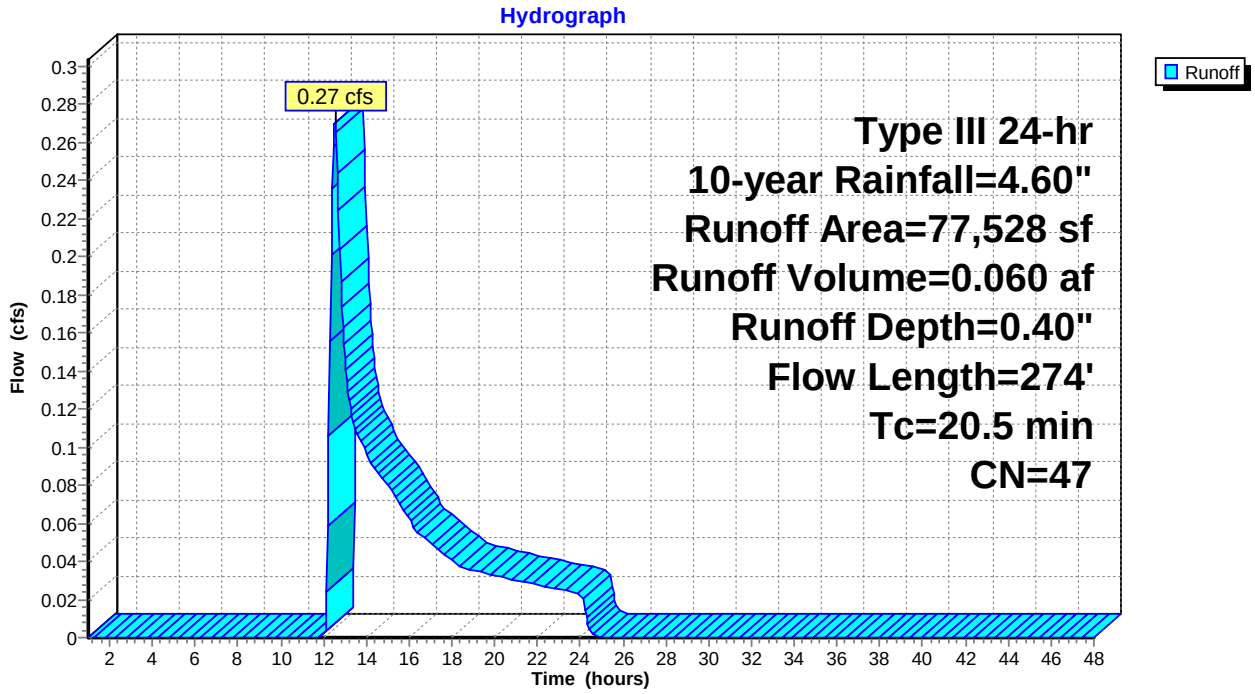
Runoff = 0.27 cfs @ 12.53 hrs, Volume= 0.060 af, Depth= 0.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	49,772	30	Woods, Good, HSG A
	17,107	77	Woods, Good, HSG D
*	10,649	77	Woods, Good, HSG D
	77,528	47	Weighted Average
	77,528		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.1	100	0.0300	0.09		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.27"
2.4	174	0.0600	1.22		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
20.5	274	Total			

Subcatchment 4N: SC 4



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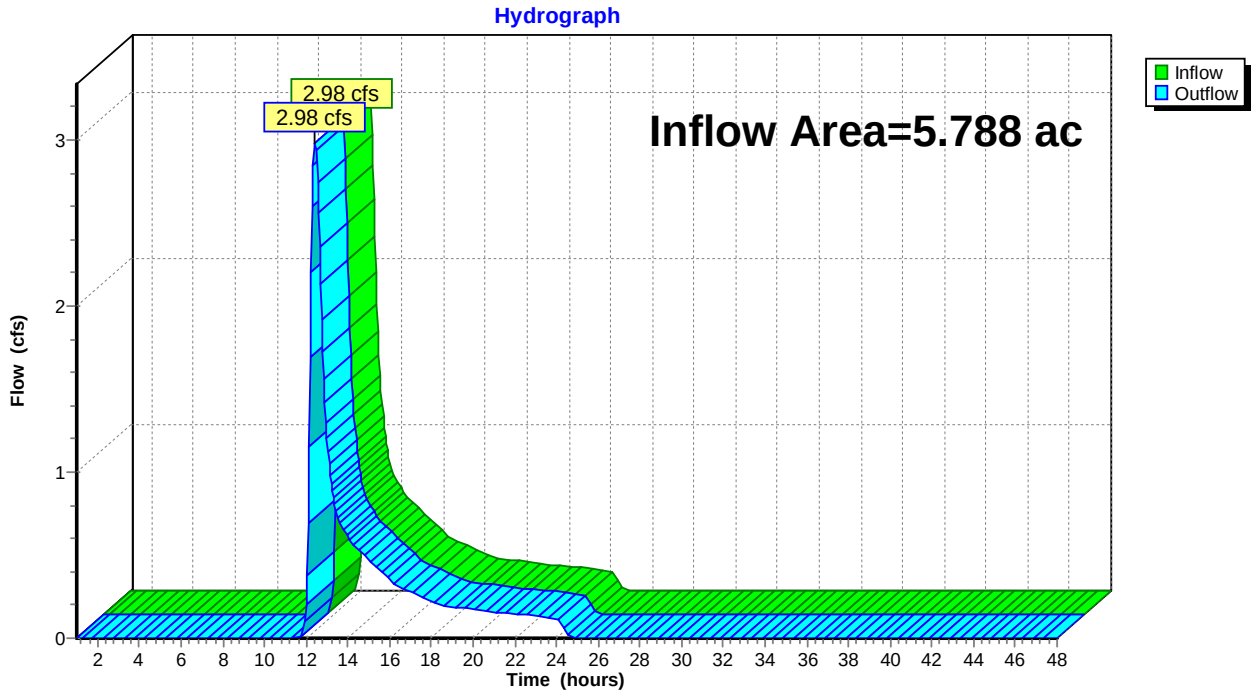
Summary for Reach 1: POI #1 - LAMBERT/WASH INTERSECTION

Inflow Area = 5.788 ac, 17.50% Impervious, Inflow Depth = 0.90" for 10-year event
Inflow = 2.98 cfs @ 12.43 hrs, Volume= 0.435 af
Outflow = 2.98 cfs @ 12.43 hrs, Volume= 0.435 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach 1: POI #1 - LAMBERT/WASH INTERSECTION



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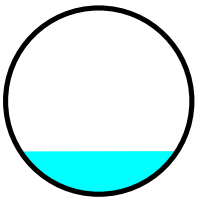
Summary for Reach 1R: N. DITCH CB OUTLET

Inflow Area = 1.831 ac, 26.86% Impervious, Inflow Depth = 0.79" for 10-year event
Inflow = 0.86 cfs @ 12.34 hrs, Volume= 0.120 af
Outflow = 0.86 cfs @ 12.35 hrs, Volume= 0.120 af, Atten= 0%, Lag= 0.3 min

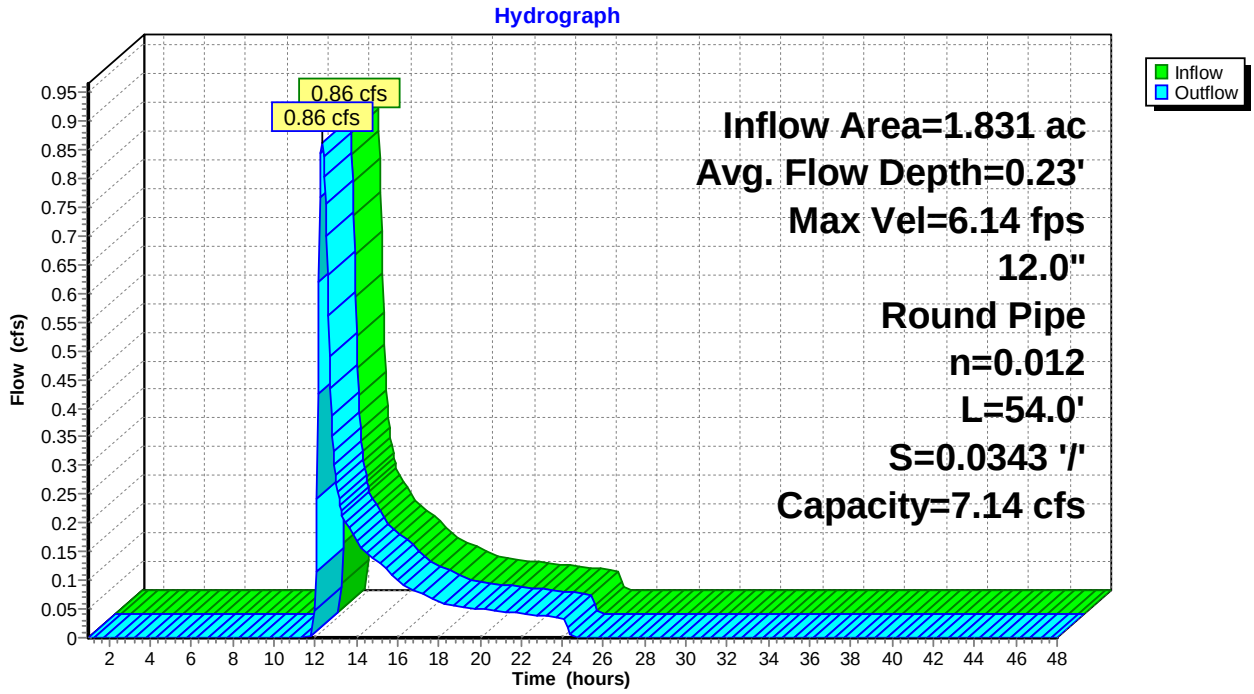
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.14 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.00 fps, Avg. Travel Time= 0.3 min

Peak Storage= 8 cf @ 12.34 hrs
Average Depth at Peak Storage= 0.23'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.14 cfs

12.0" Round Pipe
n= 0.012
Length= 54.0' Slope= 0.0343 '/'
Inlet Invert= 87.63', Outlet Invert= 85.78'



Reach 1R: N. DITCH CB OUTLET



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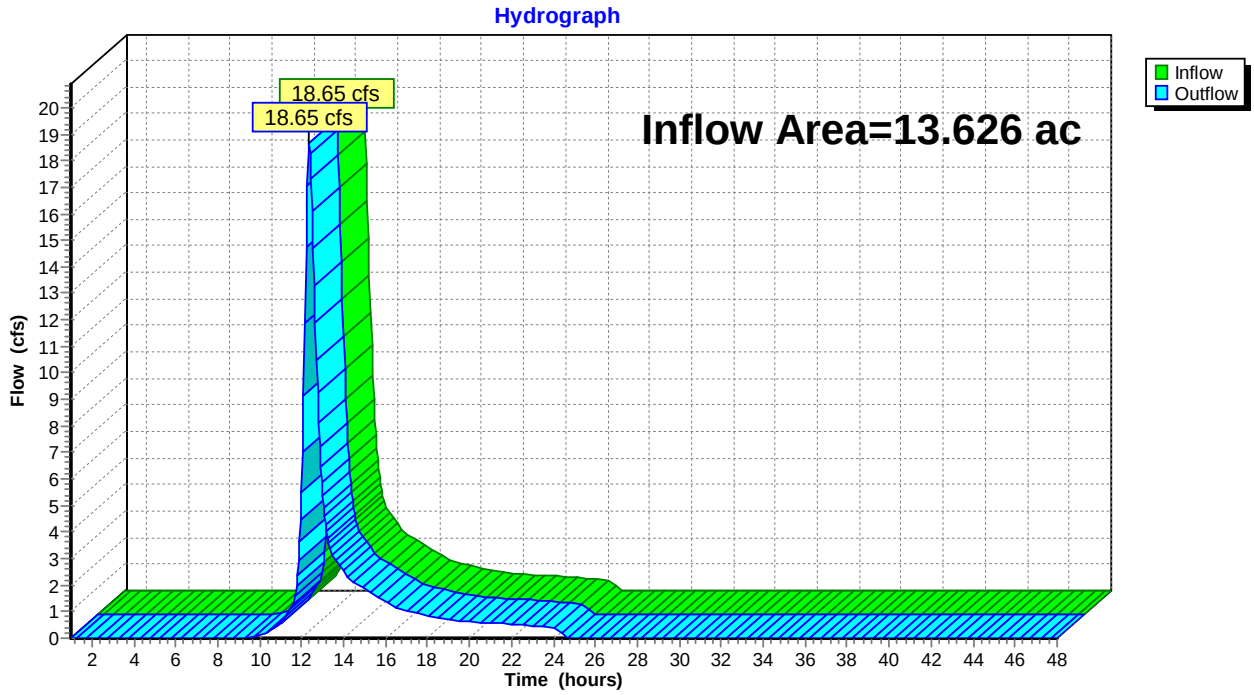
Summary for Reach 2: POI #2 - LAMBERT CROSS CULVERT

Inflow Area = 13.626 ac, 6.24% Impervious, Inflow Depth = 1.96" for 10-year event
Inflow = 18.65 cfs @ 12.35 hrs, Volume= 2.224 af
Outflow = 18.65 cfs @ 12.35 hrs, Volume= 2.224 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach 2: POI #2 - LAMBERT CROSS CULVERT



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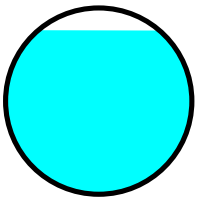
Summary for Reach 2R: WASH. CROSS CULVERT

Inflow Area = 2.208 ac, 20.90% Impervious, Inflow Depth = 2.29" for 10-year event
Inflow = 4.21 cfs @ 12.25 hrs, Volume= 0.422 af
Outflow = 4.19 cfs @ 12.26 hrs, Volume= 0.422 af, Atten= 0%, Lag= 0.7 min

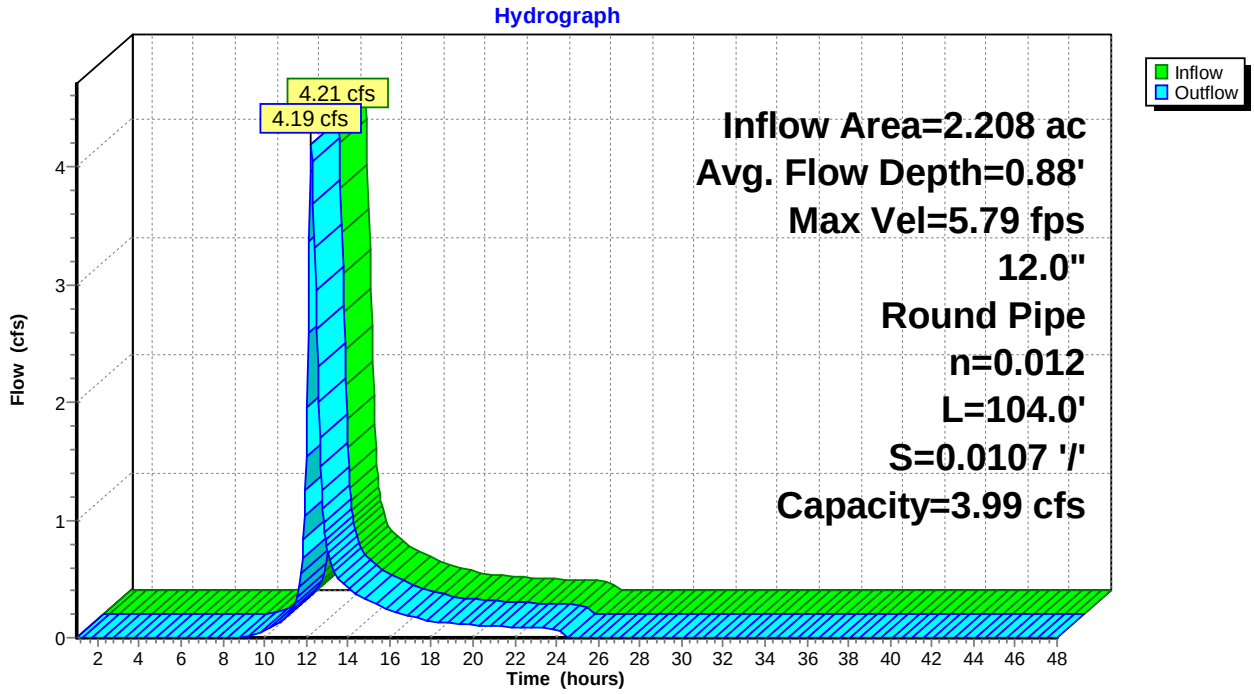
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.79 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.51 fps, Avg. Travel Time= 0.7 min

Peak Storage= 76 cf @ 12.25 hrs
Average Depth at Peak Storage= 0.88'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.99 cfs

12.0" Round Pipe
n= 0.012 Corrugated PP, smooth interior
Length= 104.0' Slope= 0.0107 '/'
Inlet Invert= 113.80', Outlet Invert= 112.69'



Reach 2R: WASH. CROSS CULVERT



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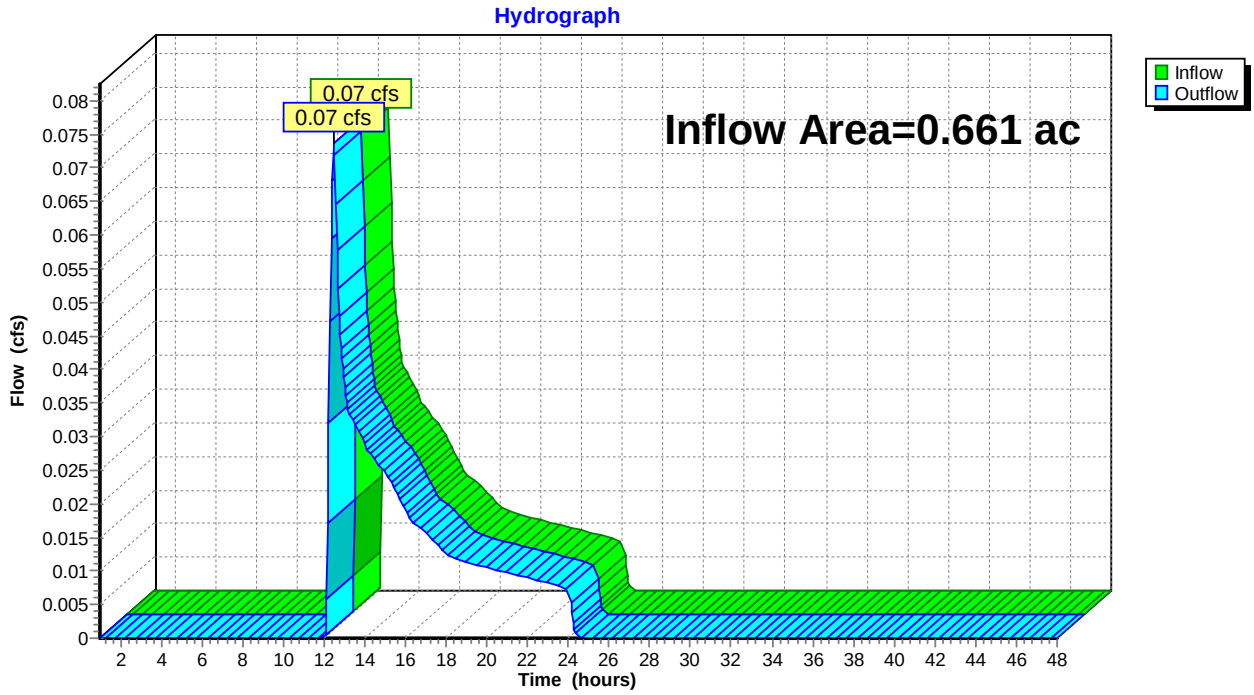
Summary for Reach 3: POI #3 - FALMOUTH WETLANDS

Inflow Area = 0.661 ac, 0.00% Impervious, Inflow Depth = 0.32" for 10-year event
Inflow = 0.07 cfs @ 12.48 hrs, Volume= 0.018 af
Outflow = 0.07 cfs @ 12.48 hrs, Volume= 0.018 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach 3: POI #3 - FALMOUTH WETLANDS



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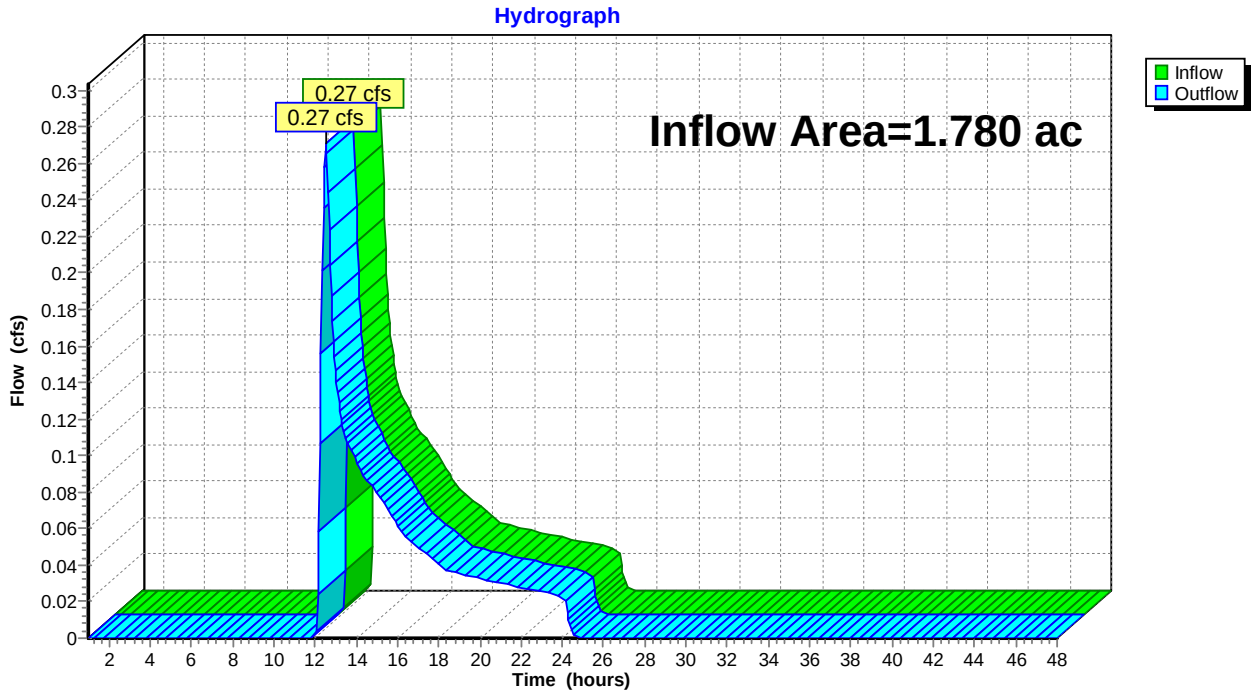
Summary for Reach 4: POI #4 - N STREAM

Inflow Area = 1.780 ac, 0.00% Impervious, Inflow Depth = 0.40" for 10-year event
Inflow = 0.27 cfs @ 12.53 hrs, Volume= 0.060 af
Outflow = 0.27 cfs @ 12.53 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach 4: POI #4 - N STREAM



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Summary for Subcatchment 1 N: SC 1 N

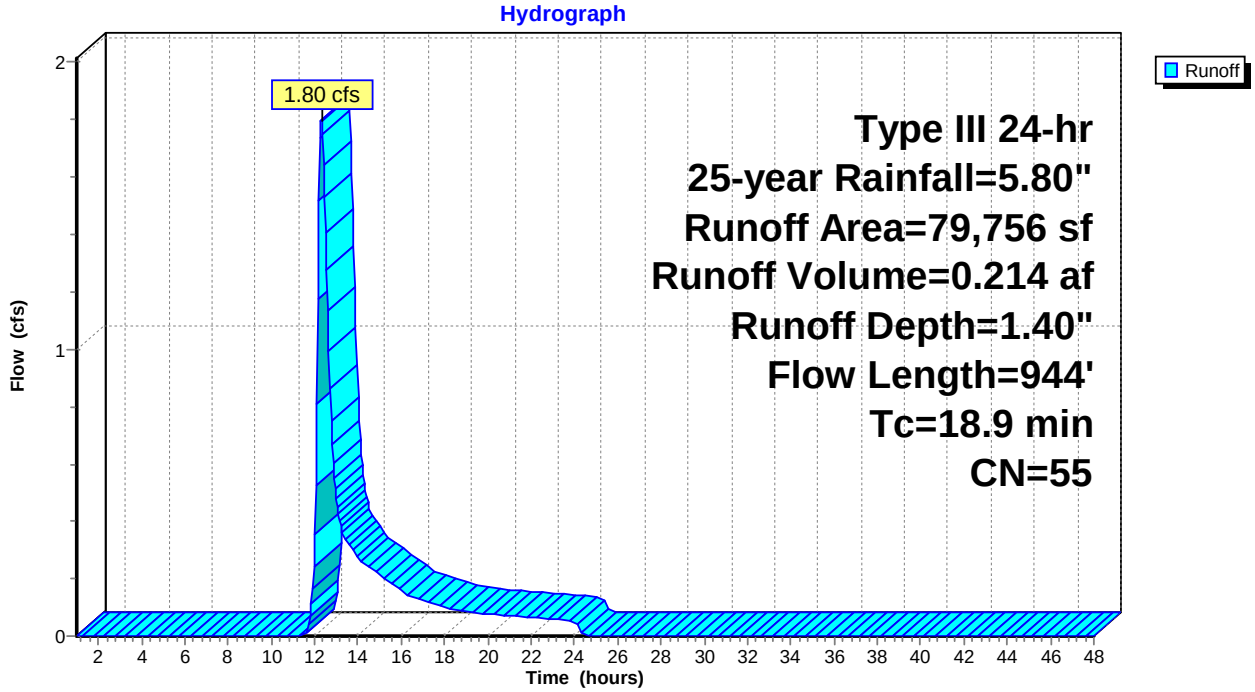
Runoff = 1.80 cfs @ 12.30 hrs, Volume= 0.214 af, Depth= 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	13,977	39	Roadside ditch and shrubs, HSG A
*	21,422	98	Paved ROW and gravel shoulder
	35,717	30	Woods, Good, HSG A
	5,802	77	Woods, Good, HSG D
*	2,838	80	Roadside ditch and shrubs, HSG D
	79,756	55	Weighted Average
	58,334		73.14% Pervious Area
	21,422		26.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	100	0.0500	0.11		**Sheet Flow, Sheet Flow (A to B)** Woods: Light underbrush n= 0.400 P2= 3.27"
1.6	106	0.0500	1.12		**Shallow Concentrated Flow, SCF (B TO C)** Woodland Kv= 5.0 fps
2.6	738	0.0310	4.64	17.83	**Trap/Vee/Rect Channel Flow, Ditch Flow (C to D)** Bot.W=2.00' D=0.80' Z= 2.5 & 4.5 '/' Top.W=7.60' n= 0.035 Earth, dense weeds
18.9	944	Total			

Subcatchment 1 N: SC 1 N



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Summary for Subcatchment 1S: SC 1 S

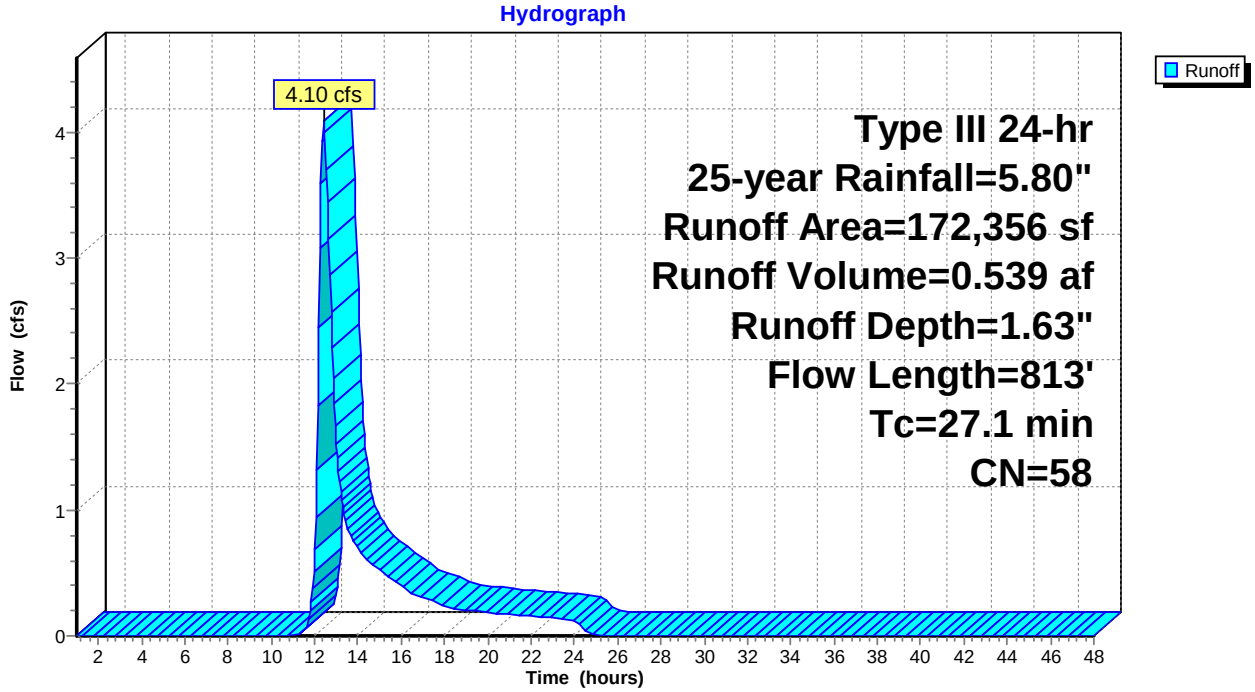
Runoff = 4.10 cfs @ 12.42 hrs, Volume= 0.539 af, Depth= 1.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	72,886	30	Woods, Good, HSG A
*	61,363	77	Woods, Good, HSG D
*	1,387	98	Roofs, HSG A
*	2,490	77	Wetland pocket, assumed HSG D
*	8,584	39	Roadside ditch, HSG A
*	4,340	80	Roadside ditch, HSG D
*	21,306	98	Paved ROW and gravel shoulder
	172,356	58	Weighted Average
	149,663		86.83% Pervious Area
	22,693		13.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.1	100	0.0300	0.09		**Sheet Flow, Sheet flow (A to B)** Woods: Light underbrush n= 0.400 P2= 3.27"
9.0	713	0.0700	1.32		**Shallow Concentrated Flow, SCF (B to C)** Woodland Kv= 5.0 fps
27.1	813	Total			

Subcatchment 1S: SC 1 S



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Summary for Subcatchment 2N: SC 2 N

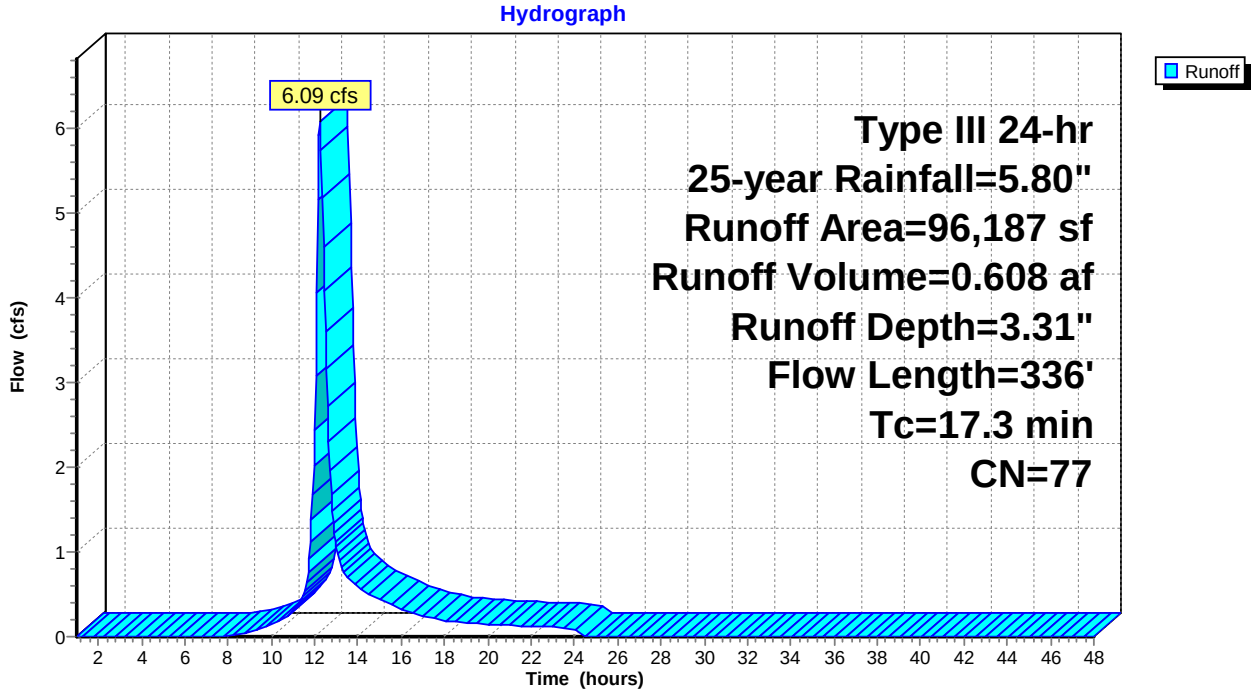
Runoff = 6.09 cfs @ 12.24 hrs, Volume= 0.608 af, Depth= 3.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	11,790	30	Woods, Good, HSG A
	35,555	77	Woods, Good, HSG D
*	5,690	80	Road sideslope HSG D
*	12,892	98	Paved ROW and gravel shoulder
*	7,208	98	Rooftops and driveways
*	23,052	80	Lawns HSG D
	96,187	77	Weighted Average
	76,087		79.10% Pervious Area
	20,100		20.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	100	0.0500	0.11		**Sheet Flow, Sheet Flow (A TO B)** Woods: Light underbrush n= 0.400 P2= 3.27"
2.6	236	0.0100	1.50		**Shallow Concentrated Flow, Wetlands** Grassed Waterway Kv= 15.0 fps
17.3	336	Total			

Subcatchment 2N: SC 2 N



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Summary for Subcatchment 2S: SC 2 S

Runoff = 22.81 cfs @ 12.37 hrs, Volume= 2.693 af, Depth= 2.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	5,912	30	Woods, Good, HSG A
	30,826	39	>75% Grass cover, Good, HSG A
*	3,896	98	Roofs/driveways/patios (HSG A)
	24,173	55	Woods, Good, HSG B
	6,557	70	Woods, Good, HSG C
	146,595	70	Woods, Good, HSG C
	247,584	77	Woods, Good, HSG D
	10,866	80	>75% Grass cover, Good, HSG D
*	3,503	98	Roofs/driveways/patios (HSG D)
*	7,726	98	Wash. paved ROW and gravel shoulder
*	7,931	80	Roadside ditch, HSG D
*	1,794	98	Auburn, paved ROW
	497,363	72	Weighted Average
	480,444		96.60% Pervious Area
	16,919		3.40% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.4	100	0.0700	0.07		**Sheet Flow, Sheet Flow (A to B)** Woods: Dense underbrush n= 0.800 P2= 3.27"
0.7	170	0.0700	3.97		**Shallow Concentrated Flow, SCF (B TO C)** Grassed Waterway Kv= 15.0 fps
2.6	565	0.0350	3.56	3.92	**Channel Flow, Stream** Area= 1.1 sf Perim= 3.0' r= 0.37' n= 0.040 Winding stream, pools & shoals
25.7	835	Total			

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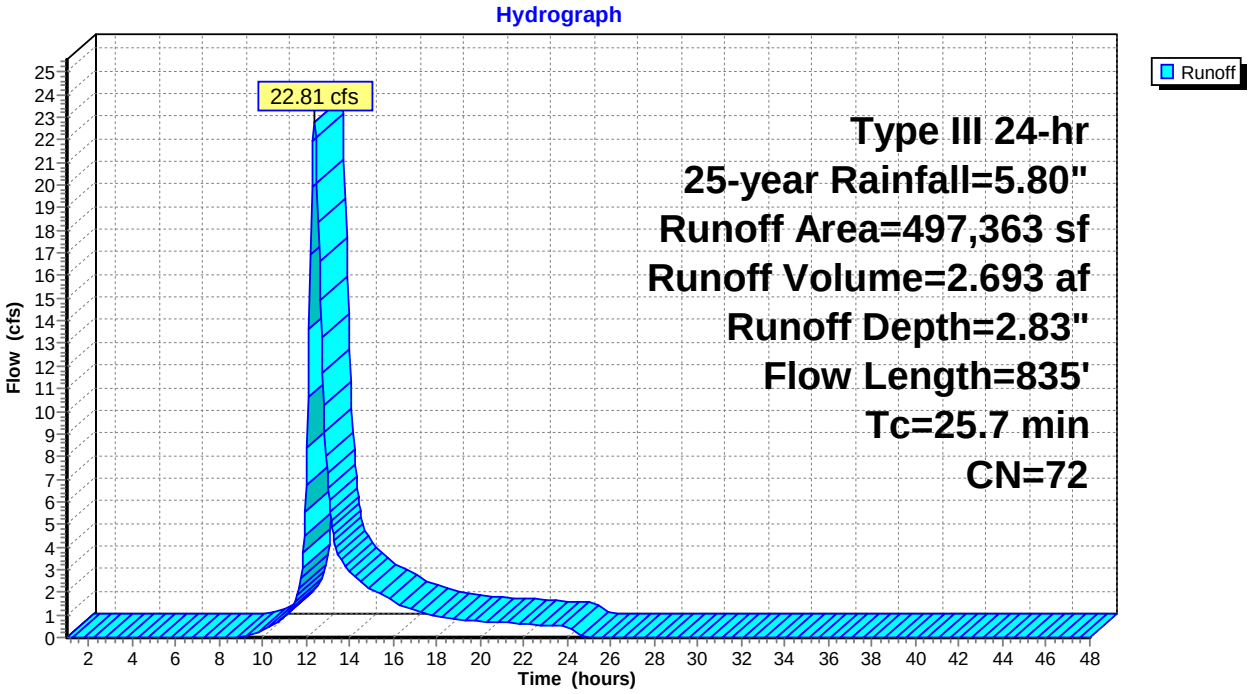
Subcatchment 2S: SC 2 S



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Summary for Subcatchment 3N: SC 3

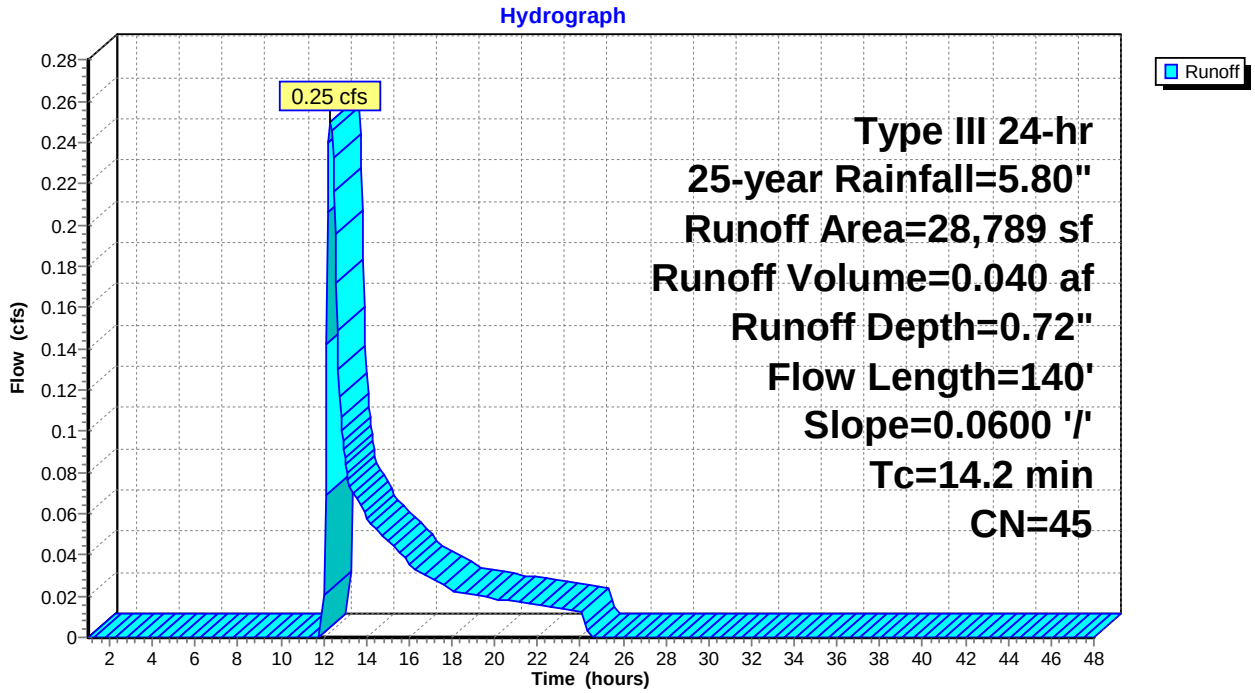
Runoff = 0.25 cfs @ 12.32 hrs, Volume= 0.040 af, Depth= 0.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

Area (sf)	CN	Description
19,623	30	Woods, Good, HSG A
9,166	77	Woods, Good, HSG D
28,789	45	Weighted Average
28,789		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	100	0.0600	0.12		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.27"
0.5	40	0.0600	1.22		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
14.2	140	Total			

Subcatchment 3N: SC 3



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Summary for Subcatchment 4N: SC 4

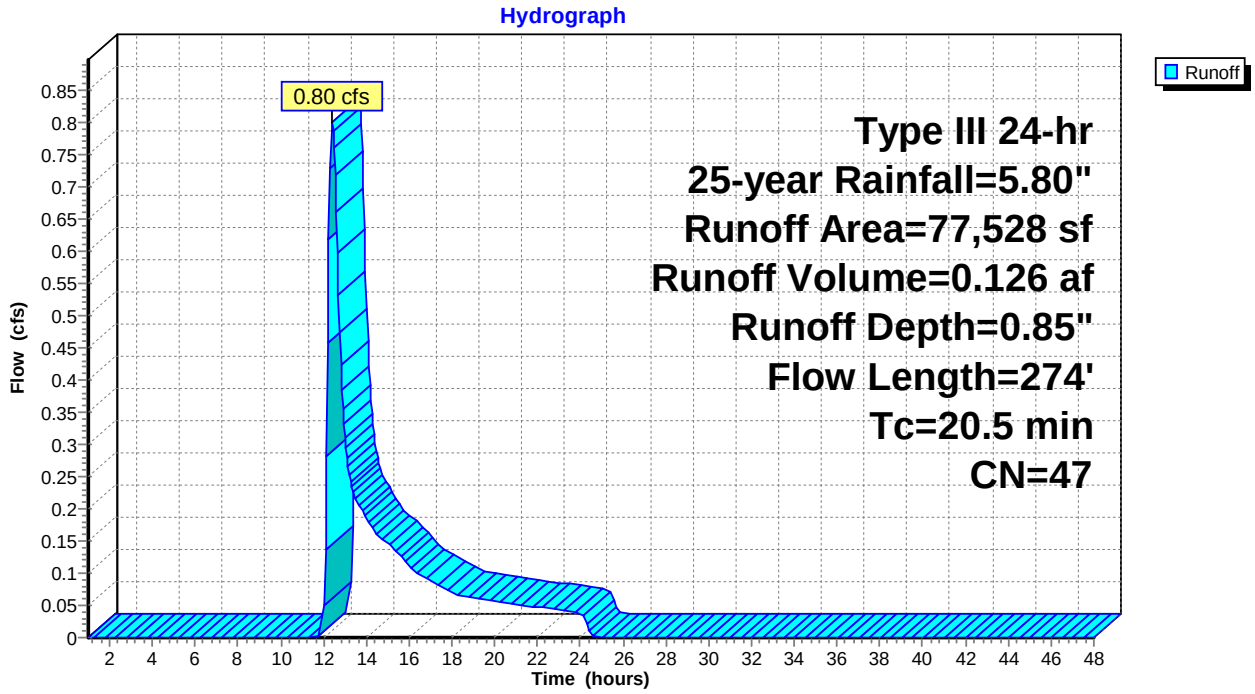
Runoff = 0.80 cfs @ 12.40 hrs, Volume= 0.126 af, Depth= 0.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	49,772	30	Woods, Good, HSG A
	17,107	77	Woods, Good, HSG D
*	10,649	77	Woods, Good, HSG D
	77,528	47	Weighted Average
	77,528		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.1	100	0.0300	0.09		**Sheet Flow, A-B** Woods: Light underbrush n= 0.400 P2= 3.27"
2.4	174	0.0600	1.22		**Shallow Concentrated Flow, B-C** Woodland Kv= 5.0 fps
20.5	274	Total			

Subcatchment 4N: SC 4



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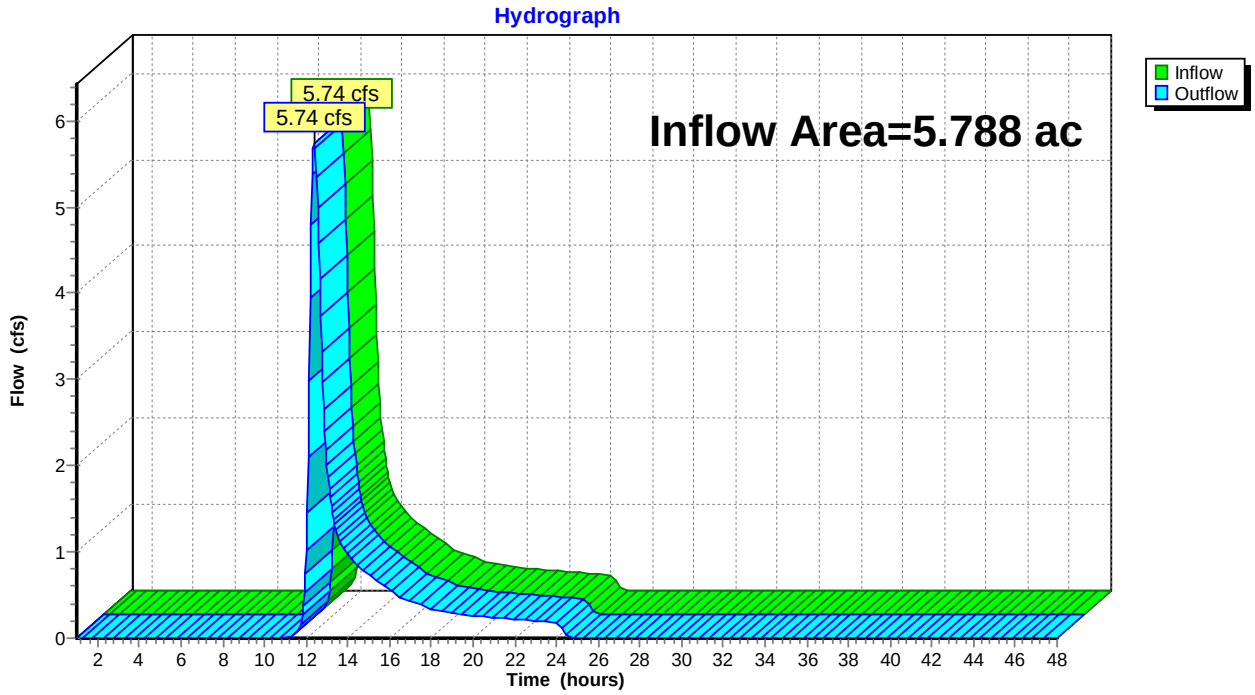
Summary for Reach 1: POI #1 - LAMBERT/WASH INTERSECTION

Inflow Area = 5.788 ac, 17.50% Impervious, Inflow Depth = 1.56" for 25-year event
Inflow = 5.74 cfs @ 12.39 hrs, Volume= 0.753 af
Outflow = 5.74 cfs @ 12.39 hrs, Volume= 0.753 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach 1: POI #1 - LAMBERT/WASH INTERSECTION



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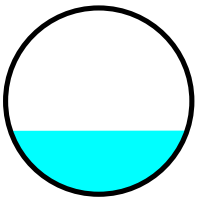
Summary for Reach 1R: N. DITCH CB OUTLET

Inflow Area = 1.831 ac, 26.86% Impervious, Inflow Depth = 1.40" for 25-year event
Inflow = 1.80 cfs @ 12.30 hrs, Volume= 0.214 af
Outflow = 1.80 cfs @ 12.31 hrs, Volume= 0.214 af, Atten= 0%, Lag= 0.2 min

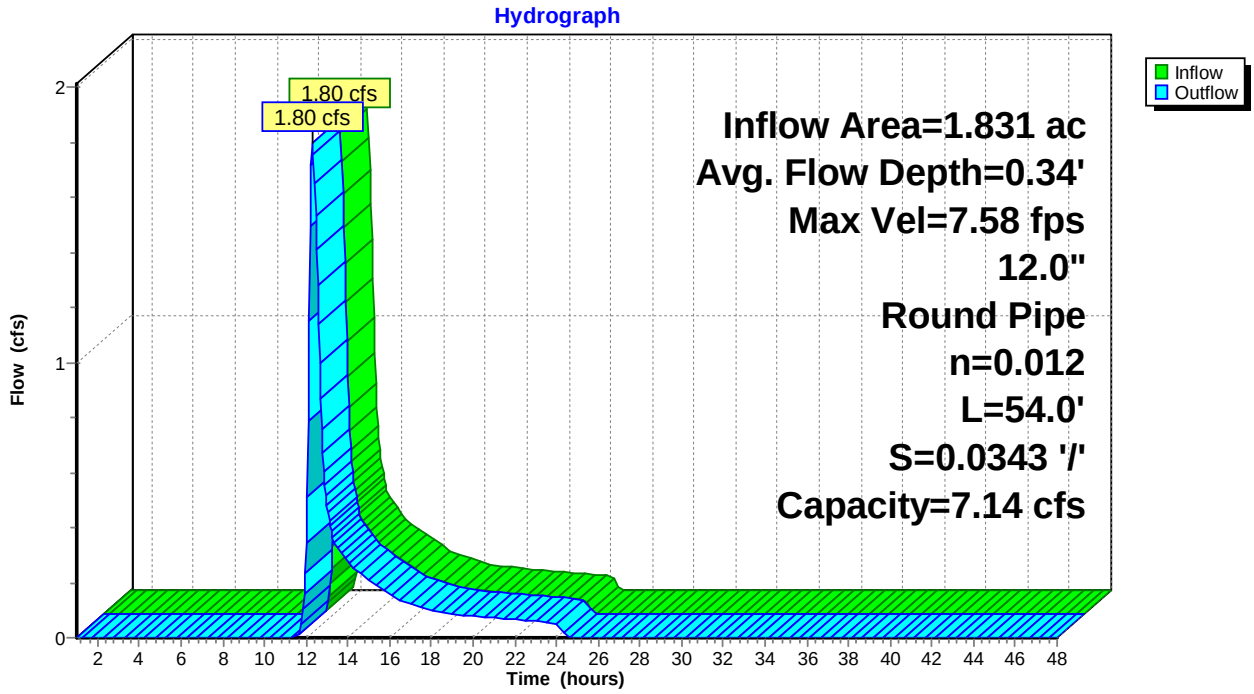
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.58 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.44 fps, Avg. Travel Time= 0.3 min

Peak Storage= 13 cf @ 12.30 hrs
Average Depth at Peak Storage= 0.34'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.14 cfs

12.0" Round Pipe
n= 0.012
Length= 54.0' Slope= 0.0343 '/'
Inlet Invert= 87.63', Outlet Invert= 85.78'



Reach 1R: N. DITCH CB OUTLET



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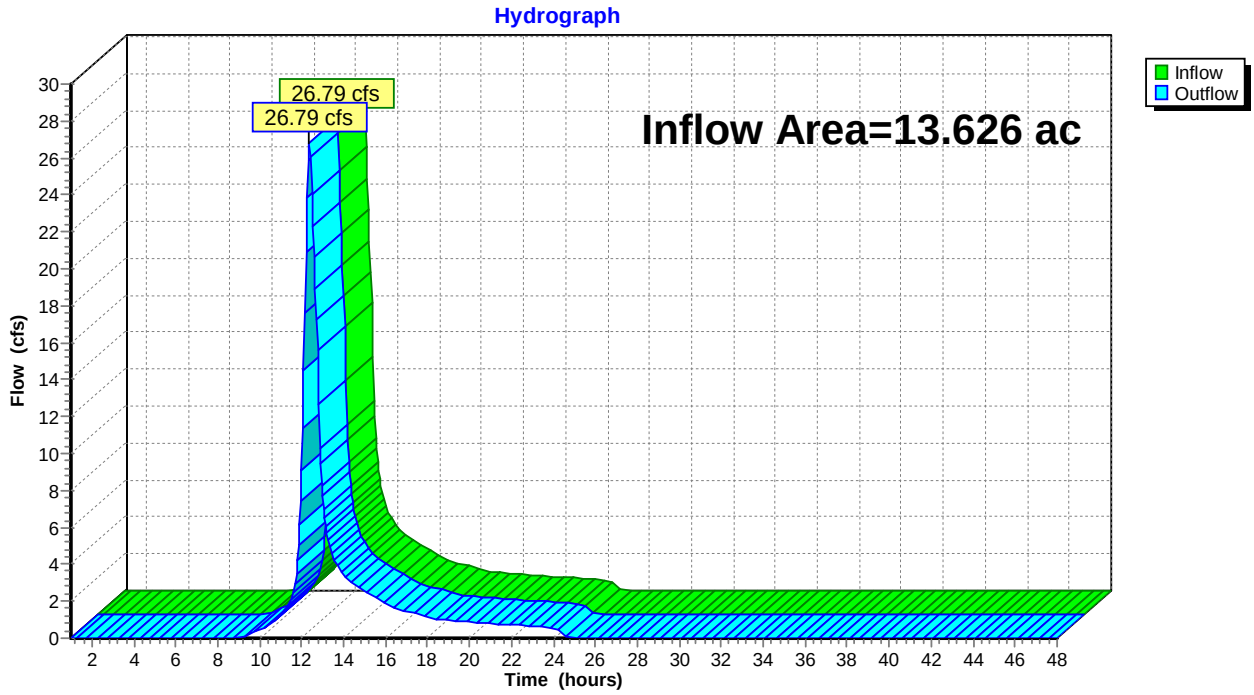
Summary for Reach 2: POI #2 - LAMBERT CROSS CULVERT

Inflow Area = 13.626 ac, 6.24% Impervious, Inflow Depth = 2.91" for 25-year event
Inflow = 26.79 cfs @ 12.37 hrs, Volume= 3.301 af
Outflow = 26.79 cfs @ 12.37 hrs, Volume= 3.301 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach 2: POI #2 - LAMBERT CROSS CULVERT



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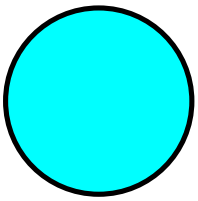
Summary for Reach 2R: WASH. CROSS CULVERT

Inflow Area = 2.208 ac, 20.90% Impervious, Inflow Depth = 3.31" for 25-year event
Inflow = 6.09 cfs @ 12.24 hrs, Volume= 0.608 af
Outflow = 3.99 cfs @ 12.20 hrs, Volume= 0.608 af, Atten= 35%, Lag= 0.0 min

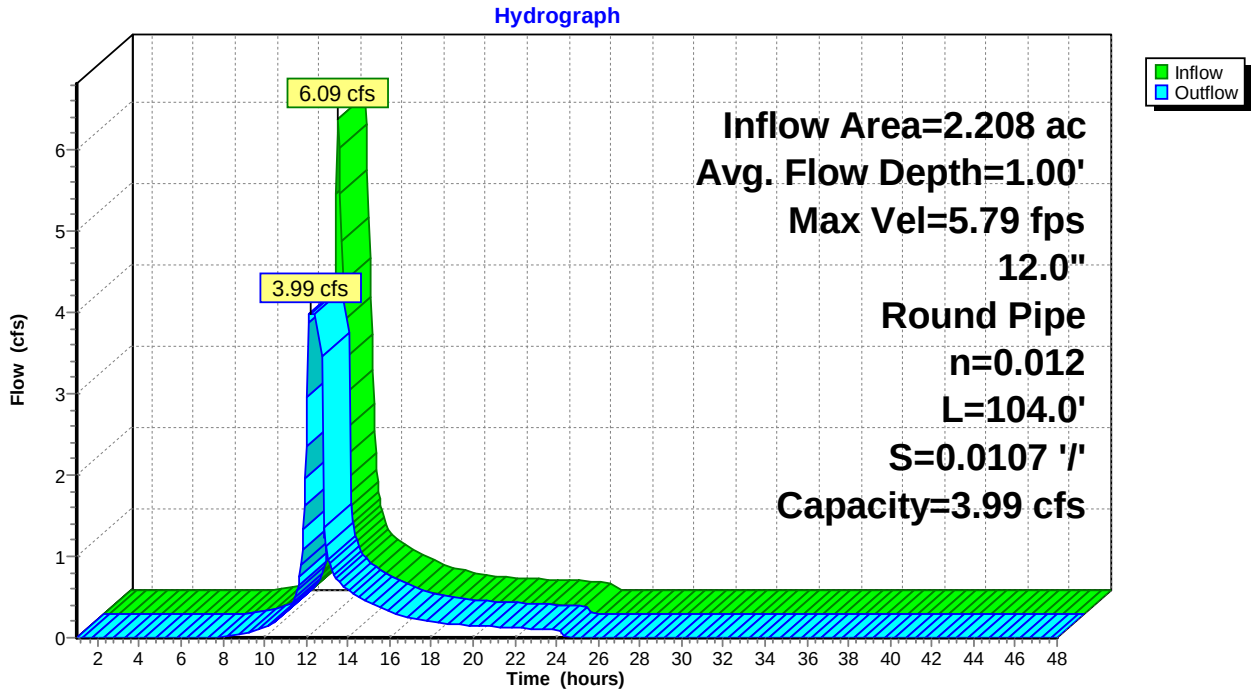
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.79 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.68 fps, Avg. Travel Time= 0.6 min

Peak Storage= 82 cf @ 12.15 hrs
Average Depth at Peak Storage= 1.00'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.99 cfs

12.0" Round Pipe
n= 0.012 Corrugated PP, smooth interior
Length= 104.0' Slope= 0.0107 '/'
Inlet Invert= 113.80', Outlet Invert= 112.69'



Reach 2R: WASH. CROSS CULVERT



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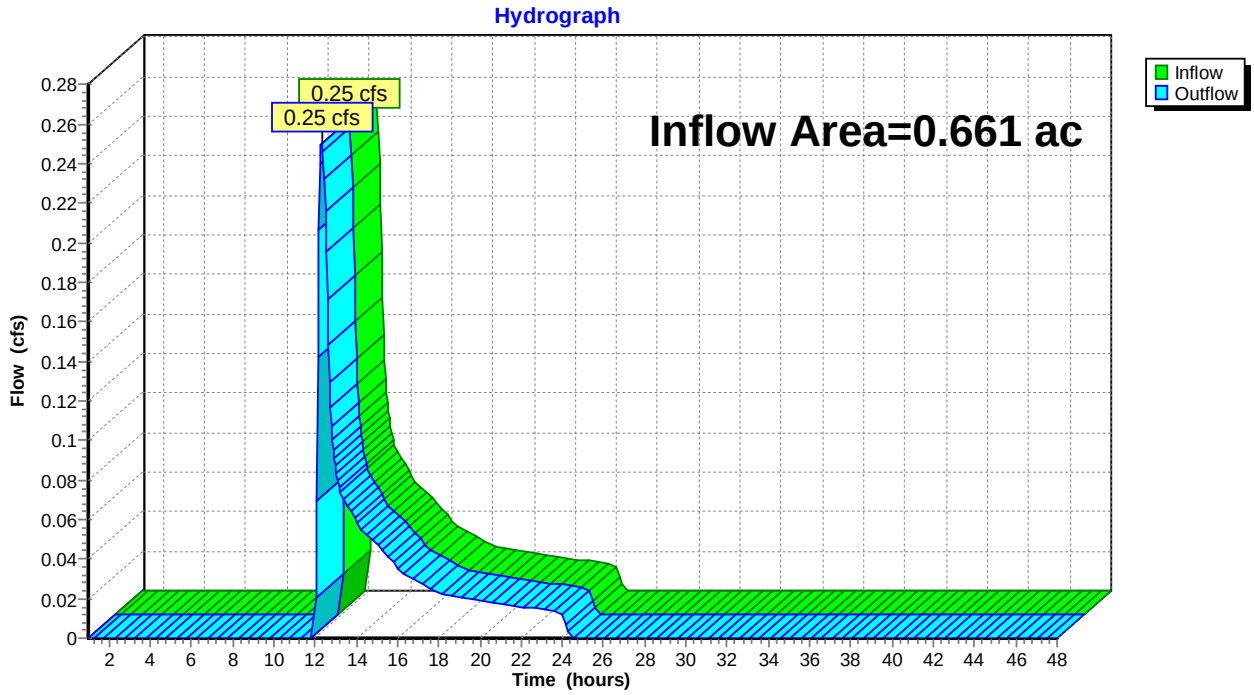
Summary for Reach 3: POI #3 - FALMOUTH WETLANDS

Inflow Area = 0.661 ac, 0.00% Impervious, Inflow Depth = 0.72" for 25-year event
Inflow = 0.25 cfs @ 12.32 hrs, Volume= 0.040 af
Outflow = 0.25 cfs @ 12.32 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach 3: POI #3 - FALMOUTH WETLANDS



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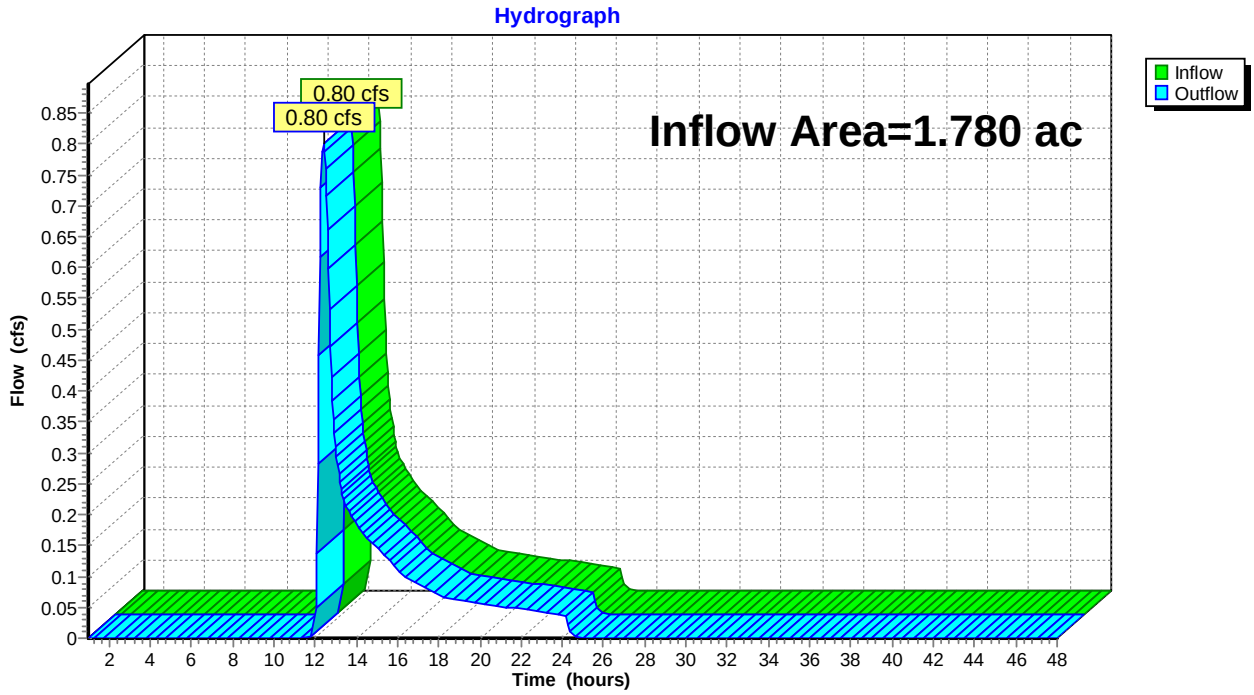
Summary for Reach 4: POI #4 - N STREAM

Inflow Area = 1.780 ac, 0.00% Impervious, Inflow Depth = 0.85" for 25-year event
Inflow = 0.80 cfs @ 12.40 hrs, Volume= 0.126 af
Outflow = 0.80 cfs @ 12.40 hrs, Volume= 0.126 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach 4: POI #4 - N STREAM



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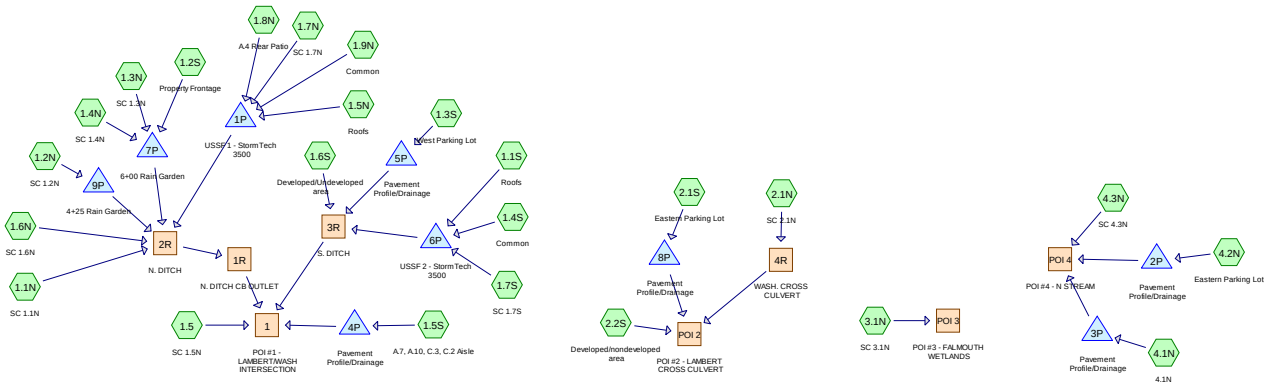

Subcat Reach Pond Link

Routing Diagram for 1145_POST
Prepared by HP Inc., Printed 6/17/2022
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.020	98	5' pavers/ s. mews (1.5S)
0.020	98	5' pavers/e. mews (1.5S)
0.042	98	5' wide pavers in mews (4.1N)
0.876	39	>75% Grass cover, Good, HSG A (1.3S, 1.4S, 2.2S)
0.745	80	>75% Grass cover, Good, HSG D (1.2S, 1.4S, 1.5S, 2.1S, 2.2S, 4.3N)
0.022	98	A.1 rear patio (4.1N)
0.006	98	A.1 walkway and patio (1.1N)
0.009	98	A.10 front patio (1.5S)
0.007	98	A.2 patios (1.2N)
0.010	98	A.2 walkway (4.1N)
0.005	98	A.3 patios (1.3N)
0.009	98	A.4 front patios (4.1N)
0.010	98	A.5 patio (1.6S)
0.003	98	A.5 rear patio (1.4S)
0.007	98	A.6 patio (1.6S)
0.007	98	A.6 rear patio (1.4S, 1.5S)
0.006	98	A.7 patio (1.6S)
0.004	98	A.7 rear patio and walkways (1.5S)
0.015	98	A.7 w.&s. walkway (1.5S)
0.010	98	A.7/A.8 patio (1.2S)
0.009	98	A.9 front patios (1.5S)
0.017	98	A.9/A.10 rear patios (1.7S)
0.041	98	Auburn St (2.2S)
0.009	98	B.1 patios (4.1N)
0.007	98	B.1/B,2 mech room walkway (4.1N)
0.018	98	B.1/B.2 patio area (4.1N)
0.002	98	B.2 east walkway (4.1N)
0.014	98	B.2 patios (4.1N)
0.009	98	B.3 patios (4.1N)
0.009	98	B.4 front patios (1.5S)
0.002	98	B.4 mech room (1.4S, 1.5S)
0.004	98	B.4 s. walkway (1.5S)
0.002	98	B.4/A.6 side walkway (1.5S)
0.002	98	B.5 mech room (1.3S)
0.014	98	B.5 patios (1.5S)
0.013	98	B.5 side patio (1.5S)
0.013	98	Bldg C.2 & C.3 patios (HSG A) (2.2S)
0.007	98	C.1 patio (1.7N)
0.005	98	C.1 patios (4.1N)
0.005	98	C.2 front patios (1.5S)
0.002	98	C.3 front patios (1.5S)
0.033	98	Driveway entrance (1.6S)
0.017	98	E. sidewalk (1.2S, 1.3N)
0.055	80	Grass pavers (1.4N, 1.6S)
0.536	98	IMPERV (1.5N)
0.111	39	Landscaped/open space (1.6S)

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Area Listing (all nodes) (continued)

Area (acres)	CN	Description (subcatchment-numbers)
0.311	80	Landscaped/openspace areas (HSG D) (2.2S)
0.015	39	Landscaping (1.6S)
0.011	80	Landscaping Auburn St (2.2S)
0.135	80	Landscaping/ HSG D (1.6S)
0.007	39	Landscaping/esplanade (1.5)
0.045	39	Landscaping/lawn, HSG A (1.3N)
0.167	39	Landscaping/open space, HSG A (1.1N, 1.6S, 4.2N)
0.054	39	Landscaping/openspace/rain garden/ HSG A (1.4N)
0.062	39	Landscaping/roadside ditch (1.1N)
0.046	39	Landscaping/slope, HSG A (4.3N)
0.092	80	Landscaping/slope, HSG D (3.1N)
0.035	39	Landscaping/swale, HSG A (3.1N)
0.216	39	Lawn/landscaping, HSG A (4.1N)
0.088	80	Lawn/landscaping, HSG D (1.7S, 1.8N)
0.076	39	Lawn/landscaping/HSG A (1.2N)
0.093	39	Lawn/lanscaping/ditch, HSG A (1.7N)
0.529	80	Lawns/landscaping, HSG D (2.1N)
0.298	39	Open space, landscaping, HSG A (1.9N)
0.148	98	Parking lot (4.2N)
0.008	98	Patio (1.8N)
0.008	98	Patio walkway (1.6S)
0.103	98	Paved driveaisle (2.1S)
0.044	98	Paved walkway (1.9N)
0.038	98	Pavers & covered pav (1.9N)
0.056	98	Porous (2.1S)
0.013	98	Porous pavement (4.2N)
0.009	80	ROW Landscaping (2.1N)
0.009	98	Rear walkway/patio (2.1S)
0.162	80	Road sideslope (2.1N)
0.179	39	Roadside ditch and shrubs, HSG A (1.1N)
0.217	80	Roadside ditch/slope (2.2S)
0.674	98	Roofs (1.1S)
0.089	98	Roofs/driveways/patios (HSG A) (2.2S)
0.080	98	Roofs/driveways/patios (HSG D) (2.2S)
0.165	98	Rooftops and driveways (2.1N)
0.075	98	Sidewalk (1.6S, 2.2S, 4.2N)
0.094	98	Sidewalk/N. Conc apron (2.1N)
0.086	39	Slope behind patios, HSG A (2.2S)
0.032	98	Unconnected roofs, HSG A (1.6S)
0.008	98	Walkway (1.7S)
0.022	98	Walkway/patio (2.1S)
0.005	98	Walkway/patio Bldg A.1 (1.4N)
0.695	98	Wash Ave (1.2N, 1.3N, 1.5, 1.6N, 1.6S, 2.2S)
0.133	39	Wash Ave ditch (1.6S)
0.068	98	Wash. Ave (1.2S)
0.231	98	Wash. Ave and S. Conc apron (2.1N)

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Area Listing (all nodes) (continued)

Area (acres)	CN	Description (subcatchment-numbers)
1.728	30	Woods, Good, HSG A (1.1N, 1.6S, 2.1N, 3.1N, 4.3N)
0.555	55	Woods, Good, HSG B (2.2S)
3.517	70	Woods, Good, HSG C (2.2S)
6.732	77	Woods, Good, HSG D (2.1N, 2.2S, 3.1N, 4.3N)
0.002	98	bus shelter (1.2N, 1.2S, 1.3N)
0.017	98	driveway (1.2S, 1.3N)
0.006	98	dumpster pad (2.1S, 4.1N)
0.050	98	eastern parking & driveaisle (4.1N)
0.005	98	grass pavers (1.2N)
0.032	80	grass pavers (1.5S, 1.6S)
0.030	98	patio/covered pav (1.3S)
0.011	98	patios (1.9N)
0.120	98	paved drive aisle (1.3S)
0.036	98	paved walkway (1.4S)
0.145	98	porous (1.3S, 1.5S)
0.120	98	porous pavement (4.1N)
0.187	98	sidewalk (1.2N, 1.2S, 1.3N, 1.4N, 1.5, 1.6N, 1.6S)
0.001	98	transformer (1.2S, 1.7N, 1.9N)
0.001	98	transformer pad (1.4S, 3.1N, 4.1N)
0.001	98	transformer pads (1.5S)
0.028	98	walkway (1.3S)
21.845	**72**	**TOTAL AREA**

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Summary for Subcatchment 1.1N: SC 1.1N

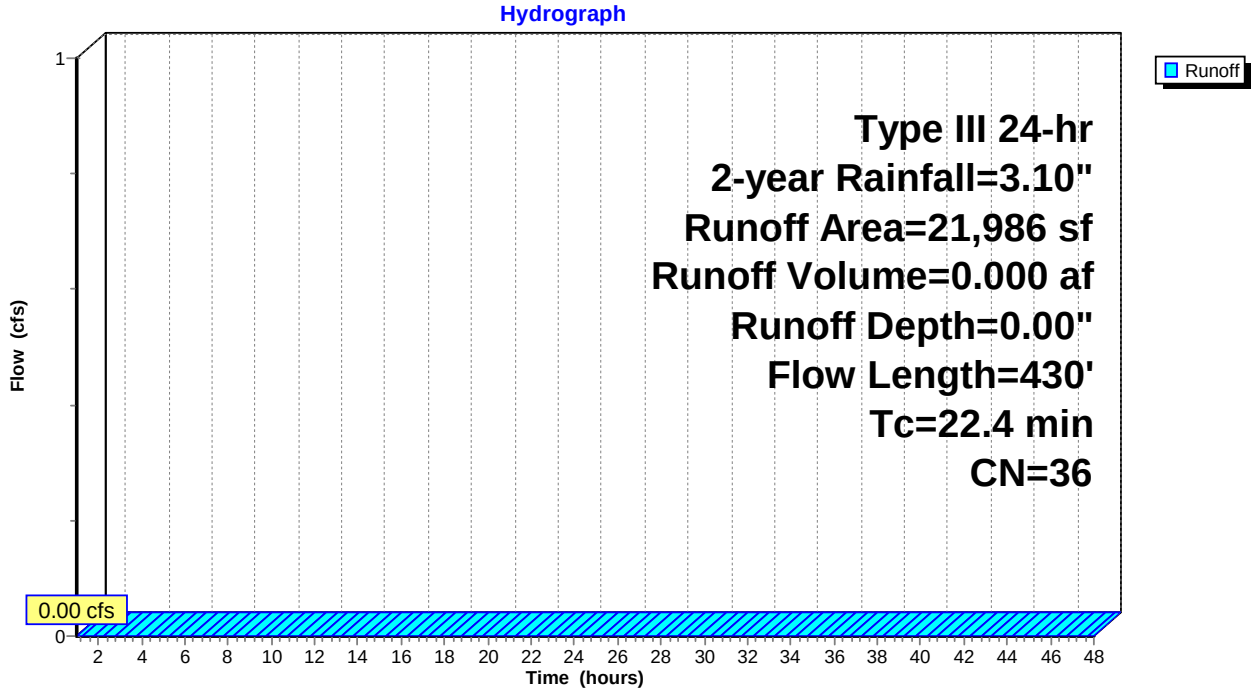
Runoff = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	7,797	39	Roadside ditch and shrubs, HSG A
	9,863	30	Woods, Good, HSG A
*	278	98	A.1 walkway and patio
*	1,326	39	Landscaping/open space, HSG A
*	2,722	39	Landscaping/roadside ditch
	21,986	36	Weighted Average
	21,708		98.74% Pervious Area
	278		1.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.1	70	0.0400	0.06		**Sheet Flow, SF (A to B)** Woods: Dense underbrush n= 0.800 P2= 3.27"
0.1	20	0.4000	3.16		**Shallow Concentrated Flow, SCF (B to C)** Woodland Kv= 5.0 fps
1.2	340	0.0310	4.64	17.83	**Trap/Vee/Rect Channel Flow, Ditch Flow (C to D)** Bot.W=2.00' D=0.80' Z= 2.5 & 4.5 '/' Top.W=7.60' n= 0.035
22.4	430	Total			

Subcatchment 1.1N: SC 1.1N



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Summary for Subcatchment 1.1S: Roofs

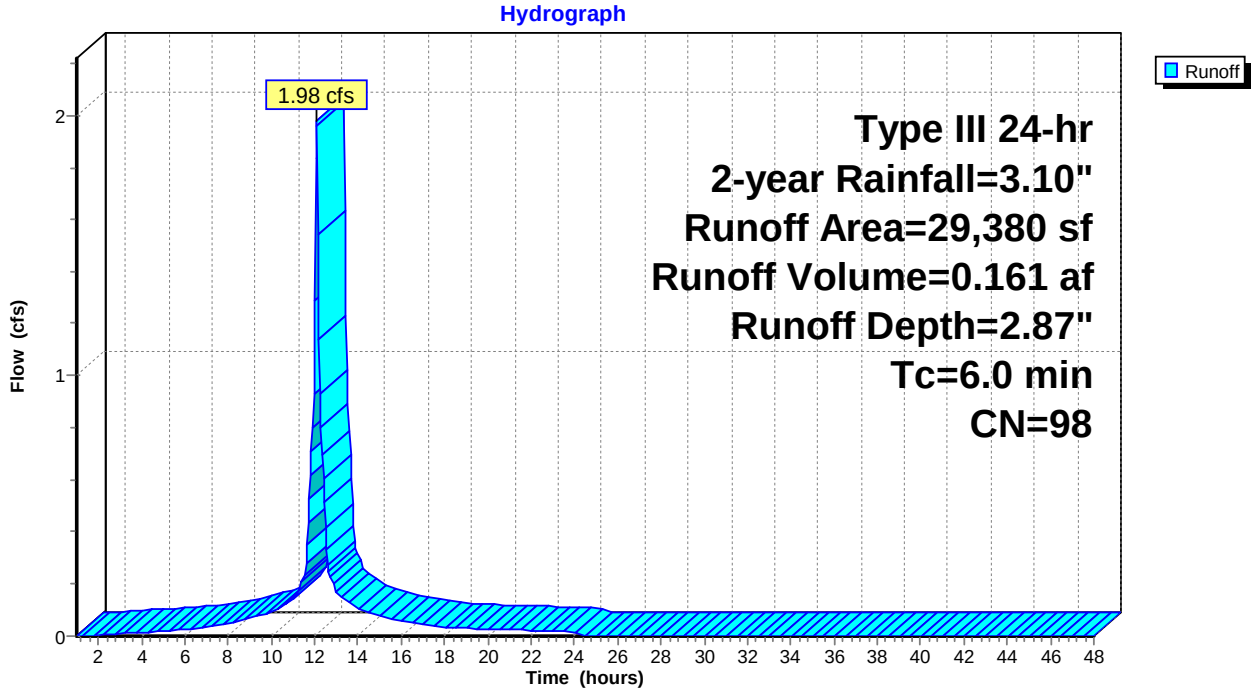
Runoff = 1.98 cfs @ 12.09 hrs, Volume= 0.161 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	29,380	98	Roofs
	29,380		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: Roofs



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Summary for Subcatchment 1.2N: SC 1.2N

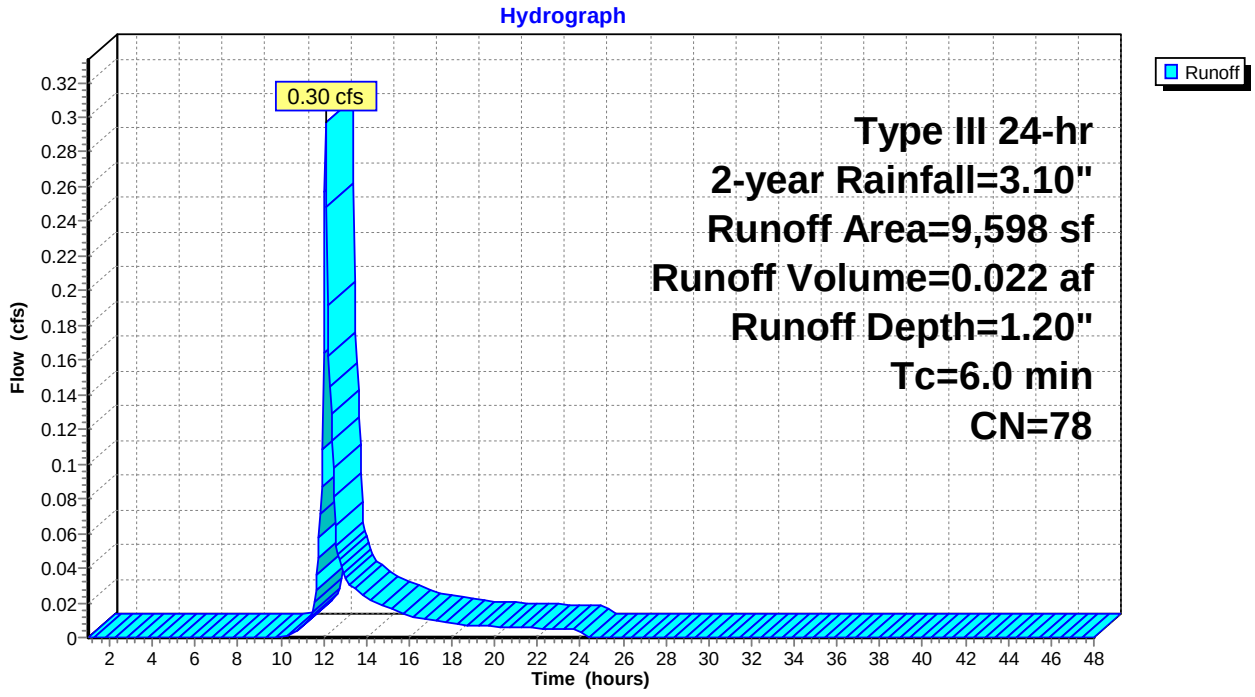
Runoff = 0.30 cfs @ 12.10 hrs, Volume= 0.022 af, Depth= 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	3,539	98	Wash Ave
*	2,202	98	sidewalk
*	288	98	A.2 patios
*	29	98	bus shelter
*	235	98	grass pavers
*	3,305	39	Lawn/landscaping/HSG A
	9,598	78	Weighted Average
	3,305		34.43% Pervious Area
	6,293		65.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.2N: SC 1.2N



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Summary for Subcatchment 1.2S: Property Frontage

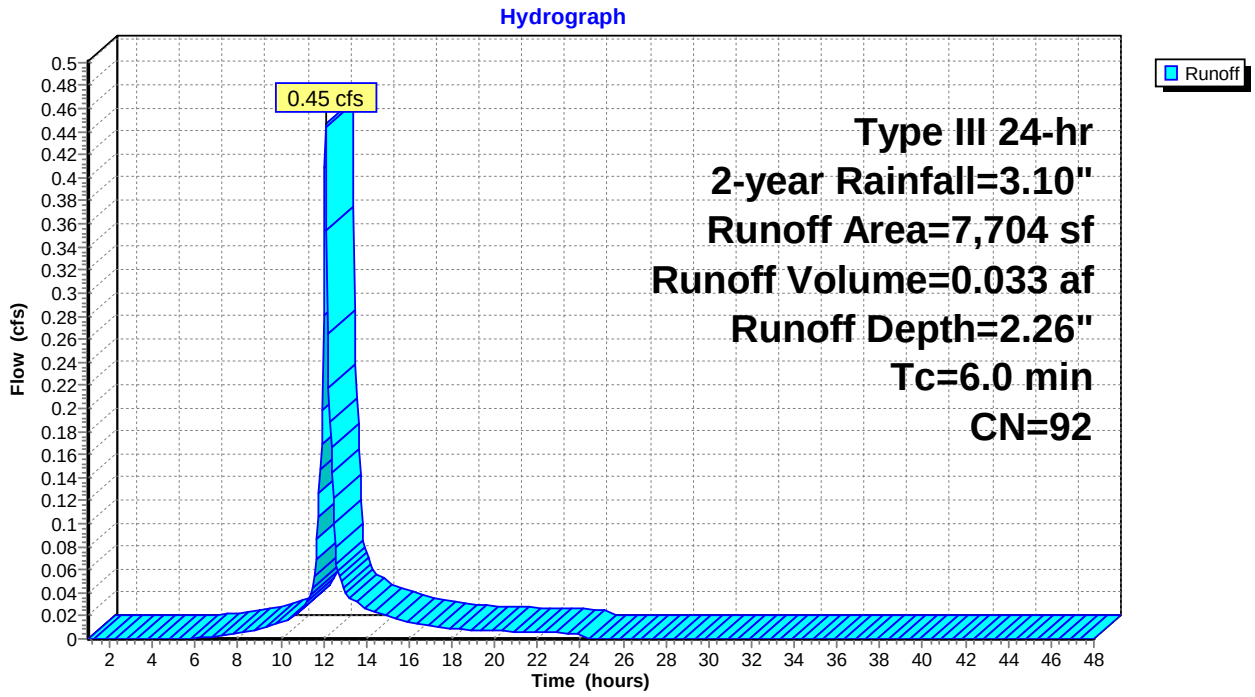
Runoff = 0.45 cfs @ 12.09 hrs, Volume= 0.033 af, Depth= 2.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	2,963	98	Wash. Ave
*	846	98	sidewalk
*	420	98	A.7/A.8 patio
*	16	98	transformer
*	403	98	driveway
*	303	98	E. sidewalk
*	48	98	bus shelter
	2,705	80	>75% Grass cover, Good, HSG D
	7,704	92	Weighted Average
	2,705		35.11% Pervious Area
	4,999		64.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.2S: Property Frontage



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Summary for Subcatchment 1.3N: SC 1.3N

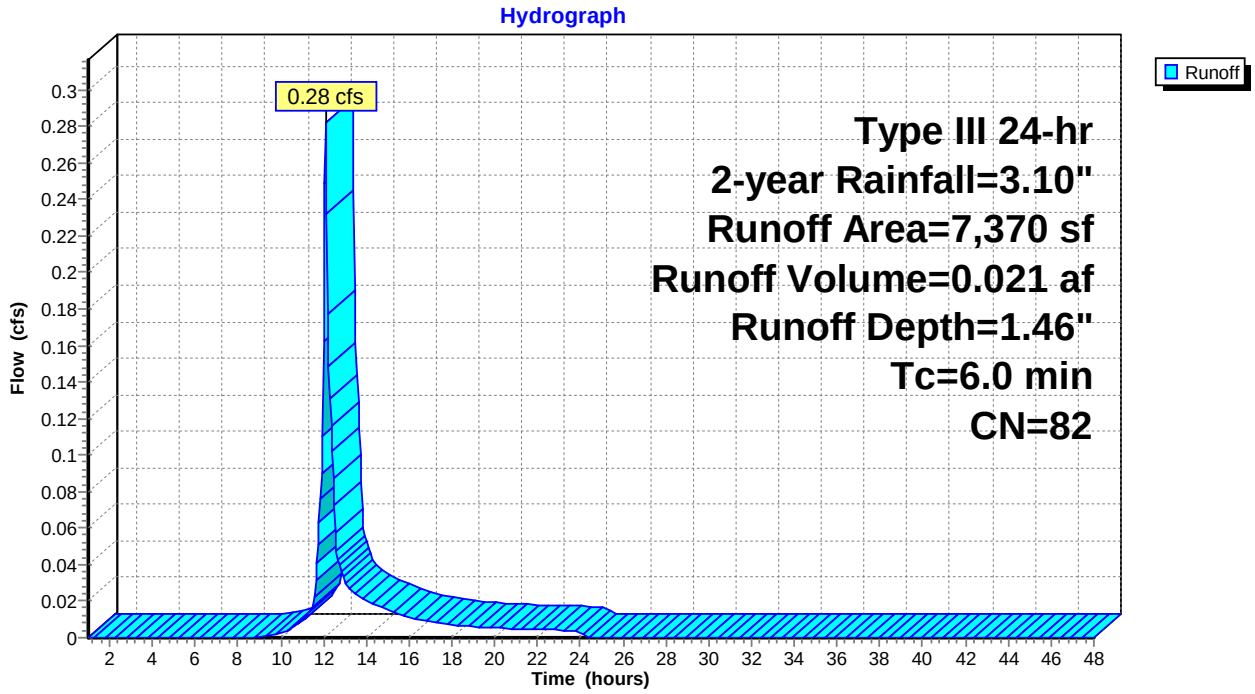
Runoff = 0.28 cfs @ 12.09 hrs, Volume= 0.021 af, Depth= 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	3,255	98	Wash Ave
*	1,111	98	sidewalk
*	224	98	A.3 patios
*	331	98	driveway
*	456	98	E. sidewalk
*	14	98	bus shelter
*	1,979	39	Landscaping/lawn, HSG A
	7,370	82	Weighted Average
	1,979		26.85% Pervious Area
	5,391		73.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.3N: SC 1.3N



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Summary for Subcatchment 1.3S: West Parking Lot

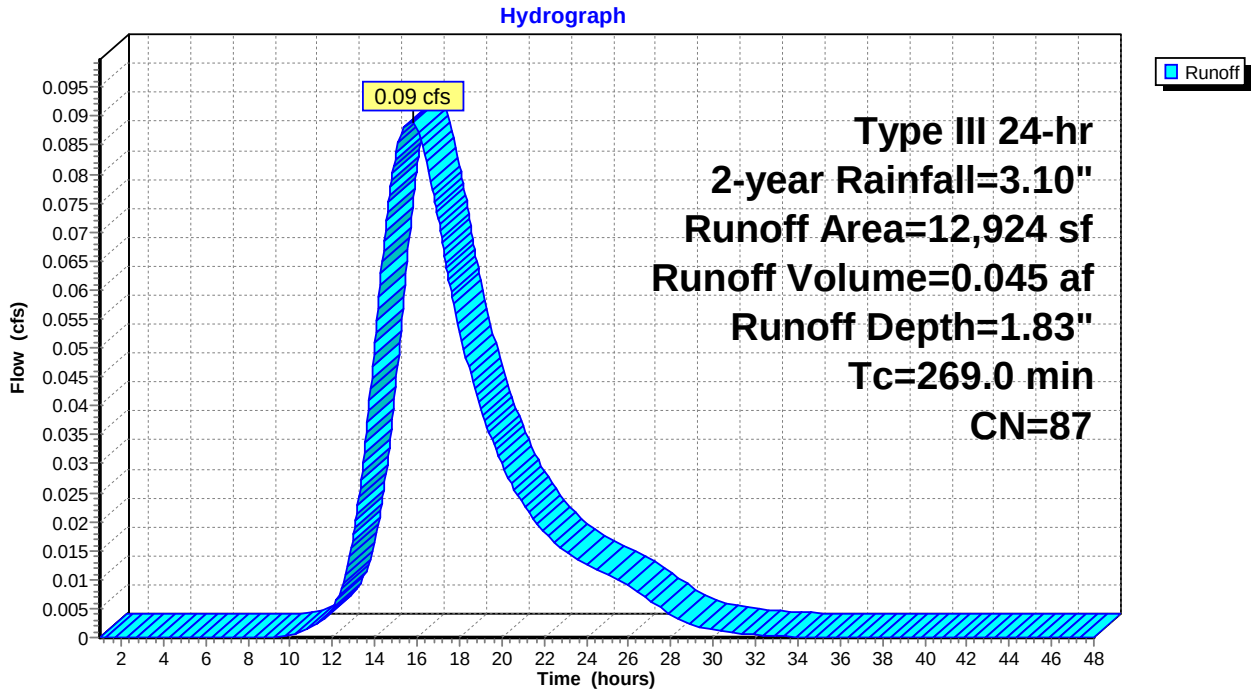
Runoff = 0.09 cfs @ 15.79 hrs, Volume= 0.045 af, Depth= 1.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	2,604	98	porous
*	5,218	98	paved drive aisle
*	1,207	98	walkway
*	1,305	98	patio/covered pav
*	86	98	B.5 mech room
	2,504	39	>75% Grass cover, Good, HSG A
	12,924	87	Weighted Average
	2,504		19.37% Pervious Area
	10,420		80.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
269.0					**Direct Entry, UNH**

Subcatchment 1.3S: West Parking Lot



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Summary for Subcatchment 1.4N: SC 1.4N

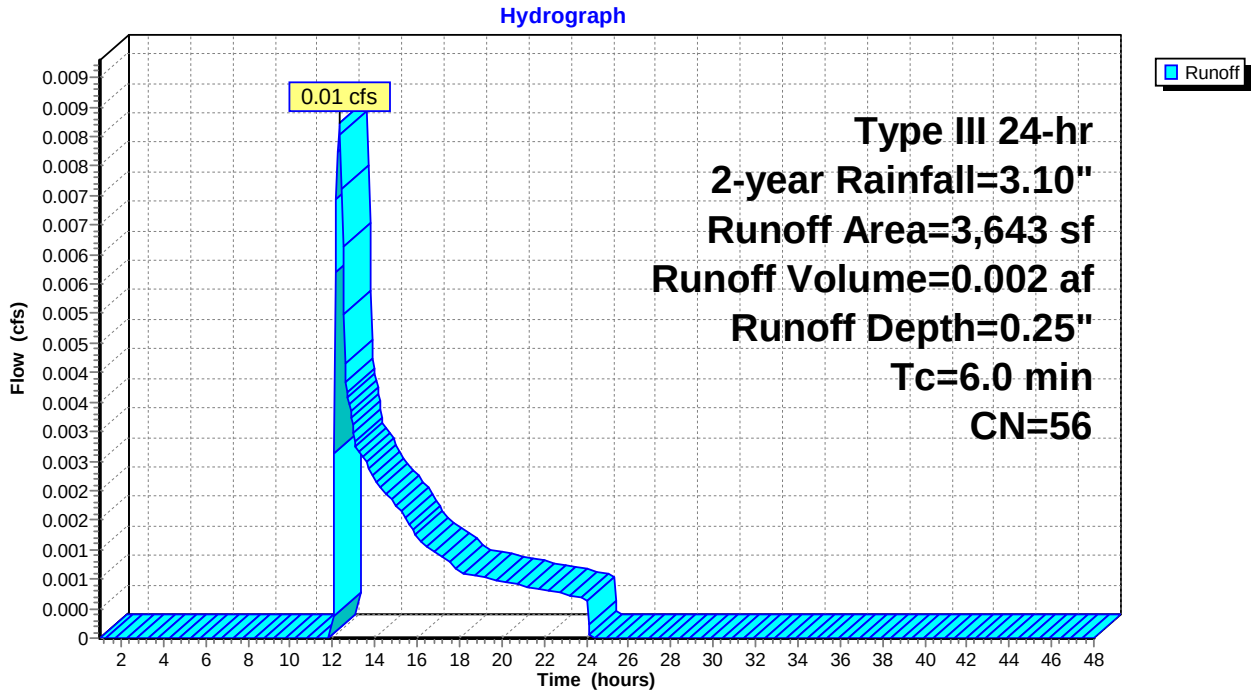
Runoff = 0.01 cfs @ 12.33 hrs, Volume= 0.002 af, Depth= 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	235	98	Walkway/patio Bldg A.1
*	825	80	Grass pavers
*	214	98	sidewalk
*	2,369	39	Landscaping/openspace/rain garden/ HSG A
	3,643	56	Weighted Average
	3,194		87.67% Pervious Area
	449		12.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.4N: SC 1.4N



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Summary for Subcatchment 1.4S: Common

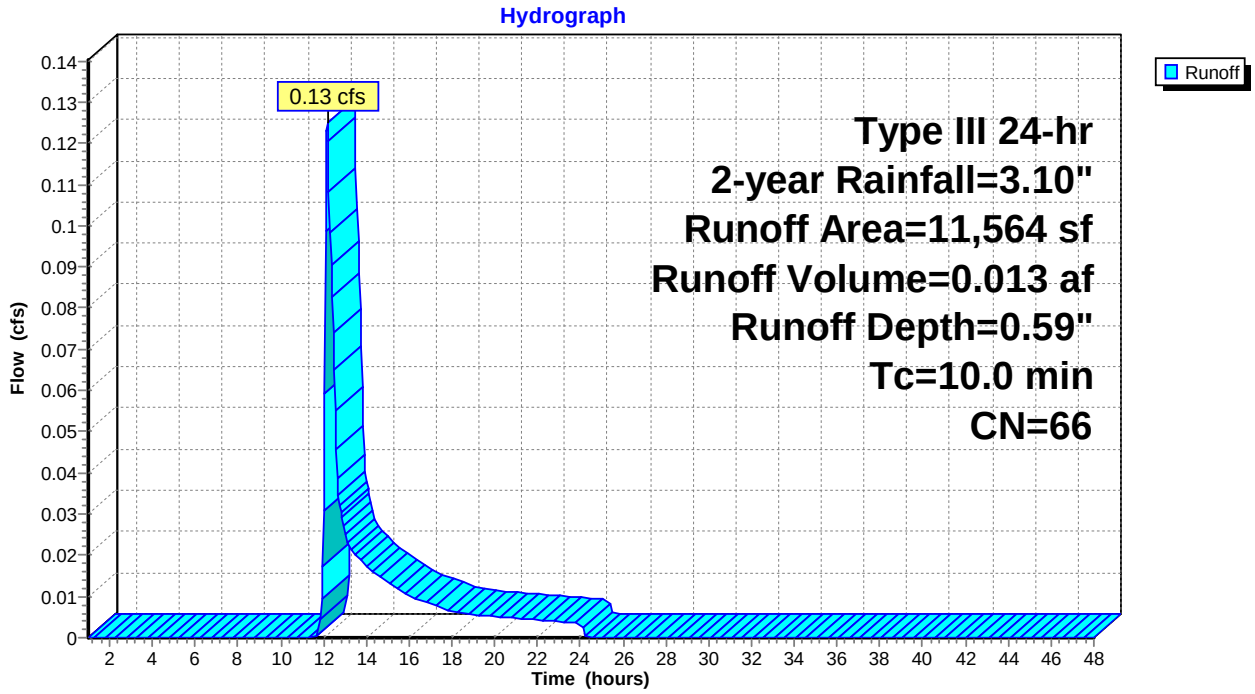
Runoff = 0.13 cfs @ 12.17 hrs, Volume= 0.013 af, Depth= 0.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	1,571	98	paved walkway
*	50	98	B.4 mech room
*	142	98	A.5 rear patio
*	103	98	A.6 rear patio
*	16	98	transformer pad
	4,841	39	>75% Grass cover, Good, HSG A
	4,841	80	>75% Grass cover, Good, HSG D
	11,564	66	Weighted Average
	9,682		83.73% Pervious Area
	1,882		16.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1.4S: Common



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Summary for Subcatchment 1.5: SC 1.5N

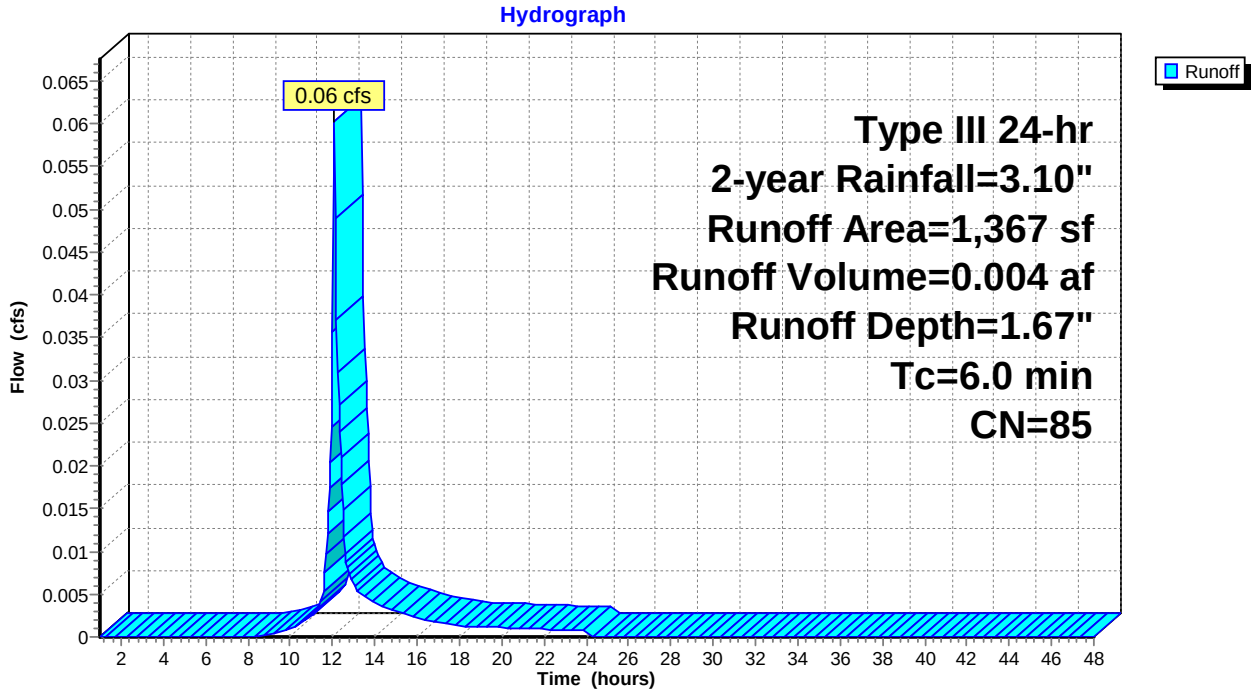
Runoff = 0.06 cfs @ 12.09 hrs, Volume= 0.004 af, Depth= 1.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	719	98	Wash Ave
*	336	98	sidewalk
*	312	39	Landscaping/esplanade
	1,367	85	Weighted Average
	312		22.82% Pervious Area
	1,055		77.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.5: SC 1.5N



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Summary for Subcatchment 1.5N: Roofs

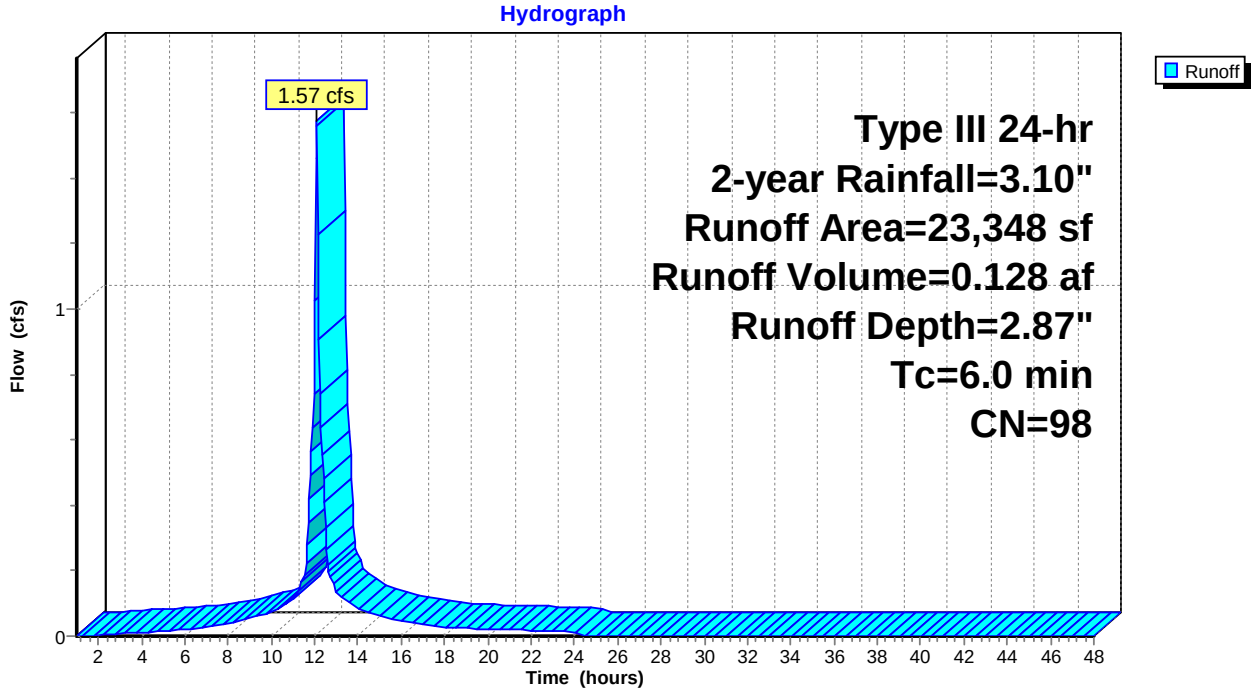
Runoff = 1.57 cfs @ 12.09 hrs, Volume= 0.128 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	23,348	98	IMPERV
	23,348		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.5N: Roofs



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Summary for Subcatchment 1.5S: A.7, A.10, C.3, C.2 Aisle

Runoff = 0.13 cfs @ 15.56 hrs, Volume= 0.067 af, Depth= 2.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	879	98	5' pavers/ s. mews
*	3,722	98	porous
*	203	98	C.2 front patios
*	101	98	C.3 front patios
*	610	98	B.5 patios
*	565	98	B.5 side patio
*	864	98	5' pavers/e. mews
*	406	98	A.10 front patio
*	32	98	transformer pads
*	157	98	B.4 s. walkway
*	42	98	B.4 mech room
*	385	98	B.4 front patios
*	406	98	A.9 front patios
*	106	98	B.4/A.6 side walkway
*	186	98	A.6 rear patio
*	1,003	80	grass pavers
*	663	98	A.7 w.&s. walkway
*	178	98	A.7 rear patio and walkways
	6,425	80	>75% Grass cover, Good, HSG D
	16,933	90	Weighted Average
	7,428		43.87% Pervious Area
	9,505		56.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
269.0					**Direct Entry, UNH**

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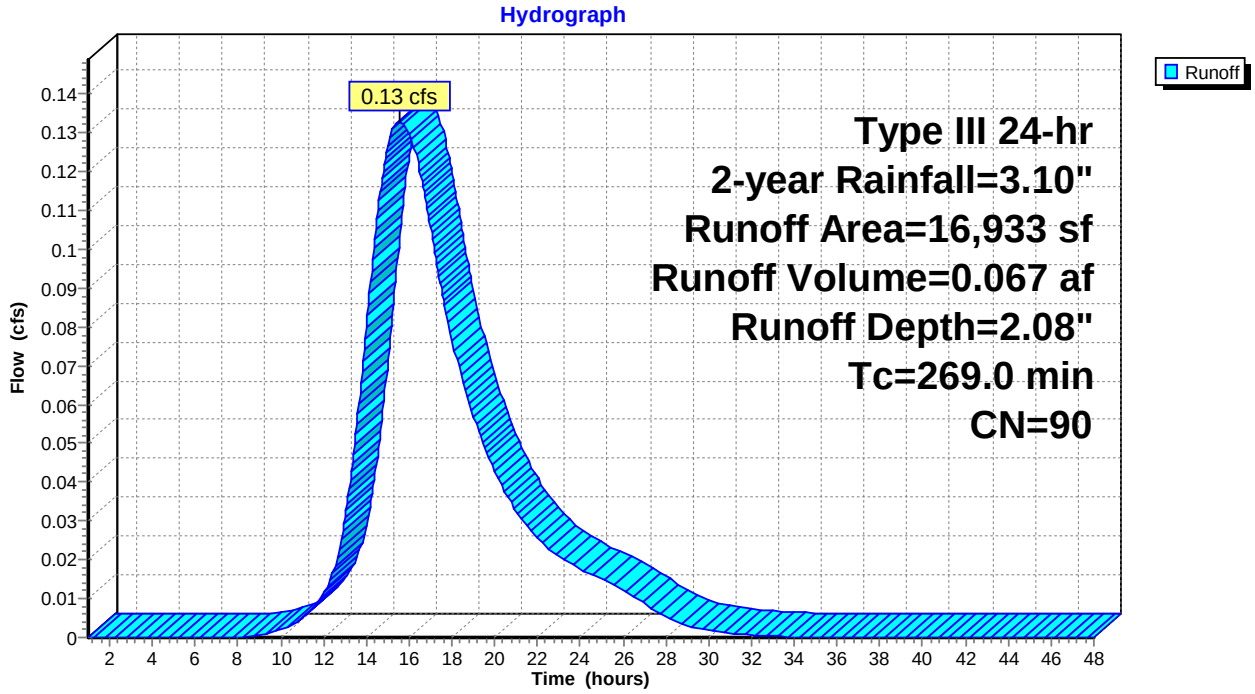
Subcatchment 1.5S: A.7, A.10, C.3, C.2 Aisle



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Summary for Subcatchment 1.6N: SC 1.6N

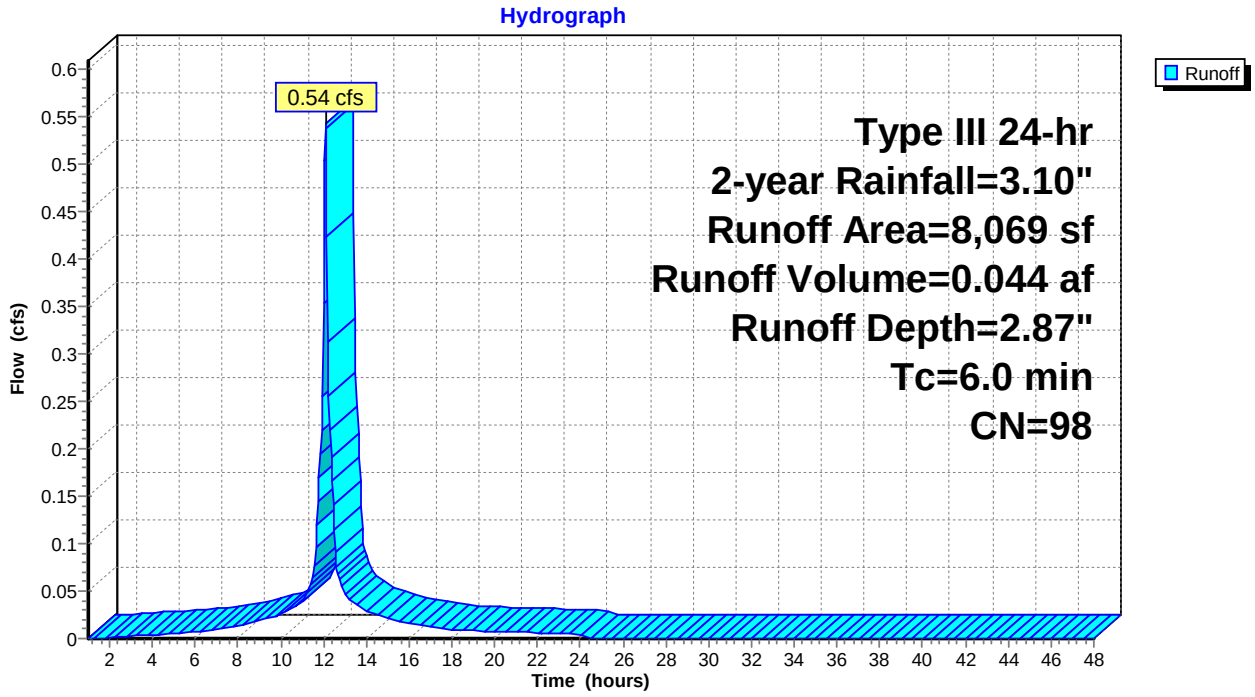
Runoff = 0.54 cfs @ 12.09 hrs, Volume= 0.044 af, Depth= 2.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	6,598	98	Wash Ave
*	1,471	98	sidewalk
	8,069	98	Weighted Average
	8,069		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.6N: SC 1.6N



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Summary for Subcatchment 1.6S: Developed/Undeveloped area

Runoff = 0.06 cfs @ 12.58 hrs, Volume= 0.022 af, Depth= 0.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	37,536	30	Woods, Good, HSG A
*	4,836	39	Landscaped/open space
	1,387	98	Unconnected roofs, HSG A
*	5,781	39	Wash Ave ditch
*	289	98	sidewalk
*	722	98	Wash Ave
*	674	39	Landscaping
*	6,396	98	Wash Ave
*	1,556	80	Grass pavers
*	1,449	98	Driveway entrance
*	302	98	Sidewalk
*	364	98	Patio walkway
*	1,799	39	Landscaping/open space, HSG A
*	3,515	98	Wash Ave
*	401	80	grass pavers
*	1,684	98	sidewalk
*	268	98	A.7 patio
*	324	98	A.6 patio
*	415	98	A.5 patio
*	5,887	80	Landscaping/ HSG D
	75,585	52	Weighted Average
	58,470		77.36% Pervious Area
	17,115		22.64% Impervious Area
	1,387		8.10% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	100	0.0500	0.17		**Sheet Flow, Sheet flow (A to B)** Grass: Dense n= 0.240 P2= 3.27"
5.5	203	0.0600	0.61		**Shallow Concentrated Flow, SCF (B to C)** Forest w/Heavy Litter Kv= 2.5 fps
0.3	92	0.0400	5.40	17.28	**Trap/Vee/Rect Channel Flow, Ditch Flow (C to D)** Bot.W=2.00' D=0.80' Z= 2.5 '/' Top.W=6.00' n= 0.035
15.6	395	Total			

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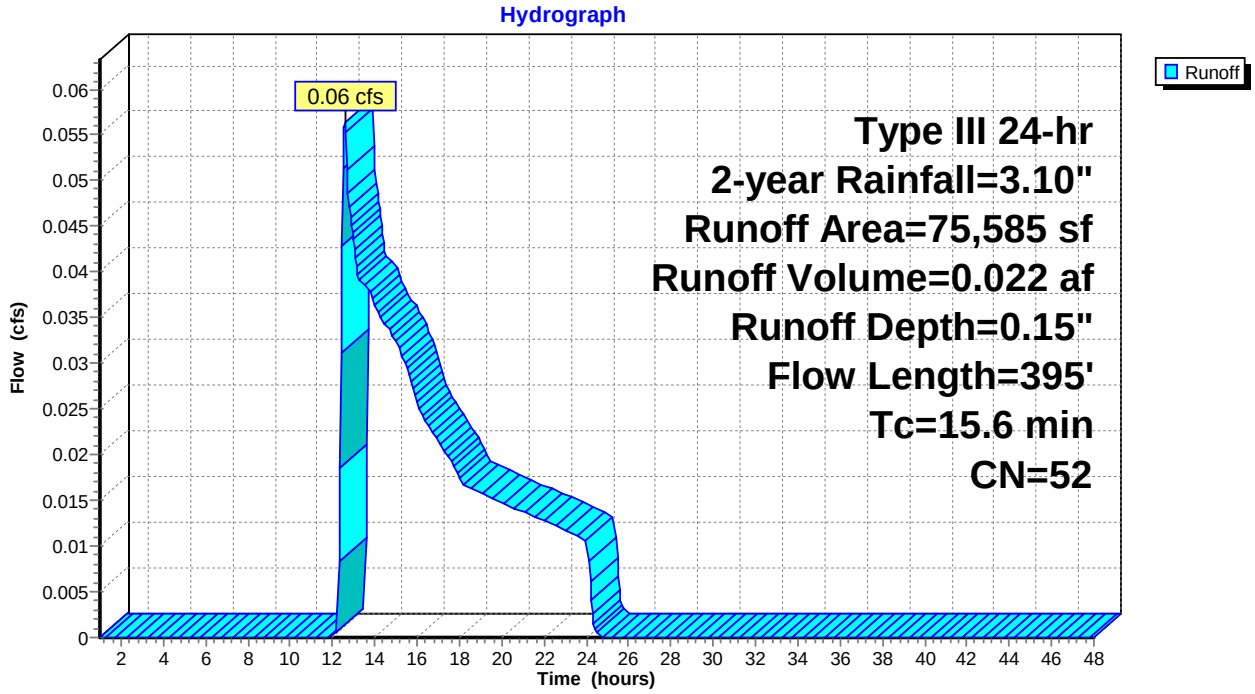
Subcatchment 1.6S: Developed/Undeveloped area



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Summary for Subcatchment 1.7N: SC 1.7N

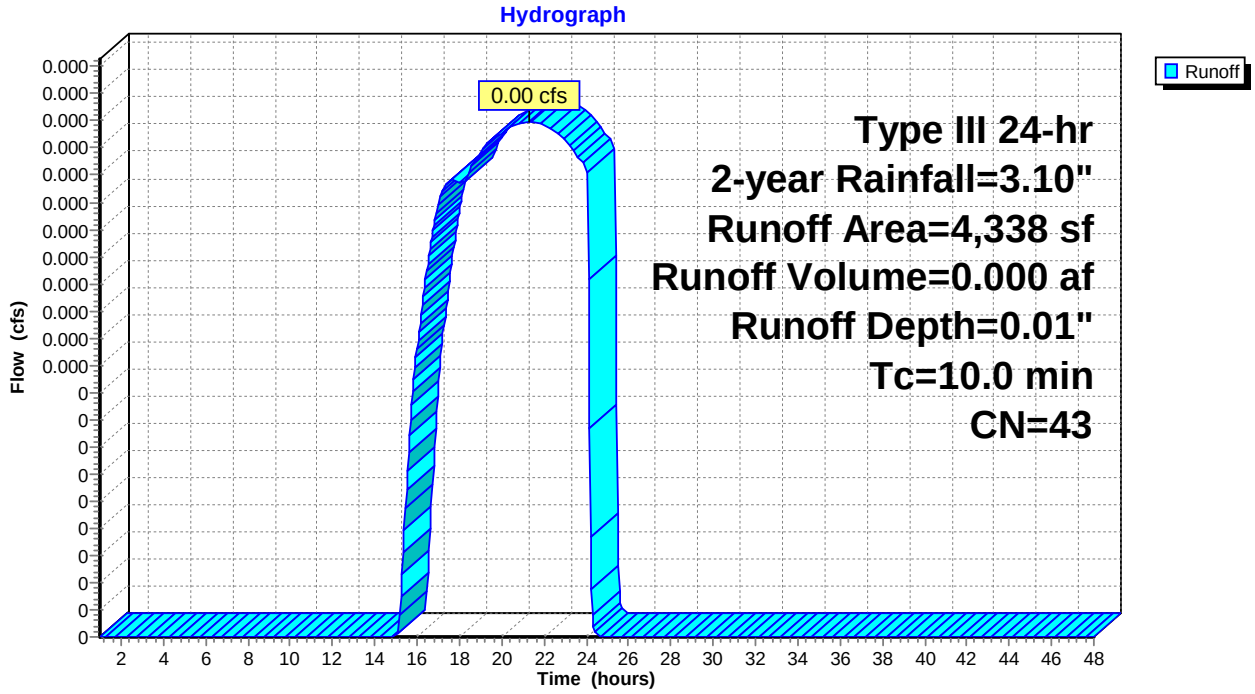
Runoff = 0.00 cfs @ 21.31 hrs, Volume= 0.000 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	288	98	C.1 patio
*	4,034	39	Lawn/lanscaping/ditch, HSG A
*	16	98	transformer
	4,338	43	Weighted Average
	4,034		92.99% Pervious Area
	304		7.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1.7N: SC 1.7N



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Summary for Subcatchment 1.7S: SC 1.7S

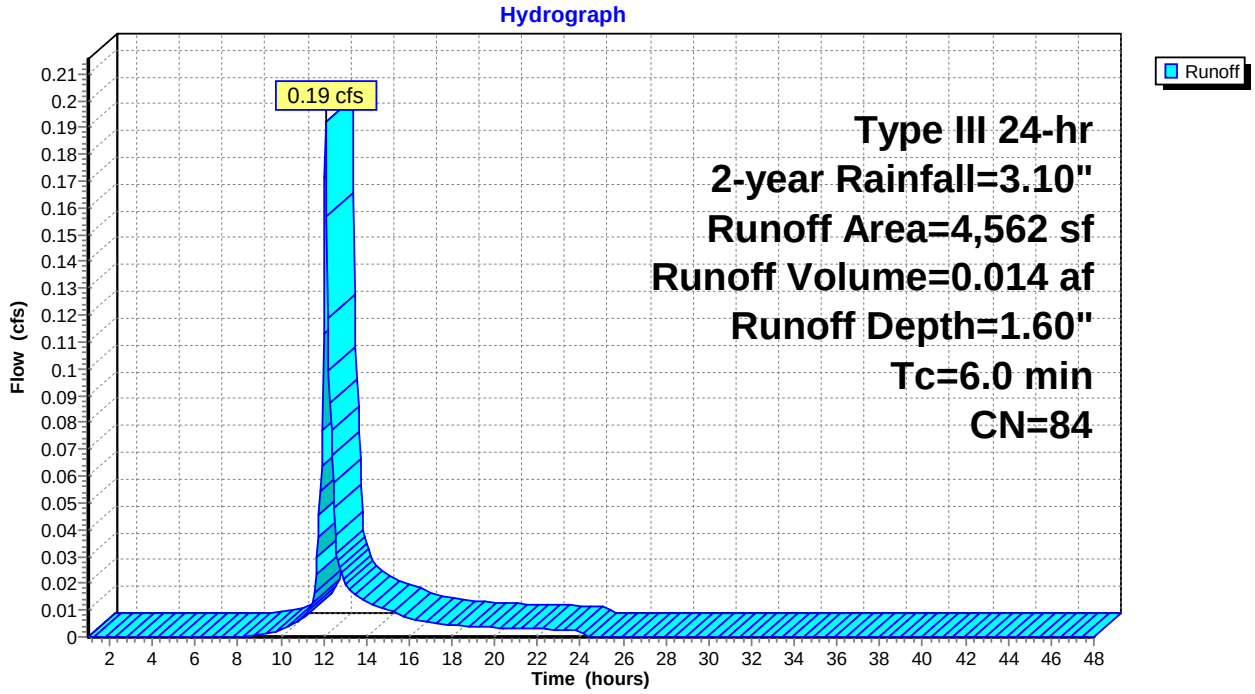
Runoff = 0.19 cfs @ 12.09 hrs, Volume= 0.014 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	724	98	A.9/A.10 rear patios
*	356	98	Walkway
*	3,482	80	Lawn/landscaping, HSG D
	4,562	84	Weighted Average
	3,482		76.33% Pervious Area
	1,080		23.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.7S: SC 1.7S



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Summary for Subcatchment 1.8N: A.4 Rear Patio

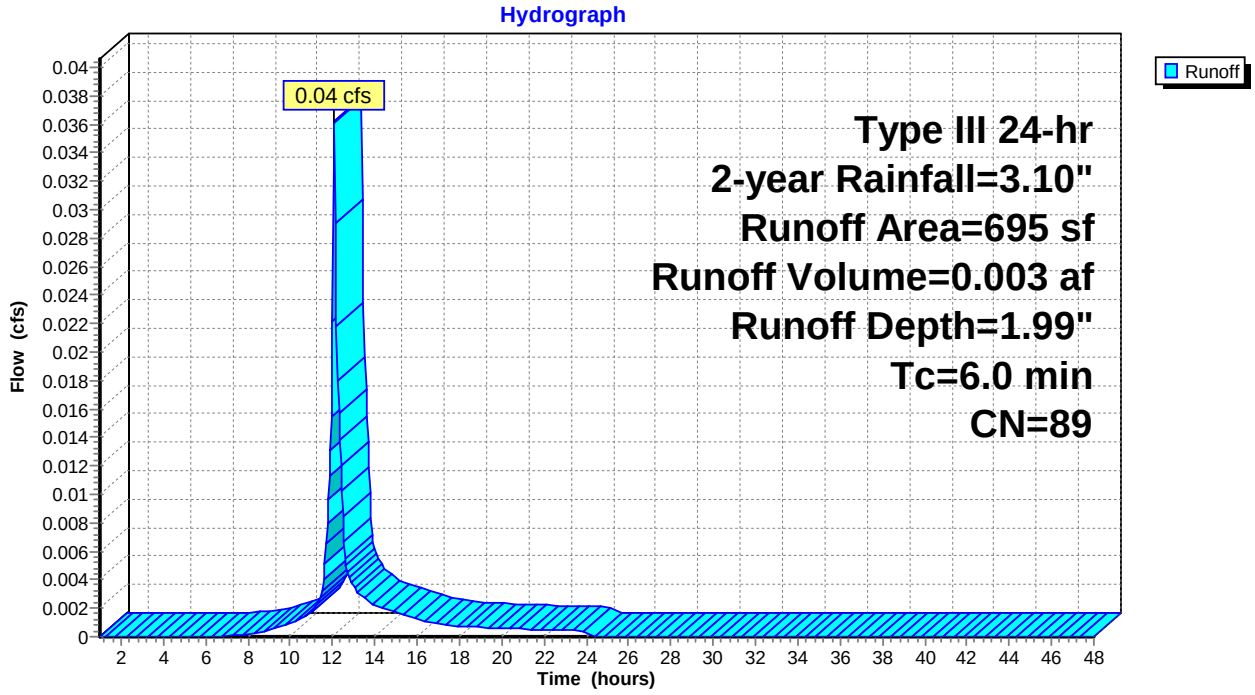
Runoff = 0.04 cfs @ 12.09 hrs, Volume= 0.003 af, Depth= 1.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	360	98	Patio
*	335	80	Lawn/landscaping, HSG D
	695	89	Weighted Average
	335		48.20% Pervious Area
	360		51.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.8N: A.4 Rear Patio



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Summary for Subcatchment 1.9N: Common

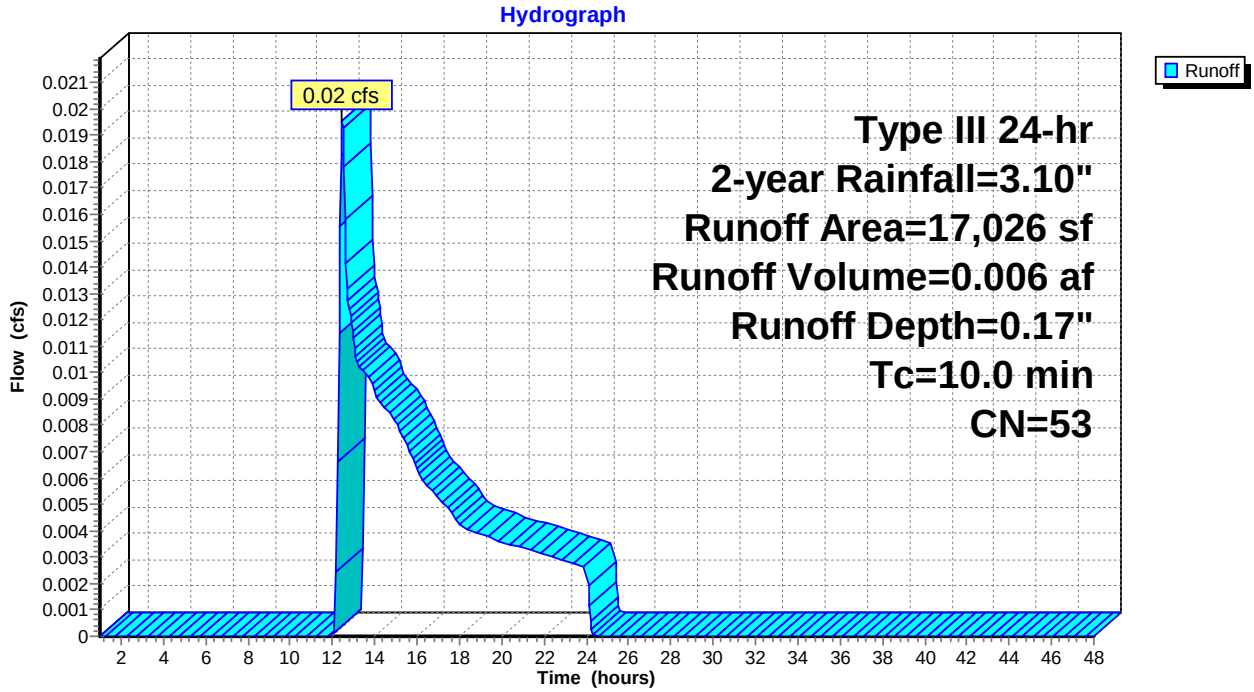
Runoff = 0.02 cfs @ 12.47 hrs, Volume= 0.006 af, Depth= 0.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	1,898	98	Paved walkway
*	1,662	98	Pavers & covered pav
*	472	98	patios
*	16	98	transformer
*	12,978	39	Open space, landscaping, HSG A
	17,026	53	Weighted Average
	12,978		76.22% Pervious Area
	4,048		23.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1.9N: Common



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Summary for Subcatchment 2.1N: SC 2.1N

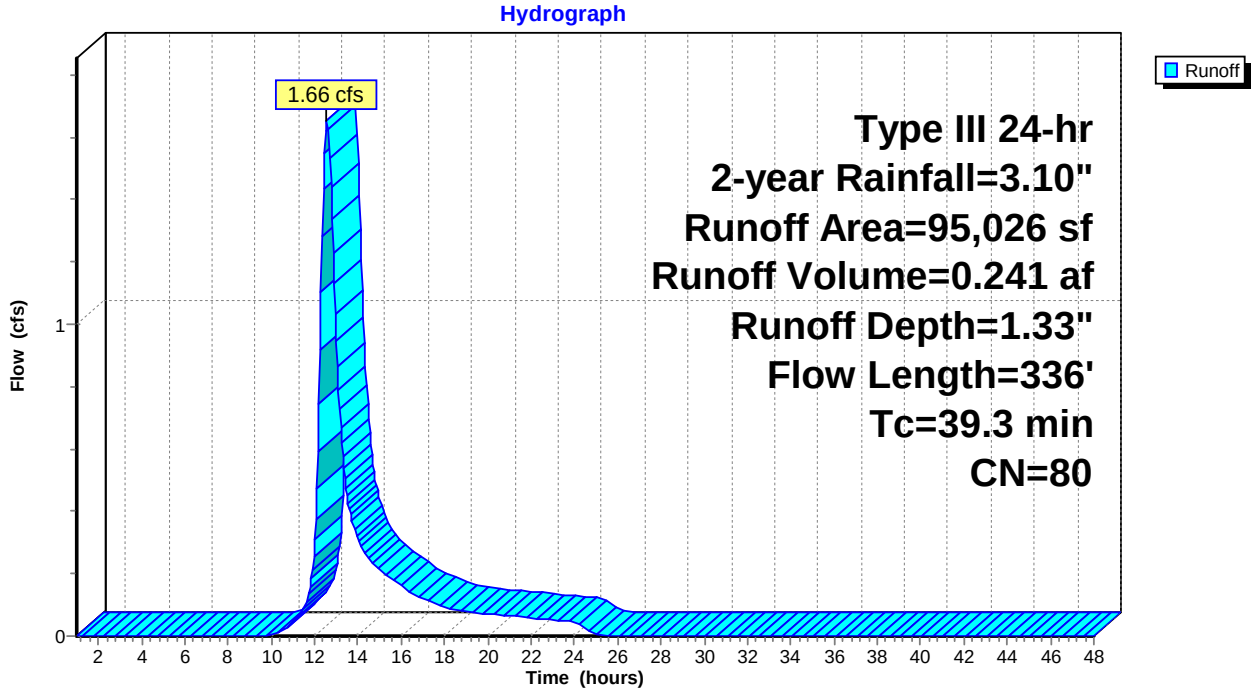
Runoff = 1.66 cfs @ 12.57 hrs, Volume= 0.241 af, Depth= 1.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	7,052	80	Road sideslope
	37,855	77	Woods, Good, HSG D
*	4,097	98	Sidewalk/N. Conc apron
*	10,054	98	Wash. Ave and S. Conc apron
	5,335	30	Woods, Good, HSG A
*	7,208	98	Rooftops and driveways
*	23,052	80	Lawns/landscaping, HSG D
*	373	80	ROW Landscaping
	95,026	80	Weighted Average
	73,667		77.52% Pervious Area
	21,359		22.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.4	100	0.0300	0.05		**Sheet Flow, SF (A to B)** Woods: Dense underbrush n= 0.800 P2= 3.27"
7.9	236	0.0100	0.50		**Shallow Concentrated Flow, SCF (B to C)** Woodland Kv= 5.0 fps
39.3	336	Total			

Subcatchment 2.1N: SC 2.1N



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Summary for Subcatchment 2.1S: Eastern Parking Lot

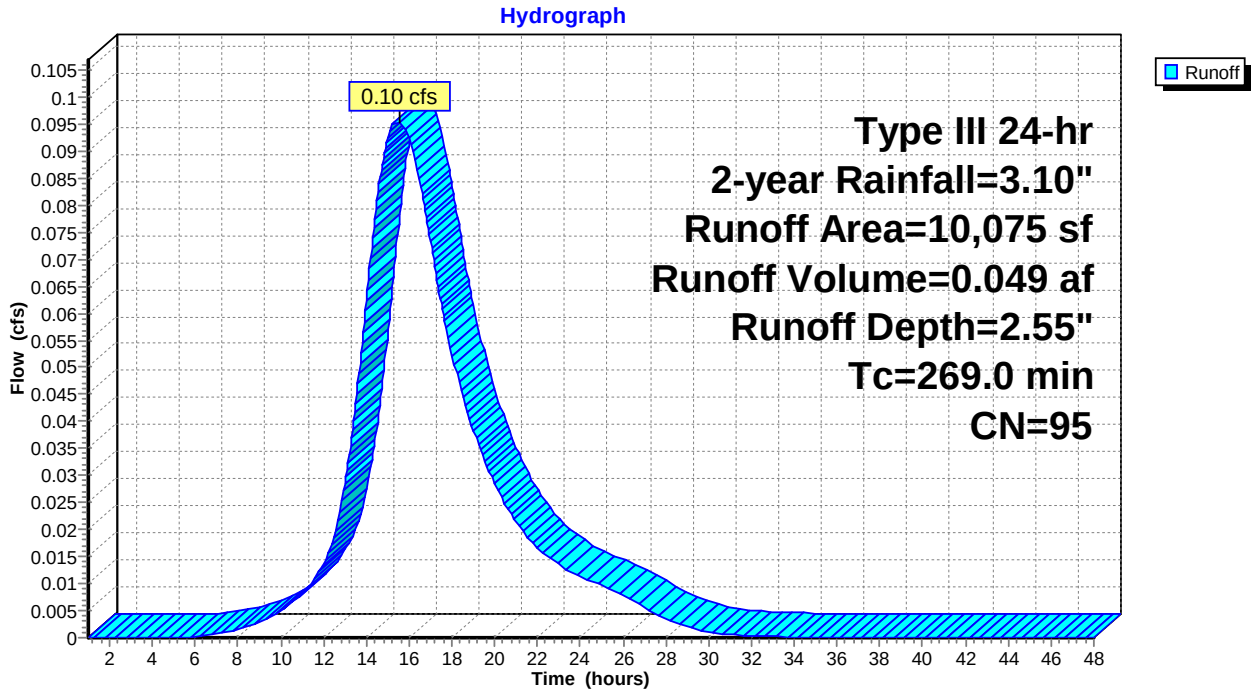
Runoff = 0.10 cfs @ 15.51 hrs, Volume= 0.049 af, Depth= 2.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	1,296	98	Porous
*	4,474	98	Paved driveaisle
*	971	98	Walkway/patio
*	371	98	Rear walkway/patio
*	128	98	dumpster pad
*	1,134	98	Porous
	1,701	80	>75% Grass cover, Good, HSG D
	10,075	95	Weighted Average
	1,701		16.88% Pervious Area
	8,374		83.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
269.0					**Direct Entry, UNH**

Subcatchment 2.1S: Eastern Parking Lot



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Summary for Subcatchment 2.2S: Developed/nondeveloped area

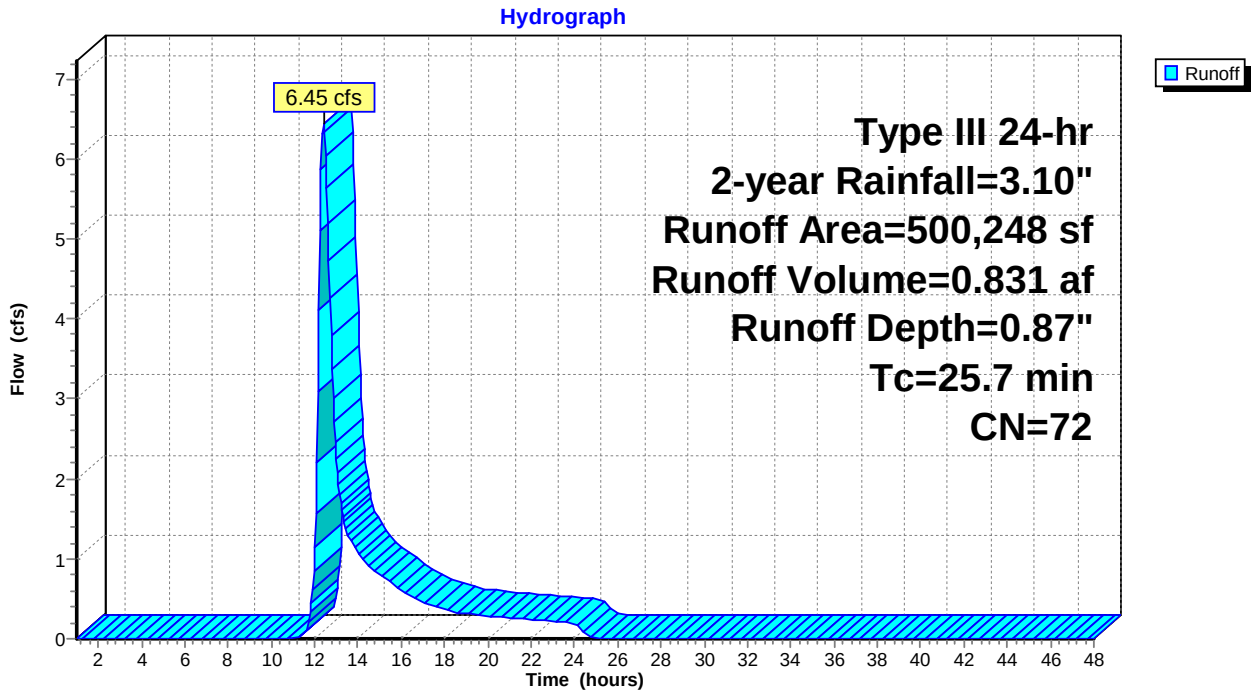
Runoff = 6.45 cfs @ 12.40 hrs, Volume= 0.831 af, Depth= 0.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	577	98	Bldg C.2 & C.3 patios (HSG A)
*	3,734	39	Slope behind patios, HSG A
*	30,823	39	>75% Grass cover, Good, HSG A
*	3,896	98	Roofs/driveways/patios (HSG A)
	24,173	55	Woods, Good, HSG B
	6,557	70	Woods, Good, HSG C
	146,624	70	Woods, Good, HSG C
	237,115	77	Woods, Good, HSG D
*	10,865	80	>75% Grass cover, Good, HSG D
*	3,503	98	Roofs/driveways/patios (HSG D)
*	13,566	80	Landscaped/openspace areas (HSG D)
*	5,509	98	Wash Ave
*	1,578	98	Sidewalk
*	9,452	80	Roadside ditch/slope
*	1,797	98	Auburn St
*	479	80	Landscaping Auburn St
	500,248	72	Weighted Average
	483,388		96.63% Pervious Area
	16,860		3.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.7					**Direct Entry, copy from pre**

Subcatchment 2.2S: Developed/nondeveloped area



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Summary for Subcatchment 3.1N: SC 3.1N

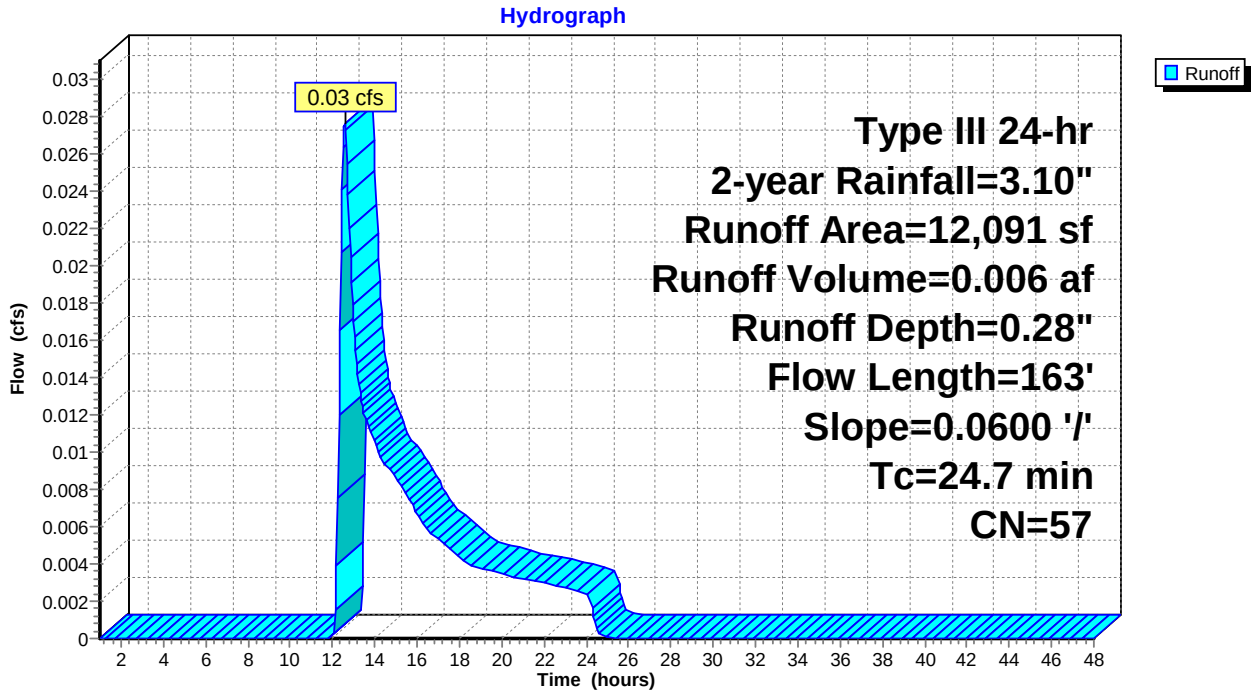
Runoff = 0.03 cfs @ 12.58 hrs, Volume= 0.006 af, Depth= 0.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	4,121	30	Woods, Good, HSG A
*	1,504	39	Landscaping/swale, HSG A
*	16	98	transformer pad
	2,428	77	Woods, Good, HSG D
*	4,022	80	Landscaping/slope, HSG D
	12,091	57	Weighted Average
	12,075		99.87% Pervious Area
	16		0.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.8	100	0.0600	0.07		**Sheet Flow, SF (A to B)** Woods: Dense underbrush n= 0.800 P2= 3.27"
0.9	63	0.0600	1.22		**Shallow Concentrated Flow, SCF (B to C)** Woodland Kv= 5.0 fps
24.7	163	Total			

Subcatchment 3.1N: SC 3.1N



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Summary for Subcatchment 4.1N: 4.1N

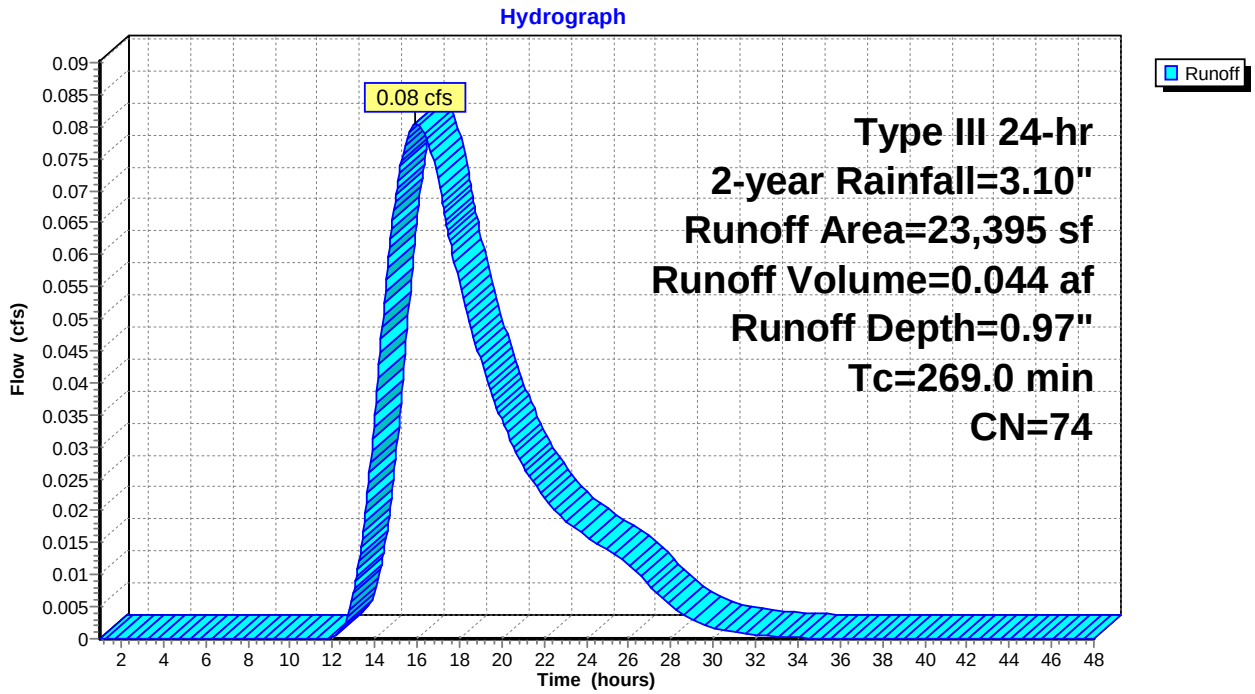
Runoff = 0.08 cfs @ 15.87 hrs, Volume= 0.044 af, Depth= 0.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	947	98	A.1 rear patio
*	439	98	A.2 walkway
*	5,241	98	porous pavement
*	1,850	98	5' wide pavers in mews
*	403	98	A.4 front patios
*	408	98	B.1 patios
*	301	98	B.1/B,2 mech room walkway
*	795	98	B.1/B.2 patio area
*	16	98	transformer pad
*	612	98	B.2 patios
*	408	98	B.3 patios
*	204	98	C.1 patios
*	128	98	dumpster pad
*	95	98	B.2 east walkway
*	2,160	98	eastern parking & driveaisle
*	9,388	39	Lawn/landscaping, HSG A
	23,395	74	Weighted Average
	9,388		40.13% Pervious Area
	14,007		59.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
269.0					**Direct Entry, UNH**

Subcatchment 4.1N: 4.1N



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Summary for Subcatchment 4.2N: Eastern Parking Lot

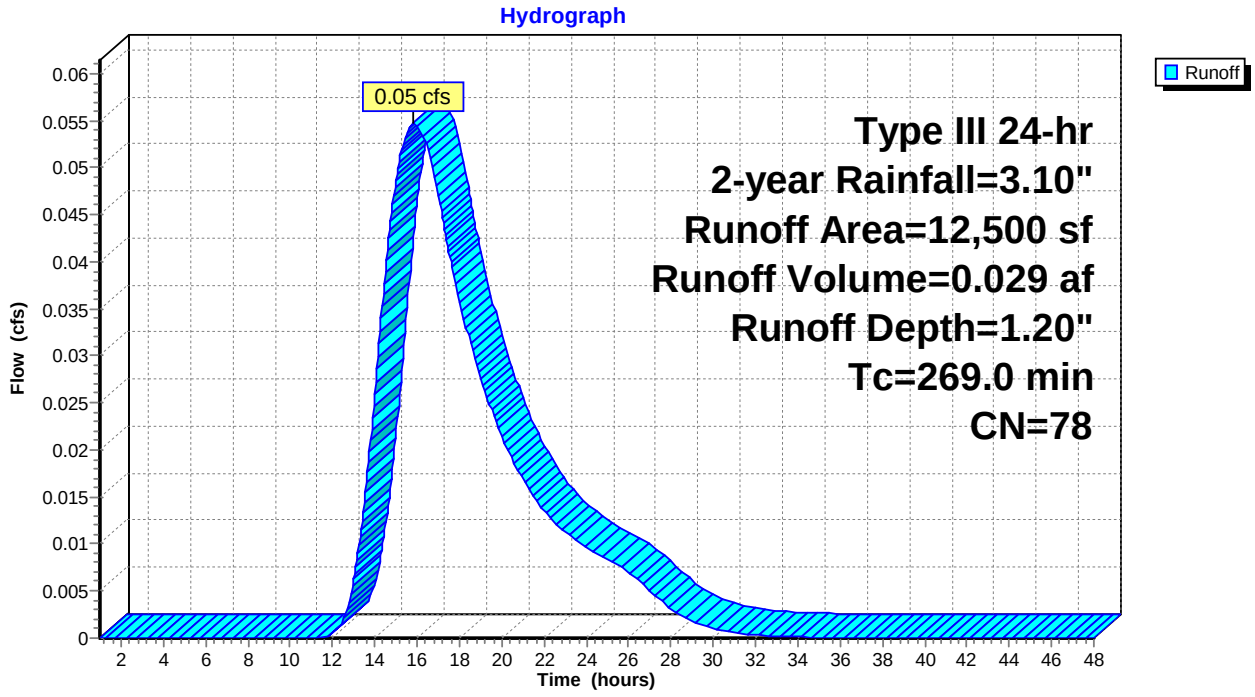
Runoff = 0.05 cfs @ 15.85 hrs, Volume= 0.029 af, Depth= 1.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
*	1,369	98	Sidewalk
*	555	98	Porous pavement
*	6,428	98	Parking lot
*	4,148	39	Landscaping/open space, HSG A
	12,500	78	Weighted Average
	4,148		33.18% Pervious Area
	8,352		66.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
269.0					**Direct Entry, UNH**

Subcatchment 4.2N: Eastern Parking Lot



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Summary for Subcatchment 4.3N: SC 4.3N

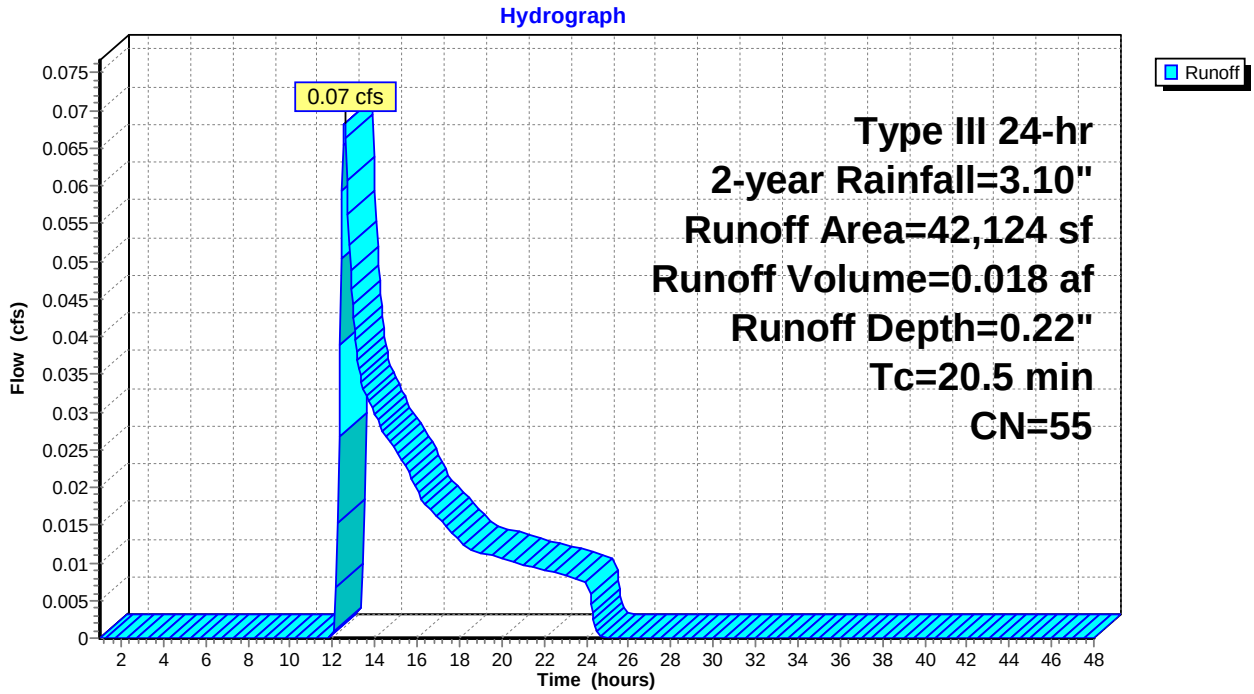
Runoff = 0.07 cfs @ 12.57 hrs, Volume= 0.018 af, Depth= 0.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-year Rainfall=3.10"

	Area (sf)	CN	Description
	5,895	80	>75% Grass cover, Good, HSG D
	5,180	77	Woods, Good, HSG D
	18,402	30	Woods, Good, HSG A
*	1,998	39	Landscaping/slope, HSG A
*	10,649	77	Woods, Good, HSG D
	42,124	55	Weighted Average
	42,124		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.5					**Direct Entry, copy from pre**

Subcatchment 4.3N: SC 4.3N



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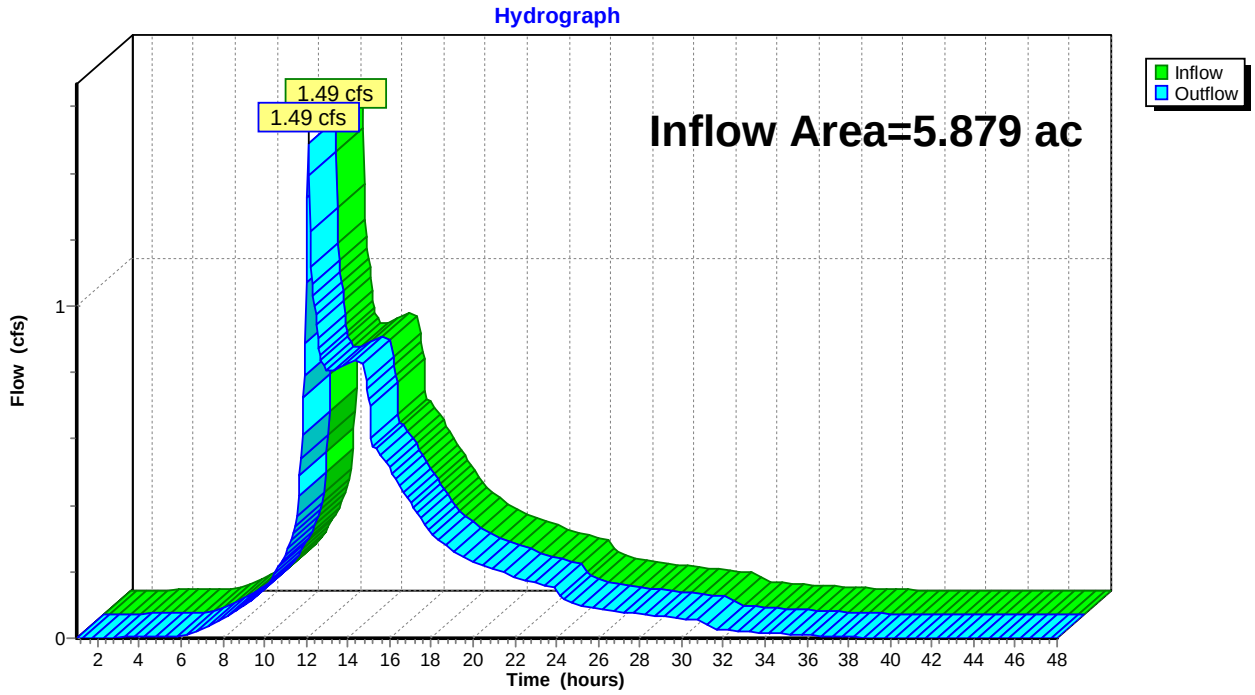
Summary for Reach 1: POI #1 - LAMBERT/WASH INTERSECTION

Inflow Area = 5.879 ac, 48.41% Impervious, Inflow Depth = 1.17" for 2-year event
Inflow = 1.49 cfs @ 12.11 hrs, Volume= 0.571 af
Outflow = 1.49 cfs @ 12.11 hrs, Volume= 0.571 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach 1: POI #1 - LAMBERT/WASH INTERSECTION



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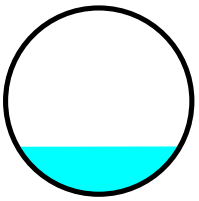
Summary for Reach 1R: N. DITCH CB OUTLET

Inflow Area = 2.382 ac, 51.59% Impervious, Inflow Depth = 1.26" for 2-year event
Inflow = 1.02 cfs @ 12.10 hrs, Volume= 0.250 af
Outflow = 1.02 cfs @ 12.10 hrs, Volume= 0.250 af, Atten= 1%, Lag= 0.2 min

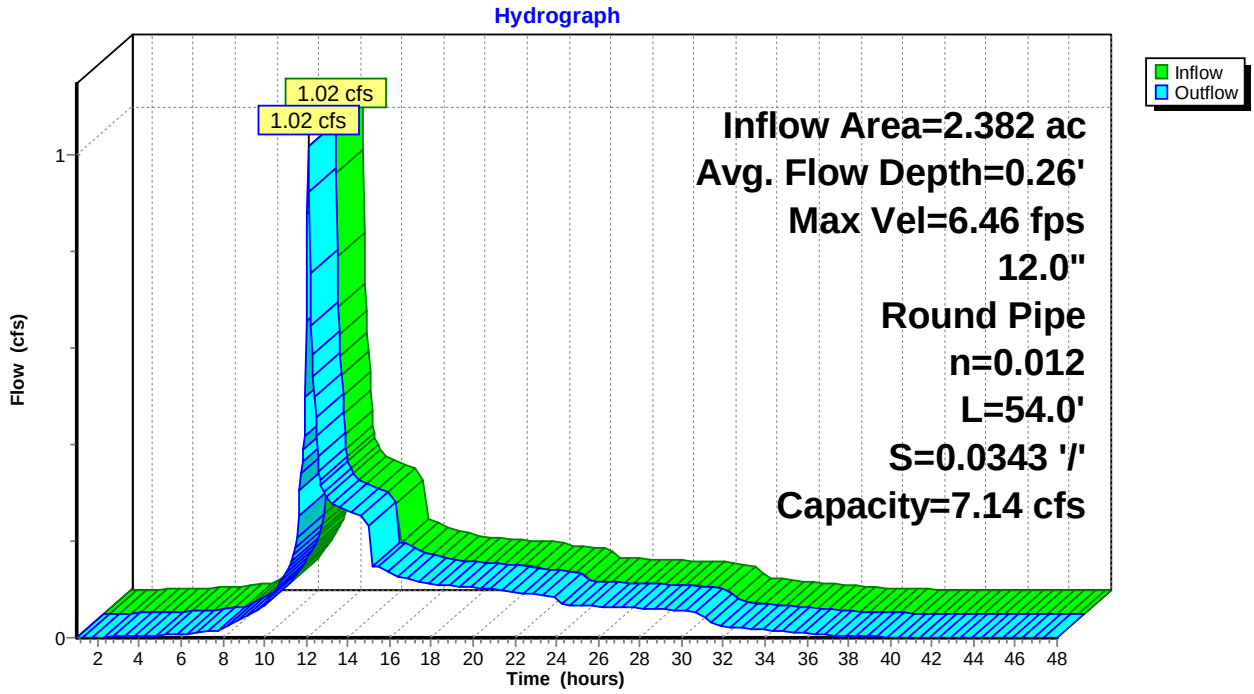
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.46 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.32 fps, Avg. Travel Time= 0.4 min

Peak Storage= 9 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.26'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.14 cfs

12.0" Round Pipe
n= 0.012
Length= 54.0' Slope= 0.0343 '/'
Inlet Invert= 87.63', Outlet Invert= 85.78'



Reach 1R: N. DITCH CB OUTLET



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Summary for Reach 2R: N. DITCH

Inflow Area = 2.382 ac, 51.59% Impervious, Inflow Depth = 1.26" for 2-year event
Inflow = 1.03 cfs @ 12.10 hrs, Volume= 0.250 af
Outflow = 1.02 cfs @ 12.10 hrs, Volume= 0.250 af, Atten= 1%, Lag= 0.3 min

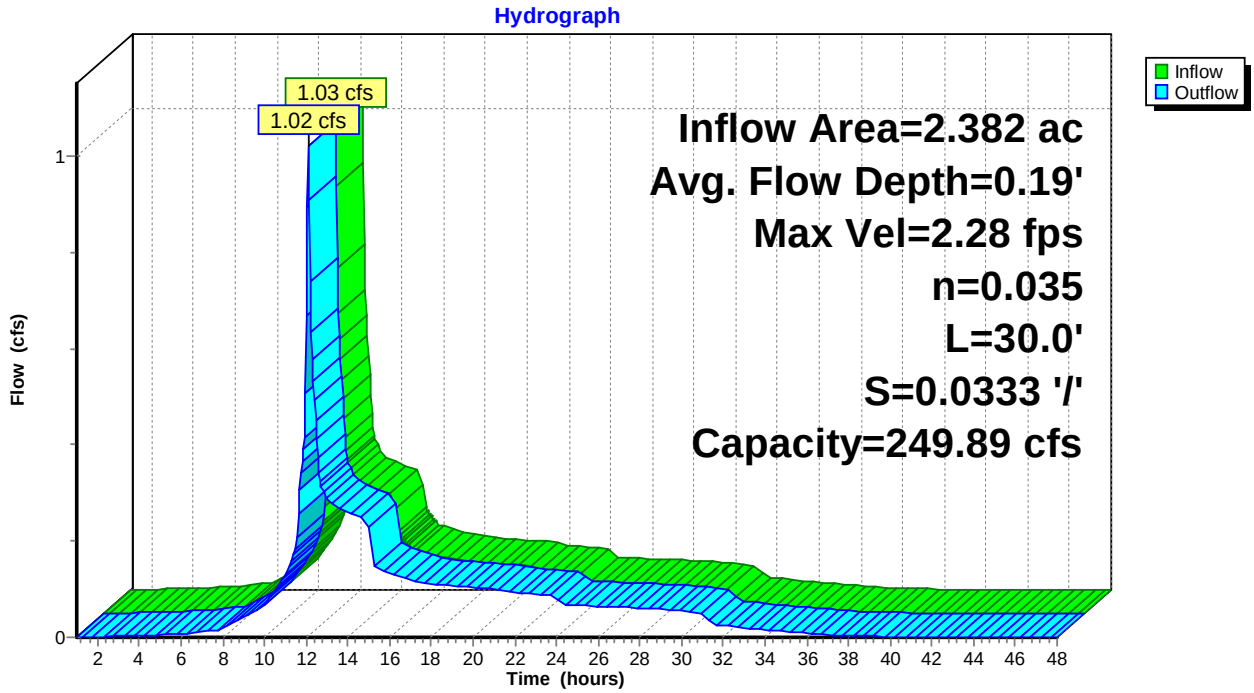
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.28 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 0.88 fps, Avg. Travel Time= 0.6 min

Peak Storage= 14 cf @ 12.10 hrs
Average Depth at Peak Storage= 0.19'
Bank-Full Depth= 3.00' Flow Area= 24.0 sf, Capacity= 249.89 cfs

2.00' x 3.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 2.0 '/' Top Width= 14.00'
Length= 30.0' Slope= 0.0333 '/'
Inlet Invert= 94.00', Outlet Invert= 93.00'



Reach 2R: N. DITCH



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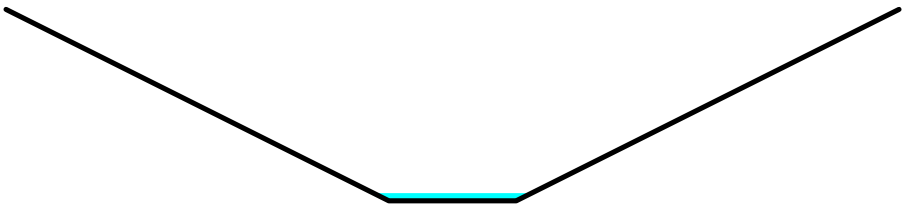
Summary for Reach 3R: S. DITCH

Inflow Area = 3.077 ac, 44.68% Impervious, Inflow Depth = 0.97" for 2-year event
Inflow = 0.50 cfs @ 12.57 hrs, Volume= 0.249 af
Outflow = 0.50 cfs @ 12.59 hrs, Volume= 0.249 af, Atten= 0%, Lag= 0.6 min

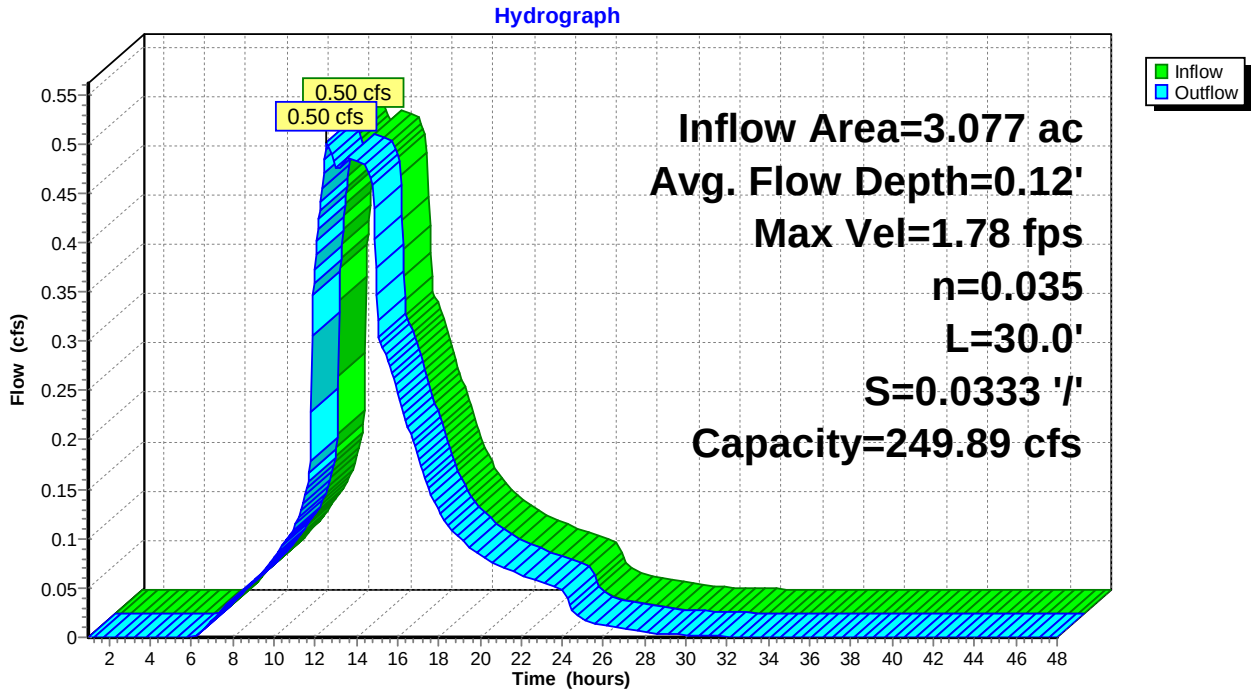
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.78 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 0.95 fps, Avg. Travel Time= 0.5 min

Peak Storage= 8 cf @ 12.58 hrs
Average Depth at Peak Storage= 0.12'
Bank-Full Depth= 3.00' Flow Area= 24.0 sf, Capacity= 249.89 cfs

2.00' x 3.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 2.0 '/' Top Width= 14.00'
Length= 30.0' Slope= 0.0333 '/'
Inlet Invert= 94.00', Outlet Invert= 93.00'



Reach 3R: S. DITCH



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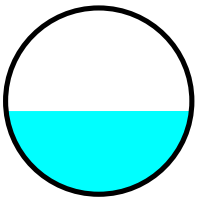
Summary for Reach 4R: WASH. CROSS CULVERT

Inflow Area = 2.181 ac, 22.48% Impervious, Inflow Depth = 1.33" for 2-year event
Inflow = 1.66 cfs @ 12.57 hrs, Volume= 0.241 af
Outflow = 1.65 cfs @ 12.58 hrs, Volume= 0.241 af, Atten= 0%, Lag= 0.7 min

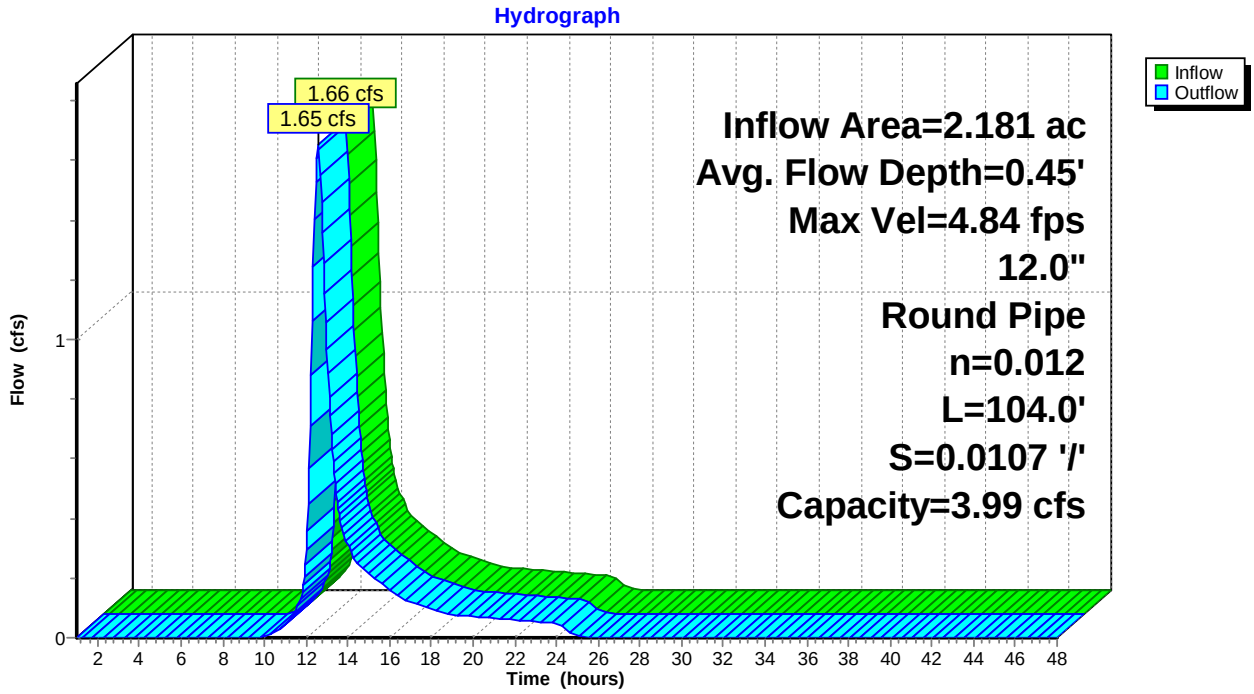
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 4.84 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 2.11 fps, Avg. Travel Time= 0.8 min

Peak Storage= 36 cf @ 12.57 hrs
Average Depth at Peak Storage= 0.45'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.99 cfs

12.0" Round Pipe
n= 0.012 Corrugated PP, smooth interior
Length= 104.0' Slope= 0.0107 '/'
Inlet Invert= 113.80', Outlet Invert= 112.69'



Reach 4R: WASH. CROSS CULVERT



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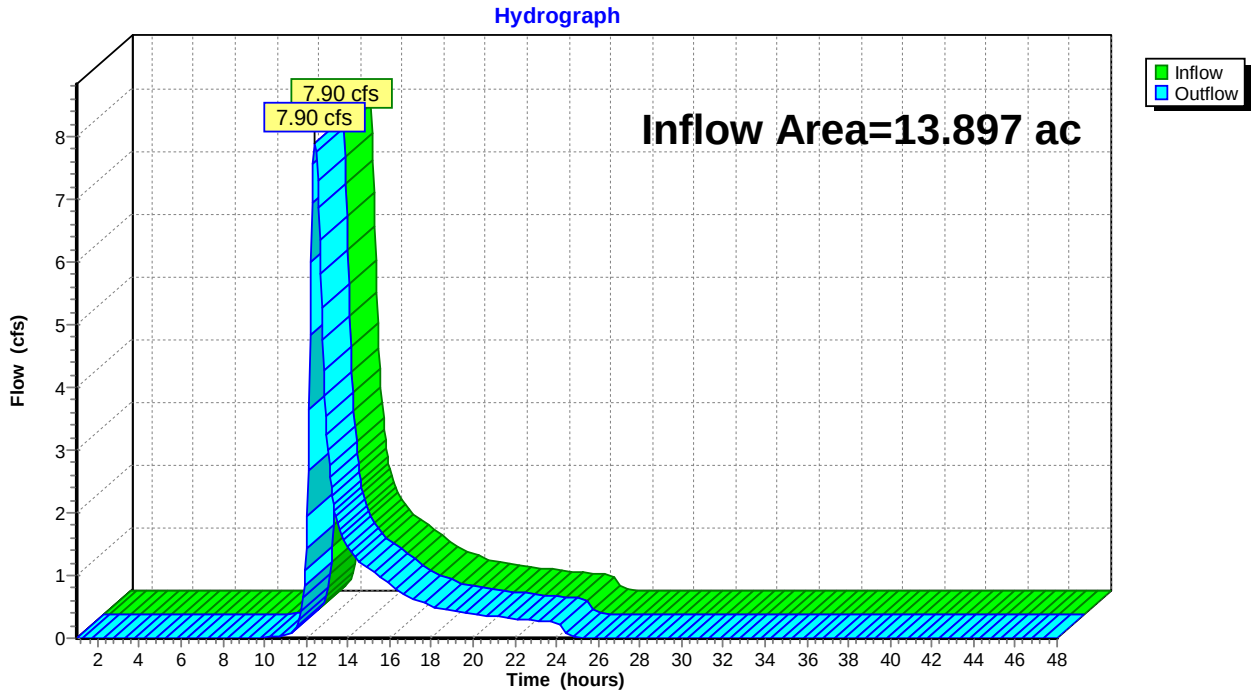
Summary for Reach POI 2: POI #2 - LAMBERT CROSS CULVERT

Inflow Area = 13.897 ac, 7.70% Impervious, Inflow Depth = 0.97" for 2-year event
Inflow = 7.90 cfs @ 12.43 hrs, Volume= 1.121 af
Outflow = 7.90 cfs @ 12.43 hrs, Volume= 1.121 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach POI 2: POI #2 - LAMBERT CROSS CULVERT



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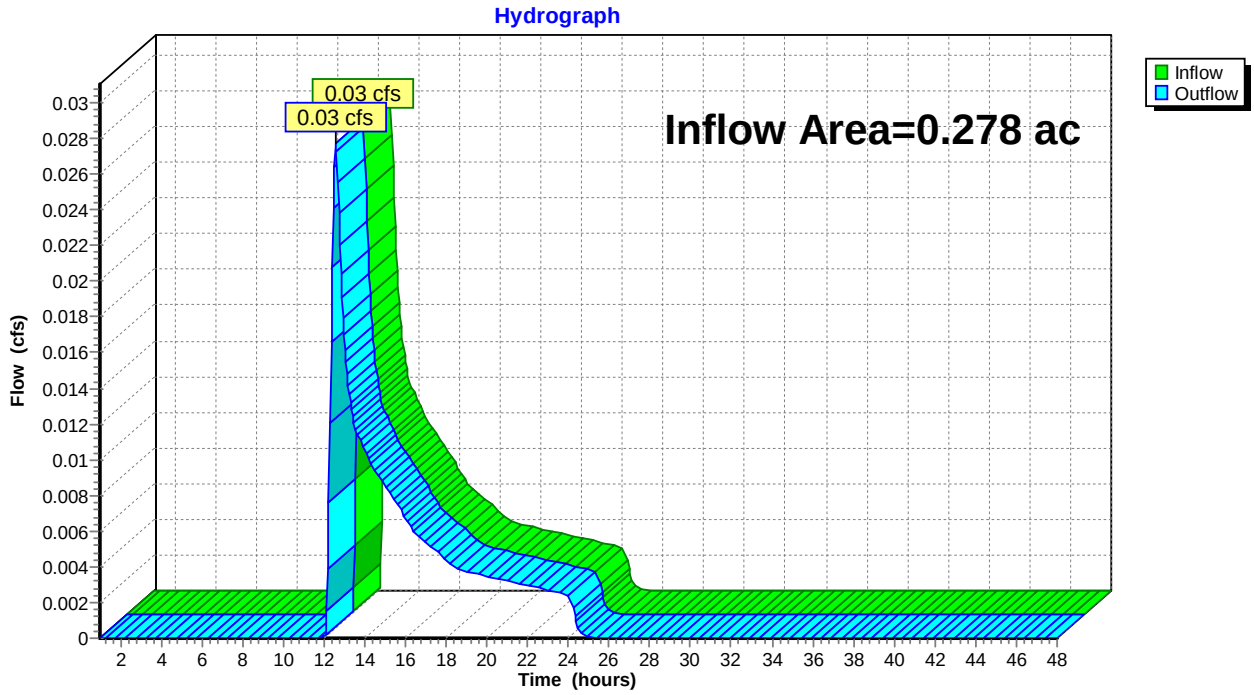
Summary for Reach POI 3: POI #3 - FALMOUTH WETLANDS

Inflow Area = 0.278 ac, 0.13% Impervious, Inflow Depth = 0.28" for 2-year event
Inflow = 0.03 cfs @ 12.58 hrs, Volume= 0.006 af
Outflow = 0.03 cfs @ 12.58 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach POI 3: POI #3 - FALMOUTH WETLANDS



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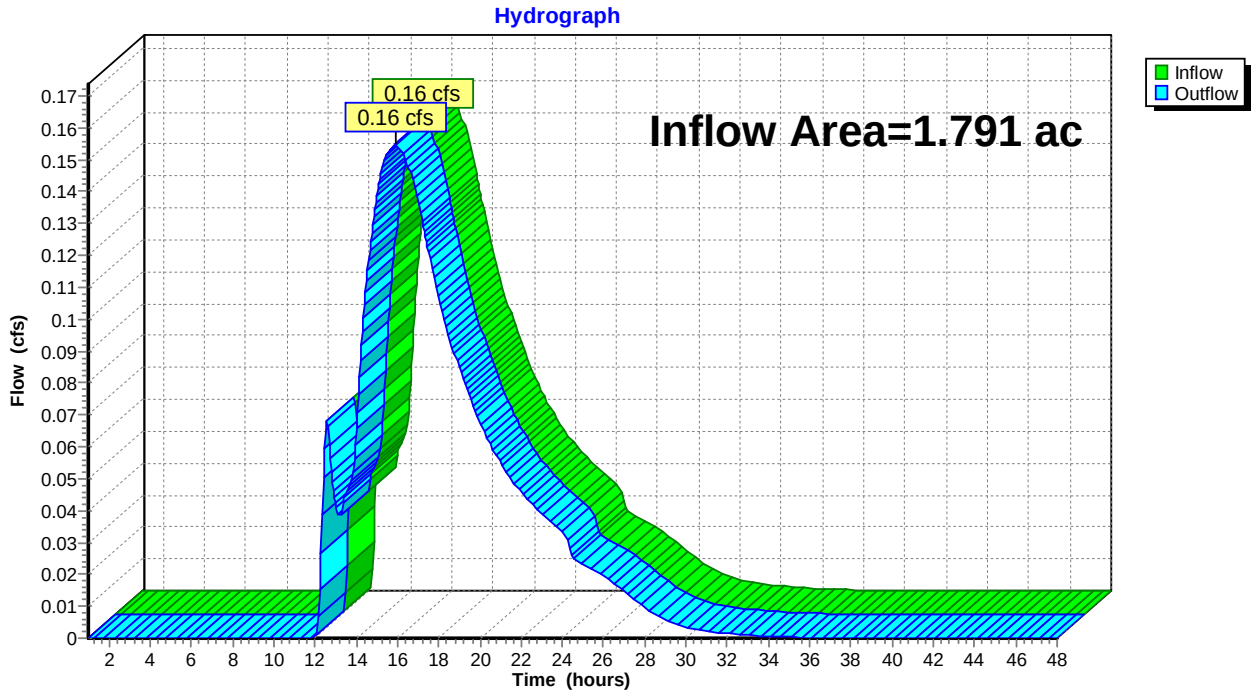
Summary for Reach POI 4: POI #4 - N STREAM

Inflow Area = 1.791 ac, 28.66% Impervious, Inflow Depth = 0.59" for 2-year event
Inflow = 0.16 cfs @ 15.88 hrs, Volume= 0.089 af
Outflow = 0.16 cfs @ 15.88 hrs, Volume= 0.089 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach POI 4: POI #4 - N STREAM



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Summary for Pond 1P: USSF 1 - StormTech 3500

Inflow Area = 1.042 ac, 61.80% Impervious, Inflow Depth = 1.57" for 2-year event
Inflow = 1.61 cfs @ 12.09 hrs, Volume= 0.136 af
Outflow = 0.08 cfs @ 14.85 hrs, Volume= 0.129 af, Atten= 95%, Lag= 165.6 min
Primary = 0.08 cfs @ 14.85 hrs, Volume= 0.129 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 107.22' @ 14.85 hrs Surf.Area= 4,998 sf Storage= 3,609 cf

Plug-Flow detention time= 528.4 min calculated for 0.128 af (94% of inflow)
Center-of-Mass det. time= 496.4 min (1,264.3 - 768.0)

Volume	Invert	Avail.Storage	Storage Description
#1	105.00'	1,714 cf	**34.00'W x 49.00'L x 4.75'H Stone** 7,914 cf Overall - 3,629 cf Embedded = 4,284 cf x 40.0% Voids
#2	105.50'	3,629 cf	**ADS_StormTech MC-3500 d +Cap @ 7.50' L** x 30 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.50'L = 115.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 30 Chambers in 6 Rows Cap Storage= +14.9 cf x 2 x 6 rows = 178.8 cf
#3	103.50'	125 cf	**34.00'W x 49.00'L x 1.50'H Sand** 2,499 cf Overall x 5.0% Voids
#4	102.50'	661 cf	**34.00'W x 49.00'L x 1.00'H Crushed Stone** 1,666 cf Overall - 13 cf Embedded = 1,653 cf x 40.0% Voids
#5	102.75'	13 cf	**4.0" Round Underdrain Storage** Inside #4 L= 150.0'
		6,142 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	103.00'	**1.2" Vert. Underdrain/Orifice** C= 0.600
#2	Primary	108.27'	**6.0" Round Bypass Overflow X 2.00** L= 6.0' Ke= 0.600 Inlet / Outlet Invert= 108.27' / 108.00' S= 0.0450 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf

Primary OutFlow Max=0.08 cfs @ 14.85 hrs HW=107.22' (Free Discharge)
1=Underdrain/Orifice (Orifice Controls 0.08 cfs @ 9.84 fps)
2=Bypass Overflow (Controls 0.00 cfs)

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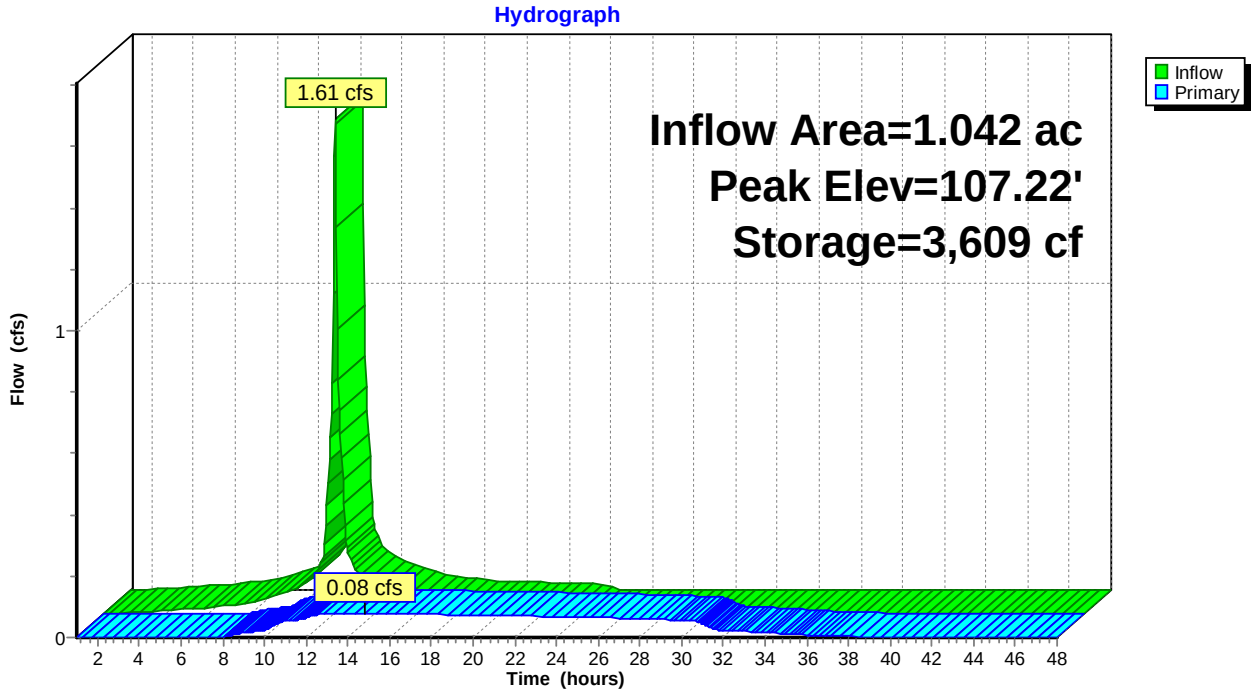
Pond 1P: USSF 1 - StormTech 3500



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Summary for Pond 2P: Pavement Profile/Drainage

Inflow Area = 0.287 ac, 66.82% Impervious, Inflow Depth = 1.20" for 2-year event
Inflow = 0.05 cfs @ 15.85 hrs, Volume= 0.029 af
Outflow = 0.05 cfs @ 15.88 hrs, Volume= 0.028 af, Atten= 0%, Lag= 2.2 min
Primary = 0.05 cfs @ 15.88 hrs, Volume= 0.028 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 108.90' @ 15.88 hrs Surf.Area= 140 sf Storage= 26 cf

Plug-Flow detention time= 16.6 min calculated for 0.028 af (99% of inflow)
Center-of-Mass det. time= 8.8 min (1,104.7 - 1,095.9)

Volume	Invert	Avail.Storage	Storage Description
#1	108.50'	48 cf	**1.33'W x 105.00'L x 1.00'H 6" Trench** 140 cf Overall - 21 cf Embedded = 119 cf x 40.0% Voids
#2	109.50'	189 cf	**18.00'W x 105.00'L x 0.25'H 3" - 3/4" Stone** 473 cf Overall x 40.0% Voids
#3	109.75'	78 cf	**18.00'W x 105.00'L x 0.83'H 10" - Filter MDOT Type D** 1,569 cf Overall x 5.0% Voids
#4	110.58'	249 cf	**18.00'W x 105.00'L x 0.33'H 4" - Choker 1-1/2"** 624 cf Overall x 40.0% Voids
#5	110.91'	125 cf	**18.00'W x 105.00'L x 0.33'H 4" - OGFC** 624 cf Overall x 20.0% Voids
#6	108.75'	21 cf	**6.0" Round 6 SD** Inside #1 L= 105.0'
		710 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	108.75'	**6.0" Round 6" Pipe** L= 5.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 108.75' / 108.50' S= 0.0500 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf

Primary OutFlow Max=0.05 cfs @ 15.88 hrs HW=108.90' (Free Discharge)
↑**1=6" Pipe** (Inlet Controls 0.05 cfs @ 1.06 fps)

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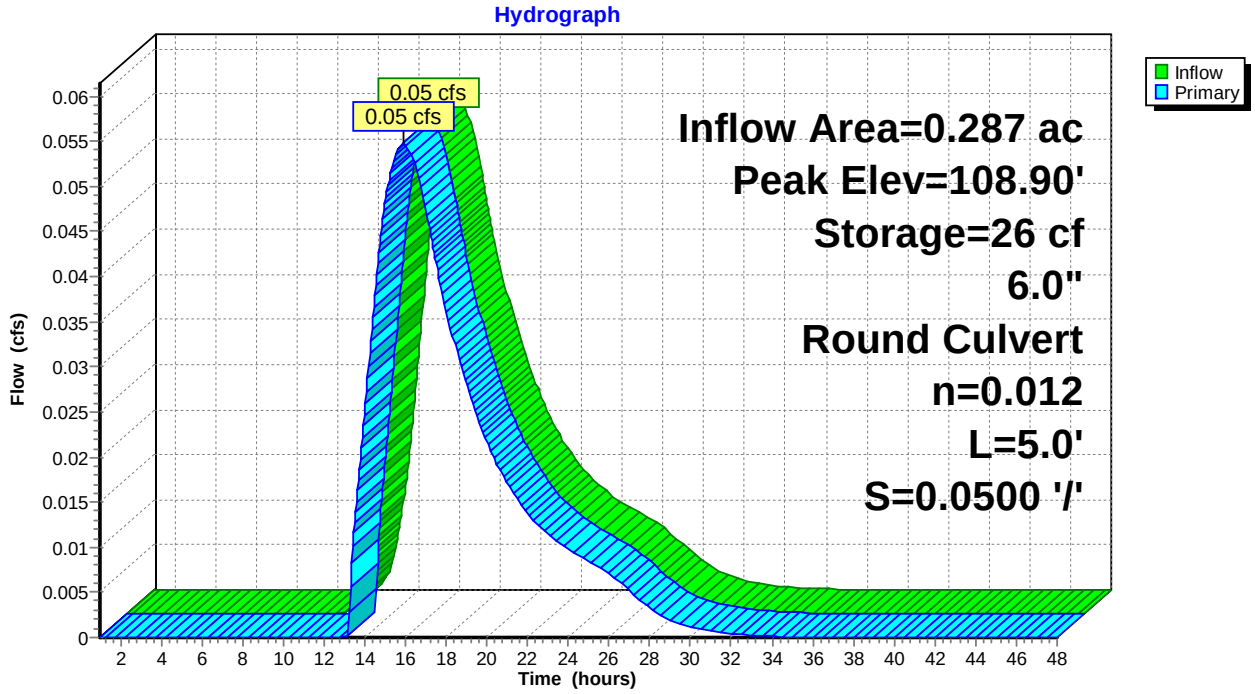
Pond 2P: Pavement Profile/Drainage



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Summary for Pond 3P: Pavement Profile/Drainage

Inflow Area = 0.537 ac, 59.87% Impervious, Inflow Depth = 0.97" for 2-year event
Inflow = 0.08 cfs @ 15.87 hrs, Volume= 0.044 af
Outflow = 0.08 cfs @ 16.06 hrs, Volume= 0.042 af, Atten= 0%, Lag= 11.5 min
Primary = 0.08 cfs @ 16.06 hrs, Volume= 0.042 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 107.59' @ 16.06 hrs Surf.Area= 557 sf Storage= 115 cf

Plug-Flow detention time= 44.9 min calculated for 0.042 af (97% of inflow)
Center-of-Mass det. time= 26.7 min (1,135.8 - 1,109.2)

Volume	Invert	Avail.Storage	Storage Description
#1	107.15'	190 cf	**1.33'W x 419.00'L x 1.00'H 6" Trench** 557 cf Overall - 82 cf Embedded = 475 cf x 40.0% Voids
#2	108.15'	461 cf	**11.00'W x 419.00'L x 0.25'H 3" - 3/4" Stone** 1,152 cf Overall x 40.0% Voids
#3	108.40'	191 cf	**11.00'W x 419.00'L x 0.83'H 10" - Filter MDOT Type D** 3,825 cf Overall x 5.0% Voids
#4	109.23'	608 cf	**11.00'W x 419.00'L x 0.33'H 4" - Choker 1-1/2"** 1,521 cf Overall x 40.0% Voids
#5	109.56'	304 cf	**11.00'W x 419.00'L x 0.33'H 4" - OGFC** 1,521 cf Overall x 20.0% Voids
#6	107.40'	82 cf	**6.0" Round 6 SD** Inside #1 L= 419.0'
		1,837 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	107.40'	**6.0" Round 6" Pipe** L= 5.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 107.40' / 107.20' S= 0.0400 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf

Primary OutFlow Max=0.08 cfs @ 16.06 hrs HW=107.59' (Free Discharge)
↑—**1=6" Pipe** (Inlet Controls 0.08 cfs @ 1.17 fps)

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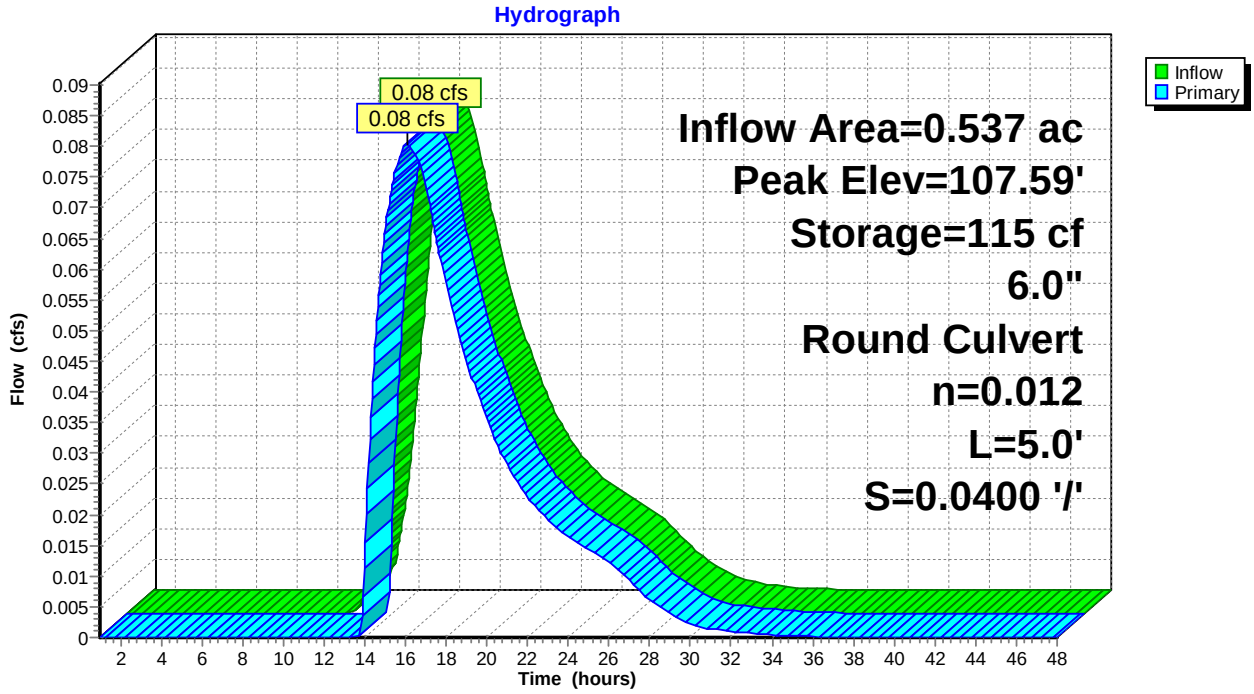
Pond 3P: Pavement Profile/Drainage



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Summary for Pond 4P: Pavement Profile/Drainage

Inflow Area = 0.389 ac, 56.13% Impervious, Inflow Depth = 2.08" for 2-year event
Inflow = 0.13 cfs @ 15.56 hrs, Volume= 0.067 af
Outflow = 0.13 cfs @ 15.57 hrs, Volume= 0.067 af, Atten= 0%, Lag= 0.1 min
Primary = 0.13 cfs @ 15.57 hrs, Volume= 0.067 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 110.25' @ 15.57 hrs Surf.Area= 203 sf Storage= 0 cf

Plug-Flow detention time= 0.0 min calculated for 0.067 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (1,053.0 - 1,053.0)

Volume	Invert	Avail.Storage	Storage Description
#1	110.25'	76 cf	**1.50'W x 135.00'L x 1.00'H 6" Trench** 203 cf Overall - 12 cf Embedded = 191 cf x 40.0% Voids
#2	111.25'	371 cf	**11.00'W x 337.00'L x 0.25'H 3" - 3/4" Stone** 927 cf Overall x 40.0% Voids
#3	112.08'	62 cf	**11.00'W x 135.00'L x 0.83'H 10" - Filter MDOT Type D** 1,233 cf Overall x 5.0% Voids
#4	112.41'	196 cf	**11.00'W x 135.00'L x 0.33'H 4" - Choker 1-1/2"** 490 cf Overall x 40.0% Voids
#5	112.74'	98 cf	**11.00'W x 135.00'L x 0.33'H 4" - OGFC** 490 cf Overall x 20.0% Voids
#6	110.50'	12 cf	**4.0" Round 6 SD** Inside #1 L= 135.0'
		814 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	108.00'	**6.0" Round 6" Pipe** L= 40.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 108.00' / 104.00' S= 0.1000 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=1.06 cfs @ 15.57 hrs HW=110.25' (Free Discharge)
↑**1=6" Pipe** (Inlet Controls 1.06 cfs @ 5.38 fps)

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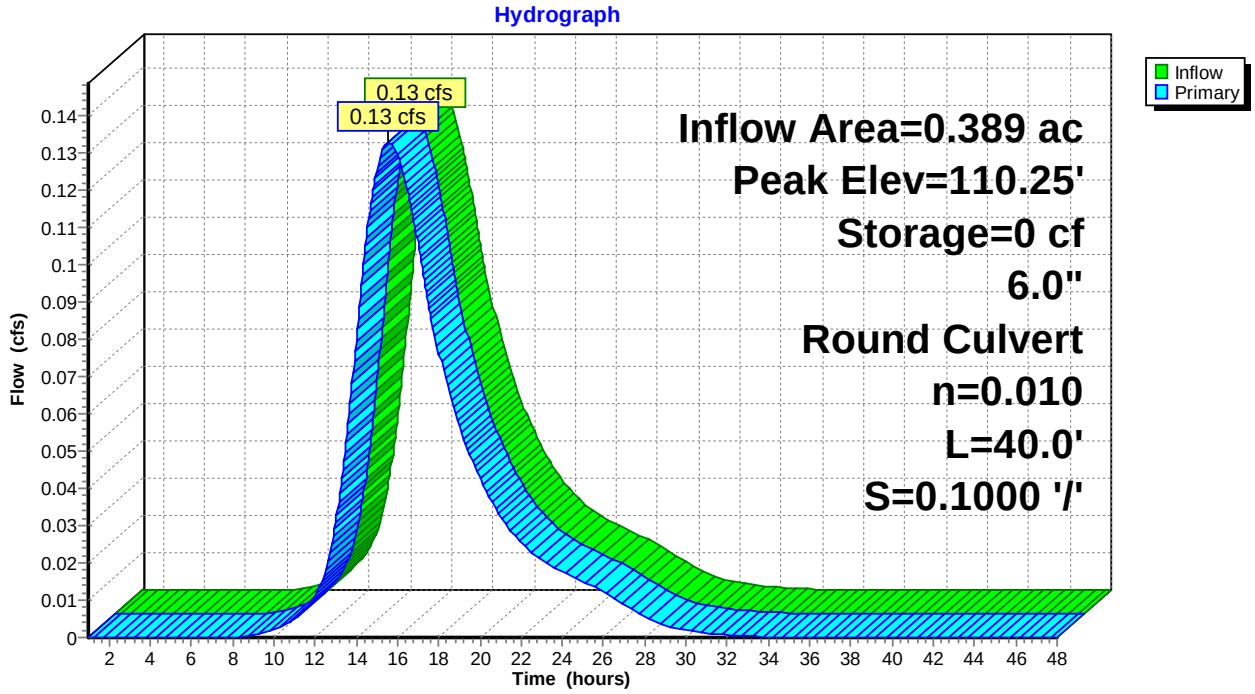
Pond 4P: Pavement Profile/Drainage



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Summary for Pond 5P: Pavement Profile/Drainage

Inflow Area = 0.297 ac, 80.63% Impervious, Inflow Depth = 1.83" for 2-year event
Inflow = 0.09 cfs @ 15.79 hrs, Volume= 0.045 af
Outflow = 0.09 cfs @ 15.80 hrs, Volume= 0.044 af, Atten= 0%, Lag= 0.9 min
Primary = 0.09 cfs @ 15.80 hrs, Volume= 0.044 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 104.80' @ 15.80 hrs Surf.Area= 216 sf Storage= 77 cf

Plug-Flow detention time= 34.9 min calculated for 0.044 af (97% of inflow)
Center-of-Mass det. time= 15.1 min (1,080.2 - 1,065.1)

Volume	Invert	Avail.Storage	Storage Description
#1	104.00'	81 cf	**1.50'W x 144.00'L x 1.00'H 6" Underdrained Trench** 216 cf Overall - 13 cf Embedded = 203 cf x 40.0% Voids
#2	105.00'	259 cf	**18.00'W x 144.00'L x 0.25'H 3" - 3/4" Stone** 648 cf Overall x 40.0% Voids
#3	105.25'	108 cf	**18.00'W x 144.00'L x 0.83'H 10" - Filter MDOT Type D** 2,151 cf Overall x 5.0% Voids
#4	106.08'	342 cf	**18.00'W x 144.00'L x 0.33'H 4" - Choker 1-1/2"** 855 cf Overall x 40.0% Voids
#5	106.41'	171 cf	**18.00'W x 144.00'L x 0.33'H 4" - OGFC** 855 cf Overall x 20.0% Voids
#6	104.25'	13 cf	**4.0" Round 4 SD** Inside #1 L= 144.0'
		974 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	104.60'	**6.0" Round 6" Pipe** L= 30.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 104.60' / 101.60' S= 0.1000 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.09 cfs @ 15.80 hrs HW=104.80' (Free Discharge)
↑**1=6" Pipe** (Inlet Controls 0.09 cfs @ 1.20 fps)

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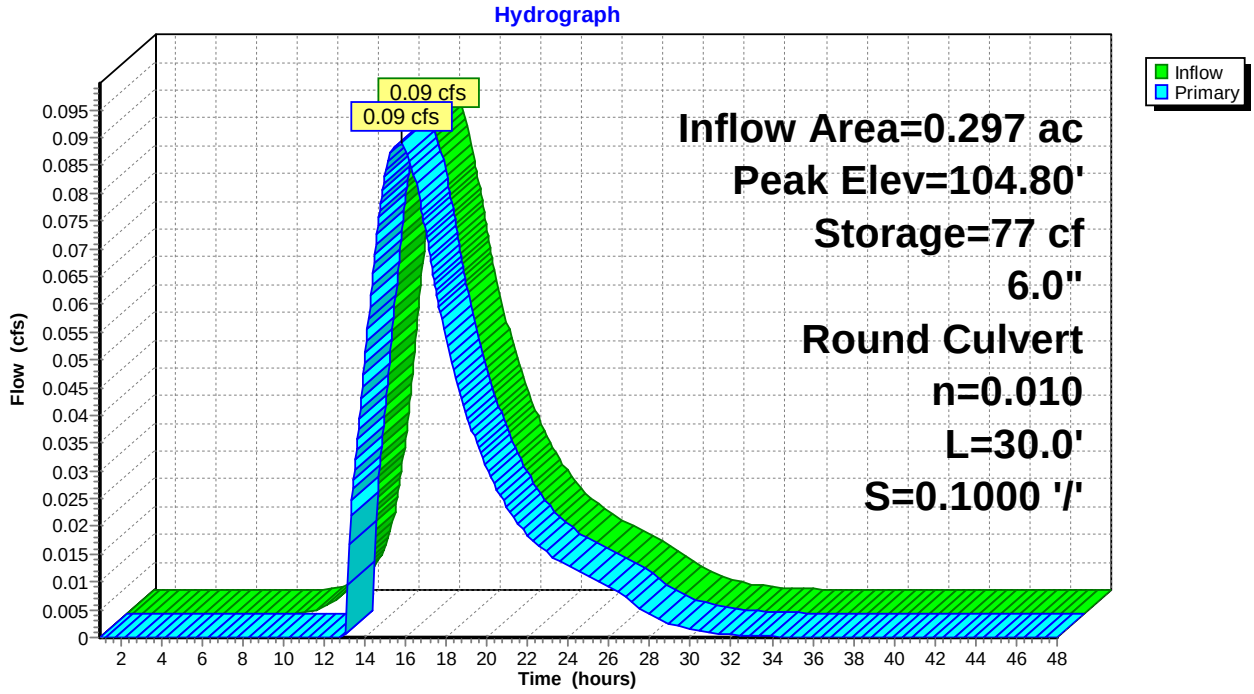
Pond 5P: Pavement Profile/Drainage



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Summary for Pond 6P: USSF 2 - StormTech 3500

Inflow Area = 1.045 ac, 71.07% Impervious, Inflow Depth = 2.16" for 2-year event
Inflow = 2.26 cfs @ 12.09 hrs, Volume= 0.188 af
Outflow = 0.44 cfs @ 12.54 hrs, Volume= 0.184 af, Atten= 80%, Lag= 27.2 min
Primary = 0.44 cfs @ 12.54 hrs, Volume= 0.184 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 102.92' @ 12.54 hrs Surf.Area= 6,091 sf Storage= 2,853 cf

Plug-Flow detention time= 90.3 min calculated for 0.183 af (97% of inflow)
Center-of-Mass det. time= 75.5 min (847.9 - 772.4)

Volume	Invert	Avail.Storage	Storage Description
#1	101.50'	2,418 cf	**35.08'W x 57.88'L x 4.75'H Stone** 9,645 cf Overall - 3,599 cf Embedded = 6,045 cf x 40.0% Voids
#2	102.00'	3,599 cf	**ADS_StormTech MC-3500 d +Cap @ 7.50' L** x 30 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.50'L = 115.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 30 Chambers in 5 Rows Cap Storage= +14.9 cf x 2 x 5 rows = 149.0 cf
#3	100.00'	152 cf	**35.08'W x 57.88'L x 1.50'H Sand** 3,046 cf Overall x 5.0% Voids
#4	99.00'	807 cf	**35.08'W x 57.88'L x 1.00'H Crushed Stone** 2,030 cf Overall - 13 cf Embedded = 2,017 cf x 40.0% Voids
#5	99.33'	13 cf	**4.0" Round Underdrain Storage** Inside #4 L= 150.0'
		6,990 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	99.25'	**3.0" Vert. Underdrain/Orifice** C= 0.600
#2	Primary	104.77'	**6.0" Round Bypass Overflow X 3.00** L= 7.0' Ke= 0.600 Inlet / Outlet Invert= 104.77' / 104.00' S= 0.1100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf

Primary OutFlow Max=0.44 cfs @ 12.54 hrs HW=102.91' (Free Discharge)
└**1=Underdrain/Orifice** (Orifice Controls 0.44 cfs @ 9.06 fps)
└**2=Bypass Overflow** (Controls 0.00 cfs)

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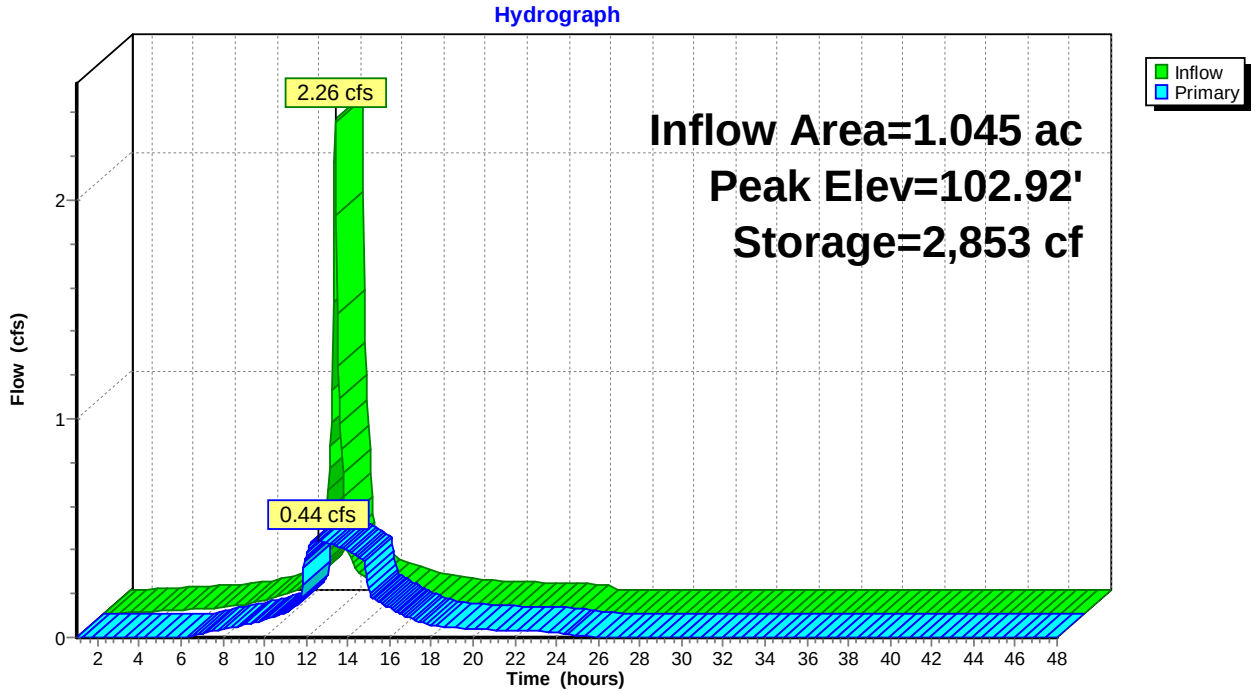
Pond 6P: USSF 2 - StormTech 3500



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Summary for Pond 7P: 6+00 Rain Garden

Inflow Area = 0.430 ac, 57.91% Impervious, Inflow Depth = 1.55" for 2-year event
Inflow = 0.73 cfs @ 12.09 hrs, Volume= 0.056 af
Outflow = 0.13 cfs @ 11.75 hrs, Volume= 0.056 af, Atten= 82%, Lag= 0.0 min
Primary = 0.13 cfs @ 11.75 hrs, Volume= 0.056 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 109.73' @ 12.57 hrs Surf.Area= 721 sf Storage= 645 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 30.0 min (848.1 - 818.1)

Volume	Invert	Avail.Storage	Storage Description
#1	108.00'	902 cf	**Ponding above surface (Prismatic)** Listed below (Recalc)
#2	106.50'	31 cf	**Soil Filter/Loam Topsoil (Prismatic)** Listed below (Recalc) 314 cf Overall x 10.0% Voids
		933 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.00	209	0	0
109.00	374	292	292
110.00	564	469	761
110.25	564	141	902

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
106.50	209	0	0
108.00	209	314	314

Device	Routing	Invert	Outlet Devices
#1	Primary	105.15'	**8.0" Round Culvert** L= 83.0' Ke= 0.600 Inlet / Outlet Invert= 105.15' / 104.50' S= 0.0078 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Device 1	106.50'	**0.13 cfs Exfiltration when above 106.50'**
#3	Primary	109.75'	**8.0" Horiz. Beehive Overflow** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.13 cfs @ 11.75 hrs HW=106.66' (Free Discharge)
└**1=Culvert** (Passes 0.13 cfs of 1.47 cfs potential flow)
└**2=Exfiltration** (Exfiltration Controls 0.13 cfs)
└**3=Beehive Overflow** (Controls 0.00 cfs)

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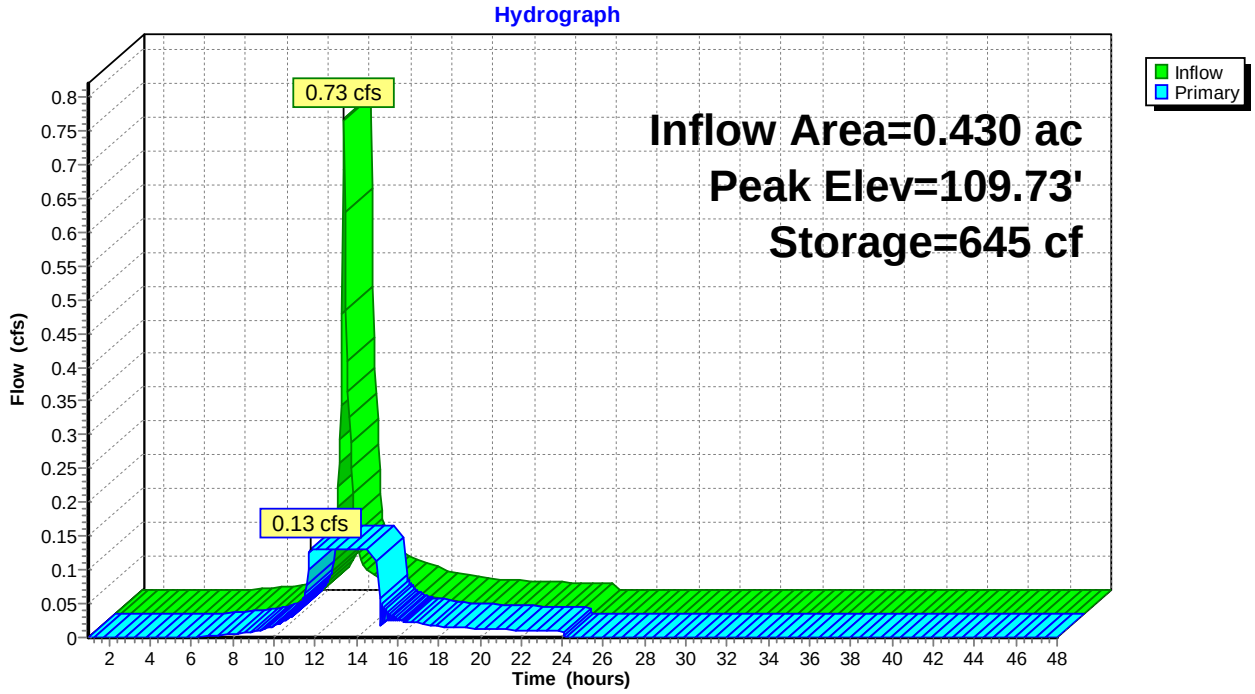
Pond 7P: 6+00 Rain Garden



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Summary for Pond 8P: Pavement Profile/Drainage

Inflow Area = 0.231 ac, 83.12% Impervious, Inflow Depth = 2.55" for 2-year event
Inflow = 0.10 cfs @ 15.51 hrs, Volume= 0.049 af
Outflow = 0.10 cfs @ 15.51 hrs, Volume= 0.049 af, Atten= 0%, Lag= 0.0 min
Primary = 0.10 cfs @ 15.51 hrs, Volume= 0.049 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 111.80' @ 15.51 hrs Surf.Area= 180 sf Storage= 0 cf

Plug-Flow detention time= 0.0 min calculated for 0.049 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (1,026.7 - 1,026.7)

Volume	Invert	Avail.Storage	Storage Description
#1	111.80'	55 cf	**1.33'W x 135.00'L x 0.83'H 4" Trench** 149 cf Overall - 12 cf Embedded = 137 cf x 40.0% Voids
#2	112.59'	243 cf	**49.30'W x 49.30'L x 0.25'H 3" - 3/4" Stone** 608 cf Overall x 40.0% Voids
#3	112.84'	101 cf	**49.30'W x 49.30'L x 0.83'H 10" - Filter MDOT Type D** 2,017 cf Overall x 5.0% Voids
#4	113.67'	321 cf	**49.30'W x 49.30'L x 0.33'H 4" - Choker 1-1/2"** 802 cf Overall x 40.0% Voids
#5	114.00'	160 cf	**49.30'W x 49.30'L x 0.33'H 4" - OGFC** 802 cf Overall x 20.0% Voids
#6	111.80'	12 cf	**4.0" Round 4 SD** Inside #1 L= 135.0' S= 0.0010 '/'
		892 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	61.65'	**6.0" Round 6" Pipe** L= 5.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.65' / 61.60' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=5.27 cfs @ 15.51 hrs HW=111.80' (Free Discharge)
↑**1=6" Pipe** (Inlet Controls 5.27 cfs @ 26.85 fps)

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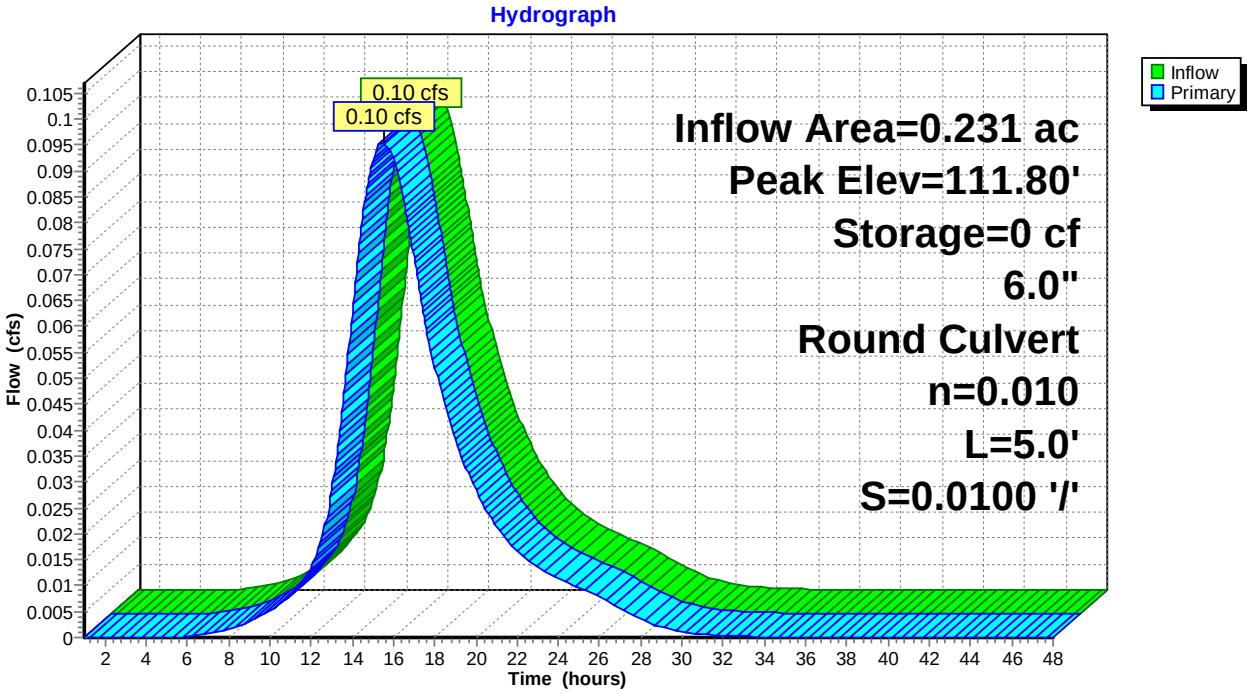
Pond 8P: Pavement Profile/Drainage



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Summary for Pond 9P: 4+25 Rain Garden

Inflow Area = 0.220 ac, 65.57% Impervious, Inflow Depth = 1.20" for 2-year event
Inflow = 0.30 cfs @ 12.10 hrs, Volume= 0.022 af
Outflow = 0.30 cfs @ 12.11 hrs, Volume= 0.022 af, Atten= 1%, Lag= 0.8 min
Primary = 0.30 cfs @ 12.11 hrs, Volume= 0.022 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 103.15' @ 12.11 hrs Surf.Area= 192 sf Storage= 74 cf

Plug-Flow detention time= 31.3 min calculated for 0.022 af (99% of inflow)
Center-of-Mass det. time= 27.7 min (878.6 - 850.9)

Volume	Invert	Avail.Storage	Storage Description
#1	102.50'	195 cf	**Ponding above surface (Prismatic)** Listed below (Recalc)
#2	101.00'	9 cf	**Soil Filter (Prismatic)** Listed below (Recalc) 90 cf Overall x 10.0% Voids
		204 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
102.50	60	0	0
103.00	126	47	47
104.00	170	148	195

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
101.00	60	0	0
102.50	60	90	90

Device	Routing	Invert	Outlet Devices
#1	Primary	99.75'	**8.0" Round Culvert** L= 78.0' Ke= 0.600 Inlet / Outlet Invert= 99.75' / 99.30' S= 0.0058 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Device 1	102.00'	**0.01 cfs Exfiltration when above 102.00'**
#3	Device 1	103.00'	**6.0" Horiz. Beehive Overflow** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.29 cfs @ 12.11 hrs HW=103.14' (Free Discharge)
└**1=Culvert** (Passes 0.29 cfs of 2.19 cfs potential flow)
├**2=Exfiltration** (Exfiltration Controls 0.01 cfs)
└**3=Beehive Overflow** (Weir Controls 0.28 cfs @ 1.23 fps)

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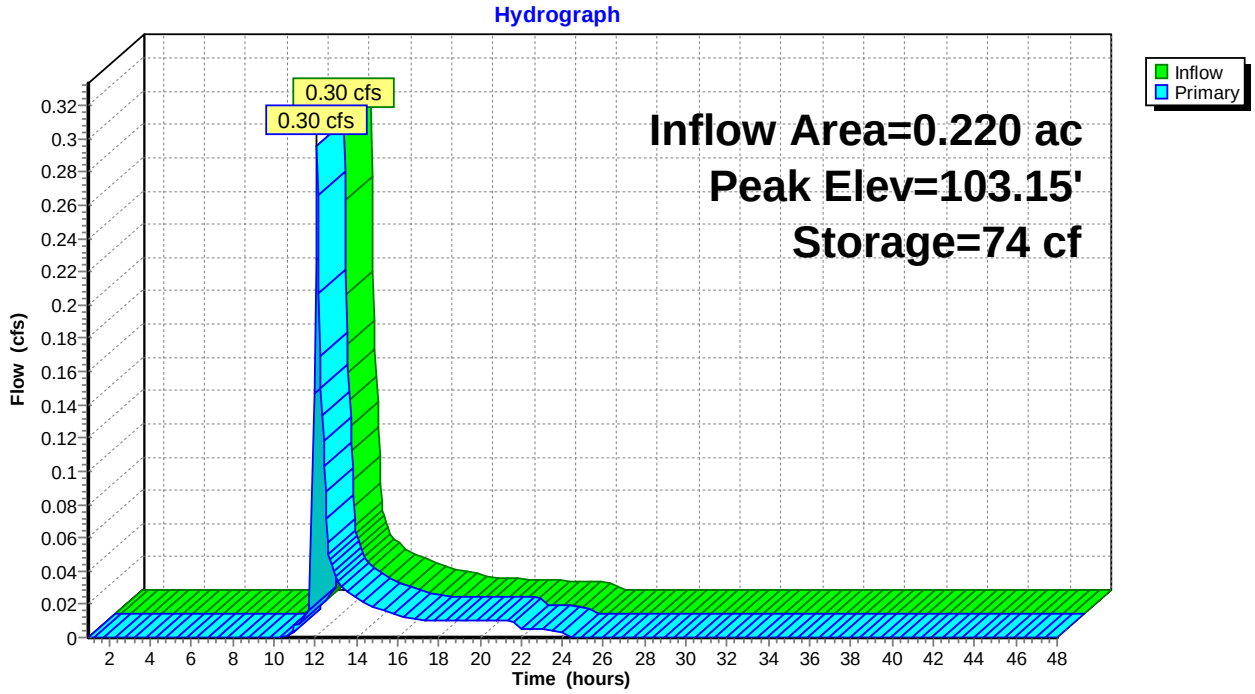
Pond 9P: 4+25 Rain Garden



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Summary for Subcatchment 1.1N: SC 1.1N

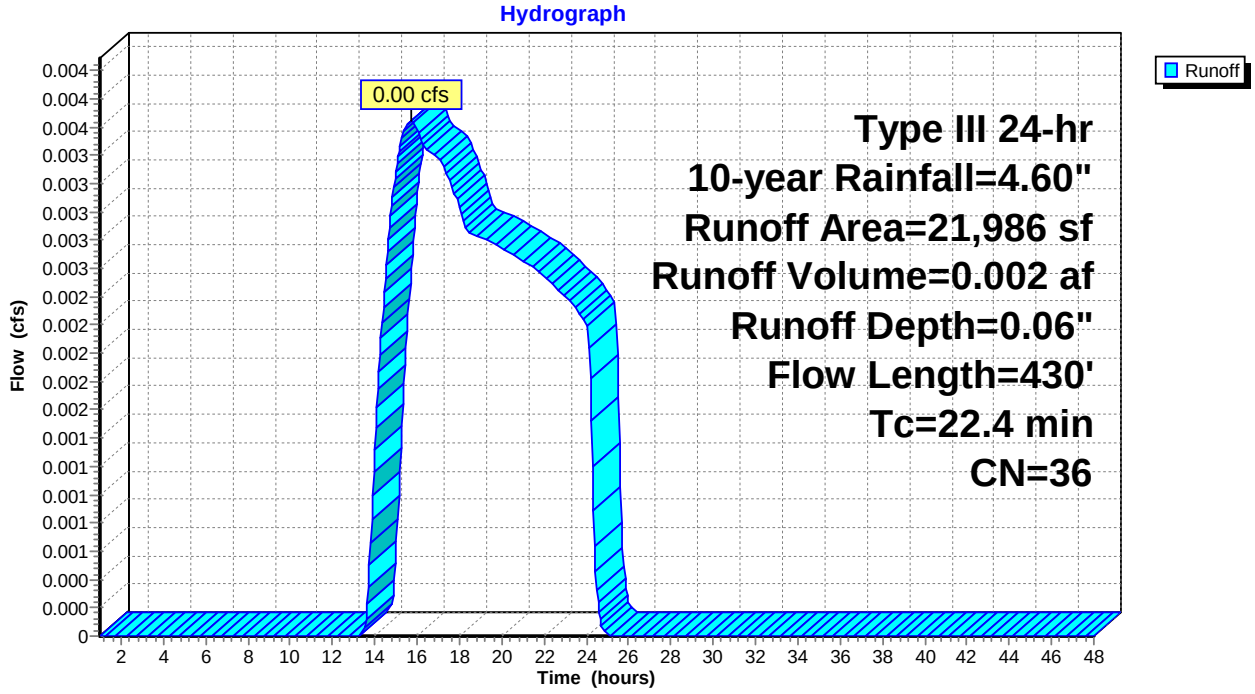
Runoff = 0.00 cfs @ 15.70 hrs, Volume= 0.002 af, Depth= 0.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	7,797	39	Roadside ditch and shrubs, HSG A
	9,863	30	Woods, Good, HSG A
*	278	98	A.1 walkway and patio
*	1,326	39	Landscaping/open space, HSG A
*	2,722	39	Landscaping/roadside ditch
	21,986	36	Weighted Average
	21,708		98.74% Pervious Area
	278		1.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.1	70	0.0400	0.06		**Sheet Flow, SF (A to B)** Woods: Dense underbrush n= 0.800 P2= 3.27"
0.1	20	0.4000	3.16		**Shallow Concentrated Flow, SCF (B to C)** Woodland Kv= 5.0 fps
1.2	340	0.0310	4.64	17.83	**Trap/Vee/Rect Channel Flow, Ditch Flow (C to D)** Bot.W=2.00' D=0.80' Z= 2.5 & 4.5 '/' Top.W=7.60' n= 0.035
22.4	430	Total			

Subcatchment 1.1N: SC 1.1N



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Summary for Subcatchment 1.1S: Roofs

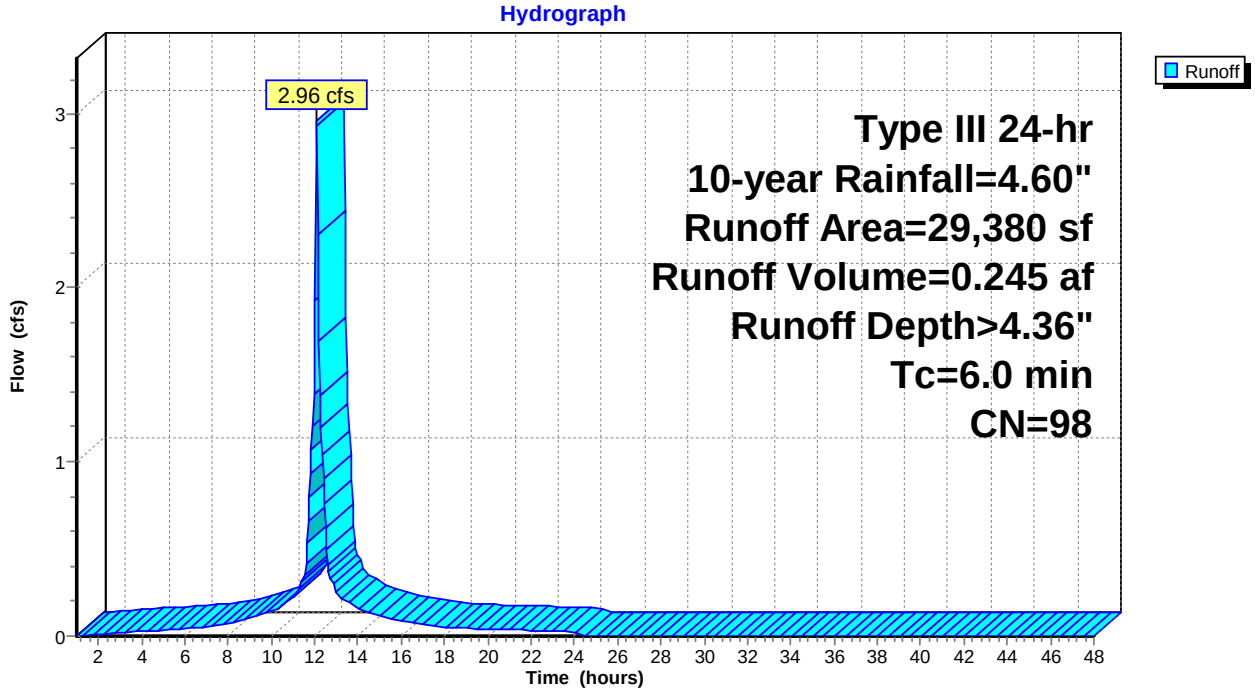
Runoff = 2.96 cfs @ 12.09 hrs, Volume= 0.245 af, Depth> 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	29,380	98	Roofs
	29,380		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: Roofs



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Summary for Subcatchment 1.2N: SC 1.2N

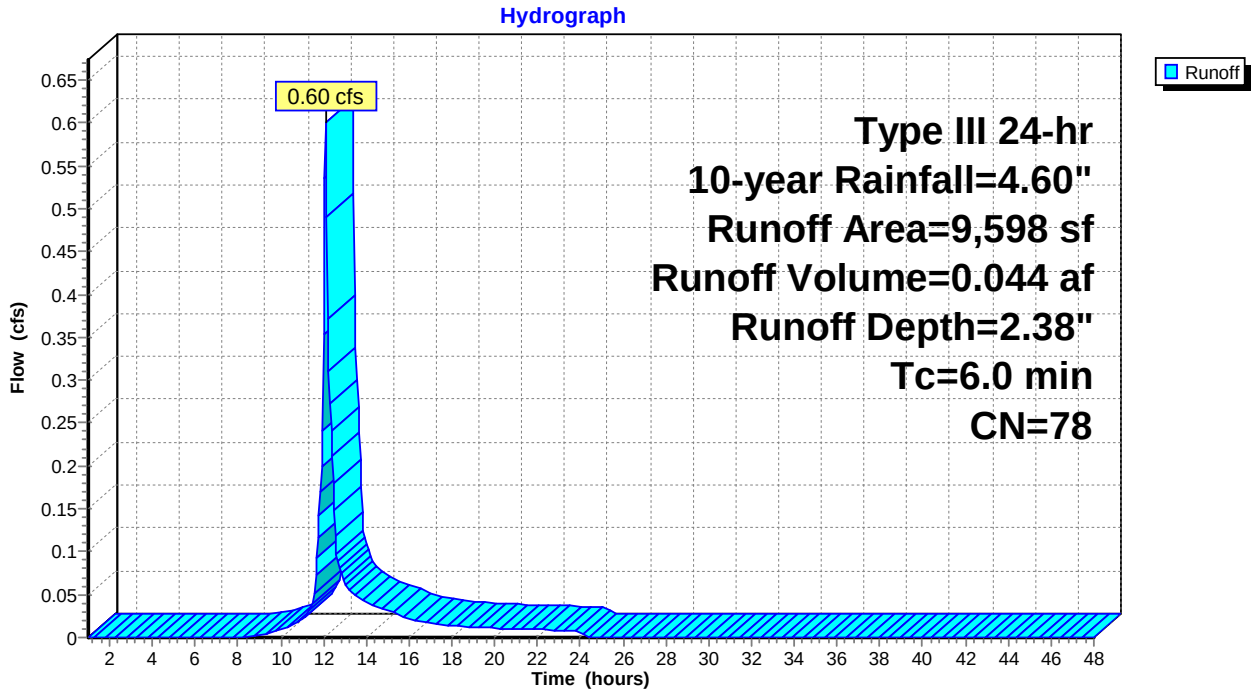
Runoff = 0.60 cfs @ 12.09 hrs, Volume= 0.044 af, Depth= 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	3,539	98	Wash Ave
*	2,202	98	sidewalk
*	288	98	A.2 patios
*	29	98	bus shelter
*	235	98	grass pavers
*	3,305	39	Lawn/landscaping/HSG A
	9,598	78	Weighted Average
	3,305		34.43% Pervious Area
	6,293		65.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.2N: SC 1.2N



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Summary for Subcatchment 1.2S: Property Frontage

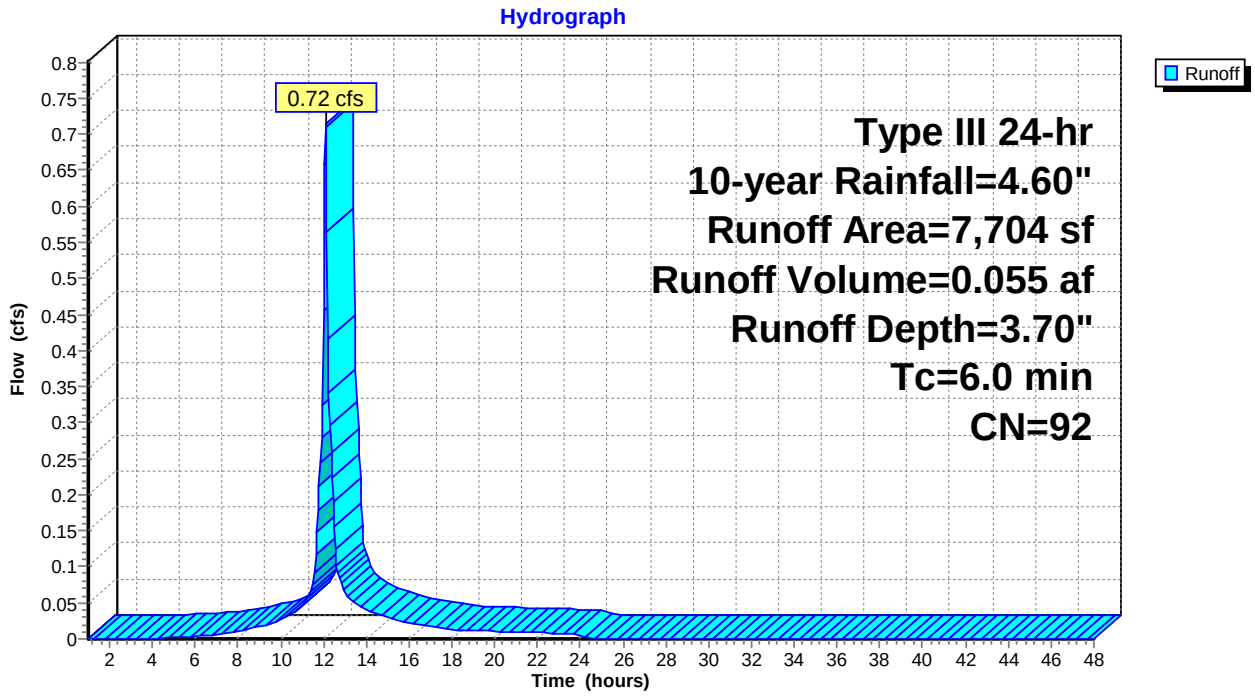
Runoff = 0.72 cfs @ 12.09 hrs, Volume= 0.055 af, Depth= 3.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	2,963	98	Wash. Ave
*	846	98	sidewalk
*	420	98	A.7/A.8 patio
*	16	98	transformer
*	403	98	driveway
*	303	98	E. sidewalk
*	48	98	bus shelter
	2,705	80	>75% Grass cover, Good, HSG D
	7,704	92	Weighted Average
	2,705		35.11% Pervious Area
	4,999		64.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.2S: Property Frontage



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Summary for Subcatchment 1.3N: SC 1.3N

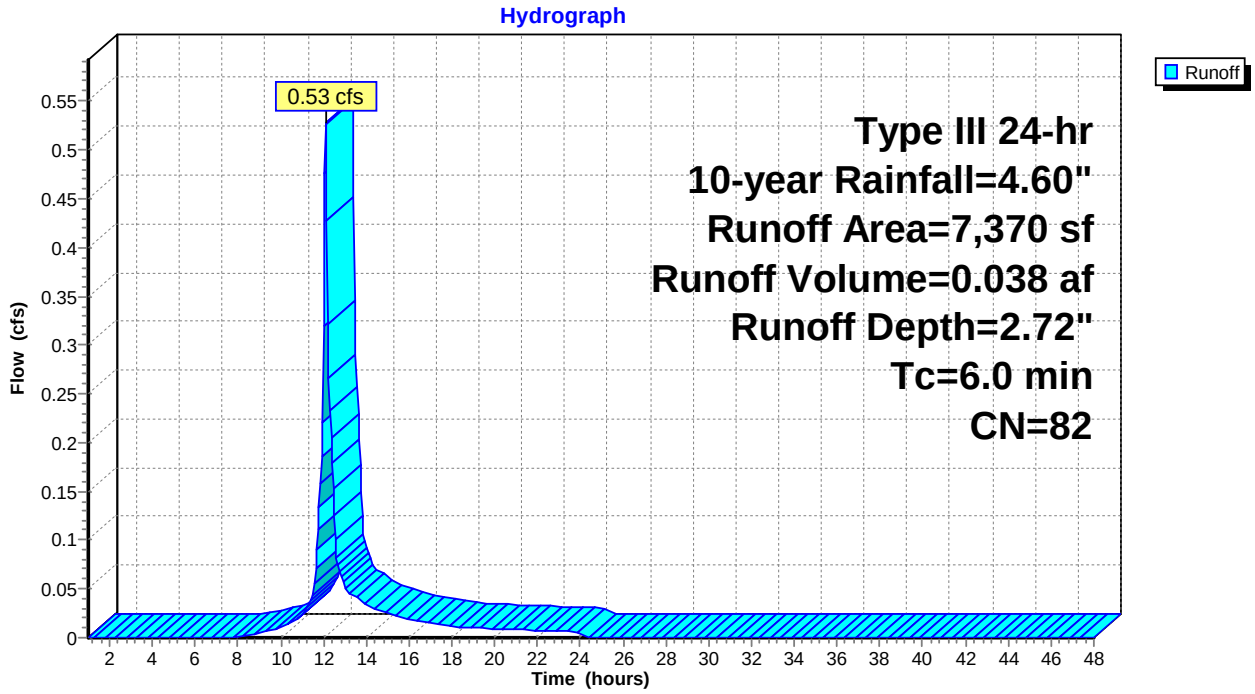
Runoff = 0.53 cfs @ 12.09 hrs, Volume= 0.038 af, Depth= 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	3,255	98	Wash Ave
*	1,111	98	sidewalk
*	224	98	A.3 patios
*	331	98	driveway
*	456	98	E. sidewalk
*	14	98	bus shelter
*	1,979	39	Landscaping/lawn, HSG A
	7,370	82	Weighted Average
	1,979		26.85% Pervious Area
	5,391		73.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.3N: SC 1.3N



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Summary for Subcatchment 1.3S: West Parking Lot

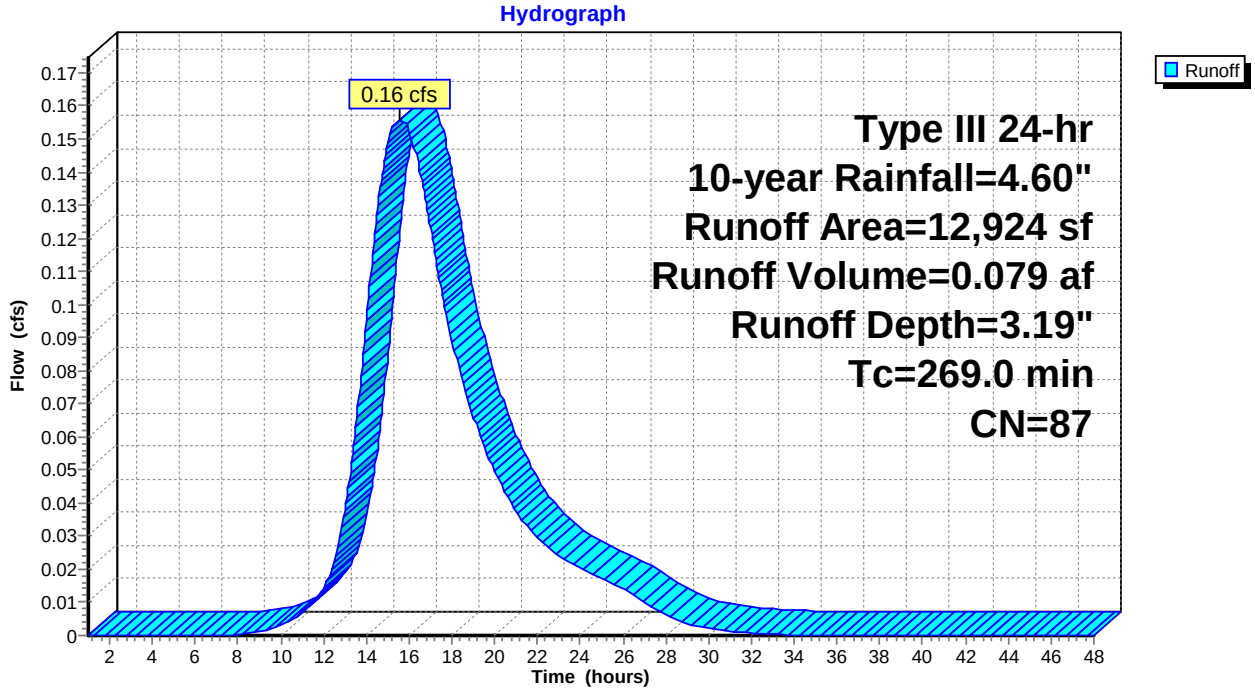
Runoff = 0.16 cfs @ 15.56 hrs, Volume= 0.079 af, Depth= 3.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	2,604	98	porous
*	5,218	98	paved drive aisle
*	1,207	98	walkway
*	1,305	98	patio/covered pav
*	86	98	B.5 mech room
	2,504	39	>75% Grass cover, Good, HSG A
	12,924	87	Weighted Average
	2,504		19.37% Pervious Area
	10,420		80.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
269.0					**Direct Entry, UNH**

Subcatchment 1.3S: West Parking Lot



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Summary for Subcatchment 1.4N: SC 1.4N

