

PLANNING BOARD

Tuesday, June 24, 2025 at 4:30 PM
Room 24 (Ground Level of City Hall) and
Zoom



MEMBERS

Brandon Mazer, Chair
David Silk, Vice Chair
Michael Fox
Nicholas Messina
Kelsey Robertson
Austin Smith
Joseph Zamboni

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AGENDA:

PUBLIC HEARING - 4:30 PM

1. ROLL CALL AND DECLARATION OF QUORUM

2. COMMUNICATION AND REPORTS

3. REPORT OF ATTENDANCE AT THE MEETING HELD ON JUNE 10, 2025

Workshop

1584 Forest Avenue: Fox, Mazer, Messina, Robertson, Smith, and Zamboni present. Silk absent.

4. REPORTS OF DECISIONS AT THE MEETING HELD ON JUNE 10, 2025 (THERE WERE NO ITEMS TO REPORT ON)

5. NEW BUSINESS

- i. Major Site Plan; 61 Preble Street; 60 Elm Street, LLC, Applicant. The Planning Board will hold a hybrid public hearing to consider an application to facilitate the development of Phase 1B of the Bayside Master Development Plan. The application involves the redevelopment of the property at 60 Elm Street from a two-story commercial building with surface parking, into a new 10-story residential building with 217 residential units and ground-level retail. The subject property is zoned B-3 Downtown Business. A project and plan summary are available for viewing on the city's CSS Portal (<https://css.portlandmaine.gov/>) by referencing Plan Number PL-003222-2025.
- ii. Major Site Plan; 1584 Forest Avenue; Acre Properties, Applicant. **This item is being tabled to the July 8, 2025, or the next scheduled Planning Board Meeting.** The Planning Board will hold a hybrid public hearing to consider a major site plan application to facilitate the development of a 50-unit multi-family development with 50 off-street parking spaces on property located at 1584 Forest Avenue, to be accessed via Belfort Street. The subject property totals 66,650 square feet and is zoned RN-5 Residential and B-1 Neighborhood Business. A project and plan summary are available for viewing on the city's CSS Portal (<https://css.portlandmaine.gov/>) by referencing Plan Number PL-003161-2024.

61 Preble Street
Major Site Plan Application
PL-003222-2025
60 Elm Street LLC, Applicant

Submitted to:	Portland Planning Board	Prepared By:	Taylor Colbeth
Public Hearing Date:	June 24, 2025	Date:	June 20, 2025

I. INTRODUCTION

Reveler Development has submitted a Major Site Plan application to facilitate the construction of Phase 1B of the Bayside Master Development Plan (MDP). Phase 1B proposes to merge the 60 and 62 Elm Street parcels to facilitate the construction of a 10-story, mixed-use development containing 217 dwelling units, 2,000 square feet of ground-level retail space, and residential open space at 61 Preble Street. The subject property is located within the B-3 Downtown Business zone and the Bayside Height Overlay Zone.

The applicant received approval from the Planning Board for a Major Amendment for the previously approved Bayside MDP (PL-003223-2025) on Tuesday, May 13th, 2025. As part of the amendment, Phase 1b has been relocated from 1966 Lancaster Street to 61 Preble Street. Additionally, the building that was previously shown to be preserved at 62 Elm Street is now proposed to be demolished to enable the construction of 61 Preble Street.

This application is being referred to the Planning Board for compliance with the City of Portland's Land Use Code Site Plan Standards, Section 14.6, as contained within the City's Land Use Code at the time the MDP application was originally approved, in June of 2023.

The Planning and Urban Development Department mailed 99 notices advertising this meeting to property owners within 500 feet of the site. A legal advertisement ran in the June 12, 2025 and June 13, 2025 editions of the Portland Press Herald.

Applicant: 60 Elm Street LLC

Applicant Representatives: Acorn Engineering, Market Square Architects



Figure 1. An aerial view of the existing site

II. PROJECT DATA

<i>Review</i>	<i>Applicable Standards</i>
Site Plan	Section 14.6
B-3 Design Standards	Design Manual

<i>Project Data</i>	
Existing Zoning	B-3 Downtown Business
Property Size	26,062 SF
Existing Use	Commercial building & surface parking lot
Proposed Use	Multi-family Residential with Retail

III. PLANNING BOARD WORKSHOP SUMMARY

The Planning Board held an initial workshop on this project on May 13, 2025. Prior workshop materials can be found by visiting <https://portlandme.portal.civicclerk.com/event/7571/files/agenda/16243>. During the workshop, the Board focused primarily on:

1. Unit Configuration.

The applicant has since submitted floor plans for the proposed development. The applicant met with City Staff on May 20, 2025 to go over Inclusionary Zoning requirements and unit configuration of the proposed development. The applicant has also submitted a Workforce Housing Compliance Overview as Attachment W. The applicant will continue to work with the Housing Program Manager to ensure that Inclusionary Zoning requirements are being met for the proposed development.

2. Existing Tenants at 62 Elm Street.

There were concerns about the current tenants at 62 Elm Street. At the prior workshop, the applicant stated that the tenants' leases were up and that they have been informed of the development.

3. **Communication with METRO.**

At the prior workshop, the applicant did indicate that METRO is informed of the proposed project. At this time, there is no additional action required on this item.

4. **Proposed Tree Plantings.**

Questions were raised regarding the applicant's required City Tree Fund contribution and how the funds would be allocated. City staff clarified that the West Bayside neighborhood would be the first priority for the Tree Fund contributions received for this proposed project.

5. **Transportation Demand Management (TDM) Plan.**

The applicant has since provided a TDM Plan that outlines the proposed strategies and incentives to meet mode split targets. Staff's review of the submitted TDM plan can be found under Standard 14.6.1.E. Full documentation of the submitted TDM Plan can be found as Attachment T.

IV. EXISTING CONDITIONS AND SURROUNDING AREA



Figure 2. Street View of the existing conditions as seen from the corner of Oxford and Elm Street

The subject property is located within the Bayside neighborhood and is bounded by Preble Street to the west, Oxford Street to the north, Elm Street to the east, and the Portland Public Market Garage to the south. The lot is zoned B-3 Downtown Business and totals approximately 26,062 square feet. The site is currently occupied by a commercial building and surface parking, and the property is fully impervious.

The area surrounding the subject property features a mixture of residential and commercial uses, along with community open spaces, with Monument Square being located less than a quarter mile from the property. Preble Street is the most active corridor within the development area and is characterized by larger-scale development such as the Schlotter Beck & Foss building, the office building at 34 Preble Street, and the abutting Public Market Garage.

The property is well served by public transportation, with METRO PULSE at Elm Street (Downtown Transportation Center) located approximately 500 feet from the subject property. METRO PULSE serves as a hub for Routes 2, 4, 5, 7, and the Husky Line. Greater Portland METRO bus route 8 runs in close proximity to the proposed development, with a stop located approximately 500 feet from the subject property.

V. PROPOSED DEVELOPMENT

The proposed development involves the construction of a ten-story mixed-use building with 217 residential units, 2,000 square feet of ground-level commercial space, and two residential open spaces, including a courtyard along the property's Oxford Street frontage.