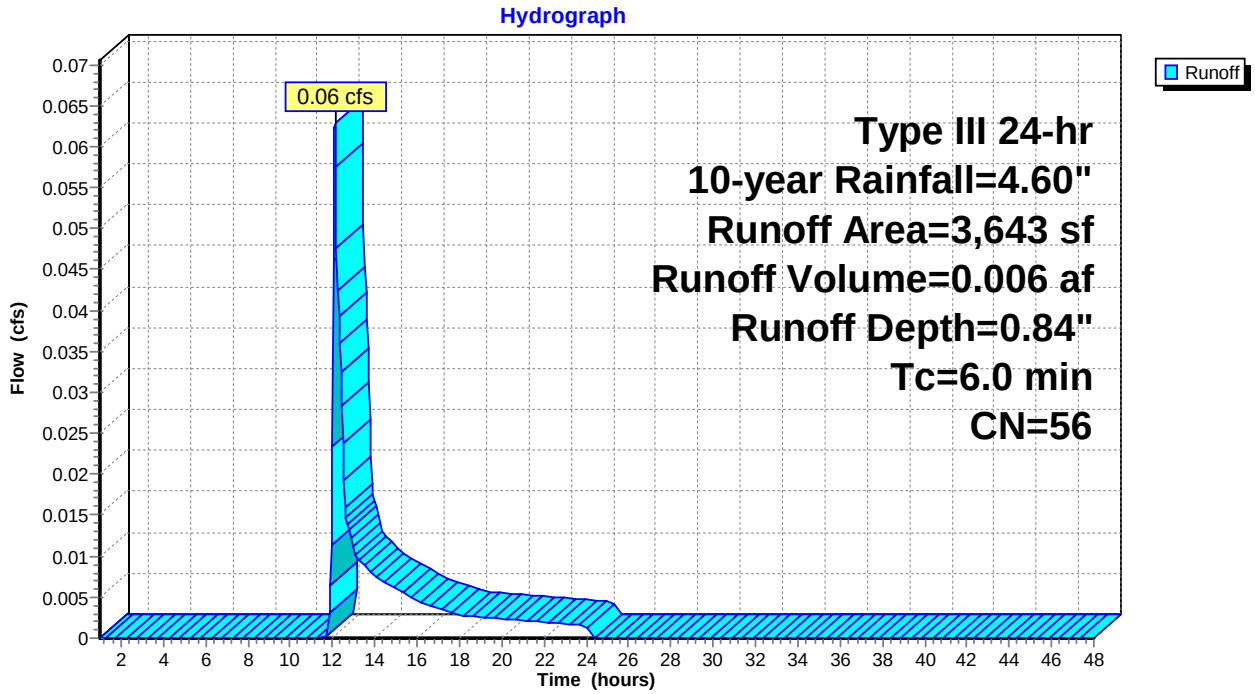
Runoff = 0.06 cfs @ 12.11 hrs, Volume= 0.006 af, Depth= 0.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	235	98	Walkway/patio Bldg A.1
*	825	80	Grass pavers
*	214	98	sidewalk
*	2,369	39	Landscaping/openspace/rain garden/ HSG A
	3,643	56	Weighted Average
	3,194		87.67% Pervious Area
	449		12.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.4N: SC 1.4N



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Summary for Subcatchment 1.4S: Common

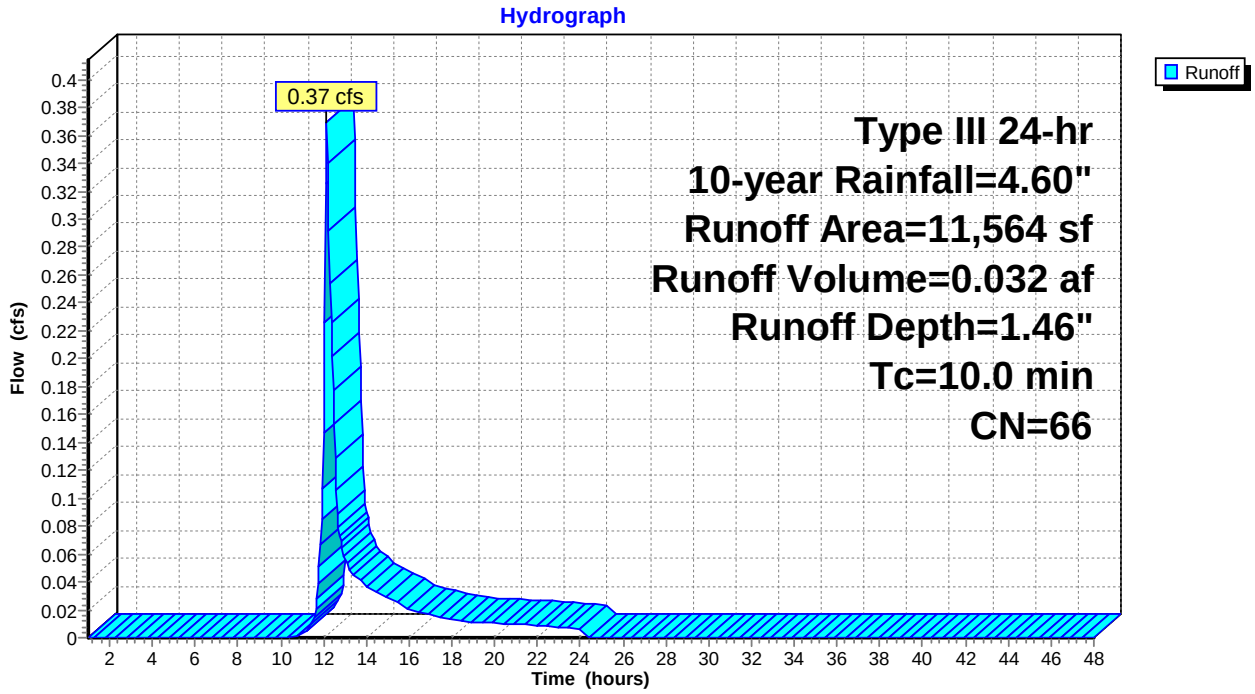
Runoff = 0.37 cfs @ 12.16 hrs, Volume= 0.032 af, Depth= 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	1,571	98	paved walkway
*	50	98	B.4 mech room
*	142	98	A.5 rear patio
*	103	98	A.6 rear patio
*	16	98	transformer pad
	4,841	39	>75% Grass cover, Good, HSG A
	4,841	80	>75% Grass cover, Good, HSG D
	11,564	66	Weighted Average
	9,682		83.73% Pervious Area
	1,882		16.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1.4S: Common



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Summary for Subcatchment 1.5: SC 1.5N

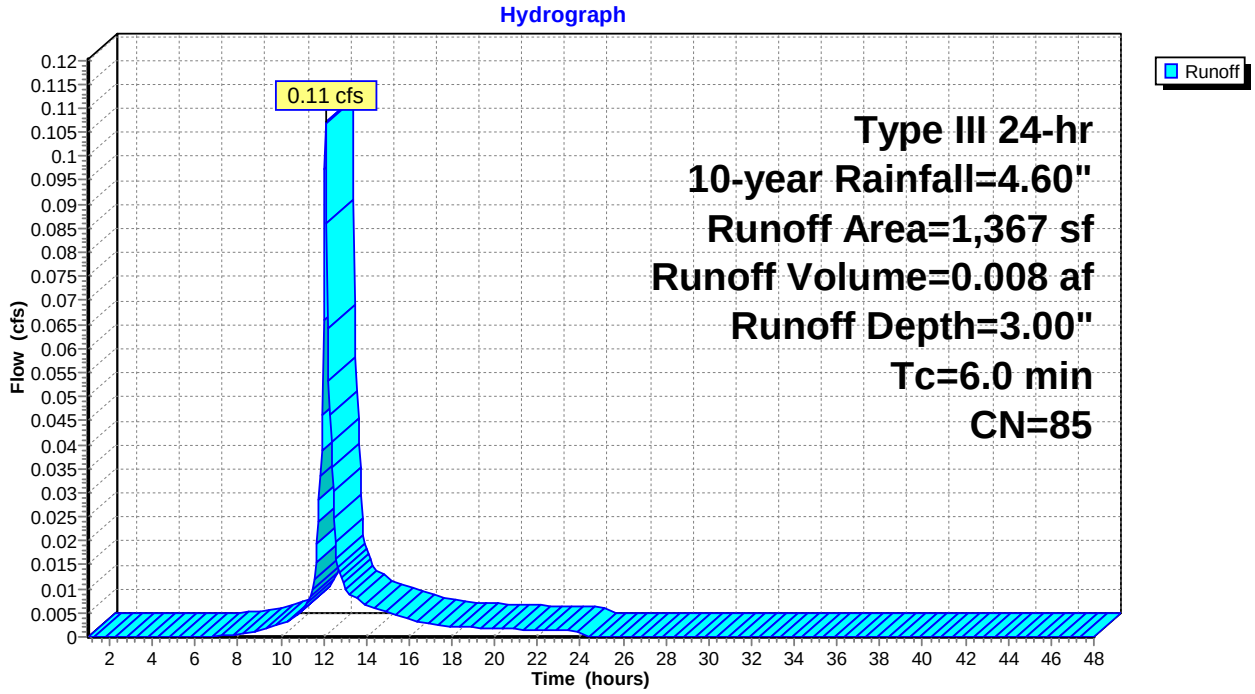
Runoff = 0.11 cfs @ 12.09 hrs, Volume= 0.008 af, Depth= 3.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	719	98	Wash Ave
*	336	98	sidewalk
*	312	39	Landscaping/esplanade
	1,367	85	Weighted Average
	312		22.82% Pervious Area
	1,055		77.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.5: SC 1.5N



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Summary for Subcatchment 1.5N: Roofs

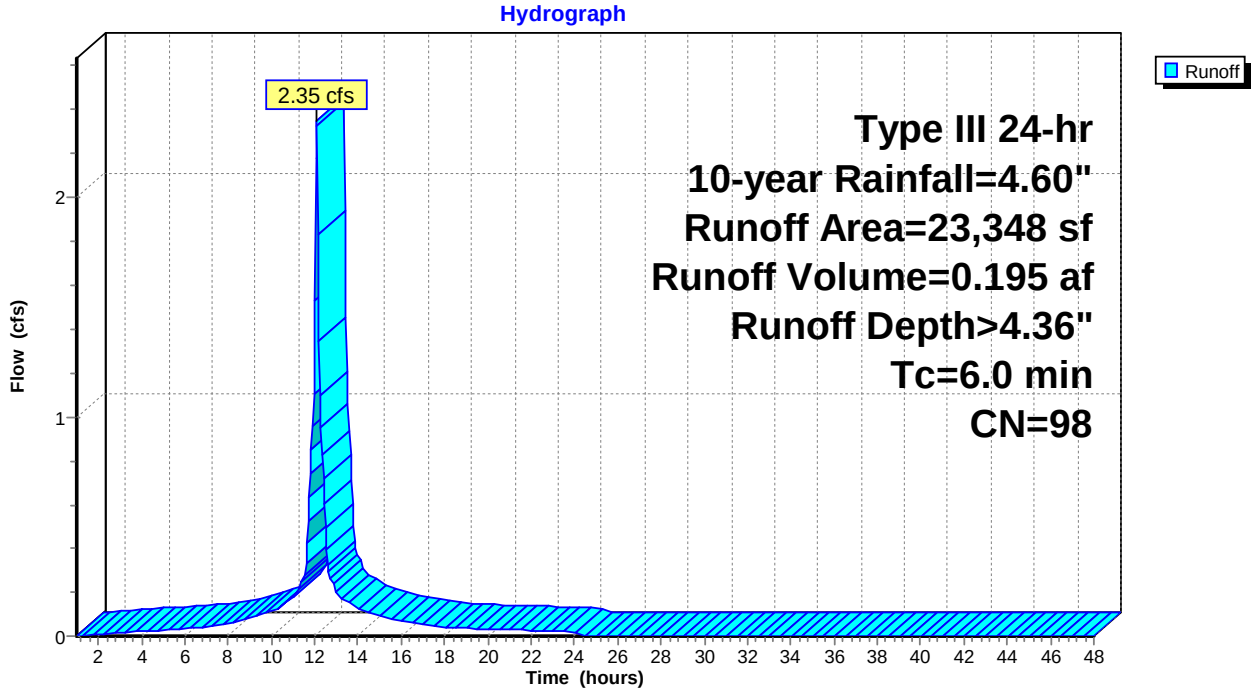
Runoff = 2.35 cfs @ 12.09 hrs, Volume= 0.195 af, Depth> 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	23,348	98	IMPERV
	23,348		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.5N: Roofs



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Summary for Subcatchment 1.5S: A.7, A.10, C.3, C.2 Aisle

Runoff = 0.22 cfs @ 15.54 hrs, Volume= 0.113 af, Depth= 3.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	879	98	5' pavers/ s. mews
*	3,722	98	porous
*	203	98	C.2 front patios
*	101	98	C.3 front patios
*	610	98	B.5 patios
*	565	98	B.5 side patio
*	864	98	5' pavers/e. mews
*	406	98	A.10 front patio
*	32	98	transformer pads
*	157	98	B.4 s. walkway
*	42	98	B.4 mech room
*	385	98	B.4 front patios
*	406	98	A.9 front patios
*	106	98	B.4/A.6 side walkway
*	186	98	A.6 rear patio
*	1,003	80	grass pavers
*	663	98	A.7 w.&s. walkway
*	178	98	A.7 rear patio and walkways
	6,425	80	>75% Grass cover, Good, HSG D
	16,933	90	Weighted Average
	7,428		43.87% Pervious Area
	9,505		56.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
269.0					**Direct Entry, UNH**

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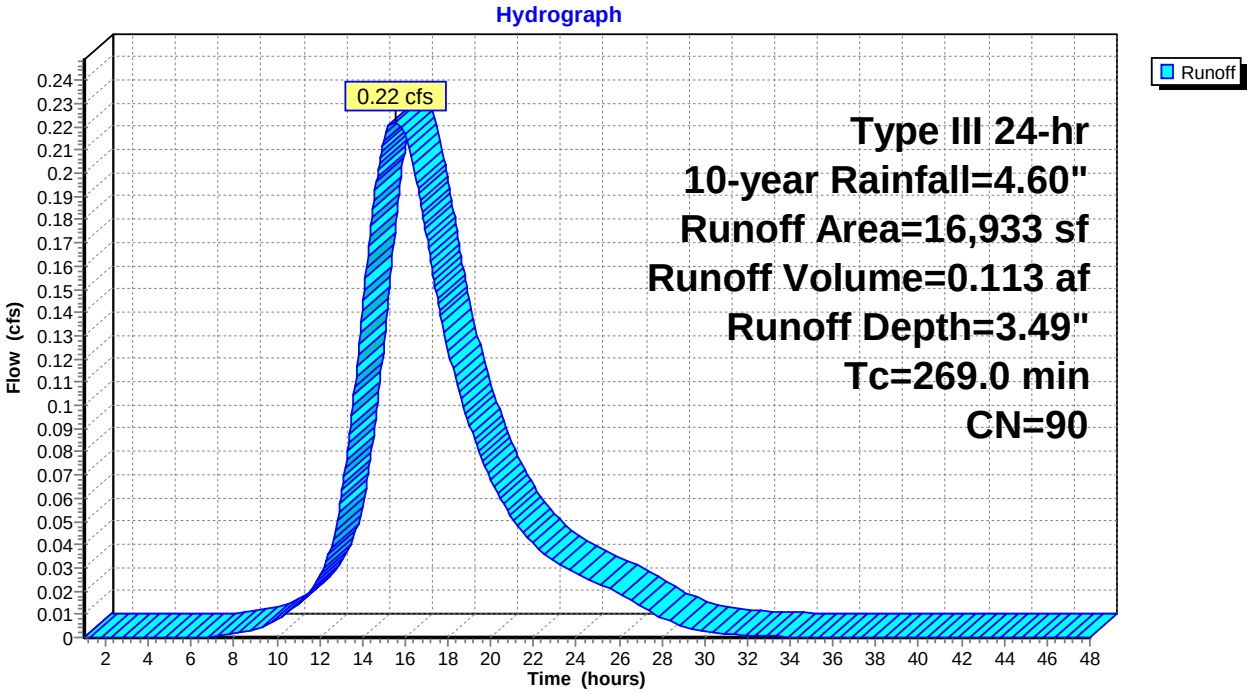
Subcatchment 1.5S: A.7, A.10, C.3, C.2 Aisle



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Summary for Subcatchment 1.6N: SC 1.6N

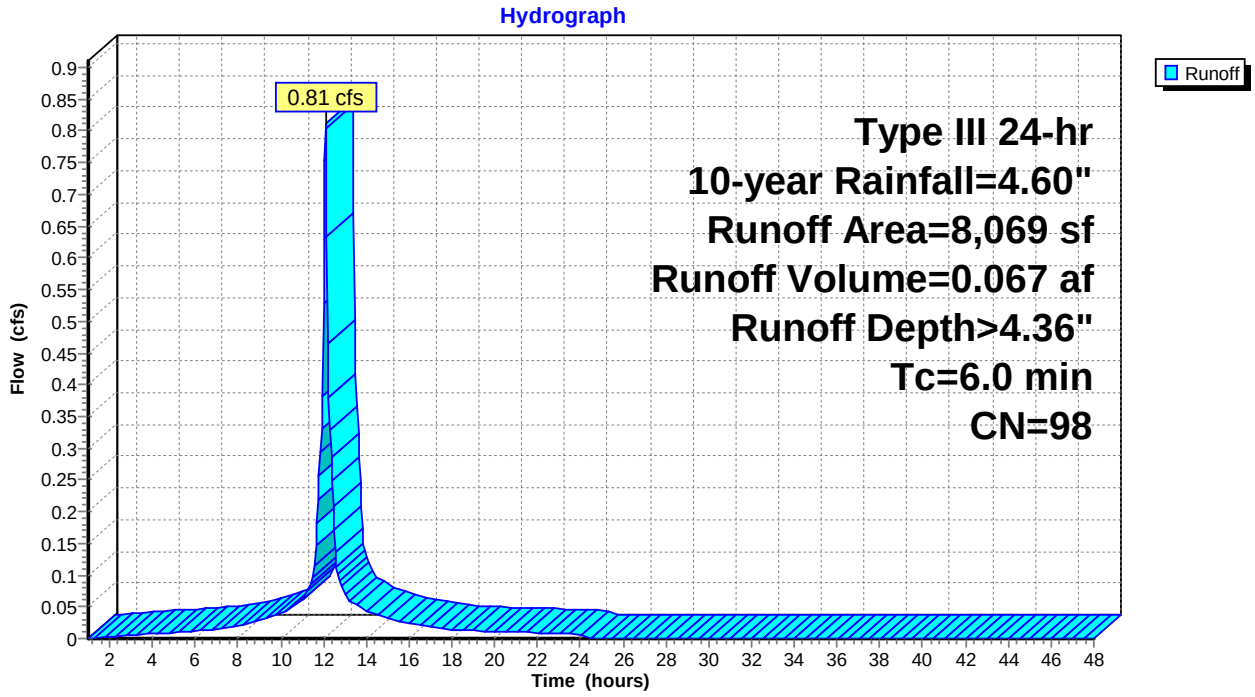
Runoff = 0.81 cfs @ 12.09 hrs, Volume= 0.067 af, Depth> 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	6,598	98	Wash Ave
*	1,471	98	sidewalk
	8,069	98	Weighted Average
	8,069		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.6N: SC 1.6N



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Summary for Subcatchment 1.6S: Developed/Undeveloped area

Runoff = 0.61 cfs @ 12.32 hrs, Volume= 0.092 af, Depth= 0.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	37,536	30	Woods, Good, HSG A
*	4,836	39	Landscaped/open space
	1,387	98	Unconnected roofs, HSG A
*	5,781	39	Wash Ave ditch
*	289	98	sidewalk
*	722	98	Wash Ave
*	674	39	Landscaping
*	6,396	98	Wash Ave
*	1,556	80	Grass pavers
*	1,449	98	Driveway entrance
*	302	98	Sidewalk
*	364	98	Patio walkway
*	1,799	39	Landscaping/open space, HSG A
*	3,515	98	Wash Ave
*	401	80	grass pavers
*	1,684	98	sidewalk
*	268	98	A.7 patio
*	324	98	A.6 patio
*	415	98	A.5 patio
*	5,887	80	Landscaping/ HSG D
	75,585	52	Weighted Average
	58,470		77.36% Pervious Area
	17,115		22.64% Impervious Area
	1,387		8.10% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	100	0.0500	0.17		**Sheet Flow, Sheet flow (A to B)** Grass: Dense n= 0.240 P2= 3.27"
5.5	203	0.0600	0.61		**Shallow Concentrated Flow, SCF (B to C)** Forest w/Heavy Litter Kv= 2.5 fps
0.3	92	0.0400	5.40	17.28	**Trap/Vee/Rect Channel Flow, Ditch Flow (C to D)** Bot.W=2.00' D=0.80' Z= 2.5 '/' Top.W=6.00' n= 0.035
15.6	395	Total			

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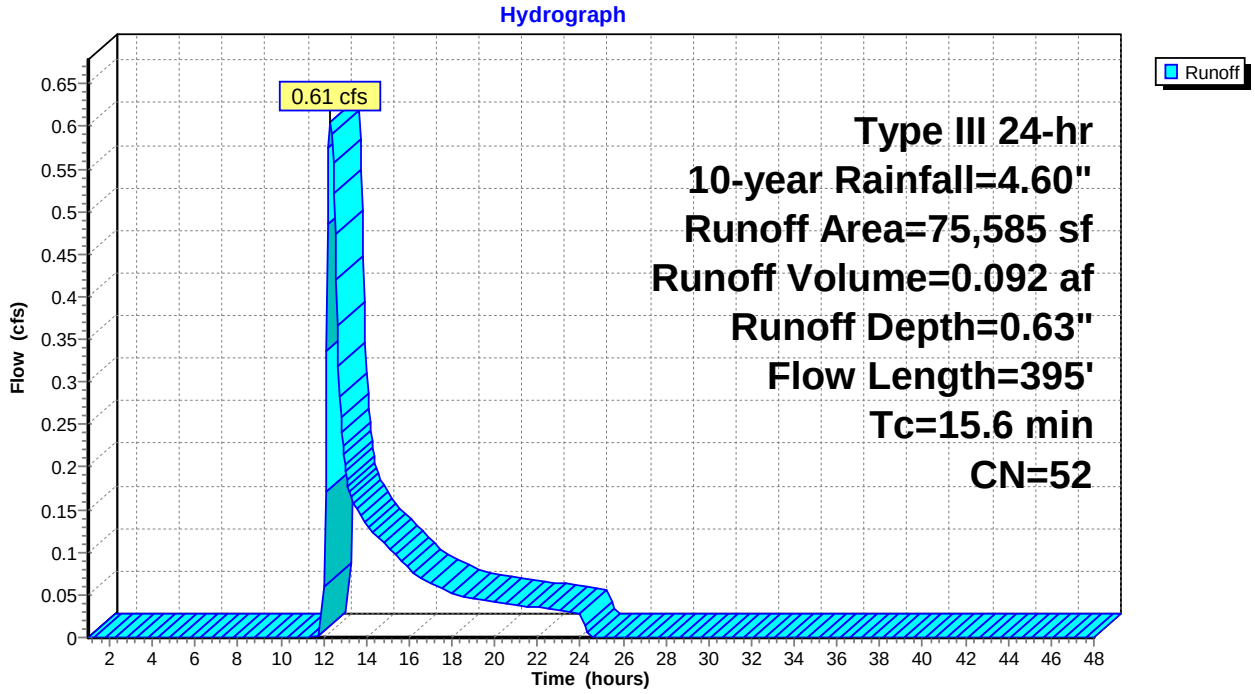
Subcatchment 1.6S: Developed/Undeveloped area



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Summary for Subcatchment 1.7N: SC 1.7N

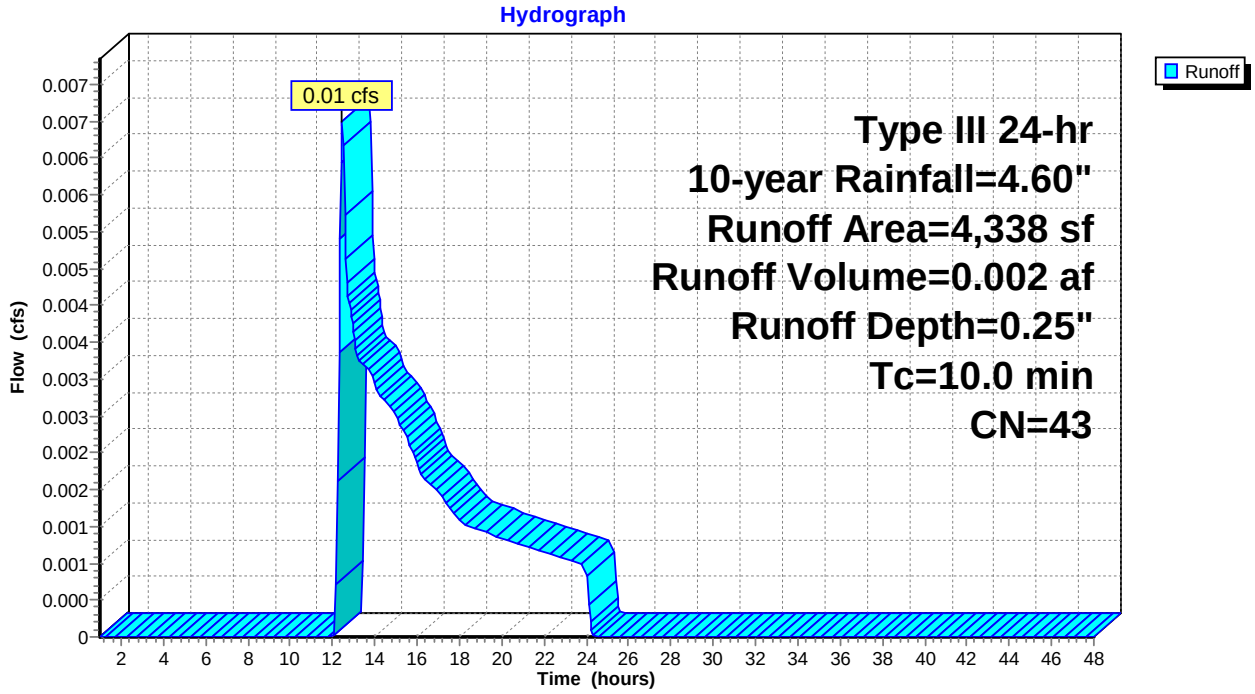
Runoff = 0.01 cfs @ 12.47 hrs, Volume= 0.002 af, Depth= 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	288	98	C.1 patio
*	4,034	39	Lawn/lanscaping/ditch, HSG A
*	16	98	transformer
	4,338	43	Weighted Average
	4,034		92.99% Pervious Area
	304		7.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1.7N: SC 1.7N



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Summary for Subcatchment 1.7S: SC 1.7S

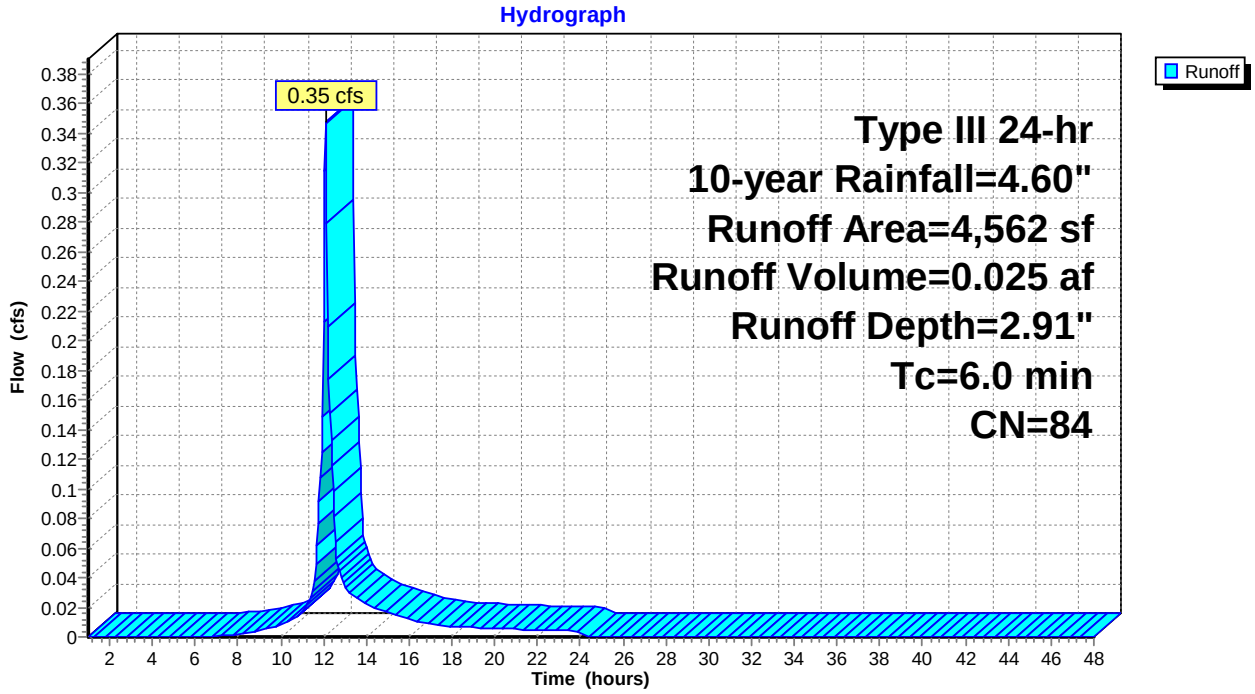
Runoff = 0.35 cfs @ 12.09 hrs, Volume= 0.025 af, Depth= 2.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	724	98	A.9/A.10 rear patios
*	356	98	Walkway
*	3,482	80	Lawn/landscaping, HSG D
	4,562	84	Weighted Average
	3,482		76.33% Pervious Area
	1,080		23.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.7S: SC 1.7S



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Summary for Subcatchment 1.8N: A.4 Rear Patio

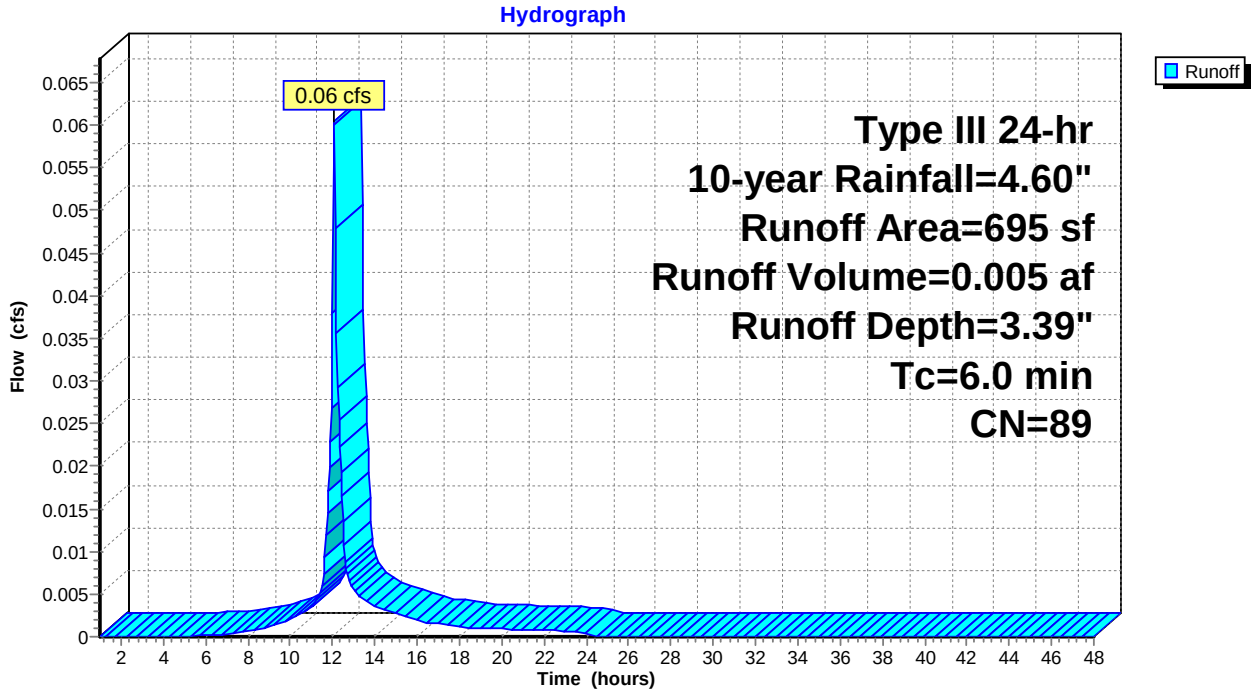
Runoff = 0.06 cfs @ 12.09 hrs, Volume= 0.005 af, Depth= 3.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	360	98	Patio
*	335	80	Lawn/landscaping, HSG D
	695	89	Weighted Average
	335		48.20% Pervious Area
	360		51.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.8N: A.4 Rear Patio



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Summary for Subcatchment 1.9N: Common

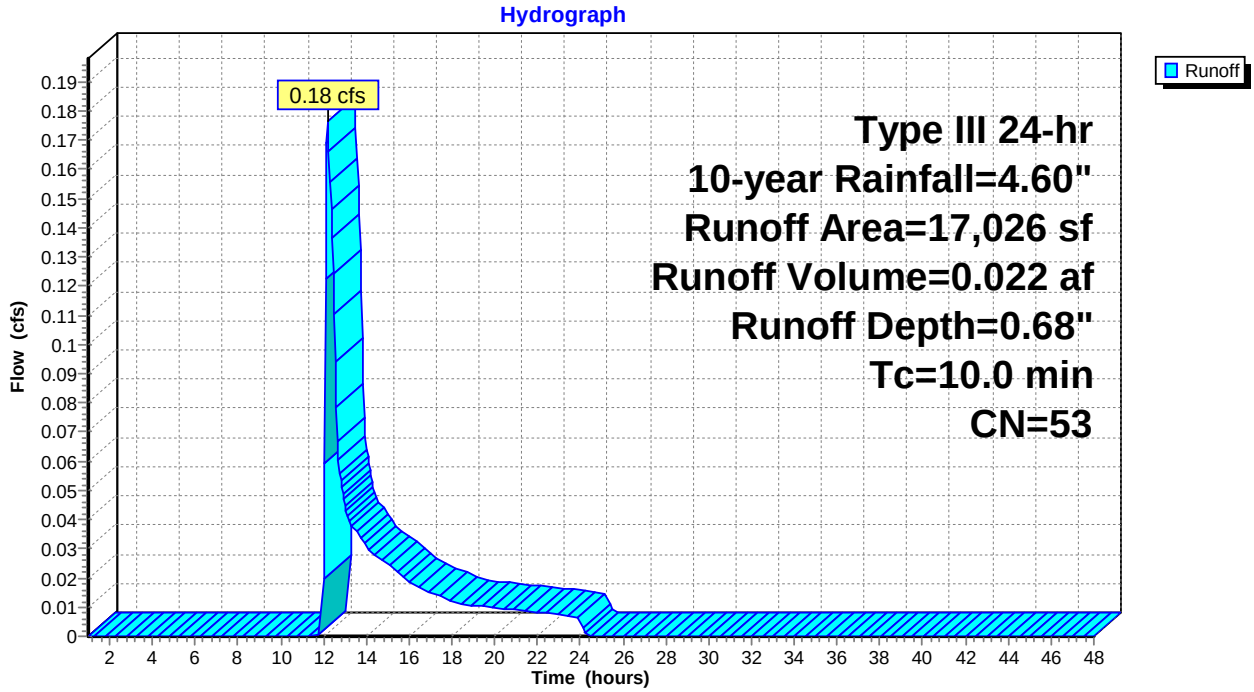
Runoff = 0.18 cfs @ 12.20 hrs, Volume= 0.022 af, Depth= 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	1,898	98	Paved walkway
*	1,662	98	Pavers & covered pav
*	472	98	patios
*	16	98	transformer
*	12,978	39	Open space, landscaping, HSG A
	17,026	53	Weighted Average
	12,978		76.22% Pervious Area
	4,048		23.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1.9N: Common



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Summary for Subcatchment 2.1N: SC 2.1N

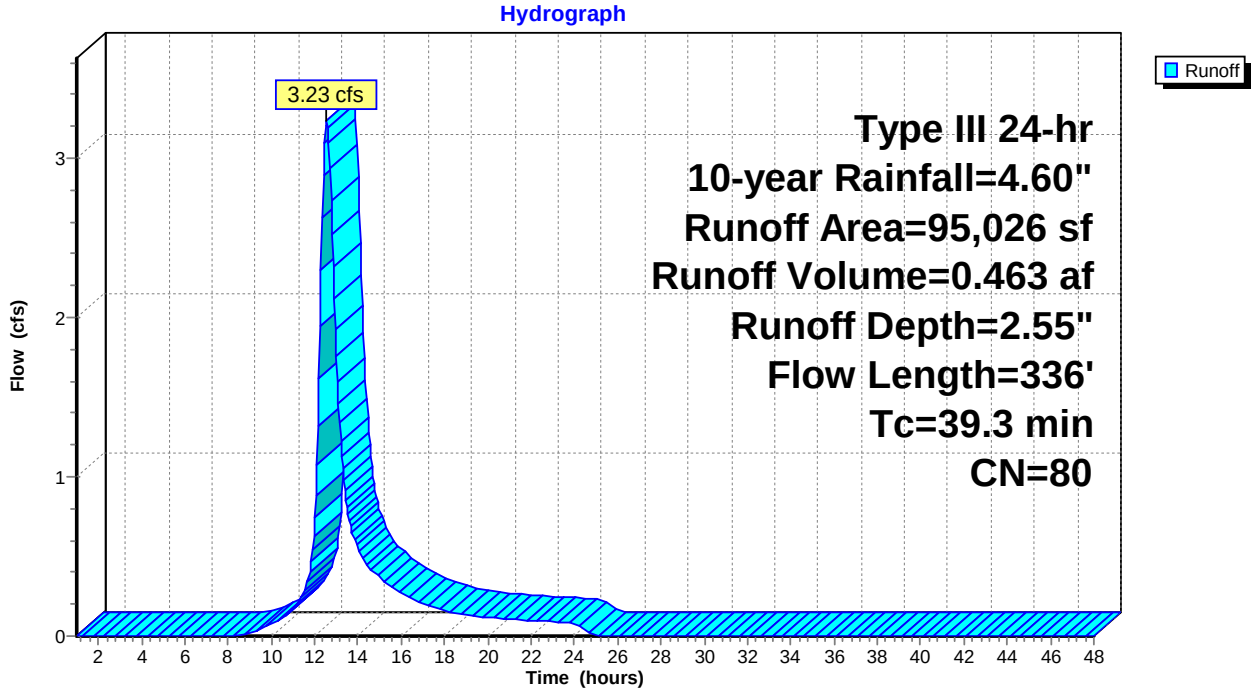
Runoff = 3.23 cfs @ 12.55 hrs, Volume= 0.463 af, Depth= 2.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	7,052	80	Road sideslope
	37,855	77	Woods, Good, HSG D
*	4,097	98	Sidewalk/N. Conc apron
*	10,054	98	Wash. Ave and S. Conc apron
	5,335	30	Woods, Good, HSG A
*	7,208	98	Rooftops and driveways
*	23,052	80	Lawns/landscaping, HSG D
*	373	80	ROW Landscaping
	95,026	80	Weighted Average
	73,667		77.52% Pervious Area
	21,359		22.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.4	100	0.0300	0.05		**Sheet Flow, SF (A to B)** Woods: Dense underbrush n= 0.800 P2= 3.27"
7.9	236	0.0100	0.50		**Shallow Concentrated Flow, SCF (B to C)** Woodland Kv= 5.0 fps
39.3	336	Total			

Subcatchment 2.1N: SC 2.1N



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Summary for Subcatchment 2.1S: Eastern Parking Lot

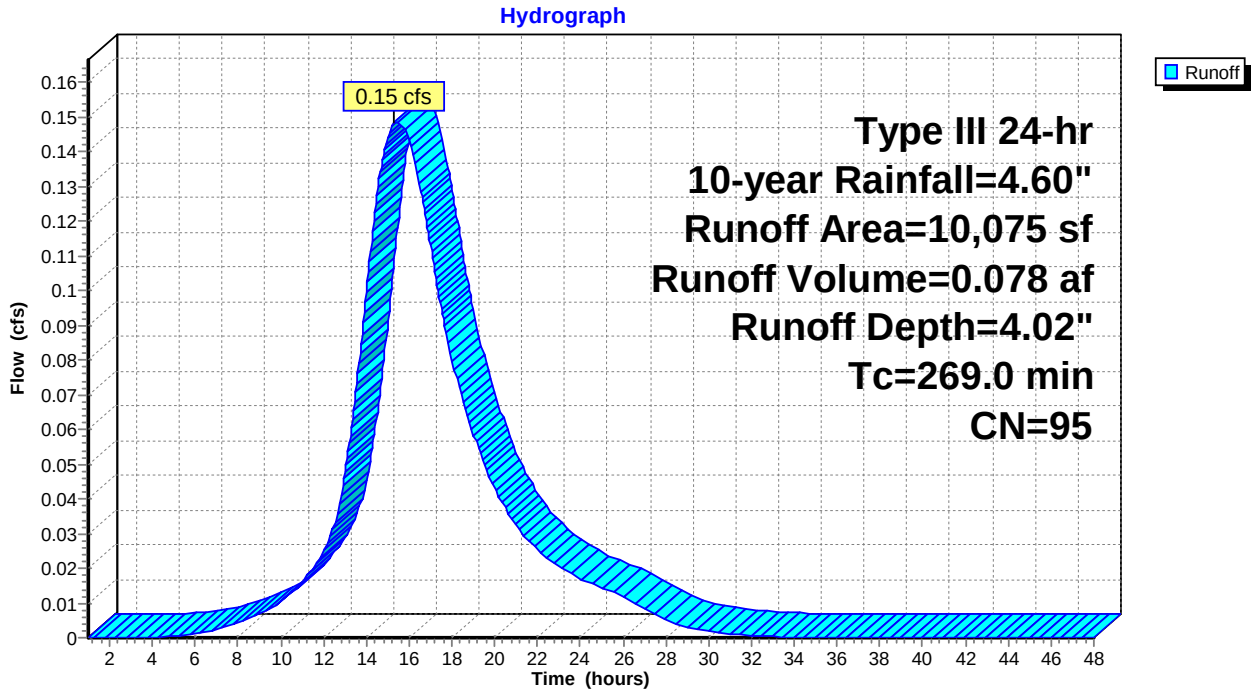
Runoff = 0.15 cfs @ 15.30 hrs, Volume= 0.078 af, Depth= 4.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	1,296	98	Porous
*	4,474	98	Paved driveaisle
*	971	98	Walkway/patio
*	371	98	Rear walkway/patio
*	128	98	dumpster pad
*	1,134	98	Porous
	1,701	80	>75% Grass cover, Good, HSG D
	10,075	95	Weighted Average
	1,701		16.88% Pervious Area
	8,374		83.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
269.0					**Direct Entry, UNH**

Subcatchment 2.1S: Eastern Parking Lot



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Summary for Subcatchment 2.2S: Developed/nondeveloped area

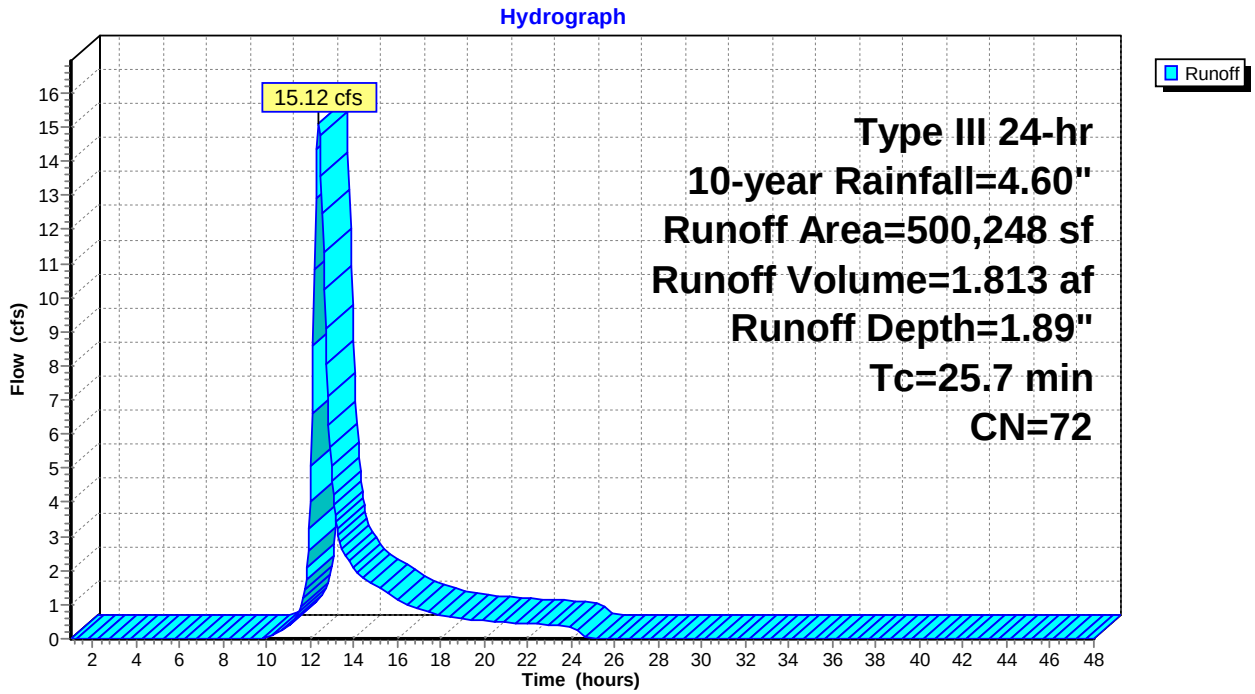
Runoff = 15.12 cfs @ 12.37 hrs, Volume= 1.813 af, Depth= 1.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	577	98	Bldg C.2 & C.3 patios (HSG A)
*	3,734	39	Slope behind patios, HSG A
*	30,823	39	>75% Grass cover, Good, HSG A
*	3,896	98	Roofs/driveways/patios (HSG A)
	24,173	55	Woods, Good, HSG B
	6,557	70	Woods, Good, HSG C
	146,624	70	Woods, Good, HSG C
	237,115	77	Woods, Good, HSG D
*	10,865	80	>75% Grass cover, Good, HSG D
*	3,503	98	Roofs/driveways/patios (HSG D)
*	13,566	80	Landscaped/openspace areas (HSG D)
*	5,509	98	Wash Ave
*	1,578	98	Sidewalk
*	9,452	80	Roadside ditch/slope
*	1,797	98	Auburn St
*	479	80	Landscaping Auburn St
	500,248	72	Weighted Average
	483,388		96.63% Pervious Area
	16,860		3.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.7					**Direct Entry, copy from pre**

Subcatchment 2.2S: Developed/nondeveloped area



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Summary for Subcatchment 3.1N: SC 3.1N

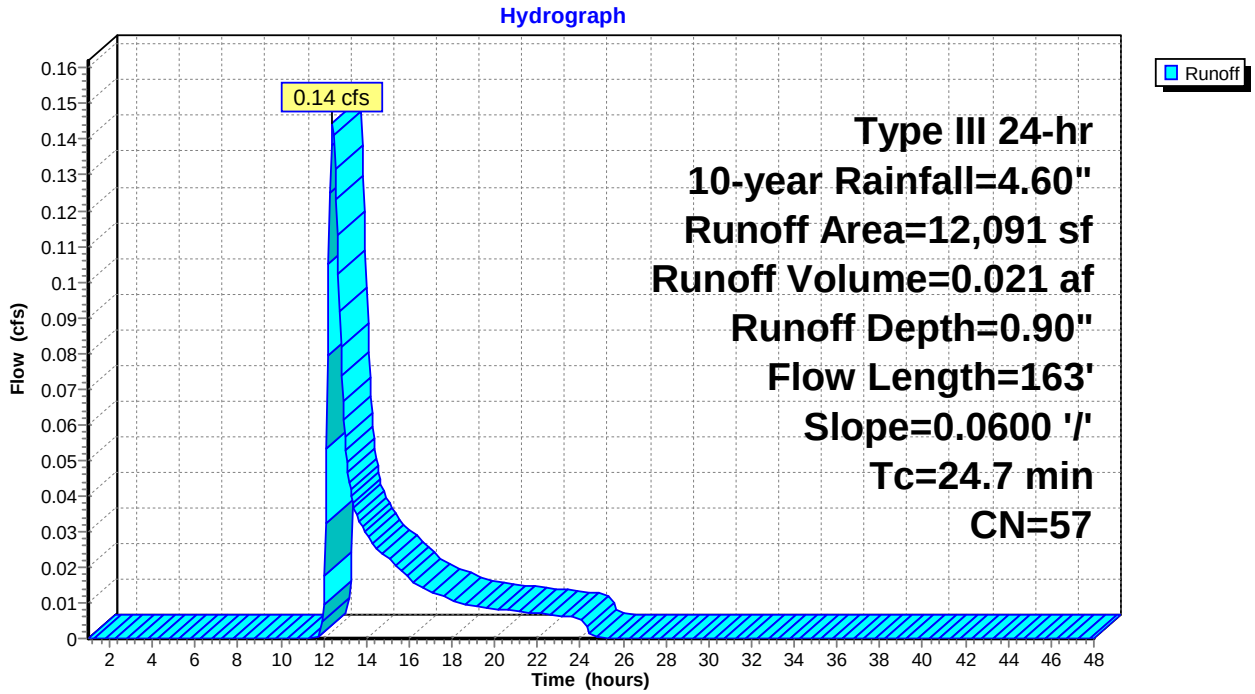
Runoff = 0.14 cfs @ 12.42 hrs, Volume= 0.021 af, Depth= 0.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	4,121	30	Woods, Good, HSG A
*	1,504	39	Landscaping/swale, HSG A
*	16	98	transformer pad
	2,428	77	Woods, Good, HSG D
*	4,022	80	Landscaping/slope, HSG D
	12,091	57	Weighted Average
	12,075		99.87% Pervious Area
	16		0.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.8	100	0.0600	0.07		**Sheet Flow, SF (A to B)** Woods: Dense underbrush n= 0.800 P2= 3.27"
0.9	63	0.0600	1.22		**Shallow Concentrated Flow, SCF (B to C)** Woodland Kv= 5.0 fps
24.7	163	Total			

Subcatchment 3.1N: SC 3.1N



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Summary for Subcatchment 4.1N: 4.1N

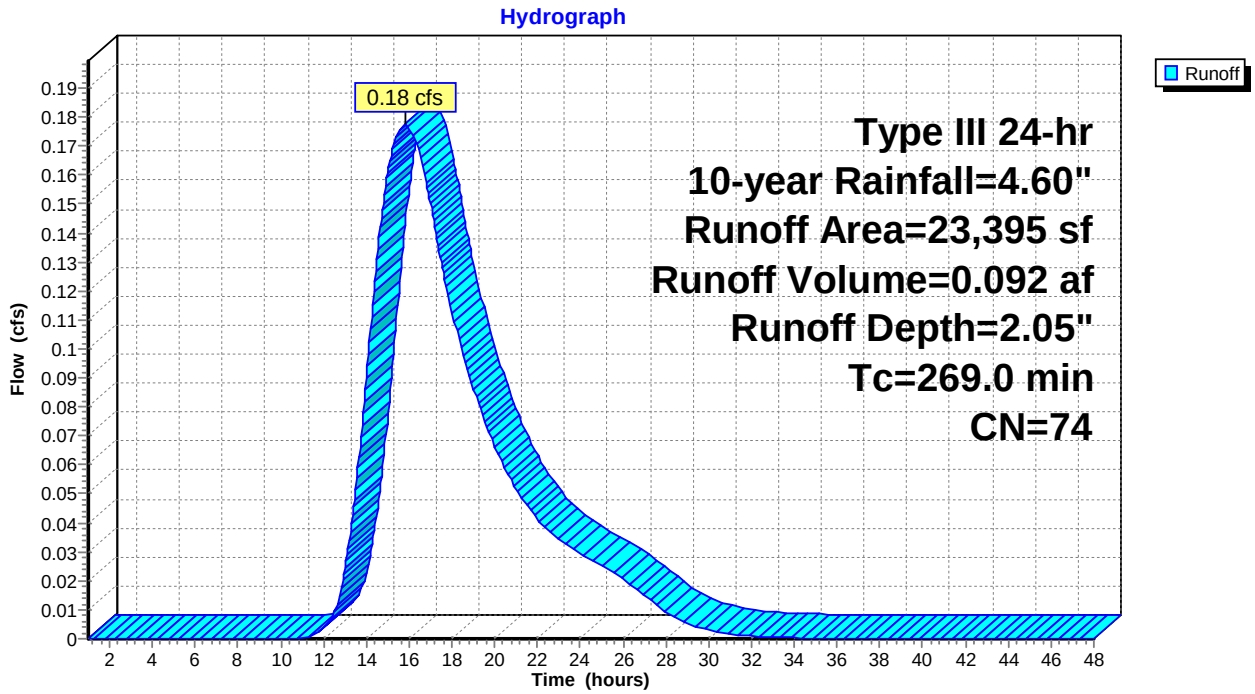
Runoff = 0.18 cfs @ 15.84 hrs, Volume= 0.092 af, Depth= 2.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	947	98	A.1 rear patio
*	439	98	A.2 walkway
*	5,241	98	porous pavement
*	1,850	98	5' wide pavers in mews
*	403	98	A.4 front patios
*	408	98	B.1 patios
*	301	98	B.1/B,2 mech room walkway
*	795	98	B.1/B.2 patio area
*	16	98	transformer pad
*	612	98	B.2 patios
*	408	98	B.3 patios
*	204	98	C.1 patios
*	128	98	dumpster pad
*	95	98	B.2 east walkway
*	2,160	98	eastern parking & driveaisle
*	9,388	39	Lawn/landscaping, HSG A
	23,395	74	Weighted Average
	9,388		40.13% Pervious Area
	14,007		59.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
269.0					**Direct Entry, UNH**

Subcatchment 4.1N: 4.1N



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Summary for Subcatchment 4.2N: Eastern Parking Lot

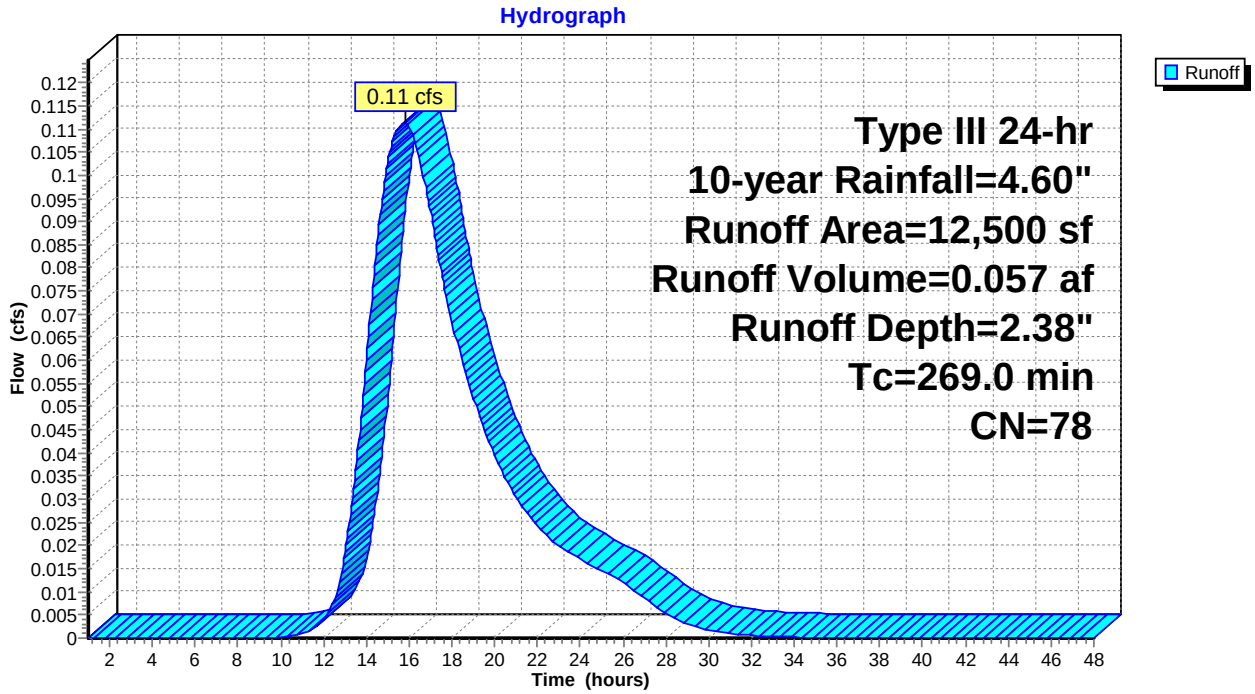
Runoff = 0.11 cfs @ 15.82 hrs, Volume= 0.057 af, Depth= 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
*	1,369	98	Sidewalk
*	555	98	Porous pavement
*	6,428	98	Parking lot
*	4,148	39	Landscaping/open space, HSG A
	12,500	78	Weighted Average
	4,148		33.18% Pervious Area
	8,352		66.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
269.0					**Direct Entry, UNH**

Subcatchment 4.2N: Eastern Parking Lot



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Summary for Subcatchment 4.3N: SC 4.3N

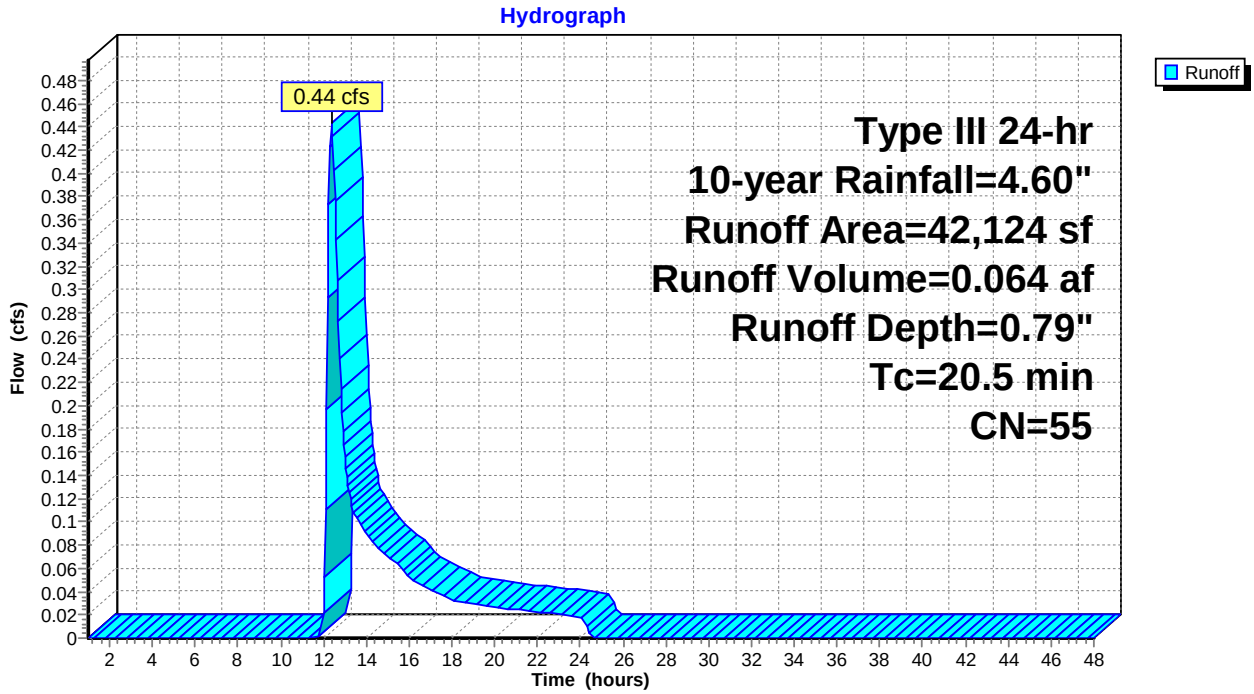
Runoff = 0.44 cfs @ 12.37 hrs, Volume= 0.064 af, Depth= 0.79"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-year Rainfall=4.60"

	Area (sf)	CN	Description
	5,895	80	>75% Grass cover, Good, HSG D
	5,180	77	Woods, Good, HSG D
	18,402	30	Woods, Good, HSG A
*	1,998	39	Landscaping/slope, HSG A
*	10,649	77	Woods, Good, HSG D
	42,124	55	Weighted Average
	42,124		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.5					**Direct Entry, copy from pre**

Subcatchment 4.3N: SC 4.3N



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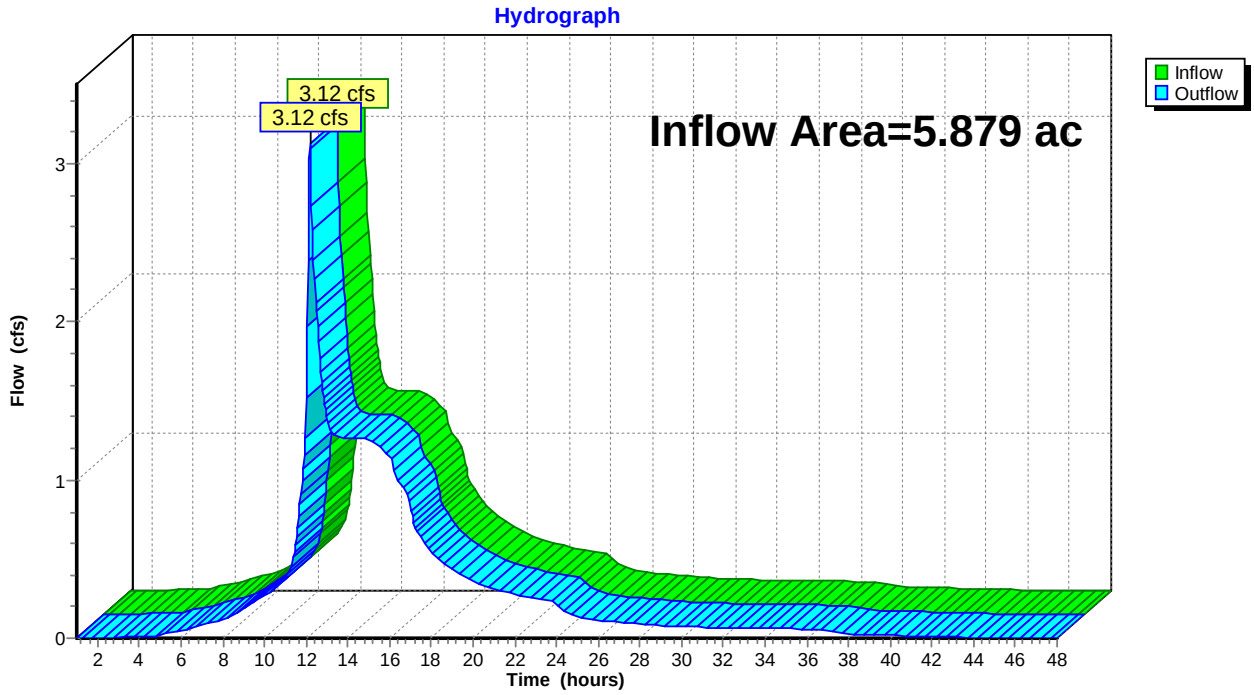
Summary for Reach 1: POI #1 - LAMBERT/WASH INTERSECTION

Inflow Area = 5.879 ac, 48.41% Impervious, Inflow Depth > 2.07" for 10-year event
Inflow = 3.12 cfs @ 12.18 hrs, Volume= 1.016 af
Outflow = 3.12 cfs @ 12.18 hrs, Volume= 1.016 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach 1: POI #1 - LAMBERT/WASH INTERSECTION



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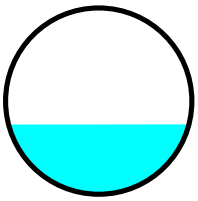
Summary for Reach 1R: N. DITCH CB OUTLET

Inflow Area = 2.382 ac, 51.59% Impervious, Inflow Depth > 2.16" for 10-year event
Inflow = 2.19 cfs @ 12.16 hrs, Volume= 0.428 af
Outflow = 2.16 cfs @ 12.17 hrs, Volume= 0.428 af, Atten= 1%, Lag= 0.3 min

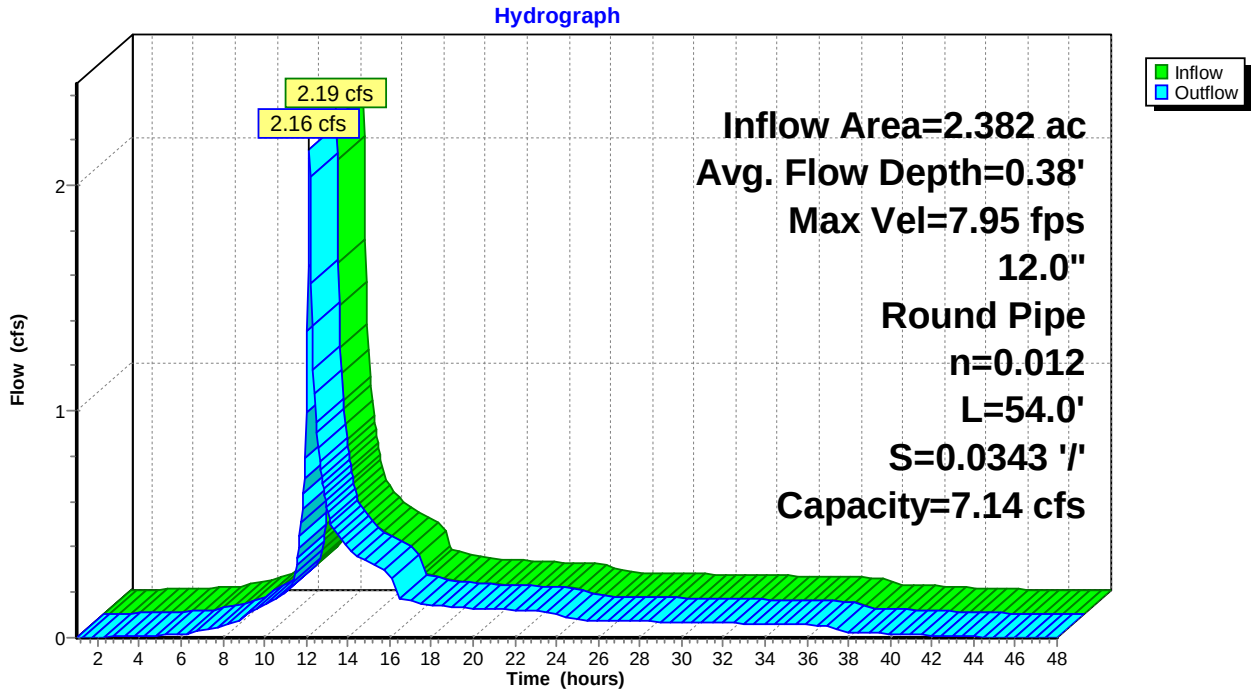
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 7.95 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.76 fps, Avg. Travel Time= 0.3 min

Peak Storage= 15 cf @ 12.17 hrs
Average Depth at Peak Storage= 0.38'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.14 cfs

12.0" Round Pipe
n= 0.012
Length= 54.0' Slope= 0.0343 '/'
Inlet Invert= 87.63', Outlet Invert= 85.78'



Reach 1R: N. DITCH CB OUTLET



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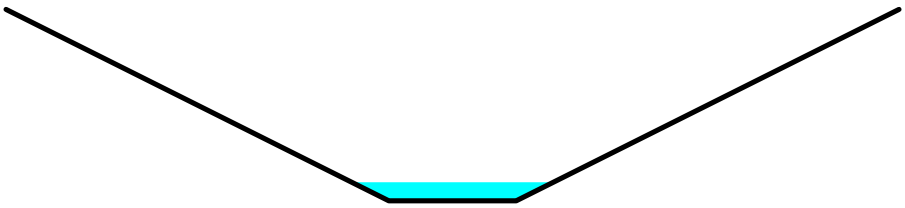
Summary for Reach 2R: N. DITCH

Inflow Area = 2.382 ac, 51.59% Impervious, Inflow Depth > 2.16" for 10-year event
Inflow = 2.24 cfs @ 12.16 hrs, Volume= 0.428 af
Outflow = 2.19 cfs @ 12.16 hrs, Volume= 0.428 af, Atten= 2%, Lag= 0.3 min

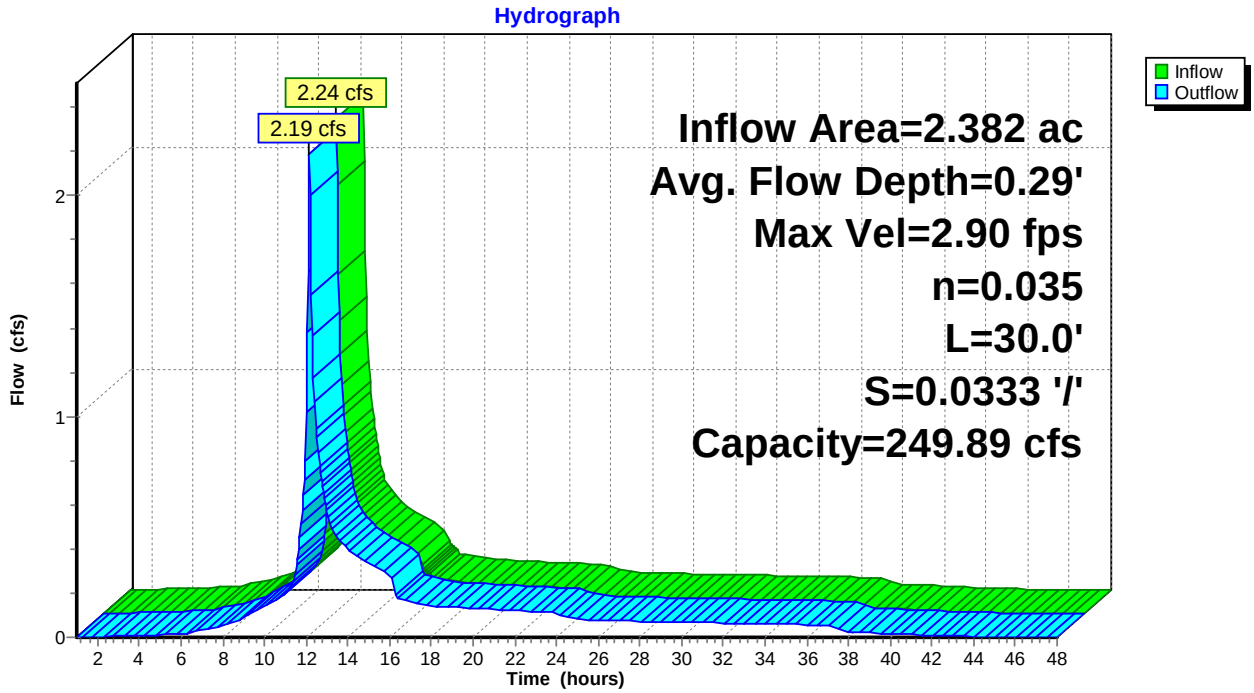
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.90 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 0.97 fps, Avg. Travel Time= 0.5 min

Peak Storage= 23 cf @ 12.16 hrs
Average Depth at Peak Storage= 0.29'
Bank-Full Depth= 3.00' Flow Area= 24.0 sf, Capacity= 249.89 cfs

2.00' x 3.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 2.0 '/' Top Width= 14.00'
Length= 30.0' Slope= 0.0333 '/'
Inlet Invert= 94.00', Outlet Invert= 93.00'



Reach 2R: N. DITCH



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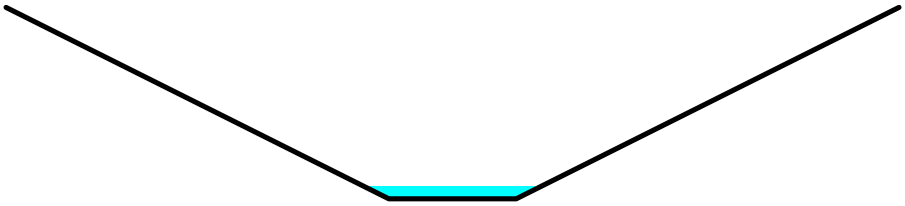
Summary for Reach 3R: S. DITCH

Inflow Area = 3.077 ac, 44.68% Impervious, Inflow Depth = 1.82" for 10-year event
Inflow = 1.13 cfs @ 12.34 hrs, Volume= 0.467 af
Outflow = 1.13 cfs @ 12.35 hrs, Volume= 0.467 af, Atten= 0%, Lag= 0.6 min

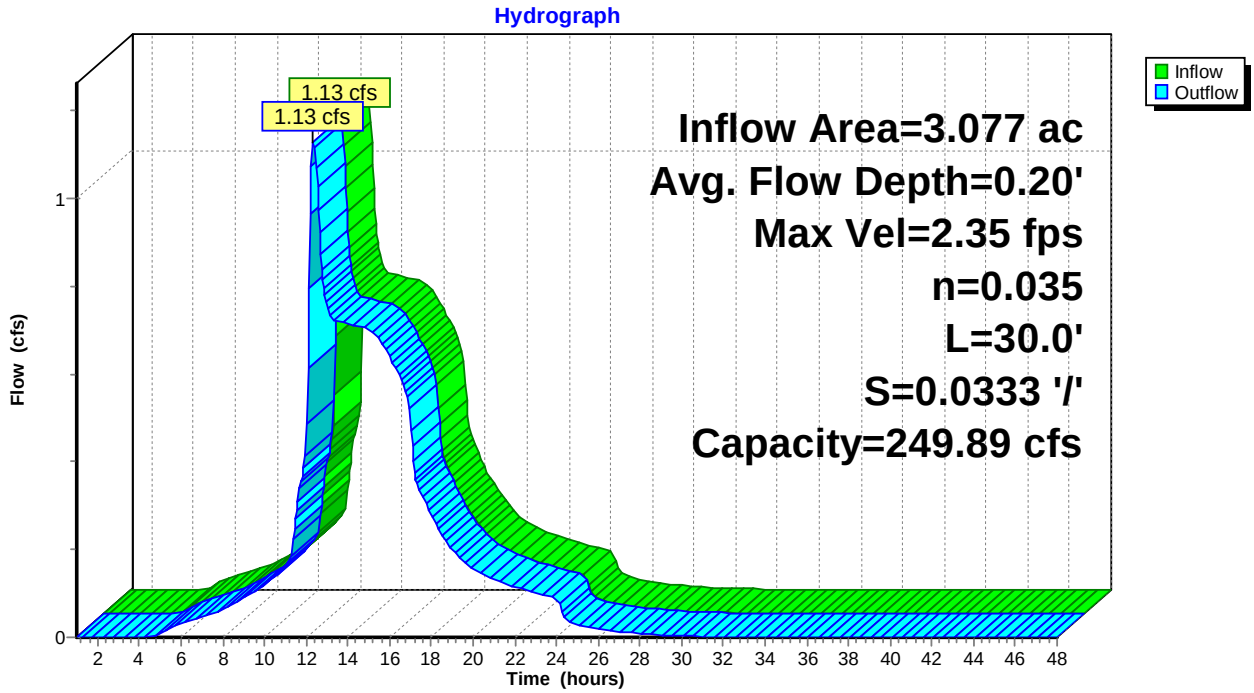
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.35 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.08 fps, Avg. Travel Time= 0.5 min

Peak Storage= 14 cf @ 12.34 hrs
Average Depth at Peak Storage= 0.20'
Bank-Full Depth= 3.00' Flow Area= 24.0 sf, Capacity= 249.89 cfs

2.00' x 3.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 2.0 '/' Top Width= 14.00'
Length= 30.0' Slope= 0.0333 '/'
Inlet Invert= 94.00', Outlet Invert= 93.00'



Reach 3R: S. DITCH



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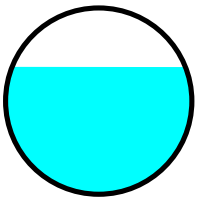
Summary for Reach 4R: WASH. CROSS CULVERT

Inflow Area = 2.181 ac, 22.48% Impervious, Inflow Depth = 2.55" for 10-year event
Inflow = 3.23 cfs @ 12.55 hrs, Volume= 0.463 af
Outflow = 3.23 cfs @ 12.56 hrs, Volume= 0.463 af, Atten= 0%, Lag= 0.6 min

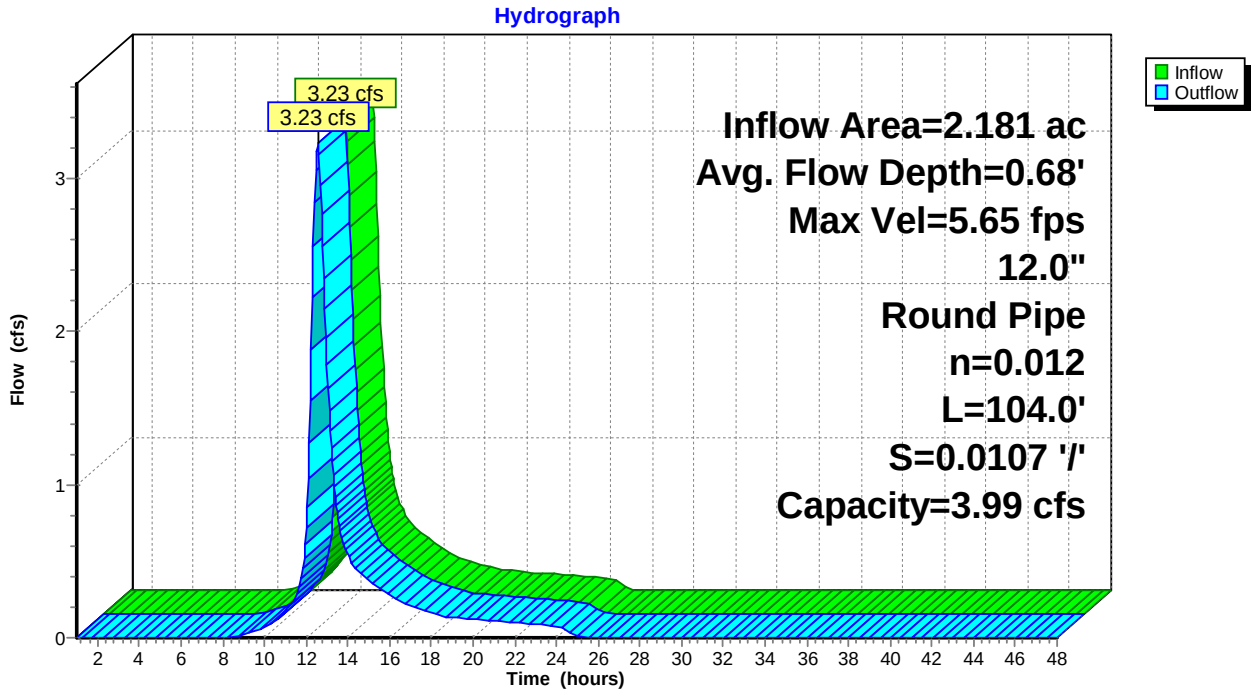
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.65 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.45 fps, Avg. Travel Time= 0.7 min

Peak Storage= 59 cf @ 12.55 hrs
Average Depth at Peak Storage= 0.68'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.99 cfs

12.0" Round Pipe
n= 0.012 Corrugated PP, smooth interior
Length= 104.0' Slope= 0.0107 '/'
Inlet Invert= 113.80', Outlet Invert= 112.69'



Reach 4R: WASH. CROSS CULVERT



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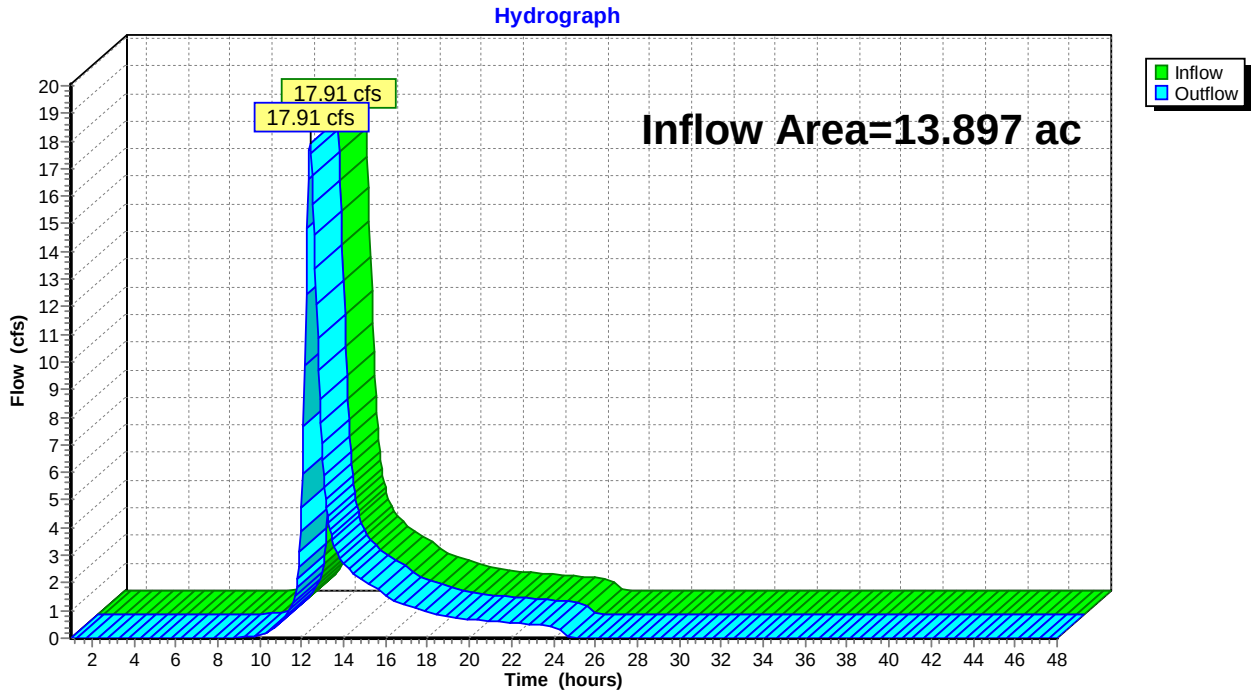
Summary for Reach POI 2: POI #2 - LAMBERT CROSS CULVERT

Inflow Area = 13.897 ac, 7.70% Impervious, Inflow Depth = 2.03" for 10-year event
Inflow = 17.91 cfs @ 12.40 hrs, Volume= 2.354 af
Outflow = 17.91 cfs @ 12.40 hrs, Volume= 2.354 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach POI 2: POI #2 - LAMBERT CROSS CULVERT



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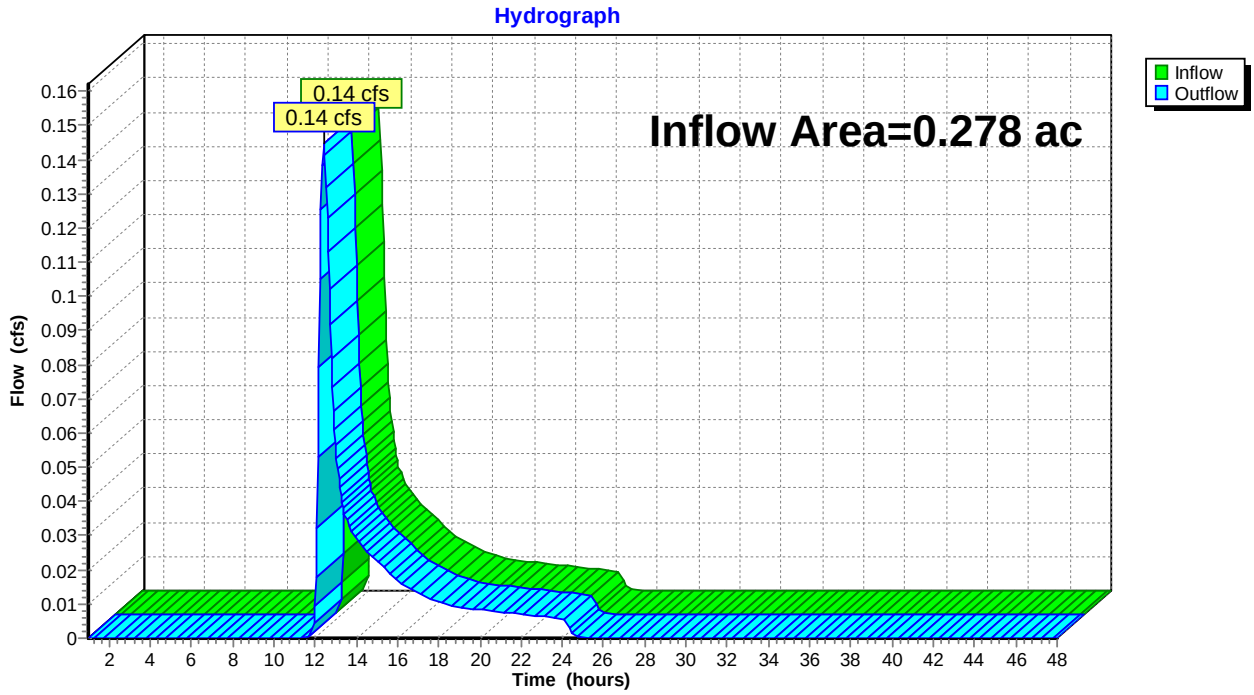
Summary for Reach POI 3: POI #3 - FALMOUTH WETLANDS

Inflow Area = 0.278 ac, 0.13% Impervious, Inflow Depth = 0.90" for 10-year event
Inflow = 0.14 cfs @ 12.42 hrs, Volume= 0.021 af
Outflow = 0.14 cfs @ 12.42 hrs, Volume= 0.021 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach POI 3: POI #3 - FALMOUTH WETLANDS



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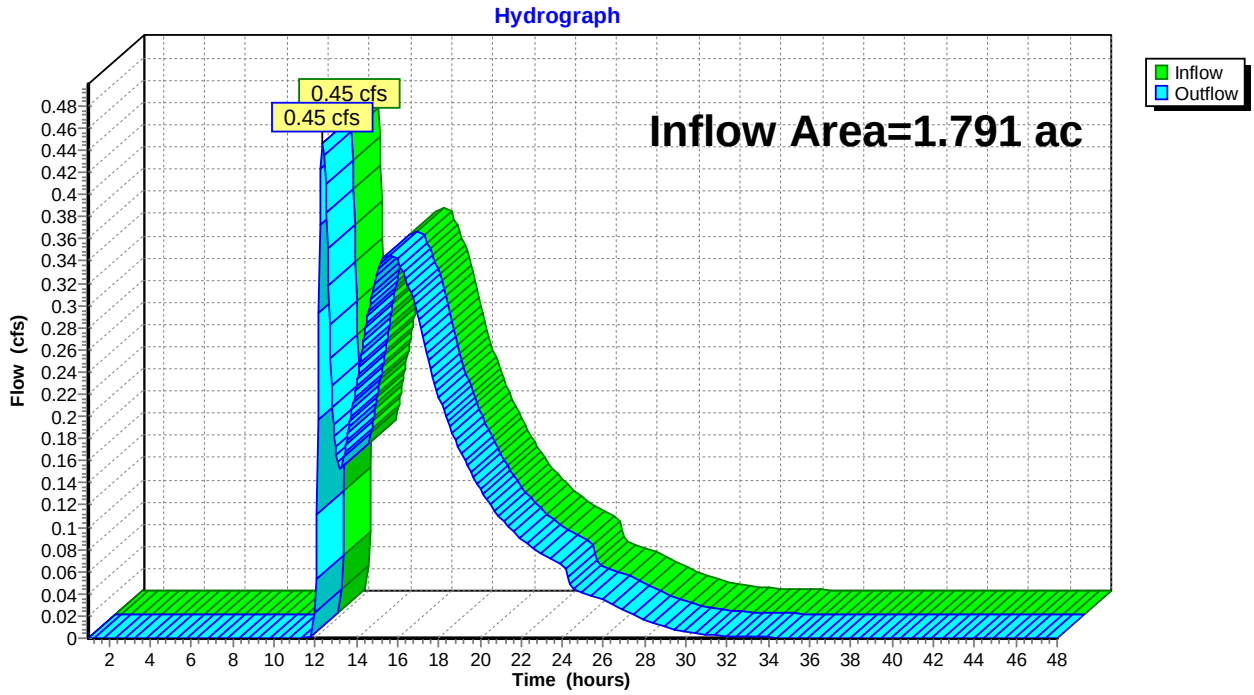
Summary for Reach POI 4: POI #4 - N STREAM

Inflow Area = 1.791 ac, 28.66% Impervious, Inflow Depth = 1.41" for 10-year event
Inflow = 0.45 cfs @ 12.37 hrs, Volume= 0.210 af
Outflow = 0.45 cfs @ 12.37 hrs, Volume= 0.210 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach POI 4: POI #4 - N STREAM



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Summary for Pond 1P: USSF 1 - StormTech 3500

Inflow Area = 1.042 ac, 61.80% Impervious, Inflow Depth > 2.58" for 10-year event
Inflow = 2.52 cfs @ 12.09 hrs, Volume= 0.224 af
Outflow = 0.37 cfs @ 12.66 hrs, Volume= 0.216 af, Atten= 85%, Lag= 34.3 min
Primary = 0.37 cfs @ 12.66 hrs, Volume= 0.216 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 108.51' @ 12.66 hrs Surf.Area= 4,998 sf Storage= 5,178 cf

Plug-Flow detention time= 559.6 min calculated for 0.216 af (96% of inflow)
Center-of-Mass det. time= 537.7 min (1,306.7 - 769.0)

Volume	Invert	Avail.Storage	Storage Description
#1	105.00'	1,714 cf	**34.00'W x 49.00'L x 4.75'H Stone** 7,914 cf Overall - 3,629 cf Embedded = 4,284 cf x 40.0% Voids
#2	105.50'	3,629 cf	**ADS_StormTech MC-3500 d +Cap @ 7.50' L** x 30 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.50'L = 115.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 30 Chambers in 6 Rows Cap Storage= +14.9 cf x 2 x 6 rows = 178.8 cf
#3	103.50'	125 cf	**34.00'W x 49.00'L x 1.50'H Sand** 2,499 cf Overall x 5.0% Voids
#4	102.50'	661 cf	**34.00'W x 49.00'L x 1.00'H Crushed Stone** 1,666 cf Overall - 13 cf Embedded = 1,653 cf x 40.0% Voids
#5	102.75'	13 cf	**4.0" Round Underdrain Storage** Inside #4 L= 150.0'
		6,142 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	103.00'	**1.2" Vert. Underdrain/Orifice** C= 0.600
#2	Primary	108.27'	**6.0" Round Bypass Overflow X 2.00** L= 6.0' Ke= 0.600 Inlet / Outlet Invert= 108.27' / 108.00' S= 0.0450 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf

Primary OutFlow Max=0.37 cfs @ 12.66 hrs HW=108.50' (Free Discharge)
└─**1=Underdrain/Orifice** (Orifice Controls 0.09 cfs @ 11.25 fps)
└─**2=Bypass Overflow** (Inlet Controls 0.28 cfs @ 1.55 fps)

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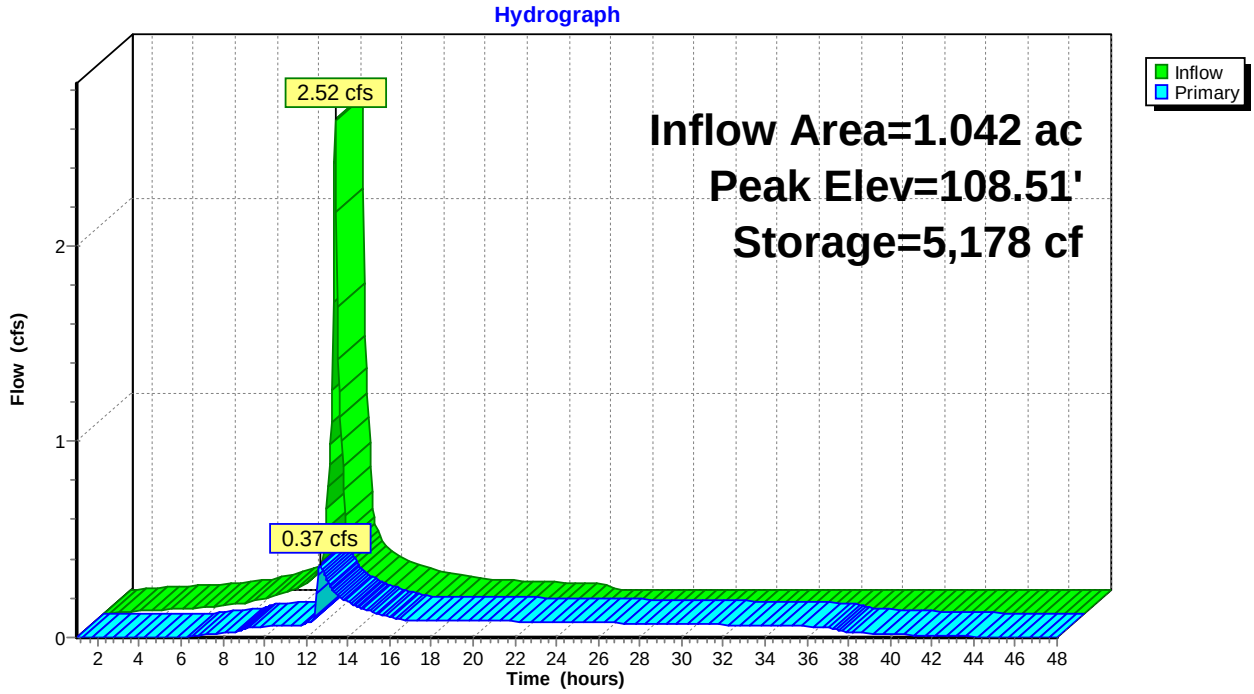
Pond 1P: USSF 1 - StormTech 3500



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Summary for Pond 2P: Pavement Profile/Drainage

Inflow Area = 0.287 ac, 66.82% Impervious, Inflow Depth = 2.38" for 10-year event
Inflow = 0.11 cfs @ 15.82 hrs, Volume= 0.057 af
Outflow = 0.11 cfs @ 15.84 hrs, Volume= 0.056 af, Atten= 0%, Lag= 0.8 min
Primary = 0.11 cfs @ 15.84 hrs, Volume= 0.056 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 108.98' @ 15.84 hrs Surf.Area= 140 sf Storage= 32 cf

Plug-Flow detention time= 10.8 min calculated for 0.056 af (99% of inflow)
Center-of-Mass det. time= 6.0 min (1,081.9 - 1,075.9)

Volume	Invert	Avail.Storage	Storage Description
#1	108.50'	48 cf	**1.33'W x 105.00'L x 1.00'H 6" Trench** 140 cf Overall - 21 cf Embedded = 119 cf x 40.0% Voids
#2	109.50'	189 cf	**18.00'W x 105.00'L x 0.25'H 3" - 3/4" Stone** 473 cf Overall x 40.0% Voids
#3	109.75'	78 cf	**18.00'W x 105.00'L x 0.83'H 10" - Filter MDOT Type D** 1,569 cf Overall x 5.0% Voids
#4	110.58'	249 cf	**18.00'W x 105.00'L x 0.33'H 4" - Choker 1-1/2"** 624 cf Overall x 40.0% Voids
#5	110.91'	125 cf	**18.00'W x 105.00'L x 0.33'H 4" - OGFC** 624 cf Overall x 20.0% Voids
#6	108.75'	21 cf	**6.0" Round 6 SD** Inside #1 L= 105.0'
		710 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	108.75'	**6.0" Round 6" Pipe** L= 5.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 108.75' / 108.50' S= 0.0500 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf

Primary OutFlow Max=0.11 cfs @ 15.84 hrs HW=108.98' (Free Discharge)
↑—**1=6" Pipe** (Inlet Controls 0.11 cfs @ 1.28 fps)

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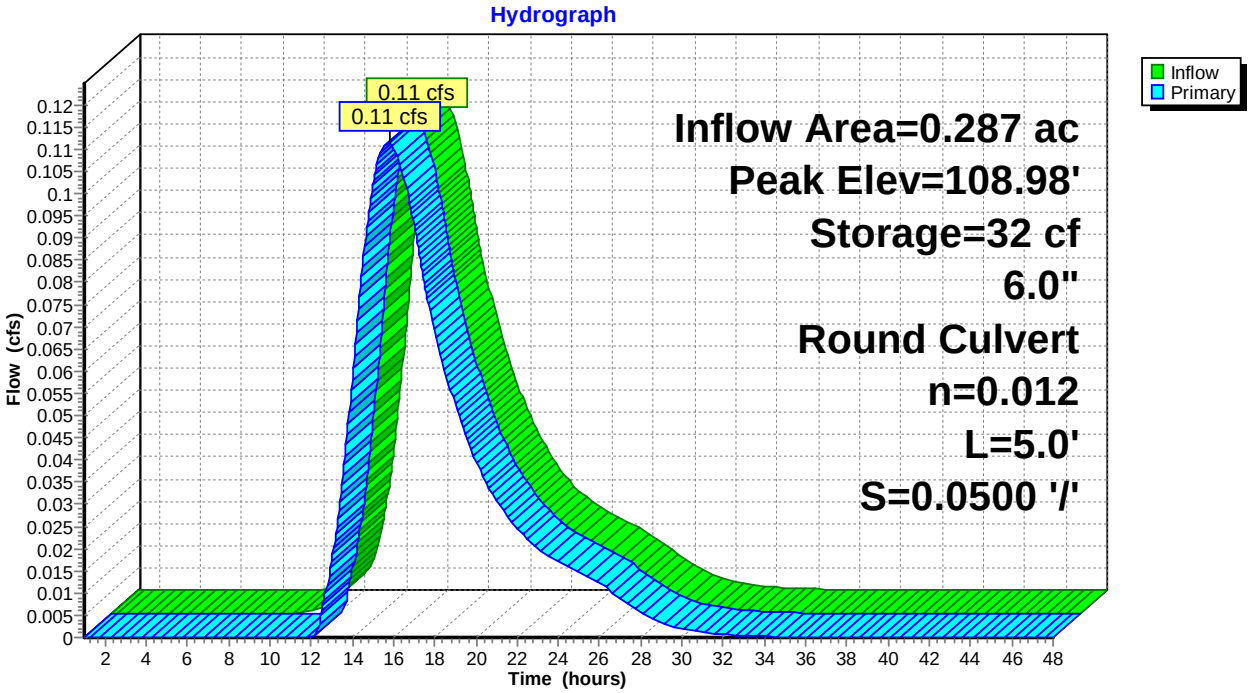
Pond 2P: Pavement Profile/Drainage



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Summary for Pond 3P: Pavement Profile/Drainage

Inflow Area = 0.537 ac, 59.87% Impervious, Inflow Depth = 2.05" for 10-year event
Inflow = 0.18 cfs @ 15.84 hrs, Volume= 0.092 af
Outflow = 0.18 cfs @ 15.90 hrs, Volume= 0.090 af, Atten= 0%, Lag= 3.8 min
Primary = 0.18 cfs @ 15.90 hrs, Volume= 0.090 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 107.70' @ 15.90 hrs Surf.Area= 557 sf Storage= 152 cf

Plug-Flow detention time= 27.6 min calculated for 0.090 af (99% of inflow)
Center-of-Mass det. time= 17.4 min (1,104.0 - 1,086.6)

Volume	Invert	Avail.Storage	Storage Description
#1	107.15'	190 cf	**1.33'W x 419.00'L x 1.00'H 6" Trench** 557 cf Overall - 82 cf Embedded = 475 cf x 40.0% Voids
#2	108.15'	461 cf	**11.00'W x 419.00'L x 0.25'H 3" - 3/4" Stone** 1,152 cf Overall x 40.0% Voids
#3	108.40'	191 cf	**11.00'W x 419.00'L x 0.83'H 10" - Filter MDOT Type D** 3,825 cf Overall x 5.0% Voids
#4	109.23'	608 cf	**11.00'W x 419.00'L x 0.33'H 4" - Choker 1-1/2"** 1,521 cf Overall x 40.0% Voids
#5	109.56'	304 cf	**11.00'W x 419.00'L x 0.33'H 4" - OGFC** 1,521 cf Overall x 20.0% Voids
#6	107.40'	82 cf	**6.0" Round 6 SD** Inside #1 L= 419.0'
		1,837 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	107.40'	**6.0" Round 6" Pipe** L= 5.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 107.40' / 107.20' S= 0.0400 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf

Primary OutFlow Max=0.18 cfs @ 15.90 hrs HW=107.70' (Free Discharge)
↑—**1=6" Pipe** (Inlet Controls 0.18 cfs @ 1.46 fps)

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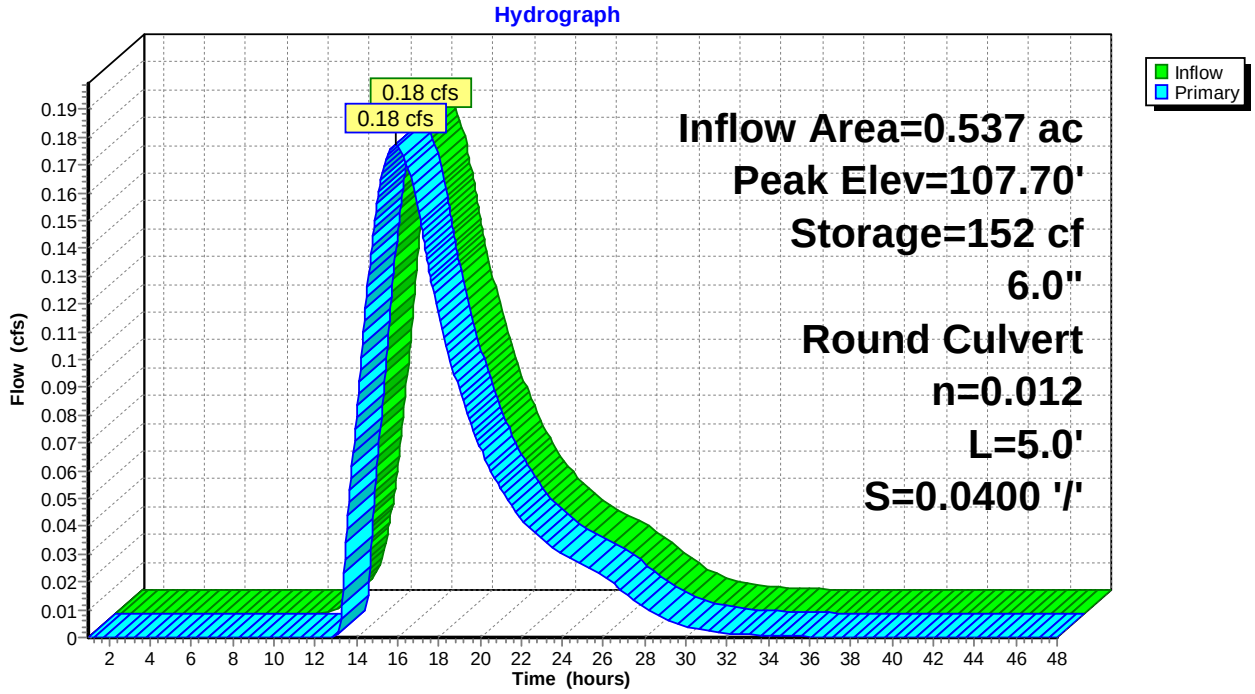
Pond 3P: Pavement Profile/Drainage



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Summary for Pond 4P: Pavement Profile/Drainage

Inflow Area = 0.389 ac, 56.13% Impervious, Inflow Depth = 3.49" for 10-year event
Inflow = 0.22 cfs @ 15.54 hrs, Volume= 0.113 af
Outflow = 0.22 cfs @ 15.54 hrs, Volume= 0.113 af, Atten= 0%, Lag= 0.0 min
Primary = 0.22 cfs @ 15.54 hrs, Volume= 0.113 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 110.26' @ 15.54 hrs Surf.Area= 203 sf Storage= 0 cf

Plug-Flow detention time= 0.0 min calculated for 0.113 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (1,038.4 - 1,038.4)

Volume	Invert	Avail.Storage	Storage Description
#1	110.25'	76 cf	**1.50'W x 135.00'L x 1.00'H 6" Trench** 203 cf Overall - 12 cf Embedded = 191 cf x 40.0% Voids
#2	111.25'	371 cf	**11.00'W x 337.00'L x 0.25'H 3" - 3/4" Stone** 927 cf Overall x 40.0% Voids
#3	112.08'	62 cf	**11.00'W x 135.00'L x 0.83'H 10" - Filter MDOT Type D** 1,233 cf Overall x 5.0% Voids
#4	112.41'	196 cf	**11.00'W x 135.00'L x 0.33'H 4" - Choker 1-1/2"** 490 cf Overall x 40.0% Voids
#5	112.74'	98 cf	**11.00'W x 135.00'L x 0.33'H 4" - OGFC** 490 cf Overall x 20.0% Voids
#6	110.50'	12 cf	**4.0" Round 6 SD** Inside #1 L= 135.0'
		814 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	108.00'	**6.0" Round 6" Pipe** L= 40.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 108.00' / 104.00' S= 0.1000 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=1.06 cfs @ 15.54 hrs HW=110.26' (Free Discharge)
↑—**1=6" Pipe** (Inlet Controls 1.06 cfs @ 5.38 fps)

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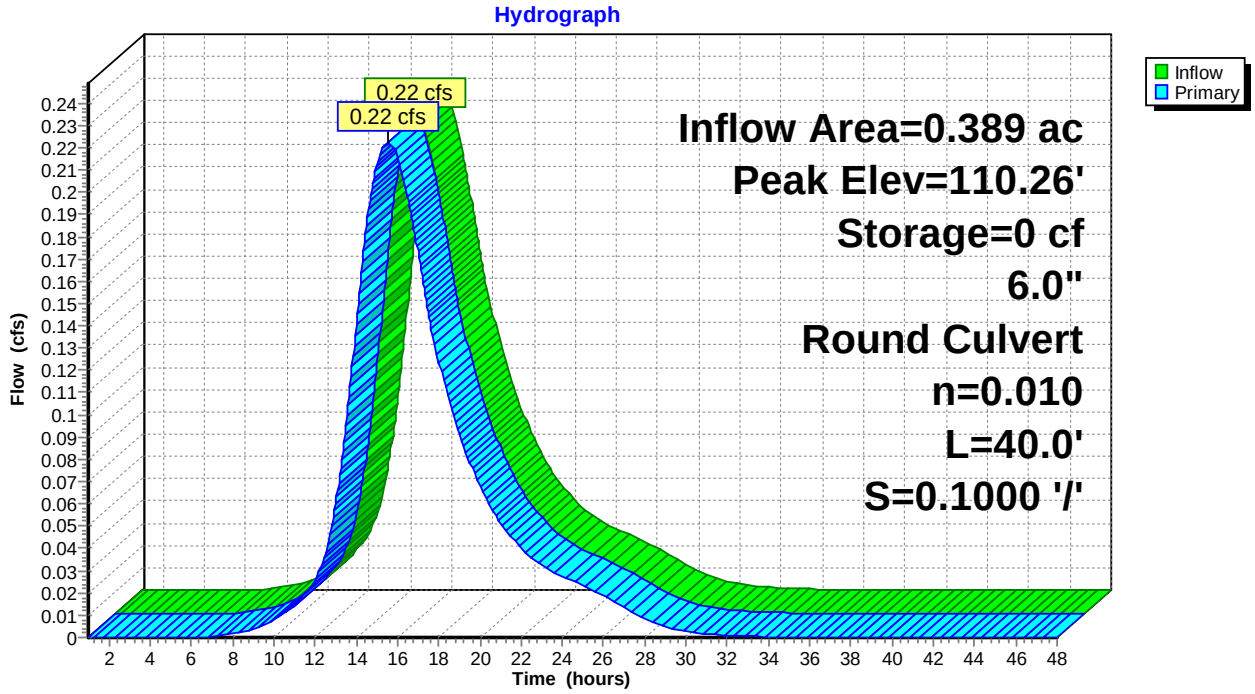
Pond 4P: Pavement Profile/Drainage



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Summary for Pond 5P: Pavement Profile/Drainage

Inflow Area = 0.297 ac, 80.63% Impervious, Inflow Depth = 3.19" for 10-year event
Inflow = 0.16 cfs @ 15.56 hrs, Volume= 0.079 af
Outflow = 0.16 cfs @ 15.59 hrs, Volume= 0.078 af, Atten= 0%, Lag= 1.8 min
Primary = 0.16 cfs @ 15.59 hrs, Volume= 0.078 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 104.87' @ 15.59 hrs Surf.Area= 216 sf Storage= 83 cf

Plug-Flow detention time= 23.3 min calculated for 0.078 af (98% of inflow)
Center-of-Mass det. time= 10.8 min (1,060.0 - 1,049.2)

Volume	Invert	Avail.Storage	Storage Description
#1	104.00'	81 cf	**1.50'W x 144.00'L x 1.00'H 6" Underdrained Trench** 216 cf Overall - 13 cf Embedded = 203 cf x 40.0% Voids
#2	105.00'	259 cf	**18.00'W x 144.00'L x 0.25'H 3" - 3/4" Stone** 648 cf Overall x 40.0% Voids
#3	105.25'	108 cf	**18.00'W x 144.00'L x 0.83'H 10" - Filter MDOT Type D** 2,151 cf Overall x 5.0% Voids
#4	106.08'	342 cf	**18.00'W x 144.00'L x 0.33'H 4" - Choker 1-1/2"** 855 cf Overall x 40.0% Voids
#5	106.41'	171 cf	**18.00'W x 144.00'L x 0.33'H 4" - OGFC** 855 cf Overall x 20.0% Voids
#6	104.25'	13 cf	**4.0" Round 4 SD** Inside #1 L= 144.0'
		974 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	104.60'	**6.0" Round 6" Pipe** L= 30.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 104.60' / 101.60' S= 0.1000 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.16 cfs @ 15.59 hrs HW=104.87' (Free Discharge)
↑**1=6" Pipe** (Inlet Controls 0.16 cfs @ 1.41 fps)

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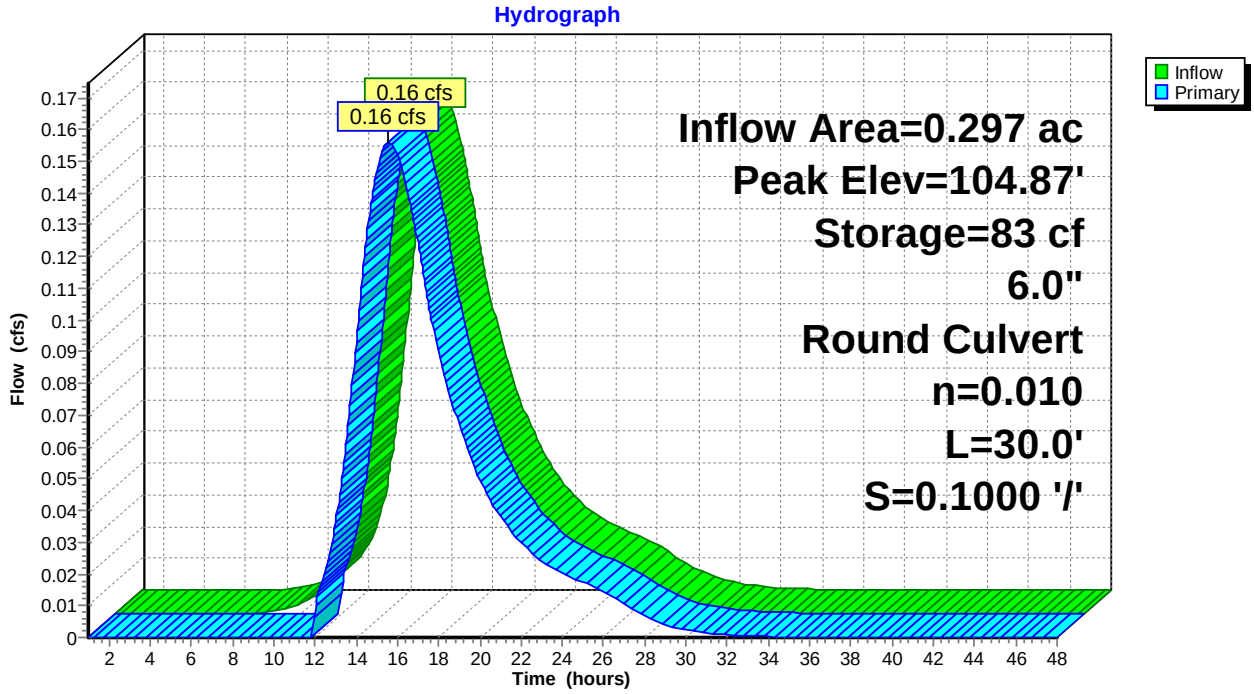
Pond 5P: Pavement Profile/Drainage



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Summary for Pond 6P: USSF 2 - StormTech 3500

Inflow Area = 1.045 ac, 71.07% Impervious, Inflow Depth > 3.48" for 10-year event
Inflow = 3.62 cfs @ 12.09 hrs, Volume= 0.303 af
Outflow = 0.53 cfs @ 12.63 hrs, Volume= 0.298 af, Atten= 85%, Lag= 32.5 min
Primary = 0.53 cfs @ 12.63 hrs, Volume= 0.298 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 104.32' @ 12.63 hrs Surf.Area= 6,091 sf Storage= 4,956 cf

Plug-Flow detention time= 106.1 min calculated for 0.298 af (98% of inflow)
Center-of-Mass det. time= 96.6 min (863.9 - 767.4)

Volume	Invert	Avail.Storage	Storage Description
#1	101.50'	2,418 cf	**35.08'W x 57.88'L x 4.75'H Stone** 9,645 cf Overall - 3,599 cf Embedded = 6,045 cf x 40.0% Voids
#2	102.00'	3,599 cf	**ADS_StormTech MC-3500 d +Cap @ 7.50' L** x 30 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.50'L = 115.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 30 Chambers in 5 Rows Cap Storage= +14.9 cf x 2 x 5 rows = 149.0 cf
#3	100.00'	152 cf	**35.08'W x 57.88'L x 1.50'H Sand** 3,046 cf Overall x 5.0% Voids
#4	99.00'	807 cf	**35.08'W x 57.88'L x 1.00'H Crushed Stone** 2,030 cf Overall - 13 cf Embedded = 2,017 cf x 40.0% Voids
#5	99.33'	13 cf	**4.0" Round Underdrain Storage** Inside #4 L= 150.0'
		6,990 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	99.25'	**3.0" Vert. Underdrain/Orifice** C= 0.600
#2	Primary	104.77'	**6.0" Round Bypass Overflow X 3.00** L= 7.0' Ke= 0.600 Inlet / Outlet Invert= 104.77' / 104.00' S= 0.1100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf

Primary OutFlow Max=0.53 cfs @ 12.63 hrs HW=104.32' (Free Discharge)
└**1=Underdrain/Orifice** (Orifice Controls 0.53 cfs @ 10.71 fps)
└**2=Bypass Overflow** (Controls 0.00 cfs)

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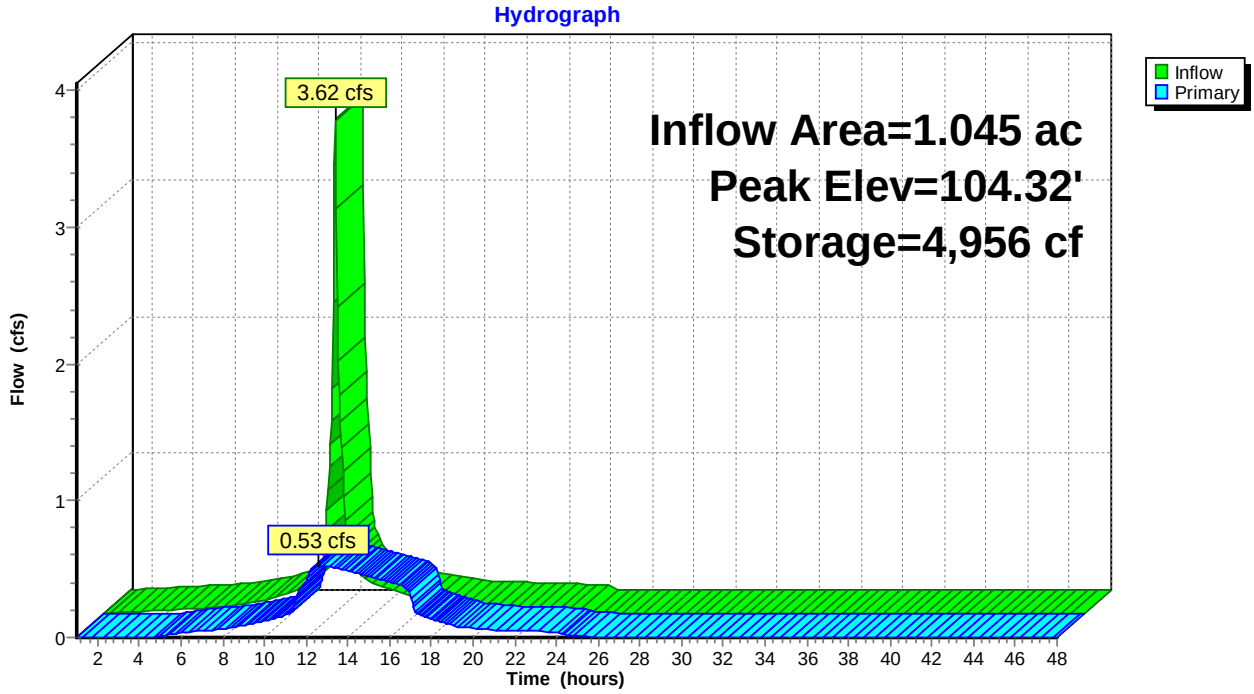
Pond 6P: USSF 2 - StormTech 3500



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Summary for Pond 7P: 6+00 Rain Garden

Inflow Area = 0.430 ac, 57.91% Impervious, Inflow Depth = 2.76" for 10-year event
Inflow = 1.30 cfs @ 12.09 hrs, Volume= 0.099 af
Outflow = 1.05 cfs @ 12.17 hrs, Volume= 0.099 af, Atten= 20%, Lag= 4.9 min
Primary = 1.05 cfs @ 12.17 hrs, Volume= 0.099 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 110.02' @ 12.17 hrs Surf.Area= 773 sf Storage= 804 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 28.3 min (833.7 - 805.4)

Volume	Invert	Avail.Storage	Storage Description
#1	108.00'	902 cf	**Ponding above surface (Prismatic)** Listed below (Recalc)
#2	106.50'	31 cf	**Soil Filter/Loam Topsoil (Prismatic)** Listed below (Recalc) 314 cf Overall x 10.0% Voids
		933 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.00	209	0	0
109.00	374	292	292
110.00	564	469	761
110.25	564	141	902

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
106.50	209	0	0
108.00	209	314	314

Device	Routing	Invert	Outlet Devices
#1	Primary	105.15'	**8.0" Round Culvert** L= 83.0' Ke= 0.600 Inlet / Outlet Invert= 105.15' / 104.50' S= 0.0078 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Device 1	106.50'	**0.13 cfs Exfiltration when above 106.50'**
#3	Primary	109.75'	**8.0" Horiz. Beehive Overflow** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.96 cfs @ 12.17 hrs HW=110.00' (Free Discharge)
└**1=Culvert** (Passes 0.13 cfs of 2.65 cfs potential flow)
└**2=Exfiltration** (Exfiltration Controls 0.13 cfs)
└**3=Beehive Overflow** (Orifice Controls 0.83 cfs @ 2.39 fps)

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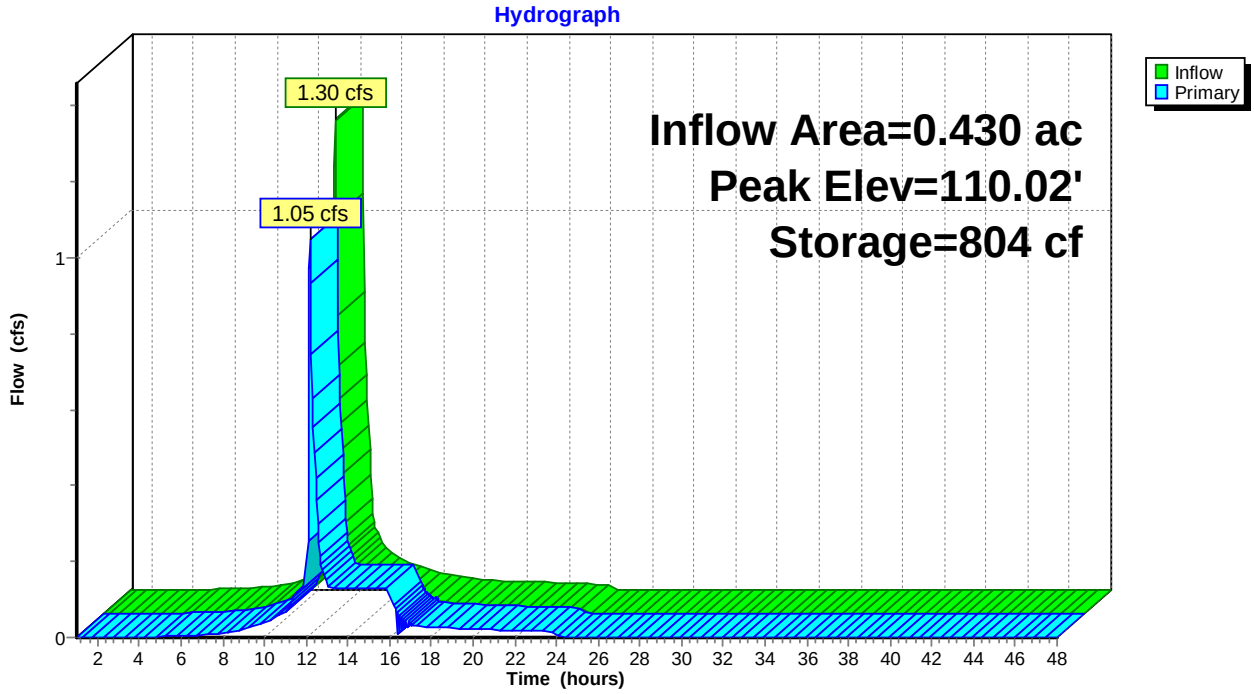
Pond 7P: 6+00 Rain Garden



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Summary for Pond 8P: Pavement Profile/Drainage

Inflow Area = 0.231 ac, 83.12% Impervious, Inflow Depth = 4.02" for 10-year event
Inflow = 0.15 cfs @ 15.30 hrs, Volume= 0.078 af
Outflow = 0.15 cfs @ 15.30 hrs, Volume= 0.078 af, Atten= 0%, Lag= 0.0 min
Primary = 0.15 cfs @ 15.30 hrs, Volume= 0.078 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 111.80' @ 15.30 hrs Surf.Area= 180 sf Storage= 0 cf

Plug-Flow detention time= 0.0 min calculated for 0.077 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (1,015.2 - 1,015.2)

Volume	Invert	Avail.Storage	Storage Description
#1	111.80'	55 cf	**1.33'W x 135.00'L x 0.83'H 4" Trench** 149 cf Overall - 12 cf Embedded = 137 cf x 40.0% Voids
#2	112.59'	243 cf	**49.30'W x 49.30'L x 0.25'H 3" - 3/4" Stone** 608 cf Overall x 40.0% Voids
#3	112.84'	101 cf	**49.30'W x 49.30'L x 0.83'H 10" - Filter MDOT Type D** 2,017 cf Overall x 5.0% Voids
#4	113.67'	321 cf	**49.30'W x 49.30'L x 0.33'H 4" - Choker 1-1/2"** 802 cf Overall x 40.0% Voids
#5	114.00'	160 cf	**49.30'W x 49.30'L x 0.33'H 4" - OGFC** 802 cf Overall x 20.0% Voids
#6	111.80'	12 cf	**4.0" Round 4 SD** Inside #1 L= 135.0' S= 0.0010 '/'
		892 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	61.65'	**6.0" Round 6" Pipe** L= 5.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.65' / 61.60' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=5.27 cfs @ 15.30 hrs HW=111.80' (Free Discharge)
↑**1=6" Pipe** (Inlet Controls 5.27 cfs @ 26.85 fps)

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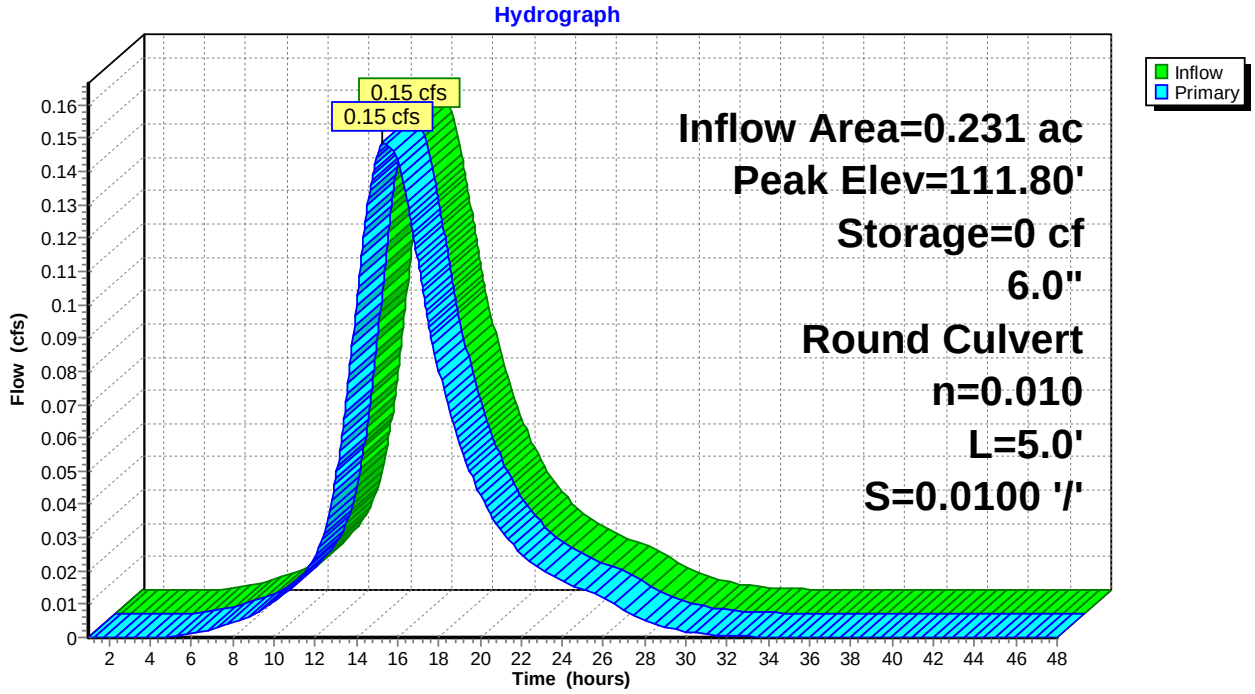
Pond 8P: Pavement Profile/Drainage



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Summary for Pond 9P: 4+25 Rain Garden

Inflow Area = 0.220 ac, 65.57% Impervious, Inflow Depth = 2.38" for 10-year event
Inflow = 0.60 cfs @ 12.09 hrs, Volume= 0.044 af
Outflow = 0.55 cfs @ 12.13 hrs, Volume= 0.044 af, Atten= 8%, Lag= 2.0 min
Primary = 0.55 cfs @ 12.13 hrs, Volume= 0.044 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 103.33' @ 12.13 hrs Surf.Area= 200 sf Storage= 99 cf

Plug-Flow detention time= 24.4 min calculated for 0.044 af (100% of inflow)
Center-of-Mass det. time= 22.8 min (853.7 - 830.9)

Volume	Invert	Avail.Storage	Storage Description
#1	102.50'	195 cf	**Ponding above surface (Prismatic)** Listed below (Recalc)
#2	101.00'	9 cf	**Soil Filter (Prismatic)** Listed below (Recalc) 90 cf Overall x 10.0% Voids
		204 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
102.50	60	0	0
103.00	126	47	47
104.00	170	148	195

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
101.00	60	0	0
102.50	60	90	90

Device	Routing	Invert	Outlet Devices
#1	Primary	99.75'	**8.0" Round Culvert** L= 78.0' Ke= 0.600 Inlet / Outlet Invert= 99.75' / 99.30' S= 0.0058 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Device 1	102.00'	**0.01 cfs Exfiltration when above 102.00'**
#3	Device 1	103.00'	**6.0" Horiz. Beehive Overflow** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.54 cfs @ 12.13 hrs HW=103.32' (Free Discharge)
└**1=Culvert** (Passes 0.54 cfs of 2.25 cfs potential flow)
├**2=Exfiltration** (Exfiltration Controls 0.01 cfs)
└**3=Beehive Overflow** (Orifice Controls 0.53 cfs @ 2.71 fps)

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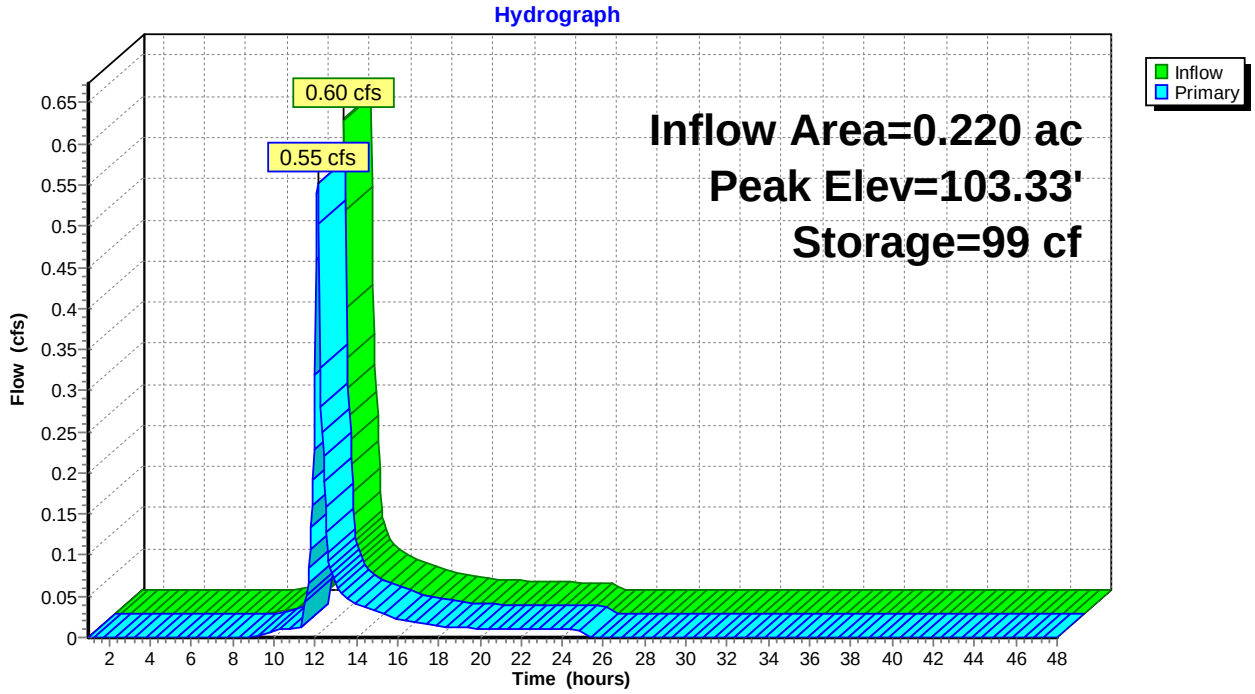
Pond 9P: 4+25 Rain Garden



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Summary for Subcatchment 1.1N: SC 1.1N

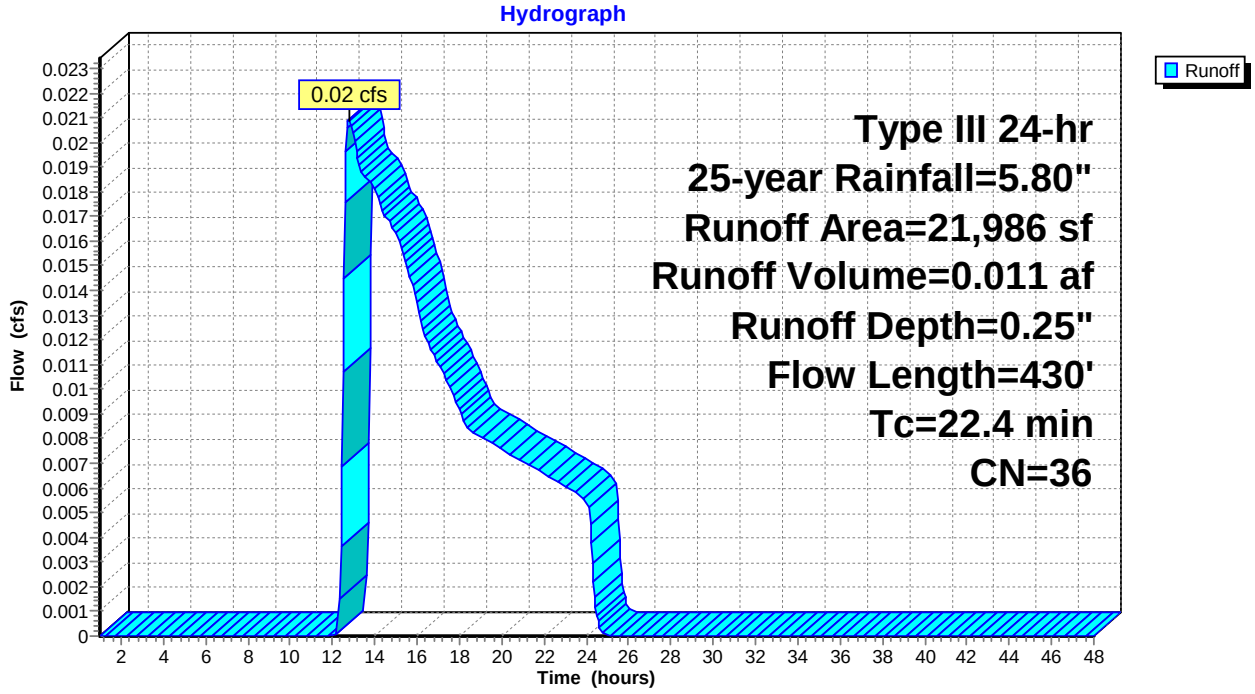
Runoff = 0.02 cfs @ 12.77 hrs, Volume= 0.011 af, Depth= 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	7,797	39	Roadside ditch and shrubs, HSG A
	9,863	30	Woods, Good, HSG A
*	278	98	A.1 walkway and patio
*	1,326	39	Landscaping/open space, HSG A
*	2,722	39	Landscaping/roadside ditch
	21,986	36	Weighted Average
	21,708		98.74% Pervious Area
	278		1.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.1	70	0.0400	0.06		**Sheet Flow, SF (A to B)** Woods: Dense underbrush n= 0.800 P2= 3.27"
0.1	20	0.4000	3.16		**Shallow Concentrated Flow, SCF (B to C)** Woodland Kv= 5.0 fps
1.2	340	0.0310	4.64	17.83	**Trap/Vee/Rect Channel Flow, Ditch Flow (C to D)** Bot.W=2.00' D=0.80' Z= 2.5 & 4.5 '/' Top.W=7.60' n= 0.035
22.4	430	Total			

Subcatchment 1.1N: SC 1.1N



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Summary for Subcatchment 1.1S: Roofs

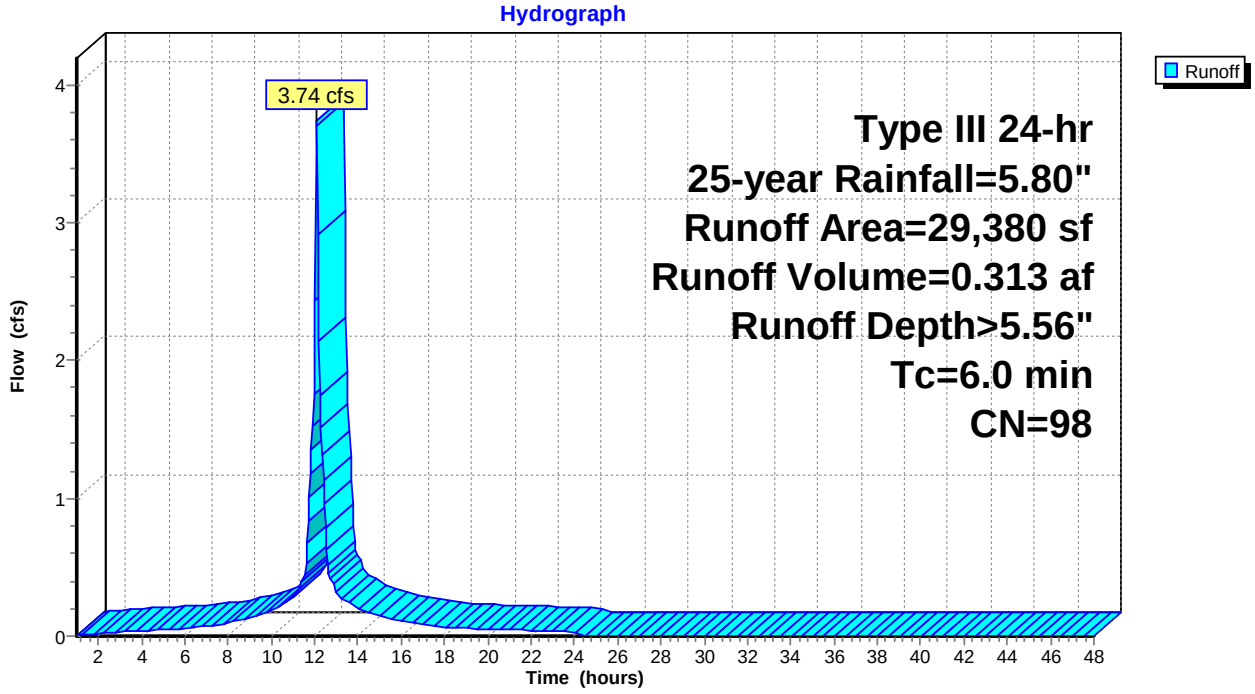
Runoff = 3.74 cfs @ 12.09 hrs, Volume= 0.313 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	29,380	98	Roofs
	29,380		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.1S: Roofs



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Summary for Subcatchment 1.2N: SC 1.2N

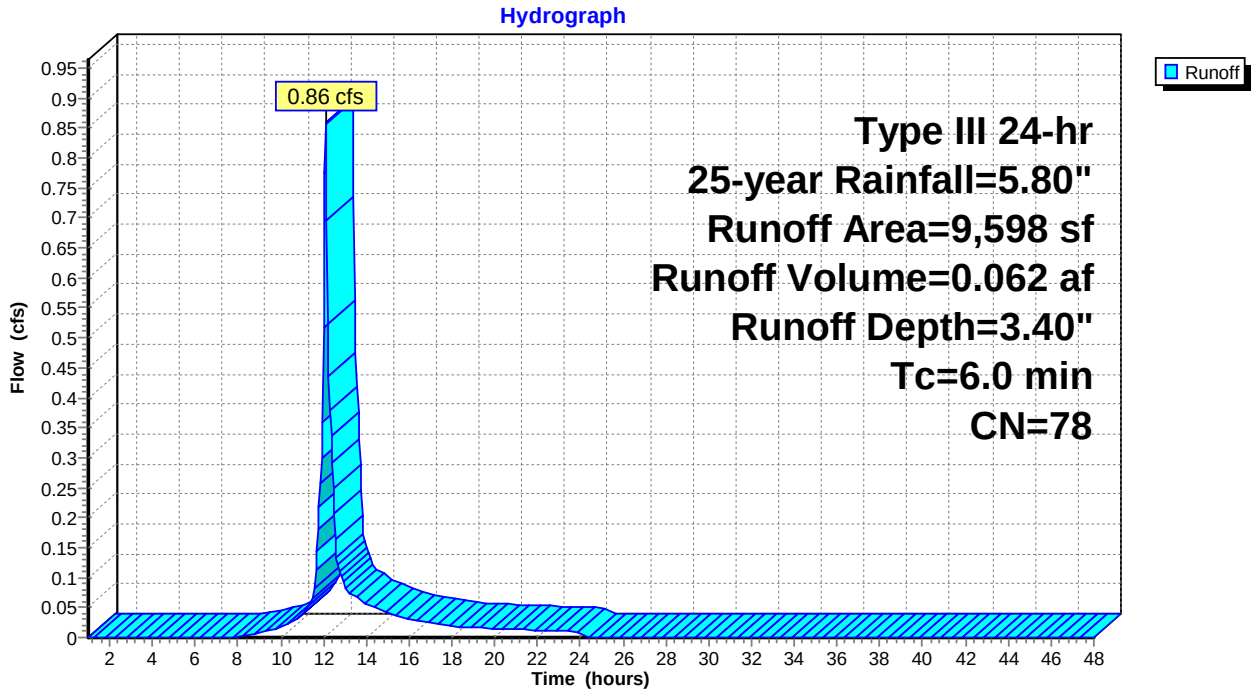
Runoff = 0.86 cfs @ 12.09 hrs, Volume= 0.062 af, Depth= 3.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	3,539	98	Wash Ave
*	2,202	98	sidewalk
*	288	98	A.2 patios
*	29	98	bus shelter
*	235	98	grass pavers
*	3,305	39	Lawn/landscaping/HSG A
	9,598	78	Weighted Average
	3,305		34.43% Pervious Area
	6,293		65.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.2N: SC 1.2N



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Summary for Subcatchment 1.2S: Property Frontage

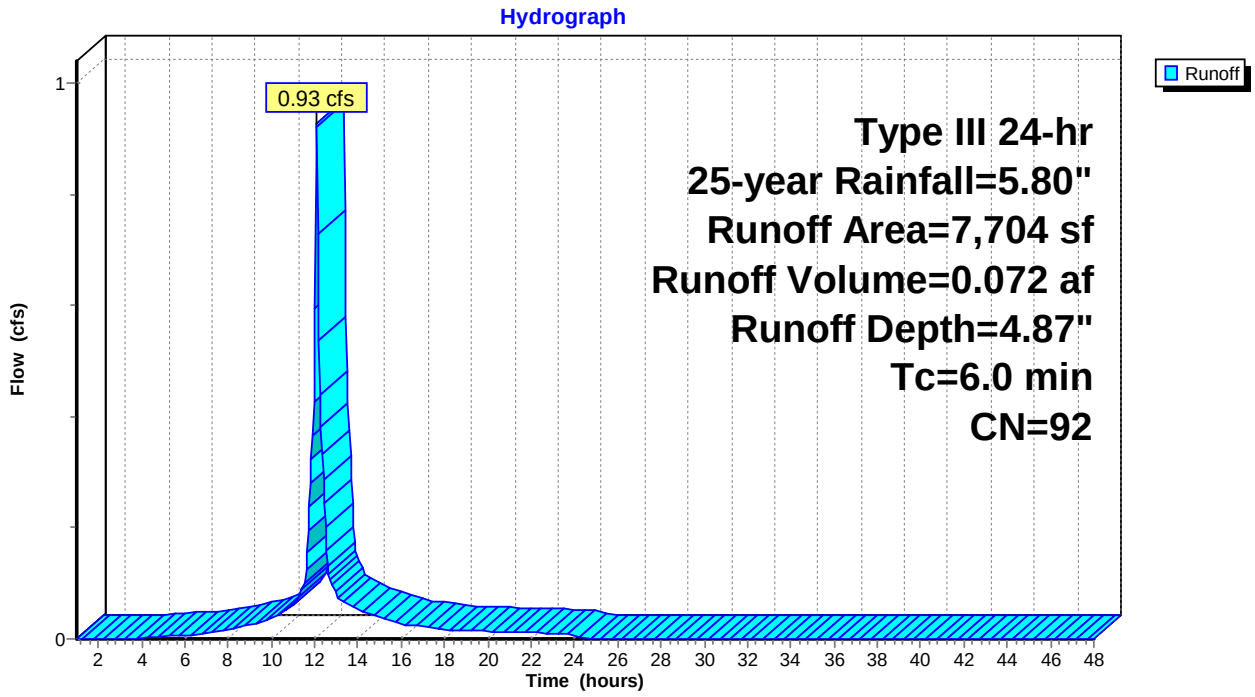
Runoff = 0.93 cfs @ 12.09 hrs, Volume= 0.072 af, Depth= 4.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	2,963	98	Wash. Ave
*	846	98	sidewalk
*	420	98	A.7/A.8 patio
*	16	98	transformer
*	403	98	driveway
*	303	98	E. sidewalk
*	48	98	bus shelter
	2,705	80	>75% Grass cover, Good, HSG D
	7,704	92	Weighted Average
	2,705		35.11% Pervious Area
	4,999		64.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.2S: Property Frontage



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Summary for Subcatchment 1.3N: SC 1.3N

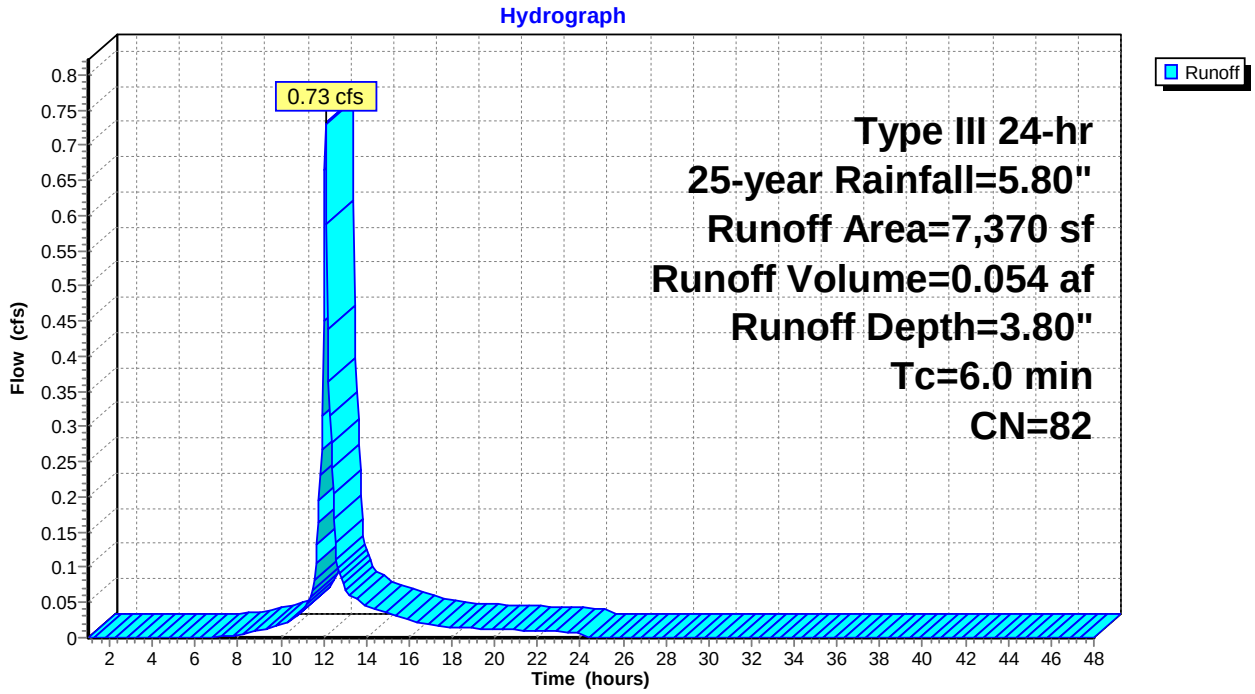
Runoff = 0.73 cfs @ 12.09 hrs, Volume= 0.054 af, Depth= 3.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	3,255	98	Wash Ave
*	1,111	98	sidewalk
*	224	98	A.3 patios
*	331	98	driveway
*	456	98	E. sidewalk
*	14	98	bus shelter
*	1,979	39	Landscaping/lawn, HSG A
	7,370	82	Weighted Average
	1,979		26.85% Pervious Area
	5,391		73.15% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.3N: SC 1.3N



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Summary for Subcatchment 1.3S: West Parking Lot

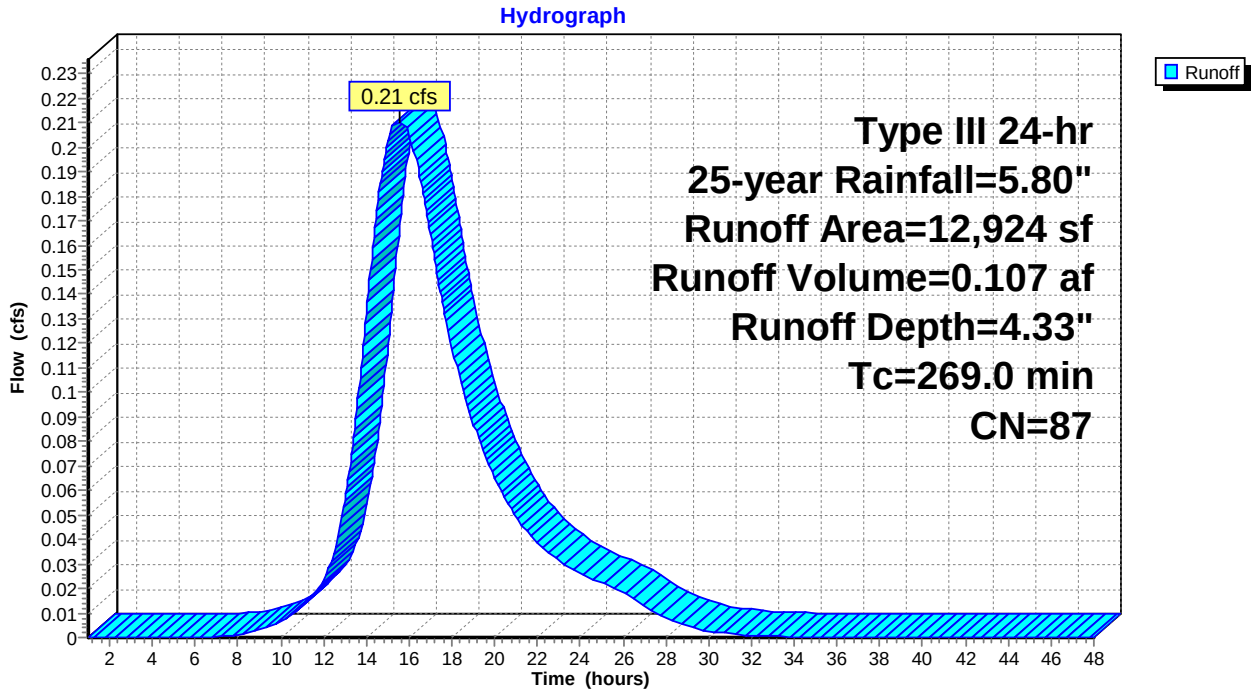
Runoff = 0.21 cfs @ 15.54 hrs, Volume= 0.107 af, Depth= 4.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	2,604	98	porous
*	5,218	98	paved drive aisle
*	1,207	98	walkway
*	1,305	98	patio/covered pav
*	86	98	B.5 mech room
	2,504	39	>75% Grass cover, Good, HSG A
	12,924	87	Weighted Average
	2,504		19.37% Pervious Area
	10,420		80.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
269.0					**Direct Entry, UNH**

Subcatchment 1.3S: West Parking Lot



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Summary for Subcatchment 1.4N: SC 1.4N

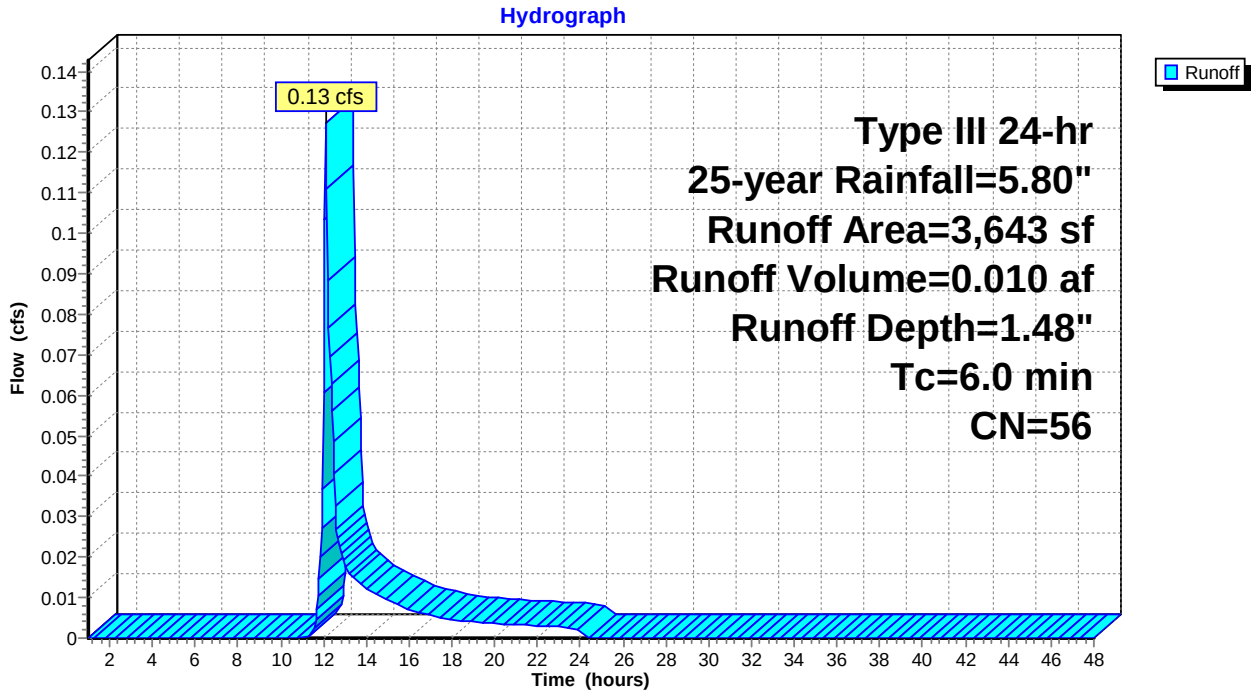
Runoff = 0.13 cfs @ 12.10 hrs, Volume= 0.010 af, Depth= 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	235	98	Walkway/patio Bldg A.1
*	825	80	Grass pavers
*	214	98	sidewalk
*	2,369	39	Landscaping/openspace/rain garden/ HSG A
	3,643	56	Weighted Average
	3,194		87.67% Pervious Area
	449		12.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.4N: SC 1.4N



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Summary for Subcatchment 1.4S: Common

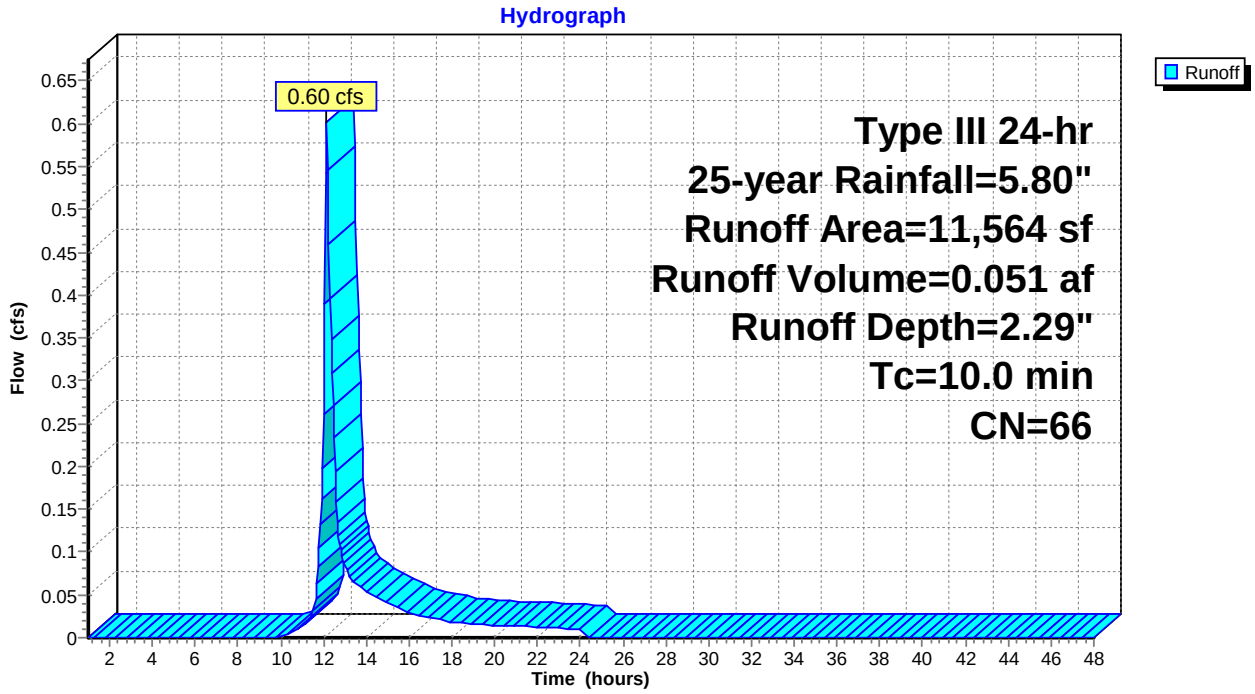
Runoff = 0.60 cfs @ 12.15 hrs, Volume= 0.051 af, Depth= 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	1,571	98	paved walkway
*	50	98	B.4 mech room
*	142	98	A.5 rear patio
*	103	98	A.6 rear patio
*	16	98	transformer pad
	4,841	39	>75% Grass cover, Good, HSG A
	4,841	80	>75% Grass cover, Good, HSG D
	11,564	66	Weighted Average
	9,682		83.73% Pervious Area
	1,882		16.27% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1.4S: Common



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Summary for Subcatchment 1.5: SC 1.5N

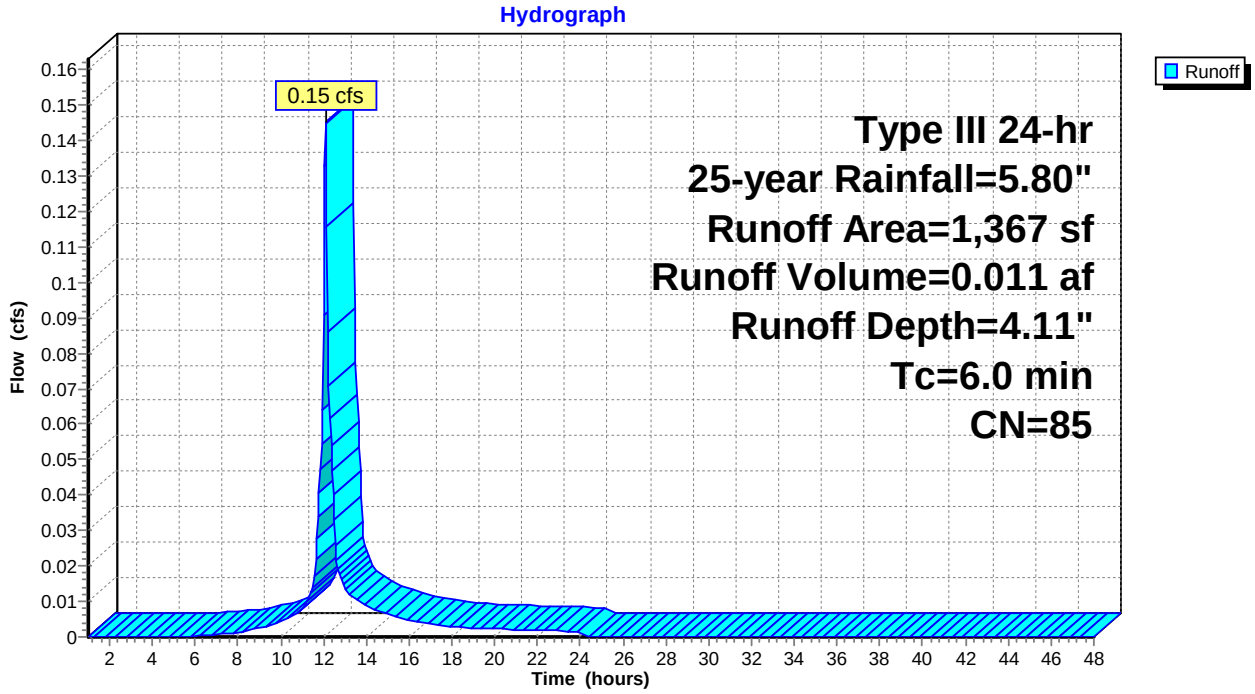
Runoff = 0.15 cfs @ 12.09 hrs, Volume= 0.011 af, Depth= 4.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	719	98	Wash Ave
*	336	98	sidewalk
*	312	39	Landscaping/esplanade
	1,367	85	Weighted Average
	312		22.82% Pervious Area
	1,055		77.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.5: SC 1.5N



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Summary for Subcatchment 1.5N: Roofs

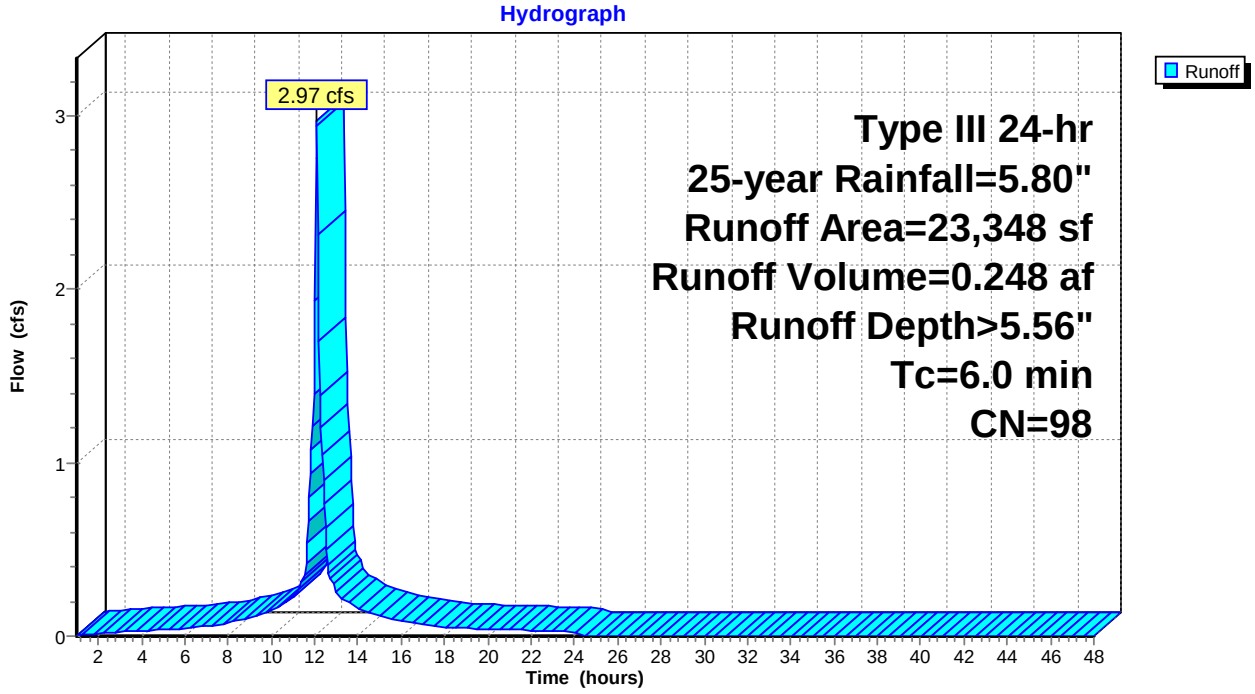
Runoff = 2.97 cfs @ 12.09 hrs, Volume= 0.248 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	23,348	98	IMPERV
	23,348		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.5N: Roofs



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Summary for Subcatchment 1.5S: A.7, A.10, C.3, C.2 Aisle

Runoff = 0.29 cfs @ 15.53 hrs, Volume= 0.151 af, Depth= 4.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	879	98	5' pavers/ s. mews
*	3,722	98	porous
*	203	98	C.2 front patios
*	101	98	C.3 front patios
*	610	98	B.5 patios
*	565	98	B.5 side patio
*	864	98	5' pavers/e. mews
*	406	98	A.10 front patio
*	32	98	transformer pads
*	157	98	B.4 s. walkway
*	42	98	B.4 mech room
*	385	98	B.4 front patios
*	406	98	A.9 front patios
*	106	98	B.4/A.6 side walkway
*	186	98	A.6 rear patio
*	1,003	80	grass pavers
*	663	98	A.7 w.&s. walkway
*	178	98	A.7 rear patio and walkways
	6,425	80	>75% Grass cover, Good, HSG D
	16,933	90	Weighted Average
	7,428		43.87% Pervious Area
	9,505		56.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
269.0					**Direct Entry, UNH**

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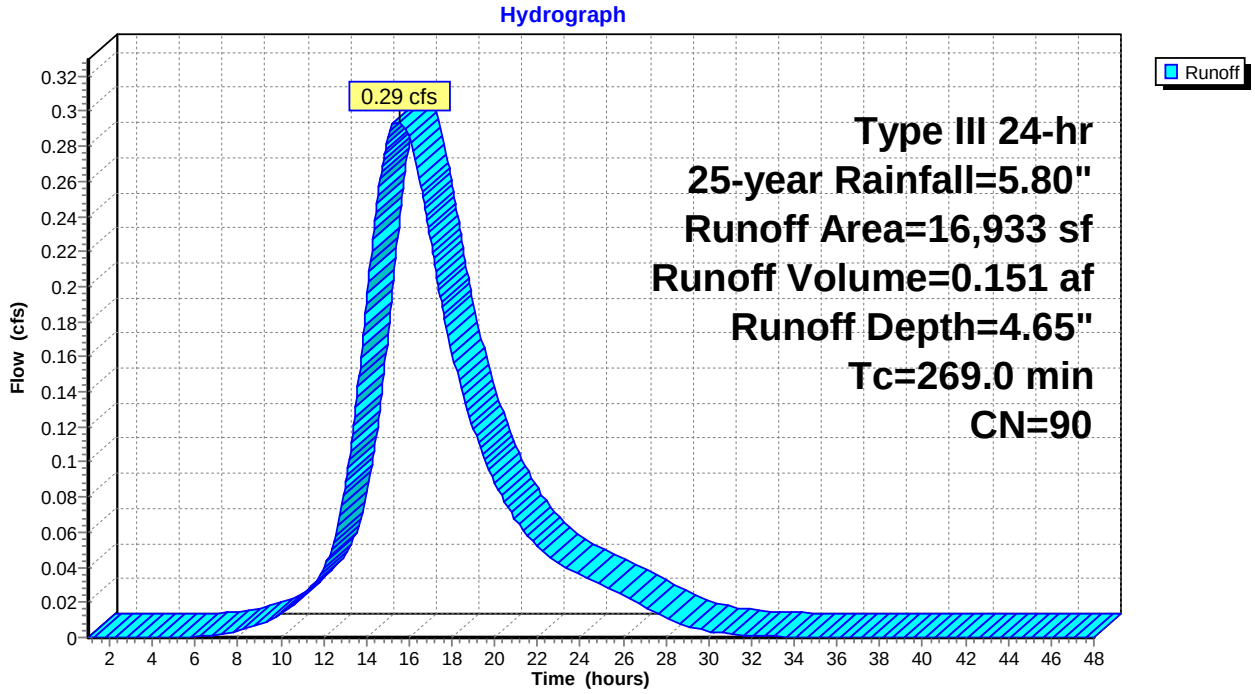
Subcatchment 1.5S: A.7, A.10, C.3, C.2 Aisle



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Summary for Subcatchment 1.6N: SC 1.6N

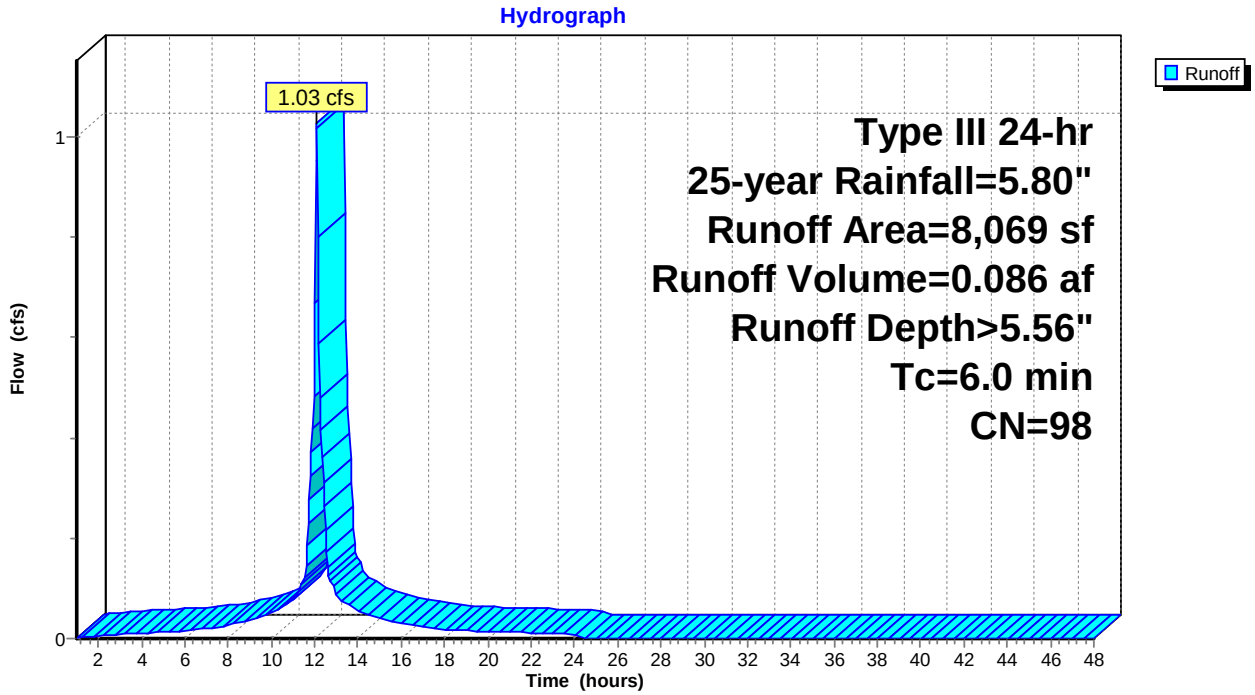
Runoff = 1.03 cfs @ 12.09 hrs, Volume= 0.086 af, Depth> 5.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	6,598	98	Wash Ave
*	1,471	98	sidewalk
	8,069	98	Weighted Average
	8,069		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.6N: SC 1.6N



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Summary for Subcatchment 1.6S: Developed/Undeveloped area

Runoff = 1.45 cfs @ 12.26 hrs, Volume= 0.171 af, Depth= 1.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	37,536	30	Woods, Good, HSG A
*	4,836	39	Landscaped/open space
	1,387	98	Unconnected roofs, HSG A
*	5,781	39	Wash Ave ditch
*	289	98	sidewalk
*	722	98	Wash Ave
*	674	39	Landscaping
*	6,396	98	Wash Ave
*	1,556	80	Grass pavers
*	1,449	98	Driveway entrance
*	302	98	Sidewalk
*	364	98	Patio walkway
*	1,799	39	Landscaping/open space, HSG A
*	3,515	98	Wash Ave
*	401	80	grass pavers
*	1,684	98	sidewalk
*	268	98	A.7 patio
*	324	98	A.6 patio
*	415	98	A.5 patio
*	5,887	80	Landscaping/ HSG D
	75,585	52	Weighted Average
	58,470		77.36% Pervious Area
	17,115		22.64% Impervious Area
	1,387		8.10% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	100	0.0500	0.17		**Sheet Flow, Sheet flow (A to B)** Grass: Dense n= 0.240 P2= 3.27"
5.5	203	0.0600	0.61		**Shallow Concentrated Flow, SCF (B to C)** Forest w/Heavy Litter Kv= 2.5 fps
0.3	92	0.0400	5.40	17.28	**Trap/Vee/Rect Channel Flow, Ditch Flow (C to D)** Bot.W=2.00' D=0.80' Z= 2.5 '/' Top.W=6.00' n= 0.035
15.6	395	Total			

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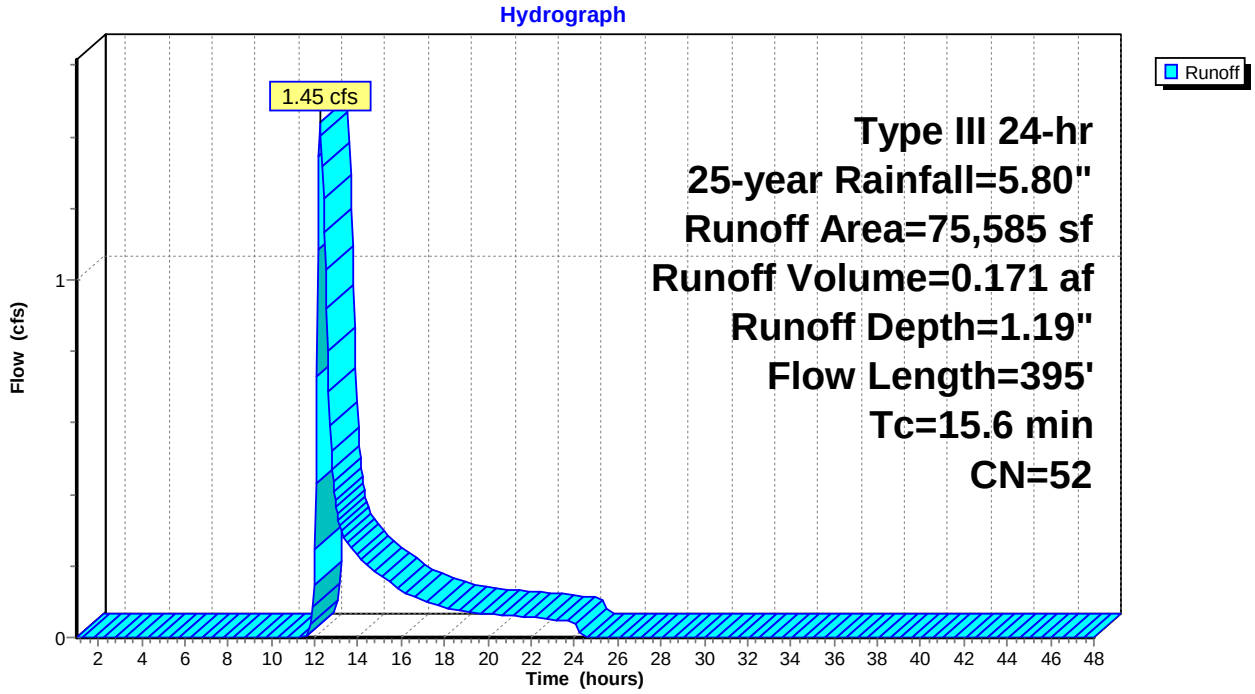
Subcatchment 1.6S: Developed/Undeveloped area



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Summary for Subcatchment 1.7N: SC 1.7N

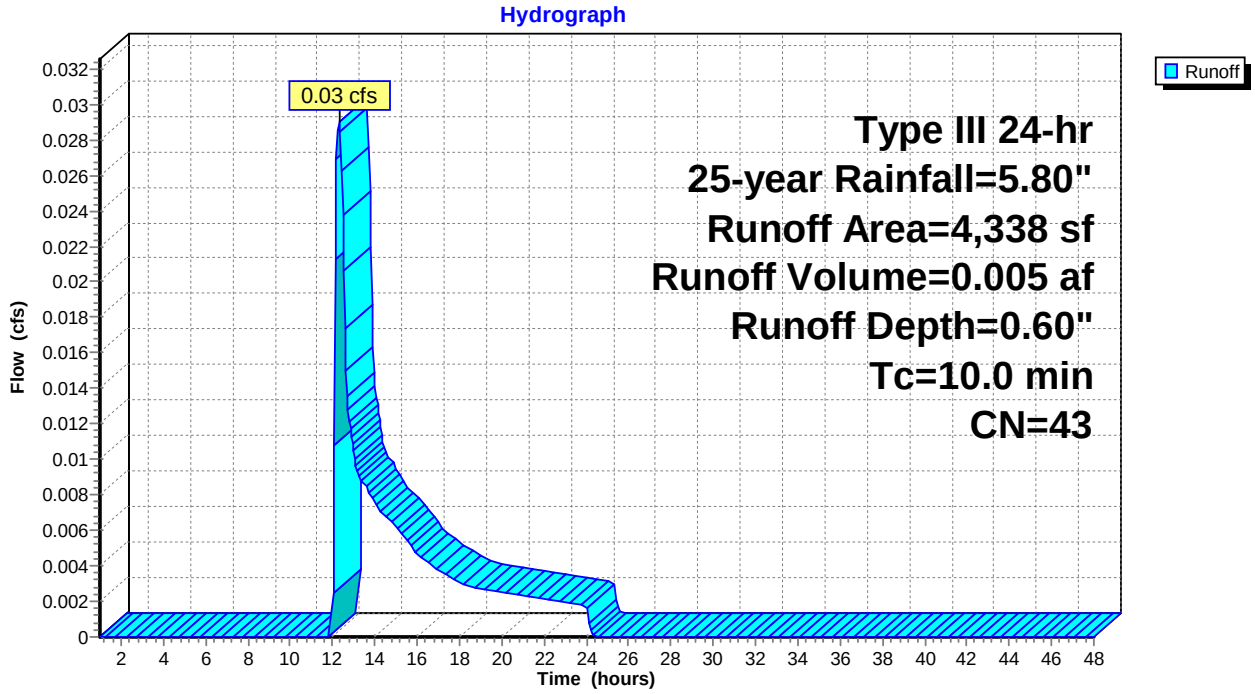
Runoff = 0.03 cfs @ 12.32 hrs, Volume= 0.005 af, Depth= 0.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	288	98	C.1 patio
*	4,034	39	Lawn/lanscaping/ditch, HSG A
*	16	98	transformer
	4,338	43	Weighted Average
	4,034		92.99% Pervious Area
	304		7.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1.7N: SC 1.7N



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Summary for Subcatchment 1.7S: SC 1.7S

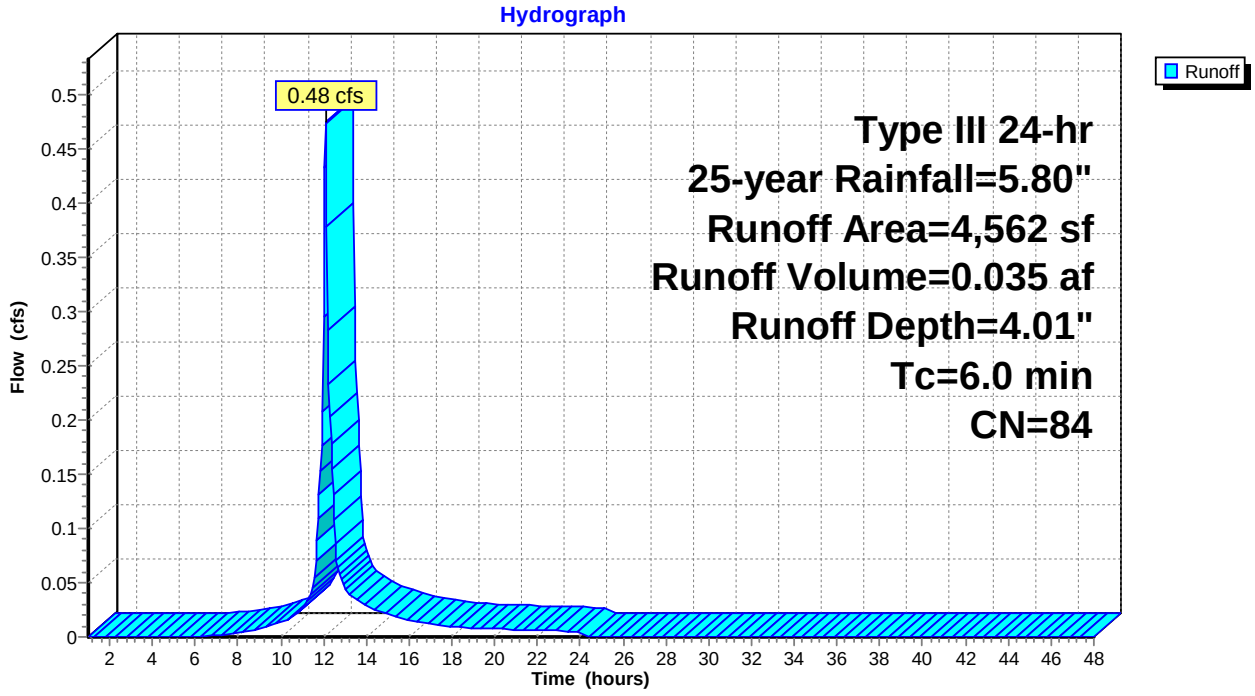
Runoff = 0.48 cfs @ 12.09 hrs, Volume= 0.035 af, Depth= 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	724	98	A.9/A.10 rear patios
*	356	98	Walkway
*	3,482	80	Lawn/landscaping, HSG D
	4,562	84	Weighted Average
	3,482		76.33% Pervious Area
	1,080		23.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.7S: SC 1.7S



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Summary for Subcatchment 1.8N: A.4 Rear Patio

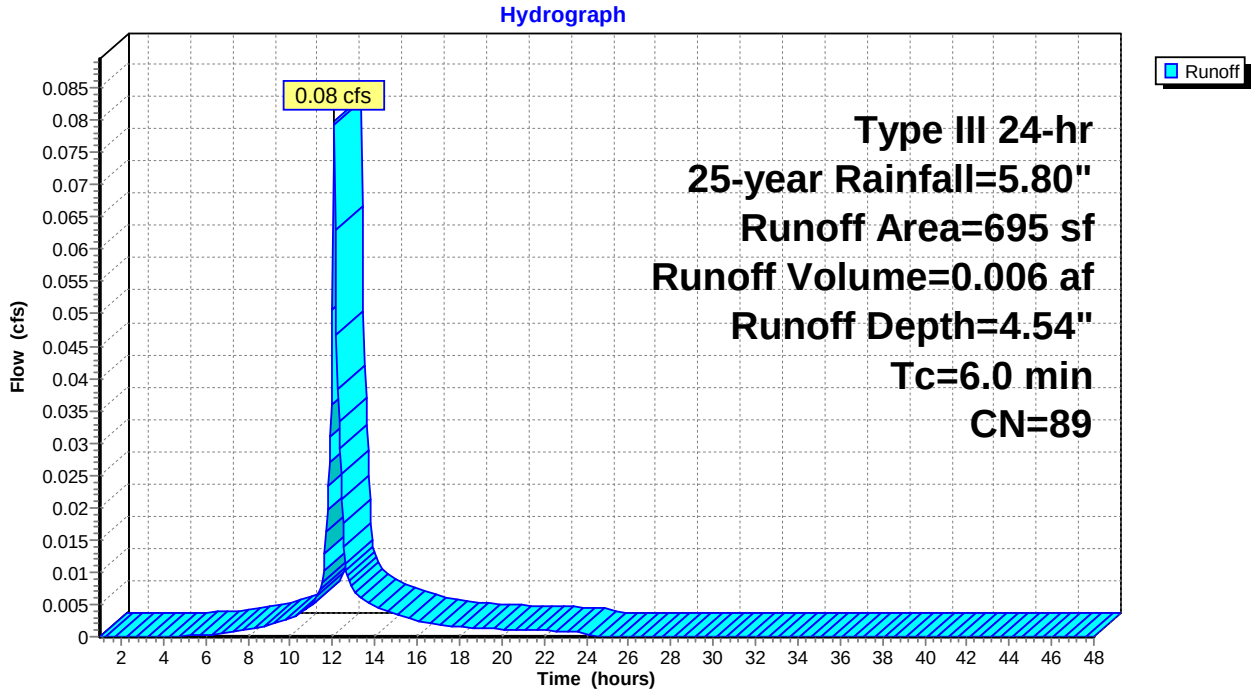
Runoff = 0.08 cfs @ 12.09 hrs, Volume= 0.006 af, Depth= 4.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	360	98	Patio
*	335	80	Lawn/landscaping, HSG D
	695	89	Weighted Average
	335		48.20% Pervious Area
	360		51.80% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Subcatchment 1.8N: A.4 Rear Patio



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Summary for Subcatchment 1.9N: Common

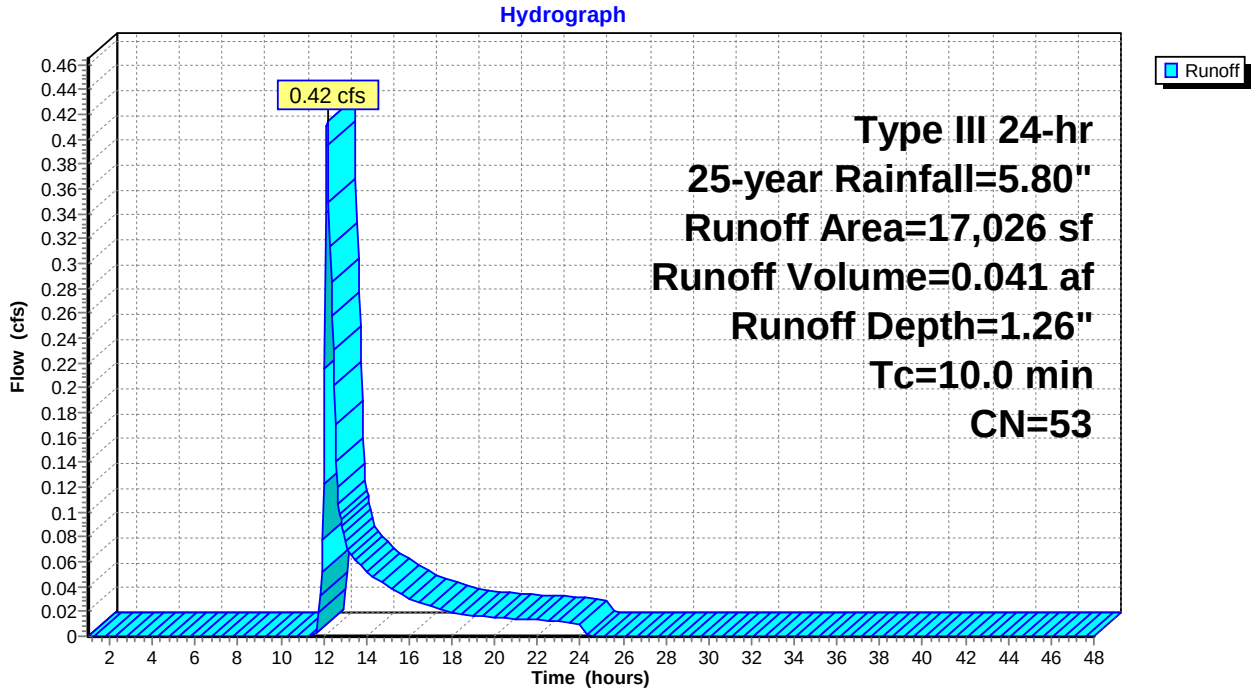
Runoff = 0.42 cfs @ 12.17 hrs, Volume= 0.041 af, Depth= 1.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	1,898	98	Paved walkway
*	1,662	98	Pavers & covered pav
*	472	98	patios
*	16	98	transformer
*	12,978	39	Open space, landscaping, HSG A
	17,026	53	Weighted Average
	12,978		76.22% Pervious Area
	4,048		23.78% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Subcatchment 1.9N: Common



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Summary for Subcatchment 2.1N: SC 2.1N

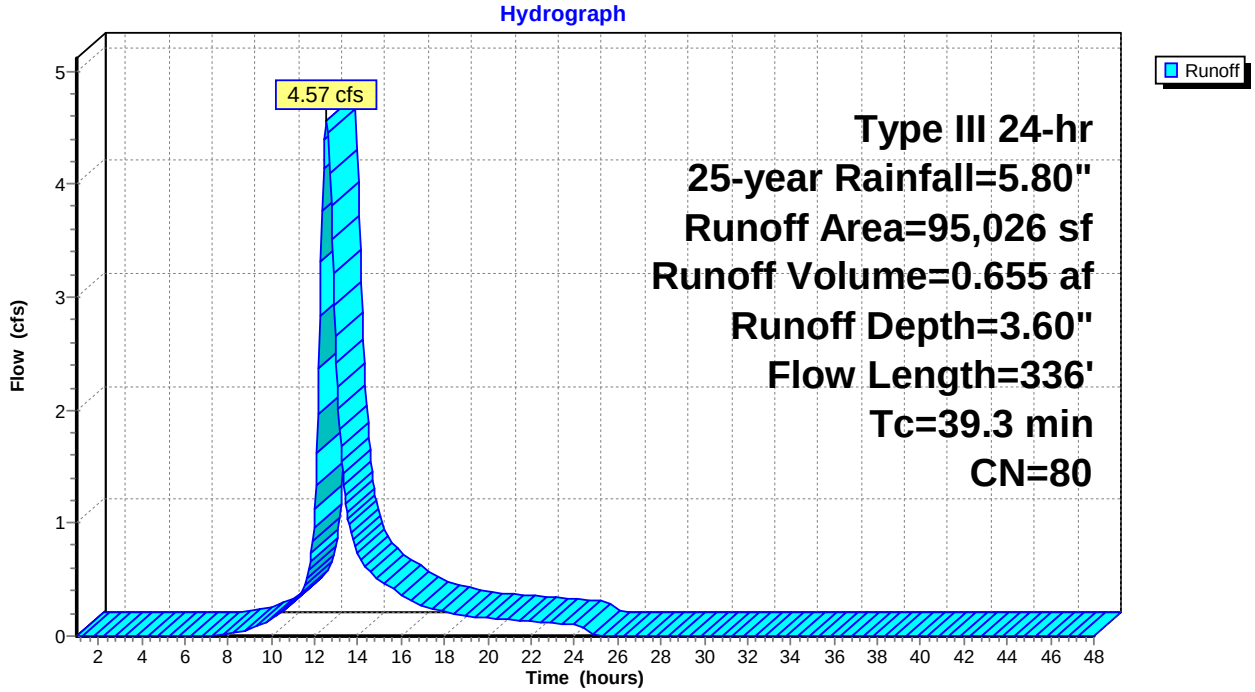
Runoff = 4.57 cfs @ 12.54 hrs, Volume= 0.655 af, Depth= 3.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	7,052	80	Road sideslope
	37,855	77	Woods, Good, HSG D
*	4,097	98	Sidewalk/N. Conc apron
*	10,054	98	Wash. Ave and S. Conc apron
	5,335	30	Woods, Good, HSG A
*	7,208	98	Rooftops and driveways
*	23,052	80	Lawns/landscaping, HSG D
*	373	80	ROW Landscaping
	95,026	80	Weighted Average
	73,667		77.52% Pervious Area
	21,359		22.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.4	100	0.0300	0.05		**Sheet Flow, SF (A to B)** Woods: Dense underbrush n= 0.800 P2= 3.27"
7.9	236	0.0100	0.50		**Shallow Concentrated Flow, SCF (B to C)** Woodland Kv= 5.0 fps
39.3	336	Total			

Subcatchment 2.1N: SC 2.1N



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Summary for Subcatchment 2.1S: Eastern Parking Lot

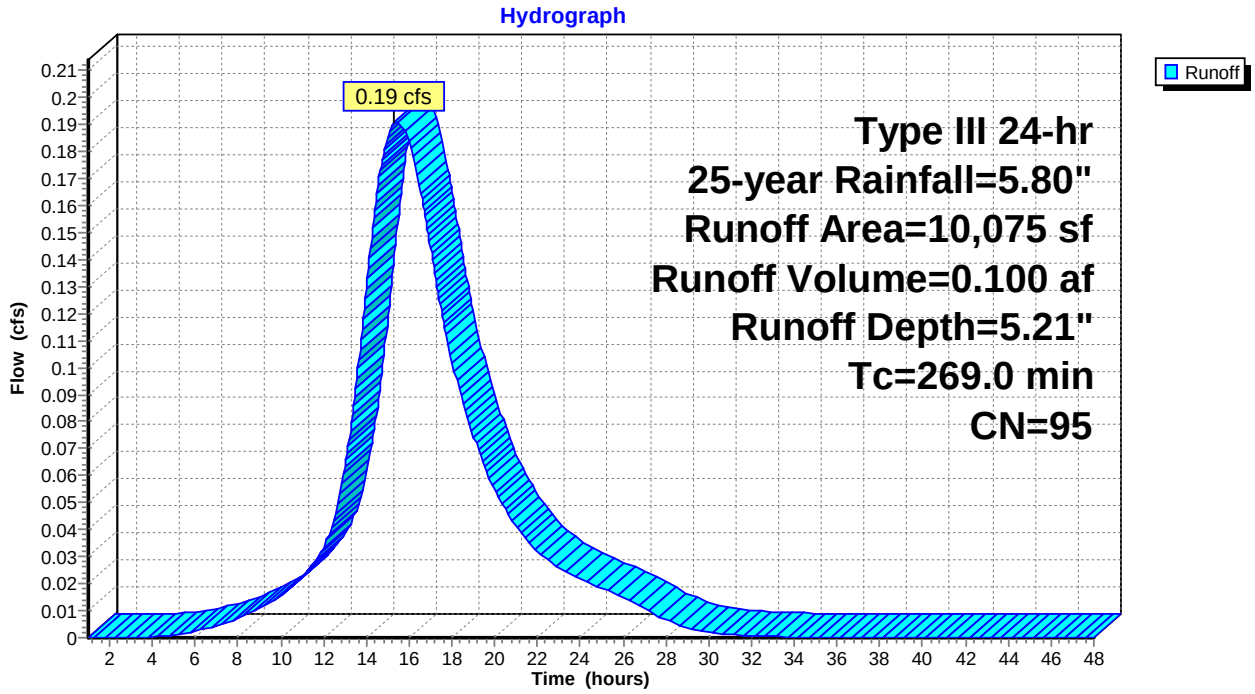
Runoff = 0.19 cfs @ 15.29 hrs, Volume= 0.100 af, Depth= 5.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	1,296	98	Porous
*	4,474	98	Paved driveaisle
*	971	98	Walkway/patio
*	371	98	Rear walkway/patio
*	128	98	dumpster pad
*	1,134	98	Porous
	1,701	80	>75% Grass cover, Good, HSG D
	10,075	95	Weighted Average
	1,701		16.88% Pervious Area
	8,374		83.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
269.0					**Direct Entry, UNH**

Subcatchment 2.1S: Eastern Parking Lot



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Summary for Subcatchment 2.2S: Developed/nondeveloped area

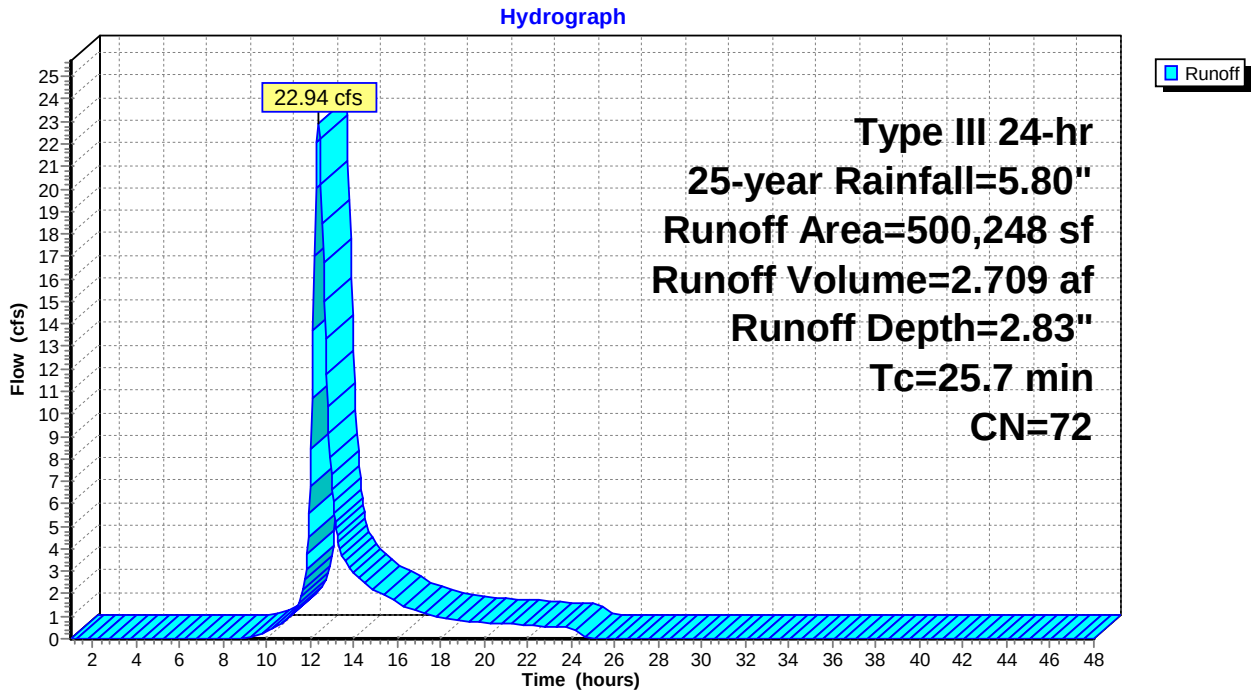
Runoff = 22.94 cfs @ 12.37 hrs, Volume= 2.709 af, Depth= 2.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	577	98	Bldg C.2 & C.3 patios (HSG A)
*	3,734	39	Slope behind patios, HSG A
*	30,823	39	>75% Grass cover, Good, HSG A
*	3,896	98	Roofs/driveways/patios (HSG A)
	24,173	55	Woods, Good, HSG B
	6,557	70	Woods, Good, HSG C
	146,624	70	Woods, Good, HSG C
	237,115	77	Woods, Good, HSG D
*	10,865	80	>75% Grass cover, Good, HSG D
*	3,503	98	Roofs/driveways/patios (HSG D)
*	13,566	80	Landscaped/openspace areas (HSG D)
*	5,509	98	Wash Ave
*	1,578	98	Sidewalk
*	9,452	80	Roadside ditch/slope
*	1,797	98	Auburn St
*	479	80	Landscaping Auburn St
	500,248	72	Weighted Average
	483,388		96.63% Pervious Area
	16,860		3.37% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.7					**Direct Entry, copy from pre**

Subcatchment 2.2S: Developed/nondeveloped area



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Summary for Subcatchment 3.1N: SC 3.1N

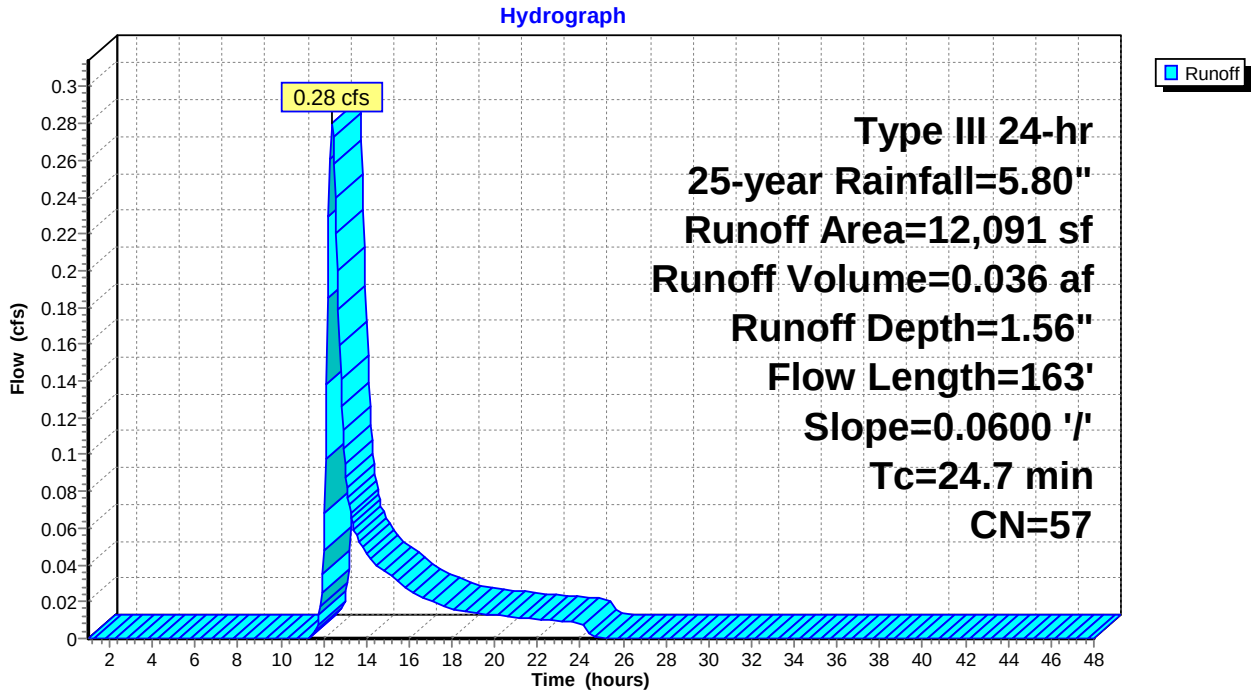
Runoff = 0.28 cfs @ 12.39 hrs, Volume= 0.036 af, Depth= 1.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	4,121	30	Woods, Good, HSG A
*	1,504	39	Landscaping/swale, HSG A
*	16	98	transformer pad
	2,428	77	Woods, Good, HSG D
*	4,022	80	Landscaping/slope, HSG D
	12,091	57	Weighted Average
	12,075		99.87% Pervious Area
	16		0.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.8	100	0.0600	0.07		**Sheet Flow, SF (A to B)** Woods: Dense underbrush n= 0.800 P2= 3.27"
0.9	63	0.0600	1.22		**Shallow Concentrated Flow, SCF (B to C)** Woodland Kv= 5.0 fps
24.7	163	Total			

Subcatchment 3.1N: SC 3.1N



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Summary for Subcatchment 4.1N: 4.1N

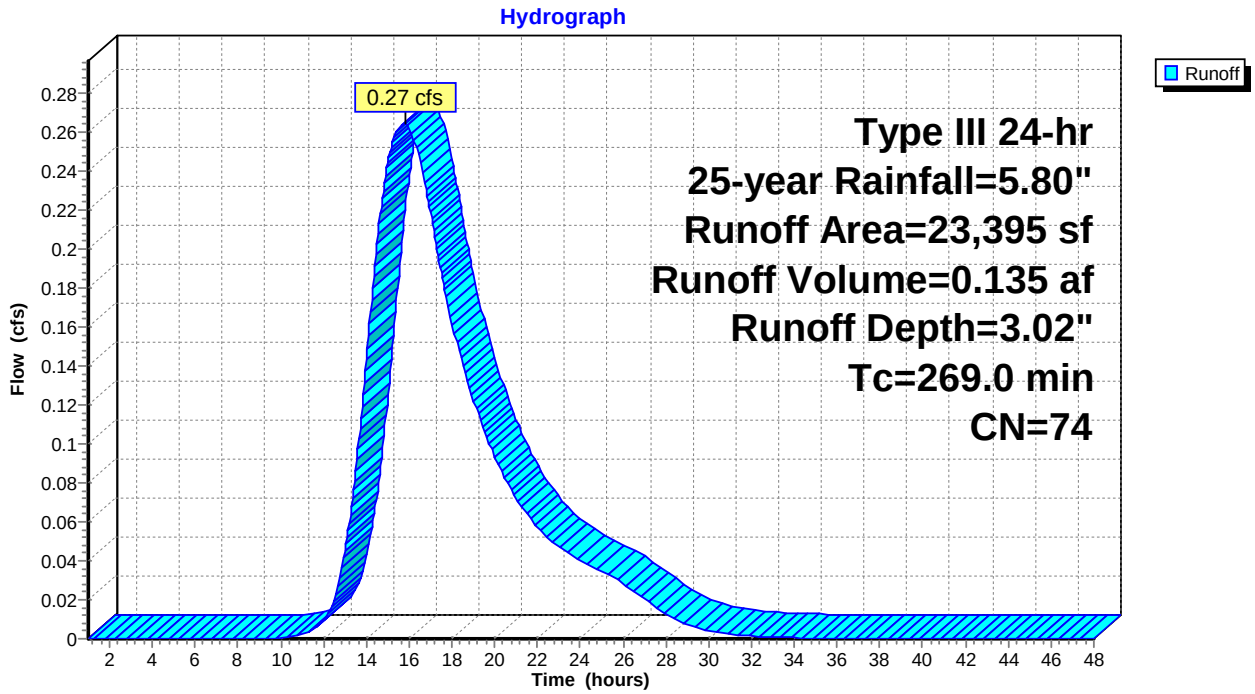
Runoff = 0.27 cfs @ 15.82 hrs, Volume= 0.135 af, Depth= 3.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	947	98	A.1 rear patio
*	439	98	A.2 walkway
*	5,241	98	porous pavement
*	1,850	98	5' wide pavers in mews
*	403	98	A.4 front patios
*	408	98	B.1 patios
*	301	98	B.1/B,2 mech room walkway
*	795	98	B.1/B.2 patio area
*	16	98	transformer pad
*	612	98	B.2 patios
*	408	98	B.3 patios
*	204	98	C.1 patios
*	128	98	dumpster pad
*	95	98	B.2 east walkway
*	2,160	98	eastern parking & driveaisle
*	9,388	39	Lawn/landscaping, HSG A
	23,395	74	Weighted Average
	9,388		40.13% Pervious Area
	14,007		59.87% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
269.0					**Direct Entry, UNH**

Subcatchment 4.1N: 4.1N



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Summary for Subcatchment 4.2N: Eastern Parking Lot

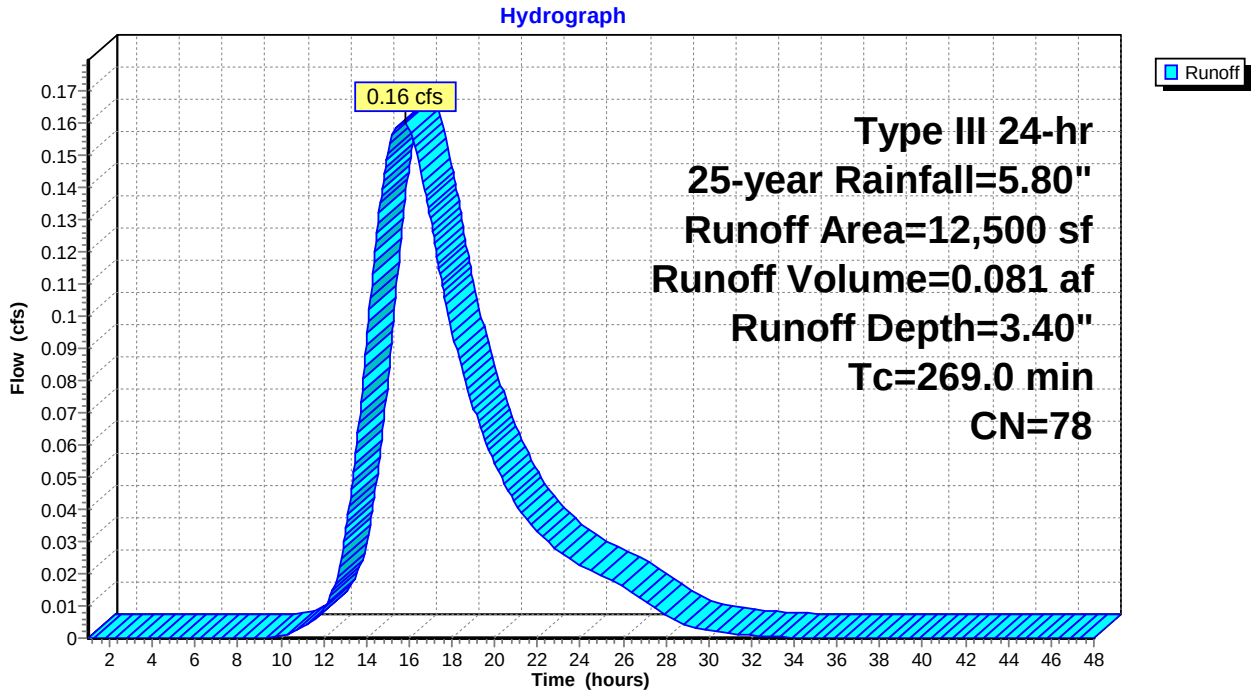
Runoff = 0.16 cfs @ 15.79 hrs, Volume= 0.081 af, Depth= 3.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
*	1,369	98	Sidewalk
*	555	98	Porous pavement
*	6,428	98	Parking lot
*	4,148	39	Landscaping/open space, HSG A
	12,500	78	Weighted Average
	4,148		33.18% Pervious Area
	8,352		66.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
269.0					**Direct Entry, UNH**

Subcatchment 4.2N: Eastern Parking Lot



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Summary for Subcatchment 4.3N: SC 4.3N

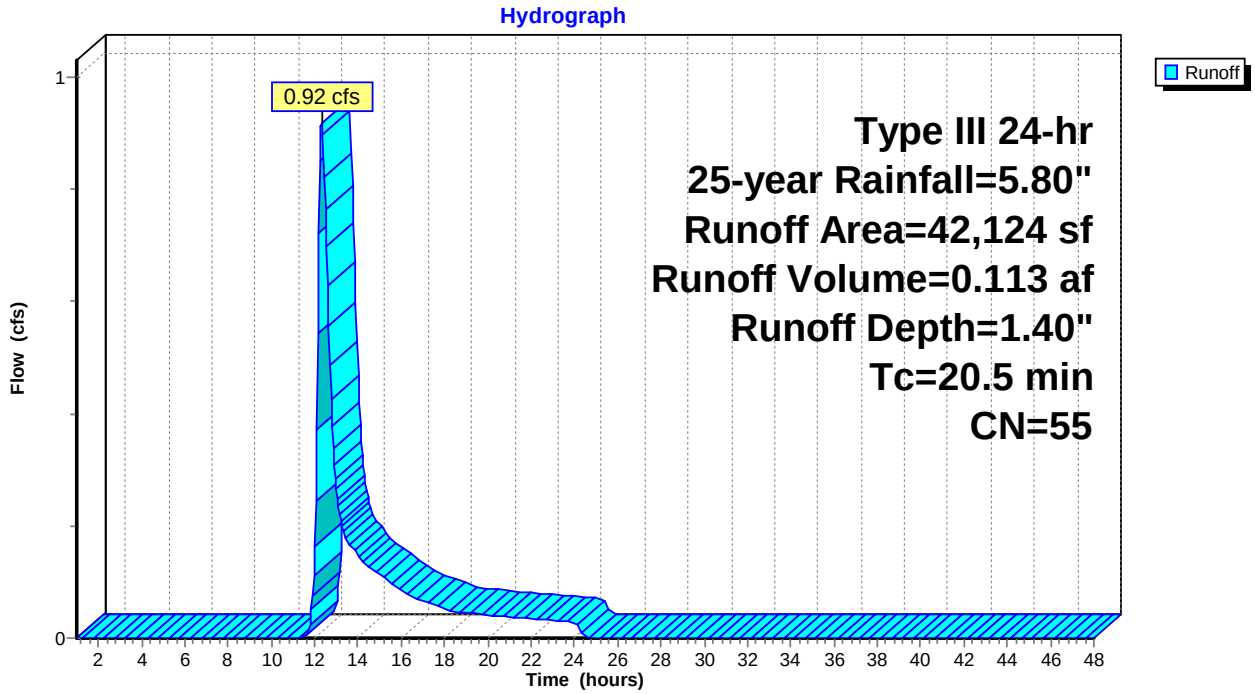
Runoff = 0.92 cfs @ 12.33 hrs, Volume= 0.113 af, Depth= 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-year Rainfall=5.80"

	Area (sf)	CN	Description
	5,895	80	>75% Grass cover, Good, HSG D
	5,180	77	Woods, Good, HSG D
	18,402	30	Woods, Good, HSG A
*	1,998	39	Landscaping/slope, HSG A
*	10,649	77	Woods, Good, HSG D
	42,124	55	Weighted Average
	42,124		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.5					**Direct Entry, copy from pre**

Subcatchment 4.3N: SC 4.3N



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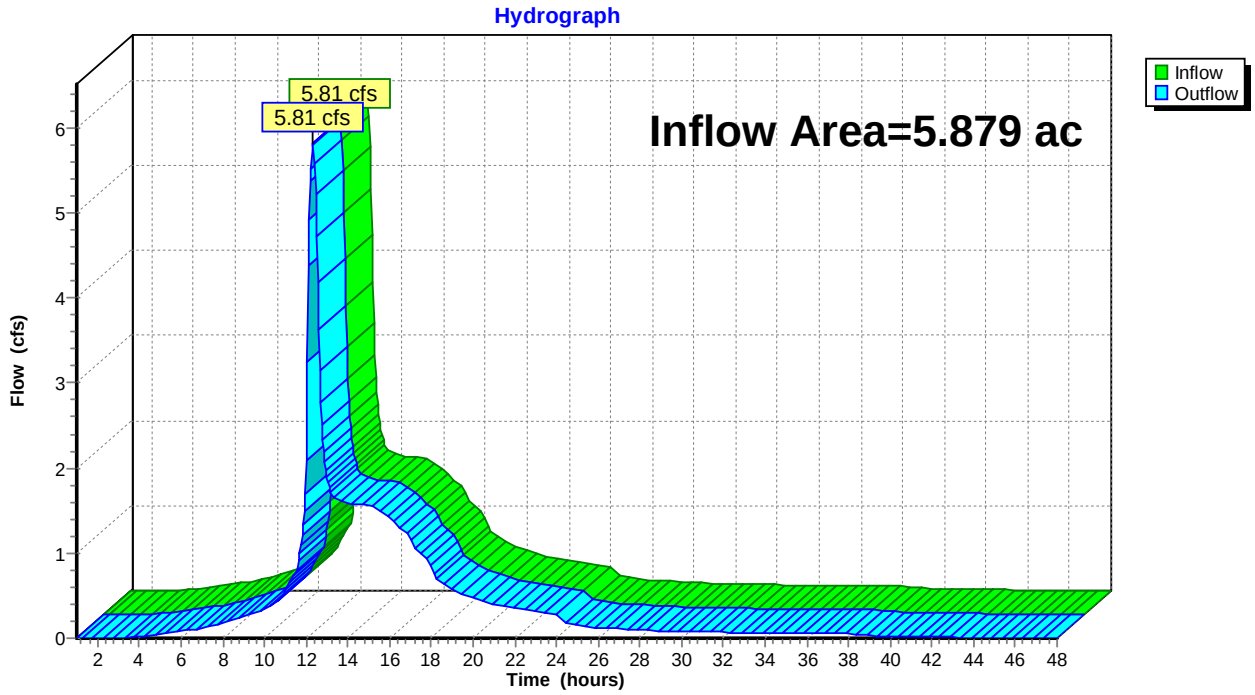
Summary for Reach 1: POI #1 - LAMBERT/WASH INTERSECTION

Inflow Area = 5.879 ac, 48.41% Impervious, Inflow Depth > 2.90" for 25-year event
Inflow = 5.81 cfs @ 12.34 hrs, Volume= 1.419 af
Outflow = 5.81 cfs @ 12.34 hrs, Volume= 1.419 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach 1: POI #1 - LAMBERT/WASH INTERSECTION



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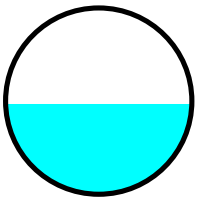
Summary for Reach 1R: N. DITCH CB OUTLET

Inflow Area = 2.382 ac, 51.59% Impervious, Inflow Depth > 2.96" for 25-year event
Inflow = 3.39 cfs @ 12.23 hrs, Volume= 0.587 af
Outflow = 3.39 cfs @ 12.23 hrs, Volume= 0.587 af, Atten= 0%, Lag= 0.2 min

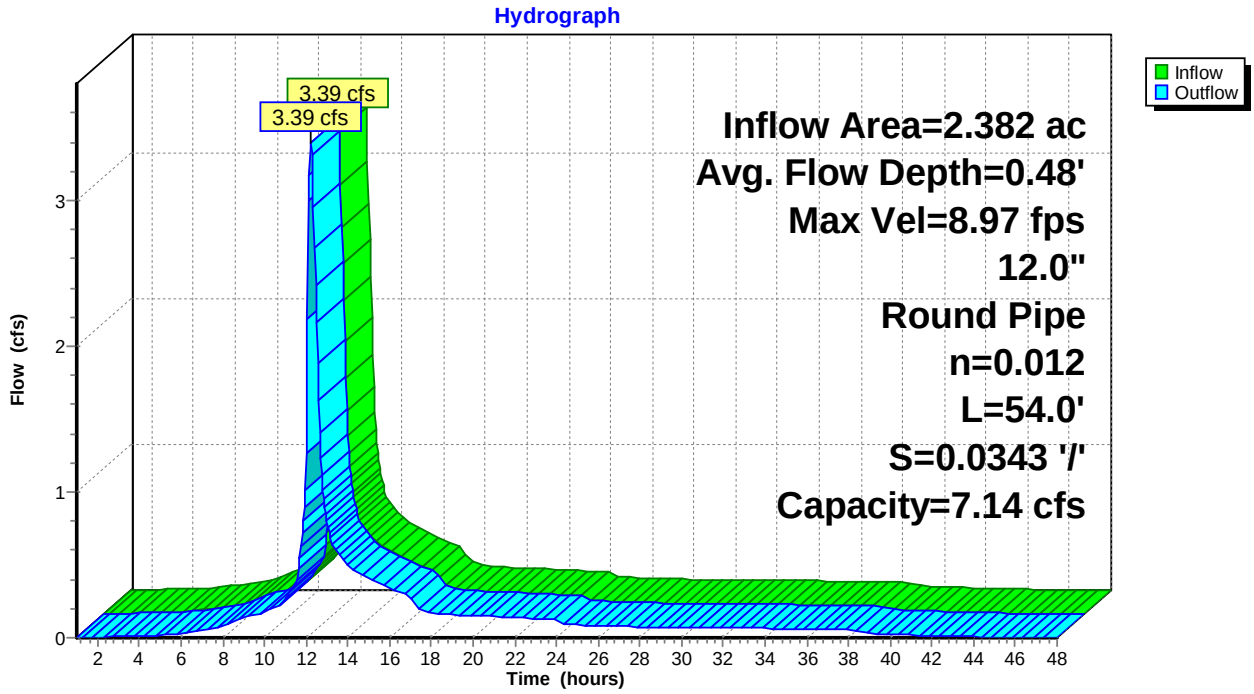
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 8.97 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 2.97 fps, Avg. Travel Time= 0.3 min

Peak Storage= 20 cf @ 12.23 hrs
Average Depth at Peak Storage= 0.48'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.14 cfs

12.0" Round Pipe
n= 0.012
Length= 54.0' Slope= 0.0343 '/'
Inlet Invert= 87.63', Outlet Invert= 85.78'



Reach 1R: N. DITCH CB OUTLET



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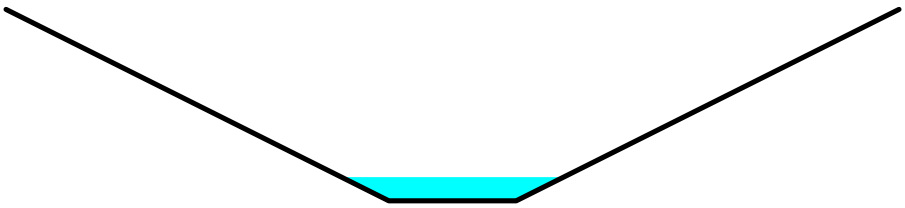
Summary for Reach 2R: N. DITCH

Inflow Area = 2.382 ac, 51.59% Impervious, Inflow Depth > 2.96" for 25-year event
Inflow = 3.40 cfs @ 12.23 hrs, Volume= 0.587 af
Outflow = 3.39 cfs @ 12.23 hrs, Volume= 0.587 af, Atten= 0%, Lag= 0.1 min

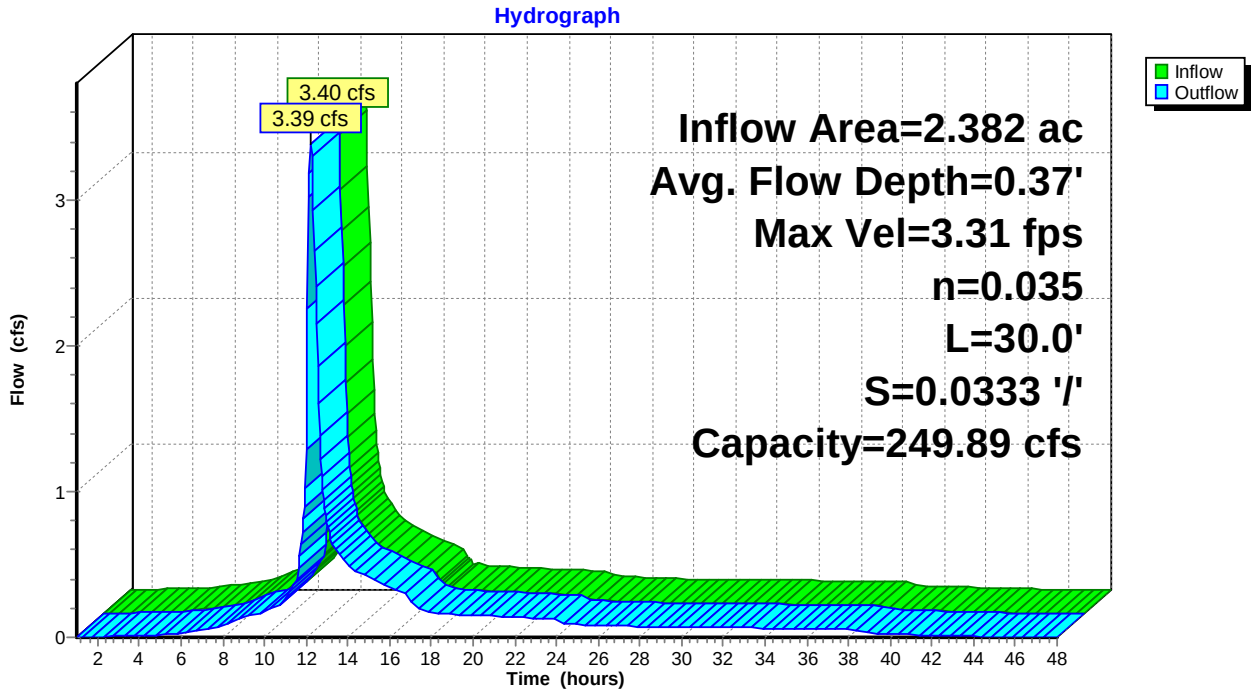
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.31 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.02 fps, Avg. Travel Time= 0.5 min

Peak Storage= 31 cf @ 12.22 hrs
Average Depth at Peak Storage= 0.37'
Bank-Full Depth= 3.00' Flow Area= 24.0 sf, Capacity= 249.89 cfs

2.00' x 3.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 2.0 '/' Top Width= 14.00'
Length= 30.0' Slope= 0.0333 '/'
Inlet Invert= 94.00', Outlet Invert= 93.00'



Reach 2R: N. DITCH



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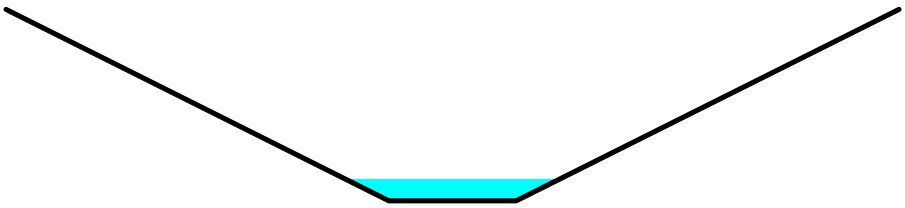
Summary for Reach 3R: S. DITCH

Inflow Area = 3.077 ac, 44.68% Impervious, Inflow Depth = 2.62" for 25-year event
Inflow = 2.82 cfs @ 12.39 hrs, Volume= 0.671 af
Outflow = 2.81 cfs @ 12.39 hrs, Volume= 0.671 af, Atten= 0%, Lag= 0.3 min

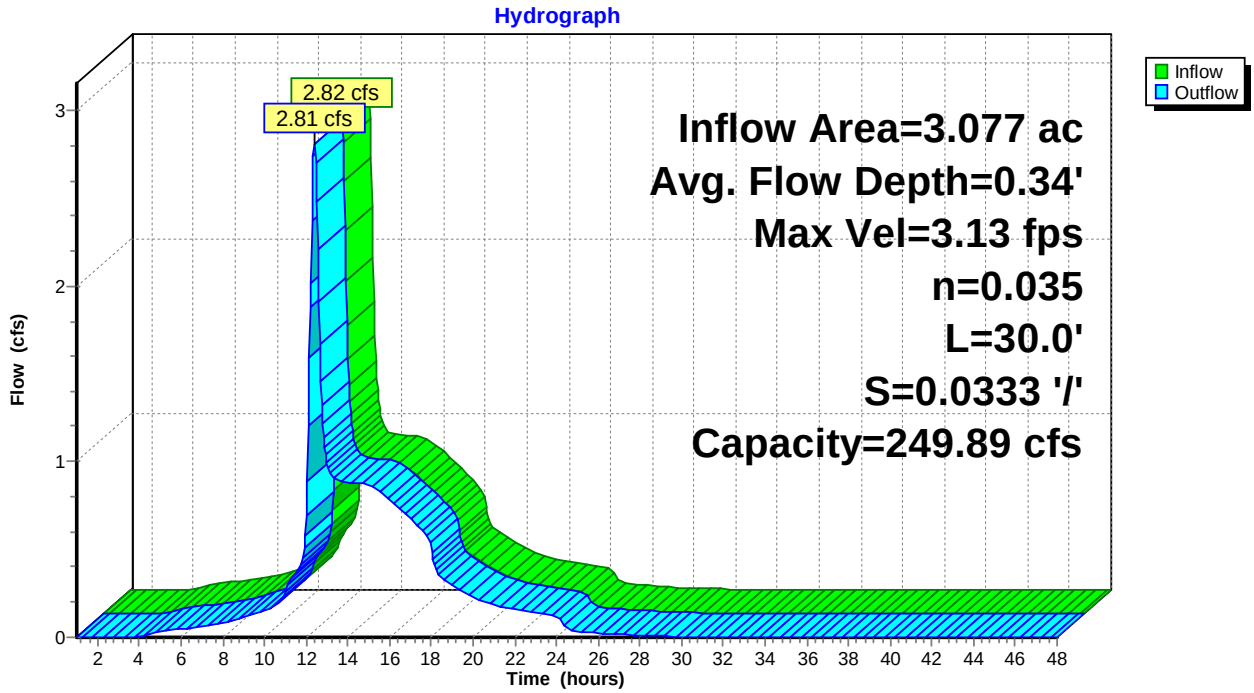
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.13 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.16 fps, Avg. Travel Time= 0.4 min

Peak Storage= 27 cf @ 12.39 hrs
Average Depth at Peak Storage= 0.34'
Bank-Full Depth= 3.00' Flow Area= 24.0 sf, Capacity= 249.89 cfs

2.00' x 3.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 2.0 '/' Top Width= 14.00'
Length= 30.0' Slope= 0.0333 '/'
Inlet Invert= 94.00', Outlet Invert= 93.00'



Reach 3R: S. DITCH



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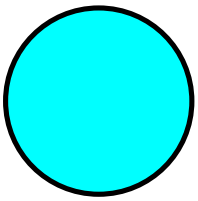
Summary for Reach 4R: WASH. CROSS CULVERT

Inflow Area = 2.181 ac, 22.48% Impervious, Inflow Depth = 3.60" for 25-year event
Inflow = 4.57 cfs @ 12.54 hrs, Volume= 0.655 af
Outflow = 4.09 cfs @ 12.42 hrs, Volume= 0.655 af, Atten= 10%, Lag= 0.0 min

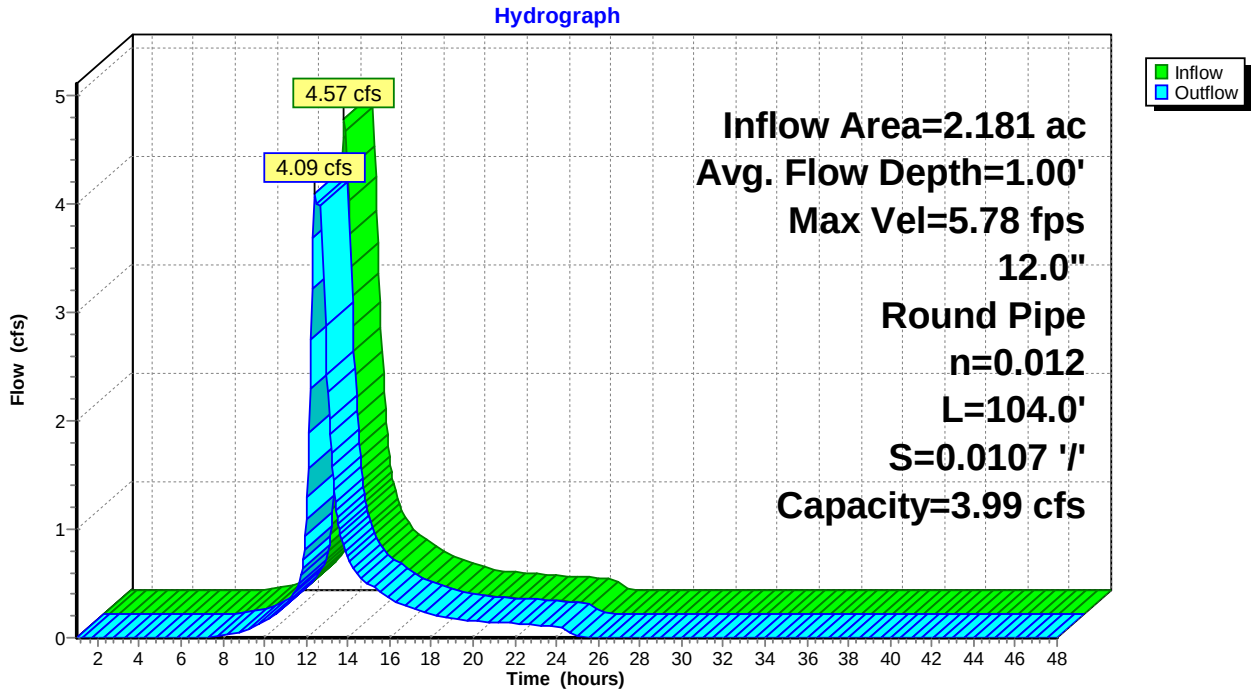
Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.78 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.61 fps, Avg. Travel Time= 0.7 min

Peak Storage= 82 cf @ 12.45 hrs
Average Depth at Peak Storage= 1.00'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.99 cfs

12.0" Round Pipe
n= 0.012 Corrugated PP, smooth interior
Length= 104.0' Slope= 0.0107 '/'
Inlet Invert= 113.80', Outlet Invert= 112.69'



Reach 4R: WASH. CROSS CULVERT



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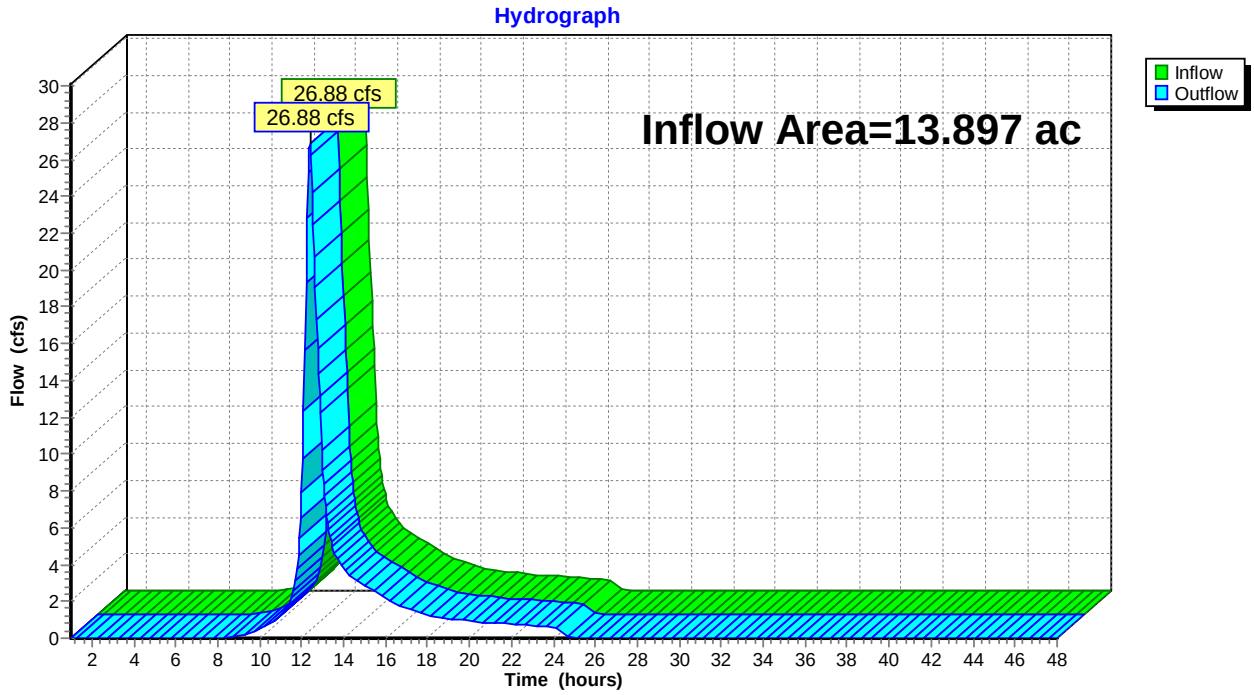
Summary for Reach POI 2: POI #2 - LAMBERT CROSS CULVERT

Inflow Area = 13.897 ac, 7.70% Impervious, Inflow Depth = 2.99" for 25-year event
Inflow = 26.88 cfs @ 12.38 hrs, Volume= 3.464 af
Outflow = 26.88 cfs @ 12.38 hrs, Volume= 3.464 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach POI 2: POI #2 - LAMBERT CROSS CULVERT



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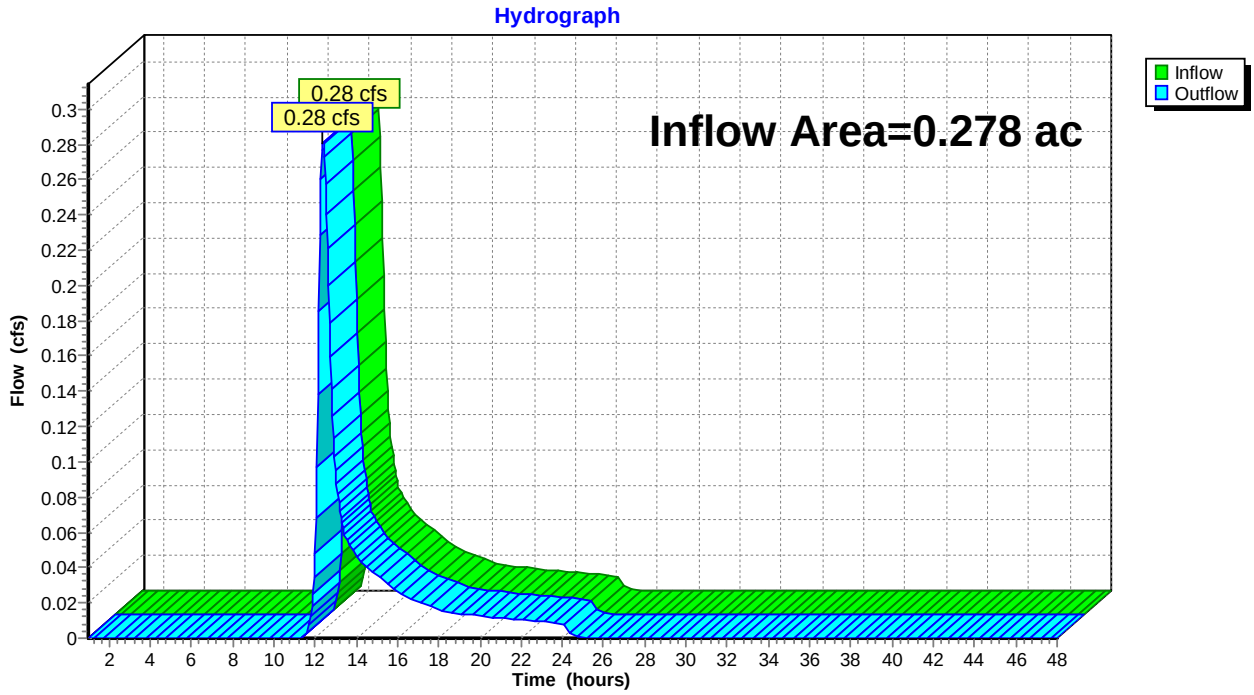
Summary for Reach POI 3: POI #3 - FALMOUTH WETLANDS

Inflow Area = 0.278 ac, 0.13% Impervious, Inflow Depth = 1.56" for 25-year event
Inflow = 0.28 cfs @ 12.39 hrs, Volume= 0.036 af
Outflow = 0.28 cfs @ 12.39 hrs, Volume= 0.036 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach POI 3: POI #3 - FALMOUTH WETLANDS



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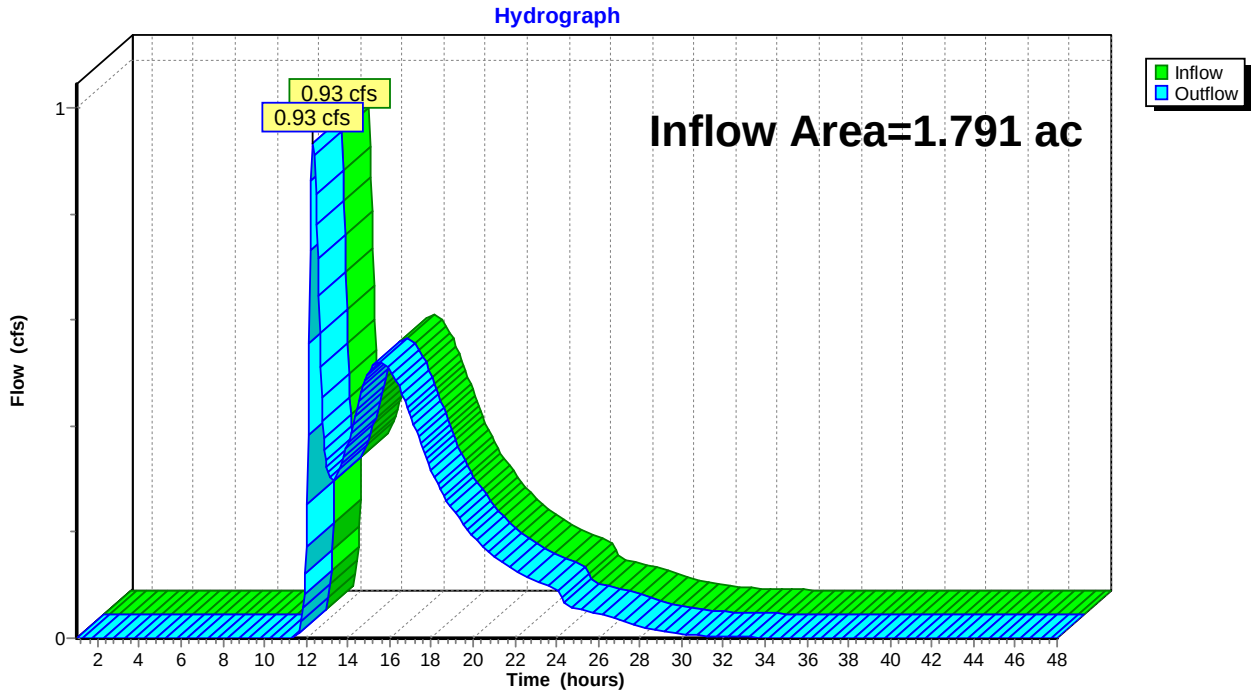
Summary for Reach POI 4: POI #4 - N STREAM

Inflow Area = 1.791 ac, 28.66% Impervious, Inflow Depth = 2.20" for 25-year event
Inflow = 0.93 cfs @ 12.33 hrs, Volume= 0.328 af
Outflow = 0.93 cfs @ 12.33 hrs, Volume= 0.328 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs

Reach POI 4: POI #4 - N STREAM



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Summary for Pond 1P: USSF 1 - StormTech 3500

Inflow Area = 1.042 ac, 61.80% Impervious, Inflow Depth > 3.46" for 25-year event
Inflow = 3.38 cfs @ 12.09 hrs, Volume= 0.300 af
Outflow = 1.37 cfs @ 12.36 hrs, Volume= 0.292 af, Atten= 60%, Lag= 16.0 min
Primary = 1.37 cfs @ 12.36 hrs, Volume= 0.292 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 109.04' @ 12.36 hrs Surf.Area= 4,998 sf Storage= 5,658 cf

Plug-Flow detention time= 453.6 min calculated for 0.292 af (97% of inflow)
Center-of-Mass det. time= 437.8 min (1,207.3 - 769.5)

Volume	Invert	Avail.Storage	Storage Description
#1	105.00'	1,714 cf	**34.00'W x 49.00'L x 4.75'H Stone** 7,914 cf Overall - 3,629 cf Embedded = 4,284 cf x 40.0% Voids
#2	105.50'	3,629 cf	**ADS_StormTech MC-3500 d +Cap @ 7.50' L** x 30 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.50'L = 115.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 30 Chambers in 6 Rows Cap Storage= +14.9 cf x 2 x 6 rows = 178.8 cf
#3	103.50'	125 cf	**34.00'W x 49.00'L x 1.50'H Sand** 2,499 cf Overall x 5.0% Voids
#4	102.50'	661 cf	**34.00'W x 49.00'L x 1.00'H Crushed Stone** 1,666 cf Overall - 13 cf Embedded = 1,653 cf x 40.0% Voids
#5	102.75'	13 cf	**4.0" Round Underdrain Storage** Inside #4 L= 150.0'
		6,142 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	103.00'	**1.2" Vert. Underdrain/Orifice** C= 0.600
#2	Primary	108.27'	**6.0" Round Bypass Overflow X 2.00** L= 6.0' Ke= 0.600 Inlet / Outlet Invert= 108.27' / 108.00' S= 0.0450 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf

Primary OutFlow Max=1.36 cfs @ 12.36 hrs HW=109.03' (Free Discharge)
└**1=Underdrain/Orifice** (Orifice Controls 0.09 cfs @ 11.78 fps)
└**2=Bypass Overflow** (Inlet Controls 1.27 cfs @ 3.23 fps)