Sidewalks along the property frontage are proposed to be reconstructed, along with the sidewalk on the opposite side of Oxford Street to facilitate the undergrounding of utilities. Additionally, a total of twelve street trees are proposed along all property frontages. The applicant is also proposing seven additional on-street parking spaces along Oxford Street.

The ground floor of the building would feature a commercial space, residential lobby area, bicycle storage room, bathrooms, and various utility rooms.

Additionally, a courtyard area with six shade trees and access to the residential and commercial ground floor space is proposed along Oxford Street. The second floor would feature a fitness center, community space, and residential units, with the remaining floors consisting entirely of residential units.



Figure 3. Rendering as seen from the corner of Preble and Oxford

VI. RIGHT, TITLE, & INTEREST

The applicant has demonstrated sufficient right, title and interest to the parcel involved in this application. The subject lot was conveyed with associated rights on June 1, 2023. Conveyance of this parcel is recorded in the Cumberland County Registry of Deeds Book 31303, Page 272. Full Right, Title and Interest documentation is included as Attachment D.

VII. FINANCIAL & TECHNICAL CAPACITY

The applicant has provided a status of good standing from the Secretary of State and a letter of good standing from their financial institution. Acorn Engineering is an experienced engineering firm that specializes in civil/site design, environmental services, municipal consulting, and construction administration and has demonstrated experience completing projects of similar scale throughout Portland. Full financial and technical capacity documentation is included as Attachments G and H.

VIII. ZONING ANALYSIS

The subject property is located within the B-3 Downtown Business zone. The purpose of the B-3 zone is to maintain and enhance the role of the downtown as the business and commercial center of the region and to encourage increased housing opportunity downtown for a diverse residential population.

Standard	Required	Proposed
Lot area (min)	None	65,375
Street frontage	None	343 ft
Build-to zone	0-10 ft	1.62 ft
Build-to Percentage	100%	100%
Building length as a percentage of street frontage (min)	60%	86.8%
Blank wall area (max)	20 ft	12 ft
Front yard maximum	10 ft	9.77 ft
Rear setback	None	13.86 ft
Yard right	None	27.17 ft
Yard left	None	15.17 ft
Structure height (max)	75 ft	67.85 ft
Maximum lot coverage	None	56.46%
Open space	None	35.96%
Impervious surface ratio (max)	None	64.04%

A. Inclusionary Zoning

New residential projects with 10 or more dwelling units are subject to the City's Inclusionary Zoning (IZ) requirements, which mandate that 25% of new units be designated as workforce housing—affordable to households earning 80% of the Area Median Income (AMI). The applicant is meeting the IZ requirements for future market-rate units within the Master Development Plan (MDP) area by utilizing the off-site provision, through the 201 affordable units approved as part of Phase 1A at 89 Elm Street. The City has drafted multiple conditions of approval associated with the project's inclusionary zoning requirements, including the provision of updated floor plans depicting the location of the proposed workforce units; and a standard condition that the applicant enter into a workforce housing agreement with the City.

IX. SITE PLAN 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

A traffic movement permit (TMP) was previously approved for Phases 1-2 of the Bayside MDP. The applicant has updated the trip generation as part of this Major Site Plan application which demonstrated a net reduction in trips due to the removal of the existing land uses at 60-62 Elm Street. The applicant has provided supporting documentation for the Land Use Code (LUC) 720 – *Medical-Dental Office Building* for the trip credit applied in the trip generation estimation. The updated trip generation has been reviewed by the City’s third-party traffic engineer and has been deemed appropriate. The estimated trip generation is not anticipated to have a significant impact or substantially increase congestion on the surrounding street systems.

The previously approved TMP had three conditions of approval that focused on on-site and off-site mitigation measures. As part of these conditions of approval, the applicant is required to replace the sidewalks along Cedar Street from Oxford Street to Lancaster Street. Additionally, the applicant is required to conduct an Oxford Street two-way conversion feasibility analysis between Elm Street and Pearl Street. If the analysis determines the conversion is feasible, the applicant is responsible for the implementation of all work necessary. The last condition of approval is implementing all on-site and off-site mitigation measures as outlined in the TMP. See Attachment S3 for the approved TMP. The applicant has acknowledged these conditions of approval and will address them accordingly.

Finding of Fact: Based on the submitted application materials, the project's description of components intended to mitigate impacts on the surrounding street system, and the recommended conditions of approval, this standard is determined to be met.

B. Access and circulation

The applicant is proposing main entrances to the residential lobby and commercial space accessible from the internal courtyard and along Oxford Street. There are additional entrances to the residential spaces accessible along Preble Street and Elm Street. Additionally, the applicant is proposing to reconstruct the sidewalk along all property frontages. The sidewalk and ADA ramps on the opposite side of Oxford Street are also proposed to be reconstructed as part of this project to facilitate the undergrounding of utilities.

All existing on-street parking spaces along Preble Street and Oxford Street are proposed to remain. Additionally, one 30-minute commercial vehicle loading zone is proposed on Preble Street near the depicted trash room. The applicant anticipates that the proposed loading space will be utilized for commercial deliveries, trash pickup, and move-in/move-out operations. The applicant anticipates that trash pickup will occur two to three times a week, depending on demand. Staff had previously requested additional information on the tree located in front of the trash room along Preble Street and whether that will impact solid waste operations. The applicant has indicated that the proposed street tree is located over nine feet from the trash room egress door and is unable to be relocated due to an existing electrical manhole to the south and proposed underground water utilities to the north.

Staff Discussion

- Staff have requested that the applicant explore the option of locating solid waste pickup operations in the alley between the proposed development and the existing Public Market Garage. The applicant shall submit final solid waste pickup plans to DPW for approval.

Finding of Fact: Based on the submitted application materials, the project's description of components related to access and circulation this standard is determined to be met.

C. Public transit access

The proposed development is situated along existing public transit routes along Elm Street and Preble Street. The subject property is also located within 500-feet from the existing Pulse Station on Elm Street. Therefore, the applicant is not required to provide a new transit shelter as part of this proposed project.

Finding of Fact: Based on the submitted application materials and description presented above this standard is determined to be met.

D. Parking

The applicant is not proposing on-site parking due to the development's location to the Public Market Garage, which is under common ownership. The development is also less than 500 feet from the Elm Street parking garage and Pulse Bus stop. According to Table 19-B, no off-street parking is required within ¼ mile of fixed-route transit service. New development, or a change of use within an existing building, that totals more than 10,000 square feet of floor area are required to provide a transportation demand management (TDM) plan in order to take advantage of this provision. The proposed development is within a quarter mile of the existing Pulse Station on Elm Street.

Finding of Fact: Based on the submitted application materials and description presented above this standard is determined to be met.

E. Transportation demand management (TDM)

Since the previous workshop, the applicant has provided a TDM Plan for the proposed development. As part of the TDM plan, the applicant has identified the designated TDM Coordinator and mode split targets that will be reviewed and updated based upon the annual TDM reporting. The applicant has identified a number of strategies to meet TDM targets, including reconstruction of public sidewalks, development of a transit lounge in the lobby of the proposed building, providing real-time bus information in the proposed transit lounge, development of 80 indoor bicycle parking spaces, and a bicycle repair station that will be accessible to all residents.

Additionally, the applicant has identified several incentives to meet mode share targets, including unbundled parking, \$50 per unit per lease cycle towards bus fares and/or bike-share rides, and sponsorship of a bike-share station within proximity to the development. See Attachment T for full TDM Plan documentation.

	Baseline	3-5 Year Target	7 Year Target
Drive Alone	44%	33%	22%
Carpool/Vanpool	3%	3%	3%
Transit	4%	8%	12%
Bicycle	4%	8%	12%
Walk	27%	30%	33%
Work from Home	18%	18%	18%

Figure 4. Mode split targets for the proposed development

Finding of Fact: Based on the submitted application materials and description presented above this standard is determined to be met.

2. **Environmental Quality Standards (Section 14.6.2)**

A. **Preservation of significant natural features**

The property at 60 and 62 Elm Street is currently comprised of a surface parking lot and existing commercial building, respectively. Being a previously developed site, there are no known significant natural features, nor any endangered species or plants on the property.

Finding of Fact: Based on the submitted application materials and description presented above this standard is determined to be met.

B. **Landscape Preservation**

The applicant is proposing the removal of one eight-inch diameter at breast height (DBH) street tree along the property line. The protection of this tree is not feasible given the proximity of the proposed building and the anticipated construction activity, which will impact this tree. The removed tree will be supplemented by 12 new street trees and three understory trees in the courtyard area along Oxford Street.

Finding of Fact: Based on the submitted application materials and description presented above this standard is determined to be met.

C. **Site landscaping and buffers**

The proposed development is within the B-3 Downtown Business zone and is not subject to minimum setback requirements, and is therefore not subject to one shade tree or six plantings per 30 linear feet of frontage as outlined in Standards 14.6.2.C.1. The solid waste is proposed to be located interior to the building with access off Preble Street. Additionally, the applicant is proposing a total of 12 new street trees along all property frontages: three along Preble Street, five along Oxford Street, and four along Elm Street.

The applicant has provided a planting plan included as Attachment 51.

Staff Discussion

- The applicant has acknowledged the required contribution into the City's Street Tree Fund, for a total of \$82,000 (205 trees x \$400).

Finding of Fact: Based on the submitted application materials, description presented above, and associated condition of approval, this standard is determined to be met.

D. Water quality/storm water management/erosion control

The stormwater runoff for the development is proposed to be collected, attenuated, and released at a rate that does not exceed pre-development flows. Per the request of Portland Department of Public Works (DPW), the maximum permissible stormwater outflow rate into the City's system during the design storm event was designed to not exceed 0.1 CFS per acre of watershed area draining to the detention system. The detention on-site will provide storage for one-inch times the impervious area while providing treatment prior to discharge. The applicant has coordinated with DPW to ensure that the proposed system will not overburden the existing City system.

Since the prior Planning Board workshop, the applicant has provided additional erosion and sedimentation control (ESC) plans, included as Attachment 16. The additional material has been reviewed by DPW and the City's third-party stormwater reviewer and has been deemed acceptable.

Finding of Fact: Based on the submitted application materials and description presented above this standard is determined to be met.

3. Public Infrastructure and Community Safety Standards (Section 14.6.3)**A. Consistency with City Master Plans**

The purpose statement for the B-3 Downtown Business zone states that the zone is intended to maintain and enhance the role of the downtown as a business and commercial center for the region, encourage increased housing opportunity downtown for a diverse residential population, and enhance the pedestrian experience through the encouragement of intensive, mixed-use activities. The proposed development would create 217 dwelling units, 2,000 square feet of commercial space, and provide a residential green space. Additionally, the project has been designed to be consistent with the approved Bayside MDP.

Finding of Fact: The proposed project is consistent with the designated zoning, which has been found to be in conformance with the City's comprehensive plan and therefore this standard is considered met.

B. Public Safety and Fire Prevention

The applicant has indicated that the development has been designed to enhance the sense of security within both public and private areas of the site, with wall-mounted lighting proposed along all building facades, and clear lines of sight and activation of the courtyard. Emergency vehicles would have access to three sides of the building, on Preble, Oxford, and Elm Streets.

Staff Discussion

- Since the prior Planning Board workshop, the applicant has provided additional information on the proposed alley between the proposed development and the existing Public Market Garage. The proposed alley would have secure access gates along Preble Street and Elm Street and an egress door available to residents. The applicant has also

provided additional information on snow loading, found as Attachment S1. The applicant is planning to incorporate a zone loading zone into Phase 4 of the Bayside MDP.

Finding of Fact: Based on the submitted application materials and description presented above this standard is determined to be met.

C. Public Utilities

The applicant is proposing the undergrounding of utilities as part of this project, which would require the reconstruction of the sidewalk along the opposite side of Oxford Street. Two nine-foot by nine-foot transformers are proposed within the Oxford Street courtyard area. Additionally, the applicant is proposing that the project be served by connection to the existing public sewer on Oxford Street.

Staff Discussion

- The applicant has coordinated with DPW regarding sewer connection and has provided two options. Option A proposes to tie into the existing sewer within Preble Street and Option B proposes to replace the existing stretch of sewer main within Oxford Street, as depicted in Attachment 6. The applicant shall continue to coordinate with DPW on the final proposed sewer connection, including the grease trap.

Finding of Fact: Based on the submitted application materials, description presented above, and condition of approval, this standard is determined to be met.

4. Site Design Standards (Section 13.6.4)

A. Massing, ventilation, and wind impact

The proposed development is not anticipated to have adverse massing, ventilation, wind, or heat impacts and is located along an active corridor that is characterized by larger-scale development such as the Schlotter Beck & Foss building, Public Market Garage, and the office building at 34 Preble Street. The massing of the building is consistent with the surrounding context.

Finding of Fact: Based on the submitted application materials and description presented above this standard is determined to be met.

B. Shadows

The proposed building is located in the B-3 zone and does not abut any publicly accessible open space. Therefore, the applicant is not required to submit a shadow study as part of this application.

Finding of Fact: Based on the submitted application materials and description presented above this standard is determined to be met.

C. Snow and ice loading

The proposed building is designed with a flat roof and is not anticipated to distribute snow and ice onto adjacent properties.

Finding of Fact: Based on the submitted application materials and description presented above this standard is determined to be met.

D. View corridors

This application is not within a protected view corridor, therefore this standard is not applicable.

Finding of Fact: Based on the submitted application materials and description presented above this standard is determined to be met.

E. Historic resources

The proposed project does not lie within a designated historic district nor have known archeological resources on the site.

Finding of Fact: Based on the submitted application materials and description presented above this standard is determined to be met.

F. Exterior lighting

The applicant has submitted a photometric plan that depicts proposed exterior lighting. Wall-mounted exterior lighting is proposed along Preble Street, in the courtyard area, and in the residential open space area between the proposed building and the Public Market Garage. Additionally, the applicant is proposing two street lights along Oxford Street and two street lights along Elm Street. The proposed lighting is not anticipated to have an adverse impact on abutting properties.