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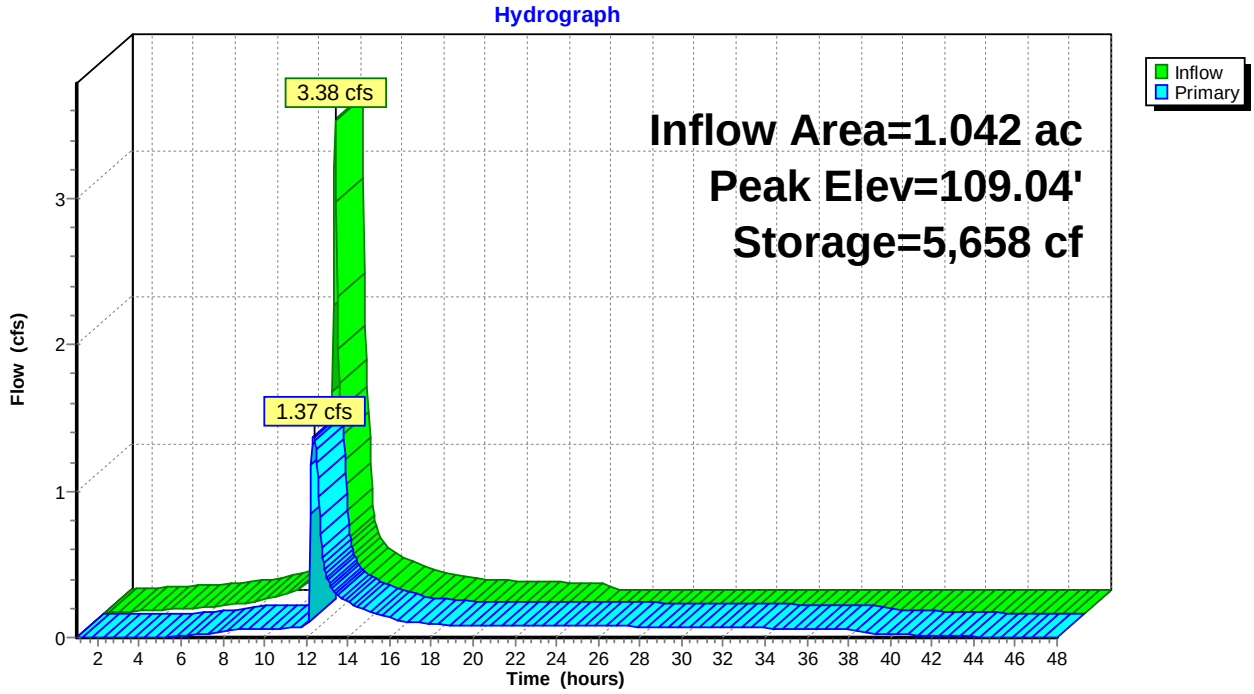
Pond 1P: USSF 1 - StormTech 3500



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Summary for Pond 2P: Pavement Profile/Drainage

Inflow Area = 0.287 ac, 66.82% Impervious, Inflow Depth = 3.40" for 25-year event
Inflow = 0.16 cfs @ 15.79 hrs, Volume= 0.081 af
Outflow = 0.16 cfs @ 15.80 hrs, Volume= 0.081 af, Atten= 0%, Lag= 0.8 min
Primary = 0.16 cfs @ 15.80 hrs, Volume= 0.081 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 109.03' @ 15.80 hrs Surf.Area= 140 sf Storage= 37 cf

Plug-Flow detention time= 8.0 min calculated for 0.081 af (100% of inflow)
Center-of-Mass det. time= 5.0 min (1,070.5 - 1,065.5)

Volume	Invert	Avail.Storage	Storage Description
#1	108.50'	48 cf	**1.33'W x 105.00'L x 1.00'H 6" Trench** 140 cf Overall - 21 cf Embedded = 119 cf x 40.0% Voids
#2	109.50'	189 cf	**18.00'W x 105.00'L x 0.25'H 3" - 3/4" Stone** 473 cf Overall x 40.0% Voids
#3	109.75'	78 cf	**18.00'W x 105.00'L x 0.83'H 10" - Filter MDOT Type D** 1,569 cf Overall x 5.0% Voids
#4	110.58'	249 cf	**18.00'W x 105.00'L x 0.33'H 4" - Choker 1-1/2"** 624 cf Overall x 40.0% Voids
#5	110.91'	125 cf	**18.00'W x 105.00'L x 0.33'H 4" - OGFC** 624 cf Overall x 20.0% Voids
#6	108.75'	21 cf	**6.0" Round 6 SD** Inside #1 L= 105.0'
		710 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	108.75'	**6.0" Round 6" Pipe** L= 5.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 108.75' / 108.50' S= 0.0500 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf

Primary OutFlow Max=0.16 cfs @ 15.80 hrs HW=109.03' (Free Discharge)
↑**1=6" Pipe** (Inlet Controls 0.16 cfs @ 1.42 fps)

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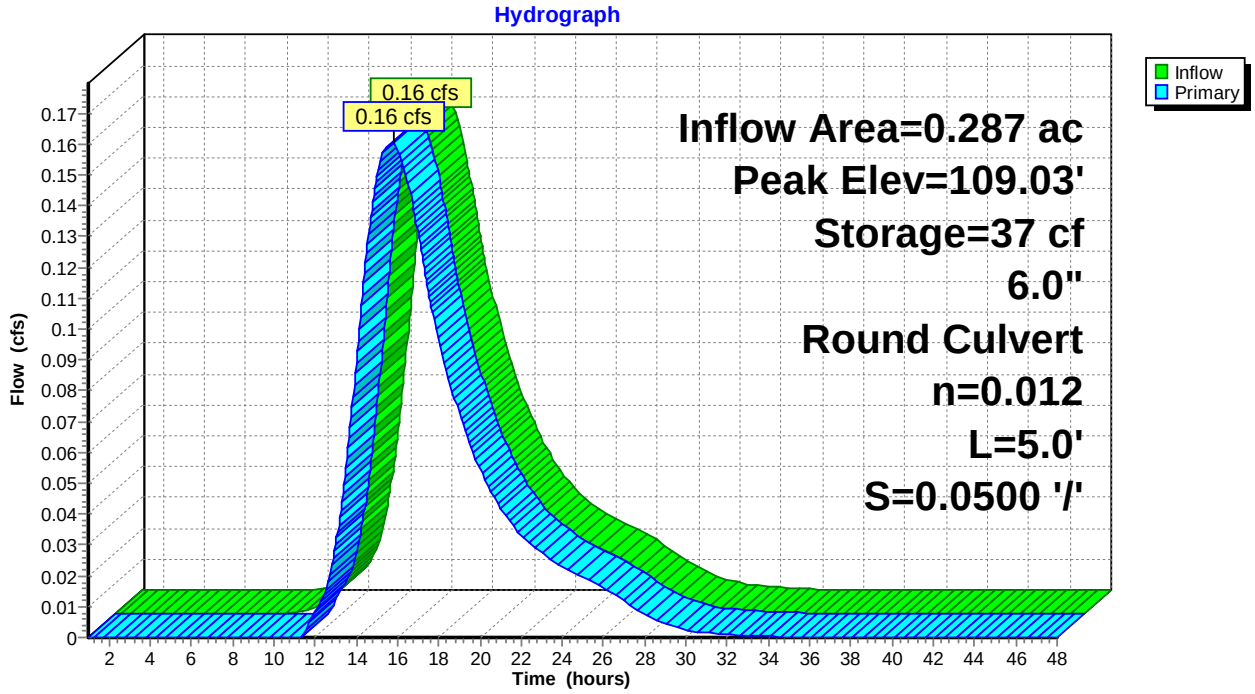
Pond 2P: Pavement Profile/Drainage



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Summary for Pond 3P: Pavement Profile/Drainage

Inflow Area = 0.537 ac, 59.87% Impervious, Inflow Depth = 3.02" for 25-year event
Inflow = 0.27 cfs @ 15.82 hrs, Volume= 0.135 af
Outflow = 0.26 cfs @ 15.86 hrs, Volume= 0.134 af, Atten= 0%, Lag= 2.4 min
Primary = 0.26 cfs @ 15.86 hrs, Volume= 0.134 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 107.78' @ 15.86 hrs Surf.Area= 557 sf Storage= 181 cf

Plug-Flow detention time= 21.8 min calculated for 0.134 af (99% of inflow)
Center-of-Mass det. time= 14.4 min (1,089.7 - 1,075.3)

Volume	Invert	Avail.Storage	Storage Description
#1	107.15'	190 cf	**1.33'W x 419.00'L x 1.00'H 6" Trench** 557 cf Overall - 82 cf Embedded = 475 cf x 40.0% Voids
#2	108.15'	461 cf	**11.00'W x 419.00'L x 0.25'H 3" - 3/4" Stone** 1,152 cf Overall x 40.0% Voids
#3	108.40'	191 cf	**11.00'W x 419.00'L x 0.83'H 10" - Filter MDOT Type D** 3,825 cf Overall x 5.0% Voids
#4	109.23'	608 cf	**11.00'W x 419.00'L x 0.33'H 4" - Choker 1-1/2"** 1,521 cf Overall x 40.0% Voids
#5	109.56'	304 cf	**11.00'W x 419.00'L x 0.33'H 4" - OGFC** 1,521 cf Overall x 20.0% Voids
#6	107.40'	82 cf	**6.0" Round 6 SD** Inside #1 L= 419.0'
		1,837 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	107.40'	**6.0" Round 6" Pipe** L= 5.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 107.40' / 107.20' S= 0.0400 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf

Primary OutFlow Max=0.26 cfs @ 15.86 hrs HW=107.78' (Free Discharge)
↑—**1=6" Pipe** (Inlet Controls 0.26 cfs @ 1.66 fps)

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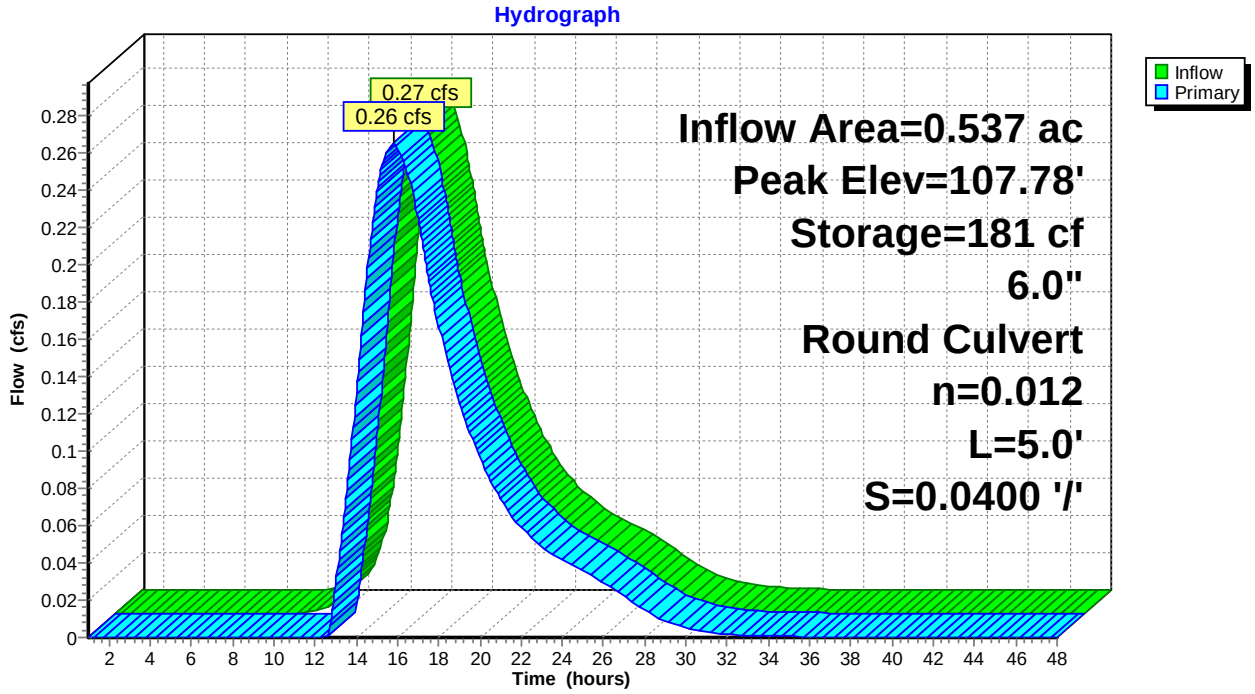
Pond 3P: Pavement Profile/Drainage



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Summary for Pond 4P: Pavement Profile/Drainage

Inflow Area = 0.389 ac, 56.13% Impervious, Inflow Depth = 4.65" for 25-year event
Inflow = 0.29 cfs @ 15.53 hrs, Volume= 0.151 af
Outflow = 0.29 cfs @ 15.52 hrs, Volume= 0.151 af, Atten= 0%, Lag= 0.0 min
Primary = 0.29 cfs @ 15.52 hrs, Volume= 0.151 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 110.26' @ 15.52 hrs Surf.Area= 203 sf Storage= 1 cf

Plug-Flow detention time= 0.0 min calculated for 0.151 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (1,030.6 - 1,030.6)

Volume	Invert	Avail.Storage	Storage Description
#1	110.25'	76 cf	**1.50'W x 135.00'L x 1.00'H 6" Trench** 203 cf Overall - 12 cf Embedded = 191 cf x 40.0% Voids
#2	111.25'	371 cf	**11.00'W x 337.00'L x 0.25'H 3" - 3/4" Stone** 927 cf Overall x 40.0% Voids
#3	112.08'	62 cf	**11.00'W x 135.00'L x 0.83'H 10" - Filter MDOT Type D** 1,233 cf Overall x 5.0% Voids
#4	112.41'	196 cf	**11.00'W x 135.00'L x 0.33'H 4" - Choker 1-1/2"** 490 cf Overall x 40.0% Voids
#5	112.74'	98 cf	**11.00'W x 135.00'L x 0.33'H 4" - OGFC** 490 cf Overall x 20.0% Voids
#6	110.50'	12 cf	**4.0" Round 6 SD** Inside #1 L= 135.0'
		814 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	108.00'	**6.0" Round 6" Pipe** L= 40.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 108.00' / 104.00' S= 0.1000 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=1.06 cfs @ 15.52 hrs HW=110.26' (Free Discharge)
↑—**1=6" Pipe** (Inlet Controls 1.06 cfs @ 5.39 fps)

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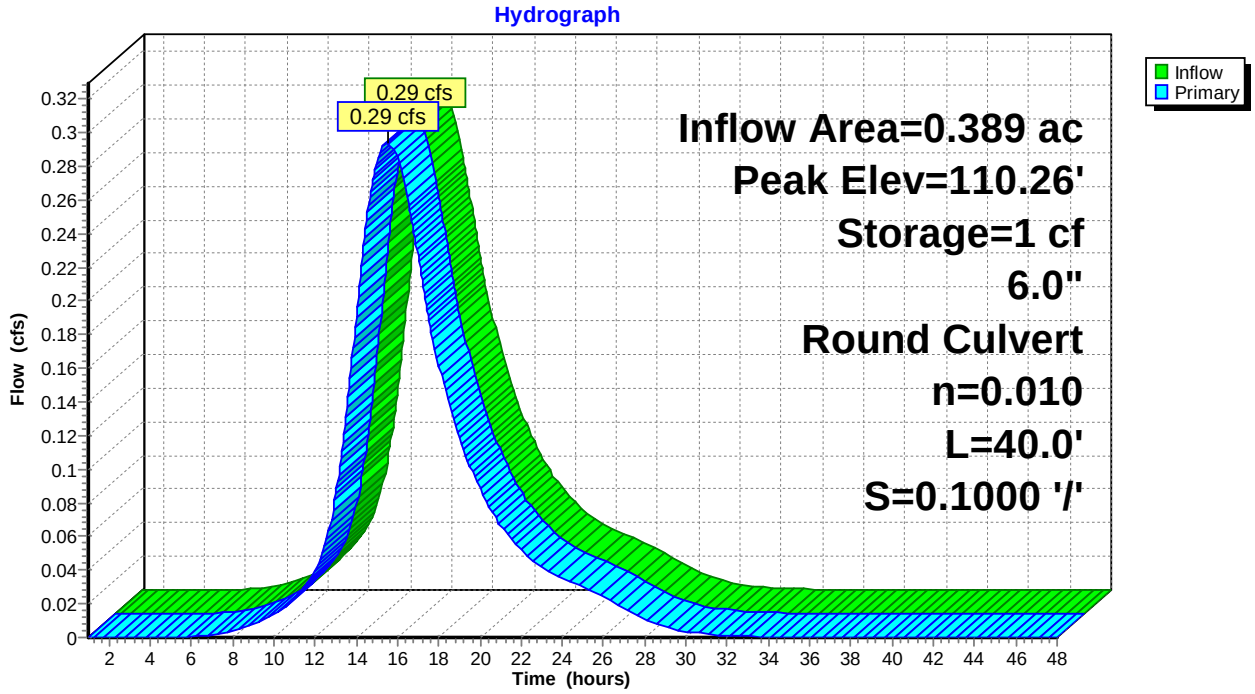
Pond 4P: Pavement Profile/Drainage



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Summary for Pond 5P: Pavement Profile/Drainage

Inflow Area = 0.297 ac, 80.63% Impervious, Inflow Depth = 4.33" for 25-year event
Inflow = 0.21 cfs @ 15.54 hrs, Volume= 0.107 af
Outflow = 0.21 cfs @ 15.56 hrs, Volume= 0.106 af, Atten= 0%, Lag= 1.1 min
Primary = 0.21 cfs @ 15.56 hrs, Volume= 0.106 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 104.93' @ 15.56 hrs Surf.Area= 216 sf Storage= 88 cf

Plug-Flow detention time= 18.1 min calculated for 0.105 af (99% of inflow)
Center-of-Mass det. time= 9.2 min (1,049.8 - 1,040.6)

Volume	Invert	Avail.Storage	Storage Description
#1	104.00'	81 cf	**1.50'W x 144.00'L x 1.00'H 6" Underdrained Trench** 216 cf Overall - 13 cf Embedded = 203 cf x 40.0% Voids
#2	105.00'	259 cf	**18.00'W x 144.00'L x 0.25'H 3" - 3/4" Stone** 648 cf Overall x 40.0% Voids
#3	105.25'	108 cf	**18.00'W x 144.00'L x 0.83'H 10" - Filter MDOT Type D** 2,151 cf Overall x 5.0% Voids
#4	106.08'	342 cf	**18.00'W x 144.00'L x 0.33'H 4" - Choker 1-1/2"** 855 cf Overall x 40.0% Voids
#5	106.41'	171 cf	**18.00'W x 144.00'L x 0.33'H 4" - OGFC** 855 cf Overall x 20.0% Voids
#6	104.25'	13 cf	**4.0" Round 4 SD** Inside #1 L= 144.0'
		974 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	104.60'	**6.0" Round 6" Pipe** L= 30.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 104.60' / 101.60' S= 0.1000 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.21 cfs @ 15.56 hrs HW=104.93' (Free Discharge)
↑—**1=6" Pipe** (Inlet Controls 0.21 cfs @ 1.54 fps)

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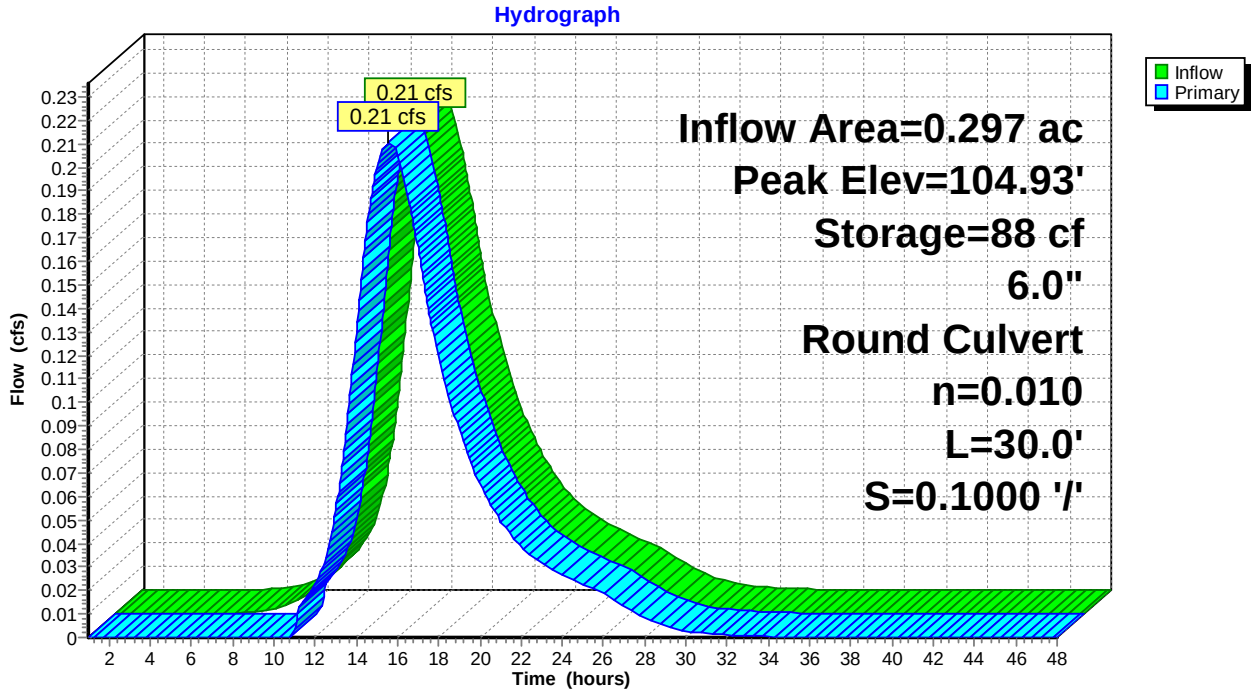
Pond 5P: Pavement Profile/Drainage



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Summary for Pond 6P: USSF 2 - StormTech 3500

Inflow Area = 1.045 ac, 71.07% Impervious, Inflow Depth > 4.58" for 25-year event
Inflow = 4.74 cfs @ 12.09 hrs, Volume= 0.398 af
Outflow = 1.57 cfs @ 12.41 hrs, Volume= 0.394 af, Atten= 67%, Lag= 19.4 min
Primary = 1.57 cfs @ 12.41 hrs, Volume= 0.394 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 105.16' @ 12.41 hrs Surf.Area= 6,091 sf Storage= 6,030 cf

Plug-Flow detention time= 105.9 min calculated for 0.394 af (99% of inflow)
Center-of-Mass det. time= 97.7 min (862.3 - 764.6)

Volume	Invert	Avail.Storage	Storage Description
#1	101.50'	2,418 cf	**35.08'W x 57.88'L x 4.75'H Stone** 9,645 cf Overall - 3,599 cf Embedded = 6,045 cf x 40.0% Voids
#2	102.00'	3,599 cf	**ADS_StormTech MC-3500 d +Cap @ 7.50' L** x 30 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.50'L = 115.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap 30 Chambers in 5 Rows Cap Storage= +14.9 cf x 2 x 5 rows = 149.0 cf
#3	100.00'	152 cf	**35.08'W x 57.88'L x 1.50'H Sand** 3,046 cf Overall x 5.0% Voids
#4	99.00'	807 cf	**35.08'W x 57.88'L x 1.00'H Crushed Stone** 2,030 cf Overall - 13 cf Embedded = 2,017 cf x 40.0% Voids
#5	99.33'	13 cf	**4.0" Round Underdrain Storage** Inside #4 L= 150.0'
		6,990 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	99.25'	**3.0" Vert. Underdrain/Orifice** C= 0.600
#2	Primary	104.77'	**6.0" Round Bypass Overflow X 3.00** L= 7.0' Ke= 0.600 Inlet / Outlet Invert= 104.77' / 104.00' S= 0.1100 '/' Cc= 0.900 n= 0.012, Flow Area= 0.20 sf

Primary OutFlow Max=1.55 cfs @ 12.41 hrs HW=105.16' (Free Discharge)
└**1=Underdrain/Orifice** (Orifice Controls 0.57 cfs @ 11.58 fps)
└**2=Bypass Overflow** (Inlet Controls 0.98 cfs @ 1.99 fps)

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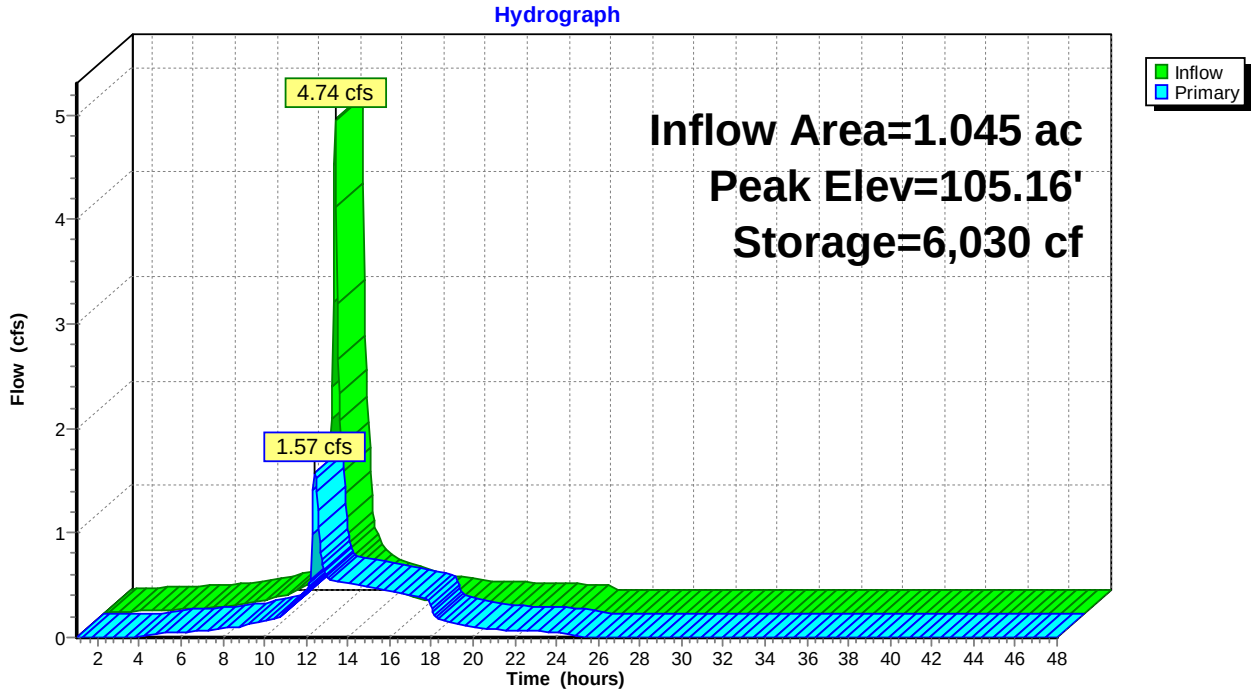
Pond 6P: USSF 2 - StormTech 3500



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Summary for Pond 7P: 6+00 Rain Garden

Inflow Area = 0.430 ac, 57.91% Impervious, Inflow Depth = 3.79" for 25-year event
Inflow = 1.79 cfs @ 12.09 hrs, Volume= 0.136 af
Outflow = 1.52 cfs @ 12.15 hrs, Volume= 0.136 af, Atten= 15%, Lag= 3.7 min
Primary = 1.52 cfs @ 12.15 hrs, Volume= 0.136 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 110.44' @ 12.15 hrs Surf.Area= 773 sf Storage= 933 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 27.1 min (825.5 - 798.3)

Volume	Invert	Avail.Storage	Storage Description
#1	108.00'	902 cf	**Ponding above surface (Prismatic)** Listed below (Recalc)
#2	106.50'	31 cf	**Soil Filter/Loam Topsoil (Prismatic)** Listed below (Recalc) 314 cf Overall x 10.0% Voids
		933 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.00	209	0	0
109.00	374	292	292
110.00	564	469	761
110.25	564	141	902

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
106.50	209	0	0
108.00	209	314	314

Device	Routing	Invert	Outlet Devices
#1	Primary	105.15'	**8.0" Round Culvert** L= 83.0' Ke= 0.600 Inlet / Outlet Invert= 105.15' / 104.50' S= 0.0078 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Device 1	106.50'	**0.13 cfs Exfiltration when above 106.50'**
#3	Primary	109.75'	**8.0" Horiz. Beehive Overflow** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.51 cfs @ 12.15 hrs HW=110.43' (Free Discharge)
- **1=Culvert** (Passes 0.13 cfs of 2.76 cfs potential flow)
  - **2=Exfiltration** (Exfiltration Controls 0.13 cfs)
- **3=Beehive Overflow** (Orifice Controls 1.38 cfs @ 3.97 fps)

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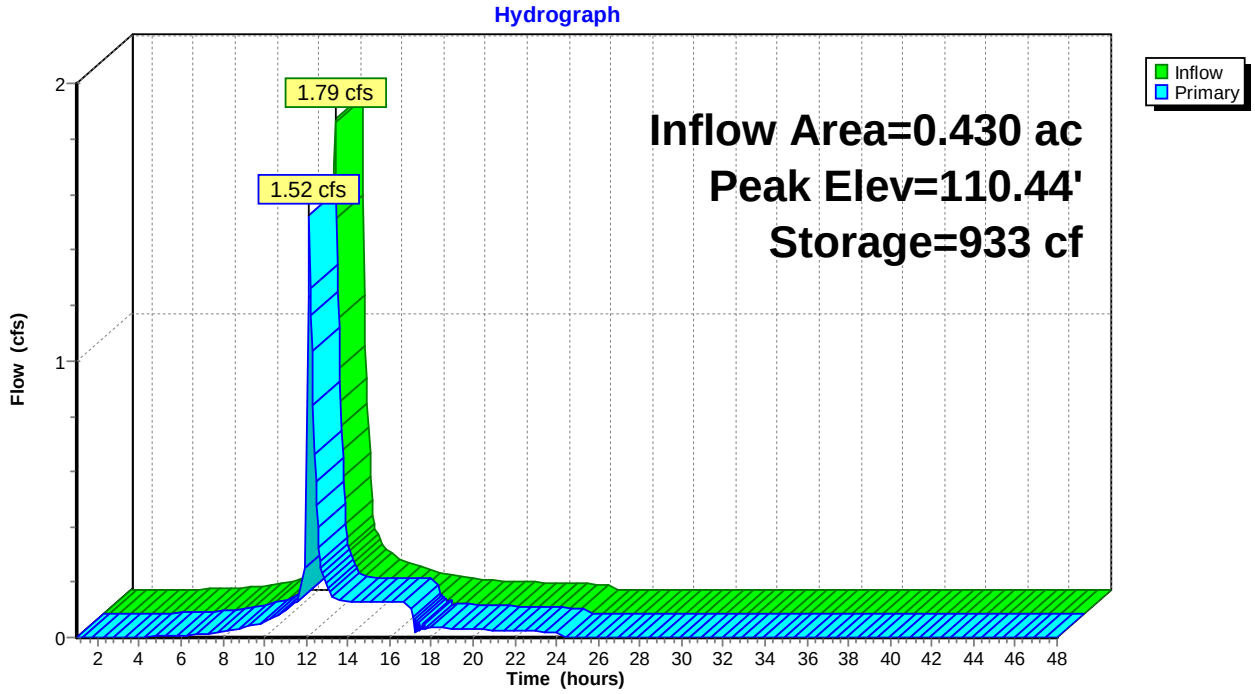
Pond 7P: 6+00 Rain Garden



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Summary for Pond 8P: Pavement Profile/Drainage

Inflow Area = 0.231 ac, 83.12% Impervious, Inflow Depth = 5.21" for 25-year event
Inflow = 0.19 cfs @ 15.29 hrs, Volume= 0.100 af
Outflow = 0.19 cfs @ 15.29 hrs, Volume= 0.100 af, Atten= 0%, Lag= 0.1 min
Primary = 0.19 cfs @ 15.29 hrs, Volume= 0.100 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 111.80' @ 15.29 hrs Surf.Area= 180 sf Storage= 0 cf

Plug-Flow detention time= 0.0 min calculated for 0.100 af (100% of inflow)
Center-of-Mass det. time= 0.0 min (1,009.1 - 1,009.1)

Volume	Invert	Avail.Storage	Storage Description
#1	111.80'	55 cf	**1.33'W x 135.00'L x 0.83'H 4" Trench** 149 cf Overall - 12 cf Embedded = 137 cf x 40.0% Voids
#2	112.59'	243 cf	**49.30'W x 49.30'L x 0.25'H 3" - 3/4" Stone** 608 cf Overall x 40.0% Voids
#3	112.84'	101 cf	**49.30'W x 49.30'L x 0.83'H 10" - Filter MDOT Type D** 2,017 cf Overall x 5.0% Voids
#4	113.67'	321 cf	**49.30'W x 49.30'L x 0.33'H 4" - Choker 1-1/2"** 802 cf Overall x 40.0% Voids
#5	114.00'	160 cf	**49.30'W x 49.30'L x 0.33'H 4" - OGFC** 802 cf Overall x 20.0% Voids
#6	111.80'	12 cf	**4.0" Round 4 SD** Inside #1 L= 135.0' S= 0.0010 '/'
		892 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	61.65'	**6.0" Round 6" Pipe** L= 5.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 61.65' / 61.60' S= 0.0100 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=5.27 cfs @ 15.29 hrs HW=111.80' (Free Discharge)
↑**1=6" Pipe** (Inlet Controls 5.27 cfs @ 26.85 fps)

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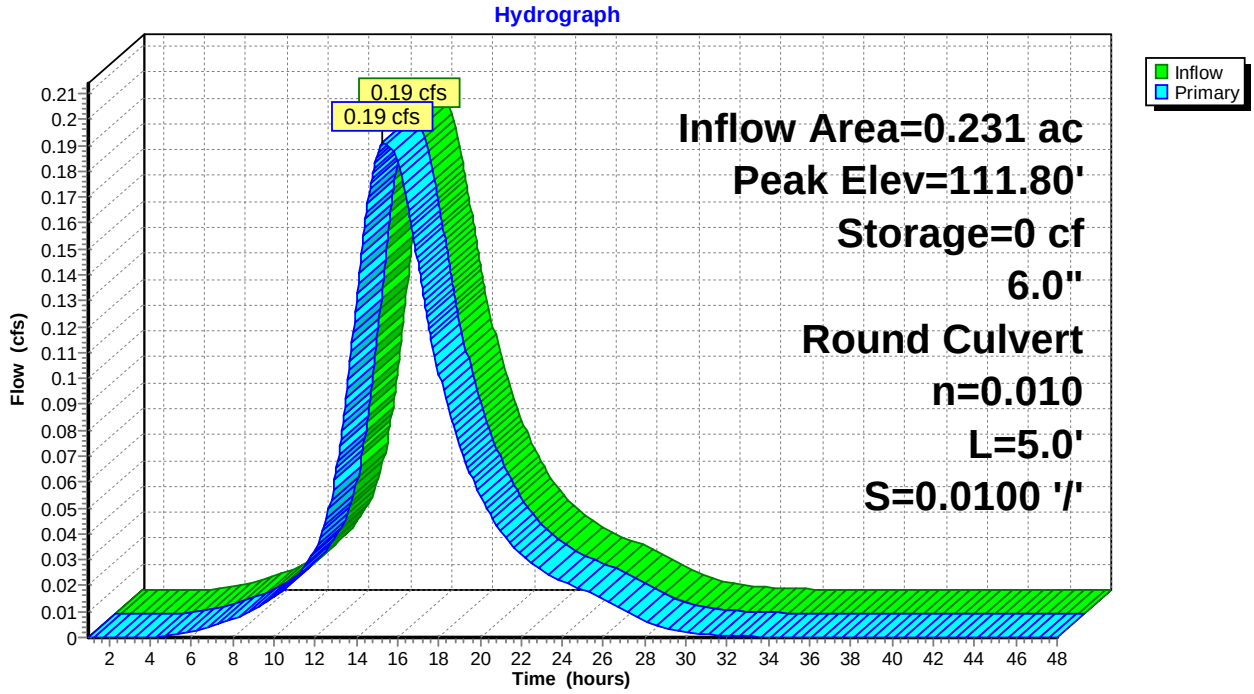
Pond 8P: Pavement Profile/Drainage



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Summary for Pond 9P: 4+25 Rain Garden

Inflow Area = 0.220 ac, 65.57% Impervious, Inflow Depth = 3.40" for 25-year event
Inflow = 0.86 cfs @ 12.09 hrs, Volume= 0.062 af
Outflow = 0.76 cfs @ 12.14 hrs, Volume= 0.062 af, Atten= 12%, Lag= 2.8 min
Primary = 0.76 cfs @ 12.14 hrs, Volume= 0.062 af

Routing by Stor-Ind method, Time Span= 1.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 103.62' @ 12.14 hrs Surf.Area= 213 sf Storage= 142 cf

Plug-Flow detention time= 19.1 min calculated for 0.062 af (100% of inflow)
Center-of-Mass det. time= 18.0 min (838.6 - 820.6)

Volume	Invert	Avail.Storage	Storage Description
#1	102.50'	195 cf	**Ponding above surface (Prismatic)** Listed below (Recalc)
#2	101.00'	9 cf	**Soil Filter (Prismatic)** Listed below (Recalc) 90 cf Overall x 10.0% Voids
		204 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
102.50	60	0	0
103.00	126	47	47
104.00	170	148	195

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
101.00	60	0	0
102.50	60	90	90

Device	Routing	Invert	Outlet Devices
#1	Primary	99.75'	**8.0" Round Culvert** L= 78.0' Ke= 0.600 Inlet / Outlet Invert= 99.75' / 99.30' S= 0.0058 '/' Cc= 0.900 n= 0.012, Flow Area= 0.35 sf
#2	Device 1	102.00'	**0.01 cfs Exfiltration when above 102.00'**
#3	Device 1	103.00'	**6.0" Horiz. Beehive Overflow** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.75 cfs @ 12.14 hrs HW=103.61' (Free Discharge)
└**1=Culvert** (Passes 0.75 cfs of 2.35 cfs potential flow)
├**2=Exfiltration** (Exfiltration Controls 0.01 cfs)
└**3=Beehive Overflow** (Orifice Controls 0.74 cfs @ 3.75 fps)

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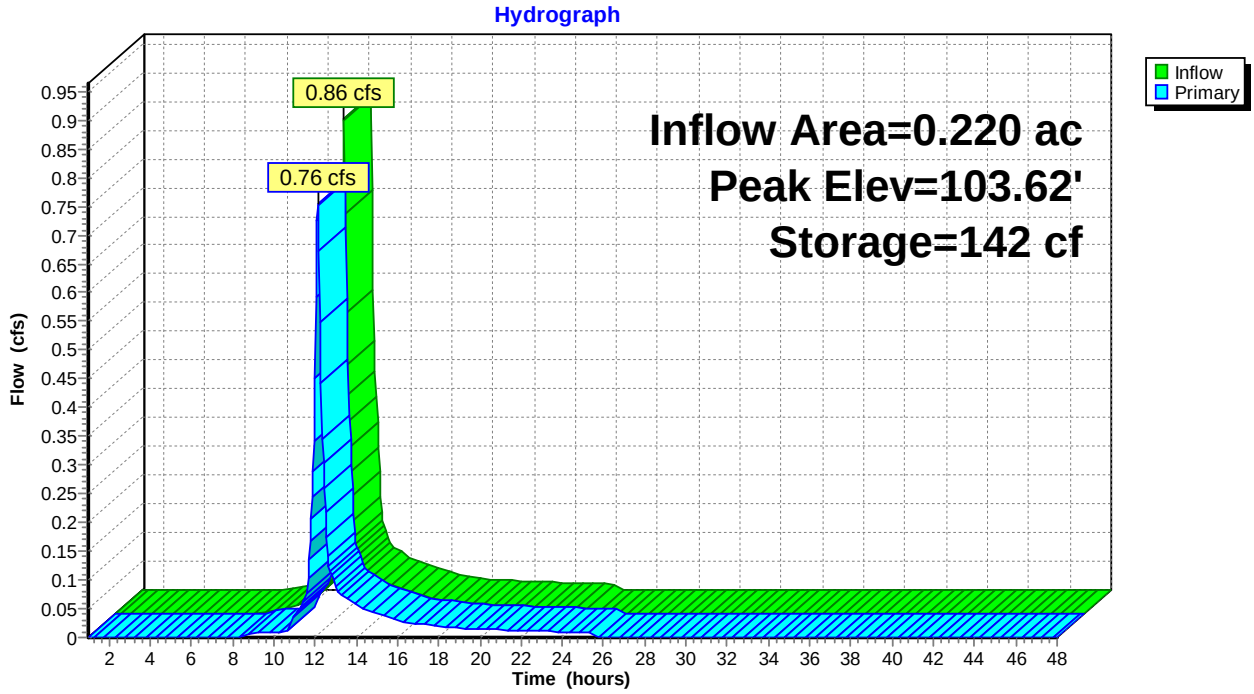
Pond 9P: 4+25 Rain Garden



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United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cumberland County and Part of Oxford County, Maine



January 5, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

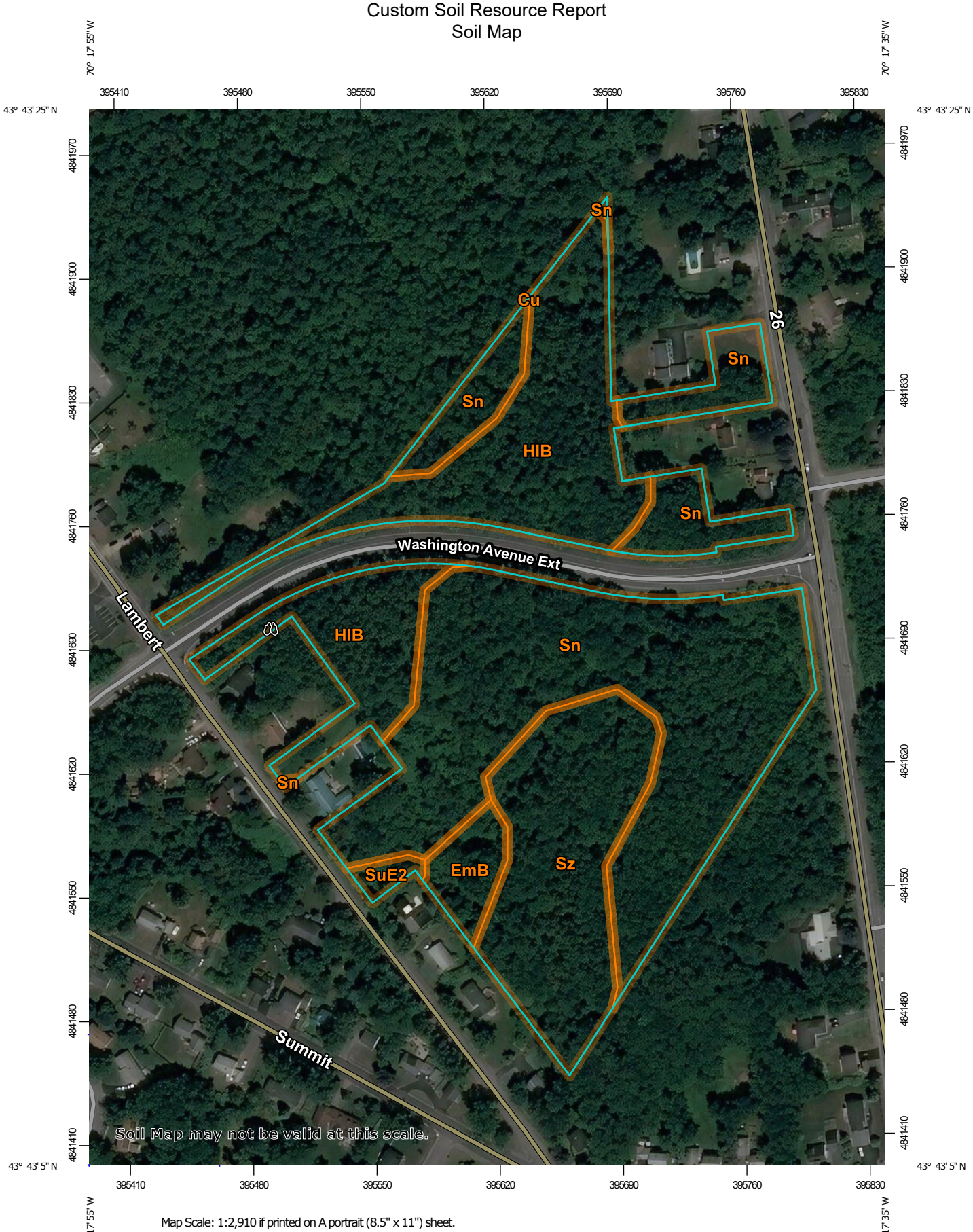
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



Map Scale: 1:2,910 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 40 80 160 240

Feet
0 100 200 400 600

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 18, Aug 31, 2021

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	0.0	0.0%
EmB	Elmwood fine sandy loam, 0 to 8 percent slopes	0.6	3.1%
HlB	Hinckley loamy sand, 3 to 8 percent slopes	5.0	27.8%
Sn	Scantic silt loam, 0 to 3 percent slopes	8.9	49.6%
SuE2	Suffield silt loam, 25 to 45 percent slopes, eroded	0.2	0.8%
Sz	Swanton fine sandy loam	3.4	18.7%
Totals for Area of Interest		**18.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it

was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cumberland County and Part of Oxford County, Maine

Cu—Cut and fill land

Map Unit Composition

Cut and fill land: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cut And Fill Land

Typical profile

H1 - 0 to 65 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 35 percent
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.06 to 20.00 in/hr)
Depth to water table: About 24 to 42 inches
Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

EmB—Elmwood fine sandy loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: blh8
Elevation: 10 to 900 feet
Mean annual precipitation: 38 to 55 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 130 to 195 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Elmwood and similar soils: 88 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Elmwood

Setting

Landform: Stream terraces
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-loamy glaciolacustrine deposits

Typical profile

H1 - 0 to 8 inches: fine sandy loam
H2 - 8 to 25 inches: sandy loam
H3 - 25 to 65 inches: silty clay loam

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.7 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: B
Ecological site: F144BY402ME - Clay Hills
Hydric soil rating: No

HIB—Hinckley loamy sand, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 2svm8
Elevation: 0 to 1,430 feet
Mean annual precipitation: 36 to 53 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Hinckley and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting
Landform: Outwash plains, eskers, moraines, kame terraces, kames, outwash terraces, outwash deltas
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Nose slope, side slope, base slope, crest, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile
Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities
Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Sn—Scantic silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2slv3
Elevation: 10 to 900 feet
Mean annual precipitation: 33 to 60 inches
Mean annual air temperature: 39 to 45 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Scantic and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scantic

Setting

Landform: Marine terraces, river valleys
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Glaciomarine deposits

Typical profile

Ap - 0 to 9 inches: silt loam
Bg1 - 9 to 16 inches: silty clay loam
Bg2 - 16 to 29 inches: silty clay
Cg - 29 to 65 inches: silty clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Ecological site: F144BY304ME - Wet Clay Flat
Hydric soil rating: Yes

SuE2—Suffield silt loam, 25 to 45 percent slopes, eroded

Map Unit Setting

National map unit symbol: blk3
Elevation: 10 to 900 feet
Mean annual precipitation: 34 to 48 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Suffield and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Suffield

Setting

Landform: Coastal plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Fine glaciolacustrine deposits

Typical profile

H1 - 0 to 6 inches: silt loam
H2 - 6 to 23 inches: silt loam
H3 - 23 to 33 inches: silty clay
H4 - 33 to 65 inches: silty clay

Properties and qualities

Slope: 25 to 45 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None

Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.5 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: F144BY402ME - Clay Hills
Hydric soil rating: No

Sz—Swanton fine sandy loam

Map Unit Setting
National map unit symbol: blk4
Elevation: 10 to 900 feet
Mean annual precipitation: 36 to 48 inches
Mean annual air temperature: 39 to 46 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition
Swanton and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Swanton

Setting
Landform: Outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy glaciolacustrine deposits

Typical profile
H1 - 0 to 9 inches: fine sandy loam
H2 - 9 to 32 inches: fine sandy loam
H3 - 32 to 65 inches: silty clay

Properties and qualities
Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w

Hydrologic Soil Group: C/D
Hydric soil rating: Yes

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ACORN ENGINEERING, INC.

K. EROSION & SEDIMENTATION CONTROL REPORT

Prepared For:

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Portland, Maine 04103

Prepared By:

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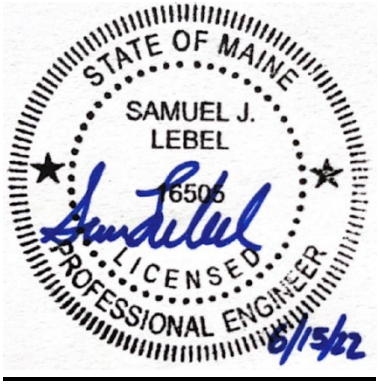


June 2022

INTRODUCTION

Acorn Engineering, Inc. has been retained by The Maine Cooperative Development Partners to provide civil engineering services for the proposed development at 165 Lambert Street and 622 Auburn Street. The property consists of approximately 17.95 acres of land and contains the following parcels (Chart, Book, Lot, 385-A-1, 386-C-1, 386-B-12, and 386-B-15).

The following Erosion and Sedimentation Control Report was developed in accordance with the City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and the Maine DEP Chapter 500 Stormwater Management Appendix A and B (1), Amended August 12, 2015. This narrative also meets the standards required in the Maine DEP's Erosion & Sediment Control BMP's Manual, revised in 2016.

1.0 EXISTING CONDITIONS

The project site is bordered by Lambert Street, Auburn Street, and Washington Ave. A boundary plan has been prepared by Owen Haskell Inc., dated June 14th 2021 and revised December 21st, 2021. Two wetland investigations were performed (separate investigations for both parcels) by Jones Associates Inc., dated June 2021, October, 2021.

The property is in the R-3 Residential Zone. Abutting Uses include the R-2 Residential Zone in the abutting Portland properties, and Mixed Use Cluster in the abutting Falmouth properties.

The site currently consists of 17.95 acres of undeveloped land divided into to parcels bisected by Washington Ave. To the very north of the property the land slopes down to a stream. The approximate slope in this area is between 5-10% for a majority of the land with steeper slopes along the banks of the stream. The southern portion of the north parcel slopes towards the Washington Ave roadside ditch at an approximate slope of 3-6%. The northern portion of the southern parcel slopes towards a slight depression with the low point of the area occurring at the end of the Washington Ave roadside ditch. The slope of the valley is approximately 3-6%. The southern portion of the south parcel slopes down to a stream. The slopes vary from approximately 5-10% for a majority of the land with steeper slopes along the banks of the stream. There are also two wetlands within the northern parcel where one is considered a WOSS due to its close proximity to an identified stream. Jones associates identified multiple streams in both parcels, the southern parcel consists of four streams, with two stream converging at the eastern portion of the parcel creating one larger stream flowing from the east to west, said streams are a result of culverts flowing onto the property. Two feeder streams also contribute to the large stream and drain from the south to the north. One stream is located on the northern parcel and flows from east to northwest, this stream is formed from a culvert draining onto the property. The site is not in the watershed of an urban impaired stream.

1.1 Existing Soils

Onsite soil information includes the following:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County
- United States Department of Agriculture Web Soil Survey

Given the soils information, listed above, no onsite wastewater is proposed; the applicant does not intend to perform a more intense hydric soil boundary delineation because the waiver requirements set forth in the City of Portland Technical Manual – Section 7 – Soil Survey, Rev. 6/17/11 are met.

The area within and surrounding the project includes soil types listed in the table below. The susceptibility of soils to erosion is indicated on a relative "K" scale of values over a range of 0.02 to 0.69. Higher "K" values indicate more erodible soils.

Table 1 - "K" Value

Soils Type	Subsurface	Substratum
Elmwood fine sandy loam (EmB)	.32	.49
Hinkley Loamy Sand (HIC)	.17	.17
Suffield Silt Loam (SuE2)	.49	.49
Scantic silt loam (SN)	.49	.49
Swanton Fine Sandy Loam (SZ)	.32	.49

Implementation of the proposed Erosion & Sedimentation Measures by the contractor will be of the utmost importance given the sustained slope and natural resources in vicinity of the site.

1.2 Existing Erosion Problems

There are signs of erosion along the stream banks as a result of the culverts outletting into the property. This area is not proposed to be altered or disturbed as part of the project.

1.3 Critical Areas

Critical areas identified onsite include the identified wetlands and streams. A double row of sedimentation barriers will be proposed for all disturbance upgradient of critical areas.

1.4 Protected Natural Resource

The client is not aware of the presence of any existing significant natural features located on the site as listed in Section 14-526 (b) 1. of the Land Use Code. The project

is not located within a watershed classified as an Urban Impaired Stream by the Maine DEP.

1.5 Previous Construction Activity (5 years)

Acorn Engineering, Inc. is not aware of any construction related activities within the project limits within the past 5 years.

1.6 Timber Harvesting

Acorn Engineering, Inc. is not aware of any timber harvesting within the past five years.

2.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

As part of the site development, the following temporary and permanent erosion and sedimentation control devices shall be implemented. Devices shall be installed as described in this report or within the plan set. See the Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices for further reference.

2.1 Temporary Erosion Control Measures

The following temporary erosion and sedimentation control measures are planned for the project's construction period:

2.1.1 Crushed stone stabilized construction entrances shall be placed at all access points to the project site where there are disturbed areas. The following specifications shall be followed at a minimum:

- Stone size shall be 2-3 inches, or reclaimed or recycled concrete equivalent.
- The thickness of the entrance stone layer shall be no less than 6 inches.
- The entrance shall not be less than 20 feet wide, however not less than the full width of points where ingress or egress occurs. The length shall not be less than 50 feet in length.
- Geotextile fabric (woven or non-woven) shall be placed over the entire entrance area.
- The entrance/exit shall be maintained to the extent that it will prevent the tracking of sediment onto public road ways.

2.1.2 Siltation fence or erosion control berm shall be installed downgradient of any disturbed areas to trap runoff borne sediments until permanent stabilization is achieved. The silt fence or erosion control berm shall be installed per the details provided in the plan set and inspected before and immediately after each rainfall and at least daily during prolonged rainfall. Repairs shall be made if there are any signs of erosion or sedimentation below the fence line or berm. If there are signs of undercutting at the center or the edges or

impounding large volumes of water behind the fence or berm, the barrier shall be replaced with a stone check dam. When time for removal, it is recommended that silt fences be removed by cutting the fence material at ground level to avoid additional soil disturbance.

2.1.3 Hay mulch, including hydroseeding, is intended to provide cover for denuded or seeded areas until revegetation is established. Temporary mulch should be applied to areas that will not be actively worked for more than 14 days (7 days in sensitive areas). Mulch placed between April 15th and November 1st on slopes of less than 15 percent shall be covered by fabric netting and anchored with staples in accordance with the manufacturer's recommendation. Mulch placed between November 1st and April 15th on slopes equal to or steeper than 8 percent and equal to or flatter than 2:1 shall use mats or fabric netting and anchored with staples in accordance with the manufacturer's recommendation.

2.1.4 At any time of the year, all slopes greater than 3:1 shall be stabilized with Double Net Erosion Control Blanket Bionet SC150BN by North American Green or Approved Equal, or Erosion Control Mix Slope Protection as detailed within the plans.

2.1.5 Lambert street (any of the other streets?) shall be swept to control mud and dust from the construction site as necessary. Add additional stone to the stabilized construction entrance to minimize the tracking of material off the site and onto the surrounding roadways.

2.1.6 During demolition, clearing and grubbing operations, stone check dams shall be installed at any areas of concentrated flow. The maximum height of the check dam shall not exceed 2 feet. The center of the check dam shall be 6 inches below the outer edges of the dam. The contractor shall mulch the side slopes and install stone check dams for all newly excavated ditch lines within 24 hours of their creation.

2.1.7 Silt fence stake spacing shall not exceed 6 feet unless the fence is supported with 14-gauge wire in which case the maximum spacing shall not exceed 10 feet. The silt fence shall be "toed" into the ground.

2.1.8 Storm drain inlet protection shall be provided to storm drains using any of the following: hay bale drop inlet structures, silt fence drop inlet sediment filter, gravel and wire mesh drop inlet sediment filter, or curb inlet sediment filter. Barriers shall be inspected after every rainfall event and repaired as necessary. Sediments shall be removed when accumulation has reached ½ the design height.

2.1.9 Dust control shall be accomplished using any of the following: water, calcium chloride, stone, or an approved MDEP product. Dust control shall be applied as needed to accomplish dust control.

2.1.10 Temporary loam, seed, and mulching shall be used in areas where no other erosion control measure is used. Application rates for seeding are provided at the end of this report.

2.1.11 Stockpiles shall be stabilized within 7 days of formation unless a scheduled rain event occurs prior to the 7-day window, in which case the stockpile shall be stabilized prior to the rain event. Methods of stabilization shall be mulch, erosion control mix, or erosion control blankets/mats. Silt fence or a wood waste compost filter berm shall be placed downhill of any soil stockpile location.

2.1.12 For disturbance between November 1 and April 15, please refer to winter stabilization plan in this report and the Maine Erosion and Sediment Control BMP manual for further information.

2.1.13 It is of the utmost importance that stormwater runoff and potential sediment from the construction site be diverted around the proposed underdrains until the trench is backfilled.

2.2 Permanent Erosion Control Measures

The following permanent erosion control measures are intended for post disturbance areas of the project.

2.2.1 All disturbed areas during construction, not subject to other proposed conditions, shall receive a minimum 4" of loam, limed, and mulched. Erosion control blankets or mats shall be placed over the mulch in areas noted in paragraph 4.1 of this report.

2.2.2 All stormwater devices shall be installed and tributary areas stabilized prior receiving stormwater.

2.2.3 Refer to the Maine Erosion and Sediment Control BMP manual for additional information.

3.0 EROSION AND SEDIMENTATION CONTROL PLAN

3.1 The Construction Management & Erosion Control Plan is included within the plan set.

4.0 DETAILS AND SPECIFICATIONS

4.1 Erosion & Sedimentation Control Details and Specifications are included in the plan set.

5.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

Winter Construction consists of earthwork disturbance between the dates of November 1 and April 15. If a construction site is not stabilized with pavement, a road gravel base, 75%

mature vegetation cover or riprap by November 15, then the site shall be protected with over-winter stabilization. Any area not stabilized with pavement, vegetation, mulching, erosion control mix, erosion control mats, riprap, or gravel base on a road shall be considered open.

The contractor shall limit the work area to areas that work will occur in during the subsequent 15 days and so that it can be mulched one day prior to a snow event. The contractor shall stabilize work areas prior to opening additional work areas to minimize areas without erosion control measures.

The following measures shall be implemented during winter construction periods:

5.1 Sediment Barriers

During frozen conditions, sediment barriers may consist of erosion control mix berms or any other recognized sediment barriers as frozen soil prevents the proper installation of hay bales or silt fences.

5.2 Mulching

All areas shall be considered to be denuded until seeded and mulched. Hay and straw mulch shall be applied at a rate of 150 lb. per 1,000 square feet or 3 tons/acre (twice the normal accepted rate of 75-lbs./1,000 s.f. or 1.5 tons/acre) and shall be properly anchored. Erosion control mix must be applied with a minimum 4-inch thickness. Mulch shall not be spread on top of snow. The snow shall be removed down to a one-inch depth or less prior to application. After each day of final grading, the area shall be properly stabilized with anchored hay or straw or erosion control matting. An area shall be considered to have been stabilized when exposed surfaces have been either mulched or adequately anchored so that ground surface is not visible through the mulch. Between the dates of November 1 and April 15, all mulch shall be anchored by either mulch netting, tracking or wood cellulose fiber. The cover will be considered sufficient when the ground surface is not visible through the mulch. After November 1st, mulch and anchoring of all exposed soil shall occur at the end of each final grading workday.

5.3 Soil Stockpiling

Stockpiles of soil or subsoil shall be mulched for over winter protection with hay or straw at twice the normal rate or with a four-inch layer of erosion control mix. This shall be done within 24 hours of stocking and re-established prior to any rainfall or snowfall.

5.4 Seeding

Between the dates of October 15th and April 1st, loam or seed shall not be required. During periods of above freezing temperatures finished areas shall be fine graded and

either protected with mulch or temporarily seeded and mulched until the final treatment can be applied. If the date is after November 1st and if the exposed area has not been loamed, final grading with a uniform surface, then the area may be dormant seeded at a rate of 3 times higher than specified for permanent seed and then mulched.

Dormant seeding may be placed prior to the placement of mulch or erosion control blankets. If dormant seeding is used for the site, all disturbed areas shall receive 4" of loam and seed at an application rate of 5 lbs./1,000 s.f. All areas seeded during the winter shall be inspected in the spring for adequate catch. All areas insufficiently vegetated (less than 75% catch) shall be revegetated by replacing loam, seed and mulch. If dormant seeding is not used for the site, all disturbed areas shall be revegetated in the spring.

5.5 Over winter stabilization of disturbed soils

By September 15th, all disturbed soils on areas having a slope less than 15% shall be seeded and mulched. If the disturbed areas are not stabilized by this date, then one of the following actions shall be taken to stabilize the soil for late fall and winter:

- Stabilize the soil with temporary vegetation – By October 1st, seed the disturbed soil with winter rye at a seeding rate of 3lbs per 1,000 s.f., lightly mulch the seeded soil with hay or straw at 75 lbs per 1,000 s.f., and anchor the mulch with plastic netting. Monitor growth of the rye over the next 30 days. If the rye fails to grow at least three inches or fails to cover at least 75% of the disturbed soil before November 1st, then mulch the area for over-winter protection.

- Stabilize the soil with sod – Stabilize the disturbed soil with properly installed sod by October 1st. Proper installation includes pinning the sod onto the soil with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil.

- Stabilize the soil with mulch – By November 15th, mulch the disturbed soil by spreading hay or straw at a rate of at least 150 lbs per 1,000 s.f. on the area so that no soil is visible through the mulch. Immediately after applying the mulch, anchor the mulch with plastic netting to prevent wind from moving the mulch off the disturbed soil.

5.6 Over winter stabilization of disturbed slopes

All stone-covered slopes shall be constructed and stabilized by November 15th. All slopes to be vegetated shall be seeded and mulched by September 1st. A slope is considered a grade greater than 15%. If a slope to be vegetated is not stabilized by September 1st, then one of the following action shall be taken to stabilize the slope for late fall and winter:

- Stabilize the soil with temporary vegetation and erosion control mats – By October 1st the disturbed slope shall be seeded with winter rye at a seeding rate of 3 lbs per 1,000 s.f. and then install erosion control mats or anchored mulch over the seeding. If the rye fails to grow at least three inches or fails to cover at least 75% of the slope by November 1st, then the contractor shall cover the slope with a layer of erosion control mix or with stone riprap.

- Stabilize the soil with sod – The disturbed slope shall be stabilized with properly installed sod by October 1st. Proper installation includes the contractor pinning the sod onto the slope with wire pins, rolling the sod to guarantee contact between the sod and underlying soil, and watering the sod to promote root growth into the disturbed soil. The contractor shall not use late-season sod installation to stabilize slopes having a grade greater than 3H:1V or having groundwater seeps on the slope face.

- Stabilize the soil with erosion control mix – Erosion control mix shall be properly installed by November 15th. The contractor shall not use erosion control mix to stabilize slopes having grades greater than 2H:1V or having groundwater seeps on the slope face.

- Stabilize the soil with stone riprap – Place a layer of stone riprap on the slope by November 15th. A registered professional engineer shall be hired to determine the stone size needed for stability on the slope and to design a filter layer for underneath the riprap.

6.0 INSPECTION AND MAINTENANCE

A person with knowledge of erosion and stormwater control, including the standards and conditions in the permit, shall conduct periodic visual inspections of installed erosion control measures. The frequency of inspection shall occur at least once every two weeks, as well as after a "storm event". A "storm event" shall consist 0.5 inches of rain within a 24-hour period. The following Erosion and Sediment Control - Best Management Practices (BMP's) shall inspected in the manner as described.

6.1 Sediment Barriers

Hay bale barriers, silt fences and filter berms shall be inspected and repaired for the following if there are any signs of erosion or sedimentation below them. If there are signs of undercutting at the center or the edges of the barrier, or impounding of large volumes of water behind them, sediment barriers shall be replaced with a temporary check dam. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly. Sediment deposits should be removed when deposits reach approximately one-half the height of the barrier. Filter berms should be reshaped as needed. Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required should be dressed to conform to the existing grade, prepared and seeded.

6.2 Stabilized Stone Construction Entrances

The exit shall be maintained in a condition that will prevent tracking of sediment onto public rights-of-way. When the control pad becomes ineffective, the stone shall be removed along with the collected soil material and redistributed on site in a stable manner. The entrance should then be reconstructed. The contractor shall sweep or wash pavement at exits, which have experienced mud-tracking on to the pavement or traveled way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment trapping device. All sediment shall be prevented from entering storm drains, ditches, or waterways. All sweeping conducted shall not be sweep into the existing wetland.

6.3 Mulched Areas

All mulches must be inspected periodically, in particular after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied. Nets must be inspected after rain events for dislocation or failure. If washouts or breakage occur, re-install the nets as necessary after repairing damage to the slope. Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface. Repair as needed.

6.4 Dust Control

When temporary dust control measures are used, repetitive treatment shall be applied as needed to accomplish control. Frequent reapplication of water may be necessary to mitigate dust occurring on warm sunny days, the distribution of water should not cause turbid runoff. Sweeping of paved road surface should occur during dry conditions and shall be swept from the centerline to the edge of the travel way, and shall not to be swept into a waterbody or wetland. Public roads may also require sweeping when necessary.

6.5 Stormwater Appurtenances

All underdrains, storm drains, and catch basins need to be operating effectively and free of debris.

6.6 Erosion and Sedimentation Control Inspections:

Acorn Engineering has personnel qualified to conduct Erosion and Sedimentation Control Inspections. For further information, contact:

Contact: Will Savage, PE
Telephone: (207) 775-2655

Qualifications:

- Maine Professional Engineering License #11419
- Maine DEP - Certified in Maintenance & Inspection of Stormwater BMP's Cert #14
- Certified Erosion, Sediment and Storm Water Inspector (CESSWI) Cert #0293
- Certified Professional in Erosion and Sediment Control (CPESC) Cert. #4620

The Contractor has sole responsibility for complying with the Erosion and Sedimentation Report/Plan, including control of fugitive dust. The Contractor shall be responsible for any monetary penalties resulting from failure to comply with these standards.

7.0 IMPLEMENTATION SCHEDULE

The following implementation sequence is intended to maximize the effectiveness of the above described erosion control measures. Contractors should avoid overexposing disturbed areas and limit the amount of stabilization area.

1. Install a stabilized construction entrance in all locations where construction traffic will enter and exit the site.
2. Install perimeter silt fence or erosion control berm.
3. Install all other erosion control devices as necessary throughout the remainder of this schedule.
4. Commence installation of drainage infrastructure.
5. Prioritize the downhill side to contain runoff within the site while providing an engineered outlet to the municipal storm drain system within Lambert Street.
6. Commence earthwork operations, associated with the parking lot construction.
7. Commence installation of utilities.
8. Continue earthwork and grading to subgrade as necessary for construction.
9. Complete installation of drainage infrastructure, as well as other utility work.
10. Complete remaining earthwork operations.
11. Install sub-base and base gravels in paved areas.
12. Install paving, curbing and brickwork.
13. Loam, lime, fertilize, seed and mulch disturbed areas and complete all landscaping.
14. Once the site is stabilized and mulching of landscape areas is complete, remove all temporary erosion control measures.
15. Touch up areas without a vigorous catch of grass with loam and seed.
16. Complete site signage and striping.
17. Execute proper maintenance of all temporary and permanent erosion control measures throughout the project.

The above implementation sequence should be generally followed by the site contractor. However, the contractor may construct several items simultaneously. The contractor shall submit to the owner a schedule of the completion of the work. If the contractor is to commence the construction of more than one item above, they shall limit the amount of exposed areas to those areas in which work is expected to be undertaken during the following 30 days.

The contractor shall re-vegetate disturbed areas as rapidly as possible. All areas shall be permanently stabilized within 7 days of final grading or before a storm event. The contractor shall incorporate planned inlets and drainage systems as early as possible into the construction phase.

8.0 CONCLUSION

The above erosion control narrative is intended to minimize the development impact by implementing temporary and permanent erosion control measures. The contractor shall also refer to the Maine Erosion and Sediment Control BMP manual for additional information.

9.0 ATTACHMENTS

- Temporary Seeding Plan

TEMPORARY SEEDING PLAN

Site Preparation

The seeded areas shall be feasibly graded out to provide the use of equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. If necessary, the site may require additional temporary erosion control measures outlined in the Erosion Control report.

Seedbed Preparation

Fertilizer shall be applied to the site at a rate of 13.8 pounds per 1,000 square feet. The composition of the fertilizer shall be 10-10-10 (N-P2O5-K2O) or equivalent.

Limestone shall be applied to the site at a rate of 138 pounds per 1,000 square feet.

Seeding

The composition and amount of temporary seed applied to a site shall be determined by the following table:

Seed	Pounds / 1,000 S.F.	Recommended Seeding Dates
Winter Rye	2.57	Aug-15 to Oct-1
Oats	1.84	Apr-1 to Jul-1 Aug-15 to Sep-15
Annual Ryegrass	0.92	Apr-1 to Jul-1
Sudangrass	0.92	May-15 to Aug-15
Perennial	0.92	Aug-15 to Sep-15

Mulching

Mulch shall be applied at a rate of 70 lbs – 90 lbs per 1,000 square feet. The mulch shall be installed at a minimum depth of 4 inches. The seeded area shall be mulched immediately after seed is applied. Mulching during the winter season shall be double the normal amount.

Conclusion

Please refer to the Maine Erosion and Sediment Control BMP manual for additional information pertaining to temporary seeding and mulching.

ACORN ENGINEERING, INC.

Chief Keith Gautreau
City of Portland Fire Department
380 Congress St.
Portland, ME 04101

June 17, 2022

Subject: Lambert Woods Development – Fire Department Checklist
Section L of Application

On behalf of Maine Cooperative Partners, LLC, the design team is pleased to respond to the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

   Maine Cooperative Development Partners
   6 City Center, Fl. 3
   Portland, Maine 04101
   (207) 415-3870

2. Name, address, telephone number of architect

   Kaplan Thompson Architects
   102 Exchange Street, Fl. 2
   Portland, ME 04101
   (207) 842-2888

3. Proposed uses of any structures [NFPA and IBC classification]

   NFPA: Apartment Building IBC: R-2

4. Square footage of all structures, including decks [total and per story]

Community Flats (10)		
Ground	3,016	sf
2nd Floor	3,404	sf
3rd Floor	3,404	sf
Total	**9,824**	**sf**

Rowhouse (5)		
Ground	2,515	sf
2nd Floor	2,467	sf
3rd Floor	2,432	sf
Total	**7,414**	**sf**

Townhomes (3)		
Ground	2,759	sf
2nd Floor	2,432	sf
Total	**5,191**	**sf**

5. Elevation of all structures

   The proposed building heights are consistent with the R3 PRUD Zoning and do not exceed the maximum allowance of 35'.

6. Proposed fire protection of all structures

   All buildings will be serviced with a private fire service. Fire flows and requirements for system storage or booster pumping are subject to the fire professional design which will be performed prior the request for a building permit.

7. Hydrant locations

   There is not an existing hydrant along the length of Washington Ave. The site anticipates the addition of a new hydrant within the development located 450' from the furthest proposed structure. Hydrant flow data from the Portland Water District once received may be made available to the Fire Department upon request.

8. Water main size and location

   Water services of 6" and 8" are proposed for the north and south parcels respectively. A domestic meter pit and above ground backflow enclosure are located along the access drive as well. Each building will be served via a fire and domestic service that tap into the service extending through the site.

9. Access to all structures [min. 2 sides]

   Access to the structures is provided from the access drive and mews section. A grass paver drive aisle has been provided for emergency access circulation

10. Code summaries will be provided by the Architects upon request.

NFPA 1 – Chapter 18 Fire Department Access and Water Supply

18.2 Fire Department Access:

The north and south parcels can be accessed from the paved driveways. The drive aisles reduce from 22' to 16' in the mews section with a grass paver drive aisle provided at the end of the mews to allow for complete site circulation for emergency access scenarios. The following pavement street widths to the site are as follows:

- Washington Avenue: 21-22 feet
- Access Driveways: 22 feet

Per NFPA 1 – Chapter 18.2.3.2.2.1, all first story floors shall be located not more than 450 feet from a Fire Department access road.

City of Portland Technical Manual – Section 3 Public Safety

3.4.1 Every dead-end roadway more than one hundred fifty (150') feet in length shall provide a turnaround at the closed end. Turnarounds shall be designed to facilitate future street connectivity and shall always be designed to the right (refer to Figure I-5).

Response: The site has been designed to accommodate the turning movements required from a 40' ladder truck maneuvering the site.

3.4.2 Where possible, developments shall provide access for Fire Department vehicles to at least two sides of all structures. Access may be from streets, access roads, emergency access lanes, or parking areas.

Response: As depicted on the site plan, the proposed site layout is compact with multiple access points via the parking lot, public right-of-way, or mews section.

3.4.3 Building setbacks, where required by zoning, shall be adequate to allow for emergency vehicle access and related emergency response activities and shall be evaluated based on the following factors:

- *Building Height.*
- *Building Occupancy.*
- *Construction Type.*
- *Impediments to the Structures.*
- *Safety Features Provided.*

Response: The proposed development layout has contemplated emergency access conditions and provides for safe and efficient access along a circuitous route through the site for emergency vehicles.

3.4.4. Fire Dept. access roads shall extend to within 50' of an exterior door providing access to the interior of the structure.

Response: The building will be provided with exterior doors that will be within 50' of a Fire Department access route.

3.4.5. Site access shall provide a minimum of nine (9) feet clearance height to accommodate ambulance access.

Response: The proposed site maintains the required clearance height of nine feet in all cases.

3.4.6. Elevators shall be sized to accommodate an 80 x 24-inch stretcher.

Response: Elevators are not proposed for this project.

3.4.7. All structures are required to display the assigned street number. Numbers shall be clearly visible from the public right of way.

Response: The applicant is currently working with the City's Public Works Division to assign street addresses and numbering to meet City Standards.

Thank you for your review. Please let me know if you have any additional questions or comments.

Sincerely,

Sam Lebel

Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
212 Canco Road
Portland, Maine 04103

Date: 6/14/22

Bradley Roland, P.E.
Water Resources Division
Department of Public Works
212 Canco Road
Portland, ME 04103

1. Please, Submit Utility, Site, and Locus Plans.

Site Address: 165 Lambert Street and 622 Auburn Street

Chart Block Lot Number: 385-A-1, 386-C-1, 385-D-8, 386-B-12, 386-B-15

Proposed Use: Residential
Previous Use: Undeveloped
Existing Sanitary Flows: 0 GPD
Existing Process Flows: 0 GPD
Description and location of City sewer that is to receive the proposed building sewer lateral.

Washington Street (10" SS)

Site Category:

Commercial *(see part 4 below)*	
Industrial *(complete part 5 below)*	
Governmental	
Residential	✔
Other *(specify)*	

Clearly, indicate the proposed connections, on the submitted plans.

2. Please, Submit Contact Information.

City Planner's Name: Charles Tetelman Phone: 207-874-8719
Owner/Developer Name: Maine Cooperative Development Partners
Owner/Developer Address: P.O. Box 15235, Portland, ME 04112
Phone: Fax: E-mail: liztrice@gmail.com
Engineering Consultant Name: Acorn Engineering
Engineering Consultant Address: 65 Hanover Street, Portland, ME 04010
Phone: 207-775-2655 Fax: E-mail: slebel@acorn-engineering.com

Note: Consultants and Developers should allow +/- 15 days, for capacity status, prior to Planning Board Review.

3. Please, Submit Domestic Wastewater Design Flow Calculations.

Estimated Domestic Wastewater Flow Generated: 29,700 GPD
Peaking Factor/ Peak Times: Diurnal
Specify the source of design guidelines: *(i.e.__"Handbook of Subsurface Wastewater Disposal in Maine," "Plumbers and Pipe Fitters Calculation Manual," __ Portland Water District Records, __ Other (specify)*
Handbook of Subsurface Wastewater Disposal in Maine

Note: Please submit calculations showing the derivation of your design flows, either on the following page, in the space provided, or attached, as a separate sheet.

4. Please, Submit External Grease Interceptor Calculations.

Total Drainage Fixture Unit (DFU) Values: N/A

Size of External Grease Interceptor: _____

Retention Time: _____

Peaking Factor/ Peak Times: _____

Note: In determining your restaurant process water flows, and the size of your external grease interceptor, please use The Uniform Plumbing Code. Note: In determining the retention time, sixty (60) minutes is the minimum retention time. Note: Please submit detailed calculations showing the derivation of your restaurant process water design flows, and please submit detailed calculations showing the derivation of the size of your external grease interceptor, either in the space provided below, or attached, as a separate sheet.

5. Please, Submit Industrial Process Wastewater Flow Calculations

Estimated Industrial Process Wastewater Flows Generated: N/A GPD

Do you currently hold Federal or State discharge permits? Yes ____ No ____

Is the process wastewater termed categorical under CFR 40? Yes ____ No ____

OSHA Standard Industrial Code (SIC): *(http://www.osha.gov/oshstats/sicser.html)*

Peaking Factor/Peak Process Times: _____

Note: On the submitted plans, please show where the building's domestic sanitary sewer laterals, as well as the building's industrial-commercial process wastewater sewer laterals exits the facility. Also, show where these building sewer laterals enter the city's sewer. Finally, show the location of the wet wells, control manholes, or other access points; and, the locations of filters, strainers, or grease traps.

Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.

M. Calculation of Wastewater Flowrate

The proposed project will include the development of a site that is currently undeveloped. The lot is proposed to be developed with 18 buildings consisting of 165 residential units. The units will be split into two separate parcels with 8 buildings with 74 units located in the north parcel, and 10 buildings with 91 units located in the south parcel. Based upon Section 4 of the Maine Subsurface Wastewater Disposal Rules, the project anticipates the following daily flows:

Estimate of Design Flows			
Classification of Water Demand	**Number of Units**	**Gallons per Day per Unit**	**Total Gallons per Day**
Existing - None			
Proposed – North Parcel			
Multiple family dwelling unit (Studio)	2	120	240
Multiple family dwelling unit (1-bedroom)	30	120	3,600
Multiple family dwelling unit (2-bedroom)	20	180	3,600
Multiple family dwelling unit (3-bedroom)	22	270	5,940
Proposed – South Parcel			
Multiple family dwelling unit (Studio)	3	120	360
Multiple family dwelling unit (1-bedroom)	34	120	4,080
Multiple family dwelling unit (2-bedroom)	30	180	5,400
Multiple family dwelling unit (3-bedroom)	24	270	6,480
		Total Existing	**0**

Total Proposed – North Parcel	**13,380**
Total Proposed – South Parcel	**16,320**
Net Change	**+29,700 GPD**
*Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition	

As seen above, the project anticipates an increase in daily flow rate of approximately 29,700 gallons per day. Please see attached for the formal application template.

102 Exchange Street Portland, ME 04101 | (207) 842-2888 | kaplanthompson.com

June 13, 2022

LAMBERT WOODS
Architectural Narrative

We are proposing three different building types on the site for both the North and South side of Washington Avenue. The three-story Community Flats buildings are arranged along Washington Avenue to create an activated street frontage and help establish a strong connection between the North and the South sides of the site. The three-story Rowhouse buildings are arranged between the community flats buildings and the two-story townhouses to form the two large community greenspaces. The intent is to gradually decrease the scale of the buildings from the center of the site to the southwestern and northeastern extents of the property, where the shorter buildings are close to the current residential neighborhoods.

Our approach to the roof form of the height-limited Community Flats building is to develop a series of low-pitched roof planes that undulate across the facade of the buildings and are occasionally tipped down to denote the entrances below. This undulating roof form carries across the site from building to building, which establishes a language that is reflected in the Townhouses and Rowhouses where roofs are occasionally tipped up to highlight corners and connections. The Townhouse entrances are highlighted by a simple entry canopy that matches the pitch of the larger Community Flats buildings. The Rowhouse has a more elaborate series of similarly pitched entrance canopies that dance along the facade to individualize the unit entries as well as to help reduce the scale of the overall building.

We intend to use common siding materials and alter their installation methods to help break up the facades by a change in texture, spacing, and orientation. There are shared cladding materials between buildings that reinforce their connection and establish the rhythm of textural and material changes at the unit entrances. We've also altered the heights of the windows at various locations in reference to the undulating roof forms.

The Community Flats buildings provide exterior deck spaces on the upper levels, which add visual interest and provide a recessed area for a specific cladding treatment. The entry spaces are clad with a locally sourced natural Eastern White Cedar in locations where the building is experienced in close proximity.

The building's architectural design details, along with the careful attention to landscape design and public circulation spaces, will provide a welcoming and interactive neighborhood experience for this unique site.



Phil Kaplan
Maine Licensed Architect, AIA
Kaplan Thompson Architects

Kaplan
Thompson
Architects

P. Utilities

The proposed project will include installation of multiple utility services to the proposed buildings.

Water:

Based on the City archive plans, there is an existing 12" water main within Washington Ave along the project's frontage. It is proposed to connect into the existing 12" main with two 6" (or 8") services to feed into the North and South sides of the development. Two (2) above-ground double-check backflow assemblies and two (2) meter pits are proposed. Each structure will be served via a domestic and fire service. Additionally, a public fire hydrant is proposed at this time with an additional 6" connection to the main and is subject to approval from Portland Water District. Ability to serve confirmation will be submitted upon receipt.

Sewer:

A new 8" PVC lateral will be installed throughout the site on both sides of the road to accept the wastewater from each unit and will both tap the existing manhole in Washington Ave.

Stormwater:

Stormwater management for the development will be provided by under drained sand filters and porous pavement. Additionally, runoff from a portion of Washington Ave. will be redirected to a detention area with plantings to provide attenuation. Please refer to the Grading & Drainage plans as well as the Stormwater Management Report for more information.

Electric/Communications:

It is proposed to install a new utility pole on the north site and to route electric and communications from an existing pole for the south site. The services will be provided with underground primaries to transformers located throughout both parcels. New conduits are proposed for telephone, fiber, and cable that will run down from the existing and proposed utility poles on Washington Street. See the Sheet C-20, Utility Plan, for more information.

Ability to serve letters have been sent out to the respective utility companies in accordance with the City of Portland Code of Ordinances Chapter 14 Land Use, Section 14-527(g)(7). Responses from the utility companies are forthcoming.

Q. Construction Management Plan

Project Address: 165 Lambert Street and 622 Auburn Street

Project Description:

The proposed project includes the construction of eighteen (18) stand-alone residential buildings to be occupied by 165 units. The project will include the construction of parking lots and stormwater management features.

Project Team Summary:

Owner:	Maine Cooperative Development Partners
General Contractor:	Penobscot General Contractors
Civil & Environmental Engineer:	Acorn Engineering, Inc.
Architect:	Kaplan Thompson Architects
Structural Engineer:	Structural Integrity Consulting Engineers
Geotechnical Engineer:	Summit Geoengineering Services

The Owner/GC and all subcontractors will work with the City of Portland and adjacent landowners to minimize any project impacts.

The GC will remain responsible for enforcement of all compliance with 1) all contract plans and specifications in their scope of work and 2) all site working conditions and safety requirements, day and night, for both persons and property, in each case for the duration of their work. These include OSHA, NIOSH, U.S. EPA, local ordinance and any other applicable governmental regulations. Both the Owner/GC and any subcontractors will remain responsible for safeguarding the general public.

The GC shall review all permits and conditions associated with the project. Refer to the Civil/Site Plan Set, Sheet C-03 Construction Management Plan for visual representation of the measures to be taken during construction.

The following outline has been developed in accordance with the City of Portland Construction Management Plan General Template and shall be referenced by the GC during construction.

A. Construction Management Principles

The control of noise, vibrations, ground movement, truck traffic, and other construction related factors will be of utmost importance. Care shall be taken to minimize these effects in the best interest of neighbors and the general public. GC to ensure that work hours conform to the City of Portland's Ordinance.

B. Development Review of Construction Management Plan

Logistics and safety program shall be submitted at or prior to the preconstruction meeting by the GC with all pertinent information required by the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

C. Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits

Guarantees and fees will be paid at the time of the respective application. Sections 14-530 and 13-532 will be complied with all necessary permits will be obtained prior to work.

1. Street Opening and Street Occupancy Permits:

   Required permits regarding street opening and occupancy will be obtained from the Department of Public Works. The requests shall conform to the approved Construction Management Plan.

2. Blasting:

   Although not anticipated, if blasting occurs, it shall conform to Article VIII. In Chapter 14 of the City Code and Section 3.7 in the City's Technical Manual.

3. Building Code:

   Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code.

D. Construction Administration and Communication

The Contractor will work closely with adjacent abutters, businesses, and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. Communication in order to comply with all agreements, ordinances, and special permits will be of the utmost importance. Contractor and Subcontractor contact information shall be posted somewhere along the project's street frontage. Additional signage necessary for communication shall be provided but will be temporary and removed upon completion of the project.

E. Construction Schedule

The GC shall submit a construction timeline at or prior to the preconstruction meeting. Construction may occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit and City Code Section 25-129, Noise, dust and debris. Between September 1 and May 31, the following year, no person shall engage in construction activities generating noise exceeding 50 decibels, between the hours of 7 pm and 7 am of the following day within 500 feet of any buildings. From June 1 to August 31, construction activity may continue until 8 pm. No construction activity shall begin before 8 am on a Saturday, Sunday, or legal holiday. Extended hours or night work may be requested for special circumstances and street utility work if needed. These requests will be subject to approval by the Public Works Authority. Deliveries will be scheduled between 7 am and 5 pm.

The estimated timeframe of the proposed project is outlined below:

Project Start Date:	Spring 2023
Project End Date:	Spring 2025

A more detailed work schedule shall be provided by the GC at or before the pre-construction meeting with the City.

F. Security

1. The Construction Management Plan, Sheet C-03, depicts all proposed fencing and other barriers, with the intent of separating pedestrian and vehicle circulation from the construction site. Construction entrances per detail shall be installed.

2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations.*

3. Fire Safety Program: Prior to construction, an overall construction and demolition fire safety program shall be developed. Essential items to be emphasized include the following:
    - Good Housekeeping
    - On-site security
    - Installation of new fire protection systems as construction progresses
    - Preservation of existing systems during demolition
    - Organization and training of an on-site fire brigade
    - Development of a pre-fire plan with the local fire department
    - Rapid communication
    - Consideration of special hazards resulting from previous occupancies
    - Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations.

4. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.

5. Temporary security lighting shall be shown on the Construction Management Plan, and all fixtures shall be full cutoffs.

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets

   Construction activity in the public right-of-way shall be compliant with Chapter 25 Article VII of the City Code. At no time will it be permissible for construction activity including delivery vehicle to close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.

2. Sewer and Stormwater

   Sewer and stormwater system connections are controlled by Chapters 24 and 32 of the City code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual.

3. Traffic Control Plans

   Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. The contractor shall submit a satisfactory "Maintenance of Traffic" (MOT) plan prior to any street opening permit approval. This document shall contain all pertinent information from the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

   The MOT will address the work required for utility connections in Washington Street. Traffic will be channelized utilizing drums and cones. Proper signage will be installed prior to the through work zone. Alternating traffic will be controlled with flaggers. Trenches will be patched with pavement daily.

   The MOT plan shall provide for the safe passage of the public through or along the construction work zone. It may be permissible to close a portion of Washington Street during utility connections and/or detour a mode of traffic when absolutely necessary for safety. All requests shall be subject to City approval. MOT plans shall employ the appropriate techniques and devices as called for in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

   - Construction speed signing may be used as needed to slow traffic.
   - Traffic Control signs shall not be placed where they would create any obstructions to bicycles or pedestrians.
   - Flaggers will be utilized when necessary.

   All existing modes of travel in the work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning and laying out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.

   - Traffic control bicycle and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or

routes are ready for safe operation. Traffic control will not be removed to allow auto travel at the expense of bicycle and pedestrians.
- Barrier systems utilized to separate the construction activity from the public street and /or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
- ADA compliance in all capacities shall be maintained.

Use of public parking spaces or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

H. Site Management and Controls

1. Regular trash and debris shall be managed appropriately, and its removal shall comply with all local, state, and federal regulations.

2. Street cleaning and sweeping shall be followed as outlined in the erosion and sedimentation control notes and report. Damage to the street shall be avoided and shall be the responsibility of the contractor.

3. Dust shall be controlled and shall comply with Section 25-129 and the erosion and sedimentation control notes, plan, and details.

4. Noise shall be controlled and shall comply with Section 17-18 and Section 25-129.

5. Rodent Control shall be provided, if applicable, by a professional exterminator and shall be consistent with Chapter 22 of the City Code.

6. Snow and Ice Removal shall be provided. Pursuant to Section 25-173, the Contractor shall ensure a safe means of travel within the work zone by the following steps:

    a. Snow/ice removal or commence automatically from 1" or greater of snow or ice
    b. Remove snow as needed within the work zone, including parking spaces. Driveways and site lines shall not be blocked by piles of snow.
    c. Clear all walks and ramps within the work zone
    d. Sand or salt as needed
    e. Clear all basin or drainage to help snow melt
    f. The above steps shall be carried out Sunday-Saturday including holidays.

I. Erosion & Sedimentation Control

1. The Contractor shall install all erosion and sedimentation controls as depicted on the approved Construction Management Plan, C-03, and the approved erosion and sedimentation control report, prior to the pre-construction meeting for inspection by the City. The Contractor shall regularly inspect the control measures, no less than weekly and after storm events (0.5" or more in 24 hours). Additionally,

temporary or permanent stormwater management systems shall be inspected and maintained to ensure working order. The Contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspection by the City, Maine Department of Environmental Protection (MDEP) or the U.S. Environmental Protection Agency (EPA) upon request.

2. Due to the existing, sparse landscaping on site, no protection during construction will be necessary.

3. Stored materials shall be identified and avoid being located under/near trees.

J. Construction Staging Area

1. The Contractor shall submit a plan with locations depicted for the location of material staging areas, the location of on-site temporary construction trailers, the location of on-site truck delivery holding areas, the location of on-site truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. This plan shall be submitted at or prior to the pre-construction meeting. Any open storage areas shall be shown on the plan.

2. Delivery Truck Holding Areas On-Site: The majority of materials delivered to the site will be scheduled such that they are able to be off-loaded immediately. On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of trucks until they can be unloaded. Once at the site all vehicles will be brought within the fence line and will make every attempt to avoid queuing on public streets. If, for any reason, on-site holding of trucks is not feasible, an off-site location must be designated and shown on the submitted plan referenced above in J.1.

3. All deliveries for materials shall comply with the City's noise requirements.

K. Parking During Construction

1. Adequate parking for construction workers shall be provided on site or arrangements for off-street parking at an off-site location shall be provided.

2. Truck Routes and Volumes: The following quantities are estimated as part of the reconstruction:

   - Gravel & Stone – 3,640 CY. Earthwork subcontractor(s) pit to project site.
   - Hot Mix Asphalt – 460 Tons. Paving subcontractor pit to project site.

L. Dewatering Plans

1. A basic dewatering plan for any construction work is required and shall be submitted by the Contractor. The plan must cover construction sites where

groundwater is not expected but the impact of rainwater may require dewatering. The plan must include operating procedures, equipment to be used, including filters, erosion and sediment control measures, or other methods of removing sediment from approved discharges.

2. For construction work that will require frequent dewatering of groundwater from site, a dewatering plan must be prepared by the Contractor and approved by the Department of Public Works. Groundwater and/or soil testing may be required to determine course of action if treatment is necessary. Approval for all discharges to City infrastructure is required. The proposed plan must address the following:

    - Project duration, discharge location, storage equipment on-site, dewatering schematic, and emergency contact.
    - General requirements include trained staff on-site for all approve discharges and required site log for documentation of all discharges.
    - Storage and/or treatment process should include proper settling time and maintain proper use of filtering medium as required.
    - Contingency/maintenance plan for all dewatering equipment devices and filtration mediums.

    Any water that is removed from an excavation must be pumped from a perforated device buried in crush stone prior discharge and/or prior to storage and treatment. There will be no discharge allowed during precipitation events.

M. Special Measures as Necessary

No special measures are necessary for the proposed reconstruction.

R. Solid Waste Disposal

The property management company or Owner shall be responsible for locating the solid waste and recyclable material to the spaces allocated for solid waste storage as noted on the Site Plans (C-10, C-11).

The solid waste containers will be fully enclosed and screened from the public view. A private hauler will be contracted with for removal.

Barton & Loguidice

Traffic Assessment

Date: June 17, 2022

To: **Sam Lebel, PE, Project Manager**
Acorn Engineering, Inc.

From: Jacob Sirois
Engineer 1
Barton & Loguidice, LLC.

John Q. Adams, P.E., PTOE
Associate, Senior Transportation Engineer
Barton & Loguidice, LLC.

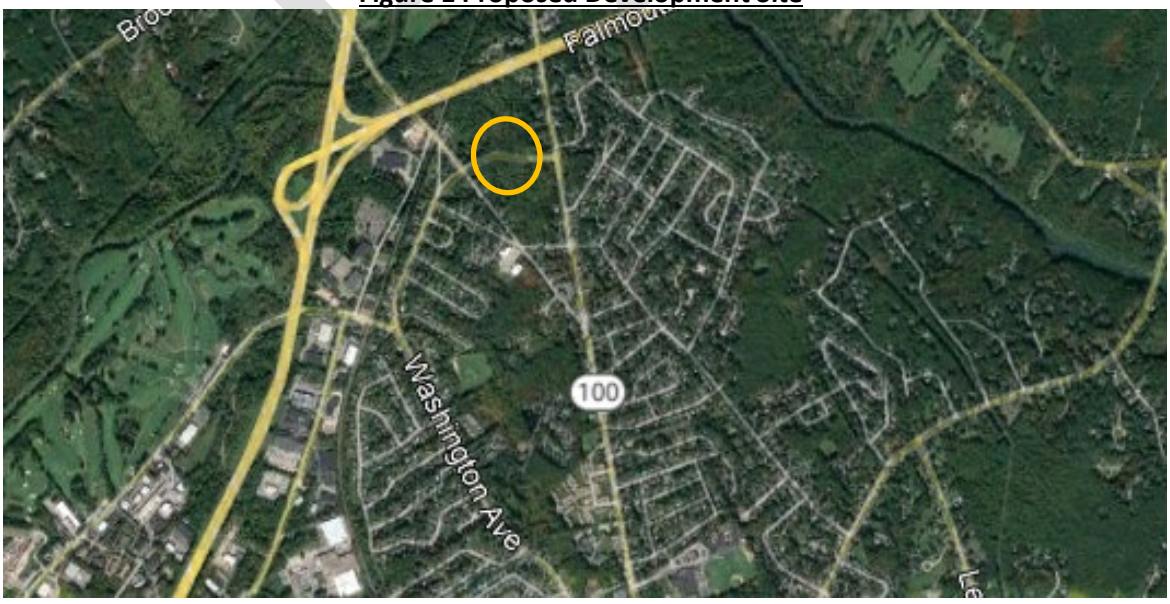
Re: **Proposed Lambert Woods Development**
Washington Street Extension, Portland, Maine
B&L #2491.001.001

Introduction

Lambert Woods Residential development is proposed with 165-unit affordable housing complex on Washington Avenue Extension in the City of Portland (refer to Figure 1 for the location of the proposed project). The proposed apartment complex will be accessed via five (5) proposed driveways; two (2) on the north side of Washington Avenue Extension, and three (3) on the south side. The program for this affordable housing development will have all 165-units income and rent restricted

This traffic assessment will evaluate and measure the level of impact on traffic operations and safety resulting with the development of the proposed project. Site generated trip projections are provided for "key" peak hour time periods throughout a typical week; road safety conditions were determined based upon a review of MaineDOT's latest road safety data and intersection sight distance was field reviewed and measured to ensure safe and acceptable sight distance is provided at the proposed entrances on Washington Avenue Extension.

Figure 1 Proposed Development Site



DRAFT

Site Access

The site will be access from Washington Avenue Extension, with portions of the located on both the north and south sides of the roadway. Access to the site via the area roadway network will generally be from Auburn Street located east of the site, Riverside Street and Washington Avenue located west and south of the south and Blackstrap Road to the north. Washington Avenue in the area of the project is a two-lane bi-directional roadway with 12-ft. travel lanes and 8-ft. shoulders and a posted speed limit of 25 mph. A review of Maine DOT Traffic Volume information indicates that this section of Washington Avenue Extension has an AADT of 3,190 vehicles.

Site Trip Generation

Daily and peak hour trip generation was determined for the proposed project based upon trip tables presented in the eleventh edition of the Institute of Transportation Engineers (ITE) "**TRIP GENERATION MANUAL**". The ITE publication provides numerous land use categories and the average volume of trips generated by each category.

Site trip estimates for the Lambert Woods Residential Development Apartment Project are based upon LUC #223 – Affordable Housing; which is described in the ITE publication as: all multi-family housing that is rented at below market rate. Calculation of the total trips generated per each corresponding time period are summarized below in Table 1.1.

Table 1.1
ITE Trip Generation Calculations

Land Use	Affordable Housing - Income Limits - LUC 223					
Time Period	Dwelling Units	Trip Generation Rate Trips/Dwelling Units	Trips Generated	Distribution Entering / Exiting	Enter	Exit
Weekday	165	4.81	794	50% / 50%	397	397
AM Weekday Peak Hour (Street)	165	0.36	60	29% / 71%	17	43
PM Weekday Peak Hour (Street)	165	0.46	76	59% / 41%	45	31
AM Weekday Peak Hour (Generator)	165	0.36	60	26% / 74%	16	44
PM Weekday Peak Hour (Generator)	165	0.50	83	58% / 42%	48	35
Saturday Peak Hour*	165	0.50	83	59% / 41%	49	34

*Saturday Peak Hour assumed to be similar to the PM Peak Hour of Generator

It should be noted that above in Table 1.1 (LUC 223) we have assumed the Saturday peak hour rate to be similar to the weekday PM peak hour rate. This land use code, 223 Affordable Housing, is a new use that has been added to the current edition (11th) of the ITE Trip generation Manual and has very limited data for the Saturday peak hour time period. In fact, there is only one data point shown for Saturday for which the rate is based on which in our judgement is not reliable. In comparison, the weekday AM and PM peak hour time periods, which had 6 to 10 data points, give a higher confidence in their accuracy. Additionally, the Saturday peak hour rate (1.28 trips per dwelling unit) was abnormally higher than the rates for the weekday AM and PM peak hours, which ranged from 0.36 to 0.50 trips per dwelling unit. This specific issue was discussed with the City Transportation Systems Engineer, Jeremiah Bartlett, PE, PTOE, and he was in agreement with our concerns and conclusions to use the weekday PM peak hour rate in lieu of the Saturday peak hour rate provided in the ITE Trip Generation Manual. This methodology should provide a more accurate estimation of expected trip generation.

As presented in the preceding table, it is our opinion that this development will be generate 60 trips during the Weekday AM peak hour, 83 trips during the Weekday PM peak hour, and 83 trips during the Saturday peak hour. This indicates that a Maine DOT Traffic Movement Permit will not be necessary as the development will not generate the minimum threshold of 100 new peak hour trips.

Vehicle Sight Distance

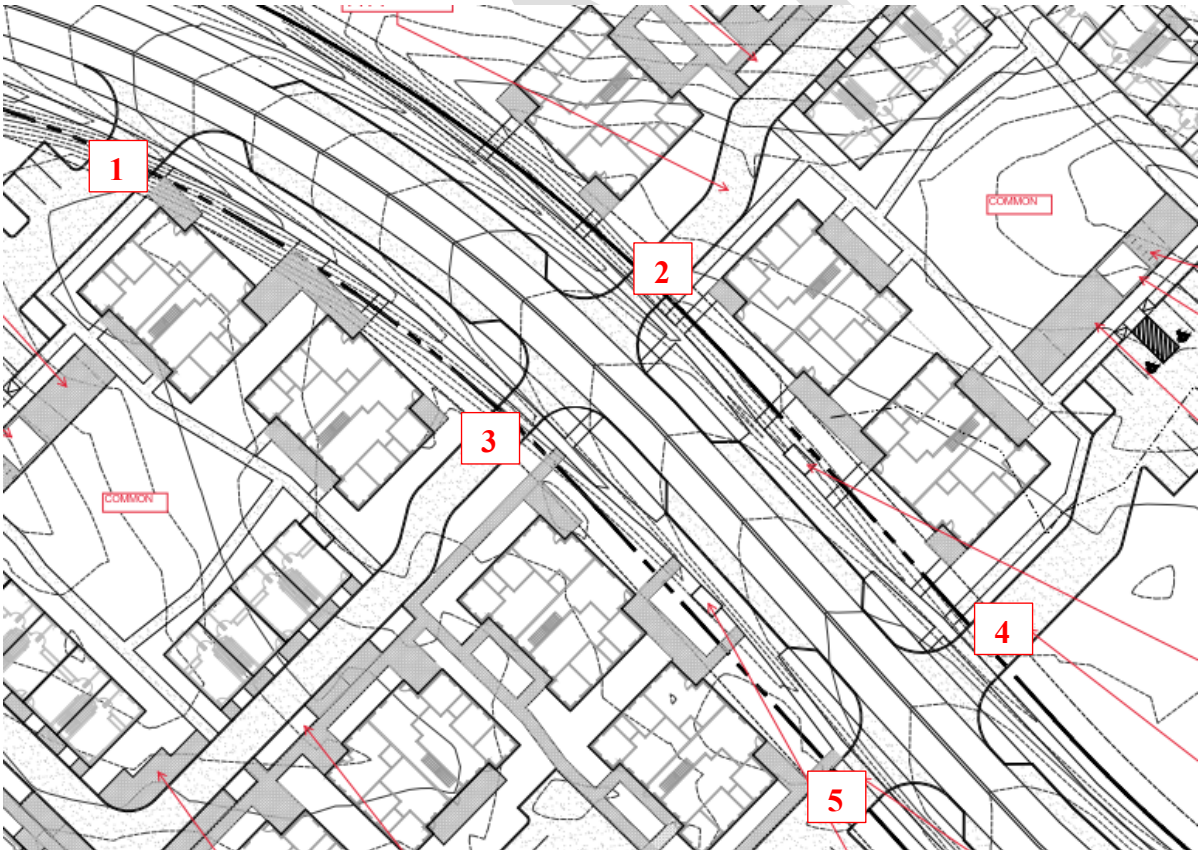
The Maine Department of Transportation's Highway Entrance and Driveway Rules require the following sight distances for a non-mobility roadway:

Sight Distance Standards

Speed Limit	Sight Distance
25 mph	**200 feet**
30 mph	250 feet
35 mph	305 feet
40 mph	360 feet
45 mph	425 feet
50 mph	495 feet

The section of Washington Avenue Extension fronting the proposed driveways is presently posted at 25mph, which requires an unobstructed sight distance of 200-feet. MaineDOT's Rules and Regulations require sight distance to be measured in accordance with the following procedures: *"Sight distance is measured to and from the point on the centerline of the proposed access that is located 10-feet from the edge of traveled way. The height of the hypothetical person's view is considered to be 3½ feet above the pavement and the height of the object being viewed is considered to be 4¼ feet above the pavement."*

The proposed driveway entrances and sight distances are listed below on the following page.



Driveway #1
Looking Left: 360'
Looking Right: 370' – Can be increased to 440' with minor clearing – See circled branch in photograph.

Driveway #2
Looking Left: 450'
Looking Right: 400'

Driveway #3
Left: 280' – can be increased to 330' with minor clearing – See circled branch in photograph
Right: Can see through intersection (600')

Driveway #4
Left: Can see through intersection (425')
Right: 450'

Driveway #5
Left: 375'
Right: can see through intersection (425')

Our field measurements looking both left and right from of each of the proposed site driveway entrances directly onto Washington Avenue Extension indicate existing sight distances are in excess of the requirements based on a posted speed limit of 25mph. See photos below.

Driveway #1 Looking Right Out of Entrance

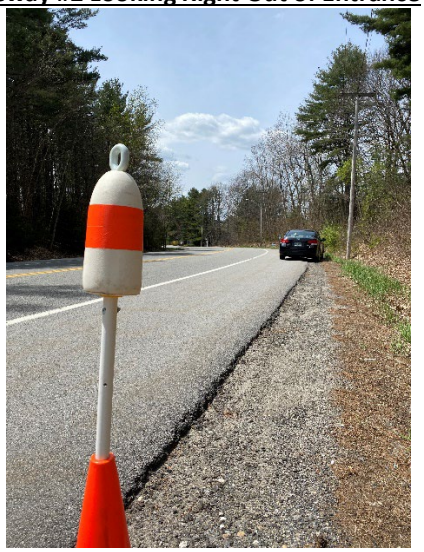


Driveway #1 Looking Left Out of Entrance



DRAFT

Driveway #2 Looking Right Out of Entrance



Driveway #2 Looking Left Out of Entrance



Driveway #3 Looking Right Out of Entrance



Driveway #3 Looking Left Out of Entrance



DRAFT

Driveway #4 Looking Right Out of Entrance



Driveway #4 Looking Left Out of Entrance



Driveway #5 Looking Right Out of Entrance



Driveway #5 Looking Left Out of Entrance



DRAFT

Existing Road Safety Conditions

The Maine Department of Transportation's (MaineDOT) Accident Records Section provided the latest three-year (2019 through 2021) crash data in the vicinity of the proposed project for a distance of approximately 2.60 miles. The defined study area is shown in Appendix A. Their report is presented as follows:

2019 -2021 Traffic Accident Summary

Location	Total Crashes	Critical Rate Factor
1. Washington Avenue Ext @ Auburn Street	1	0.25
2. Auburn Street @ Garsoe Drive	1	0.25
3. Auburn Street @ Summit Street	2	0.58
4. Eugene Street @ Gray Road	3	0.72
5. Washington Avenue @ Riverside Street	3	1.02
6. Lambert Street @ Summit Street	1	0.63
7. Lambert Street @ Washington Avenue and Washington Avenue East	5	2.60
8. Auburn Street btw. Falmouth City Line and Garsoe Drive	1	0.13
9. Gray Road btw. Eugene Street and Falmouth City Line	1	0.63
10. Washington Avenue btw. Lester Drive and Road INV 3210279	1	0.20
11. Washington Avenue Extension btw. Lambert Street and Auburn Street	1	0.29

The MaineDOT considers any roadway intersection or segment a high crash location if both of the following criteria are met:

- ***8 or more accidents in a three-year period***
- ***A Critical Rate Factor greater than 1.00***

As the data in the chart shows, there are no identified high crash locations within the defined study area.

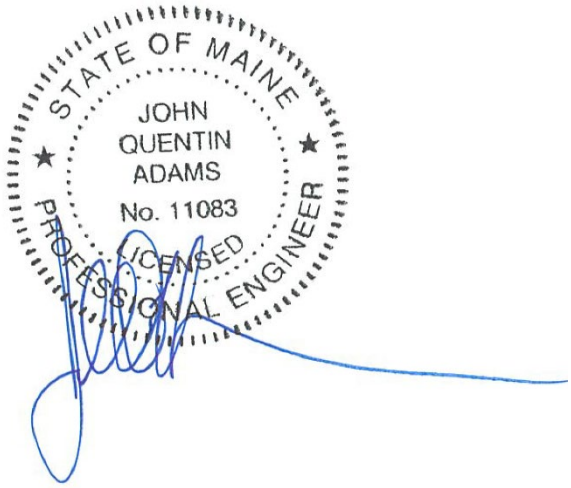
Summary

1. The expected daily trip generation for the proposed development is estimated to be 794 weekday daily trips. The project generates a total of 60 trips during the weekday AM peak hour, 83 trips during the weekday PM, and 83 trips during the Saturday peak hour. Overall the project will be a low volume trip generator and will be below the minimum MaineDOT threshold of 100 new peak hour trips ends that would require a Traffic Movement Permit.

2. A review of Maine DOT Crash data available for the latest three-year period (2019 – 2021) for the defined study area (see Appendix A) indicates that there are no high crash locations within the defined region.

3. Vehicle sight distance field measurements looking both left and right from each of the proposed five (5) site driveway entrances onto Washington Avenue Extension indicate existing sight distances are in excess of the requirements (200 ft.) based on a posted speed limit of 25mph.

DRAFT

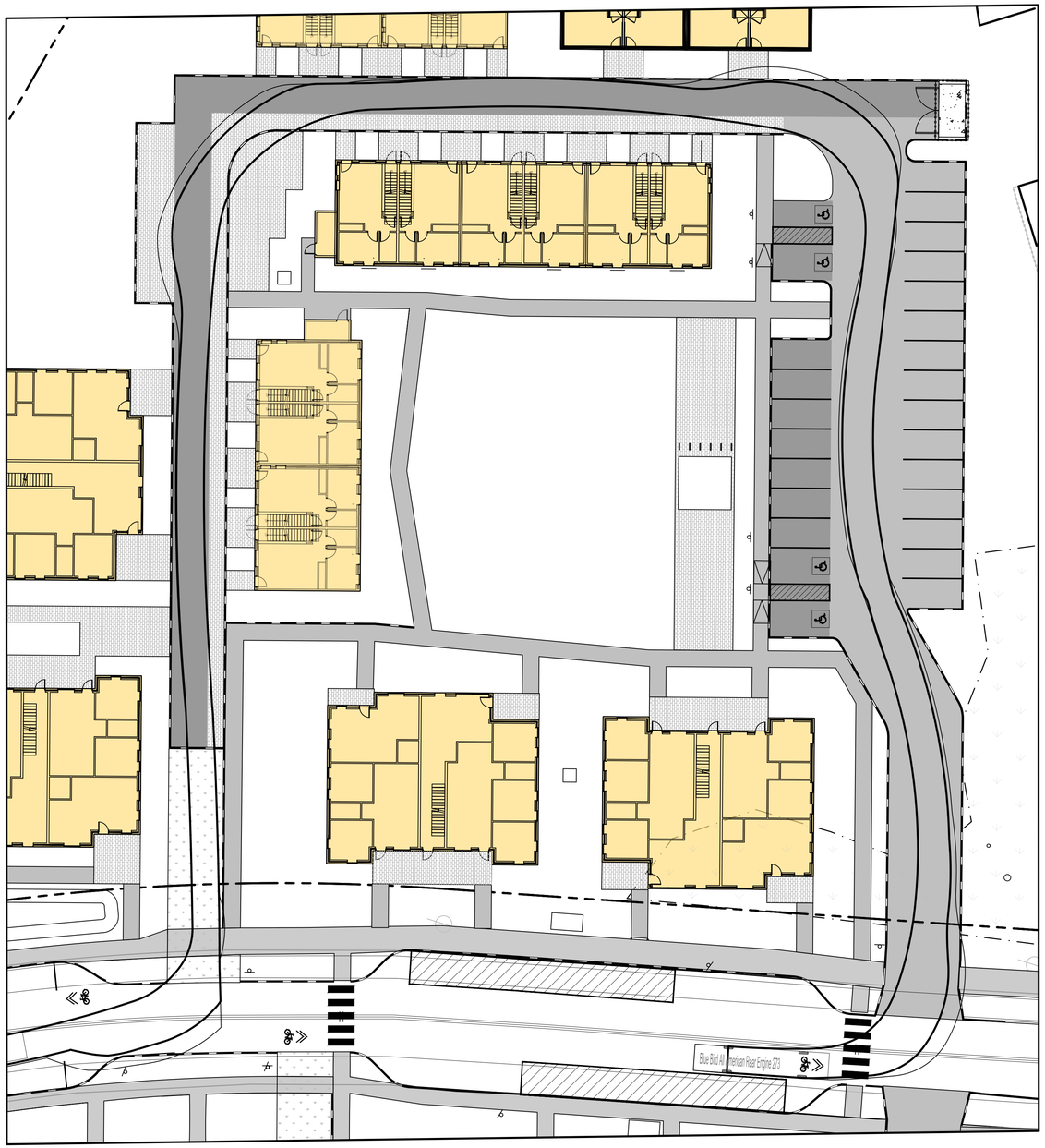


John Q. Adams, PE, PTOE, Date: 04/11/2022

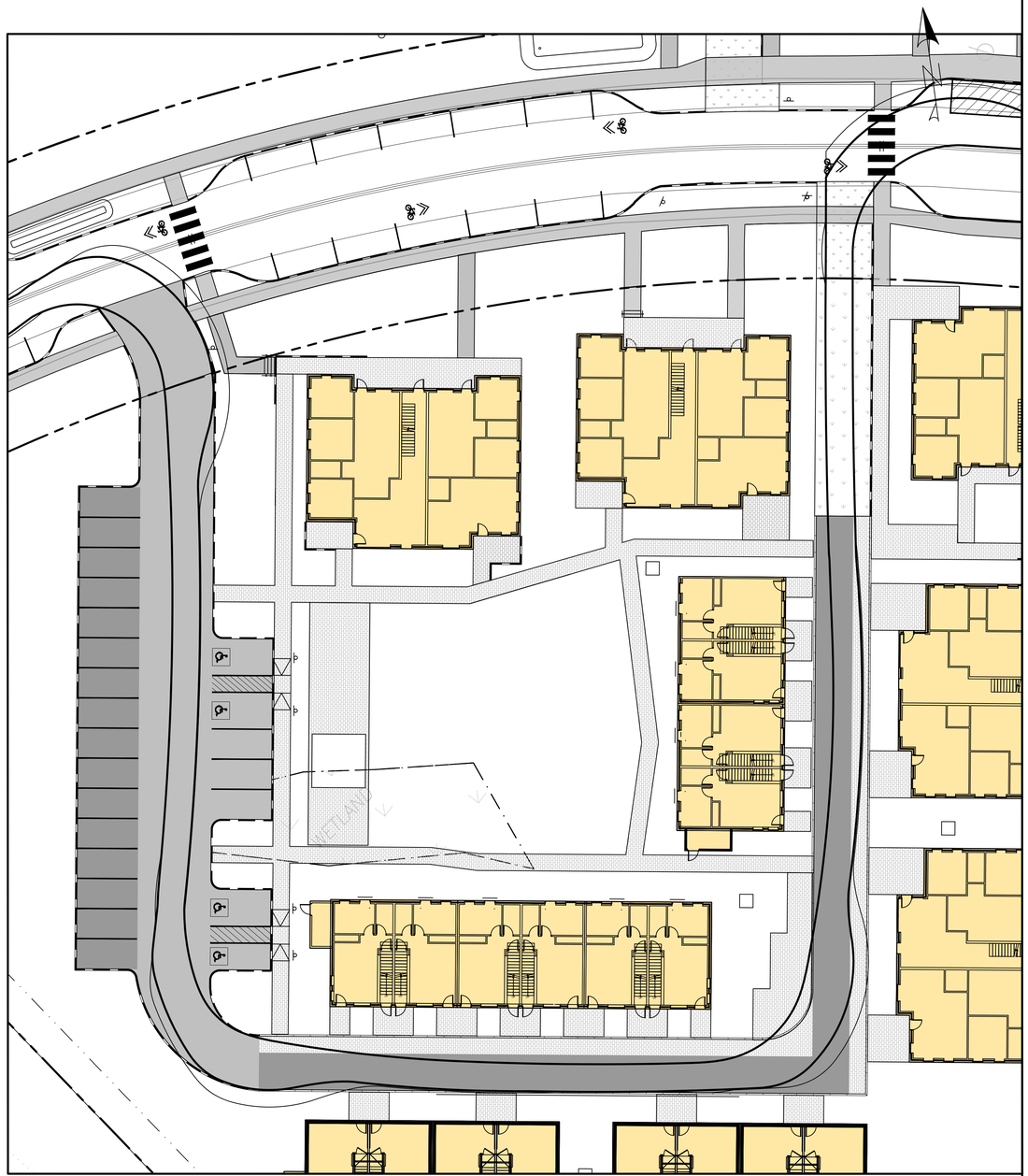
DRAFT

APPENDIX

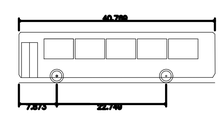
Appendix A - Maine DOT Crash Data



41' FIRE TEMPLATE ON NORTH SIDE OF DEVELOPMENT



41' FIRE TEMPLATE ON SOUTH SIDE OF DEVELOPMENT



Blue Bird All American Rear Engine 273

Overall Length	40.769ft
Overall Width	8.000ft
Overall Body Height	10.500ft
Min Body Ground Clearance	1.066ft
Track Width	8.000ft
Lock-to-lock time	6.00s
Max Wheel Angle	50.00°

40 0 20 40

SCALE: 1"=20'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE

DRAWING NAME: 41' FIRE TURNING TEMPLATE

PROJECT NAME/ADDRESS: 165 LAMBERT ST CO-OP
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04101
(207) 775-2655

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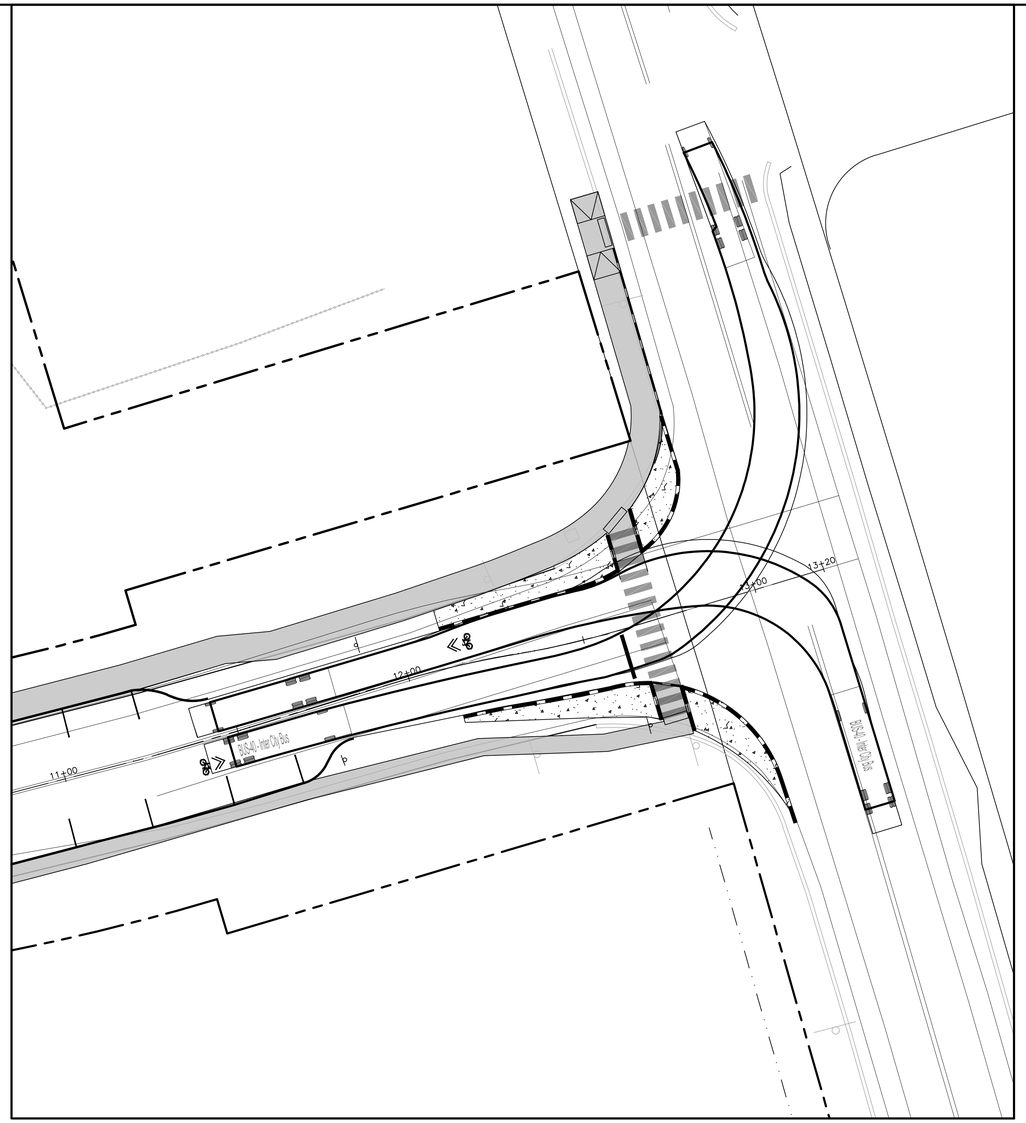
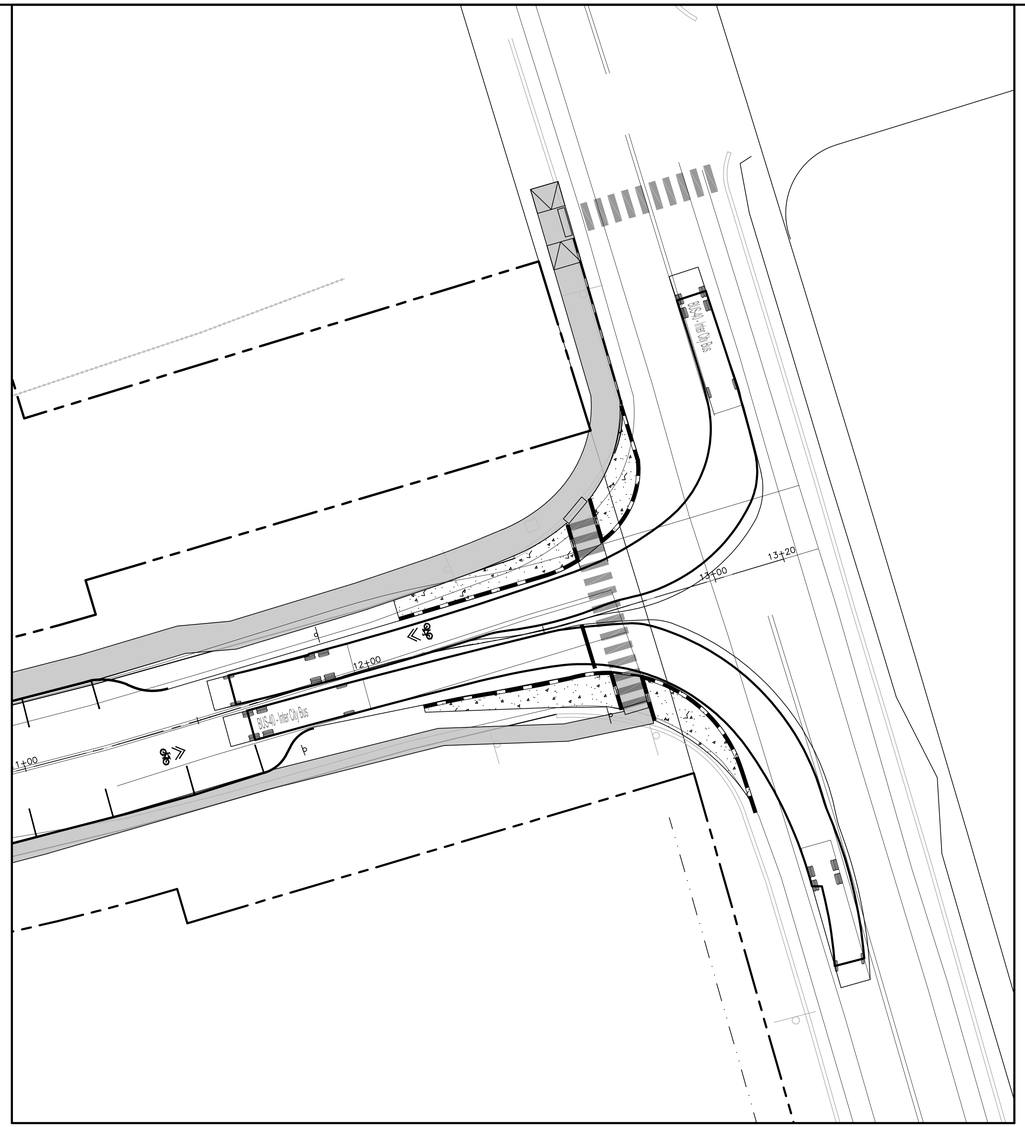
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
LICENSED
PROFESSIONAL ENGINEER
6/15/22

DRAWING NO.
TT1



40' BUS LEFT HAND TURN TEMPLATES



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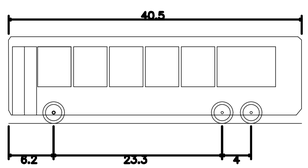

BUS-40 – Inter City Bus

Overall Length	40.500ft
Overall Width	8.500ft
Overall Body Height	12.000ft
Min Body Ground Clearance	1.158ft
Track Width	8.500ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	41.90°

40 0 20 40

SCALE: 1"=20'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE

DRAWING NAME: AUBURN STREET BUS TURN TEMPLATE

PROJECT NAME/ADDRESS: 165 LAMBERT ST CO-OP
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

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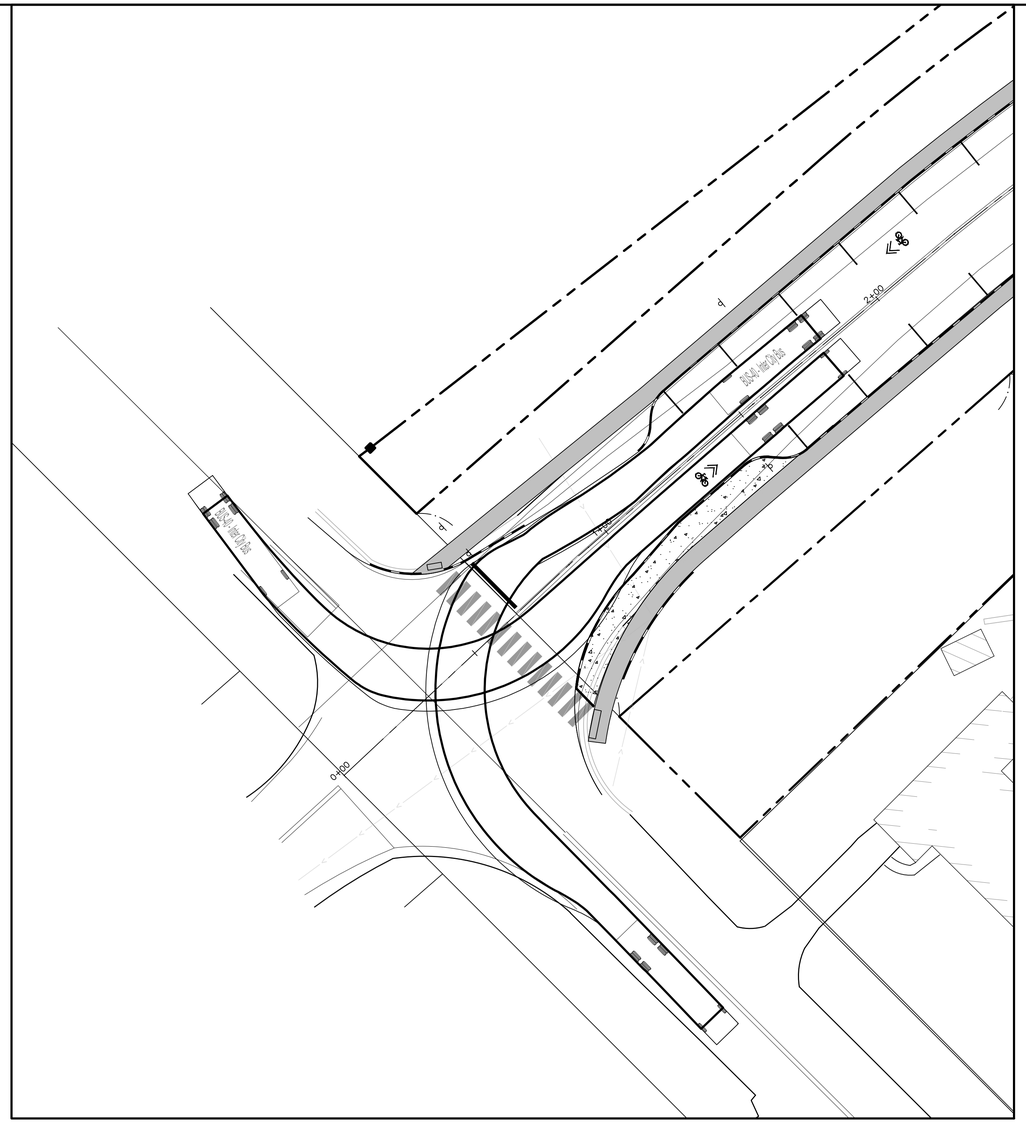
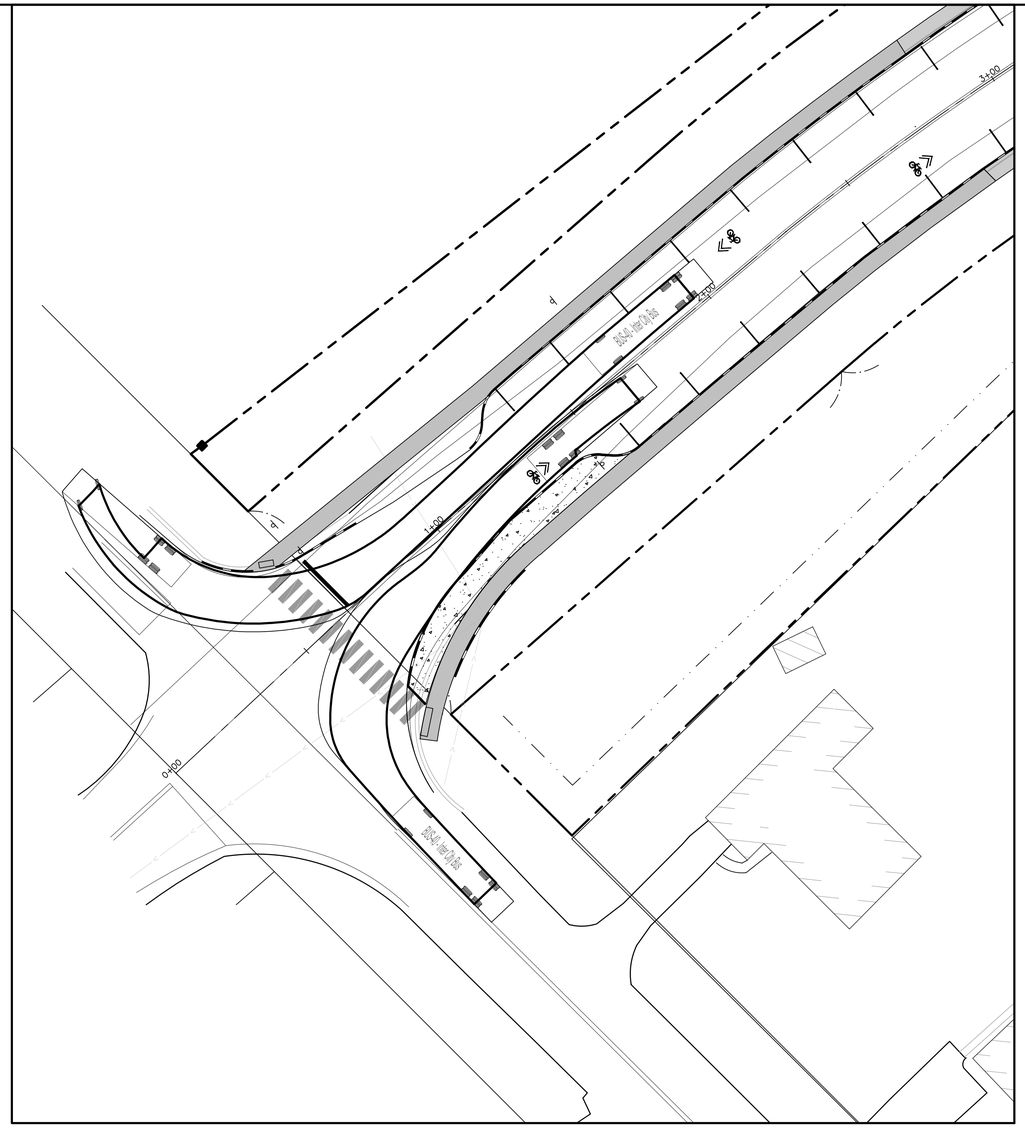
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
16505
LICENSED
PROFESSIONAL ENGINEER
8/15/22

DRAWING NO.
TT2



40' BUS LEFT HAND TURN TEMPLATE



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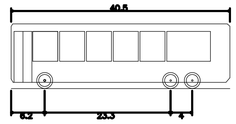

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Overall Width	8.500ft
Overall Body Height	12.000ft
Min Body Ground Clearance	1.158ft
Track Width	8.500ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	41.90°

40 0 20 40

SCALE: 1"=20'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE

DRAWING NAME: LAMBERT STREET BUS TURN TEMPLATE

PROJECT NAME/ADDRESS: 165 LAMBERT ST CO-OP
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

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SAMUEL J. LEBEL
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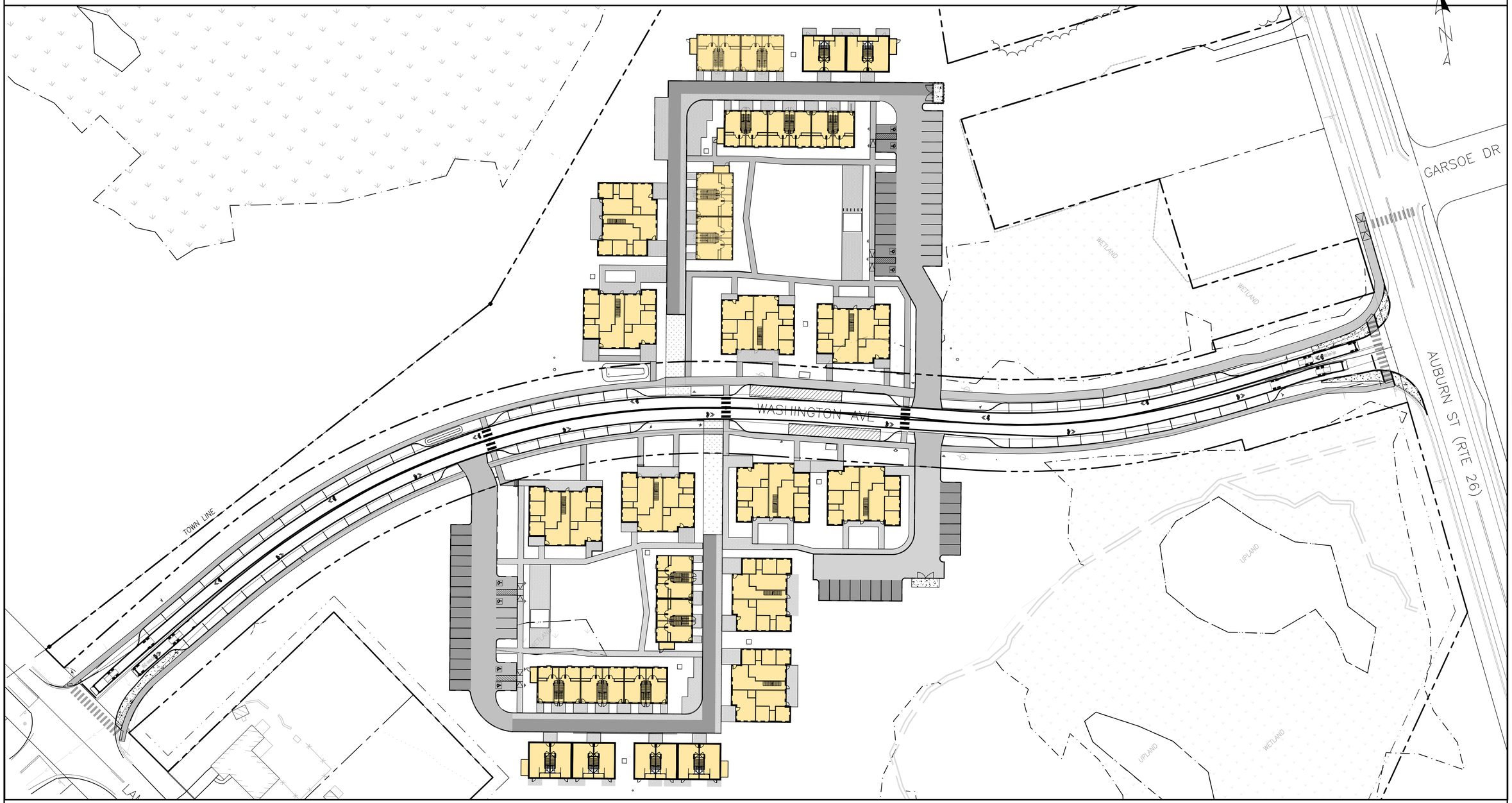
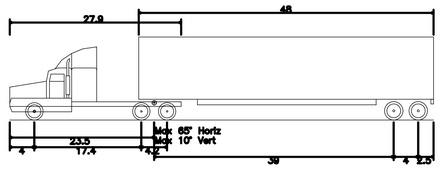
PROFESSIONAL ENGINEER
8/15/22

DRAWING NO.
TT3



WB-62 TEMPLATE ON WASHINGTON AVE. EXTENSION



WB-62 – Interstate Semi-Trailer	
Overall Length	69.000ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	28.40°

40 0 40 80

SCALE: 1"=40'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR | BY | DATE

DRAWING NAME: **WB 62 WASHINGTON EXTENSION TEMPLATE**

PROJECT NAME/ADDRESS: **165 LAMBERT ST CO-OP**
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

ACORN ENGINEERING, INC.

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P.O. BOX 3427, PORTLAND, MAINE 04101
(207) 775-2655

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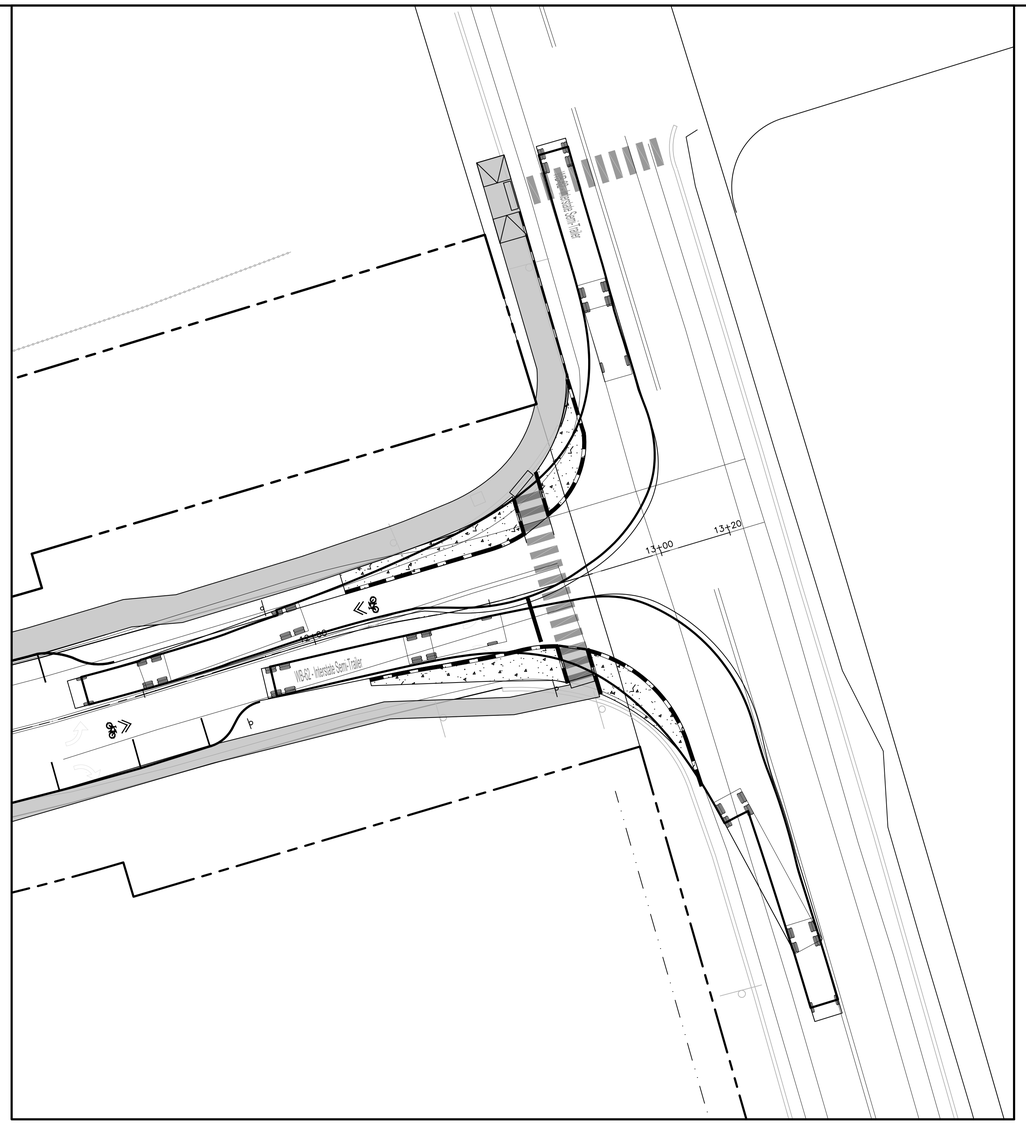
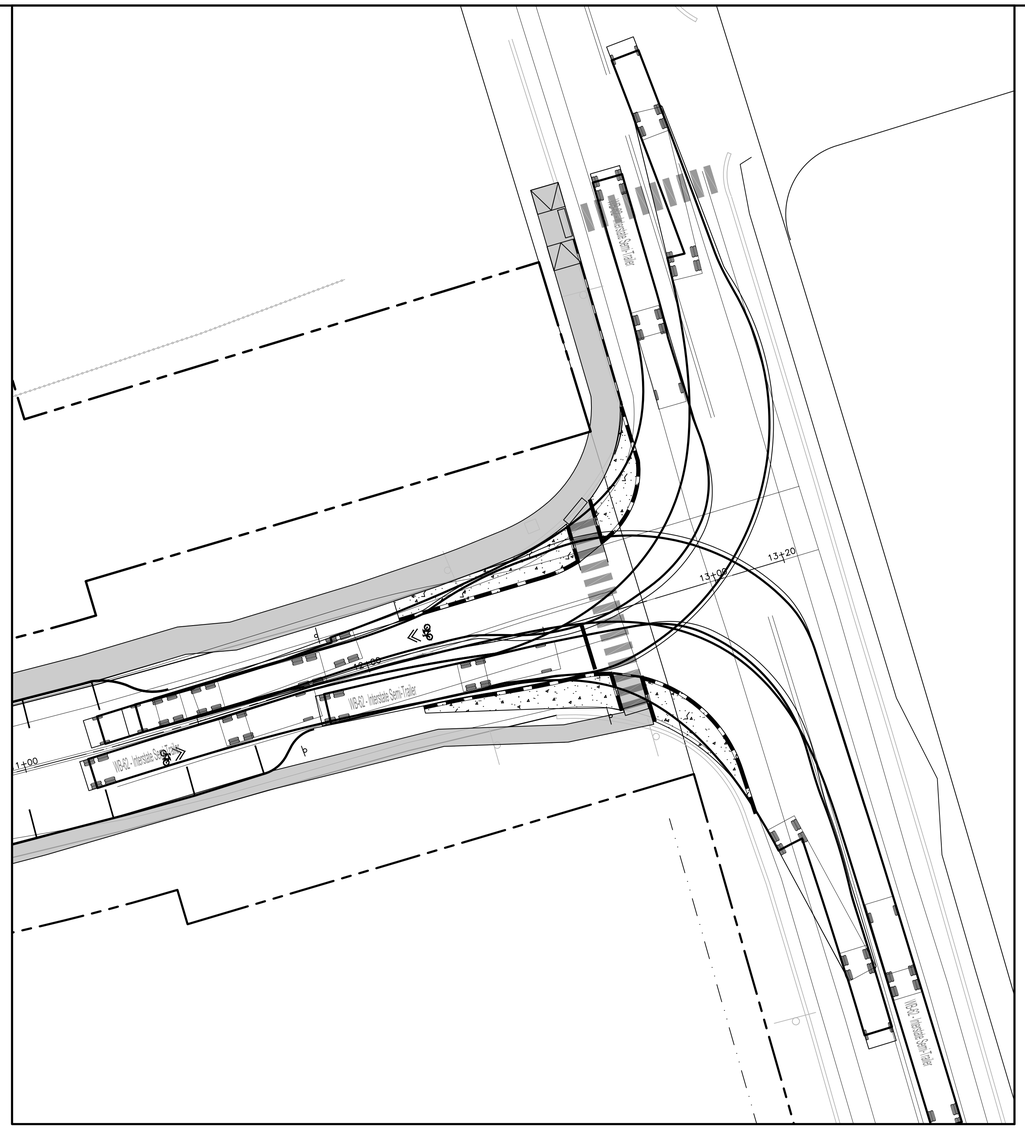
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
LICENSED PROFESSIONAL ENGINEER
5/5/22

DRAWING NO.
TT4



WB–62 RIGHT HAND TURN TEMPLATES



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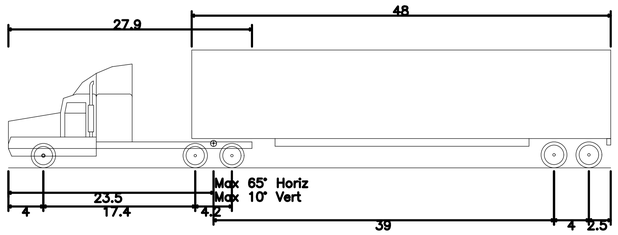

WB–62 – Interstate Semi–Trailer	
Overall Length	69.000ft
Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock–to–lock time	6.00s
Max Steering Angle (Virtual)	28.40°

40 0 20 40

SCALE: 1"=20'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE

DRAWING NAME: **AUBURN STREET WB–62 TURN TEMPLATE**

PROJECT NAME/ADDRESS: **165 LAMBERT ST CO–OP**
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD:
MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

ACORN ENGINEERING, INC.
ENGINEERING
PO BOX 3427 PORTLAND, MAINE 04101
(207) 775–2655

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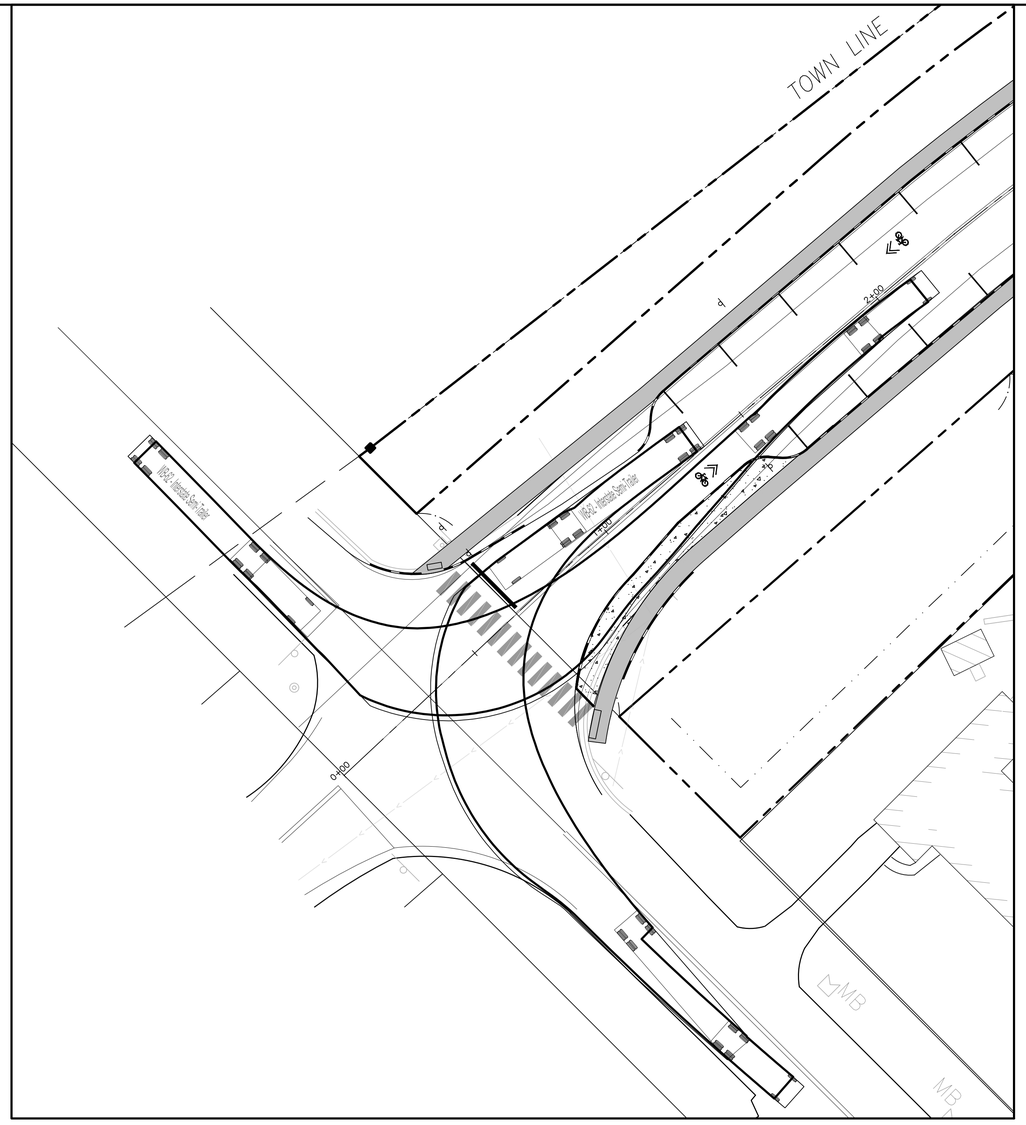
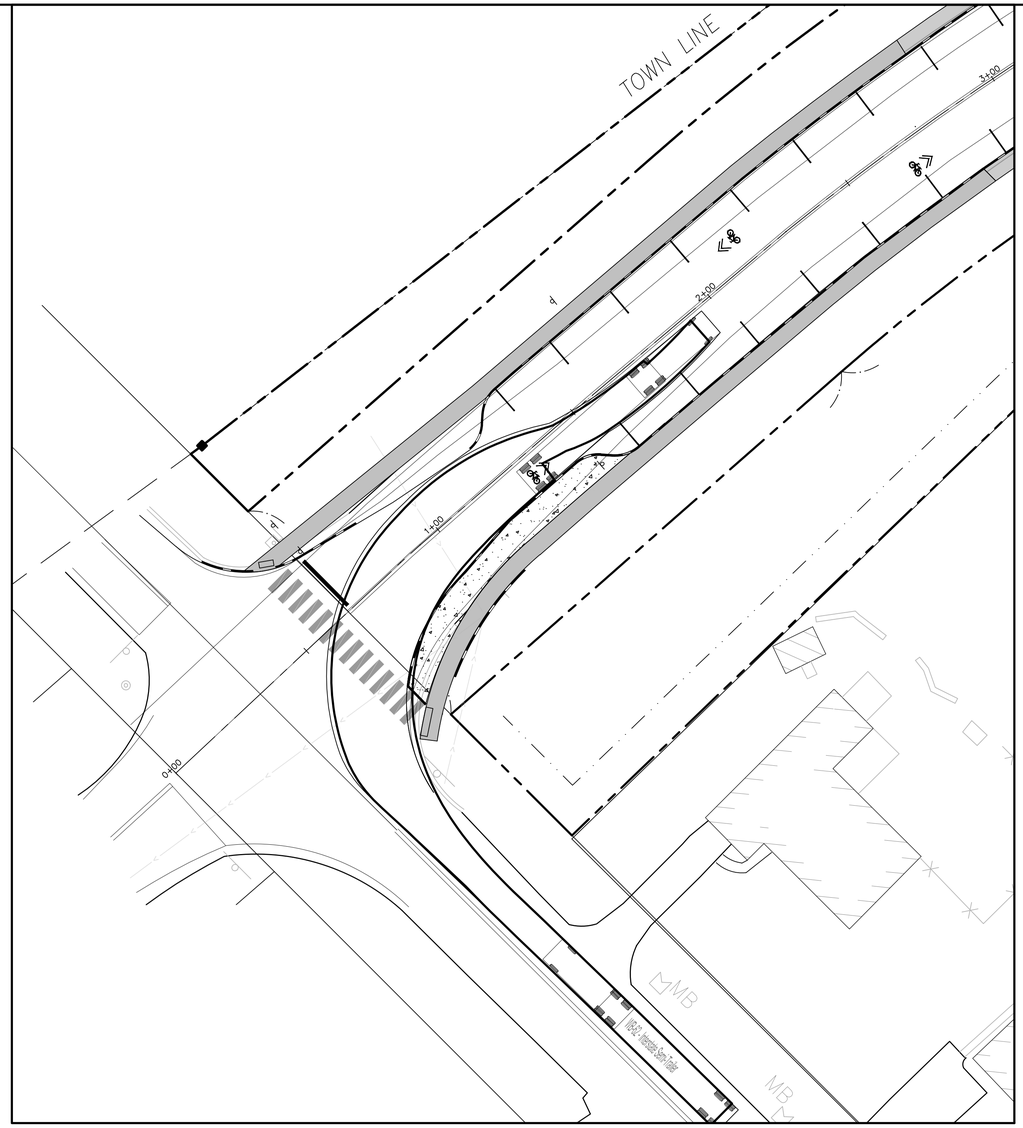
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
LICENSED PROFESSIONAL ENGINEER
5/5/22

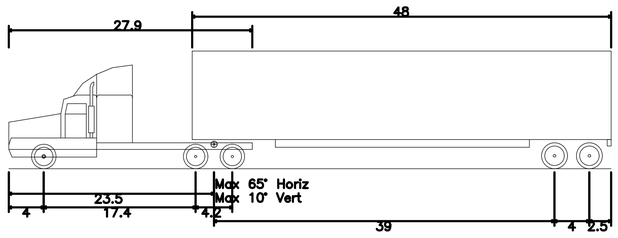
DRAWING NO.
TT5



WB-62 LEFT HAND TURN TEMPLATES



WB-62 RIGHT HAND TURN TEMPLATES



WB-62 – Interstate Semi-Trailer	
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Overall Width	8.500ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.334ft
Max Track Width	8.500ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	28.40°

40 0 20 40

SCALE: 1"=20'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE

DRAWING NAME: **LAMBERT STREET WB-62 TURN TEMPLATE**

PROJECT NAME/ADDRESS: **165 LAMBERT ST CO-OP**
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD:
MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

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ACORN ENGINEERING, INC.
PORTLAND, MAINE 04101
PO BOX 3422
(207) 775-2655

FILE:	1145_CIVIL
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
LICENSED
PROFESSIONAL ENGINEER
5/5/22

DRAWING NO.
TT6

Lambert Woods Cooperative Housing
Transportation Demand Management Plan

June 15, 2022

Att. U

Summary

Cushman Transportation Consulting, LLC provides this Transportation Demand Management (TDM) Plan for Maine Cooperative Development Partner's (MCDP) Lambert Woods Housing Development, located on two former city parcels at 165 Lambert and 622 Auburn Streets. Specifically, this is the construction of 165 new transit-oriented, income-restricted, cooperatively owned housing units – as well as transportation infrastructure improvements and open space - on what until now has been undeveloped and underutilized municipal property. The Portland Housing Authority (PHA) will be hired to manage the property long-term.

Site Overview at Lambert Woods

- *Residential housing*: a total of 142,000 square feet and 165 dwelling units:
  - 12 two-story townhouse units, 48 three-story rowhome units, and 105 three-story flat units
  - 5 studios, 64 one-bedroom, 50 two-bedroom, and 46 three-bedroom units
  - 25% of units are for people with incomes of up to 80% of Area Median Income (AMI) and 75% of units are for people with incomes of up to 100% of AMI
- *Parking*: 67 off-street surface parking spaces and 56 new on-street spaces
- *Transportation improvements*: bus shelters and seating, multi-use and pedestrian paths, lighting, crosswalks, pedestrian and bicycle signage, lane width and intersection traffic calming, on-street parking and unloading zone for package deliveries to reduce on-site vehicle traffic

TDM Plan & Targets

This project is a key opportunity for transit-oriented and more affordable housing in the City of Portland, for people who are employed locally, have children, are disabled, and/or are retired. The site's TDM Plan works further to encourage multimodal trips to and from the site, reduce parking demand, and significantly benefit the local transportation system. This includes marketing the housing to nearby employees; reducing parking; offering on-site amenities; and supporting transportation alternatives such as walking, bicycling and using public transportation.

The plan sets the following TDM targets for 3 years after Lambert Woods is fully occupied. These targets will be reassessed after the first full year of occupancy by tenants:

- *25% of all resident trips to be multimodal*
- *maintain up to .45 parking space per unit ratio*

COVID-19 NOTE: Site occupancy is forecast for 2024 and, while COVID-19 variants continue to be disruptive, we have learned much in the past two years regarding managing the virus' impact on daily life – including through vaccinations first made available last year and consistent use of non-pharmaceutical interventions such as wearing masks. Transportation alternatives that were deemed less viable during the early wave of the pandemic - such as transit and carpooling – are anticipated to continue to make significant recoveries, with marketing and other efforts. COVID-related parking demand increases due to driving alone are also expected to decline. In addition, TDM efforts will likely be supported by long-term cultural changes in both telework and also walking and bicycle commuting.

Interim Site TDM Coordinator:

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A. Property Description & Transportation Context

The Lambert Woods development is comprised of 165 Lambert Street and 622 Auburn Street - two of four parcels chosen by the City of Portland in separate RFPs from 2020 and 2021, to be redeveloped as robust mixed-income, multi-generational housing. Maine Cooperative Development Partners was chosen to develop the property included in the 2020 RFP (165 Lambert Street). MCDP was then also awarded the 2021 RFP, which included 622 Auburn Street and 0 Gray Road (located in Falmouth). Of the awarded parcels, the development will occur on the 165 Lambert Street and 622 Auburn Street properties. The project is expected to be completed in 2024.

Located in Portland's North Deering Neighborhood on the Portland/Falmouth town line, Lambert Woods is on a quiet stretch of Washington Avenue Extension, that is also part of the regional Sebago to the Sea Trail. Just beyond the development on both sides are two busy north-south commuter corridors – Lambert Street/Blackstrap Road and Auburn Street/Gray Road (State Routes 26 and 100).

One of these, Route 26/100, is a Priority Transit Corridor of the Portland Area Comprehensive Transportation System (PACTS). In addition, the site is positioned between two of PACTS' Priority Transit

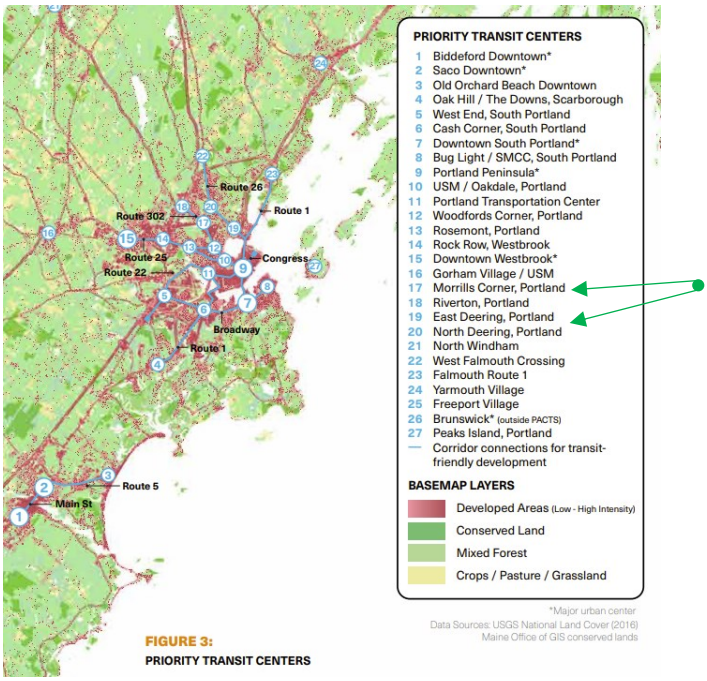


FIGURE 3:
PRIORITY TRANSIT CENTERS

Centers: West Falmouth Crossing and the center of North Deering (see graphic above right). Perhaps most significantly, Lambert Woods sits right at the outer terminus of the #9A/9B METRO bus route loop, which serves most of the city's neighborhoods, schools, service centers, and runs on Congress Street through all of downtown Portland. Finally, the site is a mile from Exit 53 of the Maine Turnpike, with a quick connection to the Falmouth Spur to access Interstate 295.

Lambert Woods has been rezoned as R-3 to allow for this Planned Residential Unit Development and is adjacent to residential areas and light industrial uses. The development team proposed a B-1 designation to the city, to enable more mixed use on the site, which unfortunately was denied. However, this is an indication of the progressive nature of this development, in terms of smart growth and sustainable transportation.

Consisting of almost 18 acres of forested land in Portland, about 5.6 acres of Lambert Woods are wetlands or exceed a 25% slope and can be excluded from a net residential density calculation. Five to seven acres of the site will ultimately be developed. Conservatively, this will result in a residential density of 13.3 units per acre. In terms of encouraging less driving, this is an incredibly beneficial improvement to the existing land use pattern. For comparison, see the following table from Portland and South Portland's *One Climate Future* plan. North Deering currently is in the 2.5-5 dwelling units per acre category, with a significantly higher associated Vehicle Miles Traveled (VMT), versus helping the area move more toward the greater-than-12 units per acre that dramatically decreases VMT. Furthermore – and perhaps counter intuitively – research has shown that the greatest VMT reductions can actually happen at the level of lowest density. (Holtzclaw, 1994)

How does density relate to how much we drive?

Research has shown that people who live in denser areas drive fewer miles, on average, resulting in lower vehicle miles traveled (VMT) per capita in areas with higher densities (persons per square mile, or ppsm). For reference, much of Portland's East End reaches densities over 10,000 ppsm, while Ferry Village (South Portland), Thornton Heights (South Portland), and North Deering (Portland) fall in the 2,000 – 3,999 ppsm range.

Table 3. Vehicle miles traveled (VMT) forecasts by Census Tract Density

Persons per Square Mile (ppsm)	Approximate dwelling units per acre	2005 VMT	VMT Compared to < 500 ppsm	2035 VMT	VMT Compared to < 500 ppsm
0-499	< 0.6	11,422	0.0%	13,798	0.0%
500-1,999	0.6-2.5	10,083	-11.7%	12,196	-11.6%
2,000-3,999	2.5-5	9,345	-18.2%	11,345	-17.8%
4,000-9,999	5-12	7,986	-30.1%	9,792	-29.1%
10,000+	> 12	4,437	-61.2%	5,651	-59.0%

Table adapted from Cambridge Systematics. (2013).[82] Dwelling units per acre conversions are gross densities estimated at roughly 50% residential land per tract.

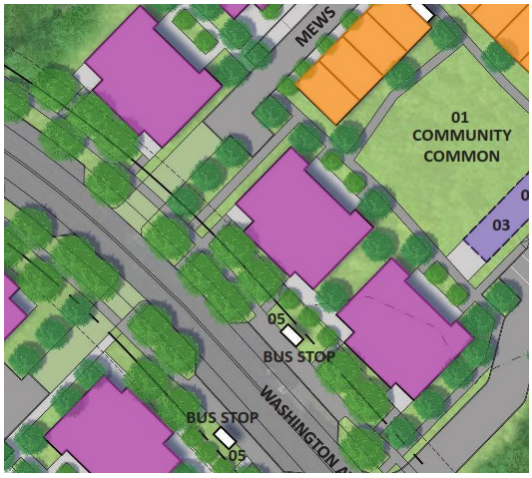


One Climate Future: charting a course for Portland and South Portland, 2021



Existing Lambert Woods street frontage

Recent site visits and Google Street View images show that, despite the current car-dominated infrastructure, local people already walk, run and bicycle regularly on this road. Lambert Woods will dramatically improve the human scale of the pedestrian environment along both the north and south frontages of Washington Avenue Extension. This includes the narrowing gateway feel to the street, an 8-foot multi-use path on one side and a pedestrian path on the other, active building facades, bus shelters and seating, crossings and signage, on-street parking, lighting, trails, street trees and landscaping, emergency vehicle access points that will be able to be used by walkers and bicyclists, and an intentional choice to not align both driving entrances to discourage cross development traffic.



Residential Housing at Lambert Woods

In addition to the density improvements named above, neighborhood infill development of any kind contributes to single-occupancy automobile trip reduction. That much more so in the case of transit-oriented and income-restricted housing, which is the use proposed for Lambert Woods.

In direct support of increasing housing stock and people's ability to afford to live in Portland, all of the residential units at Lambert Woods will be income-restricted. Twenty-five percent of the units will be for people with incomes of up to 80% of Area Median Income (AMI) and 75% for people with incomes of up to 100% of AMI. A total of 142,000 square feet in housing – 165 dwelling units - are proposed. There will be 12 two-story townhouses, 48 three-story rowhomes, and 105 three-story flats - consisting of a total of 5 studios, 64 one-bedroom, 50 two-bedroom, and 46 three-bedroom units.

In addition, Lambert Woods is being developed as a Limited Equity Housing Cooperative - that is, as a legal entity where residents jointly own and democratically manage a residential property. A Limited

Equity Housing Cooperative indicates that part of the equity is owned by individual residents and the remainder is owned by the cooperative as a whole. This ensures that homes remain permanently affordable for future residents. Ultimately, Portland Housing Authority and the Lambert Woods Co-op will manage the buildings on site.



New residential sites like Lambert Woods also provide a significant opportunity to help meet the city's goals for population growth. In *Portland's Plan 2030* (2017 Comprehensive Plan), analysis showed the number of people both living and working in the city decreased between 2002 and 2014. The Comprehensive Plan "supports the principle that all who work in Portland should have the option of living in Portland." The city set a 10-year population goal of 75% of the municipality's approximate daytime population of 96,000.

Moreover, the development includes a number of on-site features that encourage the use of alternate transportation and teleservices, as well as working from home. These include:

- bus shelters and seating
- pathways and trail connections within and across the site
- 8-foot paved multi-use path along a significant portion of the north side of Washington Avenue Extension; elsewhere, 5-foot pedestrian pathways on both sides of the street
- covered bicycle/stroller/handcart storage areas
- bike repair station
- package delivery and storage locations
- free basic wifi in all units and community areas and hardwired infrastructure for broadband
- communal gathering spaces, including those that can be used to do telework
- fitness room/gym
- community terraces and pavilions
- kitchen garden
- dog runs
- drop-off and pick-up areas with ADA access and opportunities for residents and visitors to more easily carpool and use taxis and Transportation Network Companies (such as Uber and Lyft)

Finally, behavioral research illuminates an additional reason for vehicle trip reduction. When people move from one specific residence to another, this disrupts their habitual daily living and travel patterns. This provides a key opportunity and critical juncture at which to help them understand their transportation choices and the benefits of using public transportation, walking and bicycling, carpooling and telecommuting. (Kirkman, 2019; Thøgersen, 2012; Verplanken, Walker, Davis & Jurasek, 2008; Bamberg, 2006; Fujii, Gärling & Kitamura, 2001)

…One of the more interesting studies found in reviewing the literature was a 2003 German social science experiment conducted by three researchers (Bamberg, Rolle and Weber) where an individualized marketing intervention was used at a time of what they called a "changed decision" context, meaning immediately after relocation. The research found that if, when in a new situation, people received personally relevant and persuasive information, they were more likely to use it for making new behavioral decisions.

Portland Oregon SmartTrips Welcome Program, Tools of Change Landmark Case Study, 2012

Parking

Research has shown that abundant and free or low-cost parking is the main reason people are more likely to drive for most of their trips. (Kirkman, 2019; McCahill, et al, 2016; Chatman, 2013; McCahill and Garrick, 2010 & 2014; Thøgersen, 2012; Weinberger, 2008, 2012; Higgins, 1990) A number of larger cities across North America have started tying their TDM targets and mitigation efforts primarily to parking. One example can be seen in the following table from Los Angeles' growing TDM program – where small projects that have a parking ratio of less than 0.5 spaces per unit require fewer TDM mitigation "points" or set of TDM strategies.

Table 1. Relation of project size and parking capacity to TDM mitigation requirements, based on preliminary program development in Los Angeles.

Parking capacity (stalls per housing unit or 500 sf of non-residential space)			**Mitigation points required**
Small project	Medium project	Large project	
Less than 0.5			5
0.5-.99	Less than 0.5		10
1-1.49	0.5-.99	Less than 0.5	15
1.5-1.99	1-1.49	0.5-.99	20
2 or more	1.5-1.99	1-1.49	25
	2 or more	1.5-1.99	30
		2 or more	35

Source: State Smart Transportation Initiative

***Modernizing Mitigation: A Demand-Centered Approach,* State Smart Transportation Initiative, 2018**

Similarly, the City of Portland has been working to reduce the impact of required parking minimums that historically have induced more vehicle trips. A primary example, and the impetus for this TDM plan, is the city's recently amended Land Use Code, Article 19, Table 19-B: Categorical Exceptions to Off-Street Parking Minimums, "No off-street parking shall be required within ¼ mile of fixed route transit service. New uses or changes of use of more than 10,000 SF taking advantage of this exception shall be required to provide a Transportation Demand Management Plan if they use this provision in lieu of parking requirements."

On-site parking that is both more limited and also not immediately adjacent to dwelling units makes car ownership less convenient, and further encourages the use of alternate modes. Lambert Woods proposes a forward-thinking balance between previous parking minimums and providing no parking. Developers will build and maintain 67 surface parking spaces, with a parking per unit ratio of .41. Within the development, parking will be largely in two communal areas – one in Lambert North and one in Lambert South - with the vast majority of spaces located at a distance from the housing units on site (see site

image at right). Of note, in addition to the on-site spaces, MCDP will construct 56 new on-street parking spaces along Washington Avenue Extension.



Strong parking management is another linchpin strategy to discourage drive alone trips. All residential leases at Lambert Woods will be exclusive of parking. Units designated for residents with incomes at 100% and 80% AMI levels will be charged $125 per month per parking space. Residents with incomes under 60% AMI will get parking first-come first serve and not be charged. Under the affordable housing financing regulations, low-income tenants are not permitted to be charged for parking. However, simply unbundling parking from tenant leases is of benefit to site TDM efforts. The 67 off-street spaces will be managed by the Portland Housing Authority and the Lambert Woods Co-op.

Occupant Demographics

The development team anticipates the Co-op will attract a diverse group of tenants, including those interested in a transit-oriented, walkable, low-car-use lifestyle. This will consist of singles, couples, and families – mostly working people, likely many long-term renters, and some older people who are downsizing. As stated in Portland's comprehensive plan, *Portland's Plan 2030* (2017), "Millennials (20-29) and Gen Xers (30-39) comprise the largest share of Portland's population, while Baby Boomers (50-69) are the fastest growing age group."

Lambert Woods also dovetails well with people's growing interest in living in a 20-Minute Neighborhood (or Urban Village). The 20-Minute Neighborhood in concept and practice allows residents to meet their daily needs – generally not work-related - within a short trip from home, without driving. A 20-minute walkshed to services is ideal and a 10-minute bicycle or transit trip is a reasonable alternative. The latter is the context for this development.

The growing popularity of the 20-Minute Village (also known as the urban village) is confirmed by the National Association of Realtors (NAR), whose most recent community preference research found that 85 percent of survey participants said that "sidewalks are a positive factor when purchasing a home, and 79 percent place importance on being within easy walking distance of places."

Walkable neighborhoods are also seeing significant jumps in property values. A one-point increase on Walkscore, a website that rates the walkability of U.S. neighborhoods on a 1 to 100 scale, translates into $3,250 more in value, according to the influential real estate database Redfin.

"Welcome to the 20-Minute Village: a solution to the problem of having to drive everywhere for everything", Jay Walljasper, AARP Livable Communities, February 2017

In terms of equity, the site has a Housing + Transportation Affordability Index (HTA) rate of 42%; that is, housing (23%) and transportation (19%) costs, combined, equal 42% of household income. This meets the definition of affordability, which is considered to be

combined housing and transportation costs equaling 45% or less of income. For comparison, the average Cumberland County household spends 52% of income on housing and transportation; the average Maine household spends 58%. Often lower transportation costs at sites like Lambert Woods are because people don't need to own as many (or any) private vehicles; that is, vehicle ownership rates are lower for people who live closer to urban centers. They are also lower for people with less income.



In addition, Lambert Woods has a good Job Access Score of 7.7 out of 10. This is based on employment lo cation and the variety of employment types, similarly provided through the HTA Index utilizing census data. As part of its TDM program, Maine Cooperative Development Partners plans to develop a list of major employers within a 1/4 mile of bus stops on the 9A/9B, for sharing with residents and to conduct outreach to those employers regarding housing availability at Lambert Woods.

This may assist with what can be a challenge to robust transit use for residents living in a suburban context, who often need to transfer between routes to access their place of employment. On the other hand, a number of low-income earners have to travel quickly between multiple jobs or work off-peak shifts outside of public transportation run times – and both situations often require the use of a private vehicle. However, at least these varied tenant occupations and timing of work shifts often lead to drive alone travel that is outside the peak weekday morning and afternoon commute hours.

For Co-op residents who are students, the Portland Public Schools provides bus transportation for elementary school students and middle school students will be well within the walking distance of Lyman Moore Middle School. The district requires middle school students to walk up to two miles to school; Lambert Woods is just 1.3 miles from the Moore campus. All high school students receive a METRO bus pass and they are well served to attend any of the Portland high schools; Casco Bay, Deering, Portland Arts & Technology (PATHS) and Portland High are each situated directly on the 9A/9B. Post-secondary education opportunities such as at the University of New England, Maine College of Art, the University of Southern Maine, and Portland Adult Education are also readily accessible from the site by bicycle and via public transportation.

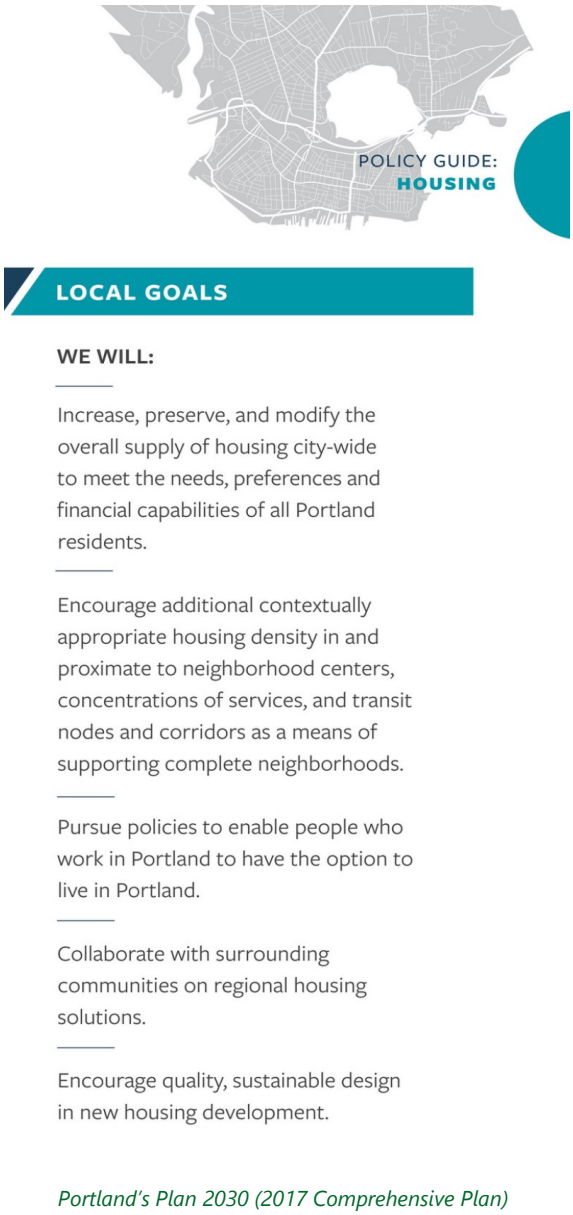


Per U.S. Census data, Generation Z and Millennials have been shown to prefer more urban environments; they also tend to be more comfortable using modes other than the single-occupancy automobile for transportation. These multimodal habits were heavily influenced by the Great Recession and driving by these generations increased slowly as the economy improved. (It has been impacted once again by the COVID-19 pandemic – which has negatively affected bus and carpool rates; although it is positively impacting the number of people who walk and bicycle.) Overall, from a behavior change perspective, this familiarity with different ways of getting around will greatly facilitate these tenants' participation in the Lambert Woods TDM program.

Larger Transportation Setting

The Lambert Woods Co-op and its TDM initiatives bring to fruition of number of the housing, urban form, and transportation goals of several recent and historically important Portland and regional studies and planning efforts. These include:

- *A Time of Change: Portland Transportation Plan* (1993)
- *Green Spaces Blue Edges* (2001)
- *Housing, Sustaining Portland's Future* (2002)
- *Sustainable Portland* (2009)
- *Lyseth-Lyman Moore School Travel Plan* (2011)
- *Falmouth Bicycle & Pedestrian Plan* (2015)
- Comprehensive Plan, *Portland's Plan 2030* (2017)
- *Getting There from Here: an active transportation plan* for the region (Greater Portland Council of Governments (GPCOG) and PACTS, 2018)
- *Cultural Plan Update* (2018)
- *Transit Tomorrow* (PACTS and GPCOG, 2021)
- *One Climate Future: charting a course for Portland and South Portland* (2021)
- *Connect 2045* (update to PACTS Long-Range Transportation Plan, expected 2022)
- *Transit Together* (GPCOG, expected 2022)

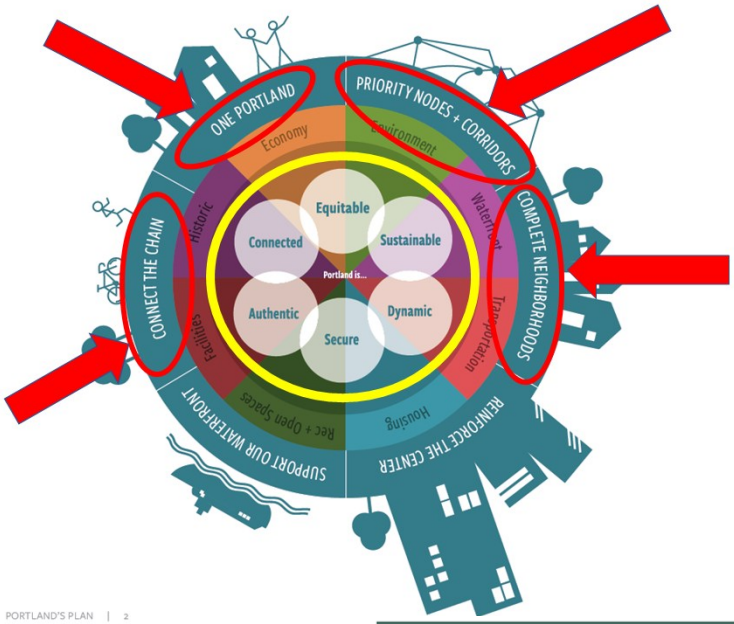


Portland's Plan 2030 (2017 Comprehensive Plan)

For example, the development of this site addresses several of the Future Land Use principles outlined in *Portland's Plan* (2017) and in the image on the next page – described further as:

- Connect the Chain – "physically integrated transportation systems and open spaces"
- One Portland – "all areas can expect appropriate City services and amenities"

- Priority Nodes and Corridors – "areas that would be appropriate for new development to provide needed housing, business and services proximate to transit"
- Complete Neighborhoods – "where all residents regardless of age, ability, or income have access to the basic necessities of daily life - high quality and affordable housing, schools and other civic functions, food, open space, other amenities and services - within a walkable, bikeable distance"



Moreover, Lambert Woods's transit-oriented development efforts align well with the 2050 Vision from the regional *Transit Tomorrow* plan at right. These public transportation efforts are being developed further as part of PACTS' *Transit Together* and *Connect 2045* planning processes this year.

2050 VISION FOR TRANSIT

Using our region's public transportation is faster and more affordable than driving a car. Our system is funded sustainably and provides reliable and seamless transportation for our community, including commuters, mainland and island residents, and people with mobility challenges. Our communities support the long-term viability of public transportation by focusing new homes and jobs where people already live and work.

Transit Tomorrow, March 2021

In addition, TDM efforts are part of several aspects of Portland and South Portland's *One Climate Future* plan. This includes the overarching multimodal target the plan has set: "By 2035, 26% of trips in the cities will use public transit or active transportation (up from 12% today)."

2.

Connect people to places, to opportunity.

We will create connected neighborhoods—where it is easy to push a stroller to the park, roll a wheelchair to the grocery store, ride your bike to school, and take the bus to a new job opportunity. To reach this goal, we will implement safer street designs, build out our network of bikeways, and radically expand our public transit system, while making travel on transit more accessible and seamless. Supported by land use policy, we will cluster a mix of housing and businesses near transit, and increase housing in the cities to bring people closer to jobs. And we will ensure that the people who most rely on public transit systems, due to income, disability, or otherwise, are part of the decision-making teams connecting our homes, businesses, open spaces, and community resources.

Key milestones: (a) By 2035, 26% of trips in the cities will use public transit or active transportation (up from 12% today). (b) Housing stock meets workforce demand within the cities by 2035.

Looking to read more?

Check out these strategies, in particular:

TLU 1.1 Public Transit Networks
TLU 1.2 Inclusive Transit-Oriented Development
TLU 1.3 Bike Accessibility
TLU 1.4 Complete Streets
TLU 1.5 Employer Transit Partnerships
TLU 1.7 Land Use for a Smaller Carbon Footprint
CR 2.4 Transportation Access



The following table breaks out commute travel data by the metropolitan region, City of Portland and the North Deering neighborhood, using census information assessed by local data analyst Abraham Dailey. The existing neighborhood context does not show strong current multimodal use. However, the Lambert Woods transit-oriented development, its associated infrastructure improvements and TDM program, plus the larger METRO transit improvements in the works (more about this in the Public Transportation Access section on page 14) should result in significantly higher multimodal numbers for Co-op residents. In addition, telecommute percentages for about 40% of the population have increased significantly during the pandemic and are expected to continue at a higher rate than before COVID-19 (for example, continuing to work from home 2-3 days per week, for those who can).

Commute Mode Share Trends by Home Origin

	Commuter Home Location	Drive Alone	Carpool	Transit	Bicycle	Walked	Work from Home
2019 5-year sample	**Portland-South Portland MSA**	79%	8%	1%	1%	4%	7%
	City of Portland	66%	8%	3%	2%	13%	7%
	North Deering	87%	2%	1%	1%	4%	5%

Bicycle & Pedestrian Access

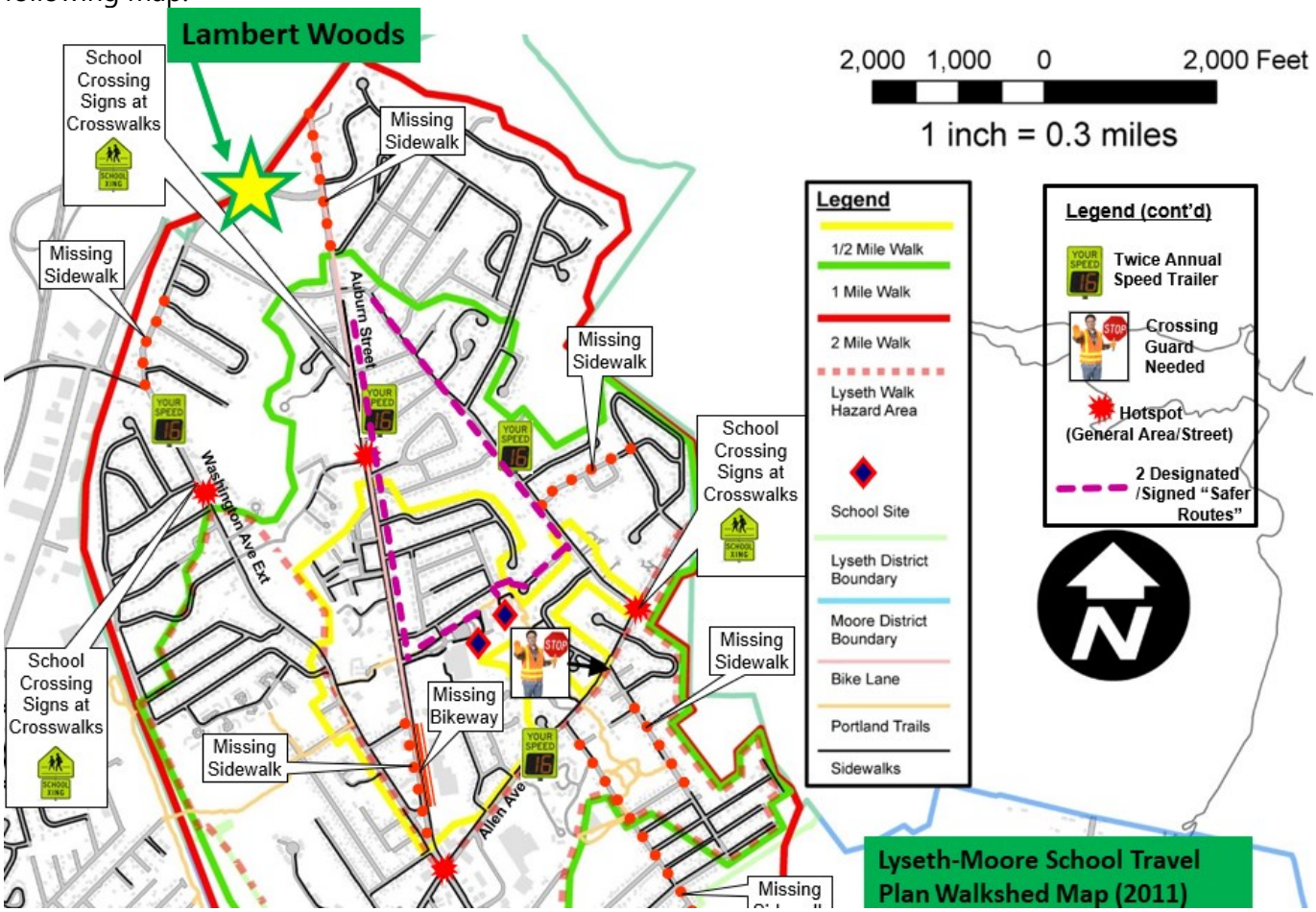
The numbers in the table above reference commute trips, which generally represent only about 30% of total vehicle trips. A greater percentage of non-commute trips are typically taken by walking and bicycling. Therefore, the 5% combined figure for active transportation use in the North Deering census block does not paint a complete picture of the amount of walking and bicycling that occurs on a daily basis in the neighborhood at this point in time.



In addition, and perhaps surprisingly with the more suburban context of this location, the site has a Compact Neighborhood Score (CNS) of 7.9 out of 10; the CNS is a measure of walkability. This scoring is based on a natural logarithm of household density and census data, also provided through the Housing + Transportation Affordability Index. Still, from a pedestrian and bicycling perspective, the area can feel rather auto-centric.

As mentioned in the previous section, the Lambert Woods development itself will significantly improve the walking and bicycling experience on Washington Avenue Extension. Moreover, none of the nearby streets are multi-lane corridors and there is a relatively robust sidewalk and crossing network in the

neighborhood. The city has worked consistently to improve these conditions over the years. For example, as a result of the *Lyseth-Lyman Moore Campus School Travel Plan* process (2011), Portland has made a number of the North Deering pedestrian and bicycle safety improvements originally identified in the following map.



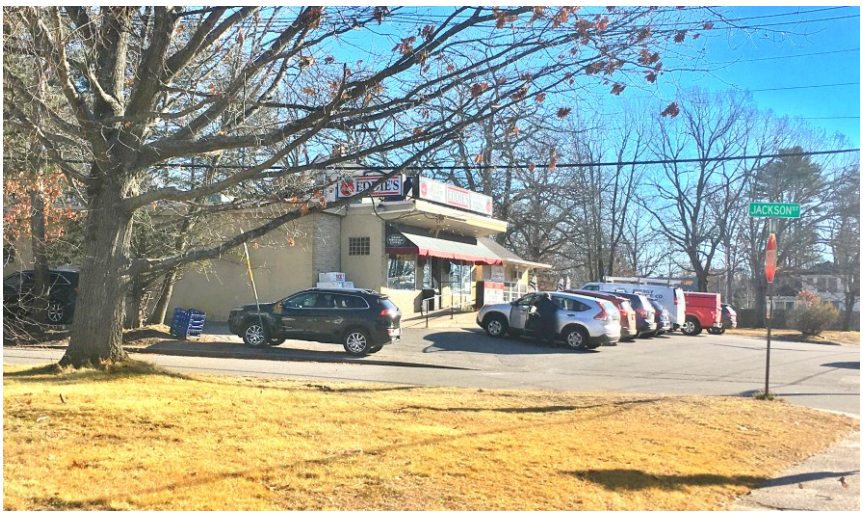
In addition to the Lambert Woods bicycle and pedestrian street improvements, the development sits in close proximity to the following existing and proposed bicycle and pedestrian facilities from the *Portland Bicycle & Pedestrian Network* (map on next page) and the *Falmouth Bicycle & Pedestrian Plan*:

- Auburn Street (Portland) and Gray Road (Falmouth) bicycle lanes and sidewalks
- Planned on-road bikeways on Washington Avenue Extension (which Lambert Woods' improvements will advance significantly), Riverside Street and Allen Avenue
- Planned sections of the Neighborhood Byway network – i.e., Summit-Lambert and Parsons Pond-Shepherd Lane
- Proposed bicycle lane or other designated shared access on Blackstrap Road from Brook Road to Hurricane Road
- Proposed shared-use pathway along the rail line adjacent to the site's 0 Gray Road, Falmouth parcel
- Potential multi-use trail along the Falmouth Spur



In the context of the 20-Minute Neighborhoods mentioned in the previous section, significant area amenities and recreational facilities also provide people with a full-service living environment. This does much to encourage individuals to walk or bike instead of choosing to drive. Those features within walking and bicycling distance of the Co-op include:

- Two daycare facilities within a one-mile radius (15-minute walk) and the neighborhood elementary and middle schools are 1.3 miles from the site (25 minutes)
- Markets such as Eddie's (3-minute bike ride or 11-minute walk), Hannaford (7-minute bike ride or 22-minute walk), and Shaw's (7-minute bike ride)
- Home product suppliers such as Cherished Possessions and the Dollar Store



- Services such as several pharmacies, the U.S. Post Office at the UPS Store; dentist and medical offices, veterinarian services, tax preparation services, hair salons, banks, yoga and other exercise classes, etc.
- Recreational spaces such as the Sebago to the Sea Trail, Presumpscot River Preserve, Haverty Track, Oat Nuts Park, Riverside Golf Course, River Point Conservation Area, and the Lyseth Elementary and Lyman Moore Middle campus playground, basketball court and fields
- Food and beverage locations such as Lib's Ice Cream, Starbucks, Dunkin Donuts, Portland House of Pizza, Taco Bell, etc.



Public Transportation Access



As mentioned previously, Lambert Woods is strategically located on the important on-off Peninsula, crosstown, bidirectional METRO Route 9A/9B. The 9A/9B serves the vast majority of the city's neighborhoods, service centers, and downtown. In addition, it provides direct connections at different points to most other routes. For example, it is timed to intersect well for transfer to the Husky route, with express service to Westbrook and Gorham.

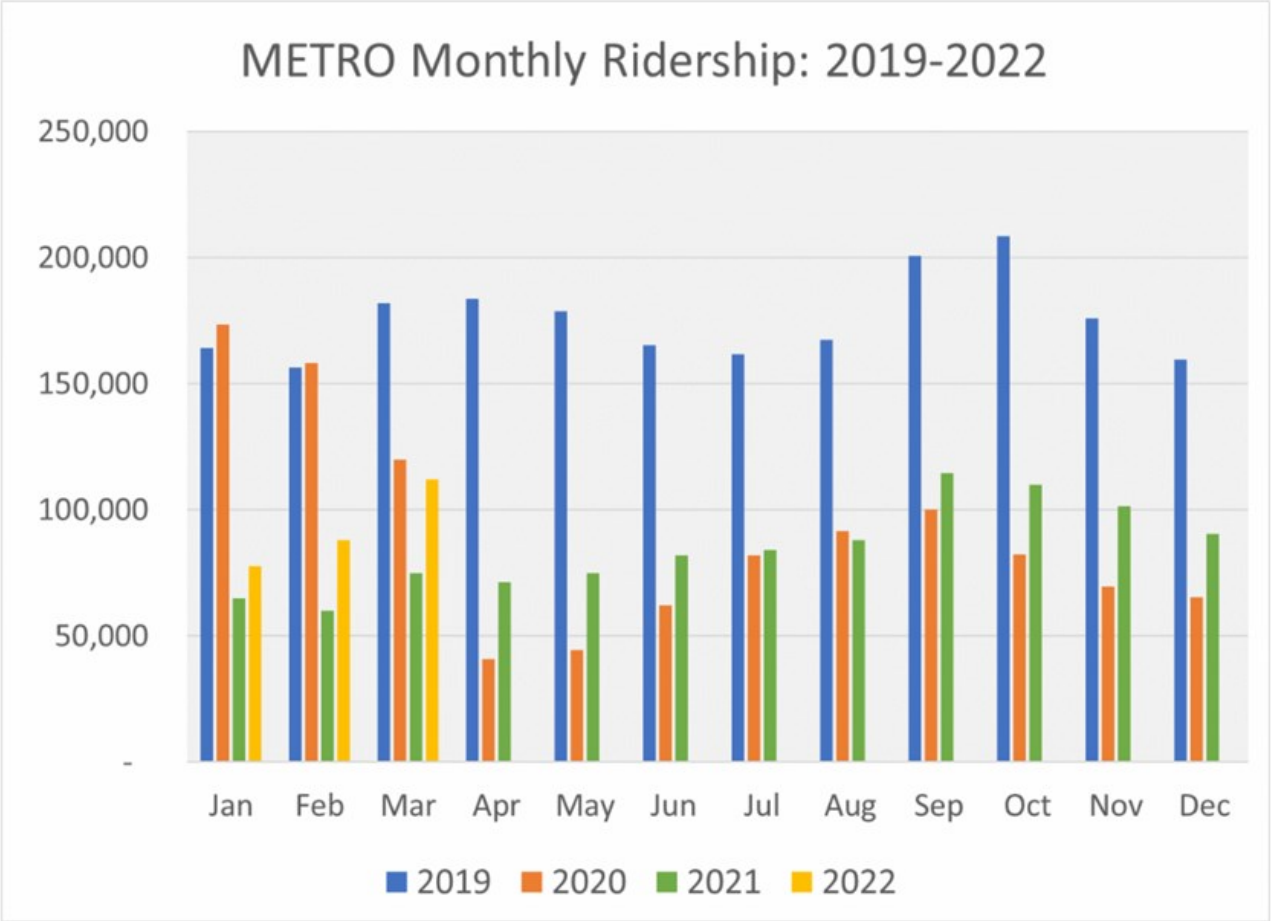
In general, transit is considered by the public to be a reasonable alternative to driving when the bus comes every 15 minutes or so. METRO currently operates with 25-35-minute peak hour headways on both the 9A and 9B (more frequently on school days). Off-peak headways on the Route 9A/9B are as low as 60 minutes.

However – and to the tremendous benefit of Lambert Woods and all residents, employers and services along the 9A/9B - METRO staff recently shared the following update:

> *METRO is in the process of securing American Rescue Plan Act (ARPA) funding which will, among other things, improve Route 9A/9B service to every 30 minutes during off-peak periods. Staggered well, the Route 9A or 9B would depart the Lambert Woods project every ~15 minutes all day, so a resident traveling downtown could take either bus and arrive downtown in 20-30 minutes.*
> *This funding strategy will fund these headways for 2-3 years, after which the funding would be picked up by other federal funding options and local contributions in order to remain permanent. In*

short, METRO anticipates that headways of about 30 minutes or better throughout the day will be the norm by the time the Lambert Woods project is occupied sometime in 2024-2025.

Despite the dramatic declines in transit use earlier in the pandemic on a number of METRO routes, analyst Abraham Dailey assessed 2019-2021 METRO data and found the ridership on Routes 9A/9B has actually grown over that period, and at a higher rate than any route except for the Husky Line. In further good news, one can see in this April 2022 *METRO Connects* graph and newsletter item that broader ridership behavior is really starting to change from its early pandemic lows.



Let's do the (Ridership) Numbers -- In March, METRO had our best month in terms of relative ridership compared to pre-pandemic levels, with over 112,000 rides taken. For the first time since the start of the pandemic, ridership exceeded 60% of 2019 ridership.

Each route had more riders in March than in January or February of this year, and several routes (Routes 2, 4, 8, 9A//9B, and BREEZ) had more ridership in March 2022 than any month since the start of the pandemic.

As we get further into 2022, we hope that strong ridership trends continue as we roll out new buses, new stops, and new ridership recovery initiatives.

On-site at Lambert Woods, a number of transit infrastructure enhancements will greatly improve upon the existing transit landscape and encourage residents to ride. First, the stops will be slightly relocated on Washington Avenue Extension to be right at the entrance to Lambert North (the 9B stop) and South (the 9A stop). Each stop will have a shelter and seating for riders. In addition, the development is collaborating to provide access to the lobby restroom nearest the bus stops for METRO driver use; drivers currently do not have any facilities when they pause the buses for a quick break at the outer terminus of Routes 9A/9B.



METRO and all other area transit providers provide real-time arrival information via agency websites, the Southern Maine Transit Tracker site, and/or smartphone apps such as Google Maps, Transit and Moovit. The bus shelters on Washington Avenue Extension will be hardwired for power, to allow METRO to potentially provide real-time arrival information at each stop. In the meantime, Lambert Woods plans to offer a live transit update screen in their lobby space near the 9A/9B stops. All local and express buses are equipped with bicycle racks with space for 2-3 bikes. In addition, METRO buses offer Wi-Fi access and some provide in-seat USB ports.

In further support of Co-op ridership, the site's Property Manager/Residential Services Coordinator will be able to assist residents with applying for reduced-fare passes at METRO and other area transit providers. Furthermore, Maine Cooperative Development Partners has been in discussions with METRO regarding the possibility of utilizing up-front financing capabilities to secure the equivalent of free passes for every resident for a certain number of years.



Shared Mobility Access

With the end of UhaulCarshare service in Portland in February 2020, Lambert Woods and other developers have been exploring new carshare possibilities for diverse sites across the city. A newly promising opportunity may be with Mobility Development, a nonprofit that helps set up equity-focused, all-electric carsharing programs. For example, they have a new program in Boston called Good2Go. The organization has recently entered into a contract with the U.S. Department of Energy to start more partnerships with affordable housing providers, and it seems to think that Portland could be a promising market. If a local organization such as the Portland Housing Authority could feasibly partner with other entities like Lambert Woods to set up a carshare at various locations, the Co-op will provide up to four parking spaces on-site and offer a discount for resident carshare vehicle use for the first year of residency.

In addition, for the past decade, the City of Portland has persisted in exploring various bikeshare possibilities. In August 2021, the city entered into an agreement with Tandem Mobility, a bikeshare company with national experience, to launch a bike sharing system by the summer of 2022. The bike system will be located primarily on and just off the Peninsula (e.g., at University of Southern Maine). The Co-op will explore with the municipality whether bikeshare might eventually be an option for residents, if and when the system is expanded further.



The use of transportation network companies (TNCs) such as Uber and Lyft has grown substantially in recent years – although there have been setbacks to sharing rides and also driver availability during the pandemic. A TNC trip does not reduce traffic congestion, unless users are carpooling; however, it does reduce parking demand.

B. Lambert Woods TDM Coordination

Maine Cooperative Development Partners and the Portland Housing Authority are committed to reducing drive-alone resident automobile trips, improving multimodal safety, easing area traffic congestion and lowering parking demand at Lambert Woods through their TDM efforts. They see this site's TDM program as part of their larger

Highly successful TDM programs share three vital characteristics – they are:

1. Dynamic - piloting strategies, assessing impacts, and modifying tactics as needed;
2. Rigorously supported and monitored by local governing bodies, in this case, the City of Portland;
3. Managed by committed and enthusiastic staff who are responsible for overseeing, promoting and sustaining the program.

affordable housing, sustainability, and quality-of-life missions. Both the MCDP and PHA teams have a history of in-fill and workforce housing development projects. They have encouraged residents' mobility and financial wellness through initiatives such as offering rent reductions for tenants who are car-free and separating housing leases and sales from parking space rental or purchase, providing bus pass subsidies, and constructing on-site bicycle/stroller/handcart rooms. Both groups have experience with TDM plan development and/or implementation at other locations in Portland.

Brian Eng will serve as the interim TDM Coordinator until Certificate of Occupancy, when the eventual property manager for the Co-op will be made the long-term TDM Coordinator. His contact information is: Brian Eng, Maine Cooperative Development Partners, bri.d.eng@gmail.com, (413) 262-2610

The Lambert Woods TDM Coordinator is responsible for:

- Ensuring strategic parking management and monitoring parking usage
- Coordinating tenant TDM policies and incentives
- Connecting tenants with nearby transportation resources
- Encouraging greater use of preferred modes – walking, bicycling, carpooling, taking bus or rail transit, and telecommuting- through transportation kiosk and site-wide promotion
- Overseeing/conducting surveying of tenants
- Filing annual reports and updating the plan with the City
- Exploration of additional TDM strategies, as needed

Acknowledging that roles and responsibilities change over time in any position, the two organizations and their future site property manager will use the first year of TDM implementation to enumerate the TDM Coordinator's responsibilities in detail for any future staff to uphold the responsibility of the position. The Co-op will notify the city within 60 days whenever there is a change in the TDM Coordinator.

In addition, the Co-op will have a Resident Engagement Committee that supports this work with an annual $4,000 discretionary budget for incentives. Day-to-day operations and monitoring of the TDM plan will be conducted in-house by the TDM Coordinator and the committee longer-term. The TDM Plan and contact information for the TDM Coordinator and City transportation program will be posted at the TDM Kiosk in the community building for resident education and access. Lambert Woods will retain the services of a TDM consultant to review initiatives, problem-solve and develop new strategies if and when necessary.

C. Site Transportation Projections & TDM Targets

Maine Cooperative Development Partners has hired Cushman Transportation Consulting, LLC (CTC) to assist with its transportation demand management process. CTC specializes in TDM efforts locally and connects with TDM research and programs across North America – including aspects of setting and managing TDM targets.

Target Setting Context

The Lambert Woods TDM Plan is one of the first to be created under the city's progressive *ReCode* provision mentioned previously, in Land Use Code Article 19, Table 19-B: Categorical Exceptions to Off-Street Parking Minimums:

> No off-street parking shall be required within ¼ mile of fixed route transit service. New uses or changes of use of more than 10,000 SF taking advantage of this exception shall be required to provide a Transportation Demand Management Plan if they use this provision in lieu of parking requirements.

Because of this exception - and given the strong strategies of limiting on-site parking, charging for parking for households at 80-100% of AMI, the implementation of other TDM strategies in Section D that follows, the likely off-peak travel demographics of tenants, and the generally lower vehicle ownership rate of households with more limited financial resources - this plan proposes a Multimodal Target as the most tangible gauge of program success, in contrast with the vehicle trip and parking reduction goals traditionally utilized under the city's original TDM ordinance. For example:

TDM Targets

The TDM Plan sets the following targets:

- ***Multimodal target:*** 25% of all resident trips will be via transit, carpooling, by bicycle, on foot or telecommuting within 3 years after full occupancy
- ***Parking ratio target:*** a maintain a progressive site parking ratio of up to .45 spaces per unit
- Will reassess targets after the first full year of occupancy

- With the range of potential tenants and tenant activities, as well as likely non-9am-5pm work shifts, a multimodal target assesses the broader drive alone rate for the site, including those trips that occur outside of the morning and evening peak periods;
- With a desirable parking ratio of .41 spaces per unit built into the site plan, it would be difficult to reduce parking demand below that level.

Nevertheless, the development team has also contracted with Barton & Laguidice, to produce the required TDM-related trip generation and parking demand projections for the site. The firm has utilized the latest data from the Institute for Transportation Engineers (ITE) *Trip Generation Manual (*11th Edition) and the ITE *Parking Generation Manual* (5th Edition). While both manuals do not currently have data that well represents cooperative housing, the traffic and parking assessments do each include distinctions for the income-restricted context of the site. According to the traffic assessment, full occupancy at Lambert Woods can be expected to generate 60 vehicle trips in the weekday morning peak hour, 83 vehicle trips during the weekday evening peak hour, and 83 trips during the Saturday peak hour. Per the parking demand projection assessment for the full Lambert Woods development, the average peak demand for parking at the site is expected to be 201 spaces on weekdays, 189 on Saturdays, and 247 on Sundays.

Multimodal Target

To best measure residents' varied transportation behavior, Lambert Woods is setting an initial target of 25% of resident trips to and from the site being multimodal, by 3 years after full occupancy of the Co-op. This pertains to *all* trips; that is, to access work, school, services, recreational activities, and run errands, etc. In this context, the term multimodal indicates using transit, carpooling or vanpooling, bicycling, walking, and telecommuting or using teleservices - or some combination of these.

This target balances the site's:

- reduced parking, TDM infrastructure improvements and programming
- with its suburban context, the current rate of alternate transportation use for commuting by those living in the area (12%), and the mixed transportation demographics of expected tenants (e.g., if working multiple jobs and/or non-weekday shifts).

Per most recent city TDM practices, the multimodal rate will be measured via the annual resident survey. In addition, the Co-op plans to closely monitor existing trends to attain a reasonable mode-shift goal over time.

It is most useful for the site's TDM efforts to address the specific needs of transit users, carpoolers, bicyclists, walkers and telecommuters and set an overarching multimodal trip target – versus targets for each mode. From other TDM experiments across the U.S., it is clear that individuals' use of various alternate modes changes over time, as different residents come and go and/or their needs change. For example, a tenant who uses transit might move to another location or an employee who walks might switch primarily to bicycling. In another instance, a tenant who was able to drive may lose the ability to do so and switch to using transit or carpooling for errands.

Parking Ratio Target

Per the tremendous impact of reduced parking discussed in Section A, page 6, Lambert Woods will maintain a progressive site parking ratio of up to .45 spaces per unit. Property management records of tenant parking space usage and the annual resident survey (more in Section E, page 25) will provide this data moving forward.



D. Trip and Parking Reduction Strategies

In the table on the following page, Lambert Woods proposes a number of best-practice and sensible parking and trip reduction strategies for the site's TDM Plan. These are based on the development team's understanding of the transportation context, likely residents and the usefulness of various TDM efforts. For example – as mentioned above in Section A: Parking - limited, unbundled and unsubsidized parking will produce the strongest results for decreasing drive alone trips to and from the site.

In addition, the team acknowledges the various needs of different multimodal commuters. For instance, tenants who use transit, walk or bicycle are more able to do so if they have on-site, secure storage for larger commuting gear like strollers, car seats, bicycle trailers and cargo bikes. Moreover, even if a number of current drive-alone residents have to pay for parking, likely this will need to be combined with TDM promotion and setting of social norms. These are vital to encourage people to experiment with other ways of getting around.

…When a person changes residence, everything changes: the way to the store, the way to work, even the steps to the fridge.

This time of change offers a unique opportunity to create new neural pathways or reinforce old ones that haven't been used for a while and make these stronger than habitual pathways.

Andrew Pelsma, SmartTrips Program Specialist, Portland, Oregon

…To us, this represents a significant number of people with an immediate gap in knowledge about their local travel options.

Linda Ginenthal, SmartTrips Program Manager

Another critical component for the success of the Lambert Woods TDM program is a carefully thought-out marketing effort that engages tenants from when they first move in regarding preferred modes of transportation, and provides easily accessible information and any subsidies. As shared by Portland, Oregon's SmartTrips Welcome program and other research, a residential move is a unique and powerful opportunity for mode experimentation and change. This also builds the site's TDM culture. As Lambert Woods is developed and under construction, the team will design a promotion strategy to encourage walking, bicycling, telework and teleservices, carpooling and the use of public transit.

Finally, the region recently reexamined the need for a Transportation Management Association (TMA) to benefit sites like Lambert Woods - and this is now a recommendation in the Portland Area Comprehensive Transportation System's *Transit Tomorrow Plan*. TMAs are public-private entities that assist sites with TDM implementation, outreach and monitoring; advocate for improved transit and act as brokers for various alternate transportation services. The Co-op plans to support the development of a local TMA and have Lambert Woods participate as a member.

Infrastructure	
Reduced Parking/Remote Parking	*Reduced parking:* Lambert Woods is limiting parking supply by providing fewer spaces than currently required under the City's land use ordinance and providing this TDM Plan as part of Article 19, Table 19-B: Categorical Exceptions to Off-Street Parking Minimums, "No off-street parking shall be required within ¼ mile of fixed route transit service. New uses or changes of use of more than 10,000 SF taking advantage of this exception shall be required to provide a Transportation Demand Management Plan if they use this provision in lieu of parking requirements." Instead of 1 space per unit, off-street parking for residents will be limited to a .41 to unit ratio.
	Remote parking: Parking for site residents will be available for lease in communal parking areas, with the vast majority of spaces located at a distance from the housing units on site. Parking that is not immediately adjacent to dwelling units makes car ownership less convenient and further encourages the use of alternate modes.

Income- Restricted Housing	All Lambert Woods dwelling units will be income and rent restricted. 25% of units will be for people with incomes of up to 80% of Area Median Income (AMI) and 75% for people with incomes of up to 100% of AMI. Income-restricted housing generates fewer vehicle trips and less parking demand than market-rate units.
Transit & Other TDM Access	Provide live feed time transit screen in community space. Also, provide transportation kiosk in community space with multimodal map of transit routes, bicycle routes and trails, and walk and bike distances/times; information on the Southern Maine Transit Tracker; listing of bicycle facilities and locations on site; carshare locations and membership information, if applicable; information on GO MAINE ride-matching, rewards and Emergency Ride Home benefit for all alternate modes of transportation; all TDM benefits available for residents; copy of the site TDM plan and contact information for TDM Coordinator.
	Relocation of METRO 9A & 9B bus stops immediately adjacent to the entrances to Lambert North and South.
	Bus shelters and seating to be installed at each stop
	Bathroom break space available for METRO driver use
Pedestrian & Bicycle Access	*Multi-use path and sidewalks:* Construction of multi-use and sidewalk paths and wayfinding, abutting the development on Washington Avenue Extension
	ADA-accessible pedestrian amenities: Barrier-free ramp improvements
	Crosswalks: Installation of crosswalks and signage across Washington Avenue Extension.
	Other pedestrian amenities: e.g., benches, weather awning protection on community buildings
	Outdoor, within-site bicycle parking: 1 lollipop style bicycle rack (2 bike parking spaces) per every 10 units, located near the main entrance of each of the buildings
	Bicycle sheds and/or under-cover bicycle/stroller/handcart parking: for 66 bicycles, electric bikes, cargo bikes or trailers, handcarts and strollers.
	On-street bicycle parking (e.g., adjacent to sidewalks/paths and bus shelters): 1 lollipop style bicycle rack (2 bike parking spaces) in front of each of the seven buildings along Washington Avenue Extension
	Electric bicycle charging: Provide charging outlets for resident electric bikes in storage areas
	Bicycle repair station: Provide one bike repair stand convenient to bicycle parking
Shared Mobility	*Flexible passenger loading curb space(s)* for resident and visitor pick-up, drop-off and carpooling
	Carshare possibilities: With the end of UhaulCarshare service in Portland in February 2020, site owners will continue exploring other possibilities for Lambert Woods. Commit to providing two spots per side of Washington Avenue if/when a carshare program is established.
	Handcarts: To assist with loading/unloading vehicles that are parked remotely - and cargo carried on bicycles - two garden carts will be located at Lambert North and two at Lambert South for resident use

On-Site Amenities	*Co-working/community space:* Seating areas in the lobby of each and site conference room will be available for residents' use, to encourage community-building and telecommuting
	Broadband access: Hardwired infrastructure for broadband and WiFi - and free basic internet access will be available in all units and community areas
	Recreation areas: The site will include an indoor child playroom and outdoor play areas, which help reduce vehicle trips for these activities
	Fitness room: Provide on-site fitness room to reduce vehicle trips and improve resident physical fitness for active transportation
Delivery Supportive Amenities	Provide a temporary storage area on the Washington Avenue Extension frontage for daily package deliveries by FedEx and UPS, etc., laundry deliveries, and other deliveries. On-site deliveries to dwelling units will be confined to specialty deliveries such as for appliances and furniture, etc.
General Contribution to Area Transportation Improvements	Per Chapter 14 of the City of Portland Code, the property is contributing to transportation impact fees that will improve traffic operations and transportation in and around downtown Portland.
Incentives	
Parking Pricing/Incentives	*Unbundled and paid-for parking:* All residential leases at Lambert Woods will be exclusive of parking. Units designated for residents with incomes at 100% and 80% AMI levels will be charged $125 per month per parking space. Residents with incomes under 60% AMI will get parking first-come first serve and not be charged. Under the affordable housing financing regulations, low-income tenants are not permitted to be charged for parking.
Transit Subsidies/Pass Management	*Transit pass purchase assistance:* Co-op Residential Services Coordinator will be able to work with residents to apply for and receive reduced-fare passes.
	Transit pass reduced payments and processing: Site owners will explore further with METRO regarding the possibility of using up-front financing capabilities to pay for the equivalent of passes for every resident for several years
Pedestrian/ Bicycling Subsidies	*Bicycle safety courses*: Explore reimbursing residents for bicycle safety courses
	Bicycle Benefits: Explore purchase of Bicycle Benefits memberships ($5) for residents who bicycle
Shared Mobility Subsidies	*Carshare:* Explore discount for resident vehicle use of any future on-site or near-site hourly carshare, for first year of residency.
	Carshare: Explore discounted parking leases for co-op members who make their vehicle(s) available for rental via Turo peer-to-peer carshare: https://turo.com/us/en/car-rental/united-states/portland-me
	Bikeshare: Explore monthly bikeshare memberships for residents when/if future City of Portland bikeshare is made available in Lambert Woods neighborhood
Targeted Promotions	*1st year Prize Drawings starting at 85%+ occupancy:* Recommend Co-op committee overseeing TDM program conduct monthly prize drawing for multi-modal residents - with benefits such as movie tickets, gift cards, etc.
	Discounts and coupons to nearby businesses - ongoing: Recommend Co-op committee work with local businesses to offer residents discounts and coupons to North Deering and West Falmouth establishments within walk/bicycling distance

TDM Coordinator	Property Manager for Lambert Woods will be TDM Coordinator for the site. The Coordinator will work with Co-op Resident Engagement Committee responsible for the site's TDM program implementation.
Information	
Education for Travel Choice	*Webpage:* Maintain active transportation-related page on property management website for residents. Page to include same info as orientation packet below.
	TDM orientation packets: new residents and any sublettors will be provided with an orientation packet regarding the site's TDM program and access to site by various travel modes. Includes: (1) Map of the area, showing the destination, major streets, nearby landmarks and time to walk/bike to them, the closest bus stops and walking times, recommended cycling and walking routes, carshare locations, etc. (2) Information about transit service frequency, fares, first and last runs, and schedules if possible; plus phone numbers and web addresses for transit service providers and taxi companies. (3) How to reach the site from major transportation terminals (bus and train stations, airport, ferry terminal, etc.) (4) Access arrangements for people with disabilities; (5) Availability of bicycle facilities, including secure bike parking and bikeshare, if available; (6) Bicycle Benefits membership and bicycle safety courses; (7) Encouraging residents to become members of GO MAINE and access rewards system, carpool matching and Emergency Ride Home Benefit; (8) any carshare information and private automobile parking availability and price; (9) Information regarding the site's TDM program and contacting the TDM Coordinator.
	New Resident & Employee TDM Engagement & Acknowledgement: TDM Coordinator will engage with each new resident to share about the TDM program as part of the site's sustainability initiatives. All new residents will be provided with the site's TDM program overview goals. They will be asked to sign an acknowledgement of the goals of the project and a commitment to participate in the annual resident transportation surveys.
	Ongoing TDM program education: 1 or more times per year, TDM Coordinator or Co-op committee will email all residents (new and existing, including subletters) the same information as is in the TDM orientation packets.
	Recommend Co-op committee experiment with walking tour of multi-modal options: offer a hands-on walking tour of all the transportation options near the property. For example, a short experiential ride on the Route 9 to and from West Falmouth Crossing, including a demonstration of how to put a bicycle on the bus.
	Recommend Co-op committee experiment with offering on-site bicycle safety class: as residents show interest, host a bike safety/information class or bike repair event on-site. Recommend engage Bicycle Coalition of Maine and/or Portland Gear Hub.
	Recommend Co-op committee encourage residents with private vehicles to experiment with rental hosting of their vehicles on Turo, to expand local vehicle rental offerings and reduce the vehicle ownership needs of others
	TDM surveying: The required resident transportation surveys and reporting to City will also serve as education tool
Promotion of Alternate Modes	*Outreach to employers on the Route 9A/9B:* Maine Cooperative Development Partners will develop a list of major employers within a 1/4 mile of bus stops on the 9A/9B for sharing with residents seeking employment and to conduct outreach to those employers regarding housing availability at Lambert Woods

Promotion of Alternate Modes (cont'd)	*Storytelling, social proof and resident recognition:* Recommend Co-op committee build social proof of residents doing the desired TDM actions. Examples include: interviewing a multimodal resident for the Co-op newsletter, encouraging residents to post a photo of taking the bus to work, or the morning carpool, or walking or biking to the store on social media and tagging Lambert Woods, etc. 1-2 times per year, recognize individual residents who reduce the traffic impact of the site utilizing property management social media, community center door posters, newsletter, email or other announcements.



E. Plan for Monitoring, Data Collection and Reporting

Recognizing that the implementation of a TDM Plan is a dynamic process, the Lambert Woods TDM Coordinator and Co-op Resident Engagement Committee will work with the city to monitor the effectiveness of the site's TDM Plan components - and to assess whether the site is achieving the multimodal and parking ratio targets listed above. The coordinator and committee will work with residents to evaluate on-site parking use, drive alone rates, use of alternate modes of transportation, and the flexibility (and ability) of tenants to walk, bicycle, carpool, telecommute and take transit. They will utilize this information to plan for subsequent TDM efforts and improvements.

Tenant Surveys

The TDM Coordinator will conduct an annual resident survey, with at least 50% participation, that provides quantitative data (e.g., multimodal use and frequency, vehicle ownership, and parking) and qualitative data (e.g., perception of alternate transportation, area parking and the site's TDM programming). The survey will be developed in consultation with the city's TDM program manager and conform to overall city TDM modeling and planning.

Survey questions will include:

- Number of people in household
- Resident mode of travel for trips to and from the site – plus frequency of use of those modes
- Number of vehicles owned, if any
- If parking personal vehicle(s), where parked – including whether they have any assigned on-site parking spots
- Whether the resident drives during morning or afternoon peak periods
- Use of/participation in:
    - On-site multimodal support facilities (e.g., bike parking and repair stations, bus shelters, pathways and trail connections, future carshare or bikeshare, etc.)
    - Any use of site TDM benefits or programming
    - GO MAINE membership and program participation
- Preferences, barriers or concerns with modes of travel and likelihood of changing travel behavior given specific incentives
- Rating knowledge of walking, bicycling and using the bus in the community
- Space to add suggestions and comments



Note: the use of these survey tools will also assist Lambert Woods with its TDM education efforts. That is, the questions themselves help people think differently about their transportation behavior. The surveys will also provide a reminder of the TDM online/on-site information center and the TDM Coordinator for more information about options.

Annual Report

The TDM Coordinator will then produce an annual TDM Report to meet the city's monitoring requirements. This will be due every year on May 15, beginning within the first year after Certificate of Occupancy. The city has created a reporting template for consistency of site reports and the Co-op will utilize the most recent version of this template when beginning its reporting process. For now, it is recommended that the report include:

a. the above survey data, percent of units occupied, and site parking data;
b. how the data directly relates to the plan's TDM targets;
c. overview of that year's TDM operations – including management, strategies, marketing, number of contact points with residents, and any new infrastructure development;
d. lessons learned and any changes in the TDM plan during the year;
e. plans for the following year.

ACORN ENGINEERING, INC.

Planning Division
City of Portland, Maine
Attn: Sean King
389 Congress Street, 4th Floor
Portland, ME 04101

July 27, 2022

Att. V

Subject: 165 Lambert Street Co-Op – Notice of Public Meeting Certification

I, Sam Lebel, hereby certify that (3) notice of neighborhood meeting signs were posted on July 26, 2022, prior to the August 9, 2022 Planning Board Meeting for the proposed project PL-002078-2022 located in the vicinity of 165 Lambert Street and 622 Auburn Street. Photo documentation of sign in-situ:



Sign Location Along Washington Avenue



Sign Location Near Auburn Street



Sign Location Near Lambert Street

Note that it is the applicant's responsibility to remove the notice of public meeting sign within three days following the date of the meeting.

Sincerely,

Samuel J. Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

ADDRESS: IN THE VICINITY OF: 165 LAMBERT STREET

MEETING DATE:
AUGUST 9, 2022

APPLICATION ID: PL-002078-2022

NOTICE OF PUBLIC MEETING

CITY OF PORTLAND PLANNING BOARD

Find agenda at: www.portlandmaine.gov/agendas

For more information, call (207) 874-8719

ADDRESS: IN THE VICINITY OF: 622 AUBURN STREET

MEETING DATE:
AUGUST 9, 2022

APPLICATION ID: PL-002078-2022

NOTICE OF PUBLIC MEETING

CITY OF PORTLAND PLANNING BOARD

Find agenda at: www.portlandmaine.gov/agendas

For more information, call (207) 874-8719

ACORN ENGINEERING, INC.

Sean King, PLA
Urban Designer
389 Congress Street
Portland, ME 04101

August 2, 2022

Att. W

Subject: Comment Response Letter
165 Lambert Street – Portland, Maine

On behalf of Winchester Woods LLC and the rest of the project team, we are pleased to respond to the final round of comments received.

To facilitate the review, comments are provided below in italics followed by the project team's response.

Acorn Engineering (Sam Lebel, PE) Civil Engineer
Aceto Landscape Architecture (Nick Aceto, RLA)
Kaplan Thompson Architects (Adam Wallace, RA)
Maine Cooperative Development Partners (Matt Peters and Liz Trice)

City Planning Staff Comments

Comment – *Document the existing conditions by boundary and ownership of the 0 Gray Street property in Falmouth, ME. Indicate the property and acreage for conservation use on a surveyed plan.*

Response – This is currently in progress

Comment – *Advance design of proposed facilities for the Community Pavilion, and include the intent for use. With the majority of household services (ie. grocery, playground, community and social such as child care services) are beyond the 1-mile radius, consider community pavilion as building for access to essential goods and services within the development.*

Response – The design team is actively working with the client to solidify program and design of the community pavilions.

Comment – *Maine Cooperative Development Partners plans to provide a list of major employers within a 1/4 mile of bus stops on the 9A/9B, for sharing with residents and to conduct outreach to those employers regarding housing availability at Lambert Woods.*

Response – Noted.

Comment – *Provide rationale for the proposed surface material selection, consider the addition of more concrete pavers (potentially permeable) for the mews to connect building entries and assist to delineate vehicular and pedestrian use. Maintain parking and driveways as asphalt.*

Response – The design team is working to clarify the materials plan to better reflect the intended treatment—generally, the design intent is to utilize bituminous paving for all dedicated vehicular and general pedestrian circulation areas(sidewalks). Unit pavers will be utilized at dedicated pedestrian spaces, such as adjacent to building entries, landings, and terraces, as well as at community gathering areas. Grass-pave materials are intended to be utilized where emergency vehicles may require secondary access or additional maneuvering space.

Comment – *Clarify the interior circulation pathway materials, it appears asphalt is proposed at the north and concrete pavers proposed at the south. Consider a unified surface material of concrete for the interior pathways and building entries with concrete pavers.*

Response – The plan will be revised to reflect intended unified surface treatment design.

Comment – *Provide site lighting locations and photometrics. Provide street lighting locations and photometrics along Washington Ave Extension.*

Response – A photometric plan and specifications will be included.

Comment – *Indicate where storage is provided for each dwelling unit per building type.*

Response – Storage is provided within the individual units; the design team is working to develop an open-air pavilion that will include storage space for the tenants.

Comment – *Building design; Confirm Guest suite as Studio apartments in Community Flats.*

Response – There are two different ground floor plans of the Community Flats building. The first has a Studio apartment with a smaller community room space, and the second has a Guest Suite for visitors who are staying with tenants and do not require a kitchen. This allows for larger community space on the ground floor.

Comment – *Building design; Provide variation in façade character along building facades that face Common (Building B.5, B.4, B.2 & B.1) as a more activated elevation. Consider delineation of first floor (ie. window awning, secondary entry or variation in façade material) that breaks horizontal scale of buildings longer than 40 feet.*

Response – Our team is working to address the facade treatment with a variety of cladding that will help reduce the length of the visual appearance. We are also planning to utilize the undulating roof forms above the entrances to act as a horizontal break between the first and second floors.

Comment – *Outline the organization structure of the Co-op development to acknowledge common area maintenance vs. tenant responsibilities. Applicant to describe or direct planner to documents submitted.*

Response – The tenants will be responsible for housekeeping in their unit, and the Cooperative will cover all other maintenance and property management, similar to a typical apartment complex.

Transportation & Traffic Comments

Comment – *The Traffic Assessment did not identify any High Crash Locations. Although the Washington Avenue/Lambert Street intersection is not a High Crash Location (Historically it has been a High Crash Location), I would like to understand the contributing factors for crashes. The applicant shall provide the requested information.*

Response – This request has been forwarded to the project's transportation engineer. A formal response and analysis is forthcoming.

Comment – *Given the level of traffic generation by the project, the applicant shall conduct a traffic analysis at the Auburn Street/Washington Avenue Extension and Lambert Street/Washington Avenue Extension intersections. This shall include conducting existing traffic counts. The counts and analysis shall be performed for the weekday AM and PM peak hours.*

Response – A traffic count will be performed and added to the traffic analysis report, this revised report will be provided at a later date.

Comment – *Three driveways are proposed to the development. The applicant shall provide information in support of a waiver from the City's Technical Standards. I would note that Washington Avenue Extension is classified as a Major Collector and thus minimizing access points is preferred.*

Response – Given the project is divided by Washington Ave into two distinct sites (not contiguous because of a public right-of-way), we believe that the City's Technical Standards 1.7.2.8 has been met, as no more than two driveways are proposed for each site. Additionally, both sites have been designed so that the eastern two driveways align along Washington Ave, with the western most curb cut being located as far as possible from the eastern driveways. We believe this approach to be ideal from a safety standpoint and align with the City's expectations. Although the road is a major collector, it's posted at 25mph and will be enhanced by a number of traffic calming measures.

Comment – *The plans depict a shared use path from the site to Auburn Street. The minimum width for a shared use path without constraints is 10 feet, although existing constraints by drainage system shall be considered. Applicant shall provide the design intent of the proposed multi-use path on the north side of Washington Avenue Extension. Confirm if share use path provides linkage of the Portland Trails Sebago to the Sea trail head and the Presumpscot Falls portion of the trail.*

Response – More information on the shared use path will be provided at a later date. We are studying on how to increase the width to 9' or 10'.

Comment – *The use of on-street parking spaces to meet parking demand requirements for a project has not been permitted during project reviews, zoning requires parking demand to be accommodated on site. Applicant to provide rationale behind the proposal to include the amount of on-street parking along with further justification for the amount of total parking provided for the development with the exemption for 1/4 mile from a fixed transit route.*

Response – The parking requirement is being met on site through the ¼ mile transit provision in tandem with a TDM plan. The on-street parking is generally meant for guests, traffic calming, and to ensure the project parking impacts do not encroach into the surrounding neighborhood.

Comment – *Suggest on-road bike facilities in this section of Washington Avenue Extension with the following options;*

- *Eliminate the proposed curb extensions and on-street parking to provide a dedicated 8' wide bike facility (6' width bike lane, 2' width buffer) on each side of the street.*
- *Create a shared lane bike facility as they are proposing with additional traffic calming measures such as reducing the travel lane width's down to 10.5' to provide more space between the on-street parking stalls and the travel lane by striping an outer fog lane line.*

Response – The project team is evaluating this comment.

Comment – *The waiver for aisle width (24'to 22') is being justified on reducing impervious surface. Any project can make this case – reducing pavement. The development is proposing to create 2.69 acres of impervious area. The threshold of a Maine DEP SLODA permit is the creation of 3 acres of impervious area. So that could be the angle here.*

Response – In a residential development where the vehicular users would be both familiar with the site, and experience low turnover, we believe a 22' wide drive aisle is appropriate to reduce impervious area while still providing a functional driving experience. Site constraints include grading concerns, abutter buffers, and natural resource protection given the wetlands and streams.

Public Works & Engineering

Note: Additional comments from DPW have been received as of 7/27/2022, responses to the comments are forthcoming.

Comment – *Recommend to eliminate the easterly and westerly crossing and have one dedicated crossing at the middle location with an RRFB, it seems like westerly and easterly crossing locations are in very close proximity to driveways being proposed.*

Response – More information on this comment will be provided at a later date.

Comment – *DPW will not be supportive of slip form curbing to be installed on a major collector such as Washington Avenue Extension.*

Response – The project will revise the curb type to granite.

Comment – *Current configuration of Washington Ave Ext. not sufficient. Cross section needs revisions by the applicant to consider curb bump out to account for a reduced bike lane width, striping travel lane and reduce to 10', elevated crosswalks for traffic calming. On-street parking should accommodate the development and not create overflow into the adjacent neighborhood.*

Response – More information on this comment will be provided at a later date.

Stormwater

Note: Additional comments from DPW have been received as of 7/27/2022, responses to the comments are forthcoming.

Comment – *Recommends a realistic limit of work to include staging, equipment and earthwork anticipated adjacent to wetlands to accurately depict disturbance area. Riprap is not recommended as a permanent solution and promotes a robust vegetated solution and erosion matting solution at steep grades adjacent to wetland. Consider appropriate vegetated buffers at wetland edges.*

Response – More information on this comment will be provided at a later date after further evaluation of grading constraints and the desire to minimize wetlands impacts.

Open Space & Trails

Comment – *Advocate for trails in passive wooden areas, applicant to clarify how open space requirement is being met. Coordinate with Falmouth Land Trust & Portland Trails for potential opportunities for trail connections and future recreation use.*

Response – More information on this comment will be provided at a later date. Portland Trails is currently working on a trail location through the sites.

Comment – ***TREE SAVE / Limit of Work -*** *The final plan should include a 'Tree Save' / Limit of Work designation and plan to be used prior to clearing and during construction. This would include a written plan, signage and construction fencing to prevent off site storage or materials and equipment. "Tree Save' trees should be protected with signage and fencing around the drip line. To date the plan does not show either a tree save or limit of work. The proposed project clears an extensive amount of existing forest without any tree saves or forest management suggestions? The site workclearing should include nearby forest thinning improvements for sustainable landscape and safety.*

Response – More information on this comment will be provided at a later date. A forester has been engaged and will consult with the project team on tree saves.

Comment – ***Invasive plant management -*** *The northern side of the project especially contains extensive Common Buckthorn shrubs, the project should identify, plan and remove all invasive plants as part of their clearing portion of site work. This has been a standard on other project sites where high numbers of invasive plants are located.*

Response – More information on this comment will be provided at a later date.

Comment – ***Tree & Landscape treatment -*** *We encourage high percentage use of native plants on wood sites like the proposed 165 Lambert Street project. Stevens Commons for example next to Baxter Woods successfully modified their landscape plan to a higher percentage of native species. This should be a condition of approval. The site is surrounded by natural appearing woodlands, the project should appear part of the surrounding landscape vs 'suburban'. The 'Woods at Canco' development is another successful landscape example. Thus we would ask the project not to use plants like 'Feather Reed Grass' and 'Maiden Grass' for example, and increase the native grasses like 'Little Bluestem', 'Prairie Dropseed' and other plants compatible to the New England region. The proposed tree pallet should also diversify, currently over 100 trees using only four species, recommend reducing numbers on the 'Armstrong' Red Maples from 40 to perhaps half of that and consider other tree types like the 'Beacon' and 'Regal Prince' Oak, though they are cultivars it would be nice to have a greater mix of tree types. Tree types missing: Red Oak, Swamp White Oak (use instead of the hard to establish White Oak), Tupelo, Shagbark Hickory, River Birch, Yellow Birch, White Spruce, Larch, 'Bowall', 'Red Pointe', 'Karpick' Red Maples offer a variety of other maple types depending on the desired planting space size.*

Response – A revised planting plan will be included indicating a broader variety of trees and mix of native shrubs and grasses. The design team looks forward to working with the city on more detailed design of any Public ROW improvements.

Comment – ***Tree planting spacing and sizes -*** *While regular spaced trees all in certain order adds a degree of structure to the landscape, this site might be better served by including groves of trees in a more natural arrangement. This might include a mix of plant heights like 5-6' conifers and 2" caliper trees with the larger sizes proposed. Knowing the more orderly plantings might be closer to the buildings and the natural groves of trees near the edges.*

Response – A revised planting plan will include a greater variety of native material, as well as revised layout indicating more naturalistic transitional plantings along site limits.

Comment – ***Street trees -*** *We would like to work closer with the project team to review the public 'Street tree' portion of the project. This would include species types, spacing. Applicant to include total tree count proposed.*

Response – ALA looks forward to working with the City on more detailed design and tree selection for public ROW improvements.

Comment – ***Buffering -*** *The proposed site contains existing residential boundaries with Auburn Street, and Falmouth properties on the North side and Auburn Street and Lambert Street residents on the South side, the landscape plan should address adequate buffer planting and treatment.*

Response – A revised planting plan will be provided to include considerations for buffering adjacent sites.

Comment – ***Wetlands / drainage treatment*** **-** *the use of restored wetlands, intermittent streams, raingardens was not noticed during my review and wanted to check to see if the project is favoring natural drainage features?*

Response – A formal stormwater drainage system has been designed for this project, the stormwater water will be detained, treated, and cooled through the use of underground chambers and utilization of porous pavement. The stormwater will be released back into the surrounding environment at a controlled rate to ensure the post development peak flow rates do not exceed the pre development rates. The development has been designed to be tight and compact, consolidating the infrastructure such that the overall development footprint remains minimized. As a result, intermittent rain gardens and natural drainage features are difficult to incorporate into the core site design given the competing list of site elements.

Comment – ***Recreational / Open Space*** **-** *It is essential to include a variety of onsite recreational and trail amenities for this project. The geographic location is out of walking distance to existing playgrounds and trails. (The future Haverty Field may in time offer somewhat close trails). Recreation features for youngsters could include playground structure, adventure play items, benches. Walking trails on or around the existing site should be a requirement and could match up with Fire Safety access.*

Response – The design team is actively working with the client to solidify program and design of the community spaces. The site design goals include creation of community amenities which provide benefits and may be accessible both for residents of this project as well as adjacent neighbors insofar as budget, spatial constraints, and project sequence allows.

Fire & Life Safety

Comment – *Fire truck access shall be well marked and visible from public street.*

Response – Noted, appropriate signage will be added to the plans and updated at a later date.

Comment – *Indicate appropriate snow storage and maintenance agreement to ensure fire access is clear at all times.*

Response – Noted, proposed snow storage has been depicted on the plans and is not proposed within the fire access lane. A maintenance agreement shall be prepared at a later date.

Comment – *Consider loop connection at the south development lot to gain access behind back of buildings to eliminate backing out onto Washington Ave Extension.*

Response – More information on this comment will be provided at a later date.

Comment – *Prefer alignment of fire truck access lanes where grasscrete is proposed, applicant to justify design intent.*

Response – More information on this comment will be provided at a later date.

Zoning

Comment – *Applicant to quantify and show on plans the net land area. The report from Jones Associates states that there is approximately 236,727.92 sf (5.43 acres) of delineated wetlands on the two properties. That is part of what needs to be subtracted from the net land area, but we still need to know the square footage of the watercourse (stream) and the slopes of 25% or greater. The overall site plan (sheet C-09) under Net Land Area states that 244,738 sf has been deducted from the property area to reach the net land area of 537,251 sf.*

Response – This will be clarified in the forthcoming set of plans.

Comment – *Applicant to confirm density bonus under section 18.2.4.B for PRUDs. Applicant to outline minimum lot area per dwelling unit in table.*

Response – This will be clarified in the forthcoming set of plans.

Comment – *Applicant to confirm if seeking minimum recreation open space reduction to 200/square feet of common area.*

Response – This will be clarified in the forthcoming set of plans.

Comment – *Proposed 122 parking (67 off street, 55 on street). The proposed 55 on-street parking stalls would not be counted towards required parking. R3 requires 1 parking stall per unit. Planning Board may establish a parking requirement less than 1 per unit based on affordable housing development. Applicant has provided TDM to pursue Land Use Code, Article 19, Table 19-B: Categorical Exceptions to Off-Street Parking Minimums, "No off-street parking shall be required within ¼ mile of fixed route transit service. New uses or changes of use of more than 10,000 SF taking advantage of this exception shall be required to provide a Transportation Demand Management Plan if they use this provision in lieu of parking requirements."*

Response – We agree the project is within a ¼ mile of a transit facility (and features 2 new bus shelters at the middle of the site along Washington Ave) and also provides a TDM plan, therefore there is no parking requirement.

Comment – *Confirm the minimum building setbacks being observed for the development, zoning requirement for PRUD is 16-foot separation between buildings. Affordable housing of more than 50% can be reduced to 10 feet.*

Response – Based on previous correspondence it is our understanding that this requirement was not eligible to be reduced from 16', but if our interpretation of previous correspondence was incorrect then it is desired the building separation is reduced to 10 feet.

Inclusionary Housing

Comment – *165 Lambert Street would meet the IZ requirement of 25% of the units being workforce housing at 80% AMI and over 50% low-income housing at 100% AMI for the density allowed under section 18.2.4.B. There will be 12 two-story townhouses, 48 three-story rowhomes, and 105 three-story flats - consisting of a total of 5 studios, 64 one-bedroom, 50 two-bedroom, and 46 three-bedroom units.*

Observations

Transportation & Traffic

Comment – *The applicant has conducted a Trip Generation analysis and assuming an Affordable Housing development 83 peak hour trips will be generated by the project during the worst-case peak hour. I find the methods used to estimate trip generation to be reasonable. I would further note that this level of trip generation does not require a Traffic Movement Permit.*

Response – Noted, thank you for the review.

Comment – *As noted in the report acceptable sight distance will be provided from the proposed driveways assuming vehicle speeds of 25MPH. I find conditions to be acceptable.*

Response – Noted, thank you for the review.

Comment – *In terms of cross-section – they are proposing 11-foot lanes and 8-foot parking lanes. The exception is at the bus stop where it will be 10.5' lanes and 10-foot shoulders. This seems okay to me.*

Response – Noted, thank you for the review.

Transportation & Traffic

Comment – *The improvements at Auburn Street need a detailed review and approval. ADA ramps need to be revised.*

Response – A detailed design of the Auburn Street intersection improvements will be revised and submitted at a later date.

Comment – *The improvements at Lambert Street need a detailed review and approval. DPW observes that the curbing alignment at this intersection might have an adverse impact on plowing operations.*

Response – A detailed design of the Lambert Street intersection improvements will be revised and submitted at a later date.

Please let us know if you have any additional questions or comments.

Sincerely,

Samuel J. Lebel, P.E.

Nathan PP Holt, E.I.

Project Manager
Acorn Engineering, Inc.

Project Engineer
Acorn Engineering, Inc.

Comments on PL-002078-2022

PC1

1 message

Ed Eggleston <eeggleston@gmail.com> Thu, Jul 28, 2022 at 9:51 AM
To: Sean King <sking@portlandmaine.gov>, planningboard@portlanmaine.gov, planning@portlandmaine.gov

Sean,

I just received the postcard about the project going before the planning board and my neighbor (at 640 Auburn) and I (at 660 Auburn) have some concerns.

We are both directly on one side of the north development and within 500 feet.

After reading the document listed below, there are several items that we are concerned about.

Reference: "Lambert Woods Cooperative Housing Transportation Demand Management Plan June 15, 2022"

While the discussion of parking in the document is accurate, there is mention of "Eddies", Hannafords and Shaws being "close".

Eddies - It is fairly close, but if you want something other than wine / beer / pizza, your choices will be very limited.

Shaws - This is a "reasonable" store but is about 2 miles down the road. For grocery shopping, walking and biking will be a challenge in any type of weather or in the winter.

Hannafords - This is a nice store and is about 1/2 mile away. However Auburn (which gets renamed as Grey in Falmouth), is very busy and there are no sidewalks. And again, walking and biking may not be a viable choice in weather or winter. NOTE: There are NO sidewalks between the development and store.

There is also a mention of two child care centers. These are not close but for both of them, there are NO sidewalks.

Reference: Traffic Study

We have also read the traffic study but feel that putting 60(?) or so parking spaces on the road is a concern. The concern is parallel parking and people walking across the street in traffic. There is a "Traffic Report" on the web site that discusses sight lines. However, if there are cars parked on the sides of Washington Ave Ext, the results of the report for sight lines will not be valid.

The report seems to say that most of the future residents will take the bus but during one of the developers zoom meetings, they said that only 5% of Portland people can / will take the bus to work.

Reference: Cover Letter

In one of the documents, (Cover Letter) there is a comment about narrowing the traffic lanes on Washington Ave Ext. It is my understanding that this road was installed to provide a path for truck traffic to / from the Riverside industrial area to the Maine turnpike. Based on homeowner observations of the truck traffic, this would seem to be the case.

The idea of making this busy road narrower does not seem like a good idea as there does not seem to be any other convenient ways to get to / from the Riverside area to / from the Maine turnpike. In fact one of my neighbors said that the extension was added specifically to remove truck traffic from going through the neighborhoods.

Reference: "Lambert Woods Cooperative Housing Transportation Demand Management Plan June 15, 2022"

In the document ("Lambert Woods Cooperative Housing Transportation Demand Management Plan June 15, 2022") there is a note about making the drive within the development 22 feet wide versus 24 feet wide. While this might seem like a nice concept, is the developer sure that none of the residents will have large pickup trucks or mid-sized work vans.

In the document ("Lambert Woods Cooperative Housing Transportation Demand Management Plan June 15, 2022") there is a mention of an 8-foot multi-use path. As documented in a previously posted Wetlands survey, there are wetlands on both sites of Washington Ave Ext on the Auburn end. To avoid damage to the wetlands (and possible neighborhood basement flooding), this should be discussed further.

In the document ("Lambert Woods Cooperative Housing Transportation Demand Management Plan June 15, 2022") there is a mention of "pathways and trail connections". Previous zoom and personal discussions with Portland Trails covered two items. The first was that a trailhead starting on Auburn Street was not viable due to a lack of parking. At that time, there was some discussion with the developer about having a trailhead on Washington Ave Ext with parking being provided by the developer. There is no mention of this in the documents that I have searched.

Reference: Site Plan _ North

Document "Site Plan - North" appears to show setback lines. During all of the developer zoom meetings and in discussions with city staff, it was our understanding that there would be a 25 foot setback. In addition, the developer stated that there would be a 75 foot setback from the creek that runs on the north end of the property. This is not shown on the site plan.

The site plan drawing of setback lines looks more like a 10 foot setback versus 25 feet. The property was surveyed a few months ago and the lines marked with plastic tape.

Furthermore, if the requirement is for a 25 foot setback from the homeowners, it would appear that the "solid waste location" and "snow storage" are shown as being within a 25 foot setback.

In addition, from a "good neighbor point of view", it would be nice to have the "solid waste" and "snow storage" locations switched so that the "solid waste" would be further from the neighbors back yard.

Reference: Site Plan _ North

At a recent developer zoom meeting, the site plan had been updated to move the parking to the east side of the site. My neighbor (at 640 Auburn) and I (at 660 Auburn) became concerned about headlights shining into our back windows. We both contacted Liz Trice (developer) to state our concern. LIz said she understood the concern and would update the site plans to include a 5-6 foot wall along the back of the parking lot to block headlight issues. There is no indication of such a headlight blocking wall shown on this site plan.