Finding of Fact: Based on the submitted application materials and description presented above this standard is determined to be met.

G. Noise and vibration

All proposed heating, ventilation, and air conditioning equipment is proposed on the interior of the roof of the building. The proposed equipment is not anticipated to have adverse noise or vibration impacts on abutting properties.

Finding of Fact: Based on the submitted application materials and description presented above this standard is determined to be met.

H. Signage and wayfinding

The applicant has not indicated proposed signage on building elevations. The applicant is proposing seven new on-street parking spaces along Oxford Street and a commercial loading parking space on Preble Street, which will require signage.

Finding of Fact: Based on the submitted application materials and description presented above this standard is determined to be met.

I. Zoning-related design standards

The applicant is proposing a 10-story mixed-use residential building with ground-floor commercial space on the corner of Preble Street and Oxford Street. The building would feature

large storefront windows where appropriate, including on the retail and other ground-floor spaces, along with corner units along Oxford Street. The commercial space is proposed to have entrances along both Preble Street and Oxford Street. The proposed design also aims to improve the pedestrian environment by offering canopies at points of entry. Additionally, the proposed courtyard area along Oxford Street will serve both residents and patrons of the commercial spaces while also providing visual interest.

Staff have reviewed the proposed development against the Master Development Plan Standards of Review, Land Use Code Section 14.7.5, and design standards of the City of Portland Design Manual, Land Use Code Section 14.6.4.I as applicable to the original Master Development Plan approval on June 13, 2023 and has provided the applicant with a design review memo. Since the prior Planning Board workshop, the applicant has provided additional information on the proposed alley between the proposed development and the existing Public Market Garage, including additional landscaping and secure access gates along Preble Street and Elm Street. The applicant has also proposed screening for the two transformers located in the courtyard along Oxford Street.

Staff finds that the proposed location of the transformers along Oxford Street detracts from pedestrian environment and quality of the open space and encourages the Applicant to revise the location to an underground vault in coordination with CMP and the City. Should the placement of transformers below grade not be found feasible the applicant shall ensure proper screening through mechanisms such as architectural detailed fencing or landscaping.

Finding of Fact: Based on the submitted application materials and description presented above this standard is determined to be met.

X. NEIGHBORHOOD MEETING & PUBLIC COMMENT

The applicant held the required neighborhood meeting on April 1, 2025, at 5:30 PM. The in-person meeting was held at 80/82 Elm Street. Four members of the public were in attendance. Public comment centered on:

- Timeline of this proposed project and the MDP
- Demolition of the existing building and the reallocation of resources/services
- Parking
- Affordable units

Seven public comments have been received to date. Comments centered on:

- Solar orientation of the courtyard area
- Solid waste operations
- Demolition of the existing building and the reallocation of resources/services
- Perceived conflict of interest with a Board member and this project

XI. STAFF RECOMMENDATION

Subject to the proposed motions and conditions of approval listed below, Planning & Urban Development Department staff recommends that the Planning Board find that the Major Site Application for 61 Preble Street (PL-003222-2025) meets the applicable standards of Portland's Land Use Code.

XII. PROPOSED MOTIONS

A. SITE 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 June 24, 2025 for application # PL-003222-2025 at 61 Preble Street relevant to the site 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 site plan standards of the land use code, subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall submit final proposed sewer connection plans, including details of the grease trap, for review and approval by the Department of Public Works.
2. The applicant shall coordinate with the Planning Authority to finalize the placement and design of the proposed transformers.
3. The applicant shall submit final solid waste pickup operation plans for review and approval by the Department of Public Works.

PRIOR TO ISSUANCE OF A BUILDING PERMIT

4. The applicant shall enter into an affordable housing agreement (AHA) with the City of Portland, and shall file this agreement as covenant to the 61 Preble Street property deed with the Cumberland County Registry of Deeds.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

5. The applicant shall pay a fee-in-lieu for the remaining 205 required street trees. At a rate of \$400 per tree, the total contribution to the City's Tree Fund shall be \$82,000.
6. The applicant shall coordinate with the Planning Authority and Tandem Mobility to sponsor a bikeshare station in proximity to the subject property.

XIII. PLANNING BOARD DECISION

On the basis of the findings, conclusions and recommendations contained in the Planning Board report for the public hearing on June 24, 2025 related to application PL-003222-2025 for 61 Preble Street, which is attached to the draft approval letter and incorporated therein, the Planning Board **[adopts/does not adopt]** the approval letter as drafted as the Planning Board's decision for application PL-003222-2025, and authorizes the Planning Board Chair to sign the approval letter as drafted.

ATTACHMENTS

Public Comment

- PC1. George Rheault 6-18-2025
- PC2. George Rheault 6-19-2025
- PC3. George Rheault 6-20-2025
- PC4. George Rheault 6-20-2025
- PC5. George Rheault 6-20-2025
- PC6. George Rheault 6-20-2025
- PC7. George Rheault 6-20-2025
- PC8. George Rheault 6-20-2025

Report Attachments

- S1. 315 Cumberland Avenue Snow Loading
- S2. Preble St. – 61 Design Review – Third 06-12-25
- S3. Traffic Movement Permit Findings (October 20, 2023)
- S4. Draft Approval Letter

Drawings

- 1. COVER SHEET & LEGEND
- 2. GENERAL NOTES
- 3. TOPOGRAPHIC SURVEY
- 4. CONSTRUCTION MANAGEMENT PLAN
- 5. SITE PLAN
- 6. UTILITY PLAN
- 7. GRADING AND DRAINAGE PLAN
- 8. SITE DETAILS - 1
- 9. SITE DETAILS - 2
- 10. UTILITY DETAILS - 1
- 11. UTILITY DETAILS - 2
- 12. DRAINAGE DETAILS - 1
- 13. DRAINAGE DETAILS - 2
- 14. DRAINAGE DETAILS - 3
- 15. EROSION & SEDIMENTATION CONTROL DETAILS
- 16. EROSION & SEDIMENTATION CONTROL PLAN
- 20. A0 - COVER SHEET & LEGEND
- 21. A1.01 - LEVEL 1 FLOOR PLAN
- 22. A1.02 - LEVEL 2 FLOOR PLAN
- 23. A1.03 - LEVEL 3-10 FLOOR PLAN
- 24. A1.04 - ROOF PLAN
- 25. A2.00 - PREBLE ST ELEVATION
- 26. A2.01 - OXFORD ST ELEVATION
- 27. A2.02 - ELM ST ELEVATION
- 28. A2.03 - CUMBERLAND AVE ELEVATION
- 29. A3.00 - SECTION VIEW OXFORD & CUMBERLAND
- 30. A3.01 - SECTION VIEW ELM & PREBLE
- 31. A3.02 - SECTION VIEW 2 OXFORD & CUMBERLAND
- 32. A3.03 - SECTION VIEW 2 ELM & PREBLE
- 33. A3.04 - SECTION VIEW 3 OXFORD & CUMBERLAND
- 34. A5.00 - MATERIALS BOARD
- 35. A7.00 - PERSPECTIVE VIEWS
- 50. L1 - MATERIAL PLAN
- 51. L2 - PLANTING PLAN
- 52. L3 - LIGHTING PLAN
- 53. LA - RENDERING 1 - ELM & OXFORD ST

- 54. LA - RENDERING 2 - OXFORD & PREBLE ST
- 55. LD1 - LA DETAILS 1
- 56. LD2 - LA DETAILS 2
- 57. LD3 - LA DETAILS 3

Applicant Submittal

- A. 61 Preble St Cover Letter
- B. Major Site Plan Checklist - 61 Preble
- C. Right, Title, & Interest
- D. Zoning Assessment B-3
- E. Easements
- F. Waiver Table
- G. Financial Capacity
- H. Technical Capacity
- I. Conformity with Land Use Ordinance
- J. Stormwater Management Report
- K. Erosion & Sedimentation Control Report
- L. Public Safety and Fire Department Letter
- M. Wastewater Capacity
- N. Lighting
- O. Architectural Design Narrative
- P. Utility Cover
- Q. Construction Management Plan
- R. Solid Waste Disposal
- S. Trip Gen Analysis & Transportation Overview
- T. TDM Plan 61 Preble Street Portland
- U. 61 Preble Comment Response
- V. Alley Narrative
- W. Workforce Housing Compliance Overview
- X. 61 Preble Design Review Comment Response #2

315 Cumberland Avenue Snow Loading

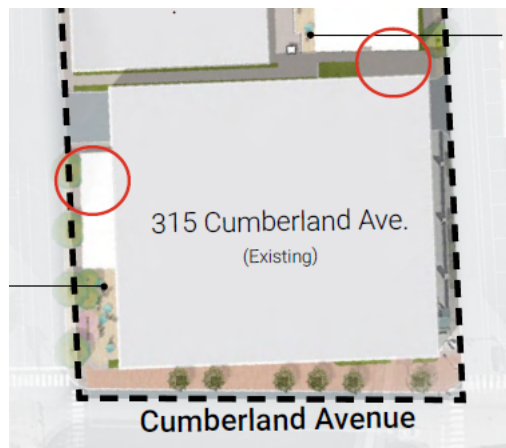
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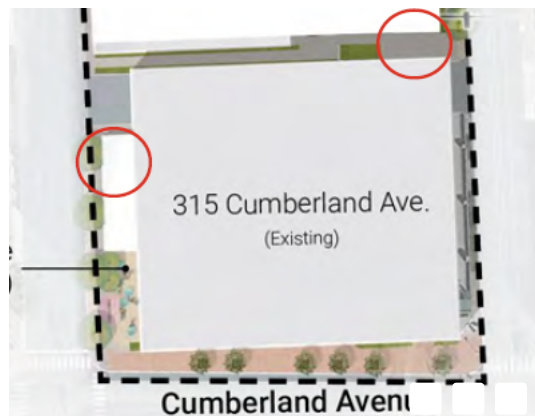
**Michael Barton**to me, Sam, Danielle 

Taylor,

Specific to the snow loading discussion with the Planning Board at the prior workshop, the approach to snow loading remains consistent with the original MDP and current M design. If the snow loading zone cannot be integrated into the phase 4 design, the alternative location will be Elm street side of the property with shared boundary associated



Prior space provisions for snow loading location flexibility.



Current space provisions for snow loading location flexibility.

Thanks,
Mike

Design Review
Planning and Urban Development Department



Subject: 61 Cumberland Avenue – Major Site Plan Review
Zone: B3
Date of June 12, 2025
Review: Design Review – First Round Comments
Reviewer(s): Taylor Colbeth (Planner), Zach Powell (Senior Planner), Sean King (Urban Designer)
Project ID: PL-003222-2025

I. INTRODUCTION

The proposed major site plan application at 61 Preble Street is subject to the *Master Development Plan Standards of Review*, *Land Use Code Section 14.7.5*, and design standards of the *City of Portland Design Manual*, *Land Use Code Section 14.6.4.I* as applicable to the original Master Development Plan approval on June 13, 2023.

II. MASTER DEVELOPMENT PLAN STANDARDS OF REVIEW: red text denotes standards not met and require resubmission and **bold** text denotes design standards being met.

Master development plan (MDP) design standards, land use ordinance section 14.7.5 is currently under review.

A. *Creation of a cohesive identity.*

*A master development plan shall be designed to create a cohesive identity through building scale, massing, and articulation; - **Met***

Staff comment: The proposed development includes a new mixed-use building with ground-level retail and multi-family residential at 61 Preble Street that necessitates an amendment to the approved MDP. The proposed development requires the demolition of the existing two-story building to allow for expansion of the building footprint, massing and orientation along Oxford Street to Preble Street. Staff finds that the proposed building creates a cohesive identity through building scale, massing, and articulation that is consistent with the approved MDP by providing prominent form-defining corners, articulated building entrances, symmetrical fenestration patterns and arrangement of exterior façade materials.

*Use of quality exterior material and architectural detailing at pedestrian scale; - **Met***

Staff comment: The proposed exterior materials utilize brick, storefront windows on the ground floor, precast concrete or granite accent banding, fiber cement panels at the middle portion of the building and metal cladding to articulate the upper floor and prominent corners as character-defining building elements. Staff finds that the arrangement of exterior materials appropriately reduces the overall scale of the building and is consistent with the approved MDP.

Consistency of design and materials for streetscape and pedestrian amenities; - Met

Staff comment: The proposed development includes streetscape and pedestrian amenities within a furnishing zone (street trees in tree wells, lighting, seating within close proximity to building entries, bike racks and brick pavement) that is consistent with the approved MDP. A six-foot concrete sidewalk is proposed within the private property's setback area to require a public access easement.

Framing of outdoor open space and linkages; - Met

Staff comment: The proposed development includes a furnishing zone with pedestrian amenities and public sidewalk to access existing open spaces within a half-mile radius that is consistent with the approved MDP. In addition, the building design includes a street-level courtyard accessible from the public sidewalk to contribute towards open space that Staff finds appropriate and consistent with the approved MDP.

A clear conveyance of the function and significance of various buildings, entrances, and features; - Met

Staff comment: The proposed building design conveys a clear function of building uses through storefront windows and articulated entrances that enhance the pedestrian environment which Staff finds is consistent with the approved MDP.

And to generally comply with design and development standards of the zone in which it is located.

Staff comment: See B-3 design standards below.

III. APPLICABLE DESIGN STANDARDS: red text denotes standards not met and require resubmission and bold text denotes standards being met within resubmission materials.

The proposed major site plan application at 61 Preble Street for a 217-unit residential and ground-level retail/commercial spaces is subject for review according to the B-3 and multi-family residential housing design standards from the City of Portland *Design Manual* as applicable to the original Master Development Plan approval on June 13, 2023.

§(b)(1)a.1. Relationship of pedestrian environment:

- *§(b)(1)a.1.i. General: The exterior design of portions of buildings within the first thirty-five (35) feet of height shall enhance the character, attractiveness, comfort, security, and usability of the street level pedestrian environment. Factors to be considered include the design, placement, character and quality of the following: Storefronts and building facades, Building entrances, Blank facades; and Special features. MET*

Staff comment: The proposed building is enhanced within the first thirty-five feet by expansive storefront windows adjacent to the public sidewalk and curtainwall system as prominent form-

defining corners that Staff finds activate the ground floor uses along Oxford Street. In addition, Staff finds the quality and durability of the proposed exterior materials which include brick, concrete or granite banding, dark trim windows and suspended metal canopies at primary entries contribute to the character, attractiveness and usability of the street-level pedestrian environment.