Ed Eggleston
660 Auburn St.

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Ed Eggleston

PL-002078-2022 - Overflow parking on Lambert Street

Ed Eggleston <eeggleston@gmail.com> Thu, Aug 4, 2022 at 10:53 AM
To: Planning <planningboard@portlandmaine.gov>, Sean King <sking@portlandmaine.gov>

With limited onsite parking for the planned 165 units, is there going to be an issue if the development people try to park on Lambert.

One of the proposed site plans includes a path along the creek between the development and Lambert street.

Lambert is a fairly busy street and is not very wide. Based on personal observations when I am walking, I don't remember seeing many or any cars parked on the street.

Ed Eggleston
660

--

Ed Eggleston

FW: Lambert st

PC2

jrather@portlandmaine.gov <jrather@portlandmaine.gov> Wed, Aug 3, 2022 at 8:17 PM
To: Sean King <sking@portlandmaine.gov>

From: planning@portlandmaine.gov <planning@portlandmaine.gov> **On Behalf Of** jt2 portland me
Sent: Tuesday, August 2, 2022 10:19 AM
To: planning@portlandmaine.gov
Subject: Lambert st

Disgusted with this Lambert st project! You will kill the last of beautiful tree lined streets in my neighborhood! Yes I know we need housing but I am crying over the lost "forest" deer go there, all sorts of animals. I am so so sad! Why why why? You have sold out to development! Stop this!!!

Good morning,

I would like to keep this observation of the proposed residential project named above simple and to the point. After discussion with my neighbors, we have compiled the following list of our concerns and questions.

1) Effect on traffic in the following areas: Auburn St., Washington Avenue extension, Lambert Street, Riverside Street and Summit Street. These are currently heavily traveled roads, especially during the morning and evening commutes. The large addition of vehicles from this proposed development trying to access these roadways will potentially cause back ups and traffic jams.

2) Effect on public schools. The elementary, middle and high schools which serve the families in this area are already filled to capacity. Does the developer have a plan to expand the existing buildings, build new buildings or hope that the possibility of adding perhaps 100 to 200 new students will fit into the "as is"school buildings? Also, a number of new buses will have to be put into service to meet the transportation of new neighborhood children.
What is the city's plan to cover these needs?

3) City services such as police, fire departments and road maintenance, etc. will realize an increase in need. This could create a problem as most services are already understaffed and strained. What is the city's plan to cover these needs?

4) Will property taxes increase to cover the added services that will be needed to service this new development?

5) The DEP will have to take a very active position to identify and protect wetlands, vernal pools, wildlife and setbacks on this site.

As we see it this property is much too large to comfortably fit into the projected areas without affecting all of our above mentioned concerns.

Best regards,

Phil Requia
110 Lester Dr.
Portland, Maine 04103
207-807-2586

PC4

Lauren Manera <laurenmanera54@gmail.com> Jul 27, 2022, 12:06:49 PM (5 days ago)
to planning@portlandmaine.gov

Dear Sir/Madam:

While I agree the City of Portland needs housing, I disagree it needs such a large development on the far side of the City.

The neighborhood ALREADY needs pedestrian improvements. Currently, it is not walkable from this site to a grocery, pharmacy or bank -- unless you consider walking 1.2+ miles reasonable. This would be especially true for older persons, disabled persons, children or anyone in bad weather.

Bus service would need to be improved, and bus shelters would need to be installed.

There are few connected sidewalks in this area, and people are forced to walk or run primarily in the road, or traipse over lawns. This is just not safe.

Speeding goes unenforced, and this creates a dangerous situation for pedestrians and bikers. The speed limit should also be reduced in this area by 5 mph.

A study needs to be done determining the amount of traffic in this area. The 4-way stop sign and blinking red light at the corner of Lambert will probably need to be converted to a stop light. There should be a stop sign at Lambert and Summit (by the church).

There is also a sign indicating "no trucks" entering Lambert Street from Auburn. Is this a suggestion or something that might actually be enforced some day?

Please feel free to contact me via email or by phone (207-279-9017) should you have any questions or need clarification on the above.

Lauren Manera
77 Lambert St., Unit A2
Portland 04103

165 LAMBERT CO-OP

MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

LEGEND

EXISTING

REFER TO THE EXISTING CONDITIONS PLAN FOR ADDITIONAL INFORMATION

PROPOSED

	UNDERDRAIN
	GREEN SPACE
	UTILITY PAVEMENT CUTS
	STRIPING
	SEDIMENTATION BARRIER
	EDGE OF EX. PAVEMENT
	CURB
	SIGN
	LAMP OR LIGHT POLE
	UTILITY POLE
	GUY WIRE
	WATER VALVE
	FIRE HYDRANT
	SEWER MANHOLE
	CATCH BASIN
	DRAIN MANHOLE
E — E	UNDERGROUND ELECTRIC LINE
W — W	UNDERGROUND WATER LINE
64	MINOR CONTOURS (1 FT)
65	MAJOR CONTOURS (5 FT)
G — G	GAS LINE
SD — SD	STORM DRAIN LINE
SS — SS	SEWER LINE
	EXISTING/PROPOSED BUILDING
	OVERHEAD ELECTRICAL/TELEPHONE/CABLE
	PROPERTY LINE
	SETBACKS

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UTILITIES

SEWER

DEPARTMENT OF PUBLIC WORKS (DPW)
250 CANCO ROAD
PORTLAND, MAINE 04101
CONTACT: KEITH GRAY, P.E.
(207) 874-8834

WATER

PORTLAND WATER DISTRICT
225 DOUGLASS STREET
PO BOX 3553
PORTLAND, MAINE 04104
ATTN: MEANS DIVISION
(207) 774-5961

ELECTRIC

CENTRAL MAINE POWER COMPANY (CMP)
162 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: JAMIE COUGH
(207) 828-2882

TELEPHONE

CONSOLIDATED COMMUNICATIONS
(FORMERLY FAIRPOINT)
45 FOREST AVENUE
PORTLAND, MAINE 04101
CONTACT: PAT MORRISON
(207) 745-9363

CABLE

SPECTRUM CABLE
118 JOHNSON ROAD
PORTLAND, MAINE, 04102
CONTACT: MARK PELLETIER
(877) 546-0962

PROJECT TEAM

DEVELOPER

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(207) 415-3870

ARCHITECT

KAPLAN THOMPSON ARCHITECTS
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(207) 210-8253

SURVEYOR

OWEN HASKELL, INC
FALMOUTH, MAINE
CONTACT: RANDY LOUBIER P.L.S.
(207) 774-0424

TRAFFIC ENGINEER

BARTON & LOGUIDICE
SCARBOROUGH, MAINE
CONTACT: JOHN Q. ADAMS P.T.O.E
(207) 331-6694

GEOTECHNICAL ENGINEER

SUMMIT GEOENGINEERING SERVICES
LEWISTON, MAINE
CONTACT: BILL PETERLEIN, P.E.
(207) 318-7761

CIVIL ENGINEER:

ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: SAM LEBEL, P.E.
(207) 775-2655

LANDSCAPE ARCHITECT

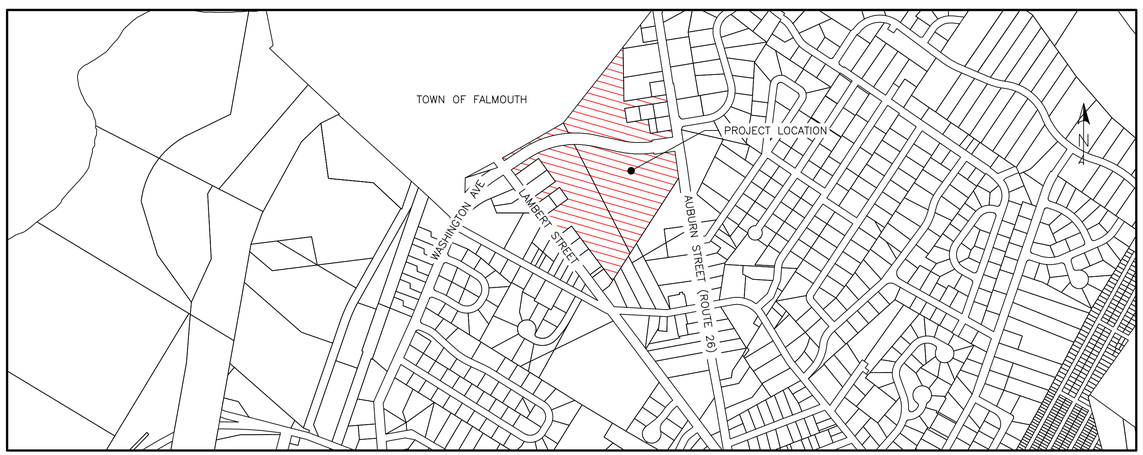
ACETO LANDSCAPE ARCHITECTURE
PORTLAND, MAINE
CONTACT: NICK ACETO, RLA
(207) 221-3390

TRANSPORTATION CONSULTANT

CUSHMAN TRANSPORTATION CONSULTING, LLC.
94 BECKETT STREET, 2ND FLOOR
PORTLAND, MAINE
CONTACT: SARAH CUSHMAN
(207) 200-1910

FORESTER

SOUTHERN MAINE FORESTRY SERVICES, INC.
PO BOX 910
WINDHAM, MAINE
CONTACT: RENE D. NOEL, JR. ACF
(207) 892-6562



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ABBREVIATIONS

PARTIAL LIST OF ABBREVIATIONS AND THEIR CORRESPONDING MEANING. PLEASE CONTACT THE ENGINEER FOR ANY CLARIFICATION

APPROX.	APPROXIMATE
BC	BOTTOM OF CURB
BMP	BEST MANAGEMENT PRACTICE
BOT.	BOTTOM
CB	CATCH BASIN
CF	CUBIC FOOT
CIP	CAST IN PLACE
CL	CENTERLINE
CM	CONSTRUCTION MANAGER
CMP	CENTRAL MAINE POWER
CONC.	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
CY	CUBIC YARD
DI	DUCTILE IRON PIPE
DIA.	DIAMETER
DIM.	DIMENSION
EA.	EACH
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQUIV.	EQUIVALENT
EST.	ESTIMATE
EX.	EXISTING
FFE	FINISH FLOOR ELEVATION
FT.	FEET
HDPE	HIGH DENSITY POLY ETHYLENE
ID	INNER DIAMETER
IN.	INCH
INV.	INVERT
L	LENGTH
MAX.	MAXIMUM
MDEP	MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
MDOT	MAINE DEPARTMENT OF TRANSPORTATION
M.E.P	MECHANICAL, ELECTRICAL, PLUMBING DESIGNER
MFG.	MANUFACTURED
MH	MANHOLE
MIN.	MINIMUM
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OHE/T/C	OVERHEAD ELECTRIC/TELEPHONE/CABLE
PC	PRECAST
PE	PROFESSIONAL ENGINEER
PL	PROPERTY LINE
PLS	PROFESSIONAL LAND SURVEYOR
PROP.	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PWD	PORTLAND WATER DISTRICT
R	RADIUS
RD	ROOF DRAIN
RET.	RETAINING
ROW	RIGHT OF WAY
S	SLOPE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FEET
SMH	SEWER MANHOLE
SPEC.	SPECIFICATION
TC	TOP OF CURB
TW	TOP OF WALL
TYP.	TYPICAL
UD	UNDERDRAIN
UGE	UNDERGROUND ELECTRIC
VIF	VERIFY IN FIELD

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
SITE/SUB	SJL 6/17/22

DRAWING NAME: COVER SHEET & LEGEND
PROJECT NAME/ADDRESS: 165 LAMBERT ST CO-OP, PORTLAND, MAINE 04103
CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS, PORTLAND, MAINE

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION OF ACORN ENGINEERING, INC. AND IF ALTERED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
PO BOX 3377, PORTLAND, MAINE 04101
(207) 775-2655

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JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
LICENSED PROFESSIONAL ENGINEER
6/17/22

DRAWING NO.
C-01

GENERAL NOTES:

1. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES SHOWN ON THE PLAN. IF DEEMED NECESSARY BY THE OWNER OR OWNER'S REPRESENTATIVE (IF APPLICABLE), ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULE BASED ON THE PLANS AND FIELD VERIFICATION BY THE CONTRACTOR. ALL MATERIAL SCHEDULES SHOWN WITHIN THE PLAN SET ARE FOR GENERAL INFORMATION ONLY.
4. ALL CONSTRUCTION METHODS, TESTING AND MATERIALS SHALL CONFORM TO THE MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IF ANY. IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SPECIFICATION SHALL APPLY AT NO ADDITIONAL COST TO THE OWNER.
5. THE SITE CONTRACTOR SHALL MAINTAIN A SET OF PAPER AND CAD DRAWINGS WHICH SHALL RECORD THE ACTUAL LOCATION, DIMENSIONS, ELEVATIONS, MATERIALS OF THEIR WORK, INDICATING THEREON ALL VARIATIONS FROM THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE COMPLETE SET OF REPRODUCIBLE RECORD DRAWINGS, IN .DWG FORMAT AND PAPER, STAMPED ''AS-BUILT''. IF AUTOCAD CAPABILITY IS NOT AVAILABLE, EXCLUDE FROM BID IN WRITING.
6. THE CONTRACTOR WILL REMAIN SOLELY AND COMPLETELY RESPONSIBLE FOR ENFORCEMENT OF AND COMPLIANCE WITH 1) ALL CONTRACT PLANS AND SPECIFICATIONS, 2) APPLICABLE INTERNATIONAL BUILDING CODE REQUIREMENTS, AND 3) ALL SITE WORKING CONDITIONS AND SAFETY REQUIREMENTS, DAY AND NIGHT, FOR BOTH PERSONS AND PROPERTY, IN EACH CASE BOTH BY THE CONTRACTOR AND ITS SUBCONTRACTORS. THESE INCLUDE ALL OSHA, NIOSH, U.S. EPA AND ANY OTHER APPLICABLE GOVERNMENTAL REGULATIONS.
7. EXISTING CONDITIONS, BOUNDARY SURVEY, AND TOPOGRAPHY FROM THE PLAN TITLED BOUNDARY & TOPOGRAPHIC SURVEY BY OWEN HASKELL, INC FOR THE SZANTON COMPANY, LLC, DATED 8/11/2021.
8. SUBSURFACE DATA HAVE BEEN OBTAINED BY SUMMIT ENGINEERING, INC. AND SHALL BE INCLUDED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL ALSO REVIEW THE REPORT PRIOR TO SUBMITTING A BID.
9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN A SAFE VEHICLE AND PEDESTRIAN ACCESS THOUGH THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACTS OR CHANGES TO SITE ACCESS CONDITIONS.
10. CONSTRUCTION MANAGEMENT PLAN NARRATIVE PREPARED BY ACORN ENGINEERING, INC. SHALL BE REFERRED TO FOR ANTICIPATED PROJECT SCHEDULE AND CLOSURES. TRAFFIC CONTROL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
11. CONTRACTOR TO DETERMINE SOIL CLASSIFICATION INDEPENDENTLY FOR TRENCH, SHORING, AND OTHER SIMILAR CONSTRUCTION MEANS AND METHODS APPLICATIONS.
12. NO HOLES, TRENCHES, OR STRUCTURES SHALL BE LEFT OPEN OR UNATTENDED OVERNIGHT IN ANY AREA ACCESSIBLE TO THE PUBLIC OR WITHIN THE PUBLIC RIGHT-OF-WAY.
13. THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION SURVEY OF INTERIOR SUBGRADE AND ABOVE GRADE ACCESSIBLE WALLS, CEILINGS, FLOORS, ROOF AND VISIBLE EXTERIOR AS VIEWED FROM THE GRADE LEVEL. THIS SHALL BE COMPLETED AT A MINIMUM FOR STRUCTURES IMMEDIATELY ABUTTING THE SITE. A COPY OF THE SURVEY SHOULD BE PROVIDED TO THE OWNER. DOCUMENT WITH PICTURES AT A MINIMUM.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY TRENCH PAVEMENT THAT HAS EXPERIENCED EXCESSIVE SETTLEMENT, CRACKING, OR OPENING OF JOINTS. REPAIRS MAY INCLUDE OVERLAY. REMOVAL OF WORK MAY BE NECESSARY AFTER THE FINAL ACCEPTANCE OF WORK OR PRIOR TO THE END OF THE WARRANTY PERIOD. THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE.

CIVIL SITE NOTES:

1. THE CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO ACORN TO MODIFY THE CONTRACT DOCUMENTS.
2. ALL SHOP, ERECTION, AND CONSTRUCTION DRAWINGS SHALL BE CHECKED AND STAMPED BY THE CONTRACTOR PRIOR TO SUBMISSION FOR ACORN'S REVIEW. ANY UNCHECKED OR NON-STAMPED SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.
3. CONTRACTOR SHALL THOROUGHLY INSPECT AND SURVEY EXISTING STRUCTURES AND SITE TO VERIFY CONDITIONS THAT AFFECT THE WORK SHOWN ON THE DRAWINGS. CONTRACTOR TO NOTIFY ACORN OF ANY DISCREPANCIES PRIOR TO PROCEEDING.
4. DETAILS SHOWN APPLY TO ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED.
5. ALTHOUGH ALL DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT ALL DETAILS ARE ILLUSTRATED, NOR IS EVERY EXCEPTION CONDITION ADDRESSED WITHIN THE CONTRACT DOCUMENTS.
6. ALL PROPRIETARY CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL WORK, INCLUDING DIMENSION AND LAYOUT VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF ANY SUBCONTRACTORS.
8. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE DRAWINGS DO NOT DESCRIBE OR DIRECT MEANS OR METHODS OF CONSTRUCTION.
9. THE CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING THE CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.
10. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE BRACING IS PROVIDED. PRIOR TO BACKFILL, PROVIDE CURING OF CONCRETE FOR 28 DAYS OR AS DIRECTED BY MATERIALS TESTING ENGINEER.
11. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND OTHER SUPPORTING ELEMENTS ARE IN PLACE, IF APPLICABLE.
12. ALL PAVEMENT JOINTS SHALL BE SAWCUT AND APPLIED WITH TACK COAT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
13. ACORN BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND SITE OBSERVATION VISITS DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.
14. EXCAVATIONS ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH SUBPART P OF 29 CRF PART 1926.650-.652 (CONSTRUCTION STANDARD FOR EXCAVATIONS).
15. ALL TRENCH PAVEMENT REPAIR SHALL BE COMPLETED WITH THE USE OF A STREET PAVER WITH A SCREED WIDTH CAPABLE OF SPANNING THE FULL WIDTH OF THE TRENCH UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.

SPECIAL INSPECTION NOTES

1. ALL SITE SOILS-RELATED WORK AND FOOTING EXCAVATIONS PRIOR TO PLACING FORMS SHALL BE REVIEWED BY THE PROJECT GEOTECHNICAL ENGINEER.
2. ALL SITE DRAINAGE-RELATED WORK SHALL BE REVIEWED BY ACORN ENGINEERING.
3. NORMAL REVIEWS BY LOCAL BUILDING DEPARTMENT. NOTIFY 48 HOURS PRIOR TO REQUIRED REVIEW.
4. REQUIRED SPECIAL INSPECTIONS PER I.B.C. SECTION 1705.6 BY AN APPROVED SPECIAL INSPECTOR RETAINED BY OWNER. CONTRACTOR TO COORDINATE SPECIAL INSPECTIONS.
5. SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.

5.1. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO OBSERVE AND/OR TEST THE WORK ASSIGNED AND OUTLINE ABOVE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.

5.2. THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT AND ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, AND NET CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE ENGINEER OF RECORD.

5.3. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN TEN DAYS OF THE FINAL INSPECTION STATING WHETHER THE WORK REQUIRING A SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE AND BELIEF, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE INTERNATIONAL BUILDING CODE. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.

5.4. SPECIAL INSPECTOR SHALL BE EMPLOYED BY THE OWNER AND COORDINATED BY THE CONTRACTOR.

LAYOUT NOTES:

1. MONUMENTS DELINEATING PROPERTY LINES OR RIGHT OF WAYS SHALL NOT BE DISTURBED DURING CONSTRUCTION OPERATIONS. IN THE CASE A MONUMENT IS DISTURBED, AT THE CONTRACTOR'S EXPENSE, THE MONUMENT SHALL BE RESET TO ITS ORIGINAL LOCATION AND ELEVATION BY A REGISTERED LAND SURVEYOR.
2. ALL DIMENSIONS ON THE FOLLOWING SHEETS TAKE PRECEDENT OVER SCALED DIMENSIONS. EACH DRAWING WITH A BAR SCALE MEANS THAT THE DRAWING/DETAIL HAS BEEN SCALED AS ACCURATELY AS POSSIBLE, AND THE BAR SCALE IS FOR GENERAL REFERENCE ONLY. IF NO BAR SCALE IS PRESENT, THEN THERE IS NO SCALE TO THAT DRAWING/DETAIL. AT NO TIME SHOULD DRAWINGS BE SCALED FROM. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, SPECIFICATIONS AND THE FIELD CONDITION SHALL BE IMMEDIATELY REPORTED TO ACORN FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
3. SIGNAGE, STRIPING, AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & CONDITIONS OF THE CITY OF PORTLAND, MAINE DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED PROFESSIONAL LAND SURVEYOR TO PROVIDE A MINIMUM OF TWO TEMPORARY BENCHMARKS WITHIN THE SITE AND TO LOCATE PROPOSED STRUCTURE CORNERS.
6. CONTRACTOR TO ENSURE THAT ACCESS, INCLUDING BUT NOT LIMITED TO WALKWAYS, DRIVEWAYS, AND MAILBOXES ADJACENT TO THE PROJECT REMAIN FUNCTIONAL AND AVAILABLE FOR USE AT ALL TIMES.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF MAJOR SITE PLAN, SUBDIVISION, CONDITIONAL USE FOR INCLUSIONARY ZONING FROM THE CITY OF PORTLAND AND MAINE DEP STORMWATER PERMIT UNDER DELEGATED REVIEW.
2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.
3. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY REQUIRES A STREET OPENING PERMIT FROM THE CITY OF PORTLAND. ADDITIONALLY, COORDINATE WITH THE DEPARTMENT OF PUBLIC WORKS.

GRADING AND DRAINAGE NOTES:

1. TOPSOIL STRIPPED FROM THE SITE THAT IS SUITABLE FOR REUSE AS LOAM (MEETS THE REQUIREMENTS WITHIN SECTION 615 OF THE MDOT STANDARD SPECIFICATIONS, MOST RECENT VERSION AND IS FREE OF TRACEABLE AMOUNTS OF CONTAMINANTS) SHALL BE STOCKPILED WITHIN THE PROPOSED LIMIT OF WORK AREA. THE CONTRACTOR SHALL NOT ASSUME THAT ANY STRIPPED TOPSOIL WILL BE ACCEPTABLE FOR REUSE WITH THEIR ESTIMATE.
2. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY; NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING. DEWATERING SHALL INCLUDE TREATMENT OF SILT THROUGH THE USE OF A DIRTBAG BY ACF ENVIRONMENTAL OR APPROVED EQUIVALENT. FLOWS FROM DEWATERING ACTIVITIES SHALL NOT BE DISCHARGED INTO SANITARY SEWERS. SEE BORING LOGS FOR ADDITIONAL INFORMATION.
3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS AS NECESSARY BY PRIVATE ADJACENT LAND OWNERS. THE CONTRACTOR SHALL NOT DISTURB ANY SOIL BEYOND THE PROPERTY LINE WITHOUT NOTIFYING AND OBTAINING SUCH EASEMENT OR TEMPORARY CONSTRUCTION RIGHT FROM THE ADJACENT LAND OWNERS. PRIOR TO THE CONTRACTOR PRICING THE WORK, THEY SHALL PROVIDE ACORN WITH PROOF OF SUCH EASEMENT OR TEMPORARY RIGHTS. SHOULD EASEMENTS OR TEMPORARY RIGHTS NOT BE AVAILABLE, THE CONTRACTOR SHALL INCLUDE COST FOR BRACING AND SHORING AS NECESSARY.
4. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. THE MINIMUM SLOPE SHALL MEET OR EXCEED 0.5% IN ALL CASES. ALL SLOPES SHALL BE AWAY FROM BUILDINGS AND TOP OF PAVEMENT SHALL BE AT OR BELOW EXISTING FINISH FLOOR ELEVATIONS.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST GEOTECHNICAL REPORT PREPARED BY THE PROJECT GEOTECHNICAL ENGINEER.
6. NO ADDITIONAL PAYMENT FOR UNSUITABLE MATERIALS.
7. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N=0.012 OR LESS.
8. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
9. NATIVE SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LIMIT THE DISTURBANCE TO SUBGRADE SOILS. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, CONTACT ACORN. THE DISTURBED AREAS SHALL BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO ADDITIONAL EXPENSE TO THE OWNER.
10. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER, IF APPLICABLE.

EROSION CONTROL NOTES:

1. DISTURBED AREAS ARE DEFINED AS THOSE SURFACES WHERE EXISTING VEGETATION OR STRUCTURES HAVE BEEN REMOVED, EXPOSING NATIVE SOIL TO THE ELEMENTS.
2. ALL ROUTINE WORK ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.
3. PRIOR TO THE START OF ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL APPLICABLE EROSION CONTROL DEVICES SUCH AS PERIMETER SILT FENCE, AND OTHER APPLICABLE MEASURES. IN THE EVENT THE CONTRACTOR IS NOT SURE A EROSION CONTROL MEASURE SHOULD BE IMPLEMENTED, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD TO CONFIRM IMPLEMENTATION OF ANY EROSION CONTROL DEVICES.
4. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCH SHALL BE APPLIED AS SOON AS POSSIBLE WITHIN 7 DAYS FOLLOWING THE COMPLETION OF ANY SOIL DISTURBANCE, AND PRIOR TO ANY STORM EVENT.
5. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY. THE CONTRACTOR SHALL REFERENCE THE APPROVED EROSION AND SEDIMENTATION CONTROL REPORT FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES IN ADDITION TO THE PLAN SET. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE D.E.P.'S CURRENT MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.
6. PRIOR TO PAVING, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM STORM DRAINS, CATCH BASINS, AND APPURTENANCES.
7. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION.

UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES TO COORDINATE WITH THE PROPOSED CONNECTIONS OR CROSSING. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO ACORN FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
2. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES, PRIOR TO THE ORDERING OF STRUCTURES.
3. ALL NEW SANITARY MANHOLES SHALL BE VACUUM TESTED BEFORE BACKFILLING. TESTING SHALL BE COMPLETED IN ACCORDANCE WITH TECHNICAL REPORT #16 (TR-16): GUIDES FOR THE DESIGN OF WASTEWATER TREATMENT WORKS, PREPARED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION.
4. SEWER MANHOLES SHALL BE 4' ID UNLESS OTHERWISE STATED ON THE PLANS.
5. CONTRACTOR TO PROVIDE 5' OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.
6. THRUST BLOCKS SHALL BE USED FOR THRUST RESTRAIN ON WATER MAINS. DETAIL AND LIMITS FOR THRUST BLOCKS ARE SHOWN WITHIN THE PLAN SET.
7. WATER INFRASTRUCTURE SHALL BE TESTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT DOCUMENT ''WATER AND SEWER CONSTRUCTION SPECIFICATIONS AND PROCEDURE'', MOST RECENT REVISION.
8. ALL REQUIRED FITTINGS FOR THE WATER MAIN ARE NOT SHOWN ON DRAWINGS. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY FITTINGS REQUIRED TO CONSTRUCT THE WATER MAIN IN ACCORDANCE WITH CITY OF PORTLAND, STATE OF MAINE, AND AMERICAN WATER WORKS ASSOCIATION STANDARDS AND REGULATIONS.
9. CONTRACTOR SHALL COORDINATE WORK REGARDING ANY WATER MAIN CONNECTION AND WATER MAIN SHUTDOWN WITH THE PORTLAND WATER DISTRICT AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION.
10. ALL WATER PIPE INSTALLATION SHALL CONFORM WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS AND PROCEDURES, MOST RECENT EDITION.
11. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
12. SEWER, GAS, TELEPHONE, ELECTRICITY, CABLE, WATER AND ANY OTHER UTILITY CONNECTIONS SHALL BE REVIEWED BY PLUMBING, ELECTRICAL, AND MECHANICAL DESIGNER FOR CONSISTENCY WITH THEIR PLANS PRIOR TO CONSTRUCTION.
13. COORDINATE EXIT POINT FOR SECONDARY UTILITY SERVICES WITH THE ARCHITECT/ELECTRICAL ENGINEER. SECONDARY LINE LOCATIONS NOT PROVIDED BY ACORN WITHIN THE UTILITY PLAN.
14. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL THE NECESSARY PERMITS FOR THE INSTALLATION OF THE UTILITIES AND STORMDRAINS WITHIN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE CITY IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL MANUAL PRIOR TO ANY WORK.
15. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL AT NO EXTRA EXPENSE TO THE OWNER.
16. ALL PIPE LINES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS INDICATED ON THE DRAWINGS. NO CRESTS OR SAGS IN THE PIPING WILL BE PERMITTED. ALL HORIZONTAL AND VERTICAL BENDS IN PRESSURIZED PIPE LINES SHALL BE SUITABLY RESTRAINED WITH THRUST BLOCKS OR RETAINER GLANDS. RETAINER GLANDS ALLOWED FOR DUCTILE IRON PIPE ONLY. PROVIDE ALL BENDS, HORIZONTAL AND VERTICAL, AS REQUIRED TO MEET THE GRADES AND ALIGNMENTS INDICATED ON THE DRAWINGS.
17. ALL WASTEWATER PIPING, EXCLUDING BUILDING DRAINS, AND ALL PRESSURIZED PIPING, TO INCLUDE WATER MAINS, INSTALLED BENEATH STRUCTURES SHALL BE ENCASED IN CONCRETE.
18. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS AND ADDITIONAL PIPE AS REQUIRED TO ENSURE A COMPLETE AND PROPERLY FUNCTIONING CONNECTION. CONTRACTOR TO VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. ADAPTERS AND FITTINGS ARE INCIDENTAL TO THE PIPE INSTALLATION.
19. WHENEVER POSSIBLE, WATER LINES SHOULD BE INSTALLED OVER WASTEWATER LINES. A MINIMUM SEPARATION OF 18 INCHES BETWEEN THE BOTTOM OF THE WATER LINE AND THE TOP OF THE WASTEWATER LINE SHALL BE MAINTAINED WHERE POSSIBLE. WHERE A WATER LINE CROSSES UNDER THE WASTEWATER LINE, A FULL LENGTH OF WASTEWATER PIPE SHALL BE CENTERED ABOVE THE WATER LINE SO THAT BOTH JOINTS WILL BE AS FAR FROM THE WATER LINE AS POSSIBLE,
20. THE CONTRACTOR SHALL BE ANTICIPATE THAT THE NATIVE SILT AND CLAY SOILS WILL NOT BE SUITABLE FOR PIPE TRENCH BACKFILL IN PAVED AREAS.
21. GROUNDWATER SHALL BE CONTROLLED TO A LEVEL OF AT LEAST ONE FOOT BELOW SUBGRADE OF THE PIPE OR STRUCTURE. THE CONTRACTOR SHALL MAINTAIN THE LOWERED GROUNDWATER LEVEL UNTIL CONSTRUCTION HAS BEEN COMPLETED TO SUCH AN EXTENT THAT THE STRUCTURES OR PIPES WILL NOT BE FLOATED OR OTHERWISE DAMAGED.
22. EXCAVATION TO SUBRADE IN NATIVE SILT AND CLAY SHALL BE COMPLETED WITH A SMOOTH EDGE BUCKET TO MINIMIZE SUBGRADE DISTURBANCE.
23. ALL ADJUSTMENTS TO FINISHED GRADE ARE TO BE COMPLETED BY THE CONTRACTOR. THE CONTRACTOR SHALL CONFIRM STRUCTURES THAT REQUIRE ADJUSTMENT WITH THE ENGINEER OR OWNERS REPRESENTATIVE PRIOR TO ADJUSTING FRAMES.

DEMOLITION NOTES:

1. THE FOLLOWING ITEMS ARE TYPICAL OF MATERIAL WHICH MAY BE ON SITE:
   - ROCK AND CONCRETE FOUNDATIONS
   - CONCRETE SLABS
   - BITUMINOUS ASPHALT PAVEMENT
   - CONCRETE PADS AND BLOCKS
   - FENCE POST AND FENCING
   - UNDERGROUND UTILITY LINES
   - ABOVE AND OR BELOW FUEL OIL AND PROPANE GAS TANKS
   - STORM DRAIN PIPES AND APPURTENANCE STRUCTURES
   - OTHER TRASH & MISCELLANEOUS SOLID WASTES
2. THE CONTRACTOR IS ADVISED TO VISIT THE SITE TO CONFIRM DEMOLITION ITEMS SINCE THE LIST IS NOT INCLUSIVE OF THE SITE CONDITIONS WHICH MAY BE ENCOUNTERED
3. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTORS SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" DEMONSTRATING PROPER DISPOSAL OF ALL MATERIALS.
4. THE CLIENT HAS NOT REQUESTED NOR HAS ACORN COMPLETED A PHASE I - ENVIRONMENTAL SITE ASSESSMENT FOR THE PROPERTY.

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
SITE/SUB	SJL	6/17/22

DRAWING NAME: **GENERAL NOTES**

PROJECT NAME/ADDRESS: **165 LAMBERT ST CO-OP**
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD:
MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

ACORN ENGINEERING, INC.
ENGINEERING, INC.

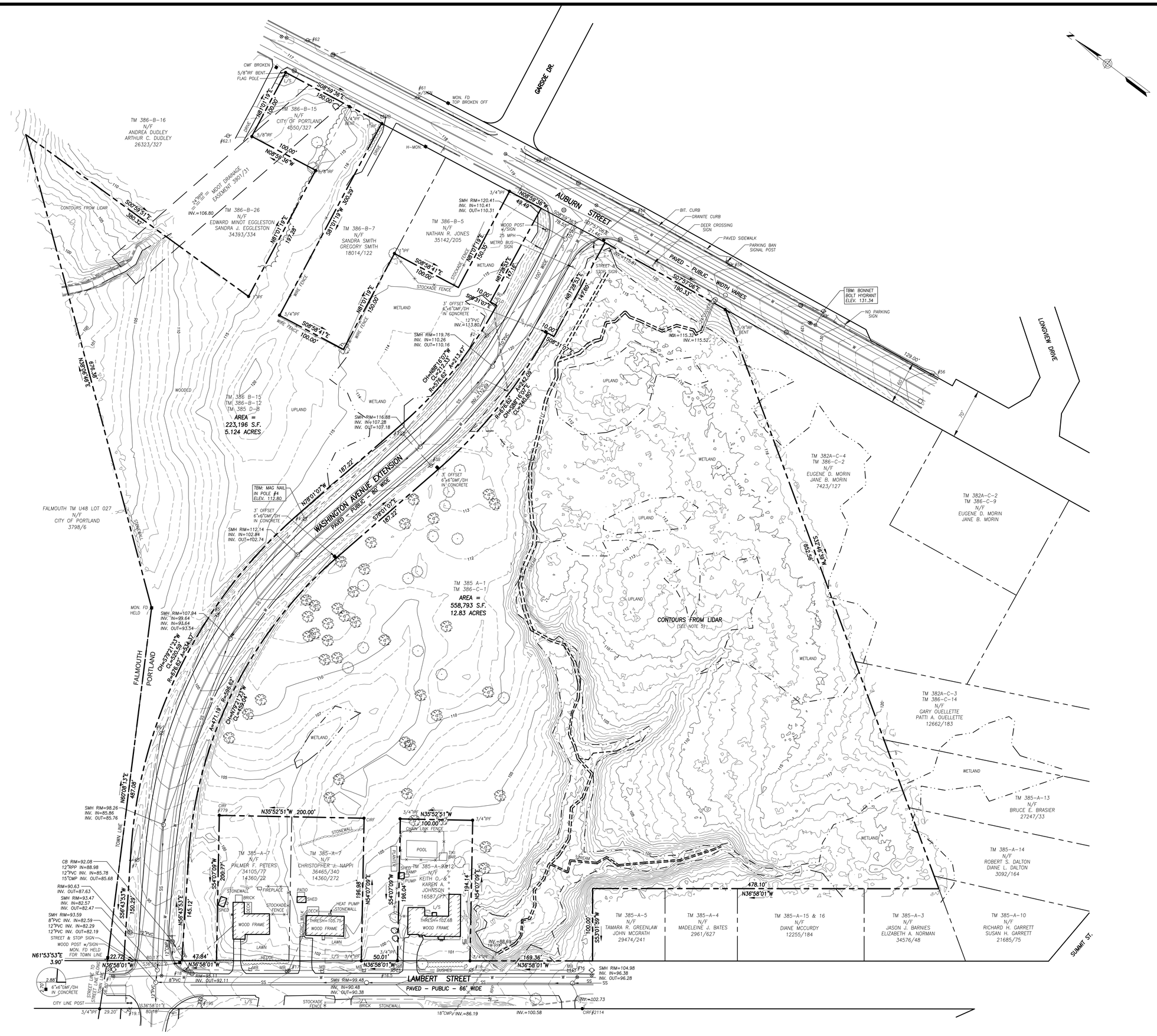
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION OF ACORN ENGINEERING, INC. AND SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

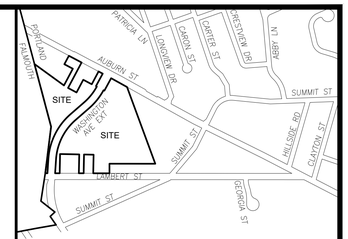
ACORN ENGINEERING, INC.
227 FORE STREET, PORTLAND, MAINE 04101
PO BOX 3477 PORTLAND, MAINE 04104
(207) 775-2655

FILE:	1145_CIVIL
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
LICENSED PROFESSIONAL ENGINEER
6/17/22

DRAWING NO.
C-02





LOCATION MAP

N.T.S.

LEGEND

- IRON PIPE OR ROD FOUND
- MONUMENT FOUND
- CAPPED IRON ROD TO BE SET
- UTILITY POLE
- MANHOLE
- ELECTRIC METER
- SIGN
- MAILBOX
- CATCH BASIN
- HYDRANT
- WATER VALVE OR SHUTOFF
- DECIDUOUS TREE
- CONIFEROUS TREE
- BUSH
- FENCE
- STONEWALL
- CURB
- OVERHEAD WIRES
- E — UNDERGROUND POWER
- W — WATER LINE
- G — GAS LINE
- T — TELEPHONE
- SD — STORM DRAIN
- SS — SANITARY SEWER
- 100 — 1' CONTOUR
- WETLAND LINE
- IPF/IRF — IRON PIPE OR ROD FOUND
- N/F — NOW OR FORMERLY
- 000/000 — DEED BOOK / PAGE
- L/S — LANDSCAPED AREA
- CONC. — CONCRETE
- GMF/DH — GRANITE MONUMENT FOUND/DRILL HOLE

PLAN REFERENCES

1. "STREET ACCEPTANCE PLAN OF WASHINGTON AVENUE EXTENSION, PORTLAND, MAINE" DATED FEBRUARY 15, 2011 BY CITY OF PORTLAND, MAINE PUBLIC SERVICES DEPARTMENT, ENGINEERING DIVISION.

2. "PLAN OF LAND IN FALMOUTH AND PORTLAND FOR CITY OF PORTLAND" DATED 1/1/76, BY OWEN HASKELL, INC.

GENERAL NOTES

1. OWNER OF RECORD:
   CITY OF PORTLAND
   C.C.R.D. 3702/236, 3795/236, 3798/6, 4550/327, 4593/154, 4599/266

2. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83 PER PLAN REFERENCE 1.

3. ELEVATIONS ARE BASED ON NGVD 1929. BENCHMARK: USC&GS DISC G-163 ELEVATION=66.92

4. WETLANDS DELINEATED BY JONES ASSOCIATES AND FIELD LOCATED BY OWEN HASKELL, INC. EXCEPT FOR THE WETLANDS AND STREAM LOCATIONS SHOWN ON THE SOUTHERLY SIDE OF THE STREAM ON TM 385 LOT A-1 & TM 386 LOT C-1.

5. THE CONTOURS SOUTH OF THE WETLAND LINE SHOWN ON THIS SURVEY WERE GENERATED USING DATA COLLECTED IN 2015 AND DOWNLOADED FROM THE NOAA WEB SITE LOCATED AT https://coast.noaa.gov/dataviewer/#/

UTILITY NOTE

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEY HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. CALL 1-888-DIGSAFE AT LEAST THREE BUSINESS DAYS BEFORE PERFORMING ANY CONSTRUCTION. DUE TO OSHA CONFINED SPACE REQUIREMENTS, ALL INVERTS AND PIPE SIZES MUST BE VERIFIED PRIOR TO ANY CONSTRUCTION.

CERTIFICATE

OWEN HASKELL, INC., HEREBY CERTIFIES THAT THIS PLAN IS BASED ON, AND THE RESULT OF, AN ON THE GROUND FIELD SURVEY AND THAT TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF, IT CONFORMS TO THE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS CURRENT STANDARDS OF PRACTICE.

RANDY R. LOUBIER, PLS #2407

12/16/21
DATE

STATE OF MAINE
RANDY R. LOUBIER 2407
PROFESSIONAL LAND SURVEYOR

REV.	DATE	DESCRIPTION
1	12-16-2021	ADDED TM 386-B-12, TM 386-B-15 & TM 385-D-8

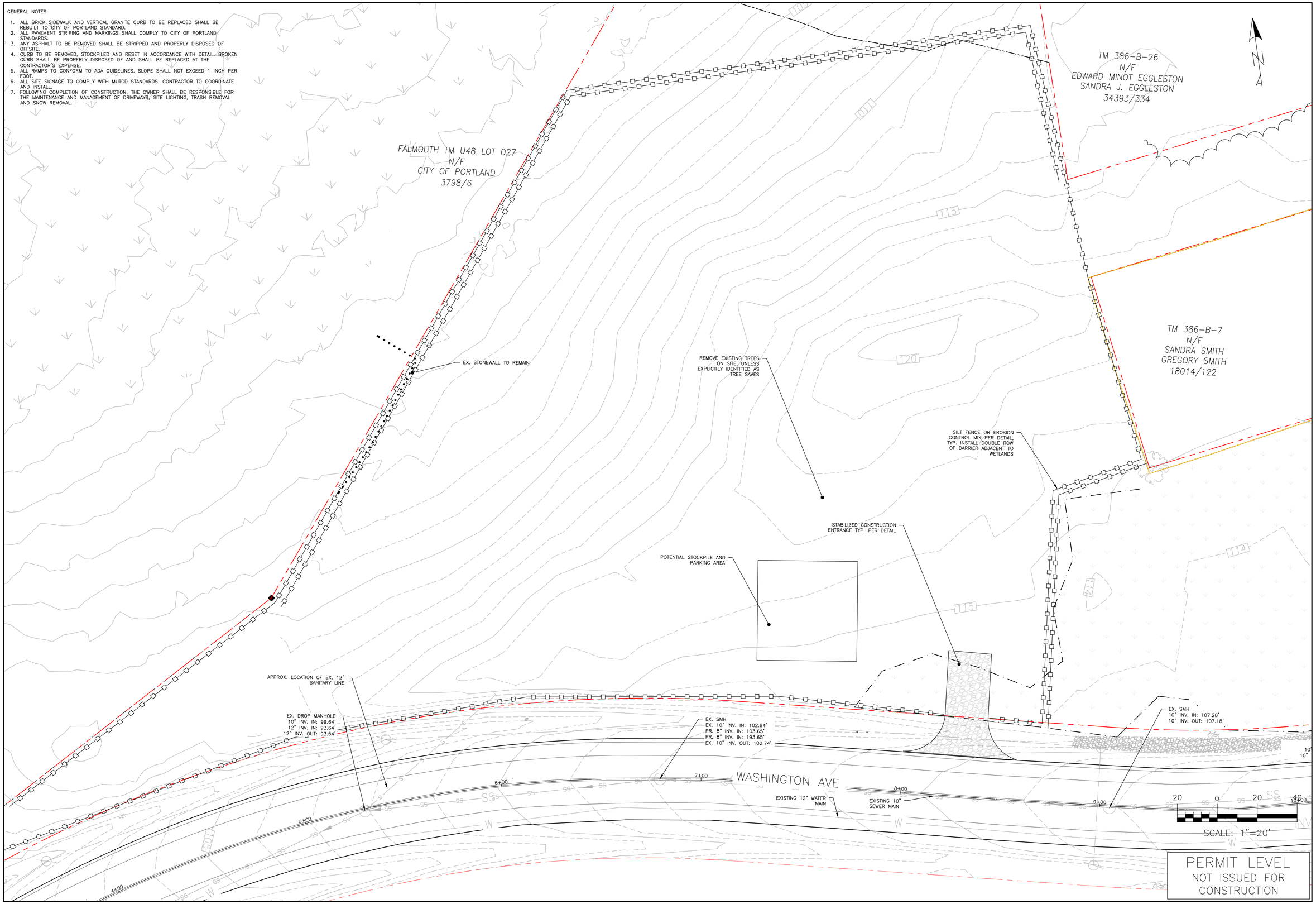
Boundary & Topographic Survey
Lambert Woods
165 Lambert Street, Portland, Maine
Made for
Maine Cooperative Development Partners
795 Congress Street, Portland, Maine

OWEN HASKELL, INC.
PROFESSIONAL LAND SURVEYORS
390 US ROUTE 1, UNIT 10, FALMOUTH, ME 04105 TEL. 207-774-0424

DRAWN BY:	RS / JLW	DATE:	JUNE 14, 2021
CHECKED BY:	RRL	SCALE:	1" = 50'
JOB NO.	2021-046 P		
DRWG. NO.	1		

GENERAL NOTES:

1. ALL BRICK SIDEWALK AND VERTICAL GRANITE CURB TO BE REPLACED SHALL BE REBUILT TO CITY OF PORTLAND STANDARD.
2. ALL PAVEMENT STRIPING AND MARKINGS SHALL COMPLY TO CITY OF PORTLAND STANDARDS.
3. ANY ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
4. CURB TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. ALL RAMPS TO CONFORM TO ADA GUIDELINES. SLOPE SHALL NOT EXCEED 1 INCH PER FOOT.
6. ALL SITE SIGNAGE TO COMPLY WITH MUTCD STANDARDS. CONTRACTOR TO COORDINATE AND INSTALL.
7. FOLLOWING COMPLETION OF CONSTRUCTION, THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SITE LIGHTING, TRASH REMOVAL AND SNOW REMOVAL.



PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
SITE/SUB	SJL	6/17/22

DRAWING NAME: CONSTRUCTION MANAGEMENT & EROSION CONTROL PLAN

PROJECT NAME/ADDRESS: 165 LAMBERT ST CO-OP
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04101
(207) 775-2655

FILE:	1145_CIVIL
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DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
16505
LICENSED
PROFESSIONAL ENGINEER
6/15/22

DRAWING NO.
C-03

GENERAL NOTES:

1. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTOR SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" TO DEMONSTRATE PROPER DISPOSAL OF ALL MATERIALS.
2. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE POTENTIAL CONFLICT WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
4. ALL CONSTRUCTION SIGNAGE IS TEMPORARY AND WILL BE REMOVED AT PROJECT COMPLETION. FINAL SIGNAGE WORDING AND PLACEMENT LOCATION TO BE ACCEPTED BY THE CITY.
5. SEDIMENT BARRIERS TO BE PLACED DIRECTLY ON THE FRONT AND SIDE PROPERTY LINES, DOWN GRADIENT OF THE PROPOSED PROJECT WORK PER DETAIL; FENCES ARE OFFSET OF THE PROPERTY LINES AS SHOWN ON THE PLAN FOR CLARITY PURPOSES AND DO NOT NECESSARILY DEPICT THE PHYSICAL LOCATION.
6. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES, PER DETAIL.
7. DEMOLITION PLAN IS NOT INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS.
8. CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING OFF-SITE PARKING TO EMPLOYEES; ON-SITE PARKING WILL NOT BE PROVIDED OR GUARANTEED. CONTRACTOR TO BE RESPONSIBLE FOR OBTAINING THE APPROPRIATE PERMITS FROM THE CITY FOR CLOSING ANY ON-STREET PARKING SPACES DURING THE CONSTRUCTION PERIOD.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR SNOW REMOVAL ALONG CONSTRUCTION FENCE AND GATE.
10. CONTRACTOR TO SUBMIT A DEWATERING PLAN FOR REVIEW AND APPROVAL TO THE DEPARTMENT OF PUBLIC WORKS PRIOR TO THE PRE-CONSTRUCTION MEETING, DURING THE BUILDING PERMIT APPLICATION PROCESS, OR PRIOR TO ADVANCED SITE WORK. CONTACT THE DEPARTMENT OF PUBLIC WORKS FOR ADDITIONAL INFORMATION AND CURRENT REGULATIONS.
11. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM THE FOLLOWING:
    - 11.1. REQUEST AND REVIEW RELEVANT DOCUMENTS THAT SUMMARIZE FINDINGS FROM INITIAL ENVIRONMENTAL DUE DILIGENCE ACTIVITIES COMPLETED AT THE SITE PERFORMED BY **MAINE COOPERATIVE DEVELOPMENT PARTNERS.**
    - 11.2. DETERMINE WHAT, IF ANY, RECOGNIZED ENVIRONMENTAL CONDITIONS (RECs) IDENTIFIED SUBSEQUENT TO ENVIRONMENTAL DUE DILIGENCE ACTIVITIES MAY AFFECT THE CONTRACTOR'S WORK.
    - 11.3. DETERMINE IF THE SITE IS/HAS BEEN IDENTIFIED AS A STATE &/OR FEDERAL HAZARDOUS SUBSTANCE SITE, OR SIMILARLY REGULATED SITE. IF SO, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMMUNICATE AND COORDINATE WITH AN ENVIRONMENTAL PROFESSIONAL (EP) TO UNDERSTAND WHAT CONTAMINANTS &/OR HAZARDS HAVE BEEN IDENTIFIED FOR THE SITE AND HOW THEIR RESPECTIVE IMPACTS MAY AFFECT THE CONTRACTOR'S WORK. THE EP SHALL BE EMPLOYED BY THE CLIENT. SHOULD THE CLIENT REQUIRE ACORN'S EP SERVICES IT SHALL BE REQUESTED IN WRITING.
    - 11.4. COMMUNICATE AND COORDINATE WITH AN EP TO REQUEST, REVIEW AND ADHERE TO RELEVANT DOCUMENTS PREPARED FOR THE SITE DESCRIBING BEST MANAGEMENT PRACTICES FOR IMPACTED OR POTENTIALLY IMPACTED MEDIA THAT MAY BE ENCOUNTERED AS PART OF THE CONTRACTOR'S WORK INCLUDING BUT NOT LIMITED TO THE SOIL MANAGEMENT PLAN & EMMP.
    - 11.5. ENSURE THE APPROPRIATE STATE &/OR FEDERAL REGULATORY AGENCY(IES) HAVE BEEN NOTIFIED OF THE CONTRACTOR'S PLANNED WORK ACTIVITIES.

WASHINGTON AVE

EX. WATER MAIN

EX. SANITARY SEWER MAIN

POTENTIAL CONSTRUCTION FENCE, TYP.

POTENTIAL LOCATION OF STABILIZED CONSTRUCTION ENTRANCE TYP. PER DETAIL

STREAM SETBACK LINE

APPROX. LOCATION OF SILT FENCE OR EROSION CONTROL MIX PER DETAIL, TYP. INSTALL DOUBLE ROW OF BARRIER ADJACENT TO WETLANDS AND STREAM

EX. WETLAND TO REMAIN UNDISTURBED

EX. STREAM

WETLAND

STREAM

STONEWALL

TM 385-A-7
N/F
CHRISTOPHER J. NAPPI
36465/340
14360/272

F. PETERS
4105/77
14360/22

20 0 20 40
SCALE: 1"=20'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
SITE/SUB	SJL	6/17/22

DRAWING NAME: **CONSTRUCTION MANAGEMENT AND EROSION CONTROL PLAN**

PROJECT NAME/ADDRESS: **165 LAMBERT ST CO-OP**
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD:
MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

ACORN ENGINEERING, INC.
ENGINEERING, INC.
ACORN ENGINEERING, INC
PO BOX 3287 PORTLAND, MAINE 04101
(207) 775-2655

THIS PLAN SHALL NOT BE MODIFIED, IN PART OR WHOLE, WITHOUT PRIOR WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE BY ANY PERSON OTHER THAN ACORN ENGINEERING, INC. OR, OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE:	1145_CIVIL
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
LICENSED PROFESSIONAL ENGINEER
6/17/22

DRAWING NO.
C-04

SPACE AND BULK STANDARDS – PRUD

ZONE: R3	REQUIRED	PROPOSED
MIN LOT AREA	3 AC	5.12 AC
NET LAND AREA PER DU	3,250 SF/DU [1]	3,256 SF/DU
MAX STRUCTURE HEIGHT	35'	<35'
MIN SETBACK FROM EXTERNAL SUBDIVISION PL	10' [1,2]	24.50'
MIN DISTANCE BETWEEN BUILDINGS	16'	16.25'
MIN RECREATIONAL OPEN SPACE	300 SF/UN	303 SF/DU

[1] PER SECTION 18.2 OF CITY LAND USE CODE

[1] PER SECTION 18.2.4.B.4 OF CITY LAND USE CODE, PRUD ALLOWED TO CROSS PUBLIC RIGHT-OF-WAY.. 10' BUILDING SETBACK NOT REQUIRED ALONG PROPERTY LINE ADJACENT TO WASHINGTON AVE RIGHT-OF-WAY.

NET LAND AREA

PROPERTY AREA (SF)	DEDUCTED AREA (SF)	NET LAND AREA (SF)	NET RESIDENTIAL DENSITY
781,989	244,738	537,251	165 UNITS

DERIVED BY TAKING THE AREA OF THE SUBJECT PARCELS AND DEDUCTING AREAS AS DEFINED IN SECTION 7.2 OF CITY LAND USE CODE.

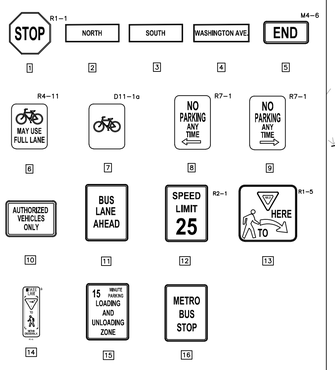
PARKING SUMMARY

	# PARKING SPACES
NORTH PARCEL STANDARD (9'X18')	25
NORTH PARCEL ADA ACCESSIBLE	4
SOUTH PARCEL STANDARD (9X'18')	34
SOUTH PARCEL ADA ACCESSIBLE	4
ON-STREET PARKING	55
TOTAL PROPOSED SPACES	122

LEGEND:

- PROPERTY LINE
- SETBACK LINE
- 75' STREAM SETBACK LINE
- STREAM CENTERLINE
- WETLAND
- FLUSH GRANITE CURB
- TYPE 5 GRANITE CURB
- VERTICAL GRANITE CURB
- SLIPFORM CONCRETE CURB

SIGN LEGEND



SIGNAGE NOTES:

1. SIGN LEGEND TO SERVE FOR VISUAL PURPOSES. LEGEND NOT TO SCALE, REFER TO MUTCD STANDARDS FOR SPECIFICATIONS AND MORE INFORMATION
2. METRO BUS STOP SIGN TO SERVE AS PLACEHOLDER. FINAL SIGN DESIGN PER METRO.

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
SITE/SUB	SJL	6/17/22

DRAWING NAME: **OVERALL SITE PLAN**

PROJECT NAME/ADDRESS: **165 LAMBERT ST CO-OP**
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD:
MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

ACORN ENGINEERING, INC.

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ACORN ENGINEERING, INC.
277 COMMERCIAL STREET, PORTLAND, MAINE 04101
PO BOX 3422 PORTLAND, MAINE 04104 (207) 775-2655

FILE:	1145_CIVIL
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

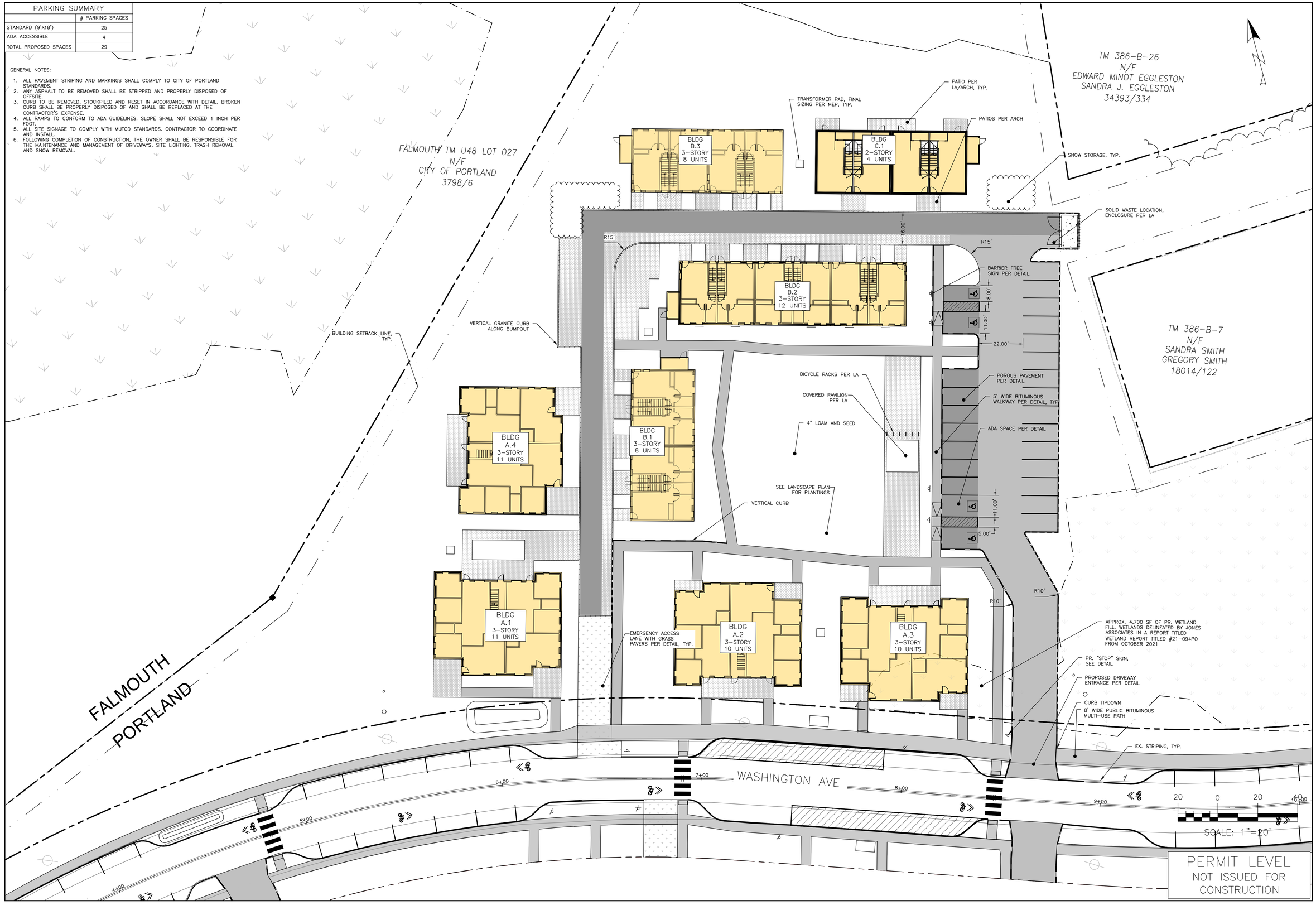
STATE OF MAINE
SAMUEL J. LEBEL
6604
LICENSED PROFESSIONAL ENGINEER
6/17/22

DRAWING NO.
C-09

PARKING SUMMARY	
	# PARKING SPACES
STANDARD (9'X18')	25
ADA ACCESSIBLE	4
TOTAL PROPOSED SPACES	29

GENERAL NOTES:

1. ALL PAVEMENT STRIPING AND MARKINGS SHALL COMPLY TO CITY OF PORTLAND STANDARDS.
2. ANY ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
3. CURB TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
4. ALL RAMPS TO CONFORM TO ADA GUIDELINES. SLOPE SHALL NOT EXCEED 1 INCH PER FOOT.
5. ALL SITE SIGNAGE TO COMPLY WITH MUTCD STANDARDS. CONTRACTOR TO COORDINATE AND INSTALL.
6. FOLLOWING COMPLETION OF CONSTRUCTION, THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SITE LIGHTING, TRASH REMOVAL AND SNOW REMOVAL.



PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
SITE/SUB	SJL	6/17/22

DRAWING NAME: SITE PLAN – NORTH

PROJECT NAME/ADDRESS: 165 LAMBERT ST CO-OP
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

ACORN ENGINEERING, INC.

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ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04101
(207) 775-2655

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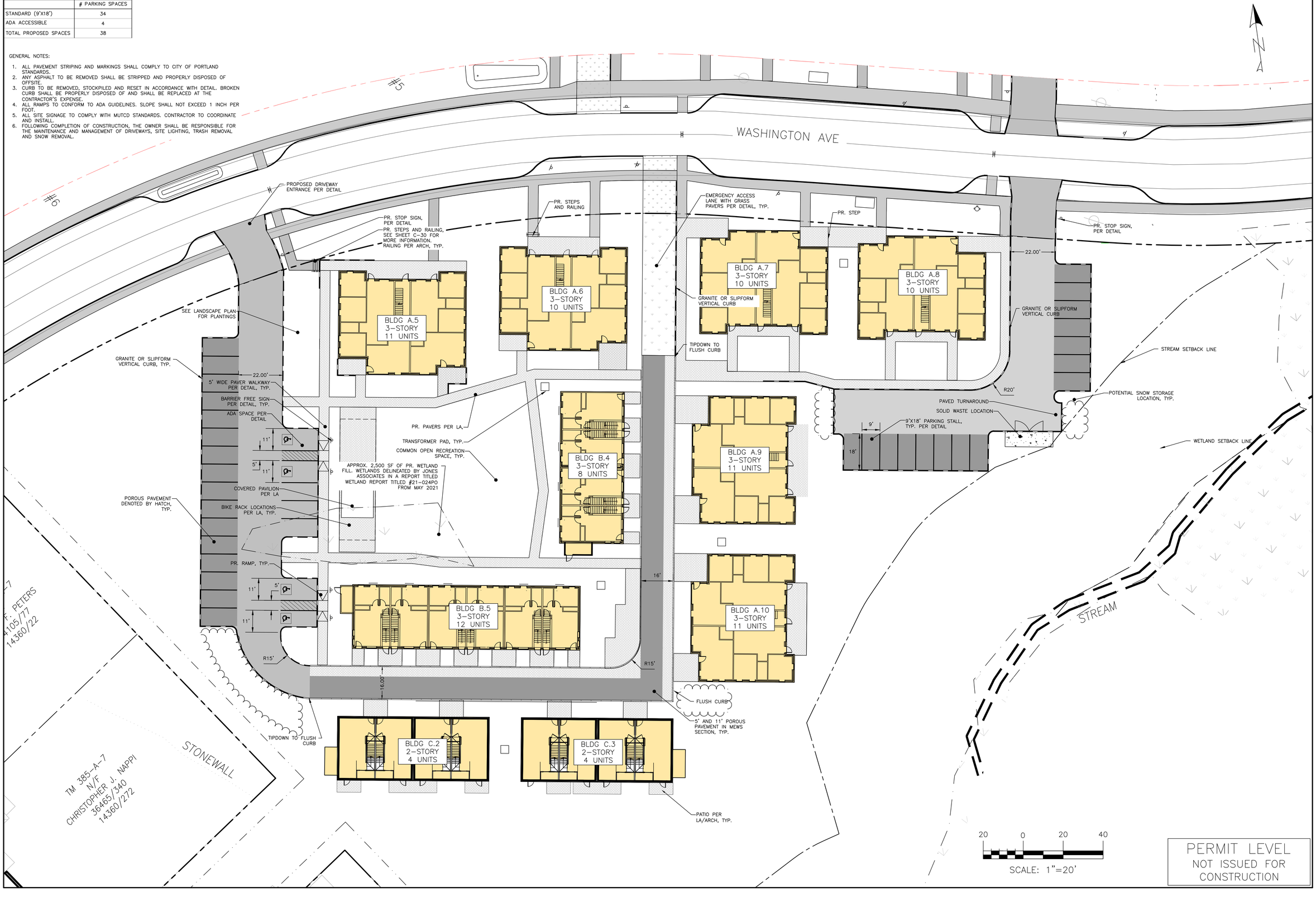
STATE OF MAINE
SAMUEL J. LEBEL
LICENSED PROFESSIONAL ENGINEER
6/17/22

DRAWING NO.
C-10

PARKING SUMMARY	
	# PARKING SPACES
STANDARD (9'X18')	34
ADA ACCESSIBLE	4
TOTAL PROPOSED SPACES	38

GENERAL NOTES:

1. ALL PAVEMENT STRIPING AND MARKINGS SHALL COMPLY TO CITY OF PORTLAND STANDARDS.
2. ANY ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
3. CURB TO BE REMOVED, STOCKPILED AND RESET IN ACCORDANCE WITH DETAIL. BROKEN CURB SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
4. ALL RAMPS TO CONFORM TO ADA GUIDELINES. SLOPE SHALL NOT EXCEED 1 INCH PER FOOT.
5. ALL SITE SIGNAGE TO COMPLY WITH MUTCD STANDARDS. CONTRACTOR TO COORDINATE AND INSTALL.
6. FOLLOWING COMPLETION OF CONSTRUCTION, THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF DRIVEWAYS, SITE LIGHTING, TRASH REMOVAL AND SNOW REMOVAL.



PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
SITE/SUB	SJL	6/17/22

DRAWING NAME: SITE PLAN

PROJECT NAME/ADDRESS: 165 LAMBERT ST CO-OP
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

ACORN ENGINEERING, INC.
ENGINEERING, INC.

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ACORN ENGINEERING, INC.
70 CENTER STREET, ELLSWORTH, MAINE 04101
PO BOX 347, ELLSWORTH, MAINE 04605
(207) 775-2655

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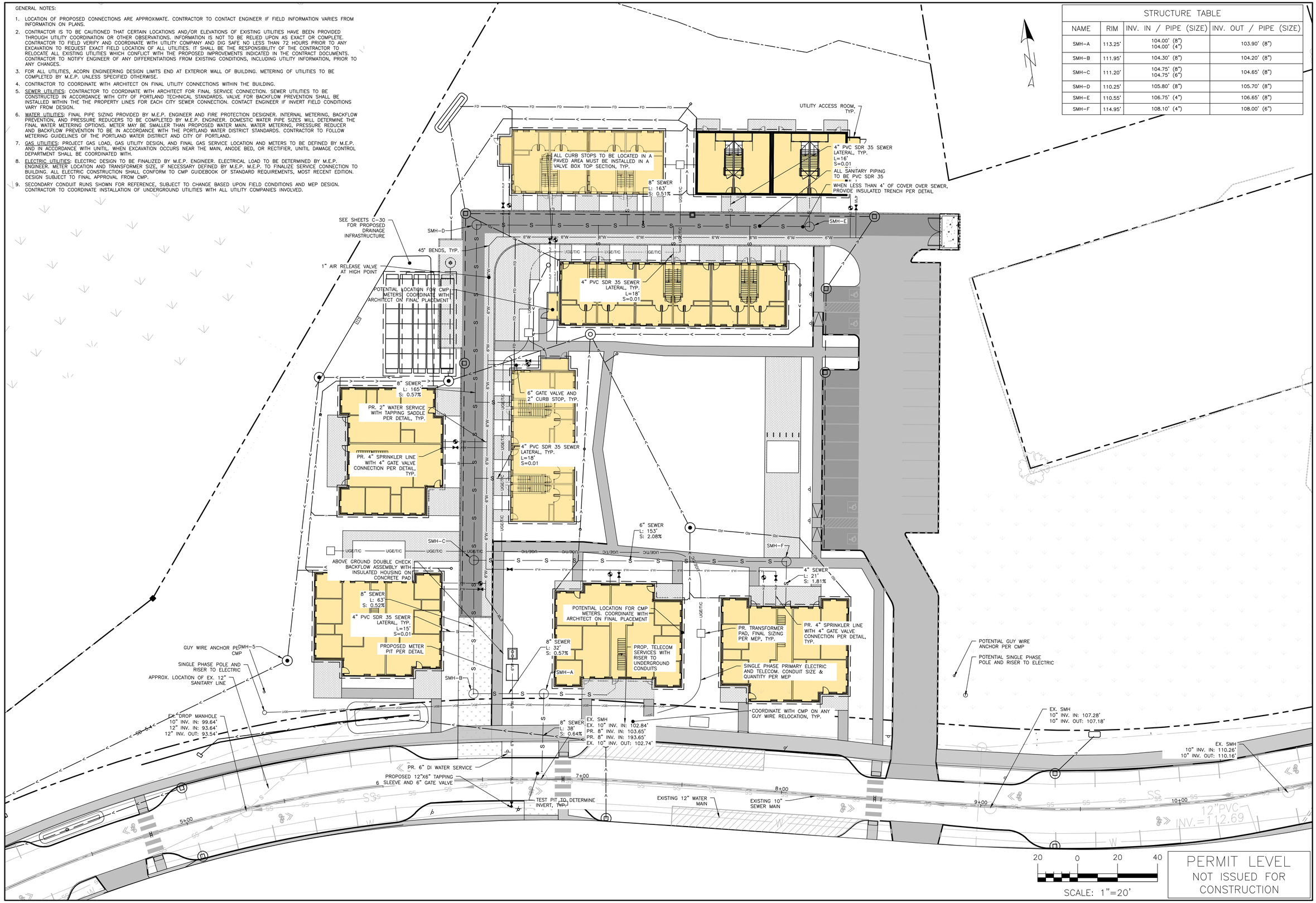
STATE OF MAINE
SAMUEL J. LEBEL
LICENSED PROFESSIONAL ENGINEER
6/17/22

DRAWING NO.
C-11

GENERAL NOTES:

1. LOCATION OF PROPOSED CONNECTIONS ARE APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIES FROM INFORMATION ON PLANS.
2. CONTRACTOR IS TO BE CAUTIONED THAT CERTAIN LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES HAVE BEEN PROVIDED THROUGH UTILITY COORDINATION OR OTHER OBSERVATIONS. INFORMATION IS NOT TO BE RELIED UPON AS EXACT OR COMPLETE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH UTILITY COMPANY AND DIG SAFE NO LESS THAN 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF ALL UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DIFFERENTIATIONS FROM EXISTING CONDITIONS, INCLUDING UTILITY INFORMATION, PRIOR TO ANY CHANGES.
3. FOR ALL UTILITIES, ACORN ENGINEERING DESIGN LIMITS END AT EXTERIOR WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY M.E.P. UNLESS SPECIFIED OTHERWISE.
4. CONTRACTOR TO COORDINATE WITH ARCHITECT ON FINAL UTILITY CONNECTIONS WITHIN THE BUILDING.
5. SEWER UTILITIES: CONTRACTOR TO COORDINATE WITH ARCHITECT FOR FINAL SERVICE CONNECTION. SEWER UTILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. VALVE FOR BACKFLOW PREVENTION SHALL BE INSTALLED WITHIN THE THE PROPERTY LINES FOR EACH CITY SEWER CONNECTION. CONTACT ENGINEER IF INVERT FIELD CONDITIONS VARY FROM DESIGN.
6. WATER UTILITIES: FINAL PIPE SIZING PROVIDED BY M.E.P. ENGINEER AND FIRE PROTECTION DESIGNER. INTERNAL METERING, BACKFLOW PREVENTION, AND PRESSURE REDUCERS TO BE COMPLETED BY M.E.P. ENGINEER. DOMESTIC WATER PIPE SIZES WILL DETERMINE THE FINAL WATER METERING OPTIONS. METER MAY BE SMALLER THAN PROPOSED WATER MAIN. WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION TO BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARDS. CONTRACTOR TO FOLLOW METERING GUIDELINES OF THE PORTLAND WATER DISTRICT AND CITY OF PORTLAND.
7. GAS UTILITIES: PROJECT GAS LOAD, GAS UTILITY DESIGN, AND FINAL GAS SERVICE LOCATION AND METERS TO BE DEFINED BY M.E.P. AND IN ACCORDANCE WITH UNITIL. WHEN EXCAVATION OCCURS NEAR THE MAIN, ANODE BED, OR RECTIFIER, UNITIL DAMAGE CONTROL DEPARTMENT SHALL BE COORDINATED WITH.
8. ELECTRIC UTILITIES: ELECTRIC DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. ELECTRICAL LOAD TO BE DETERMINED BY M.E.P. ENGINEER. METER LOCATION AND TRANSFORMER SIZE, IF NECESSARY DEFINED BY M.E.P. M.E.P. TO FINALIZE SERVICE CONNECTION TO BUILDING. ALL ELECTRIC CONSTRUCTION SHALL CONFORM TO CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION. DESIGN SUBJECT TO FINAL APPROVAL FROM CMP.
9. SECONDARY CONDUIT RUNS SHOWN FOR REFERENCE, SUBJECT TO CHANGE BASED UPON FIELD CONDITIONS AND MEP DESIGN. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND UTILITIES WITH ALL UTILITY COMPANIES INVOLVED.

STRUCTURE TABLE			
NAME	RIM	INV. IN / PIPE (SIZE)	INV. OUT / PIPE (SIZE)
SMH–A	113.25'	104.00' (8") 104.00' (4")	103.90' (8")
SMH–B	111.95'	104.30' (8")	104.20' (8")
SMH–C	111.20'	104.75' (8") 104.75' (6")	104.65' (8")
SMH–D	110.25'	105.80' (8")	105.70' (8")
SMH–E	110.55'	106.75' (4")	106.65' (8")
SMH–F	114.95'	108.10' (4")	108.00' (6")



PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
SITE/SUB	SJL	6/17/22

DRAWING NAME: UTILITY PLAN – NORTH

PROJECT NAME/ADDRESS: 165 LAMBERT ST CO-OP, PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS, PORTLAND, MAINE

THESE PLANS SHALL NOT BE MODIFIED IN ANY MANNER WITHOUT THE EXPRESS WRITTEN PERMISSION AND CONSENT OF ACORN ENGINEERING, INC. AND SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
ENGINEERING, LAND PLANNING, SURVEYING
PO BOX 3707 PORTLAND, MAINE 04101
(207) 775-2655

FILE:	1145_CIVIL
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
LICENSED PROFESSIONAL ENGINEER
6/17/22

DRAWING NO.
C-20

GENERAL NOTES:

1. LOCATION OF PROPOSED CONNECTIONS ARE APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIES FROM INFORMATION ON PLANS.
2. CONTRACTOR IS TO BE CAUTIONED THAT CERTAIN LOCATIONS AND/OR ELEVATIONS OF EXISTING UTILITIES HAVE BEEN PROVIDED THROUGH UTILITY COORDINATION OR OTHER OBSERVATIONS. INFORMATION IS NOT TO BE RELIED UPON AS EXACT OR COMPLETE. CONTRACTOR TO FIELD VERIFY AND COORDINATE WITH UTILITY COMPANY AND DIG SAFE NO LESS THAN 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF ALL UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR TO NOTIFY ENGINEER OF ANY DIFFERENTIATIONS FROM EXISTING CONDITIONS, INCLUDING UTILITY INFORMATION, PRIOR TO ANY CHANGES.
3. FOR ALL UTILITIES, ACORN ENGINEERING DESIGN LIMITS END AT EXTERIOR WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY M.E.P. UNLESS SPECIFIED OTHERWISE.
4. CONTRACTOR TO COORDINATE WITH ARCHITECT ON FINAL UTILITY CONNECTIONS WITHIN THE BUILDING.
5. SEWER UTILITIES: CONTRACTOR TO COORDINATE WITH ARCHITECT FOR FINAL SERVICE CONNECTION. SEWER UTILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. VALVE FOR BACKFLOW PREVENTION SHALL BE INSTALLED WITHIN THE THE PROPERTY LINES FOR EACH CITY SEWER CONNECTION. CONTACT ENGINEER IF INVERT FIELD CONDITIONS VARY FROM DESIGN.
6. WATER UTILITIES: FINAL PIPE SIZING PROVIDED BY M.E.P. ENGINEER AND FIRE PROTECTION DESIGNER. INTERNAL METERING, BACKFLOW PREVENTION, AND PRESSURE REDUCERS TO BE COMPLETED BY M.E.P. ENGINEER. DOMESTIC WATER PIPE SIZES WILL DETERMINE THE FINAL WATER METERING OPTIONS. METER MAY BE SMALLER THAN PROPOSED WATER MAIN. WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION TO BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARDS. CONTRACTOR TO FOLLOW METERING GUIDELINES OF THE PORTLAND WATER DISTRICT AND CITY OF PORTLAND.
7. GAS UTILITIES: PROJECT GAS LOAD, GAS UTILITY DESIGN, AND FINAL GAS SERVICE LOCATION AND METERS TO BE DEFINED BY M.E.P. AND IN ACCORDANCE WITH UNITIL. WHEN EXCAVATION OCCURS NEAR THE MAIN, ANODE BED, OR RECTIFIER, UNITIL DAMAGE CONTROL DEPARTMENT SHALL BE COORDINATED WITH.
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9. SECONDARY CONDUIT RUNS SHOWN FOR REFERENCE, SUBJECT TO CHANGE BASED UPON FIELD CONDITIONS AND MEP DESIGN. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND UTILITIES WITH ALL UTILITY COMPANIES INVOLVED.

STRUCTURE TABLE

NAME	RIM	INV. IN / PIPE (SIZE)	INV. OUT / PIPE (SIZE)
SMH-A	112.00'	104.55' (6") 104.55' (8")	104.45' (8")
SMH-B	111.60'	106.25' (8") 106.25' (4")	106.15' (8")
SMH-C	111.90'	107.15' (4") 107.15' (4")	107.05' (8")
SMH-D	115.25'	107.10' (4")	107.00' (6")

11 UNITS
A.2 3-STORY 10 UNITS
A.3 3-STORY 10 UNITS
LOCATION OF EX. 12" SANITARY LINE
DROP MANHOLE 10" INV. IN: 99.64' 12" INV. IN: 93.64' INV. OUT: 93.54'
EX. SMH 10" INV. IN: 102.84' PR. 8" INV. IN: 103.65' PR. 8" INV. IN: 193.65' EX. 10" INV. OUT: 102.74'
EX. SMH 10" INV. IN: 107.28' 10" INV. OUT: 107.18'
EXISTING 12" WATER MAIN
EXISTING 10" SEWER MAIN
PUBLIC HYDRANT ASSEMBLY WITH 6" GATE VALVE, PER DETAIL. 400' TO FURTHEST BUILDING
PROP. 12"X8" TAPPING SLEEVE AND 8" GATE VALVE AT MAIN, TYP.
6" GATE VALVE AND DI SERVICE
AIR RELEASE VALVE AT HIGH POINT
45° BEND, TYP.
8" SEWER L: 103' S: 0.77%
PROPOSED METER PIT PER DETAIL
ABOVE GROUND DOUBLE CHECK BACKFLOW ASSEMBLY WITH INSULATED HOUSING ON CONCRETE PAD
4" PVC SDR 35 SEWER LATERAL, TYP. L=12' S=0.01
6" SEWER L: 131' S: 1.83%
PR. 4" SPRINKLER LINE WITH 4" GATE VALVE CONNECTION PER DETAIL, TYP.
PR. 2" WATER SERVICE WITH TAPPING SADDLE PER DETAIL, TYP.
REPLACE EX. POLE AND RUN NEW OVERHEAD SINGLE PHASE AND TELECOM TO A RISER POLE
COORDINATE WITH CMP ON ANY GUY WIRE RELOCATION, TYP.
4" PVC SDR 35 SEWER LATERAL, TYP. L=15' S=0.01
SMH-A
SMH-D
PR. TRANSFORMER PAD, FINAL SIZING PER MEP
SEE SHEET C-31 FOR PROPOSED DRAINAGE INFRASTRUCTURE
ALL SANITARY PIPING TO BE PVC SDR 35
4" PVC SDR 35 SEWER LATERAL, TYP. L=15' S=0.01
4" PVC SDR 35 SEWER LATERAL, TYP. L=20' S=0.01
8" SEWER L: 159' S: 0.98%
ALL CURB STOPS TO BE LOCATED IN A PAVED AREA MUST BE INSTALLED IN A VALVE BOX TOP SECTION, TYP.
POTENTIAL LOCATION FOR CMP METERS. COORDINATE WITH ARCHITECT ON FINAL PLACEMENT
UTILITY ACCESS ROOM, TYP.
POTENTIAL PAVILION SERVICE
PR. 4" SPRINKLER LINE WITH 4" GATE VALVE CONNECTION PER DETAIL, TYP.
PR. 2" WATER SERVICE WITH TAPPING SADDLE PER DETAIL, TYP.
POTENTIAL LOCATION FOR CMP METERS. COORDINATE WITH ARCHITECT ON PLACEMENT
4" PVC SDR 35 SEWER LATERAL, TYP. L=12' S=0.01
SMH-C
SMH-B
4" PVC SDR 35 SEWER LATERAL, TYP. L=22' S=0.01
8" SEWER L: 127' S: 0.61%
UTILITY ACCESS ROOM, TYP.
4X4 TRANSFORMER PAD, TYP.

20 0 20 40
SCALE: 1"=20'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR

BY	DATE
SITE/SUB	SJL 6/17/22

DRAWING NAME: UTILITY PLAN – SOUTH
PROJECT NAME/ADDRESS: 165 LAMBERT ST CO-OP PORTLAND, MAINE 04103
CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS PORTLAND, MAINE

ACORN ENGINEERING, INC. PROFESSIONAL ENGINEERS, LAND SURVEYORS
THESE PLANS SHALL NOT BE MODIFIED WITHOUT THE WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE TO THESE PLANS BY ANY PERSON OR ENTITY OTHER THAN ACORN ENGINEERING, INC., OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
PO BOX 221 BUXTON, MAINE 04101
(207) 775-2655

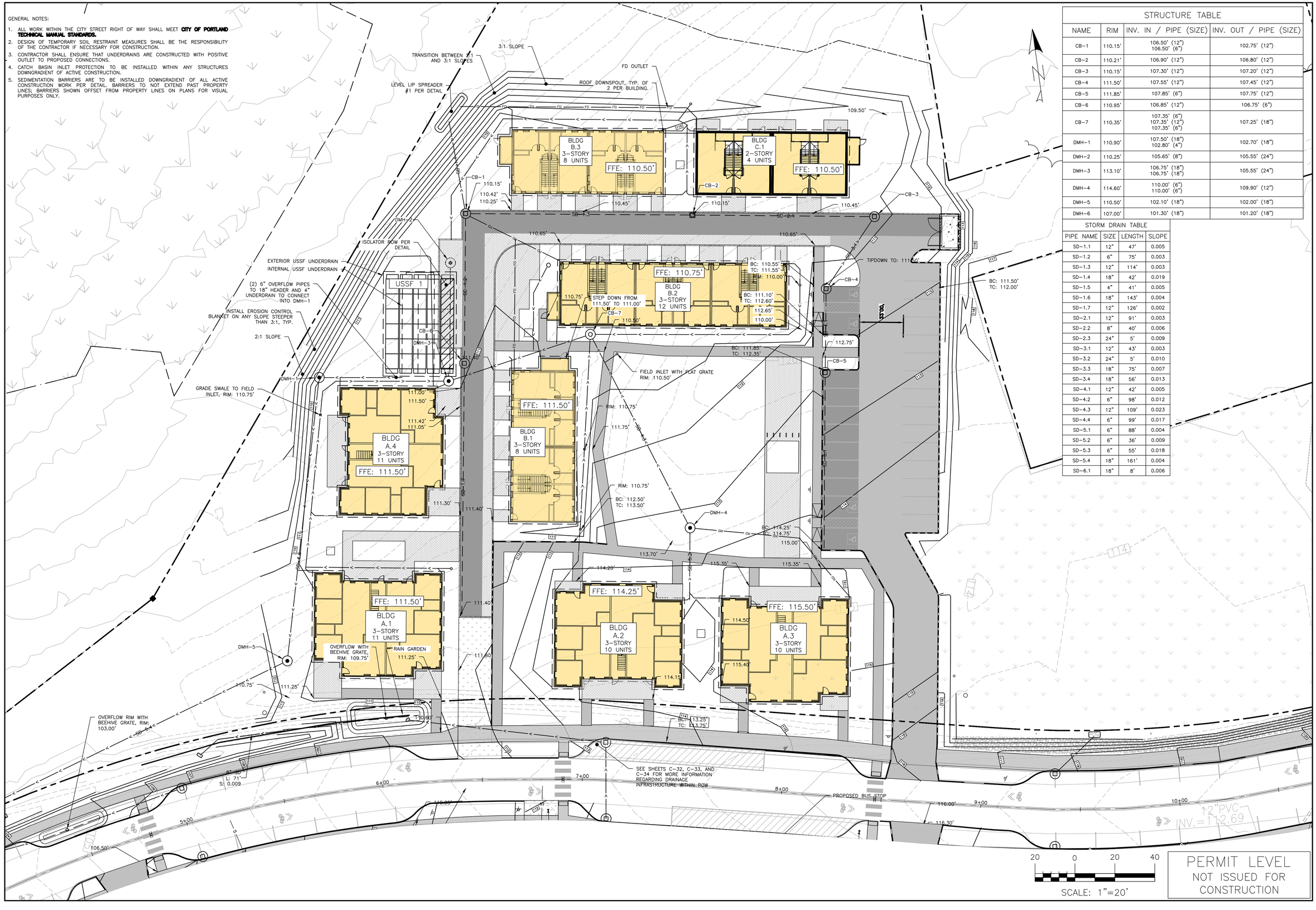
FILE:	1145_CIVIL
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

SAMUEL J. LEBEL 15504 LICENSED PROFESSIONAL ENGINEER STATE OF MAINE 6/17/22

DRAWING NO.
C-21

GENERAL NOTES:

1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET **CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.**
2. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
3. CONTRACTOR SHALL ENSURE THAT UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
4. CATCH BASIN INLET PROTECTION TO BE INSTALLED WITHIN ANY STRUCTURES DOWNGRADIENT OF ACTIVE CONSTRUCTION.
5. SEDIMENTATION BARRIERS ARE TO BE INSTALLED DOWNGRADIENT OF ALL ACTIVE CONSTRUCTION WORK PER DETAIL. BARRIERS TO NOT EXTEND PAST PROPERTY LINES; BARRIERS SHOWN OFFSET FROM PROPERTY LINES ON PLANS FOR VISUAL PURPOSES ONLY.



STRUCTURE TABLE

NAME	RIM	INV. IN / PIPE (SIZE)	INV. OUT / PIPE (SIZE)
CB-1	110.15'	106.50' (12") 106.50' (6")	102.75' (12")
CB-2	110.21'	106.90' (12")	106.80' (12")
CB-3	110.15'	107.30' (12")	107.20' (12")
CB-4	111.50'	107.55' (12")	107.45' (12")
CB-5	111.85'	107.85' (6")	107.75' (12")
CB-6	110.95'	106.85' (12")	106.75' (6")
CB-7	110.35'	107.35' (6") 107.35' (12") 107.35' (6")	107.25' (18")
DMH-1	110.90'	107.50' (18") 102.80' (4")	102.70' (18")
DMH-2	110.25'	105.65' (8")	105.55' (24")
DMH-3	113.10'	106.75' (18") 106.75' (18")	105.55' (24")
DMH-4	114.60'	110.00' (6") 110.00' (6")	109.90' (12")
DMH-5	110.50'	102.10' (18")	102.00' (18")
DMH-6	107.00'	101.30' (18")	101.20' (18")

STORM DRAIN TABLE

PIPE NAME	SIZE	LENGTH	SLOPE
SD-1.1	12"	47'	0.005
SD-1.2	6"	75'	0.003
SD-1.3	12"	114'	0.003
SD-1.4	18"	42'	0.019
SD-1.5	4"	41'	0.005
SD-1.6	18"	143'	0.004
SD-1.7	12"	126'	0.002
SD-2.1	12"	91'	0.003
SD-2.2	8"	40'	0.006
SD-2.3	24"	5'	0.009
SD-3.1	12"	43'	0.003
SD-3.2	24"	5'	0.010
SD-3.3	18"	75'	0.007
SD-3.4	18"	56'	0.013
SD-4.1	12"	42'	0.005
SD-4.2	6"	98'	0.012
SD-4.3	12"	109'	0.023
SD-4.4	6"	99'	0.017
SD-5.1	6"	88'	0.004
SD-5.2	6"	36'	0.009
SD-5.3	6"	55'	0.018
SD-5.4	18"	161'	0.004
SD-6.1	18"	8'	0.006

ISSUED FOR	BY DATE
SITE/SUB	SJL 6/17/22

DRAWING NAME: **GRADING & DRAINAGE PLAN – NORTH**

PROJECT NAME/ADDRESS: **165 LAMBERT ST CO-OP**
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD:
MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

ACORN ENGINEERING, INC.
ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT PERMISSION FROM ACORN ENGINEERING, INC. AND IF SO MODIFIED, OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
70 CENTER STREET, PORTLAND, MAINE 04101
PO BOX 3257, PORTLAND, MAINE 04104
(207) 775-2655

FILE:	1145_CIVIL
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
LICENSED PROFESSIONAL ENGINEER
6/17/22

DRAWING NO.
C-30

STRUCTURE TABLE			
NAME	RIM	INV. IN / PIPE (SIZE)	INV. OUT / PIPE (SIZE)
CB-1	111.40'	107.50' (8")	107.40' (12")
CB-2	111.40'	107.95' (8")	107.85' (8")
CB-3	111.75'	108.30' (6")	108.20' (8")
CB-4	111.75'	108.55' (6")	108.45' (6")
CB-5	111.70'		108.70' (6")
CB-6	115.85'	110.50' (6") 109.00' (6") 109.00' (4")	108.90' (12")
CB-7	113.75'	110.70' (6") 110.70' (6")	110.60' (6")
CB-8	107.25'	104.25' (12")	101.35' (12")
DMH-1	108.00'	105.00' (12") 98.25' (18")	98.15' (18")
DMH-2	109.50'	106.75' (6")	106.65' (12")
DMH-3	108.25'	104.70' (18") 99.00' (4")	98.90' (18")
DMH-4	110.60'	106.00' (6") 106.50' (12")	102.10' (24")
DMH-5	109.75'	105.25' (6") 107.00' (6")	102.10' (24")
DMH-6	111.00'	106.50' (6")	106.40' (6")
DMH-7	111.75'	108.50' (6") 108.50' (6")	108.40' (6")
DMH-8	110.75'	108.00' (12")	107.90' (12")
DMH-9	114.75'	109.75' (8") 109.75' (6")	109.65' (12")
DMH-10	111.00'	108.25' (12")	107.20' (12")

STORM DRAIN TABLE			
PIPE NAME	SIZE	LENGTH	SLOPE
PIPE – (55)	12"	167'	0.003
SD-1.1	18"	92'	0.003
SD-1.2	18"	32'	0.020
SD-1.3	12"	113'	0.015
SD-1.4	8"	91'	0.004
SD-2.1	6"	64'	0.008
SD-2.2	12"	54'	0.003
SD-2.3	8"	57'	0.003
SD-2.4	6"	60'	0.002
SD-2.5	8"	19'	0.001

STORM DRAIN TABLE			
PIPE NAME	SIZE	LENGTH	SLOPE
SD-3.1	18"	7'	0.010
SD-3.2	4"	7'	0.034
SD-4.1	6"	44'	0.003
SD-4.2	24"	4'	0.024
SD-4.3	6"	23'	0.037
SD-4.4	12"	95'	0.015
SD-5.1	24"	8'	0.014
SD-5.2	6"	36'	0.014
SD-5.3	6"	82'	0.014
SD-6.1	6"	193'	0.010

STORM DRAIN TABLE			
PIPE NAME	SIZE	LENGTH	SLOPE
SD-6.2	6"	71'	0.004
SD-6.3	6"	144'	0.005
SD-6.4	4"	11'	0.004
SD-7.1	6"	14'	0.036
SD-7.2	6"	18'	0.003
SD-7.3	6"	147'	0.011
SD-7.4	6"	44'	0.003
SD-7.5	6"	51'	0.010
SD-8.1	12"	22'	0.005
SD-8.2	12"	143'	0.004

STORM DRAIN TABLE			
PIPE NAME	SIZE	LENGTH	SLOPE
SD-8.3	12"	172'	0.010
SD-9.1	6"	69'	0.010
SD-9.2	8"	19'	0.012

GENERAL NOTES:

1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET **CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.**
2. DESIGN OF TEMPORARY SOIL RESTRAINT MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IF NECESSARY FOR CONSTRUCTION.
3. CONTRACTOR SHALL ENSURE THAT UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET TO PROPOSED CONNECTIONS.
4. CATCH BASIN INLET PROTECTION TO BE INSTALLED WITHIN ANY STRUCTURES DOWNGRADIENT OF ACTIVE CONSTRUCTION.
5. SEDIMENTATION BARRIERS ARE TO BE INSTALLED DOWNGRADIENT OF ALL ACTIVE CONSTRUCTION WORK PER DETAIL. BARRIERS TO NOT EXTEND PAST PROPERTY LINES; BARRIERS SHOWN OFFSET FROM PROPERTY LINES ON PLANS FOR VISUAL PURPOSES ONLY.

SEE SHEETS C-32, C-33, AND C-34 FOR MORE INFORMATION REGARDING DRAINAGE INFRASTRUCTURE WITHIN ROW

(4) 6" STEPS FROM 107.25' TO 109.25'

(2) 6" STEPS FROM 110.90' TO 111.90'

6" STEP FROM 114.75' TO 114.25'

GRADE SWALE TO FIELD INLET, RIM: 111.50'

GRADE SWALE TO FIELD INLET, RIM: 111.50'

FIELD INLET WITH FLAT GRATE RIM: 109.95'

FIELD INLET WITH FLAT GRATE RIM: 109.50'

FIELD INLET WITH FLAT GRATE RIM: 109.75'

(3) 6" OVERFLOW PIPES TO 18" HEADER AND 4" UNDERDRAIN TO CONNECT INTO DMH-1

24" INLET PIPES

INSTALL EROSION CONTROL BLANKET ON ANY SLOPE STEEPER THAN 3:1, TYP.

LEVEL LIP SPREADER #2

Pipe (65)

BLDG A.2 3-STORY 10 UNITS

BLDG A.5 3-STORY 11 UNITS FFE: 110.00'

BLDG A.6 3-STORY 10 UNITS FFE: 112.00'

BLDG A.7 3-STORY 10 UNITS FFE: 114.25'

BLDG A.8 3-STORY 10 UNITS FFE: 115.50'

BLDG B.4 3-STORY 8 UNITS FFE: 112.00'

BLDG B.5 3-STORY 12 UNITS FFE: 112.00'

BLDG A.9 3-STORY 11 UNITS FFE: 112.25'

BLDG A.10 3-STORY 11 UNITS FFE: 112.00'

BLDG C.2 2-STORY 4 UNITS FFE: 111.75'

BLDG C.3 2-STORY 4 UNITS FFE: 111.75'

STREAM

STONEWALL

SCALE: 1"=20'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR

BY	DATE
SJL	6/17/22
SITE/SUB	

DRAWING NAME: **GRADING & DRAINAGE PLAN – SOUTH**

PROJECT NAME/ADDRESS: **165 LAMBERT ST CO-OP**
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD:
MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

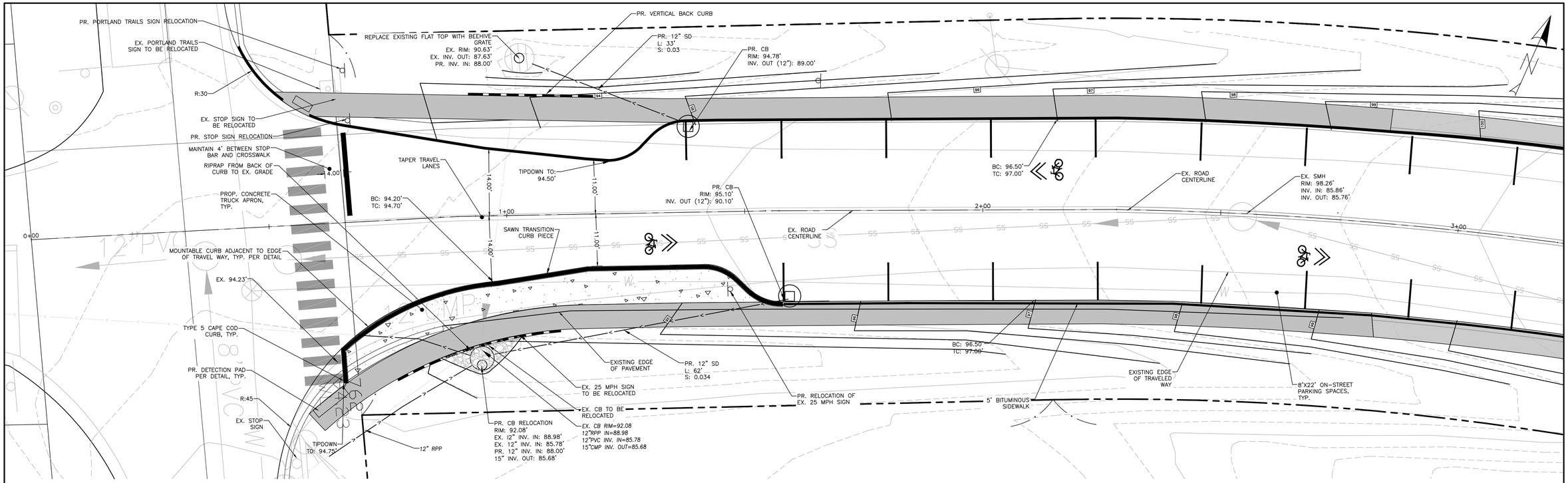
THESE PLANS SHALL NOT BE MODIFIED WITHOUT WRITTEN AUTHORIZATION FROM ACORN ENGINEERING, INC. ANY MODIFICATIONS MADE TO THESE PLANS WITHOUT THE WRITTEN AUTHORIZATION OF ACORN ENGINEERING, INC. OR, OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
P.O. BOX 3207, PORTLAND, MAINE 04101
(207) 775-2855

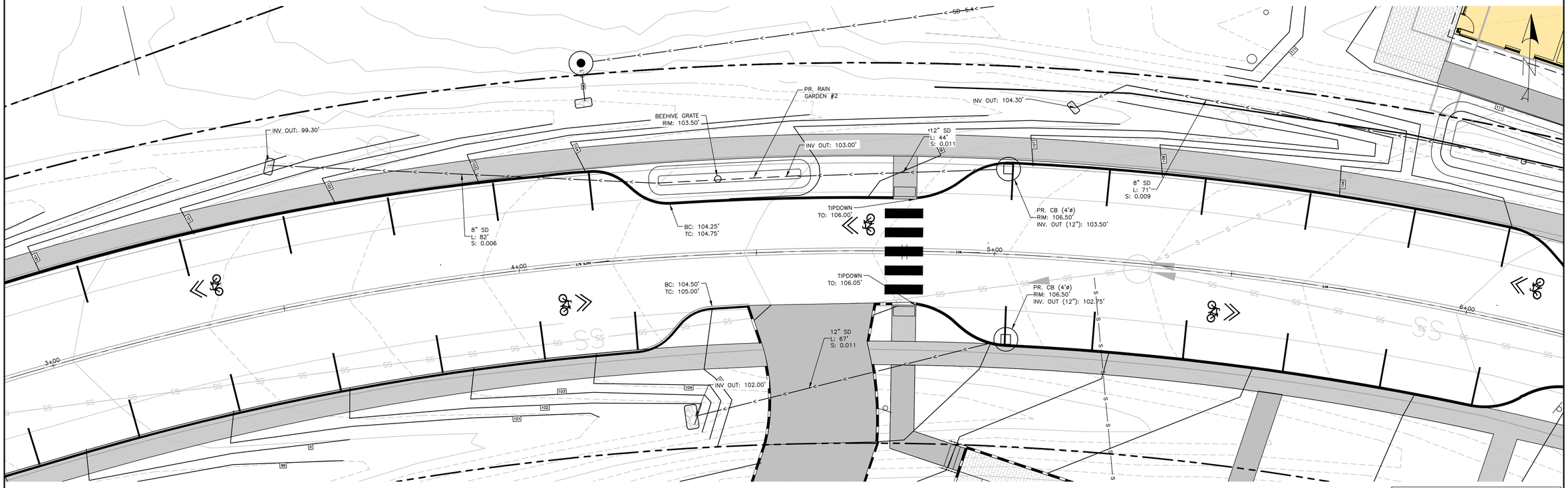
FILE:	1145_CIVIL
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
LICENSED PROFESSIONAL ENGINEER
6/17/22

DRAWING NO.
C-31



LAMBERT STREET INTERSECTION – STATIONS: 0+00 – 3+00



STATIONS: 3+00 – 6+00

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
SITE/SUB	SJL	6/17/22

DRAWING: RIGHT-OF-WAY GRADING & SITE PLAN – +0 – +6

PROJECT NAME/ADDRESS: 165 LAMBERT ST CO-OP
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

ACORN ENGINEERING, INC.

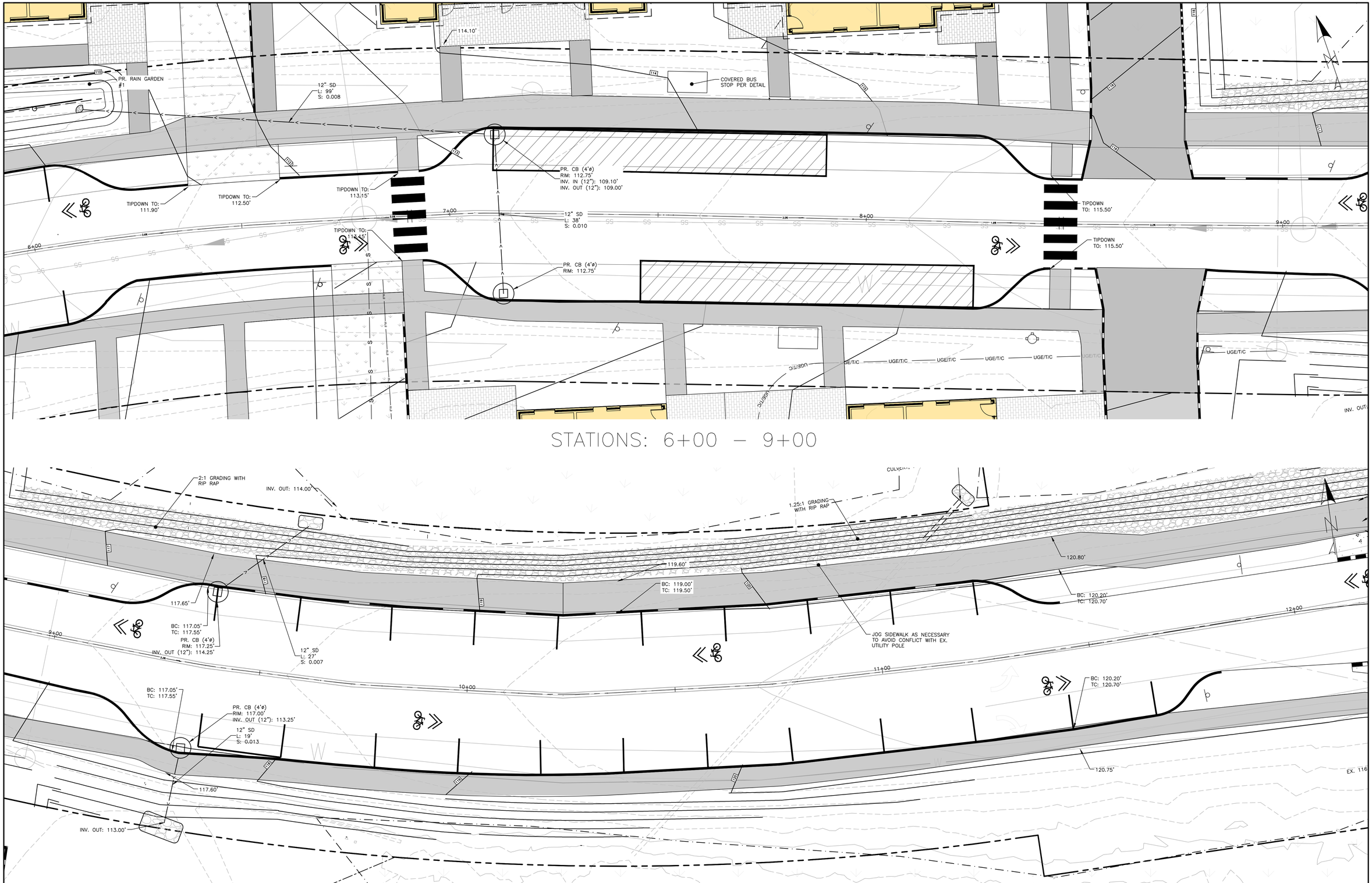
THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04101
(207) 775-2655

FILE:	1145_CIVIL
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
LICENSED
PROFESSIONAL ENGINEER
6/15/22

DRAWING NO.
C-32



STATIONS: 6+00 – 9+00

STATIONS: 9+00 – 12+00

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
SITE/SUB	SJL	6/17/22

DRAWING NAME: **RIGHT-OF-WAY GRADING & SITE PLAN – +6 – +12**

PROJECT NAME/ADDRESS: **165 LAMBERT ST CO-OP**
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD:
MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

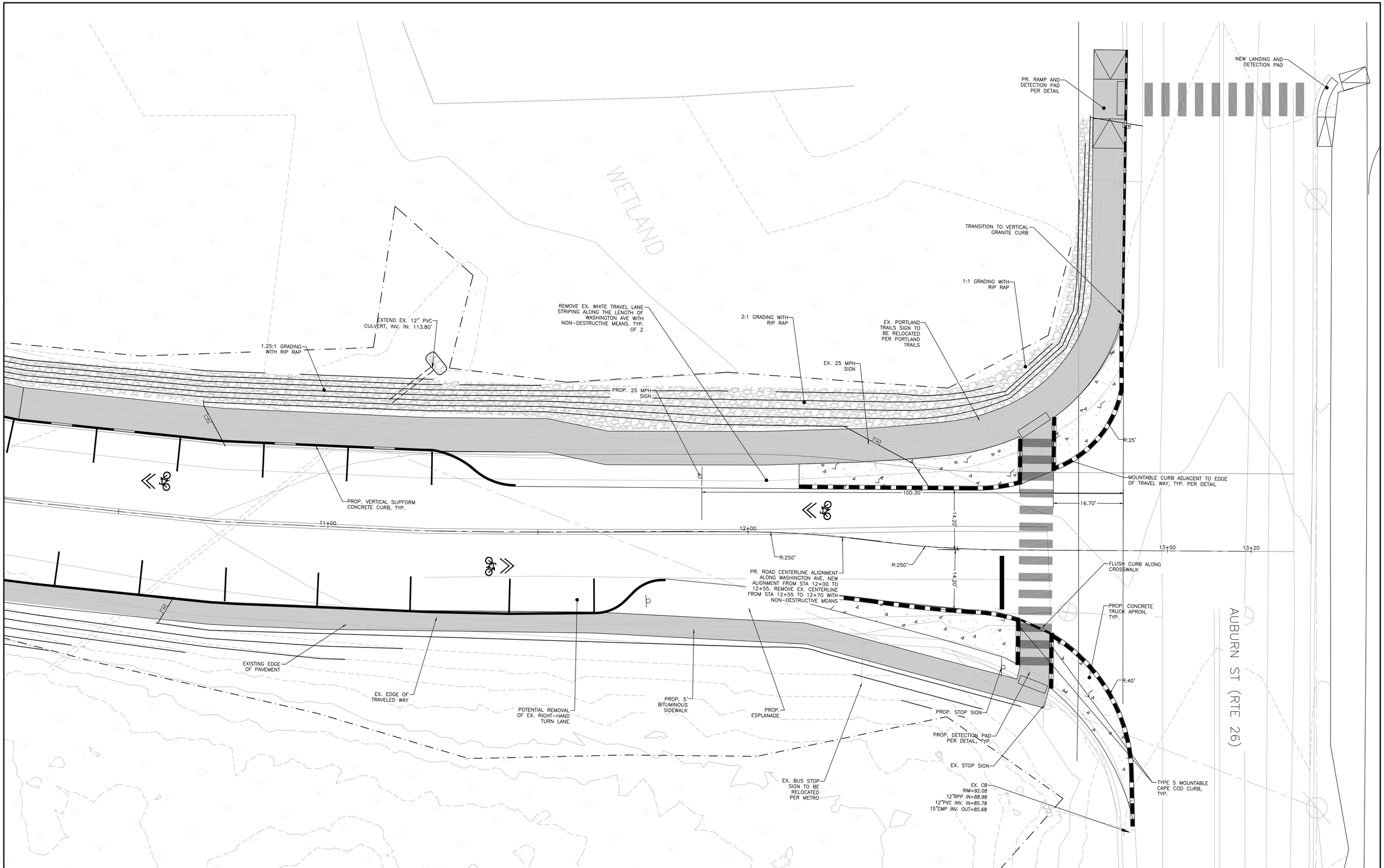
ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC
PO BOX 4737 PORTLAND, MAINE 04101
(207) 775-2655

THE DRAWINGS, NOTES, AND SPECIFICATIONS PREPARED BY ACORN ENGINEERING, INC. ARE NOT TO BE USED IN WHOLE OR IN PART FOR ANY PROJECT OTHER THAN THE PROJECT FOR WHICH THEY WERE PREPARED AND WITHOUT THE PRIOR WRITTEN PERMISSION OF ACORN ENGINEERING, INC. ANY UNAUTHORIZED USE OF THESE DRAWINGS, NOTES, AND SPECIFICATIONS SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE:	1145_CIVIL
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
6500
LICENSED PROFESSIONAL ENGINEER
6/17/22

DRAWING NO.
C-33



AUBURN STREET INTERSECTION – STATIONS: 11+00 – 13+50

10 0 10 20

SCALE: 1"=10'

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
SITE/SUB	SJL	6/17/22

DRAWING NAME: RIGHT-OF-WAY GRADING & SITE PLAN – +11 – +13.5

PROJECT NAME/ADDRESS: 165 LAMBERT ST CO-OP
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04101
(207) 775-2655

FILE:	1145_CIVIL
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
16505
LICENSED PROFESSIONAL ENGINEER
6/15/22

DRAWING NO.
C-34

GENERAL NOTES:

1. FOR INFORMATION REGARDING PROPOSED GROUND LEVEL LAYOUT, REFER TO SITE PLAN, SHEET C-10 AND C-11, MOST RECENT VERSION.
2. FOR INFORMATION REGARDING PROPOSED UTILITIES, REFER TO THE UTILITY PLAN, SHEET C-20 AND C-21, MOST RECENT VERSION.
3. FOR INFORMATION REGARDING PROPOSED GRADING AND STORMWATER, REFER TO THE GRADING & DRAINAGE PLAN, SHEET C-30 AND C-31, MOST RECENT VERSION.
4. UNIT TABULATION PROVIDED BY KAPLAN THOMPSON ARCHITECTS; REFER TO ARCHITECTURAL PLANS FOR FLOOR PLANS AND BUILDING HEIGHTS.
5. TOTAL SITE AREA INCLUDES 12.83 ACRES (558,793 S.F.) CONTAINED WITHIN THE SOUTH PARCEL AND 5.12 ACRES (223,196 S.F.) WITHIN THE NORTH PARCEL. SITE BOUNDARIES PER BOUNDARY SURVEY & TOPOGRAPHICAL MAP WITH EXISTING CONDITIONS PROVIDED BY OWEN HASKELL, INC. ON A PLAN TITLED "BOUNDARY & TOPOGRAPHIC SURVEY LAMBERT WOODS" DATED JUNE 2021 REVISED DECEMBER 2021.
6. AS OF 6/14/2022, THE SITE IS BOUNDED BY THE R3 ZONE TO THE NORTH, WEST, AND SOUTH. THE SITE IS BOUNDED BY THE R2 ZONE TO THE EAST. ZONE INFORMATION WAS OBTAINED FROM THE CITY OF PORTLAND'S GIS WEBSITE.
7. LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S MAP CHART, BOOK, LOT: 385-A-1, 386-C-1, 385-D-8, 386-B-12, AND 386-B-15.
8. LOCUS PARCEL DOES NOT FALL IN A SPECIAL FLOOD HAZARD AREA PER FEMA FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 230051 0002 C DATED 12/8/1998 AND 230045 0011 B DATED 10/16/1984.
9. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM CORNERBOARDS AND NOT BUILDING FOUNDATION, UNLESS OTHERWISE NOTED.
10. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO ONE-HUNDRED SIXTY FIVE (165) DWELLING UNITS ON THE EXISTING SUBJECT PROPERTY.
11. ANY PROPERTY MARKER PROPOSED WITHIN A PEDESTRIAN OR VEHICULAR WAY SHALL BE FLUSH OR BELOW GRADE AT THE DISCRETION OF THE PROFESSIONAL LAND SURVEYOR AND/OR ENGINEER.
12. THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND MANAGEMENT OF THE SITE INCLUDING ALL DRIVEWAYS, SIDEWALKS, STORMWATER DEVICES, SITE LIGHTING, TRASH REMOVAL, RETAINING WALLS, AND SNOW REMOVAL.
13. THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 302 STORMWATER INCLUDING ARTICLE III, POST-CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT, WHICH SPECIFIES ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS AT A MINIMUM. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND THE APPROVED PLANS, AND MEET CITY STANDARDS AND STATE GUIDELINES.
14. THE OWNER MUST COMPLY TO THE FOLLOWING AS APPROVED BY THE CITY:
    14.1. POST-CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT:

    BOOK _____ PAGE _____

SURVEY NOTES:

1. OWNER OF RECORD:
   CITY OF PORTLAND
   C.C.R.D. 3702/236, 3795/236, 3798/6, 4550/327, 4593/154, 4599/266
2. BEARINGS ARE BASED ON MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD 83 PER PLAN REFERENCE 1.
3. ELEVATIONS ARE BASED ON NGVD 1929. BENCHMARK: USC&GS DISC G-163 ELEVATION=66.92
4. WETLANDS DELINEATED BY JONES ASSOCIATES AND FIELD LOCATED BY OWEN HASKELL, INC. EXCEPT FOR THE WETLANDS AND STREAM LOCATIONS SHOWN ON THE SOUTHERLY SIDE OF THE STREAM ON TM 385 LOT A-1 & TM 386 LOT C-1. WETLANDS LOCATED ON FALMOUTH PARCEL HAVE NOT BEEN FIELD LOCATED.
5. THE CONTOURS SOUTH OF THE WETLAND LINE SHOWN ON THIS SURVEY WERE GENERATED USING DATA COLLECTED IN 2015 AND DOWNLOADED FROM THE NOAA WEB SITE LOCATED AT https://coast.noaa.gov/dataviewer/#/

PLAN REFERENCES:

1. "STREET ACCEPTANCE PLAN OF WASHINGTON AVENUE EXTENSION, PORTLAND, MAINE" DATED FEBRUARY 15, 2011 BY CITY OF PORTLAND, MAINE PUBLIC SERVICES DEPARTMENT, ENGINEERING DIVISION.
2. "PLAN OF LAND IN FALMOUTH AND PORTLAND FOR CITY OF PORTLAND" DATED 1/1/76, BY OWEN HASKELL, INC.

WAIVERS & CONDITIONS OF APPROVAL:

TBD

EASEMENTS:

ALL PROPOSED EASEMENTS ARE TO BE REVIEWED BY OWEN HASKELL, INC. AND RECORDED IN CCRD. ALL EXISTING EASEMENTS ARE TO REMAIN.

EXISTING EASEMENTS:
1. A DRAINAGE EASEMENT BENEFITING MAINE DOT AS RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS BOOK 3901/31.

PROPOSED EASEMENTS:
1. TBD

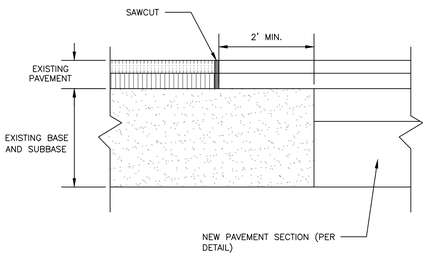


VICINITY MAP
SCALE: 1"=1000'


WASHINGTON AVE
LAMBERT ST
MATTHEW'S ST (RTE 26)
8' BITUMINOUS MULTI-USE PATH
5' BITUMINOUS MULTI-USE PATH
PR. RAIN GARDEN, TYP. OF 2
FALMOUTH
PORTLAND
N:324357.87 E:2918815.09
N:324107.17 E:2919000.94
N:324122.77 E:2919099.71
N:323974.62 E:2919123.16
N:323977.61 E:2918821.71
N:324008.40 E:2919016.57
N:323927.75 E:2918826.55
N:323852.39 E:2918990.32
N:323741.79 E:2918622.73
N:323825.70 E:2918397.62
N:323777.07 E:2919154.43
N:323828.98 E:2918842.15
N:323753.61 E:2919005.92
N:323706.23 E:2919016.63
N:323728.19 E:2919162.16
N:323645.63 E:2918111.10
N:323663.53 E:2918606.13
N:323629.36 E:2919177.41
N:323617.39 E:2919029.96
N:323607.50 E:2919031.44
N:323702.92 E:2918805.88
N:323696.50 E:2919018.11
N:323624.66 E:2918789.27
N:323583.17 E:2917975.22
N:323581.34 E:2917971.78
N:323578.75 E:2918154.99
N:323578.59 E:2918225.09
N:323440.86 E:2919203.74
N:323416.54 E:2918342.31
N:323460.91 E:2918062.42
N:323563.19 E:2917985.44
N:323499.14 E:2918033.65
N:323376.03 E:2918371.62
N:323301.09 E:2918182.71
N:323295.01 E:2918430.23
N:323261.13 E:2918212.79
N:323181.22 E:2918272.93
N:323106.04 E:2918454.68
N:323045.90 E:2918374.78
N:322724.05 E:2918742.19
R: 676.62'
L: 534.37'
CH: S79° 26' 23"W
CL: 520.69'
R: 596.62'
L: 213.47'
CH: N89° 16' 07"W
CL: 212.33'
S08°59'36"E 49.49'
N61°53'53"E 3.90'
N36°58'01"W 22.72'
S28°47'07"W 150.39'
N87°01'19"E 100.00'
N87°01'19"E 197.28'
N87°01'19"E 300.29'
N87°01'19"E 150.35'
S87°01'19"W 150.00'
N78°01'07"W 187.22'
S81°28'53"W 147.16'
S08°31'07"E 50.00'
N08°31'07"W 50.00'
S08°31'07"E 50.00'
N08°31'07"W 50.00'
N08°31'07"W 50.00'
S08°31'07"E 50.00'
N08°31'07"W 50.00'
S08°31'07"E 50.00'
N08°31'07"W 50.00'
S08°31'07"E

NOTES:

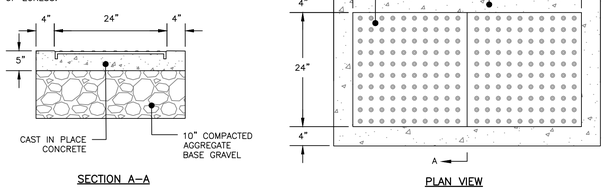
1. SAWCUT EXISTING PAVEMENT AND REMOVE 2' STRIP OF EXISTING PAVEMENT. CREATE UNIFORM AND RIGID BUTT JOINT AND APPLY BITUMINOUS TACK COAT AT AN APPLICATION RATE OF 0.10 TO 0.14 GALLONS PER SQUARE YARD PRIOR TO PLACEMENT OF NEW BITUMINOUS PAVEMENT.
2. THE NEW PAVEMENT SECTION SHALL MEET THE CITY OF PORTLAND BITUMINOUS PAVEMENT SECTION DETAIL AT A MINIMUM OR THE THE EXISTING PAVEMENT AND AGGREGATE BASE AND SUBBASE DEPTH WHICHEVER IS GREATER.



PAVEMENT SAWCUT DETAIL
NOT TO SCALE

NOTES:

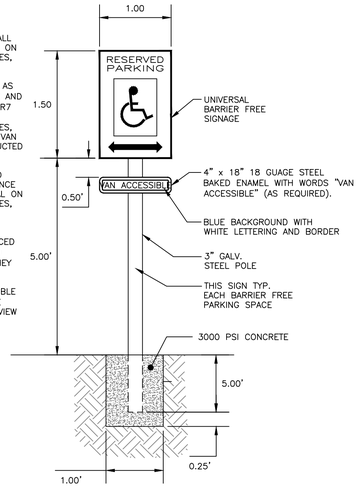
1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MDOT CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
5. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FORM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



SIDEWALK RAMP DETECTABLE WARNING PANEL
NOT TO SCALE

NOTES:

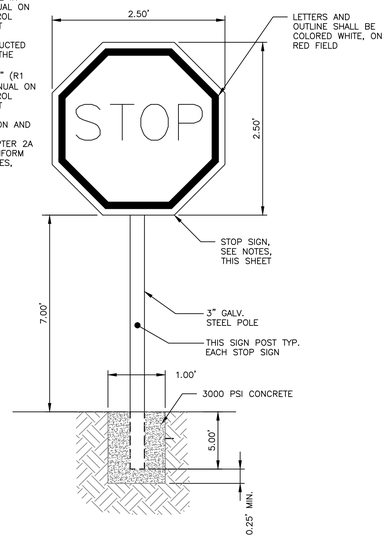
1. ALL ASPECTS OF RESERVED PARKING SIGN CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION
2. SIGN SHALL BE CONSTRUCTED AS SIGN R7–8 UNDER THE "PARKING AND STANDING SIGNS AND PLAQUES" (R7 SERIES) WITHIN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION. VAN ACCESSIBILITY SHALL BE CONSTRUCTED AS SIGN R7–8a OR R7–8b.
3. SIGN POST CONSTRUCTION AND MOUNTING SHALL BE IN ACCORDANCE WITH CHAPTER 2A OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.
4. SIGN SHALL BE INSTALLED ON BUILDING. SIGNS SHOULD BE PLACED AT SUCH A HEIGHT (AT LEAST 60 INCHES ABOVE SURFACE) THAT THEY DO NOT GET OBSCURED BY ANY PARKED VEHICLES OR OTHER OBSTRUCTIONS AND MUST BE VISIBLE FROM THE DRIVER'S SEAT OF THE VEHICLE AND LOCATED RIGHT IN VIEW OF PARKING.



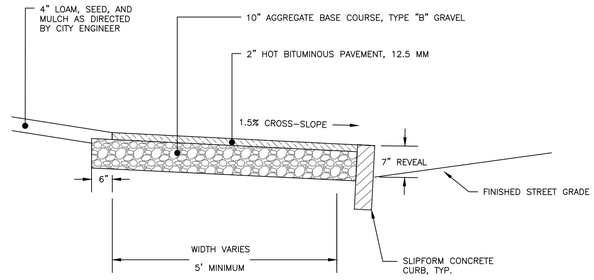
BARRIER FREE PARKING SIGN
NOT TO SCALE

NOTES:

1. ALL ASPECTS OF STOP SIGN CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.
2. SIGN SHALL BE CONSTRUCTED AS SIGN R1–1 UNDER THE "REGULATORY SIGNS, BARRICADES, AND GATES" (R1 SERIES) WITHIN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.
3. SIGN POST CONSTRUCTION AND MOUNTING SHALL BE IN ACCORDANCE WITH CHAPTER 2A OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.



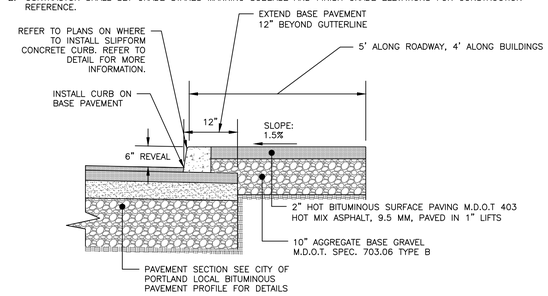
TRAFFIC SIGN DETAIL
NOT TO SCALE



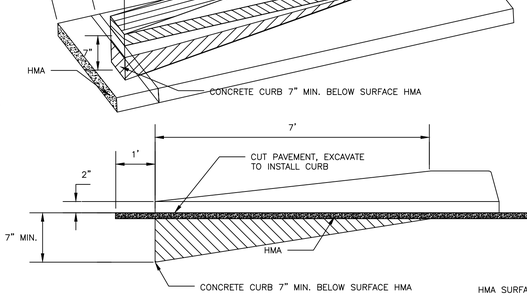
PUBLIC BITUMINOUS SIDEWALK
NOT TO SCALE

NOTES:

1. COMPACT GRAVEL SUBBASE, BASE COURSE TO 95% MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION.
2. CONTRACTOR SHALL SET GRADE STAKES MARKING SUBBASE AND FINISH GRADE ELEVATIONS FOR CONSTRUCTION REFERENCE.



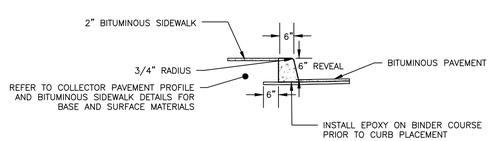
INTERNAL BITUMINOUS SIDEWALK DETAIL
NOT TO SCALE



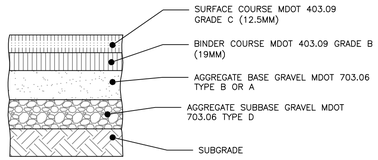
SLIPFORM CONCRETE CURB DETAIL
NOT TO SCALE

NOTE:

1. TIPDOWNS 7' IN LENGTH SHALL BE PROVIDED AS SEEN ON PLANS



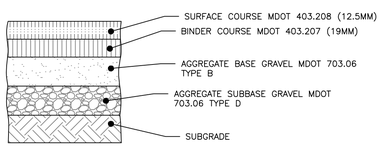
SLIPFORM CONCRETE CURB DETAIL
NOT TO SCALE



NOTE:
COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D–1557

THICKNESS OF LAYERS	
STANDARD	LAYERS
1–1/2"	SURFACE COURSE MDOT 703.09 (12.5mm)
2–1/4"	BINDER COURSE MDOT 703.09 (19mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE A
12"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

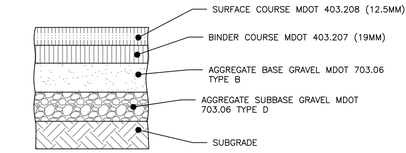
INTERNAL PARKING AND PRIVATE DRIVE PAVEMENT PROFILE
NOT TO SCALE



NOTE:
COMPACT THE AGGREGATE BASE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D–1557.

THICKNESS OF LAYERS	
STANDARD	LAYERS
2"	SURFACE COURSE MDOT 403.208 (12.5 mm)
3"	BINDER COURSE MDOT 403.207 (19 mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
18"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

AUBURN STREET PROFILE
NOT TO SCALE



NOTE:
COMPACT THE AGGREGATE BASE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D–1557.

THICKNESS OF LAYERS	
STANDARD	LAYERS
1–1/2"	SURFACE COURSE MDOT 403.208 (12.5 mm)
2–1/2"	BINDER COURSE MDOT 403.207 (19 mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
18"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

WASHINGTON AVE & LAMBERT ST PAVEMENT PROFILE
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
SITE/SUB	SJL 5/17/22

DRAWING NAME: SITE DETAILS – 1

PROJECT NAME/ADDRESS: 165 LAMBERT ST CO–OP, PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS, PORTLAND, MAINE

ACORN ENGINEERING, INC.

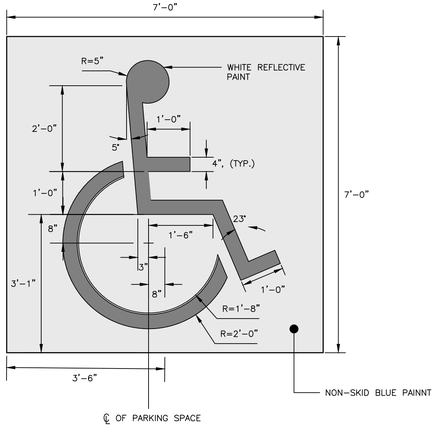
ACORN ENGINEERING, INC. PO BOX 3372, PORTLAND MAINE 04101 (207) 775–2655

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. IF ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED ARE MADE, SEE ABOVE AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

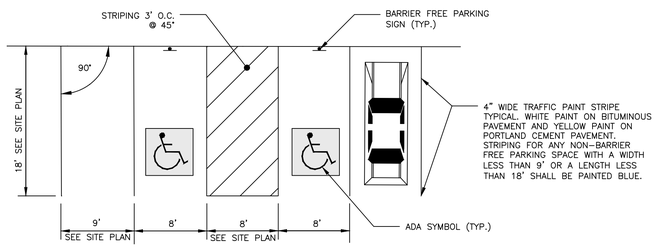
FILE:	1145_CIVIL
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE — SAMUEL J. LEBEL — 10004 — LICENSED PROFESSIONAL ENGINEER — 5/17/22

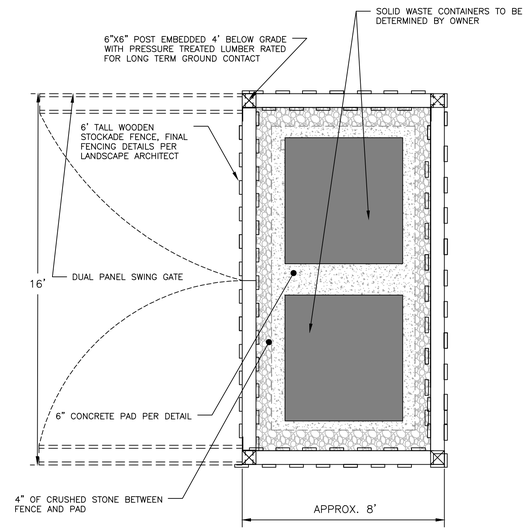
DRAWING NO.
C-40



INTERNATIONAL BARRIER FREE SYMBOL
NOT TO SCALE

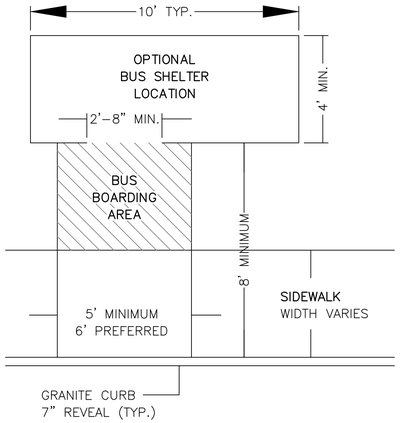


PARKING SPACE DIMENSIONS
NOT TO SCALE



PLAN VIEW

TRASH ENCLOSURE DETAIL
NOT TO SCALE



NOTES:

1. DIMENSIONS. MINIMUM CLEAR FLOOR INTERIOR AREA ENTIRELY WITHIN THE PERIMETER OF THE SHELTER IS 2'-6" WIDE BY 4' DEEP TO PERMIT WHEELCHAIR OR MOBILITY AID USER ACCESS. THE MINIMUM SHELTER OPENING FOR WHEELCHAIR ACCESS IS 2'-8".

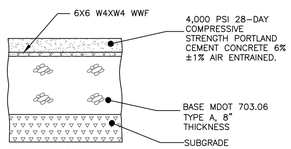
2. CONNECTION. BUS SHELTER OPENINGS WILL BE CONNECTED TO THE BUS BOARDING AREA BY AN ADA ACCESSIBLE ROUTE.

3. SLOPE. PARALLEL TO THE ROADWAY, THE SLOPE OF THE BUS BOARDING AREA SHALL BE THE SAME AS THE ROADWAY, TO THE MAXIMUM EXTENT PRACTICABLE. PERPENDICULAR TO THE ROADWAY, THE SLOPE OF THE BUS BOARDING AREA SHALL NOT EXCEED 2%.

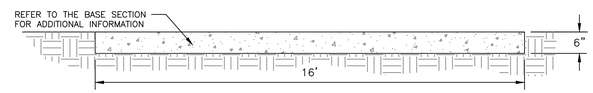
BUS SHELTER AND SHELTER SITING WITHOUT ESPLANADE
NOT TO SCALE

NOTES:

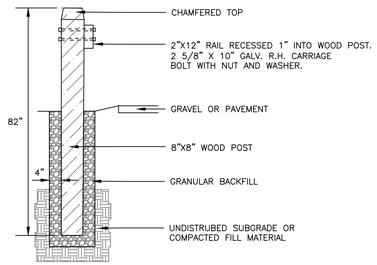
1. THE CONCRETE PAD SHALL BE 16'X8'X6" IN SIZE.
2. COMPACT AGGREGATES TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557.
3. FINISH WITH A STIFF, COARSE, FIBER BROOM.



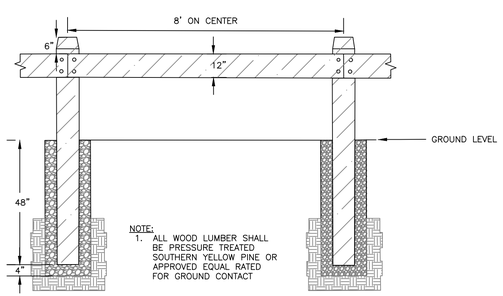
BASE SECTION



CONCRETE PAD DETAIL
NOT TO SCALE

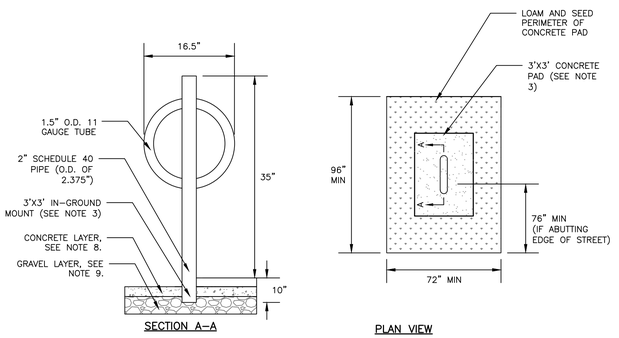


SIDE ELEVATION



FRONT ELEVATION

WOODEN GUARDRAIL DETAIL
NOT TO SCALE



SECTION A-A

PLAN VIEW

BICYCLE RACK DETAIL
NOT TO SCALE

NOTES:

1. BICYCLE RACK SHALL HAVE CAPACITY FOR TWO BICYCLES.
2. BICYCLE RACK PARTS SHALL BE OF UNIFORM COLOR AND SHALL BE FINISHED IN ACCORDANCE WITH PRODUCT SPECIFICATION. PER CITY OF PORTLAND TECHNICAL STANDARDS ALL BICYCLE RACKS WITHIN THE RIGHT-OF-WAY SHALL MATCH THE FURNITURE COLOR FOR THAT LOCATION AS DESCRIBED IN THE MUNICIPAL LIGHTING STANDARDS; IF NO DESIGNATED COLOR FOR THAT AREA EXISTS, BICYCLE RACKS SHALL BE BLACK.
3. BICYCLE RACK SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S MOST RECENT INSTALLATION RECOMMENDATIONS, AND SHALL BE INSTALLED WITH AN IN-GROUND MOUNT UNLESS OTHERWISE APPROVED BY ENGINEER.
4. BICYCLE RACK SHALL BE "DERO BIKE HITCH", AS MANUFACTURED BY DERO BIKE RACKS.
5. MINIMUM OFFSETS SHOWN. MANUFACTURER'S RECOMMENDED OFFSETS SHALL BE ENFORCED WHERE POSSIBLE.
6. MINIMUM DISTANCE BETWEEN BICYCLE RACKS SHALL BE 24". RECOMMENDED DISTANCE BETWEEN BICYCLE RACKS SHALL BE 36".
7. ALL OFFSETS ARE FROM OUTSIDE EDGES OF ITEMS.
8. CONCRETE SHALL BE 4000 PSI @28 DAYS. BOTTOM OF CONCRETE SHALL BE AT TOP OF SIDEWALK GRAVEL ELEVATION. DEPTH VARIES APPROX. 4"-7".
9. GRAVEL LAYER SHALL BE INSTALLED IN ACCORDANCE WITH BRICK SIDEWALK WITH BITUMINOUS BASE DETAIL, AND SHALL BE MAINEDOT 703.06 TYPE B.
10. TOP OF BRICK LAYER SHALL BE AT SAME ELEVATION IN ACCORDANCE WITH BRICK SIDEWALK DETAIL.

ISSUED FOR	BY DATE
SITE/SUB	SJL 5/17/22

DRAWING NAME: SITE DETAILS - 2

PROJECT NAME/ADDRESS: 165 LAMBERT ST CO-OP
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

ACORN ENGINEERING, INC.
ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04101
(207) 775-2655

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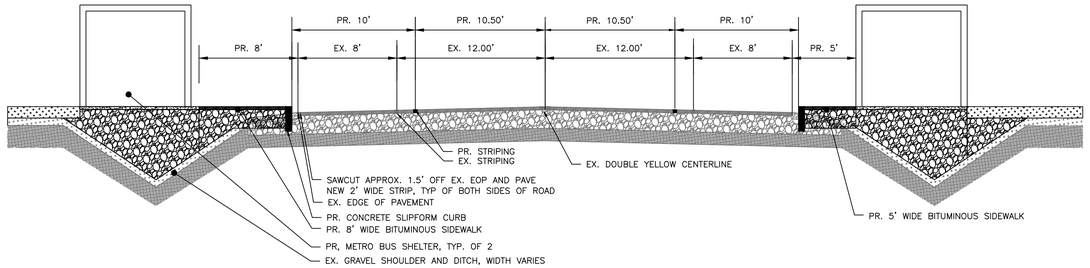
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
10509
LICENSED PROFESSIONAL ENGINEER
5/17/22

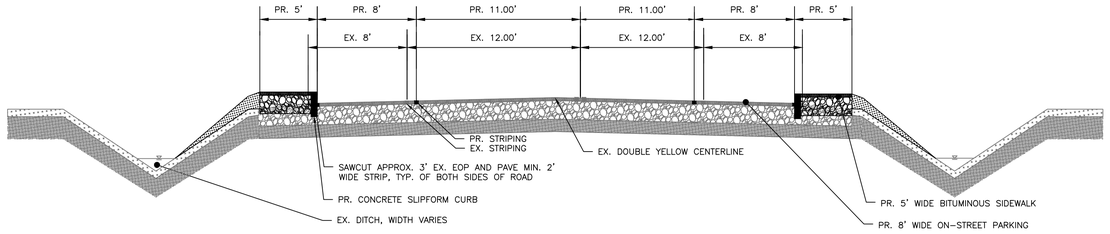
DRAWING NO.
C-41

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION



WASHINGTON AVE AT STATION 7+50 FACING EAST

NOT TO SCALE



WASHINGTON AVE AT STATION 3+00 FACING EAST

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
SITE/SUB	SJL 5/17/22

DRAWING NAME: **SITE DETAILS – 3**

PROJECT NAME/ADDRESS: **165 LAMBERT ST CO-OP**
PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD:
MAINE COOPERATIVE DEVELOPMENT PARTNERS
PORTLAND, MAINE

ACORN ENGINEERING, INC.

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PO BOX 3372, PORTLAND MAINE 04101
(207) 775-2655

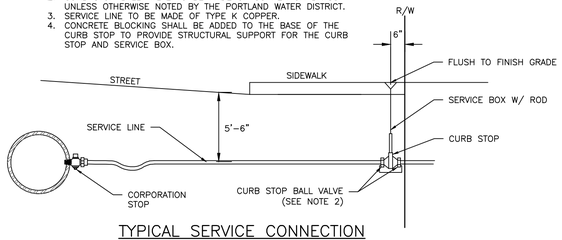
FILE:	1145_CIVIL
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
LICENSED PROFESSIONAL ENGINEER
5/17/22

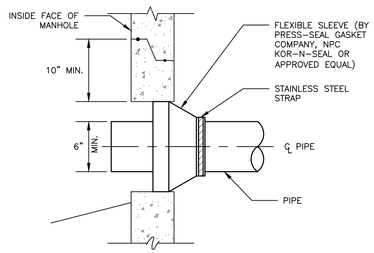
DRAWING NO.
C-42

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES MUST COMPLY WITH THE CITY OF PORTLAND WATER DISTRICT (PWD) SPECIFICATIONS.
2. CURB STOP BALL VALVE TO BE MADE OF COPPER OR BRASS UNLESS OTHERWISE NOTED BY THE PORTLAND WATER DISTRICT.
3. SERVICE LINE TO BE MADE OF TYPE K COPPER.
4. CONCRETE BLOCKING SHALL BE ADDED TO THE BASE OF THE CURB STOP TO PROVIDE STRUCTURAL SUPPORT FOR THE CURB STOP AND SERVICE BOX.



TYPICAL SERVICE CONNECTION
NOT TO SCALE

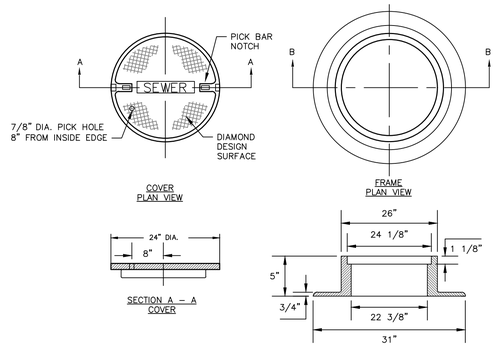


NEW PIPE TO NEW STRUCTURE CONNECTION DETAIL
NOT TO SCALE

NOTES:

1. MANHOLE COVER FOR SEWER MANHOLE SHALL BE ENGRAVED "SEWER", AND SHALL BE EITHER ITEM # 2160A AS MANUFACTURED BY EAST JORDAN CO. OR ITEM # 14960002 AS MANUFACTURED BY NEENAH FOUNDRY. MANHOLE COVER FOR STORM SEWER SHALL BE ENGRAVED "DRAIN", AND SHALL BE EITHER ITEM # 2160A AS MANUFACTURED BY EAST JORDAN CO. OR ITEM # 14960003 AS MANUFACTURED BY NEENAH FOUNDRY.
2. MANHOLE FRAME SHALL BE EITHER ITEM # 14960001, AS MANUFACTURED BY NEENAH FOUNDRY, OR ITEM # 1960Z, AS MANUFACTURED BY EAST JORDAN CO.
3. WITHIN CITY OF PORTLAND ROW, STORM DRAIN MANHOLE SHALL CONFORM WITH "STANDARD PRECAST SEWER MANHOLE DETAIL", WITH THE EXCEPTION THAT THE COVER SHALL BE MARKED AS "DRAIN". REFER TO CITY OF PORTLAND TECHNICAL MANUAL, SECTION 2 – SANITARY SEWER AND STORM DRAIN, FIGURE II-1
4. SUBMITTAL REQUIRED FOR MANHOLES, MANHOLE FRAMES & MANHOLE COVERS

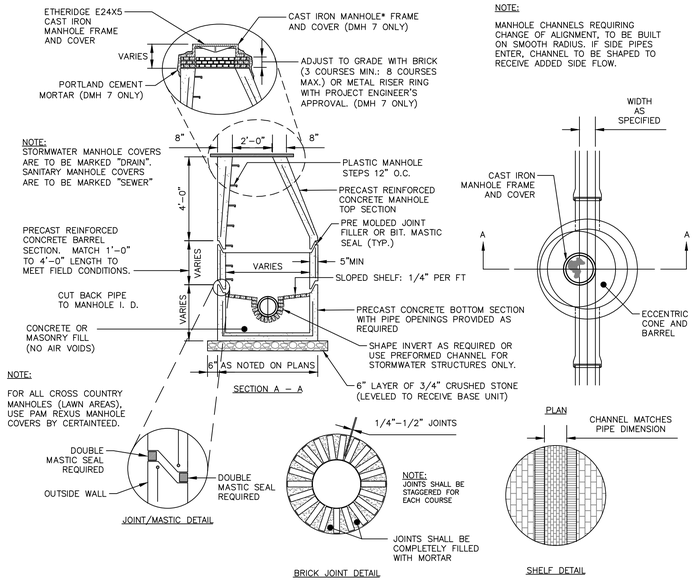
STANDARD PRECAST SEWER MANHOLE
NOT TO SCALE



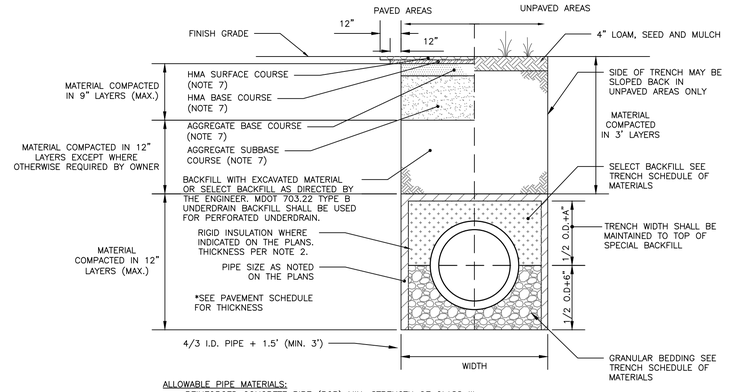
NOTES:

1. ALL MANHOLE COVERS SHALL BE SOLID AND SHALL HAVE ONE 7/8" DIAMETER DRILLED PICK HOLE, LOCATED 8" FROM THE CENTER OF THE COVER
2. ALL SANITARY AND STORMWATER/DRAIN MANHOLE COVERS SHALL BE 24" x 5".
3. ALL SANITARY MANHOLE COVERS AND SHALL HAVE "SEWER" CAST INTO THE COVER.
4. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
5. APPROVED MANHOLE FRAMES:
   - 5.1. EAST JORDAN = 1690Z
   - 5.2. NEENAH = R-1496
   - 5.3. OR APPROVED EQUAL
6. APPROVED MANHOLE COVERS
   - 6.1. EAST JORDAN = 2160A
   - 6.2. NEENAH = R-1496
   - 6.3. OR APPROVED EQUAL

CAST IRON MANHOLE COVER AND FRAME
NOT TO SCALE



PRECAST CONCRETE MANHOLE
NOT TO SCALE



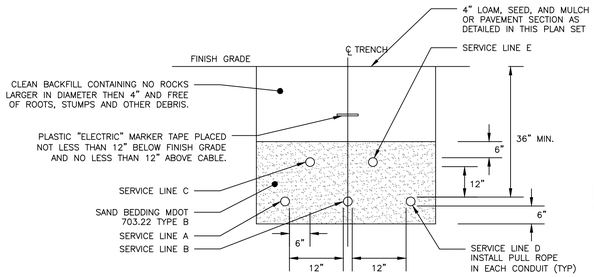
SCHEDULE OF MATERIALS		
TYPE OF PIPE	GRANULAR BEDDING	SELECT BACKFILL
CMP DUCTILE IRON RCP	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC/HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL
CMP	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE

NOTES:

1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2' RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
3. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES AT THE TOP OF SUBGRADE.
4. MINIMUM COVER
   - 4.1. 2'-0" – STORM DRAIN
   - 4.2. 5'-0" – SEWER
5. NO TREES SHALL BE PLANTED WITHIN 5' OF A SEWER PIPE OR SERVICE
6. THICKNESS AS NOTED BY SURFACE DETAILS
7. CONTRACTOR TO COORDINATE WITH TOWN ENGINEER ON MATERIAL SPECIFICATIONS FOR INSTALLATION IN THE PUBLIC ROW.

ALLOWABLE PIPE MATERIALS:
- REINFORCED CONCRETE PIPE (RCP) MIN. STRENGTH OF CLASS III
- PVC RING TYPE SEWER (SDR 35) OR EQUIVALENT, MIN PS-46 RATING
- PVC RING TYPE SEWER PIPE MEETING ASTM F 789
- DUCTILE IRON PIPE (DIP)
- ADS N-12 HP DUAL WALL MIN PS-46 RATING
- ADS SANITITE HP MIN. PS-46

INTERNAL STORM DRAIN AND SEWER TYPICAL TRENCH SECTION
NOT TO SCALE

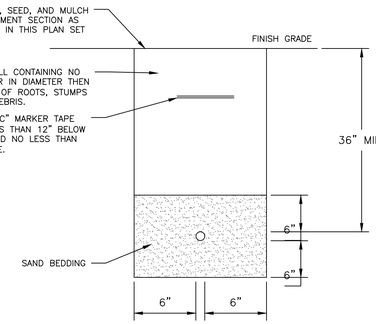


CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
C	2-4"	SCHEDULE 40 PVC	COMMUNICATION	–
D	5"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	SEE NOTE 1
E	2-4"	SCHEDULE 40 PVC	CABLE	–

NOTES:

1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS.
2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.
3. CONDUITS WITHIN THE CITY RIGHT-OF-WAY SHALL BE ENCASED IN CONCRETE.
4. FINAL SIZE OF CONDUITS TO BE SPECIFIED BY MEP, ELECTRICIAN, OR DESIGN/BUILD ELECTRICAL CONTRACTOR.

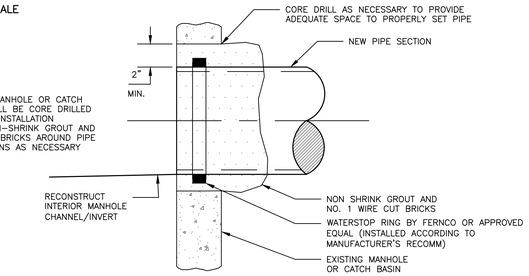
UTILITY TRENCH – PRIMARY AND SECONDARY POWER, TELEPHONE, AND CABLE
NOT TO SCALE



SECONDARY ELECTRICAL TRENCH
NOT TO SCALE

NOTE:

1. EXISTING MANHOLE OR CATCH BASIN SHALL BE CORE DRILLED FOR PIPE INSTALLATION
2. PLACE NON-SHRINK GROUT AND WIRE-CUT BRICKS AROUND PIPE CONNECTIONS AS NECESSARY



NEW PIPE TO EXISTING STRUCTURE CONNECTION DETAIL
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
SITE/SUB	SJL 5/17/22

DRAWING NAME: UTILITY DETAILS – 1

PROJECT NAME/ADDRESS: 165 LAMBERT ST CO-OP, PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS, PORTLAND, MAINE

ACORN ENGINEERING, INC.

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ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04101
(207) 775-2605

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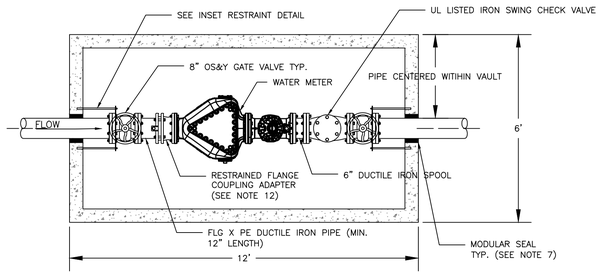
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE SAMUEL J. LEBEL LICENSED PROFESSIONAL ENGINEER 5/17/22

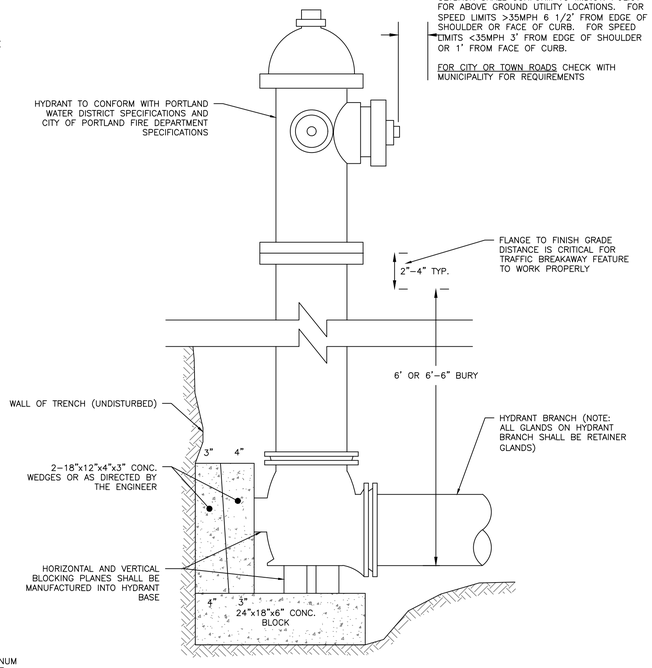
DRAWING NO.
C-43



SECTION E–E

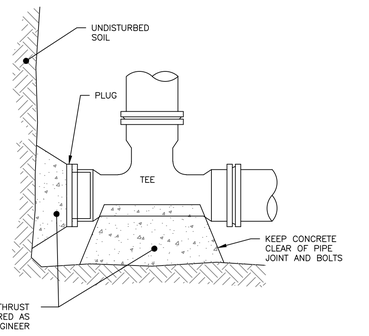
METER VAULT

VAULT SHOWN WITH 8" F2 METER AND PIPING FOR ILLUSTRATIVE PURPOSES. ACTUAL SIZE AND CONFIGURATION PER SITE SPECIFIC REQUIREMENTS

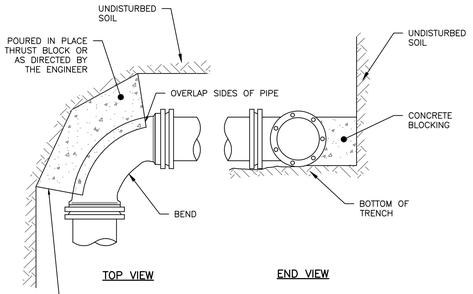


TYPICAL HYDRANT INSTALLATION DETAIL

NOT TO SCALE



END SECTION



TOP VIEW

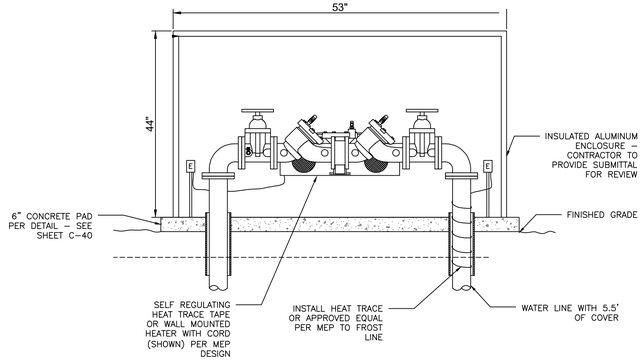
END VIEW

NOTE:
SEE THRUST/RETAINER GLAND SCHEDULE FOR TYPE OF BLOCKING TO BE USED ON BENDS

REGULAR BEND

THRUST BLOCKING

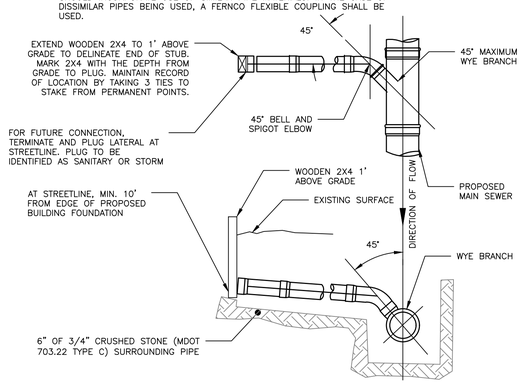
NOT TO SCALE



ABOVE GROUND INSULATED BACKFLOW PREVENTER

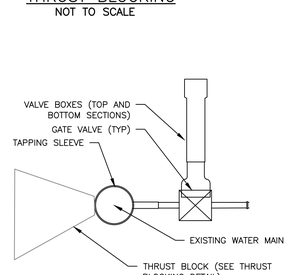
NOT TO SCALE

NOTES:
1. LOCATION WITH WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
2. SITE CONTRACTOR TO COORDINATE CONNECTION OF SEWER LATERAL TO HOUSEHOLD PLUMBING WITH ARCHITECTURAL CONTRACTOR
3. CONNECTION OF PROPOSED SEWER LATERAL TO HOUSEHOLD PLUMBING SHOULD INCORPORATE USE OF SIMILAR PIPE MATERIALS. IN THE CASE OF DISSIMILAR PIPES BEING USED, A FERNCO FLEXIBLE COUPLING SHALL BE USED.



SEWER TEE/WYE CONNECTION DETAIL

NOT TO SCALE

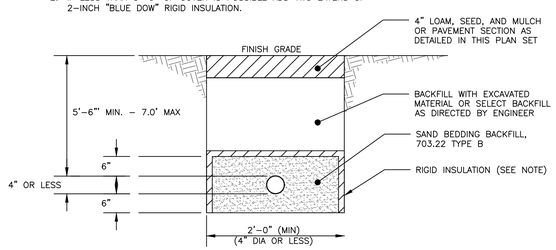


SIDE VIEW

TAPPING SLEEVE AND VALVE

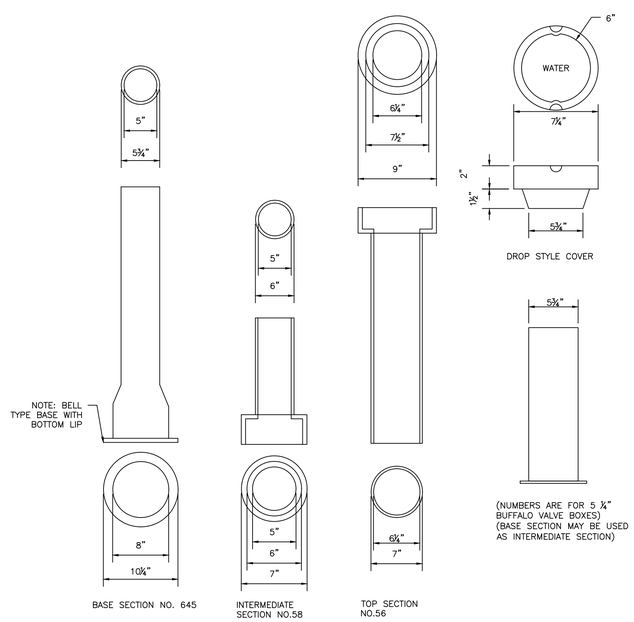
NOT TO SCALE

NOTES:
1. THE WATER TRENCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARD DETAILS & SPECIFICATIONS.
2. IF LESS THAN 5'–6" OF COVER IS POSSIBLE ADD TWO LAYERS OF 2–INCH "BLUE DOW" RIGID INSULATION.



WATER SERVICE TRENCH SECTION DETAIL

NOT TO SCALE



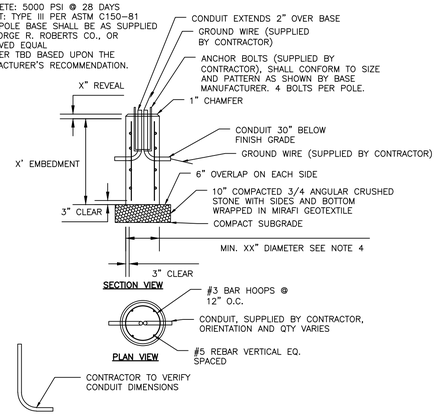
VALVE BOX & COVER

NOT TO SCALE

NOTES:
1. CONCRETE: 5000 PSI @ 28 DAYS
2. CEMENT: TYPE III PER ASTM C150–81
3. LIGHT POLE BASE SHALL BE AS SUPPLIED BY GEORGE R. ROBERTS CO., OR APPROVED EQUAL
4. DIAMETER TBD BASED UPON THE MANUFACTURER'S RECOMMENDATION.

SCHEDULE		
HEIGHT OF POLE	MIN DIAMETER	MIN EMBEDMENT
<20'	1.5'	5'
20'–40'	2'	6'
>40'	3'	8'

REVEALS	
APPLICATIONS	REVEAL
STREET/SIDEWALK	4"
OTHER PED HARDSCAPE	FLUSH
PEDESTRIAN LAWN/MULCH	4"
PARKING AREAS (OPEN TRAFFIC)	24–36"



LIGHT POLE BASE

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
SITE/SUB	SJL 5/17/22

DRAWING NAME: UTILITY DETAILS – 2

PROJECT NAME/ADDRESS: 165 LAMBERT ST CO–OP, PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS, PORTLAND, MAINE

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FILE:	1145_CIVIL
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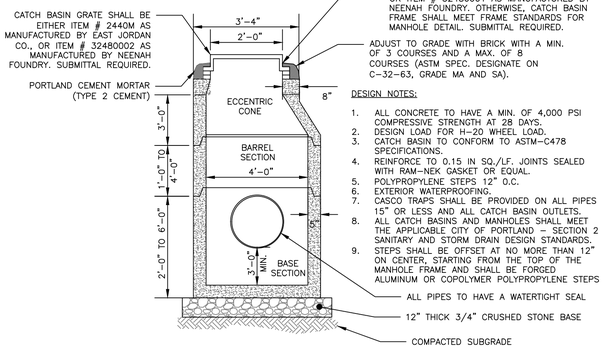
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE — SAMUEL J. LEBEL — 12824 — LICENSED PROFESSIONAL ENGINEER — 6/15/22

DRAWING NO.
C-44

1. ALL CONCRETE SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 lbs. PER SQ. INCH 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 SPEC. C-478.
4. ALL STORM AND SEWER MANHOLE COVERS SHALL BE SOLD AND SHALL HAVE ONE ⅞" 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 APPROVAL EQUAL.
7. SEWER BRICK SHALL CONFORM TO ASTM SPEC. DESIGNATE ON C-32-63, GRADE MA AND SA.
8. ALL SANITARY MANHOLES SHALL HAVE A WATERPROOFING COATING APPLIED TO THE EXTERIOR SURFACE.
9. CATCH BASIN FRAMES FOR TYPE A4 CATCH BASIN CURB INLETS SHALL BE ETHERIDGE DR5A OR APPROVED EQUAL.
10. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35.
11. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OF PORTLAND.
12. ALL CATCH BASIN OUTLETS SHALL BE INSTALLED WITH A CASCO TRAP PER DETAIL.

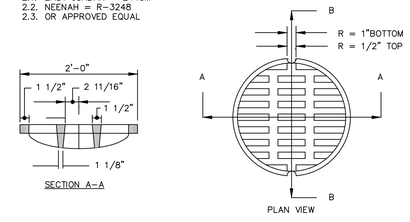
GENERAL NOTES FOR MANHOLES AND CATCH BASINS



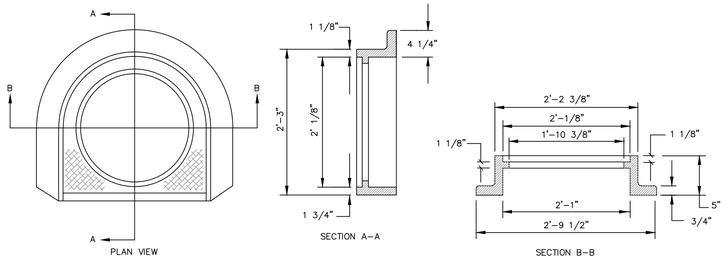
4'-0" DIAMETER PRECAST CATCH BASIN/MANHOLE
NOT TO SCALE

NOTES:

1. APPROVED CATCH BASIN FRAMES:
   1.1. EAST JORDAN = 7375Z
   1.2. NEENAH = R-3248
   1.3. OR APPROVED EQUAL
2. APPROVED CATCH BASIN GRATES
   2.1. EAST JORDAN = 2440M
   2.2. NEENAH = R-3248
   2.3. OR APPROVED EQUAL

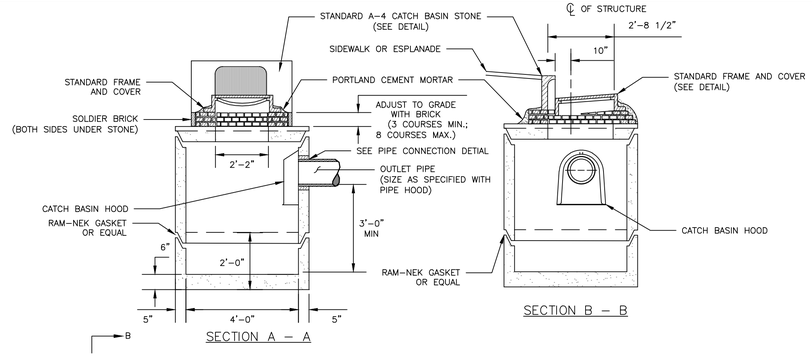


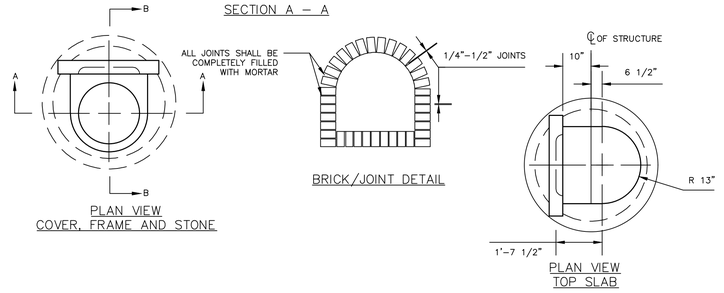
GRATE DETAIL



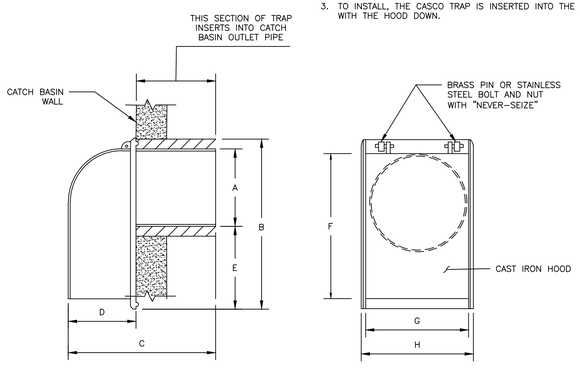
FRAME DETAIL

CATCH BASIN FRAME & GRATE
NOT TO SCALE





CITY OF PORTLAND PRECAST CONCRETE CATCH BASIN
NOT TO SCALE



SIZE	A	B	C	D	E	F	G	H
6"	5 1/2	13 3/8	13 3/4	5 3/8	5 7/8	11 5/8	6 1/2	7 1/4
8"	7 1/2	15	15 3/8	5 1/2	5 3/8	13 3/4	8 3/4	9 3/8
10"	9 1/2	16	16 1/4	6	4 1/2	14 1/8	11 1/2	12 3/8
12"	11 1/2	17	22	8	3 1/2	17	12 1/2	13 3/8

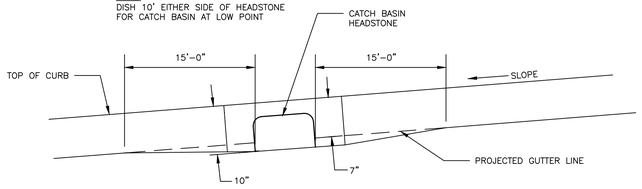
(AS MANUFACTURED BY THE ETHERIDGE FOUNDRY IN PORTLAND, ME)

CASCO TRAP DETAIL
NOT TO SCALE

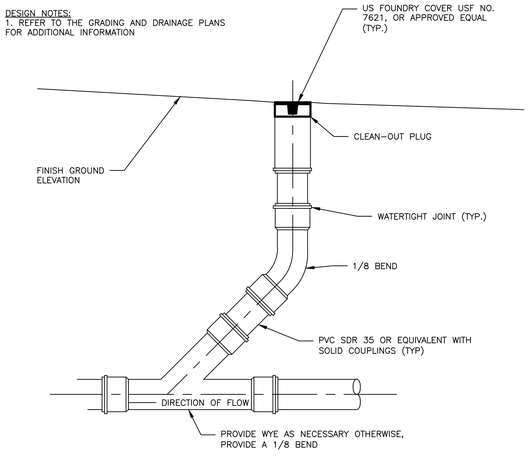
NOTES:

1. INSTALL "CASCO TRAP" AS MANUFACTURED BY THE ETHERIDGE FOUNDRY, OR APPROVED EQUIVALENT AS SUPPLIED BY THE LEBARON FOUNDRY, MODEL #L. 202 "STANDARD CATCH BASIN TRAP". INSTALL TRAP IN ALL CATCH BASINS WITH A 12" OR 15" OUTLET PIPE.
2. THE CASCO TRAP IS AN ETHERIDGE STYLE DESIGNED TO ELIMINATE CEMENTING OF THE TRAP.
3. TO INSTALL, THE CASCO TRAP IS INSERTED INTO THE SEWER PIPE WITH THE HOOD DOWN.

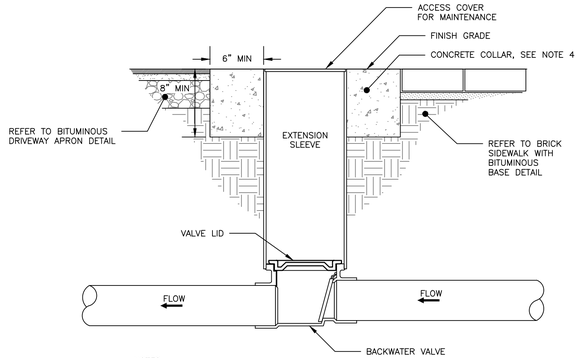
NOTE:
DISH 10' EITHER SIDE OF HEADSTONE FOR CATCH BASIN AT LOW POINT



PAVEMENT GRADING ON SLOPES FOR CATCH BASIN AND INLET
NOT TO SCALE



CLEANOUT DETAIL
NOT TO SCALE



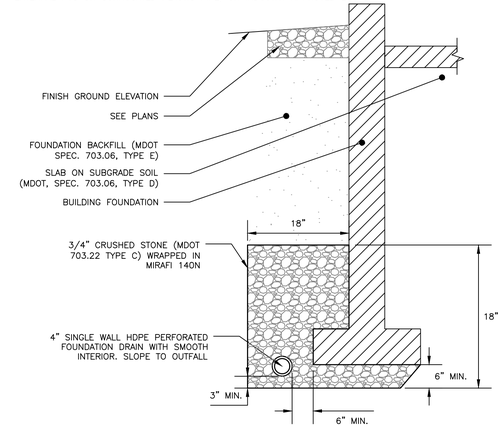
NOTES:

1. BACKFLOW VALVE TO BE PROVIDED BY AGRI DRAIN CORPORATION OR AN APPROVED EQUAL.
2. VALVE TO BE INSTALLED TO MANUFACTURER'S SPECIFICATIONS AND COMPLY WITH RULES AND REGULATIONS AS OUTLINED IN SECTION 2 OF THE CITY OF PORTLAND TECHNICAL MANUAL.
3. VALVE SHALL BE INSTALLED WITH A VALVE BOX AND COVER TO PROVIDE EASY ACCESS AND MAINTENANCE; VALVE COVER SHALL STATE 'SEWER' ON LID FLUSH TO SURFACE. REFER TO VALVE & BOX COVER DETAIL FOR ADDITIONAL INFORMATION.
4. CONCRETE COLLAR AT A MINIMUM 24-HOUR COMPRESSIVE STRENGTH OF 3,000 PSI.
5. STRUCTURE TO BE APPLIED WITH DAMP PROOF COATING

BACKFLOW VALVE ASSEMBLY
NOT TO SCALE

NOTES:

1. REFER TO THE BUILDING ARCHITECTS PLANS FOR THE BUILDING FOUNDATION, BACKFILL, ROOF DRAIN, SIDEWALK AND OTHER DETAILS.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.
3. INSTALL STONE DRIP EDGE IN A LOCATIONS SUBJECT TO ROOF RUNOFF. WIDTH SHALL BE A MIN. 12" BEYOND THE PROJECTION OF THE ROOF EVE.
4. FOUNDATION WALL FOOTINGS SHALL BE CONSTRUCTED TO A MIN. DEPTH OF 4 FT BELOW ADJACENT FINISH GRADE. REFER TO STRUCTURAL ENGINEERS PLANS FOR ADDITIONAL INFORMATION AND MIN. REQUIREMENTS.
5. IF FOUNDATION DRAIN DAYLIGHTS, INSTALL DRAINAGE SOLUTIONS ANIMAL GUARD 4" EXTERNAL PVC OR CORRUGATED PLASTIC PIPE, OR INDUSTRY APPROVED EQUAL.



FOUNDATION DRAIN DETAIL
NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
SITE/SUB	SJL 5/17/22

DRAWING NAME: **DRAINAGE DETAILS - 1**

PROJECT NAME/ADDRESS: **165 LAMBERT ST CO-OP** PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS PORTLAND, MAINE

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04101
(207) 775-2855

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED, MUST BE NOTED AS SUCH AND SIGNED AND SEALED BY THE ENGINEER OF RECORD. USE OF THIS PLAN FOR ANY PURPOSE OTHER THAN THAT STATED HEREIN IS PROHIBITED WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

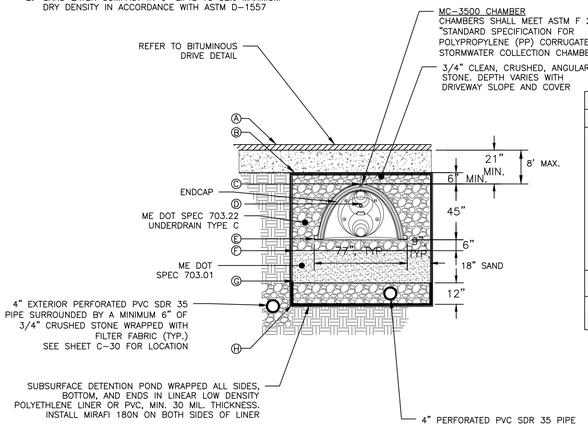
FILE:	1145_CIVIL
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
LICENSED PROFESSIONAL ENGINEER
5/17/22

DRAWING NO.
C-45

NOTES:

1. REFER TO THE MAINE DEP TECHNICAL DESIGN MANUAL SECTION 7.3 FOR ADDITIONAL DESIGN DETAILS.
2. SAND LAYER COMPACT IN 6" LIFTS TO 92% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557



SCHEDULE			
	ITEM	USSF 1	USSF 2
A	FINISHED GRADE	PER C-30	PER C-30
B	TOP OF CRUSHED STONE	109.75'	106.25'
C	TOP OF CHAMBER	109.25'	105.75'
D	OVERFLOW INV.	108.27'	104.77'
E	BOTTOM OF CHAMBER	105.50'	102.00'
F	TOP OF SAND	105.00'	101.50'
G	BOTTOM OF SAND	103.50'	100.00'
H	BOTTOM OF SYSTEM	102.50'	99.00'
	ORIFICE DIAMETER *	1.2"	3"

* PROVIDE CAP WITH DRILLED HOLE BONDED AT CONNECTION POINT TO DOWNSTREAM DMH. HOLE TO BE DRILLED AT BOTTOM OF PIPE TO MAINTAIN INVERT SLOPE

UNDERDRAINED SUB-SURFACE SAND FILTER TYPICAL CROSS SECTION

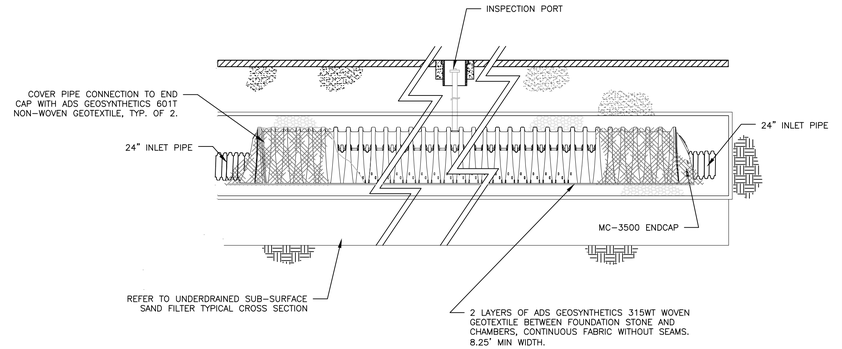
NOT TO SCALE

MANUFACTURER'S NOTES:

1. ALL DESIGN SPECIFICATIONS FOR STORMTECH MC-3500 CHAMBERS SHALL BE IN ACCORDANCE WITH THE STORMTECH DESIGN MANUAL.
2. THE INSTALLATION OF STORMTECH MC-3500 CHAMBERS SHALL BE IN ACCORDANCE WITH THE LATEST STORMTECH INSTALLATION INSTRUCTIONS.
3. THE CONTRACTOR IS ADVISED TO REVIEW AND UNDERSTAND THE INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION. CALL 1-888-892-2694 OR VISIT WWW.STORMTECH.COM TO RECEIVE A COPY OF THE LATEST STORMTECH INSTALLATION INSTRUCTIONS.
4. CHAMBERS SHALL MEET THE DESIGN REQUIREMENTS AND LOAD FACTORS SPECIFIED IN SECTION 12.12 OF THE LATEST EDITION OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

ENGINEER'S NOTES:

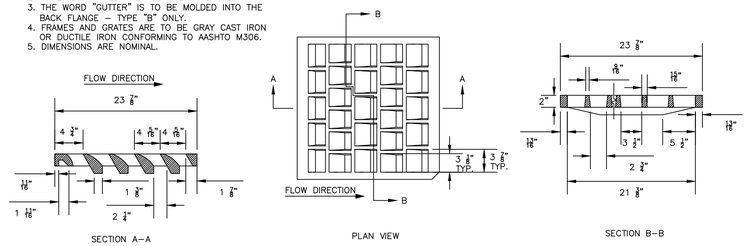
1. THE LAYOUT AND DIMENSION OF THE SUBSURFACE DETENTION MAY BE MODIFIED WITH AN ENGINEER APPROVED EQUIVALENT WHICH PROVIDES EQUAL DETENTION STORAGE AND WATER QUALITY TREATMENT.
2. PER CITY OF PORTLAND REQUIREMENT, THE SUBSURFACE DETENTION SHALL BE INSPECTED BY THE DESIGN ENGINEER AT THE FOLLOWING INTERVALS:
   - AFTER PRELIMINARY CONSTRUCTION OF THE SUBSURFACE DETENTION GRADES
   - ONE SITE VISIT DURING THE INSTALLATION OF THE IMPERVIOUS LINER
   - ONE SITE VISIT AFTER THE UNDERDRAINS ARE INSTALLED BUT BEFORE THEY ARE BACKFILLED
   - DURING THE CONSTRUCTION OF THE SAND FILTER LAYER
   - DURING THE INSTALLATION OF THE STORMTECH ISOLATOR ROW
   - BEFORE BACKFILLING THE STORMTECH UNITS
3. CONTRACTOR TO PROVIDE A MINIMUM 24 HOUR NOTICE BEFORE EACH MILESTONE INSPECTION LISTED UNDER NOTE 2.
4. THE FIRST YEAR OF MAINTENANCE SHALL BE PERFORMED BY THE MANUFACTURER TO ENSURE THAT THE SYSTEM IS OPERATING ACCORDING TO THE ESTABLISHED SPECIFICATIONS.
5. REFERENCE THE MANUFACTURER'S GUIDE FOR THE OPERATION AND MAINTENANCE PLAN.



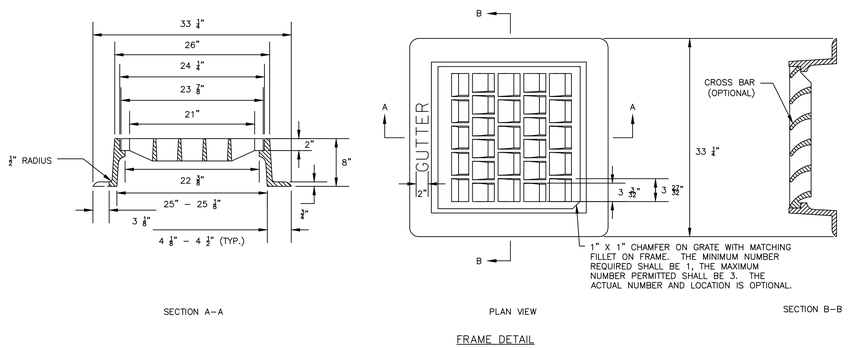
ISOLATOR ROW - PROFILE VIEW

NOT TO SCALE

NOTES:
1. TYPE "A" FRAMES ARE TO HAVE 3 FLANGES.
2. TYPE "B" FRAMES ARE TO HAVE 4 FLANGES.
3. THE WORD "GUTTER" IS TO BE MOLDED INTO THE BACK FLANGE - TYPE "B" ONLY.
4. FRAMES AND GRATES ARE TO BE GRAY CAST IRON OR DUCTILE IRON CONFORMING TO AASHTO M306.
5. DIMENSIONS ARE NOMINAL.



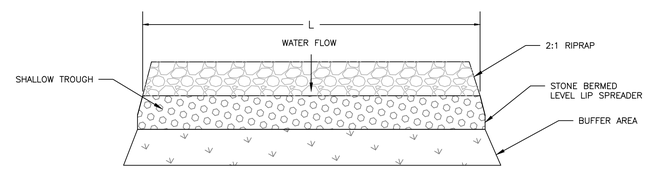
GRATE DETAIL



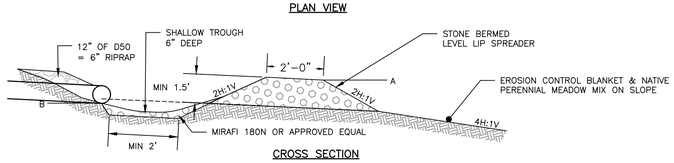
FRAME DETAIL

CATCH BASIN FRAME & GRATE - SQUARE

NOT TO SCALE



PLAN VIEW



CROSS SECTION

BERM STONE SIZE	
SIEVE SIZE	% PASSING BY WEIGHT
12"	100
6"	84-100
3"	63-83
1"	42-55
#4	8-12

NOTES:
1. FIELDSTONE, ROUGH QUARRIED STONE, BLASTED LEDGE ROCK OR TAILINGS ARE ACCEPTABLE BERM MATERIALS.
2. MEDIAN STONE SIZE TO BE APPROX 3 INCHES AT A MAXIMUM SIZE OF 6 INCHES. SEE TABLE.

	LLS1	LLS2
A	104.00'	108.25'
B	102.50'	106.75'
LENGTH	25.00'	25.00'

LEVEL LIP SPREADER DETAIL

NOT TO SCALE

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
SITE/SUB	SJL 5/17/22

DRAWING NAME: **DRAINAGE DETAILS - 2**

PROJECT NAME/ADDRESS: **165 LAMBERT ST CO-OP** PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS PORTLAND, MAINE

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04101
(207) 775-2635

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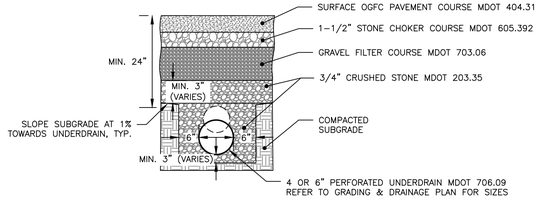
FILE:	1145_CIVIL
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE
SAMUEL J. LEBEL
LICENSED PROFESSIONAL ENGINEER
5/17/22

DRAWING NO.
C-46

NOTES:

1. DO NOT COMPACT SUBGRADE.
2. COMPACT THE GRAVEL FILTER COURSE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557. DO NOT OVER-COMPACT.
3. PAVING OPERATIONS SHALL BE SUBJECT TO THE MINIMUM REQUIREMENTS OF THE MAINE DOT SECTION 401.19 QUALITY CONTROL METHOD D, UNLESS WAIVED BY THE OWNER.
4. THE ATMOSPHERIC TEMPERATURE MUST BE 60°F OR HIGHER FOR PLACEMENT OF OGFC.
5. INSTALL TACK COAT OF PGAB 64-28 ON BASE OF PAVEMENT AND IN BETWEEN COLD JOINTS (AFTER SAWCUT) AT AN APPLICATION RATE OF .10 TO .14 GALLONS PER SQUARE YARD AT A SPRAYING TEMPERATURE OF 325° F.
6. THE ACCEPTABLE TEMPERATURE RANGE FOR OGFC IS ±25 THE PGAB MANUFACTURER'S RECOMMENDED MIXING SAND COMPACTION TEMPERATURE. ANY OGFC TEMPERATURES OUTSIDE OF THIS RANGE SHALL NOT BE PLACED.
7. MATERIALS SHALL MEET THE FOLLOWING REQUIREMENTS:
   7.1. PERFORMANCE GRADED ASPHALT BINDER (PGAB) – MDOT 702.01
   7.2. AGGREGATES FOR HMA PAVEMENT – MDOT 703.07 EXCEPT AS NOTED IN TABLE 1
8. THE REQUIRED PGAB SHALL BE A STORAGE-STABLE, PRE-BLENDED, HOMOGENEOUS, SBS POLYMER MODIFIED ASPHALT BINDER THAT MEETS PG 70E-28 GRADING REQUIREMENTS IN AASHTO MP 19. THE USE OF RECYCLED ASPHALT PAVEMENT (RAP) WILL NOT BE PERMITTED IN MIXTURES UTILIZING MODIFIED PGAB'S.
9. MINERAL FILLER SHALL CONSIST OF FINELY DIVIDED MINERAL MATTER SUCH AS ROCK OR LIMESTONE DUST OR OTHER SUITABLE MATERIAL. AT THE TIME OF USE IT SHALL BE SUFFICIENTLY DRY TO FLOW FREELY AND ESSENTIALLY FREE FROM AGGLOMERATIONS. FILLER SHALL BE FREE FROM ORGANIC IMPURITIES AND HAVE A PLASTICITY INDEX NOT GREATER THAN 4. FILLER MATERIAL FOR THE MIX SHALL MEET AASHTO M17, EXCEPT THAT THE GRADATION REQUIREMENTS OF M17 SHALL NOT APPLY.
10. STABILIZING ADDITIVE SHALL CONSIST OF A FIBER STABILIZER, EITHER CELLULOSE OR MINERAL FIBER. THE DOSAGE RATE FOR CELLULOSE SHALL BE APPROXIMATELY 0.3 PERCENT BY TOTAL MIXTURE MASS AND SUFFICIENT TO PREVENT DRAINDOWN. CELLULOSE FIBERS SHALL CONFORM TO THE PROPERTIES OUTLINED IN TABLE 2. FOR MINERAL FIBERS, THE DOSAGE RATE SHALL BE APPROXIMATELY 0.4 PERCENT BY TOTAL MIXTURE MASS AND SUFFICIENT TO PREVENT DRAINDOWN. MINERAL FIBERS SHALL CONFORM TO THE PROPERTIES OF TABLE 3.
11. COMPACTION OF THE OGFC SHALL INCLUDE A MINIMUM OF 3 PASSES OF A STEEL ROLLER OPERATED IN STATIC MODE. NO TRAFFIC SHALL BE ALLOWED ON THE PAVEMENT FOR A MINIMUM OF 24 HOURS AFTER COMPACTION.
12. PAVERS SHALL BE TRACK MOUNTED.



THICKNESS OF LAYERS	
STANDARD	LAYERS
4"	OPEN-GRADED FRICTION COURSE MDOT 404.31
4"	1-1/2" STONE CHOKER COURSE MDOT 605.392
10"	GRAVEL FILTER COURSE MDOT 703.06 TYPE D (4-7% FINES)
VARIES – MIN. 6"	3/4" CRUSHED STONE MDOT 203.35

POROUS PAVEMENT DETAILS

NOT TO SCALE

NOTES:
1. THE SIDESLOPES SHALL BE STABILIZED WITH A MIN. OF 4" LOAM, EROSION CONTROL BLANKETS SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL AND A CONSERVATION SEED MIX.

2. LIGHT COMPACTION SOIL FILTER AND PIPE BEDDING MATERIAL. (90 TO 92% STANDARD PROCTOR). TESTING SHALL BE PERFORMED BY A QUALIFIED MATERIAL TESTING FIRM.

3. THE SOIL FILTER MEDIA SHALL NOT BE CONSTRUCTED UNTIL THE AREA DRAINING TO THE BASIN HAS BEEN PERMANENTLY STABILIZED.

4. A LANDSCAPE DESIGNER OR ARCHITECT SHALL SELECT THE APPROPRIATE PLANTS FOR THE BIORETENTION CELL FOR THE SITE CONDITIONS. PLANTING PLAN BY OTHERS.

5. MINIMUM UNDERDRAIN SLOPE 0.0025.

6. TESTING: SIEVE ANALYSIS INCLUDING HYDROMETER TESTING FOR CLAY CONTENT FOR EACH LAYER SHALL BE PERFORMED BY A QUALIFIED SOIL TESTING LABORATORY AND SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO CONSTRUCTION. ALL TESTING AND SUBMITTALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE MAINE DEP – TECHNICAL DESIGN MANUAL SECTION 7.2.5 TESTING AND SUBMITTALS.

7. ACORN ENGINEERING, INC., RECOMMENDS THE SOIL FILTER LAYER BE SUPPLIED BY JONES ASSOCIATES, INC., AUBURN, ME.

TABLE 1 – AGGREGATE REQUIREMENTS			
CRITERIA	TEST METHOD	SPECIFIED MINIMUM	SPECIFIED MAXIMUM
MICRO-DEVAL	AASHTO TP 58-99	–	18.0
FLAT & ELONGATED, %			
3 TO 1	ASTM D4791	–	20
5 TO 1	ASTM D4791	–	5
FRACTURED FACES, %			
ONE FACE	ASTM D5821	100	–
TWO FACES		90	–
FRACTURED FACES, %	AASHTO T176	50	–
UNCOMPACTED VOID CONTENT OF FINE AGGREGATE	AASHTO T304	45	–

TABLE 2 – CELLULOSE FIBER	
PROPERTY	REQUIREMENTS
METHOD A – ALPINE SIEVE ANALYSIS	
FIBER LENGTH	6 MM (0.25") MAXIMUM
PASSING 0.150 MM (NO. 100) SIEVE	70 ± 10%
ASH CONTENT	18 ± 5% NON-VOLATILES
PH	7.5 ± 1.0
OIL ABSORBTION	5.0 ± 1.0 (TIMES FIBER MASS)
MOISTURE CONTENT	LESS THAN 5.0% (BY MASS)

TABLE 3 – MINERAL FIBER	
SIEVE ANALYSIS	
FIBER LENGTH	6 MM (0.25") MAXIMUM MEAN TEST VALUE
THICKNESS	0.050 MM (0.002") MAXIMUM MEAN TEST VALUE
SHOT CONTENT	
0.250 MM (NO. 60) SIEVE	90 ± 5% PASSING
0.060 MM (NO. 230) SIEVE	70 ± 10% PASSING

TABLE 4 – AGGREGATE GRADATION	
SIEVE DESIGNATION	NOMINAL MAXIMUM AGGREGATE SIZE-CONTROL POINTS-PERCENTAGE BY WEIGHT PASSING SQUARE MESH SIEVES (COMBINED AGGREGATE)
19 MM	100
12.5 MM	85-100
9.5 MM	55-75
4.75 MM	10-25
2.36 MM	5-10
0.075 MM	2.0-4.0

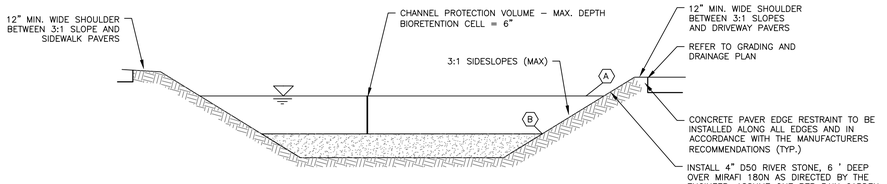
TABLE 5 – DESIGN CRITERIA	
AIR VOIDS @ N_{DESIGN}	20.0 %
BINDER CONTENT	6.0 % MIN.
VCA_{MIX}	LESS THAN VCA_{DRC}
DRAINDOWN	0.3 % MAXIMUM (AASHTO T 305)
GYRATIONS @ N_{DESIGN}	50

OGFC MIX CRITERIA:

CONSTRUCTION OBSERVATION:

CONSTRUCTION OBSERVATION SHALL BE PROVIDED FOR EACH PHASE OF CONSTRUCTION BY ACORN ENGINEERING. THE CONTRACTOR OR OWNERS REPRESENTATIVE SHALL NOTIFY ACORN ENGINEERING A MINIMUM 48 HOURS OR 2 BUSINESS DAY WHICH EVER IS GREATER PRIOR TO ANY OF THE PHASES OF CONSTRUCTION LISTED BELOW SO THAT THE FOLLOWING SITE VISITS MAY BE SCHEDULED.

1. ONE SITE VISIT AFTER PRELIMINARY CONSTRUCTION OF THE BIORETENTION CELL GRADES;
2. ONE SITE VISIT DURING THE INSTALLATION OR THE IMPERVIOUS LINER.
3. ONE SITE VISIT AFTER THE UNDER DRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED.
4. ONE SITE VISIT DURING THE CONSTRUCTION OF THE SOIL FILTER LAYER.
5. ONE SITE VISIT DURING THE CONSTRUCTION OF THE TOPSOIL LAYER.
6. ONE SITE VISIT DURING THE FLOODING OF THE BIORETENTION CELL, IF REQUIRED.



SOIL FILTER CROSS SECTION

12" SOIL FILTER BED – BLENDED SAND, LOAM, SUPERHUMUS SIEVE ANALYSIS	
SIEVE SIZE	% PASSING BY WEIGHT
#10	85-100
#20	70-100
#60	15-40
#200	8-15
1. CLAY FRACTION <2% PASSING THE #200 SIEVE. 2. SUPERHUMUS OR EQUIVALENT	

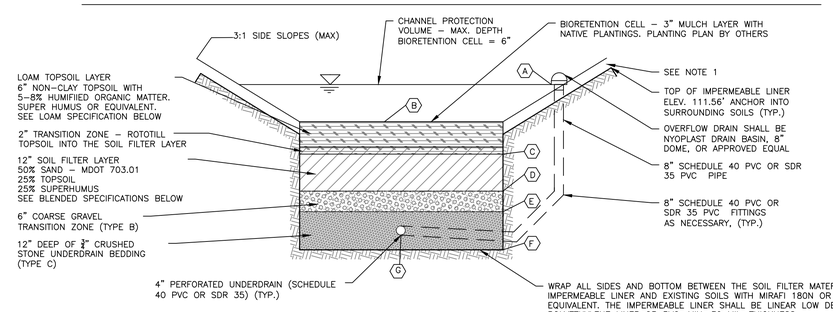
SOIL FILTER BED – TRANSISTION ZONE (TYPE B)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	90-100
1/2"	75-100
#4	50-100
#20	15-80
#50	0-15
#200	0-5

SOIL FILTER BED – UNDERDRAIN BEDDING (TYPE C)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90-100
3/8"	0-75
#4	0-25
#10	0-5

6" LOAM TOPSOIL LAYER SPECIFICATION	
SIEVE SIZE	% PASSING BY WEIGHT
#4	75-95
#10	60-90
#40	35-85
#200	20-70
1. CLAY FRACTION <10% PASSING THE #200 SIEVE.* 2. LOAM SHALL BE LOOSE AND FRIABLE AND SHALL BE FREE FROM ADMIXTURE OF SUBSOIL, REFUSE, LARGE STONES, CLODS OR ROOTS OR RHIZOMES OR "WITCH GRASS" OR OTHER UNDESIRABLE GRASSES.	

*<10% CLAY PASSING THE #200 SIEVE ALLOWED PER EMAIL FROM MARIANNE HUBERT – MDEP TO WILL SAVAGE DATED 9/20/13

SOIL FILTER BED – SUPERHUMUS OR EQUIV. SPECIFICATION	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
#200	0-5
MINIMAL CLAY CONTENT, NO MORE THAN 3-5% PASSING #200 SIEVE	



SOIL FILTER SIDE VIEW

SCHEDULE		
ITEM	BIOCELL 1	BIOCELL 2
(A) PROPOSED OVERFLOW RIM	109.50'	103.00'
(B) TOP OF LOAM TOPSOIL LAYER	108.00'	103.00'
(C) TOP OF SOIL FILTER	107.50'	102.50'
(D) TOP OF GRAVEL	106.50'	101.50'
(E) TOP OF STONE	106.00'	101.00'
(F) BOTTOM OF STONE	105.00'	100.00'
(G) UNDERDRAIN INVERT	105.50'	100.25'

RAIN GARDEN OR BIORETENTION CELL DETAIL

NOT TO SCALE

ISSUED FOR	BY DATE
SITE/SUB	SJL 5/17/22

DRAWING NAME: DRAINAGE DETAILS – 3

PROJECT NAME/ADDRESS: 165 LAMBERT ST CO-OP PORTLAND, MAINE 04103

CLIENT/OWNER OF RECORD: MAINE COOPERATIVE DEVELOPMENT PARTNERS PORTLAND, MAINE

ACORN ENGINEERING, INC.

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR UNAUTHORIZED, ARE AT THE USERS RISK AND WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04101
(207) 775-2655

FILE:	1145_CIVIL
JN:	1145
SCALE:	AS NOTED
DESIGNED BY:	SJL
DRAWN BY:	NPH
CHECKED BY:	WHS

STATE OF MAINE SAMUEL J. LEBEL LICENSED PROFESSIONAL ENGINEER 5/17/22

DRAWING NO.

C-47

PERMIT LEVEL
NOT ISSUED FOR CONSTRUCTION

1.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

AS PART OF THE SITE DEVELOPMENT, THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE IMPLEMENTED. DEVICES SHALL BE INSTALLED AS DESCRIBED IN THIS REPORT OR WITHIN THE PLAN SET. SEE THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES FOR FURTHER REFERENCE.

1.1 TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE PLANNED FOR THE PROJECT'S CONSTRUCTION PERIOD:

1.1.1 CRUSHED STONE STABILIZED CONSTRUCTION ENTRANCES SHALL BE PLACED AT ALL ACCESS POINTS TO THE PROJECT SITE WHERE THERE ARE DISTURBED AREAS. THE FOLLOWING SPECIFICATIONS SHALL BE FOLLOWED AT A MINIMUM:
- STONE SIZE SHALL BE 2–3 INCHES, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- THE THICKNESS OF THE ENTRANCE STONE LAYER SHALL BE NO LESS THAN 6 INCHES.
- THE ENTRANCE SHALL NOT BE LESS THAN 20 FEET WIDE, HOWEVER NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS. THE LENGTH SHALL NOT BE LESS THAN 50 FEET IN LENGTH.
- GEOTEXTILE FABRIC (WOVEN OR NON–WOVEN) SHALL BE PLACED OVER THE ENTIRE ENTRANCE AREA.
- THE ENTRANCE/EXIT SHALL BE MAINTAINED TO THE EXTENT THAT IT WILL PREVENT THE TRACKING OF SEDIMENT ONTO PUBLIC ROAD WAYS.

1.1.2 SILTATION FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED DOWN GRADIENT OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL PERMANENT STABILIZATION IS ACHIEVED. THE SILT FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THE PLAN SET AND INSPECTED BEFORE AND IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE OR BERM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM.

1.1.3 HAY MULCH INCLUDING HYDRO SEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND NOVEMBER 1ST ON SLOPES OF LESS THAN 15 PERCENT SHALL BE COVERED BY FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. MULCH PLACED BETWEEN NOVEMBER 1ST AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT AND EQUAL TO OR FLATTER THAN 2:1 SHALL USE MATS OR FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

1.1.4 AT ANY TIME OF THE YEAR, ALL SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH DOUBLE NET EROSION CONTROL BLANKET BIONET SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL, OR EROSION CONTROL MIX SLOPE PROTECTION AS DETAILED WITHIN THE PLANS.

1.1.5 **FREE STREET, CROSS STREET, CENTER STREET, AND SPRING STREET** SHALL BE SWEPT TO CONTROL MUD AND DUST FROM THE CONSTRUCTION SITE AS NECESSARY. ADD ADDITIONAL STONE TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

1.1.6 DURING DEMOLITION, CLEARING AND GRUBBING OPERATIONS, STONE CHECK DAMS SHALL BE INSTALLED AT ANY AREAS OF CONCENTRATED FLOW. THE MAXIMUM HEIGHT OF THE CHECK DAM SHALL NOT EXCEED 2 FEET. THE CENTER OF THE CHECK DAM SHALL BE 6 INCHES BELOW THE OUTER EDGES OF THE DAM. THE CONTRACTOR SHALL MULCH THE SIDE SLOPES AND INSTALL STONE CHECK DAMS FOR ALL NEWLY EXCAVATED DITCH LINES WITHIN 24 HOURS OF THEIR CREATION.

1.1.7 SILT FENCE STAKE SPACING SHALL NOT EXCEED 6 FEET UNLESS THE FENCE IS SUPPORTED WITH 14 GAUGE WIRE IN WHICH CASE THE MAXIMUM SPACING SHALL NOT EXCEED 10 FEET. THE SILT FENCE SHALL BE "TOED" INTO THE GROUND.

1.1.8 STORMDRAIN INLET PROTECTION SHALL BE PROVIDED TO STORMDRAINS THROUGH THE USE OF ANY OF THE FOLLOWING: HAY BALE DROP INLET STRUCTURES, SILT FENCE DROP INLET SEDIMENT FILTER, GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER, OR CURB INLET SEDIMENT FILTER. BARRIERS SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT AND REPAIRED AS NECESSARY. SEDIMENTS SHALL BE REMOVED WHEN ACCUMULATION HAS REACHED ½ THE DESIGN HEIGHT.

1.1.9 DUST CONTROL SHALL BE ACCOMPLISHED BY THE USE OF ANY OF THE FOLLOWING: WATER, CALCIUM CHLORIDE, STONE, OR AN APPROVED MDEP PRODUCT. DUST CONTROL SHALL BE APPLIED AS NEEDED TO ACCOMPLISH DUST CONTROL.

1.1.10 TEMPORARY LOAM, SEED, AND MULCHING SHALL BE USED IN AREAS WHERE NO OTHER EROSION CONTROL MEASURE IS USED. APPLICATION RATES FOR SEEDING ARE PROVIDED AT THE END OF THIS REPORT.

1.1.11 STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS OF FORMATION UNLESS A SCHEDULED RAIN EVENT OCCURS PRIOR TO THE 7 DAY WINDOW, IN WHICH CASE THE STOCKPILE SHALL BE STABILIZED PRIOR TO THE RAIN EVENT. METHODS OF STABILIZATION SHALL BE MULCH, EROSION CONTROL MIX, OR EROSION CONTROL BLANKETS/MATS. SILT FENCE OR A WOOD WASTE COMPOST FILTER BERM SHALL BE PLACED DOWNHILL OF ANY SOIL STOCKPILE LOCATION.

1.1.12 FOR DISTURBANCE BETWEEN NOVEMBER 1 AND APRIL 15, PLEASE REFER TO WINTER STABILIZATION PLAN IN THIS REPORT AND THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR FURTHER INFORMATION.

1.1.13 IT IS OF THE UTMOST IMPORTANCE THAT STORMWATER RUNOFF AND POTENTIAL SEDIMENT FROM THE CONSTRUCTION SITE BE DIVERTED AROUND THE PROPOSED UNDERDRAINS UNTIL THE TRENCH IS BACKFILLED.

1.2 PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES ARE INTENDED FOR POST DISTURBANCE AREAS OF THE PROJECT.

1.2.1 ALL DISTURBED AREAS DURING CONSTRUCTION, NOT SUBJECT TO OTHER PROPOSED CONDITIONS, SHALL RECEIVE A MINIMUM 4" OF LOAM AND SHALL BE LIMED, AND MULCHED.

EROSION CONTROL BLANKETS OR MATS SHALL BE PLACED OVER THE MULCH IN AREAS NOTED IN PARAGRAPH 4.2 OF THIS REPORT.

1.2.2 ALL STORMWATER DEVICES SHALL BE INSTALLED AND TRIBUTARY AREAS STABILIZED PRIOR RECEIVING STORMWATER.

1.2.3 REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

2.0 EROSION AND SEDIMENTATION CONTROL PLAN

2.1 THE EROSION AND SEDIMENTATION CONTROL PLAN IS INCLUDED WITHIN THE PLAN SET.

3.0 DETAILS AND SPECIFICATIONS

3.1 EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

4.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

WINTER CONSTRUCTION CONSISTS OF EARTHWORK DISTURBANCE BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15, THEN THE SITE SHALL BE PROTECTED WITH OVER–WINTER STABILIZATION. ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MIX, EROSION CONTROL MATS, RIPRAP, OR GRAVEL BASE ON A ROAD SHALL BE CONSIDERED OPEN.

THE CONTRACTOR SHALL LIMIT THE WORK AREA TO AREAS THAT WORK WILL OCCUR IN DURING THE SUBSEQUENT 15 DAYS AND SO THAT IT CAN BE MULCHED ONE DAY PRIOR TO A SNOW EVENT. THE CONTRACTOR SHALL STABILIZE WORK AREAS PRIOR TO OPENING ADDITIONAL WORK AREAS TO MINIMIZE AREAS WITHOUT EROSION CONTROL MEASURES.

THE FOLLOWING MEASURES SHALL BE IMPLEMENTED DURING WINTER CONSTRUCTION PERIODS:

4.1 SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.

4.2 MULCHING

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75–LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCH THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE–INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCHING AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4.3 SOIL STOCKPILING

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR–INCH LAYER OF EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE–ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL.

4.4 SEEDING

BETWEEN THE DATES OF OCTOBER 15TH AND APRIL 1ST, LOAM OR SEED SHALL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS NOT BEEN LOAMED, FINAL GRADING WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.

DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH OR EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

4.5 OVER WINTER STABILIZATION OF DISTURBED SOILS

BY SEPTEMBER 15TH, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% SHALL BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS SHALL BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION – BY OCTOBER 1ST, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3LBS PER 1,000 S.F., LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 LBS PER 1,000 S.F., AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1ST, THEN MULCH THE AREA FOR OVER–WINTER PROTECTION.
- STABILIZE THE SOIL WITH SOD – STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.
- STABILIZE THE SOIL WITH MULCH – BY NOVEMBER 15TH, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 LBS PER 1,000 S.F. ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

4.6 OVER WINTER STABILIZATION OF DISTURBED SLOPES

ALL STONE–COVERED SLOPES SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH. ALL SLOPES TO BE VEGETATED SHALL BE SEEDED AND MULCHED BY SEPTEMBER 1ST. A SLOPE IS CONSIDERED A GRADE GREATER THAN 15%. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1ST, THEN ONE OF THE FOLLOWING ACTION SHALL BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS – BY OCTOBER 1ST THE DISTURBED SLOPE SHALL BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1,000 S.F. AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE SLOPE BY NOVEMBER 1ST, THEN THE CONTRACTOR SHALL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP.
- STABILIZE THE SOIL WITH SOD – THE DISTURBED SLOPE SHALL BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR SHALL NOT USE LATE–SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 3H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH EROSION CONTROL MIX – EROSION CONTROL MIX SHALL BE PROPERLY INSTALLED BY NOVEMBER 15TH. THE CONTRACTOR SHALL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 2H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.
- STABILIZE THE SOIL WITH STONE RIPRAP – PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15TH. A REGISTERED PROFESSIONAL ENGINEER SHALL BE HIRED TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

5.0 INSPECTION AND MAINTENANCE

A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT PERIODIC VISUAL INSPECTIONS OF INSTALLED EROSION CONTROL MEASURES. THE FREQUENCY OF INSPECTION SHALL OCCUR AT LEAST ONCE EVERY TWO WEEKS, AS WELL AS AFTER A "STORM EVENT". A "STORM EVENT" SHALL CONSIST 0.5 INCHES OF RAIN WITHIN A 24 HOUR PERIOD. THE FOLLOWING EROSION AND SEDIMENT CONTROL – BEST MANAGEMENT PRACTICES (BMP'S) SHALL INSPECTED IN THE MANNER AS DESCRIBED.

5.1 SEDIMENT BARRIERS

HAY BALE BARRIERS, SILT FENCES AND FILTER BERMS SHALL BE INSPECTED AND REPAIRED FOR THE FOLLOWING IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE BARRIER. FILTER BERMS SHOULD BE RESHAPED AS NEEDED. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

5.2 STABILIZED STONE CONSTRUCTION ENTRANCES

THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL AND REDISTRIBUTED ON SITE IN A STABLE MANNER. THE ENTRANCE SHOULD THEN BE RECONSTRUCTED. THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS, WHICH HAVE EXPERIENCED MUD–TRACKING ON TO THE PAVEMENT OR TRAVELED WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

5.3 MULCHED AREAS

ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE–INSTALL THE NETS AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE. REPAIR AS NEEDED.

5.4 DUST CONTROL

WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHALL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.

5.5 STORMWATER APPURTENANCES

ALL UNDERDRAINS, STORM DRAINS, AND CATCH BASINS NEED TO BE OPERATING EFFECTIVELY AND FREE OF DEBRIS.

5.6 EROSION AND SEDIMENTATION CONTROL INSPECTIONS:

ACORN ENGINEERING HAS PERSONNEL QUALIFIED TO CONDUCT EROSION AND SEDIMENTATION CONTROL INSPECTIONS. FOR FURTHER INFORMATION CONTACT:

CONTACT: WILL SAVAGE, PE
TELEPHONE: (207) 775–2655

QUALIFICATIONS:

- MAINE PROFESSIONAL ENGINEERING LICENSE #11419
- MAINE DEP – CERTIFIED IN MAINTENANCE & INSPECTION OF STORMWATER BMP'S CERT #14
- CERTIFIED EROSION, SEDIMENT AND STORM WATER INSPECTOR (CESSWI) CERT #0293
- CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) CERT. #4620

THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR COMPLYING WITH THE EROSION AND SEDIMENTATION REPORT/PLAN, INCLUDING CONTROL OF FUGITIVE DUST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONETARY PENALTIES RESULTING FROM FAILURE TO COMPLY WITH THESE STANDARDS.

6.0 IMPLEMENTATION SCHEDULE

THE FOLLOWING IMPLEMENTATION SEQUENCE IS INTENDED TO MAXIMIZE THE EFFECTIVENESS OF THE ABOVE DESCRIBED EROSION CONTROL MEASURES. CONTRACTORS SHOULD AVOID OVEREXPOSING DISTURBED AREAS AND LIMIT THE AMOUNT OF STABILIZATION AREA.

1. INSTALL A STABILIZED CONSTRUCTION ENTRANCE IN ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC WILL ENTER AND EXIT THE SITE.
2. INSTALL PERIMETER SILT FENCE OR EROSION CONTROL BERM.
3. INSTALL ALL OTHER EROSION CONTROL DEVICES AS NECESSARY THROUGHOUT THE REMAINDER OF THIS SCHEDULE.
4. COMMENCE INSTALLATION OF DRAINAGE INFRASTRUCTURE.
5. PRIORITIZE THE DOWNHILL SIDE TO CONTAIN RUNOFF WITHIN THE SITE WHILE PROVIDING AN ENGINEERED OUTLET WITH SILTATION BARRIER TO THE MUNICIPAL STORMWATER SYSTEM WITHIN SPRING STREET.
6. COMMENCE EARTHWORK OPERATIONS, WALL AND FOUNDATION INSTALLATION.
7. COMMENCE INSTALLATION OF UTILITIES.
8. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
9. COMPLETE INSTALLATION OF DRAINAGE INFRASTRUCTURE, AS WELL AS OTHER UTILITY WORK.
10. COMPLETE REMAINING EARTHWORK OPERATIONS.
11. INSTALL SUB–BASE AND BASE GRAVELS IN PAVED AREAS.
12. INSTALL PAVING, CURBING AND BRICKWORK.
13. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
14. ONCE THE SITE IS STABILIZED, 90% CATCH OF GRASS HAS BEEN OBTAINED, OR MULCHING OF LANDSCAPE AREAS IS COMPLETE REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
15. TOUCH UP AREAS WITHOUT A VIGOROUS CATCH OF GRASS WITH LOAM AND SEED.
16. COMPLETE SITE SIGNAGE AND STRIPING.
17. EXECUTE PROPER MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES THROUGHOUT THE PROJECT.

THE ABOVE IMPLEMENTATION SEQUENCE SHOULD BE GENERALLY FOLLOWED BY THE SITE CONTRACTOR. HOWEVER, THE CONTRACTOR MAY CONSTRUCT SEVERAL ITEMS SIMULTANEOUSLY. THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE OF THE COMPLETION OF THE WORK. IF THE CONTRACTOR IS TO COMMENCE THE CONSTRUCTION OF MORE THAN ONE ITEM ABOVE, THEY SHALL LIMIT THE AMOUNT OF EXPOSED AREAS TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE FOLLOWING 30 DAYS.

THE CONTRACTOR SHALL RE–VEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT. THE CONTRACTOR SHALL INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEMS AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE.

7.0 SEEDING PLAN

7.1 SITE PREPARATION

THE SEEDED AREAS SHALL BE FEASIBLY GRADED OUT TO PROVIDE THE USE OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. IF NECESSARY, THE SITE MAY REQUIRE ADDITIONAL TEMPORARY EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL REPORT.

7.2 SEEDBED PREPARATION

FERTILIZER SHALL BE APPLIED TO THE SITE AT A RATE OF 13.8 POUNDS PER 1,000 SQUARE FEET. THE COMPOSITION OF THE FERTILIZER SHALL BE 10–10–10 (N–P205–K20) OR EQUIVALENT.

LIMESTONE SHALL BE APPLIED TO THE SITE AT A RATE OF 138 POUNDS PER 1,000 SQUARE FEET.

7.3 SEEDING

THE COMPOSITION AND AMOUNT OF TEMPORARY SEED APPLIED TO A SITE SHALL BE DETERMINED BY THE FOLLOWING TABLE:

TEMPORARY SEED APPLICATION RATES

SEED	LBS / ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	2.57	8/15 TO 10/1
OATS	1.84	4/1 TO 7/1 8/15 TO 9/15
ANNUAL RYGRASS	0.92	4/1 TO 7/1
SUDANGRASS	0.92	5/15 TO 8/15
PERENNIAL	0.92	8/15 TO 9/15
TOTAL	7.17 LBS/ACRE	

PERMANENT SEED APPLICATION RATES

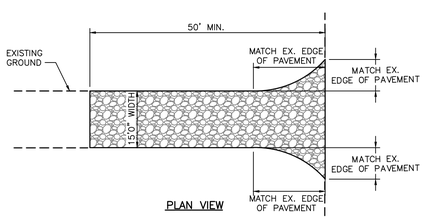
SEED	LBS / ACRE
KENTUCKY BLUEGRASS	20.00
CREEPING RED FESCUE	20.00
PERENNIAL RYEGRASS	4.80
TOTAL	44.8 LBS/ACRE

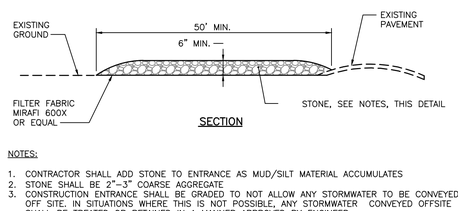
7.4 MULCHING

MULCH SHALL BE HARDWOOD AND APPLIED AT A RATE OF 70 LBS – 90 LBS PER 1,000 SQUARE FEET. THE MULCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. THE SEEDED AREA SHALL BE MULCHED IMMEDIATELY AFTER SEED IS APPLIED. MULCHING DURING THE WINTER SEASON SHALL BE DOUBLE THE NORMAL AMOUNT. REFER TO DETAIL FOR MORE INFORMATION.

8.0 CONCLUSION

THE ABOVE EROSION CONTROL NARRATIVE IS INTENDED TO MINIMIZE THE DEVELOPMENT IMPACT BY IMPLEMENTING TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

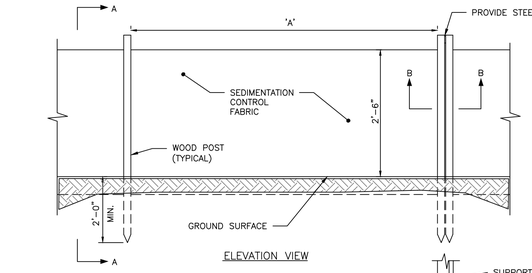




NOTES:

1. CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES
2. STONE SHALL BE 2"–3" COARSE AGGREGATE
3. CONSTRUCTION ENTRANCE SHALL BE GRADED TO NOT ALLOW ANY STORMWATER TO BE CONVEYED OFF SITE. IN SITUATIONS WHERE THIS IS NOT POSSIBLE, ANY STORMWATER CONVEYED OFFSITE SHALL BE TREATED OR RETAINED IN A MANNER APPROVED BY ENGINEER.
4. WHEN NECESSARY, ON–SITE VEHICLES SHALL HAVE THEIR WHEELS CLEANED PRIOR TO LEAVING SITE.
5. CONSTRUCTION ENTRANCE SHALL BE GRADED IN A MANNER THAT PREVENTS TRACKING OF SEDIMENTS ONTO PUBLIC RIGHT–OF–WAY

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

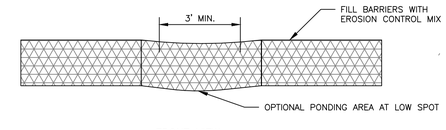


SILT FENCE REINFORCEMENT	MAX. SPACING "A"
NONE	6'
WIRE REINFORCEMENT 14 GAUGE, 6" MESH	10'

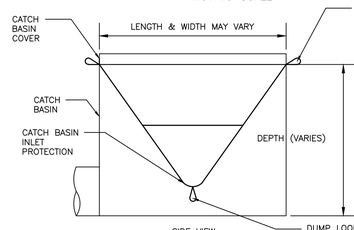
SILTATION FENCE DETAIL
NOT TO SCALE

NOTES:

1. FULL CONTACT WITH THE GROUND IS CRITICAL TO PREVENT SHORT CIRCUITING UNDER THE TUBE – THE GROUND SURFACE SHOULD BE SMOOTH AND LEVEL. IN WOODED AREAS, PROTRUDING ROOTS AND DEBRIS MAY NEED TO BE REMOVED. IN GRASSED AREAS, THE GRASS NEEDS TO BE EITHER MOWED OR COMPRESSED DOWN.
2. STAKING MAY BE NECESSARY ON STEEP SLOPES.
3. UPON FINAL INSTALLATION, THE TUBE CAN BE CUT OPEN AND THE MATERIAL SPREAD OUT ONTO THE GROUND. THE MESH MATERIAL SHOULD BE REMOVE.
4. LOOSE COMPOST MAY BE BACKFILLED ALONG THE UPSLOPE SIDE OF THE COMPOST FILTER SOCK, FILLING THE SEAM BETWEEN THE SOIL SURFACE AND THE DEVICE, IMPROVING FILTRATION AND SEDIMENT RETENTION.



FILTER SOCK DETAIL
NOT TO SCALE



NOTES:

1. CATCH BASIN INLET PROTECTION S



Base Building Design

Project Information

CLIENTS	Maine Community Development Partners
ARCHITECT	Kaplan Thompson Architects
CONTRACTOR	Penobscot General Contractors

Proposed Structure

PROPOSED OCCUPANCY:	Multi-Family
PROPOSED STRUCTURES:	2-Story Townhome 3-Story Rowhome 3-Story Community Flats

DRAWING INDEX

GENERAL		
		COVER SHEET
ARCHITECTURAL		
	A-0.1	WALL TYPES
	A-0.2	FLOOR TYPES / ROOF TYPES
	A-1.1	PLANS: COMMUNITY FLATS
	A-1.2	PLANS: TOWNHOMES
	A-1.3	PLANS: ROWHOMES
	A-1.4	ENLARGED GROUND FLOOR PLAN: COMMUNITY FLATS
	A-1.5	ENLARGED UPPER LEVELS FLOOR PLAN: COMMUNITY FLATS
	A-1.6	ENLARGED GROUND FLOOR PLAN: TOWNHOMES
	A-1.7	ENLARGED UPPER LEVEL FLOOR PLAN: TOWNHOMES
	A-1.8	ENLARGED GROUND FLOOR PLAN: ROWHOMES
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	A-2.1	ELEVATIONS: COMMUNITY FLATS
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	A-2.3	ELEVATIONS: ROWHOMES
	A-3.1	BUILDING SECTIONS
	A-4.1	WALL SECTIONS
STRUCTURAL		
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	S-1.2	FRAMING PLAN ROWHOUSE
	S-1.3	FRAMING PLAN TOWNHOUSE

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STRUCTURAL
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p: 207 307-0872

ELECTRICAL
MEGA Engineering
p: 207 749-4514

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REVISED 2	
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PHASE	Schematic Design

COVER SHEET

FIRE-RATED
EXTERIOR WALLS

EXTERIOR SIDING - FIBER CEMENT AND WOOD (TYPE 1, TYPE 2)

ON RAINSCREEN WOOD STRAPPING (COR-A-VENT @ TOP AND BOTTOM OF CAVITY)

ON BLUESKIN VP100 WRB

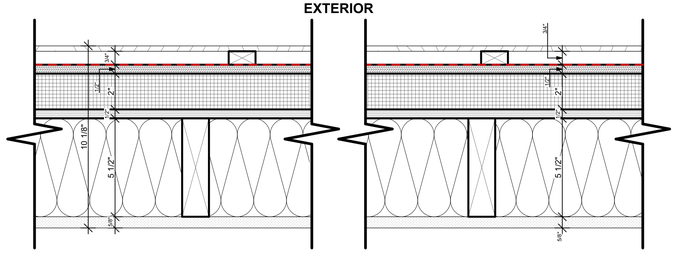
ON 2 1/2" NAILBASE INSULATION - REFER TO STRUCTURAL FOR FASTENER SIZE, SPACING AND BLOCKING REQUIREMENTS

ON 1/2" LP FLAMEBLOCK OSB SHEATHING - REFER TO STRUCTURAL FOR FASTENER SIZE, SPACING AND BLOCKING REQUIREMENTS (ALL SEAMS TAPED, AIR BARRIER)

ON 2X6 BEARING WALL W/ FULL DEPTH D.P. CELLULOSE - REFER TO STRUCTURAL

ON 5/8" TYPE X GWB - AIR SEALED AT ALL EDGES AND PENETRATIONS

EXTERIOR



INTERIOR

TOTAL: R-±33

0 HR FIRE RATED
W-0A

1 HR FIRE RATED
W-1A

FIRE PARTITION:
INTERIOR STAIR WALLS/UNIT DEMISING WALLS

5/8" TYPE X GWB - AIR SEALED AT ALL EDGES AND PENETRATIONS

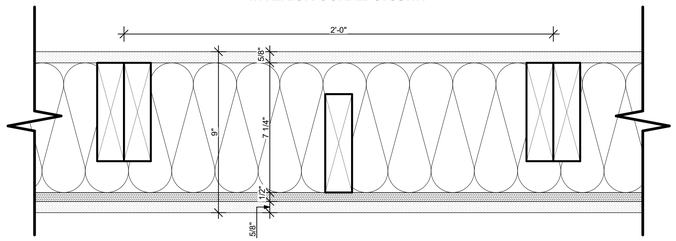
ON 2X6 KD STUD W/ FULL DEPTH D.P. CELLULOSE OR MINERAL WOOL BATT, STAGGERED

ON 2X6 KD STUD W/FULL DEPTH D.P. CELLULOSE OR MINERAL WOOL BATT, STAGGERED

ON CDX PLYWOOD SHEATHING - REFER TO STRUCTURAL

ON 5/8" TYPE X GWB - AIR SEALED AT ALL EDGES AND PENETRATIONS

INTERIOR CORRIDOR/UNIT



INTERIOR STAIR/UNIT

INSTALL STRICTLY PER UL U340 OR ANSI / UL 263
STC - 51
1 HOUR

W-1B

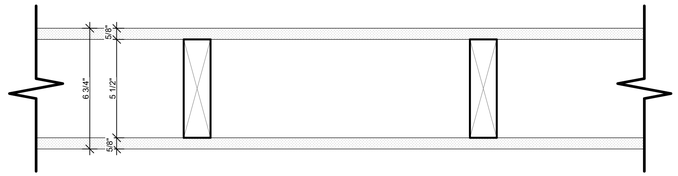
NON-RATED
INTERIOR WALLS (TYP.)

5/8" TYPE X GWB - AIR SEALED AT ALL EDGES AND PENETRATIONS

ON 2X6 KD STUD @ 16" O.C./ OR LIGHT GA STEEL STUDS

ON 5/8" TYPE X GWB - AIR SEALED AT ALL EDGES AND PENETRATIONS

INTERIOR



INTERIOR

0 HOUR

W-0B

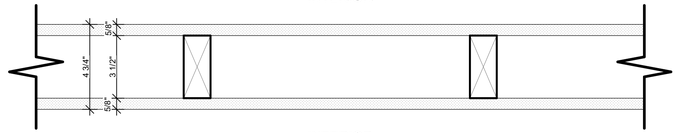
NON-RATED
INTERIOR WALLS (TYP.)

5/8" TYPE X GWB - AIR SEALED AT ALL EDGES AND PENETRATIONS

ON 2X4 KD STUD @ 16" O.C./ OR LIGHT GA STEEL STUDS

ON 5/8" TYPE X GWB - AIR SEALED AT ALL EDGES AND PENETRATIONS

INTERIOR



INTERIOR

0 HOUR

W-0C

FIRE PARTITION:
INTERIOR CORRIDOR WALLS

5/8" TYPE X GWB - AIR SEALED AT ALL EDGES AND PENETRATIONS

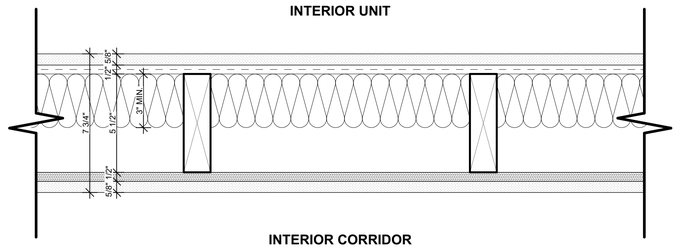
ON RESILIENT CHANNEL, RC-1 PRO (RCUR)

ON 2X6 KD STUD W/ MINERAL WOOL BATT

ON CDX PLYWOOD SHEATHING - REFER TO STRUCTURAL

ON 5/8" TYPE X GWB - AIR SEALED AT ALL EDGES AND PENETRATIONS

INTERIOR UNIT



INTERIOR CORRIDOR

INSTALL STRICTLY PER UL U305
STC - 51
0.5 HOUR

W-.5A

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A	Schematic Design			6/6/22

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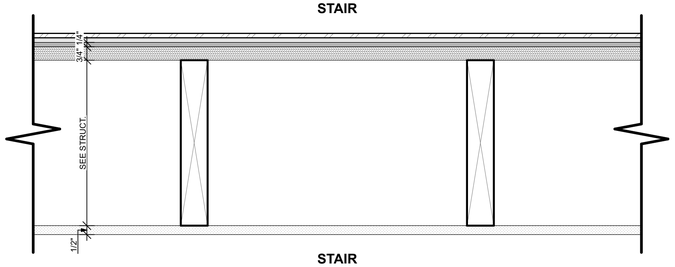
PHASE	Schematic Design

WALL TYPES
A-0.1

NON-RATED
STAIR LANDING

FINISH FLOOR, SEE FINISH SCHEDULE,
ON FLOORING UNDERLAYMENT, SEE SPEC,
ON 3/4" SUBFLOOR, SEE SPEC,
ON 2X'S, SEE STRUCTURAL
ON (1) LAYERS GYP. BOARD TYPE C

STAIR



STAIR

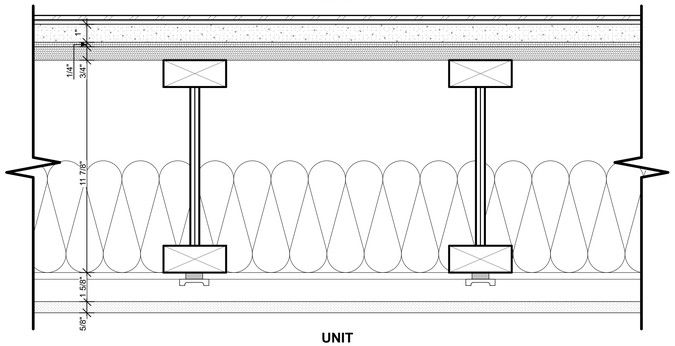
0 HOUR

H-0D

UNIT FLOORS

FINISH FLOOR, SEE FINISH SCHEDULE,
ON FLOORING UNDERLAYMENT, SEE SPEC,
ON 1" GYPCRETE OR LEVELROCK,
ON 1/4" ACOUSTIMAT
ON 3/4" SUBFLOOR, SEE SPEC,
ON 2X FRAMED FLOOR, 16 O.C. W/ 6 1/4" MIN. BATT INSULATION
ON HAT CHANNEL W/ SOUND ISOLATION CLIPS 24" O.C.
ON (1) LAYERS 5/8" TYPE X GWB - AIR SEALED AT ALL EDGES AND PENETRATIONS

UNIT



UNIT

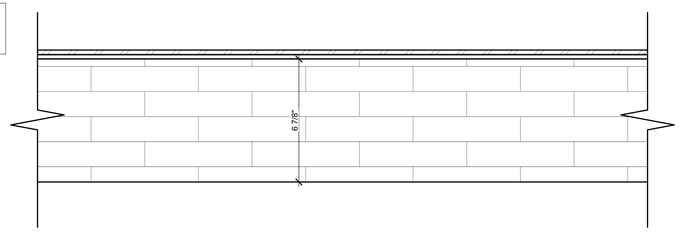
INSTALL STRICTLY PER UL GA FILE NO. FC 5120
1 HOUR

H-1A

UNPROTECTED CLT FLOOR

FINISH FLOOR, SEE FINISH SCHEDULE,
ON FLOORING UNDERLAYMENT, SEE SPEC,
ON CLT (SEE STRUCTURAL)

INTERIOR



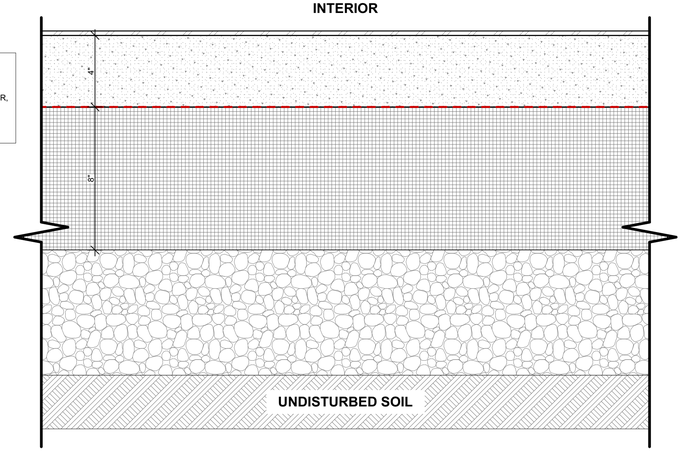
INTERIOR

H-1B

NON-RATED
SLAB ON GRADE

FINISH FLOOR, SEE FINISH SCHEDULE,
ON CONCRETE SLAB, SEE STRUCTURAL,
ON HEAVY DUTY SUB-SLAB VAPOR AND AIR BARRIER,
ON 8" EPS RIGID INSULATION,
ON COMPACTED STRUCTURAL FILL, SEE STRUCT.