The Applicant has resubmitted plans to indicate the visible transmittance (VT) of .7 or higher along the ground-level for storefront windows to meet this design standard and additional windows or brick detailing that Staff finds appropriate to reduce large expansive blank facades adjacent to the public sidewalk.

- *§(b)(1)d. Sidewalk areas and open space: The design of publicly accessible sidewalk areas and open space shall complement the general pattern of the downtown pedestrian environment, conform to special City of Portland streetscape programs described in the Technical Manual, and enhance the attractiveness, comfort, security, and usability of the pedestrian environment. Factors to be considered include the design, placement, character, durability, and quality of the following:*
 1. *Sidewalk, crosswalk, and street paving materials; Landscaping, planters, irrigation, and tree guards and grates; Lighting; Pedestrian amenities such as benches and other seating, trash receptacles, kiosks, bus shelters, artwork, directional and informational signage, fountains, and other special features; and Sidewalk vendors and sidewalk cafes. MET*

Staff comment: The proposed development proposes a six-foot wide publicly accessible sidewalk area and streetscape amenities (granite curb tree wells, ornamental street lighting, bike racks, and seating within close proximity to entries) with a brick-paved furnishing zone that Staff finds appropriate.

- *§(b)(1)e. Relationship to existing development:*
 1. *General: 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: Street walls and building setbacks; Open space; Building form, scale and massing; Façade proportion and composition; Pedestrian circulation and building entrances; Parking MET*

Staff comment: The built context of the surrounding area contains a variety of building types, architectural styles, and a mix of uses that vary in height and proximity to the street typically found throughout Portland's Bayside neighborhood.

Staff finds that the proposed development and building design is integrated within the existing character of the general pattern found within the surrounding neighborhood. The proposed development includes a setback from the property line to accommodate a public sidewalk and streetscape amenities in the furnishing zone, proposed open space as a publicly accessible courtyard at Oxford Street, and building elements such as exterior façade variations, articulated building entries with canopies and prominent form-defining corners with curtainwall building features.

2. Standards for increasing setback beyond street build-to line: A proposed development may exceed maximum setbacks as required in section 14-220(c) (Table 7-C or Table 7-D from adopted ReCode) only where 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;*

Staff comment: Staff finds that the proposed building placement to increase setback beyond street build-to line provides viable publicly accessible street-level pedestrian accessibility with an expanded public sidewalk along Preble Street and Oxford Street. In addition, Staff finds that the proposed plaza along Oxford Street to increase setback beyond build-to line provides substantial publicly accessible open space with outdoor seating areas, vegetation and enhanced surface paving that is accessible at the street level.

- 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;*

Staff comment: Staff finds that the proposed building creates prominent form-defining corners with curtainwall and articulated building entries that reinforce the prevailing street wall along all street-facing facades. In addition, Staff finds that the proposed plaza along Oxford Street does not substantially detract from the prevailing street wall character with its location anchored by the building corners at both Preble and Elm 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; and*

Staff comment: Staff finds that the proposed development does not detract from existing publicly accessible open space as there are no immediate publicly accessible open space within close proximity of the property site to create an excessive amount.

- 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.*

Staff comment: Staff finds that the proposed plaza along Oxford Street within the increase setback beyond street build-to line includes high-quality outdoor seating

areas, vegetation and enhanced surface paving that promote pedestrian activity along Oxford Street and an accessible public sidewalk along Preble Street.

The resubmitted plans indicate a stainless-steel trellis system to facilitate the growth of climbing vines onto the concrete unit retaining wall at the lower residential courtyard. Staff encourages the Applicant to either add a planting area, climbing vines and expand the trellis system along the concrete unit retaining wall at the commercial plaza or add an activated pedestrian element (e.g. wall-mounted artwork or other architectural articulation) to activate the commercial plaza proposed in the increased setback area.

Staff finds that the proposed location of the transformers along Oxford Street detracts from the pedestrian environment and requests that the Applicant revise the location to an underground vault.

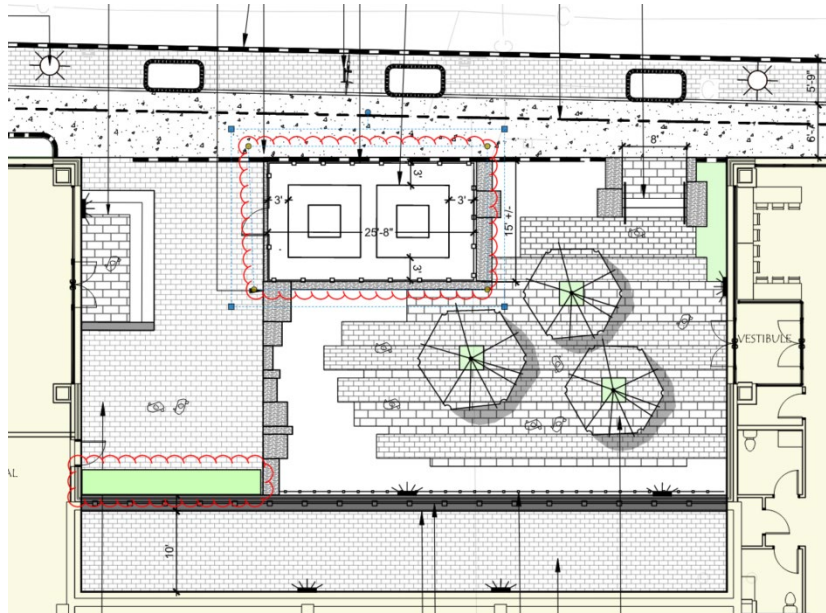


Figure A: Materials plan with clouded areas to illustrate Staff concerns

- *§(b)(1)d.2.v. Roof top appurtenances: 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; Met*

Staff comment: Staff finds that the proposed building design incorporates an expanded parapet wall to appropriately screen all rooftop appurtenances that are also located towards the center of the roof to meet this design standard.

- *§(b)(1)f. Shadow impact on open space: 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 accessible open space are avoided; Met*

Staff comment: The proposed building is in excess of sixty-five feet in height to warrant a review of shadow impacts on existing publicly accessible open space, however none exists within immediate proximity to the property site. The proposed development includes a street-level courtyard on private property that will be impacted by shadow throughout the majority of daylight hours, however Staff finds that the proposed plaza is open to the street to allow for filtered light and air.

- *§(b)(1)g. Wind impacts:* 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; **Met**

Staff comment: The proposed building is designed to incorporate façade variation through recessed building elements that Staff finds to appropriately delineate the proposed building's base, middle and top. In addition, Staff finds that the recessed building massing at the proposed courtyard to reduce adverse wind impacts.

- *§(b)(1)h. Setbacks for existing structures:* The location and design of proposed structures shall not create a detrimental impact on the structural integrity or the safety of adjacent structures or the occupants thereof; **Met**

Staff comment: Staff finds that the proposed structure is located along public streets and separated at the rear setback to not create a detrimental impact on the structural integrity of the existing parking garage.

MULTIPLE-FAMILY STANDARDS. Multiple-family shall meet the following standards:

1. *The exterior design of the proposed structure, shall be designed to complement and enhance the nearest residential neighborhood. Met*

Staff comment: The property is located in the B-3 Downtown Business zone within close proximity to adjacent mixed-use, commercial and residential structures with a variety of building typologies, character-defining features and materiality. Staff finds that the proposed exterior design complements the nearest residential neighborhood through the selection of durable façade materials (brick, fiber cement, metal and storefront windows) and articulated building entries with canopies to enhance the pedestrian environment along street-facing facades.

2. *The proposed development shall respect the existing relationship of buildings to public streets. Met*

Staff comment: The proposed development locates the building within close proximity to Preble, Oxford and Elm Street along with an increase setback to create a public sidewalk that Staff finds appropriate with respects to the existing relationship of surrounding buildings to public streets.

The exception to the street build-to line in the proposed development is to accommodate a street-level courtyard along Oxford Street. Staff finds the proposed courtyard does not significantly distract from the street build-to line as the prominent form-defining corners appropriately define the street wall along Oxford Street. Furthermore, the alignment of streetscape amenities, particularly street trees, contribute to define the street wall at the proposed courtyard.

3. *Open space on the site for all multiple-family development shall be integrated into the development site. Met*

Staff comment: The proposed development integrates open space at Level 2 with a shared patio and at Level 1 with a shared courtyard that includes landscaped edges, paved patio and trees adjacent to a primary residential entry along Oxford Street that Staff finds appropriate to meet this design standard.

4. *The design of proposed dwellings shall provide ample windows to enhance opportunities for sunlight and air in each dwelling in principle living areas and shall also provide sufficient storage areas. Met*

Staff comment: The proposed building includes ample windows and sufficient storage for each dwelling unit.



City of Portland Traffic Movement Permit

Applicant: West Bayside Partner, LLC, 82 Hanover Street, Suite 5, Portland, ME. 04101

Project Location: Project is bounded by Preble Street to the southwest, Lancaster to the northwest, Cedar Street to the northeast. Cumberland and Oxford Street to the southeast.

Parcel #: Tax Map 33, Lot # G003, g006, H005-7, H0018, M012001, M004001

Project: West Bayside Development

Identification #: PL2403-2023

Permit Category: 200+ PCE's

Traffic Engineer: Jennifer Conley, VHB, 500 Southborough Drive, Suite 105B, South Portland, ME. 04106

Pursuant to the provision of 23 M.R.S.A. § 704-A and Chapter 305 of the MaineDOT's Regulations, the City of Portland through their Delegated Review Authority has considered the application of West Bayside Development with supportive data, city review and other related materials on file.

PROJECT DESCRIPTION

The development consists of 215 multi-family housing units, 201 affordable housing units, 6,000 sf retail, 2,000 sf coffee shop, and 6,000 sf restaurant. The existing 595 space Portland Public Market Garage will provide parking for these uses.

Findings

Based on a review of the files and related information, The City of Portland approves the Traffic Movement Permit Application of West Bayside Development subject to the following conditions:

MITIGATION

If the descriptions contained herein conflict with the plans, these descriptions shall take precedence over the plans. Not all of the mitigation discussed herein may be shown on those or any plan. The following mitigation shall be constructed or implemented to the City of Portland's satisfaction prior to the opening of the facility, unless otherwise approved by the City of Portland.

All proposed traffic signal upgrades shall be designed and specified to be in compliance with the City of Portland and MaineDOT traffic signal specifications.

On-Site Mitigation

All entrances shall meet City of Portland standards.

Off-Site Mitigation

1. The applicant shall perform traffic counts and recommend a phasing and timing plan for implementation at the Marginal Way/Preble Street/Elm Street intersection. The timing plan shall also include a review of clearance times related to crash patterns. This work shall be performed post-occupancy of the 89 Elm Street project.
2. Forest Avenue/Marginal Way/Kennebec Street/State Street – Remove obstructive tree branches for better line of sight and convert the Marginal Way right from a yield condition to a stop. Install lane use signs for each approach on the mast arms. Traffic signal clearance times shall be reviewed and revised to allow more vehicles to clear the intersection. Additional signal heads shall be installed and location/number shall be determined during the design development process.
3. Forest Avenue/Cumberland Street – Traffic signal clearance times shall be reviewed and revised. Sun shields shall be installed on signal heads for improved visibility.
4. Forest Avenue/Park Avenue/Portland Street – Right turn arrow pavement markings, defining the bike lane on the Portland Street approach shall be installed, including appropriate green markings as per NACTO best practice. Install a left turn yield on green sign for left turns from Forest Avenue to Portland Street. Review and revise clearance times to allow more vehicles to clear the intersection.
5. Forest Avenue/Marginal Way/Kennebec Street/State Street - Remove obstructive tree branches on Marginal Way for improved sight. Install lane use signs for each lane for the Forest Avenue approaches. Review and revise clearance times to allow more vehicles to clear the intersection.
6. The applicant shall reconstruct the sidewalks, including meeting ADA requirements, on Cedar Street from Lancaster Street to Oxford Street and Oxford Street between Portland Street and Chestnut Street.
7. All crosswalks on Elm Street and Preble Street between Lancaster Street and Cumberland Avenue be re-striped with high visibility paint.
8. The applicant shall conduct an Oxford Street Two-Way Conversion Feasibility analysis between Elm Street and Pearl Street with scope of the analysis to be coordinated and approved by city staff. If the analysis determines the conversion is feasible, the applicant shall be responsible for implementation of all work necessary for completion.

Overall Requirements

A. Provide all necessary auxiliary signs, striping and pavement markings to implement the improvements described herein according to City, MaineDOT and/or National standards.

B. All plantings and signs (existing and/or proposed; permanent and/or temporary) shall be placed and maintained such that they do not block available sight distances and do not violate the State's "Installations and Obstructions" law. No signage, plantings or structures shall be allowed within the "clear zone" if they constitute a deadly fixed object as determined by MaineDOT. All signs shall meet MRSA Title 23, Chapter 21, Section 1914: "On-Premise Signs".

C. If any of the supporting data or representations for which this permit is based changes in any way or is found to be incorrect / inaccurate, the applicant shall request in writing from the City of Portland a decision of what impacts those changes will have on the permit. The applicant will then be required to submit those changes for review and approval and additional mitigation as a result of those changes may be required at the expense of the applicant.

D. The applicant must obtain approval of the design plans and coordinate work through the City of Portland Department of Public Works.