INTERIOR



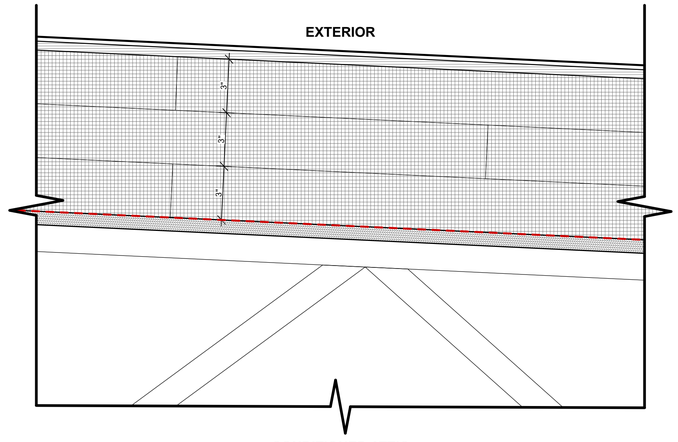
TOTAL: R-32
0 HOUR

H-0A

NON-RATED
ROOF (LOW SLOPE)

EPDM ROOM MEMBRANE,
ON COVERBOARD,
ON (3) 3" POLYISOCYANURATE INSULATION,
ON PLYWOOD SHEATHING, SEE STRUCTURAL,
ON SELF ADHERED AIR BARRIER
ON TRUSS, SEE STRUCTURAL

EXTERIOR



CONDITIONED ATTIC

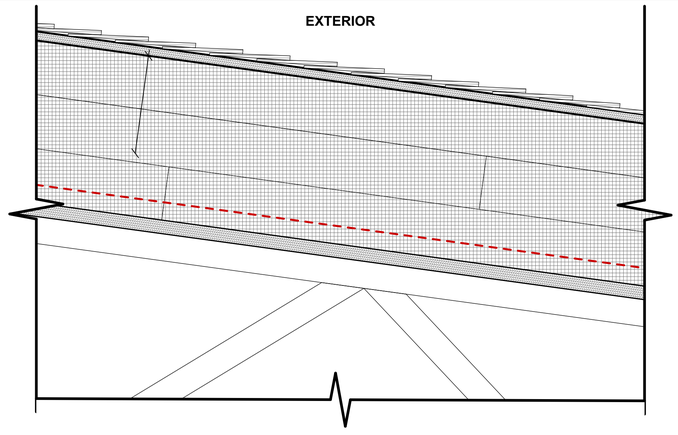
TOTAL: R-51
0 HOUR

H-0B

NON-RATED
ROOF (PITCHED)

ASPHALT SHINGLES
ON COVERBOARD
ON 3 1/2" NAILBASE
ON (2) 3" POLYISOCYANURATE INSULATION
ON PLYWOOD SHEATHING, SEE STRUCTURAL,
ON SELF ADHERED AIR BARRIER
ON 2X TRUSS, SEE STRUCTURAL

EXTERIOR



CONDITIONED ATTIC

TOTAL: R-51
0 HOUR

H-0C

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A	Schematic Design			6/6/22

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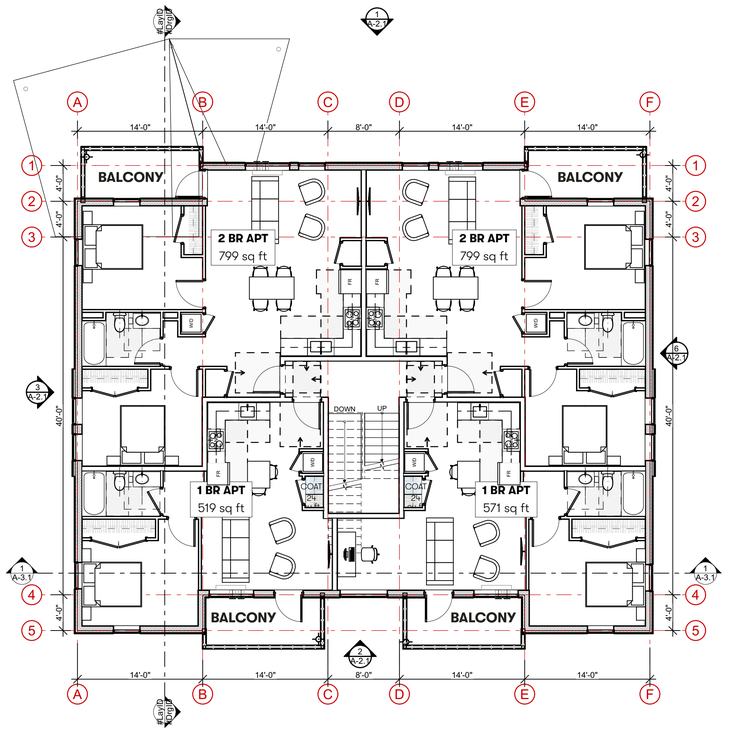
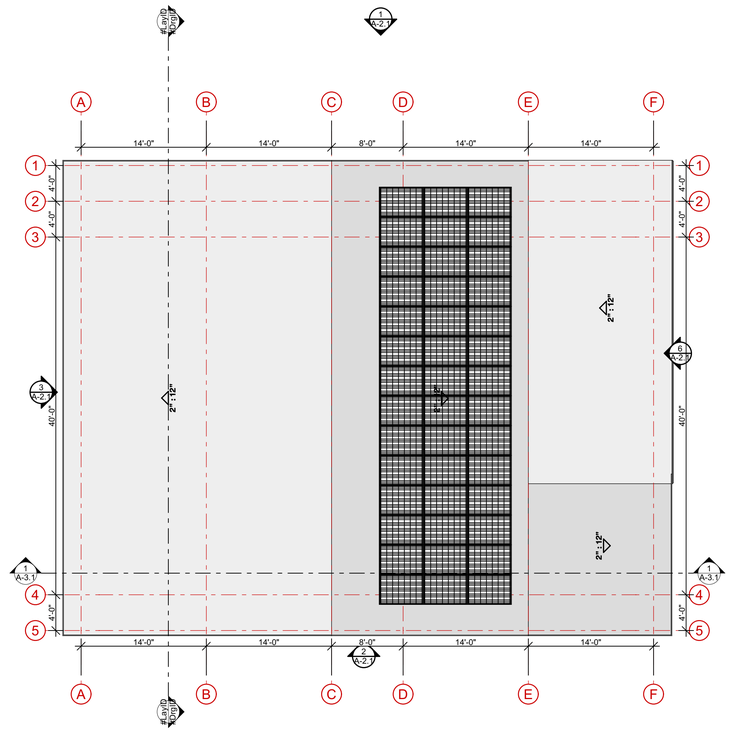
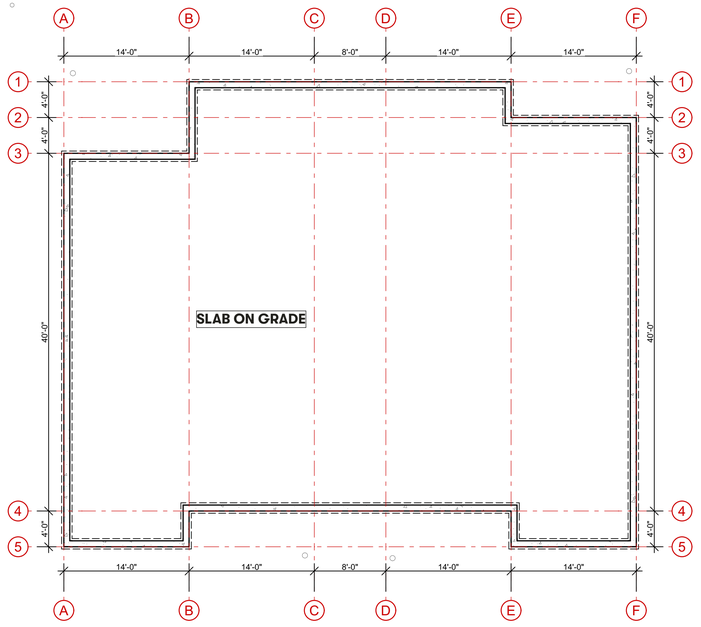
FLOOR TYPES / ROOF TYPES
A-0.2



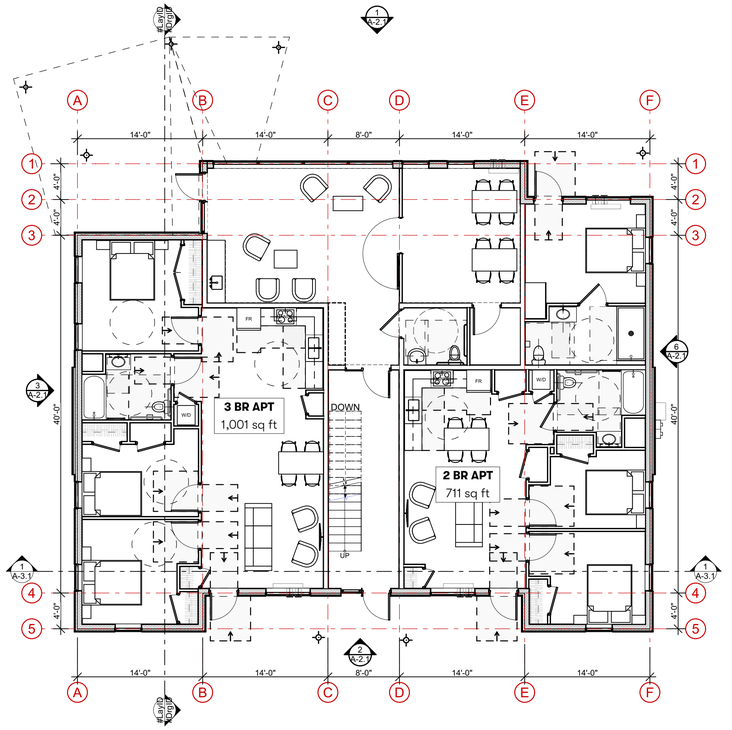
3 2ND FLOOR
SCALE: 1/8" = 1'-0"



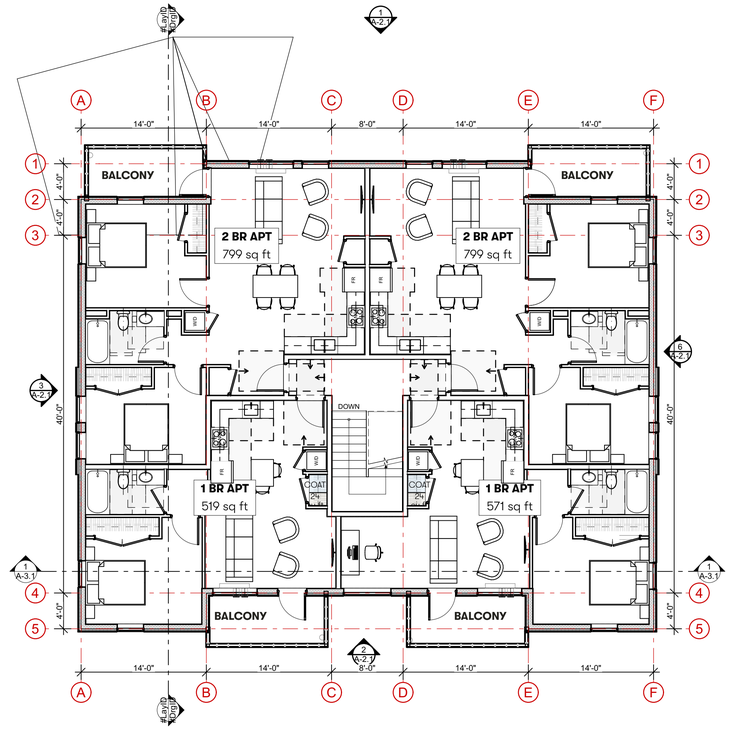
5 ROOF PLAN
SCALE: 1/8" = 1'-0"



1 FOUNDATION
SCALE: 1/8" = 1'-0"



2 GROUND FLOOR
SCALE: 1/8" = 1'-0"



4 3RD FLOOR
SCALE: 1/8" = 1'-0"

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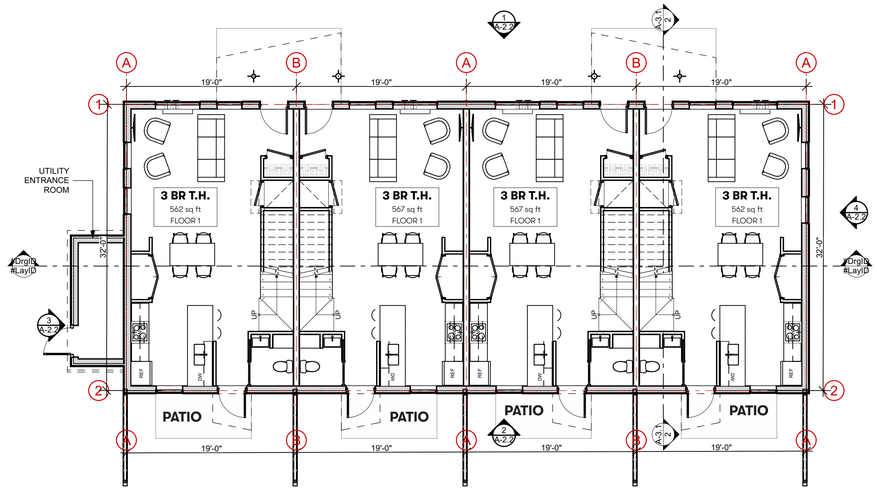
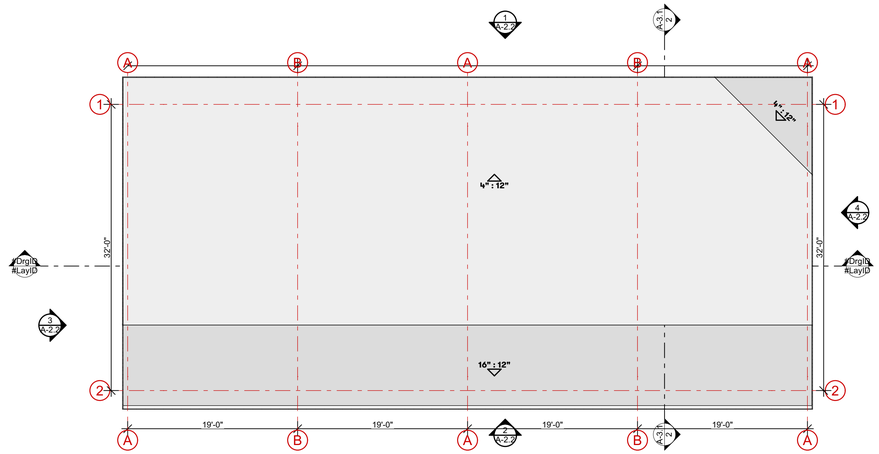
PLANS: COMMUNITY FLATS
A-1.1



3 GROUND FLOOR

SCALE: 1/8" = 1'-0"

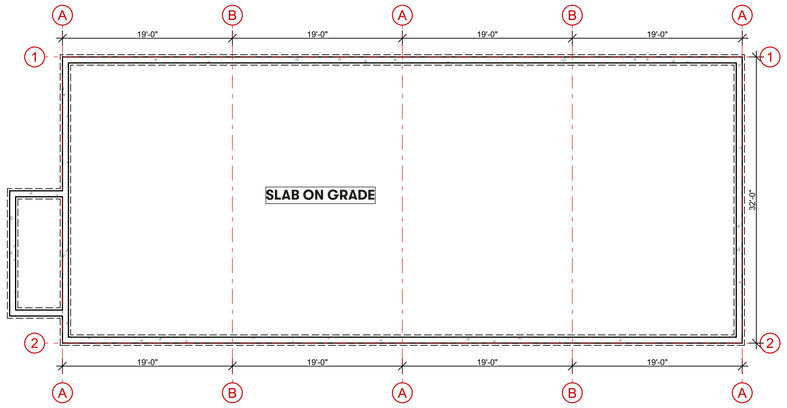
0 4' 8' 16'



2 ROOF PLAN

SCALE: 1/8" = 1'-0"

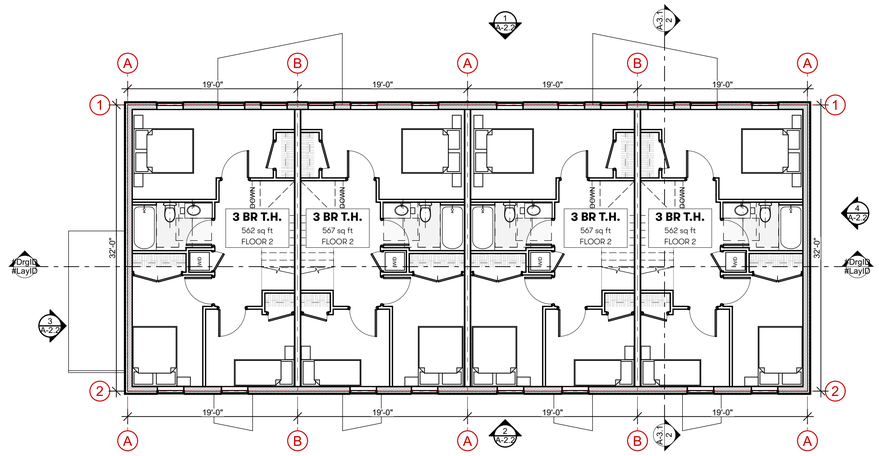
0 4' 8' 16'



1 FOUNDATION

SCALE: 1/8" = 1'-0"

0 4' 8' 16'



4 2ND FLOOR

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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PROJECT

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500 Washington Ave., Suite 202
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p: 207 775-2655

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Aceto Landscape Architects
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p: 207 221-3390

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Yarmouth, ME 04096
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ELECTRICAL
MEGA Engineering
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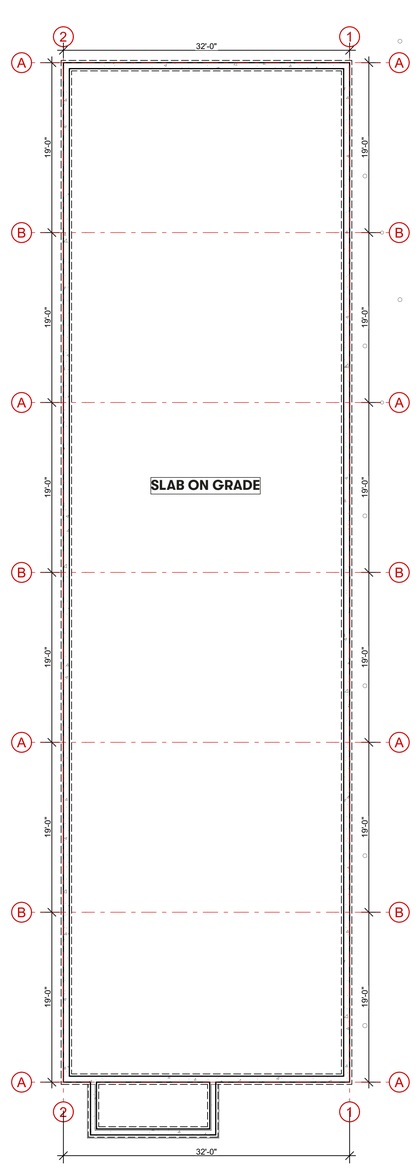
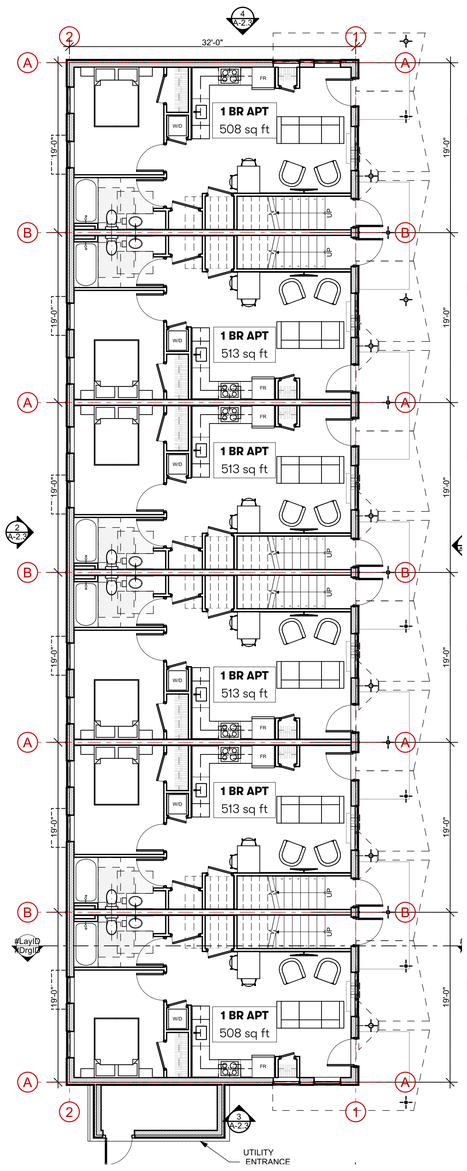
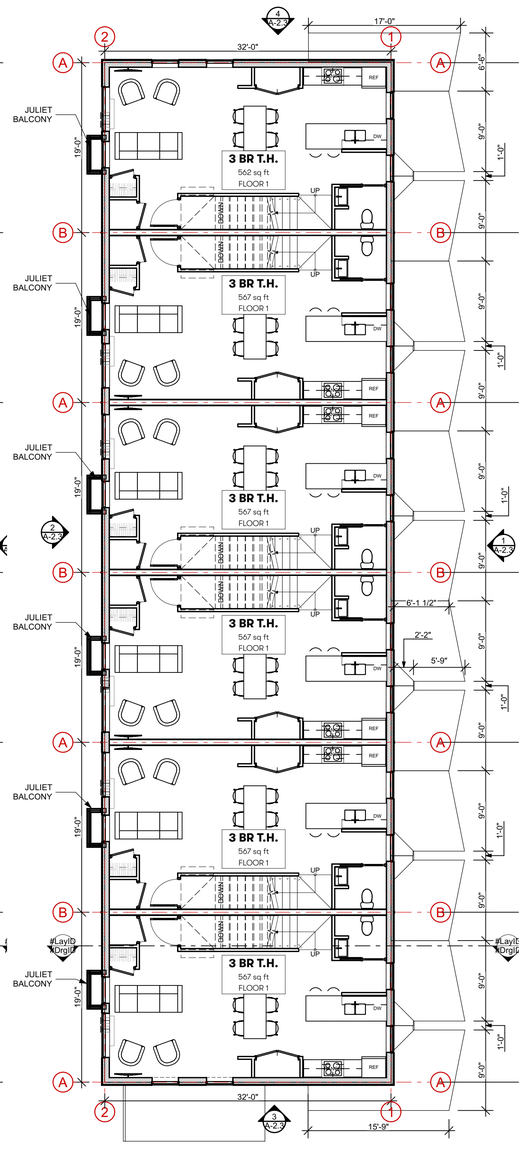
PLANS:
TOWNHOMES
A-1.2



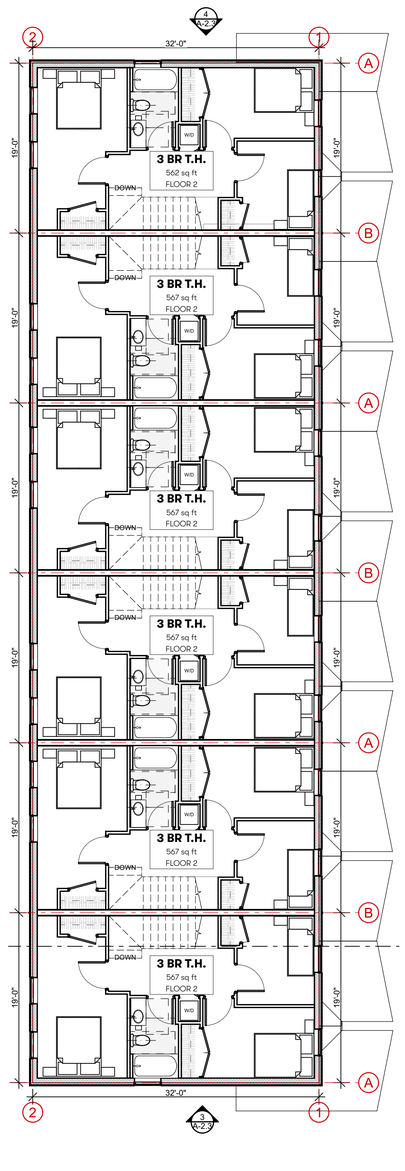
1 FOUNDATION
SCALE: 1/8" = 1'-0"



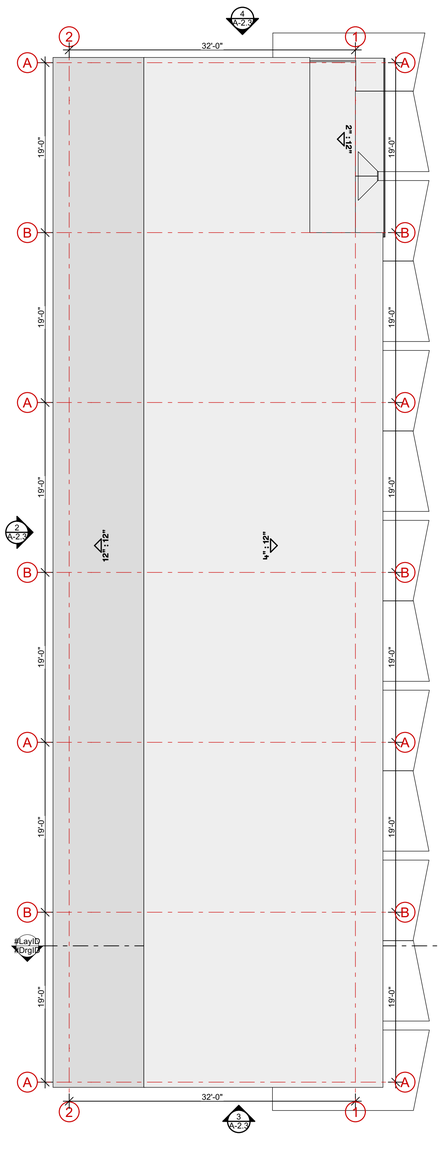
2 GROUND FLOOR
SCALE: 1/8" = 1'-0"



3 2ND FLOOR
SCALE: 1/8" = 1'-0"



4 3RD FLOOR
SCALE: 1/8" = 1'-0"



5 ROOF PLAN
SCALE: 1/8" = 1'-0"

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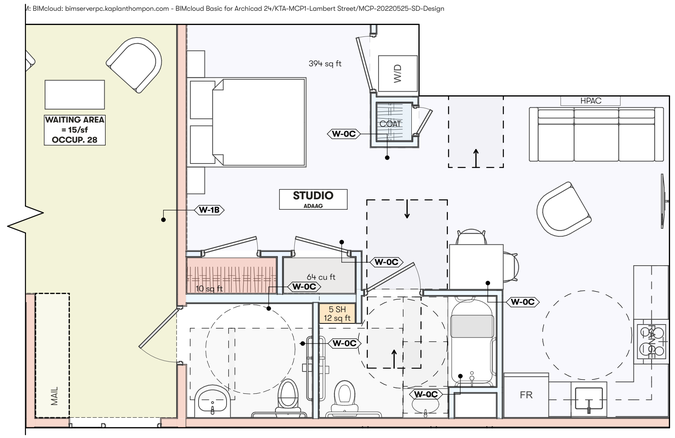
PLANS: ROWHOMES
A-1.3

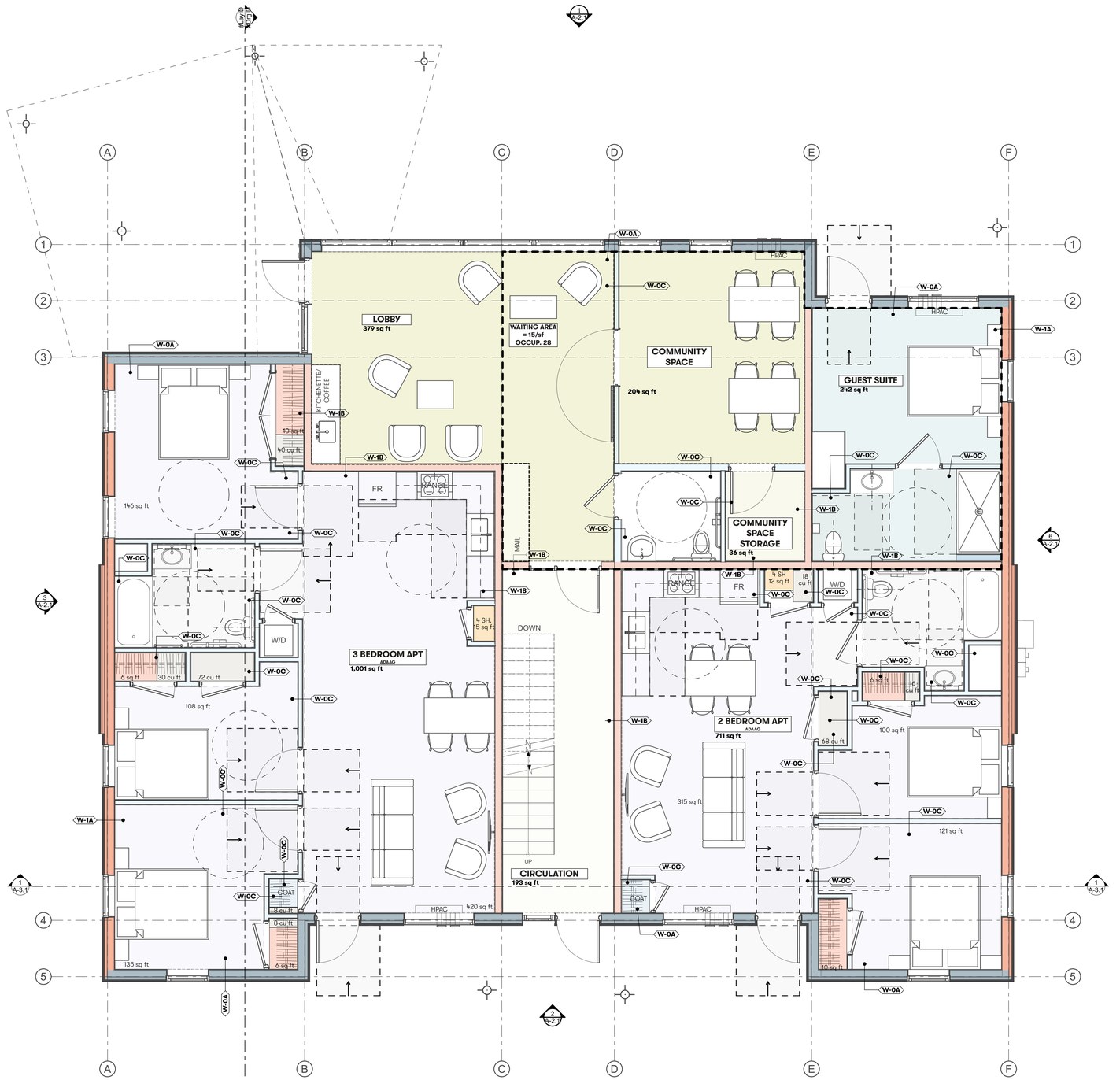
K: BIMcloud: bimserverpc.kaplanthompson.com - BIMcloud Basic for Archicad 24/KTA-MCP1-Lambert Street/MCP-20220525-SD-Design



2 ALTERNATE GROUND FLOOR

SCALE: 1/4" = 1'-0"

0 2' 4' 8'



1 GROUND FLOOR

SCALE: 1/4" = 1'-0"

0 2' 4' 8'

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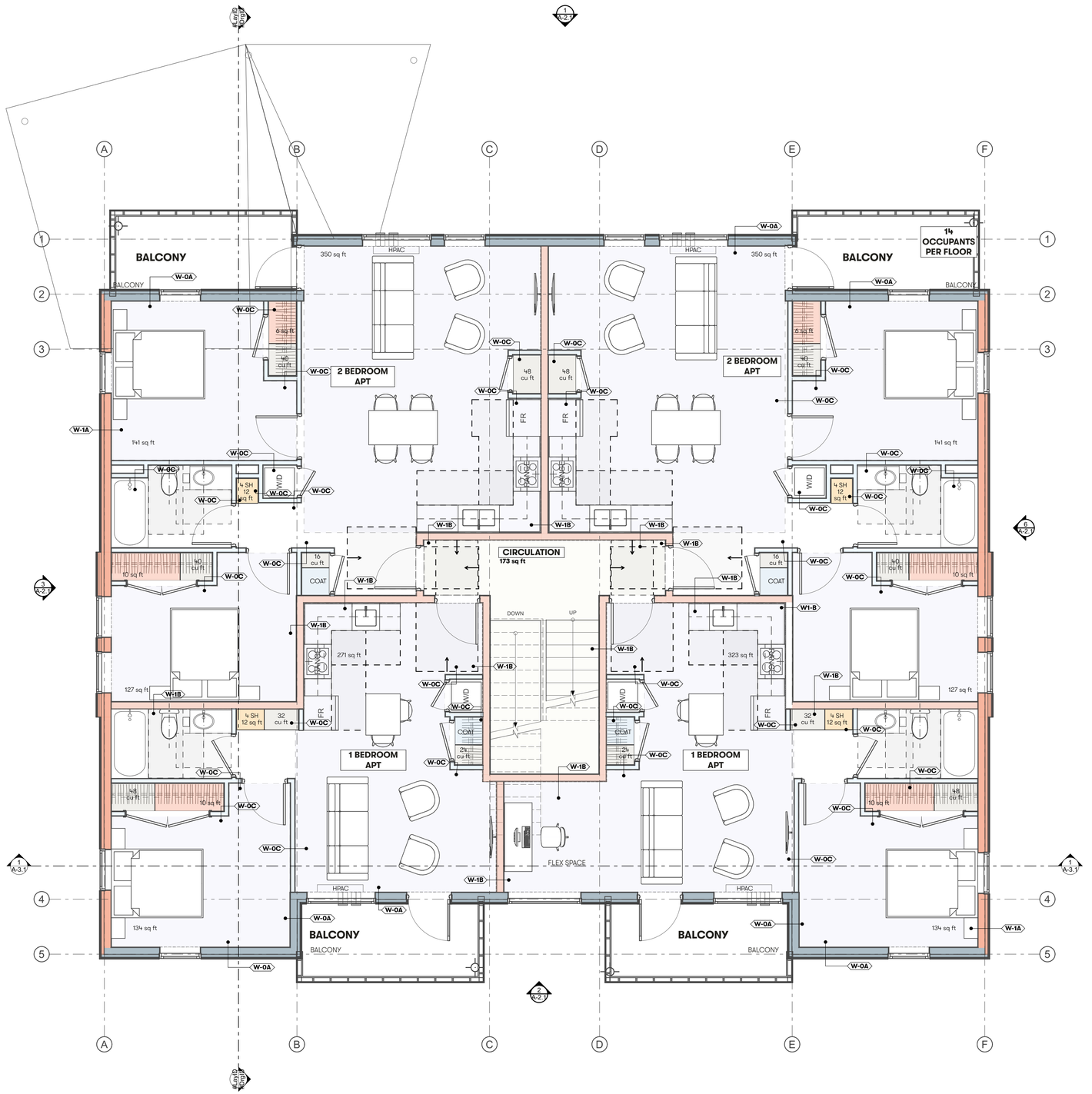
ENLARGED GROUND FLOOR PLAN: COMMUNITY FLATS

A-1.4



1 2ND FLOOR

SCALE: 1/4" = 1'-0"

0 2' 4' 8'

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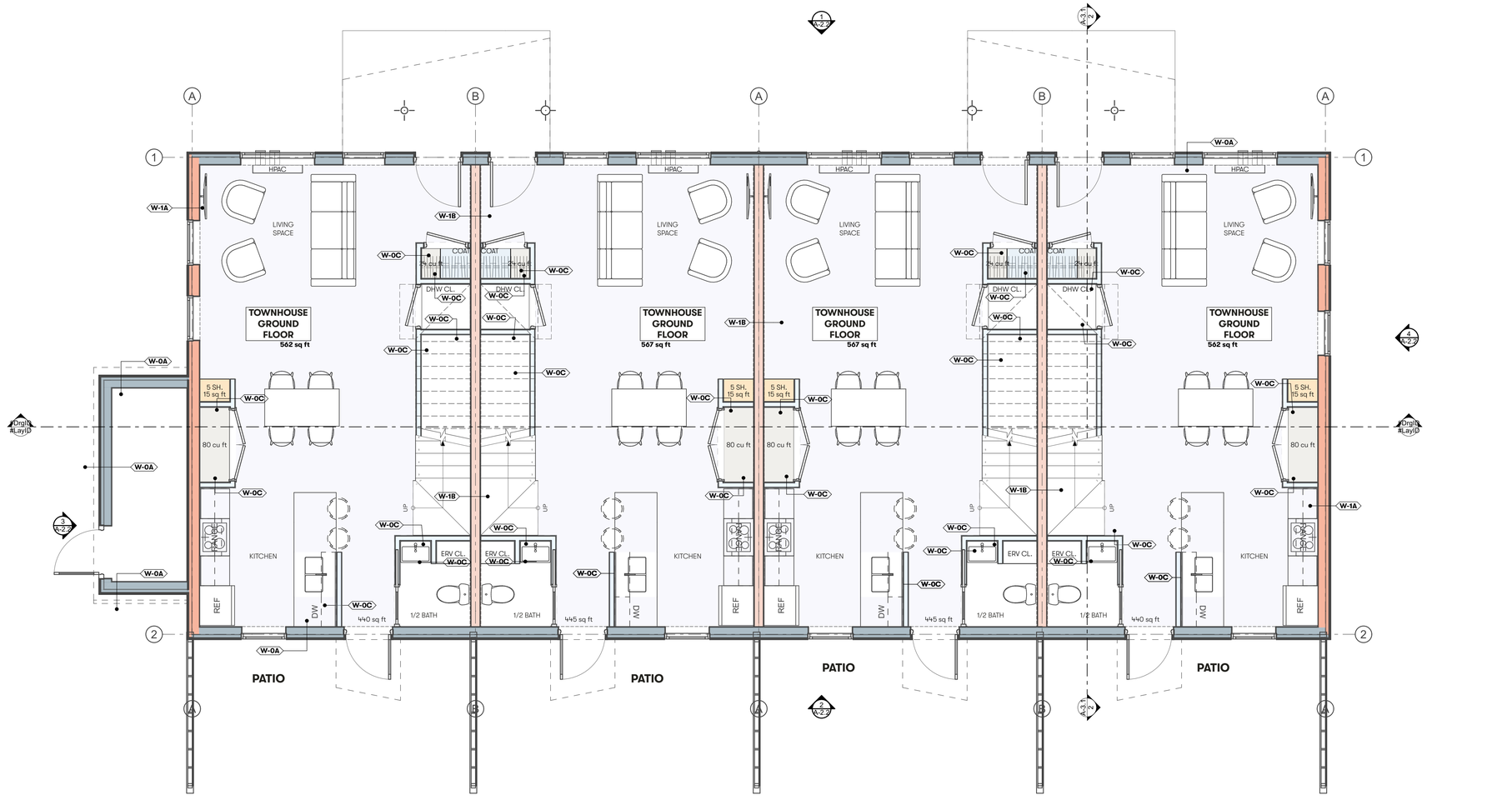
ENLARGED UPPER LEVELS FLOOR PLAN: COMMUNITY FLATS

A-1.5



1 GROUND FLOOR

SCALE: 1/4" = 1'-0"

0 2' 4' 8'

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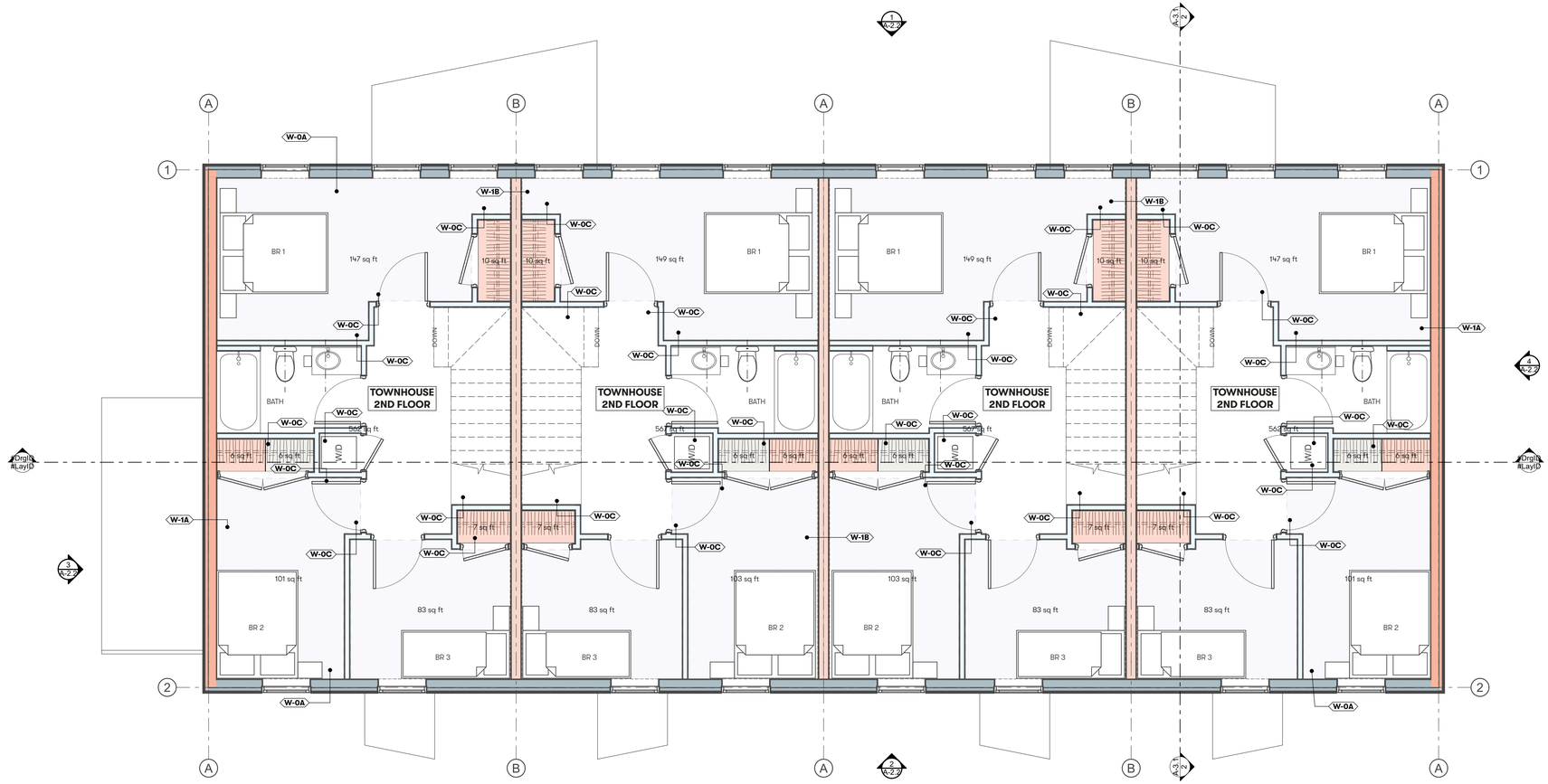
ENLARGED GROUND FLOOR PLAN: TOWNHOMES

A-1.6



1 2ND FLOOR
SCALE: 1/4" = 1'-0"

0 2' 4' 8'

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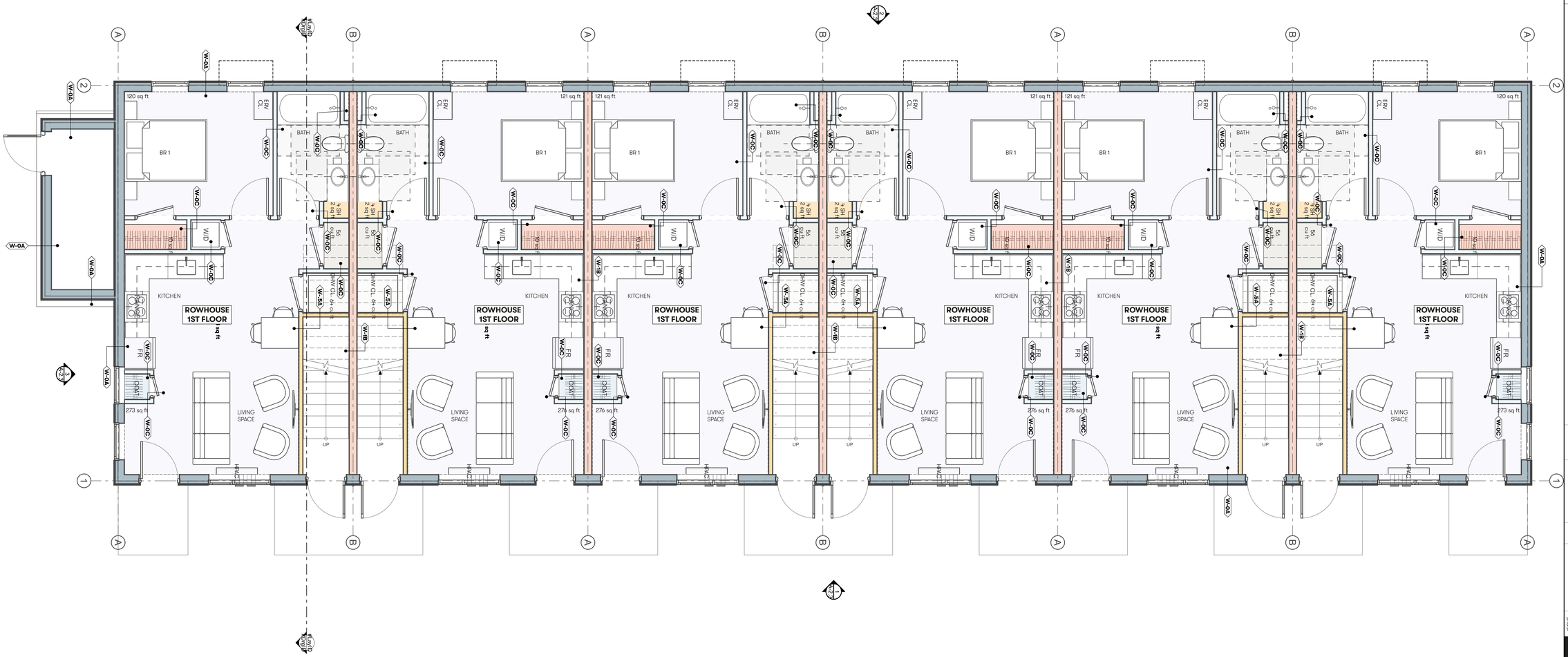
ENLARGED UPPER LEVEL FLOOR PLAN: TOWNHOMES
A-1.7



1 GROUND FLOOR

SCALE: 1/4" = 1'-0"

0 2' 4' 8'

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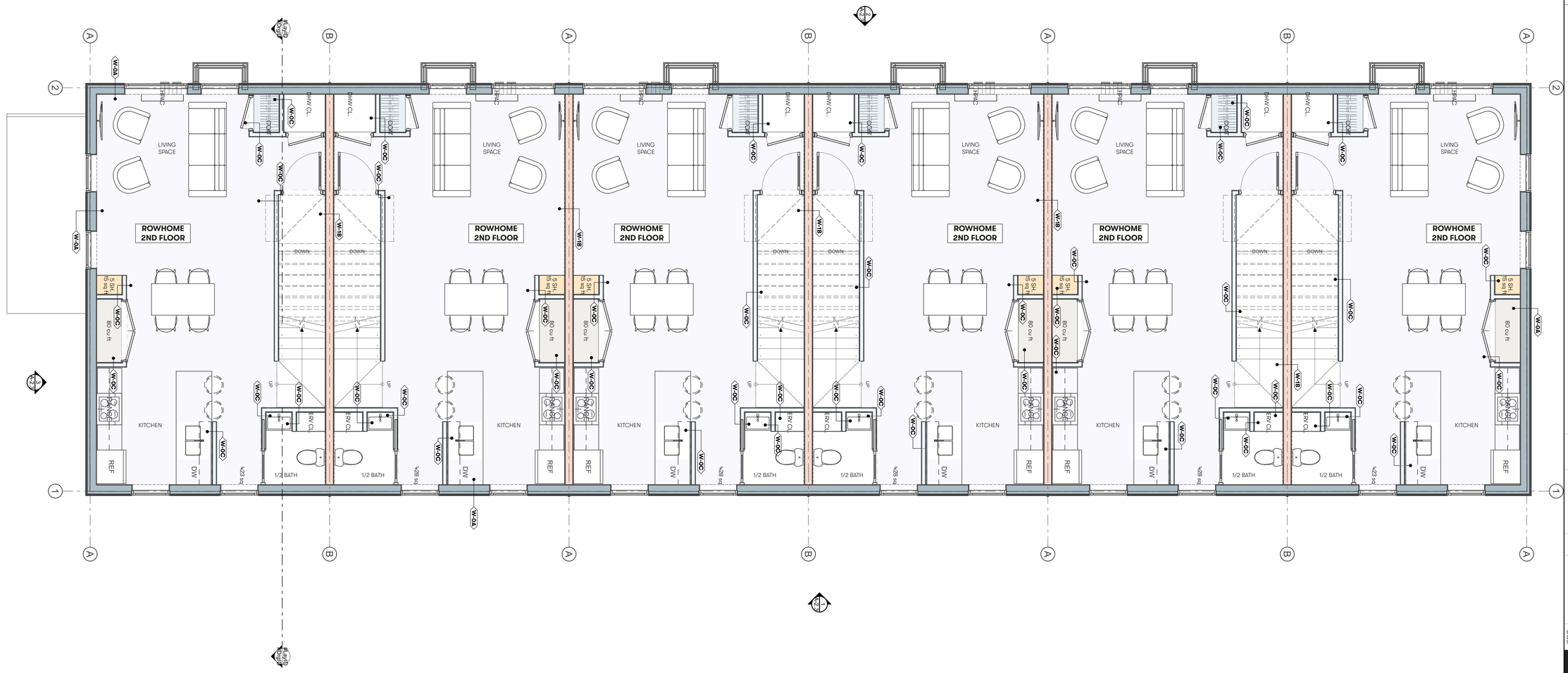
ENLARGED GROUND FLOOR PLAN: ROWHOMES

A-1.8


ROWHOME 2ND FLOOR
LIVING SPACE
KITCHEN
1/2 BATH
REF
DW
RANGE
DOWN
UP
HVAC
DHW CL.
CLOSET
5 SH 15 sq ft
80 cu ft
W-GD
W-DO
W-1B
W-4A
W-4B
W-4C
W-4D
W-4E
W-4F
W-4G
W-4H
W-4I
W-4J
W-4K
W-4L
W-4M
W-4N
W-4O
W-4P
W-4Q
W-4R
W-4S
W-4T
W-4U
W-4V
W-4W
W-4X
W-4Y
W-4Z
W-5A
W-5B
W-5C
W-5D
W-5E
W-5F
W-5G
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W-5I
W-5J
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W-5L
W-5M
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W-5O
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W-6E
W-6F
W-6G
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W-6J
W-6K
W-6L
W-6M
W-6N
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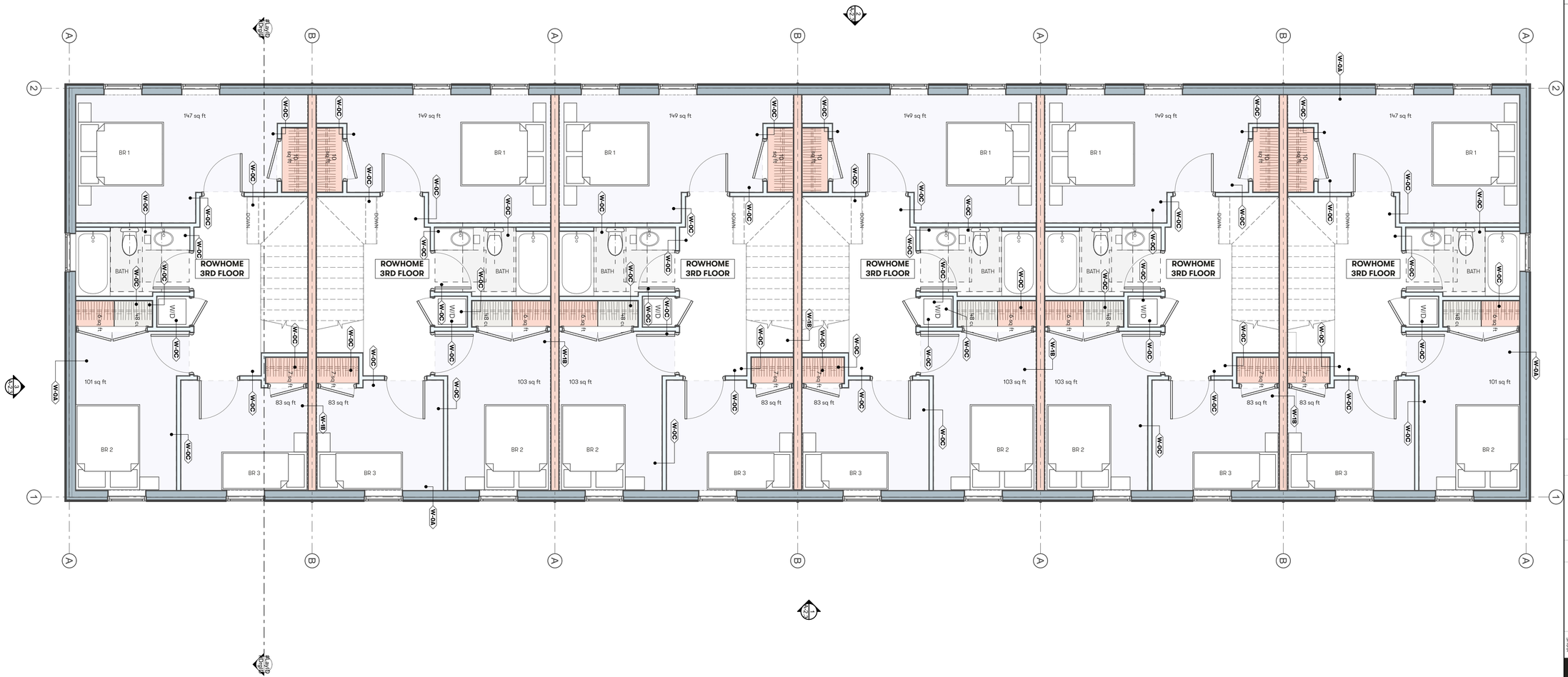

1 3RD FLOOR
SCALE: 1/4" = 1'-0"

0 2' 4' 8'

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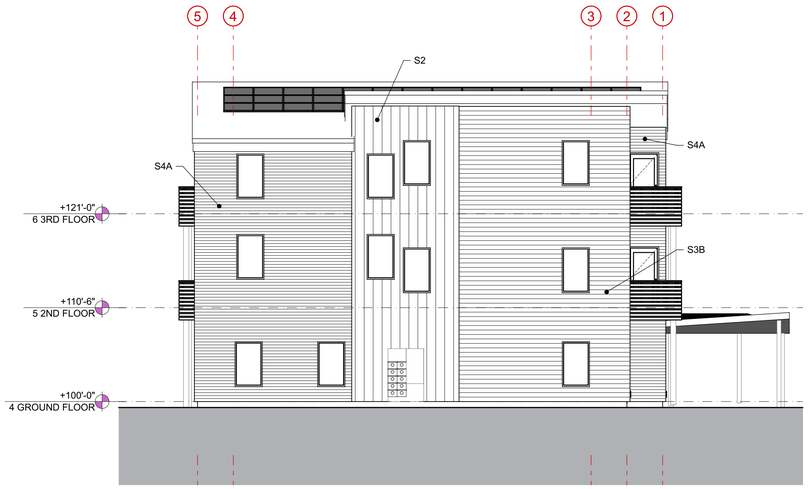
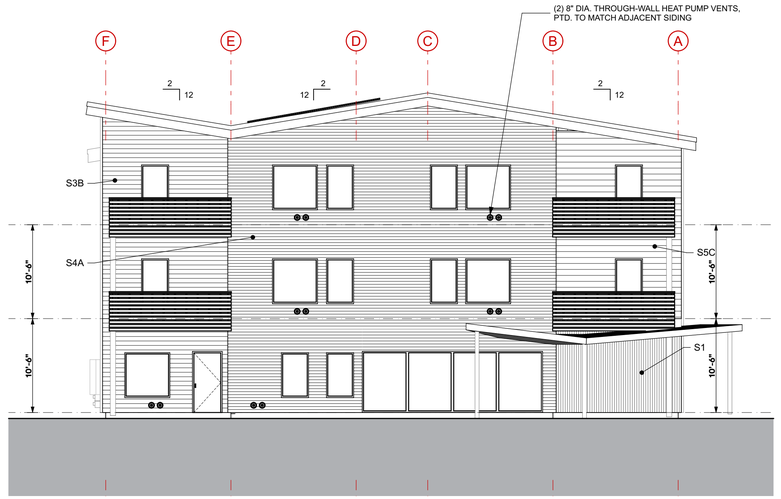
ENLARGED 3RD FLOOR PLAN: ROWHOMES
A-1.10

SIDING KEY

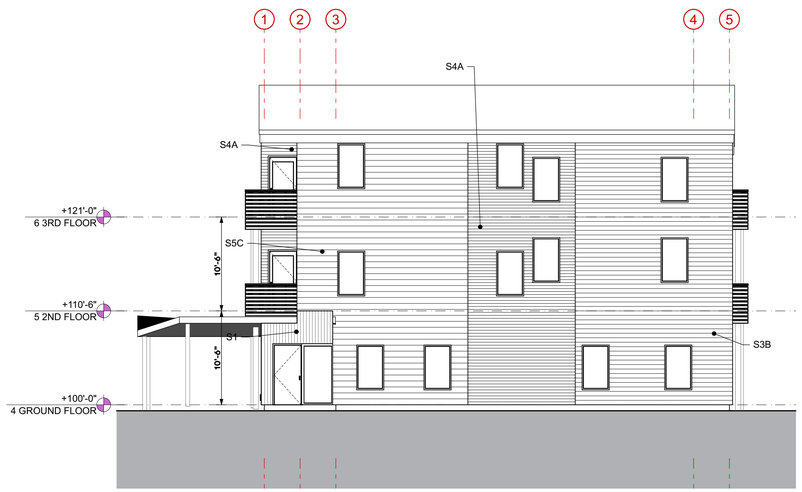
S1	CEDAR SHIPLAP SIDING	**S4B**	TRADITIONAL LAP SIDING 6" REVEAL (DARK GREY)
S2	REVERSE BOARD AND BATTEN SIDING	**S4C**	TRADITIONAL LAP SIDING 8" REVEAL (DARK GREY)
S3A	TRADITIONAL LAP SIDING 4" REVEAL (LIGHT GREY)	**S5A**	TRADITIONAL LAP SIDING 4" REVEAL (TAUPE)
S3B	TRADITIONAL LAP SIDING 6" REVEAL (LIGHT GREY)	**S5B**	TRADITIONAL LAP SIDING 6" REVEAL (TAUPE)
S3C	TRADITIONAL LAP SIDING 8" REVEAL (LIGHT GREY)	**S5C**	TRADITIONAL LAP SIDING 8" REVEAL (TAUPE)
S4A	TRADITIONAL LAP SIDING 4" REVEAL (DARK GREY)		



6 COMMUNITY FLATS, SIDE ELEVATION
SCALE: 1/8" = 1'-0"
0 4' 8' 16'



1 COMMUNITY FLATS, ENTRY ELEVATION
SCALE: 1/8" = 1'-0"
0 4' 8' 16'



3 COMMUNITY FLATS, SIDE ELEVATION
SCALE: 1/8" = 1'-0"
0 4' 8' 16'



2 COMMUNITY FLATS, PATIO ELEVATION
SCALE: 1/8" = 1'-0"
0 4' 8' 16'

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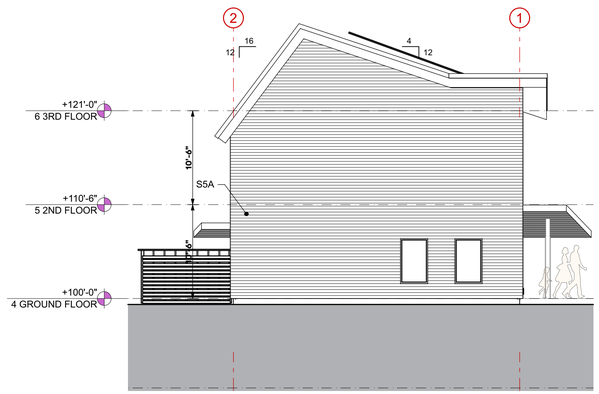
PHASE	Schematic Design

ELEVATIONS: COMMUNITY FLATS
A-2.1

SIDING KEY

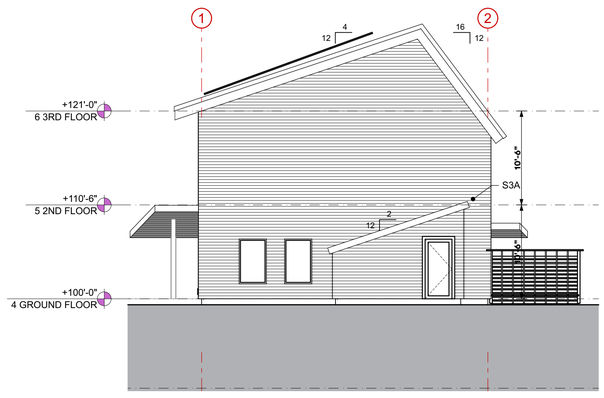
S1	CEDAR SHIPLAP SIDING	**S4B**	TRADITIONAL LAP SIDING 6" REVEAL (DARK GREY)
S2	REVERSE BOARD AND BATTEN SIDING	**S4C**	TRADITIONAL LAP SIDING 8" REVEAL (DARK GREY)
S3A	TRADITIONAL LAP SIDING 4" REVEAL (LIGHT GREY)	**S5A**	TRADITIONAL LAP SIDING 4" REVEAL (TAUPE)
S3B	TRADITIONAL LAP SIDING 6" REVEAL (LIGHT GREY)	**S5B**	TRADITIONAL LAP SIDING 6" REVEAL (TAUPE)
S3C	TRADITIONAL LAP SIDING 8" REVEAL (LIGHT GREY)	**S5C**	TRADITIONAL LAP SIDING 8" REVEAL (TAUPE)
S4A	TRADITIONAL LAP SIDING 4" REVEAL (DARK GREY)		



4 TOWNHOME, SIDE ELEVATION
SCALE: 1/8" = 1'-0"
0 4' 8' 16'



1 TOWNHOMES, ENTRY ELEVATION
SCALE: 1/8" = 1'-0"
0 4' 8' 16'



3 TOWNHOME, SIDE ELEVATION
SCALE: 1/8" = 1'-0"
0 4' 8' 16'



2 TOWNHOMES, BACK ELEVATION
SCALE: 1/8" = 1'-0"
0 4' 8' 16'

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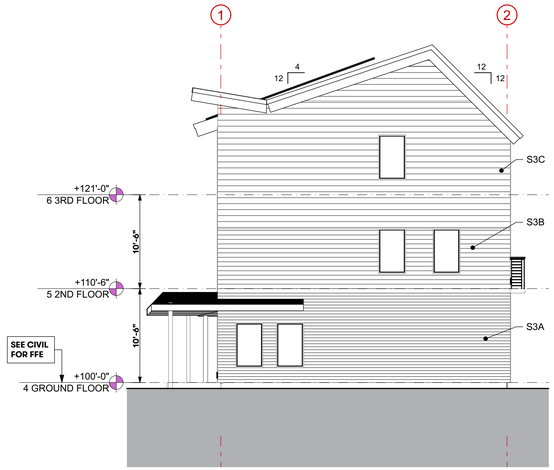
ELEVATIONS: TOWNHOMES
A-2.2

SIDING KEY

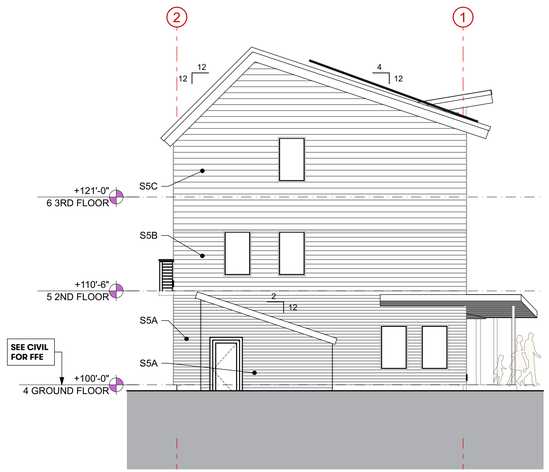
S1	CEDAR SHIPLAP SIDING	**S4B**	TRADITIONAL LAP SIDING 6" REVEAL (DARK GREY)
S2	REVERSE BOARD AND BATTEN SIDING	**S4C**	TRADITIONAL LAP SIDING 8" REVEAL (DARK GREY)
S3A	TRADITIONAL LAP SIDING 4" REVEAL (LIGHT GREY)	**S5A**	TRADITIONAL LAP SIDING 4" REVEAL (TAUPE)
S3B	TRADITIONAL LAP SIDING 6" REVEAL (LIGHT GREY)	**S5B**	TRADITIONAL LAP SIDING 6" REVEAL (TAUPE)
S3C	TRADITIONAL LAP SIDING 8" REVEAL (LIGHT GREY)	**S5C**	TRADITIONAL LAP SIDING 8" REVEAL (TAUPE)
S4A	TRADITIONAL LAP SIDING 4" REVEAL (DARK GREY)		



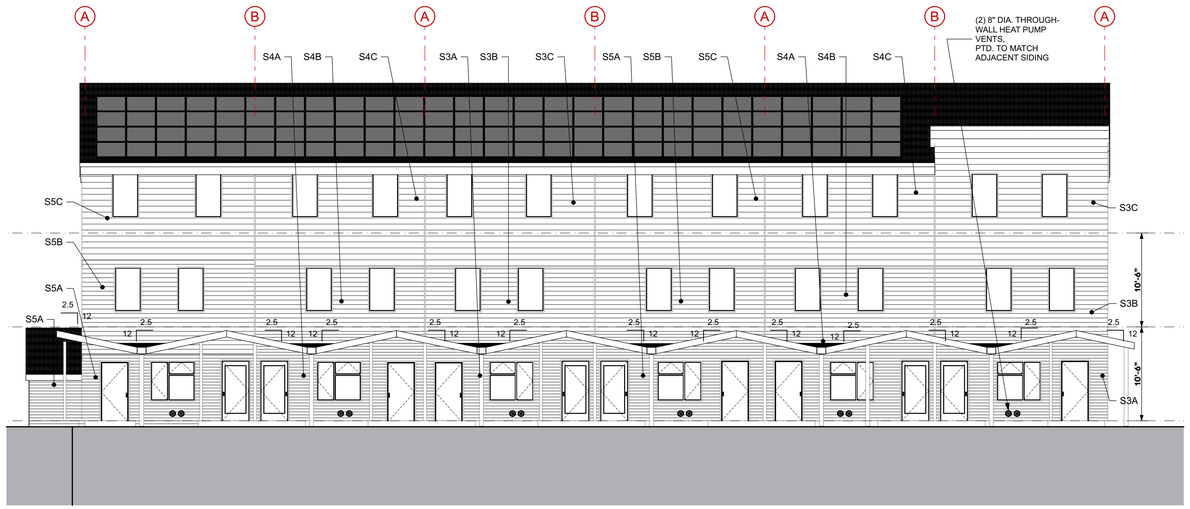
4 ROWHOME, SIDE ELEVATION
SCALE: 1/8" = 1'-0"
0 4' 8' 16'



2 ROWHOME, BACK ELEVATION
SCALE: 1/8" = 1'-0"
0 4' 8' 16'



3 ROWHOME, SIDE ELEVATION
SCALE: 1/8" = 1'-0"
0 4' 8' 16'



1 ROWHOME, ENTRY ELEVATION
SCALE: 1/8" = 1'-0"
0 4' 8' 16'

Kaplan Thompson Architects
102 Exchange Street
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PROJECT
Base Building Design

Portland, ME 04101

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500 Washington Ave., Suite 202
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p: 207 775-2655

LANDSCAPE ARCHITECTURE
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p: 207 221-3390

STRUCTURAL
Trillium Engineering
189 Main Street, Suite 200
Yarmouth, ME 04096
p: 207 307-0872

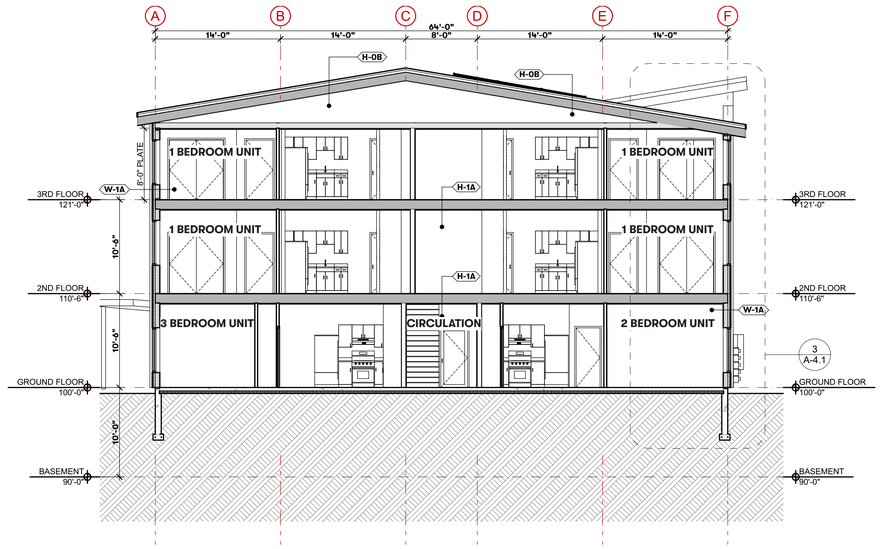
ELECTRICAL
MEGA Engineering
p: 207 749-4514

ISSUE NO	DESCRIPTION	CH'D	CHANGE NAME	DATE
A	Schematic Design			6/6/22

NOT FOR CONSTRUCTION

PROJECT	MCP
DATE	6/14/22
REVISED 1	
REVISED 2	
DRAWN BY	AW, SS, CB
PHASE	Schematic Design

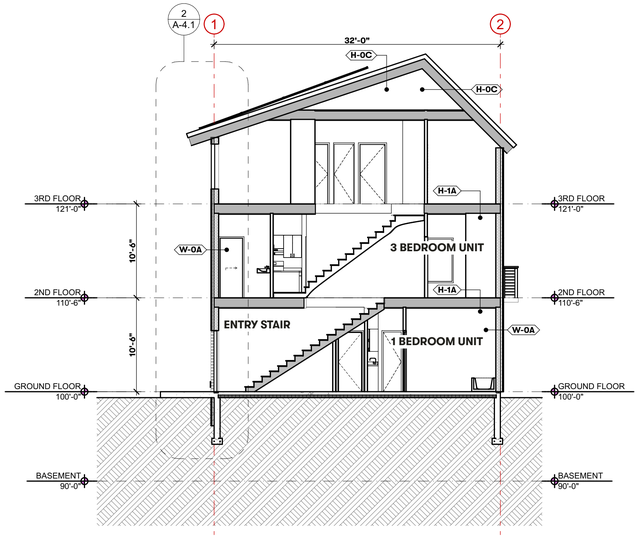
ELEVATIONS: ROWHOMES
A-2.3



1 SECTION:COMMUNITY FLATS

SCALE: 1/8" = 1'-0"

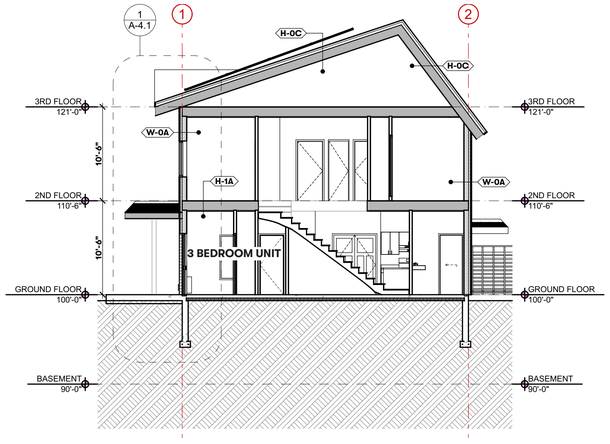
0 4' 8' 16'



3 SECTION: ROWHOME

SCALE: 1/8" = 1'-0"

0 4' 8' 16'



2 SECTION:TOWNHOME

SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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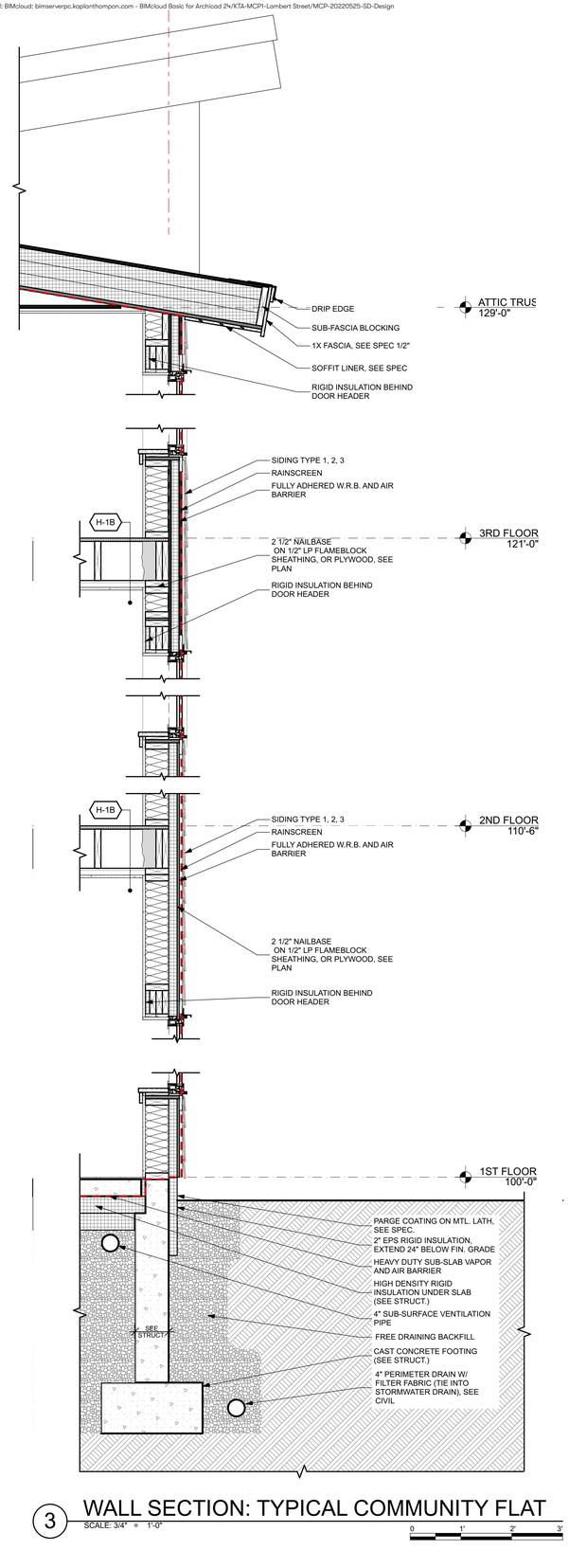
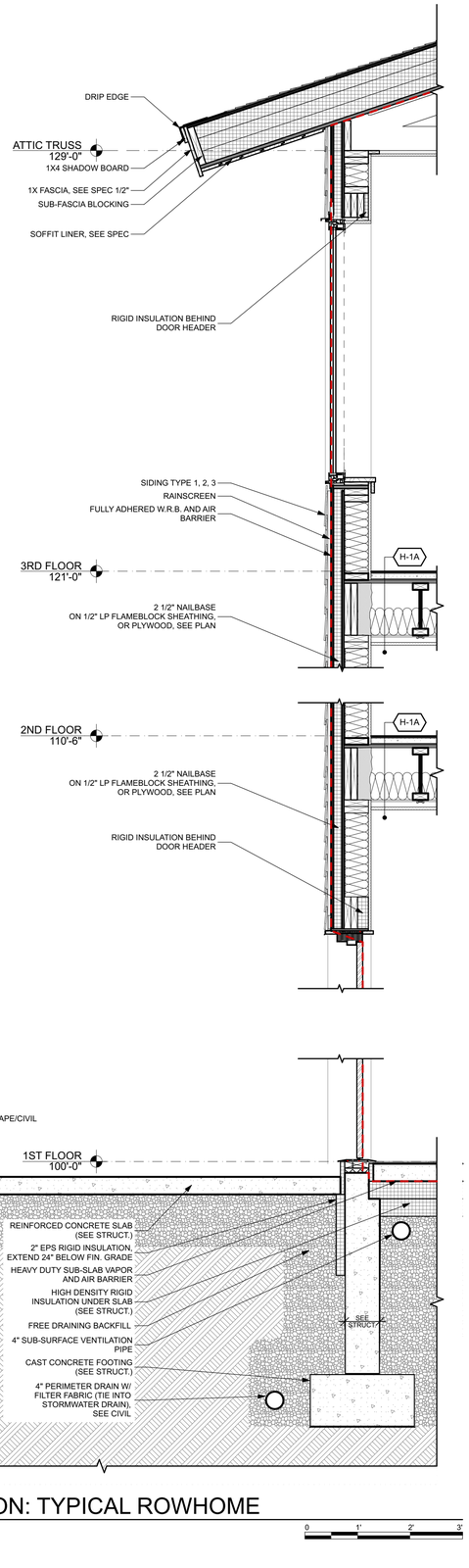
BUILDING SECTIONS

A-3.1



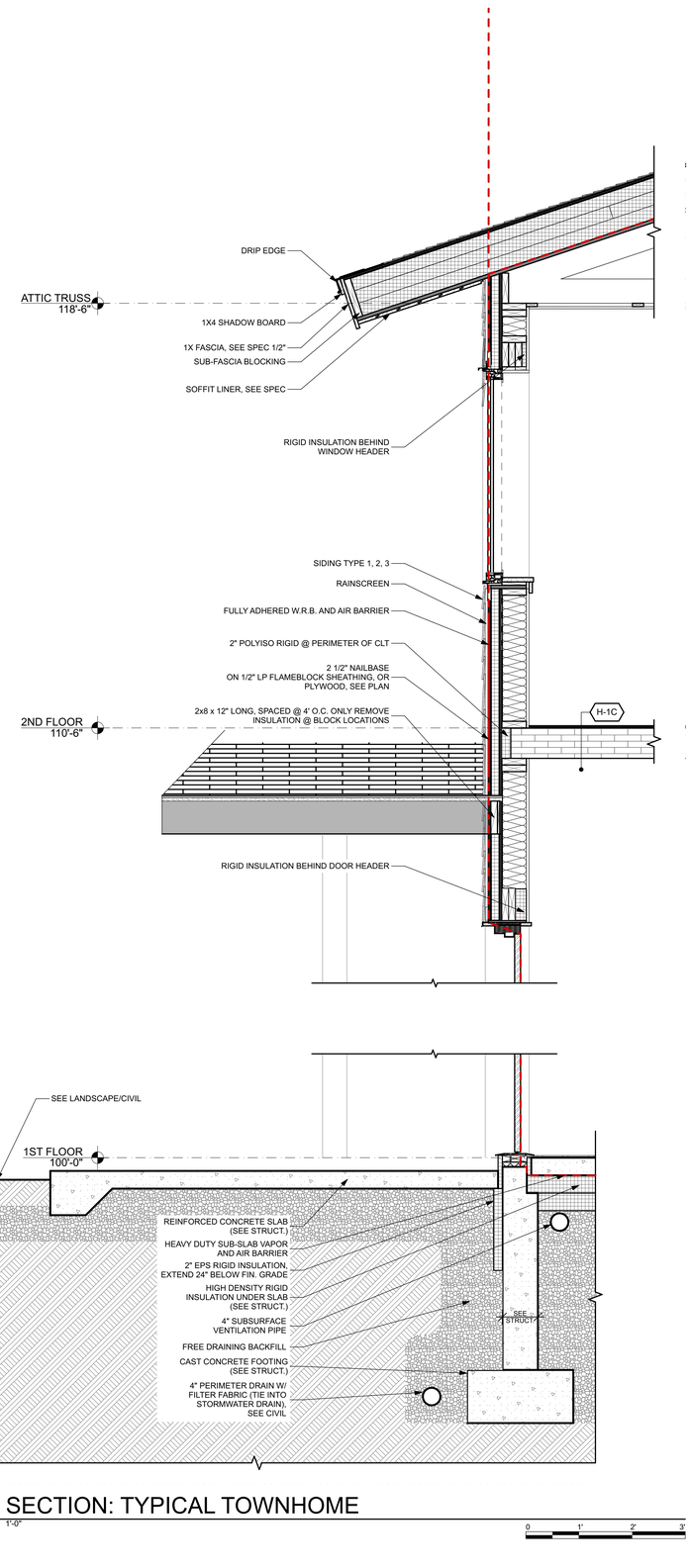
3 WALL SECTION: TYPICAL COMMUNITY FLAT

SCALE: 3/4" = 1'-0"



2 WALL SECTION: TYPICAL ROWHOME

SCALE: 3/4" = 1'-0"



1 WALL SECTION: TYPICAL TOWNHOME

SCALE: 3/4" = 1'-0"

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A	Schematic Design			6/6/22

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REVISED 2	
DRAWN BY	AW, SS, CB
PHASE	Schematic Design

WALL SECTIONS
A-4.1

LAMBERT WOODS
MAJOR SITE PLAN



CONCEPTUAL RENDERING OF WASHINGTON AVE



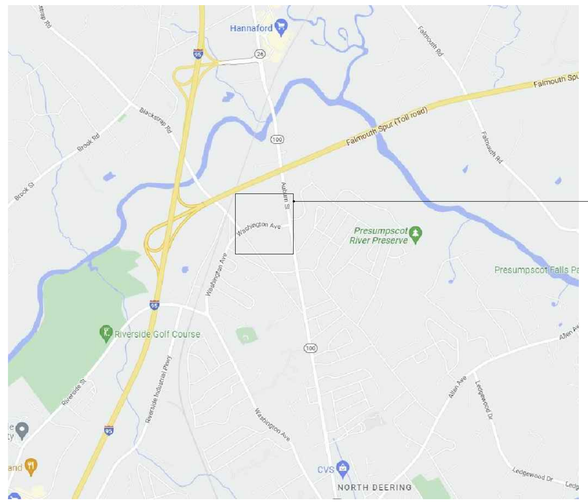
CONCEPTUAL RENDERING OF THE MEWS

06.17.2022 MAJOR SITE PLAN SUBMITTAL

SHEET INDEX
LANDSCAPE DRAWINGS

	▪	L0-00	COVER SHEET
	▪	L0-01	NOTES
	▪	L1-00	OVERALL MATERIALS PLAN
	▪	L2-00	OVERALL PLANTING PLAN
	▪	L2-01	ENLARGED NORTH PLANTING PLAN
	▪	L2-02	ENLARGED SOUTH PLANTING PLAN
	▪	L2-03	ENLARGED ROW PLANTING PLANS
	▪	L3-00	DETAILS
	▪	L3-01	DETAILS

VICINITY MAP:



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SEAL

PROJECT TITLE

LAMBERT WOODS
PORTLAND, ME

PREPARED FOR

MAINE COOPERATIVE
DEVELOPMENT PARTNERS

REVISIONS | DATE

ISSUE DATE

MAJOR SITE PLAN
JUNE 17, 2022

SHEET TITLE

COVER

SHEET INFORMATION

L 0-00

NOT FOR CONSTRUCTION

LAYOUT AND MATERIALS NOTES

1. REVIEW CONTRACT DOCUMENTS AND FIELD CONDITIONS BEFORE COMMENCING WORK. REPORT ERRORS, OMISSIONS, OR INCONSISTENCIES PROMPTLY TO THE LANDSCAPE ARCHITECT.
2. CONTACT UTILITY COMPANIES AS REQUIRED BY STATE AND LOCAL REGULATIONS BEFORE DIGGING. LOCATE AND MARK EXISTING UTILITIES.
3. THE CONTRACTOR SHALL OBTAIN ALL PERMITS WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK.
4. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS.
5. DIMENSIONS REFERRED TO AS "EQUAL" INDICATE SPACING WHICH IS EQUIDISTANT MEASURED TO THE CENTERLINES.
6. MEASUREMENTS ARE TO THE FINISHED FACE OF BUILDINGS, WALLS, OR OTHER FIXED SITE IMPROVEMENTS. DIMENSIONS TO CENTERLINES ARE IDENTIFIED.
7. INSTALL INTERSECTING ELEMENTS AT 90-DEGREE ANGLES, UNLESS OTHERWISE NOTED.
8. PROVIDE EXPANSION JOINTS WHERE FLATWORK MEETS VERTICAL STRUCTURES, SUCH AS WALLS, CURBS, STEPS, AND OTHER HARDSCAPE.
9. CONTROL JOINTS SHOULD BE SPACED NO GREATER THAN TEN (10) LINEAR FEET MAXIMUM, UNLESS OTHERWISE SPECIFIED.
10. CONTROL JOINT RECOMMENDATIONS TO MINIMIZE CRACKING SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL.
11. ALL TOP OF WALLS AND FENCES ARE TO BE HELD LEVEL, UNLESS OTHERWISE SPECIFIED.
12. SAMPLES OF SPECIFIED MATERIALS SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO ORDERING.
13. THE CONTRACTOR SHALL PROVIDE A FULL-SCALE MOCKUP AND RECEIVE APPROVAL FROM THE LANDSCAPE ARCHITECT BEFORE BEGINNING CONSTRUCTION OF PAVEMENT.
14. ALL SITE FURNITURE LOCATIONS ARE TO BE STAKED BY CONTRACTOR AND APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

PLANTING NOTES

1. CONTACT UTILITY COMPANIES AS REQUIRED BY STATE AND LOCAL REGULATIONS BEFORE DIGGING. LOCATE AND MARK EXISTING UTILITIES.
2. REFER TO CIVIL ENGINEER'S GRADING PLANS FOR FINAL GRADING AND UTILITY LOCATIONS.
3. THE CONTRACTOR SHALL OBTAIN ALL PERMITS WHICH ARE NECESSARY TO PERFORM THE PROPOSED WORK.
4. LANDSCAPE ARCHITECT TO REVIEW PLANT MATERIALS AT SOURCE OR BY PHOTOGRAPHS PRIOR TO DIGGING OR SHIPPING OF PLANT MATERIAL.
5. CONTRACTOR IS TO VERIFY ALL QUANTITIES. IF QUANTITIES ON PLANT LIST DIFFER FROM GRAPHIC INDICATIONS, GRAPHICS SHALL PREVAIL.
6. EXACT LOCATIONS OF TREES AND B&B SHRUBS ARE TO BE STAKED BY THE CONTRACTOR FOR LANDSCAPE ARCHITECT REVIEW AND APPROVAL PRIOR TO INSTALLATION. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST PLANTS TO EXACT LOCATION IN THE FIELD.
7. PLANT MATERIAL NOT MEETING THE STANDARDS CONTAINED WITHIN CONTRACT DOCUMENTS SHALL BE REPLACED AT NO COST TO THE OWNER.
8. PROVIDE MATCHING SIZES AND FORMS FOR EACH PLANT OF THE SAME SPECIES DESIGNATED ON THE DRAWINGS UNLESS OTHERWISE INDICATED.
9. ALL PLANT MATERIAL IS TO BE INSTALLED PLUMB/PER THE SPECIFICATIONS CONTAINED WITHIN THE CONTRACT DOCUMENTS.
10. PRUNE EXISTING AND/OR NEWLY PLANTED TREES ONLY AS DIRECTED BY THE LANDSCAPE ARCHITECT.
11. PLANT MATERIAL SHALL HAVE ALL WIRE, TWINE, BASKETS, BURLAP, AND ALL OTHER NON-BIODEGRADABLE CONTAINMENT MATERIAL REMOVED FROM THE TRUNK AND/OR ROOT BALL OF THE PLANT PRIOR TO PLANTING. ROOT BALLS SHALL BE FREE OF WEEDS.
12. FINISH GRADE OF PLANTING BEDS SHALL BE ONE (1) INCH BELOW ADJACENT PAVER OR HEADER, UNLESS OTHERWISE SPECIFIED.
13. MULCH OR PLANTING BED DRESSING SHALL BE PLACED IN ALL PLANTING AREAS AS SPECIFIED. MULCH OR PLANTING BED DRESSING SHALL NOT BE PLACED WITHIN SIX (6) INCHES OF TREE TRUNKS. MULCHING SHOULD BE REPEATED ANNUALLY DURING THE AUTUMN TO A 3" DEPTH, SOIL PEP MULCH SHALL BE USED UNLESS OTHERWISE SPECIFIED..
14. ALL PLANT MATERIAL SHOULD RECEIVE AN ORGANIC FERTILIZER IN LIMITED APPLICATION FOLLOWING INSTALLATION. TYPE AND APPLICATION RATE AND METHOD OF APPLICATION TO BE SPECIFIED BY THE CONTRACTOR & APPROVED BY THE LANDSCAPE ARCHITECT.
15. STOCKPILED PLANT MATERIAL TO BE PLACED IN THE SHADE AND PROPERLY HAND-WATERED UNTIL PLANTED.
16. PRESERVE & PROTECT ALL EXISTING VEGETATION INDICATED TO REMAIN AT ALL TIMES.
17. TO THE GREATEST EXTENT POSSIBLE, TOPSOIL THAT IS REMOVED DURING CONSTRUCTION SHALL BE STOCKPILED FOR LATER USE IN AREAS REQUIRING REVEGETATION/PLANTING.
18. ALL MATERIALS USED SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARDS FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
19. ALL DISTURBED AREAS ARE TO BE REVEGETATED

SEEDING NOTES

1. REVEGETATED AREAS ARE TO BE HYRO-SEEDED, FOLLOWED BY THE APPLICATION OF STRAW MULCH.
2. APPLY STRAW MULCH AT A MINIMUM RATE OF 1.5 TONS PER ACRE OF AIR DRY MATERIAL. SPREAD STRAW MULCH UNIFORMLY OVER THE AREA WITH MECHANICAL MULCH SPREADER/CRIMPER. DO NOT MULCH WHEN WIND VELOCITY EXCEEDS 10 MPH.
3. IMMEDIATELY UPON COMPLETION OF THE MULCHING AND BINDING OPERATION, THE SEEDED AREAS SHALL BE IRRIGATED, KEEPING THE TOP 2 INCHES OF SOIL EVENLY MOIST UNTIL SEED HAS UNIFORMLY GERMINATED AND GROWN TO A HEIGHT OF 2 INCHES.
4. WATERING APPLICATION SHALL BE DONE IN A MANNER WHICH WILL PROVIDE UNIFORM COVERAGE BUT WHICH WILL NOT CAUSE EROSION, MOVEMENT, OR DAMAGE TO THE FINISHED SURFACE.

GRADING AND DRAINAGE NOTES

1. MATERIALS/WASTE CREATED BY REMOVAL PROCEDURES SHALL BE LEGALLY DISPOSED OF AWAY FROM THE JOB SITE.
2. NOTIFY LOCAL UNDERGROUND SERVICE COMPANIES FOR UTILITY FINDS 48 HOURS PRIOR TO ANY EXCAVATION.
3. THE CONTRACTOR IS TO REVIEW ARCHITECTURAL DRAWINGS FOR THE VERIFICATION OF CONNECTIONS TO DRAINS OVER STRUCTURE.
4. THE CONTRACTOR IS TO REVIEW ARCHITECTURAL DRAWINGS FOR THE VERIFICATION OF WATERPROOFING OF SLAB PENETRATIONS.
5. THE CONTRACTOR IS TO REVIEW CIVIL ENGINEER'S DRAWINGS FOR THE VERIFICATION OF CONNECTIONS TO DRAINS.
6. GRADING AND EXCAVATION WORK SHALL BE COMPLETED DURING DRY AND NON-FREEZING CONDITIONS.
7. POSITIVE DRAINAGE SHALL BE PROVIDED AWAY FROM ALL STRUCTURES.
8. SOIL COMPACTION SHALL BE 95% PROCTOR DENSITY MINIMUM BENEATH PAVEMENTS, STEPS, WALLS AND LIGHT FOUNDATIONS, UNLESS OTHERWISE SPECIFIED.

ABBREVIATIONS TABLE

APPROX	APPROXIMATE
ARCH	ARCHITECT
AVG	AVERAGE
B+B	BALED AND BURLAPPED
BF	BOTTOM OF FOOTING
BLDG	BUILDING
BM	BENCHMARK
BOC	BACK OF CURB
BR	BOTTOM OF RAMP
BS	BOTTOM OF STEP
BW	BOTTOM OF WAL
CAL	CALIPER
CAP	CAPACITY
CF	CUBIC FEET
CHAM	CHAMFER
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CL	CENTER LINE
CLR	CLEARANCE
CM	CENTIMETER
CO	CLEAN OUT
COMP	COMPACTED
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CU	CUBIC
CY	CUBIC YARD
DEMO	DEMOLISH, DEMOLITION
DIA	DIAMETER
DIM	DIMENSION
DTL	DETAIL
DWG	DRAWING
E	EAST
EA	EACH
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ENG	ENGINEER
EQ	EQUAL
EQUIP	EQUIPMENT
EST	ESTIMATE
E.W.	EACH WAY
EXIST	EXISTING
EXP	EXPANSION, EXPOSED
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FIN	FINISH
FL	FLOW LINE
FOW	FACE OF WAL
FT	FOOT (FEET)
FTG	FOOTING
GA	GAUGE
GAL	GALVANIZED
GEN	GENERAL
HORIZ	HORIZONTAL
HP	HIGH POINT
HT	HEIGHT
ID	INSIDE DIAMETER
INV	INVERT ELEVATION
IN	INCH(ES)
INCL	INCLUDE(D)
IRR	IRRIGATION
JT	JOINT
LIN	LINEAR
LF	LINEAR FEET
LP	LOW POINT
LT	LIGHT
MATL	MATERIAL
MAX	MAXIMUM
MEMB	MEMBRANE
MD	MAIN DISCONNECT SWITCH
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
N	NORTH
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPP	OPPOSITE
PAR	PARALLEL
PC	POINT OF CURVATURE
PE	POLYURETHANE
PERF	PERFORATED
PED	PEDESTRIAN
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PT	POINT, POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PVR	PAVER
QTY	QUANTITY
R	RADIUS
REF	REFERENCE
REINF	REINFORCE(D)
REQ'D	REQUIRED
REV	REVISION, REVISED
ROW	RIGHT OF WAY
RT	RIGHT
S	SOUTH
SS	SANITARY SEWER
SCH	SCHEDULE
SD	STORM DRAIN
SEC	SECTION
SF	SQUARE FOOT (FEET)
SHT	SHEET
SIM	SIMILAR
SNT	SEALANT
SPECS	SPECIFICATIONS
SQ	SQUARE
ST	STORM SEWER
SY	SQUARE YARD
STA	STATION
STD	STANDARD
STL	STEEL
STRL	STRUCTURAL
SYM	SYMMETRICAL
T&B	TOP AND BOTTOM
TBC	TOP OF BACK CURB
TC	TOP OF CURB
TF	TOP OF FOOTING
TRANS	ELECTRIC TRANSFORMER
TOC	TOP OF CONCRETE
TOPO	TOPOGRAPHY
TSL	TOP OF SLAB
TR	TOP OF RAMP
TS	TOP OF STEP
TW	TOP OF WAL
TYP	TYPICAL
VAR	VARIES
VERT	VERTICAL
VEH	VEHICLE
VOL	VOLUME
W/	WITH
W/O	WITHOUT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
YD	YARD
@	AT

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SEAL

PROJECT TITLE

LAMBERT WOODS
PORTLAND, ME

PREPARED FOR

MAINE COOPERATIVE
DEVELOPMENT PARTNERS

REVISIONS DATE

ISSUE DATE

MAJOR SITE PLAN
JUNE 17, 2022

SHEET TITLE

NOTES

SHEET INFORMATION

L 0-01

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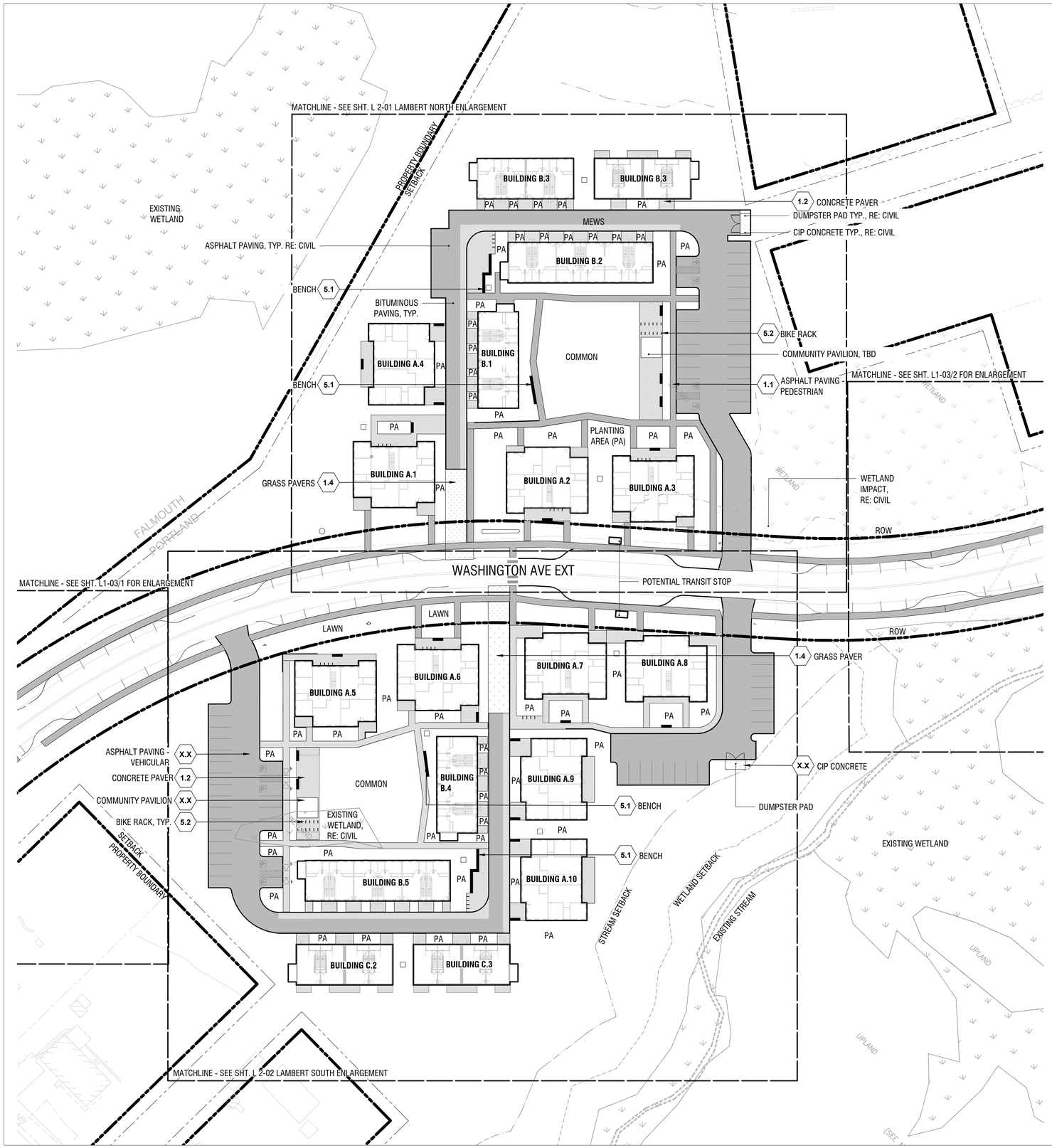

MATERIALS PALETTE

SYMBOL	TYPE	QTY
	CAST IN PLACE CONCRETE	256 SF
	CONCRETE PAVERS	24,024 SF
	GRASS PAVE	2,971 SF
	BITUMINOUS PAVING	54,049 SF
	CONCRETE CURB (FLUSH)	XX LF
	BENCH SEATING	APPROX. XX LF
	BIKE RACK	APPROX. XX

SITE KEYNOTES:

			DETAIL / SHEET
1.0	PAVEMENTS, RAMPS, CURBS		
	1.1	ASPHALT PAVING - PEDESTRIAN	1/L3-00
	1.2	CONCRETE PAVER	2/L3-00
	1.3	STONEDUST PATH	3/L3-00
	1.4	GRASS PAVERS	4/L3-01
2.0	JOINTING		
	X.X	NOT USED AT THIS TIME	X/XX-XX
3.0	STEPS		
	X.X	NOT USED AT THIS TIME	X/XX-XX
4.0	SITE WALLS/ EMBANKMENTS		
	X.X	NOT USED AT THIS TIME	X/XX-XX
5.0	SITE FURNITURE		
	5.1	STONE BENCH	5/L3-00
	5.2	BIKE RACK	6/L3-00
6.0	RAILINGS, BARRIERS, FENCING		
	X.X	NOT USED AT THIS TIME	X/XX-XX
7.0	SITE LIGHTING		DETAIL / SHEET
	7.1	LIGHT POLE BASE	7/L3-00
8.0	DRAINAGE		
	X.X	NOT USED AT THIS TIME	X/XX-XX
9.0	PLANTING AND LANDSCAPE		
	9.1	DECIDUOUS TREE PLANTING	1/L3-01
	9.2	MULTI-STEM TREE PLANTING	2/L3-01
	9.3	EVERGREEN TREE PLANTING	3/L3-01
	9.4	SHRUBS PLANTING	4/L3-01
	9.5	PERENNIAL PLANTING	5/L3-01
	9.6	TREE PROTECTION	6/L3-01
	9.7	METAL EDGING	4/L3-00
10.0	MISCELLANEOUS ELEMENTS		

0 20 40 80

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JUNE 17, 2022

SHEET TITLE

OVERALL MATERIALS PLAN

SHEET INFORMATION

L 1-00

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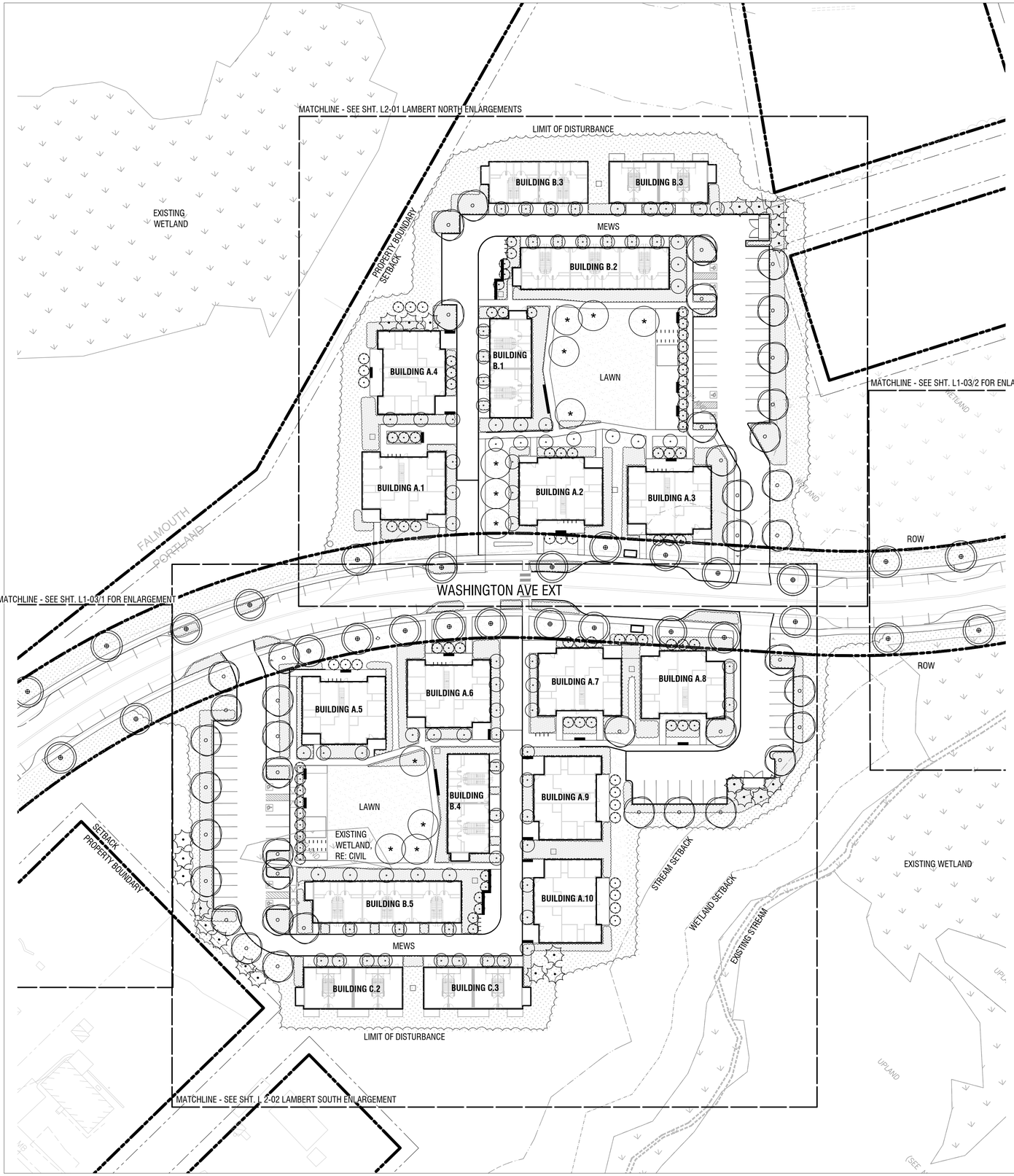

PLANT LIST

SYMB.	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
TREES					
AF	ACER X FREEMANII 'ARMSTRONG'	UPRIGHT ARMSTRONG MAPLE	81	2.5" CAL. MIN.	PER PLAN
AM	AMELANCHIER CANADENSIS	SERVICEBERRY (MULTI-STEM)	87	2.5" CAL. MIN.	PER PLAN
GT	GLEDITSIA TRIACANTHOS X INERMIS	HONEY LOCUST	42	2.5" CAL. MIN.	PER PLAN
QA	QUERCUS ALBA	WHITE OAK	12	2.5" CAL. MIN.	PER PLAN
UA	ULMUS AMERICANA	AMERICAN ELM	39	2.5" CAL. MIN.	PER PLAN
TREES - EVERGREEN					
AB	ABIES FRASERI	FRASER FIR	TBD	7-8'	PER PLAN
PS	PINUS STROBUS	WHITE PINE	23	7-8'	PER PLAN
SHRUBS					
CS	CORNUS SERICEA	RED-TWIG DOGWOOD	TBD	#5	PER PLAN
IL	ILLEX GLABRA 'SHAMROCK'	INKBERRY	TBD	#5	PER PLAN
RA	RHUS AROMATICA	LOW-GRO SUMAC	TBD	#2	PER PLAN
VD	VIBURNUM DENTATUM 'CHICAGO LUSTRE"	ARROWWOOD VIBURNUM	TBD	#5	PER PLAN
VN	VIBURNUM NUDUM 'WINTERTHUR'	SMOOTH VIBURNUM	TBD	#5	PER PLAN
PERENNIALS AND ORNAMENTAL GRASSES					
AH	AMSONIA HUBRICHTII	BLUE STAR	TBD	#1	PER PLAN
AT	ASTILBE	FALSE SPIREA	TBD	#1	PER PLAN
CA	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	TBD	#1	PER PLAN
LE	LIRIOPE	LILYTURF	TBD	#1	PER PLAN
PV	PANICUM VIRGATUM 'ROTSTRAHLBUSCH'	SWITCH GRASS	TBD	#1	PER PLAN
MS	MISCANTHUS SINENSIS 'MY FAIR MAIDEN'	MAIDEN GRASS	TBD	#1	PER PLAN
NE	NEPETA "WALKER'S LOW"	CATMINT	TBD	#1	PER PLAN
SS	SCHIZACHYRIUM SCOPARIUM 'PRAIRIE BLUES'	LITTLEBLUE STEM	TBD	#1	PER PLAN
SH	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	TBD	#1	PER PLAN

SEEDING

RESTORATION MIX
NEW ENGLAND CONSERVATION/WILDLIFE MIX
MFR: NEW ENGLAND WETLAND PLANTS
TOTAL AREA: 33,885 SF
APPLICATION RATE 25LBS/ACRE | 1750 SQ FT/LB
(SEEDING RATE MAY VARY DEPENDING ON TIME OF YEAR, SEE SPEC. SHEET FOR INSTRUCTIONS)

LAWN
WILDFLOWER FARM'S ECO-LAWN GRASS SEED
TOTAL AREA: 19,805 SF
ECO-LAWN IS A DROUGHT-RESISTANT GRASS THAT REQUIRES MOWING ONLY ONCE PER MONTH. EACH 5 POUND BAG OF SEED COVERS 1,000 SQUARE FEET. A THICK HEALTHY LAWN IS THE BEST DEFENCE AGAINST WEEDS, DISEASE, DROUGHT AND INSECT DAMAGE.

SITE KEYNOTES:

		DETAIL / SHEET
1.0	PAVEMENTS, RAMPS, CURBS	
1.1	ASPHALT PAVING - PEDESTRIAN	1/L3-00
1.2	CONCRETE PAVER	2/L3-00
1.3	STONEDUST PATH	3/L3-00
1.4	GRASS PAVERS	4/L3-01
2.0	JOINTING	
X.X	NOT USED AT THIS TIME	X/XX-XX
3.0	STEPS	
X.X	NOT USED AT THIS TIME	X/XX-XX
4.0	SITE WALLS/ EMBANKMENTS	
X.X	NOT USED AT THIS TIME	X/XX-XX
5.0	SITE FURNITURE	
5.1	STONE BENCH	5/L3-00
5.2	BIKE RACK	6/L3-00
6.0	RAILINGS, BARRIERS, FENCING	
X.X	NOT USED AT THIS TIME	X/XX-XX
7.0	SITE LIGHTING	
7.1	LIGHT POLE BASE	7/L3-00
8.0	DRAINAGE	
X.X	NOT USED AT THIS TIME	X/XX-XX
9.0	PLANTING AND LANDSCAPE	
9.1	DECIDUOUS TREE PLANTING	1/L3-01
9.2	MULTI-STEM TREE PLANTING	2/L3-01
9.3	EVERGREEN TREE PLANTING	3/L3-01
9.4	SHRUBS PLANTING	4/L3-01
9.5	PERENNIAL PLANTING	5/L3-01
9.6	TREE PROTECTION	6/L3-01
9.7	METAL EDGING	4/L3-00
10.0	MISCELLANEOUS ELEMENTS	

0 20 40 80

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SEAL

PROJECT TITLE

LAMBERT WOODS
PORTLAND, ME

PREPARED FOR

MAINE COOPERATIVE DEVELOPMENT PARTNERS

REVISIONS DATE

ISSUE DATE

MAJOR SITE PLAN
JUNE 17, 2022

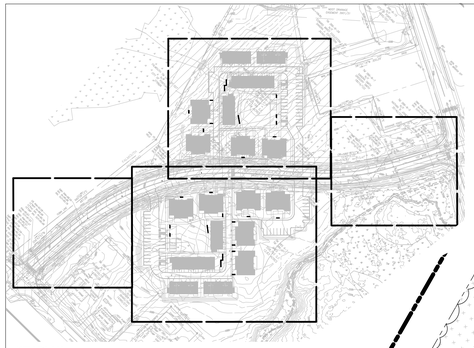
SHEET TITLE

OVERALL PLANTING PLAN

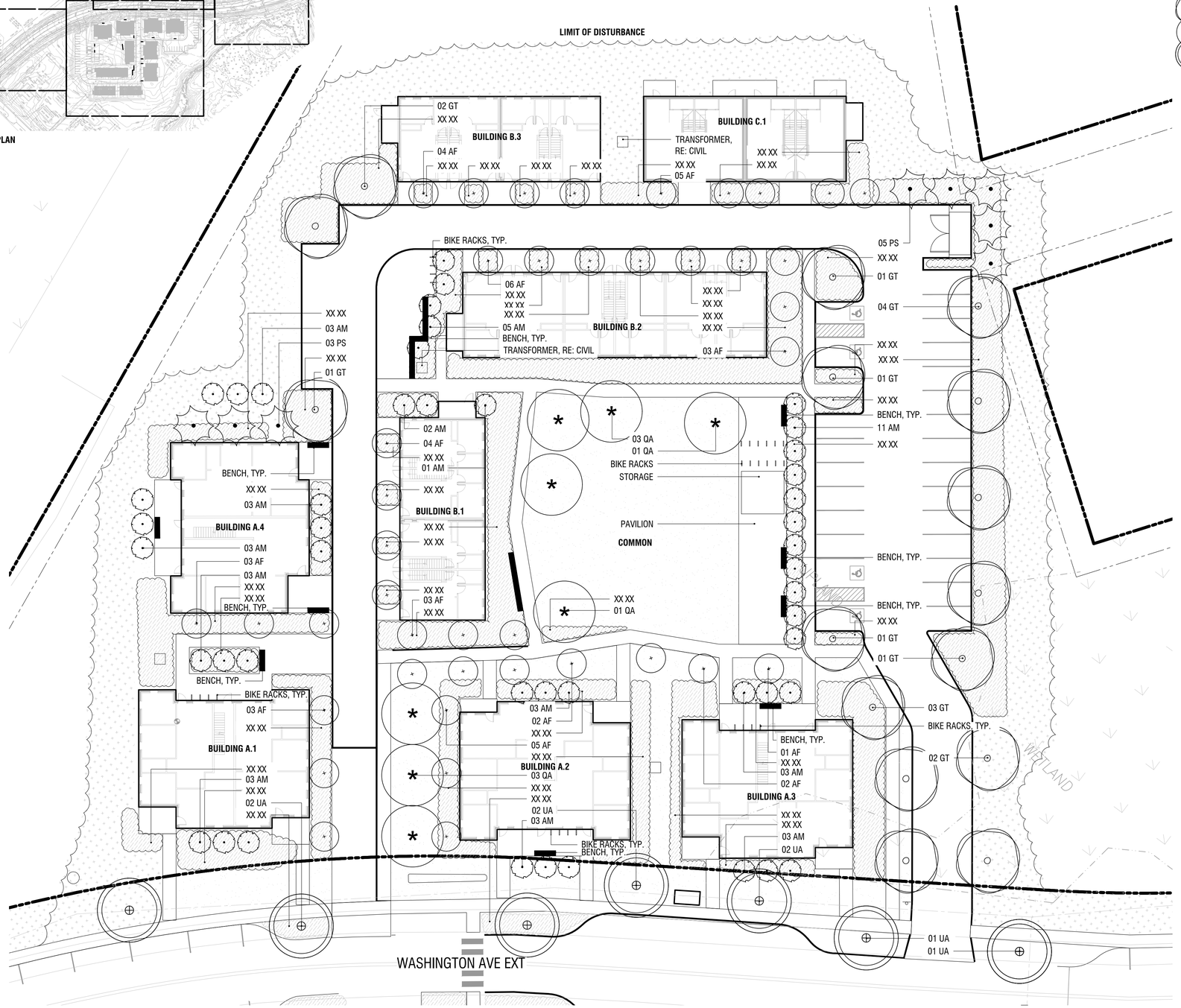
SHEET INFORMATION

L 2-00

NOT FOR CONSTRUCTION



KEY PLAN



PLANT LIST

SYMB.	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
TREES					
AF	ACER X FREEMANII 'ARMSTRONG'	UPRIGHT ARMSTRONG MAPLE	41	2.5" CAL. MIN.	PER PLAN
AM	AMELANCHIER CANADENSIS	SERVICEBERRY (MULTI-STEM)	46	2.5" CAL. MIN.	PER PLAN
GT	GLEDITSIA TRIACANTHOS X INERMIS	HONEY LOCUST	16	2.5" CAL. MIN.	PER PLAN
QA	QUERCUS ALBA	WHITE OAK	8	2.5" CAL. MIN.	PER PLAN
UA	ULMUS AMERICANA	AMERICAN ELM	7	2.5" CAL. MIN.	PER PLAN
TREES - EVERGREEN					
AB	ABIES FRASERI	FRASER FIR	TBD	7-8'	PER PLAN
PS	PINUS STROBUS	WHITE PINE	8	7-8'	PER PLAN
SHRUBS					
CS	CORNUS SERICEA	RED-TWIG DOGWOOD	TBD	#5	PER PLAN
IL	ILLEX GLABRA 'SHAMROCK'	INKBERRY	TBD	#5	PER PLAN
RA	RHUS AROMATICA	LOW-GRO SUMAC	TBD	#2	PER PLAN
VD	VIBURNUM DENTATUM 'CHICAGO LUSTRE"	ARROWWOOD VIBURNUM	TBD	#5	PER PLAN
VN	VIBURNUM NUDUM 'WINTERTHUR'	SMOOTH VIBURNUM	TBD	#5	PER PLAN
PERENNIALS AND ORNAMENTAL GRASSES					
AH	AMSONIA HUBRICHTII	BLUE STAR	TBD	#1	PER PLAN
AT	ASTILBE	FALSE GOAT'S BEARD	TBD	#1	PER PLAN
CA	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	TBD	#1	PER PLAN
LE	LIRIOPE	LILTURF	TBD	#1	PER PLAN
PV	PANICUM VIRGATUM 'ROTSTRAHLBUSCH'	SWITCH GRASS	TBD	#1	PER PLAN
MS	MISCANTHUS SINENSIS 'MY FAIR MAIDEN'	MAIDEN GRASS	TBD	#1	PER PLAN
NE	NEPETA "WALKER'S LOW"	CATMINT	TBD	#1	PER PLAN
SS	SCHIZACHYRIUM SCOPARIUM 'PRAIRIE BLUES'	LITTLEBLUE STEM	TBD	#1	PER PLAN
SH	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	TBD	#1	PER PLAN

SEEDING

RESTORATION MIX
NEW ENGLAND CONSERVATION/WILDLIFE MIX
MFR: NEW ENGLAND WETLAND PLANTS
TOTAL AREA: 17,717 SF
APPLICATION RATE 25LBS/ACRE | 1750 SQ FT/LB
(SEEDING RATE MAY VARY DEPENDING ON TIME OF YEAR, SEE SPEC. SHEET FOR INSTRUCTIONS)

LAWN
WILDFLOWER FARM'S ECO-LAWN GRASS SEED
TOTAL AREA: 7,093 SF
ECO-LAWN IS A DROUGHT-RESISTANT GRASS THAT REQUIRES MOWING ONLY ONCE PER MONTH. EACH 5 POUND BAG OF SEED COVERS 1,000 SQUARE FEET. A THICK HEALTHY LAWN IS THE BEST DEFENCE AGAINST WEEDS, DISEASE, DROUGHT AND INSECT DAMAGE.

SITE KEYNOTES:

		DETAIL / SHEET
1.0	PAVEMENTS, RAMPS, CURBS	
1.1	ASPHALT PAVING - PEDESTRIAN	1/L3-00
1.2	CONCRETE PAVER	2/L3-00
1.3	STONEDUST PATH	3/L3-00
1.4	GRASS PAVERS	4/L3-01
2.0	JOINTING	
X.X	NOT USED AT THIS TIME	X/XX-XX
3.0	STEPS	
X.X	NOT USED AT THIS TIME	X/XX-XX
4.0	SITE WALLS/ EMBANKMENTS	
X.X	NOT USED AT THIS TIME	X/XX-XX
5.0	SITE FURNITURE	
5.1	STONE BENCH	5/L3-00
5.2	BIKE RACK	6/L3-00
6.0	RAILINGS, BARRIERS, FENCING	
X.X	NOT USED AT THIS TIME	X/XX-XX
7.0	SITE LIGHTING	
7.1	LIGHT POLE BASE	7/L3-00
8.0	DRAINAGE	
X.X	NOT USED AT THIS TIME	X/XX-XX
9.0	PLANTING AND LANDSCAPE	
9.1	DECIDUOUS TREE PLANTING	1/L3-01
9.2	MULTI-STEM TREE PLANTING	2/L3-01
9.3	EVERGREEN TREE PLANTING	3/L3-01
9.4	SHRUBS PLANTING	4/L3-01
9.5	PERENNIAL PLANTING	5/L3-01
9.6	TREE PROTECTION	6/L3-01
9.7	METAL EDGING	4/L3-00
10.0	MISCELLANEOUS ELEMENTS	

0 10 20 40

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SEAL

PROJECT TITLE

LAMBERT WOODS
PORTLAND, ME

PREPARED FOR

MAINE COOPERATIVE DEVELOPMENT PARTNERS

REVISIONS DATE

ISSUE DATE

MAJOR SITE PLAN
JUNE 17, 2022

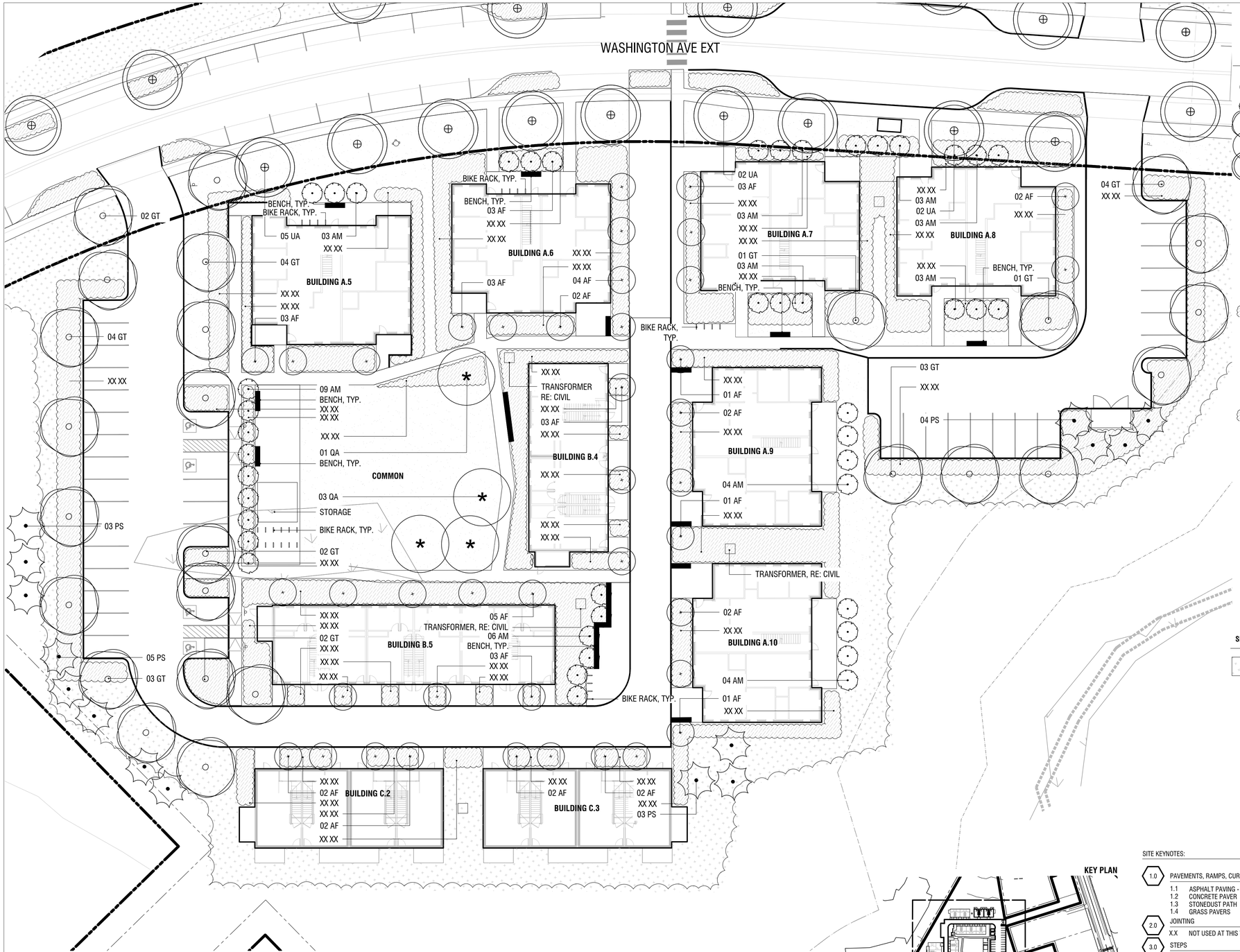
SHEET TITLE

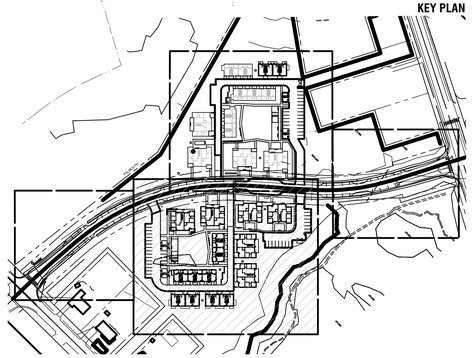
NORTH PLANTING PLAN ENLARGEMENT

SHEET INFORMATION

L 2-01

NOT FOR CONSTRUCTION





PLANT LIST

SYMB.	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING
TREES					
AF	ACER X FREEMANII 'ARMSTRONG'	UPRIGHT ARMSTRONG MAPLE	40	2.5" CAL. MIN.	PER PLAN
AM	AMELANCHIER CANADENSIS	SERVICEBERRY (MULTI-STEM)	38	2.5" CAL. MIN.	PER PLAN
GT	GLEDITSIA TRIACANTHOS X INERMIS	HONEY LOCUST	26	2.5" CAL. MIN.	PER PLAN
QA	QUERCUS ALBA	WHITE OAK	4	2.5" CAL. MIN.	PER PLAN
UA	ULMUS AMERICANA	AMERICAN ELM	10	2.5" CAL. MIN.	PER PLAN
TREES - EVERGREEN					
AB	ABIES FRASERI	FRASER FIR	TBD	7-8'	PER PLAN
PS	PINUS STROBUS	WHITE PINE	15	7-8'	PER PLAN
SHRUBS					
CS	CORNUS SERICEA	RED-TWIG DOGWOOD	TBD	#5	PER PLAN
IL	ILLEX GLABRA 'SHAMROCK'	INKBERRY	TBD	#5	PER PLAN
RA	RHUS AROMATICA	LOW-GRO SUMAC	TBD	#2	PER PLAN
VD	VIBURNUM DENTATUM 'CHICAGO LUSTRE'	ARROWWOOD VIBURNUM	TBD	#5	PER PLAN
VN	VIBURNUM NUDUM 'WINTERTHUR'	SMOOTH VIBURNUM	TBD	#5	PER PLAN
PERENNIALS AND ORNAMENTAL GRASSES					
AH	AMSONIA HUBRICHTII	BLUE STAR	TBD	#1	PER PLAN
AT	ASTILBE	FALSE GOAT'S BEARD	TBD	#1	PER PLAN
CA	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	FEATHER REED GRASS	TBD	#1	PER PLAN
LE	LIRIOPE	LILTURF	TBD	#1	PER PLAN
PV	PANICUM VIRGATUM 'ROTSTRAHLBUSCH'	SWITCH GRASS	TBD	#1	PER PLAN
MS	MISCANTHUS SINENSIS 'MY FAIR MAIDEN'	MAIDEN GRASS	TBD	#1	PER PLAN
NE	NEPETA "WALKER'S LOW"	CATMINT	TBD	#1	PER PLAN
SS	SCHIZACHYRIUM SCOPARIUM 'PRAIRIE BLUES'	LITTLEBLUE STEM	TBD	#1	PER PLAN
SH	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	TBD	#1	PER PLAN

SEEDING

RESTORATION MIX
NEW ENGLAND CONSERVATION/WILDLIFE MIX
MFR: NEW ENGLAND WETLAND PLANTS
TOTAL AREA: 16,168 SF
APPLICATION RATE 25LBS/ACRE | 1750 SQ FT/LB
(SEEDING RATE MAY VARY DEPENDING ON TIME OF YEAR, SEE SPEC. SHEET FOR INSTRUCTIONS)

LAWN
WILDFLOWER FARM'S ECO-LAWN GRASS SEED
TOTAL AREA: 12,712 SF
ECO-LAWN IS A DROUGHT-RESISTANT GRASS THAT REQUIRES MOWING ONLY ONCE PER MONTH. EACH 5 POUND BAG OF SEED COVERS 1,000 SQUARE FEET. A THICK HEALTHY LAWN IS THE BEST DEFENCE AGAINST WEEDS, DISEASE, DROUGHT AND INSECT DAMAGE.

SITE KEYNOTES:

		DETAIL / SHEET
1.0	PAVEMENTS, RAMPS, CURBS	
1.1	ASPHALT PAVING - PEDESTRIAN	1/L3-00
1.2	CONCRETE PAVER	2/L3-00
1.3	STONEDUST PATH	3/L3-00
1.4	GRASS PAVERS	4/L3-01
2.0	JOINTING	
X.X	NOT USED AT THIS TIME	X/XX-XX
3.0	STEPS	
X.X	NOT USED AT THIS TIME	X/XX-XX
4.0	SITE WALLS/ EMBANKMENTS	
X.X	NOT USED AT THIS TIME	X/XX-XX
5.0	SITE FURNITURE	
5.1	STONE BENCH	5/L3-00
5.2	BIKE RACK	6/L3-00
6.0	RAILINGS, BARRIERS, FENCING	
X.X	NOT USED AT THIS TIME	X/XX-XX
7.0	SITE LIGHTING	
7.1	LIGHT POLE BASE	7/L3-00
8.0	DRAINAGE	
X.X	NOT USED AT THIS TIME	X/XX-XX
9.0	PLANTING AND LANDSCAPE	
9.1	DECIDUOUS TREE PLANTING	1/L3-01
9.2	MULTI-STEM TREE PLANTING	2/L3-01
9.3	EVERGREEN TREE PLANTING	3/L3-01
9.4	SHRUBS PLANTING	4/L3-01
9.5	PERENNIAL PLANTING	5/L3-01
9.6	TREE PROTECTION	6/L3-01
9.7	METAL EDGING	4/L3-00
10.0	MISCELLANEOUS ELEMENTS	

0 10 20 40

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SEAL

PROJECT TITLE

LAMBERT WOODS
PORTLAND, ME

PREPARED FOR

MAINE COOPERATIVE DEVELOPMENT PARTNERS

REVISIONS DATE

ISSUE DATE

MAJOR SITE PLAN
JUNE 17, 2022

SHEET TITLE

SOUTH SIDE

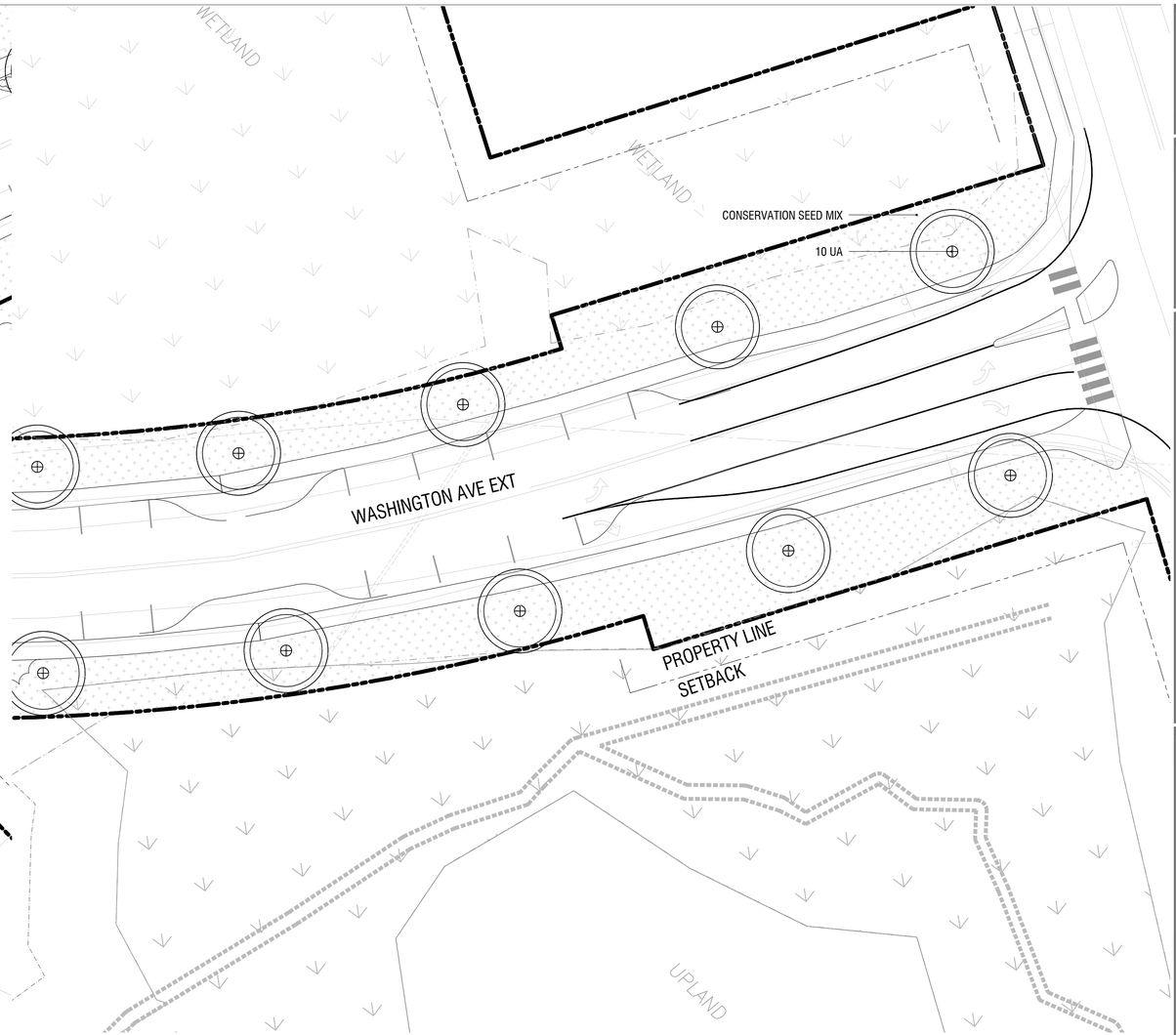
SHEET INFORMATION

L 2-02

NOT FOR CONSTRUCTION



1 ROW PLANTING PLAN ENLARGEMENT
1":20'-0"



2 ROW PLANTING PLAN ENLARGEMENT
1":20'-0"

0 10 20 40

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SEAL

PROJECT TITLE

LAMBERT WOODS
PORTLAND, ME

PREPARED FOR

MAINE COOPERATIVE
DEVELOPMENT PARTNERS

REVISIONS DATE

ISSUE DATE

MAJOR SITE PLAN
JUNE 17, 2022

SHEET TITLE

ENLARGED ROW
PLANTING PLANS

SHEET INFORMATION

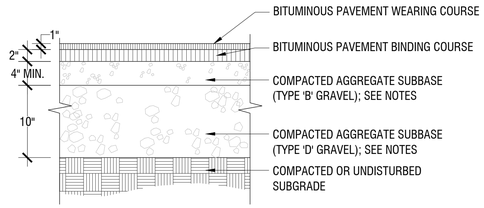
L 2-03

NOT FOR CONSTRUCTION

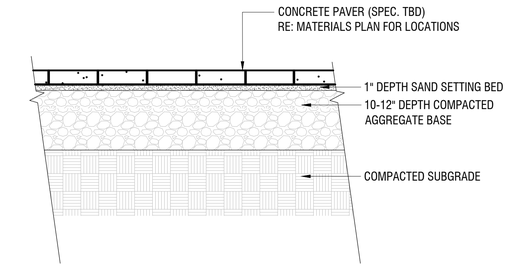
SITE KEYNOTES:

			DETAIL / SHEET
1.0	PAVEMENTS, RAMPS, CURBS		
	1.1	ASPHALT PAVING - PEDESTRIAN	1/L3-00
	1.2	CONCRETE PAVER	2/L3-00
	1.3	STONEDUST PATH	3/L3-00
	1.4	GRASS PAVERS	4/L3-01
2.0	JOINTING		
	X.X	NOT USED AT THIS TIME	X/XX-XX
3.0	STEPS		
	X.X	NOT USED AT THIS TIME	X/XX-XX
4.0	SITE WALLS/ EMBANKMENTS		
	X.X	NOT USED AT THIS TIME	X/XX-XX
5.0	SITE FURNITURE		
	5.1	STONE BENCH	5/L3-00
	5.2	BIKE RACK	6/L3-00
6.0	RAILINGS, BARRIERS, FENCING		
	X.X	NOT USED AT THIS TIME	X/XX-XX

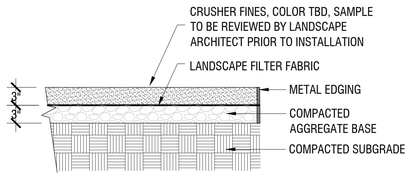
			DETAIL / SHEET
7.0	SITE LIGHTING		
	7.1	LIGHT POLE BASE	7/L3-00
8.0	DRAINAGE		
	X.X	NOT USED AT THIS TIME	X/XX-XX
9.0	PLANTING AND LANDSCAPE		
	9.1	DECIDUOUS TREE PLANTING	1/L3-01
	9.2	MULTI-STEM TREE PLANTING	2/L3-01
	9.3	EVERGREEN TREE PLANTING	3/L3-01
	9.4	SHRUBS PLANTING	4/L3-01
	9.5	PERENNIAL PLANTING	5/L3-01
	9.6	TREE PROTECTION	6/L3-01
	9.7	METAL EDGING	4/L3-00
10.0	MISCELLANEOUS ELEMENTS		



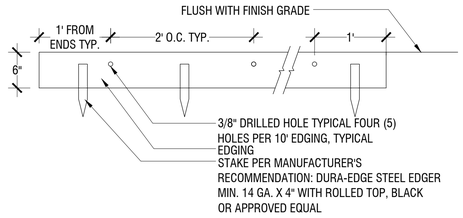
1 ASPHALT PAVING (PEDESTRIAN) 1.1
1":1'-0"



2 CONCRETE PAVER 1.2
1":1'-0"



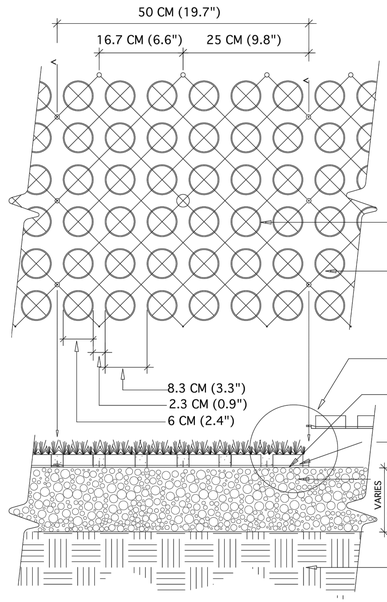
3 STONEDUST PATH 1.3
1":1'-0"



4 METAL EDGING 9.7
1":1'-0"

TYPICAL GRASSPAVE2 DETAIL

CHOOSE THIS PRODUCT FOR REINFORCING GRASS WEARING SURFACES

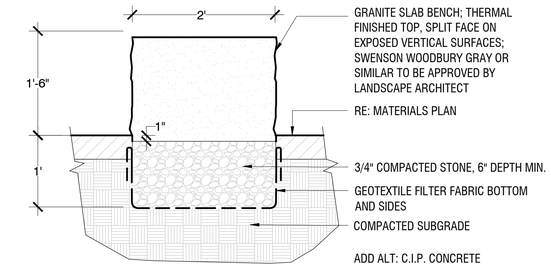


SPECIFICATIONS

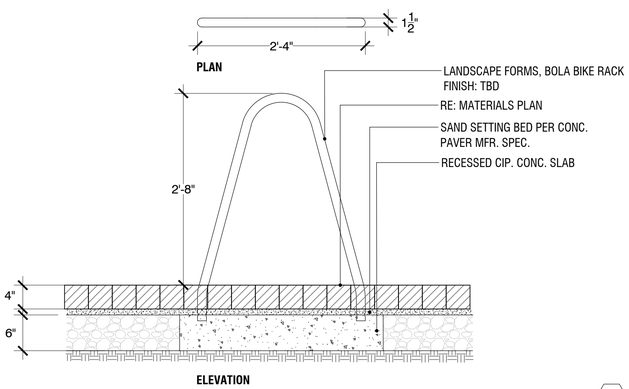
UNIT SIZE - 50 CM X 50 CM X 2.5 CM OR 1 M X 1 M X 2.5 CM
(20" X 20" X 1" OR 40" X 40" X 1")
AVAILABLE IN 9 STANDARD ROLL SIZES

UNIT WEIGHT - 510 GRAMS (18 OZ.)
OR 2.0 KG (4.5 POUNDS)
STRENGTH - 1121 KG/CM^2 (15,940 PSI)
COLOR - BLACK
RESIN - 100% RECYCLED HDPE

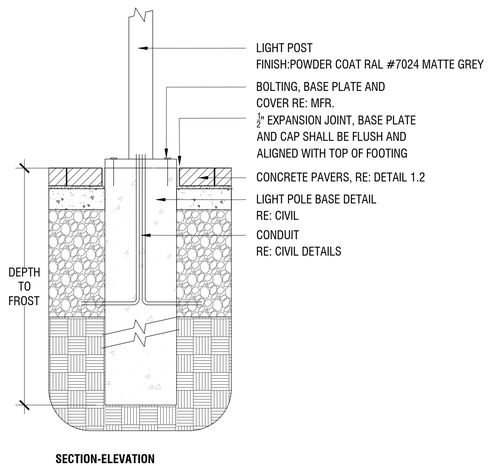
NOTE: GRASS/PLANT TYPES SHALL BE SPECIFIED BY A LANDSCAPE ARCHITECT OR LANDSCAPE DESIGNER.



5 STONE BENCH 5.1
1":1'-0"



6 BIKE RACK 5.2
N.T.S.



7 LIGHT POLE BASE 7.1
N.T.S.

8 GRASS PAVE 1.4
1":1'-0"

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SEAL

PROJECT TITLE

LAMBERT WOODS
PORTLAND, ME

PREPARED FOR

MAINE COOPERATIVE DEVELOPMENT PARTNERS

REVISIONS | DATE

ISSUE DATE

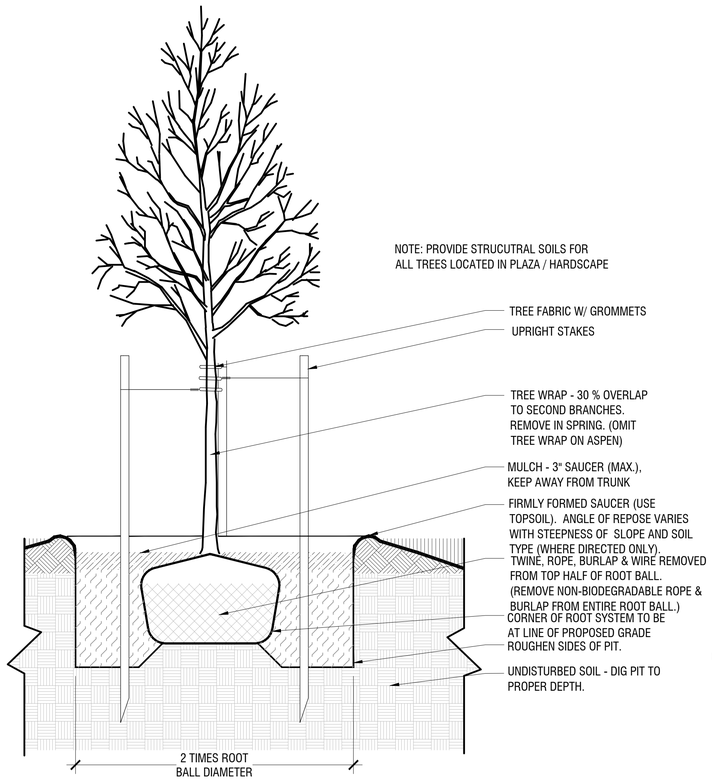
MAJOR SITE PLAN
JUNE 17, 2022

SHEET TITLE

SITE DETAILS

SHEET INFORMATION

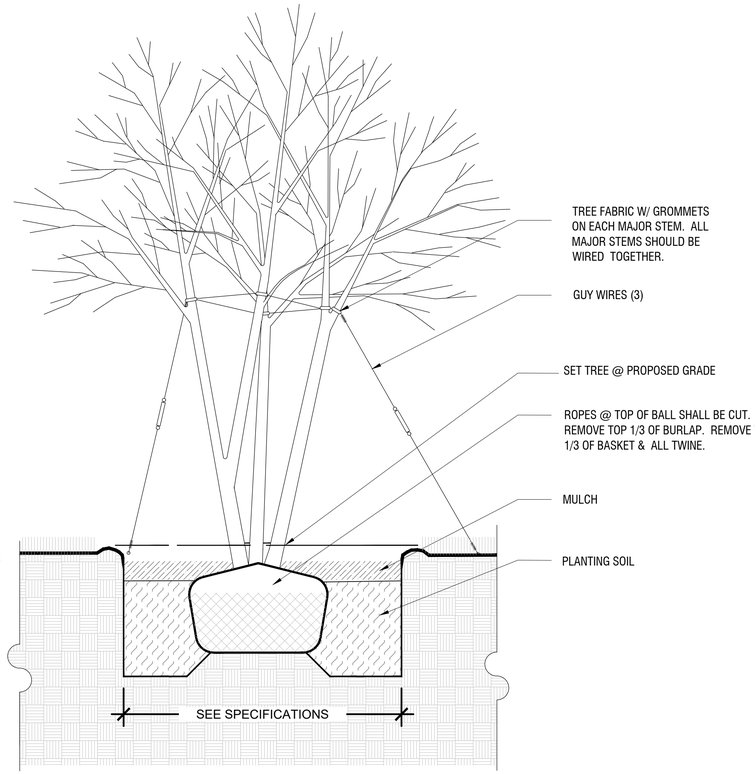
L 3-00



1 DECIDUOUS TREE PLANTING

N.T.S.

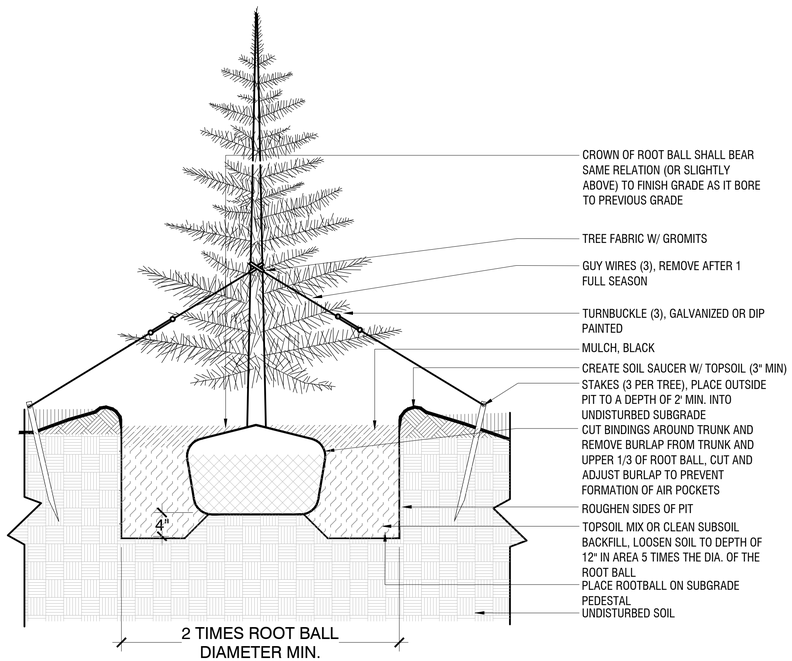
9.1



2 MULTI-STEM TREE PLANTING

N.T.S.

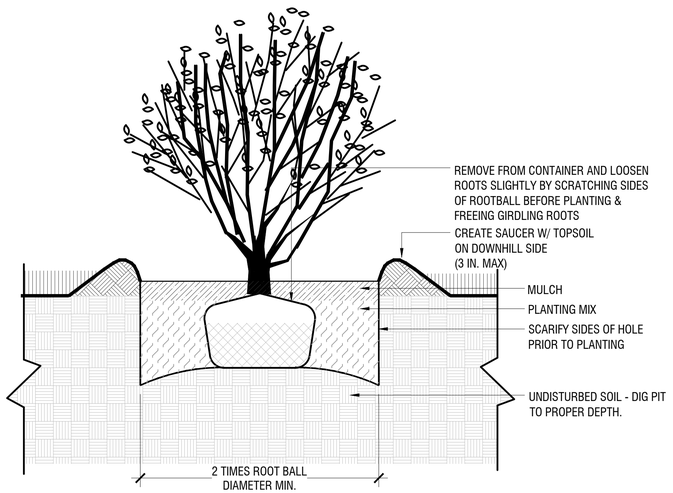
9.2



3 EVERGREEN TREE PLANTING

N.T.S.

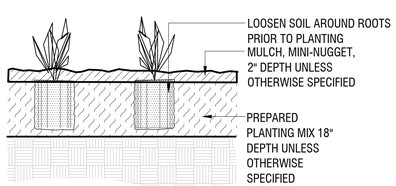
9.3



4 SHRUB PLANTING

1":1'-0"

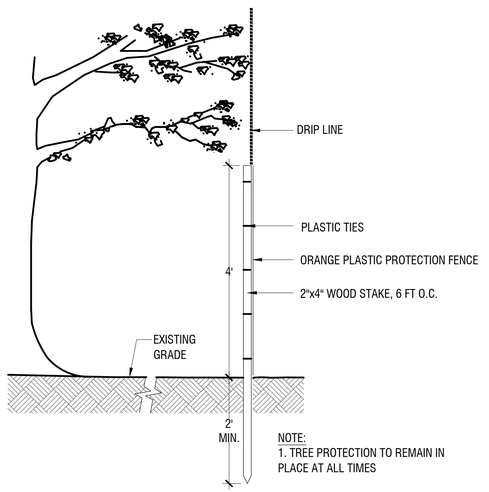
9.4



5 PERENNIAL PLANTING

1":1'-0"

9.5



6 TREE PROTECTION

1":1'-0"

9.6

SITE KEYNOTES:

1.0	PAVEMENTS, RAMPS, CURBS		DETAIL / SHEET
	1.1	ASPHALT PAVING - PEDESTRIAN	1/L3-00
	1.2	CONCRETE PAVER	2/L3-00
	1.3	STONEDUST PATH	3/L3-00
	1.4	GRASS PAVERS	4/L3-01
2.0	JOINTING		
	X.X	NOT USED AT THIS TIME	X/XX-XX
3.0	STEPS		
	X.X	NOT USED AT THIS TIME	X/XX-XX
4.0	SITE WALLS/ EMBANKMENTS		
	X.X	NOT USED AT THIS TIME	X/XX-XX
5.0	SITE FURNITURE		
	5.1	STONE BENCH	5/L3-00
	5.2	BIKE RACK	6/L3-00
6.0	RAILINGS, BARRIERS, FENCING		
	X.X	NOT USED AT THIS TIME	X/XX-XX

7.0	SITE LIGHTING		DETAIL / SHEET
	7.1	LIGHT POLE BASE	7/L3-00
8.0	DRAINAGE		
	X.X	NOT USED AT THIS TIME	X/XX-XX
9.0	PLANTING AND LANDSCAPE		
	9.1	DECIDUOUS TREE PLANTING	1/L3-01
	9.2	MULTI-STEM TREE PLANTING	2/L3-01
	9.3	EVERGREEN TREE PLANTING	3/L3-01
	9.4	SHRUBS PLANTING	4/L3-01
	9.5	PERENNIAL PLANTING	5/L3-01
	9.6	TREE PROTECTION	6/L3-01
	9.7	METAL EDGING	4/L3-00
10.0	MISCELLANEOUS ELEMENTS		

ACETO LANDSCAPE ARCHITECTS
207 221 3390 | ACETOLA.COM

SEAL

PROJECT TITLE

LAMBERT WOODS
PORTLAND, ME

PREPARED FOR

MAINE COOPERATIVE
DEVELOPMENT PARTNERS

REVISIONS DATE

ISSUE DATE

MAJOR SITE PLAN
JUNE 17, 2022

SHEET TITLE

PLANTING DETAILS

SHEET INFORMATION

L 3-01

385 Congress Street Master Development Plan
385 Congress Street | CBL 027 D001001
PL-001970-2022
Reger Dasco Properties, Applicant

Submitted to:	Chair Stanley & Portland Planning Board	**Prepared By:**	Zach Powell, Senior Planner
Public Hearing Date:	August 9, 2022	**Date:**	August 5, 2022

I. INTRODUCTION

385 Congress Street LLC has submitted an application for a Master Development Plan (MDP) to facilitate the phased development of the subject property with three attached buildings that include a hotel with 156 rooms, 297 condominium units, seven retail units totaling ±11,560 square feet, a ±5,100 square foot restaurant, a passive recreation space (Amenity Deck) totaling ±19,040 square feet, and a parking structure with a total of 337 automobile spaces in the Downtown neighborhood. This application is being referred to the Planning Board for compliance with the City of Portland's Land Use Code, Master Development Plan Standards, Section 14.7. An approved Master Development Plan is valid for a period of six years, which may be extended and/or amended.



Figure 1: Rendering of the proposed condominium and staircase to the amenity deck facing northwest on Myrtle Street.

The Planning and Urban Development Department mailed 104 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the August 2, 2022 edition of the *Portland Press Herald*.

Applicant: Joe Dasco, Reger Dasco Properties
Anticipated Hotel Operator: Marieke Thormann and Robin Payne, The Fathom Companies
Consultants: Derek Caldwell and Daniel Riley, Sebago Technics Inc., Henry Weinberg and Dylan Dasco, CBT Architects

II. REQUIRED REVIEWS

Review	Applicable Standards
Master Development Plan (MDP)	Section 14.7
Submitted Waiver Requests	**Applicable Standard**
Sec. 7.3 – Table 7-E: Mixed-Use Zone Dimensional Standards – to vary the front setbacks on Cumberland Avenue, Myrtle Street, and Pearl Street up to 22 feet.	Sec. 7.3 – The maximum permitted front setback from all street frontages in the B-3 zone is 5 feet.
Technical Standards - Sec. 14.1.2 – to construct structured parking on the portion of the site identified as Lots '2' and '3' where 96 of the total 267 spaces (±35%) will be compact parking spaces and construct structured parking on the portion of the site identified as 'Lot 1' that is 100% comprised of compact spaces.	Sec. 14.1.2 – Parking lots with greater than 10 spaces may be comprised of up to 20% compact parking spaces.
Technical Standards - Sec. 14.1.3 – to stripe parking spaces on the portion of the site identified as 'Lot 1' that have parallel valet parking spaces across the ends of double stacked, 90 degree compact spaces.	Sec. 14.1.3 – Parking lot layout shall conform to Figures I-28 thru I-32.
Technical Standards - Sec. 14.1.5 – to waive the minimum 24' drive aisle width in the garage on the portion of the site identified as 'Lot 1' to allow parallel valet parking spaces across the ends of double stacked, 90 degree compact spaces.	Sec. 14.1.5. – Vehicular access shall be provided by one or more aisles. Minimum widths of aisles are illustrated in Figures I-28 thru I-31.

III. PROJECT DATA

Existing Zoning	B-3 Downtown Business, Downtown Entertainment Overlay, PAD Encouragement Area		
Existing Use	Off-Street Parking (Surface and Structured) (141 spaces) Storage (±3,914 SF)		
Proposed Use	Condominiums	342,050 SF (297 units)	
	Hotel	69,300 SF (156 rooms)	
	Retail Space	11,560 SF (7 units)	
	Restaurant	5,100 SF (1 restaurant)	
	Structured Parking	120,400 SF (337 spaces)	
	Passive Recreation Space (Amenity Deck)	19,040 SF	
Property Size	98,470 SF (2.26 acres)		
	Existing	*Proposed*	*Net Change*
Building Footprint	17,322 SF	666,500 SF	+649,178 SF
Building Floor Area	17,322 SF	546,100 SF	+528,778 SF
Parking Spaces	173 spaces	337 spaces	+164 spaces
Curb Cuts	7 (3 blocked)	4	-3
Trees in Streetscape	9	34	+25

IV. EXISTING CONDITIONS

The project site occupies the entirety of a city block that is 2.26 acres in area. The site is bounded to the north by Pearl Street, to the South by Myrtle Street, to the East by Congress Street, and to the West by Cumberland Avenue. The Comprehensive Plan, *Portland 2030*, identifies Congress Street as a priority corridor. Priority corridors are key corridors that connect major nodes and neighborhoods and therefore serve as areas that can accommodate additional mixed-use, higher density growth to take advantage of the transit benefits and services that well-designed, diverse corridors can offer. The site was previously bisected by Chapel Street, which was discontinued in 1973 (Figure 2).

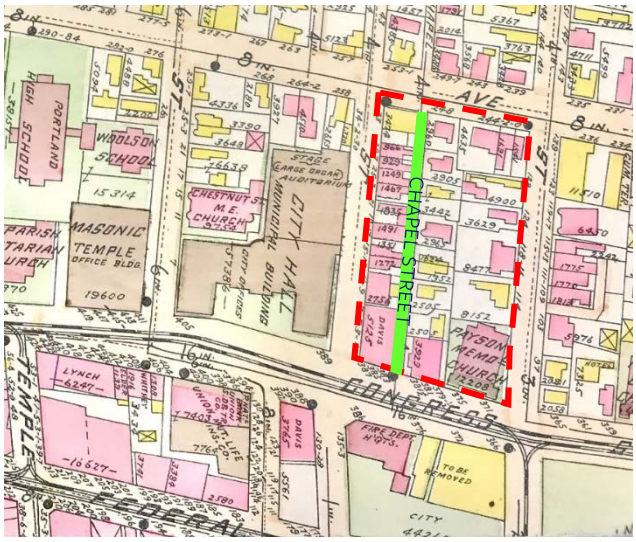


Figure 2: 1912 Sanborn Map of the subject property (outlined in red) and surrounding area. The previous bisection of the subject property by Chapel Street is shown in light green.

Previously, the site was occupied by a number of commercial and residential structures, including Payson Memorial Church. In the 1960s, a portion of the site served as the printing facilities to the Portland Press Herald. Currently, the site serves as an off-street parking (both surface and structured) for daily and monthly parking and is currently occupied by surface and structured parking, totaling 173 spaces. Additionally, the structure on the northwestern corner of the site is used for auxiliary storage. Both of the existing structures (Storage Building ±3,914 SF; Parking Structure: ±13,408 SF) are proposed to be demolished to facilitate the development of the site.

The site serves as a transitional area in a number of regards, including:

- Lots to the north with no building coverage (Top of the Old Port Parking & Lincoln Park) to lots to the south with high building coverage (City Hall, Press Hotel)
- Lower-density multi-family and smaller institutional uses from the west on Cumberland Avenue to medium-density commercial & institutional uses to the east on Congress Street
- Blocks to the west and south occupied by numerous lots to blocks to the east and north that are occupied by one lot (Central Fire Station, Top of the Old Port Parking, Lincoln Park)
- Smaller blocks and larger blocks with pedestrian access points to the south and southeast to larger blocks providing limited or no breaks for pedestrian access
- Downtown Neighborhood to Bayside Neighborhood
- Auto-centric uses & building design to the north and northeast to urban, pedestrian-centric uses to the west, south, and southeast



Figure 3: Northwest view of the subject property in 1900. Source: Maine Historical Society.



Figure 4: Western view of the subject property in 1965 showing the construction of the Portland Press Herald Printing Facility. The original alignment of Chapel Street can be seen in the portion of the site cordoned off for materials storage. Source: Maine Historical Society

The subject block and immediate area is well-served by public transit. Approximately two blocks to the southwest is the METRO PULSE at Elm Street (Downtown Transportation Center), the hub for METRO where bus routes, #2, #4, #5, #7, and the Husky Line begin and end their routes. METRO bus routes #1, #7, #8, #9A, #9B and the Biddeford Saco Old Orchard Beach Transit 60 Green line can be accessed along Congress Street within one block of the site. South Portland Bus routes 21, 24A, and 24B can be accessed along Congress Street roughly two blocks southwest of the site. METRO bus route 8 is located along Cumberland Avenue less than one block from the site.

V. RIGHT, TITLE & INTEREST

The owner of the property is 385 Congress, LLC. The owner and applicant for the construction of the hotel (The Fathom Companies) has entered into a Purchase and Sale Agreement which serves as sufficient right-title-interest documentation for The Fathom Companies for the purpose of reviewing a master development plan application.

The submitted existing conditions survey (P.13 and P.14) indicates the property has no existing easements. As noted in the Purchase and Sale Agreement and Phasing Plan, access and utility easements will be created to facilitate access pre- and post-construction.

VI. FINANCIAL & TECHNICAL CAPACITY

The applicants have submitted letters of financial capacity from each of their financial institutions as documentation stating that the Applicant is in good standing (Document H).

VII. MASTER DEVELOPMENT PLAN OBJECTIVES

A Master Development Plan (MDP) is a regulatory option, applied for at the discretion of the applicant, for sites with one acre or more in cumulative lot area that's designed as a cohesive and integral development program consisting of multiple buildings and associated site improvements built in phases over an extended timeframe (Section 14.7).

An approved MDP establishes parameters to be adhered to for the full development, including the supporting documentation for residential density, general types of uses, building coverage, open space plans, parking and circulation, and infrastructure systems such as stormwater management. MDPs may be developed concurrently with site plans and/or subdivisions, or independently. Approval does not constitute an authorization for development, but it does maintain the applicability of regulations in effect at the time of the approval for as long as the MDP approval remains valid. MDP submission requirements are deliberately not as detailed as site plan and subdivision requirements to allow for some flexibility in the final buildout of a large, phased project. Site plan applications, and any other required approvals are required before any development on the site can proceed, as outlined by the City's Land Use Code.

As stated in Sections 14.3.2.B.- of the City's Land Use Code *a Master Development Plan approval, including an approval of waivers, establishes the general parameters for the development, including the general development program, massing, open space plan, and infrastructure plan. A Master Development Plan approval shall not be construed as final authorization of the development. Approval shall confer pending proceeding status upon the development in effect at the time of approval for as long as the Master Development Plan approval remains valid, including permissible extensions if granted. Subsequent site plan approvals shall be required.*



Figure 5: Rendering of the amenity deck facing west towards Condominium C.

MDP's are intended to guide the development over the life of the development and the various phases. The MDP is a basic building block, which is intended to inform future Site Plan applications. All Major Site Plan applications for each phase shall be in general conformance with the Master Development Plan.

VIII. JUNE 14 PLANNING BOARD WORKSHOP

The Planning Board held a workshop on June 14, 2022 that served as an introduction to the project and focused on site and building design, phasing, and access management. A complete overview of the June 14, 2022 meeting materials can be found in the archived agenda at the following link:

https://portlandme.civicclerk.com/web/Home.aspx

At the June 14, 2022 Planning Board workshop the Applicant presented updated application materials to address Staff design recommendations relating to decreasing the number of vehicular access points and increasing pedestrian porosity at the ground level and continuing the Congress Street wall with a contextual front setback and expanded sidewalk. The Board was generally supportive of the incorporation of the requested changes and the overall project.

Going forward, the Board was interested in seeing a more fully developed phasing plan that addressed site and building design and infrastructure improvements on- and off-site, with particular interest in phasing related to the amenity deck. Additionally, the Board stressed the importance of the building design being

contextual and not resulting in negative visual and/or shadow impacts on the surrounding area, particularly on Cumberland Avenue and City Hall.

IX. REVISED MASTER DEVELOPMENT PLAN

As submitted in March 2022, the MDP consisted of a phasing diagram with four separate phases to be constructed over a six-year timeline and the potential for some of the phases to be constructed simultaneously. The chart below outlines the previous and current proposed phases and is followed by more detailed descriptions of each phase.

Previous Phase	Current Phase/s	Description of Phase/s
Phase 1B	Phases 0 & 1	Demolition of existing two structures and construction of Hotel and structured parking on 'Lot 1'
Phase 1	Phase 2 or Phase 1 Alt.	Construction of Condominium A and structured parking on 'Lot 2'
Phase 2A	Phase 3	Construction of Condominium B and Levels 0-2 of Condominium C, including structured parking on 'Lot 3'
Phase 2B	Phase 4	Completion of Condominium C.

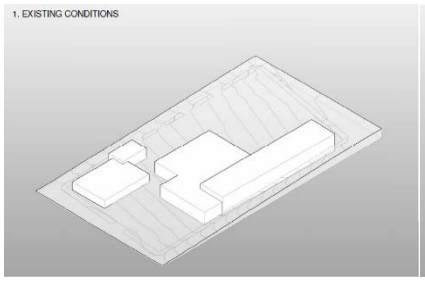
Revised Phasing Plan

At the June 14, 2022 Workshop, the Applicant presented some of the proposed changes to the design of the building and the site. Larger changes to the site include:

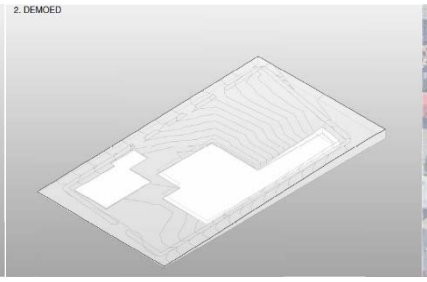
- Removal of pocket park on Congress Street and conversion to linear park.
- Expansion of sidewalk width along Congress Street and Cumberland Avenue
- Access to the amenity deck from street level on Congress and Myrtle Streets
- Modifying design of the amenity deck to reduce barriers to successful construction and programming
- Reduction in the number of curb cuts from 7 to 4 by collocating garage entrances with loading and trash storage operations, and adding vehicular ingress/egress mid-block on Cumberland Avenue
- Reduction in height of the condominium buildings and number of overall condominium units due to the maximum permitted floor area and lot coverage above 125 feet.
- Reduction in the square footage dedicated to the condominiums, hotel, restaurants, and structured parking
- Increase in the number of retail units from 4 to 7 and increase in the total square footage by +4,860 square feet that wrap around each of the corners of the project site.

The Applicant has expanded the phasing diagram into a plan that provides additional specificity relating to on- and off-site improvements (e.g. utilities, sidewalks), easements, how gaps longer than 24 months will result in design modifications and additional improvements (e.g., installing surface parking lot screening), and how site access will be handled in regards to the amenity deck and structured parking.

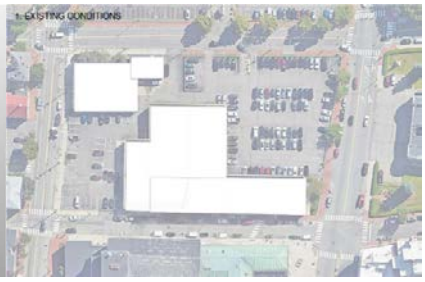
Phase 0: Demolition of the existing two structures and backfill of the building fronting Pearl Street. In the event that the hotel is constructed first, the portion of the former printing building on Lot 2 will be backfilled to facilitate access to the lower level of parking for the hotel.



Phase 0 Existing Conditions

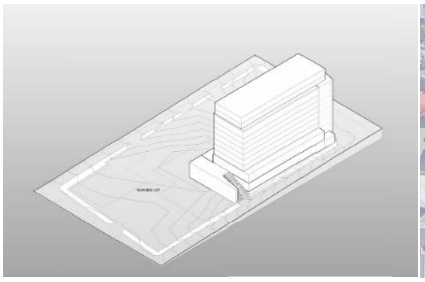


Phase 0 Proposed Demolition



Phase 0 Aerial Image

Phase 1: Construction of a ±157,600 square foot, 12-story building with a 156-room hotel, 9 condominium units, a ±5,100 square foot restaurant, ±660 square feet of retail, and 70 enclosed parking spaces. The Myrtle Street staircase and semi-public portion of the amenity deck is also included in this phase, with public access restricted at Myrtle Street until the public portion of the amenity deck for Condo A is completed. Curb extensions, crosswalk improvements, and decorative streetlighting are proposed along the frontage of Lot 1, with additional curb extension & crosswalk improvements proposed at Pearl & Congress Street as part of the proposed traffic signal relocation.



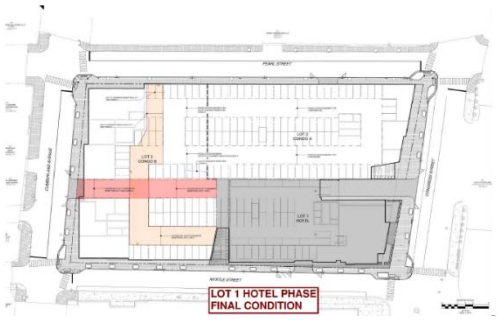
Phase 1 Photosimulation



Phase 1 Ground Floor Plan

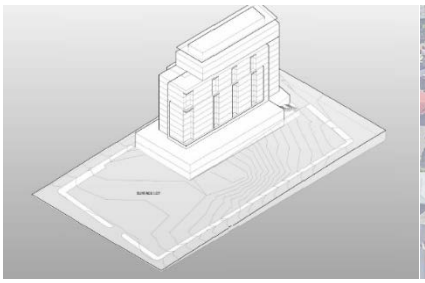


Phase 1 Podium Plan



Phase 1 Easement Plan, with utility easements in tan and access easements in red.

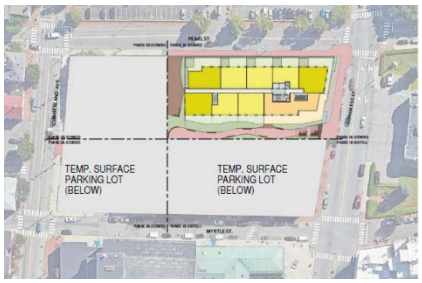
Phase 2 or Phase 1 Alt.: Construction of a ±239,450 square foot, 14-story building with 110 condominium units, ±4,000 square feet of retail and 148 enclosed parking spaces. The Congress Street staircase and the eastern public portion of the amenity deck will be constructed, with public access restricted until Phase 1 is constructed. Curb extensions and improvements, crosswalks, and decorative streetlighting along the frontages of Condo A are also included in this phase. Phase 1 Alt is provided as a scenario in the event that the hotel is not constructed first, in which case Phase 1 would be the second phase constructed.



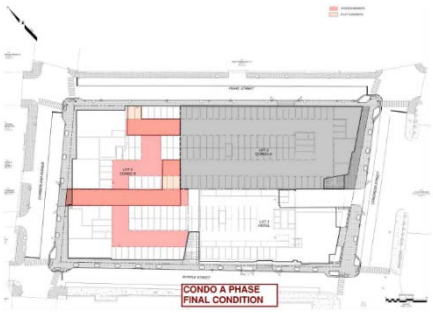
Phase 2 Photosimulation



Phase 2 Ground Floor Plan

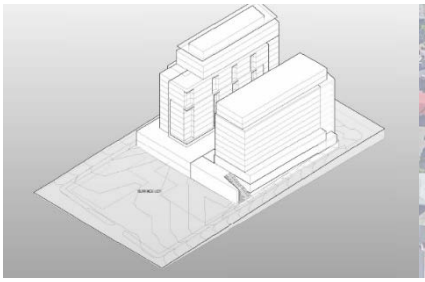


Phase 2 Podium Plan

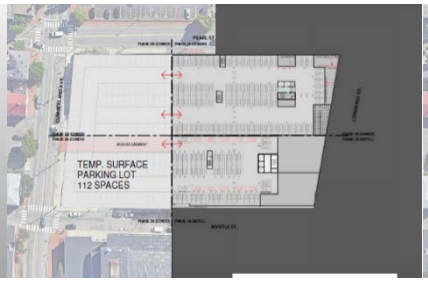


Phase 2 Easement Plan, with utility easements in tan and access easements in red.

Phase 1 Complete: At the Completion of Phase 1 and Phase 1 Alt, the amenity deck will be open to the public at Congress and Myrtle Streets. On the western portion of Lot 2, the remainder of the site will be used for temporary surface parking with 112 spaces and access points to the lower garage levels.



Phase 1 Complete Photosimulation



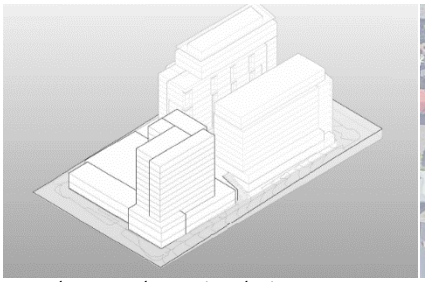
Phase 1 Complete Lower Garage Plan



Phase 1 Complete Podium Plan

Phase 3: Construction of a ±180,050 square foot, 13-story building with 97 condominium units, 4 retail units totaling ±6,900 square feet, and 130 enclosed parking spaces. Phase 3 involves the completion of Condominium B and Levels 0-2 of Condominium C. Landscaping and final improvements to the podium will not be made until Phase 4 is completed, with a temporary roof structure installed in between Phase 3 and Phase 4. The purpose of the temporary roof structures is to provide cover over the footprint for the future Condominium C.

Curb extensions and improvements, crosswalks, and decorative streetlighting along portions of Cumberland Avenue & Myrtle Street fronted by Condo B are also included. Brick sidewalks are proposed to be installed along the frontages of Condo B in this phase, with the frontages along Condo C to remain bituminous sidewalks for up to 24 months after the completion of Phase 3 or the start of Condo C construction, whichever is first.



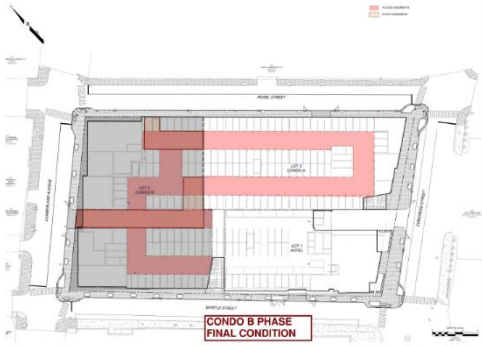
Phase 3 Photosimulation



Phase 3 Lower Garage Plan

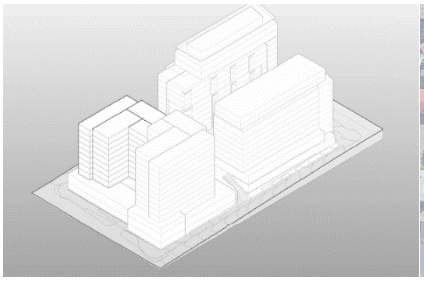


Phase 3 Podium Plan



Phase 3 Easement Plan, with utility easements in tan and access easements in red.

Phase 4: Construction of a ±89,200 square foot, 11-story addition on the northwestern portion of Lot 2 with 81 condominium units. Brick sidewalks will be completed along the frontages of Condominium C, and the remaining portion of the amenity deck will be landscaped & open to the public.



Phase 4 Photosimulation



Phase 4 Lower Garage Plan



Phase 4 Podium Plan

Overall, the expansion of the phasing diagram into a plan has successfully provided more clarity to how utility improvements and easements will be handled.

VI. ZONING ANALYSIS

The site is encompassed by the B-3 Downtown Business Zone, the Pedestrian Activities District (PAD) encouragement area, and the Downtown Entertainment Overlay Zone.

The purpose statement for the B-3 zone includes the following relevant to the proposal:

- *Enhance and promote the orderly expansion of retail and service businesses downtown, satisfying the related needs of the city's resident, working and visitor populations;*
- *Encourage increased housing opportunity downtown for a diverse residential population;*
- *Enhance the pedestrian environment through the encouragement of intensive mixed-use activities, through the enhancement and maintenance of public and private open space, and through the enlivenment and increased attractiveness of the street environment;*
- *To encourage excellence in urban design;*
- *In the PAD Overlay Zone, to create continuity of pedestrian-oriented uses along streets where such uses predominate and along streets which, over time, will establish and maintain a strong retail and pedestrian-oriented use pattern.*

The zoning dimensional requirements are intentionally permissive in this urban downtown zone – in most cases the requirements are intended to create dense, taller buildings that fill the site and maintain a street wall line. Regarding height for this block, there is a 90 foot maximum street wall height along Pearl Street, 50 foot maximum street wall height along Congress and Myrtle Streets, and a maximum building height of 150 feet as per the Downtown Height Overlay map. Compliance with B-3 dimensional standards is shown in the table below. As submitted, the Master Development Plan is consistent with zoning, including the B-3 zone purpose statement, uses, and dimensional standards, and the Downtown Height Overlay Map. A waiver request to exceed the maximum permitted front setback of five feet has been submitted by the applicant to accommodate a wider sidewalk and plaza space along Congress Street, Pearl Street, and Cumberland Avenue which is discussed on Page 12.

Standard	Required	Proposed
Minimum street frontage	15 feet	1315 feet
Maximum front setback	5 feet	8-11 feet (Waiver Request Submitted)
Maximum length of undifferentiated blank wall	30 feet	Complies. Longest length is 30 feet.
Maximum Floor Area	15,000 square feet for each floor above 125 feet	Complies. Largest proposed floor area is 10,500 square feet.
Maximum Structure Height	150 feet, with 90 foot maximum street wall height on Pearl Street and 50 foot maximum on Congress and Myrtle Streets	150 feet with street wall heights ranging from 20-38 feet
Maximum Lot Coverage	25% of lot area for portions of structures exceeding 125 feet in height	Complies. Largest proposed lot coverage is 10,500 square feet.

Each future site plan and subdivision will be evaluated for conformance with zoning, site plan, and subdivision standards requirements as well as undergoing design review under the B-3 Downtown Urban Design Guidelines which will include an advisory Historic Preservation review.

Downtown Urban Design Guidelines & Pedestrian Activities District (PAD) Encouragement Area: The site is required to comply with the Downtown Urban Design Guidelines. Additionally, the Congress Street frontage falls within the Pedestrian Activities District (PAD) encouragement area. This overlay zone, is intended to encourage ground floor uses that activate pedestrian spaces, creating a safe and vibrant pedestrian environment in Portland's downtown. Buildings located within the encouragement area are required to be designed and constructed to be reasonably capable of being converted to accommodate uses permitted in the PAD overlay zone and all sidewalk areas and open space shall complement the general pattern of the downtown pedestrian environment.

The Applicant has incorporated staff recommendations to expand the proposed sidewalk along Congress Street, added an entrance on Congress Street for the hotel, and increase the number of retail units that wrap around corners of the site. The Applicant has also expanded the sidewalk along Cumberland Avenue, which will similarly improve the pedestrian experience on the site.

Waiver Request

The Applicant has submitted a waiver request, to have front setbacks greater than 5 feet on Congress Street (22 feet), Cumberland Avenue (16 feet), and Pearl Street (6 feet).

Proposed Front Setback

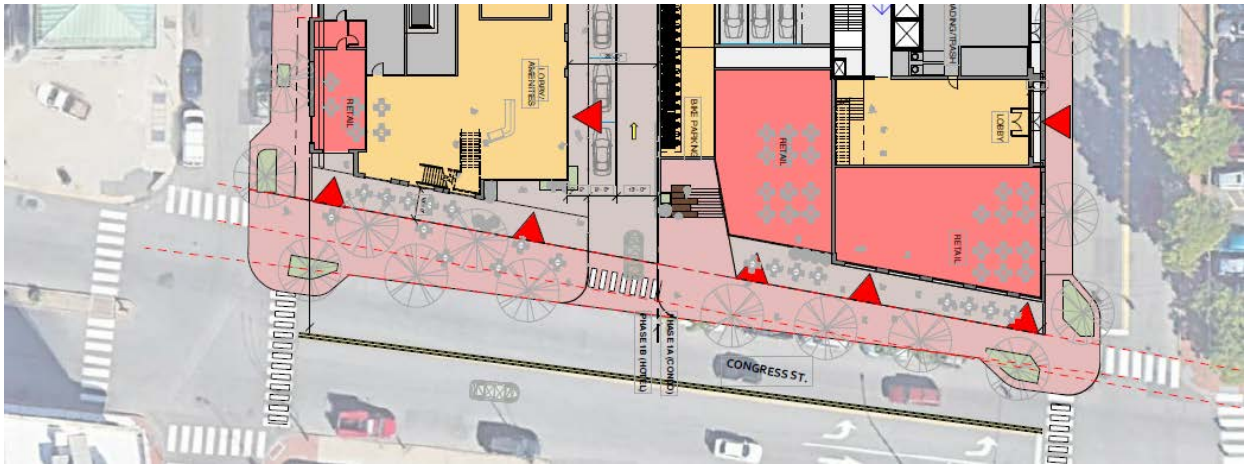


Figure 6: Rendered floor plans at street level on Congress Street showing the proposed sidewalk expansion.

§(b)(1)(e)(2) of the Design Manual identifies the review standards for the Planning Board to permit an increased setback beyond street build-to lines. The following list includes the standards of §(b)(1)(e)(2) along with staff review of the compliance with these standards:

i. **Provides substantial and viable publicly accessibly open space or other amenity at the street level that supports and reinforces pedestrian activity and interest. Such amenities may include without limitation plazas, outdoor eating spaces and cafes, or wider sidewalk circulation areas in locations of substantial pedestrian congestion.**
Complies. The requested increased setbacks facilitate expanded sidewalk areas on all three frontages to avoid conflicts with utility connections and establish a contextual setback with City Hall on Congress Street and Merrill Auditorium on Cumberland Avenue. By increasing the setback area along

Congress Street, the applicant is able to construct a wider sidewalk that would establish a linear plaza space capable of accommodating pedestrian amenities including seating, outdoor eating spaces/café tables, enhanced landscaping and tree canopy. Furthermore, the setback along Congress Street enhances the visual connection between the site and City Hall plaza and supports the existing street wall alignment by aligning with the northern building wing of City Hall. Similarly, increasing the setback area along Cumberland Avenue would allow for a wider sidewalk capable of accommodating pedestrian amenities that may support the proposed retail spaces and enhances the visual connection with Merrill Auditorium.

ii. Does not substantially detract from the prevailing street wall character by introducing such additional setback at critical building locations such as prominent form-defining corners, or create a sense of discontinuity in particularly consistent or continuous settings.

Complies. As mentioned above, the requested waiver would facilitate the strengthening of the Congress street wall by permitting a contextual setback at Congress & Myrtle Street and Cumberland & Myrtle Street, with the angular Congress Street setback respectfully transitioning to Pearl Street that reflects the current design of Congress Street.

iii. Does not detract from existing publicly accessible open space by creating an excessive amount of open space in one (1) area or by diminishing the viability or liveliness of that existing open space.

Complies. Based on recommendations from Staff, the Applicant transitioned a proposed pocket park on Congress Street into a linear park that improves the connection between existing open spaces of City Hall Plaza and Lincoln Park and provides viable opportunities for seating and events that can support uses on-site and in the surrounding neighborhood, while also creating additional space for an enhanced street tree canopy. Along Cumberland Avenue, an expanded sidewalk provides viable opportunities for seating and events that can support the proposed ground floor retail spaces.

iv. The area of setback is of high quality and character of design and of acceptable orientation to solar access and wind impacts as to be attractive to pedestrian activity.

Complies. The proposed setback areas allow for an expanded and improved brick sidewalks. The expanded sidewalks will function as an attractive improvement for pedestrian activity and provide visual connections to City Hall Plaza and Merrill Auditorium.

Based on the compliance with these review standards, Staff recommends approval of the proposed waiver.

Parking Design Waivers

The next three waivers relate to parking exemptions for the two proposed parking areas.

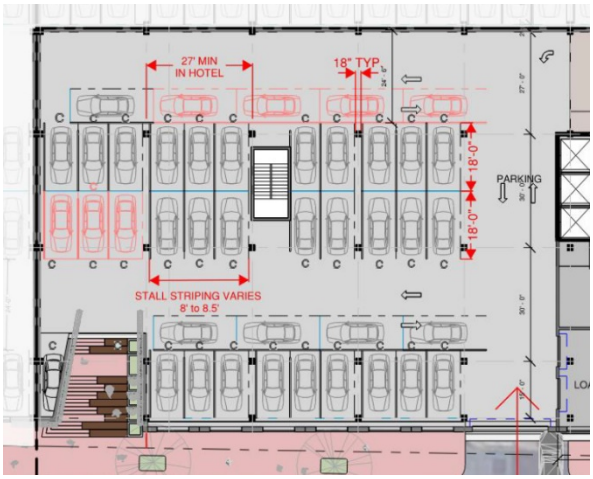


Figure 7: Parking Lot Plan for 'Lot 1' at Congress Street level. The Plan proposes that all spaces be compact spaces due to the structural columns denoted with black squares and to allow for narrower aisle widths & configuration not shown in the Technical Manual for the valet operations.

Technical Manual Waiver – Sec. 1.14.2 – Permitted Percentage of Compact Parking Spaces

The Technical Manual states that parking spaces shall meet the following dimensional requirements:

- Standard parking space: 9 feet wide by 18 feet long
- Compact parking space: 8 feet wide by 15 feet long
- Motorcycle/motorized scooter parking space: 4 feet wide by 8 feet long

with the allowance that parking lots with greater than 10 spaces may be comprised of up to 20% compact parking spaces. The Applicant has requested that all of the proposed spaces for the portion of the site identified as 'Lot 1' (Hotel) be compact. The two levels of parking on 'Lot 1' would be solely accessed by valets.

The Applicant has also included in this request a proposed increase in the number of compact spaces on the portions of the site identified as Lots '2' and '3' to 96 spaces of the total 267 spaces (±35%).

Consulting Traffic Engineer Tom Errico has provided the following comments in support of the waiver:

> *The applicant is requesting a wavier as it relates to the number of compact parking spaces for the project. Given that many of the parked vehicles will be low turnover and some spaces will only have the width reduced to between 8' and 8'6" due to structural column constraints, I support the requested waiver.*

Technical Manual Waivers – Sec. 1.14.3 & 1.14.5– Parking Lot Layout & Drive Aisle Width

Sec. 1.14.3 requires that parking lot layouts shall conform to Figures I-28 thru I-32. Additionally, Sec. 1.14.5 states that vehicular access shall be provided by one or more aisles with minimum widths of aisles depicted in Figures I-28 thru I-31. The Applicant has requested a waiver of these standards for the two levels of structured parking for 'Lot 1' (Hotel). The proposed parking includes a combination of 90 degree stalls, parallel parking spaces, and double parking. In between the 90 degree and parallel parking spaces in the northern stalls of the garage, there is a proposed 15' aisle width. In between the two southern rows of 90 degree parking stalls, stacked parallel parking is proposed and a 15' aisle width as well.

The Consulting Traffic Engineer has provided the following comments in support of these waivers:

> *The applicant is requesting a waiver for parking aisle width for the parking of valet vehicles in the aisle, thus reducing the effective width for maneuvering. Given that all vehicles in the hotel parking*

lot areas are valet managed and not self-parked, I support this waiver. I would note that vehicles shall not encroach into the driveway to and from Myrtle Street.

VII. TRAFFIC MOVEMENT PERMIT

Currently, the Applicant is in the process of revising the proposed methodology for trip generation estimates to use a separate residential land use code and high turnover sit-down restaurant for the retail uses, instead of the originally proposed LUC 221 (Mid-Rise Residential w/ First Floor Commercial).

Based on the current status of the TMP application review, the TMP will be reviewed and approved prior to the first site plan approval for the project.

VIII. STAFF REVIEW

A. Master Development Plan Review Standards Section 14.7

Section 14.7 of the City's Land Use Code establishes standards under which Master Development Plan applications must be reviewed. Per this section, Master Development Plans shall adhere to the following requirements:

Section 14.7.1. In general

a. Designed to integrate with the surrounding context with respect to land use, architecture, open space and pedestrian networks, vehicular access and circulation, off-site public facilities and all other infrastructure.

Staff Comment: The proposed uses of the site for multi-family housing, hotel, retail, and structured parking are similar & compatible with the surrounding area. As part of the initial review stage, larger design topics relating to open space and pedestrian networks, relationship with neighboring architecture, and vehicular access and circulation were identified by City Staff.

The Applicant has submitted revised plans that improve the integration with neighboring City Hall & Cumberland Avenue to better reflect the existing street wall and building form. Additionally, shadow studies and renderings along Congress Street and Cumberland Avenue confirm that the proposed design will not result in negative visual impacts on adjacent open spaces of City Hall Plaza and Lincoln Park (Documents U and V).

Open space and pedestrian improvements have also been made to provide more usable and accessible spaces through an expanded sidewalk/linear park along Congress Street and increased accessibility to the proposed amenity deck through street level staircases at Congress Street & Myrtle Avenue.

The submitted design has reduced the total number of curb cuts on the block from seven to four by collocating garage entrances with loading and trash operations and adding vehicular ingress/egress mid-block on Cumberland Avenue and shifted valet drop-off operations off Congress Street to reduce negative impacts on the surrounding area.

The applicant has requested a waiver to reduce the minimum number of parking spaces for the condominium developments on Lots 2 and 3 from one parking space per dwelling unit to 0.9 parking spaces per dwelling unit. Staff reviewed the parking reduction waiver request and finds this waiver is not necessary given that the Land Use Code provides reductions that do not require the approval of a

formal waiver. The applicant is within a quarter mile of fixed route transit and therefore is not required to provide parking if they chose to provide a TDM plan for the residential component as stated in Table 19-B, or the Planning Board may establish an off-street parking requirement that is below the zoning requirement of one parking space per dwelling unit based on a parking study or finding of unique conditions that result in a lesser parking demand.

The updated design includes an expanded sidewalk along Congress Street, which will strengthen the connection between two off-site public facilities (City Hall Plaza and Lincoln Park). The preliminary utility designs submitted for the project integrate with existing utilities and proposed signal improvements on Pearl Street and the burial of overhead utilities on Pearl Street.

Based on the submitted application materials the proposed MDP is designed to integrate with the surrounding context.

b. Consistent with the objectives of this ordinance, consistent with the City's Comprehensive Plan, and consistent with City Council-approved master plans and facility plans for off-premise infrastructure.

Staff Comment: The submitted MDP is consistent with City Council-approved master plans by:

- Improving transportation access to arts and cultural venues throughout the City by enhancing the connection to Merrill Auditorium via the proposed amenity deck and street level staircases (**Arts District Plan, 1996**), and
- Proposing the construction of dense housing in Downtown and pedestrian enhancements such as curb extensions and expanded sidewalks to promote walkability and traffic calming (**Peninsula Transit Plan, 2009**).
- Providing infill development within a transit-oriented location with pedestrian-oriented streets to make walking more inviting, and connection to bus routes, bike networks, and other mobility options easier to access to other parts of the city. Providing residential density as well as employment and job density that can support and drive transit ridership as well as walk to work opportunities **(One Climate Future, 2021)**.

The Comprehensive Plan, *Portland's Plan 2030* goals and policies (state and local) relevant to the proposed master development plan are included below. The master development plan aligns with these vision statements and goals by infilling an underdeveloped site primarily used for automobile parking located at the heart of Portland's walkable downtown, proximate to some of the tallest structures in the city, with residential units, commercial uses, and publicly accessible open spaces and pedestrian connections that better reflect the downtown location.

The scale of the proposed buildings facilitate an increase in dwelling units within a walking and transit-oriented site. Along with increasing the viability of downtown, the proposed infill project potentially reduces the need for new construction in green field or outlying areas and dependency on single occupancy vehicles, which promotes more sustainable development practices.

In addition, the expanded sidewalk area along Congress Street would serve as a positive connection between adjacent open space sites (City Hall and Lincoln Park), the proposed amenity deck and retail units wrapping the corners of the site provide site permeability to enhance pedestrian connections, and overall there is an increase in the number of recreational opportunities within close proximity to the Bayside and Downtown neighborhoods.

Vision Statements

- 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.
- Sustainable: Portland will grow in order to sustain our community, infrastructure, and economy.
- Dynamic: Portland will plan for a built environment that encourages an active citizenry.
- Connected: We will enable meaningful access to the natural world and recreational opportunities as a central component of community health.

Land Use

- **Reinforce the Center:** Though Portland's commercial and entrepreneurial activity takes place throughout the city, downtown Portland remains at the center of the region's arts and cultural, economic, and civic health, and Portland's Plan embraces the principle that downtown should continue to be a predominant locus of activity for the broader region.

Environment

- Adopt sustainable land use and transportation policies that support connectivity, walkable neighborhoods, and multi-modal transportation.
    - Continue to develop land use policies which support complete neighborhoods.

An Enduring City – Historic Preservation

- 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.

A Livable City: 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.
- 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.
    - Remove housing barriers
    - Leverage underused properties

An Active City – Recreation & Open Space

- Strengthen connections between open spaces
    - Ensure Equity
    - Improve Safety, Visibility, and Accessibility
    - Incorporate Multiple Functions
    - Connect the Chain

An Accessible City – Transportation

- 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.

- Enhance the pedestrian realm

Future Land Use

- Complete Neighborhoods
- Reinforce the Center

Natural features and open space

a. Developed so as to locate buildings and improvements in a manner that considers existing topography, provides usable open space, preserves significant natural features as defined in Subsection 14.6.2, and preserves existing trees to the maximum extent possible.

Staff Comment: The proposed development considers the existing change in topography from Congress Street to Cumberland Avenue by giving each frontage a distinct design that does not prioritize one frontage over the other. Additionally, the change in grade has allowed for the Applicant to include underground parking towards the Congress Street frontage, which allows for more active lobby space and retail units on the corners of the project site.

Expanded sidewalks and the amenity deck will serve as open spaces for tenants, hotel guests, and the public, and enhance connections between existing open spaces of Lincoln Park and City Hall Plaza. The property is currently entirely developed, with minimal landscaping around the perimeter and no significant natural features. The MDP contemplates eliminating all of the existing landscaping and proposes the planting of 34 street trees, which will be an overall increase of 25 trees in the streetscape. Staff is recommending that the existing street trees along Congress Street be re-evaluated for preservation by the applicant and the City Arborist as part of future Site Plan submissions.

b. Include provisions for the ownership and maintenance of usable open space as appropriate.

Staff Comment: The proposed amenity deck will span three parcels post-subdivision. Based on feedback from Planning Staff and the Board, the design of the amenity deck has been updated so that the portions of the amenity deck for Phase 1 and Phase 1Alt. can be used before both phases of construction are complete. The proposed access staircases will be open to the general public after both phases of construction are completed. The Applicants have stated that portions of the amenity deck on Lot 1 will be owned and maintained by the Hotel operator and portions of the amenity deck on Lots 2 and 3, will be owned and maintained by a shared owner.

Historic Preservation

a. Developed as so to conform with standards for designated landmarks or for properties within designated historic districts or historic landscape districts as found in Article 17.

Staff Comment: Not applicable. The site is not a designated landmark or located within a historic district or historic landscape district.

b. When proposed adjacent to or within one hundred (100) feet of designated landmark, historic district, or historic landscape, the master development plan shall be developed so as to be

generally compatible with the major character-defining elements of the landmark or portion of the district in the immediate vicinity of the proposed development.

Staff Comment: The site is located within 100 feet of the Congress Street Historic District and Portland City Hall, an individually designated landmark prompting a Historic Preservation advisory review. Staff has provided initial design comments to the Applicant in a previous design review memo (Attachment #3).

Staff note that the site is an excellent location for a creative contemporary design and that any future building designs consider the detailed architectural design relationship in the context of City Hall and the existing buildings along Congress Street many of which share common elements of a unified massing broken up through layered rhythms of regular fenestration and ornamentation, and prominent entrances along Congress Street. The proposed development includes contextual setbacks to ensure buildings are compatible with City Hall. The site offers an opportunity to extend the activity of Congress Street to the east with active ground floors and the creation of a linear plaza by setting the building back from Congress Street an additional 10 feet from the property line to align with City Hall's northern building wing and provide a visual connection to City Hall plaza. The majority of the site will include a one or two story street wall before stepping back and rising to the maximum building height. Subsequent site plan applications will include additional advisory reviews related to more specific elements (e.g., materiality) of the buildings.

Infrastructure

a. Designed with sizing of street and other infrastructure systems to accommodate the overall service demand of the plan.

Staff Comment: The proposed development will be serviced by public water, sanitary sewer, electric, natural gas and telecommunications. As part of the application, a new 8" water main supporting the condominium units in Phases 3 and 4 is proposed to run under Pearl Street.

Regarding stormwater management, the applicant has provided details of proposed improvements for each phase to service the overall development. This concept is to be refined and designed with more detail as part of each individual phase. The proposal qualifies as a redevelopment under MaineDEP Chapter 500, and is required to treat 50% of impervious surface. Two subsurface storage and treatment systems are proposed, with one system serving the hotel for Phase 1 and the second serving the condominium and retail uses in Phases 1 Alt-4. At this time the systems will either utilize a subsurface sand filter or storm filter system, with both being identified/approved as a Maine DEP stormwater best practice. Based on initial calculations, the system is anticipated to treat and detain 50 to 66% of the project's developed area.

The submitted application materials state that more detailed utility plans will be submitted upon submission of each separate major site plan application. Based on a request from City reviewers for more detailed documentation on ownership, easements, and level of compliance between phases, the Applicant submitted a detailed phasing plan that provides this information. City reviewers (Department of Public Works & the Consulting Traffic Engineer) have noted areas for future review and analysis in the subsequent site plan reviews. These comments have been included in Attachments 8 and 9.

b. Designed to create a street grid pattern that reflects average city block sizes of the surrounding neighborhood.

Staff Comment: The submitted MDP retains the existing city block size of 1,315 feet, which is reflected in the neighboring context of sites that occupy whole City blocks. Through updates to the design of the project, the Applicant has included a publicly accessible pedestrian connection through the site via the amenity deck and included retail units that wrap around corners to increase the porosity of the site for pedestrians, which also reflects the nearby context. Based on these design considerations, the proposed project reflects the average city block size of the surrounding neighborhood.

Design

a. Designed to create a cohesive identity through building scale, massing, and articulation; use of quality exterior materials and architectural detailing at pedestrian scale; consistency of design and materials for streetscape and pedestrian amenities; framing of outdoor open space and linkages; a clear conveyance of the function and significance of various buildings, entrances, and features; and to generally comply with design and development standards of the zone in which it is located.

Staff Comment: A Design Review was prepared by Urban Designer Sean King on August 2, 2022 detailing the compliance of the submitted application with the MDP design standards (Attachment 5). Based on the review it was determined that the MDP has created a cohesive identity through the inclusion of a podium design with ground floor retail at the base and stepbacks that have established vertical scale for the towers while reducing the building heights of Condominiums B & C to reflect the residential character of Cumberland Avenue.

Quality exterior materials have been demonstrated through the inclusion of building entry canopies, storefront windows, structured parking screening and signage, with further review upon submission of Major Site Plan applications.

A consistency in streetscape and pedestrian amenities has been provided by providing a linear park that continues the expanded pedestrian amenity provided at the adjacent City Hall, distinguishing pedestrian and vehicular zones through differing surface materials, and delineates public vs. private space on the amenity deck through grade separation.
The inclusion of expanded sidewalks, ground-floor retail, and amenity deck help to frame outdoor open spaces and linkages to open spaces on and off-site. The Design Review memo recommends requirements for continuity in materials, amenities and connectivity in the expansion of the amenity deck between phases and shall be considered by the applicant in future Site Plan applications. Under future site plan reviews, the Applicant should consider how street furniture, such as permanent outdoor seating, can be incorporated within the expanded sidewalk along Congress Street.

The function and significance of buildings, entrances and features has been demonstrated through the differing design of the hotel and condominium buildings, structured parking screening, and differing projections/recessions for balconies that denote private access to the amenity deck area.

Through the submission of the waiver request for increased front setbacks and future staff review in subsequent site plan applications, the MDP meets the relevant MDP standards related to design. Additional design review against the B-3 design standards will be required in future site plan submittals.

IX. NEIGHBORHOOD MEETING & PUBLIC COMMENT

As of the writing of this memorandum, two written public comments have been received (Attachment 10). These comments pertain to concerns about traffic circulation around the site and the support of street trees & new landscaping as a component of the proposed project. The applicant held a Neighborhood Meeting on May 23, 2022 and three members of the public attended (Attachments 11 and 12). Questions raised at the Neighborhood Meeting addressed the following topics:

- Project application materials including historic photos of the site and whether the proposed project will incorporate historic site elements (e.g., restoration of Chapel Street, design elements from Payson Memorial Church)
- The proposed number and location of parking spaces and whether the parking levels have the ability to be retrofitted for commercial or residential uses
- Levels of access to the amenity deck and activation of the streetscape

X. STAFF RECOMMENDATION

Subject to the proposed motions and condition of approval listed below, Planning Department staff recommends that the Planning Board approve application #PL-001970-2022 for a Master Development Plan at the subject property.

XI. PROPOSED MOTIONS

A. WAIVERS

On the basis of the application, plans, reports and other information submitted by the applicant, findings and recommendations contained in the Planning Board Report for the public hearing held on August 9, 2022 for application #PL-001970-2022 relevant to the Master Development Plan Standards of the Land Use Code and Portland's Technical and Design Standards, and other regulations, and testimony presented at the Planning Board public hearing:

1. Maximum Front Setback
   The Planning Board [finds/does not find] based upon the Planning Staff's review that extraordinary conditions exist or undue hardship may result from strict compliance with Section 7.3, Table 7-E of the Land Use Code which requires a maximum front setback of 5 feet, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board [waives/does not waive] Land Use Code Section 7.3, Table 7-E to allow a maximum front setback of 22 feet on Congress Street, 16 feet on Cumberland Avenue , and 6 feet on Pearl Street.

2. Maximum Percentage of Compact Parking Spaces
   The Planning Board [finds/does not find] based upon the Consulting Traffic Engineer's Review, that extraordinary conditions exist or undue hardship may result from strict compliance with

Technical Manual Section 1.14.2 which states that the maximum permitted percentage of compact spaces for parking areas with 10 or more spaces is 20%, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board [waives/does not waive] Technical Manual Section 1.14.2 to allow all of the proposed parking spaces for the portion of the site labeled 'Lot 1' to be compact spaces and 96 (±35%) of the 267 parking spaces proposed for the portion of the site labeled as 'Lot 2' and 'Lot 3' to be compact spaces.

3. Parking Lot Layout

The Planning Board [finds/does not find] based upon the Consulting Traffic Engineer's Review, that extraordinary conditions exist or undue hardship may result from strict compliance with Technical Manual Section 1.14.3 which states that parking lot layouts shall conform to Figures I-28 thru I-32, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board [waives/does not waive] Technical Manual Section 1.14.3 to allow a parking layout for the portion of the site labeled as 'Lot 1' to have a design that does not conform to Figures I-28 thru I-32.

4. Parking Lot Drive Aisle Width

The Planning Board [finds/does not find] based upon the Consulting Traffic Engineer's Review, that extraordinary conditions exist or undue hardship may result from strict compliance with Technical Manual Section 1.14.5 which requires parking lot layouts provide a minimum drive aisle of 24 feet, that substantial justice and the public interest are secured with the proposed variation in this standard, and that variation is consistent with the intent of the ordinance. The Planning Board [waives/does not waive] Technical Manual Section 1.14.3 to allow a reduced drive aisle width of 15 feet.

B. MASTER DEVELOPMENT PLAN REVIEW

On the basis of the application, plans, reports and other information submitted by the applicant; findings and recommendations contained in the Planning Board Report for the public hearing on August 9, 2022 for application #PL-001970-2022 relevant to the Master Development Plan regulations; and the testimony presented at the Planning Board hearing, the Planning Board [finds/does not find] that the plan is in conformance with the Master Development Plan standards of the Land Use Code subject to the following conditions of approval:

1. The Design Standards outlined in the City's Urban Design Review Memo dated August 2, 2022 in addition to the B-3 Downtown Business Design Standards shall guide the site plan review of all the MDP phases. The approval of the MDP does not imply approval of individual building designs and the public realm details as presented, which shall be addressed in Site Plan application and review; and

PRIOR TO APPROVAL OF THE FIRST SITE PLAN APPLICATION

2. The applicant shall receive approval for and file with the Cumberland County Register of Deeds a subdivision of the subject property (385 Congress Street) into three lots that meet the standards of the City's Land Use Code.

3. The applicant shall receive Planning Board approval for a Traffic Movement Permit encumbering all future Major Site Plans associated with this Master Development Plan.

4. The applicant shall work with the City Arborist to evaluate the preservation of existing street trees along Congress Street.

XII. ATTACHMENTS

Staff Attachments

1. City Staff Comment Letter (June 23, 2022)
2. City Staff Comment Letter (July 26, 2022)
3. City Staff Design Recommendations Memorandum
4. City Staff Design Recommendations Presentation
5. City Staff Design Review Memorandum (August 2, 2022)
6. TMP Scoping Meeting Notes (May 18, 2022)
7. Comments on Proposed Trip Generation Methodology (July 20, 2022)
8. Status Updates – Transportation Review (August 4,2022)
9. Department of Public Works Comments (August 4, 2022)
10. Public Comment
    a. PC1: Aurelia C Scott
    b. PC2: Avery Yale Kamila
11. May 23, 2022 MDP Neighborhood Meeting Notice
12. May 23, 2022 MDP Neighborhood Meeting Minutes

Applicant's Documents

A. Cover Letter and Description
B. Master Development Plan Checklist
C. Right Title and Interest
D. Evidence of State/Federal Approvals
E. Zoning Analysis Table
F. Assessment of Compliance
G. Waiver Table
H. Financial Capacity
I. Technical Capacity
J. Master Development Context and Building Design
K. Natural Features
L. Views and Historic Features
M. Public Safety
N. TMP Application and Sections 1-6
O. Transportation Assessment
P. Trip Generation Methodology Memorandum (June 28, 2022)
Q. Utilities
R. Masterplan Stormwater Narrative
S. Preliminary Geotechnical Report (March 3, 2017)
T. Exploration Summary Memo (February 8, 2022)
U. Valet Operations Narrative (July 25, 2022)
V. View Studies (August 1, 2022)
W. Shadow Study (July 31, 2022)

Plans

P1. Cover Sheet
P2. General Notes and Legend
P3. Site Plan – Street Level
P4. Grading Plan – Street Level
P5. Utility Plan – Street Level
P6. Schedules
P7. Landscape Plan – Street Level
P8. Landscape Plan – Level 2
P9. On-Street Parking Comparison Plan
P10. Easement Plan Level 0 Interim
P11. Easement Plan Level 0
P12. Easement Plan Level 1
P13. Existing Conditions Plan 1
P14. Existing Conditions Plan 2
P15. Floor Plan – Level 0
P16. Floor Plan – Level 1
P17. Floor Plan – Level 2
P18. Floor Plan – Levels 3-8
P19. Floor Plan – Levels 9-10
P20. Floor Plan – Level 11 (Level 10 Hotel)
P21. Floor Plan – Level 12 (Level 11 Hotel)
P22. Floor Plan – Level 13 (Level 12 Hotel)
P23. Floor Plan – Penthouse Level
P24. Building Sections
P25. Perspective View from Congress & Myrtle
P26. Perspective View from Congress & Pearl
P27. Perspective View from Cumberland & Myrtle
P28. Perspective View from Cumberland & Pearl
P29. Phasing Plan -Summary
P30. Phasing Plan –Phase 0
P31. Phasing Plan –Phase 1 (1 of 3)
P32. Phasing Plan –Phase 1 (2 of 3)
P33. Phasing Plan –Phase 1 (3 of 3)
P34. Phasing Plan –Phase 2 (Phase 1 Alt.) (1 of 3)
P35. Phasing Plan –Phase 2 (Phase 1 Alt.) (2 of 3)
P36. Phasing Plan –Phase 2 (Phase 1 Alt.) (3 of 3)
P37. Phasing Plan – Phase 1 & 2 Complete
P38. Phasing Plan – Phase 3 (1 of 3)
P39. Phasing Plan – Phase 3 (2 of 3)
P40. Phasing Plan – Phase 3 (3 of 3)
P41. Phasing Plan – Phase 4 (1 of 2)
P42. Phasing Plan – Phase 4 (2 of 2)

Phasing Plan

- Submit a detailed phasing plan that includes:
    - The proposed sequence of construction;
    - A description of how shifts in the sequencing of construction will modify building and site design, location, ownership and maintenance of on-site utilities, connections to off-site utilities (such as overhead electrical wires), and streetscape design for each phase, if applicable;
    - A description of the proposed site improvements that will be made in the event that longer periods of time between phases of construction, with additional attention relating to the proposed surface parking and amenity deck, and
    - Elevation drawings or renderings for Cumberland Avenue and Pearl Street that show interim conditions between phases for portions of buildings that are anticipated to be obscured by future development.

  While the submitted phasing plan may consist primarily of detailed narrative responses, Planning Staff encourages the use of conceptual elevations, renderings, and photovisualizations throughout the plan.

Zoning

- Based on the submitted application materials, the proposed project does not comply with the following B3 dimensional requirements outlined in §7.3, Table 7-E:
    - Maximum permitted floor area (15,000 square feet for each floor above 125 feet; Proposed: 17,203 square feet for Level 12 in Cumberland Avenue Condominium Building);
    - Maximum lot coverage (25% of lot area for portions of structures exceeding 125 feet in height; Proposed: 46% of current lot area. Based on the anticipated subdivision application, lot coverages for each of the three lots would still exceed the maximum permitted (Lot 1: 50.4%; Lot 2: 54%; Lot 3: 38%)).

  Update the application documents to meet the requirements of §7.3, Table 7-E of the City Land Use Code. Future submissions including elevation drawings should better identify the average grade of the site in relationship to the height of the proposed structures along each street frontage to confirm compliance.

- In the B-3 zone under Table 7-E, the maximum permitted setback from the street is 5 feet. The proposed site plan does not comply with this requirement. §(b)(1)(e)(2) of the City's Design Manual states that a proposed development may exceed the maximum setbacks as required only when the applicant demonstrates to the Planning Board that the introduction of increased building setback at the street level:
    i. Provides substantial and viable publicly accessible open space or other amenity at the street level that supports and reinforces pedestrian activity and interest. Such amenities

may include without limitation plazas, outdoor eating spaces and cafes, or wider sidewalk circulation areas in locations of substantial pedestrian congestion;

ii. Does not substantially detract from the prevailing street wall character by introducing such additional setback at critical building locations such as prominent form-defining corners, or create a sense of discontinuity in particularly consistent or continuous settings;

iii. Does not detract from existing publicly accessible open space by creating an excessive amount of open space in one (1) area or by diminishing the viability or liveliness of that existing open space;

iv. The area of setback is of high quality and character of design and of acceptable orientation to solar access and wind impacts as to be attractive to pedestrian activity.

While a waiver justification was submitted with the application, the justification does not fully address and distinctly answer each of the waiver standards. Submit an updated waiver request that provides a distinct justification in relationship to each of the waiver standards of §(b)(1)(e)(2) of the City's Design Manual.

Downtown Urban Design Guidelines

- §(b)(1)(a)(1)(i)(2) of the Design Manual states that building entrances, including such factors as compatibility with the building's façade, prominence along the street, access to the street, and accessibility for physically handicapped or for those with special needs are factors that should be considered.

  The entrance to the hotel is not as easily apparent/accessible as the entrance for the condos on Congress Street. Update the site plan and floor plans to either shift the entrance to Congress Street from the driveway/public plaza area or add an additional entrance on Congress Street with an awning similar to the entrance to the condos or a projection/recession that aligns with the proposed design of the building.

- § (b)(1)(e)(1) of the Design Manual states that proposed development shall respect, enhance, and be integrated with the existing character of the general pattern of development in the downtown, surrounding building environment and streetscape, as described and illustrated in the Downtown Urban Design Guidelines (Appendix 1). Factors to be considered include the relationship to the following existing patterns:
  i. Street walls and building setbacks;
  ii. Open space;
  iii. Building form, scale and massing;
  iv. Facade proportion and composition;
  v. Pedestrian circulation and building entrances;
  vi. Parking.

At this time, the current application materials present conflicts with the listed factors of § (b)(1)(e)(1) of the Design Manual. Some of these conflicts have been addressed in a previous design memorandum sent on May 27, 2022.

Additional preliminary comments identified by City Staff related to the design of the site included:

- *Increasing permeability into the site along Myrtle Street, Cumberland Avenue, and Pearl Street to support street activation and connections to the proposed amenity deck;*
- *Distinguishing the lower floor building façade to reinforce prevailing pattern and proportions of adjacent buildings along each frontage, particularly along Cumberland Avenue, and*
- *Providing additional information relating to the proposed signage for building uses and materiality of the façade and screening devices for the structured parking and rooftop appurtenances/mechanical equipment to confirm consistency in design in and around the site.*

- §(b)(1)(e)(2)(v) of the Design Manual states that all mechanical equipment, ventilating and air conditioning and other building systems, elevators, stairways, radio or television masts or equipment, or other rooftop elements not intended for human occupancy shall be fully enclosed in a manner consistent with the character, shape and materials of the principal building, as described and illustrated in the Downtown Urban Design Guidelines.

  Submit roof plans for the proposed structures and if rooftop appurtenances are proposed, document what screening methods & materials will be used to meet the standards of §(b)(3) of the Design Manual.

- §(b)(1)(f) of the Design Manual states that the location, massing and orientation of portions of buildings in excess of sixty-five (65) feet in height shall be such that substantial shadow impacts on public plazas, parks, and other publicly accessibly open space are avoided. §(b)(1)(f) of the Design Manual continues to state that new development should not increase the area in shadow by more than 10 percent during the period from March 21 to September 21 during the critical hours of use for the following open spaces:
  - Lincoln Park: 10 AM to 2 PM
  - City Hall Plaza: 10 AM to 2 PM

  Submit a shadow impact study to determine the pre-development and post-development shadows on City Hall Plaza and Lincoln Park during the period from March 21 to September 21 between the hours of 10 AM to 2 PM, as well as any shadow impacts that may occur on the proposed temporary park and the public plaza along Congress Street.

- §(b)(1)(g) of the Design Manual states that the location, massing, orientation and architectural design of a new building or a building addition shall be such that no significant adverse wind impacts are created.

Submit a wind tunnel study using Melbourne's Criteria to identify the change in pre-development and project post-development wind speeds and their impact on pedestrian movement, and the impact of the projected wind speed on the use of and comfort within existing and proposed pedestrian seating areas and other adverse impacts on the surrounding area. The submitted study should include analyses of impacts for each of the proposed phases of construction.

- §(b)(II)(A) of the Design Manual states that proposed development shall respect, enhance, and be integrated with the existing character of the general pattern of development in the Downtown, surrounding building environment, and streetscape.

  §(b)(VIII)(B) of the Design Manual continues on to state that development adjacent to visual landmark structures, including Portland City Hall, are encouraged to be considerable of their importance and should assure wherever feasible that the landmarks be read against the sky from important streets and view corridors and that they be surrounded by structures of similar scale.

  Submit photovisualizations of the proposed development from Congress & Exchange Streets looking north and from Cumberland Avenue & Cedar Street looking north that demonstrate how the proposed design meets the standards of §(b)(II)(A) and §(b)(VIII)(B) of the Design Manual.

Transportation Systems

- Please note that §1.1 of the Technical Manual states that development that generate 100 Passenger Car Equivalents (PCE) require a Traffic Movement Permit through the Department of Public Works.
- Additionally, since the property has frontage along Congress Street, which is identified as a Minor Arterial in Figure I-26 of the Technical Manual, the submission of a traffic study is required.
- §1.7.2.4 of the Technical Manual states that the maximum permitted driveway width for commercial uses is 24 feet.

  The submitted site plan includes driveway widths for the driveway on Myrtle Street & Pearl Street of 27 feet. Update the site plan to provide a compliant driveway width of 20 to 24 feet, with 24 feet preferred.

- Submit draft copies of the proposed cross-access agreements for parking pre- and post-construction.
- §1.15.3 of the Technical Manual requires that commercial uses provide a minimum of ten percent (10%) of required bicycle parking shall be provided within fifty (50) feet of the main egress point of the structure or shall be no further from such entry than the nearest five (5) non-handicapped parking spaces. §1.15.3 continues to state that where there is more than one structure on a site, or where a structure has more than one main entrance, the parking shall be distributed to adequately serve all structures or main entrances.

The proposed bicycle parking is located more than 50 feet from the main egress points of the structures on the site and are located on the opposite street frontages (Myrtle & Pearl Streets) from all of the primary entrances. Update the site plan and floor plan to locate at least 10% of the bicycle parking to a location that more adequately serves all commercial entrances.

- §1.18 of the Technical Manual requires that designated on-street motorcycle/moped parking spaces must be angled and four (4) feet wide by eight (8) feet long.

  The on-street motorcycle/moped parking spaces shown on Myrtle Street are only 3.5 feet in width, when 4 feet is required. Update the site plan to meet the requirements of §1.18 of the Technical Manual.

Public Safety

- §3.1.2 of the Technical Manual states that sites shall be designed so that the layout, features and/or signage clearly guide the movement of vehicles and pedestrians along safe and predictable paths, with site plans specifically detailing the placement of signage, lighting fixtures, landmarks, and landscape design features that clearly guide users to and from the facility.

  Update the site plan to include:
  - ***A signage and operations plan for the proposed valet parking;***
  - ***A signage and operations plan for the proposed staircases that exit into the structured parking that including detail specifications for signage and/or pavement markings that promote safe pedestrian access; and***
  - ***A signage and wayfinding plan for the proposed pocket park and amenity deck, along with wayfinding to connect users to both spaces.***

- §3.2.1 of the Technical Manual states that all development constructed within the limits of the City of Portland shall have a hydrant within five hundred (500) feet of all structures.

  Confirm with the City's Fire Department that a new hydrant will not be required from the building included in Phase 1A.

- Please note that §3.4.7 of the Technical Manual states that street name and street numbering shall be determined during development/subdivisions review and shall comply with Portland's 911 numbering system.

Landscaping

- Please note that §4.6 of the Technical Manual states that the arrangement and spacing of trees proposed in the City right-of-way shall be coordinated with the Portland City Arborist or their designee. Given that the number of required street trees outline in §4.6 of the Technical Manual will not be met for the multi-family units (1 street tree per dwelling unit), the Applicant should consider the use of approved Street Tree Alternatives outline in §4.6.4 of the Technical Manual.

- Update the site plan set to identify the proposed locations for snow storage. §4.5.6 of the Technical Manual states that snow storage areas shall not encroach on areas designated to meet minimum parking requirements but may be located in landscaped areas provided that appropriate landscape materials are selected which can withstand such snow storage. Additionally, snow storage shall not be located where it would adversely impact the functionality of bioretention or other stormwater management systems.

- Submit an updated landscaping plan to clarify the maximum allowable size/caliper of trees on the amenity deck based on engineering/weight limitations.

Department of Public Works - Stormwater Management

- The application notes the existing hydrants as part of their public safety narrative. The utility plans do not show replacement of these hydrants, but I would suggest that due to the disturbance and utility work in the sidewalk some may need to be replaced.
- The application notes that the existing underground utility vaults on Myrtle Street may be reused. Once they have that design, they should show the underground conduits from these vaults to ensure no conflict with the trees that are proposed very close to the vaults.
- The phasing diagrams generally don't show phasing of infrastructure. It appears that all of the sidewalk replacement (switching from concrete to brick) may be proposed at the start, but that should be clarified. I would also suggest that the phasing should include utilities and stormwater, with consideration for what may need to be done for stormwater management if there is extended time between phases and large surface parking lots remain.

Soil Survey

- At a minimum, the submission of a geotechnical report, prepared and stamped by a Maine Licensed Engineer will be required. Upon review of the geotechnical report, a separate soil survey prepared by a Certified Soil Scientist may need to be submitted.

Municipal Street Lighting

- §10.1 of the Technical Manual requires that decorative lighting be installed along the Congress Street, Cumberland Street, and Myrtle Street frontages of the project site.

§10.4 of the Technical Manual goes on to list the required types of streetlights and spacing for each of the frontages. For the frontages of Congress Street and Cumberland Avenue, the required streetlight is a STREET/PEDCOMBO (Figure X-5F in the Technical Manual) in Dark Green – Tiger Drlace RAL 6012. For Congress Street & Cumberland Avenue, the required spacing 90'-100' on center for one side or 175' -225' on center for alternating sides. For Myrtle Street, the required spacing is 90'-100' on center for one side, with alternating sides not permitted.

Update the site plan set to include a lighting plan that meets the standards of §10 of the Technical Manual and address subsequent comments related to the site lighting standards of §12 of the Technical Manual.

Boundary Survey

- Update the site plan set to include a separate sheet with a boundary survey for the site that meets the standards of §13 of the Technical Manual.

Parking Division

- The Parking Division recommends that the proposed site plan include additional off-street parking that is available to members of the public.

Department of Public Works – Transportation Division

- *On first blush the internal entry from Congress Street has some promise. The preference would be to have more of a treatment where the access crosses the sidewalk, not the other way around (i.e. the sidewalk material crosses the driveway and is more raised). I also don't think 20 feet for an opening at the sidewalk is needed for a one-way entry servicing valet needs - ideally this would be narrowed to 16 feet or less, unless they also propose using it for commercial access. It goes without saying that these operations cannot back into Congress Street, but this type of configuration should be rather efficient for quick turnaround.*

  I want to continue to note the following topics as well:

  1.) I am of the opinion that with some adjustments to their proposed cross-section, a few more feet of width can be achieved for the in-curb portion of Myrtle Street, ideally going from about 28 feet to 30 feet. Also, for the portion of the sidewalk that is on the Applicant's property, some sort of permanent easement for the City should be established for access as needed.

  2.) At 32 feet curb to curb, Pearl Street could support on-street parking on one side or the other along the project frontage, so long as the superfluous left turn lane into the Top of the Old Port is removed. If this could be accomplished, on-street parking supply would increase, even accounting for the loss of a few spaces along Congress Street.

3.) This project will significantly impact the intersections of Pearl with Cumberland and Congress, including traffic and pedestrian demand as well as significant changes to sidewalk and curbing. The traffic signal at Pearl and Cumberland is one of the oldest configurations in the City, and does not have pedestrian provisions or meet any current City specifications. This should be replaced and updated as part of this project. The structures and pedestrian equipment for the signal at Pearl and Congress should also be replaced, but this location does have a new cabinet that meets City specifications.

- *The other item I have mentioned to Planning and other staff is with regards to on-street parking. This project will reduce parking in an area with a high level of demand, at the same time adding new demand. I would recommend that as part of future transportation submittals, the Applicant conduct an expanded review of on-street parking for the streets bounded by Franklin, Oxford, Chestnut/Exchange, and Federal and provide recommendations for adjustments to the Traffic Schedule in these locations. These outcomes would be integrated into the Applicant's Traffic Movement Permit and Site Plan Approval, to be completed by the Applicant upon approval from staff and the Planning Board.*

Phasing Plan

June 23, 2022 City Staff Comments

Submit a detailed phasing plan that includes:

- The proposed sequence of construction;
- A description of how shifts in the sequencing of construction will modify building and site design, location, ownership and maintenance of on-site utilities, connections to off-site utilities (such as overhead electrical wires), and streetscape design for each phase, if applicable;
- A description of the proposed site improvements that will be made in the event that longer periods of time between phases of construction, with additional attention relating to the proposed surface parking and amenity deck, and
- Elevation drawings or renderings for Cumberland Avenue and Pearl Street that show interim conditions between phases for portions of buildings that are anticipated to be obscured by future development.

  While the submitted phasing plan may consist primarily of detailed narrative responses, Planning Staff encourages the use of conceptual elevations, renderings, and photovisualizations throughout the plan.

July 25, 2022 Applicant Response

A phasing narrative addressing in detail the anticipated sequence of construction is attached. The narrative presents the anticipated sequence of construct outlined in our application and as presented to the Planning Board where the Hotel on Lot 1 develops first followed by the condominiums, Condo A, Condo B and Condo C on Lot 2.

This is the most likely scenario of development and is also the phase that would require the most coordination with future phases. The alternative scenario where Condo A on Lot 2 is constructed first followed by the Hotel on Lot 1 also discussed.

As we have previously discussed with staff and the Planning Board, the applicant is seeking approval as part of the master plan to allow for a 24 month "grace period" between phases.

When an initial phase is constructed, the remaining areas of the site will be maintained in their existing condition and used as surface parking.

It is the goal of the development team to move from one phase to the next with minimal time between phases. However, circumstances and market conditions can affect the timing of construction. The applicant is requesting that the Master Development Plan approval allow for the undeveloped areas of the site remain a surface parking lot, with minimal improvements for a duration of up to 24 months from the time each phase is sequentially complete (receives its Certificate of Occupancy) until a site plan application is submitted for the adjacent phase.

If the applicant does not submit a complete site plan application for the next phase of work within the 24 month "grace period", then the applicant will make improvements to the remaining parcel consistent with the design standards for a more permanent surface parking lot.

We similarly request that sidewalk areas that are disturbed by construction, but are located outside of the current phase's frontage be permitted to remain as temporary bituminous sidewalk during the 24 month grace period. If the applicant does not submit a complete site plan application for the next phase of work within the 24 month "grace period", then the applicant will construct brick sidewalks in these areas.

During the first phases of construction, whether Lot 1 or Condo A is constructed first, access and utility easements across Lot 2 will be required. The revised plan set and phasing narrative are plans showing these easements in their general locations on the site, understanding that the subdivision plan approvals associated with the project will define the easement locations in more detail.

July 26, 2022 City Response

The submitting phasing plan addresses the majority of the requested comments from City Staff, with the following items that still need to be addressed:

- While the plan goes through all of the phases of construction, the naming conventions for each of the phases/subphases are not completely clear. Provide a title page with high level descriptions of each phase/subphase.
- Streetlighting is only mentioned for the construction of the hotel and Condo A. Update the plan to include descriptions for streetlighting for the construction of Condos B & C.
- For Phases 2A & 3A, references on how interim conditions will be addressed should also state how certain design standards (e.g., Maximum length of undifferentiated blank wall along publicly accessible way) will be addressed if subsequent phases are not completed.
- While the proposed plan for snow removal was discussed in the response letter for full build-out, locations for snow storage on-site for surface parking was not addressed for interim conditions. Since the interim surface parking may or may not receive site plan approval based on the time between construction phases, update the phasing plan to discuss if and how snow will be stored on-site when portions of the site will be used for surface parking.
- Curb extensions and crosswalk construction at Pearl & Congress Streets are referenced in Phase 1, Phase 1 Alt, Phase 2, and Phase 3A. Confirm whether this step will be repeated through all phases.
- In the Phase 2B description under Street and Sidewalk Construction, first bullet, crosswalks and curb extensions are proposed at the intersection of Pearl Street and Myrtle Street, when the streets do not intersect. Update to clarify intent.
- There are a number of instances where Condo A is referred to as *Cond A*.

Zoning

June 23, 2022 City Staff Comment

Based on the submitted application materials, the proposed project does not comply with the following B3 dimensional requirements outlined in §7.3, Table 7-E:

- Maximum permitted floor area (15,000 square feet for each floor above 125 feet; Proposed: 17,203 square feet for Level 12 in Cumberland Avenue Condominium Building);
- Maximum lot coverage (25% of lot area for portions of structures exceeding 125 feet in height; Proposed: 46% of current lot area. Based on the anticipated subdivision application, lot coverages for each of the three lots would still exceed the maximum permitted (Lot 1: 50.4%; Lot 2: 54%; Lot 3: 38%)).

July 25, 2022 Applicant Response

The development program and approach to subdividing the land has been revised so that all of the component developments will comply with the floor area and lot coverage standards.

The revised plan will divide the land into only two lots.

- *Lot 1 for the Hotel has been increased in size to 27,590 sf (0.63 acres) to include the proposed stair from Myrtle Street to the amenity deck.*
- *Lot 2 will include all the remaining 70,885 sf (1.63 acre) of the property and be developed as a phased condominium project, constructed in three building sequences; Condominium building 'Condo A' located along Congress Street (formerly Lot 2), 'Condo B' and 'Condo C' located along Cumberland Avenue (formerly Lot 3)*

a. *Two floors of Condominiums have been removed from the Cumberland Avenue condominium building (Condo B and Condo C) eliminating all floor area above 125' in this structure.*
b. *Per §7.3, Table 7-E, the maximum lot coverage in the B-3 zone is 25% of the lot area for portions of structures exceeding 125 ft. in height. This section is followed by footnote 4 which states: Except that no floor area shall be required to be less than 10,500 SF, gross.*

    The plans have been revised to address the standards:

    - *On Lot 1 the building coverage above 125' has been reduced to 10,500 as permitted by Ordinance*
    - *The dimensions of Lot 2 have been revised to 70,885 sf (1.63acre)*
        - *Two floors have been eliminated from the Cumberland Avenue Condominium.*
        - *The floor height and floor plans of the Congress Street condominium building have been revised such that the building coverage above 125' will not exceed 25% of the Lot 2 area.*
    - *Lot 3 has been eliminated*

July 26, 2022 City Response

The updated application complies with the maximum floor area requirements of §7.3, Table 7-E.

The updated application does not fully comply with the maximum lot coverage requirements above 125 feet of §7.3, Table 7-E. For Lot 1 (Hotel), the floor labeled as L11 is ±10,858 square feet in area, when the maximum permitted is 10,500 square feet. This calculation is inclusive of the square footage of the proposed balconies, which has been clarified by Zoning Administrator Ann Machado as counting towards overall lot coverage (Email Attached). For Lot 2, the floor labeled as Level 12 has a total lot coverage of

20,095 square feet between Condo #1 and Condo #2, when the maximum permitted lot coverage is ±17,721 square feet.

Update the application so that Lots 1 and 2 meet the maximum lot coverage requirements.

July 26, 2022 City Comment

§7.3, Table 7-E states that the maximum length of undifferentiated blank wall along a publicly accessible way is 30 feet. In the following list, there are instances where the submitted floor plans and renderings contrast in their compliance with this requirement:

- Level 0 on Pearl Street near Cumberland Avenue (Appears to be differentiation in the renderings, but not the floor plan)
- Level 1 on the corner of Myrtle Street and Cumberland Avenue (Appears to be differentiation in the renderings, but the symbology in the floor plans does not match or does not match line styles in the rest of the floor plan set used to denote window openings.
- Level 2 on Myrtle Street for the Kitchen and Restaurant (In the rendering, there appears to be windows on the southern corner of the restaurant that do not show up in the floor plans. In the rendering, the portion of the kitchen along Myrtle Street does not show fenestration, when the floor plans do.

Update the floor plans and renderings to align and meet the requirements of §7.3, Table 7-E for maximum length of undifferentiated blank wall space.

Downtown Urban Design Guidelines

June 23, 2022 City Staff Comment

§(b)(1)(a)(1)(i)(2) of the Design Manual states that building entrances, including such factors as compatibility with the building's façade, prominence along the street, access to the street, and accessibility for physically handicapped or for those with special needs are factors that should be considered.

July 25, 2022 Applicant Response

Revised building plans are attached. These are further developed versions of the plans presented to the Planning Board on June 14, 2022. Consistent with that presentation, the ground level floor plans have been revised to extend the ground level retail/commercial uses along Pearl Street and Myrtle Street. The hotel entrances have been relocated in response to these changes and the re-design of the site eliminating the "pocket park" concept in favor of a widened, linear streetscape/plaza on Congress Street and the introduction of stair access to the building's open amenity level.

July 26, 2022 City Response

Upon review of the submitted site plan, floor plans, and renderings, it is unclear where the entrance/s to the hotel will be located and whether there will be an entrance on Congress Street. Update the application documents to clearly identify where the hotel entrance on Congress Street will be located.

June 23, 2022 City Staff Comment

§ (b)(1)(e)(1) of the Design Manual states that proposed development shall respect, enhance, and be integrated with the existing character of the general pattern of development in the downtown, surrounding building environment and streetscape, as described and illustrated in the Downtown Urban Design Guidelines (Appendix 1). Factors to be considered include the relationship to the following existing patterns:

i. Street walls and building setbacks;
ii. Open space;
iii. Building form, scale and massing;
iv. Facade proportion and composition;
v. Pedestrian circulation and building entrances;
vi. Parking.

July 25, 2022 Applicant Response

Revised building plans and context design graphics are attached further developing the design changes presented to the Planning Board on June 14.

July 26, 2022 City Response

The majority of the original comment was addressed. While materiality will be more fully addressed during the separate site plan reviews, the application materials should address anticipated methods for parking lot and rooftop appurtenance screening that will be used (i.e., Will materials/design techniques used in the rest of the building be used as part of the screening or will new materials be introduced? How are impacts of structured parking lighting and lights of vehicles going to be appropriately screened to prevent spillover?).

Department of Public Works – Stormwater Management

June 23, 2022 City Staff Comment

The application notes that the existing underground utility vaults on Myrtle Street may be reused. Once they have that design, they should show the underground conduits from these vaults to ensure no conflict with the trees that are proposed very close to the vaults.

July 25, 2022 Applicant Response

The final utility design submitted in site plan and in CMP's design documents will address these vaults. This question is being researched by CMP. To date only limited information on tense vaults is available and the conduit for them was not marked by utility locators. We are researching the vaults with CMP.

July 26, 2022 City Response

Sheet 3 of the site plan states that the existing vault on Myrtle Street is proposed to be retained, but Sheet 5 states that the abandoned vault is proposed to be removed. Clarify.

Zachary Powell <zpowell@portlandmaine.gov>

RE: Average Height - 385 Congress St Project

Ann Machado <amachado@portlandmaine.gov> Wed, Jul 13, 2022 at 11:57 AM
To: Dan Riley <driley@sebagotechnics.com>
Cc: Joe Dasco <joedasco@comcast.net>, Dylan Dasco <dasco@cbtarchitects.com>, Zachary Powell <zpowell@portlandmaine.gov>, Henry Weinberg <weinberg@cbtarchitects.com>, Tom Hanson <thanson@bernsteinshur.com>

Dan -

Section 7.2 of Chapter 14 defines lot coverage as: *The proportion of lot area covered by building footprint and the footprint of accessory detached structures.* This section defines building footprint as: *The lot area contained within the outermost perimeter of the building envelope including cantilevered portions of the building, projections, and porches, decks, and similar attached structures integral to the building and contributing to its mass, but excluding roof overhangs.* This definition includes *projections, porches, decks* and *similar attached structures*. Balconies are considered extensions similar to a porch or deck. Under this definition, balconies would be part of the building footprint and therefore would be included in the lot coverage calculation of the building footprint above 125'.

Sincerely,

Ann

Ann Machado
Zoning Administrator
Permitting and Inspections Department
City of Portland, Maine
(207) 874-8709
amachado@portlandmaine.gov

[Quoted text hidden]

Memorandum
Planning and Urban Development Department

City of portland

To:	Kevin Kraft, Deputy Director of Planning and Urban Development Department
From:	Zach Powell, Senior Planner
Date:	May 27, 2022
Re:	385 Congress Street – Master Development Plan
Project ID:	PL-001970-2022
CBL:	027 D001001

City Staff has completed an initial review of the application materials and the following items were identified as conflicts with City Standards:

- Lack of a contextual front setback along Congress Street with City Hall **(§(i)(1)(a)(2) of the Design Manual)**
- Lack of building entrance fronting along Congress Street for Phase 1B (Hotel) to promote prominence along public right of way **(§(i)(1)(a)(2) of the Design Manual)**
- The massing of the building should consider additional building articulation that takes into account neighboring structures. **(§(i)(1)(a)(2) of the Design Manual)**
- View corridors may be obstructed and shadow impacts may occur on City Hall Plaza, with potential impacts for Lincoln Park **(§(b)(8) and §(b)(1)(f) of the Design Manual)**
- The proposed driveways on Congress Street and the easternmost most driveway on Myrtle Street exceed the maximum permitted driveway width of 24 feet (**§1.7.2.4 of the City's Technical Manual**)
- The backing out of vehicles from driveways is prohibited. (**§1.7.2.6 of the City's Technical Manual**)
- The proposed spacing between driveways and intersections does not meet the minimum requirements (**§1.7.2.7 of the City's Technical Manual**)
- The number of proposed driveways exceeds the maximum permitted **(§1.7.2.8 of the Land Use Code)**
- The proposed size of the block post-subdivision exceeds the maximum permitted **(§15.5.6.B. of the Land Use Code)**

Given the impact that these areas of non-compliance have on the site layout, Planning Department Staff identified the following design solutions for the applicant to consider to address these issues:

- Convert the proposed pocket park along Congress Street into a linear park

  The submitted application includes a proposed pocket park between Phase 1A and Phase 1B. The pocket park proposes landscaping and seating elements immediately adjacent to a proposed driveway that would be used for loading and unloading activities for the hotel & valet service.

  The current design of the pocket park presents potential pedestrian-vehicular conflicts and would likely lead to an unpleasant experience, given the adjacent vehicular uses. In addition, the current pocket park layout lacks coherent pedestrian circulation patterns and does not lead visitors to where they want to go. As a result, the space does not create good connections between the

adjacent buildings and active frontages and the space would be challenging to see from a distance, which would discourage use.

Shifting the design from a pocket park to a linear park that is parallel to Congress Street:

- Creates a public space that would be oriented towards the street that provides a visual and thematic connection from City Hall Plaza to Lincoln Park,
- Provides opportunities for outdoor seating that can support businesses on the site and events along Congress Street (e.g., First Fridays),
- Meets contextual setback requirements for a continuation of the Congress street wall,
- Enhances the tree canopy along Congress Street which would reduce heat island effect, and
- Presents a cost-savings potential, given that streetscape improvements (e.g., sidewalk repair, street trees), are existing requirements in the Technical Manual.

Staff are proposing two options for the Applicant to consider with this memorandum.



Option 1 - Contextual Front Setback and Linear Park with Driveway

As shown above, Option 1 retains the existing driveway orientation with access from Congress Street.

Option 2, shown below eliminates the proposed driveway, which allows increased lobby floor area for the hotel and condominium buildings, which creates additional leasable ground floor space.



Option 2 - Contextual Front Setback and Linear Park without Driveway

The proposed conversion of the pocket park at ±5,969.20 square feet (±4,016 square feet excluding driveway) to a linear park at ±4,355 square feet (±5,695.42 square feet in option with proposed driveway), would result in a minimal change in site area occupied by the park. With the shift to a linear park, some reorganization of the lobby and loading areas would be required and align with the second recommended design change for the creation of a new street or woonerf.

Standards completely or potentially addressed include:

- Lack of a contextual front setback along Congress Street with City Hall
- Building entries in Phases 1A and 1B orient to Congress Street to accommodate pedestrian-oriented uses, access and prominence along the street
- The building design considers the visual relationship along Congress Street and at Myrtle Street corner to align with the intent of the Pedestrian Activities District (PAD) encouragement area
- View corridors and shadow impacts on City Hall Plaza and potentially Lincoln Park

- **Reduce the number of proposed driveways and shift their location to a new street or woonerf**

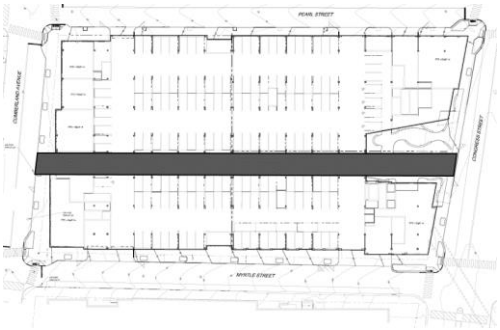
The submitted site plan includes eight driveways, with four on Myrtle Street, three on Pearl Street, and one on Congress Street. Four of the driveways are collocated (Two on Myrtle and Two on Pearl Street) for garage access and loading. It is important to note that the proposed development is located in one of the most walkable and transit accessible sites in the city.

The number of driveways exceeds the maximum permitted for a project (6) and there are a number of issues of noncompliance based on the maximum permitted width, spacing, and proximity to intersections. Additionally, City Departments have raised concerns about the

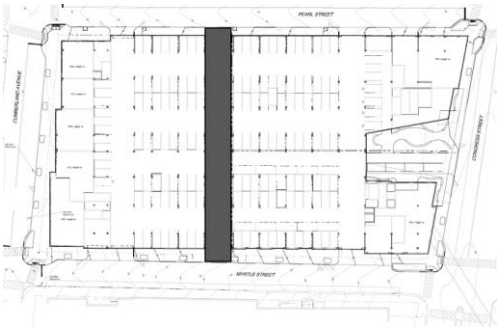
proposed valet operations on and in close proximity to Congress Street to Planning Staff and the Applicant. The proposed valet operations may lead to issues of queuing into Congress Street and have the potential to interfere with the operations of the Fire Department at the adjacent Central Station as well as create additional conflicts with pedestrians utilizing the sidewalk.

In the submitted application materials, the Applicant states that the number of driveways and temporary use of the Congress Street driveway as a two-way driveway are needed to ensure that vehicular operations are not negatively impacted when Myrtle Street is closed for events at Merrill Auditorium. Staff note that Myrtle Street closes approximately 25 times a year and generally not for extended periods of time. Given that these events happen on a limited basis, compliant forms of ingress and egress are available on Pearl Street, and the proposed driveways do not comply with numerous other vehicular and design standards, the submitted justification is insufficient and waivers of these standards would likely not be supported.

Taking all of these factors into consideration, Planning Staff has recommended that the Applicant consider breaking up the block and accommodating all vehicle circulation, loading, and valet operations along streets within the site. Staff are proposing that the Applicant consider one of the following two mid-block connections. The proposed connections would provide a mid-block connection from either Myrtle Street to Pearl Street and/or from Congress Street to Cumberland Avenue.



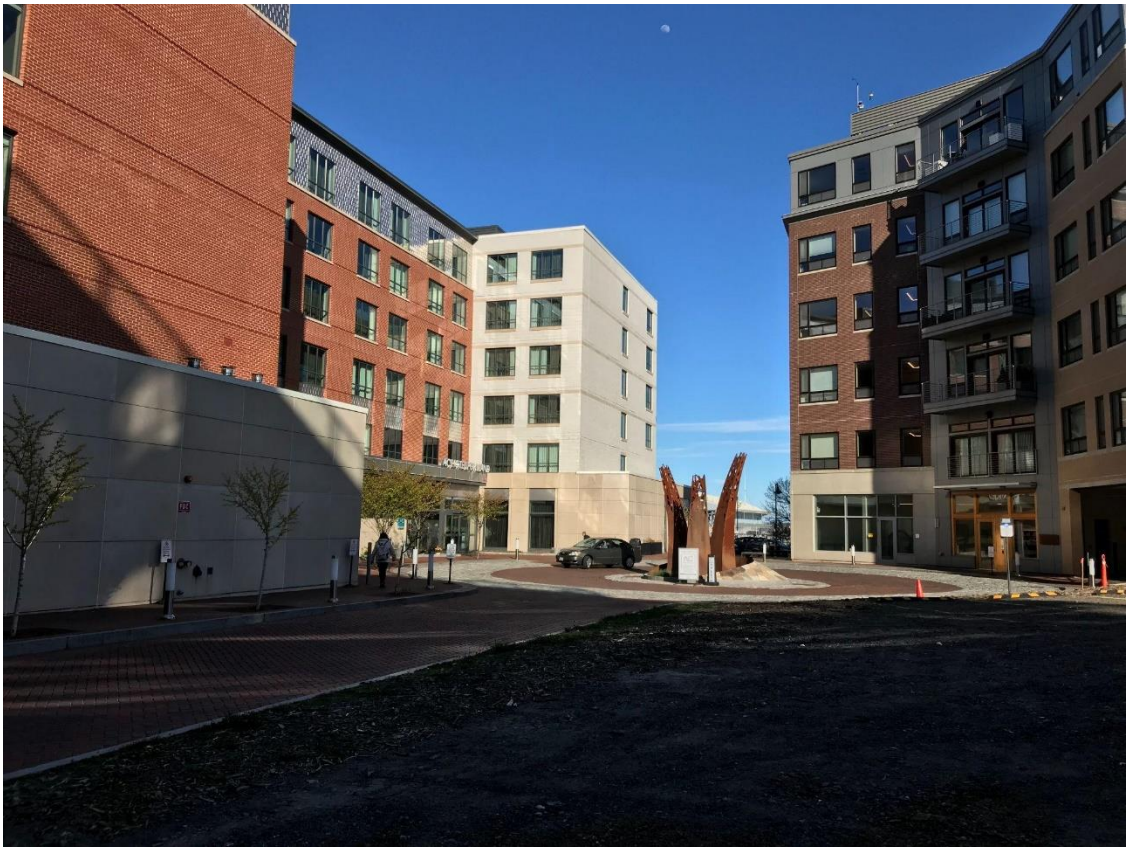
Option 1 - Connection from Congress Street to Cumberland Avenue



Option 2 - Connection from Myrtle Street to Pearl Street

Each of these options provides unique benefits. The connection from Congress Street to Cumberland Avenue likely requires less of a shift in the site plan and restores a historic street connection previously provided by Chapel Street. This option would also avoid any issues with street closures on Myrtle. The option connecting Myrtle Street to Pearl Street removes a potential conflict point for the recommended linear park on Congress Street, and could help support connections/programming around Merrill Auditorium.

The addition of a street connection or connections at these points are recommended since they run along the proposed phasing lines and could help provide a solution to achieve the requested valet service. A similar implementation of this approach at the AC Hotel Portland in the India Street neighborhood has been identified by Planning Staff and is included below.



Implementation of Recommendation – AC Hotel Portland



Implementation of Recommendation – AC Hotel Portland

Standards completely or potentially addressed include:

- The maximum permitted number of driveways for the site
- Creating a more contextual building articulation of the lower stories
- The proposed size of the block for the development would comply with the maximum permitted perimeter.
- The maximum permitted widths for driveways
- Removing potential vehicular conflicts from the backing out of vehicles from driveways
- Minimum required spacing between driveways and intersections

A4

385 CONGRESS STREET

STAFF DESIGN RECOMMENDATIONS

May 27, 2022

SITE OVERVIEW

385 Congress Street is situated in a prominent location that serves as a gateway to Downtown and will influence first impressions of the City.

The proposed redevelopment is an exciting opportunity to activate the site and add to the high quality of design seen in neighboring buildings along Congress Street.







CONGRESS STREET CONTEXT

The variety of design on Congress Street adds to the character of vibrancy of the street. With these different designs, they share similar elements such as:



Pedestrian-centered design that is tourist- and resident-friendly



A street wall that help define the street and improve wayfinding



Multiple connection points to make the street feel approachable and walkable

CURENT DESIGN

The current design brings a number of pedestrian and design improvements to the site, such as:



Shade trees around the entirety of the site



Pedestrian amenities and passive recreation space



Design elements to reflect the design of neighboring structures

SITE DESIGN STANDARDS

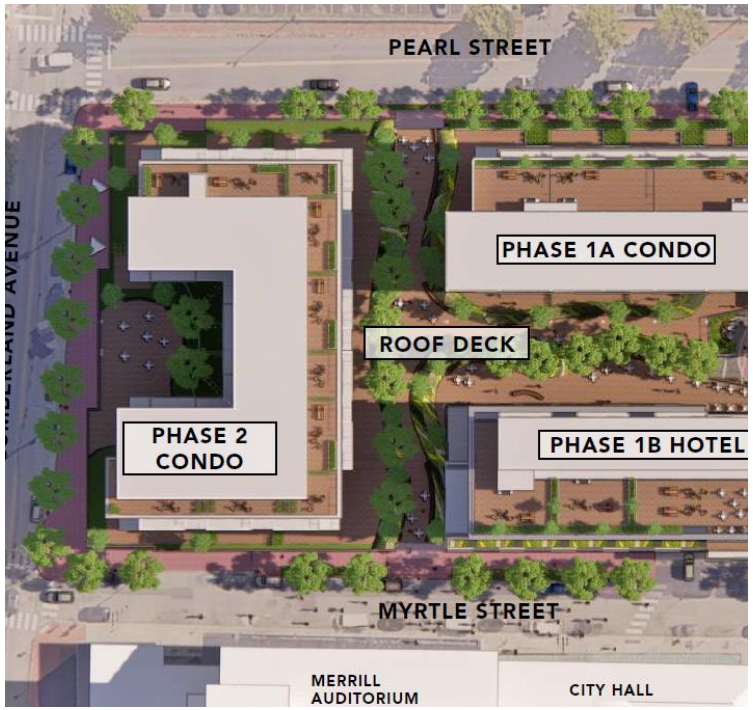
City Staff has reviewed the application for compliance with subdivision, landscaping, and downtown design standards. While the current design aligns with some of these standards, the design presents some questions related to:



The massing of the current structure and connection points on each street frontage



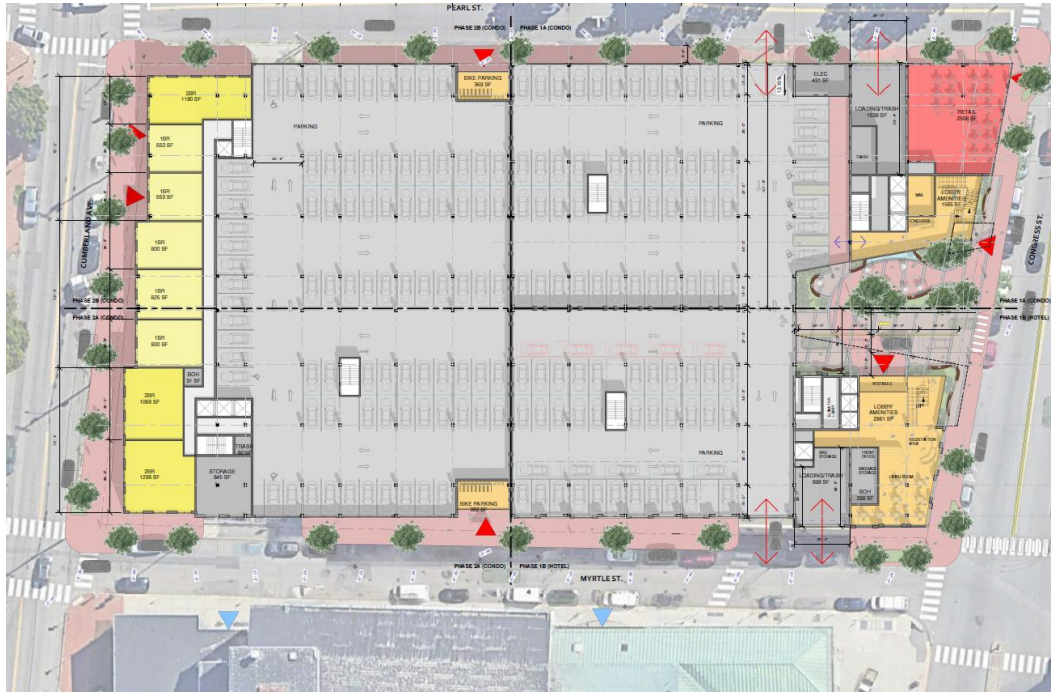
The location of the proposed pocket park



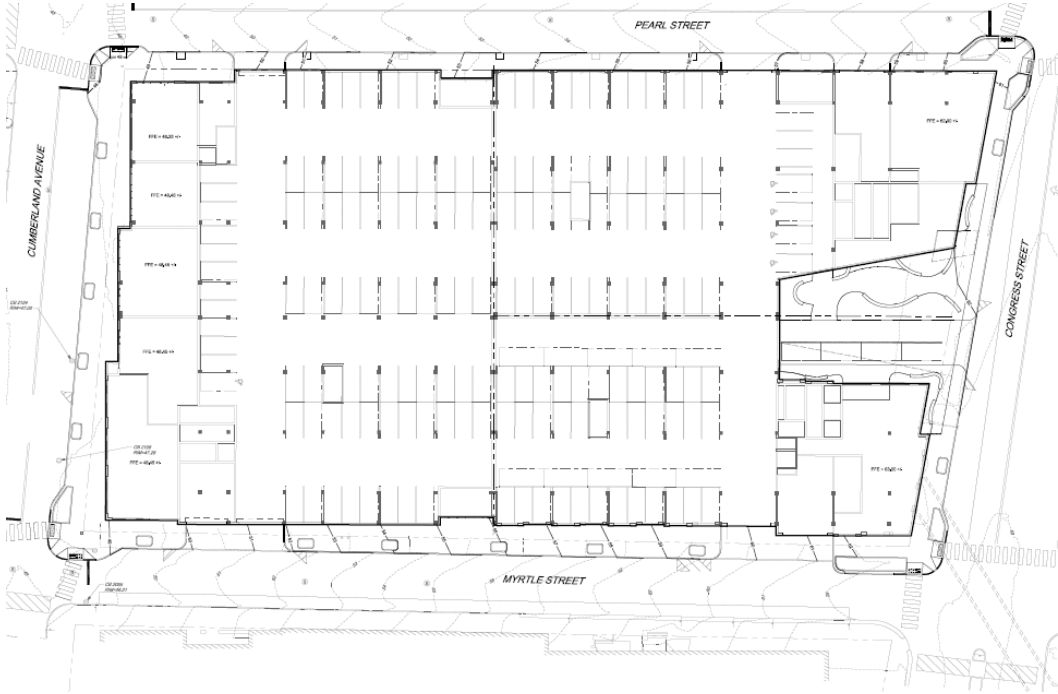
How light and air will carry throughout the entire site and along the streetscape

DESIGN SOLUTIONS

Building on the positive design elements currently on Congress Street and shown in the project design, Planning Staff have identified options to help meet these design requirements and help improve the resident/visitor experience:



Transform the proposed pocket park into a linear park



Establish street connection(s) along phasing lines

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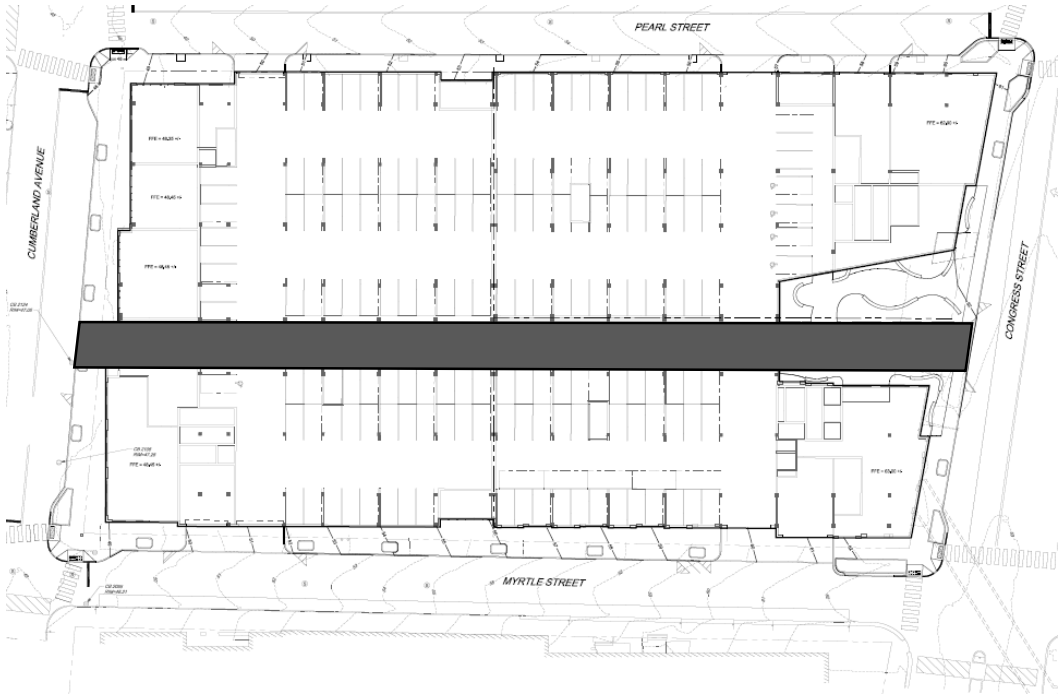
Transform the proposed pocket park into a linear park



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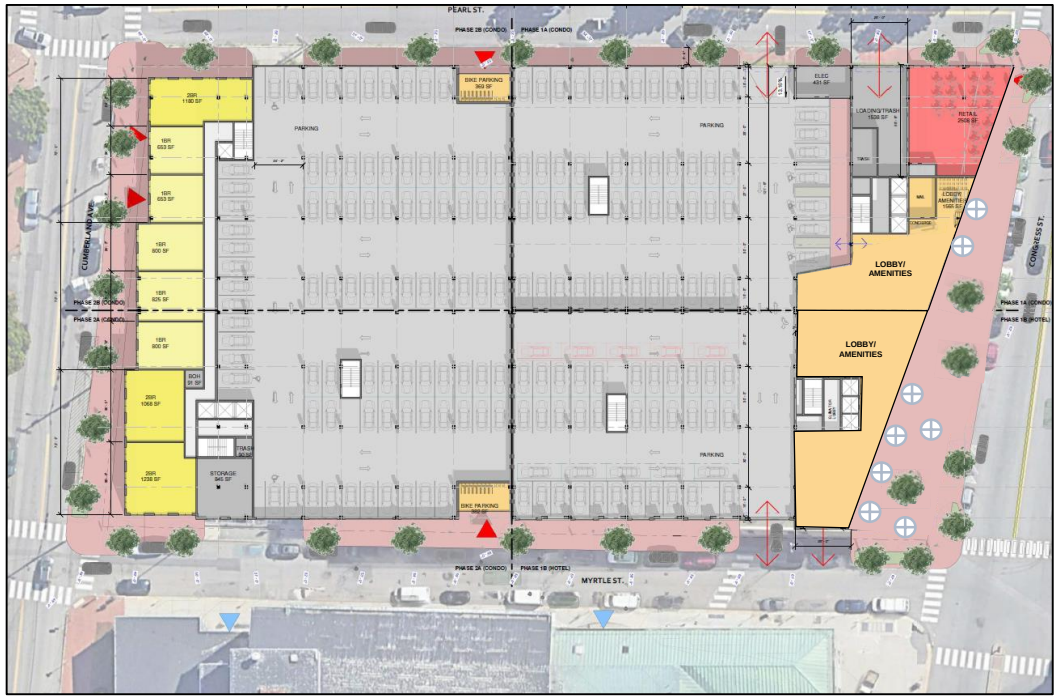

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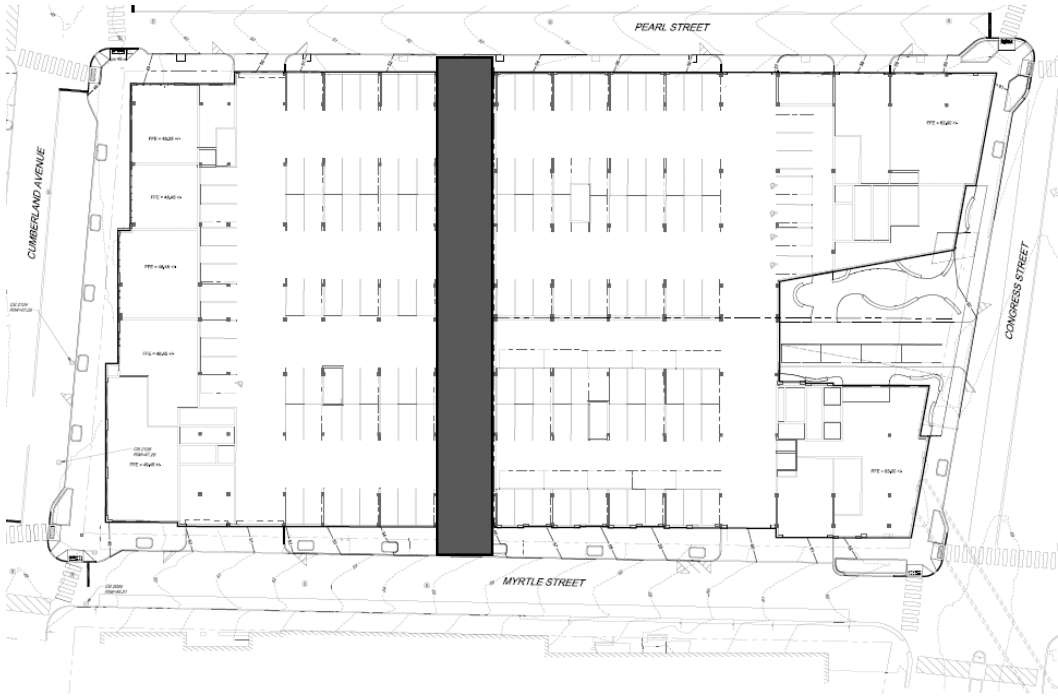

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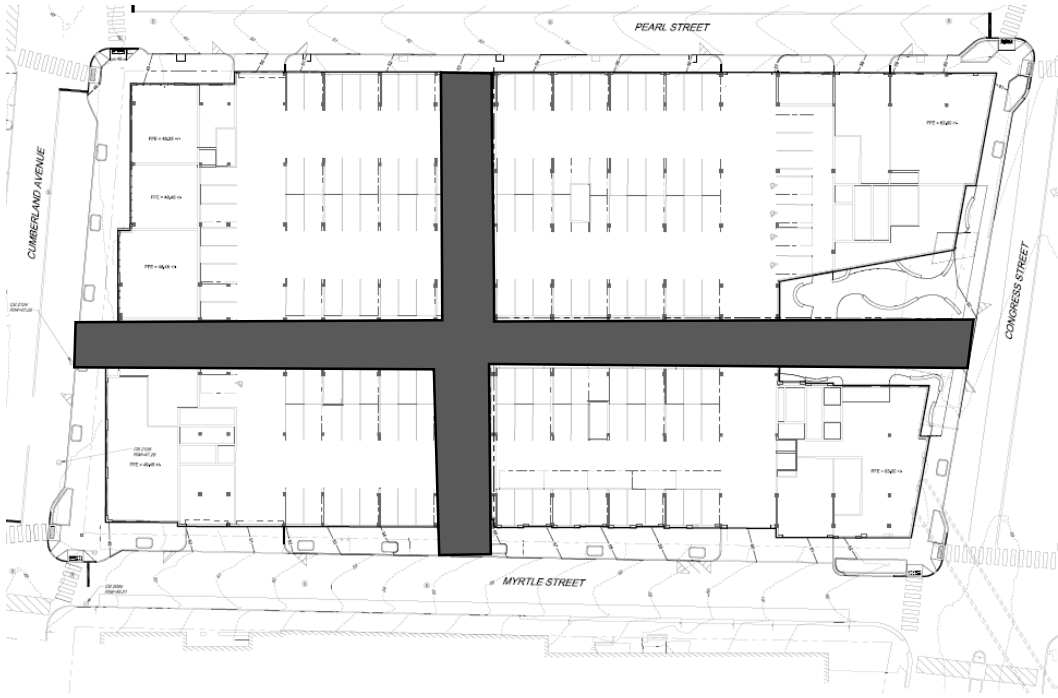
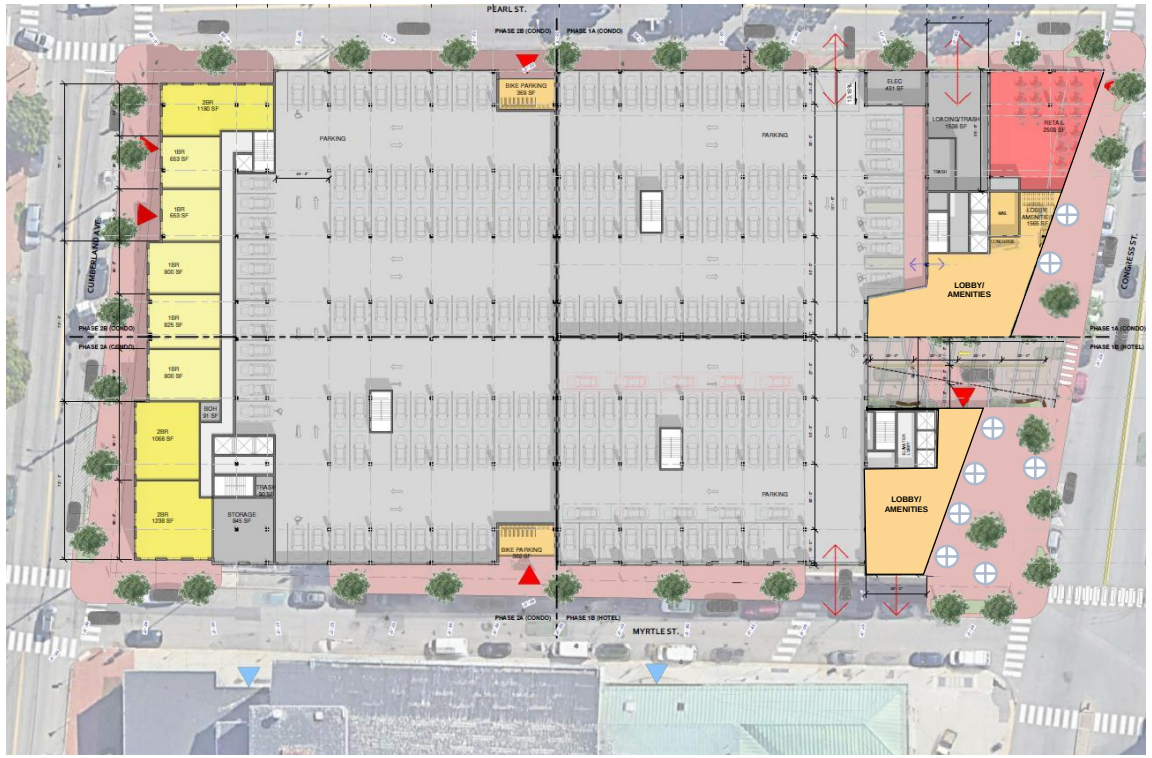
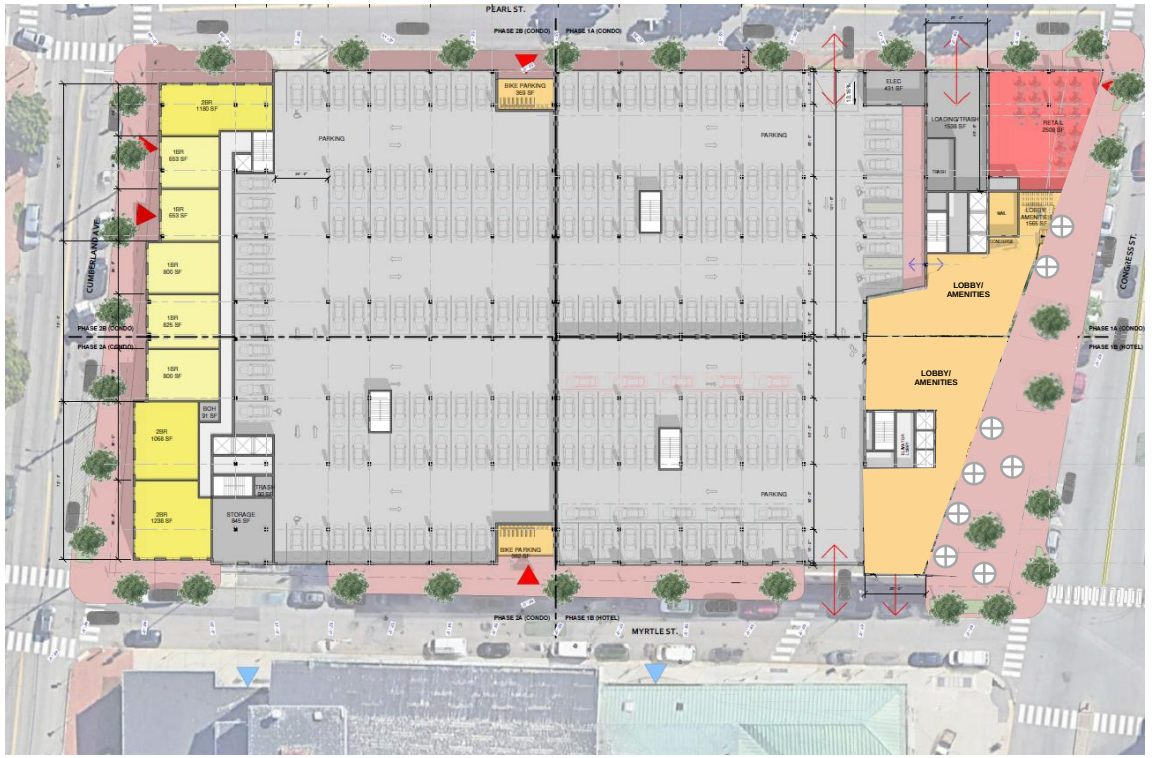


Establish street connection(s) along phasing lines

LINEAR PARK

Benefits of a linear park along Congress Street include:





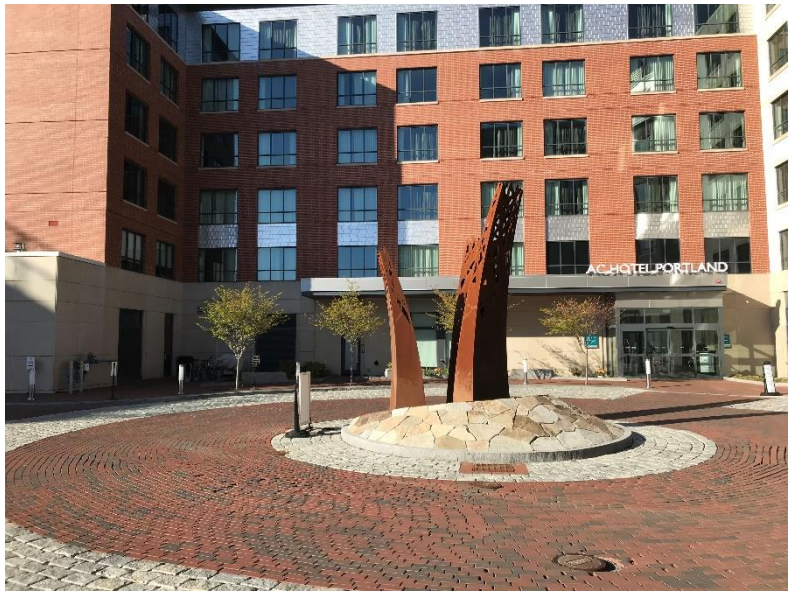
- **An enhanced streetscape with elements that are already required under landscaping standards**
- **Enhances the visual connection between City Hall Plaza and the site**
- **Provides opportunities for outdoor seating and events that can complement uses on site and the surrounding neighborhood**

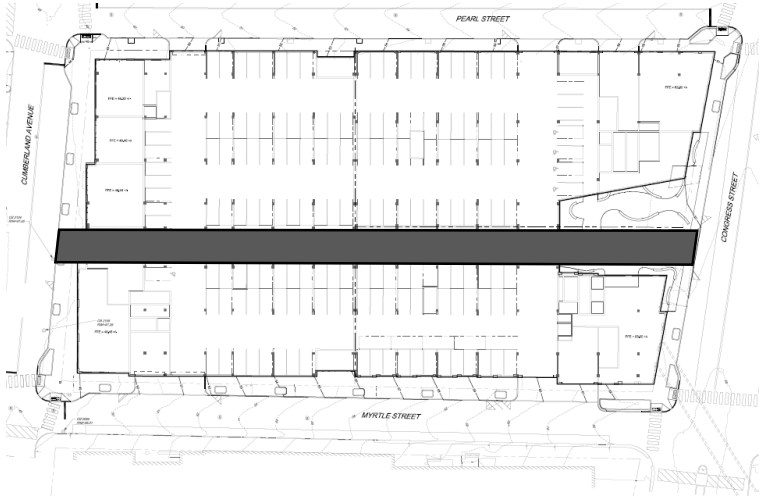
STREET CONNECTIONS

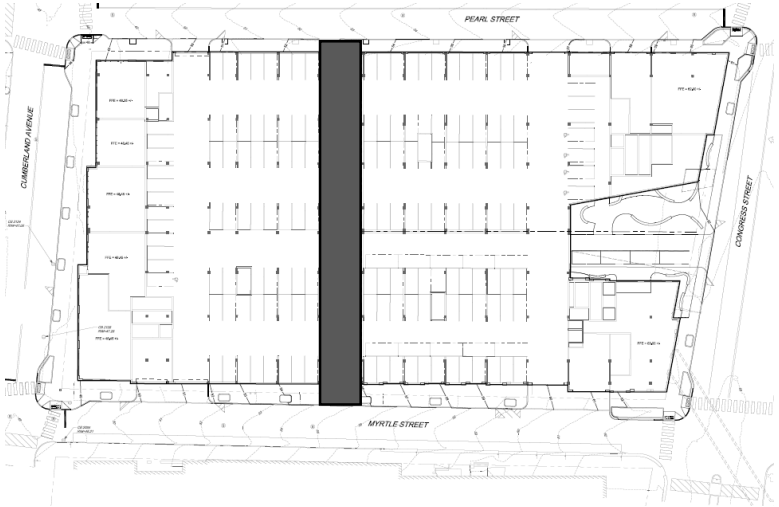
Benefits of a new street connection(s) include:

- **Opportunity to retain desired valet service**
- **Ability to consolidate the number of driveways and avoid conflicts with events at Merrill Auditorium**
- **Location would align with proposed phasing and increase connectivity at the site.**
- **Capacity for loading and vehicular operations internal to the site**









Design Review
Planning and Urban Development Department

City of portland

Subject:	385 Congress Street – Master Development Plan
Zone:	B3
Date of Review:	Tuesday, August 2, 2022
Reviewer(s):	Sean King (Urban Designer), Zachary Powell (Senior Planner), Kevin Kraft (Deputy Director)
Project ID:	PL-001970-2022

I. INTRODUCTION

The project at 385 Congress Street is subject to the Master Development Plan Review Standards, Land Use Code section 14.7.5 Design. The project is also within 100' of a historic district and included an advisory historic preservation design review.

The proposed Master Development Plan for a mixed-use hotel and condominium is only reviewed according to the Master Development Plan criteria. The project will be subject to future staff design review subject to the design standards of the City of Portland *Design Manual* – ***[b] B-3 Downtown Business Zone, Appendix 1***. Staff recommend the MDP approval include design guidelines that will apply to all subsequent site plan applications.

Based on the revised submission from August 1, 2022 and Planning Board comments, staff have the following comments as well as recommended Design Standards to apply to future Site Plan applications.

II. DESIGN REVIEW COMMENTS:

The project at 385 Congress Street shall meet the following standards of ***Master Development Plan Review Standards, Land Use Code Section 14.7.5 Design.***

A. Creation of a cohesive identity.

A master development plan shall be designed to create a cohesive identity through building scale, massing, and articulation;

Staff comment: The proposed development program includes a hotel and condominium units to occupy the entirety of the 385 Congress Street site, bordered by Congress Street, Cumberland Avenue, Pearl and Myrtle Streets. The proposed development intends to create a cohesive identity through building scale with a 1-2 story podium level continuous at the ground-level to activate and address the neighboring context and adjacent structures, notably City Hall, a hotel with ground floor retail, residential buildings and a place of assembly. The massing defined with stepbacks for the proposed towers of the hotel and multi-phased condominium units establishes vertical scale while reducing building height towards the residential character of Cumberland Avenue. The composition and articulation of the building facades shall maintain the master development plan

approach to activate the street frontage along the ground-floor with storefronts windows materials for screening, and rhythm of fenestration; the towers shall maintain a regular rhythm of vertically proportioned windows and sculpt massing to reduce the scale with façade composition in response to the street and mid-block "no build zone" that includes the amenity terrace and site access points.

Use of quality exterior material and architectural detailing at pedestrian scale;

Staff comment: The materials proposed meet this standard that provides pedestrian scaled façade composition through building entry canopies, storefront windows, fenestration screening materials at garage facades and signage. Each phase of site plan review shall include further details for materiality, color, articulation and quality.

Consistency of design and materials for streetscape and pedestrian amenities;

Staff comment: The proposed master development plan includes activation of streetscape and pedestrian amenities along highly traversed roadways. At Congress Street, the linear park creates an expansion of the public realm to allow for trees and tree wells, lighting, outdoor seating and brick sidewalk for pedestrian access. There is a delineation of surface material for pedestrian vs. vehicular that shall be maintained. The creation of the level 2 amenity terrace includes a unique approach to create public vs private zones that shall be suddenly delineated by changes in grade to accommodate sufficient soil depth for the tree planters, along with acute materiality. Street level pedestrian public access through monumental stairs to incorporate bench terrace seating, planters and greenscreens from Congress Street and Myrtle Street shall be maintained.

Framing of outdoor open space and linkages;

Staff comment: The proposed master development plan creates layers of outdoor open space and linkages to include the Congress Street linear park, Myrtle Street-scape, Cumberland Avenue active street, Pearl Street residential lobby and level 2 amenity terrace to reinforce public activation along the surrounding streets of the site. Each phase of site plan review shall include the adjoining open space as a continuation that shall utilize similarity of material, pedestrian amenities, and pedestrian connectivity. Under future site plan reviews, the Applicant should consider how street furniture, such as permanent outdoor seating, can be incorporated within the expanded sidewalk along Congress Street.

A clear conveyance of the function and significance of various buildings, entrances, and features;

Staff comment: The hotel in Phase 1 is differentiated from the condominium units primarily through the façade composition along Congress / Myrtle Street corner with a glass façade, regularity of fenestration for the hotel rooms and deeply recessed building entries with unobstructed glass along Congress Street. The condominium units, shown as three phases are primarily distinguished from the hotel by the storefront windows for the retail program and large fenestrations along the garage façade which shall be screened with high quality material to create an activated façade. Along with the retail program, the development shall incorporate MDP design standards for signage to be reviewed at each phase of site plan review. Additionally, the

condominium buildings include balconies projections and recessions into the façade composition that reinforces private access to open space.

And to generally comply with design and development standards of the zone in which it is located. – Met. In addition to the MDP review standards, the application will be reviewed under the B-3 design guidelines.

Proposed MDP Design Standards (to be applied to subsequent Site Plan applications)

- Materials
  - Congress Street – Material placement, detail, and articulation should emphasize the established historic Congress Street patterns of massing, proportions, and façade composition regulating lines and building base. The ground floors will consider pedestrian comfort and scale, especially in the placement of doors, windows, canopies, and details in the materials and articulation. The hotel, in order to stand apart in character and use, will have a more contemporary expression but will continue the base and regulating lines found along Congress Street.

  - Quality Exterior Materials includes the detailing, articulation, transition, durability, and visual interest of the materials, not only their selection and placement. These aspects will be reviewed with special attention to the ground floors and areas most visible to pedestrians.

  - Façade composition - In Site Plan review the design shall provide depth, articulation, visual interest, and quality transitions. Historic buildings in the surrounding context should be considered precedent examples, especially on Congress Street.

  - Cumberland Avenue - The condominium buildings along Cumberland Avenue should have a cohesive visual relationship in materiality, window type and pattern, and articulation elements that activate the ground-floor. The massing and function of the podium base along Cumberland shall be pedestrian scaled that responds to the surrounding neighborhood context.

- Streetscape design
  - Congress Street / Cumberland Avenue – Establish active uses fronting the street. The sidewalk should be as wide as possible to accommodate street trees, tree wells, permanent outdoor seating, lighting and other pedestrian amenities in the furnishing zone. Planters or landscape areas should not be placed between the sidewalk and the building, with the exception of recessed building entries and/or access points. Final design shall be coordinated with City staff, especially to ensure viability of street trees and ease of maintenance.

  - Interior Passages – Internal passages should employ CPTED principles as a best practice to make spaces that are safe, active, and inviting. Material selection and design should indicate private or public access. Design shall be legible and intuitive for pedestrians and cars, especially for wayfinding.

- Signage – Signage shall be integrated into the building design and respond to the storefront façade at the ground level and be pedestrian scaled, especially along the Congress Street historic district. Final design shall be coordinated with City staff.

City of Portland

TRAFFIC MOVEMENT PERMIT SCOPING MEETING

Permit Category: X 100 - 200 PCEs ____200 + PCEs
____ New ____ Modification

Attendance: **Date:** May 18, 2022

Tom Errico, Jeremiah Bartlett, Bruce Hyman,
Derek Caldwell, Dan Riley, Griffin Steinman, Zach Powell, Kevin Kraft, Robyn Smith-Payne, Joe Dasco, James Rather, Merike Thormann

Meeting Location: Zoom Meeting

Project Name: 385 Congress Street
Address:

Applicant: 385 Congress Street, LLC

Address:

Project Engineer: **Derek Caldwell ,** Sebago Technics

Address: South Portland, ME

Portland Traffic Engineer (reviewer): Tom Errico

Filings: Has the Applicant notified abutters via certified mail at least 7 days prior to this meeting? To be Provided
Has the "Notice of Intent to File" been published in a local newspaper? To be Provided

Section 1 - Site and Traffic Information

1A. Site Plan

Size of development parcel (acres): N/A

Size of development parcel to be left non-vegetated (acres): N/A

1B. Existing and Proposed Site Uses

Type of development:

USE	SIZE
See application	

1C. Site and Vicinity Boundaries

Yes, Boundary or title survey signed and sealed by a professional land surveyor
Yes, Vicinity map provided

1D. Proposed Uses in the Vicinity of Proposed Development

Other approved development(s):

1E. Trip Generation

Summary tables for each land use code:

ITE (LUC)	Weekday	AM Peak	PM Peak	Saturday Peak
See Application				

Trip rates obtained from other sources:
Number of locations where driveway counts taken: _____
Dates & time periods when driveway counts taken: _____
Locations where driveway counts where taken: _____
OTHER: _____

1F. Trip Distribution

_____Stick diagram for each major intersection on either side of the development driveway(s)?
_____ ITE trip generation handbook
_____ Actual survey done? Location? _____
_____ Other. Explain. _____

Comments: _____

1G. Trip Assignment

_____ Stick diagram for each major intersection on either side of the development driveway(s)?
Percent primary trips _____
Percent passer-by trips _____
Percent diverted trips _____

Basis for using above-listed percentages:
_____ Existing traffic patterns of adjacent street
_____ Zip code survey
_____ Gravity model
_____ Other. Explain._____

Comments: _____

_____

Section 2 - Traffic Crashes

_____ Year(s) of MDOT crash records for study area
_____ Number of high crash locations
_____ Collision diagrams provided

Mitigation provided for each high crash location: _____
_____
_____
_____

Other traffic problems: _____
_____
_____
_____

Comments: _____

Section 3 - Development Entrances and Exits

3A. Entrance and Exit Locations

X Distance to nearest intersecting road or town line (to the nearest hundredth of a mile)

X Number, width and surface of each proposed entrance/exit

3B. Plan View of Each Intersection Created

Names of intersecting road _____

Posted speed limits _____

Entrance/Exit Sight Distance:	Left	Right
_____	_____	_____
_____	_____	_____
_____	_____	_____

3C. Entrance/Exit Design

_____ Lighting
_____ Driveway spacing and corner clearance (Access Management)
_____ Adequate sight distance for vehicles exiting development
_____ Entrance grade (see fact sheet)
_____ Entrance/exit widths less than 42 feet (12.8 meters)
_____ Left turn lane
_____ Right turn lane
_____ Signal warranted
_____ Lane encroachment
_____ Separation islands (see fact sheet)
_____ Drainage study using 50 year storm for culverts and to connect to MDOT system
_____ Capacity Analysis
_____ Queuing Analysis
_____ Study to be submitted to MDOT Division Engineer

Comments: _____

Section 4 - Title, Right or Interest

x Title, right or interest in project site
x Title, right or interest in entrance/exits
x Title, right or interest in drainage easement affecting MDOT

Section 5 - Public or Private Rights-of-Way

x Location and width or proposed streets, easements and other public or private rights-of-way
x No signs, structures or pavement connected to the entrance

Section 6 - Schedule

Project schedule: See Application

Further study items required **($500.00 additional fee)**: _____

Section 7 - Full Traffic Study

KEY COMMENTS

- Age of traffic signal equipment is a concern at the Pearl Street intersections.
- List of developments will be provided by Planning staff.
- .25% for growth with the other development is reasonable for future traffic volume projections.
- Congress/Pearl – relocated signal equipment needs to occur as part of the project. The timing of changes will depend on phasing.
- The study area shall consist of the Congress and Cumberland intersections with Pearl and Myrtle.
- The project will need to evaluate conditions with the conditions at the Pearl Street/Top of the Port parking lot. The applicant will collect traffic data as part of the evaluation.
- It was noted that there would be benefits if the Valet routes directly to Pearl Street when circulating back to the Hotel for pick up. This will be investigated.
- The trip generation was estimated according to land use codes that were based on limited data. The applicant shall revise the trip generate estimate using land use codes with solid sample sizes.
- The applicant shall reassign trips to Pearl to and from Somerset Street. The applicant should review intersection turning movement data for the final assignment.
- ADA facilities shall be reviewed for all study area intersections (full intersection review).
- Traffic counts shall be performed for the AM (7-9) and PM (3-6) time periods. Traffic analysis shall be performed for the Weekday AM and PM peak hours.
- The applicant shall count the existing PPH lot to determine shift of traffic from the study area.
- The applicant shall include a figure to depict valet circulation movements.
- TMP would parallel first site plan.
- The applicant shall provide documents on notices and authorization.
- The applicant shall conduct a safety analysis at the Congress/Pearl and Cumberland/Chestnut intersections.
- The applicant shall incorporate the garage door opening delay into the traffic modeling.

A7

Zachary Powell <zpowell@portlandmaine.gov>

385 Congress Street - TMP Application

Tom Errico <thomas.errico@tylin.com> Wed, Jul 20, 2022 at 8:03 AM
To: Derek Caldwell <dcaldwell@sebagotechnics.com>
Cc: James Rather <jrather@portlandmaine.gov>, Kevin Kraft <kkraft@portlandmaine.gov>, Bruce Hyman <bhyman@portlandmaine.gov>, Jeremiah Bartlett <jbartlett@portlandmaine.gov>, Zachary Powell <zpowell@portlandmaine.gov>, Dan Riley <driley@sebagotechnics.com>

Hi Derek – I met with City staff last week to discuss the revised trip generation estimate and we would like you to perform another estimate before we authorize proceeding with the study. We would like you to estimate trip generation using separate land use codes for the residential use portion of the project and assuming a high turnover sit-down restaurant for the commercial use. You can include adjustments for internal capture and breaking out primary and pass-by trips. I would further note that we will likely be requiring a monitoring study following project phases and at full build to ensure the trip generation estimate for the study is consistent with actual conditions.

If you have any questions, please feel free to call me.

Thanks

Tom Errico, PE

NE TRAFFIC ENGINEERING DIRECTOR

TYLin

From: Derek Caldwell <dcaldwell@sebagotechnics.com>
Sent: Tuesday, June 28, 2022 11:57 AM
To: Tom Errico <thomas.errico@tylin.com>

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Status Updates on May 5, 2022 Consulting Traffic Engineer Review Comments

A8

Based on the review of the updated application materials, status comments have been provided on the previous May 5, 2022 comments:

May 5, 2022 Comment: The applicant has submitted a Traffic Movement Permit Application and a Scoping meeting for the traffic study is scheduled for May 18th. Comments regarding traffic mobility, safety and roadway impacts will be provided following receipt and review of the traffic study.

Status: The City and Applicant continue to coordinate on assumptions for the traffic study. The Traffic Movement Permit review and approval will occur in conjunction with the first site plan application. I find this approach to be acceptable and is permitted under MaineDOT regulations.

May 5, 2022 Comment: I continue to review the existing and proposed on-street parking evaluation. One of the assumptions included is eliminating the short left-turn lane into the surface parking lot on the east side of Pearl Street. This will likely be a requirement of the traffic study and final conclusions on the comparison is pending.

Status: Permitting on-street parking on Pearl Street is still pending the outcome of the traffic study. I would also note that the parking regulations noted on On-Street Parking Comparison Plan should not be considered acceptable and additional review and coordination is required. Additionally, the plan eliminates the crosswalk on Myrtle Street, and this needs additional coordination and review.

May 5, 2022 Comment: A parking study shall be prepared documenting the anticipated parking demand and parking management, including pick-up/drop off activity at the Hotel. This should be provided for individual phases and full build-out of the project.

Status: A parking study documenting parking generation for the entire project has not been provided. The applicant is requesting a waiver reducing the minimum parking ratio for the condominium development to not less than 0.9 spaces per unit. Additional supporting documentation as it relates to the TDM Plan, parking in-lieu fee contributions and/or other parking demand strategies is required before a formal waiver can be supported. A formal review of this waiver will occur in conjunction with the first site plan application.

May 5, 2022 Comment: While the proposed project does close some driveways, I am concerned about the number of driveways proposed for the project. Two driveways on Myrtle Street, three driveways on Pearl Street, and one driveway on Congress Street. Additionally, I am concerned about the width of some of the driveways. The traffic study will include evaluation of driveway operations, but the project exceeds the City's standard for the number of driveways to a site. I would note that I also am concerned about the location of the driveways on Pearl Street, near the signalized intersections of Cumberland Avenue and Congress Street and I will be requesting analysis on driveway blockage from vehicles waiting at the noted intersections and potential safety impacts.

Status: The revised site plan significantly improves the driveway conditions for the project site. I would note that the applicant shall provide a formal waiver request for the number of driveways as it continues to exceed the number of driveways permitted. The final decision on granting a waiver will also need to be supported by the traffic modeling to be performed in conjunction with the traffic study. A formal review of the waiver will occur in conjunction with the first site plan application. Related to the number of driveways and on-site access/egress movements, the applicant shall incorporate a plan that minimizes the extent of valet vehicles circulating around the site on city streets to accomplish pick-up/drop maneuvers. The City finds it unacceptable for all or most circulating valet vehicles to use Myrtle Street. Additionally, specifics on how access/egress movements are managed during Myrtle Street roadway closures should be provided.

A9

Department of Public Works (DPW) Comments

There are still outstanding questions and comments regarding impacts to City streets and infrastructure abutting the proposed development block. DPW would be supportive of these issues being addressed during future site plan development review for each individual development lot but would like to document which design elements may need further analysis, discussion and design refinement as the process continues to move forward. These elements include but are not limited to the following:

- Design of the proposed curb extensions and resulting impacts to traffic flow and turning radii at each corner of the development block.
- The scope of traffic and pedestrian signal improvements at the Pearl/Congress and Pearl/Cumberland intersections.
- Street width and sidewalk layout design along Myrtle Street.
- ADA compliance/sidewalk design at proposed driveway curb cut locations.
- Operational impacts to City Hall and Merrill Auditorium associated with the proposed curb cut/driveway exit for the hotel valet parking configuration, elimination of on-street parking spaces and the removal of the midblock crosswalk on Myrtle Street.
- Coordination with the Parking Division and DPW to create a formal parking restriction traffic schedule plan for the new proposed on-street parking spaces along Pearl Street and a revision to the existing parking restriction traffic schedules for Myrtle, Congress and Cumberland. Street Level Site Plan Sheet 3 calls out for the removal of an existing tunnel which crosses Congress Street near the intersection with Myrtle Street. Further discussion and coordination with DPW will be needed regarding the removal methodology during future site plan reviews for this project.
- Permanent sidewalk & public access easements along Myrtle Street, Cumberland Avenue and Congress Street will need to be established as part of future site plan and subdivision plan application reviews.

SEBAGO TECHNICS

40 YEARS OWNERSHIP • GROWTH

May 10, 2022
19371

Dear Neighbor:

Please join us for a virtual neighborhood meeting to discuss 385 Congress Street, LLC's proposed Master Development Plan for 385 Congress Street; the city block bounded by Congress Street, Myrtle Street, Cumberland Avenue and Pearl Street in Portland.

The proposed development plan anticipates a 152-room full-service hotel with nine (9) condominium units on the corner of Myrtle and Congress Street; a 110-unit condominium tower located at the corner of Pearl Street and Congress Street and a 193-unit tower along Cumberland Avenue. The massing of the site is envisioned to include three towers rising from a shared two-story "pedestal" incorporating structured parking, street level hotel and commercial uses as well as condominium entrances.

The City of Portland Land Use Code requires that neighboring property owners within 500 feet of the site and residents on an "interested parties list" be invited to participate in this neighborhood meeting. Attendance will be recorded and minutes of the meeting will be taken. Both the attendance list and minutes will be submitted to the Planning Department. The virtual meeting will take place via Zoom and can be accessed online using the link shown below.

Meeting Location: Virtual
Zoom Link: **https://us02web.zoom.us/webinar/register/WN_xrVuSrTHTJ-gbplLd4usRA**

Copy the link above into your browser to **register in advance** for this webinar. After registering, you will receive a confirmation email containing information about joining the webinar.

Meeting Date: **Monday May 23, 2022**
Meeting Time: **7:00PM**

If you have any questions, please call or email Daniel Riley at Sebago Technics, Inc. (207) 200-2080, driley@sebagotechnics.com.

Should you wish to offer additional comments on this proposed development, you may forward them by e-mail to planning@portlandmaine.gov or by mail to the Planning and Urban Development Department, Planning Division, 4th Floor, 389 Congress Street Portland, ME 04101

Sincerely,

SEBAGO TECHNICS, INC.

Daniel L. Riley, P.E.
Vice President, Engineering

DLR:

Meeting Summary

Memorandum

From:	Daniel Riley, Sebago Technics	Date:	May 26, 2022
To:	City of Portland Planning Department	Project:	19371
Subject:	Neighborhood Meeting Summary Master Development Plan, 385 Congress Street (PL-001970-2022)		

Summary

A neighborhood information meeting for the Master Development Plan Application for 385 Congress Street (City application PL-001970-2022) was held virtually via a Zoom Webinar on Monday May 23, 2022 at 7:00 PM. This memorandum summarizes the meeting as required in the Land Use Ordinance Section 14.5.5

Notice

The written notice of the meeting was mailed to abutters within 500 feet of the project and to the entities on the City's interested parties list. A copy of the notice and the mailing list/labels for abutters and interested parties is attached (provided by the planning department) is attached. A total of 104 mailings were sent by US Mail on May 10, 2022.

Participants and Attendance List

A total of four members of the public registered for the online webinar meeting and three attended the meeting. An attendance list is attached including members of the public and project applicant(s) representatives

Presenters

The following individuals representing the applicant presented material, participated in discussions during question-and-answer period or commented during the meeting.

Presenters for the Applicant(s):

385 Congress Street, LLC: Joe Dasco, Reger Dasco Development

The Fathom Companies: Marieke Thorman, Robin Payne

CBT Architects: Henry Weinberg, Dylan Dasco

Sebago Technics: Dan Riley, Dylan Stuart

Other Project Representatives Attending

The Fathom Companies: Robin Payne

CBT Architects: Dylan Dasco

Sebago Technics: Dylan Stuart

Neighborhood Participants

The following individuals attended the meeting, an attendance sheet generated by Zoom Webinars is attached.

Ian Jacob, Portland
Aislynn Sawyer, Portland
Max Ashburn, Portland

Content

A copy of printed materials presented is attached

The meeting was initiated at 7:00 pm and the presentation began at 7:05 pm to allow attendees to log in. One member of the public noted that the webinar link made it difficult to join, requiring a Zoom registration and suggesting a different process in the future.

Daniel Riley with Sebago Technics opened the meeting explaining that the purpose of the meeting is to provide information regarding the project as required by the City's review process. Mr. Riley briefly explained the purpose of the Master Development Plan (MDP) application is to provide a Planning Board review of large-scale projects, particularly projects that are to be permitted and constructed in phases over a number of years. The MDP is not a final design review process, once and MDP is approved individual site plans for the components of the project are reviewed in a Level III Planning Board review. Which includes a separate public process.

The purpose of the MDP is to establish the overall parameters of a project including items such as scale and massing, allowable density (number of units), parking requirements and impacts to abutting streets and infrastructure that may be address through the City's impact fee programs or by design and construction as part of future Planning Board review of individual site plan applications.

The MDP established the big picture parameters of a project, allowing site plan reviews to address design details. The MDP process provides a level of certainty for applicants and the City related to what will be allowed or expected in future site plan applications.

Mr. Riley noted that the meeting was being recorded for the purpose of documenting attendance and for preparation of summary materials for submittal to the City.

Mr. Riley introduced the project representatives. Joe Dasco (property owner/applicant) made a brief introduction of his firm and its history developing projects in Portland. He stated that is company has worked in Portland since 2006 with the current project being their 5th major project in the City. He introduced other major projects that Reger Dasco has developed, including Hobson's Landing at 383/387 Commercial Street which is very similar in nature to this proposed development on Congress Street being a multiple phase project including a hotel and residential condominiums.

Mr. Dasco explained that the existing lot includes the former printing building for the Portland Press Herald. After acquiring the property in 2017 there have been no tenants interested in repurposing the building and the site is currently used as a paid parking lot. Mr. Dasco introduced the Fathom Companies who anticipates developing the Hotel component of the site noting their experience developing and operating hospitality development in Portland and other states, also noting their current operation of the Press Hotel across Congress Street from this site.

Henry Weinberg with CBT Architects presented the design materials and slides attached to this summary, these documents being materials that are all included in the MDP application on file with the City.

The presentation provided information including the design objectives; neighborhood context, zoning setback and height analysis slides. The presentation included a discussion of the massing evolution for the building beginning by extruding the building volume allowed under the zoning ordinance's height and setback

requirements, and then subdividing and sculpting that envelop to create visual porosity and to establish the character of the buildings.

A summary of the proposed building program and layout on the site was provided followed by context and precedent slides related to the development pattern for pocket parks in the project vicinity along with images of potential designs and inspirations for a public pocket park at the hotel drive entrance on Congress Street.

A summary of the street edge design and context along Myrte Street was presented. The presentation concluded with a review of the conceptual plans for the roof amenity deck and perspective views of the building from various angles.

Record of Feedback

At the conclusion of the presentation, the meeting was opened for comments. One member of the project spoke.

The following summarized the comments/feedback received and discussion:

1. Ian Jacob commented that the presentation noted a former church on the site and noted that "Chapel Street" formerly passed through the site and that the presentation referenced the former church as a design consideration Questioning how does the design reflects this context.

   Mr. Weinberg responded stating that building design doesn't intend to reflect the design of the church, or take inspiration but it may be noted or memorialized in images, artwork/murals that may be incorporated into future design details.

2. Mr. Jacob asked if any consideration was given to restoring the section of Chapel Street that is discontinued as a means of public access through the site, potentially as access from Congress Street to Cumberland Avenue.

   A discussion of the practical difficulty of meeting the building program needs and mandated parking, combined with grade differences across the block make this approach difficult.

3. Mr. Jacob noted that that no discussions with Historic Preservation Committee or Portland Historical society have occurred.

   This is a requirement of future site plan applications. There are no historic buildings on the site but the site is located in the vicinity of historic buildings.

4. Mr. Jacob stated concerns about the large amount of parking being proposed and the impact that the parking structure has on street activation on Myrtle and Peral Street and public access through the site.

   Mr. Dasco responded that the project needs to meet requirements for parking established by the City ordinance. A discussion continued into areas of street activation with Mr. Jacob stating concerns street activation on Cumberland and Congress Street and asking about opportunities to use the second level amenity deck as public space.

   Mr. Dasco noted parking is always a conundrum and that an extensive evaluation of the site was performed in 2019 and 2020 that included a separate structured parking solution to address the parking and program needs. But this solution was not economically viable and the focus of street activation is on the most used streets. Every project has a push and pull of requirements and their other projects have had some success in convincing residents to reduce from two cars to one car which is typically what they offer.

5. Mr. Jacob asked if consideration has been given to designing the parking levels in a way that they could be retrofitted in the future into more useful and active space, noting that vehicle ownership and use are evolving in Portland and there could be less parking needed in the future.

   Mr. Dasco and Ms. Thormann both agreed that this was an interesting idea that had not yet been considered but has merit. Particularly, because the parking levels are not connected with ramps, providing more level areas on the floor plan than a ramped garage would provide.

6. Mr. Jacob asked about the amenity deck and what the reasoning was of not making it semi-public and questioning the activation at that level compared to the streets.

   Mr. Dasco responded sating that reasons including security and safety were a concern, the site topography and elevation difference between Congress and Cumberland was also an issue, given the parking requirements and the need for ADA accessibility that would be necessary access from the street.

   Mr. Dasco a explained that the hotel needs functional space outside. The roof area includes that space and common space for residents and for residents with pets, but that much of the space is dedicated to private outdoor patios for individual unit owners at that level. The demand for private outdoor space from unit owners is very high has only increased post COVID with more people working from home.

   Mr. Jacob stated that he would like the design team to look further into this. Mr. Dasco commented that the public cut through that was constructed at Hobsons' Landing (383-387 Commercial Street) from York Street to Commercial Street is not being utilized like they had hoped, noting that the Hobson's landing project was able to create that space without compromising their ability to meet the onsite parking requirements.

7. Mr. Riley closed the meeting by revieing the next steps for the permitting process.

   - A Master Development Plan (MDP) application has been submitted to the City. We have had pre-application discussion with staff but have not yet received review comments.
   - A planning board workshop is scheduled with the City on June 14th. The meeting is open to the public and the planning Board takes comments at all of its workshops.
   - The next steps could include another workshop or a public hearing likely in the summer.
   - Individual components of the project will apply for Site Plan review in the summer of 2022. The site plan process will also involve a neighborhood meeting, Planning Board workshops and public hearings.
   - Construction is expected to begin in some time in 2023.
   - Zach Powell is the City planner assigned to the project, his phone and email address were provided

8. Mr. Riley provided his contact information and closed the meeting at 8:00 pm.

May 10, 2022
19371

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Sincerely,

SEBAGO TECHNICS, INC.

Daniel L. Riley, P.E.
Vice President, Engineering

DLR:

Abutters and Interested Parties
385 Congress Street

COMPANY	FIRST NAME	LAST NAME	ADDRESS	CITY	STATE	ZIP
141 PLEASANT STREET LLC			307 MAIN ST	HANOVER	MA	02339
150 PEARL STREET LLC			225 CUMBERLAND AVE	PORTLAND	ME	04101
150 PEARL STREET LLC			PO BOX 4271	PORTLAND	ME	04101
151 PEARL STREET LLC			225 CUMBERLAND AVE	PORTLAND	ME	04101
155 PEARL STREET LLC			225 CUMBERLAND AVE	PORTLAND	ME	04101
161 PEARL STREET LLC			161 PEARL ST # 2	PORTLAND	ME	04101
223 CUMBERLAND AVENUE LLC			225 CUMBERLAND AVE	PORTLAND	ME	04101
227 CUMBERLAND AVENUE LLC			PO BOX 4271	PORTLAND	ME	04101
229 CUMBERLAND AVENUE LLC			PO BOX 4271	PORTLAND	ME	04101
231 CUMBERLAND AVENUE LLC			PO BOX 4271	PORTLAND	ME	04101
235 CUMBERLAND AVENUE LLC			PO BOX 4271	PORTLAND	ME	04104
385 CONGRESS LLC			2730 TRANSIT RD	WEST SENECA	NY	14224
42 WILMOT STREET LLC			225 CUMBERLAND AVE	PORTLAND	ME	04101
50-52 WILMOT STREET LLC			PO BOX 4271	PORTLAND	ME	04101
55 CHESTNUT STREET LLC			460 BAXTER BLVD	PORTLAND	ME	04103
56 WILMOT STREET LLC			PO BOX 4271	PORTLAND	ME	04101
APOSTOLIC FAITH ASSEMBLY			331 CONGRESS ST	PORTLAND	ME	04101
ASHBY TEAM LLC			415 CONGRESS ST STE 204	PORTLAND	ME	04101
AVESTA UNITY VILLAGE LP			307 CUMBERLAND AVE	PORTLAND	ME	04101
BAYSIDE CONDO			164 PEARL ST	PORTLAND	ME	04101
BOODILLY LLC			158 WOODVILLE RD	FALMOUTH	ME	04105
CASTANEA PRIME LLC			PO BOX 24	FRIENDSHIP	ME	04547
CHESTNUT STREET LOFTS			21 CHESTNUT ST	PORTLAND	ME	04101
CHESTNUT STREET LOFTS LLC			58 HANNAFORD COVE RD	CAPE ELIZABETH	ME	04107
CITY OF PORTLAND			389 CONGRESS ST	PORTLAND	ME	04101
CUMBERLAND COUNTY OF			142 FEDERAL ST	PORTLAND	ME	04101
CUMBERLAND PEARL CONDO			241 CUMBERLAND AVE	PORTLAND	ME	04101
DOWTOWN LODGING LLC			PO BOX 10250	PORTLAND	ME	04104
FEDERAL STREET PHOENIX LLC			PO BOX 15372	PORTLAND	ME	04112
FIRST ASSEMBLY OF GOD CHURCH			243 CUMBERLAND AVE	PORTLAND	ME	04101
FIRST INDEPENDENT ASSEMBLY OF GOD			243 CUMBERLAND AVE	PORTLAND	ME	04101
FIRST PARISH IN PORTLAND TRUSTEE			427 CONGRESS ST	PORTLAND	ME	04101
HAIR ETC LLC			705 WEBBS MILLS RD	RAYMOND	ME	04071
HOWLES CORPORATION			PO BOX 938	PORTLAND	ME	04104
HTLV PORTLAND LLC			101 CALIFORNIA ST STE 980	SAN FRANCISCO	CA	94111
I-95 PORTLAND PORTFOLIO I LLC			135 CHADWICK ST STE B	PORTLAND	ME	04101
KINGSLEY ENTERPRISES			225 CUMBERLAND AVE	PORTLAND	ME	04101
MASONIC TRUSTEES OF PORTLAND			415 CONGRESS ST	PORTLAND	ME	04101
MOJO PROPERTIES LLC			536 WASHINGTON AVE	PORTLAND	ME	04103
ONETEN EXCHANGE LLC			254 COMMERCIAL ST STE 118	PORTLAND	ME	04101
PEARL CUMBERLAND LLC			ONE CITY CENTER 4TH FLOOR	PORTLAND	ME	04101
PEARL MANOR LLC			225 CUMBERLAND AVE	PORTLAND	ME	04101
PO SQUARE BUILDING LLC			120 EXCHANGE ST	PORTLAND	ME	04103
PORTLAND BOYS CLUB ASSOC			277 CUMBERLAND AVE	PORTLAND	ME	04101
PORTLAND HOUSING AUTHORITY			14 BAXTER BLVD	PORTLAND	ME	04101
REDFERN DOWNTOWN LLC			PO BOX 8816	PORTLAND	ME	04104
RICH BUILDING LLC			104 EXCHANGE ST	PORTLAND	ME	04101
TOP OF EXCHANGE LLC			42 MARKET ST	PORTLAND	ME	04101
TRIPOD HOLDINGS LLC			1 DANA ST	PORTLAND	ME	04101
WARD CAPITAL LLC			139 ASHMONT ST	PORTLAND	ME	04103
	JEFFREY	TITCOMB	PO BOX 835	FRYEBURG	ME	04037
	THOMAS	MICHAUD	50 MYRTLE ST	PORTLAND	ME	04101
	THOMAS	SEPULVERES	43 MYRTLE ST	PORTLAND	ME	04101
	JULIE	GOFF	136 OXFORD ST	PORTLAND	ME	04101
	GIOVANNI	FRISONE	22 LANCESTER RD	CROMWELL	CT	06416
	SARA	YINDRA	21 CHESTNUT ST # 5N	PORTLAND	ME	04101
	MUNIRA	NAQUI	203 SHERIDAN ST	PORTLAND	ME	04101
	TERESA	CURTIN	21 CHESTNUT ST # 5W	PORTLAND	ME	04101
	PIERRE	AVIGNON	723 ISLAND AVE	LONG ISLAND	ME	04050
	LORINDA	FRAZER	123 HOPE RD	LINCOLNVILLE	ME	04849
	EMILY	DEGRAY	172 BOYCE ST	AUBURN	MA	01501
	DANIEL J	FITZPATRICK	PO BOX 143	WESTBROOK	ME	04098
	THOMAS	SEPULVERES	51 MYRTLE ST	PORTLAND	ME	04101
	BRUCE R	COUILLARD	110 MARGINAL WAY # 241	PORTLAND	ME	04101
	ANGELA F	HENRY	239 CUMBERLAND AVE	PORTLAND	ME	04101
	DOUGLAS A	SMITH	21 CHESTNUT ST # 2N	PORTLAND	ME	04101
	EVAN	ANDERSON	21 CHESTNUT ST # 2W	PORTLAND	ME	04101

Abutters and Interested Parties
385 Congress Street

	DONALD B	BAILEY	21 CHESTNUT ST # 406	PORTLAND	ME	04101
	CHARLES	KAUFMANN	21 CHESTNUT ST # 4S	PORTLAND	ME	04101
	AURELIA	SCOTT	21 CHESTNUT ST # 6N	PORTLAND	ME	04101
	PRUDENCE	BARRY	21 CHESTNUT ST # 6W	PORTLAND	ME	04101
	PETER	BUSQUE	21 CHESTNUT ST # 08W	PORTLAND	ME	04101
	JULIA P	GAULKE	60 BOLTON ST	PORTLAND	ME	04102
	ROSEMARY	FLACH	45 EASTERN PROMENADE # BG	PORTLAND	ME	04101
	JEAN M	MURPHY	PO BOX 10045	PORTLAND	ME	04104
	LOUIS	CHRISTEN	239 CUMBERLAND AVE	PORTLAND	ME	04101
	LEAH	BURKE	237 CUMBERLAND AVE # 2	PORTLAND	ME	04101
	AARON T	STEPHAN	142 PEARL ST	PORTLAND	ME	04101
	JOHN	YORK	58 WILMOT ST	PORTLAND	ME	04101
	CARA	JORDAN	9 MITCHELLWOOD DR	FALMOUTH	ME	04105
	VICTOR	MORREL	21 CHESTNUT ST # 202	PORTLAND	ME	04101
	STEPHEN D	SEARS	95 AMBROSE COVE	BELGRADE	ME	04917
	DANTON D	NYGAARD	21 CHESTNUT ST # 401	PORTLAND	ME	04101
	LARRY F	HAMM	11800 SUNSET HILLS RD # 820	RESTON	VA	20190
	JAMES C	SCHWELLENBACH	21 CHESTNUT ST # 602	PORTLAND	ME	04101
	JAN	WILLIAMS	21 CHESTNUT ST # 8S	PORTLAND	ME	04101
	ERGUN	DUNDAR	21 CHESTNUT ST # 2NW	PORTLAND	ME	04101
	CONOR	MAHON	21 CHESTNUT ST # 5SE	PORTLAND	ME	04101
	AVNER	EISENBERG	29 CITY POINT RD	PEAKS ISLAND	ME	04108
	CURTIS	HUSSEY	147 SAWYER ST	SOUTH PORTLAND	ME	04106
	ADAM	HILL	PO BOX 4242	PORTLAND	ME	04101
	PROPERTY	HELM	4420 GIBBONS ST # D	VANCOUVER	WA	98661
	JESSICA	OUELLETTE	164 PEARL ST # A	PORTLAND	ME	04101
	TANIA F	BOWEN	164 PEARL ST # B	PORTLAND	ME	04101
	JAMES W SR	MCDONALD	696 QUAKER RIDGE RD	CASCO	ME	04015
	GARRETT K	TILTON	21 CHESTNUT ST # 3N	PORTLAND	ME	04101
	JESSE	SAWYER	21 CHESTNUT ST # 302	PORTLAND	ME	04101
	JOHN	VANHOEWYK	21 CHESTNUT ST # 301	PORTLAND	ME	04101
	ALICIA	HARDING	21 CHESTNUT ST	PORTLAND	ME	04101
	MICHAEL P	POLLASTRI	235 POND ST	COHASSET	MA	02025
	MARILYN	KELLY	21 CHESTNUT ST # 702	PORTLAND	ME	04101
	MICHAEL	GUIGLI	21 CHESTNUT ST # 701	PORTLAND	ME	04101
	STEPHANIE	COTSIRILOS	21 CHESTNUT ST # 8N	PORTLAND	ME	04101
	JOSEPH	PALACCI	102 EXCHANGE ST	PORTLAND	ME	04101

Attendee Report											
Report Generated:	5/27/2022 13:41										
Topic	Webinar ID	Actual Start Time	Actual Duration (minutes)	# Registered	# Cancelled	Unique Viewers	Total Users	Max Concurrent Views	Enable Registration		
385 Congress Stree	876 8930 8194	5/23/2022 18:20	96	12	0	9	15	0	Yes		
Host Details											
Attended	User Name (Original Name)	Join Time	Leave Time	Time in Session (minutes)	Is Guest	Country/Region Name					
Yes	Dan Riley (Henry Hess)	5/23/2022 18:20	5/23/2022 19:55	96	No	United States					
Panelist Details											
Attended	User Name (Original Name)	Join Time	Leave Time	Time in Session (minutes)	Is Guest	Country/Region Name					
Yes	Dylan Stuart - Sebago Technics (DylanStuart)	5/23/2022 18:59	5/23/2022 19:55	56	Yes	United States					
Yes	MariekeThormann	5/23/2022 19:00	5/23/2022 19:54	55	Yes	United States					
Yes	Henry Weinberg - CBT Architects (HenryWeinberg)	5/23/2022 19:04	5/23/2022 19:54	51	Yes	United States					
Yes	JoeDasco	5/23/2022 19:00	5/23/2022 19:54	55	Yes	United States					
Attendee Details											
Attended	User Name (Original Name)	First Name	Last Name	City	Organization	Registration Time	Join Time	Leave Time	Time in Session (minutes)	Is Guest	Country/Region
Yes	Ian Jacob	Ian	Jacob	Portland		5/12/2022 16:23	5/23/2022 18:57	5/23/2022 19:55	58	Yes	United States
Yes	Max Ashburn	Max	Ashburn	Portland		5/12/2022 19:12	5/23/2022 19:05	5/23/2022 19:54	50	Yes	United States
Yes	Aislynn Sawyer	Aislynn	Sawyer	Portland		5/16/2022 18:04	5/23/2022 18:59	5/23/2022 19:55	56	Yes	United States
Yes	Dylan Stuart	Dylan	Stuart	South Portland		5/18/2022 12:57	5/23/2022 18:56	5/23/2022 18:56	1	Yes	United States
Yes	Marieke Thormann	Marieke	Thormann	Portland	Fathom Companies	5/18/2022 13:09	5/23/2022 18:59	5/23/2022 19:00	1	Yes	United States
Yes	Henry Weinberg	Henry	Weinberg	Boston	CBT Architects	5/18/2022 13:19	5/23/2022 19:02	5/23/2022 19:04	2	Yes	United States
Yes	Joe Dasco	Joe	Dasco	Portland	385 Congress, LLC	5/18/2022 14:16	5/23/2022 18:59	5/23/2022 19:00	1	Yes	United States
Yes	Dylan Dasco	Dylan	Dasco	Boston	CBT architects	5/19/2022 11:23	5/23/2022 19:01	5/23/2022 19:54	54	Yes	United States
Yes	Robyn Payne	Robyn	Payne	Portland	Fathom Companies	5/20/2022 10:14	5/23/2022 18:57	5/23/2022 19:54	58	Yes	United States
No	Dan Riley (Henry Hess)	Dan	Riley	Portland	Sebago Technics, Inc	5/16/2022 8:40	--	--	--	--	
No	Jim	Jim	Monteverde	Cambridge	CBT	5/18/2022 12:54	--	--	--	--	
No	Peter	Peter	Busque	Portland		5/18/2022 14:35	--	--	--	--	

Master Development Plan
385 Congress Street



Submitted To:
City of Portland

Submitted By:
385 Congress Street, LLC
The Fathom Companies

Prepared By:
Sebago Technics, Inc
CBT Architects

AGENDA

Introductions

- **385 Congress Street LLC- Joe Dasco**
- **The Fathom Companies- Marieke Thormann**
- **CBT Architects- Henry Weinberg**
- **Sebago Technics- Dan Riley, Dylan Stewart**

Project Presentation

Questions

Next Steps and Contacts

GENERAL APPROACH & GOAL



Our approach is to create a **cohesive and complementary design** that **builds upon the historic context** of Downtown Portland with forward and innovative vision of providing **activation and scaled environment to the public realm and the neighborhood.**

1. **Respect historic context**
2. **Well scaled street environment**
3. **Create skyline**
4. **Timeless design approach**
5. **Sustainable approach**

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CONTEXT IMAGES



NORTH-EAST VIEW



SOUTH-EAST VIEW



SOUTH-WEST VIEW



NORTH-WEST VIEW

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NEIGHBORHOOD CONTEXT MAP & ZONING ANALYSIS



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VIEW ANALYSIS



CUMBERLAND AVE

NORTH @ 150'



PEARL STREET

EAST @ 150'



CONGRESS STREET

SOUTH @ 150'



MYRTLE STREET

WEST @ 150

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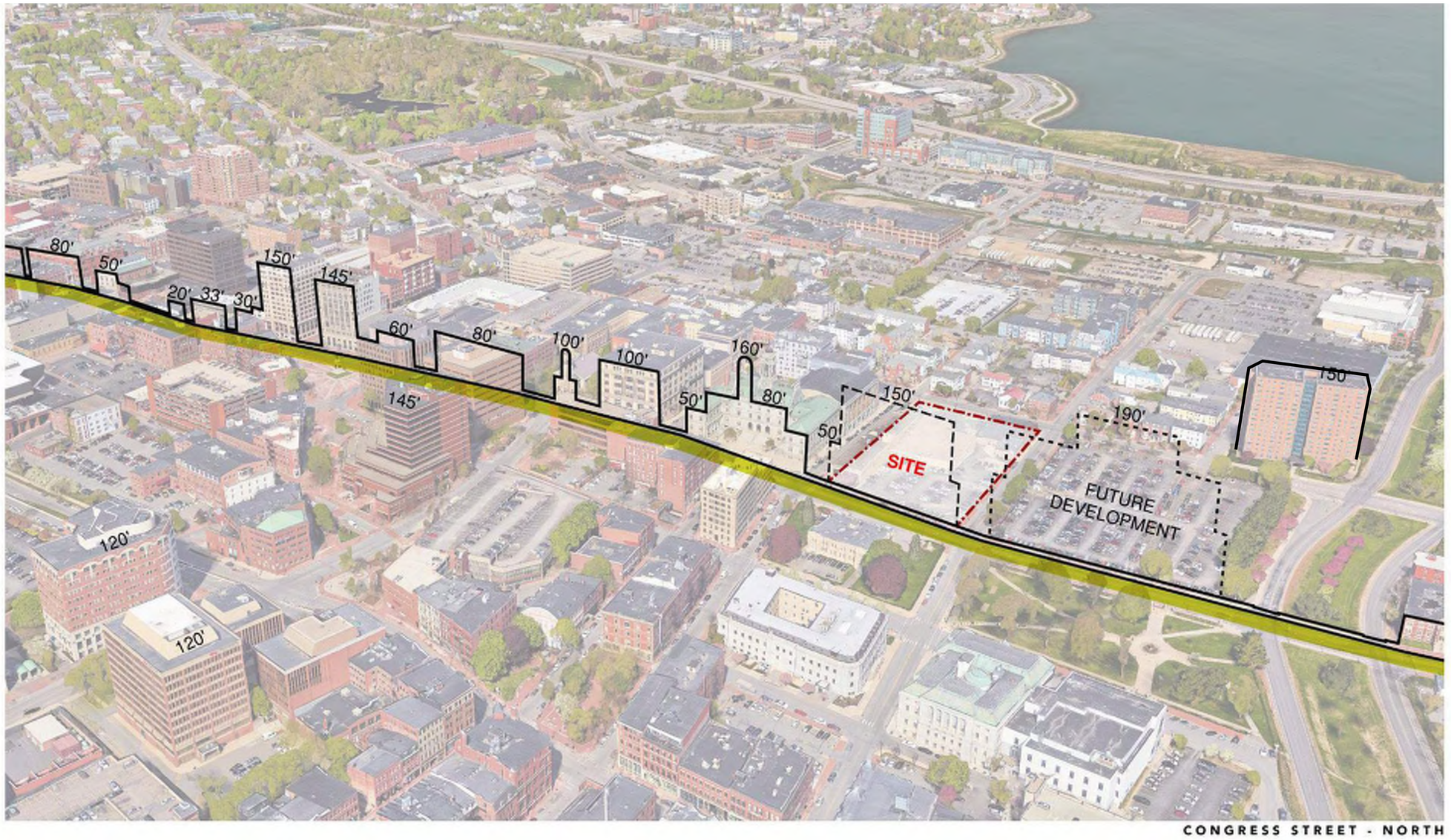
CONTEXT HEIGHT ANALYSIS

CONGRESS ST NORTH



CONGRESS STREET - NORTH

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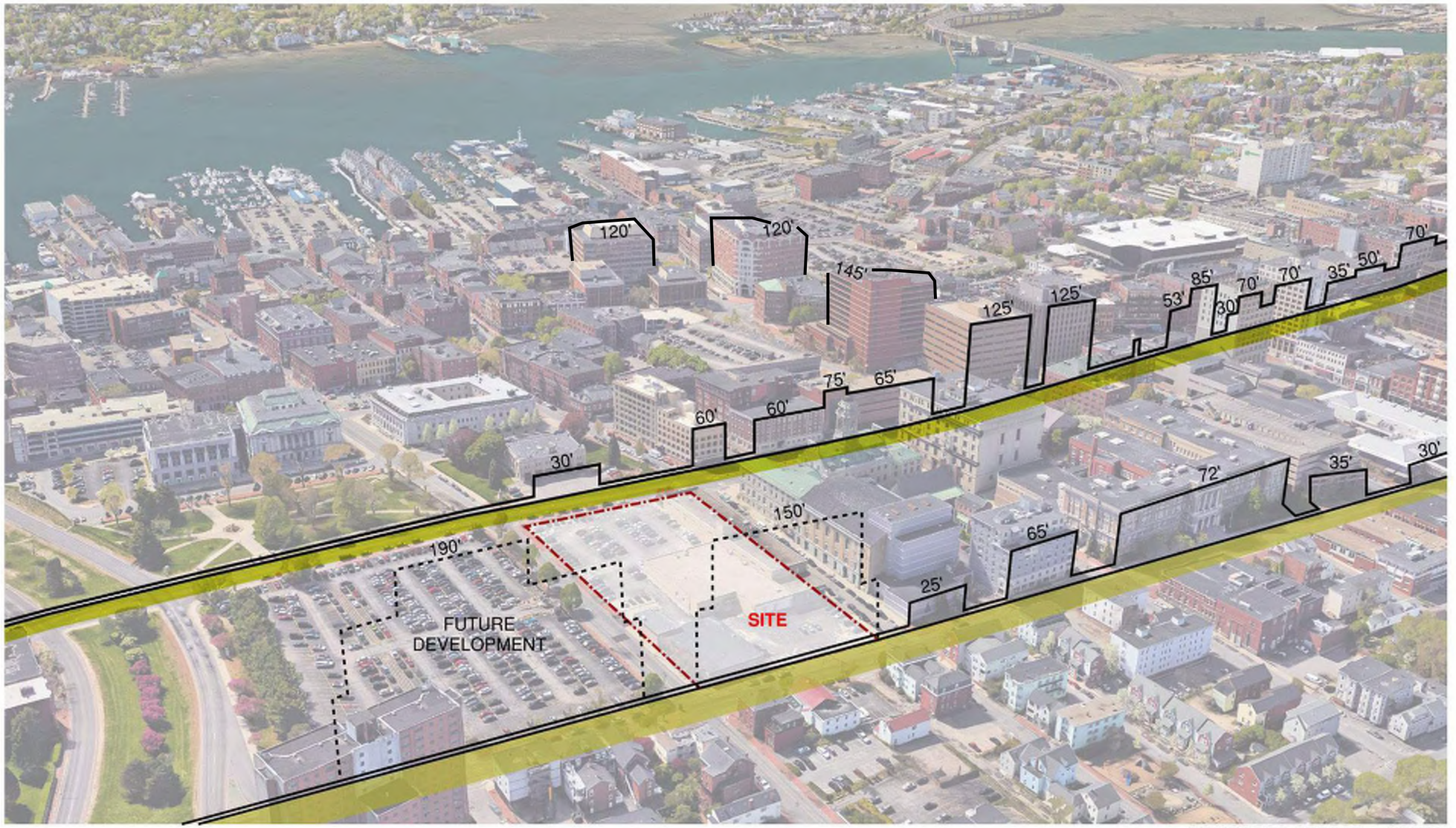
CONTEXT HEIGHT ANALYSIS

CUMBERLAND AVE



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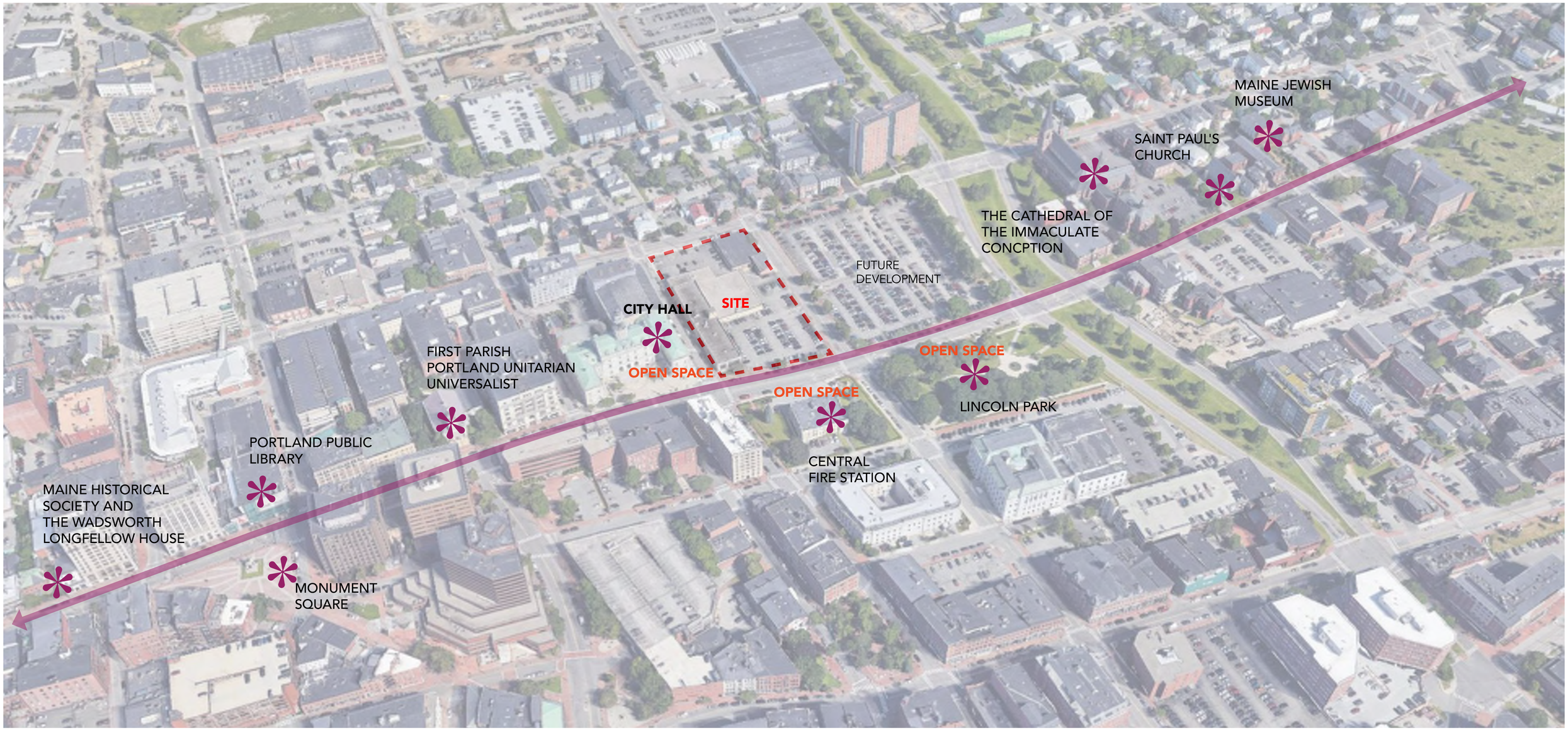
CONGRESS STREET ACTIVATION

THIS SITE PROVIDES THE OPPORTUNITY TO EXTEND THE ACTIVITY OF CONGRESS STREET TO THE EAST AND BRIDGE THE GAP BETWEEN DOWNTOWN AND THE EAST END. BY PROVIDING PROGRAMS THAT CAN BE ENJOYED BY THE BUILDING TENANTS AND MEMBERS OF THE PUBLIC, THIS PROJECT WILL ADD TO THE ALREADY VIBRANT NETWORK OF SPACES ALONG CONGRESS STREET.



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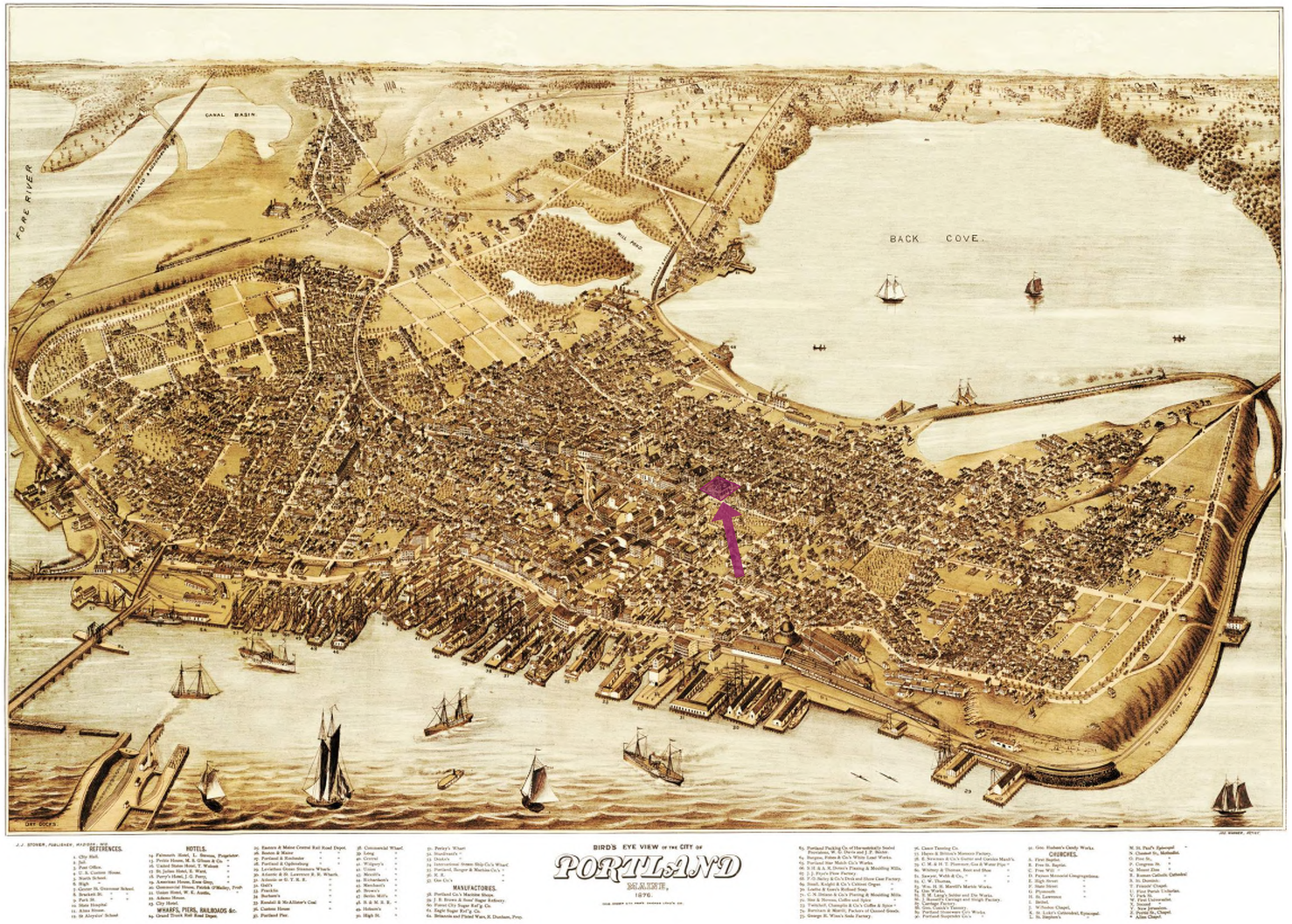
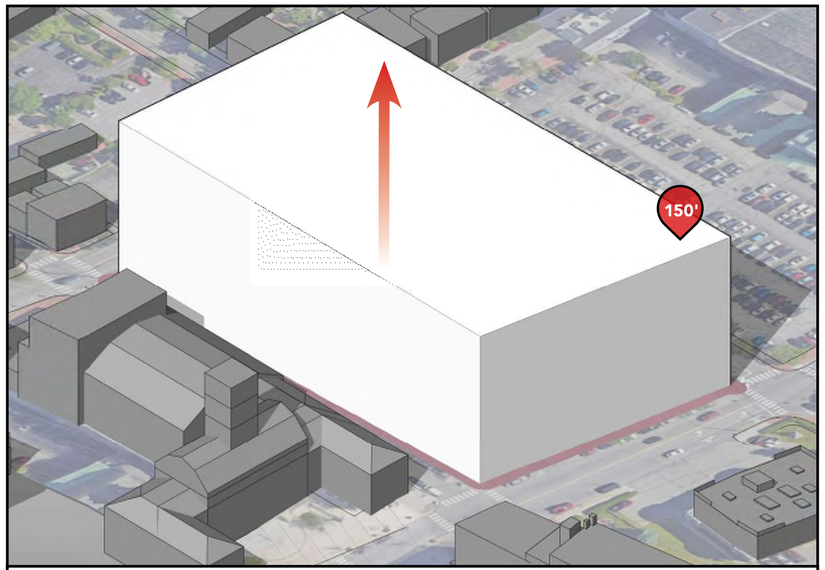
HISTORIC CONTEXT

HISTORICAL MAPS REVEAL THAT THIS PARCEL WAS FORMERLY THE SECOND PARISH CHURCH.

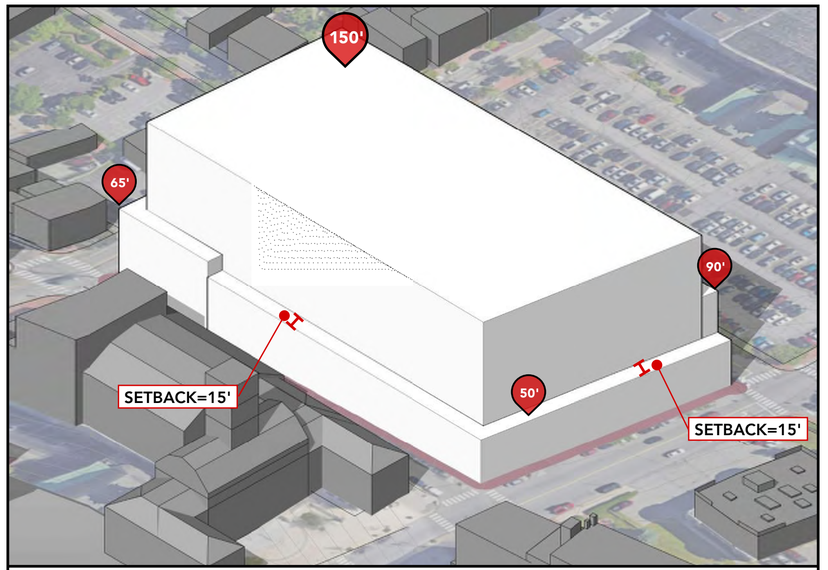




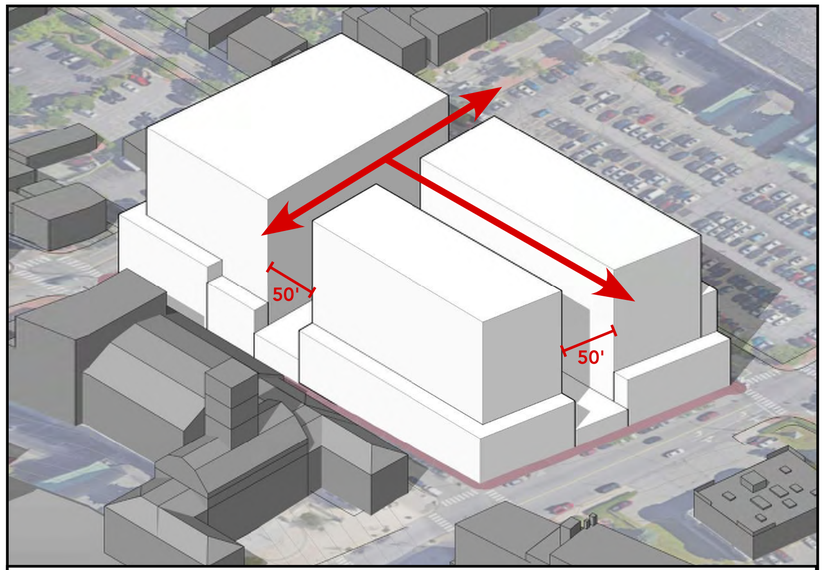
MASSING EVOLUTION



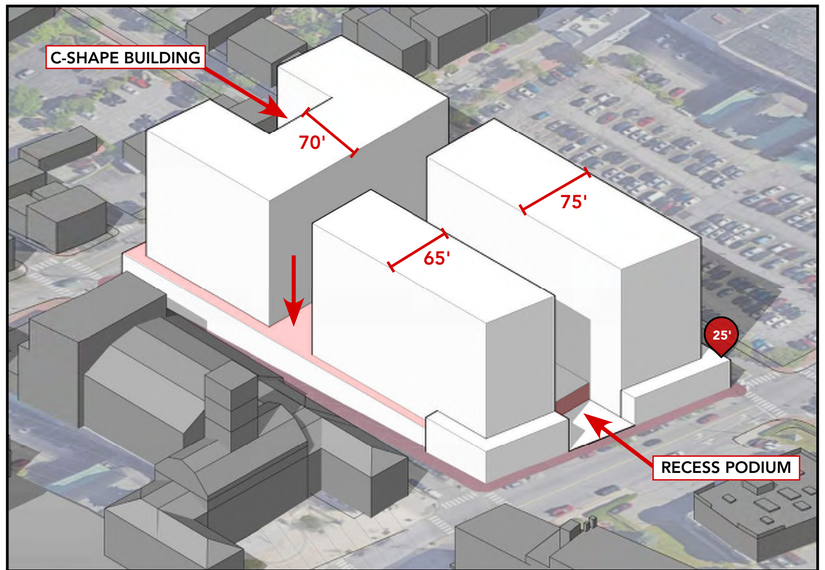
1_EXTRUDE SITE FOOTPRINT



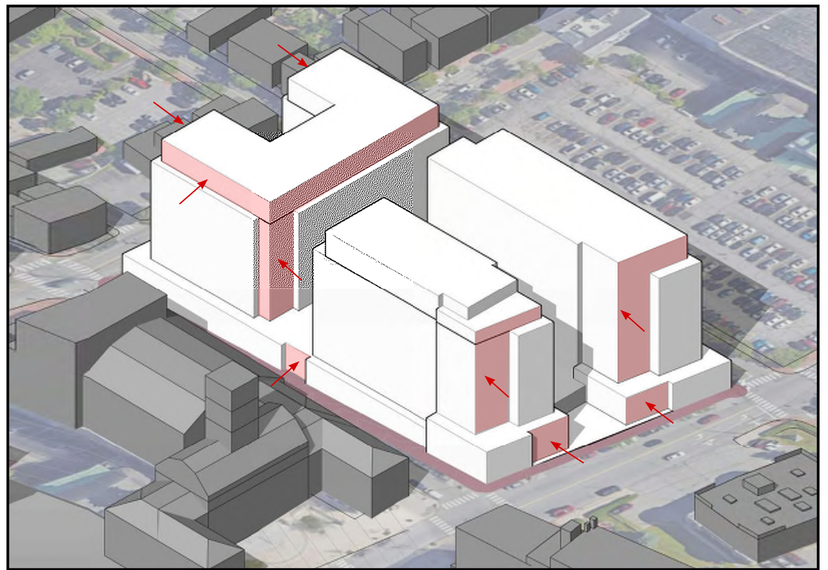
2_ZONING SETBACKS (AS OF RIGHT)



3_SUB-DIVIDE SITE FOR POROSITY



4_SHAPE BUILDING FOOTPRINTS; ESTABLISH SHARED PODIUM



5_SCULPT MASSING



6_ADD BALCONIES & MATERIALS

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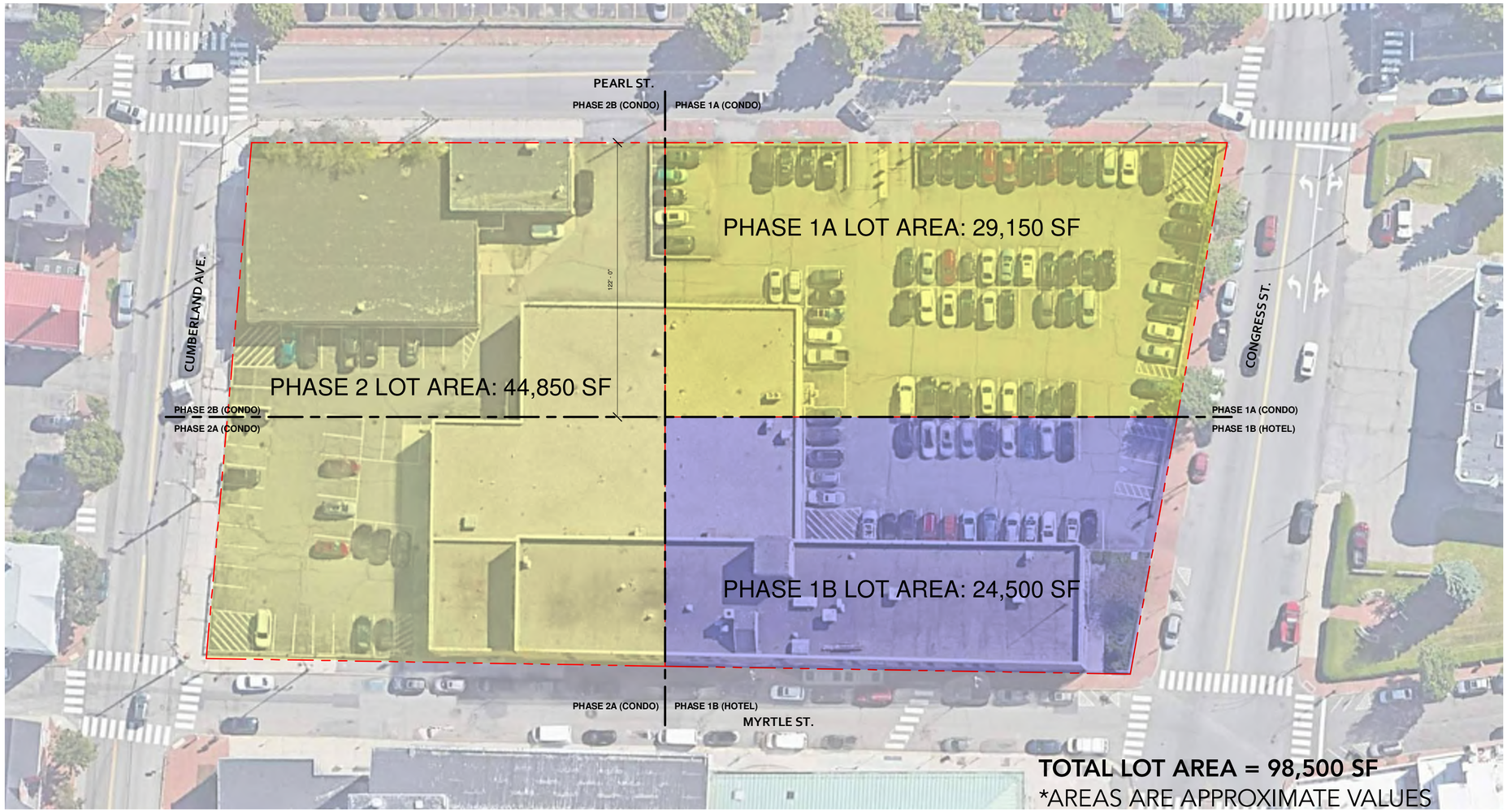
PARCEL SUBDIVISIONS

**VALUES ARE APPROXIMATE

		HOTEL SF	*KEY COUNT*	RESI SF	*UNIT COUNT*	LOBBY / AMENITY	RETAIL	BOH / SUPPORT	MECHANICAL	CIRCULATION	PARKING	*PARKING COUNT*	GSF TOTAL
Phase 1A	**Pearl**			**158,100**	***110***	**4,900**	**2,500**		**12,000**	**24,200**	**43,300**	***126***	**245,000**
Phase 1B	**Myrtle**	**80,000**	***152***	**9,000**	***9***	**15,700**		**17,500**	**7,200**	**22,200**	**28,400**	***70***	**180,000**
Phase 2A	**Cumberland S**			**92,400**	***94***	**5,100**	**4,200**		**6,500**	**22,000**	**62,000**	***165***	**192,200**
Phase 2B	**Cumberland N**			**97,700**	***99***	**-**	**-**		**3,000**	**12,100**	**-**	**-**	**112,800**
GRAND TOTALS		***80,000***	***152***	***357,200***	***312***	***25,700***	***6,700***	***17,500***	***28,700***	***80,500***	***133,700***	***361***	**730,000**

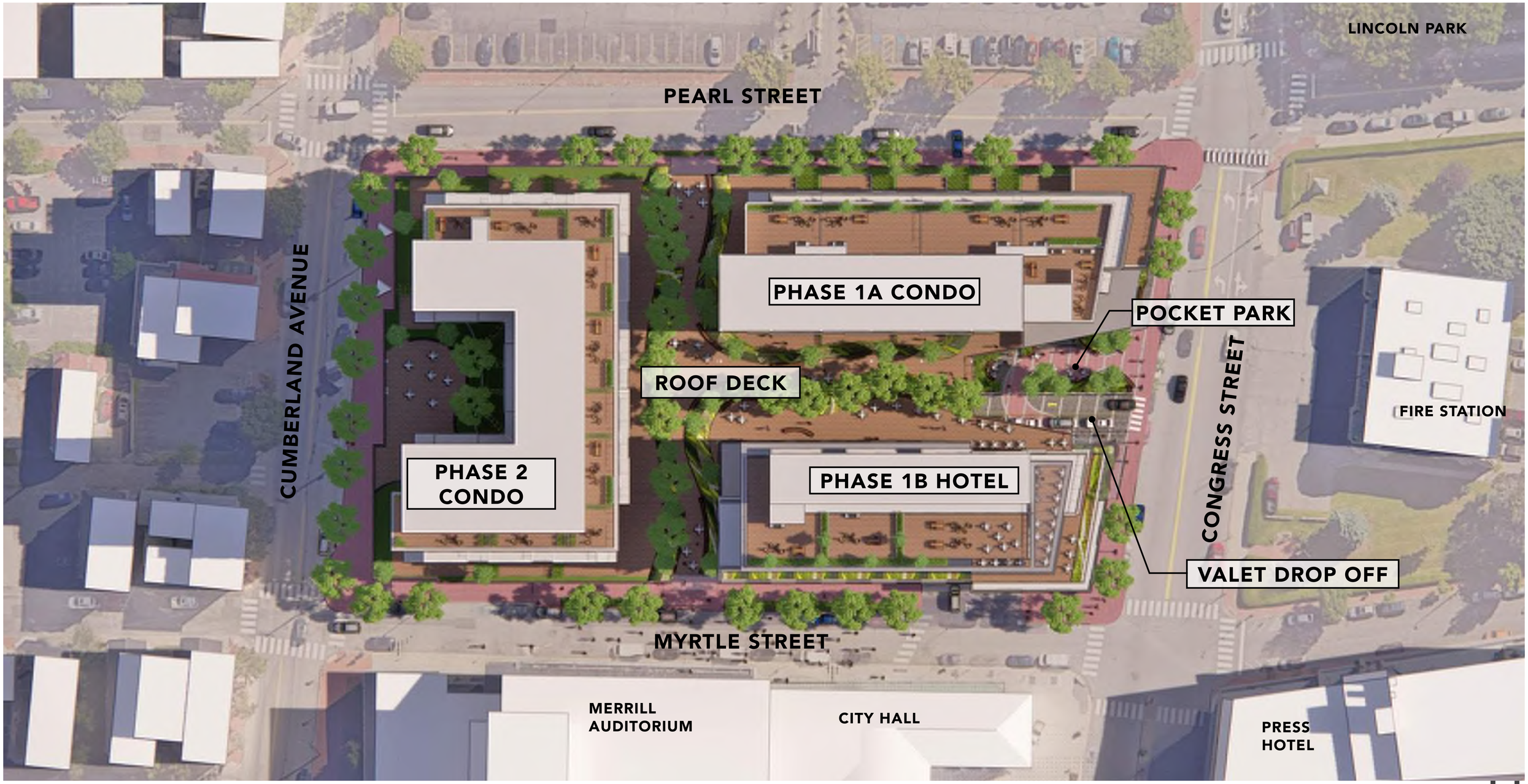


cbt

PROGRAM SUMMARY

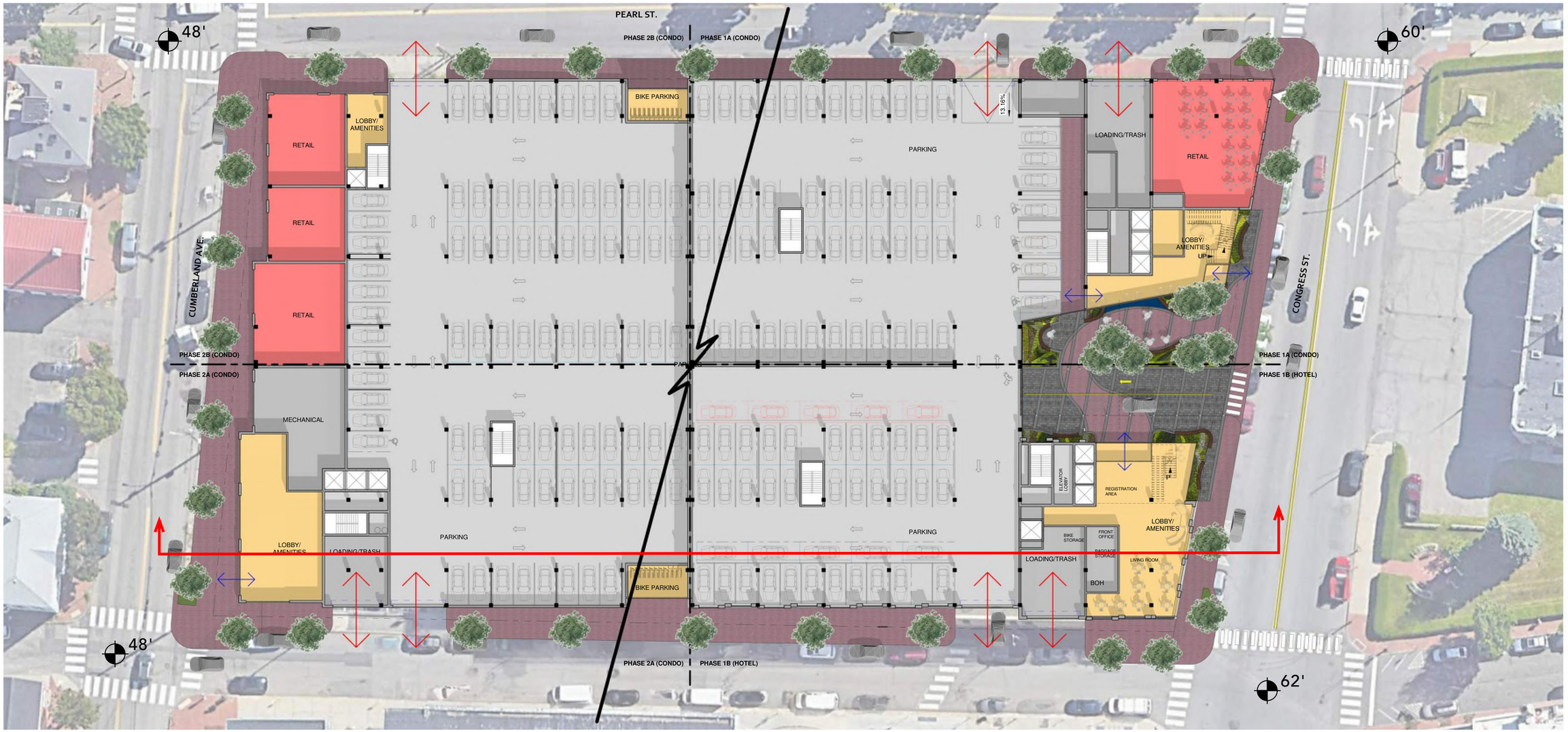


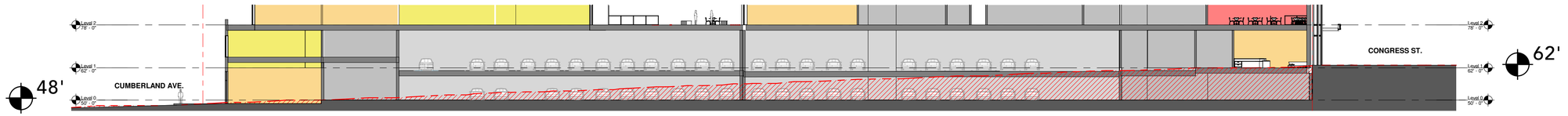
SITE PLAN


LINCOLN PARK
PEARL STREET
CUMBERLAND AVENUE
PHASE 1A CONDO
POCKET PARK
ROOF DECK
CONGRESS STREET
FIRE STATION
PHASE 2
CONDO
PHASE 1B HOTEL
VALET DROP OFF
MYRTLE STREET
MERRILL
AUDITORIUM
CITY HALL
PRESS
HOTEL

COMPOSITE GROUND FLOOR PLAN

THE TOPOGRAPHICAL NATURE OF THE BLOCK AFFORDS THE OPPORTUNITY TO MAXIMIZE GARAGE EFFICIENCY AND ELIMINATE INTERNAL RAMPING. THE SITE SLOPES DOWN FROM EAST TO WEST BY 12' THIS ALLOWS US TO PROVIDE SEPARATE GARAGE ENTRANCES FOR THE UPPER AND LOWER LEVELS. THE LOWER LEVEL OF THE GARAGE (LEVEL 0) WILL BE AT THE ELEVATION OF CUMBERLAND AVE (48') AND THE UPPER LEVEL OF THE GARAGE (LEVEL 1) WILL BE AT THE ELEVATION OF CONGRESS ST. (60')



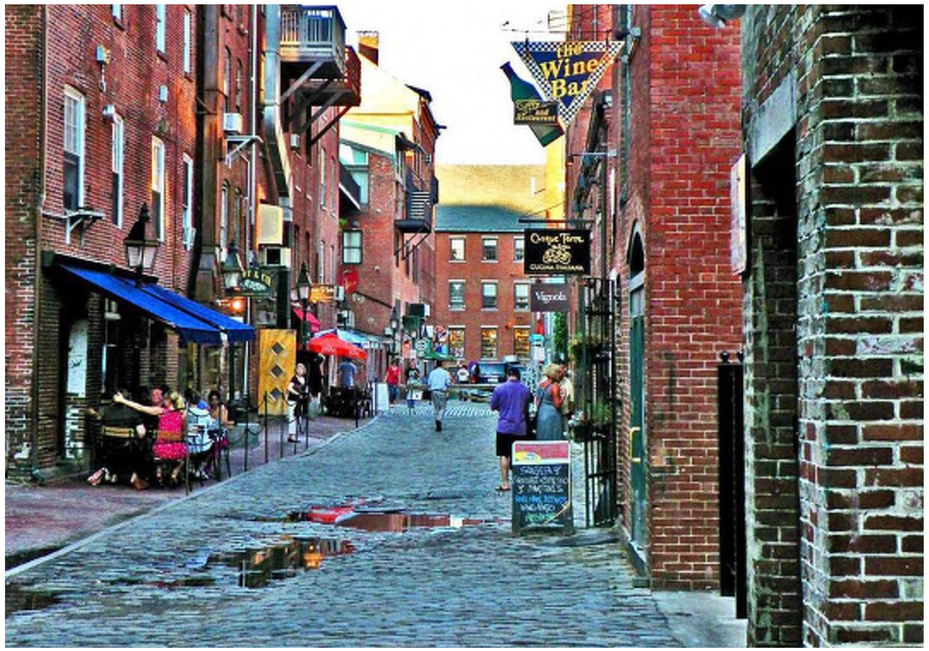


PORTLAND ALLEYWAYS AND POCKET PARKS

THE CITY BLOCK DEFINED BY CONGRESS, PEARL, MYRTLE AND CUMBERLAND AVE PROVIDES A UNIQUE OPPORTUNITY TO CONTINUE THE MULTI-LAYERED URBAN TEXTURE OF DOWNTOWN PORTLAND AND ADD TO THE DIVERSE & HISTORIC SKYLINE. WHILE STUDYING PORTLAND'S CITY GRID, WE FOUND A LAYERING OF SCALES THAT COMPOSES A UNIQUE URBAN FABRIC. THE IRREGULAR NATURE OF THE URBAN GRID PRODUCES OPPORTUNITIES FOR FOUND SPACES IN THE FORM OF POCKET PARKS AND OPEN PLAZAS.



OPEN SPACE / POCKET PARKS



WHARF STREET



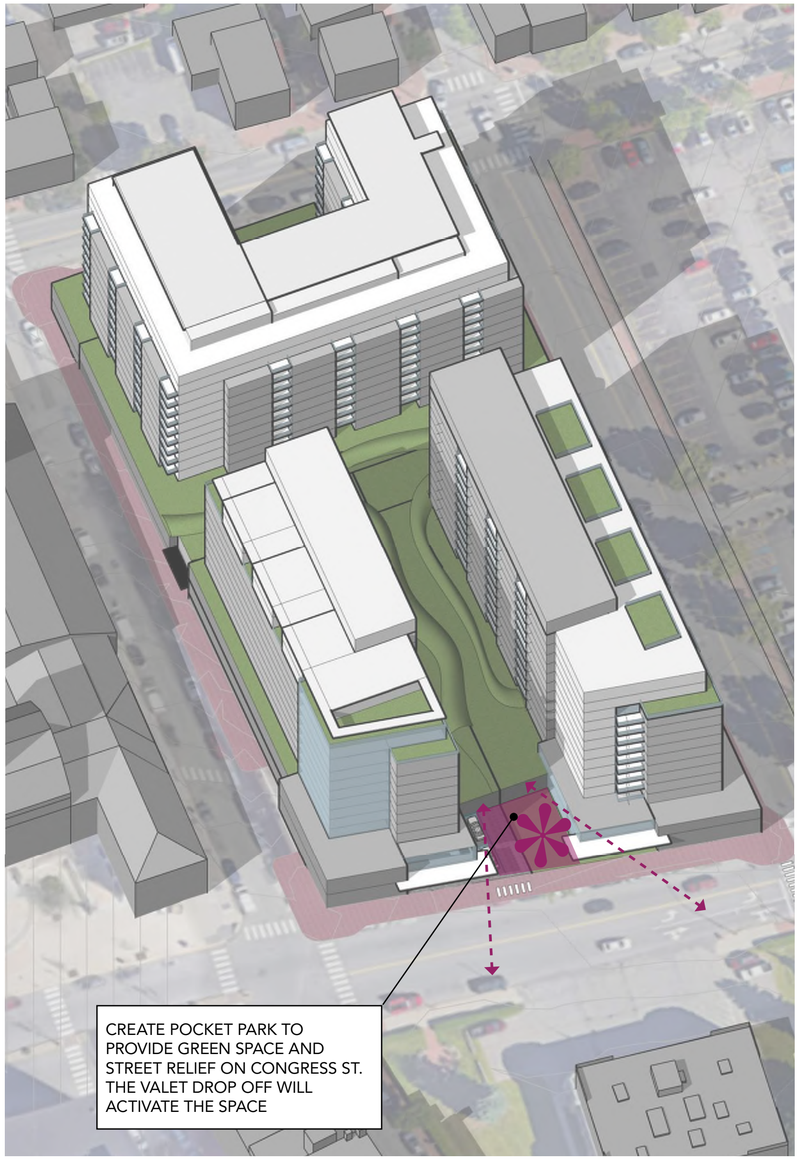
POST OFFICE PARK

cbt

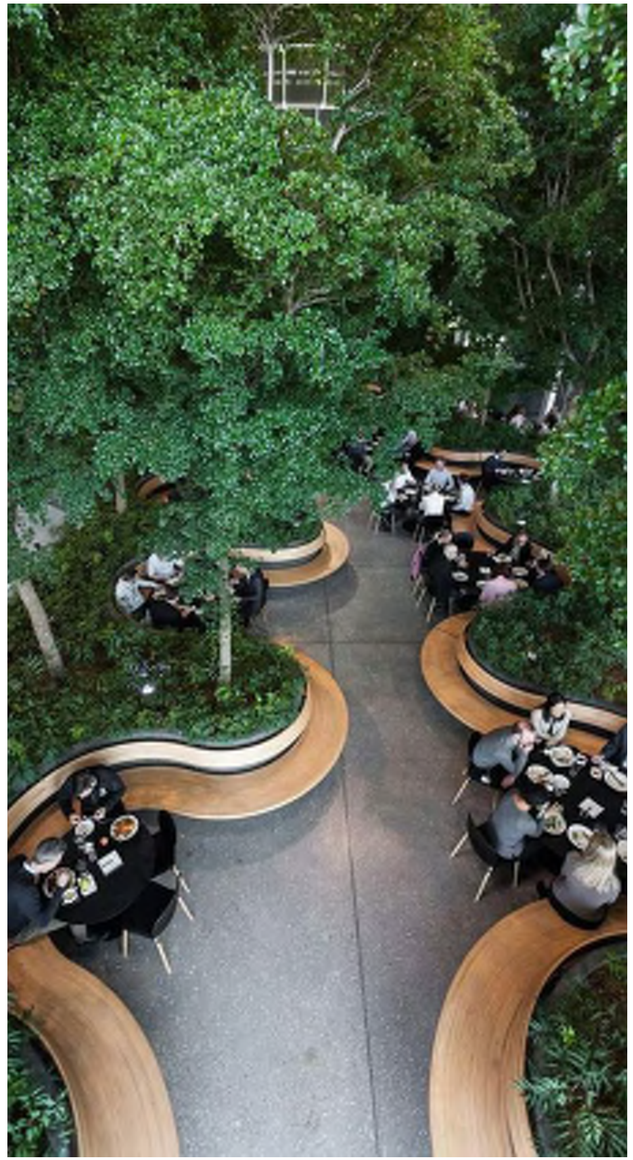
POCKET PARK

BY SUBDIVIDING OUR BLOCK INTO THREE PARCELS, WE ARE ABLE TO STITCH OUR SITE INTO THE UNIQUE URBAN FABRIC OF DOWNTOWN. THE BUILDINGS ON CONGRESS STREET WILL BE SEPARATED BY A POCKET PARK WHICH WILL PROVIDE STREET WALL RELIEF AND PUBLIC GREEN SPACE. THE INTENT FOR THIS SPACE IS TO PROVIDE THE RESIDENTS AND MEMBERS OF THE PUBLIC AN OPPORTUNITY TO ENJOY A SANCTUARY SPACE OFF OF A BUSY STREET.

DESIGN CONCEPT



PRECEDENT











POCKET PARK DESIGN - CURVILINEAR SOFT-SCAPE OPTION

THE POCKET PARK IS POSITIONED BETWEEN THE HOTEL VALET DROP-OFF AND CONDO LOBBY WHICH WILL HELP ACTIVATE, AND KEEP EYES ON THE SPACE. THE POSITION OF THE SPACE LENDS ITSELF TO BE ENJOYED WHILE BEING VIEWED AND OCCUPIED. THE PARK WILL INCLUDE A WATER FEATURE TO GENERATE AMBIENT NOISE TO DEADEN THE SOUND OF THE STREET AND VALET AREA AS WELL AS RAISED PLANTERS THAT WILL PROVIDE BENCH SEATING AND SOIL DEPTH FOR A BOSQUE OF TREES. THE GROUND SURFACE WILL INCLUDE A VARIETY OF PAVING PATTERNS TO DEFINE THE SPACES. THE PARK ALSO PROVIDES THE OPPORTUNITY TO INCLUDE PUBLIC ART IN THE FORM OF MURALS OR SCULPTURE.







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POCKET PARK DESIGN - LINEAR HARD-SCAPE OPTION

ANOTHER APPROACH FOR THE POCKET PARK IS TO USE TREE GRATES INSTEAD OF RAISED PLANTERS TO HOST THE TREES. THIS ALLOWS FOR A MORE CONTINUOUS GROUND PLANE THAT PROVIDES OPPORTUNITIES FOR MORE FLEXIBLE SEATING. THE VEHICLE ZONES AND PEDESTRIAN ZONES ARE DEFINED BY PAVING PATTERNS AND BOLLARDS. THIS DESIGN STILL PROVIDES OPPORTUNITIES FOR PUBLIC ART, WATER FEATURES, AND SEATING AREAS FOR ALL TO ENJOY.







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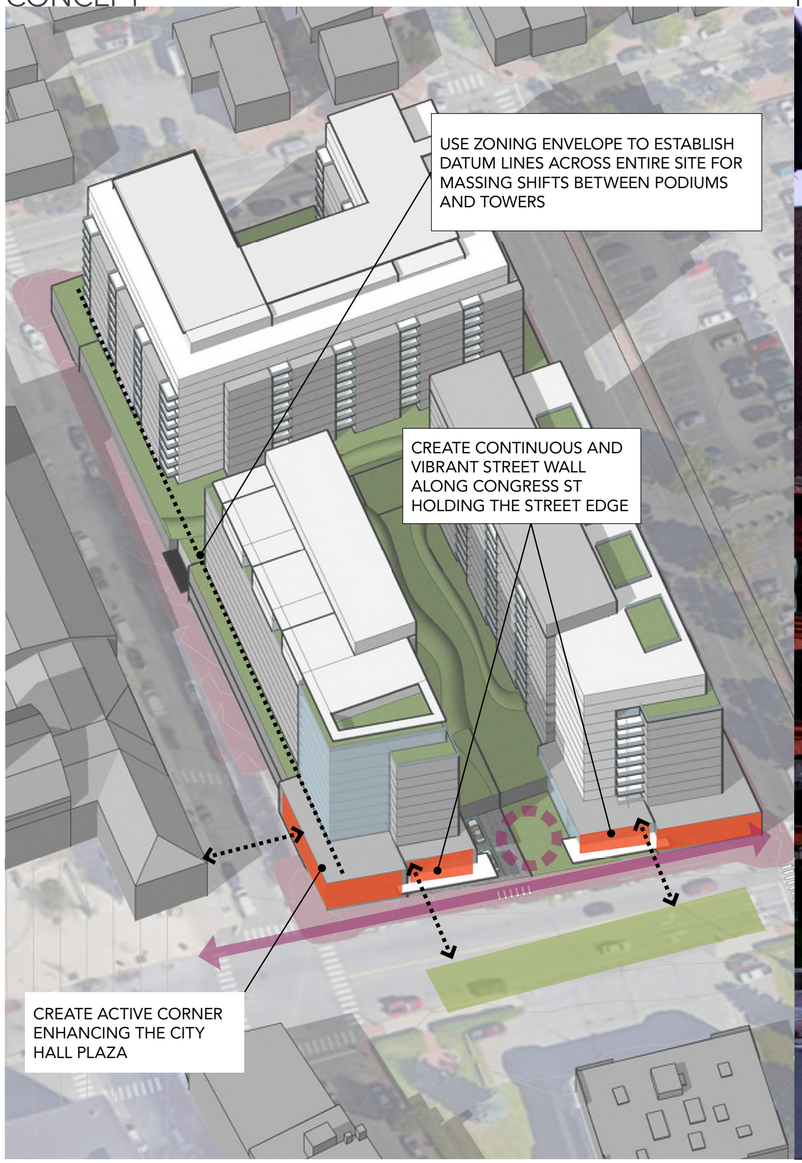
WELL SCALED ACTIVE STREET EDGE

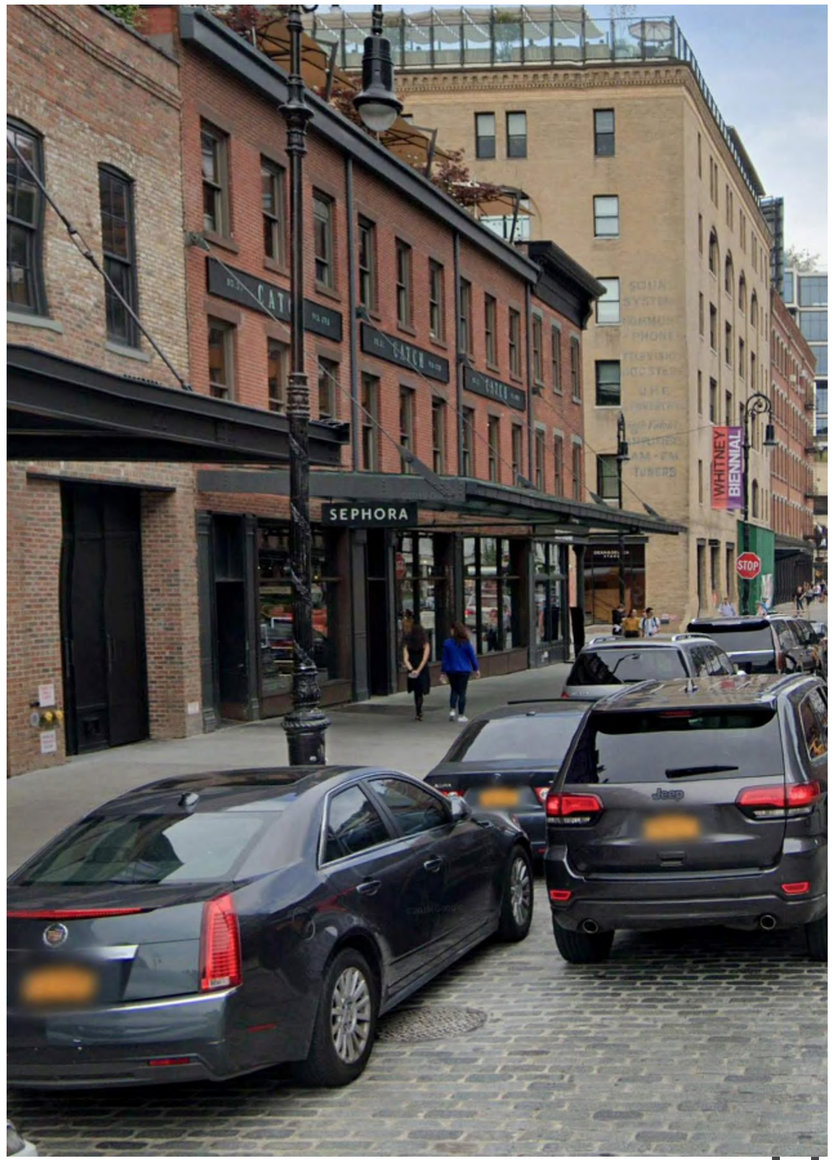
THIS SITE MUST CONNECT INTO THE URBAN FABRIC OF DOWNTOWN PORTLAND AND EXTEND THE NATURE OF OF CONGRESS STREET TO THE EAST. IT WILL DO SO BY MAINTAINING AN ACTIVE AND WELL-SCALED STREET EDGE. WE POSITIONED THE BUILDINGS RIGHT AT THE PROPERTY LINE AND PROVIDED ACTIVE PROGRAM ON THE GROUND FLOOR TO GENERATE POROSITY AND ACTIVITY. BY BREAKING DOWN THE SCALE OF THE BUILDINGS INTO SMALLER PIECES (BOTH VERTIALLY AND HORIZONTALLY) WE WILL CONTINUE THE LANGUAGE OF THE SURROUNDING AREA AND STITCH THIS SITE INTO THE CONTEXT.

CONCEPT



PRECEDENT





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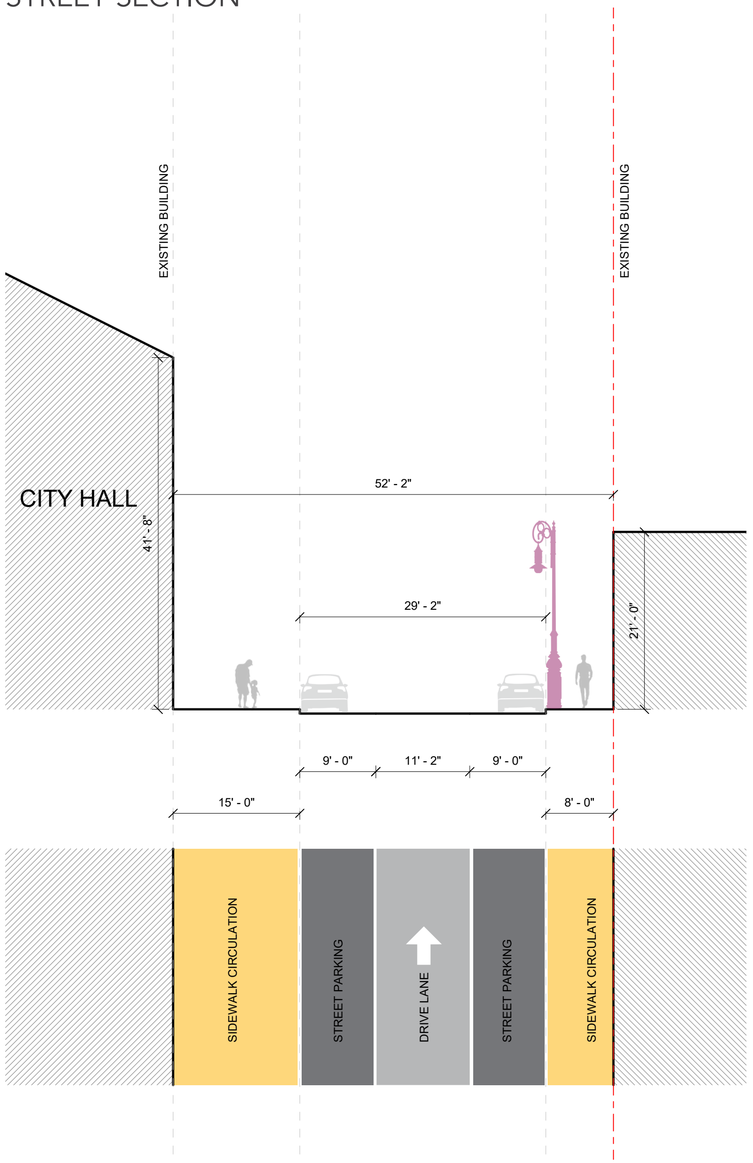
MYRTLE STREET - EXISTING

THE CURRENT NATURE OF MYRTLE STREET IS VERY NARROW AND UNINVITING. THE EXISTING BUILDING SITS RIGHT ON THE PROPERTY LINE, SQUEEZING ALL PEDESTRIAN TRAFFIC INTO AN 8' SIDEWALK THAT IS TOO TIGHT TO INCLUDE STREET TREES OR PLANTING.

STREET SECTION



EXISTING CONDITIONS PHOTO



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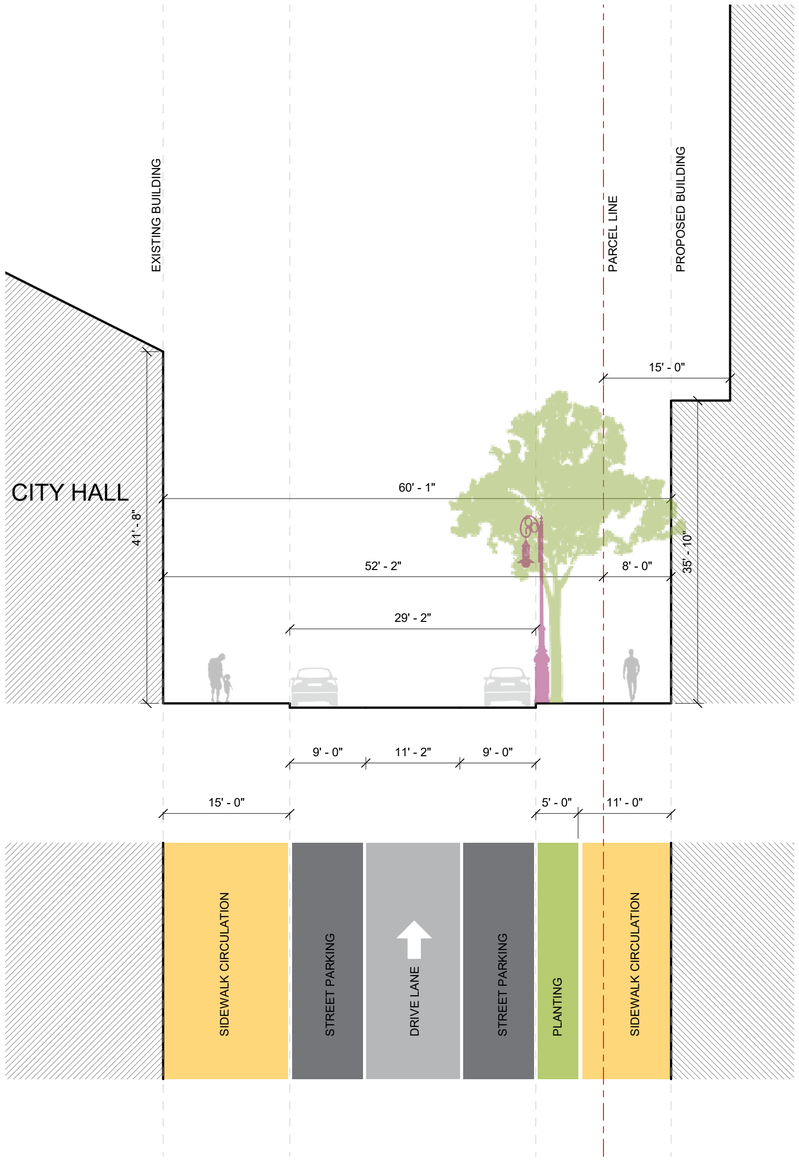
MYRTLE STREET - PROPOSED

THE PROPOSED CONDITION OF MYRTLE STREET WILL ENHANCE THE PEDESTRIAN EXPERIENCE ALONG THE SIDEWALK. WE PROPOSE TO ALIGN THE BUILDING TO BE PARALLEL TO PEARL STREET, THUS CREATING A WIDER SIDEWALK ON MYRTLE BY AN AVERAGE OF 3'. THIS ADDITIONAL SIDEWALK WIDTH ALLOWS ROOM FOR STREET TREES IN RAISED PLANTER BEDS AS WELL AS OTHER VEGETATION. THE GARAGE FACADE PROVIDES OPPORTUNITIES FOR MURALS, LIGHTING DESIGN, AND UNIQUE MATERIALS FOR SCREENING. ADDITIONALLY, THIS FACADE WILL BE ACTIVATED WITH THE INTRODUCTION OF THE BIKE STORAGE ROOM AT THE CENTER OF THE BLOCK.

STREET SECTION



CONCEPT RENDERING



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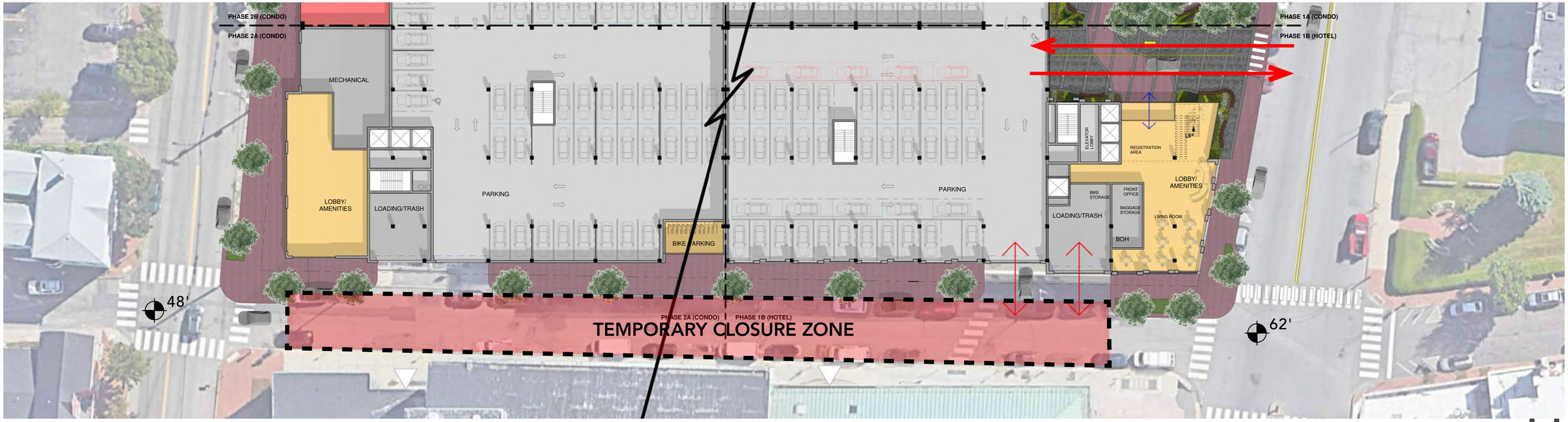
MYRTLE STREET - CLOSURE

WHEN MYRTLE STREET IS CLOSED FOR EVENTS (SUCH AS GRADUATION), THE PEDESTRIAN EXPERIENCE CAN BE FURTHER ENHANCED AS PEOPLE SPILL OUT OF THE AUDITORIUM. HOWEVER, THE STREET CLOSURE WILL CREATE CHALLENGES FOR HOTEL OPERATIONS. WHEN THE GARAGE ENTRY ON MYRTLE IS INACCESSIBLE, THERE WILL BE A NEED TO CREATE A TEMPORARY TWO-WAY TRAFFIC PATTERN AT THE VALET DROP-OFF ZONE. THE HOTEL WILL ALSO NEED TO COORDINATE LOADING OPERATIONS TO NOT CONFLICT WITH STREET CLOSURES.





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AMENITY DECK

ON THE "ROOF" OF THE GARAGE WILL BE A SHARED AMENITY TERRACE FOR EACH OF THE BUILDING USERS TO ENJOY. THE HOTEL PROGRAM ON THIS LEVEL WILL CONSIST OF LARGE MEETING/CONFERENCE SPACE, FITNESS CENTER, AND RESTAURANT THAT ALL CAN SPILL OUT ONTO THE ROOF DECK. ADDITIONALLY, EACH OF THE CONDO BUILDING UNITS WILL HAVE PRIVATE TERRACE SPACE AS WELL AS SHARED TERRACE SPACE THAT WILL BE ACCESSED THROUGH THE AMENITY ROOMS RESPECTIVELY. THE SHARED OUTDOOR SPACE WILL HAVE AREAS FOR GRILLING, WALKING PATHS, AND PET RELIEF ZONES.







VIEW FROM CONGRESS & MYRTLE

THE PROPOSED HOTEL AT THE CORNER OF CONGRESS AND MYRTLE STREETS, IS A 12 STORY BUILDING CONSISTING OF 152 HOTEL KEYS, 9 RESIDENTIAL CONDOS AND RESTAURANT SPACE ON THE LEVEL 2 AND LEVEL 12. THE BUILDING MASSING COMMENCES AT GRADE WITH A 2 STORY PODIUM, THAT HOLDS THE STREET EDGE ALONG MYRTLE AND CONGRESS, PROVIDING AN ARCHITECTURAL NOD TO ITS CONTEXT OF THE ADJACENT CITY HALL, AND ANCHORING THE STRUCTURE WITH MORE TRADITIONAL MATERIALITY AND PROPORTIONS.
THE GROUND LEVEL IS COMPRISED OF THE HOTEL LOBBY AND VALET DROP-OFF WHICH ACTIVATES THE SHARED POCKET PARK BETWEEN THE HOTEL AND THE CONDO BUILDING. THE TRANSPARENT FACADE WILL PROVIDE EYES ON THE SPACE AND PEDESTRIAN ACCESS POINTS INTO THE LOBBY. LEVEL 2 WILL HOST THE FITNESS CENTER, MAIN RESTAURANT SPACE, AND CONFERENCE ROOMS THAT ALL HAVE ACCESS OUT TO THE SHARED ROOF DECK ABOVE THE GARAGE. THE NEXT 8 LEVELS WILL COMPRISE OF THE 152 HOTEL ROOMS. ABOVE THAT, THE MASS STEPS BACK SLIGHTLY TO PROVIDE BALCONY SPACE FOR THE 7 RESIDENTIAL CONDO UNITS ON LEVEL 11. TWO MORE RESIDENTIAL UNITS WILL SHARE THE PENTHOUSE LEVEL WITH ANOTHER RESTAURANT SPACE AND PRIVATE AMENITY LOUNGE. THE ROOFTOP WILL HOST A MECHANICAL PENTHOUSE SPACE AS WELL AS A TWO PRIVATE ROOF DECKS AND ONE PUBLIC ROOF DECK FOR ALL BUILDING USERS TO ENJOY.



AERIAL VIEW



GROUND VIEW

cbt

VIEW FROM CONGRESS & PEARL

OUR GOAL FOR THE CONDO BUILDING ON THE CORNER OF PEARL AND CONGRESS IS TO CREATE A CONTEXTUAL, YET CONTEMPORARY EXTENSION OF THE CONGRESS STREET ARTERY. BY USING THE ZONING ENVELOPE TO DEFINE THE MAJOR MASSING MOVES, WE HOPE TO DRAW UPON THE EXISTING DATUM LINES ALONG THIS IMPORTANT STREET. THE GROUND FLOOR IS COMPRISED OF THE BUILDING LOBBY THAT FACES THE SHARED POCKET PARK AS WELL AS A RETAIL SPACE TO HOLD THE CORNER AND PROVIDE SOME ACTIVITY ON BOTH CONGRESS AND PEARL STREET. ABOVE THIS WILL BE THE BUILDING AMENITY LOUNGE THAT CAN SPILL OUT ONTO THE SHARED ROOFDECK ABOVE THE GARAGE. MOVING DOWN PEARL STREET, THE STREET WALL STEPS DOWN TO THE BASE PODIUM HEIGHT. THIS ALLOWS US TO PROVIDE LARGE PRIVATE PATIOS FOR THOSE UNITS ON LEVEL 2. ABOVE THAT, EACH UNIT WILL HAVE A PRIVATE BALCONY SPACE THAT IS SET INTO THE FORM OF THE BUILDING. THAT IS, UNTIL LEVEL 12 WHEN THE BUILDING MASS STEPS BACK TO HELP SCALE THE TOWER AS WELL AS PROVIDE LARGER TERRACES FOR THE PENTHOUSE UNITS. THE ROOFTOP WILL HOST A MECHANICAL PENTHOUSE AS WELL AS PRIVATE PATIOS FOR THE UNITS ON THE TOP FLOOR AND ONE PUBLIC TERRACE FOR ALL BUILDING TENANTS TO ENJOY THE SWEEPING VIEWS OVER DOWNTOWN PORTLAND TO THE WATER. THE DESIGN OF THE INDIVIDUAL WINDOW PUNCHES IS REPLICATIVE OF THE MASONRY BUILDING TYPOLOGY ACROSS DOWNTOWN PORTLAND. THE SECONDARY MASSING MOVES HELP BREAK DOWN THE SCALE OF THE BUILDING. THE INTERLOCKING FORMS ALLOW FOR CLEAR MATERIAL TRANSITIONS WHILE SIMPLE PLANAR SHIFTS PROVIDE AN OPPORTUNITY FOR INTEGRATED BALCONIES. THIS BUILDING WILL BE A HIGHLY VISIBLE ADDITION TO THE DIVERSE SKYLINE, SO IT IS IMPORTANT THAT IT SEAMLESSLY STITCHES INTO THE EXISTING, AND EVOLVING, FABRIC OF DOWNTOWN PORTLAND.



AERIAL VIEW



GROUND VIEW

cbt

VIEW FROM CUMBERLAND AND PEARL

THE CONDO BUILDING IN PHASE 2 WILL ACTIVATE CUMBERLAND AVE WHILE ADDRESSING THE SCALE OF THE NEIGHBORING CONTEXT. BY USING THE ZONING ENVELOPE TO DEFINE THE MAJOR MASSING MOVES, THE SCALE OF THE BUILDING IS BROKEN DOWN INTO SMALLER COMPONENTS THAT RESPOND TO THAT CONTEXT. THE PODIUM WILL TIE INTO THE PODIUM OF THE BUILDINGS IN PHASE 1, THUS PROVIDING A CONTINUOUS PARKING STRUCTURE AND SHARED ROOF DECK SPACE. THE GARAGE WILL BE LINED WITH RETAIL AND BUILDING LOBBY ON THE GROUND FLOOR WITH UNITS ON THE LEVEL ABOVE FACING CUMBERLAND AVE. ABOVE THE PODIUM, THE C-SHAPED TOWER ADHERES TO THE 15' SETBACK ON ALL SIDES WHICH ALLOWS THE OPPORTUNITY TO PROVIDE PRIVATE TERRACES FOR THE UNITS DIRECTLY ABOVE THE PODIUM AS WELL AS A LARGE PUBLIC TERRACE WITHIN THE "C" TO BE ACCESSED THROUGH THE AMENITY/FITNESS AREA. THE C-SHAPE TOWER MINIMIZES THE MASS OF THE BUILDING BY REDUCING THE AMOUNT OF BUILDING ALONG THE STREET. SECONDARY MASSING MOVES FURTHER BREAK DOWN THE SCALE AND STITCH TOGETHER THE PODIUM AND THE TOWER. THE STEPS IN THE PODIUM FAÇADE ALONG CUMBERLAND AVE ALIGN WITH THE C-SHAPED MASS ABOVE. BY ALIGNING THE STEPS, WE CREATE THE EFFECT THAT THREE SEPARATE ELEMENTS COMPRISE THE OVERALL BUILDING, WHICH RELATES TO THE SMALLER SCALE OF THE BUILDINGS ACROSS THE STREET. SMALLER PLANAR SHIFTS ALLOW FOR SMOOTH MATERIAL TRANSITIONS AND INTEGRATED BALCONIES THAT REDUCE THE PERCEPTION OF THE TOWER'S HEIGHT WHILE PROVIDING SWEEPING WATER VIEWS. THIS BUILDING WILL HELP EASE THE TRANSITION BETWEEN THE DENSITY OF CONGRESS STREET WITH THE RESIDENTIAL SCALE NORTHWEST OF CUMBERLAND AVE.



AERIAL VIEW



GROUND VIEW

cbt

VIEW FROM CUMBERLAND AND MYRTLE



AERIAL VIEW



GROUND VIEW

cbt

Questions?

Next Steps

Master Development Plan

Planning Board Workshop (June 14)

Planning Board Public Hearing (TBD Summer 2022)

Level 3 Site Plan Review(s)

Summer/Fall 2022

Construction 2023

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Dan Riley, PE
Sebago Technics, Inc.
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driley@sebagotechnics.com

Thank You

March 25, 2022
19371

City of Portland
Office of Planning and Urban Development
Congress Street
Portland, ME 04101

Pre-application, Master Development Plan
385 Congress Street

On Behalf of 385 Congress Street LLC, we pleased to submit the enclosed application for a Master Development Plan for the redevelopment of 385 Congress Street.

The subject site occupies 2.26 acres comprised of the city block bounded by Congress Street, Myrtle Street, Cumberland Avenue and Pearl Street. The site is currently fully developed with buildings previously housing the Portland Press Herald's printing operations which ceased operations at this location many years ago. The site is currently used as a private parking facility.

In 2017, the subject property was purchased by Reger Dasco Properties (dba 385 Congress Street LLC a Maine corporation) who will be the applicant for the Master Development Plan to redevelop and subdivide the site to support a hotel and condominium development. The massing of the site is envisioned to include three towers rising from a shared two-story "pedestal" incorporating structured parking and street level hotel and commercial uses as well as condominium entrances. The top of this shared pedestal will be developed as low-rooftop outdoor common areas, between the towers for use by the condominium and hotel residents and guests. This design creates no-build zones within the development to enhance the site's permeability and reduces the visual scale and mass of the towers. The building is aligned along the street line at Pearl Street and Congress Street and set back from the street line along Myrtle Street and Cumberland Avenue to allow for the widening of the Myrtle Street sidewalk to accommodate street trees and an expanded public realm. A public pocket park space is proposed adjacent to the valet entrance in the center of the site on Congress Street.

The proposed development program includes a 152-room full-service hotel with nine (9) condominium units on the corner of Myrtle and Congress Street. The applicant has entered an agreement with The Fathom Companies LLC, (dba Fathom Congress, LLC) who will develop and operate the hotel component.

The proposed condominium units will be located in a 110-unit condominium tower located at the corner of Pearl Street and Congress Street and a 193-unit tower along Cumberland Avenue.

The project includes two levels of structured parking which will support all three developments on the site. The garage will be accessed by five entrances; three at-grade with Congress Street and two at-grade with Cumberland Avenue. The entrances at the Congress Street level include a one-way (enter-only)

access on Congress Street and two-way entrances along Pearl and Myrtle Streets. The entrances to the Cumberland Avenue parking level includes two-way entrances on Myrtle Street and Pearl Street.

A valet drop-off area is entirely on site, accessed from a mid-block curb cut which replaces/relocates an existing two-way parking lot entrance near the center of the site's frontage on Congress Street. All hotel traffic will be valet parked, condominium owners and guests may valet park or self-park. This one-way entrance is flanked and integrated with a proposed public "pocket park" space to enhance the pedestrian experience along Congress Street.

Phases

Enclosed within the application are diagrammatic plans outlining the phases of the project which account for several potential build out sequences.

We anticipate that the project will be developed in up to four (4) phases. Phase 1A and Phase 1B include the condominium and hotel on Lot 1 and Lot 2 along Congress Street. Phase 2A and 2B include the condominiums on Lot 3 along Cumberland Avenue. Each phase will include the structured parking below the tower, with the remaining property continued as surface parking. The proposed plan includes temporary landscaping along the edges of the surface parking.

- Phase 1A and 1B will include the Hotel (Lot 1) and Condominium (Lot 2) along Congress Street including the structured parking below these towers and the street improvements on their frontages. When phase 1 is complete the remaining land along Cumberland Avenue will surface parking.

  The construction of the hotel and Phase 1 condominiums may be completed on separate schedules or concurrently. Phasing diagrams 1A and 1B present alternate scenarios for construction sequences.

- Phase 2 will include the buildout of Lot 3 along Cumberland Avenue.

  Phase 2A will include all of the remaining structured parking on the site, and the construction of a condominium tower at Cumberland Avenue and Myrtle Street.

  Phase 2B will include the construction of a condominium tower at the corner of Cumberland Avenue and Pearl Street.

It is the goal of the development team to move from one phase to the next with a minimal time between phases. However, circumstances and market conditions can affect the timing of construction. The applicant is requesting that the Master Development Plan approval allow for the undeveloped areas of the site remain a surface parking lot, with minimal improvements for a duration of up to 24 months from the time one phase is complete (Certificate of Occupancy) until a site plan application is submitted for an adjacent parcel or phase. If the applicant does not submit a complete site plan application for the next phase of work within the 24 month "grace period", then the applicant will make improvements to the remaining parcel consistent with the design standards for a more permanent surface parking lot.

As the phasing relates to the pocket park along Congress Street, the applicant will install and maintain a temporary landscaped park area on Lot 2, until such time as the Lot 2 project is constructed. At that time the final construction of the park, consistent with this application can be constructed. The design of any temporary park landscaping and improvements (if required) will be addressed in the Level 3 Site Plan application for the first phase of the project. The final accepted version of the pocket park cannot be constructed until the building on Lot 2 at the corner of Pearl Street and Congress Street is constructed. This phase of the project will include foundations and underground garage construction directly below the park area. Any interim park will need to be removed to compete this construction.

The phasing strategy proposed with this plan is consistent with another large project (Hobson's Landing) that is underway along Commercial Street. We feel that the above approach is sound and has proven successful given the applicants experience.

Valet Parking

The enclosed plans include entirely on-site valet parking for the Hotel accessed from Congress Street. Myrtle Street is routinely closed by the City when there are functions at the Merrill Auditorium. This condition eliminates Myrtle Street as a reliable location for a valet operation and limits the site's usable frontage for this purpose to Congress Street.

To address this condition, the proposed design includes relocating an existing curb cut onto the property to the center of the block. This curb cut will be a one-way enter only access to the site for valet parking. The on-site valet area includes a dedicated drop off lane and a valet controlled through lane. This will allow for up to 8 vehicles in the valet area without encroachment onto the public sidewalk or Congress Street. A 20' wide curb cut is proposed to allow for the two-lane (entering) configuration necessary for valet controlled on site "double parking" to accommodate peak arrival times.

The design of the valet area incorporate pavers and surface materials to emphasize the area as a shared use plaza for vehicles and pedestrians, not a vehicle dominated area. The entrance plaza design will be integrated with the pocket park design, sidewalk and streetscape providing a clear and attractive arrival experience and presence for the face of the building on Congress Street. The sidewalk materials will continue across the driveway with grades that reinforce this sidewalk crossing as a pedestrian dominant area.

The adjacent park design extends the plaza hardscape materials into the park spaces and includes landscaping, bench seating with opportunities for alternative furnishing such as movable tables or chairs to create an inviting space for the public. The space is further described in the architectural plans and renderings included in our application.

Myrtle Street Access

The building includes two levels of parking, one each at roughly the elevation of Congress Street and Cumberland Street. Each level includes its own entrance from Myrtle Street. The upper-level entrance near Congress Street will include a hotel garage entrance/exit and service bay; the lower entrance near Cumberland Avenue will access the condominium parking and provide for loading and trash removal for the Phase 2A and 2B condominiums.

The Master Plan application requests that future closures of Myrtle Street, for events at Merrill Auditorium, allow access to these curbs cut locations.

Pearl Street Design

During the preapplication process the Public Works department noted that with a 32'-33' curb to curb width, Pearl Street can support on-street parking along the project frontage, if the left turn lane striping into the Top of the Old Port parking lot is removed. Public Works considers this turn lane striping to be superfluous.

In response, the plan proposes to re-stripe Pearl Street with 12' travel lanes in each direction and reconstruct the sidewalk on the south (project) side of the street to maintain the existing street pavement width. This restriping will eliminate the left turn lane and allow for up to 11 new public parking spaces on Pearl Street. This proposed plan, including the relocated entrance on Congress Street and the closing of driveway curb cuts on Cumberland Avenue results in a net increase in public on street parking on the streets surrounding the site and includes new street tree plantings on all of the project's frontages creating a street experience consistent with Portland's downtown urban fabric.

The curb line adjacent to the building on Pearl Street will be reconstructed maintaining its current location, providing an 8'9" wide sidewalk. Curb extensions are proposed at the street corners to create space for landscaping, enhanced crosswalks, and traffic signal equipment, specifically the strain pole and controller box at Congress Street that is located immediately adjacent to the right of way line will need to be relocated to construct the Lot 2 (Phase 1B) building foundations.

Providing on street parking on Pearl Street necessitates the installation of street trees in standard grates, similar to the condition on the north side of Pearl Street and on the block to the west. The sidewalk width, with on street parking is not sufficient for raised, curbed tree wells that will be provided on the other street frontages. We have discussed this installation option with the City arborist who we understand is supportive assuming that salt application is minimized. We note that the plantings located closest to the building's pedestrian entrances (where winter salt application is highest) remain within raised curb planters, it is only the mid-block areas on Pearl Street where tree grates are proposed.

Sincerely,

SEBAGO TECHNICS, INC.

Daniel L. Riley, PE
Vice President, Engineering

DLR/AT
Enc.

CITY OF PORTLAND
Planning & Urban Development Department

MASTER DEVELOPMENT PLAN
SUBMISSION CHECKLIST
GENERAL DOCUMENT AND DRAWINGS CHECKLIST

Please submit each document as a separate PDF file.
Please confirm by electronically checking the boxes to the left.

** PLEASE FILL OUT AND UPLOAD SEPARATELY THE ZONING ASSESSMENT TABLE AND WAIVER TABLE AS NOTED BELOW **

GENERAL APPLICATION DOCUMENTS		
Yes ✔	NA	**Project Description** • Cover letter with detailed project description
Yes ✔	NA	**Completed Checklist – Master Development Plan** (this document)
Yes ✔	NA	**Evidence of Right, Title and Interest** • Deeds, leases, or purchase and sales agreements
Yes	NA ✔	**Evidence of State or Federal Approvals, if applicable** • Permits or letters of non-jurisdiction, if applicable
Yes ✔	NA	**Zoning Assessment** (see Zoning Assessment Table) • Table listing required and proposed uses and dimensional standards
Yes ✔	NA	**Assessment of Compliance with Master Development Plan Standards (see Article 14.7)**
Yes	NA ✔	**Existing and/or Proposed Easements or Covenants, if 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

MASTER DEVELOPMENT
STANDARDS AND SUBMISSION CHECKLIST

Provide assessment of compliance with master development plan standards and include supplemental documentation below, as applicable. Please submit each document as a separate PDF file.

NEIGHBORHOOD CONTEXT	
Yes NA ✔	**Neighborhood Context Statement** • Provide a statement and/or plan as to the general impact of the proposed Master Development Plan upon the area, indicating how the Master Development Plan relates to surrounding properties and what measures will be taken to create appropriate transitions and access from the subject property to abutting public properties (i.e. parks, waterfront, etc.) or other neighboring tracts (if applicable)
SITE ANALYSIS	
Yes NA ✔	**Natural Features and Open Space** • An analysis of existing and/or adjacent natural waterways, wetlands, floodplains topography, soil conditions and other natural features, as applicable. • Evidence demonstrating the provision of sufficient onsite open space to serve resident needs throughout all project phases, including interim spaces to be temporarily programmed as open space in advance of buildout of future phases
Yes NA ✔	**View and Historic Features** • A study of the designated view corridors, historic resources, and archaeological resources associated with the site.
Yes NA ✔	**Public Safety** • A summary of the public safety services needed to support the Master Development Plan.
Yes NA ✔	**School Impacts** • An analysis of the anticipated impacts on the public school system to support the Master Development Plan
Yes NA ✔	**Traffic Analysis** • A traffic impact analysis and recommendations prepared by a registered professional engineer, including current traffic counts for streets surrounding the project, analysis of existing capacity, projections of the amount of traffic that will be generated by the project, and the ability of the street system to absorb the traffic. (Note: In cases when a Master Development Plan is subject to a Traffic Movement Permit, those submission requirements shall supersede.)✔
Yes NA ✔	**Utilities** • A utility capacity report, including recommendations for needed improvements, prepared by a registered professional engineer, including an inventory of existing utilities (storm sewers and drains, sanitary sewers, electrical lines, fire alarm

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MAINE REAL ESTATE TAX PAID

QUITCLAIM DEED WITH COVENANT
(Maine Statutory Short Form)

METRO MEDIA PROPERTIES LLC, a Maine limited liability company with a mailing address of 201 Old Country Road, Suite 105, Melville, NY 11747 ("Grantor"), for consideration paid, grants to **385 CONGRESS LLC,** a Maine limited liability company with mailing address of 2730 Transit Road, West Seneca, NY 14224 ("Grantee"), with QUITCLAIM COVENANT, a certain lot or parcel of land with the buildings and improvements thereon located in the City of Portland, County of Cumberland and State of Maine, described as follows:

A certain lot or parcel of land in Portland, County of Cumberland and State of Maine bounded and described generally as follows:

South: Congress Street;
East: Pearl Street;
North: Cumberland Avenue; and
West: Myrtle Street

This parcel of land is more particularly described as follows:

Beginning at the intersection of the Northerly sideline of Congress Street with the Easterly sideline of Myrtle Street;

Thence: N72° 54' E along the Northerly sideline of Congress Street approximately Two Hundred Forty Feet (240') to the intersection of the Northerly sideline of Congress Street with a Westerly sideline of Pearl Street;

Thence: N27° 21' W along the Westerly sideline of Pearl Street approximately Four Hundred Fifty Five Feet (455') to the intersection of the Westerly sideline of Pearl Street with a Southerly sideline of Cumberland Avenue;

Thence: Westerly along the Southerly sideline of Cumberland Avenue approximately One Hundred Seventy Feet (170') to a point;

Thence: Northerly to point A (point A being located at the intersection of the line of this call with the line of the next call extended N 67° 11' E);

Thence S67° 11' W approximately Sixty Feet (60') to the intersection of the Southerly sideline of Cumberland Avenue with the Easterly sideline of Myrtle Street;

Thence S26° 22' E along the Easterly sideline of Myrtle Street approximately Four Hundred Ten Feet (410') to the intersection of the Easterly sideline of Myrtle Street with the Northerly sideline of Congress Street and the point of beginning.

Also conveying the following parcel of land:

A certain lot or parcel of land with the buildings thereon situated in the City of Portland, County of Cumberland and State of Maine, bounded and described generally as follows:

Beginning at a drill hole reset marking the intersection of the northwesterly sideline of Congress Street and the northeasterly sideline of Myrtle Street;

Thence N 55°-45'-03" E, 240.31 feet by and along the northwesterly sideline of said Congress Street to a drill hole set marking the northwesterly sideline of said Congress Street and the southwesterly sideline of Pearl Street;

Thence N 44°-35'-56" W, 433.81 feet by and along the southwesterly sideline of said Pearl Street to a point at the intersection of the southwesterly sideline of Pearl Street with the southeasterly sideline of Cumberland Avenue. Said point being witnessed by a granite right-of-way monument.

Thence S 50°-25'-20" W, 230.34 feet by and along the southeasterly sideline of said Cumberland Avenue to a point at the intersection of said southeasterly sideline of Cumberland Avenue with said northwesterly sideline of Myrtle Street. Said point being witnessed by a granite right-of-way monument.

Thence S 43°-37'-52" E, 410.86 feet by and along the northeasterly sideline of said Myrtle Street to the Point of Beginning, containing 2.26 acres more or less.

Also releasing to Grantee, Grantor's right, title and interest in a certain underground tunnel that runs from the subject premises to 390 Congress Street, by virtue of a license granted pursuant to approval of the City of Portland Inspector of Buildings dated May 14, 1965.

Being the same premises described in a Quitclaim Deed with Covenant from MTM Portland Properties, LLC to Metro Media Properties, LLC dated July 10, 2009 and recorded in the Cumberland County Registry of Deeds at Book 27079, Page 160.

IN WITNESS WHEREOF, Metro Media Properties LLC has caused this instrument to be signed and sealed in its company name by George Cacoulidis, its CEO, thereunto duly authorized, this 20th day of October, 2017.

WITNESS:

Tom Hanson

METRO MEDIA PROPERTIES LLC,
a Maine limited liability company

By: _____
George Cacoulidis
Title: CEO

STATE OF MAINE
COUNTY OF CUMBERLAND, ss. October 20, 2017

Then personally appeared the above named George Cacoulidis, CEO of Metro Media Properties LLC, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of Metro Media Properties LLC.

Before me,

_____
Attorney at Law ~~Notary Public~~
Printed Name: Nicholas J. Marrill

Received
Recorded Register of Deeds
Oct 20,2017 12:19:14P
Cumberland County
Nancy A. Lane

PARID: 027 D001001 **385 CONGRESS ST**
385 CONGRESS LLC

Parcel

Parcel ID	027 D001001
Property Location	385 CONGRESS ST
Unit	
Living Unit	1
Land Use Code	32 - WAREHOUSE & STORAGE
	Verify legal use with Inspections Division
Zoning	B3
Land Area (acreage)	2.2606
Land Area (square footage)	98472
Notes	27-D-1 CONGRESS ST 371-387 CUMBERLAND AVE 240-254 MYRTLE ST 1-35 PEARL ST 98470 SF
Utilities	1 - ALL PUBLIC - -

Owners

Owner	385 CONGRESS LLC
Address	2730 TRANSIT RD
City, State, Zip	WEST SENECA NY 14224
Deed Date	10/20/2017
Book	34401
Page	214

AGREEMENT OF PURCHASE AND SALE

between

FATHOM DEVELOPMENT, LLC,

as Buyer,

and

385 CONGRESS LLC,

as Seller

December 1, 2021

385 Congress Street
Portland, Maine 04101

AGREEMENT OF PURCHASE AND SALE

BY THIS AGREEMENT OF PURCHASE AND SALE (the "Agreement") entered into this 1st day of December, 2021 ("Effective Date"), 385 CONGRESS LLC, a Maine limited liability company (hereinafter referred to as "Seller"), and FATHOM DEVELOPMENT, LLC a Maine limited liability company (hereinafter referred to as "Buyer"), hereby agree as follows:

ARTICLE I
Terms and Definitions

Section 1.1. In addition to the other terms herein defined, the following terms shall have the meanings set forth in this Article I, unless the context otherwise requires:

Additional Deposit. Defined in Section 3.1.

Approvals. Defined in Section 6.5.

Approvals Period. Defined in Section 6.4.

Buyer's Conditions Precedent. Defined in Section 6.1.

Buyer's Knowledge. Means the knowledge of James Brady based upon his historical knowledge of the Real Property and assuming a commercially reasonable level of inquiry.

Buyer Project Information. Defined in Section 6.5.4.

Buyer's Termination Notice. Defined in Section 6.2.2.

Cash Balance. Defined in Section 5.2.2.

Closing. The consummation of the purchase and sale of the Property pursuant to this Agreement.

Closing Date. Defined in Section 6.6.

Commitments. Defined in Section 14.3.

Condominium Project. Defined in Section 6.5.4.

Consideration. Defined in Section 5.1.

Construction License. Defined in Section 14.2.

Cross Easement Agreement. Defined in Section 14.3.

Deed. Defined in Section 6.1.1.

Deposit. Defined in Section 3.1.

Demolition is defined in Section 6.1.10.

Due Diligence Period. Defined in Section 6.4.12.

ESA. Defined in Section 6.4.4.

Escrow Agent. Defined in Section 3.1.

Execution Date. The date of this Agreement as hereinabove set forth.

Facilities Program. Means and refers to the facilities program set forth on Exhibit C.

Hazardous Materials. Mean any pollutants, contaminants or hazardous substances (as such terms are defined under CERCLA), pesticides (as such term is defined under the Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. §§ 136 et seq.), solid wastes and hazardous wastes (as such terms are defined under the Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901 et seq.), chemicals, other hazardous, radioactive or toxic materials, oil, petroleum and petroleum products (and fractions thereof), asbestos and asbestos-containing materials, polychlorinated biphenels ("PCBs") or PCB-containing materials, or any other material (or article containing such material) listed or subject to regulation under any law, statute, rule, regulation, order, Permit, or directive due to its potential, directly or indirectly, to harm the environment or the health of humans or other living beings.

Improvements. All improvements constructed on the Real Property.

Initial Deposit. Defined in Section 3.1.

Mandatory Cure Items. Defined in Section 6.3.

Master Development. Means the Seller's development of the area shown in the Plan attached as Exhibit B as a residential condominium project.

Master Parcel. Defined in Section 6.5.6.

Monetary Liens. Defined in Section 6.3.

MP Application. Defined in Section 6.5.4.

MP Application Deadline. Defined in Section 6.5.4.

MP Application Period. Defined in Section 6.4.12.

MP Approval. Defined in Section 6.5.4 .

OFAC. Defined in Section 7.1.

Parking Agreement. Defined in Section 14.1.

Permitted Encumbrances. Defined in Section 6.3

Preliminary Title Report. The commitment for issuance of an owner's policy of title insurance issued by the Title Company.

Project. A full service hotel [redacted]

Property. The Real Property.

Purchase Price. Defined in Section 5.1.

Real Property. That portion of the real property located at 385 Congress Street, Portland, Maine, 04101, Tax Map 27, Block D, Lot 1, as more particularly depicted on Exhibit A attached hereto and by this reference made a part hereof, together with all rights in the streets lying adjacent to such land and owned by Seller, and all rights, privileges, easements and appurtenances thereto, [redacted], and including all additional rights and easements as necessary to service the Project pursuant to the Cross Easement Agreement. [redacted] The Real Property description shall be finally determined by an ALTA survey commissioned by Buyer and the Real Property shall be conveyed using that survey description, provided that the description is reasonably acceptable to Seller. The Real Property shall be configured as more particularly described herein. The illustration included in Exhibit A is for reference purposes only regarding the approximate boundaries and alleyway location, and the buildings are not necessarily indicative of the massing or design to be agreed upon by the parties as provided herein.

Seller's Conditions Precedent. Defined in Section 6.8.

Seller's Knowledge. Means the knowledge of Gordon Reger and Joseph Dasco based upon their historical knowledge of the Real Property and assuming a commercially reasonable level of inquiry.

Seller Project Information. Defined in Section 6.5.4.

Seller's Retained Land. Defined in Section 6.5.6.

Site Plan Application. Defined in Section 6.5.1

Site Plan Approval. Defined in Section 6.5.4.

Site Studies. Defined in Section 6.4.6.

SP Application Deadline. Defined in Section 6.5.4.

Subd Application. Defined in Section 6.5.4.

Subd Approval. Defined in Section 6.5.6.

Survey. Defined in Section 6.4.5.

Title Commitment. Defined in Section 6.3.

Title Company. A nationally recognized title insurance company to be selected by Buyer.

Title Inspection Period. Defined in Section 6.3.

Title Notice Deadline. Defined in Section 6.3.

[redacted]

[redacted]

Utilities. Defined in Section 6.4.7.

Zoning Confirmation. Defined in Section 6.4.3.

ARTICLE II
Purchase and Sale

Section 2.1. Purchase and Sale. Seller agrees to sell and convey to Buyer, and Buyer agrees to purchase from Seller, the Property, on all of the mutual terms, covenants and conditions hereinafter set forth. Buyer shall have the right to designate an entity organized and controlled by Buyer for purposes of taking title to the Property as provided in Section 15.3 hereof. Seller shall be permitted to reserve certain rights and easements over the Property in accordance with the terms and provisions of Section 14.3

ARTICLE III
Deposit

Section 3.1. Deposit. Upon execution hereof, Buyer shall deposit with Pierce Atwood LLP (the "Escrow Agent") the sum of [redacted] (the "Initial Deposit"). Upon completion of the Approvals Period if Buyer has not otherwise terminated this Agreement in accordance with its terms, Buyer shall deposit with the Escrow Agent the additional sum of [redacted] (the "Additional Deposit"). The Initial Deposit and the Additional Deposit are hereinafter collectively referred to as the "Deposit" and are to be held and applied as hereinafter set forth. The Deposit shall be held in a non-interest-bearing escrow account.

Section 3.2. Non-Refundable. Except as otherwise specifically set forth in this Agreement, the Initial Deposit shall be fully refundable until the completion of the Approvals Period, after which, assuming Buyer has not terminated this Agreement, it shall be non-refundable, except as otherwise specifically set forth in this Agreement. Except as otherwise specifically set forth in this Agreement, the Additional Deposit shall be non-refundable. Except as otherwise specifically set forth in this Agreement, the Deposit shall serve as Seller's liquidated damages (except for any Buyer indemnities) in the event of a breach of this Agreement by Buyer pursuant to Article IV, or shall be applied against the Purchase Price pursuant to Article V.

Section 3.3. Liability of Escrow Agent. In the event of any disagreement between the parties, Escrow Agent shall be entitled to refuse to comply with any claims or demands by either party as long as such disagreement may continue, and in so refusing, shall make no delivery or other disposition of the Deposit. Escrow Agent shall not become liable in any way for such refusal, and Escrow Agent shall be entitled to continue to refrain from acting until (a) the rights of the parties shall have been finally adjudicated in a court of competent jurisdiction, or (b) all differences shall have been settled by agreement and Escrow Agent shall have been notified in writing of such agreement signed by both parties.

ARTICLE IV
Damages

Section 4.1. Buyer's Default. In the event that this transaction does not close as a consequence of a default by Buyer, and Seller has performed or tendered performance of its obligations hereunder, Seller's sole remedy shall be to retain the Deposit as liquidated damages. The parties hereby agree that if Buyer defaults, Seller's actual damages would be difficult or impossible to determine, and thus the amount of the Deposit is the best estimate of the damage Seller would suffer. Accordingly, the Deposit shall be the total amount that Seller is entitled to receive as liquidated damages (except for any Buyer indemnities).

Section 4.2. Seller's Default. In the event Seller fails to perform any obligation of Seller under this Agreement, including without limitation the obligation to convey title to the Property to Buyer on the Closing Date, as hereinafter defined, in accordance with the provisions of this Agreement, and Buyer has performed or tendered performance of its obligations hereunder, and such failure shall remain uncured for a period of thirty (30) days following written notice thereof from Buyer to Seller, then Buyer may (a) terminate this Agreement, in which event the Deposit shall be returned to Buyer, or (b) Buyer shall be entitled to pursue specific performance of Seller's obligations hereunder.

ARTICLE V
Purchase Price

Section 5.1. Amount of Consideration. Buyer shall pay Seller consideration (the "Consideration") for the Property in the amount of [redacted] (the "Purchase Price"), subject to adjustment for credit, debits and other adjustments as expressly provided in this Agreement..

Section 5.2. Manner of Payment. Buyer shall pay and provide the Consideration to Seller at the Closing as follows:

5.2.1. Deposit. Applying the Deposit against the Consideration; and

5.2.2. Remaining Consideration. Paying the balance of the Consideration, by wire transfer to an account to be designated by Seller (the "Cash Balance").

ARTICLE VI
Conditions Precedent to Closing

Section 6.1. Buyer's Conditions Precedent. Buyer's obligation to purchase the Property from Seller is subject to the following conditions precedent (the "Buyer's Conditions Precedent"):

6.1.1. Title. At the Closing, Seller shall sell, convey, transfer and deliver the Property to the Buyer by statutory Quitclaim Deed with Covenant Buyer (the "Deed"), and the Deed shall convey to the Buyer fee title free of Monetary Liens and Mandatory Cure Items, but subject to Permitted Encumbrances.

6.1.2. Seller's Representations and Warranties. Seller's representations and warranties set forth herein shall be true and correct in all material respects at and as of the Closing as though such representations and warranties were made at and as of such date.

6.1.3. Seller's Compliance. The Seller shall have in all material respects performed and complied with all covenants, agreements and conditions required by this Agreement to be performed or complied with by it prior to or at the Closing.

6.1.4. Approvals. The Approvals shall continue in full force and effect without imposition of any amendments, alterations or conditions not requested or pursued by Buyer or its agents or contractors, since receipt of the same by Buyer.

6.1.5. Lease Termination. Delivery by Seller of evidence reasonably satisfactory to Buyer that all leases, licenses or other use agreements of all or any portion of the Property, [redacted] have been terminated at or prior to Closing, at Seller's expense, and tenants have no further right to occupancy or use of the Property thereunder.

6.1.6. Consents and Approvals. The Seller shall have obtained all consents, approvals, authorizations, exemptions and waivers from governmental authorities and third parties, if any, as shall be necessary to convey the Property to Buyer.

6.1.7. Commitments. Buyer and Seller shall have executed and delivered the Commitments, as such documents have been negotiated and agreed upon by the parties prior to expiration of the Due Diligence Period, with only such revisions to the agreed upon forms as may be required under Article XIV, as applicable.

6.1.8. No Material Adverse Changes. There shall have been no material adverse change since the date of this Agreement in the Property, except changes contemplated or required by this Agreement, including without limitation, any change in the title, physical condition (except

for the Demolition), legal status, use or possession of the Property [redacted] from the conclusion of the Approvals Period through the date of closing that would cause the Property to be unsuitable for development of the Project; the foregoing is not intended to include any changes in the national, state or local economy or capital markets or any similar change that does not involve the physical, legal or land-use status of the Property.

6.1.9. No Legal Restraints or Litigation. No statute, rule, regulation or order of any court or administrative agency shall be in effect which restrains or prohibits the Seller from consummating the transactions contemplated hereby. In addition, no action, suit, or proceeding shall be pending before any court or quasi-judicial or administrative agency of any federal, state, local, or foreign jurisdiction wherein an unfavorable injunction, judgment, order, decree, ruling, or charge would (a) prevent consummation of any of the transactions contemplated by this Agreement, or (b) result in a material adverse change in the Property or the ability to develop the Project at the Property, except for an appeal of the Approvals, which is addressed in Section 6.5.1 below.

6.1.10. Demolition. Seller shall have completed the demolition (as more particularly described in Section 14.4) prior to Closing ("Demolition").

Section 6.2. Failure of Buyer's Conditions Precedent. If, at the time of the Closing, any of the foregoing Buyer's Conditions Precedent have not been fulfilled, Buyer may, at its option, do the following:

6.2.1. Waive and Close. Waive such condition and close in accordance with this Agreement; or

6.2.2. Terminate. Terminate this Agreement by delivery of a written notice to Seller and to Escrow Agent ("Buyer's Termination Notice") and enforce any remedy afforded by Section 4.2 in the event Seller has defaulted under any of its obligations under this Agreement (provided that the mere failure of the following conditions to closing shall not constitute a Seller default: Sections 6.1.6, 6.1.8, or 6.1.9); provided, however, that, if Buyer fails to deliver Buyer's Termination Notice to Seller at or prior to the Closing, the applicable condition or conditions shall be deemed waived by Buyer.

Section 6.3. Title Examination. From the date hereof through the date of expiration of the Due Diligence Period, as hereinafter defined (the "Title Inspection Period"), Buyer shall have the opportunity to review the commitment to insure title (the "Title Commitment"), any amendments thereto issued during the Title Inspection Period, the exceptions to title disclosed in the Title Commitment, all Survey Matters and all other aspects of Seller's title to the Property. The Title Commitment shall be for the benefit of the Buyer, at customary rates, in the ALTA form currently in use, subject only to the Permitted Encumbrances (as defined below) and with such standard exceptions deleted and standard endorsements included as Buyer may, in its sole discretion, require. On or before the date of the expiration of the Title Inspection Period (the "Title Notice Deadline"), Buyer shall notify Seller in writing of any defect in title to the Property, or any other matter which is indicated on the Title Commitment or any Survey Matter to which Buyer objects except for the following: (a) liens for real estate taxes not yet due and payable or for

betterments assessed after the Effective Date, (b) other encumbrances which may be removed or satisfied by the payment of a liquidated sum of money which Seller agrees to discharge at Closing to Buyer's satisfaction and (c) such easements, restrictions and reservations of record as are acceptable to Buyer, in its discretion. If Buyer does so notify Seller of a defect in title or other matter objectionable to Buyer prior to the Title Notice Deadline, Seller shall have ten (10) business days in which to determine whether to cure the defect or other matter so objected to by Buyer and to notify Buyer of Seller's decision in this regard. If Seller does not respond within such time frame, Seller shall be deemed to have elected not to cure the defect or other matter. Seller, at its sole cost and expense, will have until the Closing to cure the title objections which Seller has elected to cure, other than the Monetary Liens (as herein defined), which (to the extent not previously removed) Seller shall remove or cure by payment of funds at Closing. Those defects that Seller gives notice will be cured on or before the Closing Date, along with discharge of Monetary Liens, are referred to herein as "Mandatory Cure Items." If Seller elects (or is deemed to elect) not to cure the defect or other matter so objected to by Buyer, Buyer shall have the right, by not later than the tenth (10th) day after the date of Seller's notice (or failure to provide notice) to either (a) waive such defect or other matter and take title to the Property without any adjustment in the Purchase Price, or (b) terminate this Agreement by giving written notice thereof to Seller. If Buyer timely gives such notice of termination, this Agreement shall terminate and the Deposit shall be returned to Buyer. If Buyer fails to give Seller a notice of termination, Buyer (a) shall no longer have an right to terminate this Agreement under this Section 6.1.1 and shall be bound to proceed to Closing and consummate the transaction contemplated hereby pursuant to the terms of this Agreement and (b) shall be deemed to have approved the state of title to the Property as it exists on the effective date of the Title Commitment, as last amended during the Title Inspection Period. Seller shall be responsible for discharging any mortgages, voluntary monetary liens or tax liens (other than municipal liens not yet due and payable), including mechanics' liens for unpaid work at the Property performed on behalf of Seller but not mechanics' lien arising from due diligence and permitting and approvals work performed for Buyer (collectively, "Monetary Liens") at or prior to Closing. "Permitted Encumbrances" shall mean all matters of record as of the Effective Date affecting the Property, including without limitation easements, covenants, restrictions and agreements, as of the Effective Date, except for (i) items to which Buyer has objected and which Seller has agreed to cure, all as provided above in this Section, and (ii) Monetary Liens. Permitted Encumbrances also shall include the Parking Agreement, the Construction License, the Cross Easement Agreement and all governmental approvals and the conditions thereof contemplated or required by this Agreement.

Section 6.4. Buyer's Due Diligence. Notwithstanding any other provision of this Agreement to the contrary, Buyer shall be entitled to undertake a thorough investigation of the Property, including without limitation such reviews, analyses and studies of the Property and the development of the Project at the Property, as Buyer may, in its sole discretion, determine to be necessary or appropriate, including without limiting the generality of the foregoing:

6.4.1. Inspection of physical condition, [redacted]

6.4.3. Evaluation by Buyer of all necessary zoning, including zoning board approvals of required variances and any other matters, required in order to develop the Project ("Zoning Confirmation").

6.4.4. A Phase I Environmental Site Assessment for the Property, together with (i) any Phase II Environmental Site Assessments or other studies or analyses as may be required based upon the Phase I Environmental Site Assessment, and (ii) a Hazardous Materials Inventory of the building on the Property (together referred to as "ESA"). Seller agrees to allow Buyer, as [redacted] to take and analyze soil borings and perform groundwater testing both from the Master Parcel at locations determined by Buyer's engineering advisors, and underneath the buildings and structures located on the Real Property, including drilling through the foundations of any buildings or structures for purposes of access for soil and groundwater testing; provided, that in the event tenant consent is needed for any of the work contemplated by this Section 6.4.4, Seller shall use commercially reasonable efforts to assist Buyer in obtaining such required consent. Any damage associated with the Buyer's testing shall be restored at Buyer's expense.

6.4.5. An ALTA/ACSM Land Title Survey of the Property certified satisfactory to Buyer, in its sole opinion, sufficient in all respects to delete the standard survey exception from Buyer's title policy, and bearing a legal description, made by a licensed surveyor, and showing, among other things, the area, dimensions and location of the Property to the nearest monuments, streets, alleys on all sides, the topography, the location of all available utilities in adjoining streets, alleys, or property, the location of all recorded and apparent easements against or appurtenant to the Property, the location of all active and abandoned sewer and storm water lines on an as built basis, certifying the applicable zoning and flood zone classifications and not disclosing any condition rendering the Property unusable, in Buyer's sole opinion, for the Project (the "Survey").

6.4.6. A geotechnical report in form satisfactory to Buyer, boring, percolation and other soil tests and feasibility, demographic, traffic pattern, and other site assessment studies ("Site Studies") as required by Buyer. In connection therewith, Buyer shall have access to the Property as required [redacted] and may conduct such tests, studies, surveys and inspections (expressly including boring, drilling and other subsurface exploration as Buyer may reasonably deem appropriate). Buyer promptly shall restore to its former condition any portion of the Property disturbed by any activity conducted under this Agreement, which shall include repaving or otherwise filling any bore holes, shall repair all damage to the Property caused thereby and shall indemnify and hold Seller harmless from and against any claims, losses, liabilities, costs, fines, penalties or expenses (including without limitation reasonable attorneys' and paralegals' fees) asserted against or incurred by Seller in connection with any such activity, it being expressly understood and agreed that the foregoing provisions shall survive the Closing or the termination of this Agreement prior thereto. Buyer agrees not to assert as a defense to the enforcement of the foregoing indemnity any workers' compensation immunity. Damages under the foregoing indemnity are not limited by any liquidated damages provision in this Agreement. In addition, Buyer shall be afforded full opportunity by Seller, without warranty or recourse, to examine the following, to the extent in the possession of Seller and/or Seller's agents or employees, including the reasonable right to make copies of such books and records: environmental and engineering reports, surveys, title reports and title insurance policies, soil studies, and any reports or analyses

regarding the Demolition and the condition of the Property following the Demolition, but excluding Seller's internal memoranda, financial projections, budgets, appraisals, accounting and tax records, attorney work product, work protected by attorney-client privilege and similar proprietary or confidential information. Buyer shall take commercially-reasonable precautions to ensure that such materials and any information contained therein are disclosed only to such of Buyer's employees, agents, consultants, attorneys, investors and lenders as have need therefor, under conditions which will prohibit any further dissemination thereof not authorized by Seller.

6.4.7. Confirmation that all utilities, including without limitation, water, gas, electric power, telephone, cable, storm water systems and sanitary sewer, necessary or appropriate for development of the Project ("Utilities"), as determined by Buyer in its sole discretion, shall be located in the public way or ways adjacent to the Property ("Utility Confirmation") which confirmation may be in such form as Buyer may require.

6.4.8. Confirmation that the Project can be integrated into the Seller's Master Development in a manner acceptable to Buyer, as determined by Buyer, in Buyer's sole discretion, including without limiting the generality of the foregoing all necessary service drives, commercial truck delivery facilities, parking improvements and valet program, footings and foundations, storm water management and Utilities. The foregoing confirmation shall include confirmation that the location of buildings and other structures on the Master Parcel satisfy the requirement that the clearance between the Project and adjacent building to be located at the corner of Pearl Street and Congress Street shall be no less than fifty-five (55) feet at hotel guest room and residence levels.

6.4.9. Such other traffic, lighting and other engineering or investigatory studies as may be necessary or appropriate, or required by planning authorities, for determining the adequacy of the Property for development of the Project.

6.4.10. Confirmation that the Property is sufficient in all respects to accommodate the full service hotel Facilities Program, including associated front of house, back of house, rooftop bar, underground garage, valet on Congress Street and residences and all associated improvements.

6.4.11. Confirmation of likely availability of all Approvals for the Project. Buyer shall have the right to contact and communicate with such governmental officials regarding the Property and the project as Buyer may deem appropriate, provided that, prior to Closing, Buyer shall make no application with the City of Portland for a permanent change in zoning or other permanent change to the land-use status of the Property.

6.4.12. Inspection by Buyer of the physical condition, title to, and other matters related to the tunnel under Congress Street.

[redacted]

[redacted]

Section 6.5. Approvals. Notwithstanding any other provisions of this Agreement to the contrary, Buyer shall be entitled to apply for and obtain all necessary federal, state and local governmental land-use permits, licenses and approvals of any type or nature required, including historic preservation review, as may be necessary for the development on the Property of the Project, including without limiting the generality of the foregoing, all necessary site plan, and other governmental land-use permits, licenses, and approvals, of any type and from any necessary public or governmental authority or other party, for Buyer's development of the Project at the Property (excluding building permits and other construction related permits and approvals and hotel and restaurant operating permits and licenses).

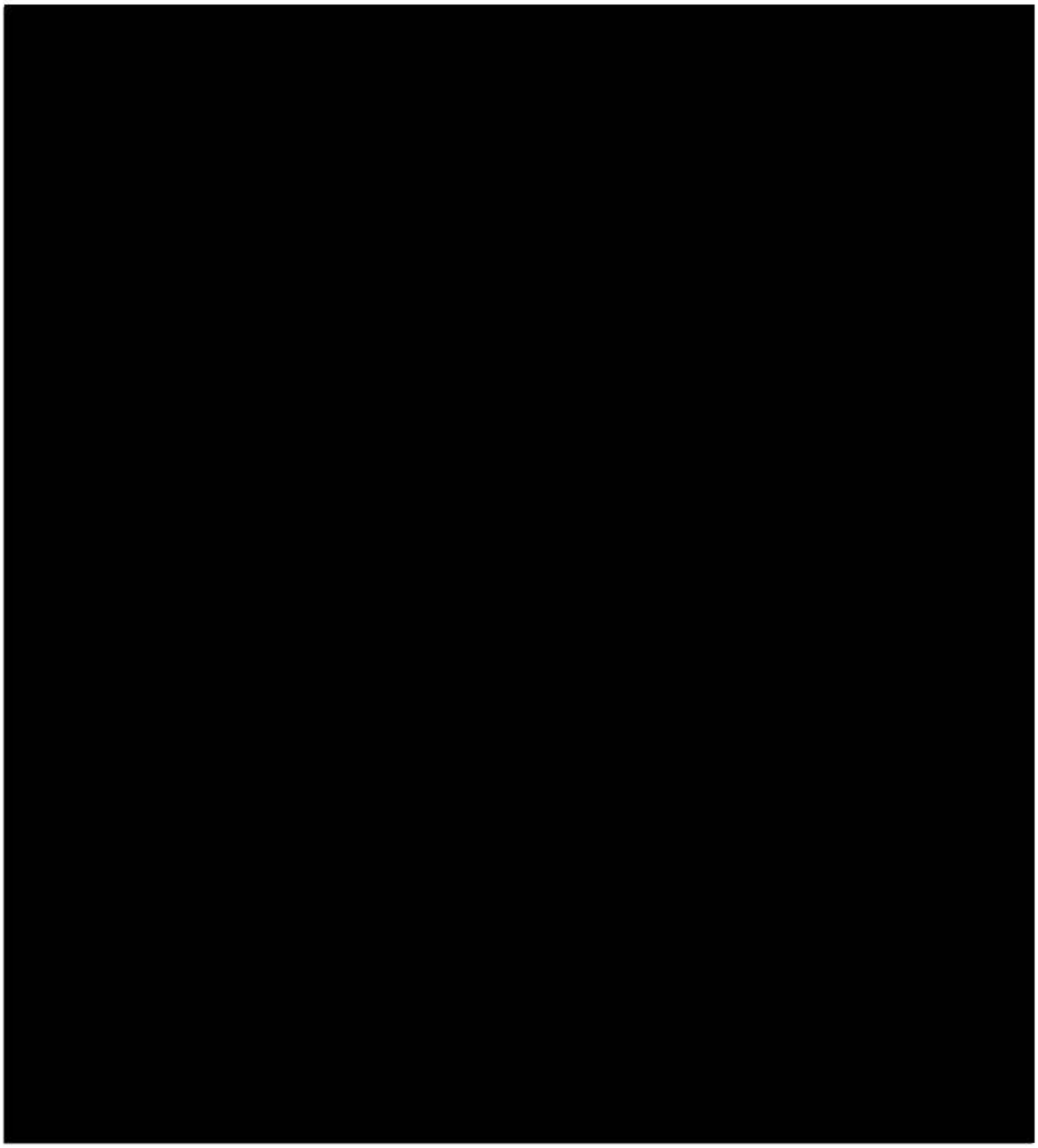
[redacted]

6.5.3. Buyer shall have the right to apply for and pursue the Site Plan Approval on a stand-alone basis, separate from the MP Application and MP Approval, so long as such Site Plan Application and Site Plan Approval do not interfere with Seller's Master Development and have been approved in writing in advance of submission to the City of Portland by Seller, as provided in Section 6.5.4 below.











[redacted]

6.5.5. Intentionally deleted.

[redacted]

[redacted]

[redacted]

Section 6.7. Effective Termination. If this Agreement is terminated pursuant to the provisions of this Article, all other obligations of the parties hereto shall cease and this Agreement shall be void and without recourse to the parties hereto, except as otherwise expressly set forth in Article IV and Section 6.2 hereof and except for obligations that expressly survive termination.

Section 6.8. Seller's Conditions Precedent. Seller's obligation to sell the Property to Buyer is subject to the following conditions precedent (the "Seller's Conditions Precedent"):

(a) Payment by Buyer of all sums due in accordance with this Agreement;

(b) As of the Closing Date, no statute, rule, regulation or order of any court or administrative agency shall be in effect which restrains or prohibits the Seller from consummating the transactions contemplated hereby, and to that end, Seller has obtained approval from the City of Portland to subdivide the Master Parcel. In addition, no action, suit, or proceeding shall be pending before any court or quasi-judicial or administrative agency of any federal, state, local, or foreign jurisdiction wherein an unfavorable injunction, judgment, order, decree, ruling, or charge would (a) prevent consummation of any of the transactions contemplated by this Agreement, or (b) result in a material adverse change in the Master Parcel or the ability to develop the Master Parcel;

(c) All of the representations and warranties of Buyer shall be true and correct in all material respects as of the Closing, and Buyer shall deliver a separate certificate certifying to that effect;

(d) Buyer shall have performed in all material respects each of its obligations under this Agreement to be performed at or prior to the Closing; and

(e) Seller shall have received Master Development plan and Subd Approval from the City of Portland.

ARTICLE VII
Representations and Warranties

Section 7.1. Buyer's Representations and Warranties. Buyer hereby represents, warrants and covenants to Seller the following as of the date hereof and as of the Closing. The representations and warranties shall survive Closing for a period of only one (1) year from the Closing:

(a) Buyer is duly organized, validly existing and in good standing under the laws of the State of Maine. Buyer has the requisite right, power and authority to buy the Property from Seller as provided herein, and has taken all action necessary to authorize the execution, delivery and performance of this Agreement. Buyer has obtained all consents and approvals necessary for Buyer's execution, delivery and performance of this Agreement, and the performance by Buyer of

Buyer's obligations hereunder will not constitute a default under the terms and provisions of any material agreement, document or instrument to which Buyer is a party or by which Buyer is bound.

(b) This Agreement constitutes the valid and binding obligation of Buyer, enforceable against Buyer in accordance with its respective terms, except to the extent that enforcement may be limited by applicable bankruptcy, insolvency, moratorium and other principles relating to or limiting the rights of contracting parties generally.

(c) There is no suit or proceeding pending or, to Buyer's knowledge, threatened against or affecting Buyer that might affect or relate to this Agreement or the transactions contemplated hereby, in any court or before or by any federal, state, county or municipal department, commission, board, bureau, or agency or other governmental instrumentality. No order, writ, injunction, subpoena or decree has been issued by or requested of any court or government agency which is reasonably likely to result in a material adverse change in the Property or the Buyer, or which could reasonably be expected to have a material adverse effect on the transactions contemplated by this Agreement.

(d) Buyer has engaged no broker or agent in connection with the sale. Buyer shall indemnify, defend and hold Seller harmless from and against any loss, damages, liabilities, costs or expenses, including without limitation attorneys' fees and court costs, resulting from any claim for a fee or commission by any broker or finder with whom Buyer has dealt, other than Malone Commercial.

(e) Neither Buyer nor any of its affiliates, nor any of their respective partners, members, shareholders or other equity owners, and none of their respective employees, officers, directors, representatives or agents is, nor will they become, a person or entity with whom United States persons or entities are restricted from doing business under regulations of the Office of Foreign Asset Control ("OFAC") of the Department of the Treasury (including those named on OFAC's Specially Designated Nationals and Blocked Persons List) or under any statute, executive order (including the September 24, 2001, Executive Order Blocking Property and Prohibiting Transactions with Persons Who Commit, Threaten to Commit, or Support Terrorism), or other governmental action and is not and will not engage in any dealings or transactions or be otherwise associated with such persons or entities.

Section 7.2. Authority. Each party warrants and represents that this Agreement and all other documents delivered prior to or at the Closing (a) have been or shall be duly authorized and executed and delivered by such party; (b) are legal, valid, and binding obligations of such party; and (c) neither violate any provision of any agreement to which such party is a party, nor violate any charters, bylaws, operating agreements or other organizational documents of such party.

Section 7.3. Seller's Representations and Warranties. Seller hereby represents, warrants and covenants to Buyer the following. The Seller's representations and warranties shall survive Closing for a period of only one (1) year from the Closing:

(a) Seller is duly organized, validly existing and in good standing under the laws of the State of Maine. Seller has the requisite right, power and authority to sell and convey the Property to Buyer as provided herein, and has taken all action necessary to authorize the execution,

delivery and performance of this Agreement. Seller has obtained all consents and approvals necessary for Seller's execution, delivery and performance of this Agreement, and the performance by Seller of Seller's obligations hereunder will not constitute a default under the terms and provisions of any material agreement, document or instrument to which Seller is a party or by which Seller is bound.

(b) This Agreement constitutes the valid and binding obligation of Seller, enforceable against Seller in accordance with its respective terms, except to the extent that enforcement may be limited by applicable bankruptcy, insolvency, moratorium and other principles relating to or limiting the rights of contracting parties generally.

(c) Seller has not received any written notice of any pending condemnation, expropriation, eminent domain or similar proceeding affecting all or any portion of the Property and to Seller's Knowledge, no such proceeding is contemplated.



(e) No written notice has been given to Seller by the holder of any mortgage on the Property, any insurance company that has issued a policy with respect to the Property, or by any board of fire underwriters (or other body exercising similar functions) claiming any material defect or deficiency or requesting the performance of any material repairs, alterations or other work to the Property.

(f) There are no management, service, equipment, supply, maintenance or concession agreements to which Seller is a party with respect to or affecting all or any portion of the Property that are not terminable by Seller by the Closing.

(g) Seller has paid or will pay in full prior to the Closing all outstanding bills and invoices for Utility charges, labor, goods, materials, and services of any kind relating to the Property incurred by or for the benefit of Seller.

(h) No work has been performed or is in progress at, and no materials have been furnished to, at the direction of or for the benefit of the Seller, the Property which, though not presently the subject of, might give rise to mechanic's, materialmen's or other liens against the Property or any portion thereof. If any lien for work performed or materials furnished prior to the Closing, in either case pursuant to a contract with Seller, is filed before or after the Closing, Seller shall promptly discharge such lien by filing the requisite bond or in any other manner allowed by applicable law.

(i) There is no suit or proceeding pending or to Seller's Knowledge, threatened against or affecting Seller or the Property that might affect or relate to this Agreement or the transactions contemplated hereby, in any court or before or by any federal, state, county or municipal department, commission, board, bureau, or agency or other governmental instrumentality. No order, writ, injunction, subpoena or decree has been issued by or requested of

any court or government agency which is reasonably likely to result in a material adverse change in the Property or the Seller, or which could reasonably be expected to have a material adverse effect on the transactions contemplated by this Agreement.

(j) Seller has received no written notice of any outstanding violation of any federal, state, county, or municipal laws, ordinances, orders, codes, rules, regulations, or requirements affecting all or any portion of the Property, including without limitation violations of the housing, building, safety, health, fire, or zoning ordinances, codes, and regulations of the municipality or county within which the Property is located, issued by any governmental or quasi-governmental authority.

(k) Seller is not in violation or default under any agreement with any third party, or under any judgment, order, decree, rule or regulation of any court, arbitrator, administrative agency or other governmental authority to which it may be subject, which violation or default will, in any one case or in the aggregate, materially and adversely affect the ownership or operation of the Property or Seller's ability to consummate the transactions contemplated hereby. To Seller's Knowledge, there are no material violations of laws, regulations, permits or approvals affecting or pertaining to the Property. The execution, delivery and performance of this Agreement and the consummation of the transactions contemplated hereby will not (i) violate any law or any order of any court or governmental authority with proper jurisdiction and pertaining to Seller; (ii) result in a breach or default under any provision of the organizational documents of Seller; or (iii) require any consent, or approval or vote of any third person that, as of the Closing Date, has not been given or taken, and does not remain effective.

(l) There are no tax liens on any of the Property except for taxes not yet due and payable, and Seller has paid or will pay through the Closing all real estate taxes, withholdings and governmental charges due and payable with respect to the Personal Property under all applicable federal, state and local laws and regulations. To Seller's Knowledge, there are no legal, administrative or other tax proceedings currently in progress or threatened pursuant to which Seller is or could be made liable for any taxes.

[redacted]

(n) Seller is not a "foreign person" as defined in Section 1445(f)(3) of the Code.

(o) Neither Seller nor any of its affiliates, nor any of their respective partners, members, shareholders or other equity owners, and none of their respective employees, officers, directors, representatives or agents is, nor will they become, a person or entity with whom United States persons or entities are restricted from doing business under regulations of the Office of Foreign Asset Control ("OFAC") of the Department of the Treasury (including those named on OFAC's Specially Designated Nationals and Blocked Persons List) or under any statute, executive order (including the September 24, 2001, Executive Order Blocking Property and Prohibiting

Transactions with Persons Who Commit, Threaten to Commit, or Support Terrorism), or other governmental action and is not and will not engage in any dealings or transactions or be otherwise associated with such persons or entities.

Section 7.4. Waiver of Disclosure. Buyer hereby agrees that, notwithstanding the provisions of 33 M.R.S. § 193, the investigation of any and all matters relating to (i) the identification of any abandoned or discontinued town ways, public easements, or private roads located on or abutting the Property and (ii) the identification of the party or parties responsible for the maintenance of any abandoned or discontinued town way, public easement, or private road located on or abutting the Property (including any responsible road association) shall be the sole responsibility of Buyer and has been performed as part of Buyer's examination of all other matters of title respecting the Property. Buyer hereby knowingly, unconditionally, and expressly waives their right to receive a property disclosure statement from Seller pursuant to 33 M.R.S. § 193. Buyer's waiver of their right to receive a property disclosure statement from Seller pursuant to 33 M.R.S. § 193 shall not constitute a waiver of any other rights to disclosure afforded to Buyer pursuant to this Agreement or by law unless otherwise expressly provided herein. By execution of this Agreement, Buyer hereby releases Seller from and against and all claims, losses, costs, liabilities, expenses, demands, or obligations whatsoever arising from or related to (i) the identification of any abandoned or discontinued town ways, public easements, or private roads located on or abutting the Property and (ii) the identification of the party of parties responsible for the maintenance of any abandoned or discontinued town way, public easement, or private road located on or abutting the Property (including any responsible road association).

ARTICLE VIII
Disclaimer of Warranties

EXCEPT AS EXPRESSLY SET FORTH IN SECTION 7.3 AND THE DEED, IT IS UNDERSTOOD AND AGREED THAT SELLER IS NOT MAKING AND HAS NOT AT ANY TIME MADE ANY WARRANTIES OR REPRESENTATIONS OF ANY KIND OR CHARACTER, EXPRESS OR IMPLIED, WITH RESPECT TO THE PROPERTY. BUYER AGREES, ACKNOWLEDGES AND REPRESENTS THAT EXCEPT AS SPECIFICALLY SET FORTH IN THIS AGREEMENT, BUYER IS ENTERING INTO THIS AGREEMENT AND SHALL PERFORM ALL OF ITS OBLIGATIONS HEREUNDER AND CONSUMMATE THE TRANSACTION CONTEMPLATED BY THIS AGREEMENT SOLELY IN RELIANCE ON AND AS A RESULT OF BUYER'S OWN INVESTIGATIONS AND EFFORTS (INCLUDING BUYER'S INSPECTION OF THE PROPERTY AND SUCH OTHER INVESTIGATIONS, EXAMINATIONS AND INSPECTIONS AS BUYER HAS CHOSEN TO MAKE OR HAS MADE) AND AT BUYER'S SOLE RISK, COST AND EXPENSE, INCLUDING, WITHOUT LIMITATION, THE RISK THAT BUYER'S INSPECTION OF THE PROPERTY AND SUCH OTHER INVESTIGATIONS, EXAMINATIONS AND INSPECTIONS MAY NOT REVEAL ANY OR ALL ADVERSE OR EXISTING CONDITIONS, ASPECTS OR ATTRIBUTES OF THE PROPERTY. BUYER ACKNOWLEDGES THAT SELLER HAS AFFORDED, AND, DURING THE DUE DILIGENCE PERIOD, SHALL AFFORD, BUYER THE OPPORTUNITY FOR FULL AND COMPLETE INVESTIGATION, EXAMINATION AND INSPECTION OF THE PROPERTY. BUYER ACKNOWLEDGES THAT THIS PARAGRAPH WAS A NEGOTIATED PART OF THIS AGREEMENT AND SERVES AS AN ESSENTIAL COMPONENT OF CONSIDERATION FOR THE SAME. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, THE PARTIES SPECIFICALLY ACKNOWLEDGE THAT BUYER HAS HAD, AND, DURING THE DUE DILIGENCE PERIOD SHALL HAVE, AN OPPORTUNITY TO FULLY INSPECT THE PROPERTY,

INCLUDING, BUT NOT LIMITED TO, THE PHYSICAL CONDITION OF THE PROPERTY (INCLUDING ALL ENVIRONMENTAL CONCERNS), AND THE PURCHASE PRICE HAS BEEN NEGOTIATED TO ELIMINATE ALL CLAIMS EXCEPT THOSE ARISING UNDER REPRESENTATIONS, WARRANTIES OR AGREEMENTS CONTAINED IN THIS AGREEMENT OR OTHER AGREEMENTS OR DOCUMENTS ENTERED INTO IN CONNECTION WITH THE TRANSACTIONS CONTEMPLATED HEREIN, WHETHER KNOWN OR UNKNOWN, RELATING TO THE CONDITION OF THE PROPERTY AS OF THE DATE OF THIS AGREEMENT AND ALL ASPECTS AND ATTRIBUTES THEREOF, INCLUDING, WITHOUT LIMITATION, ALL ENVIRONMENTAL MATTERS. BUYER ACKNOWLEDGES AND AGREES THAT SELLER HAS MADE NO REPRESENTATION OR WARRANTY WITH RESPECT TO THE PROPERTY EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT.

ARTICLE IX
Risk of Loss

Section 9.1. Risk of Loss. The risk of damage to the improvements on the Property or any portion thereof prior to Closing is Buyer's risk.

Section 9.2. Condemnation. Any taking or condemnation for any public or quasi-public purpose or use by any competent authority in appropriate proceedings or by any right of eminent domain of all or any material part of the Property between the Effective Date and the time of the Closing shall, at Buyer's option, cause a termination of this Agreement. The election to terminate provided for hereby must be exercised by Buyer by written notice to Seller to such effect, which notice shall be given by Buyer on or before the thirtieth (30th) day after Buyer's receipt of written notice of such condemnation (but in any event prior to the Closing; provided, however, that Buyer shall be entitled to extend the Closing Date to a date that is two business days beyond the date that would be the thirtieth (30th) day following such notice). If Buyer shall not elect so to terminate this Agreement, Seller shall be relieved of its duty to convey title to the portion of the Property so taken or condemned, but Buyer will be entitled to receive all proceeds of any such taking or condemnation with respect to the Property only provided Buyer takes title hereunder and Seller shall make no settlement or adjustment of such proceedings with respect to the Property only without Buyer's consent, and shall take at the Closing all action necessary to assign its entire interest in any such award with respect to the Property only to Buyer.

Section 9.3. Return of Deposit. The Deposit shall be returned to Buyer immediately following termination of this Agreement by Buyer under this Article and all other obligations of the parties hereto shall cease and this Agreement shall be void and without recourse to the parties hereto subject to the provisions of Section 6.3 and except for provisions that expressly survive termination.

ARTICLE X
Operation of Property

[redacted]

[redacted]

ARTICLE XI
Closing

Section 11.1. Closing Date. The Closing shall take place at the time and place specified in Section 6.6 hereof. The Cash Balance shall be held in escrow by the Buyer's attorney pursuant to customary conveyancing practice until the Deed is recorded; provided, however, that the Deed shall be recorded no later than 3:00 P.M. on the Closing Date unless Seller's attorney has been advised of any matter of record arising after a title update performed by Buyer's counsel the morning of the Closing and preventing Seller from conveying title to the Property in accordance with the applicable provisions of this Agreement.

Section 11.2. Closing Deposits. At the Closing, Seller and Buyer shall exchange the following documents and funds:

11.2.1. Seller's Deposits. Seller shall deliver to Buyer the following:

(a) Deed. The Deed conveying the Property to Buyer subject only to Permitted Encumbrances.

(b) Non-Foreign Affidavit. A duly executed original affidavit as to Seller's non-foreign status.

(c) Authority. Such evidence as may be reasonably required by the title insurance company as to the authority of the person or persons executing documents on behalf of Seller.

(d) Affidavits. Executed affidavits and indemnifications in form and substance reasonably satisfactory to the title insurance company regarding mechanics' and materialmen's liens and parties in possession sufficient to eliminate any title insurance exceptions for these matters with respect to the Property.

(e) Executed Commitments. Executed Commitments in the form agreed to on or before the expiration of the Due Diligence Period, with only such changes as the parties may mutually agree.

(f) Additional Documents. Such other documents, including without limitation settlement statements and escrow instructions, as are required of Seller to close in accordance with this Agreement and local conveyancing practice.

11.2.2. Buyer's Deposits. Buyer shall deliver to Seller the following:

(a) Cash Balance. The Cash Balance;

(b) Closing Costs. Additional cash in the amount necessary to pay Buyer's share of closing costs, as set forth in Section 12.2.;

(c) Executed Commitments (with execution of the Cross Easement Agreement required if necessary to bind Buyer and the Property to the Cross Easement Agreement); and

(d) Additional Documents. Such other documents, including without limitation authority documents, settlement statements and escrow instructions, as are required of Buyer to close in accordance with this Agreement and local conveyancing practice.

Section 11.3. Use of Purchase Price to Clear Title. To enable Seller to make conveyance as herein provided, Seller may, at the Closing, use the Purchase Price or any portion thereof to clear title of any or all encumbrances or interests so long as Seller has obtained and furnished to Buyer at or prior to the Closing a recordable release of each such encumbrance or interest or (in the case of an institutional mortgage or other security interest) written commitment from the holder thereof to provide such release upon receipt of a sum certain.

Section 11.4. Closing Statement. The parties shall execute and deliver a Closing and Proration Statement confirming the funds flow and prorations required under Article XII hereof.

ARTICLE XII
Closing Costs, Prorations

Section 12.1. Seller's Costs. Seller shall pay (a) one-half of the transfer taxes payable upon recordation of the Deed; and (b) the costs necessary to discharge Seller's obligations under this Agreement.

Section 12.2. Buyer's Costs. Buyer shall pay (a) one-half of the transfer taxes payable upon recordation of the Deed; (b) the cost of the Preliminary Title Report; (c) all title insurance premiums; (d) the cost of recording the Commitments; and (e) all other costs required in order to close in accordance with this Agreement (except as specified in Section 12.1).

Section 12.3. Prorations. Taxes and assessments (including any business and license taxes and any other state, county or municipal assessments), utility and fuel bills and other customarily-adjusted operating expenses shall be prorated as of the Closing Date and added to or subtracted from (as the case may be) the Cash Balance. All charges accruing prior to the Closing Date shall be prorated between the parties, and all charges accruing on or after the Closing Date shall be the obligation of Buyer. If the amount of such taxes is not known on the Closing Date, such taxes shall be prorated on the basis of taxes assessed for the preceding fiscal period, subject to reapportionment as soon as the new tax rate and valuation can be ascertained. In the event of any abatement of such taxes subsequent to the apportionment thereof, the amount of such abatement, less the reasonable cost of obtaining the same, shall be prorated as of the Closing Date.

ARTICLE XIII
Notices

Section 13.1. Notices. All notices required or permitted to be given hereunder shall be in writing and sent by electronic mail, with a confirmation copy sent by a recognized overnight courier

service offering confirmation of delivery to the appropriate address indicated below or at such other place or places as either Buyer or Seller may, from time to time, respectively, designate in a written notice given to the other:

To Buyer:	Fathom Development, LLC 80 Exchange Street, Suite 400 Portland, ME 04101 Attn: James H Brady, Manager jameshbrady@gmail.com
With a copy to:	Christopher E. Howard, Esq. Pierce Atwood LLP 254 Commercial Street Portland, Maine 04101 choward@pierceatwood.com
To Seller:	385 Congress LLC 2730 Transit Road West Seneca, NY 14224 Attn: Gordon Reger joedasco@comcast.net
With a copy to:	Tom Hanson Bernstein Shur 100 Middle Street Portland, ME 04101 thanson@bernsteinshur.com

ARTICLE XIV
Additional Conditions

[redacted]

Section 14.1. Construction License. Seller shall provide Buyer with access to and right to use lay-down space for Project construction, the location of such lay-down space to be negotiated by the parties during the Due Diligence Period as provided below, and the parties shall enter into an agreement with respect to reasonable cooperation and coordination of construction activities with respect to the common boundary between the Property and Seller's Retained Land. Subject to agreement of the parties as provided below in this Section, a conditional license to use the lay-down area and for coordination of construction activities on the common boundary will be executed and delivered at Closing ("Construction License"). If the Construction License, including the

location of the lay-down space, is not finalized in a form reasonably acceptable to Buyer and Seller on or before the expiration of the Due Diligence Period, then Buyer or Seller may terminate this Agreement by giving the other party written notice thereof on or before the expiration of the Due Diligence Period, in which event the Deposit will be refunded to Buyer and this Agreement shall terminate and the parties shall have no further obligations of any nature whatsoever hereunder except those that expressly survive termination. Buyer and Seller agree to exercise reasonable good faith efforts to agree on any adjustments required in the lay-down space to accommodate the needs of both parties in the development of the Project and the Master Development as finally approved in the Site Plan Approval and the MP Approval.









[redacted]

Section 14.5. [redacted]

Section 14.6. Intentionally deleted.

Section 14.7. Recordation. The form of Deed, the Cross Easement Agreement, the Parking Agreement, the Construction License, [redacted] will be memorialized in form and substance acceptable to both Seller and Buyer, to be executed and delivered by the parties at Closing ("Commitments"). If the Commitments are not finalized in a form reasonably acceptable to Buyer on or before the expiration of the Due Diligence Period, as provided in this Article XIV, then Buyer may terminate this Agreement by giving the other party written notice thereof on or before the expiration of the Due Diligence Period, in which event the Deposit will be refunded to Buyer and this Agreement shall terminate and the parties shall have no further obligations of any nature whatsoever hereunder, except those that expressly survive termination. The Commitments shall survive the Closing and shall be memorialized in a written agreement in recordable form that will be executed and delivered by Buyer and Seller at Closing. The order of recording the Commitments shall include recording the Cross Easement Agreement before the Deed unless those documents are combined into a single instrument.

ARTICLE XV
Miscellaneous Provisions

Section 15.1. Attorneys' Fees. If any suit or action be instituted to enforce the rights of either party under this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees and court costs.

Section 15.2. Further Assurances. Whenever reasonably requested to do so by the other party, Seller and Buyer shall execute, acknowledge, and deliver any and all such further reasonable conveyances, assignments, confirmations, satisfactions, releases, instruments of further assurance, approvals, consents and any and all such further instruments and documents as may be necessary in order to complete any and all conveyances, transfers, sales and assignments herein provided, and to do any and all other acts and to execute, acknowledge and deliver any and all documents as reasonably requested in order to carry out the intent and purpose of this Agreement.

Section 15.3. Buyer's Right to Assign. Buyer may, by written notice to Seller prior to the Closing Date, designate a nominee to take title to the Property and assign Buyer's interest in this Agreement in connection therewith to an entity in which the principals of Buyer own a membership or other equity interest. The named Buyer under this Agreement shall remain liable under this Agreement notwithstanding any such assignment.

Section 15.4. Successors and Assigns. Without waiver of the terms and conditions of Section 15.3, all of the rights, benefits, duties, liabilities, and obligations of the parties hereto shall inure to the benefit of, and be binding upon, their respective successors and assigns.

Section 15.5. Time. Time is of the essence of this Agreement and of every provision herein contained.

Section 15.6. Headings. The title and headings of the Sections hereof are intended solely for means of reference and are not intended to modify, explain or place any construction on any of the provisions of this Agreement.

Section 15.7. Modification. This Agreement may not be modified, amended or otherwise changed in any manner except by a writing mutually executed by both parties. To the extent there is any conflict between the terms and conditions of this Agreement and the terms and conditions of any other documents relating to the acquisition of the Property as they relate to rights and obligations between Buyer and Seller, the terms and conditions of this Agreement shall be deemed controlling.

Section 15.8. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Maine.

Section 15.9. Escrow Agent. Pierce Atwood, LLP agrees to serve as Escrow Agent as described herein pursuant to the Pierce Atwood LLP Standard Escrow Terms and conditions attached hereto as Exhibit D, which are incorporated herein by reference.

Section 15.10. Exclusivity. For so long as this Agreement remains in force, neither Seller nor any of its agents, affiliates, members, managers, subsidiaries, directors, officers or employees, will solicit, initiate, continue or participate in any discussions or negotiations with, or encourage or respond to any inquiries or proposals by, or provide any information to, or otherwise cooperate in any other way with, any corporation, company, partnership, person or other entity or group (other than Buyer and its affiliates, subsidiaries, partners, officers, directors, employees, consultants, agents, financing sources (and potential financing sources), accountants, and attorneys in connection with the development, sale, or acquisition of any interest in, the Property. Seller shall cause its agents, affiliates, members, managers, subsidiaries, directors, officers or employees, to comply with the provisions of this section.

Section 15.11. Counterparts. This Agreement may be executed in one or more counterparts, each of which when executed shall be deemed to be an original but all of which, when taken together shall constitute one and the same agreement. This Agreement may be executed by electronic or other facsimile signatures.

[*Remainder of Page Intentionally Blank – Signature Page Follows*]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

FATHOM DEVELOPMENT, LLC

By: _____
Name: James Brady
Title: Manager

385 CONGRESS LLC

By: _____
Name: Joseph Dasco
Title: Authorized Agent

ESCROW AGENT: PIERCE ATWOOD LLP

By: _____
Name: Christopher E. Howard
Title: Partner

[Signature Page to 385 Congress Street Purchase and Sale Agreement]

EXHIBIT A

DESCRIPTION OF REAL PROPERTY

EXHIBIT

tabbies

A

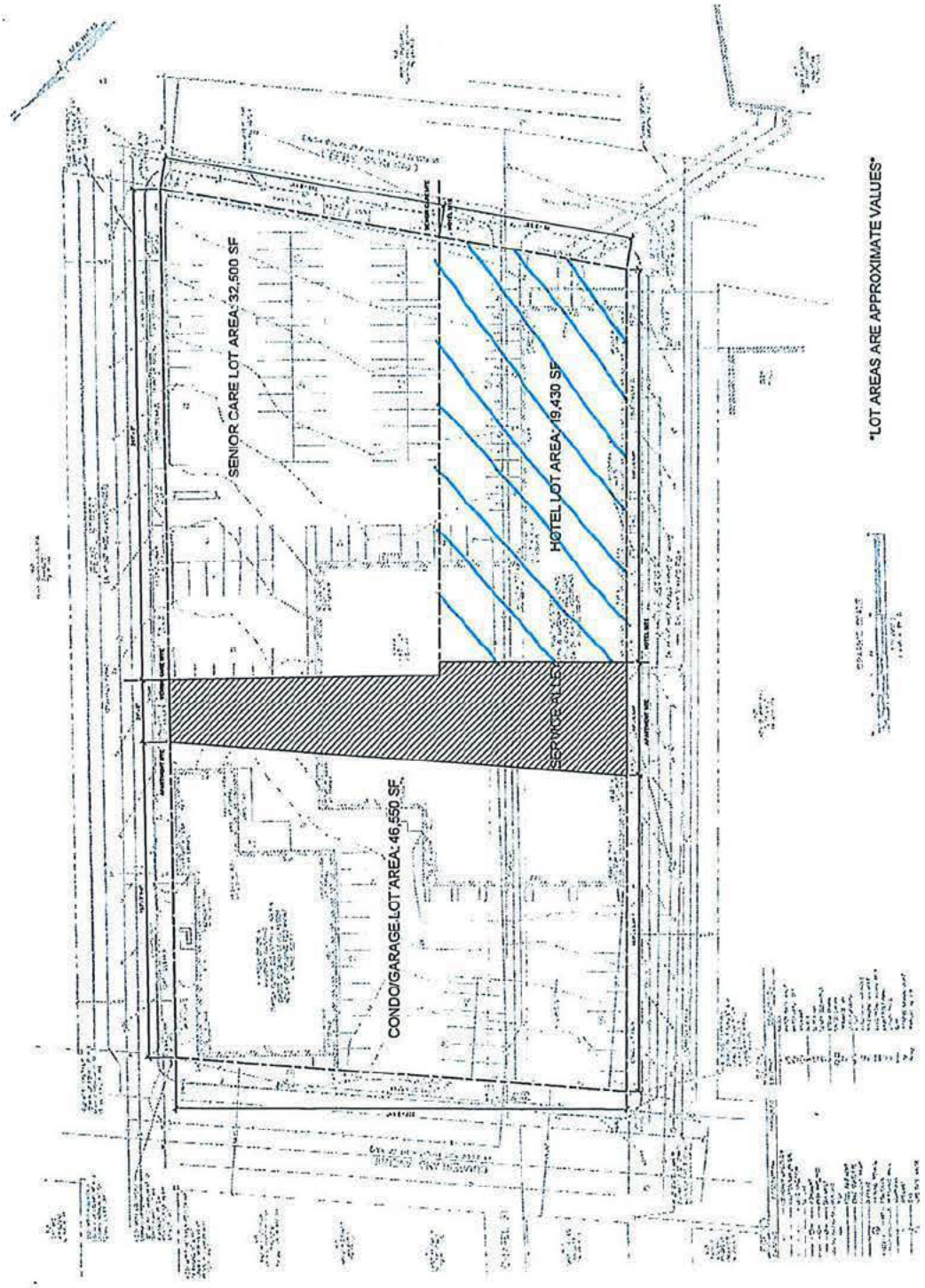


EXHIBIT B

DESCRIPTION OF MASTER DEVELOPMENT AREA

EXHIBIT

tabbies

B

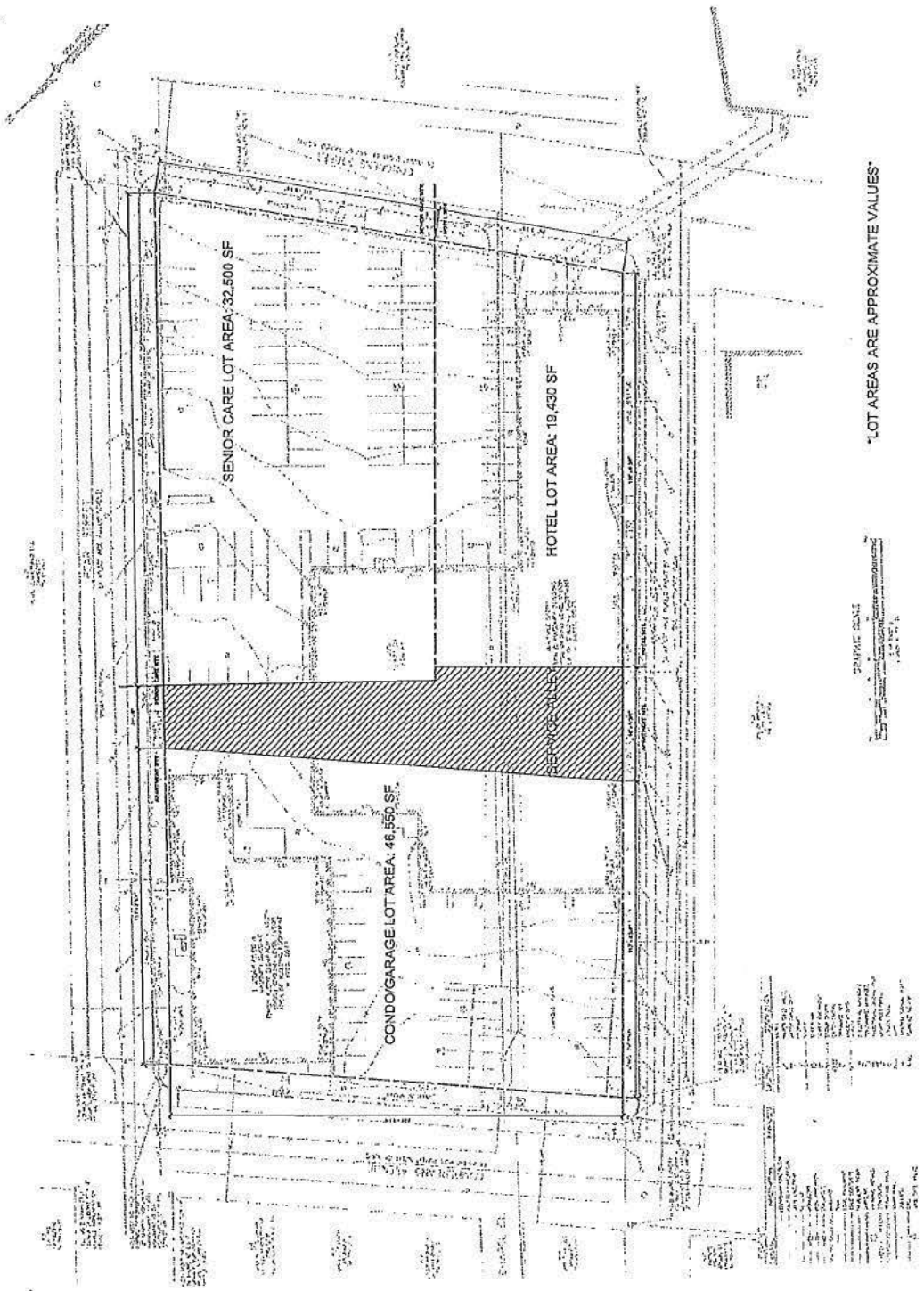


EXHIBIT C

FACILITIES PROGRAM

EXHIBIT D

PIERCE ATWOOD LLP

STANDARD ESCROW TERMS AND CONDITIONS

In consideration of Pierce Atwood LLP serving as the Escrow Agent ("Pierce Atwood" or "Escrow Agent") pursuant to that certain Purchase and Sale Agreement dated as of December 1, 2020 between 385 CONGRESS LLC, a Maine limited liability company (hereinafter referred to as "Seller"), and FATHOM DEVELOPMENT, LLC a Maine limited liability company (hereinafter referred to as "Buyer"), ("Purchase Agreement"), to which these Standard Escrow Terms and Conditions ("Escrow Terms") are attached as an Exhibit, the Seller and Buyer hereby acknowledge and agree as follows:

1. Acceptance by Pierce Atwood LLP of its duties as Escrow Agent under the Purchase Agreement to which this Exhibit is attached, is subject to the following Escrow Terms, which all parties to the Agreement hereby agree shall govern and control the rights, duties and privileges of the Escrow Agent and shall be deemed incorporated by reference into the Agreement as if set forth in full therein (the escrow provisions of the Purchase Agreement and the Escrow Terms shall together be referred to as the "Escrow Agreement").

2. The duties of the Escrow Agent are to be determined solely by the express provisions of the Escrow Agreement, and the Escrow Agent shall have no responsibilities except the performance of such duties as are specifically set forth in the Escrow Agreement. The Escrow Agent shall not be deemed to be the agent of any party hereto with respect to its duties hereunder. The Escrow Agent shall not be liable for any error of judgment, any act taken or omitted by it, or any mistake in fact or law, except for its own willful misconduct and breach of the Escrow Term. The parties acknowledge that the duties of the Escrow Agent hereunder are solely ministerial and contractual in nature and have been requested for their convenience. The Escrow Agent shall not be deemed to be the agent of any party hereto with respect to its duties hereunder. Without limiting the generality of the foregoing, the Escrow Agent shall not incur liability and shall be fully protected in respect of any action taken, omitted or suffered by it in good faith, except for a breach of the Escrow Terms.

3. The Escrow Agent shall be entitled to act on or rely upon any written notice, direction, request, waiver, consent, receipt or other document (including those transmitted by facsimile transmission, email, or other electronic transmission which is capable of producing a written record) which appears to the Escrow Agent to have been signed or presented by the party or parties entitled to execute or deliver such document, and the Escrow Agent shall have no duty to inquire of or investigate the authorization, signature or authenticity of such person or document.

4. The Funds are being deposited into a client trust account of the law firm of Pierce Atwood LLP for disbursement on behalf of the undersigned in accordance with the terms

of the Purchase Agreement of even date, to which these a copy of which is attached hereto and made a part hereof. The funds (the "Funds") shall be held in escrow by Pierce Atwood LLP in a non-interest-bearing account in accordance with the terms and conditions set forth herein. In the event of an inconsistency between the provisions of any other document and the provisions of these Escrow Terms, the provisions of these Escrow Terms shall govern. The Escrow Agent shall place any funds held in escrow in a non-interest-bearing account and shall have no duty to invest or earn interest on any such funds. The parties recognize that the amount of the funds deposited may exceed the amount of Federal Deposit Insurance Corporation or other insurance thereon and agree that the Escrow Agent shall have no responsibility for losses due to bank insolvency, whether or not the bank in which the funds are deposited was selected by it. Any payments by the Escrow Agent may be made, at the Escrow Agent's election, by check or by wire transfer.

5. The Escrow Agent may, but shall not be obligated to, in its sole and absolute discretion at any time and from time to time, for any reason or for no reason, commence an interpleader or other action, suit or proceeding for the resolution of any controversy regarding the Escrow Agreement or the subject matter of its escrow, and deposit the funds or other property held in escrow. Upon so depositing such property and filing its complaint in interpleader the Escrow Agent shall be relieved of all liability under the terms of the Escrow Agreement as to the property so deposited, and furthermore, the parties hereto for themselves, their heirs, legal representatives, successors and assigns do hereby submit themselves to the jurisdiction of said court and do hereby appoint the then Clerk or acting Clerk, of said Court as their agent for the service of all process in connection with such proceedings. The institution of any such interpleader action shall not impair the rights of the Escrow Agent hereunder.

6. The parties to the Escrow Agreement other than the Escrow Agent (collectively referred to as the "Indemnitors") jointly and severally agree to indemnify each of the Escrow Agent and its attorneys, employees and agents (collectively referred to as the "Indemnitees") against, and hold them harmless of and from, any and all loss, liability, cost, damage and expense, including reasonable counsel fees (including those of the Escrow Agent computed at its regular hourly rates), which the Indemnitees may suffer or incur by reason of any action, claim or proceeding brought or threatened to be brought, whether by any party to the Escrow Agreement or by any other person or entity, against any Indemnitee or in which any Indemnitee may become involved arising out of or relating directly or indirectly in any way to the Escrow Agreement or any transaction to which the Escrow Agreement directly or indirectly relates (including any action, claim or proceeding to enforce any indemnity obligation or any other obligation of any party to the Escrow Agreement) , excluding, however, any willful or intentional wrong doing on the part of the Escrow Agent or breach of the Escrow Terms as determined by final judgment. The provisions of this paragraph shall survive any termination of the Escrow Agreement, whether by disbursement of the property held in escrow, the resignation of the Escrow Agent or otherwise.

7. THE ESCROW AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF MAINE APPLICABLE TO

CONTRACTS MADE AND TO BE PERFORMED ENTIRELY WITHIN SUCH STATE, WITHOUT REFERENCE TO CONFLICT OF LAWS PRINCIPLES, AND THE ESCROW AGREEMENT CANNOT BE CHANGED OR TERMINATED EXCEPT BY A WRITING SIGNED BY ALL OF THE PARTIES TO THE ESCROW AGREEMENT. THE PARTIES TO THE ESCROW AGREEMENT HEREBY AGREE THAT NO ACTION, SUIT OR PROCEEDING SHALL BE COMMENCED AGAINST THE ESCROW AGENT UNLESS (A) THE ESCROW AGENT SHALL FIRST HAVE BEEN GIVEN 30 DAYS' WRITTEN NOTICE OF THE CLAIM AND (B) THE SAME IS BROUGHT IN A COURT OF COMPETENT JURISDICTION LOCATED IN THE STATE OF MAINE. THE PARTIES TO THE ESCROW AGREEMENT OTHER THAN THE ESCROW AGENT AGREE THAT IN ANY ACTION, SUIT OR OTHER PROCEEDING COMMENCED BY THE ESCROW AGENT, SERVICE BY MAIL AS PROVIDED HEREIN SHALL BE DEEMED GOOD, PROPER AND EFFECTIVE SERVICE UPON SAID PARTY, AND EACH CONSENTS TO THE EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS SITTING IN THE STATE OF MAINE (OR ANY OTHER COURT SELECTED BY THE ESCROW AGENT) IN ANY ACTION, SUIT OR PROCEEDING UNDER OR IN CONNECTION WITH THE ESCROW AGREEMENT, HEREBY WAIVING ANY AND ALL RIGHT TO OBJECT TO THE JURISDICTION OR VENUE OF SAID COURT OR TO OBJECT THAT SUCH COURT IS AN INCONVENIENT FORUM.

8. If a controversy arises between one or more of the parties hereto, or between any of the parties hereto and any person not a party hereto, as to whether or not or to whom the Escrow Agent shall deliver the property held in escrow or any portion thereof, or as to any other matter arising out of or relating to the Escrow Agreement or the property held in escrow, the Escrow Agent shall not be required to make any inquiry or investigation, or make any determination as to such controversy, and need not make any delivery of such property but may retain it until the rights of the parties to the dispute shall have finally been determined by agreement in form, substance and formalities satisfactory to the Escrow Agent or by final order of a court of competent jurisdiction from which final order the time for appeal has expired without an appeal having been taken.

9. All notices, requests and other communications which may or must be given hereunder shall be in writing (including facsimile transmission, email, or other electronic transmission which is capable of producing a written record) and shall be deemed to have been duly given upon the earliest of receipt or attempted delivery or 3 days after deposit when mailed by registered or certified mail, return receipt requested, to each of the parties at their addresses set forth in the Escrow Agreement, or such other address of which notice may be given to all parties from time to time.

10. The Escrow Agreement shall be binding upon and inure to the benefit of Escrow Agent, Seller and Buyer, and their respective heirs, personal representatives, successors and permitted assigns, but not to the benefit of any third party other than the Indemnitees. The Escrow Agreement and any rights thereunder may not be assigned without the written consent of the Escrow Agent, and any

purported assignment without the Escrow Agent's written consent shall be null and void and of no effect whatsoever. The rights granted the Escrow Agent herein are cumulative and the exercise of any one or more rights hereunder shall not constitute a waiver of the Escrow Agent's right to assert all other legal and equitable remedies available to it under the circumstances. If one or more of the provisions or paragraphs of the Escrow Agreement shall be held to be illegal or otherwise void or invalid, the remainder of the Escrow Agreement shall not be affected and shall remain in full force and effect.

11. **Pierce Atwood LLP acting as Escrow Agent and is holding the Funds in its account at the request of the Seller and Buyer, and each of Seller and Buyer acknowledge that Pierce Atwood LLP represents Buyer and its Affiliates for this transaction and does not represent Seller. The Seller and Buyer both hereby confirm their consent to Pierce Atwood LLP's current and continued representation of Buyer in this transaction, any dispute, arbitration or litigation arising in connection herewith, including any dispute about the Funds, and any and all future representation of Buyer and its affiliates. In the event of a dispute between the parties, the commencement of an Interpleader action, or the resignation by Pierce Atwood LLP as Escrow Agent, Pierce Atwood LLP shall be free to continue to act as counsel for and represent Buyer, and each of Seller and Buyer hereby consent to such representation.**

12. That Pierce Atwood LLP is not liable for any portion of the Funds in excess of the limit of FDIC insurance on the account and is not liable for losses due to failure of the bank in which the account is held.

13. That Pierce Atwood LLP will not make any payment with respect to the Funds until it receives confirmation that the Funds are collected in its account.

Evidence of State or Federal Approvals

Not Applicable. No State or Federal approvals are required for this project at this time.

Portland, Maine Yes. Life's good here.

Planning & Urban Development Department

ZONING ANALYSIS Relevant Zone(s) B3

All Projects:

	Required	Proposed
Lot Size	none	2.26 ac
Area Per Dwelling Unit	none	none
Minimum Street Frontage	15 ft	1315 ft
Front Yard Minimum	none	0
Front Yard Maximum	none	none
Rear Yard	none	none
Yard Right	none	none
Yard Left	none	none
Side Street Setback	none	none
Step Back	none	none
Maximum Lot Coverage	100%	97%
Minimum Lot Coverage	none	none
Maximum Height	150 ft	150 ft
Open Space	none	~3800 sf*
Maximum Impervious Area	100%	TBD
Pavement Setback	none	N/A
Floor Area Ratio	none	N/A
Off Street Parking Spaces	353	361
Loading Bays	2	3
Other 1		
Other 2		
Other 3		

*The project includes a Pocket Park/Landscaped alley way that will be open to the public. The area will be owned and maintained by the developer.

Article 14-7 Master Development Plan Review Standards

14.7.1 In general

A. Integration with the surrounding context. The proposed master development plan has been designed to integrate with the surrounding context of the site. Please see the plan set.

B. Consistency with City plans. The proposed master development plan is consistent with the City's Comprehensive Plan and consistent with City Council-approved master plans and facility plans for off-premise infrastructure.

14.7.2 Natural features and open space

A. Preservation of natural features. The proposed buildings have been located considering the existing topography. The proposed project area is a previously developed, urban parcel. The site is fully developed with buildings and surface parking without any natural features of significance. Vegetation is limited to small amounts of landscaping within the parking lot. Useable open space has been provided as part of the design. Please see the plan set and the site analysis information.

There are no natural waterways or wetlands on or within close proximity of the project site.

B. Provisions for open space. The proposed master development plan has made provisions for usable open space including Level 2 and roof deck areas for hotel guests and condominium owners and guests. The site includes a public pocket park space on Congress Street. Please see the plan set and architectural renderings.

14.7.3 Historic Preservation

There are no buildings of historic significance on the site. The proposed development site is located in an area of the City that, like much of Portland, is a mix of modern and historic structures. The parcel is located next to City Hall and the Central Street Fire Station as well as being in close proximity of Portland High School and the U.S. Court House. All of these structures are historic landmarks and are located in the historic district overlay zone. Congress Street and Cumberland Avenue are a blend of modern and traditional architecture that are the hallmark of a vibrant City.

The proposed development has been designed to work cohesively with the historic fabric of the surrounding area. Please see the Master Development Plan included as supportive information for the Neighborhood Context section of this application.

14.7.4 Infrastructure

A. Adequacy of infrastructure capacity. The proposed project will utilize the existing street infrastructure.

B. Continuation of street grid. The proposed project will not result in the addition of streets to the existing city grid.

14.7.5 Design

A. Creation of a cohesive identity. The proposed master plan was designed to provide a cohesive identity along Congress Street. Please refer the neighborhood context and design narratives attached to this application

	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.
1	Land Use Ordinance Section 7.3 Table 7-E Maximum Front Setback	All buildings or structures shall be located within 5 feet of the property line	Applicant proposes varying setbacks along Congress Street, Myrtle Street and Cumberland Avenue	See attached narrative
2	Technical Standards Section 14.1.2	1.14.2. Parking spaces shall meet the following dimensional requirements: • Standard parking space: 9 feet wide by 18 feet long. • Compact parking space: 8 feet wide by 15 feet long • Motorcycle/motorized scooter parking space: 4 feet wide by 8 feet long. Any parking lot with 10 or fewer spaces shall contain standard sized parking spaces. Parking lots with greater than 10 spaces may be comprised of up to 20% compact parking spaces.	Applicant proposes that up to 35% of Condominium's structured parking be reduced width/compact spaces (up to 96 of 267 spaces proposed) and; That all of the valet parked spaces in the hotel's structured parking be reduced width/compact spaces	See attached narrative
3	Technical Standards Section 14.1.3	Parking lot layout shall conform to Figures I-28 thru I-32.	Applicant seeks a waiver to allow parallel valet parking spaces across the ends of double stacked, 90 degree compact spaces within the Hotel parking levels on Lot 1	See attached narrative
4	Technical Standards Section 14.1.5	Vehicular access shall be provided by one or more aisles. Minimum widths of aisles are illustrated in Figures I-28 thru I-31.	Applicant seeks a waiver of 24' drive aisle width in the Hotel garage to allow to allow parallel valet parking spaces across the ends of double stacked, 90 degree compact spaces within the Hotel parking levels on Lot 1	See attached narrative
5	Land Use Ordinance Section 19.1 Off Street Parking Table 19-A Off-street Parking Minimums	Singe, two-, or Multi Family Units 1 space /dwelling unit	The applicant seeks a waiver reducing the minimum parking ratio for the Condominium developments on Lot 2 and Lot 3 to not less than 0.9 spaces per unit.	See attached narrative

7A Waiver Narrative

Waiver 1

The Master Development Plan requests increased setbacks along Congress Street, Myrtle Street and Cumberland Avenue. In the B-3 zone, the Zoning Ordinance Section 7.3 Table 7-E defines the maximum permitted setback from the street as 5 feet. Section §(b)(1)(e)(2) of the City's Design Manual states that a proposed development may exceed the maximum setbacks as required only when the applicant demonstrates to the Planning Board that the introduction of increased building setback at the street level:

a. *Provides substantial and viable publicly accessible open space or other amenity at the street level that supports and reinforces pedestrian activity and interest. Such amenities may include without limitation plazas, outdoor eating spaces and cafes, or wider sidewalk circulation areas in locations of substantial pedestrian congestion;*
b. *Does not substantially detract from the prevailing street wall character by introducing such additional setback at critical building locations such as prominent form-defining corners, or create a sense of discontinuity in particularly consistent or continuous settings;*
c. *Does not detract from existing publicly accessible open space by creating an excessive amount of open space in one (1) area or by diminishing the viability or liveliness of that existing open space;*
d. *The area of setback is of high quality and character of design and of acceptable orientation to solar access and wind impacts as to be attractive to pedestrian activity.*

The following narrative addresses each of the criteria identified in Section §(b)(1)(e)(2) of the Design Manual.

a. ***Provides substantial and viable publicly accessible open space or other amenity at the street level that supports and reinforces pedestrian activity and interest. Such amenities may include without limitation plazas, outdoor eating spaces and cafes, or wider sidewalk circulation areas in locations of substantial pedestrian congestion;***

   The Master Development plan seeks to widen the public sidewalk on Congress Street in response to Planning Staff comments and recommendation to create a linear plaza activating Congress Street and allowing the site to comply with the contextual front setback with City Hall, required by the Design Manual.

   The revised design and request for additional setback on Congress Street is in direct response to this request from Planning Staff. The revised design:

   - Creates a public space oriented toward the street that provides a visual and thematic connection from City Hall Plaza to Lincoln Park
   - Provides opportunities for outdoor seating that can support businesses on the site and events along Congress Street;
   - Meets the contextual setback requirements for the continuation of the Congress Street's Street wall;
   - Provides opportunity to enhance the tree canopy along Congress Street

In the revised floorplans, the Condominium lobby entrance has been relocated from Congress Street to the Pearl Street side of the building providing for retail/commercial floor space to activate the prominent building corner at Pearl Street and Congress Street.

Similar to Congress Street, the Cumberland Avenue façade steps back between 3.5' and 11' from the right of way. The step backs and the proposed curb extensions on Cumberland create a similar opportunity for outdoor seating and space supporting the retail/commercial spaces at street level, particularly at the corners of the building.

The proposed setbacks allow for 10' of clearance from the building to the overhead power lines on Cumberland Avenue and provide clearance for the proposed building's foundation construction from existing underground utilities in the sidewalks.

The proposed setbacks provide for a wider sidewalk width, consistent with the width provided on Cumberland Avenue to the south of the site including the Merrill Auditorium, and Portland High School sites.

The increase setback, coupled with a reduction in building height for the Cumberland Avenue condominium building reduces the scale and massing of the project along Cumberland Avenue.

The proposed setbacks on Myrtle Street vary from 4' to 8' to allow for the planting of street trees with wider sidewalks in the area opposite City Hall and the Merrill Auditorium entrance enhancing the street as an active space for both the on-site retail/commercial buildings and for public events associated with City Hall and the auditorium. The proposed setback on Myrtle Street is consistent with City Hall/Merrill Auditorium's setback on this block which varies from 0' to 9'. The increased setback provides clearance for the proposed building's foundation construction from existing underground utilities in the sidewalks.

b. Does not substantially detract from the prevailing street wall character by introducing such additional setback at critical building locations such as prominent form-defining corners, or create a sense of discontinuity in particularly consistent or continuous settings;

The street setting on this section of Congress Street, Cumberland Avenue, and Myrtle Street are not a particularly consistent or continuous setback.

The street wall along Congress has been created to be responsive the contextual street wall considerations discussed in item a. above. The proposed street wall on Myrtle Street is reflective of City Hall and Merrill Auditorium and the street wall on Cumberland Avenue to the south which varies in a manner similar to the blocks to the south, including those occupied by Merrill Auditorium and Portland High School.

c. Does not detract from existing publicly accessible open space by creating an excessive amount of open space in one (1) area or by diminishing the viability or liveliness of that existing open space;

The proposed setbacks will enhance pedestrian experiences at the building corners improving pedestrian crossing and safety and create viable space supporting business on the site at a location that has been a dominated by surface parking lot for many years. The most significant

setbacks requested occur along Congress Street and have been consciously considered to provide a visual and contextual connection between public spaces at City Hall and Lincoln Park.

The setback on Myrtle Street and Cumberland Avenue are reflective of and responsive to the setbacks at Merrill Auditorium. The additional open space created is not excessive and does not diminish the liveliness of the street. There are no other significant open spaces on Cumberland Avenue in the vicinity of the project.

d. The area of setback is of high quality and character of design and of acceptable orientation to solar access and wind impacts as to be attractive to pedestrian activity.

The areas of increased setback will be constructed of City standard brick sidewalk within the right of way and a combination of brick sidewalk and with pavers on on-site areas to enhance the spaces in support of the street level uses. The design creates quality pedestrian spaces consistent with the City's standards and precedents.

The public brick sidewalk materials will extend on to the site on Congress Street from the right of way to the base of the amenity deck stairs and on Myrtle Street as a visual wayfinding feature visually reinforcing these features a public amenity.

The proposed buildings are to be constructed within height limits allowed by zoning and the shadow studies submitted with the application provide evidence of the availability of solar access to the extent practicable in an urban setting with buildings of the heights allowed by zoning. The northwest-southeast orientation of the block provides sunlit conditions for much of the day throughout the year.

Waiver 2

The Master Development Plan requests a waiver of the technical standards Section 14.1.2 regarding the number of compact spaces within the structured parking levels

The language of the Ordinance is as follows:

> *Any parking lot with 10 or fewer spaces shall contain standard sized parking spaces. Parking lots with greater than 10 spaces may be comprised of up to 20% compact parking spaces.*

The waiver requests that all of the valet operated parking spaces in the Hotel's parking structure on Lot 1 be permitted as reduced width/compact spaces.

The reduced width spaces are typically 8' to 8'6" with the width narrowed to accommodate the anticipated size and spacing of columns that will be required in the hotel garage levels.

- This column condition is not unusual in parking structures below hotel and residential uses, where column spacing needs to respond to hotel room bay spacing, and has precedent in other projects in the City
- The building columns are anticipated to include fire proofing and protective encasements that may encroach into the standard 9' width.
- All of the hotel parking will be by valet, there is no self-parking by the public in the hotel
- With valet parking, the plan proposes to include double stacked space and spaces less than 9' width

The Hotel garage compact spaces will arrange generally as shown below.

We anticipate that all of the 90 degree stalls, exclusive of ADA Accessible spaces, will be compact (approximately 70-75 based on the MDP design). Widths are anticipated to vary from 8' to 8.5'. It is anticipated that the reduced width 90 degrees stalls may vary in length but will meet the City's minimum 15' length for a compact stall.



Hotel Garage Level 0



Hotel Garage Level 1

The waiver requests that up to 35% of the structured parking spaces for the condominium parking on Lot 2 to be reduced width/compact spaces.

The Master Development Plan proposes a total of up to 267 vehicle parking spaces on two levels withing the Lot 2 and Lot 3 Condominium phases, this total may include up to 96 reduced width spaces. Generally arranges as shown on the site plans.

- The building columns are anticipated to include fire proofing and protective encasements that may encroach into the standard 9' width. The spaces are anticipated to meet or exceed the minimum 8'x15' dimensions for a compact space
- In general, columns are located at the head of the stalls where they will not restrict door swing or door clearance between vehicles.
- This column condition is not an unusual condition in residential scale parking structures and has precedent in other projects in the City.
- The reduced width stalls are dedicated to unit owners who will be aware of the column locations and do not typically represent a high use/turnover parking location. Because none of the reduced width spaces are available to the public, no compact space parking signs are necessary or proposed.

The arrangement of Condominium compact spaces will generally be as shown below.

We anticipate approximately 60 to 70 stalls may be reduced width spaces (actual count will vary based on final building design). Widths are anticipated to be a minimum of 8' wide. It is anticipated that the reduced width 90 degrees stalls may vary in length but will meet the City's minimum 15' length for a compact stall.



Condominium Garage Level 0



Condominium Garage Level 1

Waiver 3 and Waiver 4

The Master Development Plan requests a waiver of the technical standards Section 14.1.3 regarding the parking space layout and Section 14.1.5 related to drive aisle width within the structured parking levels of the Hotel garage on Lot 1 to allow parallel valet parking spaces across the ends of double stacked, 90 degree compact spaces within the Hotel parking levels on Lot 1

The language of the Ordinance is as follows:

> *Section 14.1.3 Parking lot layout shall conform to Figures I-28 thru I-32.*
>
> *Section 14.1.5 Vehicular access shall be provided by one or more aisles. Minimum widths of aisles are illustrated in Figures I-28 thru I-31.*

The waiver requests double stacked 90 degrees spaces and parallel spaces generally as shown on the plans. Valet parked parallel parked vehicles may block the ends of 90 degrees spaces and be located within the 24' clear width of the drive aisles.

- All of the hotel parking will be by valet, there is no self-parking by the public in the hotel
- The column spacing will allow clear space in the drive aisle of at not less than 24'
- The use of double stacked and parallel spaces in the valet operated garage allow for efficient valet operations for uncongested operation of the site drive entrance on Congress Street

The arrangement of spaces will generally be as shown on the floor plans below.



Hotel Garage Level 0



Hotel Garage Level 1

Waiver 5

The Master Development Plan requests a reduction in the required parking for the Condominium developments on Lot 2 and Lot 3 from the typical 1 space per dwelling unit required for residential uses The Master Development Plan requests to reduce the requirement to 0.9 spaces per dwelling unit (or a minimum of 260 parking spaces within the structured parking levels on Lot 2 and Lot 3).

The project anticipates addressing the parking demand for each phase of the project during Site Plan review when a final unit count, building program and floor configuration is determined and the Planning Board determines the parking demand.

It is anticipated that a combination of the Categorical Exceptions for Off Street Parking Minimums outlined in Section 19.1 Table 19-B will be employed including:

1. Multi-family Housing that participates in a Transportation Demand Management (TDM) Program.

   Future development proposals may include a TDM plan to reduce parking demand under this exemption.

2. Transit Proximate Development: No off-street parking shall be required within ¼ mile of fixed route transit service. New uses or changes of use of more than 10,000 SF taking advantage of this exception shall be required to provide a Transportation Demand Management Plan if they use this provision in lieu of parking requirements.

   Future development proposals may include a TDM plan to reduce parking demand under this exemption.

Other provisions of the Ordinance which may be employed to meet the parking demand established by the Planning Board in future Site Plan applications include:

- Section 19.14.4 Shared Use Vehicles.

  The required parking for multi-family residential buildings may be partially met through provision of shared-use vehicles, which are vehicles available for use on a fee basis to the residents of the building. One shared use vehicle shall be deemed to satisfy eight required car spaces, but in no case shall more than 50% of the parking requirement be satisfied by a shared vehicle use.

  The applicant may propose one or more shared use vehicles to meet parking demand in a future application when a final unit count and parking demand is determined.

- Section 19.1.7 Fee-in-lieu of Parking

  Any development subject to site plan review shall either provide the required parking on- or off-site or pay a fee-in-lieu of parking. Fees shall be deposited into the Sustainable Transportation Fund, as established in Section 19.3 of the land Use Ordinance. The fee shall be paid on or before the date upon which a certificate of occupancy is issued. Payment shall be secured by a bond at the time the amount of the fee is set.

  The applicant may propose an in-lieu fee to meet parking demand in a future application when a final unit count and parking demand is determined.

Financial Capability

The proposed project is comprised of three separate developments and there are two different entities providing financing:

- Reger Dasco Properties (dba 385 Congress LLC) will develop the condominiums on Lots 2 and 3;
- The Fathom Companies (dba Fathom Congress, LLC) will develop the hotel and condominiums on Lot 1

Attached please find the following letters as proof of financial capability:

- Letter dated March 31, 2020 from Newmark Knight Frank for Reger Holdings (Reger Dasco Properties);
- Letter dated February 1, 2022 from Mascoma Bank for Fathom Congress LLC.

March 31, 2020

Portland Planning Staff
Portland City Hall
389 Congress Street
Portland, ME 04101

RE: Congress Street in Portland

To Whom it May Concern:

I'm writing regarding the future development of Congress Street in Portland being proposed by Reger Holdings. Our firm Newmark Knight Frank and my prior firm has acted as a financing intermediary for Reger Holdings for the past 15 years on numerous projects from condominiums to industrial. In the last 3 years alone, we arranged the financing for over $150 million of development in Maine, Massachusetts and South Carolina. Two local examples include: (i) the 383 Commercial Street condominium development; we arranged a $42 million loan from a Boston Bank; and (ii) the Bay House Condominiums in Downtown Portland; we arranged a $20 million dollar construction loan with a Boston Bank that had a very successful sellout.

NKF Debt Group in Boston has the capacity to finance large development projects thru our long term lending relationships. We also have access to financing sources through our ownership group BGC Partners (NYSE: BGCP) and our proprietary lending platform Cantor Commercial as well as our GSE lending arm.

Reger Holdings is a third generation well respected real estate company with numerous holdings and experience. The company is run and spearheaded by Mr. Gordon Reger. Our dealing with him and his firm have always been handled in a first class manner. As a result, we would highly recommend Reger Holdings for the development of Congress Street.

If I can be of any assistance in your decision, please do not hesitate to give me a call. Thank you.

Regards,

David Douvadjian

Head of Mortgage Banking
New England
(617) 863-8388
ddouvadjian@ngkf.com

SENT VIA EMAIL

February 1, 2022

City of Portland
Planning Board
385 Congress Street
4th Floor
Portland, Maine 04101

Re: Statement of Financial Capacity: Fathom Congress, LLC, as part of Fathom Development, LLC, and Mr. James Brady.

To Whom It May Concern,

We are pleased to confirm that Fathom Congress, LLC, as part of Fathom Development, LLC, and Mr. James Brady possess the full financial capacity and experience to successfully finance the proposed development to be located at 385 Congress Street, Portland, Maine 04101.

Please do not hesitate to contact me if you have any questions.

Sincerely,



Tad Atwell
Tad.Atwell@MascomaBank.com
Senior Vice President
48 Free Street, Portland, Maine

Technical Capability

There is a highly qualified team of developer, architects, and engineers that have been compiled for the proposed project.

Residential Condominiums (Lots 2 and 3)
The proposed residential condominiums are to be developed by Reger Dasco Properties (dba 385 Congress Street LLC).

Reger Dasco Properties is a Portland-based partnership between Gordon Reger, Principal of Reger Holdings in West Seneca, NY, Demetri Dasco, Principal of Atlas Investment Group in Boston, MA and Joseph Dasco, Principal of Boulder Hill Development in western Massachusetts. Please see the attached writeup for more detailed information.

Hotel (Lot 1)
The proposed hotel is to be developed by Fathom Companies (dba Fathom Congress, LLC). The Fathom Companies is a fully integrated real estate development, management, and investment company based in Falmouth Maine. Fathom has developed and currently operates several hotel and commercial properties in Portland including the Press Hotel, 80 Exchange Street and Canopy by Hilton Waterfront Hotel

Architect

CBT is a Boston-based architectural firm with over 50 years of experience. They are a multi-disciplined firm that specializes in architecture, interior design, and urban design that has worked on projects both nationally and internationally. Please see the additional information included as part of this exhibit and the Neighborhood Context Statement exhibit for additional qualification information.

Civil/Survey/Permitting
Civil engineering, surveying, and permitting services are being provided by Sebago Technics.

Sebago Technics, Inc. (STI) is a multi-disciplined engineering firm with 40 years of experience, that offers a wide range of services specializing in land development, planning, permitting and engineering design services. We maintain a staff of multi-disciplinary professionals to provide services in the areas of general civil engineering, road and utility infrastructure design, construction management, permitting, landscape architecture, soil science, wetlands science, land surveying, and environmental engineering.

Please see the attached STI resumes for Steve Doe, RLA, Dan Riley, P.E., and Andrew Tufts, LA

Reger Dasco Properties

Reger Dasco Properties is a Portland-based partnership between Gordon Reger, Principal of Reger Holdings in West Seneca, NY, Demetri Dasco, Principal of Atlas Investment Group in Boston, MA and Joseph Dasco, Principal of Boulder Hill Development in western Massachusetts. Reger Dasco Properties has extensive experience with real estate investments**,** high-quality residentia**l** developments and mixed-use projects**.**

Gordon's career path began with Marc Equity Corporation, where he headed the company's new residential development division. His responsibilities included overseeing land development and new residential construction in western New York. Gordon also worked on numerous condominium conversions and new residential construction projects in Pennsylvania, Florida, South Carolina and Texas. Later in his career, as CEO of Reger Holdings, Gordon became involved in the redevelopment of historic buildings into luxury residences in Boston's Back Bay. One of his most notable projects was the Gateway Terraces, a premier, 230,000 sf, mixed-use development in the city's South End. Gordon led every aspect of the project, from concept to land acquisition, development, and retail sell-off.

Demetri established Atlas Investment Group in 2001 and currently oversees development acquisitions, construction management, and investment operations of the company's real estate portfolio. Under his leadership, Atlas has created transformational housing and retail opportunities, building strong, thriving, and diverse communities working in partnership with neighborhoods, residents, businesses and community groups. Demetri brings more than 25 years of experience to commercial real estate and development. Prior to founding Atlas Investment Group, Demetri was co-founder and president of his own specialty construction firm. Under his leadership, it grew into one of Boston's premier construction restoration companies

Joe started his career with Arthur Andersen and Company, a global accounting and consulting firm where he earned his CPA certification. Along with one of his Arthur Andersen associates, Joe later purchased AV Associates Inc., an Arthur Andersen client located in Storrs, CT. Together, they grew the multi-media/communications business from $2.5 million annual revenues to a $40 million business serving the large-scale needs of its Fortune 100 clients. Joe and his partner later sold the business to MCSI, a NASDAQ listed company. Joe then founded and continues to operate Boulder Hill Development, a boutique design-build real estate development and construction company located in western Massachusetts. Joe is also responsible for the day to day operations at Reger Dasco Properties.

Reger Dasco Properties has been working in Portland since 2006. The project resume in Portland includes, The Bay House, a mixed-use project which consists of 86 residential condominiums and over 6,000 square feet of commercial space, 113 Newbury Street, consisting of 35 residential condominiums, The Mason Block which consists of 27 condominiums and approximately 4,000 square feet of commercial space and Hobson's Landing which is currently under construction which is a multi-phase project consisting of a 150 room hotel (being developed by others), 85 condominiums, approximately 7,000 square feet of commercial space with an additional phase currently under design.

Completed Portfolio Fall 2021

info@fathomcompanies.com

www.fathomcompanies.com

207.808.8787

Fathom Companies is a fully integrated real estate development, management, and investment company focusing on exceptional properties in secondary and tertiary markets. We seek to add value to mixed-use, office, retail and hospitality facilities through thoughtful design and fastidious attention to detail. Our hospitality management branch brings decades of experience with some of the most successful brands in the industry. We aim to foster an environment of empowerment, creativity and teamwork.

The Press Hotel

Portland, Maine

- Historic Rehabilitation Adaptive Reuse

- Former Newspaper Headquarters of the Portland Press Herald

- 110 Guest Room Boutique Hotel with 100 Seat Restaurant

- Ranked #1 and RevPAR leader in the market

- Opened May 2015

The opening marked the City of Portland's first lifestyle boutique hotel, breathing new life into a cherished, historic city landmark.

Design & Construction Team:

- Architype Architect
- Wright Ryan Construction



The Press Hotel

80 Exchange Street

Portland, Maine

- Historic Rehabilitation
- 15,000 Square Feet
- 4 Story Retail and Class A Office Space
- Opened January 2019

The project set out to bring back the once glorious building and restore its place in the urban fabric as a good neighbor and leader in design, and community development.



4th Floor Fathom Office at 80 Exchange Street

Design & Construction Team:

- Briburn Architects
- Warren Construction

Canopy by Hilton Portland Waterfront Hotel

Portland, Maine

- Ground Up Construction
- Canopy Lifestyle Brand by Hilton
- 135 Guestroom Lifestyle Hotel with indoor/outdoor rooftop bar and restaurant overlooking Casco Bay.
- Opened June 2021

Design & Construction Team:

- HKS Architects
- Baskervill Architects
- Cianbro Construction



Luna Rooftop Bar at Canopy Portland Waterfront Hotel



FIRM OVERVIEW

WE ARE A TEAM OF OVER 220 ARCHITECTS, PLANNERS, INTERIOR AND GRAPHIC DESIGNERS. WE'RE CURIOUS. WE'RE CREATIVE.
WE CHANNEL OUR COLLECTIVE DRIVE AND EXPERTISE TO CREATE RESOURCEFUL, IMAGINATIVE, **TRANSFORMATIVE** SPACES.

ABOUT CBT

CBT is an award-winning design firm providing services in interior design, architecture, and urban design for a diverse range of clients in a variety of building types. Founded in Boston in 1967, CBT is proud of our 220 designers, architects, planners, and support personnel dedicated to innovative and responsive design across eight project sectors. Our interiors group is among the most robust in the region.

Our firm works nationally and internationally on projects that range from multi-family developments, urban mixed-use master plans, civic and cultural buildings, corporate interior design, and academic projects. Clients come to us for our real estate savvy, ability to provide strategic design services in a broad number of project types and styles, and our skill in blending high quality planning and design with practical goals of budget and schedule.

Our work benefits from a holistic approach that considers the scope of a project in its broadest definition from issues of long-range planning to ergonomic detail. In 50 years of practice, CBT has played an important role in a broad range of projects in diverse settings. It is our belief that for each of our projects to come to life and continue to thrive, it must support the business goals and culture of each client.

INTEGRATED PRACTICE

CBT's principals practice broadly in the fields of architecture, interior design and urban design with specialties in residential and commercial developments, workplace interiors, academic, large-scale site development and mixed-use design. We freely share our talents and our specialized staff so that each project gets the unique mix of creativity that it deserves. But, we manage projects independently so that each client relationship is personal, direct and professional.

CBT's recent award-winning residential projects in and around Boston include the Mandarin Boston Hotel and Residences; Avalon North Station; Twenty | 20 at Cambridge Crossing; AVA Theater District; and Watermark East. Projects currently in construction include the monumental new residential tower to replace the Government Center Garage, The Echelon Seaport and Parcel I at Cambridge Crossing.

For these, we have planned and programmed hundreds of residential units, common spaces, amenities, and ancillary living environments.

CROSS-DISCIPLINARY ADVANTAGE

cbt



ARCHITECTURE

Architectural design plays a critical role at the street level as within a skyline. CBT holds dear every design commission that allows for a unique vision, creative design expression, and meaningful contribution to the surrounding neighborhood.



URBAN DESIGN

At the core of responsible urban design is an understanding of context: successful placemaking results from thoughtful exploration of the built and natural environment. Within the urban fabric, each project must be a complement to the surrounding parcels, while always appealing to the human experience.



INTERIOR DESIGN

We understand how the interior design and the base building inform one another, so that space is conceived in a responsive way. When the interiors are designed in conjunction with the architecture very early in the project, a much more appropriate and efficient result emerges.

INNOVATIVE DESIGNS

INTEGRATED IDEAS

EFFECTIVE RESULTS

AUTHENTIC DESIGN

cbt

CBT'S RECENT CLIENTS (THE THREE-YEAR LIST)

ABRY Partners

Abu Dhabi Future Energy Company

Abu Dhabi Urban Planning Council

Ajax Consulting Services

Alexandra Partners

Analysis Group

Andover School of Montessori

AvalonBay Communities

Babson College

Berkeley Investments

BioMed Realty Trust

Blue Cross Blue Shield of Massachusetts

BNY Mellon

Boston College

Boston Global Investors

Boston Properties, Inc.

Boston University

Bryant University

Cottonwood Management

Cabot, Cabot & Forbes of New England

CIM Group

Crane & Co.

Curry College

Cushman & Wakefield

Deka Immobilien Investment

DivcoWest

Dynatrace

Eaton Vance Management

Equinox Luxury Fitness

Flatley Management Company, LLC

FoxRock Properties

Gables Residential

Grantham, Mayo, Van Otterloo & Co.

HarbourVest Partners, LLC

Harvard Business School

Jefferson Apartment Group LLC

HUBweek

Jefferson Apartment Group LLC

Jones Day

Jones Lang LaSalle — JLL

Leggat McCall Properties

Massachusetts State Senate

MIT Media Lab

National Development

Natixis Investment Managers

New England Aquarium

Norton Museum of Art

Oxford Properties Group

Pembroke Real Estate

Redgate Real Estate Advisors

Reading Public Library

Related Beal

Samuels & Associates

Sea-Dar Development

Shawmut Design and Construction

Skanska USA Commercial Development Inc.

Sterling Bay

Synergy Investments

The Brattle Group, Inc.

The Druker Company, Ltd.

The Fessenden School

The General Investment and Development Companies

The HYM Investment Group, LLC

Tishman Speyer

Trammell Crow Company

Tufts University

Twining Properties LLC

UDR Apartments

University of Massachusetts Building Authority

WeWork



Education
Bachelor of Architecture, Syracuse University

Professional Affiliations
American Institute of Architects

Boston Society of Architects

National Council of Architectural Registration Boards

Urban Land Institute

US Green Building Council

PRINCIPAL

PHILIP CASEY AIA, LEED AP

PROFESSIONAL EXPERIENCE

Phil Casey is a Principal at CBT and has over 20 years of professional experience in architectural design and project management with specialization in highly complex mixed-use and multi-family residential developments. He has far-reaching experience working with the Greater Boston area and its agencies. He is a skilled and facile senior project manager serving as executive liaison to many of CBT's clients. Phil's wide-ranging and adaptable leadership style has contributed to many award-winning projects within Boston and beyond.

Motor Mart Garage Redevelopment | Boston, MA
Reimagining an Art Deco parking structure as a 19-story tower is an exercise in design agility and artistry. The tower, when complete, will breathe new life into the surrounding urban neighborhood while maintaining the integrity and beauty of the original building.

60 Kilmarnock | Boston, MA
Design for a new mixed-use residential building in Boston's Fenway neighborhood. The project includes 250 – 300 multi-family rental units and 50 – 100 condominium units, along with retail, parking, and public and private amenity spaces.

121 Seaport Boulevard | Boston, MA
Design for a dramatic new elliptical office tower in Boston's Seaport District. The 17-story building offers two floors of retail space and below-grade parking. The innovative building design has resulted in new strategies for environmental sustainability and the project is LEED-Platinum certified.

Cambridge Crossing, Parcel I | Cambridge, MA
This newest residential building in CBT's master-planned Cambridge Crossing neighborhood is a signature design to enrich the character and fabric of the development. At 21 stories, the residences at Parcel I will offer retail options along the street level and nearly 500 new market-rate rental units.

Echelon Seaport | Boston, MA
Site planning and design for a new mixed-use residential project covering a full city block in the heart of Boston's Seaport. Echelon is a three-building, 1.2-million-square-footdevelopment with world-class amenities, ground-level retail, and more than 700 units of housing. In collaboration with KPF of New York.

380 Stuart Street Tower | Boston, MA
Executive Architect with SOM for the design of a new 26-story, 625,000-square-foot office tower in the heart of Boston's Midtown Cultural District.

Confidential Office Master Plan | MA
Design and master plan of a 1 million-square-foot multi-use campus comprised of 5 new, 6-story, lab-ready office buildings, 3-5 single story retail / commercial buildings, and parking for approximately 3,300 cars.

Confidential Residential Tower | Baltimore, MD
Full architectural design for a 44-story residential tower in Baltimore's Inner Harbor, contributing to the development and growth of this neighborhood. When complete, the new building will deliver nearly 400 new units of luxury apartments.

Avalon North Station | Boston, MA
Design for a new, 38-story luxury residential tower adjacent to Boston's famed TD Garden. The 635,000-square-foot project includes 503 residential units, a sky terrace on the 35th floor, 219 above-grade parking spaces, and a two-story retail arcade that connects the new tower to Causeway Street and North Station.

Commonwealth Pier | Boston, MA
Design in collaboration with SHL to revitalize the Seaport World Trade Center on Boston's Commonwealth Pier. The multi-year project will transform and rejuvenate the 705,000-square-foot building and pier with new amenities for greater public access to the waterfront, vibrant retail offerings, first-class event spaces, and a unique and flexible workplace for Fidelity Investments, who will occupy more than 600,000 square feet of new office space.

Gables Seaport | Boston, MA
Design for a 20-story, 300,000-square-foot mixed-use residential development including approximately 250 rental units, amenity spaces and common areas, ground floor retail space, and one level of paking.

AVA Theater District | Boston, MA
Design of a 30-story, 460,000-square-foot glass residential tower in the heart of Boston's cultural district. The building includes 400 modern rental units, 90,000 square feet of below-grade parking, fitness space, shared social spaces, and sky lounge with terrace.

Atlantic Wharf | Boston, MA
Design of Boston's first LEED Platinum high-rise. This 1.2-million-square-foot waterfront development includes a 31-story office tower, the restoration of historic buildings, new retail and residential space, and a dramatic reclaimed public space.

Lofts at Atlantic Wharf | Boston, MA
Adaptive reuse of an 1890 Peabody and Stearns building into 86 contemporary, luxury loft-style apartments, including seven two-story duplex units with club room, fitness room, and a new lobby. This project is a major component in CBT's 1.2-million-square-foot Atlantic Wharf development.

The Beverly | Boston, MA
Design for a 14-story, 496,000-square-foot mixed-use complex above the underground Central Artery. The program includes a 250-key hotel, 230 residential units, 180 elevated parking spaces, and ground-floor retail.

Tango Residences at Cambridge Crossing | Cambridge, MA
Design and construction of a new 236,000-square-foot, 230-unit residential tower with a variety of unit types; in collaboration with architectsAlliance of Toronto.

Clippership Wharf | Boston, MA
Master planning and preliminary design for a five-building, 400-unit residential development on the East Boston waterfront overlooking downtown Boston and the Boston Harbor.



Education
Bachelor of Architecture, Advanced Studies in Studio Art and Art History, University of Minnesota

Professional Affiliations
American Institute of Architects

Association of College and University Housing Officers – International

Boston Society of Architects

Boston Architectural College Thesis Critic

Society of College and University Planning

PRINCIPAL

CHRISTOPHER A. HILL AIA

PROFESSIONAL EXPERIENCE

Christopher has 31 years of experience in the design of a variety of projects ranging from academic and institutional facilities to mixed-use office and residential complexes. He is a sought expert on the design of campus residential environments often based around live/learn principles. He has served as a guest lecturer on residential hall design at both the Harvard Graduate School of Design summer program and the ERAPPA, SCUP, AIA, and ACUHO-i national conferences. He has published articles in SCUP's quarterly Planning magazine, ACUHO-i's Talking Stick publication and contributed research in Campus Architecture, a book by Richard P. Dober.

345 Harrison Avenue | Boston, MA
Design for a new 14-story, 714,600-square-foot residential building. The program include 585 one-, two-, and three-bedroom apartments, amenity space, street-level retail, and a 267-car structured parking garage.

J. Malden Center | Malden, MA
Design of a dynamic new building complex for downtown Malden including two new residential buildings with 320 units of rental housing, a new 44,000 square foot office building, 22,000 square feet of retail, a sky bridge spanning Pleasant Street, and a new above-ground parking garage.

The Harvey | Boston, MA
Planning and design of a new six-story, 177-unit residential building in the famed Hood Park in Charlestown, Massachusetts. The building is designed to complement the existing neighborhood buildings and to give life to the emerging Rutherford Avenue Corridor with 10,500 square feet of new retail space.

Charlesview Development | Boston, MA
Master plan and design for 708,000 square feet of residential, community, commercial and open space including 240 rental units, 100 new homeownership units, 26,533 square feet of commercial/community space and four acres of new open space.

Rollins Square | Boston, MA
Design of a new 184-unit condominium complex for the Archdiocese of Boston, comprised of four buildings surrounding a central park, retail space on the ground floor, and a below-grade parking garage.

Clippership Wharf | Boston, MA
Master planning and preliminary design for a five-building, 400-unit residential development on the East Boston waterfront overlooking downtown Boston and the Boston Harbor.

The Marlborough, 416 Marlborough Street | Boston, MA
Conversion of a ten-story apartment building to luxury condominiums including a one-story addition to the top of the building with common and private roof-deck patios.

101 Huntington Lobby, Prudential Center | Boston, MA
Interior rehabilitation of the 101 Huntington Avenue office tower as part of the Prudential Center redevelopment project.

111 Huntington at the Prudential Center | Boston, MA
Planning and design for an 850,000-square-foot landmark project within Boston's Commercial District. This iconic 30-story glass office tower includes a 400-foot-long winter garden overlooking a new park and a five-story precast base containing office, retail, and transit links.

The Belvedere at Prudential Center | Boston, MA
Design of a new 11-story residential tower providing 60 units of luxury one-, two-, and three-bedroom condominiums, and two stories of retail shops.

Sargent's Wharf | Boston, MA
Design of mixed-use complex that includes 265 housing units, office and retail space, underground parking, marina, and public open space, and an addition to the existing pilot house.

Waterfront at Pitts Bay | Hamilton, Bermuda
Competition-winning design of a new 250,000 square foot mixed-use development for a prominent waterfront site located in Bermuda.

Watermill Place | Arlington, MA
Planning and design for 130 market-rate condominiums in a six-story building on a historic site.

927 Boylston Street | Boston, MA
Design for a 54,000-square-foot, 11-story mixed-use building. The program includes 11 high-end residential units, ground-floor office space, 24 parking spaces, and common roof deck.

Charles River Park Amenity Center | Boston, MA
Design of a new plaza level structure connecting Longfellow Place towers and including a leasing and business center, fitness club, pool, Wi-Fi café, activity room, sundeck, and site design.

Introduction to Sebago Technics, Inc.



Year Established: 1981 (38 years in business)

About Us: Sebago Technics, Inc. (STI) is a consulting firm of more than 70 design professionals and technical staff providing services throughout New England. From the start, our business plan was simple: "to provide quality, cost-effective civil engineering services that are responsive to a customer's goals, schedule and budget." Our One Company capabilities and resources provide clients with experience and solutions to respond to their planning, permitting and design needs.



Structure: Employee-owned since 1998

Services: Civil, environmental, transportation & traffic engineering; municipal engineering; local/state/federal permitting and planning; land surveying & laser scanning; GIS; landscape architecture; environmental services; and natural resources.

Employee Disciplines:
Professional Engineers, Civil Engineers, Transportation Engineers, Landscape Architects, Professional Land Surveyors, Survey Technicians, CADD Designers, Wetland Scientist, Soil Scientist, Construction Inspectors, Community Planner, Environmental Scientists, GIS Professionals, Marketing, Administrative & Financial



Professional Focus: Sebago Technics provides engineering and planning services to both public and private sector clients. In the municipal and government sectors we have provided multiple discipline services through General Services Contracts (GSC) and project specific contracts. A few examples include the Portland Jetport, City of Portland Public Services, City of South Portland, City of Lewiston, City of Westbrook and several smaller communities. Our municipal sector work includes street and utility infrastructure design, municipal facility planning and specialty work such as Island marine and solid waste planning & engineering.

Location: South Portland, ME



Primary Geographic Service Area: Maine, New Hampshire, Vermont, Massachusetts

Web Site: www.sebagotechnics.com

75 JOHN ROBERTS ROAD, SUITE 4A, SOUTH PORTLAND, MAINE 04106-6963 · SEBAGOTECHNICS.COM

STEPHEN G. DOE, RLA, LEED-AP

Senior Landscape Architect



When Mr. Doe joined Sebago Technics, Inc. in 1988, he brought with him a versatile and highly proficient background in land planning, site development, landscape architecture and graphic presentation, and construction. With a fine understanding for detail and construction practices, he has continually proven his ability to prepare functional, yet aesthetically pleasing land development programs and Site Plans for both public and private sector clients. He is proficient in combining his technical knowledge with highly skilled graphic communications to prepare all levels of plan documents from Conceptual Site Plans to complete construction documents and specifications. His strong public presentation skills and attention to detail in preparing and administering Site Plan Applications with state and local regulators has proven beneficial to clients in receiving timely approvals and respect within their communities.

EXPERIENCE

Boothbay Harbor Country Club, Boothbay, Maine – Steve was Sebago's Project Manager and Lead Site Designer for this complete renovation of the Boothbay Harbor Country Club. Working in collaboration with Knickerbocker Group, Steve prepared the master plan, detailed site plan, landscaping and grading plan for this new world class country club and was fully involved in the construction administration of the entire project. This $21M rebuild broke ground in 2013 and opened in 2016. The landscape planting budget alone exceeded $1.2M and included the installation of 8 inch caliper trees along a boulevard entry drive. The golf course itself underwent a $14M renovation during the same time frame as the clubhouse.

Boothbay Harbor Country Club Fitness Pavilion, Boothbay, Maine – Continuing with the BHCC and the Knickerbocker Group, Sebago completed the site design, engineering and permitting for an expansion to the campus by designing a fitness pavilion with an outdoor pool and spa. This development included a separate entry drive to the campus from the Boothbay Village Common. This design process started in 2014 and opened in Spring 2018.

Route 27 Street Improvement Project, Boothbay, Maine – Steve was the Project Landscape Architect for this upgrade and street improvement project in the heart of Boothbay Village. The design included landscaped median islands, central round-about, new street lights, signage and redevelopment of several properties, including the Town hall and Village Market that conflicted with street re-alignments. Steve also worked with the Town's Landscape Committee to collaborate with them on the landscape design and plant selection. Steve performed construction administration and inspections of the landscape installation. Project was completed in July 2018.

Kennebunkport Resort Collection- Various Properties, Kennebunk and Kennebunkport, Maine - Steve is the Lead Site Planner and Permitting Specialist for the entire holdings of the Kennebunkport Resort Collection. This group owns and operates numerus high-end hotels throughout the Kennebunk's. Sebago has been involved with KRC since its inception in 2015. These properties include: Hidden Pond and Earth Restaurant, The Tides Beach Club, Cabot Cove Cottages, The Grand, The Yachtsman, The Boathouse, The Lodge on the Cove, The Arundel Inn and The Old Fort Inn.

Residential Properties, Kennebunk, Kennebunkport, Maine- As a resident of Kennebunkport, Steve has developed a solid reputation with the Town Planning and Code Enforcement offices in these communities and consequently has received numerous referrals from the officials to assist homeowners, developers and architects with design, engineering and permitting for their projects. He is familiar with the regulations and permitting process in these Towns and has developed a respect with the Planning Boards in providing quality engineering and land planning work that complies with local codes.

EDUCATION

Ohio State University - Columbus, OH
Bachelor of Science, Landscape Architecture, 1986

Architectural Technical Institute, Ohio State University - Wooster, OH
Associated Degree in Applied Science, 1980

MEMBERSHIPS

Sigma Lambda Alpha Honor Society for Landscape Architects

National Landscape Architecture Honor Society

Town of Kennebunkport Shade Tree Committee Member

REGISTRATIONS

Registered Landscape Architect: Maine #131

LEED Accredited Professional
CLARB Certified

SEBAGO TECHNICS

DANIEL L. RILEY, PE, CFM

Vice President, Engineering



Mr. Riley is a Senior Project Manager and Vice President of Engineering with over 25 years of experience in the civil engineering field on projects for the private sector, as well as federal and municipal clients. He has a diverse background in civil engineering, site design, residential and commercial development and permitting.

He is experienced and well versed in presenting complex, controversial and publicly sensitive issues to a variety of audiences. Since 2008, Mr. Riley has been the Contract Manager and lead engineer for Sebago Technics' General Engineering Services Contract with the City of South Portland. In that role, he is responsible for coordinating the firm's services and providing engineering support for City Departments including Planning and Development, Bus/Transportation and Waterfront, Public Works, and Parks and Recreation.

Prior to joining Sebago Technics, Mr. Riley worked as a professional engineer in Colorado specializing in water resources engineering. In that role, he managed projects for federal and municipal clients, including stormwater master planning and floodplain studies and assisted communities with the implementation of Stormwater Management Utilities. He maintains status as an ASFPM Certified Floodplain Manager.

EXPERIENCE

City of South Portland Maine Engineering Services
Mr. Riley has been the Contract Manager and lead engineer for Sebago Technics' General Engineering Services Contract with the City of South Portland since 2009. In that role, he is responsible for coordinating the firm's services and providing engineering support for City Departments including Planning and Development, Bus/Transportation and Waterfront, Public Works, and Parks and Recreation. Since 2012 his focus for South Portland has been combined sewer separation projects. Notable projects include:

- Knightville Sewer Separation and Street Improvements Phases 1 and 2
- Thornton Heights Improvements Project Phases 1-3
- Pleasantdale Sewer Separation Project
- SWMM Model updates, Greenbelt Trunkline, West High Pump Station and Pearl street Pumps Station Service areas.
- Greenbelt Sewer Replacement Project

City of Portland Combined Sewer Separation Projects
Mr. Riley has been the Project Manager for several of Sebago Technics' Sewer Separation contracts with the City of Portland since 2010. Notable Relevant Projects include:

- Fall Brook Watershed Study- City of Portland Public Services Department
- Woodford Street and Melrose Street: Design and Inspection Services 2016-2017
- Forest Avenue, Deering Street and Ocean Avenue: Design and Inspection Services 2017-2018
- Mackworth-Ocean and Walnut Street: Design Services 2018-2019 for construction in 2020-2021

EDUCATION

Villanova University, Villanova, PA
Bachelor of Science, Civil Engineering
1991

REGISTRATIONS

Professional Engineer:
Maine #9967
Colorado: #32176

Certified Floodplain Manager
#32249

MEMBERSHIPS

Chi Epsilon, National Civil Engineering Honor Society

Association of State Floodplain Managers (ASFPM)

SEBAGO TECHNICS

Att. J



August 9, 2022

385 CONGRESS STREET
MDP SUBMISSION 2

cbt | REGER DASCO PROPERTIES | Fathom COMPANIES | SEBAGO TECHNICS

cbt

GENERAL APPROACH & GOAL

Our approach is to create a **cohesive and complementary design** that **builds upon the historic context** of Downtown Portland with forward and innovative vision of providing **activation and scaled environment to the public realm and the neighborhood.**

1. **Respect historic context**
2. **Well scaled street environment**
3. **Create skyline**
4. **Timeless design approach**
5. **Sustainable approach**

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CONTEXT IMAGES



NORTH-EAST VIEW



SOUTH-EAST VIEW



SOUTH-WEST VIEW



NORTH-WEST VIEW

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NEIGHBORHOOD CONTEXT MAP & ZONING ANALYSIS



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VIEW ANALYSIS



CUMBERLAND AVE

NORTH @ 150'



PEARL STREET

EAST @ 150'



CONGRESS STREET

SOUTH @ 150'



MYRTLE STREET

WEST @ 150

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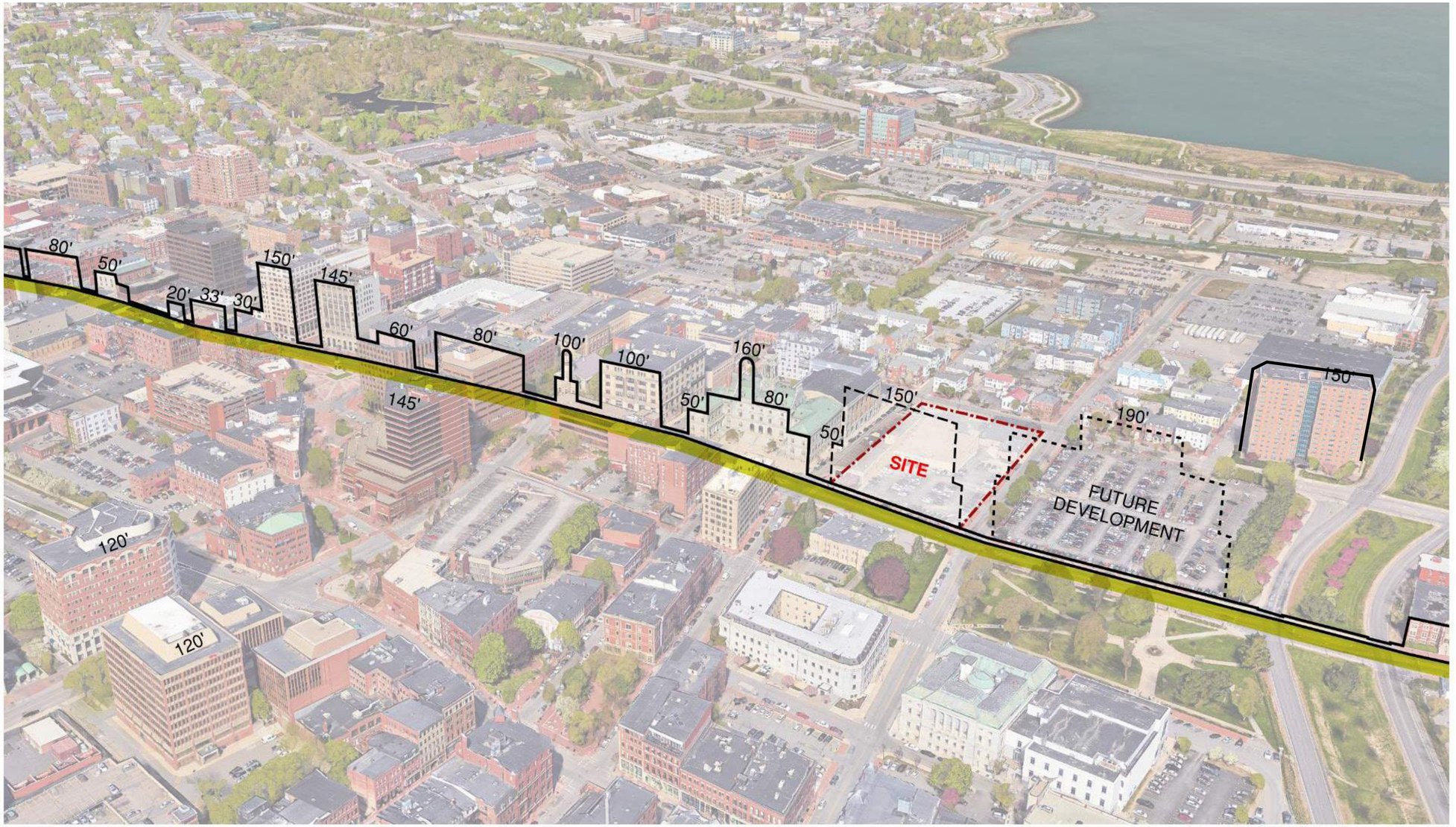
CONTEXT HEIGHT ANALYSIS

CONGRESS ST NORTH



CONGRESS STREET - NORTH

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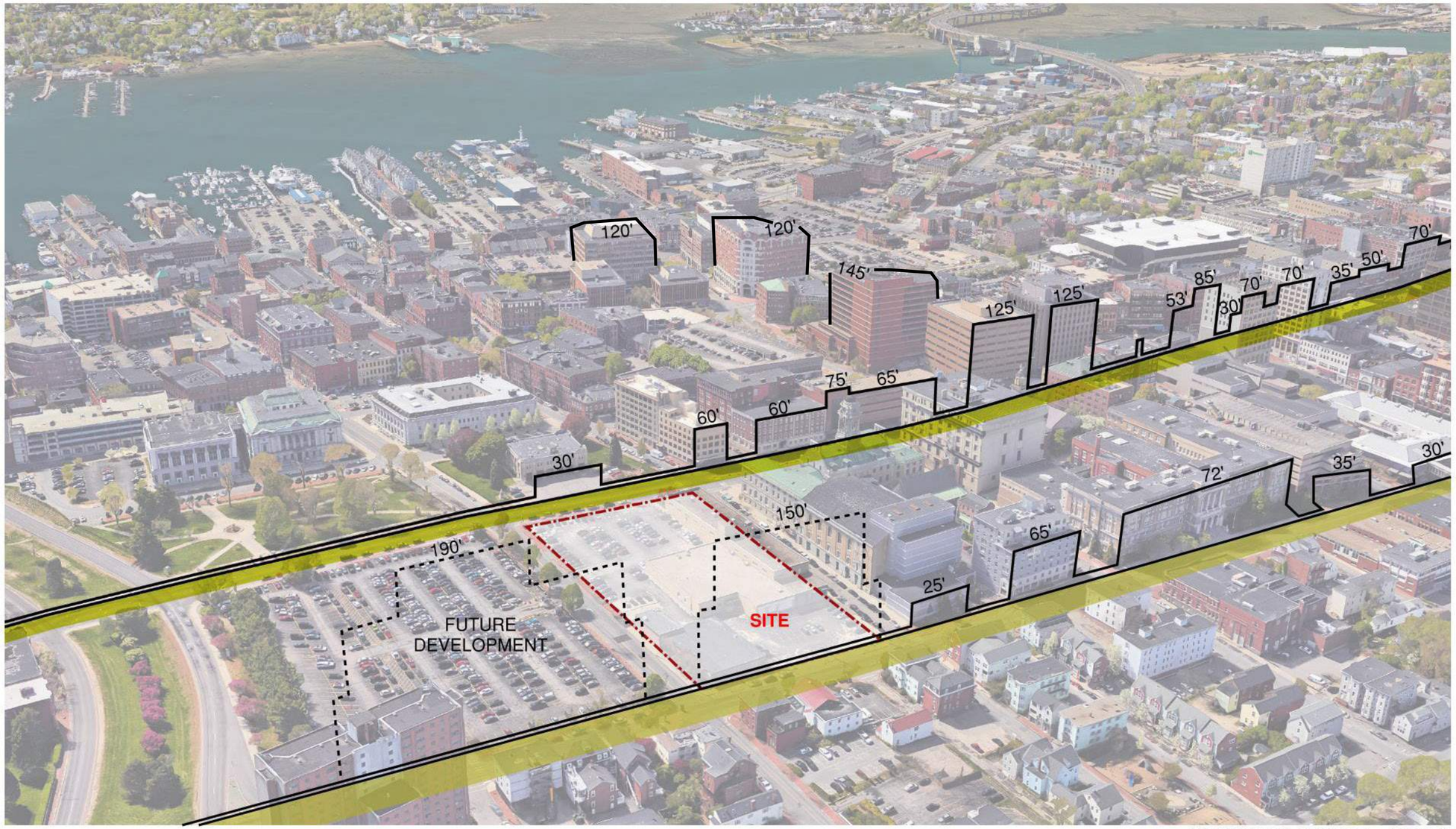
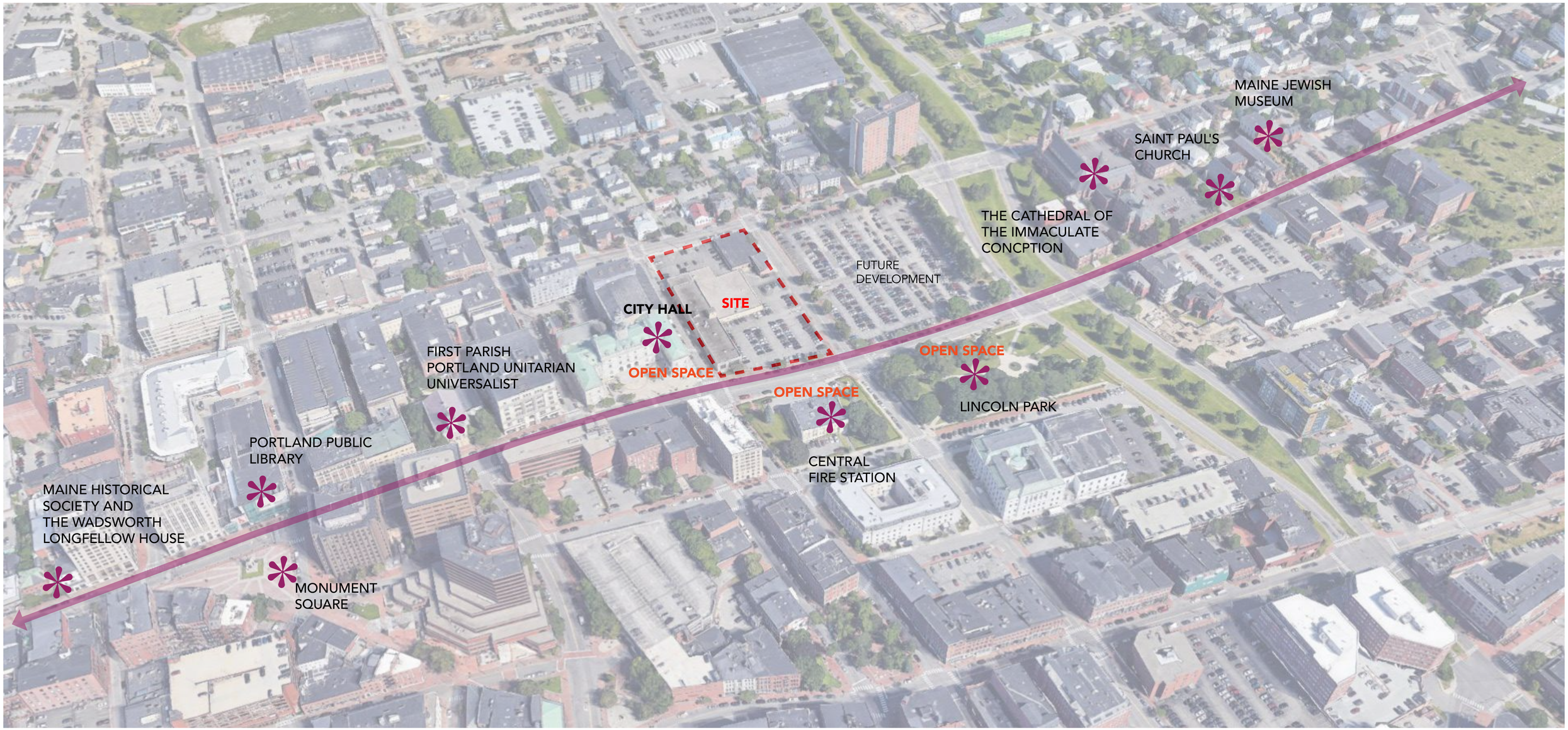
CONTEXT HEIGHT ANALYSIS

CUMBERLAND AVE



CONGRESS STREET ACTIVATION

THIS SITE PROVIDES THE OPPORTUNITY TO EXTEND THE ACTIVITY OF CONGRESS STREET TO THE EAST AND BRIDGE THE GAP BETWEEN DOWNTOWN AND THE EAST END. BY PROVIDING PROGRAMS THAT CAN BE ENJOYED BY THE BUILDING TENANTS AND MEMBERS OF THE PUBLIC, THIS PROJECT WILL ADD TO THE ALREADY VIBRANT NETWORK OF SPACES ALONG CONGRESS STREET.



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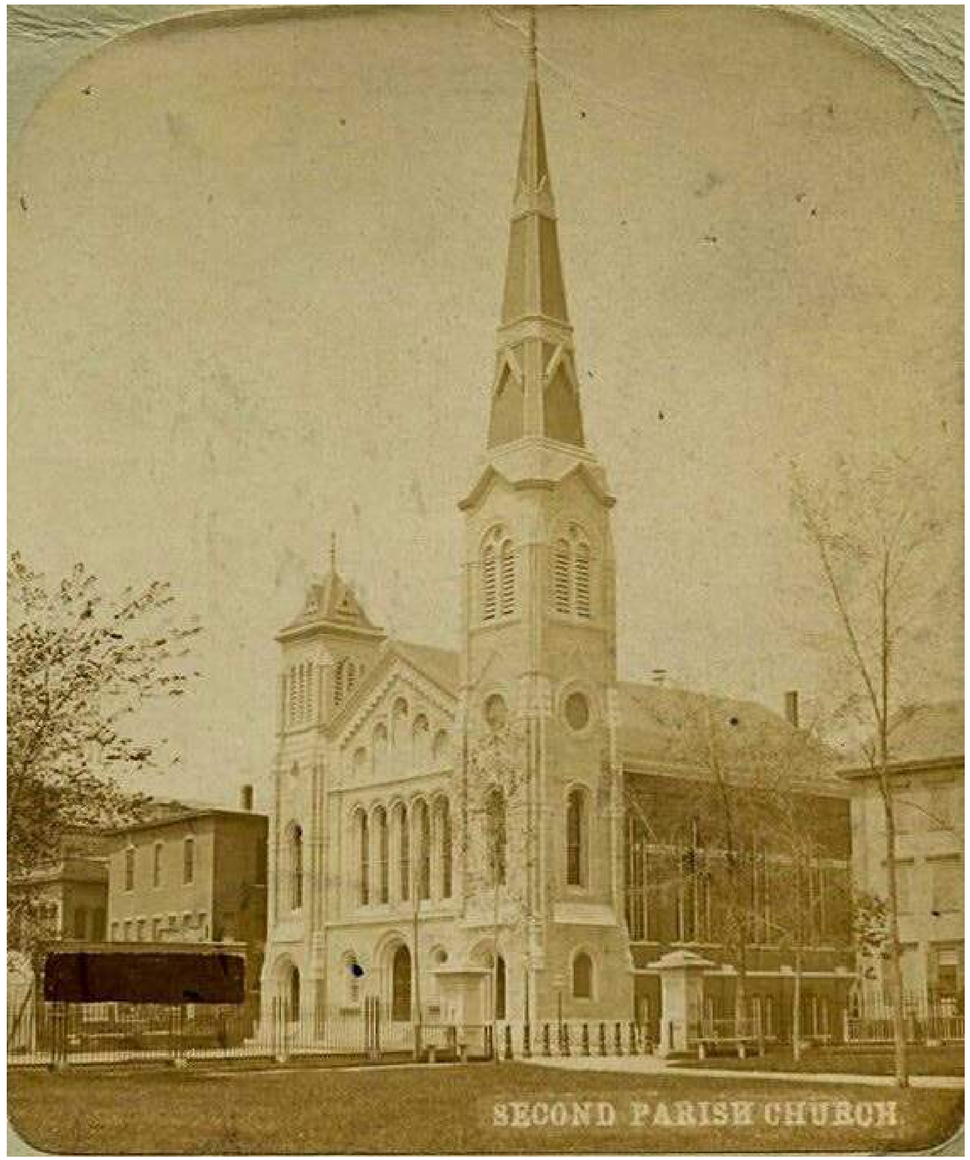
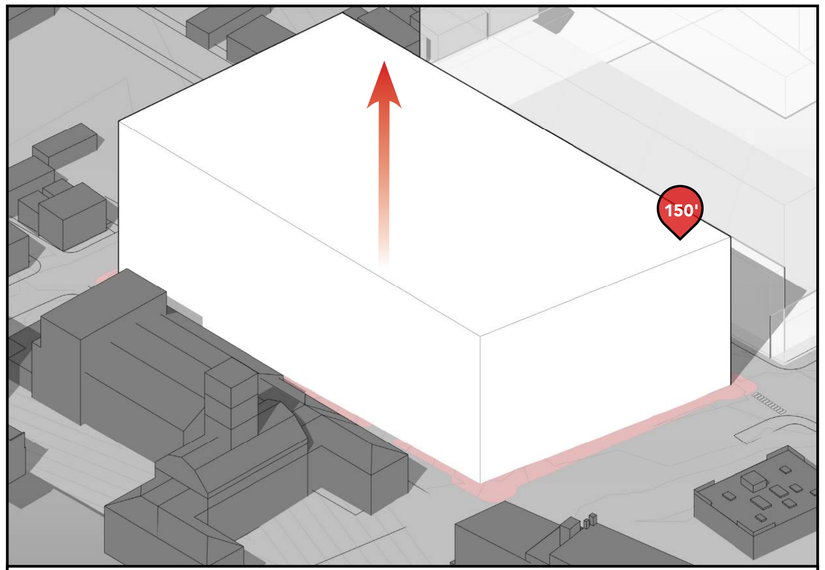
HISTORIC CONTEXT

HISTORICAL MAPS REVEAL THAT THIS PARCEL WAS FORMERLY THE SECOND PARISH CHURCH.

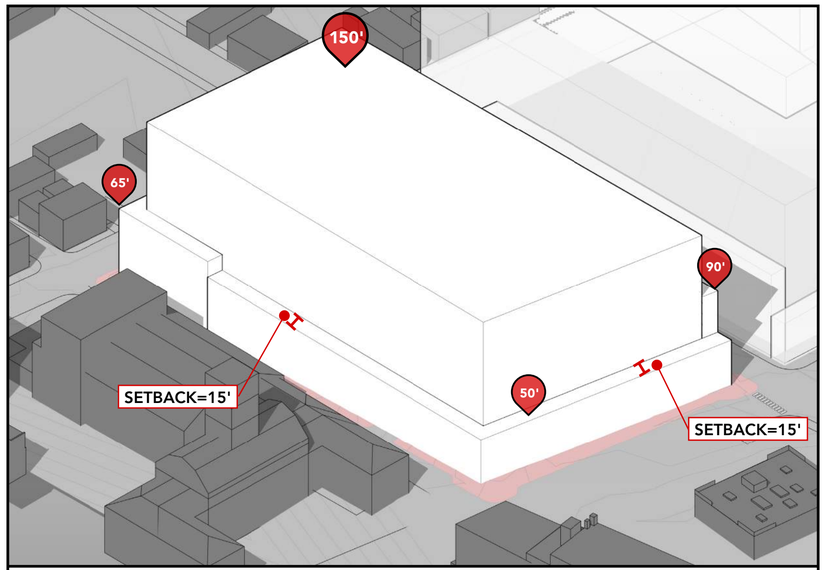




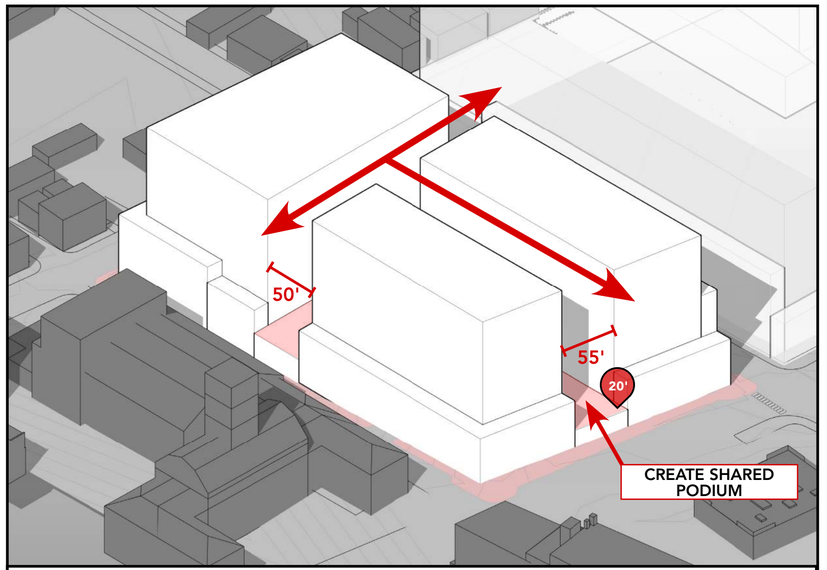
MASSING EVOLUTION



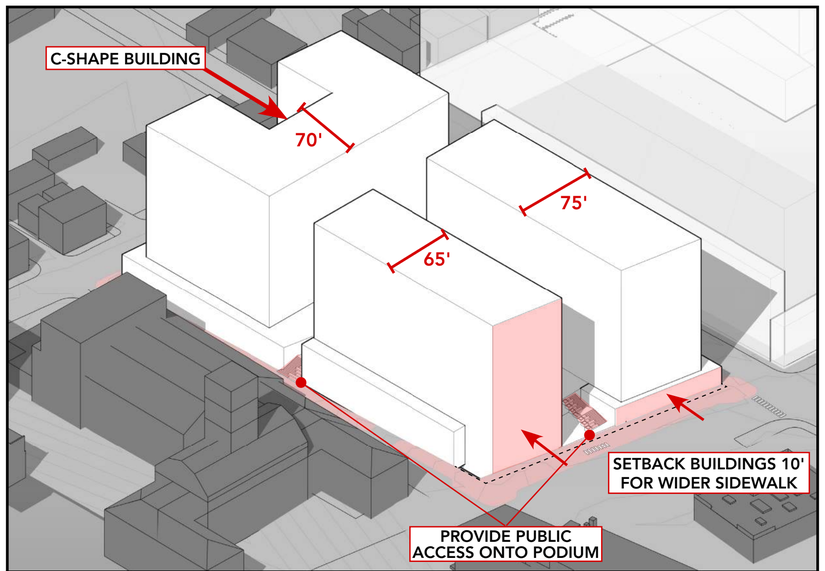
1_EXTRUDE SITE FOOTPRINT



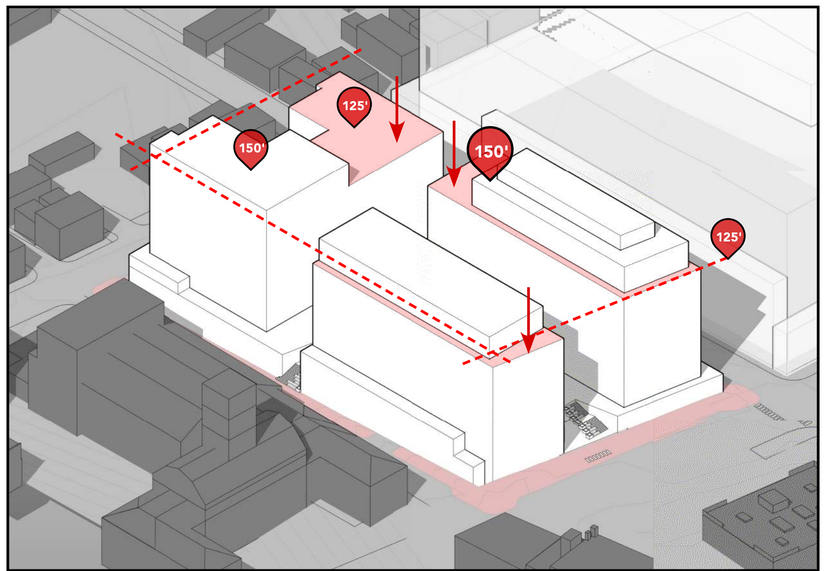
2_ZONING SETBACKS (AS OF RIGHT)



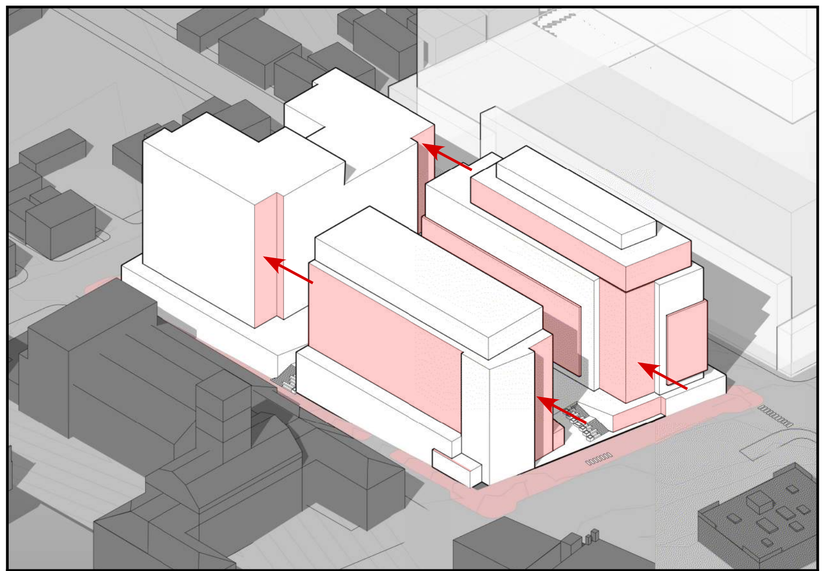
3_SUB-DIVIDE SITE FOR POROSITY



4_SHAPE BUILDING FOOTPRINTS FOR PROGRAM; PROVIDE ACCESS TO PODIUM



5_REDUCE BUILDING FOOTPRINTS ABOVE 125'



6_SCULPT MASSING TO SCALE ARCHITECTURE

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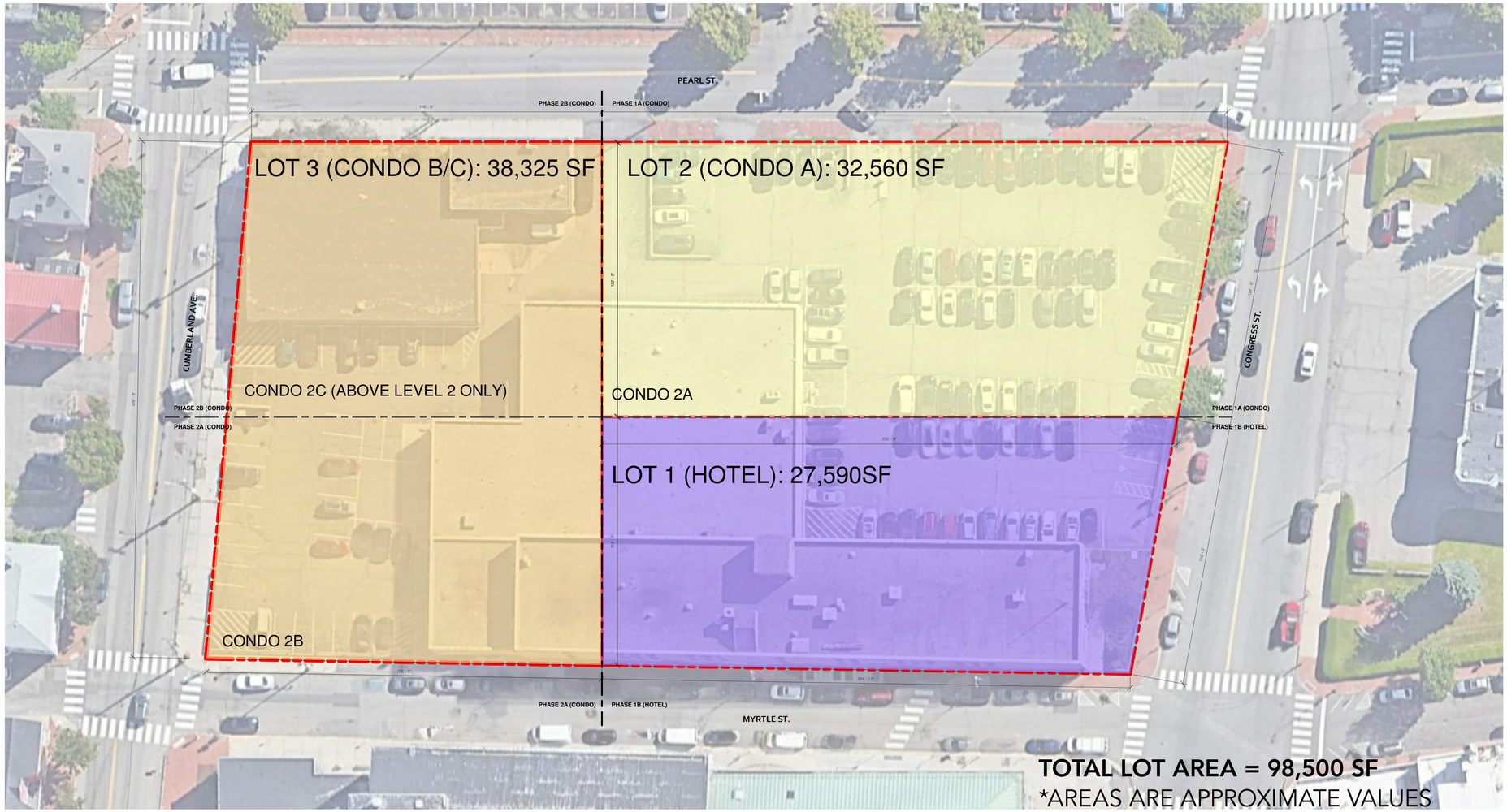
PARCEL SUBDIVISIONS

**VALUES ARE APPROXIMATE

		HOTEL SF	*KEY COUNT*	RESI SF	*UNIT COUNT*	LOBBY / AMENITY	RETAIL	HOTEL BOH / SUPPORT	MECHANICAL	CIRCULATION	PARKING	*PARKING COUNT*	GSF TOTAL
Lot 1 - Hotel	**Myrtle**	**69,300**	***156***	**13,500**	***9***	**16,000**	**660**	**7,780**	**9,880**	**13,080**	**27,400**	***70***	**157,600**
Lot 2 - Condo A	**Pearl**			**152,850**	***110***	**5,000**	**4,000**		**7,400**	**22,200**	**47,500**	***148***	**239,450**
Lot 3 - Condo B	**Cumberland S**			**96,200**	***97***	**4,100**	**6,900**		**6,000**	**21,350**	**45,500**	***119***	**180,050**
Lot 3 - Condo C	**Cumberland N**			**79,500**	***81***	**-**	**-**		**-**	**9,900**	**-**	**-**	**89,400**
GRAND TOTALS		***69,300***	***156***	***342,050***	***297***	***25,100***	***11,560***	***7,780***	***23,280***	***66,530***	***120,400***	***337***	***666,500***



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PROGRAM SUMMARY



*SEE UPCOMING INDIVIDUAL SITE PLAN APPLICATIONS FOR MATERIALS AND COLOR

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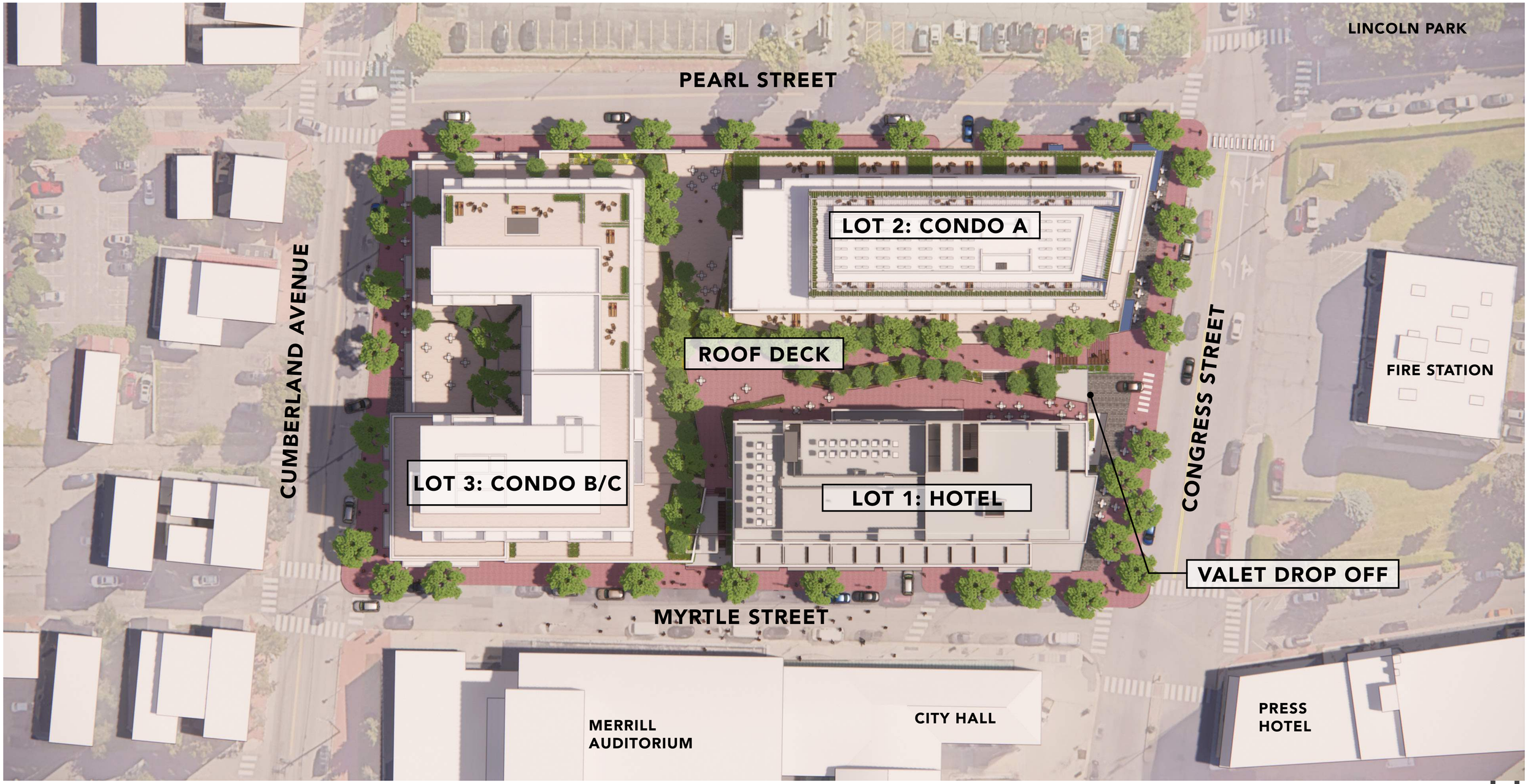
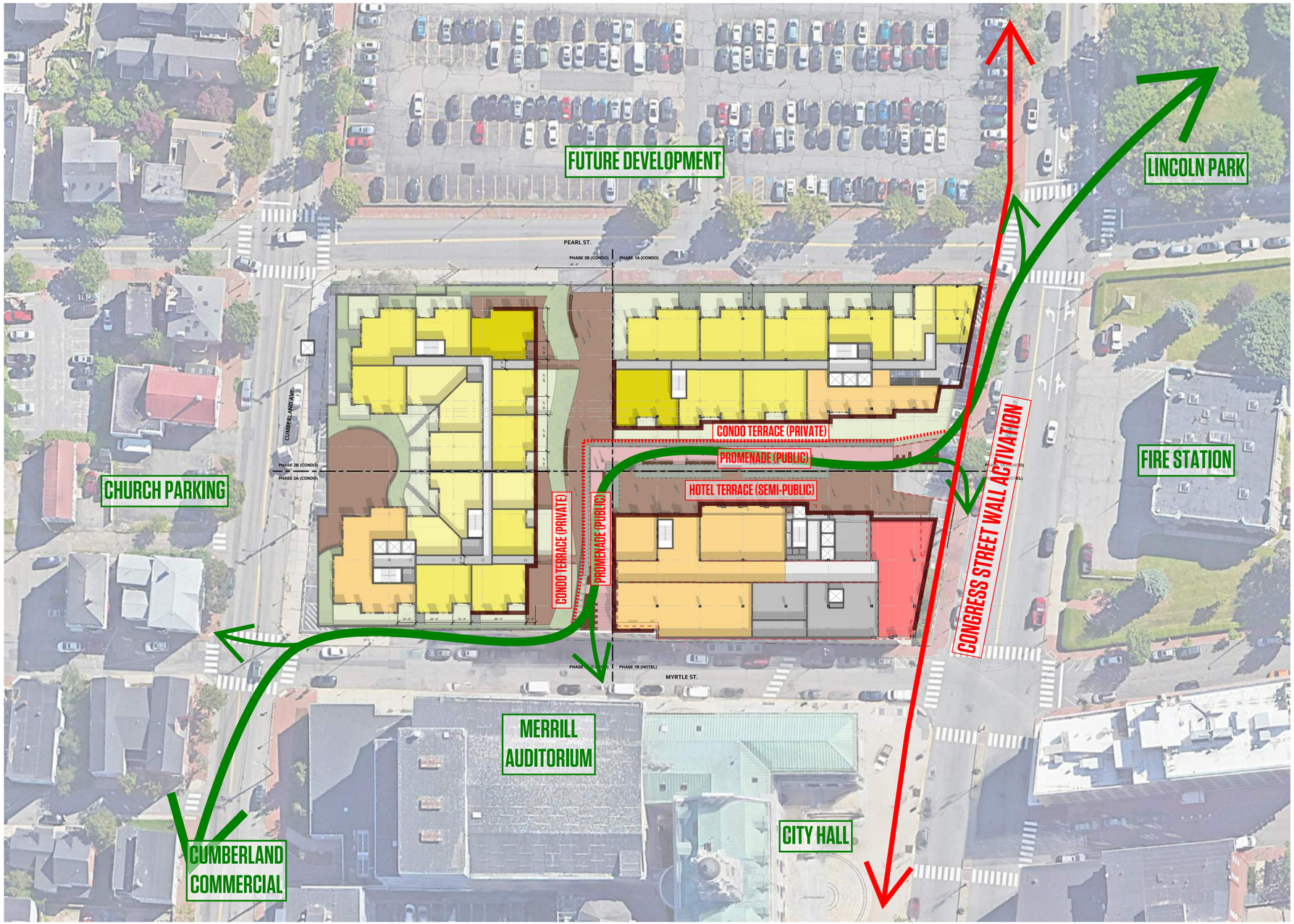
SITE PLAN


LINCOLN PARK
PEARL STREET
LOT 2: CONDO A
ROOF DECK
CUMBERLAND AVENUE
CONGRESS STREET
FIRE STATION
LOT 3: CONDO B/C
LOT 1: HOTEL
VALET DROP OFF
MYRTLE STREET
MERRILL AUDITORIUM
CITY HALL
PRESS HOTEL

DESIGN CONSIDERATIONS

MID-BLOCK POROSITY



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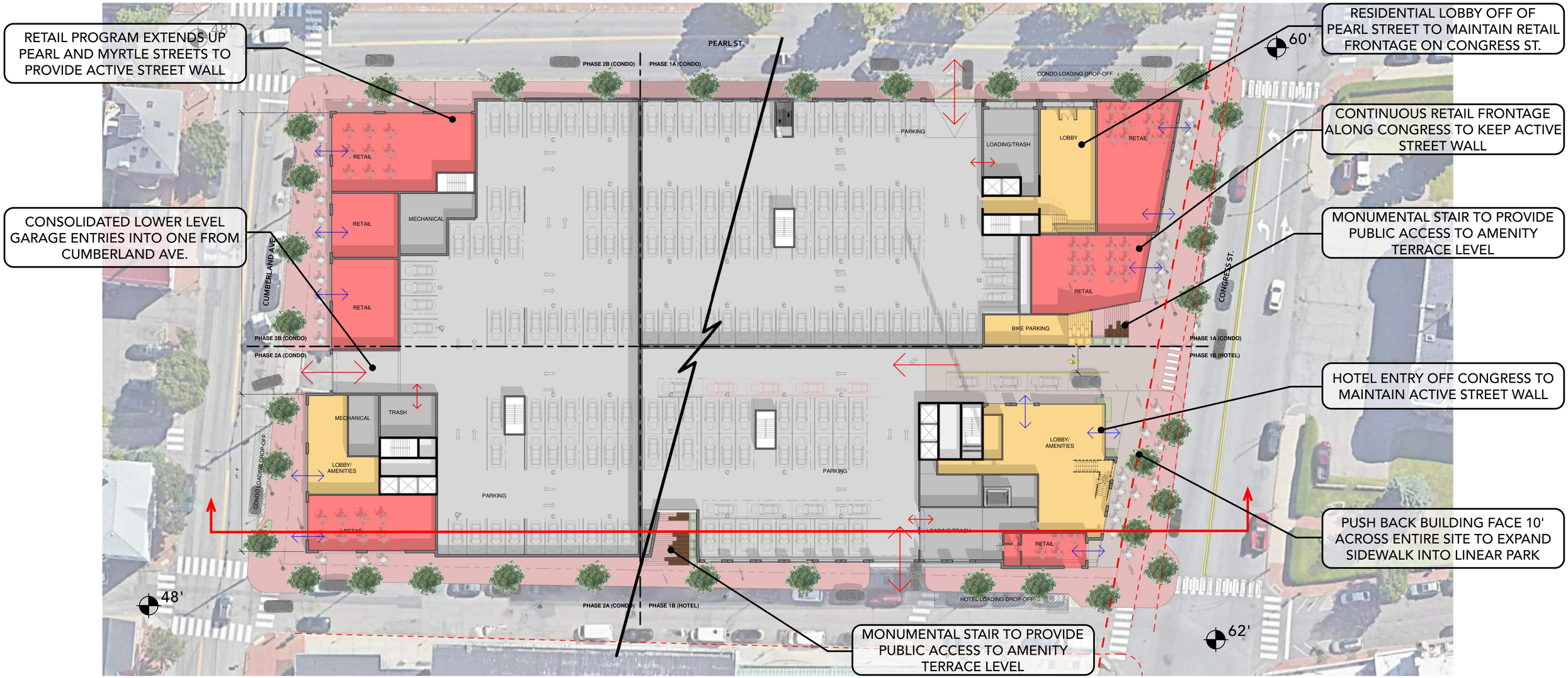
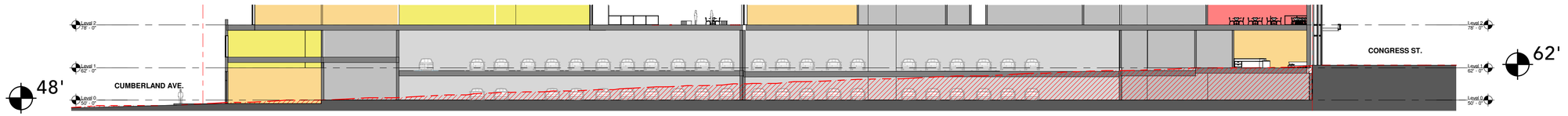
COMPOSITE GROUND FLOOR PLAN

THE TOPOGRAPHICAL NATURE OF THE BLOCK AFFORDS THE OPPORTUNITY TO MAXIMIZE GARAGE EFFICIENCY AND ELIMINATE INTERNAL RAMPING. THE SITE SLOPES DOWN FROM EAST TO WEST BY 12' THIS ALLOWS US TO PROVIDE SEPARATE GARAGE ENTRANCES FOR THE UPPER AND LOWER LEVELS. THE LOWER LEVEL OF THE GARAGE (LEVEL 0) WILL BE AT THE ELEVATION OF CUMBERLAND AVE (48') AND THE UPPER LEVEL OF THE GARAGE (LEVEL 1) WILL BE AT THE ELEVATION OF CONGRESS ST. (60')





CONGRESS STREET LINEAR PARK

THE BUILDINGS ARE SET BACK 10' FROM THE PROPERTY LINE ALONG CONGRESS STREET, WHICH CREATES AN EXPANDED SIDEWALK THAT SERVES AS A LINEAR PARK. THE WIDENED PUBLIC REALM WILL PLAY HOST TO A CONSISTENT ROW OF TREES, OUTDOOR SEATING AND RETAIL SPILL-OUT, AS WELL AS AMPLE TRAVEL WIDTH FOR PEDESTRIANS. THIS EXPERIENCE WILL STITCH THIS SITE TOGETHER WITH CITY HALL PLAZA AND ANY FUTURE DEVELOPMENT ON THE ADJACENT PARCEL TO THE EAST OF THIS SITE. THE LINEAR PARK ALLOWS FOR THE OPPORTUNITY TO LINE THE MAJORITY OF THE BLOCK WITH ACTIVE RETAIL PROGRAM AND STILL PROVIDE ENJOYABLE OUTDOOR SPACE FOR THE PUBLIC TO ENJOY. FURTHERMORE, THE EXPERIENCE OF THE LINEAR PARK WILL EXTEND UP ONTO THE AMENITY TERRACE LEVEL BY WAY OF THE MONUMENTAL STAIRS THAT OPEN UP FROM CONGRESS STREET. THE MID-BLOCK CONNECTION POINT PROVIDES POROSITY AT THE PEDESTRIAN SCALE WITHOUT SACRIFICING ACTIVE PROGRAM AREA.







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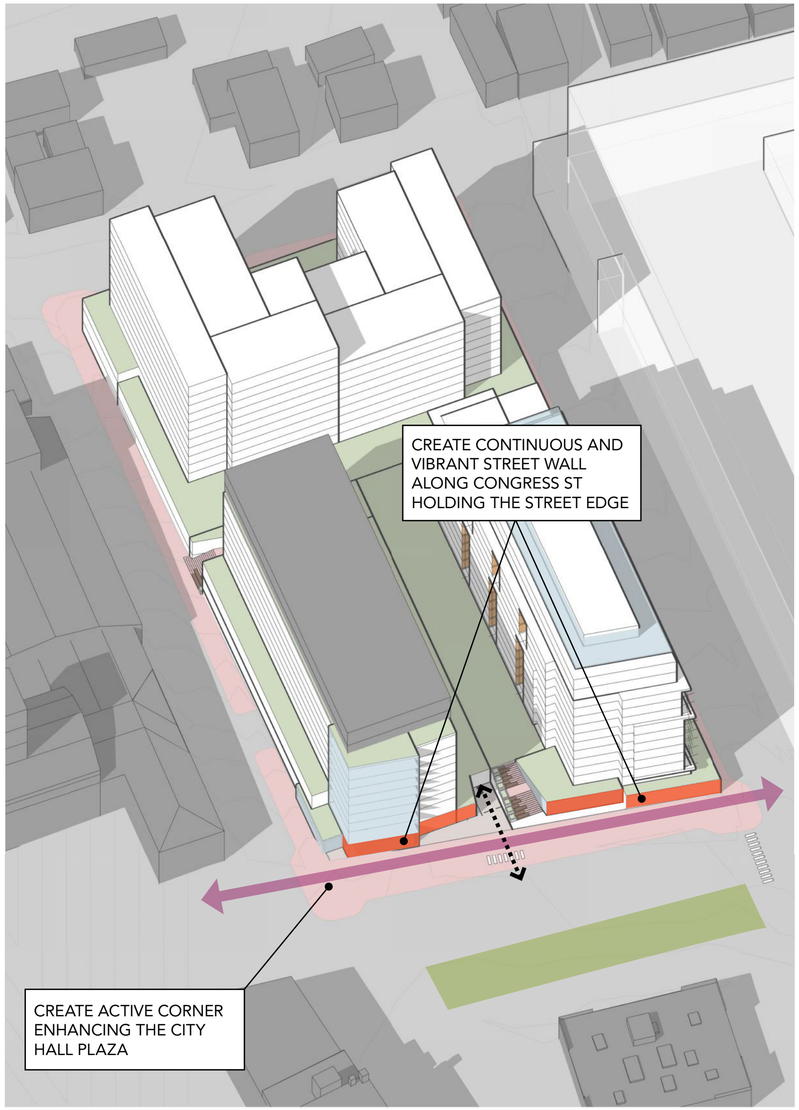
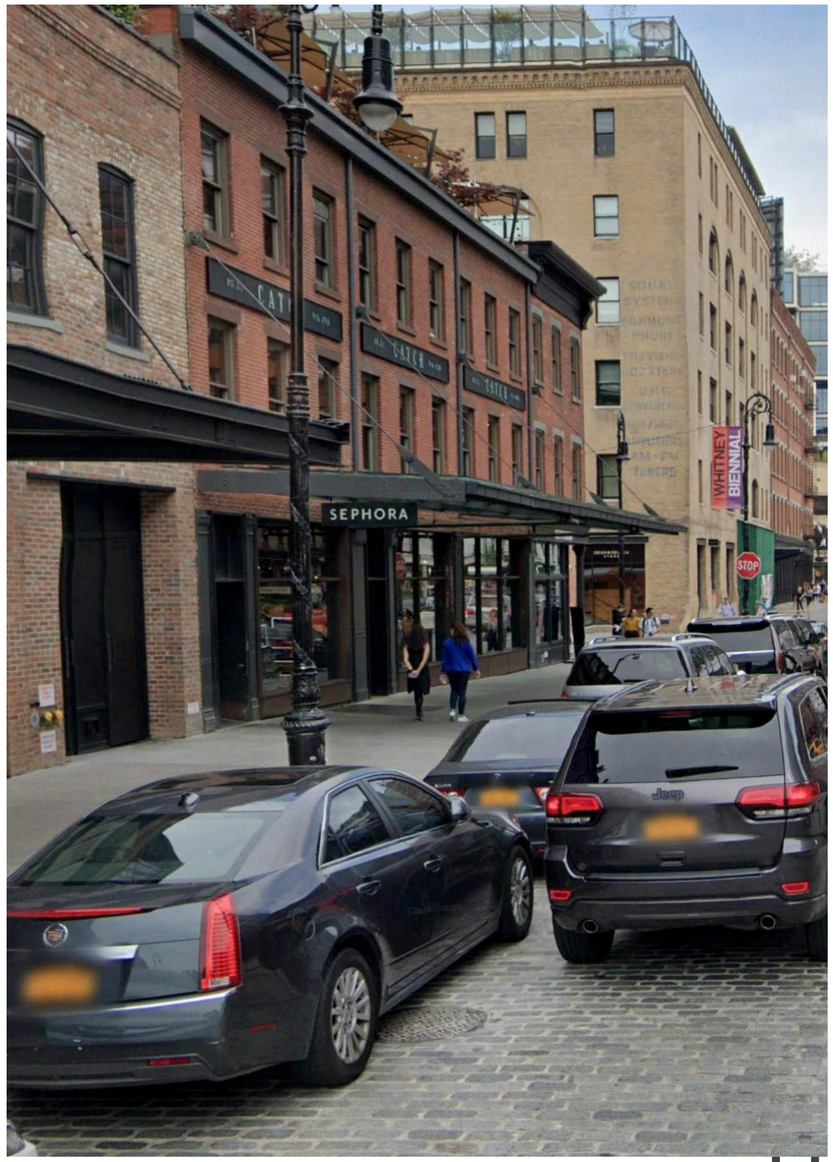
WELL SCALED ACTIVE STREET EDGE

THIS SITE MUST CONNECT INTO THE URBAN FABRIC OF DOWNTOWN PORTLAND AND EXTEND THE NATURE OF OF CONGRESS STREET TO THE EAST. IT WILL DO SO BY MAINTAINING AN ACTIVE AND WELL-SCALED STREET EDGE. THE MAJORITY OF THE SITE WILL HOLD A ONE OR TWO STORY STREET WALL BEFORE STEPPING BACK AT THE AMENITY TERRACE LEVEL. THE TOWER PORTION OF THE BUILDINGS WILL ADHERE TO THE REQUIRED ZONING SETBACKS WHICH HELP DEMINISH THEIR PERCEVED HEIGHT AND SCALE. MUCH OF THE GROUND FLOOR PROGRAM ALONG CONGRESS ST. AND CUMBERLAND AVE. WILL BE ACTIVE AND UTILIZED BY THE PUBLIC, WHILE THE GARAGE AND BOH SPACES WILL BE KEPT TO THE SECONDARY STREETS OF MYRTLE AND PEARL.



PRECEDENT





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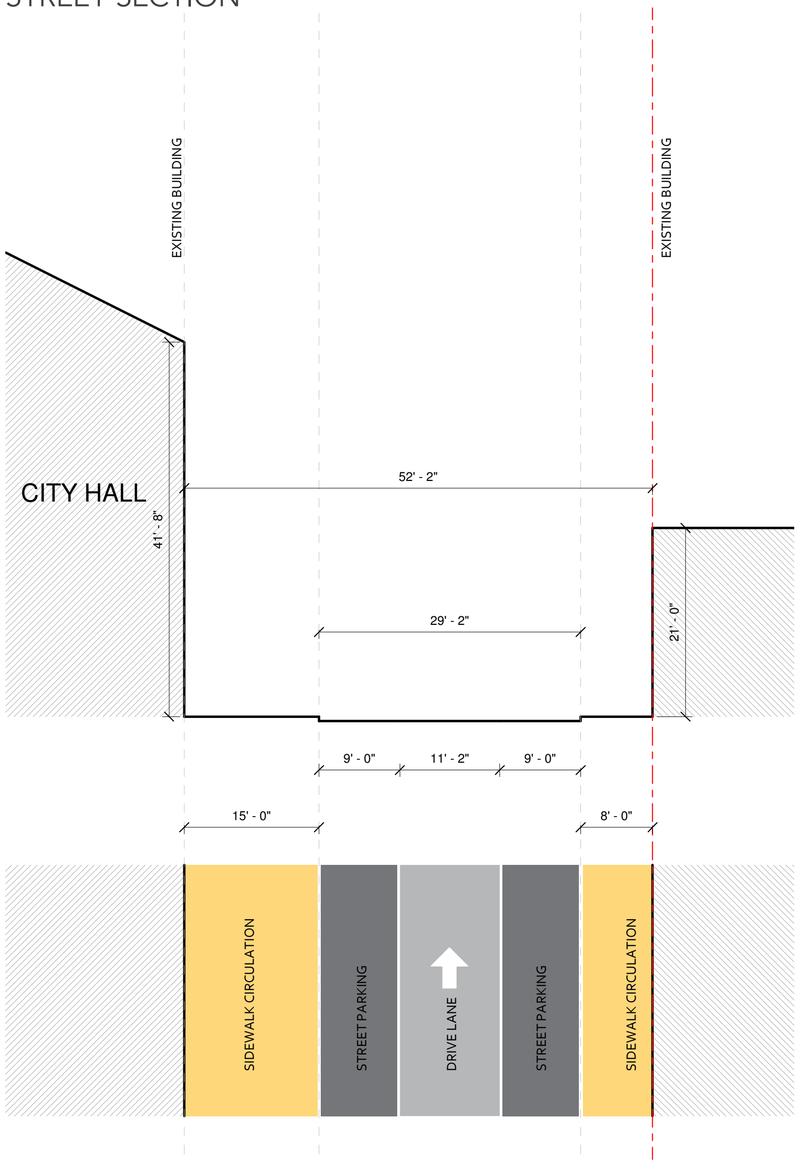
MYRTLE STREET - EXISTING

THE CURRENT NATURE OF MYRTLE STREET IS VERY NARROW AND UNINVITING. THE EXISTING BUILDING SITS RIGHT ON THE PROPERTY LINE, SQUEEZING ALL PEDESTRIAN TRAFFIC INTO AN 8' SIDEWALK THAT IS TOO TIGHT TO INCLUDE STREET TREES OR PLANTING.

STREET SECTION



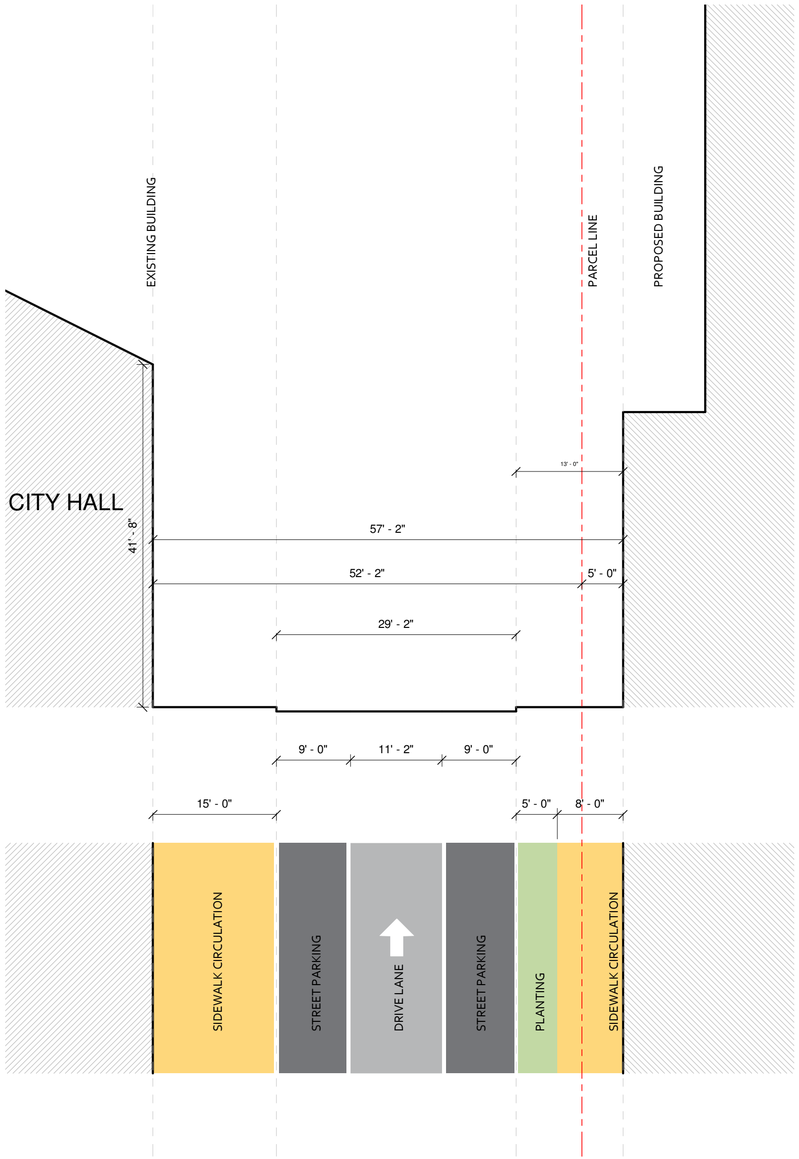
EXISTING CONDITIONS PHOTO



MYRTLE STREET - PROPOSED

THE PROPOSED CONDITION OF MYRTLE STREET WILL ENHANCE THE PEDESTRIAN EXPERIENCE ALONG THE SIDEWALK. WE PROPOSE TO ALIGN THE BUILDING TO BE PARALLEL TO PEARL STREET, THUS CREATING A WIDER SIDEWALK ON MYRTLE. THIS ADDITIONAL SIDEWALK WIDTH ALLOWS ROOM FOR STREET TREES IN RAISED PLANTER BEDS AS WELL AS OTHER VEGETATION. THE GARAGE FACADE PROVIDES OPPORTUNITIES FOR MURALS, LIGHTING DESIGN, AND UNIQUE MATERIALS FOR SCREENING. ADDITIONALLY, THIS FACADE WILL BE ACTIVATED WITH THE PEDESTRIAN CONNECTION UP TO THE SHARED AMENITY TERRACE VIA A SET OF MONUMENTAL STAIRS THAT OPEN UP ACROSS FROM THE ENTRANCE TO THE MYRTLE AUDITORIUM. THE STAIRS WILL HAVE AREAS FOR PLANTING AND SEATING.

STREET SECTION



RENDERING



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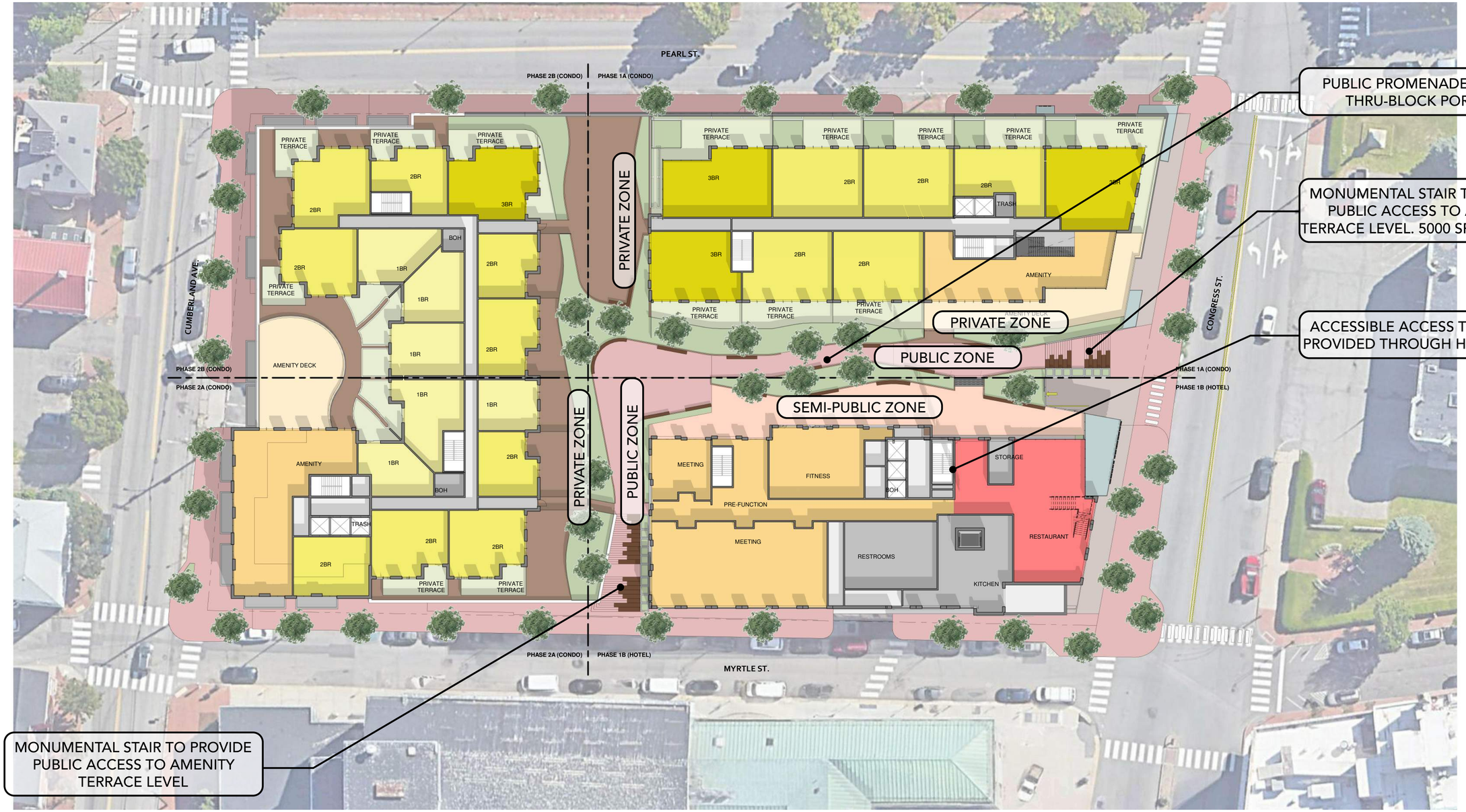
LEVEL 2 PLAN

ON THE "ROOF" OF THE GARAGE WILL BE A SHARED AMENITY TERRACE FOR THE BUILDING USERS AND PUBLIC TO ENJOY. THE MONUMENTAL STAIRS ON CONGRESS ST. AND MYRTLE ST. WILL PROVIDE MEMBERS OF THE PUBLIC ACCESS TO PORTIONS OF THE AMENITY TERRACE, WHICH PROVIDES MID-BLOCK POROSITY AT THE PEDESTRIAN LEVEL. THE PUBLIC WILL BE ABLE TO WALK ALONG THE PROMENADE AND RELAX ON SEATING ZONES INTEGRATED INTO THE LANDSCAPE. THE HOTEL PROGRAM ON THIS LEVEL WILL CONSIST OF LARGE MEETING/CONFERENCE SPACE, FITNESS CENTER, AND RESTAURANT THAT ALL CAN SPILL OUT ONTO THE ROOF DECK AND PROVIDE PUBLIC ACTIVATION OF THE SPACE DURING DESIGNATED TIMES. ADDITIONALLY, EACH OF THE CONDO BUILDING UNITS WILL HAVE PRIVATE TERRACE SPACE AS WELL AS SHARED TERRACE SPACE THAT WILL BE ACCESSED THROUGH THE AMENITY ROOMS. THE SHARED OUTDOOR SPACE WILL HAVE AREAS FOR GRILLING, WALKING PATHS, AND PET RELIEF ZONES.



AMENITY TERRACE

THE HEIGHT OF THE PUBIC PORTION OF THE AMENITY TERRACE WILL BE SET DOWN BY A COUPLE OF FEET FROM THE PRIVATE AMENITY AREA FOR THE CONDO RESIDENTS. THIS WILL ALLOW FOR VISUAL CONNECTIONS BETWEEN THE USERS, BUT STILL PROVIDE THE RESIDENTS PRIVACY FROM THE PUBLIC SPACE. IN ADDTION TO THE HEIGHT DIFFERENCE, THERE WILL BE LUSH PLANTING ZONES LINED WITH SEATING WALLS THAT WILL HELP CREATE A BUFFER FOR THE PRIVATE CONDO TERRACES. THE SEMI-PUBLIC HOTEL SPACES WILL HAVE A DIRECT CONNECTION TO THE PUBLIC PROMENADE, BUT STILL MAY NEED TO RESTRICT ACCESS DURING CERTAIN EVENTS. THEREFORE, PLANTING ZONES AND SEATING WALLS WILL BE DESIGNED TO CREATE SPACIAL SEPARATION, BUT MAINTAIN THE VISUAL CONNECTION BETWEEN THE SPACES.





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CUMBERLAND AVE ACTIVATION

CUMBERLAND AVE WILL BE LINED PRIMARILY WITH RETAIL PROGRAM TO CREATE A VIBRANT AND ACTIVE STREET. THE WAY THE SIDEWALK SPLAYS AWAY FROM THE ORTHAGONAL BUILDING FACE ALLOWS FOR OPPORTUNITIES TO CREATE OUTDOOR SEATING AND SPILLOUT FROM THE PROGRAM SPACES INSIDE. THE MID-BLOCK GARAGE ENTRY WILL BE AT THE SIDEWALK LEVEL AS TO NOT INTERRUPT THE PEDESTRIAN SIDEWALK EXPERIENCE. ADDITIONALLY, THE VARIED STREET WALL HEIGHT WILL HELP SCALE THE BUILDING TO THE NEIGHBORHOOD.







*SEE UPCOMING INDIVIDUAL SITE PLAN APPLICATIONS FOR MATERIALS AND COLOR

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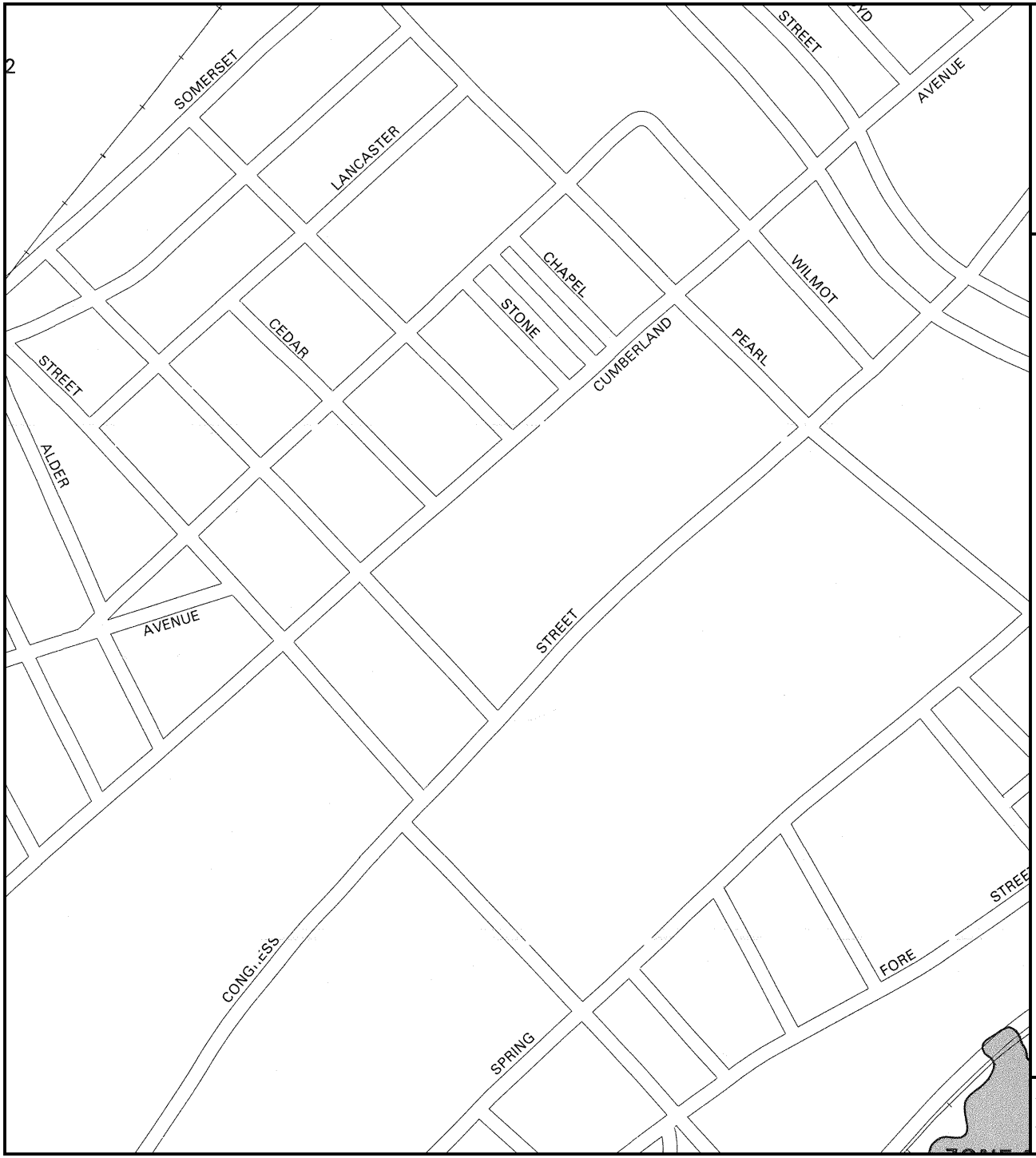
Natural Features

The proposed project area is a previously developed, urban parcel. The project area comprises a city block that is bounded by Cumberland Avenue on the northwest, Myrtle Street on the southwest, Congress Street on the southeast, and Pearl Street on the northeast. There are two buildings on-site, as well as paved parking areas and concrete sidewalks. Vegetation is limited to small amounts of landscaping. There are no natural waterways or wetlands on or within proximity of the project site.

FEMA FIRM information was reviewed and found the project area to be located in Zone C which is described as areas of minimal flooding. Please see FEMA FIRM Community Panel Number 230051 0013 B included in this Section.



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

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

View and Historic Features

The proposed development site is located in an area of the City that, like much of Portland, is a mix of modern and historic structures. The parcel is located next to City Hall and the Central Street Fire Station as well as in close proximity of Portland High School and the U.S. Court House. All of these structures are historic landmarks and are located in the historic district overlay zone. Congress Street and Cumberland Avenue are a blend of modern and traditional architecture that are the hallmark of a vibrant City.

The proposed development has been designed to work cohesively with the historic fabric of the surrounding area. Please see the Master Development Plan included as supportive information for the Neighborhood Context section of this application.

Public Safety Standards – Section 3 City of Portland Technical Manual

3.1 Crime Prevention Through Environmental Design Principles

Natural Surveillance. The proposed project has been designed to have formal and informal natural surveillance networks on site that increases the on-site visibility and the safety of legitimate users and to deter potential offenders.

- The site has been designed to allow for proper surveillance of walkways, entrances, and parking areas.
- Lighting at the site is designed in accordance with the City's technical standards as detailed in Section 12 of the City Technical Manual.

Access Management. The proposed site design provides visible pathways and offers proper guidance for legitimate users of the site to find access and discourages unauthorized use.

- The site has been designed in such a way that the layout, features, and signage clearly guide the movement of vehicles and pedestrians during both the daytime and nighttime. The proposed signage is such as to be clear and site features have been designed to avoid the creation of entrapment zone.

Territorial Reinforcement. The proposed development has been designed to clearly delineate private, semi-private, and public space. Private outdoor spaces are proposed in the second-level plaza, for the Hotel and common spaces for the Condominium owners. The private (common open space) for the condominium on the second level plaza will be defined delineated from outdoor hotel space by a railing, low planters with shrubs and possibly fencing. Individual condominiums on the second level will have private opens space patio areas separated from the common open space areas with fencing and gates. Rooftop units will also include private terraces.

Public access is encouraged in the Pocket Park adjacent to Congress Street.

3.2 Fire Hydrant Standards

The proposed project will occupy a full City block that contains three public fire hydrants located on: the corner of Cumberland Avenue and Myrtle Street; Cumberland Avenue and Pearl Street; and on Congress Street near Myrtle. Given the size of the subject parcel (approximately 240 ft x431 ft) and the proposed site design, there will be a hydrant within 500 feet of all structures.

There are no private hydrants proposed as part of this project. A 6-foot space will be maintained around the circumference of the existing City hydrants.

Please see the plan set for additional information.

3.4 Site Access Standards

- The proposed development is to be located on a full city block with road access on all four sides (3.4.2).

- All proposed building setbacks are in compliance with the City zone requirements (3.4.3).
- There is ample area around the entrance point of the buildings to accommodate ambulance parking and emergency personnel access (3.4.5).
- All proposed elevators have been sized to be able to accommodate an 84x24-inch stretcher (3.4.6).
- The proposed development will be incompliance with the City's 911 numbering system and all street numbers will be clearly visible from the public right of way (3.4.7 & 3.4.8)

Please see the plan set for additional information.

3.5 Standards for Emergency Access Lanes and Gates

Emergency Access to the buildings will be afforded by public streets on all four sides of the site. Please see the site plan for additional information.

Att. N

SEBAGO TECHNICS

CIVIL ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE

MaineDOT
Traffic Movement Permit Application
Sections 1-6

385 Congress Street
Portland, Maine

Applicant:
385 Congress Street, LLC
2730 Transit Road
West Seneca, NY 14224

Prepared By:
Sebago Technics, Inc.
75 John Roberts Road, Suite 4A
South Portland, Maine 04106

March 24, 2022

MaineDOT Traffic Movement Permit Application
Sections 1-6
385 Congress Street
Portland, Maine

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Traffic Movement Permit Application

Department of Transportation
Traffic Engineering Division
16 State House Station
Augusta, Maine 04333
Telephone: 207-287-3775

FOR MDOT USE 1/2000
ID #

Total Fees:
Date Received:

PERMIT APPLICATION – TRAFFIC
TRAFFIC MOVEMENT PERMIT, 23 M.R.S.A. § 704 – A

Please type or print:

This application is for: Traffic 100-200 PCE's X
Traffic 200+ PCE's _____

Name of Applicant: **385 CONGRESS STREET, LLC**

Address: **2730 TRANSIT ROAD** Telephone: **413-244-9092**

City/State/Zip: **WEST SENECA, NEW YORK 14224**

Name of local contact or agent: **SEBAGO TECHINCS, INC – DEREK CALDWELL P.E., PTOE**

Address: **75 JOHN ROBERTS ROAD – SUITE 4A** Telephone: **207-200-2100**

City/State/Zip: **SOUTH PORTLAND, ME 04106**

Name and type of development: **385 CONGRESS STREET – MIXED-USE DEVELOPMENT**

Location of development including road, street, or nearest route number: **385 CONGRESS STREET**

City/Town/Plantation: **PORTLAND** County: **CUMBERLAND**, Tax Map # **27** Lot # **D001**

Do you want a consolidated review with DEP pursuant to 23 M.R.S.A. § 704 – A (7)? Yes _____ No **X**

Was this development started prior to obtaining a traffic permit? **NO**

Is the project located in an area designated as a growth area (as defined in M.R.S.A. title 30 – A chapter 187)? Yes _____ No X
Is this project located within a compact area of an urban compact municipality? Yes X No ___

Is this development or any portion of the site currently subject to state or municipal enforcement action? **No**

Existing DEP or MDOT permit number (if applicable): **N/A**

Name(s) of DOT Staff person(s) contacted concerning this application: **N/A**

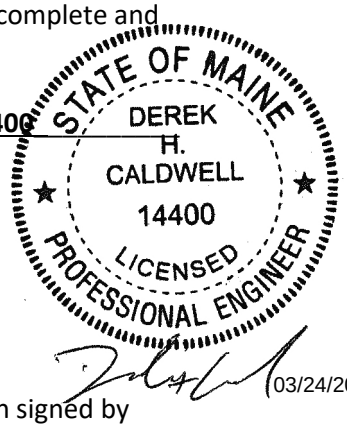
Name(s) of DOT staff person(s) present at the scoping meeting for 200+ applications:
N/A

1/2000

CERTIFICATION

The traffic engineer responsible for preparing this application and/or attaching pertinent site and traffic information hereto, by signing below, certifies that the application for traffic approval is complete and accurate to the best of his/her knowledge.

Signature: _____ Re/Cert/Lic No.: **PE # 14400**



Name (print): **Derek H. Caldwell**

Date: March 24, 2022

If the signature below is not the applicant's signature, attach letter of agent authorization signed by applicant.

"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 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. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

(Agent) March 25, 2021

Signature of applicant Date

Notice of Intent to File

FORM C 7/97

NOTICE OF INTENT TO FILE

Please take notice that

385 Congress Street, LLC
2730 Transit Road
West Seneca, NY 14224
(413) 244-9092

is intending to file a Traffic Movement Permit application with the City of Portland pursuant to the provisions of 23 M.R.S.A. § 704 - A on or about

March 24, 2022

The application is for

A mixed-use development at 385 Congress Street in Portland. The site currently houses the former Portland Press Herald printing building and surface parking. The development will consist of an approximate total of 312 residential units, a 152-room hotel, and approximately 6,765 square feet of retail space. The site will be served by proposed entrances to two levels of parking by way of new driveways on Myrtle Street and Pearl Street. New trips generated by the development will consist of 147 new trip ends during the AM Peak Hour and 114 new trip ends during the PM Peak Hour.

at the following location:

385 Congress Street
Portland, ME

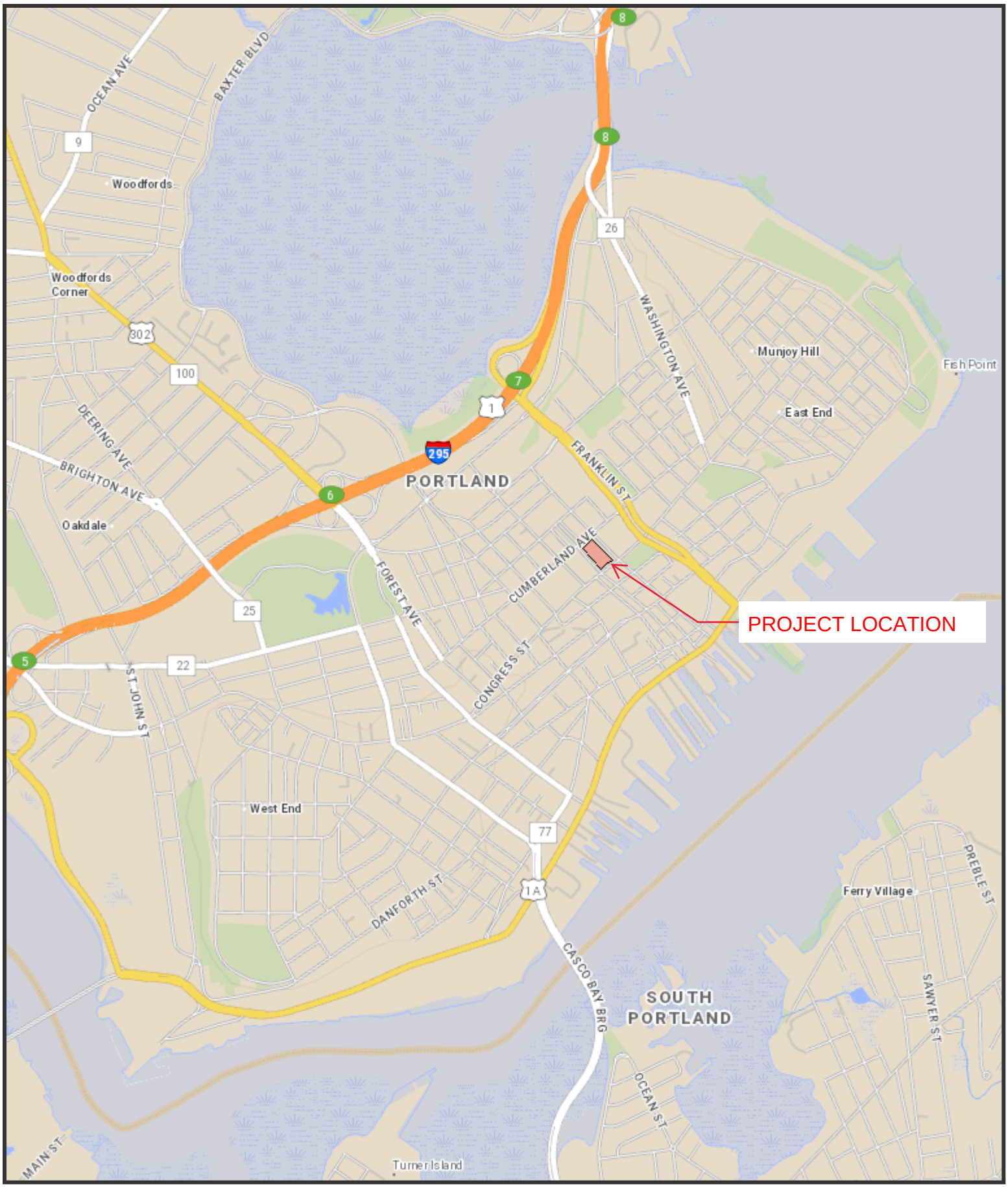
A request for a public hearing must be received by the City,,in writing, no later than 20 days after the application is found by the City to be complete and is accepted for processing. Public comment on the application will be accepted throughout the processing of the application.

The application will be filed for public inspection at Portland City Hall during normal working hours.

Written public comments may be sent to the City of Portland, Planning and Urban Development Department, 389 Congress Street, 4th Floor, Portland, ME 04101.

Location Map

385 CONGRESS STREET - LOCATION MAP



The Maine Department of Transportation provides this publication for information only. Reliance upon this information is at user risk. It is subject to revision and may be incomplete depending upon changing conditions. The Department assumes no liability if injuries or damages result from this information. This map is not intended to support emergency dispatch.

0.4 Miles

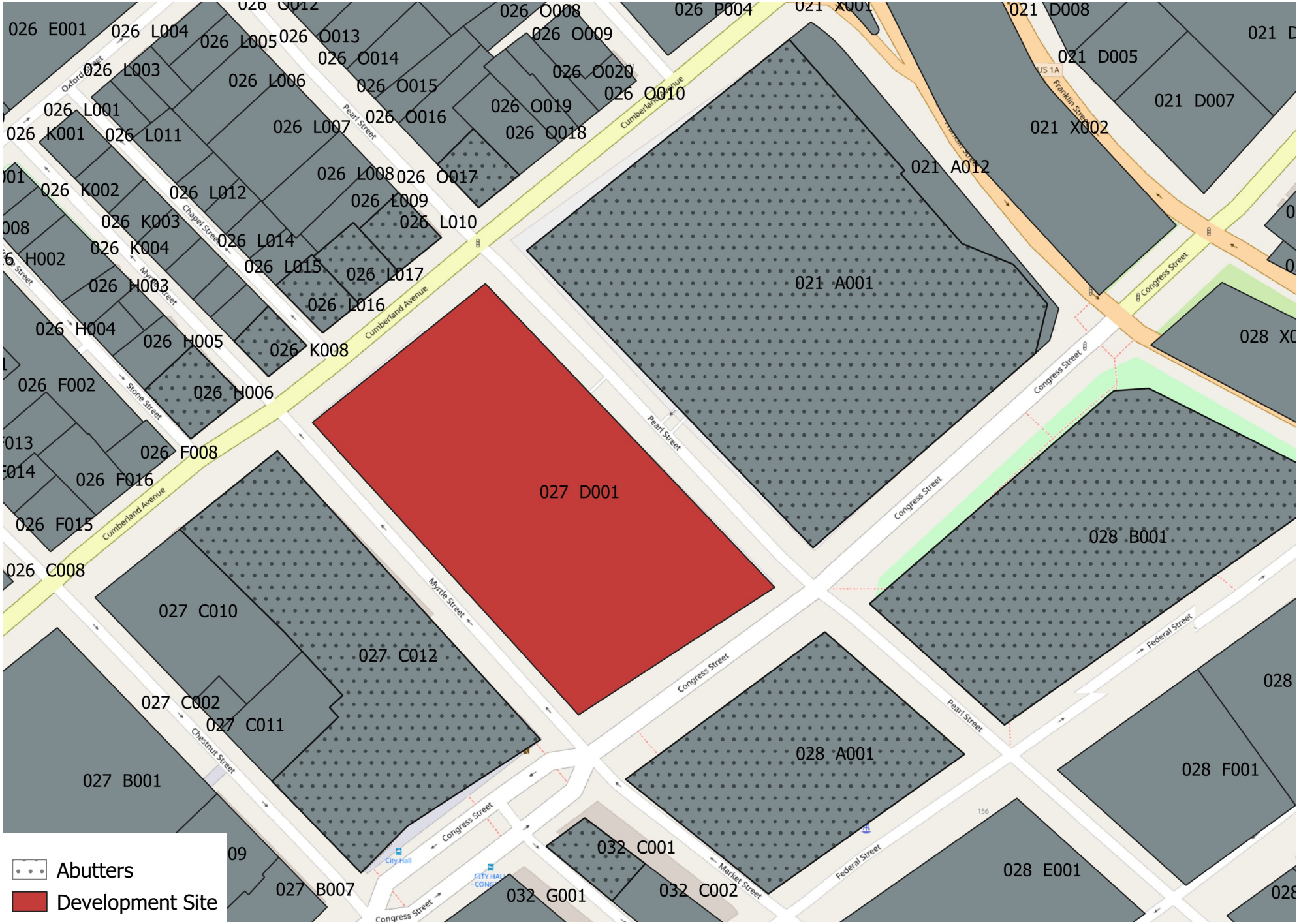
1 inch = 0.43 miles

Date: 2/3/2022
Time: 1:07:54 PM

Abutters List and Map

19371
385 Congress Street Portland
Abutters List

Map-Lot	Grantee	Mailing 1	City	State	Zip
021 A001001	PEARL CUMBERLAND LLC	ONE CITY CENTER 4TH FLOOR	PORTLAND	ME	04101
026 H006	AVESTA UNITY VILLAGE LP	307 CUMBERLAND AVE	PORTLAND	ME	04101
026 K008001	WARD CAPITAL LLC	139 ASHMONT ST	PORTLAND	ME	04103
026 L008	COUILLARD BRUCE R JR & LAURA T WITHERS JTS	110 MARGINAL WAY # 241	PORTLAND	ME	04101
026 L008002	BURKE LEAH FRANCES	237 CUMBERLAND AVE # 2	PORTLAND	ME	04101
026 L008003	HENRY ANGELA F & LOUIS A CHRISTEN	239 CUMBERLAND AVE	PORTLAND	ME	04101
026 L008004	STEPHAN AARON T & LAUREN FENSTERSTOCK JTS	142 PEARL ST	PORTLAND	ME	04101
026 L016	FIRST ASSEMBLY OF GOD CHURCH	243 CUMBERLAND AVE	PORTLAND	ME	04101
026 L017	APOSTOLIC FAITH ASSEMBLY	331 CONGRESS ST	PORTLAND	ME	04101
026 O017	235 CUMBERLAND AVENUE LLC	PO BOX 4271	PORTLAND	ME	04104
027 C012	CITY OF PORTLAND	389 CONGRESS ST	PORTLAND	ME	04101
028 A001	CITY OF PORTLAND	389 CONGRESS ST	PORTLAND	ME	04101
028 B001	CITY OF PORTLAND	389 CONGRESS ST	PORTLAND	ME	04101
032 C001	PRESS HOTEL LLC	119 EXCHANGE ST	PORTLAND	ME	04101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026 L001
026 K001
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026 L007
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026 O018
021 D008
021 D005
021 D007
021 X002
021 A012
026 K002
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026 H003
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026 K008
026 H006
026 F002
026 F008
026 F016
026 F015
026 C008
021 A001
027 D001
028 B001
027 C010
027 C012
027 C002
027 C011
027 B001
028 A001
028 F001
028 E001
032 C001
032 C002
032 G001
027 B007
Pearl Street
Cumberland Avenue
Congress Street
Myrtle Street
Chestnut Street
Federal Street
Market Street
Stone Street
Chapel Street
Oxford Street
Franklin Street
US 1A
City Hall
Abutters
Development Site

Section 1 – Site and Traffic Information

A. Site Plan

385 Congress Street, LLC proposes to redevelop the 2.26 acre parcel known as 385 Congress Street in Portland, Maine. The site is bounded by Congress Street to the south, Myrtle Street to the west, Cumberland Avenue to the north and Pearl Street to the east. The site is presently developed consisting of two buildings and large area of paved surface parking. The site follows the natural topography of the surrounding roadways, sloping in a general northerly direction downward from Congress Street to Cumberland Avenue. The site currently has a total six curbs; one on Congress Street, two on Cumberland Avenue and three on Pearl Street. Sidewalk is present adjacent to the site along all four roadway frontages. On-street parking is present along the majority of the Congress Street and Myrtle Street frontages and partially along the Cumberland Street frontage. There is no on street parking on Pearl Street.

An existing conditions and site plan are included with this application.

B. Existing and Proposed Uses

The site is currently developed consisting of two buildings formerly used by the Portland Press Herald printing operations. The remaining areas of the site are paved parking areas currently operated as paid private parking.

The proposed development is to construct three towers housing a mix of residential condominium units, a hotel with restaurant, and first floor commercial space. The following table summarizes the proposed uses:

Table 1: Development Program Summary

Building	Number of Levels	Number of Residential Units	Number of Hotel Rooms	Retail Square Footage
Pearl St Tower	12	110	--	2,600
Myrtle St Tower	12	9	152	--
Cumberland Ave Tower	12	193	--	4,165
Total		**312**	**152**	**6,765**

The development includes two levels of structured parking which will support all three buildings on the site. Under full build out the garage will be accessed by five driveway, two full access drives each on Pearl Street and Myrtle Street and one entry only drive on Congress Street. The lower level of the garage (Level 0) will be at grade with Cumberland Avenue. The upper level of the garage (Level 1) will be at grade with Congress Street. The Congress Street entry would be used to serve only hotel guests arriving

and hotel valet operations. Residents of the residential units would utilize one of the driveways on Pearl or Myrtle Street to access the desired level of the parking areas.

C. Site and Vicinity Boundaries

The site is bounded by Congress Street to the south, Myrtle Street to the west, Cumberland Avenue to the north and Pearl Street to the east. In the immediate vicinity of the site there are a number of notable existing uses. Directly across Congress Street from the development is the City of Portland Central Fire Station. Portland City Hall and Merrill Auditorium are adjacent to the site across Myrtle Street. Adjacent to the site across Cumberland Avenue are a number of multi-family residences as well as church. And adjacent to the site across Pearl Street is a large private parking operation, known as "Top of the Old Port Parking".

The site is bordered by four existing intersections:

1. Congress Street at Pearl Street (signalized)
2. Congress Street at Myrtle Street (unsignalized)
3. Myrtle Street at Cumberland Avenue (unsignalized)
4. Pearl Street at Cumberland Avenue (signalized)

D. Proposed Uses in the Vicinity of the Proposed Development

Contact was made with City of Portland officials to determine if any proposed but unbuilt uses in the vicinity of the development should be included in the background traffic volumes for this development's traffic analysis. At this time, no other developments have been identified.

E. Trip Generation

Vehicular trip generation of the proposed development was calculated using the *Institute of Transportation Engineers Trip Generation Manual, 11th Edition.* The following table outlines the land use codes (LUC) and independent variables used for the calculation.

Table 2: Trip Generation Land Use Summary

Use	Land Use Code	Independent Variable	Setting/Location
Residential & Retail	232 – High-Rise Residential with Ground-Floor Commercial – GFA (1-25K)	312 Dwelling Units	Dense Multi-Use Urban
Hotel & Restaurant	310 – Hotel	152 Rooms	Dense Multi-Use Urban

The following tables detail the trip generation calculation for each of the above listed land use codes.

Table 3 – Trip Generation
Land Use Code 232 – High-Rise Residential w/ Ground-Floor Commercial
Dense Multi-Use Urban
312 Dwelling Units

Time Period	Trip Rate per DU	Total Trips	Entering %[A]	Exiting %[A]	Entering Trips	Exiting Trips
AM Peak Hour of Adjacent Street	0.31	97	41%	59%	40	57
PM Peak Hour of Adjacent Street	0.21	66	50%	50%	33	33
AM Peak Hour of Generator	0.31	97	41%	59%	40	57
PM Peak Hour of Generator	0.2	62	66%	34%	41	21

Note A- Trip Distributions not published for LUC 232. Listed Entering/Exiting percentages taken from published rates for LUC 222 – Multifamily Housing (High-Rise) Dense Multi-Use Urban

Table 4 – Trip Generation
Land Use Code 310 - Hotel
Dense Multi-Use Urban
152 Rooms

Time Period	Trip Rate per DU	Total Trips	Entering %[A]	Exiting %[A]	Entering Trips	Exiting Trips
AM Peak Hour of Adjacent Street	0.31	47	39%	61%	18	29
PM Peak Hour of Adjacent Street	0.21	32	44%	56%	14	18
AM Peak Hour of Generator	0.33	50	51%	49%	25	25
PM Peak Hour of Generator	0.34	52	30%	70%	16	36

The total unadjusted trip generation for the development is shown in Table 5, found by summing the values shown in Table 3 and Table 4.

Table 5 –Unadjusted Total External Trip Generation

Time Period	Total Trips	Entering Trips	Exiting Trips
AM Peak Hour of Adjacent Street	144	58	86
PM Peak Hour of Adjacent Street	98	47	51
AM Peak Hour of Generator	147	65	82
PM Peak Hour of Generator	114	57	57

F. Trip Distribution

Entering and exiting trip distribution for the development is shown above in Table 5. Both levels of the parking garage are proposed to have access to Myrtle Street and Pearl Street. The northerly access points, closer to Cumberland Ave, would serve Level 0 and the southerly access points, closer to Congress Street, would serve Level 1. Whether traffic uses the Pearl Street or Myrtle Street access is based upon the origin-destination of an individual trip. The following assumptions are made as to what entrance/exit a given vehicle associated with the residential portion of the development would use based on the external origin destination point:

- Traffic entering from Congress Street to the west would use Myrtle Street. Traffic exiting to Congress Street to the west would use Pearl Street.
- Traffic entering and exiting to Congress Street from the east would use Pearl Street.
- Traffic entering from Cumberland Avenue to the west would use Pearl Street. Traffic exiting to Cumberland Ave to the west would use Myrtle Street.
- Traffic entering and exiting from Franklin Street to the south would use Pearl Street via Cumberland Avenue.
- Traffic entering and exiting from Pearl Street points north and south would use the Pearl Street access points.

Traffic associated with the Hotel is assumed to enter the site via the Congress Street driveway and exit via the southerly Myrtle Street driveway (regardless of origin/destination). Valet operations would function as follows:

- Guests arrives via Congress Street driveway entering in own vehicle.
- Valet moves vehicle internally to parking area.
- Upon departure, valet would bring car to guest by exiting the southerly Myrtle Street drive, and circulating the block (right onto Cumberland Ave, right onto Pearl Street, right onto Congress Street) and reentering the site at Congress Street to bring vehicle to guest.
- Guest would exit the southerly Myrtle Street drive and proceed to desired destination.

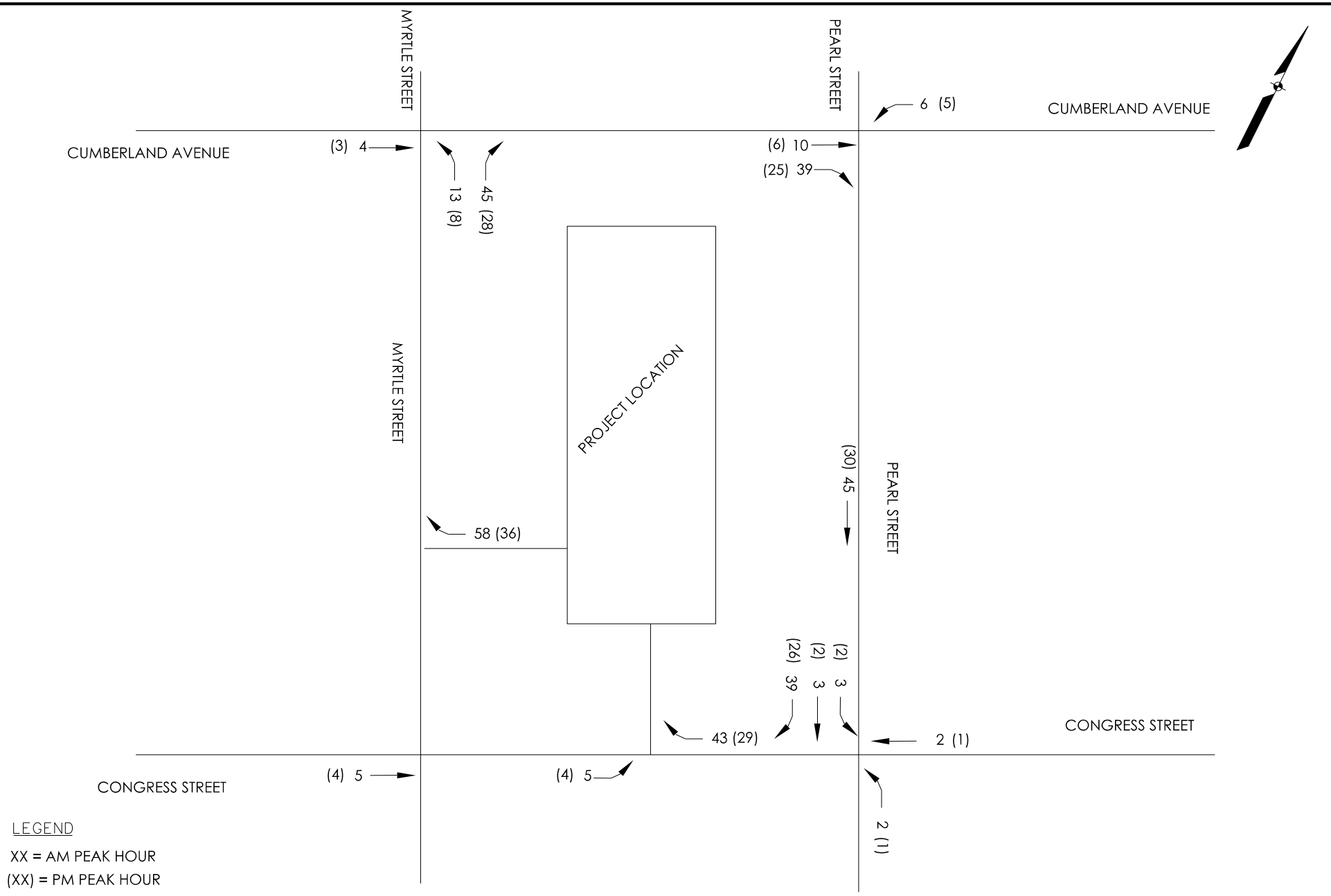
From there the vehicle would be assumed to travel to the ultimate destination, described below in Section G.

G. Trip Assignment

The proposed development generated trip assignment is based upon published MaineDOT AADT data and local traffic patterns. The following general trip assignment is proposed:

- 35% to/from Franklin Street to the north. This would encompass traffic from I-295 and points north.
- 25% to/from Congress Street to the west. This would encompass traffic from points west and south.
- 20% to/from Cumberland Avenue to the west. This would encompass traffic from points west and north.
- 10% to/from Pearl Street to the South. This would encompass traffic from points west and south.
- 10% to/from Congress Street to the east. This would encompass traffic from points east and north.

The proposed trip distribution and assignment related to the residential traffic is shown in Figure 1 and the trip distribution and assignment associated with the hotel in Figure 2. Figure 3 shows the overall trip distribution and assignment, found by summing the values in Figures 1 and 2.



SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

HOTEL PROJECT GENERATED TRIPS
OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S
DATE: 03/24/2022

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 1 OF 3

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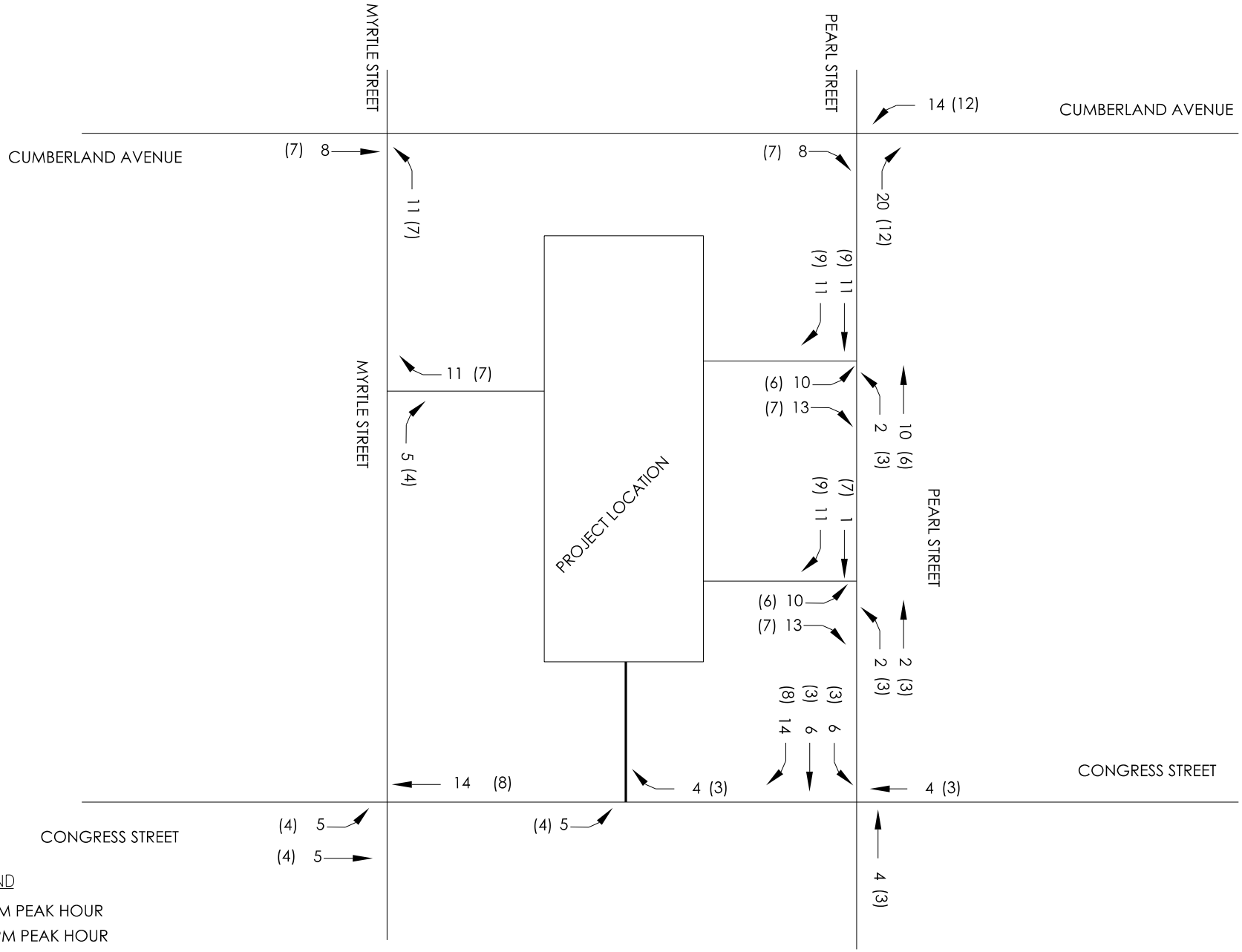

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

RESIDENTIAL PROJECT GENERATED TRIPS
OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S
DATE: 03/24/22

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 2 OF 3

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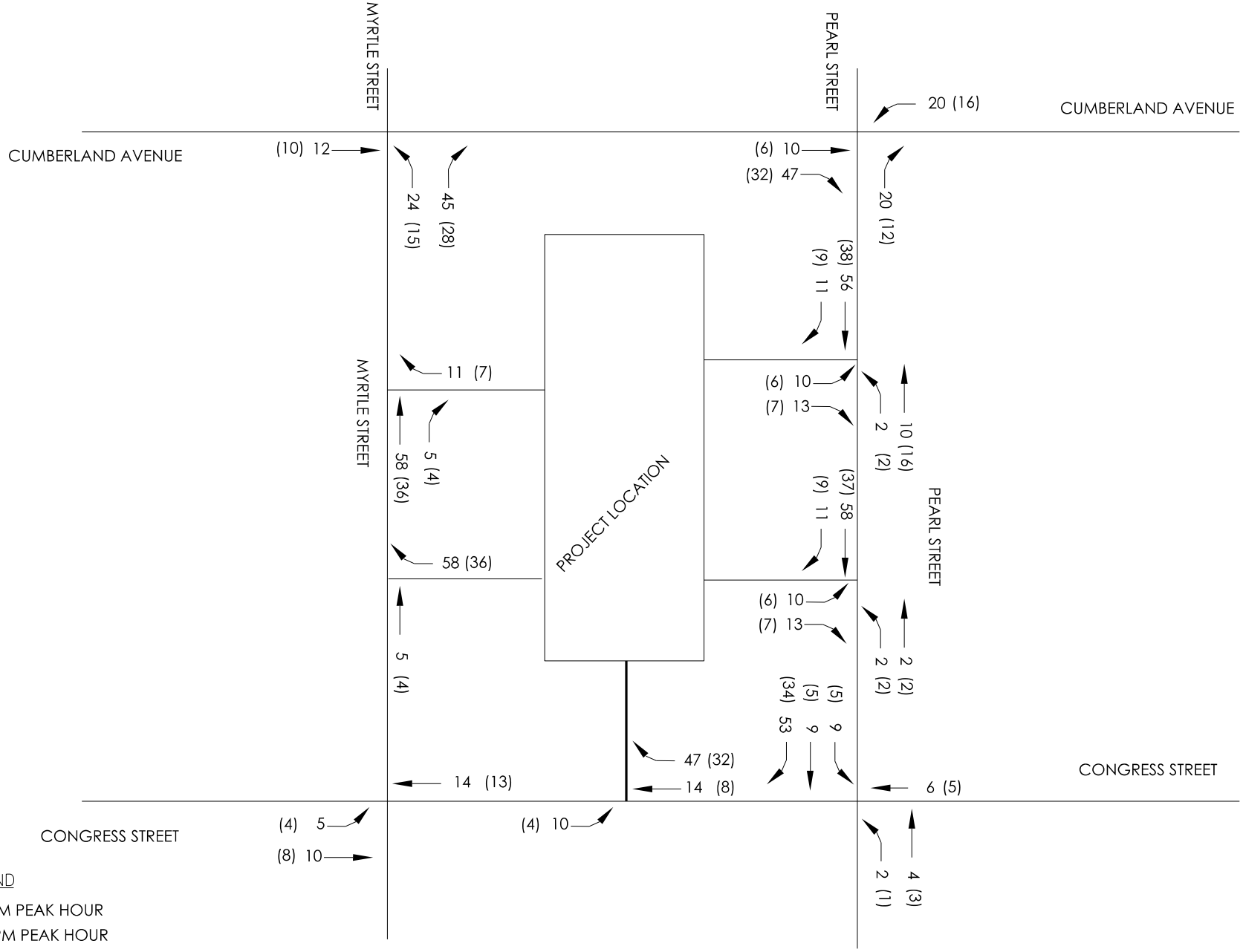

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

TOTAL PROJECT GENERATED TRIPS
OF: 385 CONGRESS STREET DEVELOPMENT

SCALE: N.T.S
DATE: 03/24/2022

LOCATION: 385 CONGRESS ST
PORTLAND, MAINE

FOR: 385 CONGRESS STREET, LLC
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SHEET: 3 OF 3

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Section 2 – Traffic Accidents

The most recent three (3) year crash history (2018-2020) was obtained from MaineDOT for the intersections and roadway links in the vicinity of the project site. Intersections and roadway links are considered to be High Crash Locations (HCL's) if they have a Critical Rate Factor (CRF) greater than 1.0 and have minimum of 8 accidents in a three (3) year period. No locations in the project area were identified as High Crash Locations. A summary of this information is presented below and the MaineDOT summary reports are included in the Appendix.

Table 6: Intersection Crash Data Summary

Node	Description	# of Crashes	CRF	HCL
18813	Congress Street at Pearl Street	16	0.90	No
18772	Congress Street at Myrtle Street	1	0.00	No
18990	Myrtle Street at Cumberland Avenue	0	0.00	No
18994	Cumberland Avenue at Chapel Street	0	0.00	No
18812	Cumberland Avenue at Pearl Street	12	0.68	No

Table 7: Segment Crash Data Summary

Link	Description	# of Crashes	CRF	HCL
18813-18772	Congress Street between Pearl Street and Myrtle Street	3	0.82	No
18772-18990	Myrtle Street between Congress St and Cumberland Avenue	2	1.41	No
18990-18994	Cumberland Avenue between Myrtle Street and Chapel Street	0	0.00	No
18994-18812	Cumberland Avenue between Chapel Street and Pearl Street	0	0.00	No
18812-18813	Pearl Street between Cumberland Avenue and Congress Street	2	0.00	No

Section 3 – Development Entrances and Exits

a) Access to the development is proposed by way of four full access points to the proposed development parking structures on Myrtle Street and Pearl Street, as well as an entry only drive on Congress Street to serve the Hotel only. Access to the upper-level parking is proposed by a driveway at a point approximately 100’ north from the intersection with Congress Street. Access to the lower-level garage on Myrtle Street is proposed by a drive approximately 70’ north of the intersection with Cumberland Avenue. On Pearl Street, access to the upper-level parking is proposed by a driveway at a point approximately 130’ north of the intersection with Congress Street and access to the lower-level parking by way of a drive at a point approximately 50’ south of the intersection with Cumberland Avenue. Additionally, there are proposed loading/trash areas located adjacent to each of the four above-described access points. These loading areas would utilize the same curb cut created for the garage access drives.

b) Sight distance looking from the project driveways was found to be adequate on both Pearl Street and Myrtle Street. On Pearl Street, sight distance available is the length of the city block between Cumberland Avenue and Congress Street looking from both driveway locations. On Myrtle Street, sight distance is similarly available the length of the block between Congress Street and Cumberland Avenue, however on-street parking may obstruct the view for an exiting vehicle. At the southerly drive on Myrtle Street on-street parking would not block an exiting vehicles sight line, since there would not be adequate room for on-street parking to be present between the driveway and Congress Street. At the northerly drive, vehicles may have an obstructed view if parked vehicles are present south of the drive. This could be partially mitigated by restricting parking in the immediate vicinity of the drive.

Section 4 – Title, Right, or Interest

A deed for the subject parcel is included.

Doc#: 53773 Bk:34401 Pg: 214

MAINE REAL ESTATE TAX PAID

QUITCLAIM DEED WITH COVENANT
(Maine Statutory Short Form)

METRO MEDIA PROPERTIES LLC, a Maine limited liability company with a mailing address of 201 Old Country Road, Suite 105, Melville, NY 11747 ("Grantor"), for consideration paid, grants to **385 CONGRESS LLC,** a Maine limited liability company with mailing address of 2730 Transit Road, West Seneca, NY 14224 ("Grantee"), with QUITCLAIM COVENANT, a certain lot or parcel of land with the buildings and improvements thereon located in the City of Portland, County of Cumberland and State of Maine, described as follows:

A certain lot or parcel of land in Portland, County of Cumberland and State of Maine bounded and described generally as follows:

South: Congress Street;
East: Pearl Street;
North: Cumberland Avenue; and
West: Myrtle Street

This parcel of land is more particularly described as follows:

Beginning at the intersection of the Northerly sideline of Congress Street with the Easterly sideline of Myrtle Street;

Thence: N72° 54' E along the Northerly sideline of Congress Street approximately Two Hundred Forty Feet (240') to the intersection of the Northerly sideline of Congress Street with a Westerly sideline of Pearl Street;

Thence: N27° 21' W along the Westerly sideline of Pearl Street approximately Four Hundred Fifty Five Feet (455') to the intersection of the Westerly sideline of Pearl Street with a Southerly sideline of Cumberland Avenue;

Thence: Westerly along the Southerly sideline of Cumberland Avenue approximately One Hundred Seventy Feet (170') to a point;

Thence: Northerly to point A (point A being located at the intersection of the line of this call with the line of the next call extended N 67° 11' E);

Thence S67° 11' W approximately Sixty Feet (60') to the intersection of the Southerly sideline of Cumberland Avenue with the Easterly sideline of Myrtle Street;

Thence S26° 22' E along the Easterly sideline of Myrtle Street approximately Four Hundred Ten Feet (410') to the intersection of the Easterly sideline of Myrtle Street with the Northerly sideline of Congress Street and the point of beginning.

Also conveying the following parcel of land:

A certain lot or parcel of land with the buildings thereon situated in the City of Portland, County of Cumberland and State of Maine, bounded and described generally as follows:

Beginning at a drill hole reset marking the intersection of the northwesterly sideline of Congress Street and the northeasterly sideline of Myrtle Street;

Thence N 55°-45'-03" E, 240.31 feet by and along the northwesterly sideline of said Congress Street to a drill hole set marking the northwesterly sideline of said Congress Street and the southwesterly sideline of Pearl Street;

Thence N 44°-35'-56" W, 433.81 feet by and along the southwesterly sideline of said Pearl Street to a point at the intersection of the southwesterly sideline of Pearl Street with the southeasterly sideline of Cumberland Avenue. Said point being witnessed by a granite right-of-way monument.

Thence S 50°-25'-20" W, 230.34 feet by and along the southeasterly sideline of said Cumberland Avenue to a point at the intersection of said southeasterly sideline of Cumberland Avenue with said northwesterly sideline of Myrtle Street. Said point being witnessed by a granite right-of-way monument.

Thence S 43°-37'-52" E, 410.86 feet by and along the northeasterly sideline of said Myrtle Street to the Point of Beginning, containing 2.26 acres more or less.

Also releasing to Grantee, Grantor's right, title and interest in a certain underground tunnel that runs from the subject premises to 390 Congress Street, by virtue of a license granted pursuant to approval of the City of Portland Inspector of Buildings dated May 14, 1965.

Being the same premises described in a Quitclaim Deed with Covenant from MTM Portland Properties, LLC to Metro Media Properties, LLC dated July 10, 2009 and recorded in the Cumberland County Registry of Deeds at Book 27079, Page 160.

IN WITNESS WHEREOF, Metro Media Properties LLC has caused this instrument to be signed and sealed in its company name by George Cacoulidis, its CEO, thereunto duly authorized, this 20th day of October, 2017.

WITNESS:

Tom Hanson

METRO MEDIA PROPERTIES LLC,
a Maine limited liability company

By: _____
George Cacoulidis
Title: CEO

STATE OF MAINE
COUNTY OF CUMBERLAND, ss. October 20, 2017

Then personally appeared the above named George Cacoulidis, CEO of Metro Media Properties LLC, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of Metro Media Properties LLC.

Before me,

_____
Attorney at Law ~~Notary Public~~
Printed Name: Nicholas J. Morrill

Received
Recorded Register of Deeds
Oct 20,2017 12:19:14P
Cumberland County
Nancy A. Lane

PARID: 027 D001001 **385 CONGRESS ST**
385 CONGRESS LLC

Parcel

Parcel ID	027 D001001
Property Location	385 CONGRESS ST
Unit	
Living Unit	1
Land Use Code	32 - WAREHOUSE & STORAGE
	Verify legal use with Inspections Division
Zoning	B3
Land Area (acreage)	2.2606
Land Area (square footage)	98472
Notes	27-D-1 CONGRESS ST 371-387 CUMBERLAND AVE 240-254 MYRTLE ST 1-35 PEARL ST 98470 SF
Utilities	1 - ALL PUBLIC - -

Owners

Owner	385 CONGRESS LLC
Address	2730 TRANSIT RD
City, State, Zip	WEST SENECA NY 14224
Deed Date	10/20/2017
Book	34401
Page	214

Section 5 – Public or Private Rights-of-Way

No Public or Private Rights-of-Way are proposed on the project parcel.

Section 6 – Construction Schedule

Construction is anticipated to begin in early 2023 once all permits are received with initial occupancy in late 2024. Construction will be phased; a proposed phasing schedule will be provided at the project's scoping meeting.

Appendix A. Crash Data

Crash Summary Report

Report Selections and Input Parameters

REPORT SELECTIONS

☑ **Crash Summary I** ☐ **Section Detail** ☑ **Crash Summary II** ☐ **1320 Public** ☐ **1320 Private** ☐ **1320 Summary**

REPORT DESCRIPTION

Portland
Congress St., Myrtle St., Pearl St., Cumberland Ave. Block

REPORT PARAMETERS

Year 2018, Start Month 1 through Year 2020 End Month: 12

Route: **0560160**	Start Node: **18813**	Start Offset: **0**	☐ **Exclude First Node**
	End Node: **18772**	End Offset: **0**	☐ **Exclude Last Node**
Route: **0561238**	Start Node: **18990**	Start Offset: **0**	☐ **Exclude First Node**
	End Node: **18812**	End Offset: **0**	☐ **Exclude Last Node**
Route: **0560527**	Start Node: **18772**	Start Offset: **0**	☑ **Exclude First Node**
	End Node: **18990**	End Offset: **0**	☑ **Exclude Last Node**
Route: **0560571**	Start Node: **18813**	Start Offset: **0**	☑ **Exclude First Node**
	End Node: **18812**	End Offset: **0**	☑ **Exclude Last Node**

Crash Summary I

Nodes

Node	Route - MP	Node Description	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual M Ent-Veh	Crash Rate	Critical Rate	CRF
18813	0560160 - 0.87	Int of CONGRESS ST PEARL ST	9	16	0	0	0	6	10	37.5	4.353	1.23	1.36	0.90
												Statewide Crash Rate:	0.77	
18772	0560160 - 0.93	Int of CONGRESS ST MARKET ST MYRTLE ST	2	1	0	0	0	0	1	0.0	4.056	0.08	0.41	0.00
												Statewide Crash Rate:	0.16	
18990	0561238 - 0.62	Int of CUMBERLAND AV MYRTLE ST	2	0	0	0	0	0	0	0.0	2.618	0.00	0.44	0.00
												Statewide Crash Rate:	0.15	
18994	0561238 - 0.64	Int of CHAPEL ST CUMBERLAND AV	2	0	0	0	0	0	0	0.0	2.807	0.00	0.43	0.00
												Statewide Crash Rate:	0.15	
18812	0561238 - 0.68	Int of CUMBERLAND AV PEARL ST	9	12	0	0	3	2	7	41.7	4.326	0.92	1.36	0.68
												Statewide Crash Rate:	0.77	
Study Years:	3.00	**NODE TOTALS:**		29	0	0	3	8	18	37.9	18.160	0.53	0.67	0.79

Crash Summary I

Sections

Start Node	End Node	Element	Offset Begin - End	Route - MP	Section Length	U/R	Total Crashes	Injury Crashes K	A	B	C	PD	Percent Injury	Annual HMVM	Crash Rate	Critical Rate	CRF
18772	18813	3938300	0 - 0.06	0560160 - 0.87	0.06	2	3	0	0	0	1	2	33.3	0.00181	553.41	671.84	0.00
Int of CONGRESS ST	MARKET ST	MYRTLE ST		RD INV 05 60160											Statewide Crash Rate: 231.61		
18990	18994	3106833	0 - 0.02	0561238 - 0.62	0.02	2	0	0	0	0	0	0	0.0	0.00043	0.00	752.62	0.00
Int of CUMBERLAND AV	MYRTLE ST			RD INV 05 61238											Statewide Crash Rate: 179.30		
18812	18994	3119280	0 - 0.04	0561238 - 0.64	0.04	2	0	0	0	0	0	0	0.0	0.00139	0.00	593.51	0.00
Int of CUMBERLAND AV	PEARL ST			RD INV 05 61238											Statewide Crash Rate: 179.30		
18772	18990	194351	0 - 0.09	0560527 - 0	0.09	2	2	0	0	0	0	2	0.0	0.00030	2230.14	1576.57	1.41
Int of CONGRESS ST	MARKET ST	MYRTLE ST		RD INV 05 60527											Statewide Crash Rate: 404.36		
18812	18813	5080413	0 - 0.09	0560571 - 0.31	0.09	2	2	0	0	0	0	2	0.0	0.00123	541.61	1121.39	0.00
Int of CUMBERLAND AV	PEARL ST			RD INV 05 60571											Statewide Crash Rate: 404.36		
Study Years: 3.00				**Section Totals:**	0.30		7	0	0	0	1	6	14.3	0.00515	452.67	568.95	0.80
				Grand Totals:	0.30		36	0	0	3	9	24	33.3	0.00515	2328.00	744.95	3.13

Crash Summary

Section Details

Start Node	End Node	Element	Offset Begin - End	Route - MP	Total Crashes	Injury Crashes K	A	B	C	PD	Crash Report	Crash Date	Crash Mile Point	Injury Degree
18772	18813	3938300	0 - 0.06	0560160 - 0.87	3	0	0	0	1	2	2020-26845	11/04/2020	0.90	C
											2018-41353	12/25/2018	0.90	PD
											2020-17682	07/27/2020	0.91	PD
18990	18994	3106833	0 - 0.02	0561238 - 0.62	0	0	0	0	0	0				
18812	18994	3119280	0 - 0.04	0561238 - 0.64	0	0	0	0	0	0				
18772	18990	194351	0 - 0.09	0560527 - 0	2	0	0	0	0	2	2018-16265	06/05/2018	0.03	PD
											2019-64287	09/05/2019	0.08	PD
18812	18813	5080413	0 - 0.09	0560571 - 0.31	2	0	0	0	0	2	2018-15713	05/31/2018	0.35	PD
											2018-12710	05/01/2018	0.35	PD
				Totals:	7	0	0	0	1	6				

Crash Summary II - Characteristics

Crashes by Day and Hour

	AM												Hour of Day	PM											
Day Of Week	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**Un**	**Tot**
SUNDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	3
MONDAY	0	0	0	0	0	0	0	3	1	0	1	1	0	0	1	0	0	0	0	1	0	0	0	0	0	8
TUESDAY	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	1	1	1	1	0	0	0	7
WEDNESDAY	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3
THURSDAY	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	0	1	1	1	0	0	0	0	0	0	7
FRIDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	1	1	0	0	6
SATURDAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
Totals	0	0	0	0	0	0	1	3	3	1	1	2	0	2	4	3	2	2	2	3	2	3	2	0	0	**36**

Vehicle Counts by Type

Unit Type	Total
1-Passenger Car	30
2-(Sport) Utility Vehicle	26
3-Passenger Van	1
4-Cargo Van (10K lbs or Less)	1
5-Pickup	11
6-Motor Home	0
7-School Bus	0
8-Transit Bus	1
9-Motor Coach	0
10-Other Bus	1
11-Motorcycle	0
12-Moped	0
13-Low Speed Vehicle	0
14-Autocycle	0
15-Experimental	0
16-Other Light Trucks (10,000 lbs or Less)	0
17-Medium/Heavy Trucks (More than 10,000 lbs)	0
18-ATV - (4 wheel)	0
20-ATV - (2 wheel)	0
21-Snowmobile	0
22-Pedestrian	1

Unit Type	Total
23-Bicyclist	0
24-Witness	6
25-Other	0
26-Construction	0
27-Farm Vehicle	0
Total	**78**

Crash Summary II - Characteristics

Crashes by Driver Action at Time of Crash

Driver Action at Time of Crash	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
No Contributing Action	9	22	0	0	0	0	31
Ran Off Roadway	1	0	0	0	0	0	1
Failed to Yield Right-of-Way	5	2	0	0	0	0	7
Ran Red Light	7	2	0	0	0	0	9
Ran Stop Sign	0	0	0	0	0	0	0
Disregarded Other Traffic Sign	1	0	0	0	0	0	1
Disregarded Other Road Markings	0	0	0	0	0	0	0
Exceeded Posted Speed Limit	0	0	0	0	0	0	0
Drove Too Fast For Conditions	0	0	0	0	0	0	0
Improper Turn	3	0	0	0	0	0	3
Improper Backing	1	1	0	0	0	0	2
Improper Passing	0	0	0	0	0	0	0
Wrong Way	0	0	0	0	0	0	0
Followed Too Closely	3	1	0	0	0	0	4
Failed to Keep in Proper Lane	2	0	0	0	0	0	2
Operated Motor Vehicle in Erratic, Reckless, Careless, Negligent or Aggressive Manner	0	0	0	0	0	0	0
Swerved or Avoided Due to Wind, Slippery Surface, Motor Vehicle, Object, Non-Motorist in Roadway	0	0	0	0	0	0	0
Over-Correcting/Over-Steering	1	1	0	0	0	0	2
Other Contributing Action	2	2	0	0	0	0	4
Unknown	0	0	0	0	0	0	0
Total	**35**	**31**	**0**	**0**	**0**	**0**	**66**

Crashes by Apparent Physical Condition And Driver

Apparent Physical Condition	Dr 1	Dr 2	Dr 3	Dr 4	Dr 5	Other	Total
Apparently Normal	32	29	0	0	0	1	62
Physically Impaired or Handicapped	0	0	0	0	0	0	0
Emotional(Depressed, Angry, Disturbed, etc.)	1	1	0	0	0	0	2
Ill (Sick)	1	0	0	0	0	0	1
Asleep or Fatigued	0	0	0	0	0	0	0
Under the Influence of Medications/Drugs/Alcohol	0	1	0	0	0	0	1
Other	0	0	0	0	0	0	0
Total	**34**	**31**	**0**	**0**	**0**	**1**	**66**

Driver Age by Unit Type

Age	Driver	Bicycle	SnowMobile	Pedestrian	ATV	Total
09-Under	0	0	0	0	0	0
10-14	0	0	0	0	0	0
15-19	1	0	0	0	0	1
20-24	8	0	0	0	0	8
25-29	8	0	0	0	0	8
30-39	18	0	0	0	0	18
40-49	9	0	0	0	0	9
50-59	11	0	0	0	0	11
60-69	9	0	0	0	0	9
70-79	4	0	0	0	0	4
80-Over	1	0	0	0	0	1
Unknown	2	0	0	1	0	3
Total	**71**	**0**	**0**	**1**	**0**	**72**

Crash Summary II - Characteristics

Most Harmful Event

Most Harmful Event	Total	Most Harmful Event	Total
1-Overturn / Rollover	0	38-Other Fixed Object (wall, building, tunnel, etc.)	0
2-Fire / Explosion	0	39-Unknown	0
3-Immersion	0	40-Gate or Cable	0
4-Jackknife	0	41-Pressure Ridge	0
5-Cargo / Equipment Loss Or Shift	0	**Total**	**70**
6-Fell / Jumped from Motor Vehicle	0		
7-Thrown or Falling Object	0		
8-Other Non-Collision	0		
9-Pedestrian	0		
10-Pedalcycle	0		
11-Railway Vehicle - Train, Engine	0		
12-Animal	0		
13-Motor Vehicle in Transport	65		
14-Parked Motor Vehicle	5		
15-Struck by Falling, Shifting Cargo or Anything Set in Motion by Motor Vehicle	0		
16-Work Zone / Maintenance Equipment	0		
17-Other Non-Fixed Object	0		
18-Impact Attenuator / Crash Cushion	0		
19-Bridge Overhead Structure	0		
20-Bridge Pier or Support	0		
21-Bridge Rail	0		
22-Cable Barrier	0		
23-Culvert	0		
24-Curb	0		
25-Ditch	0		
26-Embankment	0		
27-Guardrail Face	0		
28-Guardrail End	0		
29-Concrete Traffic Barrier	0		
30-Other Traffic Barrier	0		
31-Tree (Standing)	0		
32-Utility Pole / Light Support	0		
33-Traffic Sign Support	0		
34-Traffic Signal Support	0		
35-Fence	0		
36-Mailbox	0		
37-Other Post Pole or Support	0		

Traffic Control Devices

Traffic Control Device	Total
1-Traffic Signals (Stop & Go)	25
2-Traffic Signals (Flashing)	3
3-Advisory/Warning Sign	0
4-Stop Signs - All Approaches	0
5-Stop Signs - Other	1
6-Yield Sign	0
7-Curve Warning Sign	0
8-Officer, Flagman, School Patrol	1
9-School Bus Stop Arm	0
10-School Zone Sign	0
11-R.R. Crossing Device	0
12-No Passing Zone	0
13-None	6
14-Other	0
Total	**36**

Injury Data

Severity Code	Injury Crashes	Number Of Injuries
K	0	0
A	0	0
B	3	4
C	9	10
PD	24	0
Total	**36**	**14**

Road Character

Road Grade	Total
1-Level	32
2-On Grade	4
3-Top of Hill	0
4-Bottom of Hill	0
5-Other	0
Total	**36**

Light

Light Condition	Total
1-Daylight	22
2-Dawn	0
3-Dusk	0
4-Dark - Lighted	14
5-Dark - Not Lighted	0
6-Dark - Unknown Lighting	0
7-Unknown	0
Total	**36**

Crash Summary II - Characteristics

Crashes by Year and Month

Month	2018	2019	2020	Total
JANUARY	0	1	1	2
FEBRUARY	3	1	1	5
MARCH	1	1	1	3
APRIL	0	2	0	2
MAY	2	1	0	3
JUNE	2	1	0	3
JULY	0	2	2	4
AUGUST	1	1	0	2
SEPTEMBER	0	1	0	1
OCTOBER	5	1	0	6
NOVEMBER	1	1	1	3
DECEMBER	1	0	1	2
Total	**16**	**13**	**7**	**36**

Report is limited to the last 10 years of data.

Crash Summary II - Characteristics

Crashes by Crash Type and Type of Location

Crash Type	Straight Road	Curved Road	Three Leg Intersection	Four Leg Intersection	Five or More Leg Intersection	Driveways	Bridges	Interchanges	Other	Parking Lot	Private Way	Cross Over	Railroad Crossing	Traffic Circle-Roundabout	Total
Object in Road	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rear End - Sideswipe	4	0	0	12	0	1	0	0	0	0	0	0	0	0	17
Head-on - Sideswipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intersection Movement	0	0	0	17	0	1	0	0	0	0	0	0	0	0	18
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Train	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Went Off Road	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
All Other Animal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jackknife	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rollover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fire	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Submersion	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thrown or Falling Object	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Moose	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Turkey	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**5**	**0**	**0**	**29**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**36**

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Blowing Sand, Soil, Dirt												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Blowing Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Clear												
Dark - Lighted	5	0	0	0	0	0	0	0	0	0	2	7
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	13	0	0	0	0	0	0	0	0	0	2	15
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Cloudy												
Dark - Lighted	1	0	0	0	0	0	0	0	0	0	2	3
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	4	4
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Fog, Smog, Smoke												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Other												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Rain												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	4	4
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	3	3
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Severe Crosswinds												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0

Crash Summary II - Characteristics

Crashes by Weather, Light Condition and Road Surface

Weather Light	Dry	Ice/Frost	Mud, Dirt, Gravel	Oil	Other	Sand	Slush	Snow	Unknown	Water (Standing, Moving)	Wet	Total
Sleet, Hail (Freezing Rain or Drizzle)												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Snow												
Dark - Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Not Lighted	0	0	0	0	0	0	0	0	0	0	0	0
Dark - Unknown Lighting	0	0	0	0	0	0	0	0	0	0	0	0
Dawn	0	0	0	0	0	0	0	0	0	0	0	0
Daylight	0	0	0	0	0	0	0	0	0	0	0	0
Dusk	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**17**	**36**

Appendix B. Existing Conditions Plan

GENERAL NOTES:

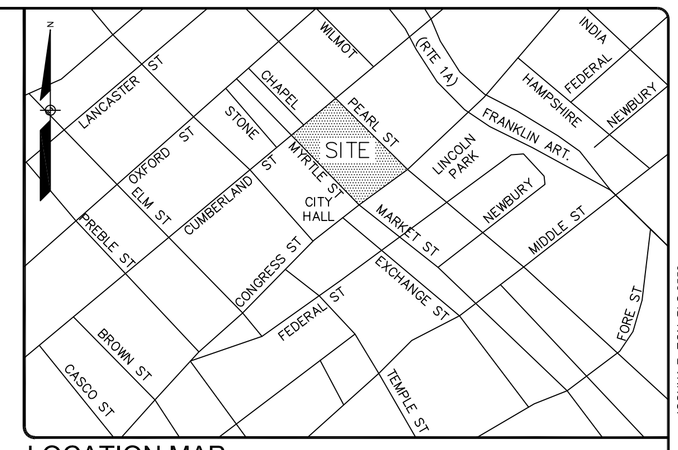
1. THE RECORD OWNER OF THE PARCEL IS 385 CONGRESS LLC BY DEED DATED OCTOBER 20, 2017 AND RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD) IN BOOK 34401, PAGE 214.
2. THE PROPERTY IS SHOWN AS LOT 1 ON THE CITY OF PORTLAND TAX MAP 27 AND IS LOCATED IN THE B3 DOWNTOWN BUSINESS DISTRICT.
3. SPACE AND BULK CRITERIA FOR THE B3 DISTRICT ARE AS FOLLOWS:

MINIMUM LOT SIZE:	N/A
MINIMUM STREET FRONTAGE:	15 FEET
MINIMUM FRONT YARD:	N/A
MINIMUM SIDE YARD:	N/A
MINIMUM REAR YARD:	N/A
MAXIMUM BUILDING HEIGHT:	150 FEET
MAXIMUM LOT COVERAGE:	100%

* SEE ORDINANCE FOR MORE PARTICULAR INFORMATION.

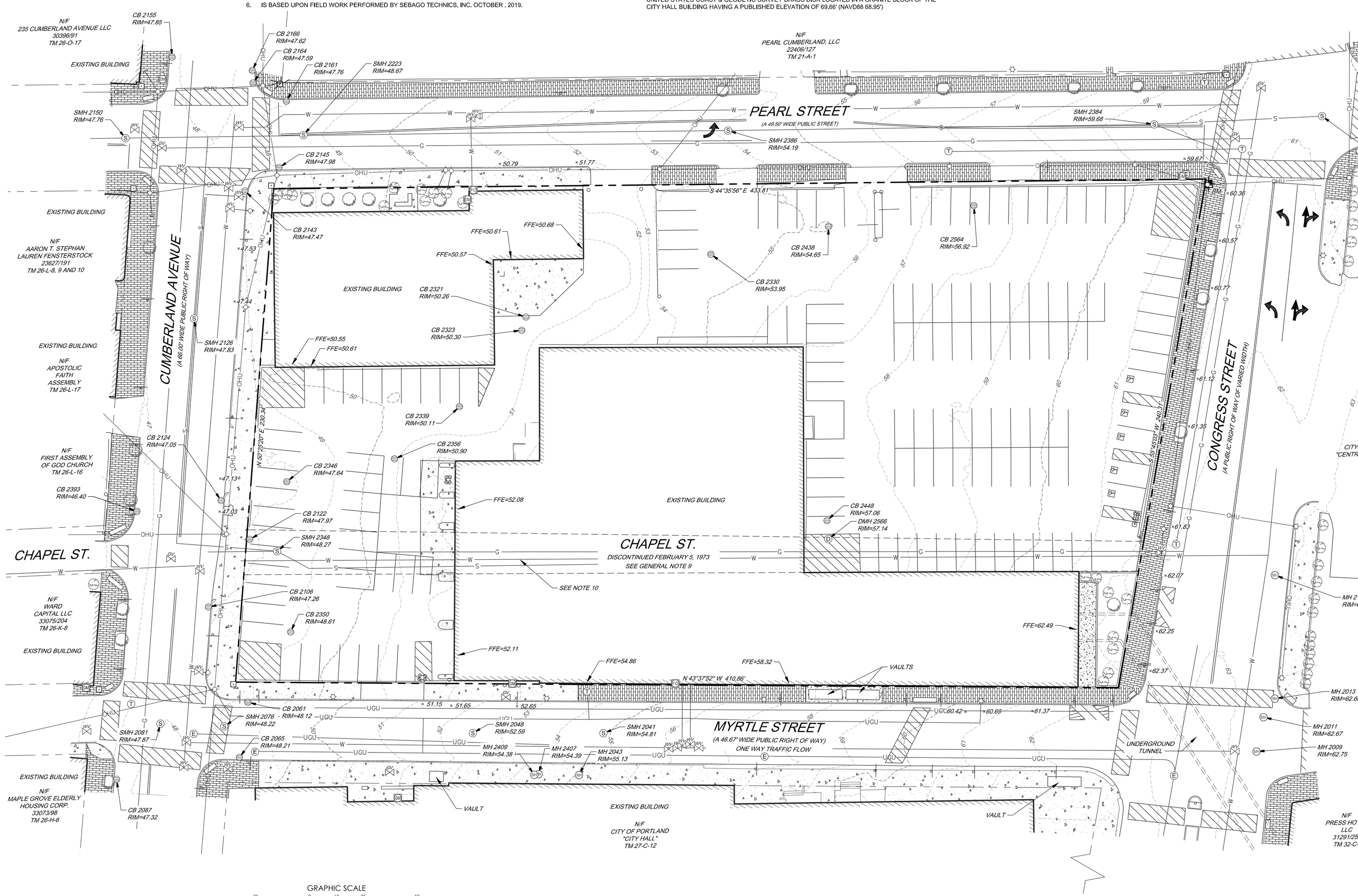
4. TOTAL AREA OF PARCEL IS APPROXIMATELY 2.26 ACRES.
5. THE BOUNDARY IS BASED ON PLAN REFERENCE 6F. TOPOGRAPHIC INFORMATION SHOWN HEREON. SEBAGO TECHNICS INC. UPDATED RECORDS RESEARCH FROM 2009 TO DATE REGARDING THE BOUNDARY INFORMATION.
6. IS BASED UPON FIELD WORK PERFORMED BY SEBAGO TECHNICS, INC. OCTOBER , 2019.
7. PLAN REFERENCES:
   - A. PLAN OF CITY BUILDING LOT, PORTLAND, ME, DATED AUGUST 1908 BY THE CITY OF PORTLAND ENGINEER, AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 159/5.
   - B. PORTLAND DEPARTMENT OF PUBLIC WORKS STREET WORKSHEETS AND BLUESHEETS FOR STREETS BOUNDING THE LOCUS PARCEL AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 159/5.
   - C. PLAN OF PROPERTY IN PORTLAND, ME. MADE FOR GUY GANNETT PUBLISHING CO. BY H.I. & E.C. JORDAN - SURVEYORS, DATED JULY 1964 AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 663/2.
   - D. NEW MECHANICAL BUILDING, GUY GANNETT PUBLISHING COMPANY, PORTLAND, ME, TUNNEL PLAN AND SECTIONS BY LOCKWOOD, GREENE ENGINEERS, INC, REVISED THROUGH MAY 12, 1965 AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 203/2.
   - E. PLAN OF PROPERTY IN PORTLAND, ME. MADE FOR GUY GANNETT PUBLISHING PUBLISHING CO. BY H.I. & E.C. JORDAN - SURVEYORS, REVISED THROUGH FEBRUARY 6, 1973 AND ON FILE WITH OWEN HASKELL INC.
   - F. ALTA/ACSM LAND TITLE SURVEY OF CONGRESS STREET SITE, 385 CONGRESS STREET, PORTLAND, ME DATED JULY 1, 2009 BY SEBAGO TECHNICS INC, PROJECT NUMBER 09235.
8. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83, ELEVATIONS DEPICTED HEREON ARE NGVD29 PER CITY STANDARDS AS VERIFIED BY A UNITED STATES COAST & GEODETIC SURVEY BRASS DISK LOCATED IN A GRANITE BLOCK OF THE CITY HALL BUILDING HAVING A PUBLISHED ELEVATION OF 69.66' (NAVD88 68.95')
9. THE CITY OF PORTLAND DISCONTINUED THAT PORTION OF CHAPEL STREET ''RUNNING FROM CONGRESS STREET TO CUMBERLAND STREET'' BY ORDER OF CITY COUNCIL ON FEBRUARY 5, 1973 AND RECORDED AT THE CITY OF PORTLAND RECORDS IN VOLUME 89, PAGE 61, PUBLIC AND PRIVATE RIGHTS MAY EXIST FOR PUBLIC HIGHWAY AND UTILITIES THAT STILL LIE WITHIN THE LIMITS OF CHAPEL STREET. SEBAGO TECHNICS, INC. SUGGEST LEGAL COUNSEL BE SOUGHT TO CLARIFY THE INTEREST OF OTHERS IN THESE RIGHTS.
10. PURSUANT TO A CONVERSATION BETWEEN SEBAGO TECHNICS, INC. AND THE PORTLAND WATER DISTRICT, THE WATER LINE SHOWN AS BEING LOCATED IN THE DISCONTINUED PORTION OF CHAPEL STREET HAS BEEN REMOVED AND NO LONGER EXISTS.
11. UTILITY INFORMATION DEPICTED HEREON, UNLESS OTHERWISE NOTED, IS OF QUALITY LEVEL D PER AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD CI/ASCE 38-02. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
12. THE LOCUS PROPERTY AS DEPICTED HEREON DOES NOT FALL WITHIN A SPECIAL FLOOD HAZARD AREA AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR PORTLAND, MAINE, CUMBERLAND COUNTY, COMMUNITY-PANEL NUMBER 230051 0013 B, HAVING AN EFFECTIVE DATE OF JULY 17 1986. THE LOCUS FALLS WITHIN AN AREA IDENTIFIED AS ZONE C, AREAS OF AREAS OF MINIMAL FLOODING.
13. BENCHMARK:

    BM-1 EASTERLY BOLT AT BASE OF UTILITY POLE ELEVATION: 61.55 (NGVD29)



LOCATION MAP N.T.S.

JOSHUA R. EON, PLS 2558



GRAPHIC SCALE

25 0 12 25 50

(IN FEET)
1 INCH = 25 FT.

PROJECT BENCHMARK
USC&G BRASS DISK SET IN GRANITE STEP.
DESIGNATION: TIDAL 38 STA 84
STAMPED ''1919/38''
NAVD 88 ELEVATION = 68.95'
NGVD29 ELEVATION = 69.66'

SURVEYOR'S STATEMENT

THIS SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF, IT WAS DONE IN ACCORDANCE WITH CHAPTER 90, PART 1 (PROFESSIONAL STANDARDS OF PRACTICE) AND PART 2 (TECHNICAL STANDARDS OF PRACTICE) OF THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS.

JOSHUA R. EON, PLS 2558 12/16/2019

LEGEND

EXISTING

- PROPERTY LINE/R.O.W.
- ABUTTER LINE/R.O.W.
- DEED LINE/R.O.W.
- N/F NOW OR FORMERLY
- BUILDING
- DECK/STEPS/ OVERHANG
- EDGE PAVEMENT
- EDGE CONCRETE
- PAVEMENT PAINT
- CURB LINE
- 120 118 CONTOURS
- DECIDUOUS TREE
- SHRUB
- BOLLARD
- SIGN
- G GAS
- GAS GATE VALVE
- GAS METER
- W WATER
- WATER GATE VALVE
- HYDRANT
- S SANITARY SEWER
- SANITARY MANHOLE
- UNKNOWN MANHOLE
- D DRAINAGE MANHOLE
- CATCH BASIN
- OHU OVERHEAD UTILITY
- UGU UNDERGROUND UTILITY
- E ELECTRICAL MANHOLE
- ELECTRIC METER
- COMMUNICATIONS BOX
- T TELEPHONE MANHOLE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- BM-1 BENCHMARK
- FIRE DEPARTMENT HOOKUP
- GRANITE MONUMENT

REV:	BY:	DATE:	STATUS:
F.	JRE	2/20/2020	ADDED STRUCTURE INFO AND MINOR DRAFTING REVISIONS
E.	JRE	2/10/2020	ADDED NOTE 10
D.	JRE	2/7/2020	MINOR DRAFTING REVISIONS PER PM REQUEST, ADDED NOTE 9
C.	JRE	1/20/2020	MINOR DRAFTING REVISIONS PER PM REQUEST
B.	JRE	1/09/2020	CORRECTED SPACE AND BULK CRITERIA PER PM REQUEST
A.	JRE	12/16/2019	ISSUED TO CLIENT FOR REVIEW

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC., ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

EXISTING CONDITIONS PLAN
OF:
CONGRESS / PEARL BLOCK
CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE 04101
FOR RECORD OWNER:
385 CONGRESS STREET, LLC.
2730 TRANSIT ROAD
WEST SENECA, NY 14224

DESIGNED	-
DRAWN	RHS/TSL
CHECKED	JRE/CDM
DATE	12/16/19
SCALE	1" = 25'
PROJECT	19371

SHEET 1 OF 2

19371EC.dwg, TABEC1

Appendix C. Site Plan

Transportation Assessment

The proposed project area comprises the city block northeast of City Hall. The U.S. Courthouse and Central Street Fire Station are located southeast of the project area. The area is a highly traversed part of Portland whether it be by foot, car, bicycle, or public transportation.

Public transport

Public transportation is available around the parcel with closest established stops being located at Cumberland and Myrtle Street (Bus 8 line) and in front of City Hall (Bus 1, 7, 8, and 9A lines).

Vehicle Parking and Circulation

Below please find a comparison of the existing and proposed on-street parking for those streets immediately surrounding the proposed development site: Congress Street; Myrtle Street; Cumberland Avenue; and Pearl Street. The following summary is also shown on the ***On-Street Parking Comparison Plan***, in the plan set. The on-street parking comparison is as follows:

Street	Existing	Proposed
Congress Street	8 vehicles 2 motorcycle	8 vehicles
Myrtle Street (both sides)	34 vehicles (1 ADA) 2 motorcycles 1 City Hall loading zone	27 vehicles(1 ADA) 2 motorcycles 1 City Hall loading zone
Cumberland Avenue	4 vehicles	7 vehicles 2 Loading zone for Condominiums
Pearl Street	No Parking	11 vehicles
Total:	**46 vehicles** **4 motorcycles** **1 City Hall loading zone**	**53 vehicles (public)** **2 motorcycles** **8 vehicles (valet)**
Total On-Street	46 vehicles (public) 4 motorcycles (public) 1 Loading Zone	53 vehicles (Public) 2 motorcycles Public 3 loading zone
Change:		**+7 vehicle (public)** **-2 motorcycles (public)** **+8 vehicle (valet)** **+2 Loading Zone**

Bicycle parking
Bicycle parking racks will be located within the garage level of all three buildings.

Pedestrian movement
The project includes several improvements to the pedestrian network, including the following:

- Reconstruction of brick sidewalks per the City Technical Standards.
- Adding street lighting on all streets in accordance with the City Technical Standards.
- Adding curb extensions at intersections with improved ADA ramps and crosswalks.
- Allowing for public access through the pocket park.

Att. P

SEBAGO TECHNICS

CIVIL ENGINEERING • SURVEYING • LANDSCAPE ARCHITECTURE

Memorandum

19371

To: **Tom Errico, P.E.**
TY Lin

From: **Derek Caldwell, P.E., PTOE**
Sebago Technics, Inc

Date: **June 28, 2022**

Subject: **Revised Trip Generation Calculation**
385 Congress Street Development
Portland, Maine

As requested at the scoping meeting for 385 Congress Street, we have reevaluated the trip generation for the project specifically as it relates to the proposed residential uses with ground-floor commercial space. The proposed building program, as presented in the TMP application, is as follows:

Table 1: Development Program Summary

Building	Number of Levels	Number of Residential Units	Number of Hotel Rooms	Commercial Square Footage
Pearl St Tower	12	110	--	2,600
Myrtle St Tower	12	9	152	--
Cumberland Ave Tower	12	193	--	4,165
Total		312	152	6,765

As presented in the initial TMP Application materials, trip generation for the proposed 12-story residential high-rises with ground floor commercial/retail was calculated using LUC 232 - High-Rise Residential with Ground-Floor Commercial - GFA (1-25k), Dense Multi-Use Urban. The Table below repeats this calculation.

Table 2 – Trip Generation
Land Use Code 232 – High-Rise Residential w/ Ground-Floor Commercial
Dense Multi-Use Urban
312 Dwelling Units

Time Period	Trip Rate per DU	Total Trips	Entering %	Exiting %	Entering Trips	Exiting Trips
AM Peak Hour of Adjacent Street	0.31	97	41%	59%	40	57
PM Peak Hour of Adjacent Street	0.21	66	50%	50%	33	33
AM Peak Hour of Generator	0.31	97	41%	59%	40	57
PM Peak Hour of Generator	0.2	62	66%	34%	41	21

Additionally, the trip generation for the proposed hotel was done using LUC 310- Hotel with the Dense Multi-Use Urban setting/location.

Table 3 – Trip Generation
Land Use Code 310 – Hotel
Dense Multi-Use Urban
152 Rooms

Time Period	Trip Rate per DU	Total Trips	Entering %	Exiting %	Entering Trips	Exiting Trips
AM Peak Hour of Adjacent Street	0.31	47	39%	61%	18	29
PM Peak Hour of Adjacent Street	0.21	32	44%	56%	14	18
AM Peak Hour of Generator	0.33	50	51%	49%	25	25
PM Peak Hour of Generator	0.34	52	30%	70%	16	36

This resulted in a total unadjusted trip generation for the development was as follows:

Table 4 –Unadjusted Total External Trip Generation – Original

Sections 1-6	Total Trips	Entering Trips	Exiting Trips
AM Peak Hour of Adjacent Street	144	58	86
PM Peak Hour of Adjacent Street	98	47	51
AM Peak Hour of Generator	147	65	82
PM Peak Hour of Generator	114	57	57

There were concerns expressed regarding the limited number of studies for LUC 232. A similar land use listed in the ITE Trip Generation Manual, LUC 231 Mid-Rise Residential with Ground-Floor Commercial - GFA (1-25k), Dense Multi-Use Urban, was found to have a significant number of studies (20) for both the AM and PM peak hours of the generator. Normally this land use is for buildings between two and ten stories tall, but given the adequate number of studies it is recommended that this land use be utilized for the trip generation calculation. Typically, residential trip generation rates decrease as the number of stories increases (corresponding to the low-, mid- and high-rise descriptions), so this would likely provide a conservative approach. Under this land use, we would utilize the trip rates from the AM and

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PM peak hours of the generator as the trips for the AM and PM peak hours of the adjacent street because of the greater number of studies.

It would be proposed to continue to use LUC 310- Hotel with the Dense Multi-Use Urban setting/location for the hotel use.

The following tables shows the proposed trip generation calculation for LUC 231 and the resultant total trip generation. This would result in a decrease of 22 trips in the AM Peak Hour of the Adjacent Street and an increase of 15 trips in the PM Peak Hour of the Adjacent Street. Once distributed across the roadway network, these additional trips would not exceed thresholds whereas additional intersections would be needed to be added to the study area.

Table 5 – Trip Generation
Land Use Code 231 – Mid-Rise Residential with Residential w/ Ground-Floor Commercial GFA (1-25K)
Dense Multi-Use Urban
312 Dwelling Units

Time Period	Trip Rate per DU	Total Trips	Entering %	Exiting %	Entering Trips	Exiting Trips
AM Peak Hour of Adjacent Street	0.24	75	39%	61%	29	46
PM Peak Hour of Adjacent Street	0.26	81	49%	51%	40	41
AM Peak Hour of Generator	0.24	75	39%	61%	29	46
PM Peak Hour of Generator	0.26	81	49%	51%	40	41

Table 6 – Unadjusted Total External Trip Generation – Revised

Sections 1-6	Total Trips	Entering Trips	Exiting Trips
AM Peak Hour of Adjacent Street	122	47	75
PM Peak Hour of Adjacent Street	113	54	59
AM Peak Hour of Generator	125	54	71
PM Peak Hour of Generator	133	56	77

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Utilities

Water

The applicant has met with the Portland Water District. The Lot 1 (Phase 1) Hotel and the Lot 3 (Phase 2A) condominium will be served by the existing water main in Myrtle Street. The Lot 2 (Phase 1) Condominium and Lot 3 (Phase 2B) Condominium building will be served by a new water main to be installed by the applicant in Pearl Street. Portland Water District has confirmed that its infrastructure has the capacity to serve the project.

Sewer/Stormwater

The applicant has met with Brad Roland of the Department of Public Works, who has confirmed that the City has capacity to serve the project for stormwater and sanitary sewer capacity. Sewer and stormwater is separated on site with separate connections to the existing 18" combined sewer in Pearl Street. As discussed with Mr. Roland, the connections are as close as practicable to the Pearl Street/Cumberland Avenue intersection for connection to a potential future separated storm drain in Pearl Street.

Power and Gas

The applicant has had preliminary discussions Central Maine Power Company and Unitil in 2020, who have confirmed that they have the capacity to serve the project. Until has recently completed upgrades to the gas mains in Cumberland Avenue

The applicant has submitted preliminary Utility Plans as part of the application, which depict the anticipated locations of proposed utilities, including locations of sidewalk transformer vaults in the public right of way. A formal plan for infrastructure improvements, documenting timing, funding mechanisms and coordination with the City will be provided as each project prepares a Level III Site Plan Application.

Stormwater

The City of Portland stormwater ordinances adopt the MDEP Chapter 500 standards for stormwater management. The existing parcel comprises 2.3 acres and is fully developed with impervious surfaces constructed prior to the adoption of the Chapter 500 stormwater management regulations and the site is not subject to Site Location of Development review standards.

Pursuant to the City of Portland Technical Manual Chapter 5 section II.D All projects not subject to requirements of an existing Site Law or Stormwater Management Law Permit that include redevelopment of non-roof impervious area greater than 5,000 square-feet and are subject to City of Portland review shall provide stormwater quality treatment in accordance with the General Standards for no less than 50% of the redeveloped impervious area.

To meet the required redevelopment standards, treatment for at least 50% of the developed area is proposed. The preliminary design for the site includes two subsurface storage and treatment systems, one for the hotel development located on Lot 1 and a second located on Lot 3 for the Lot 2 and Lot 3 condominiums.

The system will be comprised of either a subsurface sand filter system (Stormtech by ADS) or a Storm filter system by Contech. The schematic design presented on the plans is based on Contech system using 60" corrugated metal pies for storage with a Stormfilter water quality filtering units. A system similar to the Applicants recent project at 383 and 385 Commercial Street. It

This system a currently envisioned will be sized to treat and detain runoff from between 50% and 66% of the project's developed area.

Att. S

The key to success starts with a solid foundation.
ENGINEERING | EXPLORATION | EXPERIENCE

`

Preliminary Geotechnical Report

Pearl Street and Congress Street Property

Portland, Maine



Client

Metro Media Properties LLC
10 Dana Street
Portland, Maine 04101

Project #: 14002.1
Date: 3/3/2017

SUMMIT
GEOENGINEERING SERVICES

145 Lisbon Street (PO Box 7216) Lewiston, Maine 04243 | (207) 576-3313
173 Pleasant Street Rockland, Maine 04841 | (207) 318-7761
www.summitgeoeng.com

March 3, 2017
Summit #14002.1

George Cacoulidis
Metro Media Properties, LLC
10 Dana Street, Ste. 400
Portland, ME 04101

Reference: Preliminary Geotechnical Report
Congress and Pearl Street, Portland, Maine

Dear Mr. Cacoulidis;

Summit Geoengineering Services, Inc. (SGS) has completed a geotechnical investigation at the above referenced site. Our scope of services included the drilling of 11 test borings at the site and preparing this preliminary report summarizing our findings and providing a general geotechnical evaluation of the site.

Our investigation did not include an environmental site assessment of further investigation for the presence or absence of hazardous or toxic material on, below, or around the site. Any statements in this report, or on the soil boring logs, regarding odors or unusual and suspicious conditions observed are for informational purposes and are no intended to constitute an environmental situation.

1.0 Project and Site Description

We understand that potential development at the site could consist of the construction of a multi-story parking garage. Other potential uses of the site may also be considered. Our investigation and this preliminary report are intended to provide data on the subsurface conditions at the site for planning of future development.

The subject property is bordered by Congress Street, Pearl Street, Cumberland Avenue, and Myrtle Street. The site is currently occupied by a one to two story brick masonry building with a footprint of approximately 30,000 square feet and a smaller single story building will a footprint of about 8,500 squre feet. The area around the buildings is used as parking. Based on City of Portland GIS, the existing ground surface elevations range from 48 feet adjacent to Cumberland Avenue up to elevation 62 feet adjacent to Congress Street. The grade rises gradually at approximately a 3.5% slope. All areas outside the building are paved

2.0 Subsurface Exploration

SGS observed the subsurface conditions with the drilling of 11 test borings on March 4, 2014. The test borings were performed by using a track mounted AMS Power Probe 9500 VTR rig. All borings were completed using 2-1/2" hollow stem augers. Standard 24 inch long split spoon samples were obtained a selected intervals. All borings were drilled to refusal, at depths ranging from 3.5 to 37.9 feet below the existing ground surface.

The borings were located by taping from existing site features. The location of the borings is shown on Figure 1 in Appendix A. Logs of the borings are included in Appendix B.

3.0 Subsurface Conditions

Generalized soil stratigraphic cross sections are presented as Figure 2 in Appendix A.

3.1 Soil

The soil at the site consists of Fill over Glacial Till. A Glacial Marine deposit was encountered between the fill and the glacial till at the B-2, B-6, and B-8 locations.

The Fill deposit ranged in thickness from 2.5 to 3.5 feet in thickness at all boring locations except B-7, where the fill was 8 feet thick. The Fill primarily consists of gravelly sand with a trace of silt. The fill contained rubble (B-1), cobbles (B-2), and a trace of brick (B-4 & B-7). At the B-5 and B-5A locations, the fill consisted of silty sand mixed with bricks. At the B-8 location, the fill is described as brown silty sand with a little gravel. A layer of wood was encountered at B-7 at a depth of 7.5 feet.

The glacial Marine Deposit, encountered at the B-2, B-6, and B-8 locations, varied from olive brown fine sand with a little silt to olive brown clayey silt. A very soft layer of gray silty clay was encountered at the B-6 (4 feet thick) and B-8 (7 feet thick) locations. SPT-N values in the olive brown layers ranged from 9 to 15 blows per foot (bpf) and averaged 11 bpf. The SPT-N values in the gray clay were 0 (weight of hammer, WH). The glacial marine deposits are classified as CL or ML.

The Glacial Till deposit extended from the bottom of the fill or glacial marine layer to the bedrock surface. This soil consists of various combinations of gravel, sand, silt, and clay. The soil is classified as SM or ML. SPT-N values in the Glacial Till ranged from 3 to 47 bpf and averaged 16 bpf.

3.2 Bedrock

Refusal was encountered at all the boring locations. Refusal was presumed to be on rubble or on bedrock, depending on the location. Refusal information is presented in the table below.

BEDROCK DEPTH, ELEVATIONS, AND DESCRIPTIONS			
Boring	Refusal (ft)		Description
	Depth	Elevation +/-	
B-1	4.0	56	Rubble
B-1A	4.0	56.5	Rubble
B-1B	3.7	57.3	Rubble
B-2	15.2	44.8	Bedrock
B-3	19.9	39.1	Bedrock
B-4	15.1	42.4	Bedrock
B-5	3.5	52.5	Rubble
B-5A	14.2	41.8	Bedrock
B-6	22.4	28.6	Bedrock
B-7	8.0	41.0	Wood
B-7A	12.6	36.4	Bedrock
B-8	37.9	12.1	Bedrock

The refusal descriptions above are based on visual observations of the drill rig behavior and limited sampling. Coring was not performed to verify whether refusal was on bedrock. The descriptions in the table are therefore a best guess.

Bedrock at the site is mapped as a member of the Spring Point Formation and consists of a medium greenish-gray actinolite-biotite-chlorite-plagioclase-quartz schist and amphibolite.

3.3 Groundwater

Groundwater was observed at a depth of 9.2 feet (elevation 50.8 feet) at the B-2 location and 23.8 feet (elevation 26.2 feet) at the B-8 location. Caving in the borehole, an estimation of the groundwater level, was observed at a depth of 13.6 feet (elevation 43.9 feet) at the B-4 location. We conclude from this limited data that the groundwater generally flows within the glacial till in the direction from Congress Street to Cumberland Avenue.

4.0 Evaluation

Overall from a geotechnical perspective, the site appears to be readily developable. The soft soil and undesirable man made materials in the fill soil appear to be limited. Rock excavation

will be tricky due to adjacent structures, but a parking garage or building structure can be readily designed to fit the site.

In general, the soil at the site is suitable for support of most structures on conventional spread footing foundations. The fill appears to be primarily of mineral composition. Some rubble, brick, and ash from former building and other work at the site can be expected in the fill.

Consideration for construction in the eastern portion of the site (adjacent to Congress Street) is the presence of rubble and bedrock. Bedrock removal at this site is expected to be complex due to vibration restrictions on adjacent structures. We expect that blasting will be done at a premium. Once bedrock is opened, we expect that groundwater will be an issue and temporary and permanent control of same will be required.

Consideration for development in the west portion of the site (adjacent to Cumberland Avenue) are the presence of the wood (B-7) and the pockets of soft silty clay. While these materials do not preclude constructing foundations on them, some special considerations may be required.

A relatively large portion of the site is occupied by buildings and explorations could not be performed in those areas. For planning purposes, the soil conditions shown in Cross Section B-B on Figure 2 can be extrapolated through the building. Once a development concept has been approved, we recommend additional explorations be performed in this area, after demolition of the building. These exploration would likely consist of test pits to explore the existing fill soil and borings to determine the depth of bedrock.

5.0 Closure

The above preliminary opinions are based on professional judgment and generally accepted principles of geotechnical engineering. SGS reserves the right to change or modify the conclusions in this report based on new information provided to us.

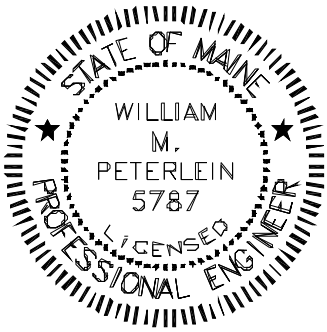
We appreciate the opportunity to serve you during this phase of your project. If there are any questions or additional information is required, please do not hesitate to call.

Sincerely,

Summit Geoengineering Services, Inc.

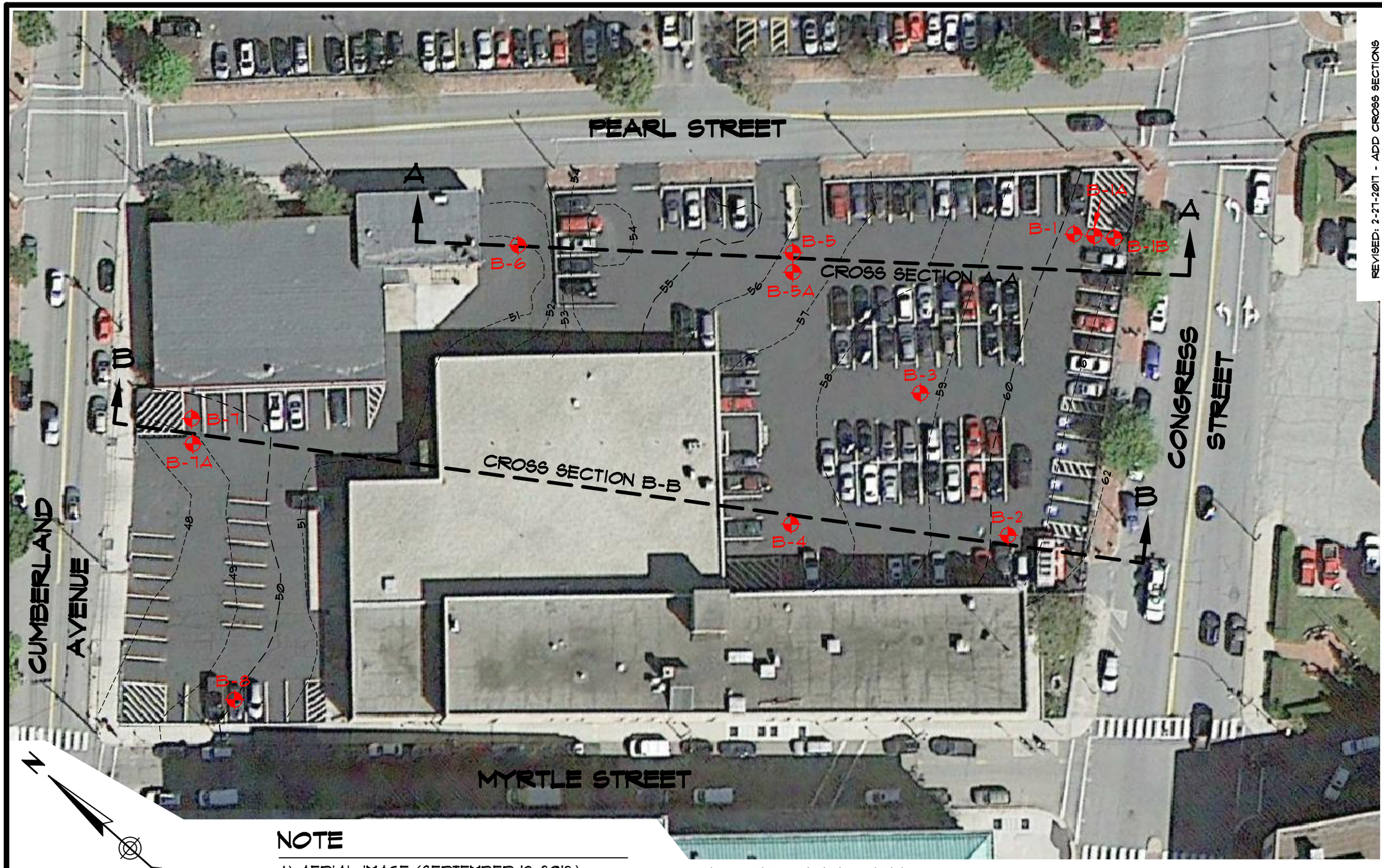


William M. Peterlein, PE
President & Principal Engineer



APPENDIX A

FIGURES



NOTE

1) AERIAL IMAGE (SEPTEMBER 18, 2013) OBTAINED FROM GOOGLE EARTH.

2) GROUND CONTOURS WERE OBTAINED FROM CITY OF PORTLAND G.I.S. INFORMATION.

GEOTECH LEGEND

B-2 SUMMIT TEST BORING (MARCH 4-5, 2014)

SCALE: 1" = 40'

0 20 40 80 120

REVISED: 2-27-2017 - ADD CROSS SECTIONS

PROJECT:
PROPOSED PARKING GARAGE
CONGRESS & PEARL STREETS - PORTLAND, ME

CLIENT:
METRO-MEDIA PROPERTIES, LLC

TITLE:
BORINGS LOCATION PLAN

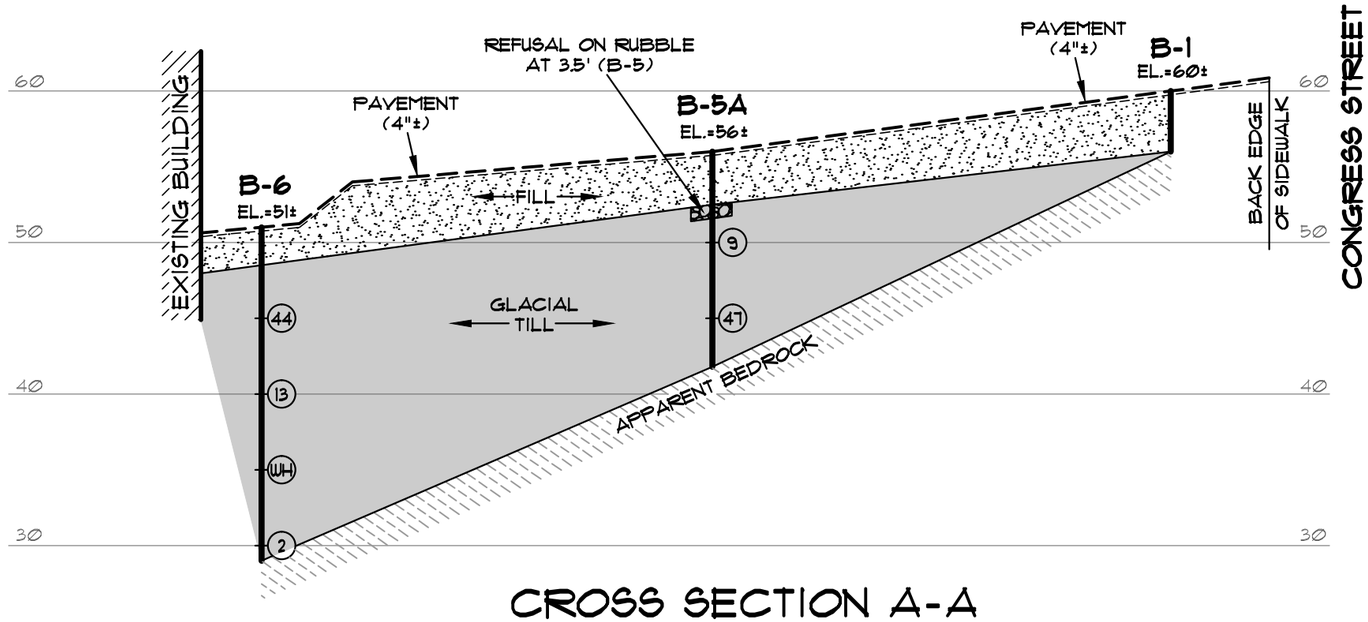
SCALE: 1" = 40' | DRAWN BY: KRF

DATE: MARCH 6, 2014 | APPR. BY: WAP

SUMMIT GEOENGINEERING SERVICES
145 LISBON ST. - SUITE 601
LEWISTON, ME 04240
Tel: (207) 516-3313
2002 ATLANTIC HIGHWAY
CAMDEN, ME 04843
Tel: (207) 106-1999

PROJ.#: 14002

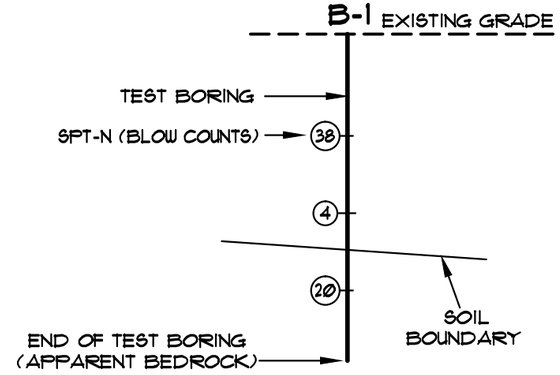
FIGURE: 1



CROSS SECTION A-A

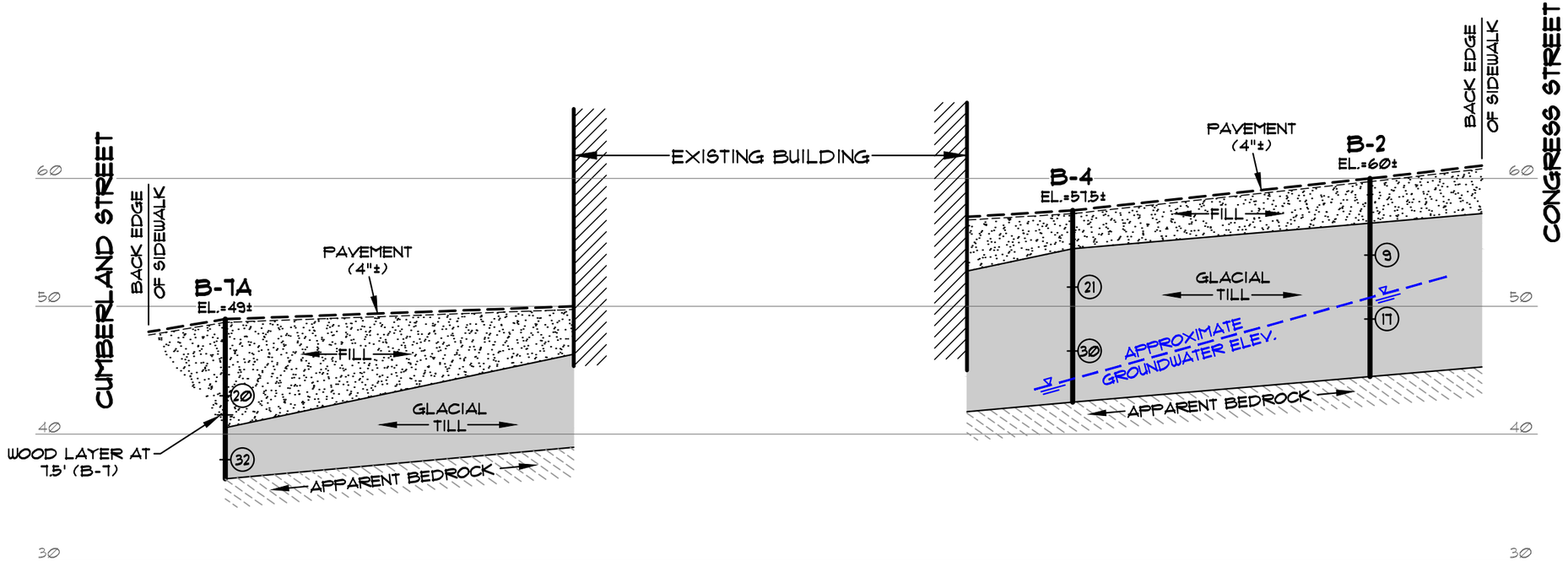
SCALE: HORIZ. - 1" = 40'
VERT. - 1" = 10'

LEGEND



NOTE

BEDROCK SURFACE AND SOIL THICKNESS BETWEEN BORINGS WILL VARY.



CROSS SECTION B-B

SCALE: HORIZ. - 1" = 40'
VERT. - 1" = 10'

PROJECT:
PROPOSED PARKING GARAGE
CONGRESS & PEARL STREETS - PORTLAND, ME

CLIENT:
METRO-MEDIA PROPERTIES, LLC

TITLE:
CROSS SECTIONS

DRAWN BY: KRF
APPR. BY: WMP
SCALE: AS NOTED
DATE: MARCH 3, 2017

SUMMIT
GEOENGINEERING SERVICES
145 LISBON ST. - SUITE 601
LEWISTON, ME 04240
Tel: (207) 516-3313
2002 ATLANTIC HIGHWAY
CAMDEN, ME 04843
Tel: (207) 106-7999

PROJ.#: 14002

FIGURE:
2

APPENDIX B

BORING LOGS

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-1**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	60 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/4/2014	Date Completed: 3/4/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/4/2014			None Observed

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						3" Pavement Bricks and rubble, occasional lenses of silty gravelly		FILL
	S-1	1/1	1.0 to 1.1	50 for 1"		sand, dry		
2								
						Difficult drilling through rubble		
3								
4								
					56.0	End of Boring at 4 ft on Auger Refusal		
5								
6								
						B-1A:		
7								
						Move 5 feet east and drill through rubble to refusal		
8						at 4 ft		
9								
10						B-1B:		
11						Moved 5 feet east and drilled through rubble to		
						3.7 ft		
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-2**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	60 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/4/2014	Date Completed: 3/4/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/4/2014	9.2 ft	50.8 ft +/-	Measured in borehole at completion

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						4" Pavement		FILL
						Dark brown to brown Gravelly SAND, trace Silt, damp, dense, SM		
2						Cobbles at 1.5 ft		
3								
4					56.5			
5								
	S-1	24/24	5 to 7	4		Olive-brown fine SAND, little Silt, trace Clay with silt seams, loose, moist, ML		GLACIAL MARINE
6				4				
				5				
7				10				
8								
9								
10								
	S-2	24/24	10 to 12	4		Olive-brown Sandy SILT, trace Silt seams, wet, stiff, ML		
11				7				
				10				
12				7	48.5			
						Olive-brown Silty fine SAND, trace Gravel, wet, compact, SM		GLACIAL TILL
13								
14								
15						Olive-gray Sandy SILT, trace to little Gravel, wet, very dense, ML		
	S-3	2/2	15 to 17	50 for 2"				
16					44.8	End of Boring on Auger/Spoon Refusal at 15.2 ft		BEDROCK
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	B-3
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	59 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/4/2014	Date Completed: 3/4/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/4/2014			None Observed

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						4-1/2" to 4-3/4" Pavement		
						Brown Gravelly SAND, little Silt, dry, compact, SM		FILL
2								
3					56.0			
4								
5								
	S-1	24/24	5 to 7	3		Olive-brown Sandy SILT, trace Gravel, stiff, moist,		GLACIAL TILL
6				4		mottled, ML		
				7				
7				13				
8								
9								
10								
	S-2	24/24	10 to 12	10		Olive-brown Silty SAND, trace to little Gravel, damp,		
11				14		compact, SM		
				16				
12				27				
13								
					46.0			
14								
15	S-3	24/24	15 to 17	4		Gray Silty SAND to Sandy SILT, trace Clay,		
				4		wet, loose to firm, SM or ML		
16				4				
				5				
17								
18								
19								
20								
					39.1	End of Boring at 19.9 ft on Auger Refusal		BEDROCK
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-4**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	57.5 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/4/2014	Date Completed: 3/4/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/4/2014	13.6 ft	43.9 ft +/-	Caved at 13.6 ft

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						4-1/2" Pavement		
						Dark brown to brown Gravelly SAND, little Silt, trace brick, moist, SM		FILL
2								
3								
					57.5			
4								
5								
	S-1	24/24	5 to 7	6		Olive-brown Silty SAND, trace Gravel, damp, compact, SM		GLACIAL TILL
6				8				
				13				
7				16				
8								
9								
10								
	S-2	24/24	10 to 12	9		Olive-brown Sandy SILT to Silty SAND, trace Gravel, damp, compact to very stiff, SM or ML		
11				14				
				16				
12				17				
13								
14								
15								
				50 for 1"	42.4	End of Boring at 15.1 ft on Auger Refusal		BEDROCK
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-5**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	56 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/5/2014	Date Completed: 3/5/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/5/2014			None Observed

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						3-1/2" Pavement		
2						Nested Bricks mixed with lenses of Silty SAND with a trace of Gravel		FILL
3								
4					52.5	End of Boring on Auger Refusal at 3.5 ft		
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils	
Blows/ft.	Density	Blows/ft.	Consistency
0-4	V. Loose	<2	V. soft
5-10	Loose	2-4	Soft
11-30	Compact	5-8	Firm
31-50	Dense	9-15	Stiff
>50	V. Dense	16-30	V. Stiff
		>30	Hard

% Composition ASTM D2487
< 5% Trace
5-15% Little
15-30% Some
> 30% With

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-5A**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	56 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/5/2014	Date Completed: 3/5/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/5/2014			None Observed

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						3-1/2" Pavement		
						Nested Bricks mixed with lenses of Silty SAND with a trace of Gravel		FILL
2								
3								
4					52.5			
5								
	S-1	24/24	5 to 7	2		Olive-brown Clayey SILT, trace Sand and Gravel, moist, stiff, ML		GLACIAL TILL
6				3				
				6				
7				12				
8								
9								
10								
				12		Olive-brown Clayey SILT, trace Sand and Gravel, moist, stiff, ML		
11				18				
				29				
12				30				
13								
14								
					41.8	End of Boring at 14.2 ft on Auger Refusal		BEDROCK
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-6**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	51 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/5/2014	Date Completed: 3/5/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/5/2014			Dry at 21.6 ft

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						3-1/2" Pavement		
						Dark brown to brown Gravelly SAND, trace to little		FILL
2						Silt, moist, compact, SM		
3					48.3			
4								
5								
	S-1	24/8	5 to 7	17		Olive-brown Clayey SILT, trace fine Sand, moist,		GLACIAL MARINE
6				24		stiff, blocky, ML		
				20				
7				12		Cobble at 5.5 to 6 ft		
8								
9								
10								
	S-2	24/24	10 to 12	4		Mix of gray Clayey SILT & fine Sandy SILT, inter-		
11				6		layered, wet, stiff, ML		
				7				
12				10				
13								
14								
					37.0			
15								
	S-3	24/24	15 to 17	WH		Gray Clayey SILT to very fine Silty SAND, very		
16				WH		soft, wet, ML		
				WH				
17				2				
18								
					33.0			
19								
								GLACIAL TILL
20								
	S-4	24/24	20 to 22	WH		Gray Sandy SILT, little Gravel, wet, soft, ML		
21				WH				
				2				
22				2				
					28.6	End of Boring at 22.4 ft on Auger Refusal		BEDROCK
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-7**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	49 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/5/2004	Date Completed: 3/5/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/5/2014			None Observed

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						3" Pavement		
						Dark brown Gravelly SAND, little Silt, trace bricks, dry, SM		FILL
2								
3								
4						Drill through rubble from 4 ft to 7 ft		
5								
	S-1	24/21	5 to 7	10		Brown Gravelly SAND, little Silt, damp, compact, SM		
6				11				
				9				
7				19				
8						Wood layer at 7.5 ft		
					41.0	End of Boring on Wood at 8 ft		
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils	
Blows/ft.	Density	Blows/ft.	Consistency
0-4	V. Loose	<2	V. soft
5-10	Loose	2-4	Soft
11-30	Compact	5-8	Firm
31-50	Dense	9-15	Stiff
>50	V. Dense	16-30	V. Stiff
		>30	Hard

% Composition ASTM D2487
< 5% Trace
5-15% Little
15-30% Some
> 30% With

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-7A**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	49 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/5/2014	Date Completed: 3/5/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/5/2014			None Observed

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						3" Pavement		
						Auger to 10 feet		FILL
2								
3								
4								
5								
6								
7								
8								
9					40.5			
10								
	S-1	24/24	10 to 12	8		Olive-brown Sandy SILT, little Gravel, damp, very		GLACIAL TILL
11				10		stiff, ML		
				22				
12				32				
13					36.4	End of Boring at 12.6 ft on Auger Refusal		BEDROCK
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-8**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 2
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	50 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/5/2014	Date Completed: 3/5/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/5/2014	23.8 ft	26.2 ft +/-	In borehole at completion

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						Dark brown Silty SAND, little Gravel, damp, compact, SM		FILL
2								
3								
4					46.5			
5								
	S-1	24/24	5 to 7	4		Olive-brown Silty CLAY, trace fine Sand in seams,		GLACIAL MARINE
6				6		very stiff, moist, ML		
				9				
7				12				
8								
9								
10								
	S-2	24/24	10 to 12	3		Olive-brown Clayey SILT, trace Silty fine Sand in		
11				5		seams, moist, stiff, ML		
				4				
12				3				
13								
14								
15								
	S-3	24/24	15 to 17	WH		Gray Clayey SILT, trace fine Sand, wet, very soft,		
16				WH		plastic fines, ML		
				WH				
17				WH				
18								
19								
20								
	S-4	24/20	20 to 22	1		Same as above		
21				1				
				1		Gray fine Sandy SILT, trace Clay and Gravel, wet,		
22				1		very soft, ML		GLACIAL TILL
23								
24								
25								
	S-5	24/24	25 to 27	WH		Gray Silty fine SAND, little Gravel, wet, very loose,		
26				2		SM		
				2				
27				2				

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-8**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	2 of 2
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	50 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/5/2014	Date Completed: 3/5/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/5/2014	23.8 ft	26.2 ft +/-	In borehole at completion

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
28								
29								GLACIAL TILL
30								
	S-6	24/24	30 to 32	WH		Gray Silty SAND, little Gravel, wet, very loose, SM		
31				1				
				2				
32				2				
33								
34								
35								
	S-7	24/24	35 to 37	WH		Gray SAND, little Silt, wet, loose, SM		
36				2				
				2				
37				5				
38								
					12.1	End of Boring at 37.9 ft on Auger Refusal		BEDROCK
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52								
53								
54								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

MEMORANDUM

Date: February 8, 2021
To: M. Thormann, R. Payne, The Fathom Companies
Project: 385 Congress Street, Portland, Maine, #20068
From: B. Peterlein, P.E., Summit Geoengineering Services
RE: Summary of Current Subsurface Explorations

A total of 3 borings were completed adjacent to the existing building on February 2, 2022. These borings are labelled B-101 through B-103 as shown on the attached Boring Location plan. Logs of the borings completed in 2014 are also included for reference.

B-101 and B-102, drilled inside the entrance to the parking garage, encountered granular fill over a glacial marine silty clay over glacial till. The soil profile at these locations was consistent with the conditions encountered at the B-8 (2014) location. Spoon refusal on probable bedrock was encountered at a depth of 34.8 feet at the B-101 location. A dense stratum, possible weathered bedrock, was encountered at a depth of 39 feet at the B-102 location.

The key geotechnical challenge with this soil stratigraphy is the soft silty clay soil. This soil layer was 8 to 8.5 feet thick and located at 12.5 to 16 feet below the existing ground. The low SPT-N values in the glacial till are likely the result of soil loosening dure to the build up of pore water pressure, making the soil appear to be looser/softer than they are in an undisturbed state. The soft clay soil, and to a lesser extent the glacial till soil, will be subject

P.O. Box 7216, Lewiston, Maine 04243, (207) 576-3313
173 Pleasant Steet, Rockland, Maine 04841, (207) 318-7761

to settlement under foundation loadings.

Groundwater was encountered at the B-101 and B-102 locations at elevations ranging from 35 feet to 38.5 feet. These elevations are somewhat higher than the groundwater observed at the B-8 location. In any case, based on these groundwater levels, we do not anticipate groundwater will be an issue for design or construction of the foundations in this area.

B-103 was drilled between the existing building and Congress Street. The soil at this location consisted of fill. The fill layer down to a depth of 11 feet consisted of a gravelly sand. From a depth of 11 feet to 20 feet, the fill consisted sandy silt or silty fine sand. Refusal, presumed to be bedrock, was encountered at a depth of 20.2 feet.

This boring was drilled outside of the proposed building footprint due to restricted access to the building interior. Measurements at the inside of the building were not performed, but we estimate that the bedrock encountered in the boring is at or near the sub-basement floor elevation Based on our estimation, foundations constructed in the sub-basement area of the building are anticipated to be bearing on bedrock. One geotechnical considerations is the potential for differential settlement between foundations on bedrock and foundations on soil.

Groundwater was detected at a depth of 15 feet. Assuming the location of the new foundation is below the groundwater at this location, the geotechnical considerations are uplift pressures on slab-on-grade elements and hydrostatic loading on the outside of retaining/basement walls. Perimeter underdrains may be necessary at this location.

SCALE: 1" = 40'

0 20 40 80 120

NORTH

PEARL STREET

PEARL STREET
(A 49.50' WIDE PUBLIC STREET)

CUMBERLAND AVENUE

MYRTLE STREET
(A 46.67' WIDE PUBLIC RIGHT OF WAY)

CONGRESS STREET

CHAPEL ST.
DISCONTINUANCE FEBRUARY 5, 1973, SEE GENERAL NOTE 9
LOCATION FROM PLAN REF. 6C

1 STORY BRICK & MASONRY BUILDING
FINISH FLOOR ELEVATION = 49.8'±
GROSS GROUND LEVEL FLOOR AREA OF BUILDING FOOTPRINT = 8790. SQ.FT.

MULTIPLE STORY BRICK & MASONRY BUILDING
GROSS GROUND LEVEL FLOOR AREA OF BUILDING FOOTPRINT = 30,110. SQ.FT.

HOTEL LOT AREA: 19,430 SF

LOCUS
98,477 S.F.
2.26 Ac.

CROSS SECTION A-A

CROSS SECTION B-B

B-1 B-1A B-1B B-2 B-3 B-4 B-5 B-5A B-6 B-7 B-7A B-8 B-101 B-102 B-103

GEOTECH LEGEND

B-2 SUMMIT TEST BORING (MARCH 4-5, 2014)

B-101 SUMMIT TEST BORING (FEBRUARY 2, 2022)

PLAN REFERENCE

PARTIAL COPY OF AN UNTITLED AND UNDATED PLAN, PROVIDED BY THE CLIENT.

PROJECT: PROPOSED HOTEL
385 CONGRESS STREET - PORTLAND, MAINE

CLIENT: FATHOM COMPANIES

TITLE: BORINGS LOCATION PLAN

DRAWN BY: KRF

APPR. BY: WMP

SCALE: 1" = 40'

DATE: FEBRUARY 1, 2022

PROJ.: 20068

FIGURE: 1

SUMMIT GEOENGINEERING SERVICES
113 PLEASANT STREET
ROCKLAND, ME 04841
Tel: (207) 318-7161
145 LISBON ST. - SUITE 601
LEWISTON, ME 04240
Tel: (207) 576-3313

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Hotel	Boring #:	B-101
Location:	385 Congress Street	Project #:	20068
City, State:	Portland Maine	Sheet:	1 of 2
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	51 ft +/-
Driller:	S. Floyd	Reference:	Alta Land Title Survey, Sebago Technics, 7-1-2009
Summit Staff:	B. Peterlein, P.E.	Date started: 2/2/2022	Date Completed: 2/2/2022

DRILLING METHOD		SAMPLER	
Vehicle:	Rubber Track	Length:	24" SS
Model:	AMS VTR Power Probe	Diameter:	2"OD/1.5"ID
Method:	2-1/2" H.S.A.	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
2/2/2022	12.5 ft	38.5 ft +/-	Observed in samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
						2" Intact Concrete, unreinforced		
1						3" Broken Concrete, WWF reinforcing		
	S1	24/12	1 to 3	8				FILL
2				6		Brown Gravelly SAND, trace Silt, dry, loose, SP		
				4				
3				7				
	S2	24/18	3 to 5	18				
4				21				
				22				
5				26		Dark brown Silty SAND, little Gravel, moist, dense, SM		
	S3	24/18	5 to 7	11				
6				10				
				8		Brick layer		
7				19		Dark brown Silty SAND, little Gravel, moist, dense, SM		
8								
9								
						Auger refusal at 9.7 ft		
10	S4	24/4	9.7 to 11.7	21		Brick layer		
				4				
11				1				
				2		Gray Silty CLAY, mixed with bricks, damp, soft, CL		
12	S5	24/16	11.7 to 13.7	2				
				2				
13				1				
				2		Gray Silty CLAY, wet, soft, CL		GLACIAL MARINE
14								
15								
	S6	24/21	15 to 17	WH		Gray Silty CLAY, trace black streaks, wet, very soft,		
16				WH		CL		
				WH				
17				WH				
18								
19								
20								
	S7	24/24	20 to 22	WH		Gray Silty CLAY, trace black streaks, wet, very soft,		
21				WH		CL		
				WH		Gray Clayey SILT, little fine Sand and Gravel, wet,		
22				WH		very soft		GLACIAL TILL
23								
24								
25								
	S8	24/24	25 to 27	WH		Gray fine Sandy Silty CLAY, very fine sand seams,		
26				2		wet, soft, ML		
				2				
27				2				

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

DRAFT

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Hotel	Boring #:	B-101
Location:	385 Congress Street	Project #:	20068
City, State:	Portland Maine	Sheet:	2 of 2
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	51 ft +/-
Driller:	S. Floyd	Reference:	Alta Land Title Survey, Sebago Technics, 7-1-2009
Summit Staff:	B. Peterlein, P.E.	Date started: 2/2/2022	Date Completed: 2/2/2022

DRILLING METHOD		SAMPLER	
Vehicle:	Rubber Track	Length:	24" SS
Model:	AMS VTR Power Probe	Diameter:	2"OD/1.5"ID
Method:	2-1/2" H.S.A.	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
2/2/2022	12.5 ft		Observed in samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
				2		Gray fine Sandy Silty CLAY, very fine sand seams,		
27				2		wet, soft, ML		GLACIAL TILL
28								
29								
30								
	S9	24/16	30 to 32	WH		Gray fine Sandy Silty CLAY, very fine sand seams,		
31				WH		wet, soft, ML		
				1				
32				4				
				20				
33								
				26				
34								
				100				
35								
						End of Boring at 34.8 feet - Spoon Refusal		
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52								
53								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

DRAFT

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Hotel	Boring #:	B-102
Location:	385 Congress Street	Project #:	20068
City, State:	Portland Maine	Sheet:	1 of 2
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	51 ft +/-
Driller:	S. Floyd	Reference:	Alta Land Title Survey, Sebago Technics, 7-1-2009
Summit Staff:	B. Peterlein, P.E.	Date started: 2/2/2022	Date Completed: 2/2/2022

DRILLING METHOD		SAMPLER	
Vehicle:	Rubber Track	Length:	24" SS
Model:	AMS VTR Power Probe	Diameter:	2"OD/1.5"ID
Method:	2-1/2" H.S.A.	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
2/2/2022	16 ft	35 ft +/-	Observed in samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1	S1	18/16	0.5 to 2	13		2" Intact Concrete, unreinforced 3" Broken Concrete, WWF reinforcing		FILL
				8				
2				6		Brown Gravelly SAND, trace Silt, dry, SP		
3								
4								
5								
	S2	24/10	5 to 7	2		Brown Gravelly SAND, trace Silt, dry, SP		
6				2				
				2				
7				2				
8								
9								
10								
	S3	24/21	10 to 12	3		Olive-brown Silty CLAY, very fine Sand seams at 4",		GLACIAL MARINE
11				4		moist, stiff, CL		
				6				
12				7				
13								
14								
15								
	S4	24/24	15 to 17	2		Olive-brown Silty CLAY, damp, soft, CL		
16				1				
				WH		Gray Silty CLAY, wet, very soft, CL		
17				WH				
18								
19							Sv = 625 psf	
20								
							Sv = 625 psf	
21	S5	18/12	20.5 to 22	WH		Gray Silty CLAY, wet, very soft, CL		
				WH				
22				WH				
23								
24								
25								GLACIAL TILL
	S6	24/24	25 to 27	WH		Gray fine Sandy CLAY, little Silt, wet, very soft, ML		
26				WH				
				WH				
27				WH				

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index, Sv = Field Vane

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

DRAFT

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Hotel	Boring #:	B-102
Location:	385 Congress Street	Project #:	20068
City, State:	Portland Maine	Sheet:	2 of 2
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	51 ft +/-
Driller:	S. Floyd	Reference:	Alta Land Title Survey, Sebago Technics, 7-1-2009
Summit Staff:	B. Peterlein, P.E.	Date started: 2/2/2022	Date Completed: 2/2/2022

DRILLING METHOD		SAMPLER	
Vehicle:	Rubber Track	Length:	24" SS
Model:	AMS VTR Power Probe	Diameter:	2"OD/1.5"ID
Method:	2-1/2" H.S.A.	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
2/2/2022	16 ft		Observed in samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
				WH		Gray fine Sandy CLAY, little Silt, wet, very soft, ML		
27				WH				GLACIAL TILL
28								
29								
30								
	S7	24/24	30 to 32	WH		Gray Silty Clayey SAND, trace Gravel, wet, very loose,		
31				WH		SM		
				WH				
32				WH				
				6				
33								
				9				
34								
				21				
35								
				14				
36								
				22				
37								
				52				
38								
				59				
39						End of Boring at 39 feet		PROBABLE BEDROCK
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52								
53								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

DRAFT

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Hotel	Boring #:	B-103
Location:	385 Congress Street	Project #:	20068
City, State:	Portland Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	62 ft +/-
Driller:	S. Floyd	Reference:	Alta Land Title Survey, Sebago Technics, 7-1-2009
Summit Staff:	B. Peterlein, P.E.	Date started: 2/2/2022	Date Completed: 2/2/2022

DRILLING METHOD		SAMPLER	
Vehicle:	Rubber Track	Length:	24" SS
Model:	AMS VTR Power Probe	Diameter:	2"OD/1.5"ID
Method:	2-1/2" H.S.A.	Hammer:	140 lb
Hammer Style:	Auto	Method:	ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
2/2/2022	15 ft	47 ft +/-	Observed in samples

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	Elev	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1	S1	24/18	1 to 3	18		Brown Gravelly SAND, dry, compact, SP		FILL
2				11				
				5				
3				2				
4	S2	24/16	5 to 7	2				
5				5		Brown Gravelly SAND, dry, compact, SP		
				8				
6				9				
7	S3	24/6	10 to 12	2		Brown Gravelly SAND, dry, compact, SP		
				7				
8				9		Olive-brown Sandy SILT, trace Clay, crushed rock in		
9				10		tip of spoon, moist, very stiff, ML		
10	S4	24/16	15 to 17	2		Gray Silty fine SAND, wet, very loose, SM		
				1				
11				1				
12				20				
13	S5	2/2	20 to 20.2	50 for 2"	42 +/-	Gray Silty fine SAND, wet, very loose, SM		
14						End of Boring at 20.2 feet - Spoon Refusal		PROBABLE BEDROCK
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

DRAFT

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-1**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	60 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/4/2014	Date Completed: 3/4/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/4/2014			None Observed

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						3" Pavement		
						Bricks and rubble, occasional lenses of silty gravelly		FILL
	S-1	1/1	1.0 to 1.1	50 for 1"		sand, dry		
2								
						Difficult drilling through rubble		
3								
4								
					56.0	End of Boring at 4 ft on Auger Refusal		
5								
6								
						B-1A:		
7								
						Move 5 feet east and drill through rubble to refusal		
8						at 4 ft		
9								
10						B-1B:		
11						Moved 5 feet east and drilled through rubble to		
						3.7 ft		
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-2**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	60 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/4/2014	Date Completed: 3/4/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/4/2014	9.2 ft	50.8 ft +/-	Measured in borehole at completion

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						4" Pavement		
						Dark brown to brown Gravelly SAND, trace Silt, damp, dense, SM		FILL
2						Cobbles at 1.5 ft		
3								
4					56.5			
5								
	S-1	24/24	5 to 7	4		Olive-brown fine SAND, little Silt, trace Clay with silt seams, loose, moist, ML		GLACIAL MARINE
6				4				
				5				
7				10				
8								
9								
10								
	S-2	24/24	10 to 12	4		Olive-brown Sandy SILT, trace Silt seams, wet, stiff, ML		
11				7				
				10				
12				7	48.5			
						Olive-brown Silty fine SAND, trace Gravel, wet, compact, SM		GLACIAL TILL
13								
14								
15						Olive-gray Sandy SILT, trace to little Gravel, wet, very dense, ML		
	S-3	2/2	15 to 17	50 for 2"				
16					44.8	End of Boring on Auger/Spoon Refusal at 15.2 ft		BEDROCK
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-3**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	59 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/4/2014	Date Completed: 3/4/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/4/2014			None Observed

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						4-1/2" to 4-3/4" Pavement		
						Brown Gravelly SAND, little Silt, dry, compact, SM		FILL
2								
3								
					56.0			
4								
5								
	S-1	24/24	5 to 7	3		Olive-brown Sandy SILT, trace Gravel, stiff, moist,		GLACIAL TILL
6				4		mottled, ML		
				7				
7				13				
8								
9								
10								
	S-2	24/24	10 to 12	10		Olive-brown Silty SAND, trace to little Gravel, damp,		
11				14		compact, SM		
				16				
12				27				
13								
					46.0			
14								
15	S-3	24/24	15 to 17	4		Gray Silty SAND to Sandy SILT, trace Clay,		
				4		wet, loose to firm, SM or ML		
16				4				
				5				
17								
18								
19								
20								
					39.1	End of Boring at 19.9 ft on Auger Refusal		BEDROCK
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-4**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	57.5 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/4/2014	Date Completed: 3/4/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/4/2014	13.6 ft	43.9 ft +/-	Caved at 13.6 ft

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						4-1/2" Pavement		
						Dark brown to brown Gravelly SAND, little Silt, trace brick, moist, SM		FILL
2								
3								
					57.5			
4								
5								
	S-1	24/24	5 to 7	6		Olive-brown Silty SAND, trace Gravel, damp, compact, SM		GLACIAL TILL
6				8				
				13				
7				16				
8								
9								
10								
	S-2	24/24	10 to 12	9		Olive-brown Sandy SILT to Silty SAND, trace Gravel, damp, compact to very stiff, SM or ML		
11				14				
				16				
12				17				
13								
14								
15								
				50 for 1"	42.4	End of Boring at 15.1 ft on Auger Refusal		BEDROCK
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-5**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	56 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/5/2014	Date Completed: 3/5/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/5/2014			None Observed

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						3-1/2" Pavement		
2						Nested Bricks mixed with lenses of Silty SAND with a trace of Gravel		FILL
3								
4					52.5	End of Boring on Auger Refusal at 3.5 ft		
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils	
Blows/ft.	Density	Blows/ft.	Consistency
0-4	V. Loose	<2	V. soft
5-10	Loose	2-4	Soft
11-30	Compact	5-8	Firm
31-50	Dense	9-15	Stiff
>50	V. Dense	16-30	V. Stiff
		>30	Hard

% Composition ASTM D2487
< 5% Trace
5-15% Little
15-30% Some
> 30% With

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-5A**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	56 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/5/2014	Date Completed: 3/5/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/5/2014			None Observed

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						3-1/2" Pavement		
						Nested Bricks mixed with lenses of Silty SAND with a trace of Gravel		FILL
2								
3								
4					52.5			
5								
	S-1	24/24	5 to 7	2		Olive-brown Clayey SILT, trace Sand and Gravel, moist, stiff, ML		GLACIAL TILL
6				3				
				6				
7				12				
8								
9								
10								
				12		Olive-brown Clayey SILT, trace Sand and Gravel, moist, stiff, ML		
11				18				
				29				
12				30				
13								
14								
					41.8	End of Boring at 14.2 ft on Auger Refusal		BEDROCK
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-6**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	51 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/5/2014	Date Completed: 3/5/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/5/2014			Dry at 21.6 ft

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						3-1/2" Pavement		
						Dark brown to brown Gravelly SAND, trace to little		FILL
2						Silt, moist, compact, SM		
3					48.3			
4								
5								
	S-1	24/8	5 to 7	17		Olive-brown Clayey SILT, trace fine Sand, moist,		GLACIAL MARINE
6				24		stiff, blocky, ML		
				20				
7				12		Cobble at 5.5 to 6 ft		
8								
9								
10								
	S-2	24/24	10 to 12	4		Mix of gray Clayey SILT & fine Sandy SILT, inter-		
11				6		layered, wet, stiff, ML		
				7				
12				10				
13								
14								
					37.0			
15								
	S-3	24/24	15 to 17	WH		Gray Clayey SILT to very fine Silty SAND, very		
16				WH		soft, wet, ML		
				WH				
17				2				
18								
					33.0			
19								
								GLACIAL TILL
20								
	S-4	24/24	20 to 22	WH		Gray Sandy SILT, little Gravel, wet, soft, ML		
21				WH				
				2				
22				2				
					28.6	End of Boring at 22.4 ft on Auger Refusal		BEDROCK
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-7**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	49 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/5/2004	Date Completed: 3/5/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/5/2014			None Observed

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						3" Pavement		
						Dark brown Gravelly SAND, little Silt, trace bricks, dry, SM		FILL
2								
3								
4						Drill through rubble from 4 ft to 7 ft		
5								
	S-1	24/21	5 to 7	10		Brown Gravelly SAND, little Silt, damp, compact, SM		
6				11				
				9				
7				19				
8						Wood layer at 7.5 ft		
					41.0	End of Boring on Wood at 8 ft		
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils	
Blows/ft.	Density	Blows/ft.	Consistency
0-4	V. Loose	<2	V. soft
5-10	Loose	2-4	Soft
11-30	Compact	5-8	Firm
31-50	Dense	9-15	Stiff
>50	V. Dense	16-30	V. Stiff
		>30	Hard

% Composition ASTM D2487
< 5% Trace
5-15% Little
15-30% Some
> 30% With

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-7A**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 1
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	49 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/5/2014	Date Completed: 3/5/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/5/2014			None Observed

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						3" Pavement		
						Auger to 10 feet		FILL
2								
3								
4								
5								
6								
7								
8								
9					40.5			
10								
	S-1	24/24	10 to 12	8		Olive-brown Sandy SILT, little Gravel, damp, very		GLACIAL TILL
11				10		stiff, ML		
				22				
12				32				
13					36.4	End of Boring at 12.6 ft on Auger Refusal		BEDROCK
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-8**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	1 of 2
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	50 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/5/2014	Date Completed: 3/5/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/5/2014	23.8 ft	26.2 ft +/-	In borehole at completion

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
1						Dark brown Silty SAND, little Gravel, damp, compact, SM		FILL
2								
3								
4					46.5			
5								
	S-1	24/24	5 to 7	4		Olive-brown Silty CLAY, trace fine Sand in seams, very stiff, moist, ML		GLACIAL MARINE
6				6				
				9				
7				12				
8								
9								
10								
	S-2	24/24	10 to 12	3		Olive-brown Clayey SILT, trace Silty fine Sand in seams, moist, stiff, ML		
11				5				
				4				
12				3				
13								
14								
15								
	S-3	24/24	15 to 17	WH		Gray Clayey SILT, trace fine Sand, wet, very soft, plastic fines, ML		
16				WH				
				WH				
17				WH				
18								
19								
20								
	S-4	24/20	20 to 22	1		Same as above		
21				1				
				1		Gray fine Sandy SILT, trace Clay and Gravel, wet, very soft, ML		GLACIAL TILL
22				1				
23								
24								
25								
	S-5	24/24	25 to 27	WH		Gray Silty fine SAND, little Gravel, wet, very loose, SM		
26				2				
				2				
27				2				

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

SUMMIT
GEOENGINEERING SERVICES

SOIL BORING LOG

Project:	Proposed Parking Garage	Boring #:	**B-8**
Location:	Pearl St. & Cumberland Ave	Project #:	14002
City, State:	Portland, Maine	Sheet:	2 of 2
		Chkd by:	

Drilling Co:	Summit Geoengineering Services	Boring Elevation:	50 ft +/-
Driller:	C. Coolidge, P.E.	Reference:	Interpolated from city of Portland GIS
Summit Staff:	B. Peterlein, P.E.	Date started: 3/5/2014	Date Completed: 3/5/2014

DRILLING METHOD	SAMPLER
Vehicle: Tracked	Length: 24" SS
Model: AMS Power Probe	Diameter: 2"OD/1.5"ID
Method: 2-1/2" H.S.A.	Hammer: 140 lb
Hammer Style: Auto	Method: ASTM D1586

ESTIMATED GROUND WATER DEPTH

Date	Depth	Elevation	Reference
3/5/2014	23.8 ft	26.2 ft +/-	In borehole at completion

Depth (ft.)	No.	Pen/Rec (in)	Depth (ft)	blows/6"	EL +/-	SAMPLE DESCRIPTION	Geological/ Test Data	Geological Stratum
28								
29								GLACIAL TILL
30								
	S-6	24/24	30 to 32	WH		Gray Silty SAND, little Gravel, wet, very loose, SM		
31				1				
				2				
32				2				
33								
34								
35								
	S-7	24/24	35 to 37	WH		Gray SAND, little Silt, wet, loose, SM		
36				2				
				2				
37				5				
38								
					12.1	End of Boring at 37.9 ft on Auger Refusal		BEDROCK
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
49								
50								
51								
52								
53								
54								

Granular Soils		Cohesive Soils		% Composition
Blows/ft.	Density	Blows/ft.	Consistency	ASTM D2487
0-4	V. Loose	<2	V. soft	
5-10	Loose	2-4	Soft	< 5% Trace
11-30	Compact	5-8	Firm	5-15% Little
31-50	Dense	9-15	Stiff	15-30% Some
>50	V. Dense	16-30	V. Stiff	> 30% With
		>30	Hard	

NOTES: PP = Pocket Penetrometer, MC = Moisture Content
LL = Liquid Limit, PI = Plastic Index

Bedrock Joints
Shallow = 0 to 35 degrees
Dipping = 35 to 55 degrees
Steep = 55 to 90 degrees

Boulders = diameter > 12 inches, Cobbles = diameter < 12 inches and > 3 inches
Gravel = < 3 inch and > No 4, Sand = < No 4 and >No 200, Silt/Clay = < No 200

Soil Moisture Condition
Dry: S = 0%
Humid: S = 1 to 25%
Damp: S = 26 to 50%
Moist: S = 51 to 75%
Wet: S = 76 to 99%
Saturated: S = 100%

Valet Operations Narrative

The project proposes a two- lane, one-way (entering) driveway on Congress Street for vehicles entering the hotel site.

The proposed curb cut is set at 22' wide to allow for an 11' through lane entering and an 11' wide pull off area for drop off at the onsite entrance area. This lane configuration allows for valet operators to move entering vehicles past loading vehicles in the drop off lane and into the garage structure if necessary to prevent stacking of vehicles in the entrance driveway or on the sidewalk area.

The material details of the entrance driveway will be further developed during site plan review. Paver materials and sidewalk grading will be developed to respect and reinforce the pedestrian-oriented streetscape while defining the area as an entrance to the hotel for safe and efficient valet parking.

The valet parking may include moveable/temporary sidewalk kiosks or signs, placed by the valet operators, to indicate valet parking locations, but no permanent valet signage is proposed. This approach is similar to other valet parking operations in the City of Portland.

There will be no self-parking in the hotel's garage by hotel guests, all guest parking will be valet parked. The revised plan provides a minimum of (4) loading spaces at the valet entrance outside of the garage for guest arrival and during peak arrival/departure times the valet operators can use both lanes of the valet entrance to accommodate up to (8) cars.

During standard operations, the second lane will remain clear to allow entering vehicles to pass loading/unloading guest vehicles and move off of the public sidewalks. During peak periods, the through lane is a available for unloading while valets move vehicles into the garage The entrance off Congress Street for the hotel will only be utilized for valet parking guest traffic.

The hotel's valet operation, similar to most valet operations at hotels in Portland, is a contracted service by a parking facility operator that has access to the both the on-site parking and other nearby offsite parking facilities. During peak periods, if the on-site garage is approaching capacity, the valets will park vehicles offsite in contracted facilities managed by the valet/parking vendor to ensure that arriving and departing vehicles are not queuing on the sidewalk or in the streets adjacent to the site. Peak periods of hotel valet operations are generally predicable at typical weekend check-in and check-out times and are staffed accordingly.

The valet service will be staffed 24 hours a day whenever the hotel is operating. The operation will be managed in the same manner as the applicants other existing hotels in Portland.

VIEW CORRIDOR - CONGRESS_EXISTING



cbt

VIEW CORRIDOR - CONGRESS_FUTURE CONDITION

THE ALLOWABLE ZONING ENVELOPE FOR THE ADJACENT PARCEL ILLUSTRATES HOW THE FUTURE CONDITION OF CONGRESS STREET MAY BE DEVELOPED. THE PROPOSED DEVELOPEMENT AT 358 CONGRESS WILL SERVE AS A PRECEDENT FOR FUTURE DEVELOPMENT TO CONTINUE THE ACTIVITY AND VIBRANCY ALONG CONGRESS STREET. THE DENSITY AND SCALE OF OUR PROPOSED DEVELOPMENT FITS INTO THE ALREADY EXISTING CONTEXT AS WELL AS WHAT MAY COME IN THE FUTURE.



*SEE SUBSEQUENT INDIVIDUAL SITE PLAN APPLICATIONS FOR DETAILS ON FENESTRATION, MATERIALS, AND COLOR

cbt

VIEW CORRIDOR - CONGRESS_PROPOSED

THE PROPOSED DEVELOPEMENT ON 385 CONGRESS FITS INTO THE EXISTING SCALE OF CONGRESS STREET. BY PULLING BUILDING FACES BACK FROM THE PROPERTY LINE, WE CONTINUE THE WIDENED PUBLIC REALM EXPERIENCE ESTABLISHED BY CITY HALL PLAZA. THIS PROVIDES THE OPPORTUNITY TO PROVIDE RETAIL SPILL-OUT AND CONTINUOUS VEGITATION IN FRONT OF OUR BUILDINGS THAT WILL SERVE AS A LINEAR PARK. BY BREAKING DOWN THE BLOCK INTO TWO SEPARATE BUILDINGS THAT FRONT ONTO CONGRESS, WE MAINTAIN THE GRANULARITY OF THE SURROUNDING CONTEXT. THE MID-BLOCK POROSITY PROVIDED BY OUR SHARED AMENITY TERRACE HELPS TO BREAK DOWN THE BLOCK SCALE.



*SEE SUBSEQUENT INDIVIDUAL SITE PLAN APPLICATIONS FOR DETAILS ON FENESTRATION, MATERIALS, AND COLOR

cbt

VIEW CORRIDOR - CUMBERLAND_EXISTING



cbt

VIEW CORRIDOR - CUMBERLAND_FUTURE CONDITION

THE ALLOWABLE ZONING ENVELOPE FOR THE ADJACENT PARCEL ILLUSTRATES HOW THE FUTURE CONDITION OF CUMBERLAND AVE MAY BE DEVELOPED. THE PROPOSED DEVELOPEMENT AT 358 CONGRESS WILL SERVE AS A PRECEDENT FOR FUTURE DEVELOPMENT TO CONTINUE THE HEIGHT AND SCALE OF THE EXISTING CUMBERLAND AVE. THE DENSITY AND SCALE OF OUR PROPOSED DEVELOPMENT FITS INTO THE ALREADY EXISTING CONTEXT AS WELL AS WHAT MAY COME IN THE FUTURE.



*SEE SUBSEQUENT INDIVIDUAL SITE PLAN APPLICATIONS FOR DETAILS ON FENESTRATION, MATERIALS, AND COLOR

cbt

VIEW CORRIDOR - CUMBERLAND_PROPOSED

THE PROPOSED DEVELOPEMENT ON CUMBERLAND AVE EMULATES THE EXISTING HEIGHT AND SETBACKS OF THE SURROUNDING CONTEXT. THE BUILDING STEPS DOWN AS IT GETS CLOSER TO THE STREET WHICH HELPS SCALE IT TO THE NEIGHBORHOOD ACROSS CUMBERLAND AVE. THE C-SHAPED BUILDING ALSO ADDS TO THE GRANULARITY AND SCALE OF THE IMMEDIATE CONTEXT.



*SEE SUBSEQUENT INDIVIDUAL SITE PLAN APPLICATIONS FOR DETAILS ON FENESTRATION, MATERIALS, AND COLOR

cbt

PROPOSED SHADOWS

JUNE 21 EDT

Att. W

10:00 AM



12:00 PM



2:00 PM



CONCLUSION:

THE PROPOSED DEVELOPMENT DOES NOT CAST ANY NEW SHADOWS ON CITY HALL PLAZA OR LINCOLN PARK DURING THE HOURS OF 10AM TO 2PM ON THE SUMMER SOLSTICE (JUNE 21ST)

N

cbt

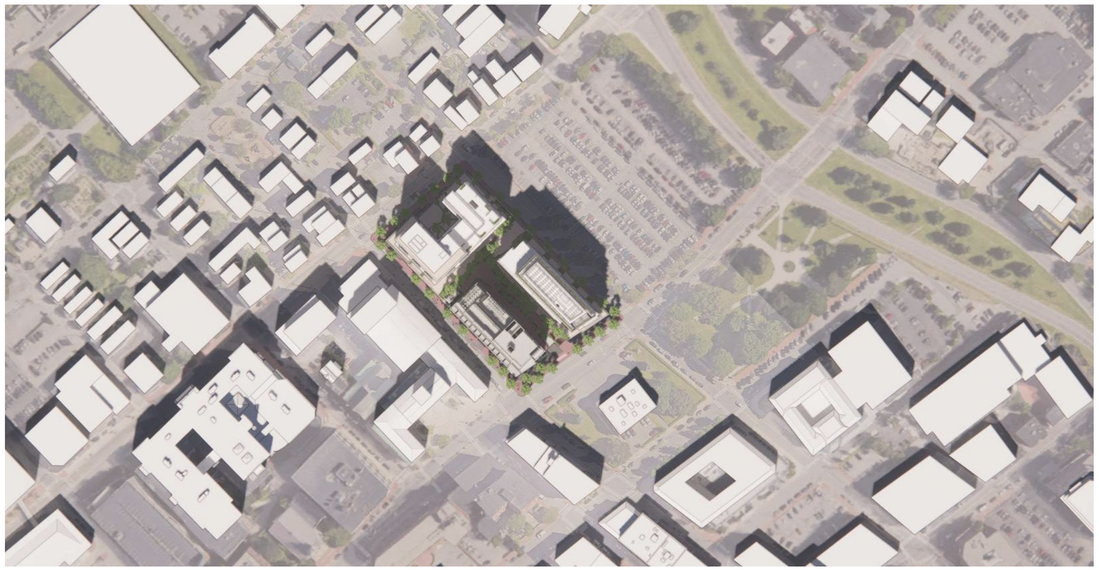
PROPOSED SHADOWS

MARCH / SEPTEMBER 21 EDT

10:00 AM



12:00 PM



2:00 PM



CONCLUSION:

THE PROPOSED DEVELOPMENT DOES NOT CAST ANY NEW SHADOWS ON CITY HALL PLAZA OR LINCOLN PARK DURING THE HOURS OF 10AM TO 2PM ON THE SPRING OR FALL EQUINOX (MARCH/SEPTEMBER 21ST)

N

cbt

Zachary Powell <zpowell@portlandmaine.gov>

385 Congress Street

1 message

Aurelia C Scott <rekacs2556@gmail.com> Thu, Apr 28, 2022 at 11:15 AM
To: planningboard@portlandmaine.gov, zpowell@portlandmaine.gov

Hello,

I am writing with a couple of comments about the plans for redevelopment of 385 Congress Street.

I am glad that there will be something other than an unused building in the area, and am pleased that the plans include residential and commercial units. I'm relieved that there will be multiple buildings instead of one. However, I have three concerns.

The first concern is that the suggested height and the artist's rendition make the proposed building noticeably out of proportion with neighboring City Hall, Merrill, and the Press Hotel, and even further out of proportion with existing buildings on Cumberland. They've shown that the proposed buildings are no taller than City Hall's cupola. But that's many stories taller than City Hall's roof! Be honest, and visualize Portland Towers right beside City Hall. It doesn't work - 150 feet is too tall.

Second, such tall towers would increase the already noticeable wind tunnels along Congress and Cumberland.

Third, I wish that the planning board (and any other department that would need to be involved) would be bold and visionary when working with developers, including the one proposing the redevelopment of 385 Congress Street. I'm sure you all are talented, well-trained people. And I know that you want the best for Portland today and in the future. So, be forward-looking!

Demand imagination and cutting-edge technology from developers. Demand designs that make a visual statement and help address the city's challenges, including climate change. We could be a city with beautiful historical buildings **and** fascinating new architecture, including astonishing residential/commercial structures. Instead, so much of the new stuff is boiler plate. Every year, I attend Portland's Architalx lecture series and wonder why all that eye-opening imagination isn't harnessed right here at home.

I should note that I live on Chestnut Street. Part of my view will be affected by whatever is built, and yet, I am in favor of redeveloping the site. It's the out-of-proportion height beside City Hall and Merrill and across from Cumberland that most concern me, as well as the wind-tunnel effect.

Thank you for your consideration of my remarks.

Sincerely,
Aurelia C. Scott

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Aurelia C. Scott
21 Chestnut Street, Unit 605
Portland, Maine 04101
she/her/hers
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207-712-7763

Zachary Powell <zpowell@portlandmaine.gov>

385 Congress Street comments

Avery Yale Kamila <avery.kamila@gmail.com> Mon, May 2, 2022 at 12:22 PM
To: planningboard@portlandmaine.gov
Cc: Zachary Powell <zpowell@portlandmaine.gov>

Dear Honorable Planning Board members,

My family lives on Myrtle Street in Bayside within 500 feet of the proposed development at 385 Congress Street, and after receiving notification of the proposed buildings I am writing to offer written comments.

Currently this large parcel is an under-utilized lot dominated by the former Press Herald printing plant and heat-generating parking lots. The only greenery or trees exist in two small gardens at the corners of Congress and Myrtle and Cumberland and Pearl.

The census tract which encompases the 385 Congress block is the second LEAST equitable tract in the entire city in terms of tree canopy. https://treeequityscore.org/map/#16.46/43.659127/-70.255435 (The Bayside census tract that abuts the property below Cumberland is a majority Black neighborhood and the number one least equitable tract in the city.) Only 3 percent of the census tract is currently covered by tree canopy.

As neighbors, my family and I applaud the developer's intention expressed via artist renderings to incorporate significant street trees, a pocket park and a number of roof parklets with plants and trees. If built as envisioned, this influx of trees and greenery will improve the overall tree equity in the neighborhood.
I urge the board to insert conditions requiring all the trees and parks depicted in the artist renderings and mentioned in the cover letter be completed to the standard shown or higher.

With low-income housing across the street and nearby in the form of rooming houses, two major Avesta complexes, the Franklin Towers building, the Oxford Street Shelter and the family shelter buildings, I also urge the board to ban generators and idling construction vehicles on the site. The neighbors in the abutting least equitable census tract have much higher than average levels of respiratory illnesses, along with higher levels of all other health challenges. Generators and idling diesel vehicles produce dangerously high levels of fine particulates and ground-level smog that converts to even more dangerous ground-level ozone in sunlight.

The low income neighbors stand to benefit greatly from the influx of trees and greenery into this current concrete jungle. However, neighbors with respiratory conditions will suffer greatly if generators or idling construction vehicles are allowed on the property, where their smog will blow into the homes of those living below the poverty line in a majority Black, least equitable census district.

Thank you for considering my comments and the health of the wider community.

Sincerely,
Avery

—
Avery Yale Kamila, AOLCP
Co-founder
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Portland, ME 04101
207-780-0915
www.facebook.com/portlandprotectors

385 CONGRESS STREET

CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE

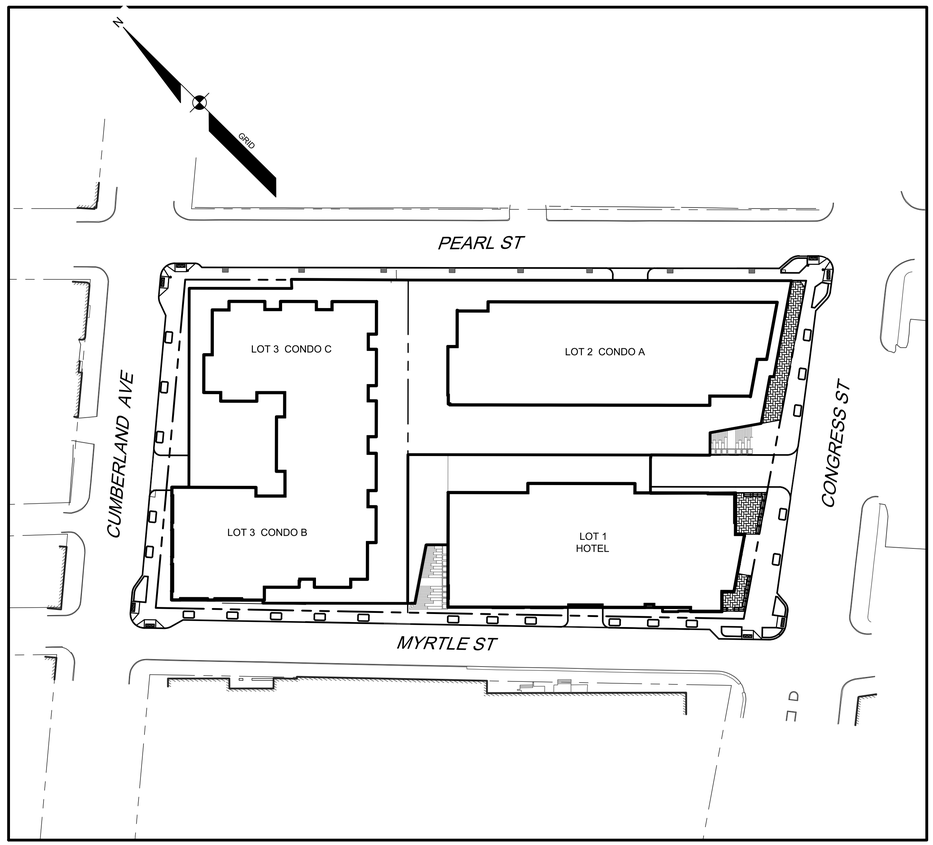
APPLICANT:
385 CONGRESS STREET, LLC.
2730 TRANSIT ROAD
WEST SENECA, NY 14224

ENGINEER/SURVEYOR/ LANDSCAPE ARCHITECT:

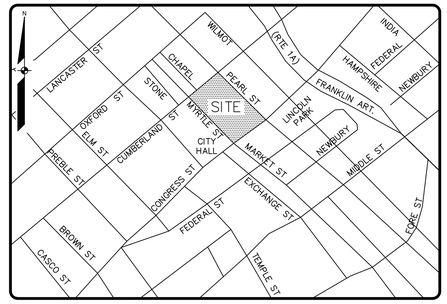
SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

PROJECT ARCHITECT:

CBT ARCHITECTS
110 CANAL ST.
BOSTON, MA 02114



GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 INCH = 50 FT.



LOCATION MAP NTS

SHEET INDEX:

SHEET	TITLE
1	COVER SHEET
2	GENERAL NOTES AND LEGEND
3	SITE PLAN - STREET LEVEL
4	GRADING PLAN - STREET LEVEL
5	UTILITY PLAN - STREET LEVEL
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7	LANDSCAPE PLAN - STREET LEVEL
8	LANDSCAPE PLAN - LEVEL 2
9	ON STREET PARKING COMPARISON PLAN
10	EASEMENT PLAN LEVEL 0 INTERIM
11	EASEMENT PLAN LEVEL 0
12	EASEMENT PLAN LEVEL 1
1 OF 2	EXISTING CONDITIONS PLAN 1
2 OF 2	EXISTING CONDITIONS PLAN 2

NOT FOR CONSTRUCTION

DANIEL L RILEY PE 9967
STATE OF MAINE
DANIEL
RILEY
No. 9967
REGISTERED
PROFESSIONAL ENGINEER
07/29/2022

REV.	BY	DATE:	STATUS
C	DLR	07/29/2022	RESPONSE TO MDP REVIEW COMMENTS
B	DLR	07/21/2022	RESPONSE TO MDP REVIEW COMMENTS
A	DLR	03/25/2022	MASTER PLAN APPLICATION

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM SEBAGO TECHNICS, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE THE USER'S SOLE RISK AND WITHOUT LIABILITY TO SEBAGO TECHNICS, INC.

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

COVER SHEET
OF:
385 CONGRESS STREET
CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE
FOR:
385 CONGRESS STREET, LLC.
2730 TRANSIT ROAD
WEST SENECA, NY 14224

DESIGNED	DJS
DRAWN	DAB
CHECKED	DLR
DATE	02/04/2022
SCALE	AS NOTED
PROJECT	19371

SHEET 1 OF12

F:\Projects\19000\19371\DWG\Design\19371C.dwg 7/29/2022 11:34 AM DAVID BLANCHARD

19371C.dwg, TAB:Cover

LEGEND

EXISTING		PROPOSED
	PROPERTY LINE/R.O.W.	
	ABUTTER LINE/R.O.W.	
	DEED LINE/R.O.W.	
	TIE LINE	
	SETBACK	
	EASEMENT	
	BUFFER	
	FLOODPLAIN	
	FLOODWAY	
	CENTERLINE	
⊡	MONUMENT	■
◎	IRON PIPE/ROD	●
◎	DRILL HOLE	◉
C1/L1	DEED CALL	
C1/L1	CURVE/LINE NO.	C1/L1
	SOILS	
	ZONE LINE	
	ZONE LINE ON PL	
BENCHMARK DESCRIPTION WITH ELEVATION	BENCHMARK	
	SURVEY CONTROL	
TP-1	TEST PIT	
MW-1	MONITORING WELL	
B-1	BORING	
	BUILDING	
	DECK/STEPS/ OVERHANG	
	EDGE WETLAND	
	WETLANDS	
	UPLANDS	
	STREAM	
	LEDGE	
	EDGE PAVEMENT	
	PAVEMENT SAWCUT	
	EDGE CONCRETE	
	PAVEMENT PAINT	
	EDGE GRAVEL	
	CURB LINE	
	EDGE OF WATER	
	TREELINE	
120 118	CONTOURS	120
×120.00	SPOT GRADE	+120.00
	CHAIN LINK FENCE	
X	BARB WIRE FENCE	X
	STOCKADE FENCE	
	GUARD RAIL	
	STONE WALL	
	RETAINING WALL	
	DECIDUOUS TREE	
	CONIFEROUS TREE	
	BOLLARD	●
	SIGN	
	RAILROAD	
G	GAS	G
	GAS GATE VALVE	
GM	GAS METER	
G	GAS MANHOLE	
W	WATER	W
	WATER GATE VALVE	
	WATER SHUT OFF	
	HYDRANT	
W	WATER MANHOLE	
W	WELL	W
S	SANITARY SEWER	S
FM	FORCE MAIN	FM
S	SANITARY MANHOLE	
SD	STORM DRAIN	SD
UD	UNDER DRAIN	UD
D	DRAINAGE MANHOLE	
	CATCH BASIN	
OHU	OVERHEAD UTILITY	OHU
UGU	UNDERGROUND UTILITY	UGU
T	TRANSFORMER PAD	T
E	ELECTRICAL MANHOLE	E
EM	ELECTRIC METER	
H	HVAC UNIT	
T	TELEPHONE MANHOLE	
	LIGHT POLE	
	UTILITY POLE	
	GUY WIRE	
	DRAINAGE DITCH	
	EROSION CONTROL BLANKET	
	FILTER BARRIER	FB
	RIPRAP	
	CHECK DAM	
	INLET PROTECTION	
	BOULDER	
	STREAM	

LANDSCAPE LEGEND

- MULCH LINE
- LARGE SHADE TREES
- STREET TREES
- ORNAMENTAL TREES
- LANDSCAPE PLANTING BEDS
- CITY SIDEWALK BRICK
- DRIVEWAY BRICK
- PRIVATE TERRACE
- COMMON PAVING AREAS
- BENCHES

STRIPING LEGEND

SINGLE WHITE LANE LINE	SWLL
DOUBLE YELLOW CENTERLINE	DYCL
WHITE CROSSWALK STRIPING	
WHITE STOP BAR STRIPING	
WHITE NO PARKING STRIPING	

GENERAL NOTES

1. THE RECORD OWNER OF THE PARCEL IS 385 CONGRESS LLC BY DEED DATED OCTOBER 20, 2017 AND RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD) IN BOOK 34401, PAGE 214.
2. THE PROPERTY IS SHOWN AS LOT 1 ON THE CITY OF PORTLAND TAX MAP 27 AND IS LOCATED IN THE B3 DOWNTOWN BUSINESS DISTRICT.
3. SPACE AND BULK CRITERIA FOR THE B3 DISTRICT ARE AS FOLLOWS:

MINIMUM LOT SIZE:	N/A
MINIMUM STREET FRONTAGE:	15 FEET
MINIMUM FRONT YARD:	N/A
MINIMUM SIDE YARD:	N/A
MINIMUM REAR YARD:	N/A
MAXIMUM BUILDING HEIGHT:	150 FEET
MAXIMUM LOT COVERAGE:	100%

* SEE ORDINANCE FOR MORE PARTICULAR INFORMATION.

4. TOTAL AREA OF PARCEL IS APPROXIMATELY 2.26 ACRES.
5. THE BOUNDARY IS BASED ON PLAN REFERENCE 6F. TOPOGRAPHIC INFORMATION SHOWN HEREON. SEBAGO TECHNICS INC. UPDATED RECORDS RESEARCH FROM 2009 TO DATE REGARDING THE BOUNDARY INFORMATION.
6. IS BASED UPON FIELD WORK PERFORMED BY SEBAGO TECHNICS, INC. OCTOBER , 2019.
7. PLAN REFERENCES:
1. PLAN OF CITY BUILDING LOT, PORTLAND, ME, DATED AUGUST 1908 BY THE CITY OF PORTLAND ENGINEER, AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 159/5.
   A. PORTLAND DEPARTMENT OF PUBLIC WORKS STREET WORKSHEETS AND BLUESHEETS FOR STREETS BOUNDING THE LOCUS PARCEL AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 159/5.
   B. PLAN OF PROPERTY IN PORTLAND, ME. MADE FOR GUY GANNETT PUBLISHING CO. BY H.I. & E.C. JORDAN - SURVEYORS, DATED JULY 1964 AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 663/2.
   C. NEW MECHANICAL BUILDING, GUY GANNETT PUBLISHING COMPANY, PORTLAND, ME, TUNNEL PLAN AND SECTIONS BY LOCKWOOD, GREENE ENGINEERS, INC, REVISED THROUGH MAY 12, 1965 AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 203/2.
   D. PLAN OF PROPERTY IN PORTLAND, ME. MADE FOR GUY GANNETT PUBLISHING PUBLISHING CO. BY H.I. & E.C. JORDAN - SURVEYORS, REVISED THROUGH FEBRUARY 6, 1973 AND ON FILE WITH OWEN HASKELL INC.
   E. ALTA/ACSM LAND TITLE SURVEY OF CONGRESS STREET SITE, 385 CONGRESS STREET, PORTLAND, ME DATED JULY 1, 2009 BY SEBAGO TECHNICS INC, PROJECT NUMBER 09235.
   F. F. ALTA/NSPS LAND TITLE SURVEY OF CONGRESS/PEARL BLOCK CONGRESS STREET AND PEARL STREET , PORTLAND, ME DATED FEBRUARY 11, 2022 BY SEBAGO TECHNICS, INC. FOR FATHOM COMPANIES PROJECT NUMBER 19371-02
8. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83, ELEVATIONS DEPICTED HEREON ARE NGVD29 PER CITY STANDARDS AS VERIFIED BY A UNITED STATES COAST & GEODETIC SURVEY BRASS DISK LOCATED IN A GRANITE BLOCK OF THE CITY HALL BUILDING HAVING A PUBLISHED ELEVATION OF 69.66' (NAVD88 68.95')
9. THE CITY OF PORTLAND DISCONTINUED THAT PORTION OF CHAPEL STREET ``RUNNING FROM CONGRESS STREET TO CUMBERLAND STREET' BY ORDER OF CITY COUNCIL ON FEBRUARY 5, 1973 AND RECORDED AT THE CITY OF PORTLAND RECORDS IN VOLUME 89, PAGE 61. PUBLIC AND PRIVATE RIGHTS MAY EXIST FOR PUBLIC HIGHWAY AND UTILITIES THAT STILL LIE WITHIN THE LIMITS OF CHAPEL STREET. SEBAGO TECHNICS, INC. SUGGEST LEGAL COUNSEL BE SOUGHT TO CLARIFY THE INTEREST OF OTHERS IN THESE RIGHTS.
10. PURSUANT TO A CONVERSATION BETWEEN SEBAGO TECHNICS, INC. AND THE PORTLAND WATER DISTRICT, THE WATER LINE SHOWN AS BEING LOCATED IN THE DISCONTINUED PORTION OF CHAPEL STREET HAS BEEN REMOVED AND NO LONGER EXISTS.
11. UTILITY INFORMATION DEPICTED HEREON, UNLESS OTHERWISE NOTED, IS OF QUALITY LEVEL D PER AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD CI/ASCE 38-02. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
12. THE LOCUS PROPERTY AS DEPICTED HEREON DOES NOT FALL WITHIN A SPECIAL FLOOD HAZARD AREA AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR PORTLAND, MAINE, CUMBERLAND COUNTY, COMMUNITY-PANEL NUMBER 230051 0013 B, HAVING AN EFFECTIVE DATE OF JULY 17 1986. THE LOCUS FALLS WITHIN AN AREA IDENTIFIED AS ZONE C, AREAS OF AREAS OF MINIMAL FLOODING.
13. BENCHMARK: BM-1EASTERLY BOLT AT BASE OF UTILITY POLE ELEVATION: 61.55 (NGVD29)
16. PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR ANY PHASE OF THE SUBDIVISION A PERFORMANCE GUARANTEE MUST BE SUBMITTED TO AND APPROVED BY THE CITY OF PORTLAND.
17. ALL WORK SHALL CONFORM TO THE APPLICABLE CODES AND ORDINANCES.
18. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIM OR HERSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIM OR HERSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
19. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND IN THE FIELD.
20. PROVIDE ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND OWNER'S REQUIREMENTS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
21. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL, ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.
22. CONTRACTOR SHALL CLEAN AND REMOVE DEBRIS AND SEDIMENT DEPOSITED ON PUBLIC STREETS, SIDEWALKS, ADJACENT AREAS, OR OTHER PUBLIC WAYS DUE TO CONSTRUCTION.
23. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ALL AREAS TO ORIGINAL CONDITION AND AS DIRECTED BY DESIGN DRAWINGS.
24. SITE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION.
25. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENT CONTROL BMPS" PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY OF THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
26. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY UTILITY COMPANIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (811) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.
27. CONTRACTOR SHALL BE AWARE THAT DIG SAFE ONLY NOTIFIES ITS "MEMBER" UTILITIES ABOUT THE DIG. WHEN NOTIFIED, DIG SAFE WILL ADVISE CONTRACTOR OF MEMBER UTILITIES IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND CONTACTING NON-MEMBER UTILITIES DIRECTLY. NON-MEMBER UTILITIES MAY INCLUDE TOWN OR CITY WATER AND SEWER DISTRICTS AND SMALL LOCAL UTILITIES, AS WELL AS USG PUBLIC WORKS SYSTEMS.
28. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRSA 3360-A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE APPROPRIATE UTILITIES TO OBTAIN AUTHORIZATION PRIOR TO RELOCATION OF ANY EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS. IF A UTILITY CONFLICT ARISES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, THE MUNICIPALITY AND APPROPRIATE UTILITY COMPANY PRIOR TO PROCEEDING WITH ANY RELOCATION.
29. ALL PAVEMENT MARKINGS AND DIRECTIONAL SIGNAGE SHOWN ON THE PLAN SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS.
30. ALL PAVEMENT JOINTS SHALL BE SAWCUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.
31. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.
32. IMMEDIATELY UPON COMPLETION OF CUTS/FILLS, THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH EROSION CONTROL NOTES AND AS SPECIFIED ON PLANS.
33. THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR THE REMOVAL, REPLACEMENT AND RECTIFICATION OF ALL DAMAGED AND DEFECTIVE MATERIAL AND WORKMANSHIP IN CONNECTION WITH THE CONTRACT WORK. THE CONTRACTOR SHALL REPLACE OR REPAIR AS DIRECTED BY THE OWNER ALL SUCH DAMAGED OR DEFECTIVE MATERIALS WHICH APPEAR WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.
34. ALL WORK PERFORMED BY THE GENERAL CONTRACTOR AND/OR TRADE SUBCONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF LOCAL, STATE OR FEDERAL LAWS, AS WELL AS ANY OTHER GOVERNING REQUIREMENTS, WHETHER OR NOT SPECIFIED ON THE DRAWINGS.
35. WHERE THE TERMS "APPROVED EQUAL", "OTHER APPROVED", "EQUAL TO", "ACCEPTABLE" OR OTHER GENERAL QUALIFYING TERMS ARE USED IN THESE NOTES, IT SHALL BE UNDERSTOOD THAT REFERENCE IS MADE TO THE RULING AND JUDGEMENT OF SEBAGO TECHNICS, INC.
36. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION FOR THE WORK UNTIL TURNED OVER TO THE OWNER.
37. THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON SITE DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES.
38. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.
39. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. ANY MODIFICATION TO SUIT FIELD DIMENSION AND CONDITION SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY WORK.
40. BEFORE THE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND MATERIALS, REPAIR OR REPLACE PRIVATE OR PUBLIC PROPERTY WHICH MAY HAVE BEEN DAMAGED OR DESTROYED DURING CONSTRUCTION, CLEAN THE AREAS WITHIN AND ADJACENT TO THE PROJECT WHICH HAVE BEEN OBSTRUCTED BY HIS/HER OPERATIONS, AND LEAVE THE PROJECT AREA NEAT AND PRESENTABLE.
41. ALL GRAVITY CONDUIT PIPES SHALL BE INSTALLED USING A PIPE LASER AND TARGET SYSTEM THROUGH THE PIPE. ON PIPE RUNS 50 FEET OR LESS, THE THE CONTRACTOR SHALL REQUEST ENGINEER'S APPROVAL TO USE A GROUND LASER.
42. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FLOW THROUGH THE EXISTING CLOSED STORM DRAINAGE SYSTEM DURING CONSTRUCTION AND SHALL SUBMIT A WORK PLAN FOR APPROVAL BY THE DESIGN ENGINEER.

UTILITY DEMOLITION NOTES

1. PROTECT EXISTING BOUNDARY LINE MONUMENTATION. IF DISTURBED, EXISTING MONUMENTATION TO BE RESET BY A PROFESSIONAL LAND SURVEYOR.
2. DEMOLITION OF UTILITIES REQUIRING TREE REMOVAL SHALL BE COORDINATED WITH THE OWNER AND IN ACCORDANCE WITH PROJECT PLANS.
3. UTILITY DEMOLITION SHALL BE COMPLETED IN COORDINATION WITH NEW INFRASTRUCTURE. CONTRACTOR SHALL ENSURE EXISTING SURFACE DRAINAGE IS MAINTAINED DURING CONSTRUCTION.
4. EXISTING SEWER AND STORM DRAINAGE INFRASTRUCTURE TO REMAIN ACTIVE DURING CONSTRUCTION AND UPON COMPLETION OF PROJECT. DEMOLITION/CONSTRUCTION ACTIVITIES SHALL NOT INTERFERE OR IMPEDE EXISTING FLOWS. CONTRACTOR SHALL PROVIDE BYPASS PUMPING AS REQUIRED DURING SEWER AND STORM DEMOLITION AND NEW CONSTRUCTION. DAMAGE TO EXISTING SEWER INFRASTRUCTURE SHALL BE REPAIRED BY CONTRACTOR AT THEIR EXPENSE.
5. PROTECT EXISTING UTILITIES NOT CALLED OUT TO BE REMOVED DURING CONSTRUCTION.
6. DEMOLITION SHOWN IS FOR MAJOR SITE ELEMENTS TO BE DEMOLISHED. OTHER MINOR DEMOLITION MAY BE REQUIRED AS PART OF CONSTRUCTION AND SHALL BE CONSIDERED INCIDENTAL TO THE COST OF CONSTRUCTION. COORDINATE ALL DEMOLITION WORK WITH SITE AND BUILDING DRAWINGS.
7. PRIOR TO ANY DEMOLITION, THE CONTRACTOR SHALL SUBMIT A SEQUENCE OF DEMOLITION PLANS TO THE OWNER. THIS PLAN SHALL DEPICT LOCATIONS OF PROPOSED TERMINATIONS AND ANY TEMPORARY SERVICES THAT WILL BE NEEDED.
8. CONTRACTOR REQUIRED TO CONFIRM/MAINTAIN BENCHMARKS. IF IMPACTED CONTRACTOR IS RESPONSIBLE FOR NOTIFICATION/RELOCATION AND COORDINATION WITH PROJECT TEAM.

GRADING & EROSION NOTES

1. SIDESLOPES SHALL NOT BE STEEPER THAN 3:1 (H:V) EXCEPT AS OTHERWISE IDENTIFIED ON THIS PLAN. ALL SIDESLOPES STEEPER THAN 3:1 (H: V) SHALL BE LINED WITH EROSION CONTROL BLANKET, OR ADDITIONAL MEASURES AS INDICATED.
2. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENT CONTROL BMPS" MANUAL PUBLISHED BY BUREAU OF LAND AND WATER QUALITY MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.
3. ALL AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE LOAM AND SEED PER DETAIL.
4. SEE UTILITY DRAWINGS FOR PIPE AND STRUCTURE DATA TABLES.

CONSTRUCTION PLAN

1. PROVIDE EROSION CONTROL MEASURES PRIOR TO SITE DISTURBANCE.
2. GRADING AND CLEARING LIMITS SHALL NOT ENCROACH ON ADJACENT PROPERTIES UNLESS NOTED OTHERWISE ON THE PLANS.
3. OPEN AREAS SHALL BE LIMITED TO AREAS BEING WORKED IN. THE AREA STRIPPED OF EXISTING VEGETATION AT ANY GIVEN TIME SHALL BE MINIMIZED AND BE PHASED WHERE PRACTICAL SO THAT AREAS ARE REVEGETATED AND PERMANENTLY STABILIZED BEFORE ADDITIONAL AREAS ARE STRIPPED OF EXISTING VEGETATION. STABILIZE CONSTRUCTION AREAS BY USE OF RIPRAP, SEED, MULCH, OR OTHER GROUND COVER WITHIN ONE WEEK FROM THE TIME IT WAS ACTIVELY WORKED. SURFACES SHALL BE STABILIZED PRIOR TO DIRECTING STORMWATER RUNOFF TOWARD STORMWATER BMPS. PLEASE REFER TO DRAINAGE PLANS FOR WATERSHED AREAS.

LANDSCAPE NOTES

1. PLANT QUANTITIES SHOWN ON PLANT LISTS ARE FOR CONVENIENCE TO THE CONTRACTOR ONLY. THE CONTRACTOR IS RESPONSIBLE FOR ALL PLANT MATERIAL INSTALLATION AS SHOWN ON PLANS.
2. SIZE AND GRADING STANDARDS OF PLANT MATERIALS SHALL CONFORM TO THE LATEST EDITION OF "U.S.A. STANDARD FOR NURSERY STOCK," BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.
3. ALL PLANT MATERIAL SHALL BE FREE FROM INSECTS AND DISEASE.
4. ALL PLANTING SHALL BE DONE IN ACCORDANCE WITH ACCEPTABLE HORTICULTURAL PRACTICES. THIS IS TO INCLUDE PROPER PLANTING MIX, PLANT BED AND TREE PIT PREPARATION, PRUNING, STAKING OR GUYING, WRAPPING, SPRAYING, FERTILIZATION, PLANTING AND ADEQUATE MAINTENANCE UNTIL ACCEPTANCE BY THE OWNER.
5. PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR BY THE CONTRACTOR AND A PERIOD OF TWO YEARS THEREAFTER BY THE OWNER FROM DATE OF INSTALLATION, DURING THE ONE YEAR GUARANTEE PERIOD, DEAD PLANT MATERIAL SHALL BE REPLACED AT NO COST TO THE OWNER. AT THE END OF THE ONE YEAR PERIOD, THE CONTRACTOR SHALL OBTAIN FINAL ACCEPTANCE FROM THE OWNER.
6. ALL GRASS, OTHER VEGETATION AND DEBRIS SHALL BE REMOVED FROM ALL PLANTING AREAS PRIOR TO PLANTING.
7. EXISTING TREES TO BE PRESERVED WILL BE PROTECTED DURING CONSTRUCTION AND SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
8. THE LANDSCAPE CONTRACTOR IS ADVISED OF THE PRESENCE OF THE UNDERGROUND UTILITIES AND SHALL VERIFY THE EXISTENCE AND LOCATION OF SAME BEFORE COMMENCING AND DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR SHALL REPLACE OR REPAIR UTILITIES, PAVING, WALKS, CURBING, ETC. DAMAGED IN PERFORMANCE OF THIS JOB AT NO ADDITIONAL COST TO THE OWNER.
9. ALL SHRUB BEDS SHALL BE MULCHED WITH 3" CLEAN SHREDDED DARK BROWN BARK MULCH.
10. THE CONTRACTOR SHALL PROVIDE 4" LOAM FOR ALL AREAS TO BE SODDED OR SEEDED. PLANTING AREAS SHALL RECEIVE 12" ROLLED THICKNESS OF LOAM. THE LANDSCAPE CONTRACTOR SHALL COORDINATE SUBGRADE PREPARATION WITH THE GENERAL CONTRACTOR PRIOR TO PLACING LOAM.
11. ANY DEVIATION FROM THE LANDSCAPE PLAN, INCLUDING PLANT LOCATION, SELECTION, SIZE, QUANTITY OR CONDITION SHALL BE REVIEWED AND APPROVED BY THE OWNER AND LANDSCAPE ARCHITECT (AND MUNICIPAL AUTHORITY, IF APPLICABLE) PRIOR TO INSTALLATION ON SITE.
12. WHERE INDICATED ON PLAN, PLANTING SOIL MIXTURE FOR PERENNIAL AND ANNUAL FLOWER BED AREAS SHALL CONSIST OF FOUR PARTS TOPSOIL, TWO PARTS SPHAGNUM PEAT MOSS, AND ONE PART HORTICULTURAL PERLITE BY VOLUME. PEAT MOSS MAY BE SUBSTITUTED WITH WELL-ROTTED OR DEHYDRATED MANURE OR COMPOST. ROTOTILL BEDS TO A DEPTH OF 8 INCHES.
13. DURING CLEANING OF SITE AND PRIOR TO TREE AND SHRUB INSTALLATION, CONTRACTOR SHALL REMOVE INVASIVE PLANTS. AREAS WHERE INVASIVE PLANTS ARE REMOVED AND NO OTHER PLANTING IS PROPOSED, AREA SHALL BE LOAM AND SEEDED.

UTILITY NOTES

1. UTILITY INFORMATION DEPICTED HEREON IS COMPILED USING PHYSICAL EVIDENCE LOCATED IN THE FIELD. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION AND/OR EXCAVATION. PROTECT EXISTING ONSITE SEWER PIPE AND ADJUST MANHOLE RIMS TO GRADE WHERE APPLICABLE.
2. ALL GRAVITY CONDUIT PIPES SHALL BE INSTALLED USING A PIPE LASER AND TARGET SYSTEM THROUGH THE PIPE. ON PIPE RUNS 50 FEET OR LESS, THE CONTRACTOR SHALL REQUEST ENGINEER'S APPROVAL TO USE OR NOT USE A GROUND LASER.
3. MAINTAIN MINIMUM 5'-6" OF COVER ABOVE TOP OF WATER SERVICE PIPE.
4. MAINTAIN MINIMUM 10 FEET HORIZONTAL SEPARATION BETWEEN WATER SERVICES AND OTHER UTILITIES. MAINTAIN MINIMUM 18 INCHES VERTICAL SEPARATION BETWEEN WATER SERVICES AND OTHER UTILITIES.
5. LOWER OR RAISE WATER SERVICES AS REQUIRED TO MAINTAIN MINIMUM 12 INCH VERTICAL SEPARATION FROM OTHER UTILITIES. WATER SERVICES CROSSING SEWERS SHALL MAINTAIN 12 INCH MINIMUM SEPARATION BETWEEN THE BOTTOM OF WATER LINE AND TOP OF SEWER UNLESS NOTED OTHERWISE ON THE PLANS.
6. PIPE:
   - SEWER PIPE SHALL BE SDR 35 PVC OR APPROVED EQUAL.
   - FORCEMAIN PIPE SHALL BE DR-11 HDPE OR APPROVED EQUAL.
   - STORMDRAIN SHALL BE ADS N-12 DUAL WALL HDPE PIPE WITH SMOOTH-WALLED INTERIOR OR APPROVED EQUAL UNLESS NOTED OTHERWISE ON THE UTILITY PLANS.
   - WATER PIPE AND FITTINGS SHALL CONFORM TO PORTLAND WATER DISTRICT WATER PIPING SPECIFICATIONS. MAIN WATER SERVICE PIPE SHALL BE DUCTILE IRON CLASS 52 PUSH-ON PIPE MEETING THE REQUIREMENTS OF AWWA/ANSI C-111/A21.11 (LATEST REVISION). PIPE SHALL BE CEMENT-LINED AWWA/ANSI C104/A21.4 WITH LINING TWICE THE THICKNESS SPECIFIED, AND COATED TWICE WITH A BITUMINOUS SEAL COATING. PROVIDE THRUST BLOCKS AT ALL WATER SERVICE BENDS.
7. COORDINATE FOUNDATION UNDERDRAIN LOCATIONS WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
8. COORDINATE GREASE INTERCEPTOR LOCATIONS WITH ARCHITECTURAL & PLUMBING DRAWINGS.
9. COORDINATE UTILITY INVERTS AT BUILDING WITH ARCHITECTURAL, STRUCTURAL AND PLUMBING DRAWINGS.
10. COORDINATE LOCATION OF SEWER, WATER, GAS, FOUNDATION DRAINS AND ROOF DRAIN INVERTS AT THE BUILDING WITH ARCHITECTURAL DRAWINGS.
11. WATER SERVICE ENTRANCE DESIGNS TO INCLUDE METERS AND BACKFLOW PREVENTERS TO MEET ALL STANDARDS AND REQUIREMENTS OF THE PORTLAND WATER DISTRICT.
12. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY GRADE CHANGES THAT WILL IMPACT STORM DRAINAGE INFRASTRUCTURE OR OTHER UTILITIES.
13. UTILITIES WITHIN 5 FEET FROM FACE OF BUILDING ARE COORDINATED ON RELEVANT M.E.P. DRAWINGS. CONTRACTOR SHALL COORDINATE INVERTS, CONNECTIONS AND MATERIALS WITH ALL DRAWINGS.
14. CONTRACTOR SHALL FURNISH AND INSTALL TRENCHING, MATERIALS AND BACKFILL FOR ALL UTILITIES. ELECTRICAL AND TELECOM/DATA PROVIDERS WILL PULL PRIMARY SERVICE TO TRANSFORMER AND PANEL. CONTRACTOR RESPONSIBLE FOR TIMING AND COORDINATION WITH UTILITIES AND DRAWINGS. COORDINATE WITH ELECTRICAL DRAWINGS FOR CONDUIT SCHEDULE, TYPE AND SIZES.
15. COORDINATE ALL WATER RELATED WORK WITH PORTLAND WATER DISTRICT.
16. UTILITY CONTACTS:

ELECTRIC:
CENTRAL MAINE POWER (CMP)
JAMIE COUGH, ENERGY SERVICES ADVISOR
(207) 629-1489
ACCOUNT#
- 10300876197
- 10300876218
- 10300876227
- 10300876228

WATER:
PORTLAND WATER DISTRICT
ROBERT BARTELS, ENGINEER
(207) 774-5961

TELECOMMUNICATIONS
FAIRPOINT
PATRICK MORRISON
(207) 535-4271

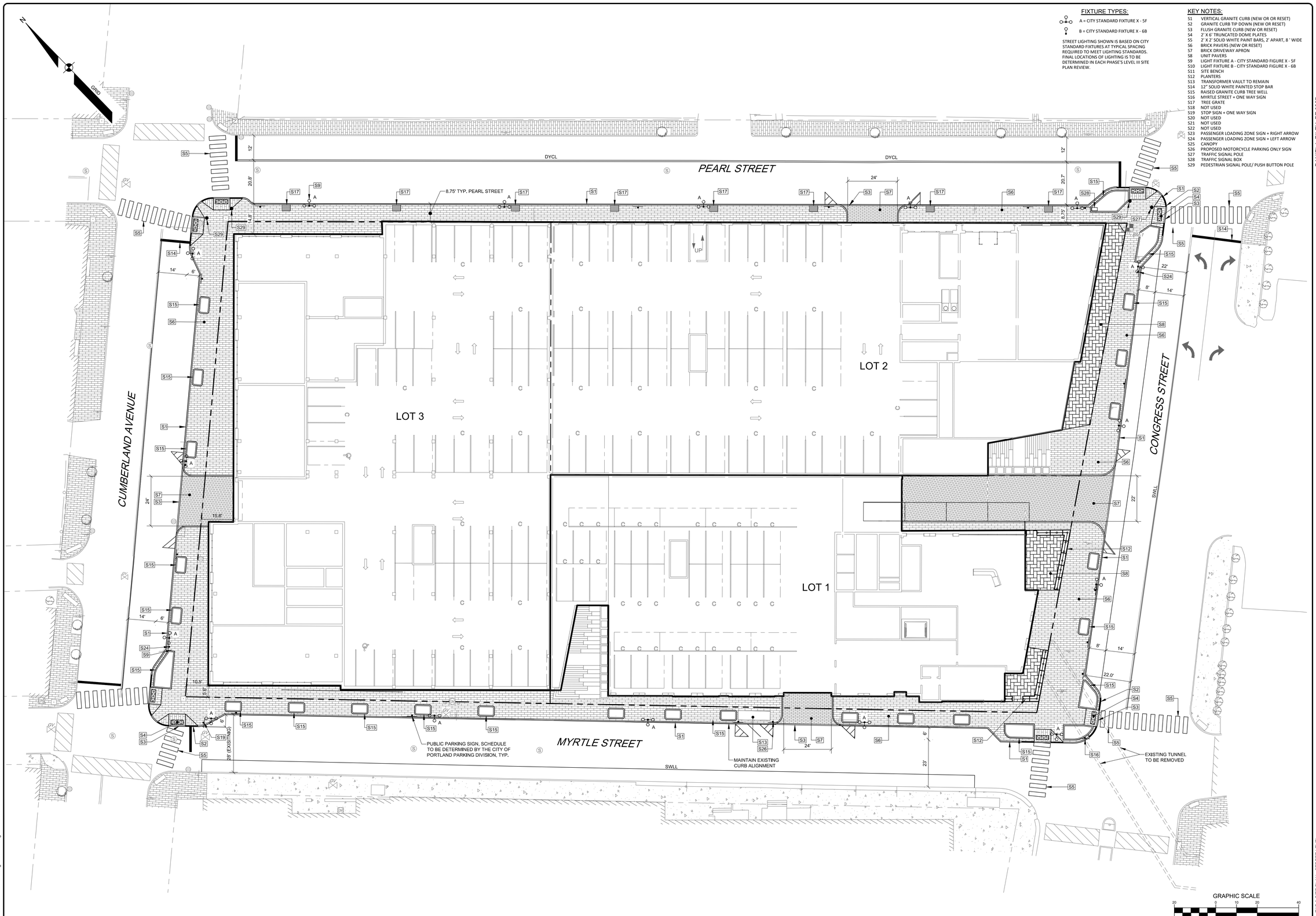
NATURAL GAS
UNITL
TBD

TYPICAL ABBREVIATIONS

AC	ACRE
AFG	ABOVE FINISH GRADE
APPROX.	APPROXIMATELY
BC	BOTTOM OF CURB
BCC	BITUMINOUS CONCRETE CURB
BIT	BITUMINOUS
BLDG	BUILDING
BW	BOTTOM OF WALL
CB	CATCH BASIN
CONC	CONCRETE
CONT	CONTINUOUS
DI	DUCTILE IRON
DIA	DIAMETER
DMH	DRAIN MANHOLE
E.W.	EACH WAY
ELEV	ELEVATION
FFE	FINISH FLOOR ELEVATION
FIN. GR.	FINISH GRADE
FTG	FOOTING
HDPE	HIGH DENSITY POLYETHYLENE
HGT	HEIGHT
HMA	HOT MIX ASPHALT
INV.	INVERT
LF	LINEAR FEET
OC	ON CENTER
PVC	POLYVINYL CHLORIDE
PWD	PORTLAND WATER DISTRICT
R	RADIUS
R.O.W.	RIGHT OF WAY
S.F.	SQUARE FEET
SCH	SCHEDULE
SCSC	SLIPFORM CONCRETE SLOPED CURB
SCVC	SLIPFORM CONCRETE VERTICAL CURB
SD	STORM DRAIN
SGC	SLOPED GRANITE CURB
SMH	SEWER MANHOLE SPECS SPECIFICATIONS
SS	SANITARY SEWER
SSGC	SALAVAGED SLOPED GRANITE CURB
SVGC	SALAVAGED VERTICAL GRANITE CURB
TC	TOP OF CURB
TW	TOP OF WALL
TYP	TYPICAL
VGC	VERTICAL GRANITE CURB
VIF	VERIFY IN FIELD

PARKING SUMMARY

LOT 1 HOTEL		
REQUIRED PARKING		
CONDOMINIUM		9
PARKING REQUIRED (ZONING)	1 per Unit	9
BIKE PARKING REQUIRED (ZONING)	2 per 5 Units	4
HOTEL (GUEST ROOMS)		156
PARKING REQUIRED (ZONING)	.25 per key	39
BIKE PARKING REQUIRED (ZONING)	2 per 10 cars	8
PROPOSED PARKING GARAGE		
	LEVEL 1	30
	LEVEL 0	40
TOTAL PARKING LOT 1		70
TOTAL PARKING PROPOSED:	70	DELTA
PARKING REQUIRED (ZONING



FIXTURE TYPES:

A = CITY STANDARD FIXTURE X - 5F

B = CITY STANDARD FIXTURE X - 6B

STREET LIGHTING SHOWN IS BASED ON CITY STANDARD FIXTURES AT TYPICAL SPACING REQUIRED TO MEET LIGHTING STANDARDS. FINAL LOCATIONS OF LIGHTING IS TO BE DETERMINED IN EACH PHASE'S LEVEL III SITE PLAN REVIEW.

KEY NOTES:

S1 VERTICAL GRANITE CURB (NEW OR RESET)
S2 GRANITE CURB TIP DOWN (NEW OR RESET)
S3 FLUSH GRANITE CURB (NEW OR RESET)
S4 2' X 6' TRUNCATED DOME PLATES
S5 2' X 2' SOLID WHITE PAINT BARS, 2' APART, 8 ' WIDE
S6 BRICK PAVERS (NEW OR RESET)
S7 BRICK DRIVEWAY APRON
S8 UNIT PAVERS
S9 LIGHT FIXTURE A - CITY STANDARD FIGURE X - 5F
S10 LIGHT FIXTURE B - CITY STANDARD FIGURE X - 6B
S11 SITE BENCH
S12 PLANTERS
S13 TRANSFORMER VAULT TO REMAIN
S14 12" SOLID WHITE PAINTED STOP BAR
S15 RAISED GRANITE CURB TREE WELL
S16 MYRTLE STREET + ONE WAY SIGN
S17 TREE GRATE
S18 NOT USED
S19 STOP SIGN + ONE WAY SIGN
S20 NOT USED
S21 NOT USED
S22 NOT USED
S23 PASSENGER LOADING ZONE SIGN + RIGHT ARROW
S24 PASSENGER LOADING ZONE SIGN + LEFT ARROW
S25 CANOPY
S26 PROPOSED MOTORCYCLE PARKING ONLY SIGN
S27 TRAFFIC SIGNAL POLE
S28 TRAFFIC SIGNAL BOX
S29 PEDESTRIAN SIGNAL POLE/ PUSH BUTTON POLE

NOT FOR CONSTRUCTION

DANIELL L RILEY PE 9967

STATE OF MAINE — DANIEL L RILEY — No. 9967 — REGISTERED PROFESSIONAL ENGINEER
07/29/2022

REV	BY	DATE	STATUS
C	DLR	07/29/2022	RESPONSE TO MDP REVIEW COMMENTS
B	DLR	07/21/2022	RESPONSE TO MDP REVIEW COMMENTS
A	DLR	02/25/2022	MASTER PLAN APPLICATION

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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel. 207-200-2100

SITE PLAN - STREET LEVEL
OF:
385 CONGRESS STREET
CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE
FOR:
385 CONGRESS STREET, LLC.
2730 TRANSIT ROAD
WEST SENECA, NY 14224

DESIGNED	DJS
DRAWN	DAB
CHECKED	DLR
DATE	02/04/2022
SCALE	1" = 20'
PROJECT	19371

SHEET 3 OF12

19371S.dwg, TAB:3 SITE PLAN - STREET LEVEL

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F:\Projects\19000\19371\DWG\Design\19371S.dwg, 3 SITE PLAN - STREET LEVEL, 7/29/2022 12:37:11 PM

PEARL STREET

CUMBERLAND AVENUE

CONGRESS STREET

MYRTLE STREET

FFE = 48.35 +/-

FFE = 48.45 +/-

FFE = 48.45 +/-

FFE = 48.45 +/-

FFE = 48.45 +/-

FFE = 62.00 +/-

FFE = 63.00 +/-

48.35

48.45

46.45

48.45

48.45

53.65

60.80

63.00

63.00

63.00

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 INCH = 20 FT.

NOT FOR CONSTRUCTION

DANIEL L. RILEY PE 9967

STATE OF MAINE
DANIEL
RILEY
No. 9967
REGISTERED
PROFESSIONAL ENGINEER
07/29/2022

REV.	BY:	DATE:	STATUS
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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

GRADING PLAN - STREET LEVEL

OF:

385 CONGRESS STREET

CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE

FOR:

385 CONGRESS STREET, LLC.
2730 TRANSIT ROAD
WEST SENECA, NY 14224

DESIGNED	DJS
DRAWN	DAB
CHECKED	DLR
DATE	02/04/2022
SCALE	1" = 20'
PROJECT	19371

SHEET 4 OF12

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19371G.dwg, TAB:2D SCALE

UTILITY PLAN KEY NOTES

DRAINAGE:
- D1 CATCH BASIN (CB)
- D2 DRAIN MANHOLE (DMH)
- D3 STORM DRAIN MAIN (SD)
- D4 STORMWATER TREATMENT SYSTEM

ELECTRICAL:
- E1 6' X 12' SUBMERSIBLE TRANSFORMER
- E2 (3) 5" PVC AND (2) 4" PVC CONDUITS
- E3 REMOVE EXISTING UTILITY POLE
- E4 EXISTING OVERHEAD ELECTRIC LINE TO BE SWAPPED TO UNDERGROUND ELECTRIC
- E5 6' X 12' ELECTRICAL MANHOLE

GAS:
- G1 TAP EXISTING NATURAL GAS MAIN
- G2 NEW NATURAL GAS SERVICE
- G3 NATURAL GAS METER

LIGHTING:
- L1 STREET LIGHT AND OVERHEAD SERVICE TO BE REMOVED
- L2 EXISTING STREET LIGHT TO BE REMOVED

SANITARY:
- SS1 SEWER MANHOLE (SMH)
- SS2 SEWER MAIN (S)
- SS3 1500 GALLON GREASE TRAP

TELECOM:
- T1 5' X 7' TEL/ DATA VAULT

TRAFFIC SIGNAL:
- TS1 RELOCATE EXISTING TRAFFIC SIGNAL WIRES TO NEW STRAINPOLE
- TS2 TRAFFIC SIGNAL POLE TO REMAIN
- TS3 NEW TRAFFIC SIGNAL STRAIN POLE. INSTALL NEW OR RELOCATED PEDESTRIAN SIGNAL HEADS
- TS4 RELOCATE EXISTING TRAFFIC CONTROL CABINET TO NEW FOUNDATION
- TS5 NEW PEDESTRIAN SIGNAL/BUTTON POLE

WATER:
- W1 NEW 8" WATER LINE
- W2 NEW 4" WATER LINE
- W3 NEW 12" WATER LINE
- W4 WATER GATE VALVE
- W5 HYDRANT

N

GRID

CUMBERLAND AVENUE

PEARL STREET

CONGRESS STREET

MYRTLE STREET

RENEW MAIN TO CUMBERLAND AVENUE

6" DI 1973

DMH-1A

SV27P535 6" FIRE SERVICE TO BE RETIRED DURING RENEWAL OF MAIN

INSTALL NEW HYDRANT, RETURN OLD HYDRANT TO PWD

DMH-1

SD-5

SD-5.1

SD-5.2

SUBSURFACE STORMWATER TREATMENT SYSTEM

DMH-5

CONDO ROOF DRAIN DOWN FROM ABOVE

SD-1

DMH-1B

SD-2

DMH-2

CONDO SEWER DOWN FROM ABOVE

CONDO ROOF DRAIN DOWN FROM ABOVE

SS1

SMH-1A

4.02%

S-1

SMH-1

SD-3

S-2

SMH-2

SS2

S-3

CONDO SEWER DOWN FROM ABOVE

CONDO ROOF DRAIN DOWN FROM ABOVE

CONDO PLAZA DRAIN DOWN FROM ABOVE

HOTEL PLAZA DRAIN DOWN FROM ABOVE

HOTEL PLAZA DRAIN DOWN FROM ABOVE

HOTEL SEWER DOWN FROM ABOVE

HOTEL ROOF DRAIN DOWN FROM ABOVE

DMH-4

SD-4.2

SD-4

SD-4.1

DMH-3

SUBSURFACE STORMWATER TREATMENT SYSTEM

SMH-4

SS3

S-4

SMH-3

RELOCATE HYDRANT, INSTALL NEW HYDRANT, RETURN OLD HYDRANT TO PWD

RENEW WATER MAIN WITH 12" DI MAIN

REMOVE ABANDONED TRANSFORMER VAULT

EXISTING UNDERGROUND DESIGN IS PENDING REVIEW FROM CENTRAL MAINE POWER.

CONDO ROOF DRAIN DOWN FROM ABOVE

RETURN EXISTING HYDRANT TO PWD

REMOVE GATE VALVE

RETIRE PER PWD STANDARDS. CUT OUT TEE, SLEEVE IN 16" DI MAIN, SHUTDOWN REQUIRED, COORDINATE SHUTDOWN WITH PWD.

8" CI 1965

16" CI 1895

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

NOT FOR CONSTRUCTION

DANIEL L RILEY PE 9967

STATE OF MAINE
DANIEL
RILEY
No. 9967
REGISTERED
PROFESSIONAL ENGINEER
07/29/2022

REV	BY	DATE	STATUS
C	DLR	07/29/2022	RESPONSE TO MDP REVIEW COMMENTS
B	DLR	07/21/2022	RESPONSE TO MDP REVIEW COMMENTS
A	DLR	03/25/2022	MASTER PLAN APPLICATION

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WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

UTILITY PLAN - STREET LEVEL
OF:
385 CONGRESS STREET
CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE
FOR:
385 CONGRESS STREET, LLC.
2730 TRANSIT ROAD
WEST SENECA, NY 14224

DESIGNED	DJS
DRAWN	DAB
CHECKED	DLR
DATE	02/04/2022
SCALE	1" = 20'
PROJECT	19371

SHEET 5 OF12

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19371U.dwg, TAB:20 SCALE

STRUCTURE TABLE

POINT #	STRUCTURE TYPE	RIM EL.	INV.	INV. EL.	SIZE	TYPE	LOCATION (N=12)	COMMENTS
2041	SMH	54.78	IN	49.43	12	VIT CLAY	3	
			IN	49.49	4	VIT CLAY	6	
			IN	46.39	10	VIT CLAY	4	
			IN	45.56	UNK	UNK	5	FULL OF SEDIMENT
			OUT	45.34	UNK	UNK	11	FULL OF SEDIMENT
			SHELF	45.81				
2048	SMH	52.54	IN	43.04	18	VIT CLAY	5	
			IN	35.36	UNK	UNK	5	
			IN	36.34	10	PVC	3	
			IN	36.39	UNK	STEEL	4	TOP OF PIPE
2061	CBR	48.09	OUT	44.12	8	PVC	7	HOOD
			SUMP	42.12				
2065	CBR	48.25	IN	44.81	8	VIT CLAY	8	
			OUT	44.71	8	UNK	2	
			SUMP	40.71				
2076	SMH	48.19	IN	41.31	12	VIT CLAY	4	
			IN	40.94	8	VIT CLAY	8	
			IN	48.22	0	NONE	NONE	2 INVERTS & SHELF FURTHER THAN 25'
2081	SMH	47.90	IN	38.77	18	VIT CLAY	4	
			IN	24.67	18	VIT CLAY	4	
			OUT	24.67	18	VIT CLAY	10	
			SHELF	25.77				
2106	CBR	47.27	OUT	43.46	UNK	UNK	10	HOOD
			SUMP	40.26				
2124	CBR	47.00	IN	44.75	12	VIT CLAY	6	
			OUT	47.05	0	NONE	NONE	NO OUT VISIBLE
			SUMP	40.05				
2126	SMH	47.80	IN	39.41	12	VIT CLAY	8	
			OUT	39.32	12	VIT CLAY	2	
			SHELF	40.03				
2143	CBR	47.40	OUT	45.27	10	VIT CLAY	3	
			SUMP	45.17				
2145	CBR	47.95	IN	44.48	8	VIT CLAY	9	
			OUT	43.78	12	VIT CLAY	12	
			SUMP	42.98				
2150	MH	47.77	IN	37.46	18	VIT CLAY	4	
			OUT	37.21	18	VIT CLAY	10	
			SHELF	38.11				
2161	CBR	47.77	OUT	43.36	12	UNK	8	
			SUMP	40.76				
2164	CBR	47.54	IN	44.26	8	VIT CLAY	4	
			IN	44.19	8	VIT CLAY	2	
			OUT	43.49	12	UNK	9	
			SUMP	40.09				
2166	CBR	47.59	OUT	44.42	8	VIT CLAY	8	
			SUMP	44.02				
2223	SMH	48.67	IN	39.72	15	VIT CLAY	4	
			OUT	39.62	15	VIT CLAY	10	
			SHELF	40.77				
2386	SMH	54.12	IN	44.67	15	VIT CLAY	4	
			OUT	44.62	15	VIT CLAY	10	
			SHELF	45.69				

STORM DRAIN STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
CB-1	47.55		39.20 (SD-2.1)	48"
DMH-1	50.00	42.00 (SD-1,1) 42.00 (SD-5)	41.90 (SD-1)	48"
DMH-1A	50.95	41.60 (SD-1) 41.60 (EX. SD)	41.50 (EX. SD)	48"
DMH-1B	50.00	42.29 (SD-2)	42.19 (SD-1,1)	48"
DMH-2	50.00	42.60 (SD-3)	42.50 (SD-2)	48"
DMH-3	50.00	43.18 (SD-4)	43.08 (SD-3)	48"
DMH-4	50.00		46.70 (SD-4.2)	48"
DMH-5	50.00		43.50 (SD-5.2)	48"

STORM DRAIN PIPE DATA

NAME	SIZE	LENGTH	SLOPE
SD-1	15"	51'	0.58%
SD-2.1	12"	13'	2.31%
SD-3	15"	96'	0.50%
SD-4	15"	114'	0.59%
SD-4.1	12"	8'	0.62%
SD-4.2	12"	14'	2.15%
SD-5.1	15"	7'	0.75%
SD-5.2	12"	52'	0.96%

SANITARY SEWER STRUCTURE DATA

STRUCTURE	RIM	INV. IN	INV. OUT:	DIAM.
SMH-1	50.00	45.20 (S-2)	45.10 (S-1)	48"
SMH-1A	47.15	43.25 (S-1) 40.20 (SD-34)	40.10 (SD-33)	48"
SMH-2	50.00	45.80 (S-3)	45.70 (S-2)	48"
SMH-3	57.95	46.30 (S-5)	46.20 (S-4)	48"
SMH-4	50.22		46.70 (S-5)	48"

SANITARY SEWER PIPE DATA

NAME	SIZE	LENGTH	SLOPE
S-1	8"	182'	1.02%
S-2	8"	40'	1.25%
S-3	8"	139'	0.86%
S-4	8"	45'	1.12%
S-5	8"	36'	1.11%

NOT FOR CONSTRUCTION

DANIELL RILEY PE 9967

STATE OF MAINE
DANIEL
RILEY
No. 9967
PROFESSIONAL ENGINEER
07/29/2022

REV.	BY:	DATE:	STATUS
C	DLR	07/29/2022	RESPONSE TO MDP REVIEW COMMENTS
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SCHEDULES
OF:
385 CONGRESS STREET
CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE
FOR:
385 CONGRESS STREET, LLC.
2730 TRANSIT ROAD
WEST SENECA, NY 14224

SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

DESIGNED	DJS
DRAWN	DAB
CHECKED	DLR
DATE	02/04/2022
SCALE	1" = 20'
PROJECT	19371

SHEET 6 OF12

19371U.dwg, TAB:Schedules

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PEARL STREET

CUMBERLAND AVENUE

CONGRESS STREET

MYRTLE STREET

LOT 1
HOTEL

LOT 2
CONDO A

LOT 3
CONDO B / CONDO C

(9) ST

(7) ST

(6) ST

(5) ST

(3) ST

(4) ST

LOW PLANTERS WITH FENCING (REMOVABLE IN WINTER, TYP.)

OUTDOOR SEATING, TYP.

GRANITE PAVERS, TYP.

BRICK

CURB HEIGHT PLANTER

LANDSCAPE LEGEND

- LARGE SHADE TREES
- STREET TREES
- ORNAMENTAL TREES
- LANDSCAPE PLANTING BEDS
- CITY SIDEWALK BRICK
- DRIVEWAY BRICK
- PRIVATE TERRACE
- COMMON PAVING AREAS
- BENCHES

PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	SIZE
SD	SPECIES TO BE DETERMINED	SHADE TREE	LARGE
ST	SPECIES TO BE DETERMINED	STREET TREE	MEDIUM
OR	SPECIES TO BE DETERMINED	ORNAMENTAL TREE	SMALL

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

NOT FOR CONSTRUCTION

DANIEL L. RILEY PE 9967
STATE OF MAINE
DANIEL
RILEY
No. 9967
REGISTERED
PROFESSIONAL ENGINEER
07/29/2022

REV.	BY	DATE	STATUS
A	DLR	02/25/2022	MASTER PLAN APPLICATION
B	DLR	07/21/2022	RESPONSE TO MDP REVIEW COMMENTS
C	DLR	07/29/2022	RESPONSE TO MDP REVIEW COMMENTS

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75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

LANDSCAPE PLAN - STREET LEVEL

OF:
385 CONGRESS STREET
CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE

FOR:
385 CONGRESS STREET, LLC.
2730 TRANSIT ROAD
WEST SENECA, NY 14224

DESIGNED	DJS
DRAWN	DAB
CHECKED	DLR
DATE	02/04/2022
SCALE	1" = 20'
PROJECT	19371

SHEET 7 OF12

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19371L.dwg, TAB:7 LANDSCAPE PLAN - STREET LEVEL

PEARL STREET

CUMBERLAND AVENUE

CONGRESS STREET

MYRTLE STREET

ELECTRIC ?

LOT 2
CONDOMINIUM

LOT 3
CONDOMINIUM

LOT 1
HOTEL

(5) OR

(8) OR

(1) SD

OUTDOOR DINING AREA

(3) OR

SCULPTURE

(1) OR

PRIVATE TERRACE

6 FT HIGH SCREEN FENCE, TYP.

STAIRS

(2) OR

FENCE

EVERGREEN SCREENING BETWEEN TERRACES

(3) SD

(4) OR

(1) SD

PLANTERS ON STAIRS , TYP.

BENCHES, TYP.

(12) OR

LANDSCAPE LEGEND

- LARGE SHADE TREES
- STREET TREES
- ORNAMENTAL TREES
- LANDSCAPE PLANTING BEDS
- CITY SIDEWALK BRICK
- DRIVEWAY BRICK
- COMMON PAVING AREAS
- BENCHES

PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	SIZE
SD	SPECIES TO BE DETERMINED	SHADE TREE	LARGE
ST	SPECIES TO BE DETERMINED	STREET TREE	MEDIUM
OR	SPECIES TO BE DETERMINED	ORNAMENTAL TREE	SMALL

TERRACE LEGEND

- COMMON TERRACE
- PUBLIC WALKWAY / TERRACE
- PRIVATE TERRACE

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

NOT FOR CONSTRUCTION

DANIEL L RILEY PE 9967

STATE OF MAINE
DANIEL
RILEY
No. 9967
REGISTERED
PROFESSIONAL ENGINEER
07/29/2022

REV	BY	DATE	STATUS
C	DLR	07/29/2022	RESPONSE TO MDP REVIEW COMMENTS
B	DLR	07/21/2022	RESPONSE TO MDP REVIEW COMMENTS
A	DLR	02/25/2022	MASTER PLAN APPLICATION

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WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

LANDSCAPE PLAN - LEVEL 2

OF:

385 CONGRESS STREET

CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE

FOR:

385 CONGRESS STREET, LLC.
2730 TRANSIT ROAD
WEST SENECA, NY 14224

DESIGNED	DJS
DRAWN	DAB
CHECKED	DLR
DATE	02/04/2022
SCALE	1" = 20'
PROJECT	19371

SHEET 8 OF12

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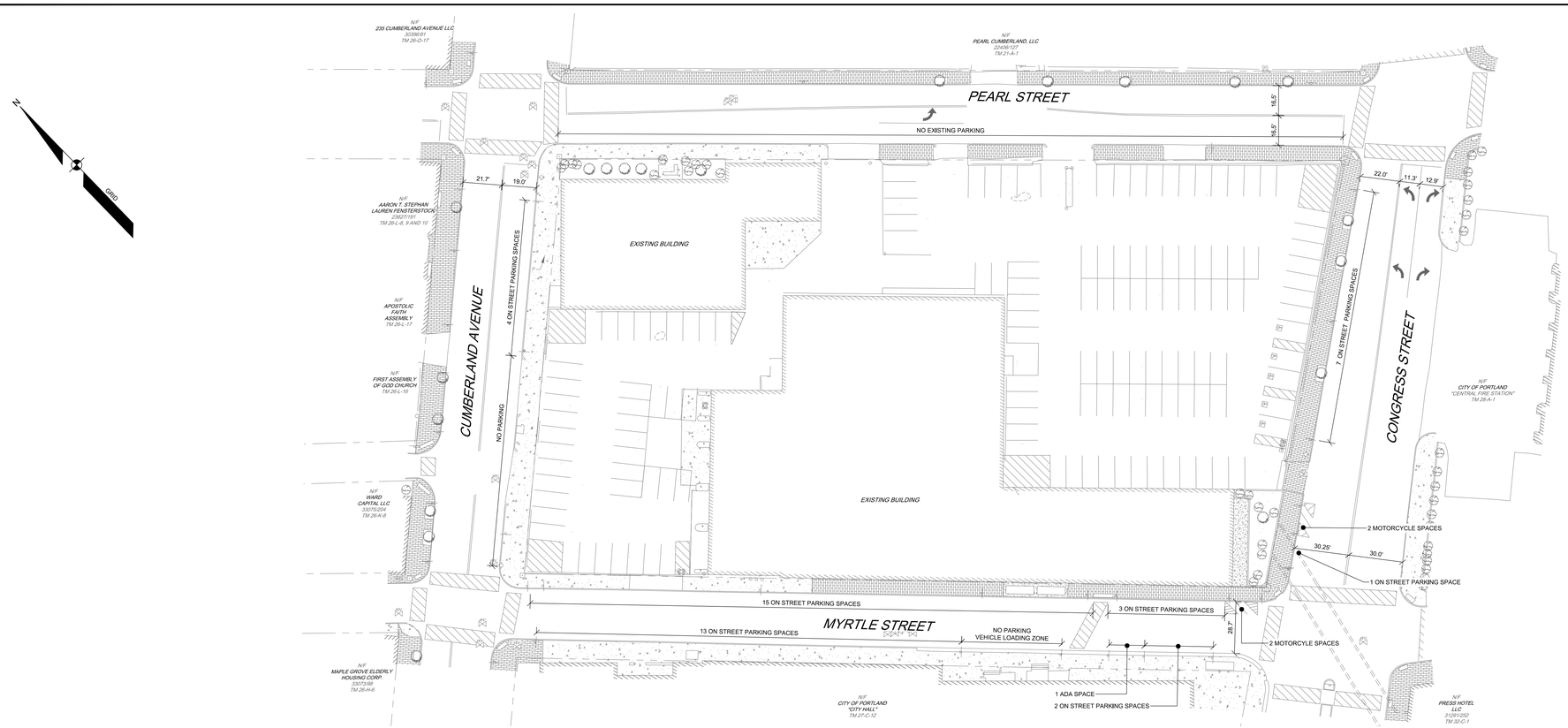
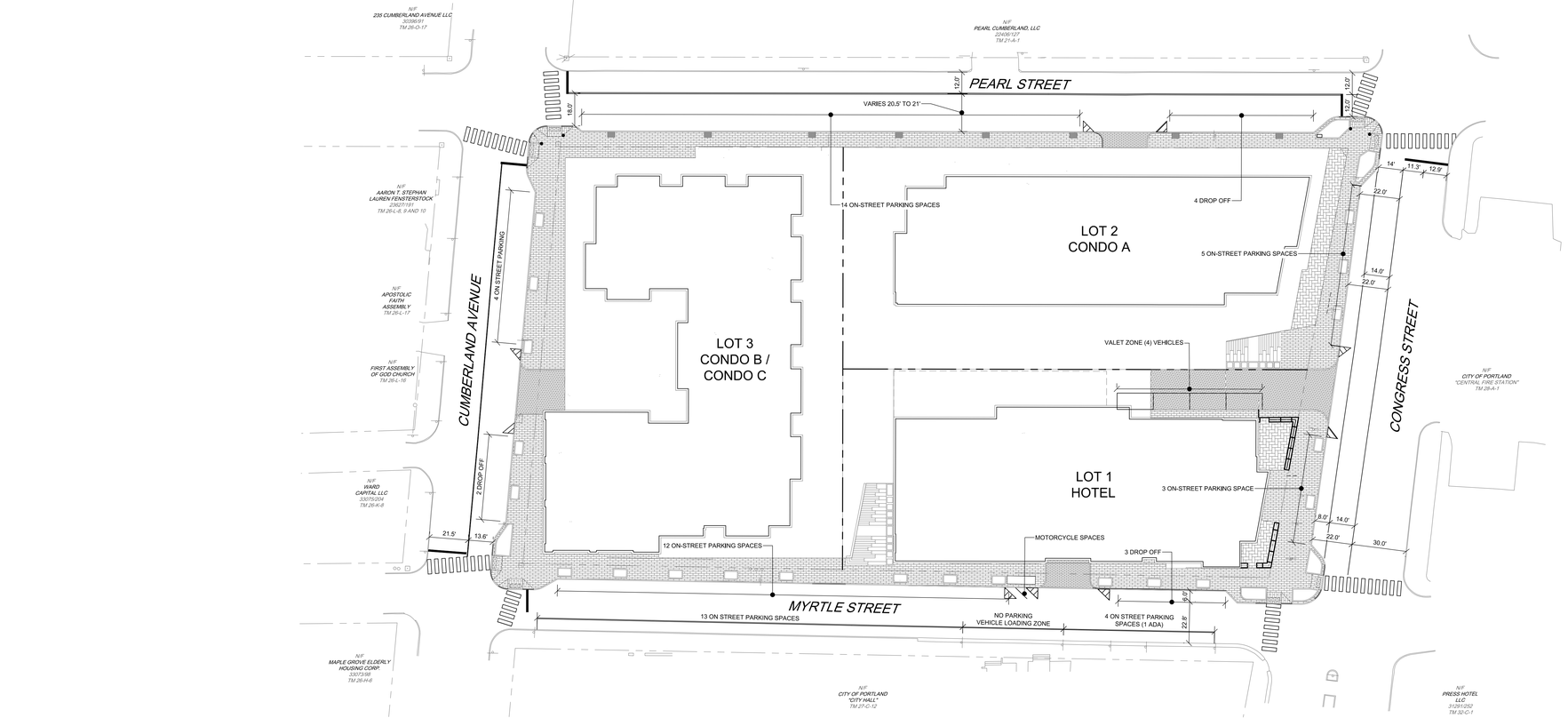
19371L-UL.dwg, TAB:20 SCALE



EXISTING OFF STREET PARKING

EXISTING ON STREET PARKING SUMMARY:

ON-STREET VEHICLE PARKING:	46
ON-STREET LOADING SPACES:	2+
TOTAL ON-STREET VEHICLE SPACES:	48
ON-STREET MOTORCYCLE PARKING:	4



PROPOSED OFF STREET PARKING

PROPOSED ON STREET PARKING SUMMARY:

ON-STREET VEHICLE PARKING:	55
ON-STREET LOADING SPACES:	9
TOTAL ON-STREET VEHICLE SPACES:	64
ON-STREET MOTORCYCLE PARKING:	2

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 INCH = 30 FT.

STATE OF MAINE
DANIEL L RILEY
No. 9957
REGISTERED PROFESSIONAL ENGINEER
07/29/2022

DANIEL L RILEY, PE 9957

PROGRESS PRINT

REV	BY:	DATE:	STATUS:
C	DLR	07/15/2022	RESPONSE TO MDP REVIEW COMMENTS
B	DLR	03/25/2022	DRAFT MASTER PLAN
A	SGD	01/14/2022	PRE-APPLICATION SKETCH

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WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel: 207-200-2100

ON STREET PARKING COMPARISON PLAN
OF:
385 CONGRESS STREET
CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE
FOR:
385 CONGRESS STREET, LLC.
2730 TRANSIT ROAD
WEST SENECA, NY 14224

DESIGNED	DJS
DRAWN	DAB
CHECKED	DLR
DATE	02/04/2022
SCALE	1" = 30'
PROJECT	19371

19371S-On Street Comparison Plan.dwg, TAB.S-OSCP

SHEET 9 OF 12

INTERIM ACCESS AND UTILITY EASEMENT

N/F
235 CUMBERLAND AVENUE LLC
30396/91
TM 26-O-17

N/F
PEARL CUMBERLAND, LLC
22408/127
TM 21-A-1

PEARL STREET

N/F
AARON T. STEPHAN
LAUREN FENSTERSTOCK
23627/191
TM 26-L-8, 9 AND 10

LOT 3
CONDO B
AND
CONDO C

LOT 2
CONDO A

N/F
APOSTOLIC
FAITH
ASSEMBLY
TM 26-L-17

CUMBERLAND AVENUE

N/F
FIRST ASSEMBLY
OF GOD CHURCH
TM 26-L-16

INTERIM ACCESS AND UTILITY EASEMENTS BENEFITING LOT 1 AND LOT 2 (CONDO A)

CONGRESS STREET

N/F
CITY OF PORTLAND
'CENTRAL FIRE STATION'
TM 28-A-1

LOT 1
HOTEL

N/F
WARD
CAPITAL LLC
33075/254
TM 26-K-8

MYRTLE STREET

N/F
MAPLE GROVE ELDERLY
HOUSING CORP.
3397/398
TM 26-H-6

N/F

GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1 INCH = 20 FT.

NOT FOR CONSTRUCTION

DANIEL L RILEY PE 9967

STATE OF MAINE
DANIEL
RILEY
No. 9967
REGISTERED
PROFESSIONAL ENGINEER
07/29/2022

REV.	BY:	DATE:	STATUS
C	DLR	07/29/2022	RESPONSE TO MDP REVIEW COMMENTS
B	DLR	07/21/2022	RESPONSE TO MDP REVIEW COMMENTS
A	DLR	02/25/2022	MASTER PLAN APPLICATION

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South Portland, ME 04106
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EASEMENT PLAN LEVEL 0 INTERIM

OF:
385 CONGRESS STREET
CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE

FOR:
385 CONGRESS STREET, LLC.
2730 TRANSIT ROAD
WEST SENECA, NY 14224

DESIGNED	DJS
DRAWN	DAB
CHECKED	DLR
DATE	02/04/2022
SCALE	1" = 20'
PROJECT	19371

SHEET10 OF12

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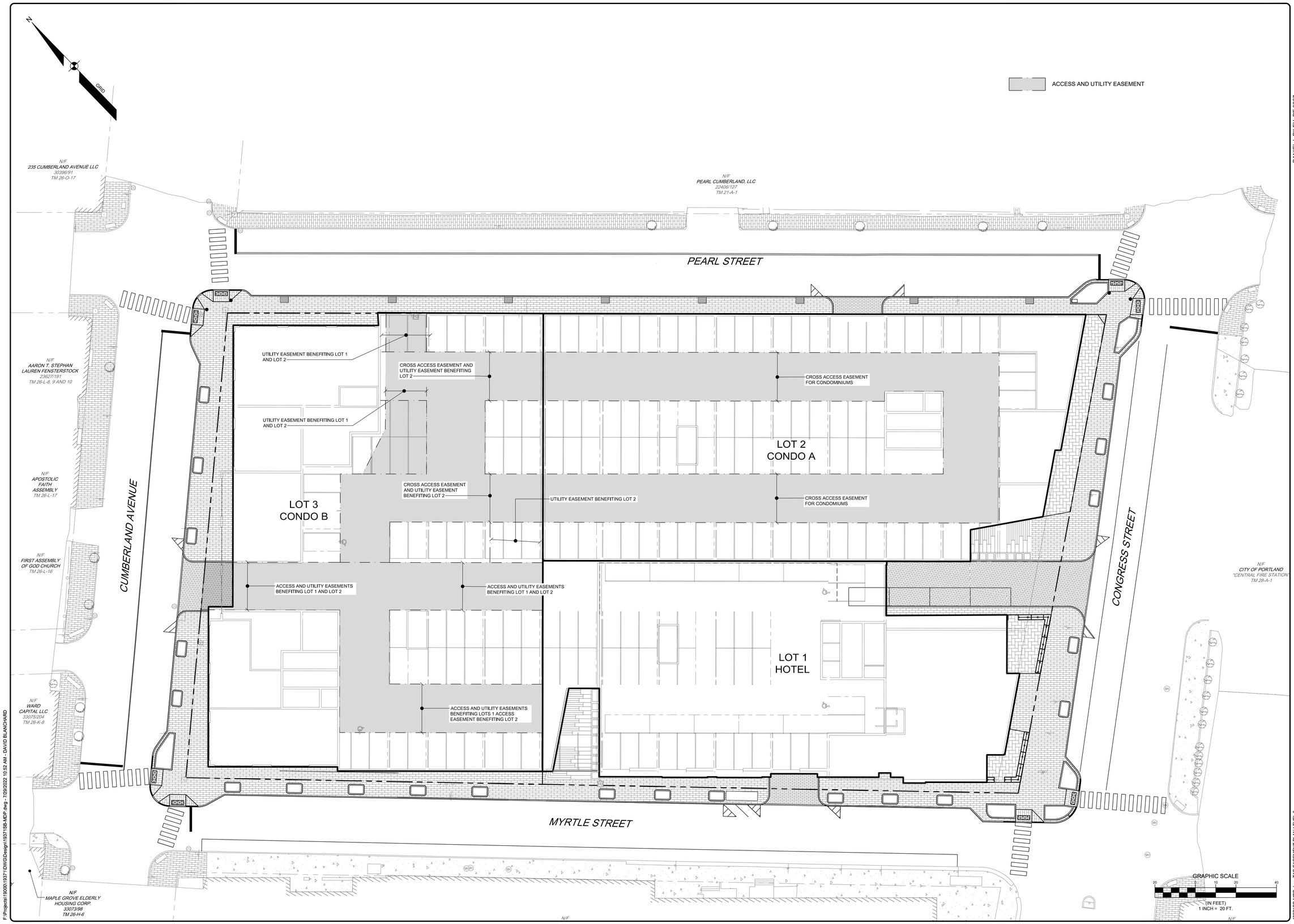
19371SB-MDP.dwg, TAB-EASEMENT PLAN LEVEL 0 INTERIM



NOT FOR CONSTRUCTION

DANIEL L RILEY, PE 9967

STATE OF MAINE
DANIEL L RILEY
No. 9967
PROFESSIONAL ENGINEER
07/29/2022

REV:	BY:	DATE:	STATUS:
C	DLR	07/29/2022	RESPONSE TO MDP REVIEW COMMENTS
B	DLR	07/21/2022	RESPONSE TO MDP REVIEW COMMENTS
A	DLR	03/25/2022	MASTER PLAN APPLICATION

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South Portland, ME 04106
Tel. 207-200-2100

EASEMENT PLAN LEVEL 0

OF:
385 CONGRESS STREET
CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE

FOR:
385 CONGRESS STREET, LLC.
2730 TRANSIT ROAD
WEST SENECA, NY 14224

DESIGNED	DJS
DRAWN	DAB
CHECKED	DLR
DATE	02/04/2022
SCALE	1" = 20'
PROJECT	19371

SHEET11 OF12

19371SB-MDP.dwg, TAB:EASEMENT PLAN LEVEL 0

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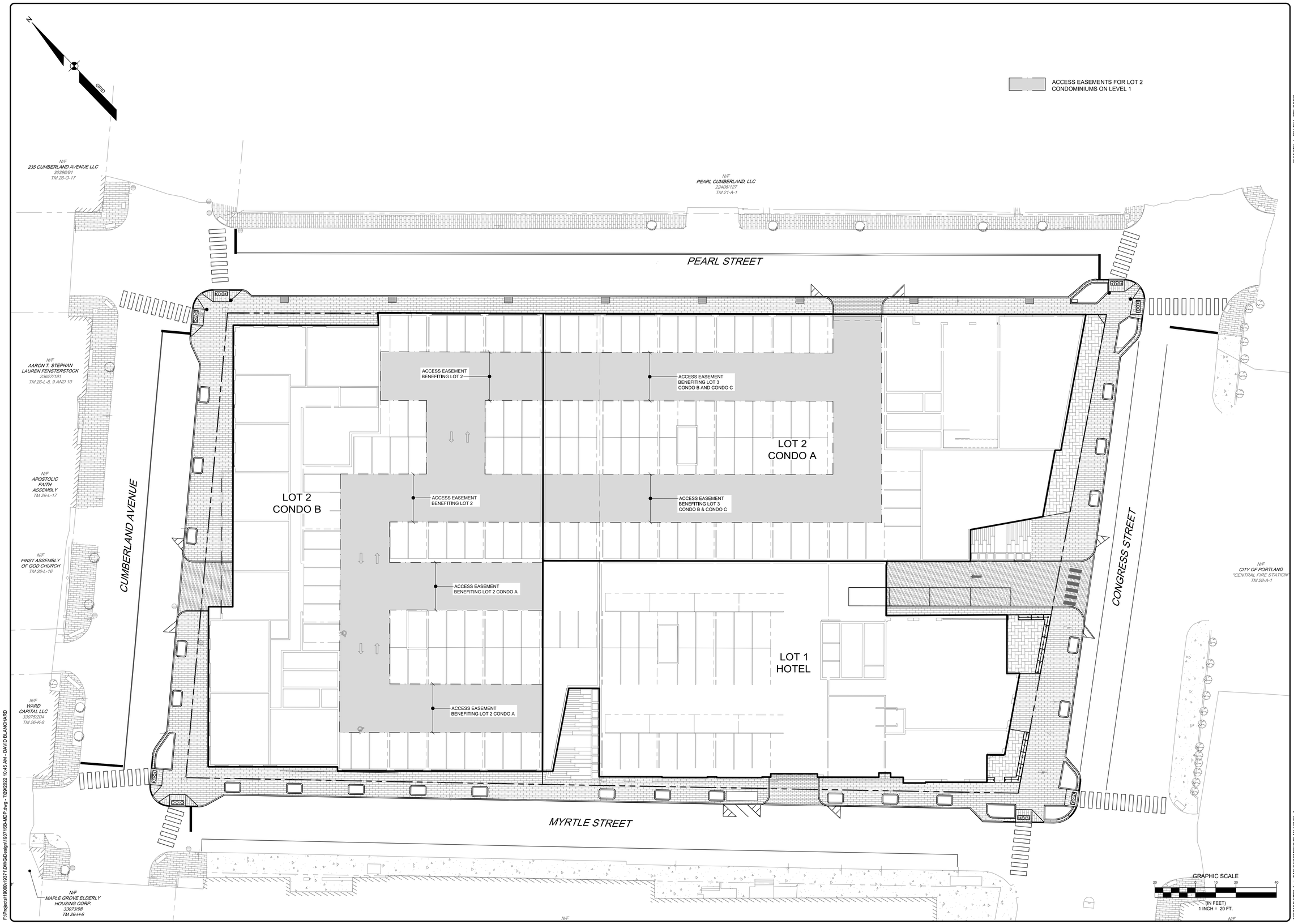

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NOT FOR CONSTRUCTION

DANIEL L RILEY PE 9967

STATE OF MAINE
DANIEL L RILEY
No. 9967
REGISTERED PROFESSIONAL ENGINEER
07/29/2022

REV	BY	DATE	STATUS
C	DLR	07/29/2022	RESPONSE TO MDP REVIEW COMMENTS
B	DLR	07/21/2022	RESPONSE TO MDP REVIEW COMMENTS
A	DLR	02/25/2022	MASTER PLAN APPLICATION

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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite A
South Portland, ME 04106
Tel. 207-200-2100

EASEMENT PLAN LEVEL 1

OF:

385 CONGRESS STREET

CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE

FOR:

385 CONGRESS STREET, LLC.

2730 TRANSIT ROAD
WEST SENECA, NY 14224

DESIGNED	DJS
DRAWN	DAB
CHECKED	DLR
DATE	02/04/2022
SCALE	1" = 20'
PROJECT	19371

SHEET12 OF12

19371SB-MDP dwg, TAB:EASEMENT PLAN LEVEL 1

GENERAL NOTES:

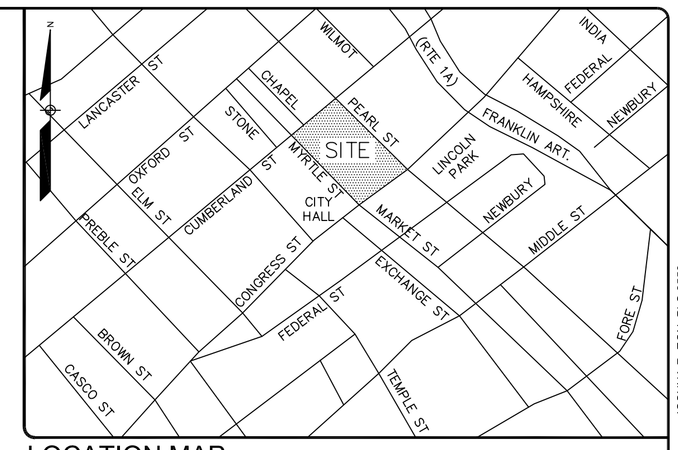
1. THE RECORD OWNER OF THE PARCEL IS 385 CONGRESS LLC BY DEED DATED OCTOBER 20, 2017 AND RECORDED AT THE CUMBERLAND COUNTY REGISTRY OF DEEDS (CCRD) IN BOOK 34401, PAGE 214.
2. THE PROPERTY IS SHOWN AS LOT 1 ON THE CITY OF PORTLAND TAX MAP 27 AND IS LOCATED IN THE B3 DOWNTOWN BUSINESS DISTRICT.
3. SPACE AND BULK CRITERIA FOR THE B3 DISTRICT ARE AS FOLLOWS:

MINIMUM LOT SIZE:	N/A
MINIMUM STREET FRONTAGE:	15 FEET
MINIMUM FRONT YARD:	N/A
MINIMUM SIDE YARD:	N/A
MINIMUM REAR YARD:	N/A
MAXIMUM BUILDING HEIGHT:	150 FEET
MAXIMUM LOT COVERAGE:	100%

* SEE ORDINANCE FOR MORE PARTICULAR INFORMATION.

4. TOTAL AREA OF PARCEL IS APPROXIMATELY 2.26 ACRES.
5. THE BOUNDARY IS BASED ON PLAN REFERENCE 6F. TOPOGRAPHIC INFORMATION SHOWN HEREON. SEBAGO TECHNICS INC. UPDATED RECORDS RESEARCH FROM 2009 TO DATE REGARDING THE BOUNDARY INFORMATION.
6. IS BASED UPON FIELD WORK PERFORMED BY SEBAGO TECHNICS, INC. OCTOBER , 2019.
7. PLAN REFERENCES:
   - A. PLAN OF CITY BUILDING LOT, PORTLAND, ME, DATED AUGUST 1908 BY THE CITY OF PORTLAND ENGINEER, AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 159/5.
   - B. PORTLAND DEPARTMENT OF PUBLIC WORKS STREET WORKSHEETS AND BLUESHEETS FOR STREETS BOUNDING THE LOCUS PARCEL AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 159/5.
   - C. PLAN OF PROPERTY IN PORTLAND, ME. MADE FOR GUY GANNETT PUBLISHING CO. BY H.I. & E.C. JORDAN - SURVEYORS, DATED JULY 1964 AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 663/2.
   - D. NEW MECHANICAL BUILDING, GUY GANNETT PUBLISHING COMPANY, PORTLAND, ME, TUNNEL PLAN AND SECTIONS BY LOCKWOOD, GREENE ENGINEERS, INC, REVISED THROUGH MAY 12, 1965 AND ON FILE WITH THE PORTLAND DEPARTMENT OF PUBLIC WORKS AS 203/2.
   - E. PLAN OF PROPERTY IN PORTLAND, ME. MADE FOR GUY GANNETT PUBLISHING PUBLISHING CO. BY H.I. & E.C. JORDAN - SURVEYORS, REVISED THROUGH FEBRUARY 6, 1973 AND ON FILE WITH OWEN HASKELL INC.
   - F. ALTA/ACSM LAND TITLE SURVEY OF CONGRESS STREET SITE, 385 CONGRESS STREET, PORTLAND, ME DATED JULY 1, 2009 BY SEBAGO TECHNICS INC, PROJECT NUMBER 09235.
8. PLAN ORIENTATION IS GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE 1802-NAD83, ELEVATIONS DEPICTED HEREON ARE NGVD29 PER CITY STANDARDS AS VERIFIED BY A UNITED STATES COAST & GEODETIC SURVEY BRASS DISK LOCATED IN A GRANITE BLOCK OF THE CITY HALL BUILDING HAVING A PUBLISHED ELEVATION OF 69.66' (NAVD88 68.95')
9. THE CITY OF PORTLAND DISCONTINUED THAT PORTION OF CHAPEL STREET ''RUNNING FROM CONGRESS STREET TO CUMBERLAND STREET'' BY ORDER OF CITY COUNCIL ON FEBRUARY 5, 1973 AND RECORDED AT THE CITY OF PORTLAND RECORDS IN VOLUME 89, PAGE 61, PUBLIC AND PRIVATE RIGHTS MAY EXIST FOR PUBLIC HIGHWAY AND UTILITIES THAT STILL LIE WITHIN THE LIMITS OF CHAPEL STREET. SEBAGO TECHNICS, INC. SUGGEST LEGAL COUNSEL BE SOUGHT TO CLARIFY THE INTEREST OF OTHERS IN THESE RIGHTS.
10. PURSUANT TO A CONVERSATION BETWEEN SEBAGO TECHNICS, INC. AND THE PORTLAND WATER DISTRICT, THE WATER LINE SHOWN AS BEING LOCATED IN THE DISCONTINUED PORTION OF CHAPEL STREET HAS BEEN REMOVED AND NO LONGER EXISTS.
11. UTILITY INFORMATION DEPICTED HEREON, UNLESS OTHERWISE NOTED, IS OF QUALITY LEVEL D PER AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD CI/ASCE 38-02. UTILITIES DEPICTED HEREON MAY NOT NECESSARILY REPRESENT ALL EXISTING UTILITIES. CONTRACTORS AND/OR DESIGNERS NEED TO CONTACT DIG-SAFE SYSTEMS, INC. (1-888-DIG-SAFE) AND FIELD VERIFY EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION AND/OR EXCAVATION.
12. THE LOCUS PROPERTY AS DEPICTED HEREON DOES NOT FALL WITHIN A SPECIAL FLOOD HAZARD AREA AS DELINEATED ON THE FLOOD INSURANCE RATE MAP FOR PORTLAND, MAINE, CUMBERLAND COUNTY, COMMUNITY-PANEL NUMBER 230051 0013 B, HAVING AN EFFECTIVE DATE OF JULY 17 1986. THE LOCUS FALLS WITHIN AN AREA IDENTIFIED AS ZONE C, AREAS OF AREAS OF MINIMAL FLOODING.
13. BENCHMARK:

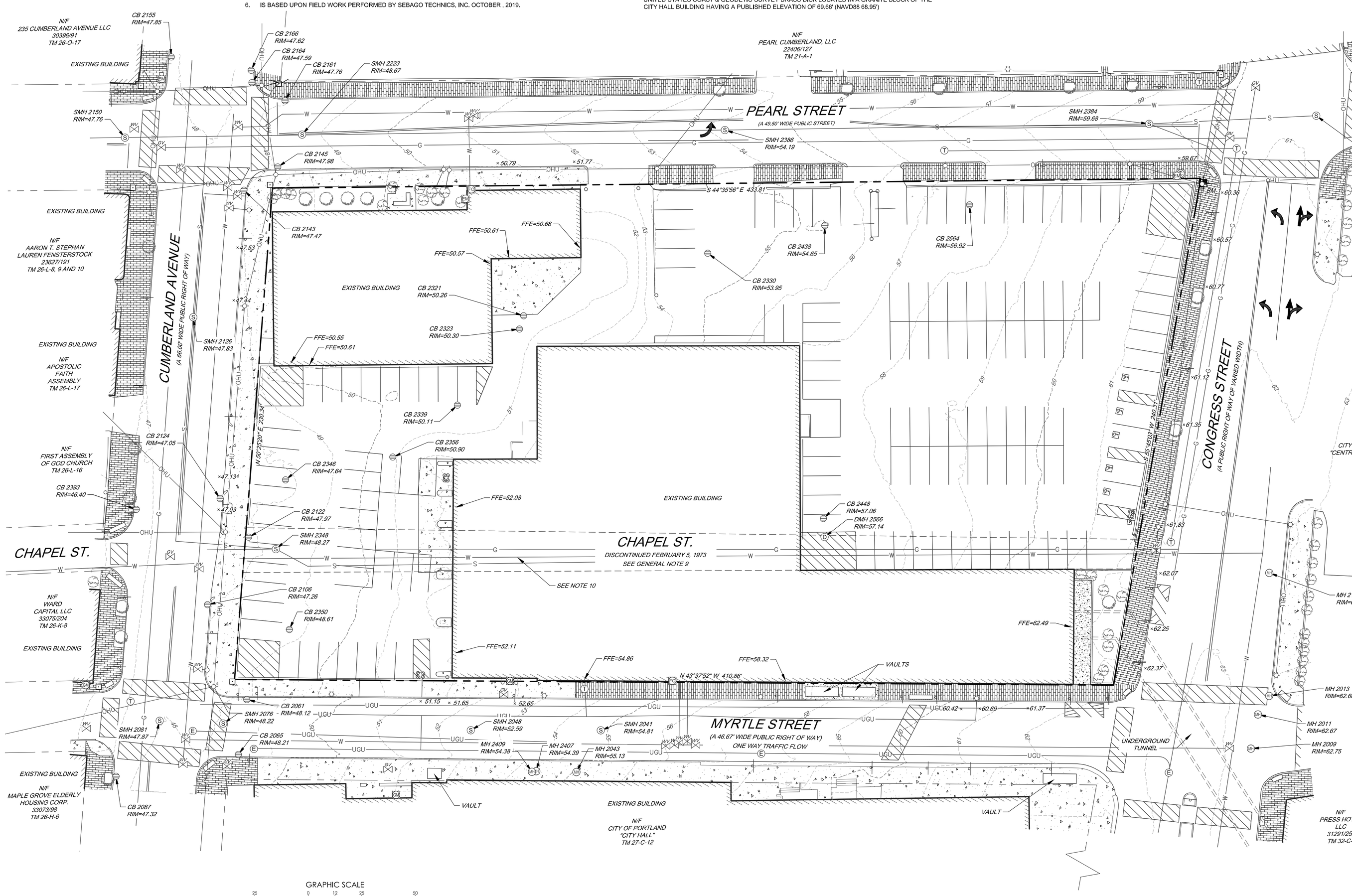
    BM-1 EASTERLY BOLT AT BASE OF UTILITY POLE ELEVATION: 61.55 (NGVD29)



LOCATION MAP N.T.S.

JOSHUA R. EON, PLS 2558

STATE OF MAINE — JOSHUA R. EON 2558 — PROFESSIONAL LAND SURVEYOR



LEGEND

EXISTING

- PROPERTY LINE/R.O.W.
- ABUTTER LINE/R.O.W.
- DEED LINE/R.O.W.
- N/F NOW OR FORMERLY
- BUILDING
- DECK/STEPS/ OVERHANG
- EDGE PAVEMENT
- EDGE CONCRETE
- PAVEMENT PAINT
- CURB LINE
- 120 118 CONTOURS
- DECIDUOUS TREE
- SHRUB
- BOLLARD
- SIGN
- G GAS
- GAS GATE VALVE
- GAS METER
- W WATER
- WATER GATE VALVE
- HYDRANT
- S SANITARY SEWER
- SANITARY MANHOLE
- UNKNOWN MANHOLE
- D DRAINAGE MANHOLE
- CATCH BASIN
- OHU OVERHEAD UTILITY
- UGU UNDERGROUND UTILITY
- E ELECTRICAL MANHOLE
- ELECTRIC METER
- COMMUNICATIONS BOX
- T TELEPHONE MANHOLE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- BM-1 BENCHMARK
- FIRE DEPARTMENT HOOKUP
- GRANITE MONUMENT

GRAPHIC SCALE

25 0 12 25 50

(IN FEET)
1 INCH = 25 FT.

PROJECT BENCHMARK
USC&G BRASS DISK SET IN GRANITE STEP.
DESIGNATION: TIDAL 38 STA 84
STAMPED ''1919/38''
NAVD 88 ELEVATION = 68.95'
NGVD29 ELEVATION = 69.66'

SURVEYOR'S STATEMENT

THIS SURVEY WAS PERFORMED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF, IT WAS DONE IN ACCORDANCE WITH CHAPTER 90, PART 1 (PROFESSIONAL STANDARDS OF PRACTICE) AND PART 2 (TECHNICAL STANDARDS OF PRACTICE) OF THE MAINE BOARD OF LICENSURE FOR PROFESSIONAL LAND SURVEYORS.

JOSHUA R. EON, PLS 2558 12/16/2019

REV:	BY:	DATE:	STATUS:
A.	JRE	12/16/2019	ISSUED TO CLIENT FOR REVIEW
B.	JRE	1/09/2020	CORRECTED SPACE AND BULK CRITERIA PER PM REQUEST
C.	JRE	1/20/2020	MINOR DRAFTING REVISIONS PER PM REQUEST
D.	JRE	2/7/2020	MINOR DRAFTING REVISIONS PER PM REQUEST, ADDED NOTE 9
E.	JRE	2/10/2020	ADDED NOTE 10
F.	JRE	2/20/2020	ADDED STRUCTURE INFO AND MINOR DRAFTING REVISIONS

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SEBAGO TECHNICS
WWW.SEBAGOTECHNICS.COM
75 John Roberts Rd.
Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

EXISTING CONDITIONS PLAN
OF:
CONGRESS / PEARL BLOCK
CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE 04101
FOR RECORD OWNER:
385 CONGRESS STREET, LLC.
2730 TRANSIT ROAD
WEST SENECA, NY 14224

DESIGNED	-
DRAWN	RHS/TSL
CHECKED	JRE/CDM
DATE	12/16/19
SCALE	1" = 25'
PROJECT	19371

SHEET 1 OF 2

19371EC-dwg_TABEC1

STRUCTURE TABLE

POINT #	STRUCTURE TYPE	RIM EL.	INV.	INV. EL.	SIZE	TYPE	LOCATION (N=12)	COMMENTS
2041	SMH	54.78	IN	49.43	12	VIT CLAY	3	
			IN	49.49	4	VIT CLAY	6	
			IN	46.39	10	VIT CLAY	4	
			IN	45.56	UNK	UNK	5	FULL OF SEDIMENT
			OUT	45.34	UNK	UNK	11	FULL OF SEDIMENT
			SHELF	45.81				
2048	SMH	52.54	IN	43.04	18	VIT CLAY	5	
			IN	35.36	UNK	UNK	5	
			IN	36.34	10	PVC	3	
			IN	36.39	UNK	STEEL	4	TOP OF PIPE
2061	CBR	48.09	OUT	44.12	8	PVC	7	HOOD
			SUMP	42.12				
2065	CBR	48.25	IN	44.81	8	VIT CLAY	8	
			OUT	44.71	8	UNK	2	
			SUMP	40.71				
2076	SMH	48.19	IN	41.31	12	VIT CLAY	4	
			IN	40.94	8	VIT CLAY	8	
			IN	48.22	0	NONE	NONE	2 INVERTS & SHELF FURTHER THAN 25'
2081	SMH	47.90	IN	38.77	18	VIT CLAY	4	
			IN	24.67	18	VIT CLAY	4	
			OUT	24.67	18	VIT CLAY	10	
			SHELF	25.77				
2106	CBR	47.27	OUT	43.46	UNK	UNK	10	HOOD
			SUMP	40.26				
2124	CBR	47.00	IN	44.75	12	VIT CLAY	6	
			OUT	47.05	0	NONE	NONE	NO OUT VISIBLE
			SUMP	40.05				
2126	SMH	47.80	IN	39.41	12	VIT CLAY	8	
			OUT	39.32	12	VIT CLAY	2	
			SHELF	40.03				
2143	CBR	47.40	OUT	45.27	10	VIT CLAY	3	
			SUMP	45.17				
2145	CBR	47.95	IN	44.48	8	VIT CLAY	9	
			OUT	43.78	12	VIT CLAY	12	
			SUMP	42.98				
2150	MH	47.77	IN	37.46	18	VIT CLAY	4	
			OUT	37.21	18	VIT CLAY	10	
			SHELF	38.11				
2161	CBR	47.77	OUT	43.36	12	UNK	8	
			SUMP	40.76				
2164	CBR	47.54	IN	44.26	8	VIT CLAY	4	
			IN	44.19	8	VIT CLAY	2	
			OUT	43.49	12	UNK	9	
			SUMP	40.09				
2166	CBR	47.59	OUT	44.42	8	VIT CLAY	8	
			SUMP	44.02				
2223	SMH	48.67	IN	39.72	15	VIT CLAY	4	
			OUT	39.62	15	VIT CLAY	10	
			SHELF	40.77				
2386	SMH	54.12	IN	44.67	15	VIT CLAY	4	
			OUT	44.62	15	VIT CLAY	10	
			SHELF	45.69				

JOSHUA R. EON, PLS 2558

STATE OF MAINE
JOSHUA R. EON
2558
PROFESSIONAL LAND SURVEYOR

REV.	BY:	DATE:	STATUS:
E.	JRE	2/10/2020	ADDED NOTE 10
D.	JRE	2/7/2020	MINOR DRAFTING REVISIONS PER PM REQUEST, ADDED NOTE 9
C.	JRE	1/20/2020	MINOR DRAFTING REVISIONS PER PM REQUEST
B.	JRE	1/08/2020	CORRECTED SPACE AND BULK CRITERIA PER PM REQUEST
A.	JRE	12/16/2019	ISSUED TO CLIENT FOR REVIEW

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Suite 4A
South Portland, ME 04106
Tel. 207-200-2100

STRUCTURE TABLE
OF:
CONGRESS / PEARL BLOCK
CONGRESS STREET AND PEARL STREET
PORTLAND, MAINE 04101
FOR RECORD OWNER:
385 CONGRESS STREET, LLC.
2730 TRANSIT ROAD
WEST SENECA, NY 14224

DESIGNED	-
DRAWN	RHS/TSL
CHECKED	JRE/CDM
DATE	12/16/19
SCALE	1" = 25'
PROJECT	19371

SHEET 2 OF 2

19371EC.dwg, TAB:EC2

PEARL ST.

PHASE 3 (CONDO B)

PHASE 3 (CONDO A)

71' - 4"

RETAIL

RETAIL

RETAIL

MECHANICAL

PARKING

PARKING

ELECTRICAL

TELECOMM

FIRE PUMP

ELEVATOR MACHINE

STORAGE

CONGRESS ST.

CUMBERLAND AVE.

182' - 0"

4.02%

20' - 9"

PHASE 2 (CONDO A)

PHASE 1 (HOTEL)

MECHANICAL

PARKING

TRASH

MECHANICAL

CONDO DROP-OFF / LOADING

LOBBY/ AMENITIES

77' - 8"

RETAIL

BOH

63' - 8"

PHASE 3 (CONDO B)

PHASE 1 (HOTEL)

MYRTLE ST.

8/1/2022 10:18:54 AM

cbt

LEVEL 0 - PLAN

PORTLAND - 385 CONGRESS STREET

8/9/22 1" = 20'-0"

0' 10' 20' 40'

N

PEARL ST.

PHASE 3 (CONDO B)

PHASE 3 (CONDO A)

CUMBERLAND AVE.

CONGRESS ST.

MYRTLE ST.

PHASE 2 (CONDO A)

PHASE 1 (HOTEL)

PHASE 3 (CONDO B)

PHASE 1 (HOTEL)

2BR

2BR

1BR

1BR

1BR

1BR

0BR

2BR

BOH

3BR

2BR

STORAGE

PARKING

PARKING

LOADING/TRASH

PACKAGE ROOM

LOBBY

FIRE COMMAND

RETAIL

RETAIL

STORAGE

PARKING

PARKING

ELEVATOR LOBBY

LOBBY/ AMENITIES

LOADING/TRASH

RETAIL

15.79%

LEVEL 1 - PLAN

PORTLAND - 385 CONGRESS STREET

8/9/22 1" = 20'-0"

cbt

0' 10' 20' 40'

N

8/1/2022 10:18:14 AM



8/1/2022 10:18:37 AM

cbt

LEVEL 2 - PLAN

PORTLAND - 385 CONGRESS STREET

8/9/22 1" = 20'-0"

0' 10' 20' 40'

N



8/1/2022 10:18:39 AM

cbt

LEVEL 3-8 - PLAN

PORTLAND - 385 CONGRESS STREET

8/9/22 1" = 20'-0"

0' 10' 20' 40'

N



8/1/2022 10:18:39 AM

cbt

LEVEL 9-10 - PLAN

PORTLAND - 385 CONGRESS STREET

8/9/22 1" = 20'-0"

0' 10' 20' 40'

N

PEARL ST.

PHASE 4 (CONDO C) | PHASE 2 (CONDO A)

CUMBERLAND AVE.

CONGRESS ST.

ROOFTOP BELOW

LOT 3 AREA ABOVE 125'
INTERIOR FLOOR AREA = 9,800 SF
LOT COVERAGE = 10,400 SF

NO BUILD ZONE

NO BUILD ZONE

PHASE 4 (CONDO C) | PHASE 2 (CONDO A)

PHASE 3 (CONDO B) | PHASE 1 (HOTEL)

PHASE 3 (CONDO B) | PHASE 1 (HOTEL)

MYRTLE ST.

8/1/2022 10:18:44 AM

cbt

LEVEL 11 (L10 HOTEL) - PLAN

PORTLAND - 385 CONGRESS STREET
8/9/22 1" = 20'-0"

0' 10' 20' 40'

N

PEARL ST.

PHASE 4 (CONDO C) | PHASE 2 (CONDO A)

LOT 2 AREA ABOVE 125'
INTERIOR FLOOR AREA = 10,500 SF
LOT COVERAGE = 10,500 SF
**BALCONIES ARE BELOW 125' SEE BUILDING SECTIONS*

CUMBERLAND AVE.

CONGRESS ST.

NO BUILD ZONE

PRIVATE TERRACE

3BR

2BR

3BR

PRIVATE TERRACE

2BR

3BR

2BR

PRIVATE TERRACE

60' - 0"

69' - 4"

LOT 3 AREA ABOVE 125'
INTERIOR FLOOR AREA = 8,900 SF
LOT COVERAGE = 10,000 SF

PHASE 4 (CONDO C) | PHASE 2 (CONDO A)

PHASE 3 (CONDO B) | PHASE 1 (HOTEL)

NO BUILD ZONE

85' - 0"

74' - 2"

1BR

1BR

2BR

1BR

2BR

3BR

2BR

2BR

MECHANICAL

2BR

3BR

3BR

3BR

57' - 9"

LOT 1 AREA ABOVE 125'
INTERIOR FLOOR AREA = 7,665 SF (EXCLUDES MECH.)
LOT COVERAGE = 10,500 SF
**BALCONIES ARE BELOW 125' SEE BUILDING SECTIONS*

PHASE 3 (CONDO B) | PHASE 1 (HOTEL)

MYRTLE ST.

8/1/2022 10:18:45 AM

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LEVEL 12 (L11 HOTEL) - PLAN

PORTLAND - 385 CONGRESS STREET
8/9/22 1" = 20'-0"

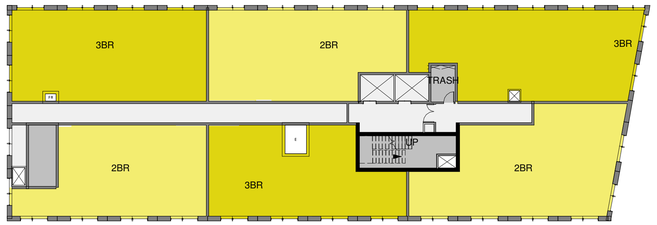
0' 10' 20' 40'

N

PEARL ST.

PHASE 4 (CONDO C) | PHASE 2 (CONDO A)

LOT 2 AREA ABOVE 125'
INTERIOR FLOOR AREA = 10,500 SF
LOT COVERAGE = 10,500 SF



CUMBERLAND AVE.

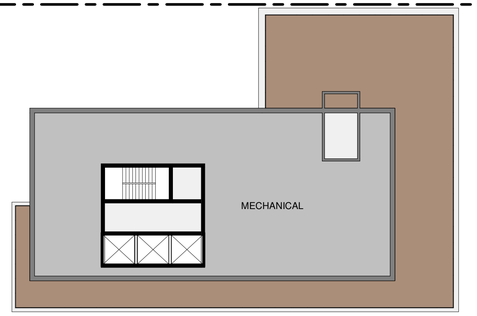
CONGRESS ST.

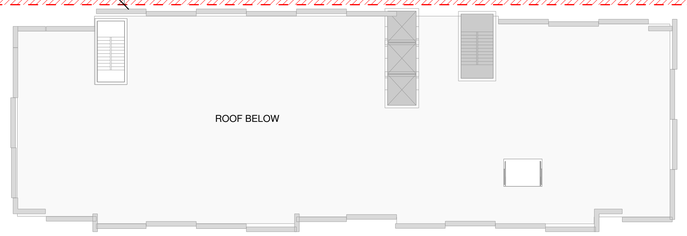
NO BUILD ZONE

NO BUILD ZONE

PHASE 4 (CONDO C) | PHASE 2 (CONDO A)

PHASE 3 (CONDO B) | PHASE 1 (HOTEL)





PHASE 3 (CONDO B) | PHASE 1 (HOTEL)

MYRTLE ST.

8/1/2022 10:18:46 AM

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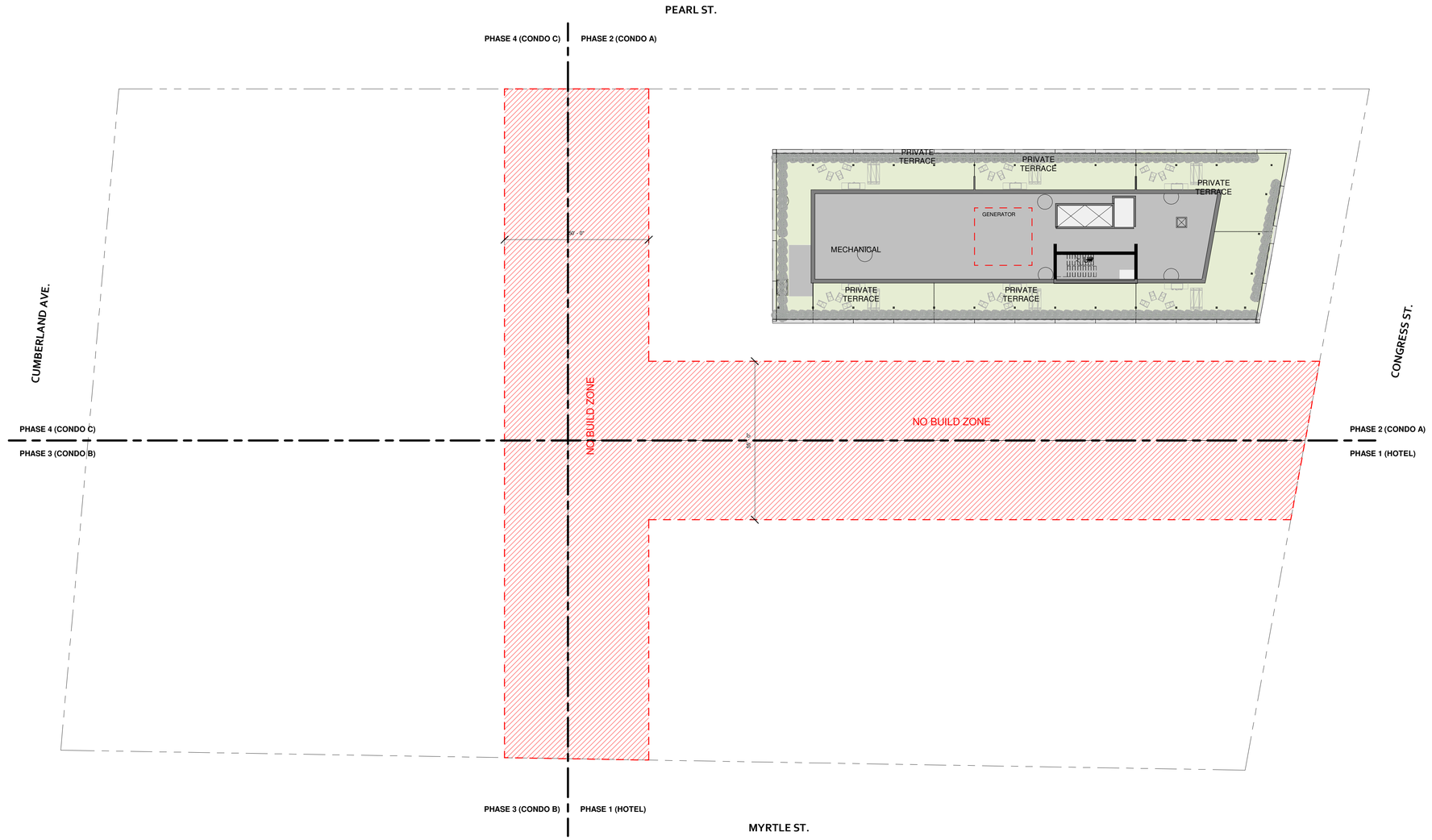
LEVEL 13 (L12 HOTEL) - PLAN

PORTLAND - 385 CONGRESS STREET

8/9/22 1" = 20'-0"

0' 10' 20' 40'

N



8/1/2022 10:18:51 AM

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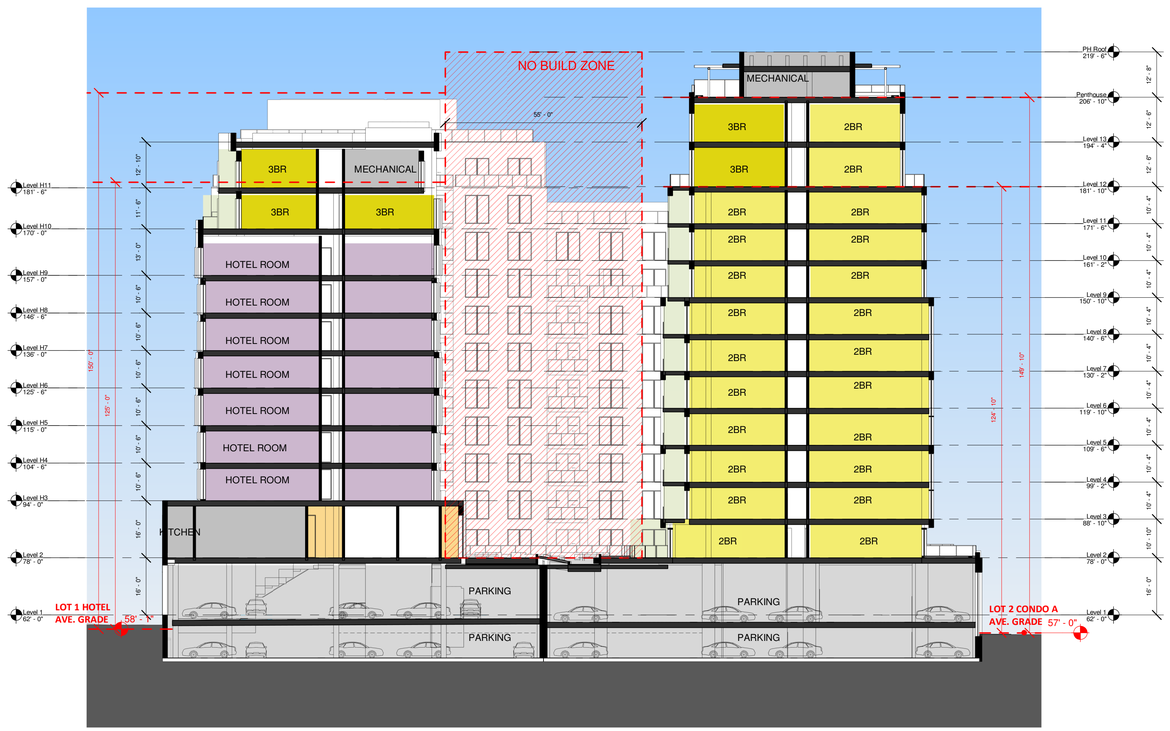
PENTHOUSE - PLAN

PORTLAND - 385 CONGRESS STREET

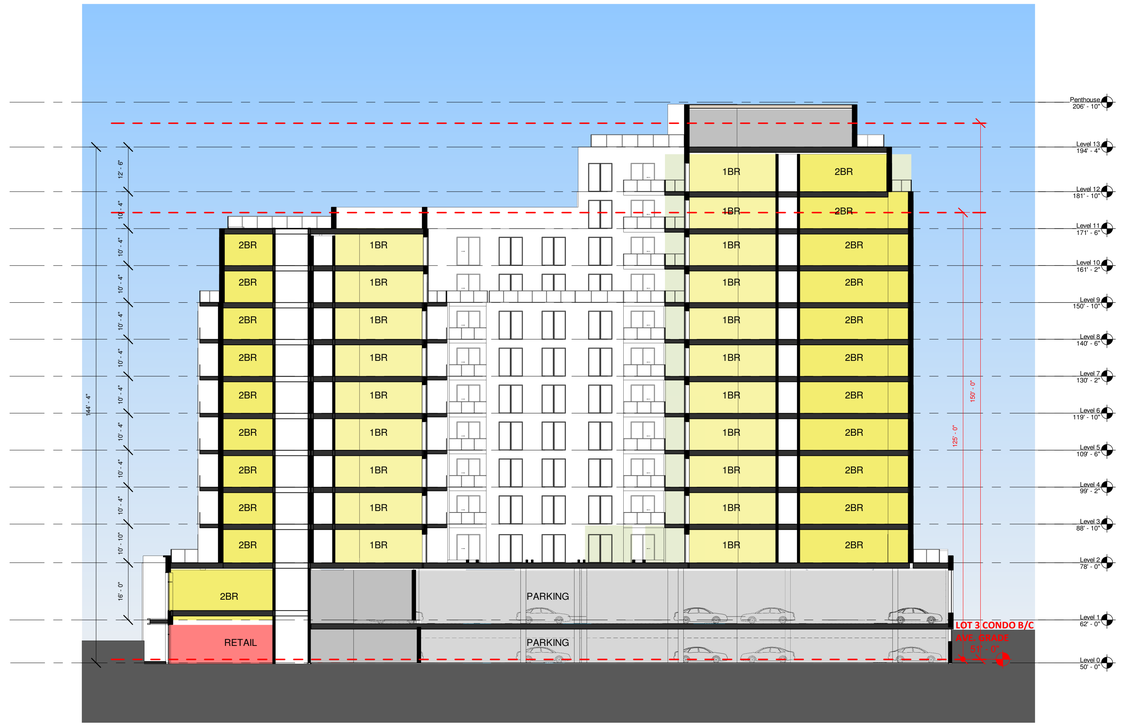
8/9/22 1" = 20'-0"

0' 10' 20' 40'

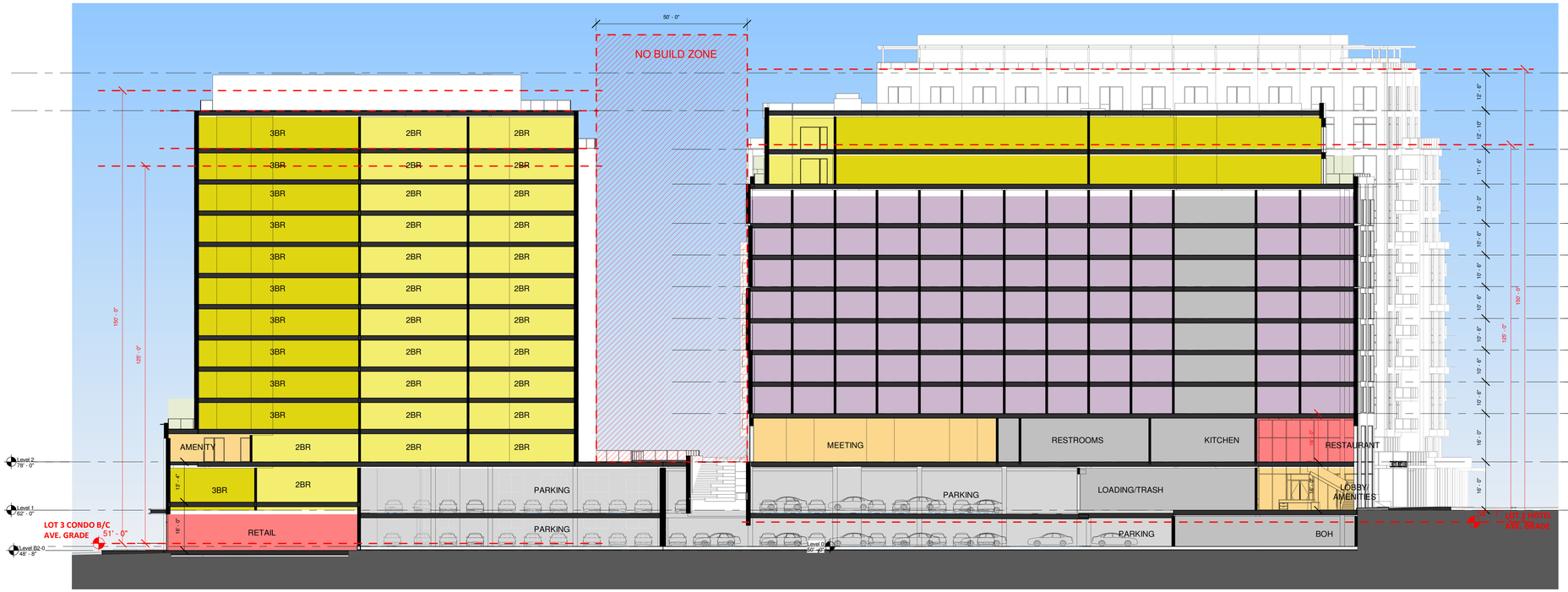
N



2 BUILDING SECTION - N/S
1" = 20'-0"



1 CONDO - NORTH/SOUTH
1" = 20'-0"



3 BUILDING SECTION - EAST-WEST
1" = 20'-0"

8/1/2022 10:19:02 AM

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BUILDING SECTIONS

PORTLAND - 385 CONGRESS STREET

8/9/22 1" = 20'-0"

0' 10' 20' 40'

VIEW FROM CONGRESS & MYRTLE

THE PROPOSED HOTEL AT THE CORNER OF CONGRESS AND MYRTLE STREETS IS AN 11-STORY BUILDING. THE BUILDING MASSING COMMENCES AT GRADE WITH A 1 TO 2-STORY PODIUM THAT HOLDS THE STREET EDGE ALONG MYRTLE AND CONGRESS, PROVIDING AN ARCHITECTURAL NOD TO IT'S CONTEXT OF THE ADJACENT CITY HALL, AND ANCHORING THE STRUCTURE WITH MORE TRADITIONAL MATERIALITY AND PROPORTIONS. THE GROUND LEVEL IS COMPRISED OF THE HOTEL LOBBY AND THE VALET DROP-OFF. THE TRANSPARENT FAÇADE WILL PROVIDE EYES ON THE STREET AND PEDESTRIAN ACCESS POINTS INTO THE LOBBY. LEVEL 2 WILL HOST THE FITNESS CENTER, RESTAURANT SPACE AND CONFERENCE ROOMS WHICH ALL HAVE ACCESS OUT TO THE SHARED ROOF DECK ABOVE THE GARAGE. THE NEXT 7 LEVELS WILL COMPRISE THE HOTEL ROOMS. ABOVE THAT, THE MASS STEPS BACK SLIGHTLY TO PROVIDE BALCONY SPACE FOR RESIDENTIAL CONDOS.



AERIAL VIEW



GROUND VIEW

*SEE SUBSEQUENT INDIVIDUAL SITE PLAN APPLICATIONS FOR DETAILS ON FENESTRATION, MATERIALS, AND COLOR

cbt

VIEW FROM CONGRESS & PEARL

OUR GOAL FOR THE CONDO BUILDING ON THE CORNER OF PEARL AND CONGRESS IS TO CREATE A CONTEXTUAL, YET CONTEMPORARY EXTENSION OF THE CONGRESS STREET ARTERY. BY USING THE ZONING ENVELOPE TO DEFINE THE MAJOR MASSING MOVES, WE HOPE TO DRAW UPON THE EXISTING DATUM LINES ALONG THIS IMPORTANT STREET. THE GROUND FLOOR IS COMPRISED OF CONTINUOUS RETAIL SPACE ALONG CONGRESS STREET TO CREATE AN ACTIVE AND VIBRANT STREET FRONTAGE. THE LOBBY FOR THE RESIDENTS WILL BE POSITIONED OFF OF PEARL STREET IN ORDER TO PROVIDE A MORE RESIDENTIAL SCALE ENTRANCE AND KEEP LOADING / DROP-OFF ACTIVITIES AWAY FROM THE ACTIVITY ON CONGRESS. ABOVE THE FIRST LEVEL, THE BUILDING STEPS BACK FROM THE STREET TO DISTINGUISH THE TOWER FROM THE PODIUM. THIS STEP REDUCES THE HEIGHT IMPACT FROM THE STREET BUT MAINTAINS THE ACTIVE AND VIBRANT STREET WALL. AT THE LEVEL 2 STEP BACK, THE REIDENTIAL UNITS WILL HAVE PRIVATE TERRACE SPACE AS WELL AS SHARED BUILDING AMENITY SPACE THAT CAN SPLL OUT ONTO THE PUBLIC PROMENADE. THE LEVEL OF THE PROMENADE IS SET BELOW THE LEVEL OF THE PRIVATE TERRACES IN ORDER TO MAINTAIN THE VISUAL CONNECTION, BUT STILL PROVIDE PRIVACY FOR THE CONDO OWNERS. ABOVE THE AMENITY TERRACE LEVEL, EACH UNIT WILL BE HAVE A PRIVATE BALCONY. THESE BALCONIES PROVIDE THE RESIDENTS VALUABLE OUTDOOR SPACE. THEN AT LEVEL 12, THE BUILDING STEPS BACK TO ACCOMDATE THE ZONING RESTRICTION TO REDUCE THE FLOOR AREA ABOVE 125'. THIS CREATES THE OPPORTUNITY TO PROVIDE LARGE WRAP-AROUND TERRACES FOR THE PENTHOUSE UNITS AND SCALE THE BUILDING AS IT MEETS THE SKY. THE ROOFTOP WILL HOST A MECHANICAL PENTHOUSE AS WELL AS PRIVATE PATIOS FOR THE UNITS ON THE TOP FLOOR. THIS BUILDING WILL BE A HIGHLY VISIBLE ADDITION TO THE DIVERSE SKYLINE, SO IT IS IMPORTANT THAT IT SEAMLESSLY STITCHES INTO THE EXISTING, AND EVOLVING, FABRIC OF DOWNTOWN PORTLAND.



AERIAL VIEW



GROUND VIEW

*SEE SUBSEQUENT INDIVIDUAL SITE PLAN APPLICATIONS FOR DETAILS ON FENESTRATION, MATERIALS, AND COLOR

cbt

VIEW FROM CUMBERLAND AND MYRTLE



AERIAL VIEW



GROUND VIEW

*SEE SUBSEQUENT INDIVIDUAL SITE PLAN APPLICATIONS FOR DETAILS ON FENESTRATION, MATERIALS, AND COLOR

cbt

VIEW FROM CUMBERLAND AND PEARL

THE CONDO BUILDING IN PHASE 2 WILL ACTIVATE CUMBERLAND AVE WHILE ADDRESSING THE SCALE OF THE NEIGHBORING CONTEXT. BY USING THE ZONING ENVELOPE TO DEFINE THE MAJOR MASSING MOVES, THE SCALE OF THE BUILDING IS BROKEN DOWN INTO SMALLER COMPONENTS THAT RESPOND TO THAT CONTEXT. THE PODIUM WILL TIE INTO THE PODIUM OF THE BUILDINGS IN PHASE 1, THUS PROVIDING A CONTINUOUS PARKING STRUCTURE AND SHARED ROOF DECK SPACE. THE GARAGE WILL BE LINED WITH RETAIL AND BUILDING LOBBY ON THE GROUND FLOOR WITH UNITS ON THE LEVEL ABOVE FACING CUMBERLAND AVE. ABOVE THE PODIUM, THE C-SHAPED TOWER ADHERES TO THE 15' SETBACK ON ALL SIDES WHICH ALLOWS THE OPPORTUNITY TO PROVIDE PRIVATE TERRACES FOR THE UNITS DIRECTLY ABOVE THE PODIUM, AS WELL AS A LARGER TERRACE WITHIN THE "C" TO BE ACCESSED THROUGH THE AMENITY/FITNESS AREA. THE C-SHAPE TOWER MINIMIZES THE MASS OF THE BUILDING BY REDUCING THE AMOUNT OF BUILDING ALONG THE STREET. SECONDARY MASSING MOVES FURTHER BREAK DOWN THE SCALE AND STITCH TOGETHER THE PODIUM AND THE TOWER. THE VARIATION IN HEIGHT OF THE PODIUM ALONG CUMBERLAND AVE HELPS RELATE THE BUILDING TO THE ADJACENT CONTEXT. BY BREAKING DOWN THE SCALE, THE BUILDING APPEARS AS THOUGH IT IS COMPRISED OF MULTIPLE, SMALLER BUILDINGS LIKE THE BUILDINGS ACROSS THE STREET. SMALLER PLANAR SHIFTS ALLOW FOR SMOOTH MATERIAL TRANSITIONS AND INTEGRATED BALCONIES THAT REDUCE THE PERCEPTION OF THE TOWER'S HEIGHT WHILE PROVIDING SWEEPING WATER VIEWS.



AERIAL VIEW

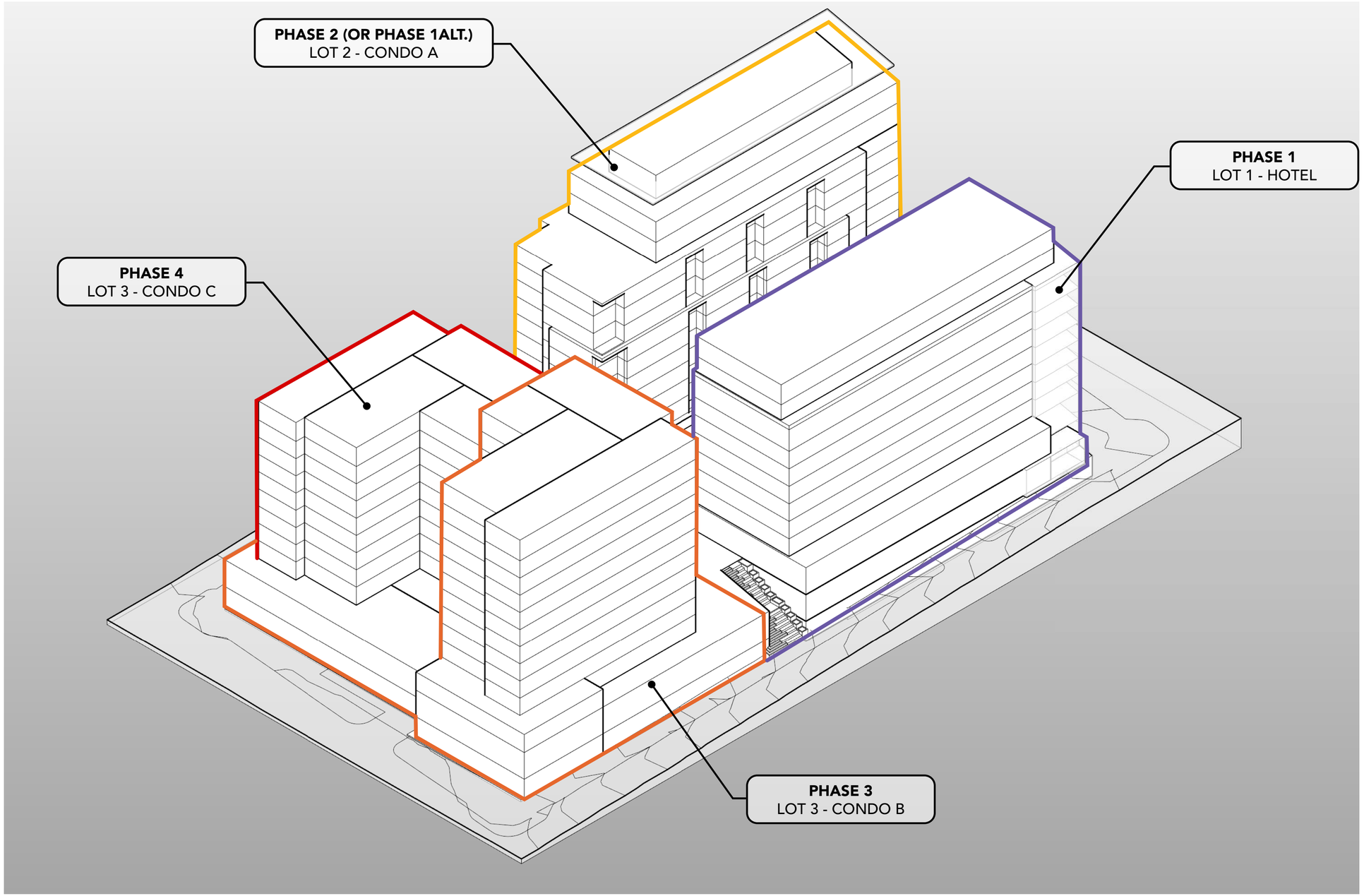


GROUND VIEW

*SEE SUBSEQUENT INDIVIDUAL SITE PLAN APPLICATIONS FOR DETAILS ON FENESTRATION, MATERIALS, AND COLOR

cbt

PHASING PLANS - SUMMARY



PHASING PLANS - PHASE 0

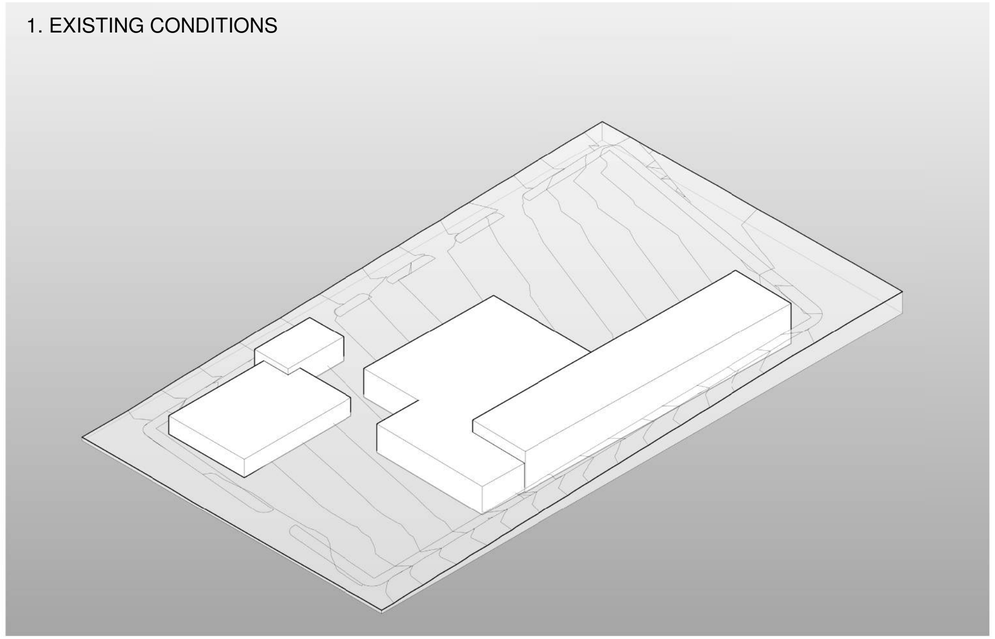
DEMO AND SITE PREP

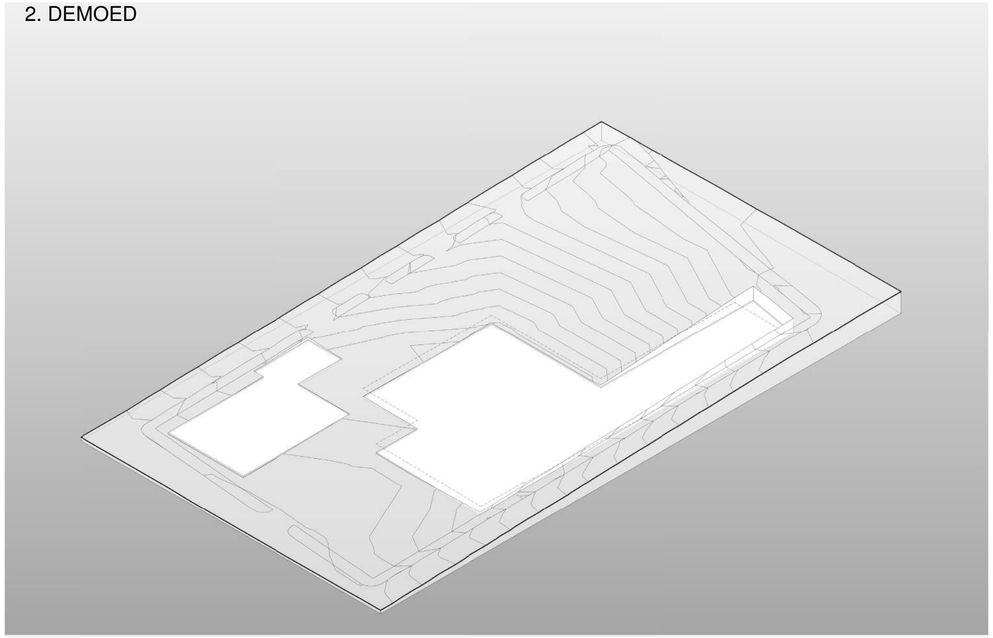
THE TWO EXISTING BUILDINGS ON THE SITE WILL BE DEMOLISHED PRIOR TO THE CONSTRUCTION PHASE OF EITHER THE *LOT 1 HOTEL* OR *LOT 2 (CONDO A)*.

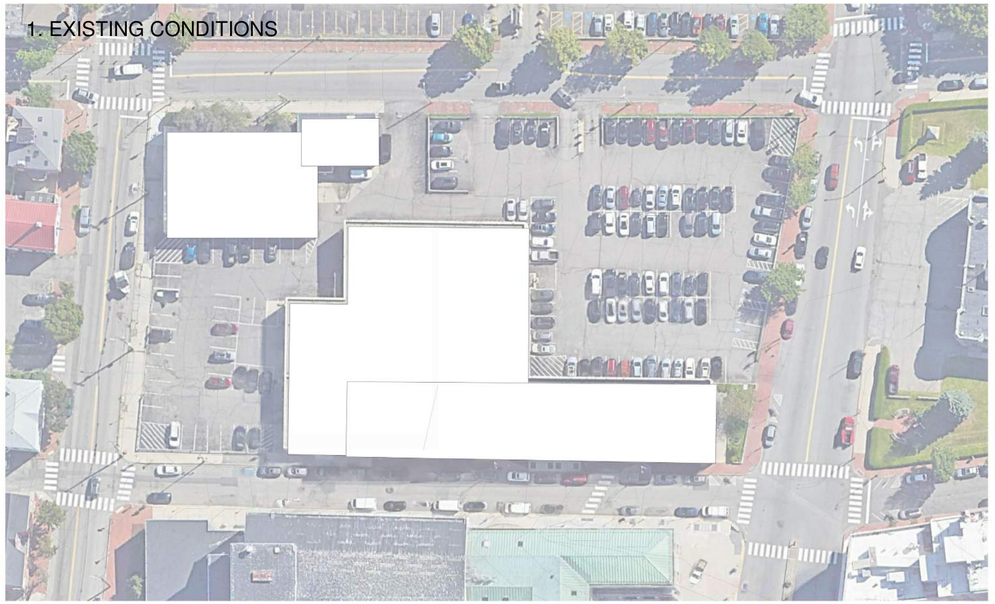
THE EXISTING BUILDING FRONTING ON PEARL STREET WILL BE BACKFILLED AND GRADED FOR USE AS SURFACE PARKING OR FOR CONSTRUCTION LAYDOWN.

THE EXISTING BUILDING FRONTING ON MYRTLE STREET WILL BE DEMOLISHED. IF THE LOT 1 HOTEL CONSTRUCTION COMMENCES FIRST, THIS AREA WILL BE OCCUPIED BY THE HOTEL WITH REMAINING BASEMENT AREAS ON LOT 3 WILL BE BACKFILLED TO PROVIDE ACCESS TO THE HOTEL'S LOWER-LEVEL PARKING.

THE EXISTING SIDEWALK AND CURBING WILL BE REMOVED ON A PER-PHASE BASIS. THE AREA OF SIDEWALK AND CURB ALONG EACH OF THE PROPOSED BUILDINGS WILL BE DEMOED AND RE-BUILT WITH THAT SPECIFIC BUILDING PHASE







PHASING PLANS - PHASE 1

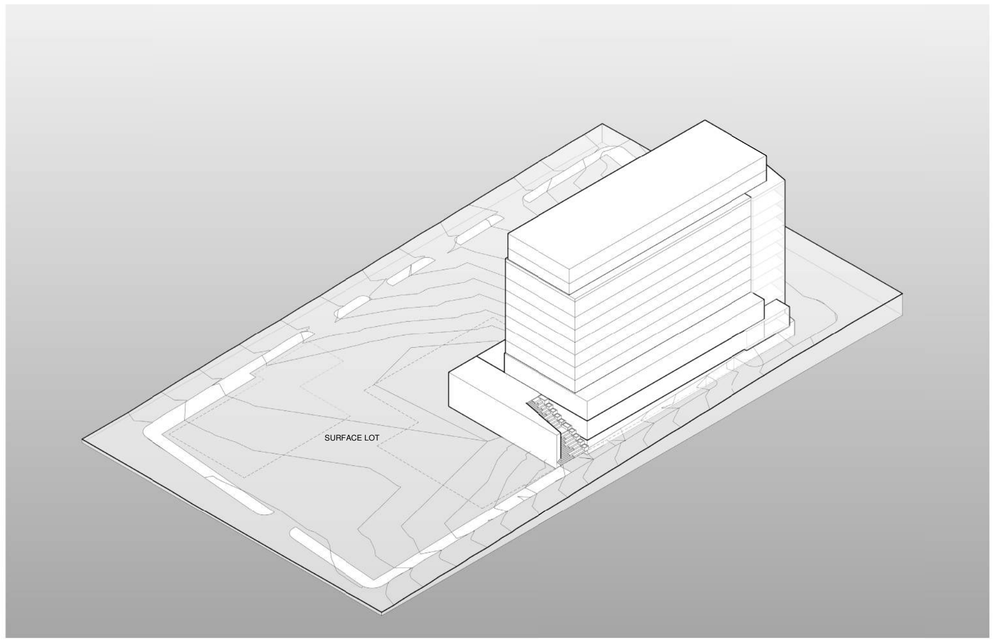
LOT 1 (HOTEL)

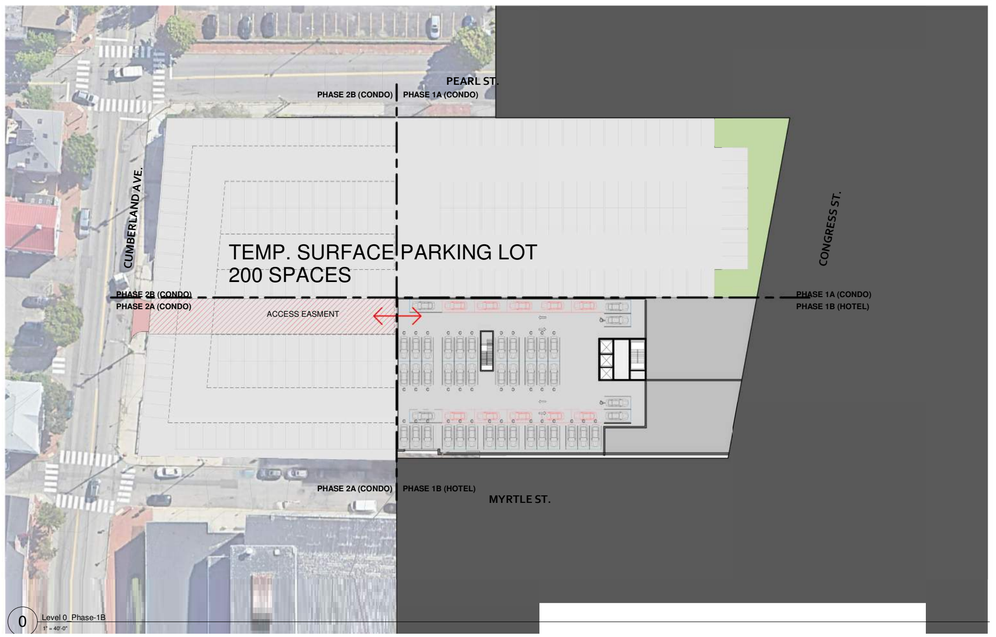
LOT 1 HOTEL BUILDING CONSTRUCTION:

- CONSTRUCTION OF THE HOTEL STRUCTURE INCLUDING THE LEVEL 0 AND LEVEL 1 PARKING DECKS WITHIN THE LIMITS OF LOT 1
- CONSTRUCTION OF THE HOTEL'S SEMI PRIVATE AMENITY DECK
- CONSTRUCTION OF THE HOTEL'S VALET AREA AND CURB CUT ON CONGRESS STREET,
- CONSTRUCTION OF THE HOTEL CURB CUT AND ENTRANCE ON MYRTLE STREET
- CONSTRUCTION OF THE PUBLIC ACCESS STAIR ON MYRTLE STREET AND THE PORTION OF THE PUBLIC AMENITY DECK ALONG THE WESTERLY LINE OF LOT 1 UP TO THE LOT 2 CORNER CONNECTING TO THE HOTEL'S AMENITY DECK
- THE MYRTLE STREET STAIR AND AMENITY DECK WILL REMAIN PRIVATE UNTIL THE LOT 2 (CONDO A) CONSTRUCTION COMPLETES THE PUBLIC PORTION OF THE AMENITY DECK

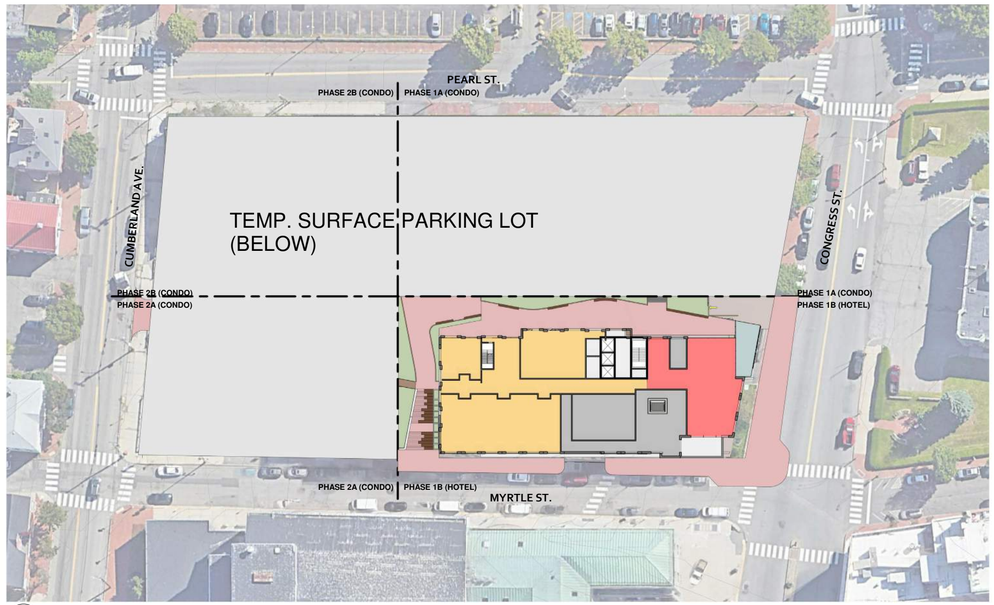
STREET AND SIDEWALK CONSTRUCTION:

- THE PROPOSED CURB AND SIDEWALK IMPROVEMENTS ON MYRTLE STREET AND CONGRESS STREET, ALONG THE FRONTAGE OF LOT 1 WILL BE CONSTRUCTED INCLUDING CROSSWALKS AND CURB EXTENSIONS AT THE INTERSECTION OF MYRTLE STREET AND CONGRESS STREET
- THE CURB EXTENSIONS AND CROSS WALKS AT THE CORNER OF PEARL STREET AND CONGRESS STREET WILL BE CONSTRUCTED TO ACCOMMODATE THE SIGNAL RELOCATION AND TO ENABLE THE FUTURE CONSTRUCTION OF LOT 2 (CONDO A)'S FOUNDATIONS AT THE STREET LINE.
- TEMPORARY BITUMINOUS SIDEWALKS MAY BE PLACED ALONG THE FRONTAGE OF THE CONDO A BUILDING ON CONGRESS STREET AND PEARL STREET FOR UP TO 2 YEARS, ANTICIPATING THE CONDO A BUILD OUT AT WHICH TIME THE FINAL BRICK SIDEWALKS WILL BE INSTALLED.
- STREET LIGHTING ALONG THE FRONTAGE OF LOT 1 WILL BE INSTALLED
- IF REQUIRED BY SITE PLAN REVIEW, INTERIM LANDSCAPING WILL BE INSTALLED AND MAINTAINED ON THE SITE AND ON ADJOINING AREAS. LANDSCAPING WILL BE MAINTAINED BY THE APPLICANT UNTIL IT IS REMOVED OR

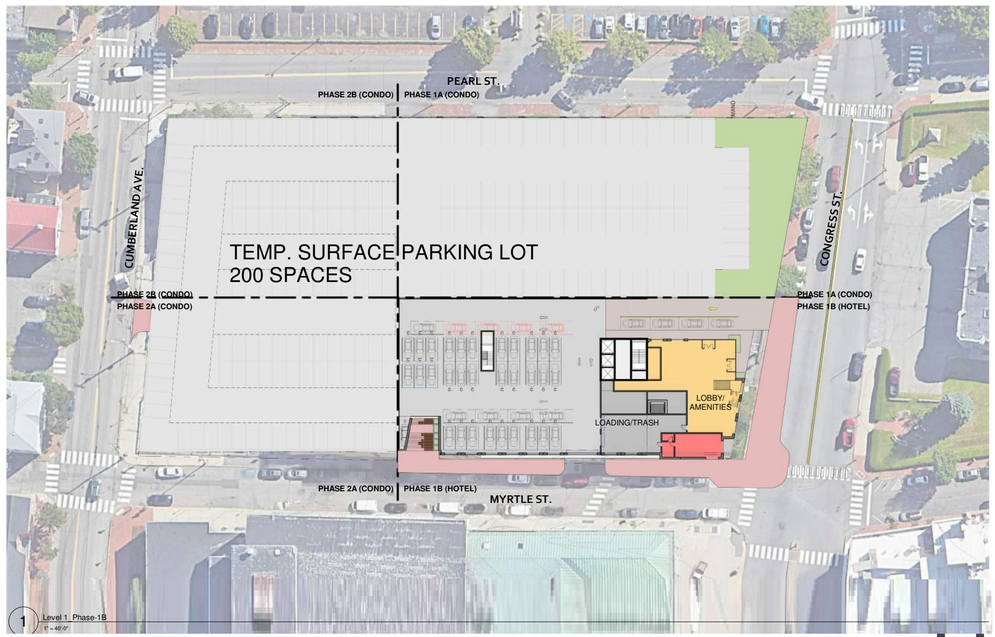




0 Level 0 Phase-1B
1" = 40'-0"



2 Level 2 Phase-1B
1" = 40'-0"



1 Level 1 Phase-1B
1" = 40'-0"

cbt

PHASING PLANS - PHASE 1

LOT 1 (HOTEL)

STREET DEMOLITION LOT 1 HOTEL

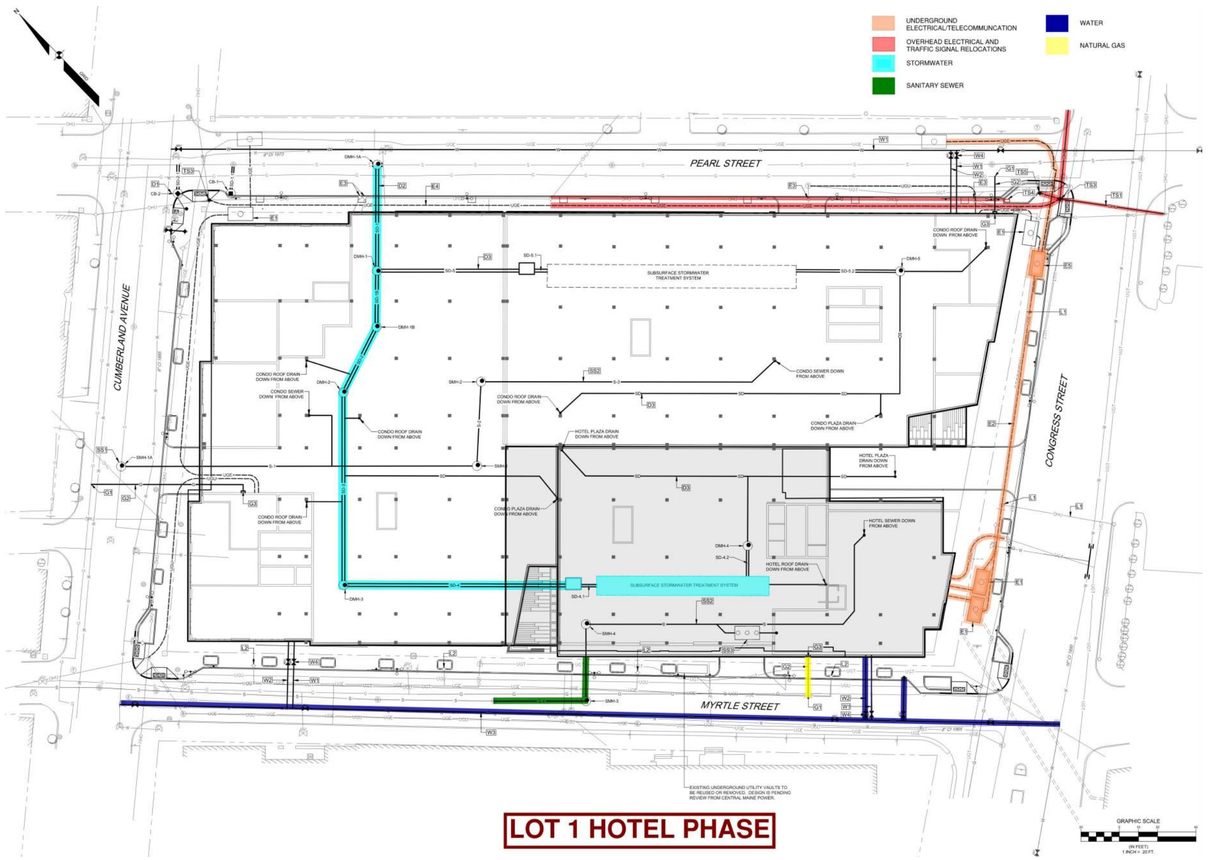
- THE EXISTING SIDEWALKS AND CURBING WILL BE REMOVED ACROSS THE FRONTAGE OF LOT 1 AND PORTIONS OF LOT 2 NECESSARY TO FACILITATE UNDERGROUND UTILITIES
    - REMOVE CURB AND SIDEWALK AT PEARL STREET/CONGRESS STREET, ALONG CONGRESS STREET FROM PEARL STREET TO MYRTLE STREET AND ALONG MYRTLE STREET ALONG THE FRONTAGE OF LOT 1
    - REMOVE AND REPLACE/RELOCATE THE TRAFFIC AND PEDESTRIAN SIGNALS AT PEARL STREET/ CONGRESS STREET
    - RELOCATE OVERHEAD UTILITIES ATTACHED TO THE TRAFFIC SIGNALS AT PEARL STREET/CONGRESS STREET UNDERGROUND ALONG THE FRONTAGE OF THE LOT 2 (CONDO A) BUILDING

UTILITIES

- A SEWER SERVICE WILL BE CONSTRUCTED FROM THE HOTEL FRONTAGE TO THE EXISTING SANITARY SEWER IN MYRTLE STREET ALONG THE HOTEL'S FRONTAGE.
- A NEW WATER MAIN WILL BE INSTALLED IN MYRTLE STREET FROM CUMBERLAND AVENUE TO CONGRESS. THE WATER DISTRICT WILL PARTICIPATE IN THE UPGRADING OF THE MAIN DUE TO ITS AGE AND CONDITION. DOMESTIC AND FIRE PROTECTION WATER SERVICES WILL BE TAKEN FROM MYRTLE STREET ALONG THE HOTEL'S FRONTAGE.
- GAS SERVICE WILL BE PROVIDED FROM A MAIN IN CONGRESS STREET OR MYRTLE STREET ALONG THE HOTEL FRONTAGE. THE LOCATION OF THE SERVICE IS TO BE DETERMINED IN COORDINATION WITH UNITIL AND WILL BE PRESENTED ON THE LOT 1 SITE PLANS
- ELECTRICAL SERVICE WILL BE TAKEN FROM CMP MANHOLES CONSTRUCTED IN 2020-2021 IN PEARL STREET AT CONGRESS STREET. A NEW CMP MANHOLE WILL BE INSTALLED ALONG THE LOT 2 FRONTAGE ON CONGRESS STREET TO SERVE LOT 1 AND LOT 2 (CONDO A).
- PRIMARY POWER AND FUTURE CONDUIT WILL BE BROUGHT TO THIS MANHOLE AND THEN DISTRIBUTED TO SERVE TWO (2) SIDEWALK TRANSFORMER VAULTS FOR THE LOT 1 HOTEL AT THE CORNER OF MYRTLE AND CONGRESS STREET, CONDUIT WILL BE EXTENDED FOR A FUTURE TRANSFORMER VAULT FOR CONDO A.
- TELECOMMUNICATION SERVICE WILL BE TAKEN FROM MYRTLE STREET OR PEARL STREET FOR LOT 1, LOCATION TO BE DETERMINED. CONDUIT WILL BE EXTENDED FOR A FUTURE CONNECTION TO LOT 2

TRAFFIC SIGNALS AND OVERHEAD UTILITY RELOCATIONS.

- THE TRAFFIC SIGNAL EQUIPMENT AT THE CORNER OF PEARL AND CONGRESS STREET WILL BE RELOCATED OR REPLACED AS NEEDED IN THE FIRST PHASE OF WORK. THIS WILL BE NECESSARY BASED ON THE SCOPE OF THE ELECTRICAL INSTALLATION AT THE CORNER OF PEARL STREET AND CONGRESS STREET AND WILL SERVE AS ENABLING WORK FOR THE CONDO A CONSTRUCTION. EXISTING OVERHEAD UTILITIES ON THE TRAFFIC SIGNAL POLES WILL BE RELOCATED UNDERGROUND.
- OVERHEAD UTILITIES ON THE POLE LINE IN PEARL STREET FROM CONGRESS STREET WEST, ACROSS THE FRONTAGE OF CONDO A WILL BE RELOCATED UNDERGROUND AS NEEDED TO FACILITATE THE FIRST PHASE ELECTRICAL AND TRAFFIC SIGNAL RELOCATIONS AND AS ENABLING WORK FOR THE FUTURE CONDO A BUILDING
- THE CURB EXTENSIONS AND CROSS WALKS AT THE CORNER OF PEARL AND CONGRESS STREET WILL BE CONSTRUCTED TO ACCOMMODATE THE SIGNAL RELOCATION AND TO ENABLE THE FUTURE CONSTRUCTION OF LOT 2 (CONDO A).
- TEMPORARY BITUMINOUS SIDEWALKS MAY BE PLACED ALONG THE FRONTAGE OF LOT 2 FOR UP TO 2 YEARS,



PHASING PLANS - PHASE 1

LOT 1 (HOTEL)

- ANTICIPATING THE LOT 2 (CONDO A) BUILD OUT AT WHICH TIME THE FINAL BRICK SIDEWALKS WILL BE INSTALLED.
- THE REMAINING OVERHEAD UTILITIES ON PEARL STREET AND THE OVERHEAD UTILITIES ON CUMBERLAND AVENUE WILL NOT BE AFFECTED BY THE LOT 1 CONSTRUCTION.

STORMWATER MANAGEMENT

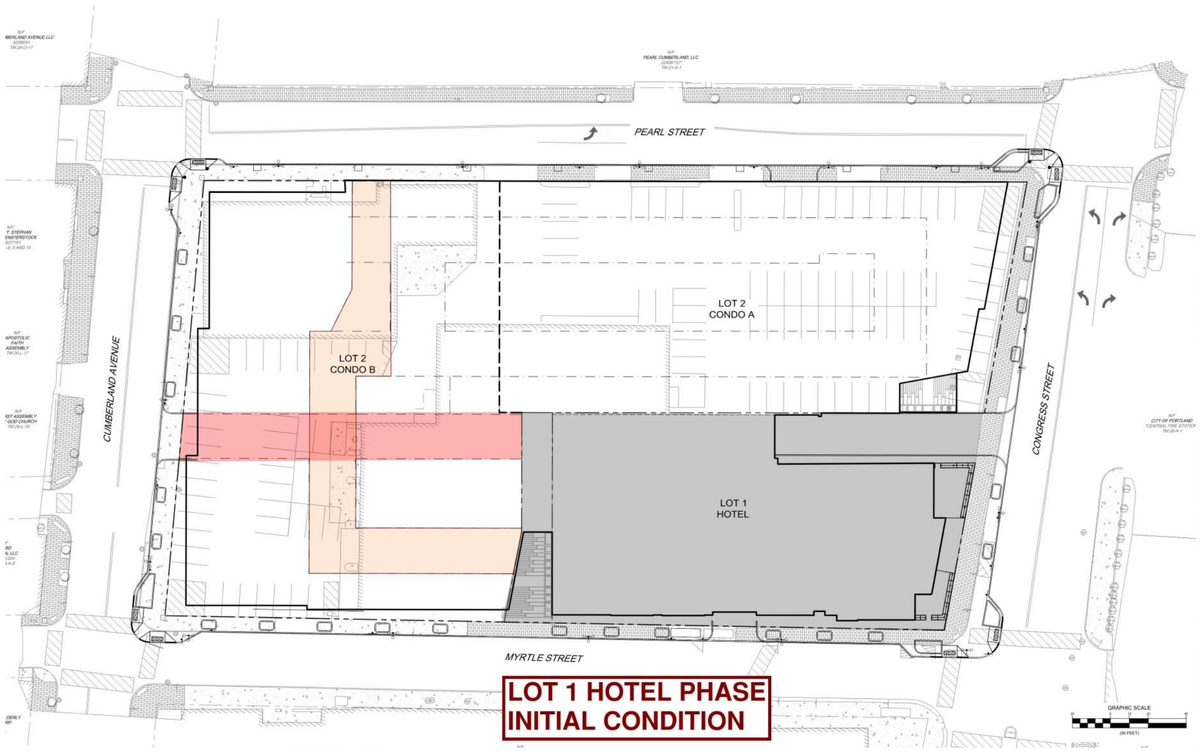
- THE PROJECT IS A REDEVELOPMENT OF A FULLY DEVELOPED SITE. THE CITY STANDARDS REQUIRE TREATMENT OF 50% OF THE REDEVELOPED AREA. THIS STANDARD WILL BE MET AS EACH PHASE IS CONSTRUCTED
- UNDERGROUND STORMWATER TREATMENT WILL BE CONSTRUCTED IN THE BASEMENT LEVEL OF THE LOT 1 BUILDING AT THE TIME THE LOT 1 IS CONSTRUCTED.
    - THE SYSTEM IS SIZED TO TREAT RUNOFF FROM 100% OF THE BUILDING'S ROOF DRAINS.
    - THE OUTFALL OF THIS SYSTEM WILL BE CONSTRUCTED WITHIN EASEMENTS ACROSS LOT 2 TO THE CORNER OF PEARL STREET AND CUMBERLAND AVENUE.
- THE REMAINING UNDEVELOPED LAND ON LOT 2 AND LOT 3 WILL DRAIN AS IT DOES IN THE EXISTING CONDITION TO EXISTING CATCH BASINS CONNECTED TO PEARL STREET AND CUMBERLAND AVENUE
- A SIMILAR SYSTEM IS TO BE CONSTRUCTED ON LOT 2, WITHIN THE LIMITS OF CONDO A WHEN THAT BUILDING IS CONSTRUCTED AND WILL BE CONNECTED TO THE COMMON OUTFALL ON LOT 2 TO THE PEARL STREET/ CUMBERLAND AVENUE INTERSECTION.
- THE TREATMENT PROVIDED ON LOT 1 WILL MEET THE STORMWATER STANDARDS FOR LOT 1
- THE TREATMENT PROVIDED ON LOT 2 (CONDO A) WILL MEET THE STORMWATER STANDARDS FOR LOT 2
- THE COMBINED TREATMENT PROVIDED IN THE LOT 1 AND LOT 2 SYSTEMS WILL EXCEED THE MINIMUM REQUIREMENTS FOR THE ENTIRE SITE/SUBDIVISION. SUCH THAT TREATMENT FOR LOT 3 (CONDO B AND CONDO C) WILL NOT BE REQUIRED.

ACCESS AND UTILITY EASEMENTS AND CONSIDERATIONS

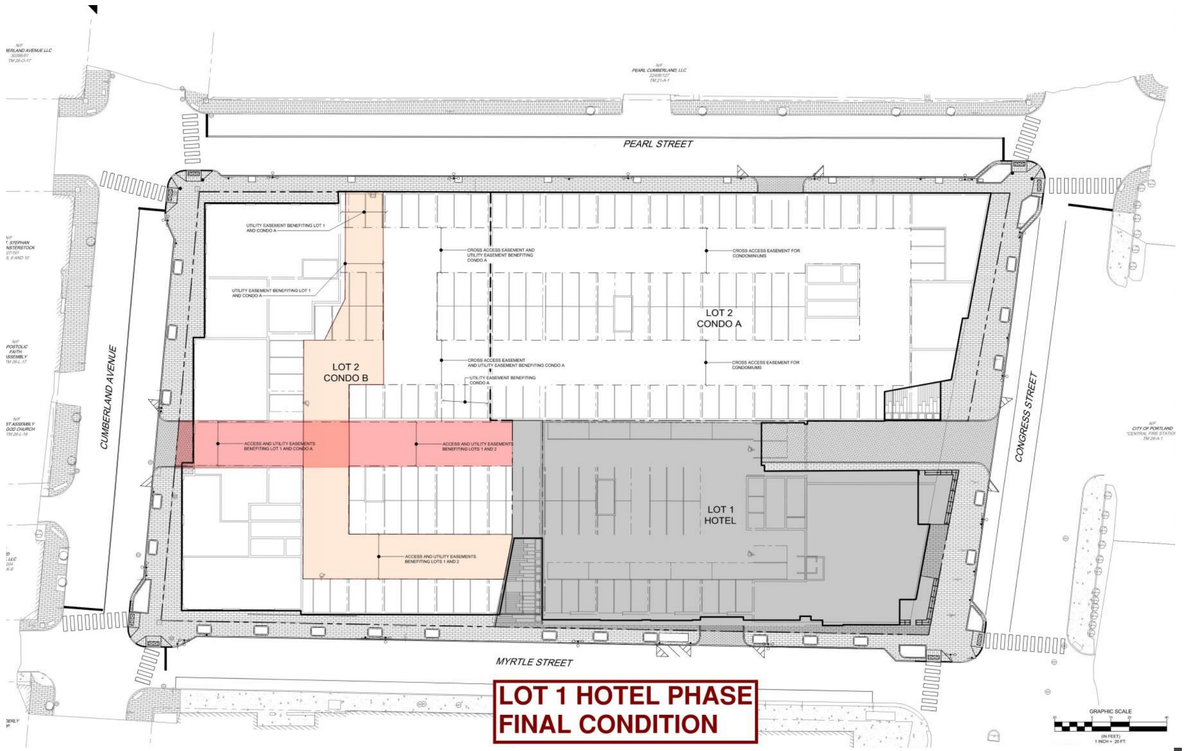
- THE SUBDIVISION PLANS SUBMITTED WITH THE LOT 1 SITE AND SUBDIVISION APPLICATION WILL IDENTIFY ACCESS AND UTILITY EASEMENTS ACROSS LOT 3, BENEFITTING LOT 1. THE EASEMENTS WILL ADDRESS TWO CONDITIONS:
- ACCESS AND UTILITY EASEMENTS FOR ACCESS ACROSS LOT 3 PRIOR TO CONSTRUCTION OF THE LOT 3 (CONDO B, CONDO C) BUILDING. THESE WILL OCCUR AT GROUND LEVEL FOR ACCESS BETWEEN THE LOWER PARKING LEVEL HOTEL PARKING AND FOR THE CONSTRUCTION OF STORM DRAINS
- PERMANENT ACCESS AND UTILITY EASEMENTS THROUGH THE CONDO B BUILDING ONCE THE IT IS CONSTRUCTED

INTERIM CONDITION OF REMAINING LAND

- IT IS THE GOAL OF THE DEVELOPMENT TEAM TO MOVE FROM ONE PHASE TO THE NEXT WITH A MINIMAL TIME BETWEEN PHASES. HOWEVER, CIRCUMSTANCES AND MARKET CONDITIONS CAN AFFECT THE TIMING OF CONSTRUCTION. THE APPLICANT IS REQUESTING THAT THE MASTER DEVELOPMENT PLAN APPROVAL ALLOW FOR THE UNDEVELOPED AREAS OF THE SITE REMAIN A SURFACE PARKING LOT, WITH MINIMAL IMPROVEMENTS FOR A DURATION OF UP TO 24 MONTHS FROM THE TIME ONE PHASE IS COMPLETE (CERTIFICATE OF OCCUPANCY) UNTIL A SITE PLAN APPLICATION IS SUBMITTED FOR THE ADJACENT PARCEL OR PHASE.



LOT 1 HOTEL PHASE INITIAL CONDITION



LOT 1 HOTEL PHASE FINAL CONDITION

PHASING PLANS - PHASE 2 (PHASE 1 ALT.)

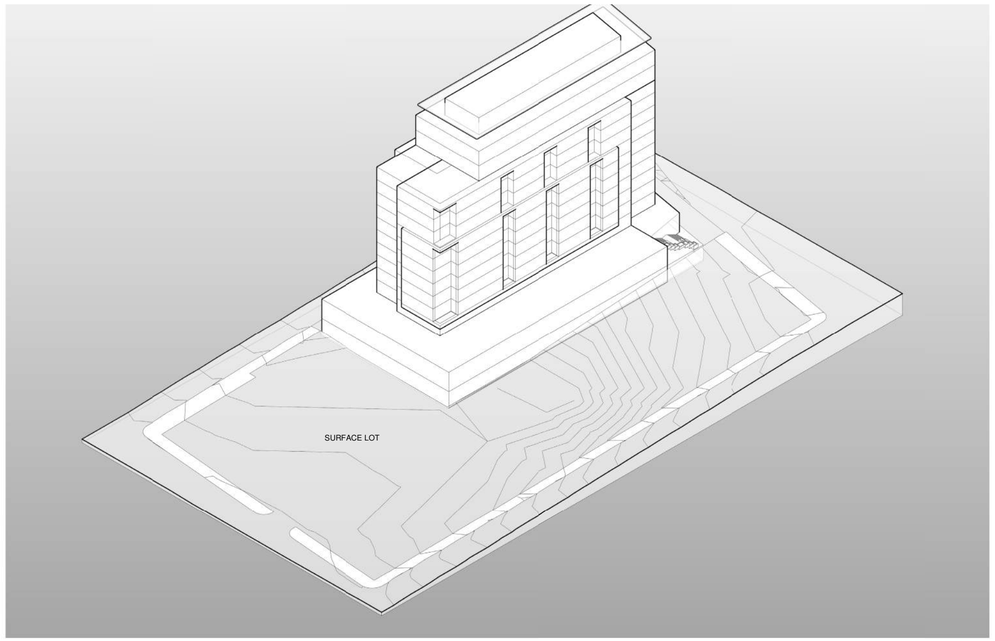
LOT 2 (CONDO A)

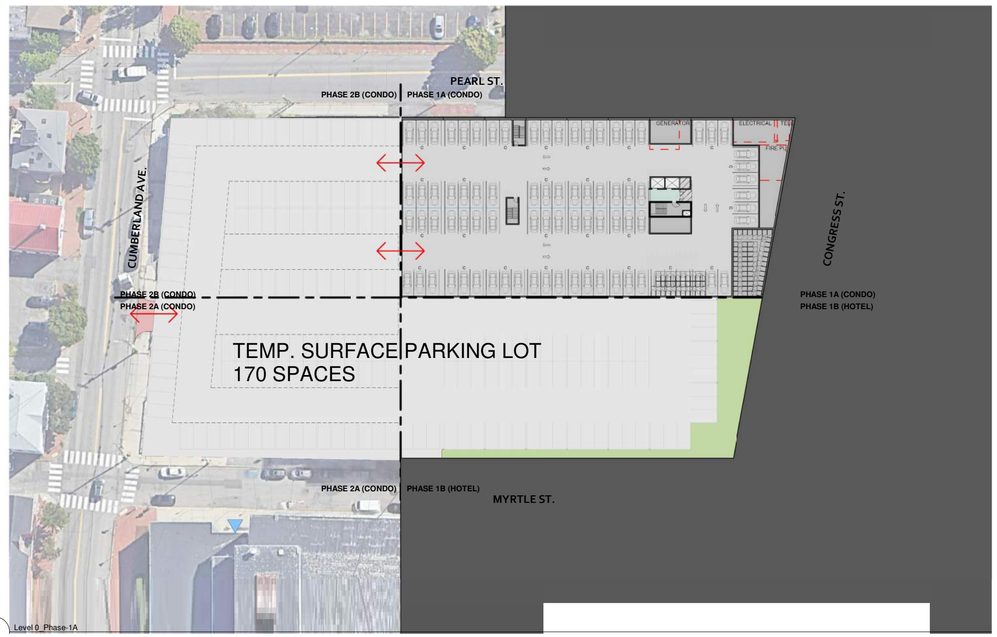
LOT 2 (CONDO A) BUILDING CONSTRUCTION:

- CONSTRUCTION OF THE CONDOMINIUM STRUCTURE INCLUDING THE LEVEL 0 AND LEVEL 1 PARKING DECKS WITHIN THE LIMITS OF LOT 2
- CONSTRUCTION OF THE PUBLIC ACCESS STAIR ON CONGRESS STREET AND THE AMENITY DECK ON LOT 2 (CONDO A) LEVEL 2
- THE CONGRESS STREET STAIR AND AMENITY DECK WILL REMAIN PRIVATE UNTIL THE LOT 1 HOTEL CONSTRUCTION COMPLETES THE PUBLIC PORTION OF THE AMENITY DECK AND THE STAIR AT MYRTLE STREET

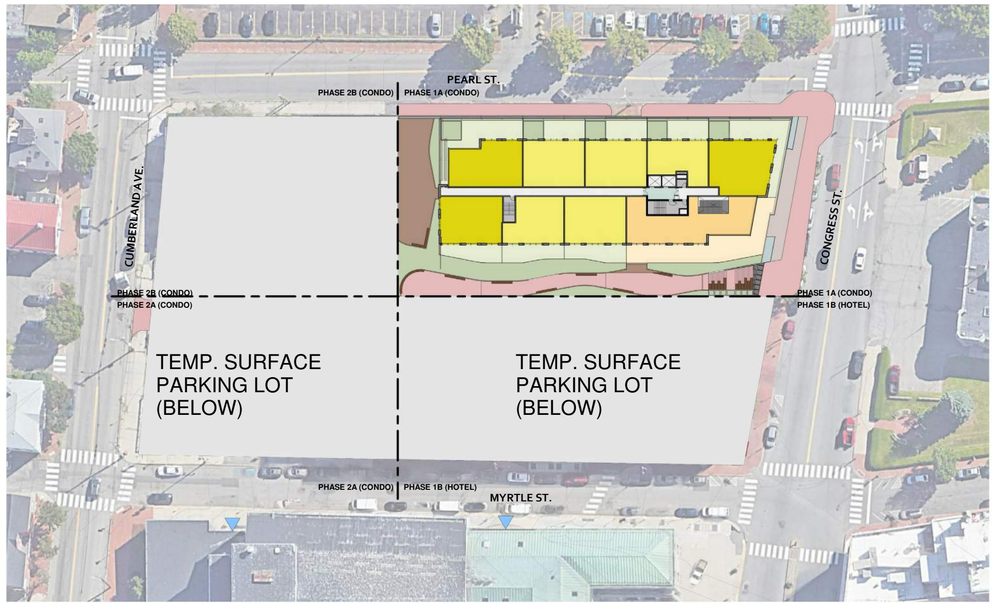
STREET AND SIDEWALK CONSTRUCTION:

- THE PROPOSED CURB AND SIDEWALK IMPROVEMENTS ON PEARL STREET AND CONGRESS STREET, ALONG THE FRONTAGE OF LOT 2 (CONDO A) WILL BE CONSTRUCTED INCLUDING CROSSWALKS AND CURB EXTENSIONS AT THE INTERSECTION OF PEARL STREET AND CONGRESS STREET
- THE CURB EXTENSIONS AND CROSS WALKS AT THE CORNER OF PEARL STREET AND CONGRESS STREET WILL BE CONSTRUCTED TO ACCOMMODATE THE SIGNAL RELOCATION AND TO ENABLE THE CONSTRUCTION OF THE CONDO A BUILDING FOUNDATIONS AT THE STREET LINE.
- STREET LIGHTING ALONG THE FRONTAGE OF LOT 2 (CONDO A) WILL BE INSTALLED
- IF REQUIRED BY SITE PLAN REVIEW, INTERIM LANDSCAPING WILL BE INSTALLED AND MAINTAINED ON THE SITE AND ON ADJOINING AREAS. LANDSCAPING WILL BE MAINTAINED BY THE APPLICANT UNTIL IT IS REMOVED OR REPLACED IN A SUBSEQUENT PHASE.





2 Level 0_Phase-1A



4 Level 2_Phase-1A
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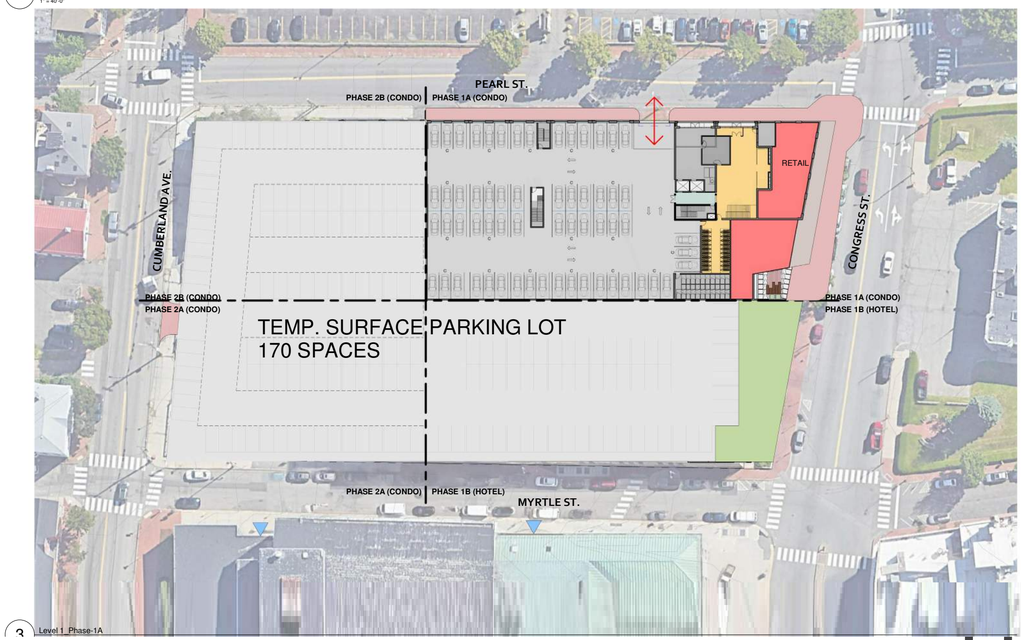


3 Level 1_Phase-1A

PHASING PLANS - PHASE 2 (PHASE 1 ALT.)

LOT 2 (CONDO A)

STREET DEMOLITION

- THE EXISTING SIDEWALK AND CURBING WILL BE REMOVED ACROSS THE FRONTAGE OF LOT 2 (CONDO A) ON PEARL STREET AND CONGRESS STREET
    - REMOVE CURB AND SIDEWALK AT PEARL/CONGRESS, ALONG THE FRONTAGE OF LOT 2 (CONDO A)
    - REMOVE AND REPLACE/RELOCATE THE TRAFFIC AND PEDESTRIAN SIGNALS AT PEARL STREET/CONGRESS STREET
    - RELOCATE OVERHEAD UTILITIES ATTACHED TO THE TRAFFIC SIGNALS AT PEARL STREET/CONGRESS STREET AND RELOCATE UNDERGROUND ACROSS THE FRONTAGE OF LOT 2 (CONDO A)

UTILITIES

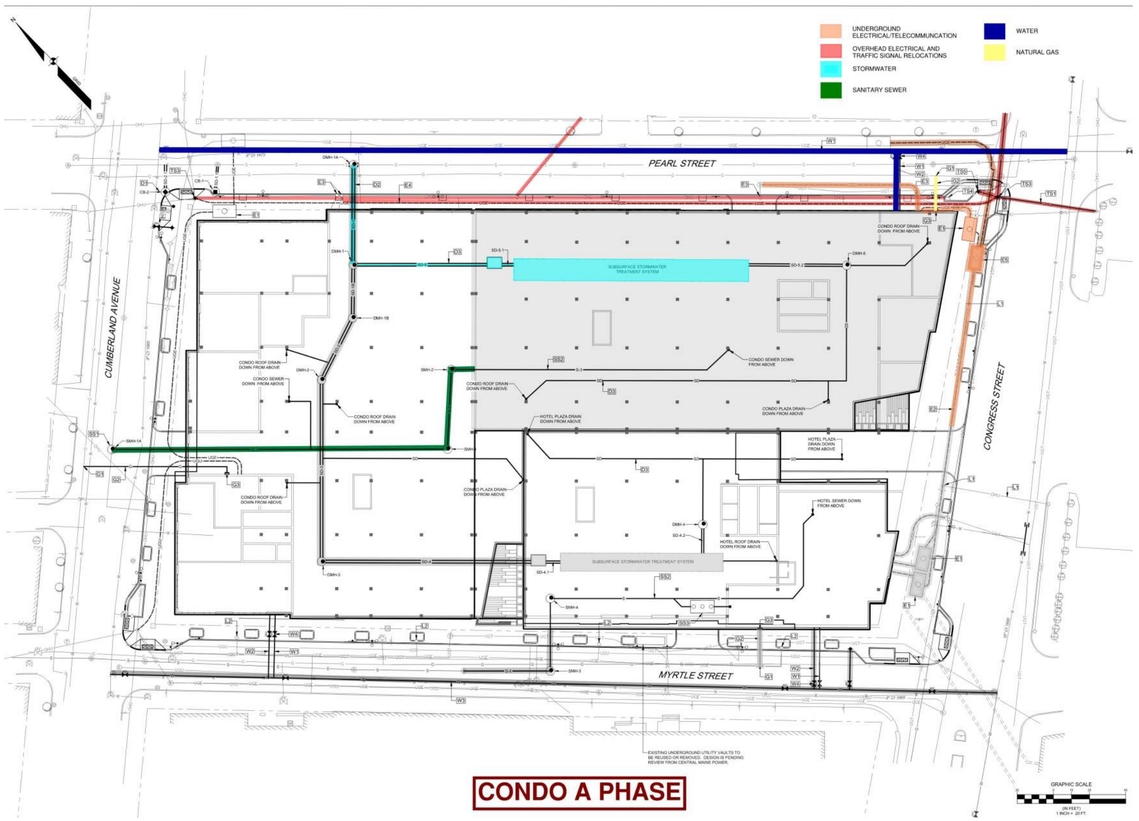
- A SEWER SERVICE WILL BE CONSTRUCTED FROM THE CUMBERLAND AVENUE ACROSS LOT 3 TO THE LOT 2 (CONDO A) BUILDING
- A NEW WATER MAIN WILL BE INSTALLED IN PEARL STREET FROM CUMBERLAND AVENUE TO CONGRESS STREET DUE TO THE AGE AND SIZE OF THE EXISTING WATER SYSTEM. DOMESTIC AND FIRE PROTECTION SERVICES WILL BE TAKEN FROM PEARL STREET ALONG LOT 2'S FRONTAGE.
- GAS SERVICE WILL BE PROVIDED FROM A MAIN IN CONGRESS STREET OR PEARL STREET ALONG LOT 2'S FRONTAGE. THE LOCATION OF THE SERVICE IS TO BE DETERMINED IN COORDINATION WITH UNITIL
- ELECTRICAL SERVICE WILL BE TAKEN FROM CMP MANHOLES CONSTRUCTED IN 2020-2021 IN PEARL STREET AT CONGRESS STREET. A NEW CMP MANHOLE WILL BE INSTALLED ALONG THE LOT 2 (CONDO A) FRONTAGE ON CONGRESS STREET TO SERVE LOT 1 AND LOT 2 (CONDO A).
- PRIMARY POWER AND FUTURE CONDUIT WILL BE BROUGHT TO THIS MANHOLE AND THEN DISTRIBUTED TO SERVE ONE (1) SIDEWALK TRANSFORMER VAULTS FOR THE LOT 2 (CONDO A) AT THE CORNER OF PEARL STREET AND CONGRESS STREET. CONDUIT FOR PRIMARY POWER WILL BE EXTENDED ALONG CONGRESS STREET AND CAPPED AT LOT 1 FOR A FUTURE SERVICE TO THE LOT 1 HOTEL.
- TELECOMMUNICATION SERVICE WILL BE TAKEN FROM PEARL STREET FOR CONDO A, LOCATION TO BE DETERMINED. CONDUIT WILL BE CONDUIT WILL BE EXTENDED FOR A FUTURE CONNECTION TO THE LOT 1 HOTEL.

TRAFFIC SIGNALS AND OVERHEAD UTILITY RELOCATIONS

- THE TRAFFIC SIGNAL EQUIPMENT AT THE CORNER OF PEARL AND CONGRESS STREET WILL BE RELOCATED OR REPLACED AS NEEDED IN THE FIRST PHASE OF WORK. THIS WILL BE NECESSARY BASED ON THE SCOPE OF THE ELECTRICAL INSTALLATION AT THE CORNER OF PEARL STREET AND CONGRESS STREET AND FOR CONSTRUCTION OF THE LOT 2 (CONDO A) FOUNDATIONS AT THE STREET LINE. EXISTING OVERHEAD UTILITIES ON THE TRAFFIC SIGNAL POLES WILL BE RELOCATED UNDERGROUND.
- OVERHEAD UTILITIES ON THE POLE LINE IN PEARL STREET FROM CONGRESS STREET WEST, ACROSS THE FRONTAGE OF CONDO A WILL BE RELOCATED UNDERGROUND AS NEEDED TO FACILITATE THE FIRST PHASE ELECTRICAL AND TRAFFIC SIGNAL RELOCATIONS AND THE LOT 2 (CONDO A) FOUNDATION CONSTRUCTION AT THE RIGHT OF WAY LINE
- THE CURB EXTENSIONS AND CROSS WALKS AT THE CORNER OF PEARL AND CONGRESS WILL BE CONSTRUCTED TO ACCOMMODATE THE SIGNAL RELOCATION.
- THE REMAINING OVERHEAD UTILITIES ON PEARL STREET AND THE OVERHEAD UTILITIES ON CUMBERLAND AVENUE WILL NOT BE AFFECTED BY THE LOT 2 (CONDO A) CONSTRUCTION.

STORMWATER MANAGEMENT

- THE PROJECT IS A REDEVELOPMENT OF A FULLY DEVELOPED SITE. THE CITY STANDARDS REQUIRE TREATMENT OF 50% OF THE REDEVELOPED AREA. THIS STANDARD WILL BE MET AS EACH PHASE IS CONSTRUCTED.
- UNDERGROUND STORMWATER TREATMENT WILL BE CONSTRUCTED IN THE BASEMENT LEVEL OF THE LOT 2 (CONDO A) BUILDING AT THE TIME THE LOT 2 (CONDO A) IS CONSTRUCTED.
    - THE SYSTEM IS SIZED TO TREAT RUNOFF FROM 100% OF THE BUILDING'S ROOF DRAINS.
    - THE OUTFALL OF THIS SYSTEM WILL BE CONSTRUCTED ACROSS LOT 3 TO THE CORNER OF PEARL STREET AND CUMBERLAND AVENUE.
- THE REMAINING UNDEVELOPED LAND ON LOT 1 AND LOT 3 WILL DRAIN AS IT DOES IN THE EXISTING CONDITION TO EXISTING CATCH BASINS CONNECTED TO PEARL STREET AND CUMBERLAND AVENUE.
- A SIMILAR SYSTEM IS TO BE CONSTRUCTED ON LOT 1 WHEN THE HOTEL IS CONSTRUCTED. THIS SYSTEM CONNECTED TO THE COMMON OUTFALL ON LOT 3 TO THE PEARL STREET/CUMBERLAND AVENUE INTERSECTION.
- THE TREATMENT WITHIN ON LOT 2 WILL MEET THE STORMWATER STANDARDS FOR LOT 2
- THE TREATMENT PROVIDED ON LOT 1 FOR THE HOTEL WILL MEET THE STORMWATER STANDARDS FOR LOT 1 WHEN IT IS CONSTRUCTED
- THE COMBINED TREATMENT PROVIDED IN THE LOT 1 AND LOT 2 SYSTEMS WILL EXCEED THE MINIMUM REQUIREMENTS FOR THE ENTIRE SITE/SUBDIVISION. SUCH THAT TREATMENT FOR THE LOT 3 BUILDING WILL NOT BE REQUIRED.



PHASING PLANS - PHASE 2 (PHASE 1 ALT.)

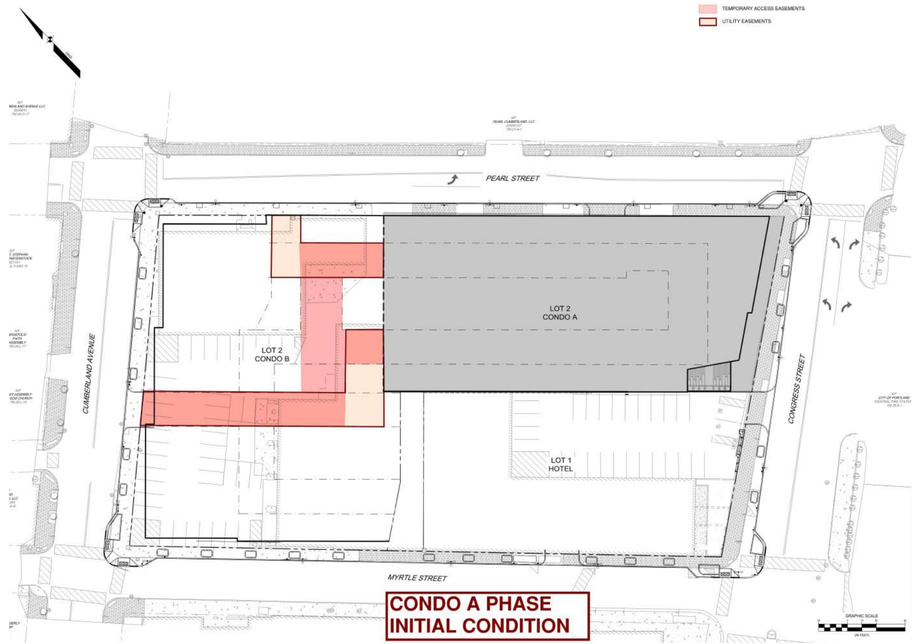
LOT 2 (CONDO A)

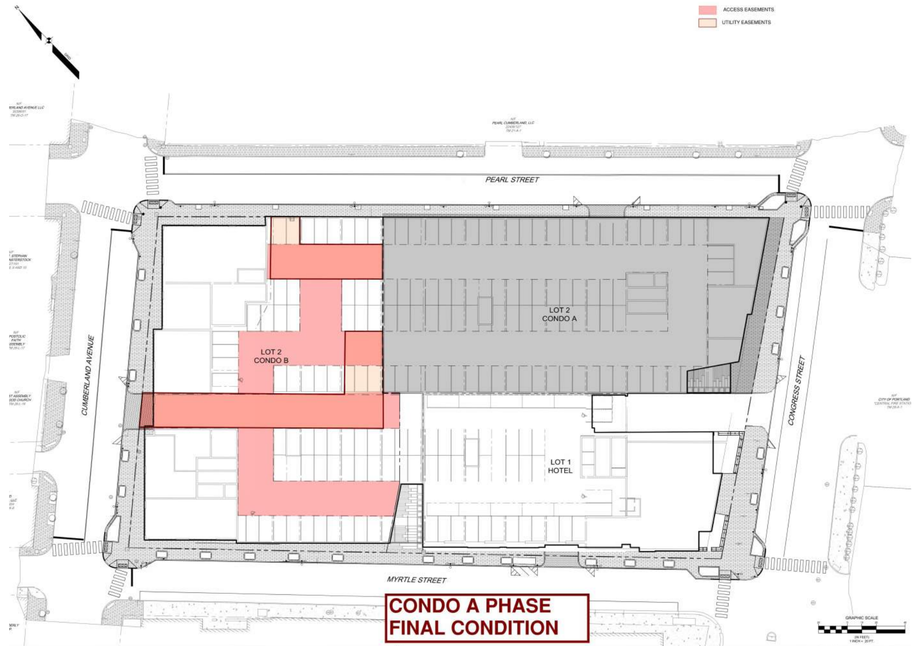
ACCESS AND UTILITY EASEMENTS AND CONSIDERATIONS

- THE SUBDIVISION PLANS SUBMITTED WITH THE CONDO A SITE AND SUBDIVISION APPLICATION WILL IDENTIFY ACCESS AND UTILITY EASEMENTS ACROSS THE LOT 3, INCLUDING:.
  - ACCESS AND UTILITY EASEMENTS ACROSS LOT 3 PRIOR TO CONSTRUCTION OF THE LOT 3 (CONDO B/CONDO C) BUILDING. THESE WILL OCCUR AT GROUND LEVEL FOR ACCESS TO THE LOWER PARKING LEVEL IN THE LOT 2 (CONDO A) BUILDING AND FOR THE CONSTRUCTION OF STORM DRAINS AND SEWERS
  - PERMANENT ACCESS AND UTILITY EASEMENTS THROUGH THE LOT 3 ((CONDO B/ CONDO C) BUILDING ONCE THE CONDO B/CONDO C BUILDING IS CONSTRUCTED TO ALLOW FOR SHARED PARKING FOR THE CONDOMINIUMS

INTERIM CONDITION OF REMAINING LAND

- THE APPLICANT IS REQUESTING THAT THE MASTER DEVELOPMENT PLAN APPROVAL ALLOW FOR THE UNDEVELOPED AREAS OF THE SITE REMAIN A SURFACE PARKING LOT, WITH MINIMAL IMPROVEMENTS FOR A DURATION OF UP TO 24 MONTHS FROM THE TIME ONE PHASE IS COMPLETE (CERTIFICATE OF OCCUPANCY) UNTIL A SITE PLAN APPLICATION IS SUBMITTED FOR THE ADJACENT PARCEL OR PHASE.
- IF THE APPLICANT DOES NOT SUBMIT A SITE PLAN APPLICATION FOR THE NEXT PHASE OF WORK WITHIN THE 24 MONTH “GRACE PERIOD”, THEN THE APPLICANT WILL MAKE IMPROVEMENTS TO THE REMAINING PARCEL CONSISTENT WITH THE DESIGN STANDARDS FOR A MORE PERMANENT SURFACE PARKING LOT.

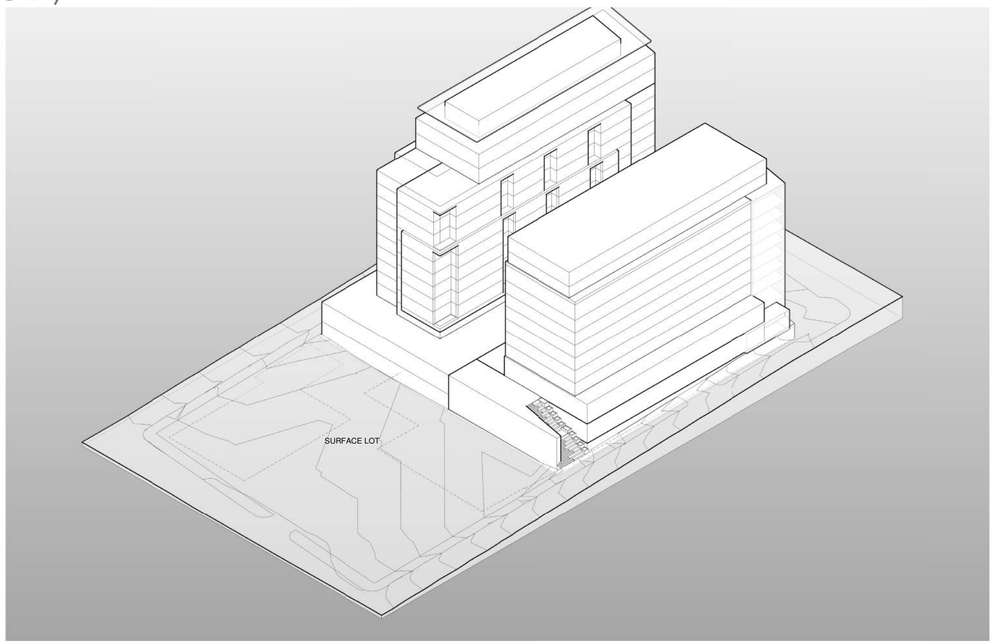


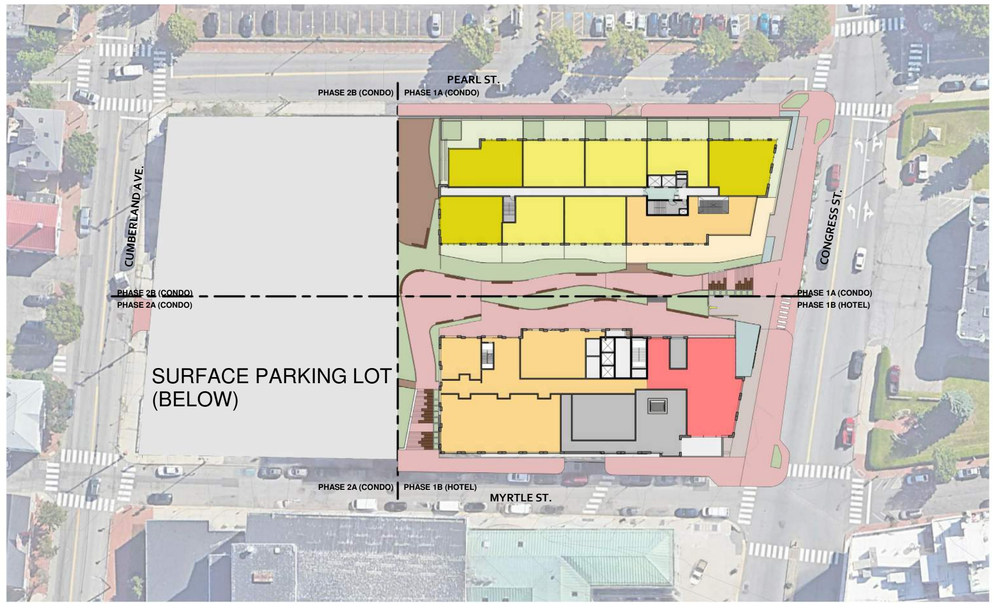


PHASING PLANS - PHASE 1 & 2 COMPLETE

LOT 1 HOTEL + LOT 2 (CONDO A)

ONCE THE LOT 1 HOTEL AND LOT 2 (CONDO A) PHASES HAVE BEEN BUILT, THE AMENITY TERRACE WILL BE OPEN TO THE PUBLIC. LOT 3 WILL REMAIN AS A TEMPORARY SURFACE PARKING LOT UNTIL THAT PHASE OF CONSTUCTION IS READY TO MOVE FORWARD.





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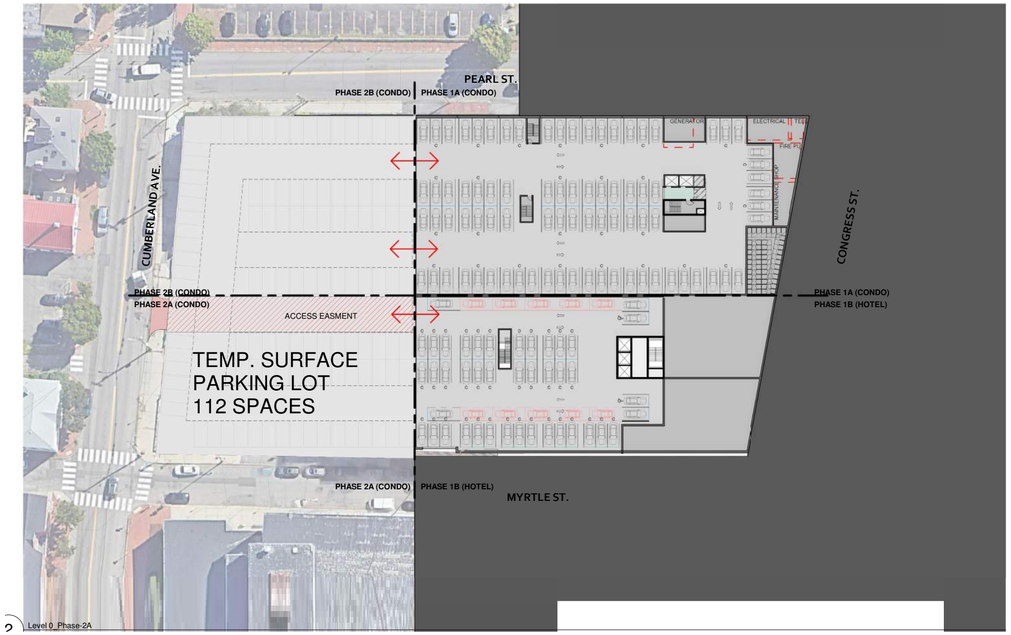
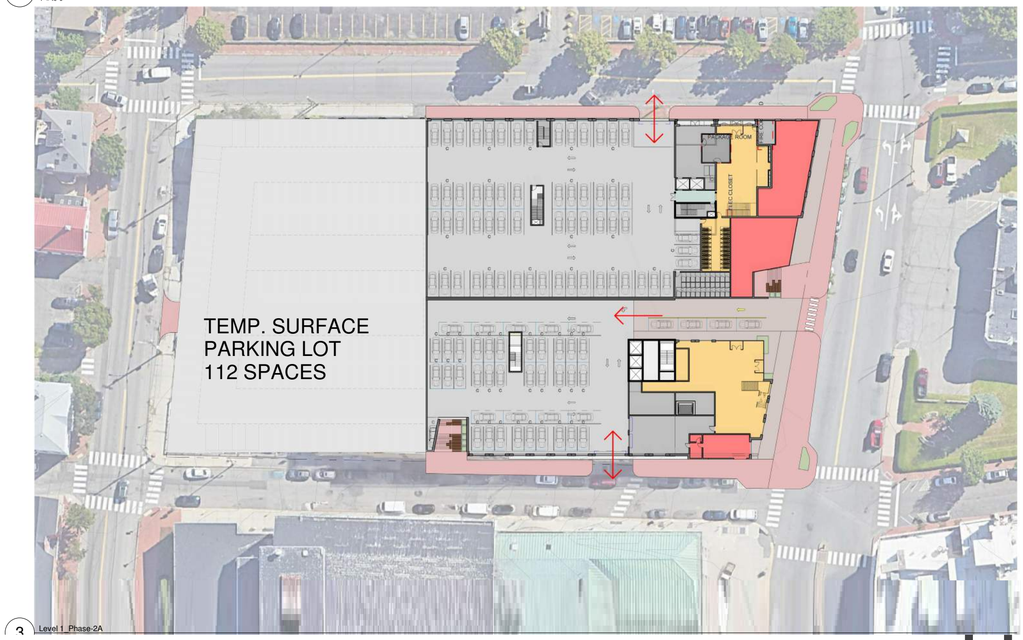


2 Level 0_Phase-2A



3 Level 1_Phase-2A

PHASING PLANS - PHASE 3

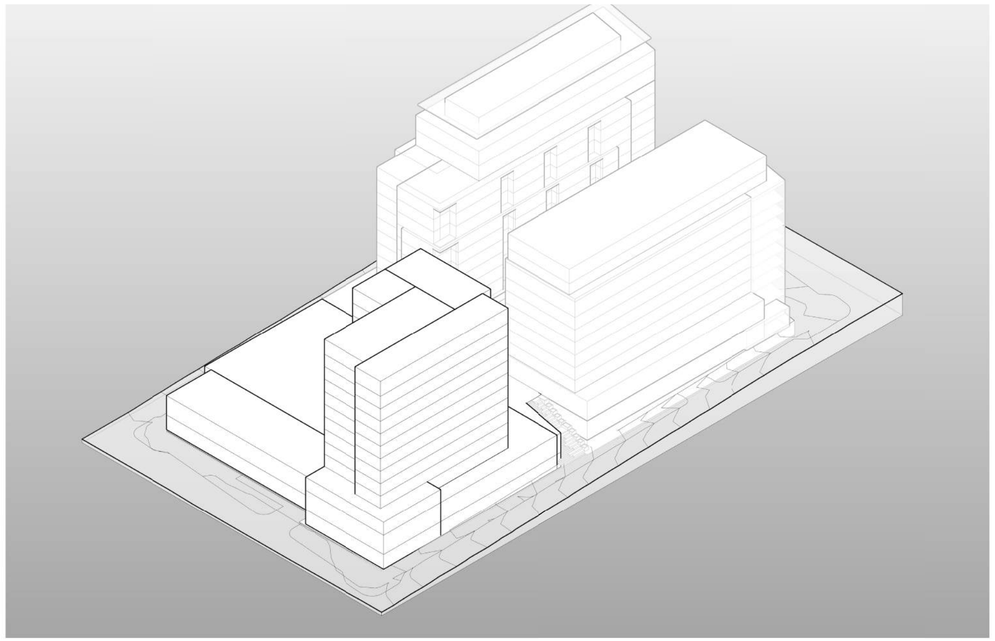
LOT 3 (CONDO B)

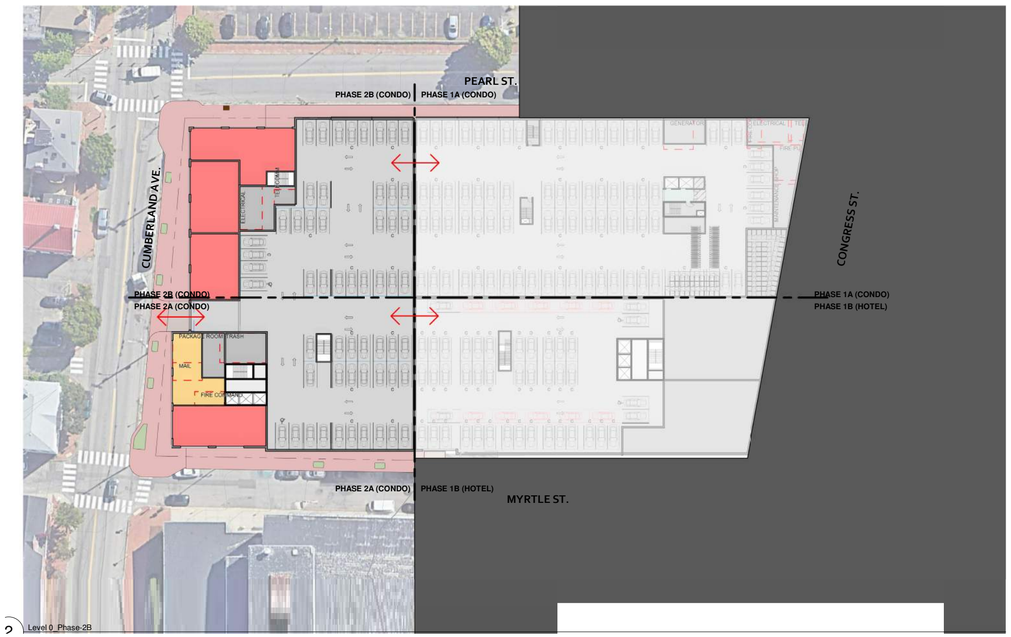
LOT 2 CONDO B BUILDING CONSTRUCTION:

- CONSTRUCTION OF THE REMAINING CONDOMINIUM LEVEL 0 AND LEVEL 1 PARKING DECKS ON LOT 2
- CONSTRUCTION THE CONDOMINIUM TOWER AT THE CORNER OF MYRTLE STREET AND CUMBERLAND AVENUE
- CONSTRUCTION OF THE PRIVATE AMENITY DECK FOR THE CONDO B UNITS.
- AMENITY DECK AREAS ADJACENT TO THE CONDO B TOWER WILL BE COMPLETED IN THEIR FINAL LANDSCAPED CONDITION.
- AREAS OF THE FUTURE CONDO C TOWER FOOTPRINT WILL INCLUDE A TEMPORARY ROOF TREATMENT.

STREET AND SIDEWALK CONSTRUCTION:

- THE PROPOSED CURB IMPROVEMENTS ON PEARL STREET, CUMBERLAND AVENUE AND MYRTLE STREET ALONG THE REMAINING FRONTAGE OF LOT 2 WILL BE CONSTRUCTED INCLUDING CROSSWALKS AND CURB EXTENSIONS AT THE INTERSECTION OF PEARL STREET AND MYRTLE STREET WITH CUMBERLAND AVENUE.
- FINAL BRICK SIDEWALKS WILL BE INSTALLED ON MYRTLE STREET AND ON CUMBERLAND AVENUE UP TO DRIVEWAY ON CUMBERLAND AVENUE WILL BE CONSTRUCTED
- THE REMAINING SIDEWALKS ALONG THE FRONTAGE OF THE CONDO C TOWER ON CUMBERLAND AVENE AND PEARL STREET MAY REMAIN AS TEMPORARY BITUMINOUS SIDEWALKS FOR A PERIOD OF UP TO 24 MONTHS ANTICIPATING THE CONDO C CONSTRUCTION
- STREET LIGHTING ALONG CONDO B'S FRONTAGE WILL BE INSTALLED INCLUDING LIGHTS ON MYRTLE STREET, CUMBERLAND AVENUE, AND PEARL STREET





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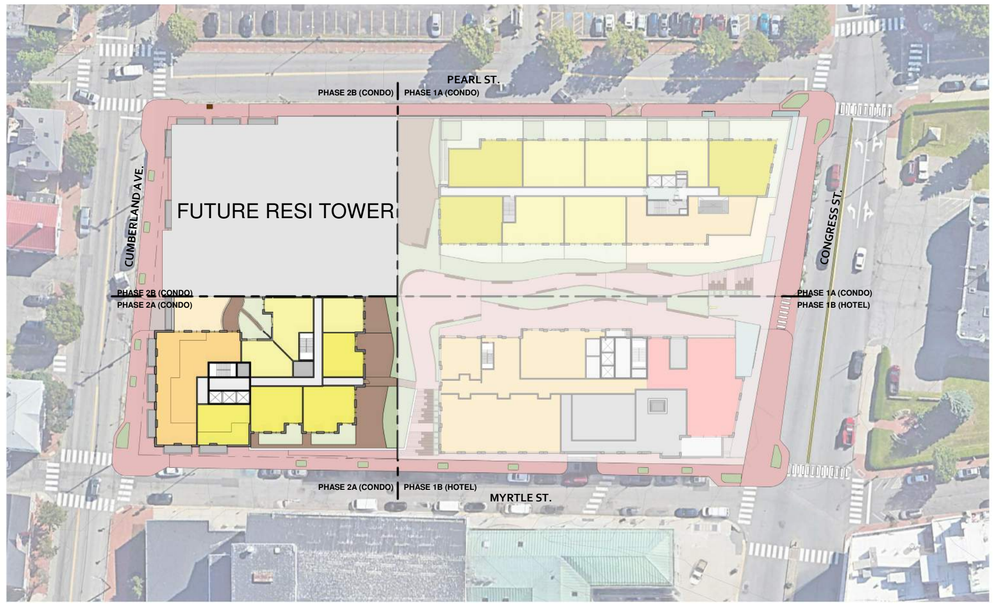

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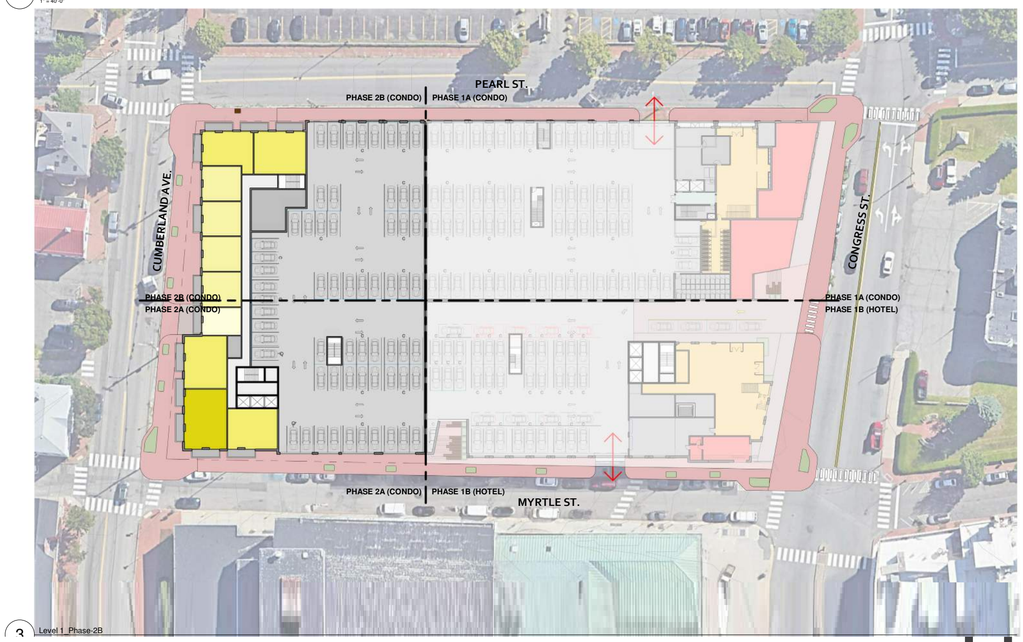


3 Level 1_Phase-2B

PHASING PLANS - PHASE 3

LOT 3 (CONDO B)

SITE DEMOLITION

- THE TWO EXISTING BUILDINGS ON THE SITE WILL BE HAVE BEEN DEMOLISHED IN THE FIRST PHASE OF CONSTRUCTION IN WITH EITHER THE LOT 1 HOTEL OR THE LOT 2 (CONDO A) BUILDING
- SITE DEMOLITION FOR LOT 3 (CONDO B) WILL BE LIMITED TO REMOVALS OF SURFACE PARKING AND SITE IMPROVEMENTS WITHIN THE REMAINING UNDEVELOPED AREAS OF LOT 3

STREET DEMOLITION

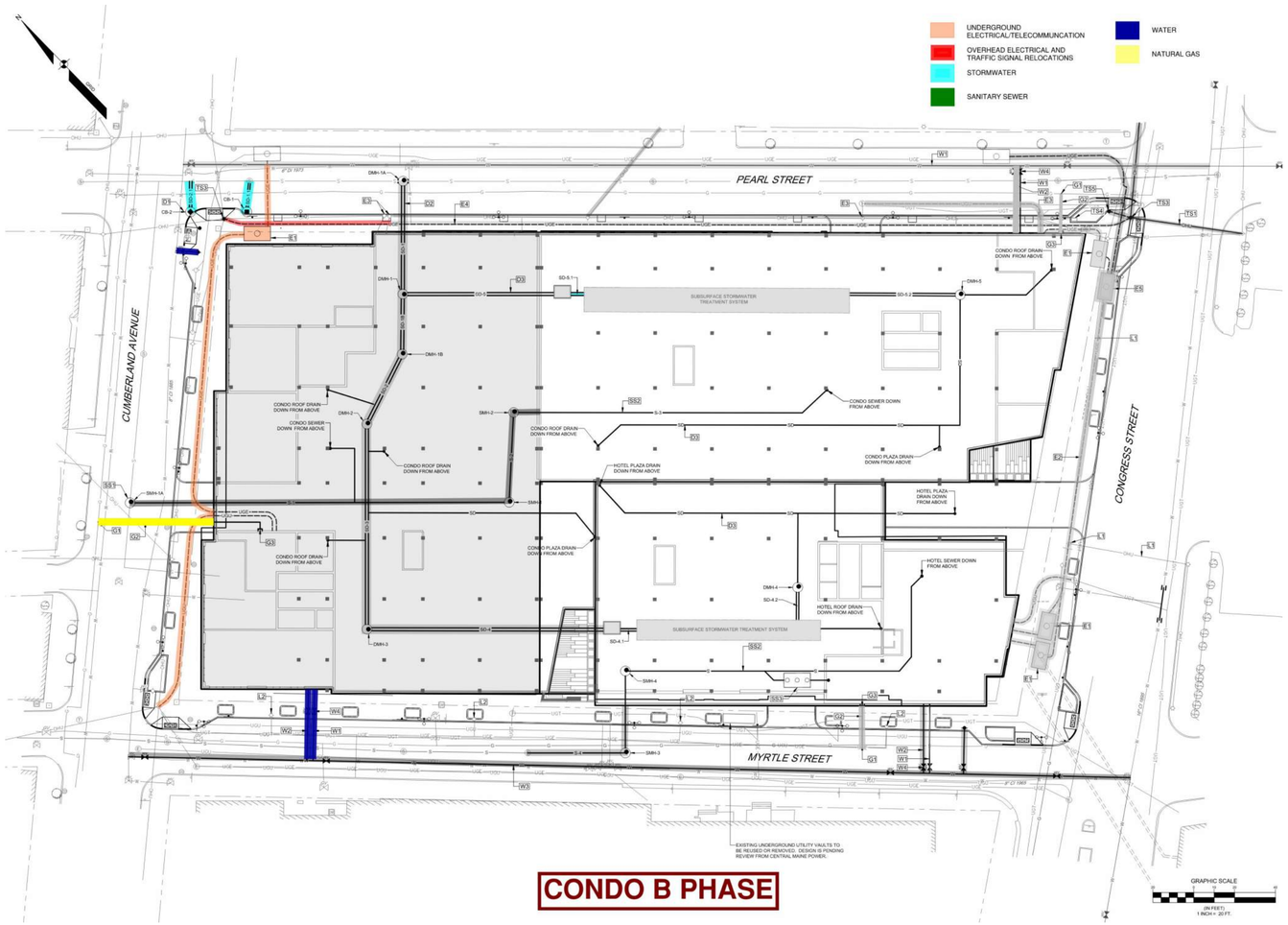
- THE EXISTING SIDEWALK AND CURBING ALONG THE FRONTAGE OF LOT 3 (CONDO B) ON PEARL STREET, MYRTLE STREET AND CUMBERLAND AVENUE
    - REMOVE CURB AND SIDEWALK ALONG ACROSS THE FRONTAGE OF LOT 3
    - REMOVE AND REPLACE/RELOCATE THE TRAFFIC AND PEDESTRIAN SIGNALS AT PEARL STREET/ CUMBERLAND AVENUE
    - RELOCATE REMAINING OVERHEAD UTILITIES ON PEARL STREET UNDERGROUND ACROSS THE FRONTAGE OF LOT 3
    - THE EXISTING OVERHEAD UTILITIES ON CUMBERLAND AVENUE ARE ANTICIPATED TO REMAIN, PENDING FINAL BUILDING DESIGN AND CONSULTATION/COORDINATION WITH CMP.

UTILITIES

- THE LOT 3 (CONDO B) UTILITY WORK WILL INCLUDE:
- THE BUILDING SEWERS WILL BE CONNECTED INTERNALLY TO THE ON-SITE SEWER CONSTRUCTED IN THE LOT 2 (CONDO A) PHASE, NO NEW STREET CONNECTIONS WILL BE REQUIRED.
- FIRE AND DOMESTIC WATER SERVICES WILL BE TAKEN FROM THE MAIN IN MYRTLE STREET, CONSTRUCTED AS PART OF THE LOT1 CONSTRUCTION
- GAS SERVICE WILL BE PROVIDED FROM A MAIN IN CUMBERLAND AVENUE OR MYRTLE STREET ALONG CONDO B'S FRONTAGE. THE LOCATION OF THE SERVICE IS TO BE DETERMINED IN COORDINATION WITH UNITIL AND WILL BE PRESENTED ON THE CONDO B SITE PLANS
- ELECTRICAL SERVICE WILL BE TAKEN FROM CMP MANHOLES CONSTRUCTED IN 2020-2021 IN PEARL STREET AT CUMBERLAND AVENUE. A NEW CMP MANHOLE WILL BE INSTALLED ALONG THE LOT 3 (CONDO B) FRONTAGE ON PEARL STREET OR CUMBERLAND AVENUE.
- PRIMARY POWER WILL BE BROUGHT TO THIS MANHOLE AND THEN DISTRIBUTED TO SERVE TWO (2) SIDEWALK TRANSFORMER VAULTS; ONE EACH FOR THE LOT 3 (CONDO B) AND LOT 3 (CONDO C) PHASES AT THE CORNER OF PEARL STREET AND CUMBERLAND AVENUE.
- THE POLE MOUNTED TRANSFORMER SERVING THE TOP OF THE OLD PORT PARKING LOT WILL BE REMOVED, THE EXISTING OVERHEAD SERVICE TO THE TOP OF THE OLD PORT LOT WILL BE REPLACED UNDERGROUND FROM EITHER ONE OF THE NEW LOT 3 SIDEWALK TRANSFORMERS OR FROM AN OVERHEAD TRANSFORMER LOCATED ON PEARL STREET AT CUMBERLAND AVENUE.
- TELECOMMUNICATION SERVICE WILL BE TAKEN FROM PEARL STREET OR MYRTLE STREET FOR LOT 3 (CONDO B AND CONDO C). LOCATION TO BE DETERMINED.

STORMWATER MANAGEMENT

- LOT 3'S STORMWATER TREATMENT REQUIREMENTS WILL BE MET BY THE SYSTEM CONSTRUCTED IN THE LOT 2 (CONDO A) PHASE AND LOT 1 HOTEL PHASES
- THE LOT 3 (CONDO B/CONDO C) BUILDING'S ROOF DRAINS WILL BE CONNECTED INTERNAL TO THE SITE TO THE STORM DRAIN SERVICE LINE CONSTRUCTED ON LOT 3 DURING THE LOT 2 (CONDO A) WORK.
- CATCH BASINS LOCATED IN THE STREET AT MYRTLE STREET/CUMBERLAND AVENUE AND PEARL STREET/CUMBERLAND AVENUE WILL BE REPLACED TO ACCOMMODATE THE NEW CURB EXTENSIONS.



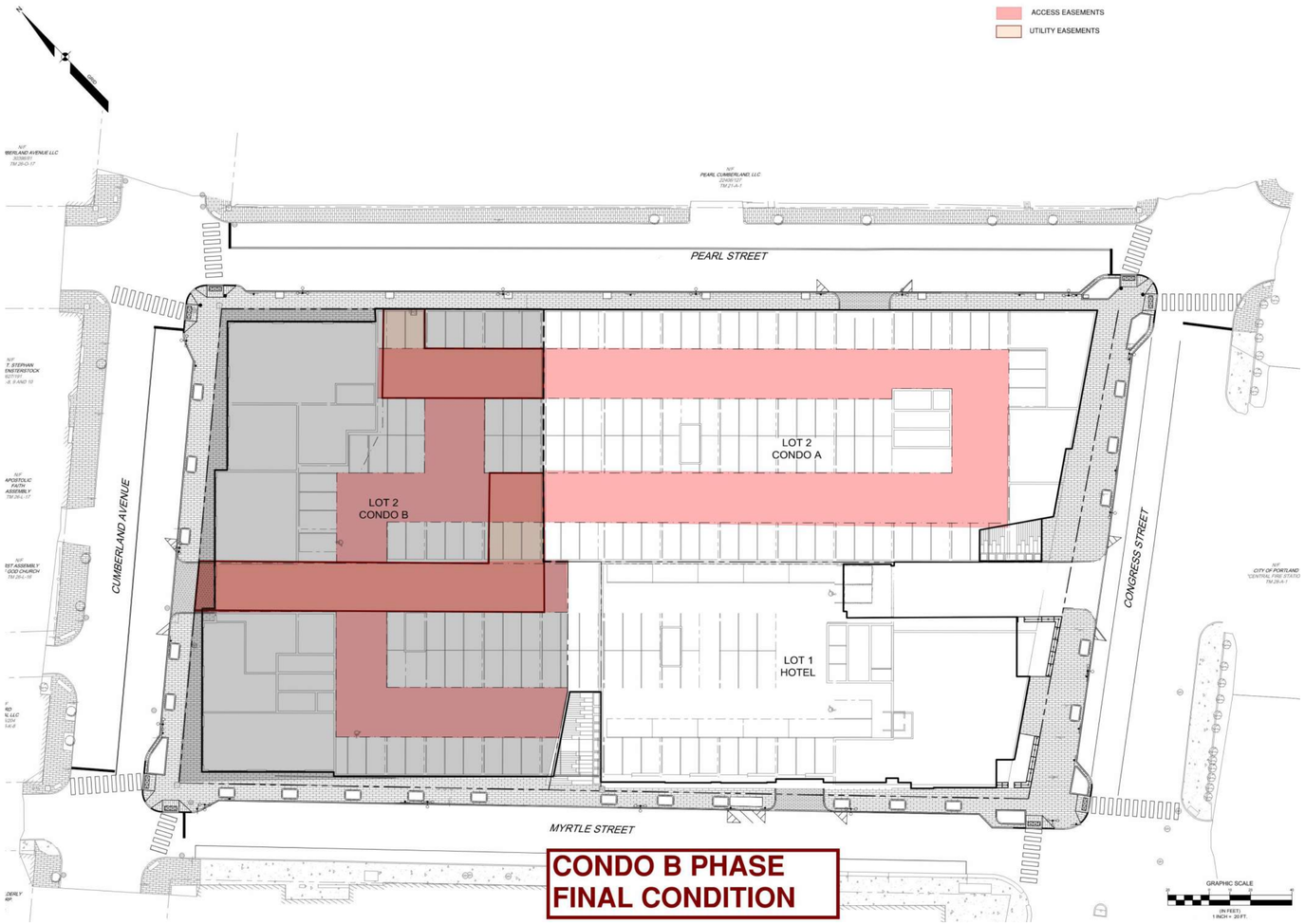
CONDO B PHASE

PHASING PLANS - PHASE 3

LOT 3 (CONDO B)

ACCESS AND UTILITY EASEMENTS AND CONSIDERATIONS

- THE SUBDIVISION PLANS SUBMITTED WITH THE LOT 1 HOTEL AND CONDO A APPLICATIONS WILL IDENTIFY ACCESS AND UTILITY EASEMENTS ACROSS CONDO B, BENEFITTING LOT 1 CONDO A. THE EASEMENTS WILL HAVE ADDRESSED THREE CONDITIONS:
- ACCESS AND UTILITY EASEMENTS FOR ACCESS ACROSS LOT 2 PRIOR TO CONSTRUCTION OF THE CONDO B BUILDING. THESE WILL OCCUR AT LEVEL 0 FOR ACCESS TO THE LEVEL 0 PARKING ON THE LOT 1 HOTEL SITE AND CONDO A BUILDING AND FOR THE CONSTRUCTION OF STORM DRAINS AND SEWERS.
- PERMANENT ACCESS AND UTILITY EASEMENTS THROUGH THE CONDO B BUILDING AT LEVEL 0 BENEFITTING LOT 1 AND CONDO A ADDRESSING THE FINAL BUILDOUT CONDITION.
- PERMANENT CROSS ACCESS EASEMENTS THROUGH CONDO A AND CONDO B AT LEVEL 0 AND LEVEL 1 TO ALLOW SHARED CONDOMINIUM PARKING
- DURING THE CONSTRUCTION OF CONDO B, TEMPORARY ACCESS TO THE LOWER-LEVEL PARKING ON LOT 1 AND CONDO A WILL BE PROVIDED ACROSS THE CONDO B SITE BY AGREEMENT BETWEEN THE OWNERS. ACCESS DURING CONSTRUCTION WILL BE MAINTAINED BY THE CONTRACTOR AND WILL BE RELOCATED AS THE CONSTRUCTION PROGRESSES. ANY TEMPORARY ACCESS AGREEMENTS WILL SUNSET UPON CERTIFICATE OF OCCUPANCY FOR THE CONDO B BUILDING AND BE REPLACED BY THE PERMANENT EASEMENTS APPROVED AS PART OF THE CONDO B SITE PLAN AND AMENDED SUBDIVISION REVIEW.



PHASING PLANS - PHASE 4

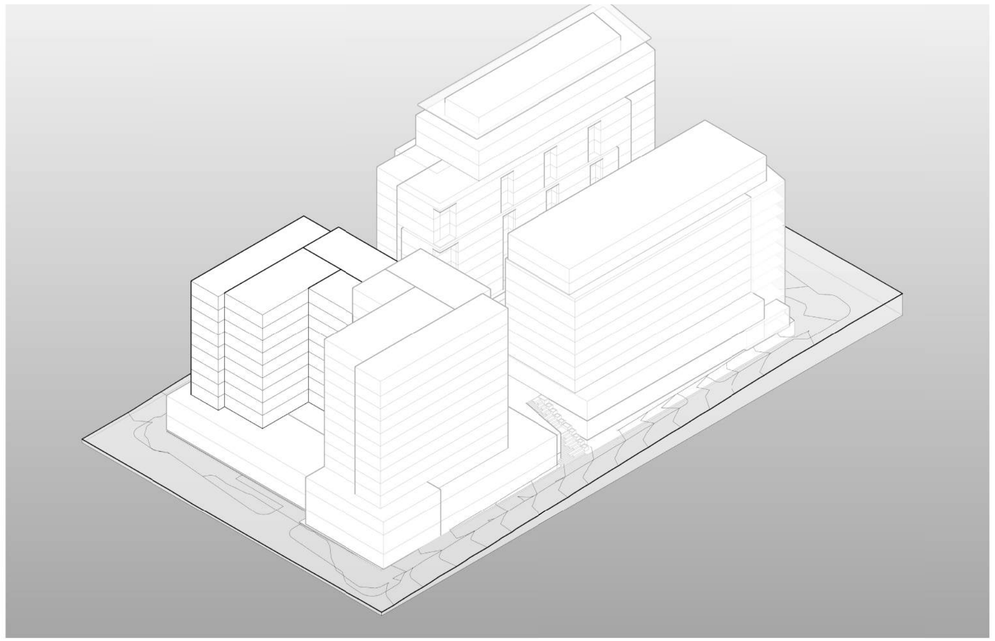
LOT 3 (CONDO C)

LOT 3 (CONDO C) BUILDING CONSTRUCTION:

- CONSTRUCTION OF THE BUILDING LOT 3 (CONDO C) CONDOMINIUM TOWER AT THE CORNER OF PEARL STREET AND CUMBERLAND AVENUE.
- CONDO C IS A VERTICAL EXPANSION ABOVE THE CONDO B STREET LEVEL PODIUM
- THE REMAINING AMENITY DECK AREAS WITHIN LOT 3 (CONDO C) WILL BE CONVERTED FROM THEIR TEMPORARY CONDITION TO THEIR FINAL LANDSCAPED POSITION

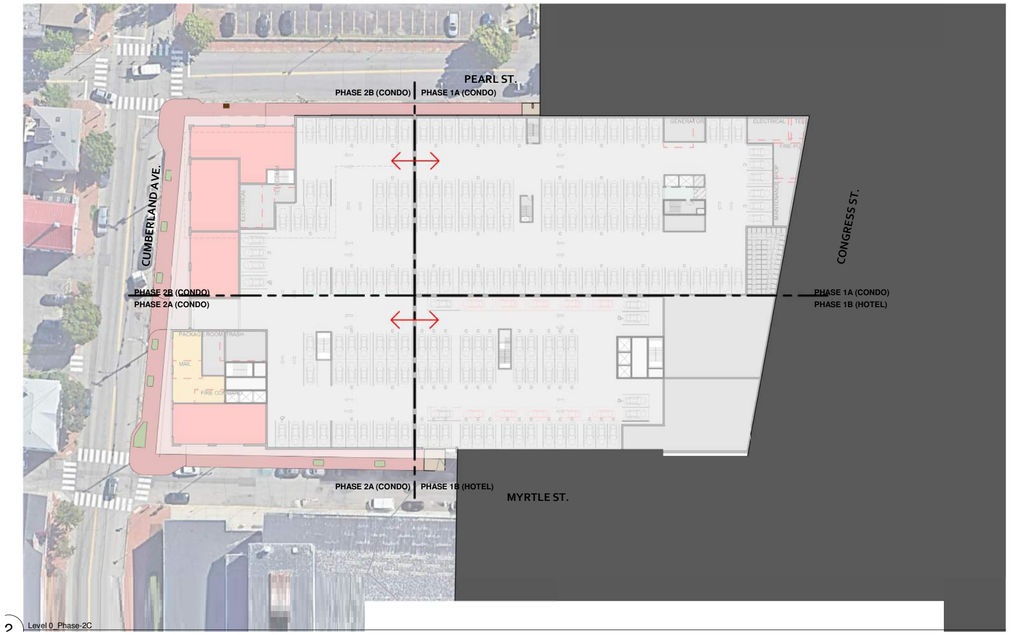
LOT 3 (CONDO C) STREET AND SIDEWALK CONSTRUCTION:

- STREET UTILITY CONSTRUCTION FOR CONDO C WILL HAVE BEEN COMPLETED IN THE CONDO B PHASE
- ANY TEMPORARY SIDEWALKS ALONG THE FRONTAGE OF CONDO C WILL BE REMOVED AND COMPLETED AS PART OF THE CONDO C CONSTRUCTION

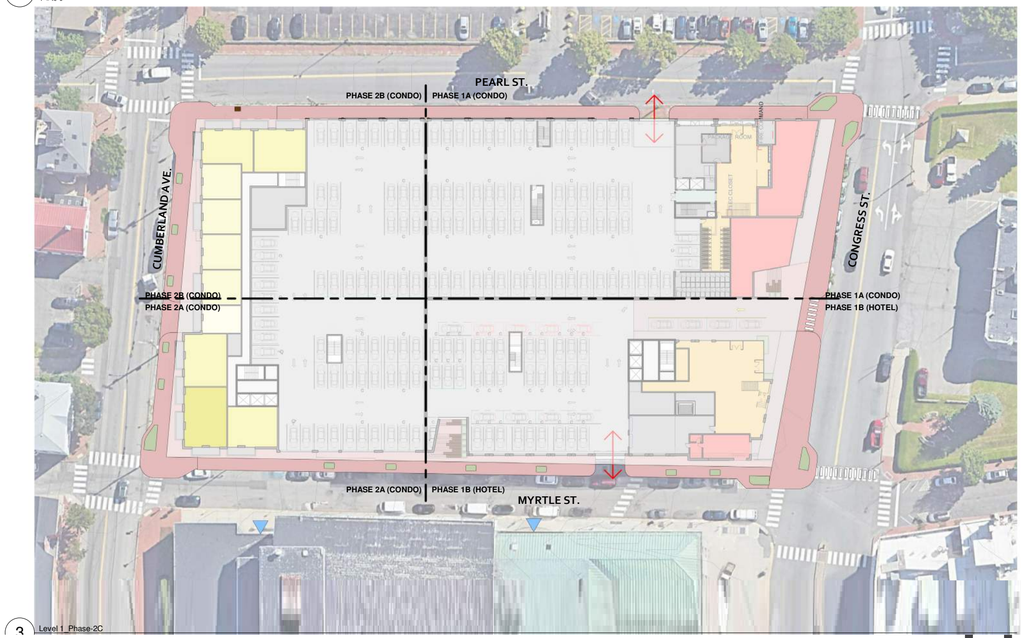




4 Level 2_Phase-2C
1" = 40'-0"



2 Level 0_Phase-2C



3 Level 1_Phase-2C

PHASING PLANS - PHASE 4

LOT 3 (CONDO C)

SITE DEMOLITION

- THE LOT 3 (CONDO C) TOWER IS TO BE CONSTRUCTED ABOVE THE LEVEL 0 AND LEVEL 1 PODIUM CONSTRUCTED IN THE LOT C (CONDO B) PHASE. NO ADDITION SITE DEMOLITION IS ANTICIPATED.
- STREET DEMOLITION
- STREET DEMOLITION ALONG LOT 3'S FRONTAGE WILL HAVE BEEN COMPLETED IN THE CONDO B PHASE. ANY TEMPORARY SIDEWALKS CONSTRUCTED IN THE CONDO B PHASE WILL REMOVED AND REPLACED WITH BRICK SIDEWALKS.

UTILITIES

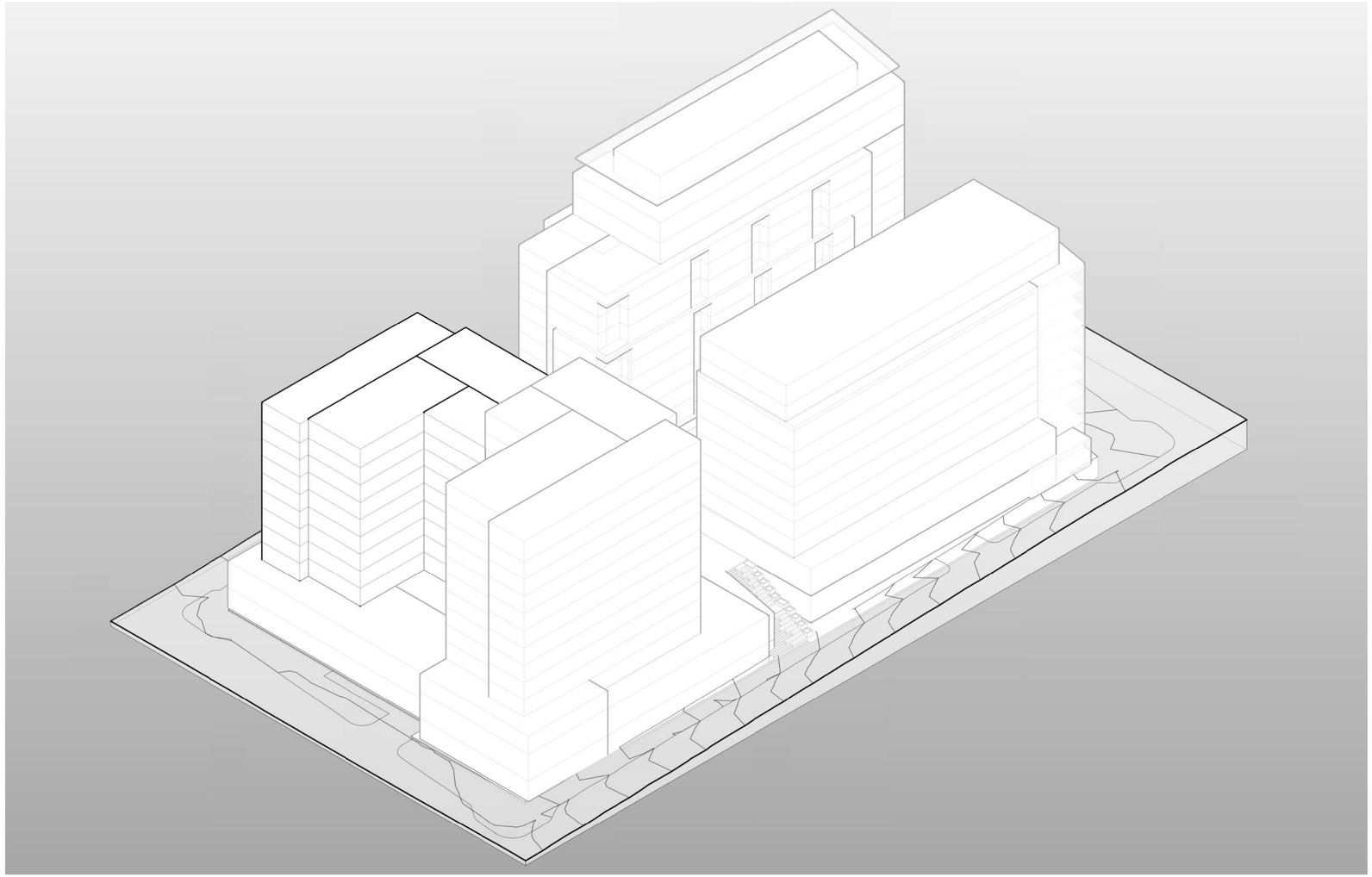
- THE CONDO C UTILITY WORK WILL INCLUDE PRIMARILY INTERNAL CONNECTIONS TO SERVICES INSTALLED IN THE CONDO B PHASE
- THE BUILDING SEWERS WILL BE CONNECTED INTERNALLY TO THE ON-SITE SEWER CONSTRUCTED FOR CONDO B, NO NEW STREET CONNECTION WILL BE REQUIRED.
- FIRE AND DOMESTIC WATER SERVICES WILL BE TAKEN FROM THE MAIN IN PEARL STREET, CONSTRUCTED AS PART OF THE CONDO B CONSTRUCTION.
- GAS SERVICE WILL BE PROVIDED FROM A MAIN IN CUMBERLAND AVENUE OR MYRTLE STREET ALONG CONDO B'S FRONTAGE. THE LOCATION OF THE SERVICE IS TO BE DETERMINED IN COORDINATION WITH UNITIL AND WILL BE PRESENTED ON THE CONDO B/CONDO C SITE PLANS. IT IS ANTICIPATED THAT SERVICE FOR CONDO B AND CONDO C WILL BE STUBBED OUT OF THE STREET IN PRECEDING PHASES.
- ELECTRICAL SERVICE WILL BE TAKEN FROM CMP MANHOLES CONSTRUCTED IN THE CONDO B PHASE
- TELECOMMUNICATION SERVICE WILL BE TAKEN INTERNALLY FROM INFRASTRUCTURE INSTALLED IN THE CONDO B PHASE

STORMWATER MANAGEMENT

- ALL OF THE SUBDIVISION'S REQUIRED TREATMENT WILL HAVE BEEN CONSTRUCTED IN THE LOT 1 HOTEL AND LOT 2 (CONDO A) PHASE OF THE PROJECT
- THE CONDO C TOWER'S BUILDING'S ROOF DRAINS WILL BE CONNECTED INTERNAL ON SITE TO THE STORM DRAIN SERVICE LINES CONSTRUCTED IN PRIOR PHASES.

ACCESS AND UTILITY EASEMENTS AND CONSIDERATIONS

- THE SUBDIVISION PLANS SUBMITTED WITH THE LOT 3 (CONDO B) APPLICATION WILL HAVE IDENTIFIED ACCESS AND UTILITY EASEMENTS.
- WHEN LOT 3 (CONDO B) IS CONSTRUCTED ALL OF THE LEVEL 0 AND LEVEL 1 INFRASTRUCTURE WILL BE IN PLACE, BUILDING CONSTRUCTION WILL OCCUR ABOVE THESE LEVELS AND NEW OR REVISED EASEMENTS ARE NOT ANTICIPATED AS PART OF CONDO C'S CONSTRUCTION.



cbt