By: 

Jeremiah J. Bartlett, PE, PTOE
City of Portland

Date: October 20, 2023

CITY OF PORTLAND, MAINE PLANNING BOARD

Brandon Mazer, Chair
 David Silk, Vice Chair
 Austin Smith
 Nicholas Messina
 Joseph Zamboni
 Kelsey Robertson
 Michael Joseph Fox

June 24, 2025

Michael Barton
 60 Elm Street LLC
 82 Hanover Street, Suite 5
 Portland, ME 04101

Sam Lebel
 Acorn Engineering
 65 Hanover Street
 Portland, Maine 04101

Project Address: 61 Preble Street
Applicant: 60 Elm Street LLC
Planner: Taylor Colbeth

Project ID: PL-003222-2025
CBL(s): 033 M001001

Dear Applicant

On June 24, 2025, the Planning Board approved a Major Site Plan to facilitate the construction of a 10-story, mixed-use development containing 217 residential dwelling units, 2,000 square feet of ground-level retail space, and residential open space at 61 Preble Street in the B-3 Downtown Business zone and the Bayside Height Overlay zone. The decision is based upon the application, documents and plans as submitted. The Planning Board reviewed the proposal for conformance with the standards of the Site Plan Ordinance, Chapter 14, Section 14.6.

Based on the information provided to the Board in the application, plans, and reports, through testimony and other information submitted by the applicant, as well as the findings, conclusions and recommendations contained in the Planning Board Report for the public hearing held on June 24, 2025, which is attached hereto and incorporated herein by reference, the Planning Board found the application met all relevant standards and voted [X-X] to approve the application with the following conditions as presented below.

A. SITE 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 June 24, 2025, for application PL-003222-2025 at 61 Preble Street relevant to the site plan regulations; and

the testimony presented at the Planning Board hearing, the Planning Board finds that the plan is in conformance with the site plan standards of the land use code, subject to the following conditions of approval:

PRIOR TO APPLYING FOR A BUILDING PERMIT

1. The applicant shall submit final proposed sewer connection plans, including details of the grease trap, for review and approval by the Department of Public Works.
2. The applicant shall coordinate with the Planning Authority to finalize the placement and design of the proposed transformers.
3. The applicant shall submit final solid waste pickup operation plans for review and approval by the Department of Public Works.

PRIOR TO ISSUANCE OF A BUILDING PERMIT

4. The applicant shall enter into an affordable housing agreement (AHA) with the City of Portland, and shall file this agreement as covenant to the 61 Preble Street property deed with the Cumberland County Registry of Deeds.

PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY

5. The applicant shall pay a fee-in-lieu for the remaining 205 required street trees. At a rate of \$400 per tree, the total contribution to the City's Tree Fund shall be \$82,000.
6. The applicant shall coordinate with the Planning Authority and Tandem Mobility to sponsor a bikeshare station in proximity to the subject property.

Standard Procedures

Note: The following standard procedures and requirements apply to all approved site plans:

1. Site Plan Expiration
The site plan approval shall expire three (3) years from the date of approval unless development has been undertaken in accordance with the approved site plan and site work or building construction is ongoing. Any lapse in construction for a period in excess of 12 months shall result in an expiration of the site plan.
2. Separate Building Permits Are Required
This approval does not constitute approval of building plans, which must be reviewed and approved by the City of Portland's Permitting and Inspections Department.
3. Performance Guarantee and Inspection Fees
A performance guarantee covering the site improvements and an inspection fee payment of 2.0% of the guarantee amount and three (3) final sets of plans must be submitted to and approved by the Planning and Urban Development Department prior to the release of a building permit, street opening permit or certificate of occupancy

for site plan.

4. Construction Management Plans

The applicant, contractor and subcontractors are required to conform to the approved Construction Management Plan, and all conditions contained within the project's approval, for the entire duration of the project. Any amendments to the approved Construction Management Plan shall be reviewed and approved by the Department of Public Works prior to the execution. The Planning Authority and the Department of Public Works have the right to seek revisions to an approved Construction Management Plan. The applicant shall coordinate the project's construction schedule with the timing of nearby construction activities to avoid cumulative impacts on a neighborhood and prevent unsafe vehicle and pedestrian movements. Accordingly, nearby construction activities could involve a delay in the commencement of construction.

5. Preconstruction Meeting

Prior to the release of a building permit and scheduling of a preconstruction meeting, a hard copy set of approved plans shall be submitted to the Development Review Coordinator. A pre-construction meeting shall be held at the project site with the contractor, Development Review Coordinator, Public Works representative, and owner to review the construction schedule and critical aspects of the site work. At that time, the Development Review Coordinator will confirm that the contractor is working from the approved site plan and the approved Construction Management Plan. The site/building contractor shall provide one (1) copy of a detailed construction schedule to the attending City representative. It shall be the contractor's responsibility to arrange a mutually agreeable time for the pre-construction meeting.

6. Department of Public Works Permits

If work or obstructions will occur within the public right-of-way, such as utilities, curb, sidewalk, driveway construction, site deliveries and equipment siting, a Street Opening and/or Occupancy Permits are required for your site. Please contact the Department of Public Works Permit Clerk at (207) 874-8300, ext. 8828. (Only excavators licensed by the City of Portland are eligible.)

7. Develop Site According to Plan

The site shall be developed and maintained as depicted on the site plan and in the written submission of the applicant. Any modifications of an approved site plan or alteration of a parcel, or of any approved exterior elevations, which were the subject of site plan approval after May 20, 1974, shall require the prior approval of an amended site plan by the Planning Board or Planning Authority pursuant to the terms of Chapter 14, Land Use, of the Portland City Code.

8. Stormwater Management

The owner/operator of an approved stormwater management system, and all assigns shall comply with the conditions of Chapter 32, Stormwater including Article III, Post Construction Stormwater Management, which specifies the annual inspections and reporting requirements. A maintenance agreement for the stormwater drainage system, as attached, or in substantially the same form, shall be submitted for review by Corporation Counsel. Once approved, the document shall be signed and recorded at the Cumberland County Registry of Deeds prior to the issuance of a building permit. Final copies shall be submitted to both the Department of Planning and Urban Development and the Department of Public Works.

9. Third Party Inspections

For all sites with one acre or greater of disturbance, the applicant shall retain the services of a third-party inspector for the duration of construction until final site stabilization is in place. The inspection is required in order to ensure that all construction and stabilization activities comply with the approved drawings and specifications; that field decisions regarding erosion control implementation, stormwater system installation, and natural resource protection are based on sound engineering and environmental considerations; and that any changes to the development's erosion control plan, stormwater management plan, or final stabilization plan is communicated to the City of Portland for additional review and approval.

The inspector will submit weekly written reports to the Stormwater Coordinator(s) in the Water Resources Division of Public Works. Reports must include: project ID, project address, the date(s) and time(s) of inspection(s), site photographs of areas under construction, and the date(s) and approximate duration(s) of any rainfall events. The report will identify and describe any erosion problems or discharge of pollutants and what actions will be taken to address these issues and repair any damage to other properties or natural resources, actions to eliminate the erosion source, and actions to prevent future sediment discharges from the area.

10. Defect Guarantee

A defect guarantee, consisting of 10% of the performance guarantee, must be posted before the performance guarantee will be released.

11. As-Built Final Plans

Final sets of as-built plans shall be submitted digitally to the Planning and Urban Development Department as a PDF. Once the PDF version has been reviewed and accepted, a mylar and a AutoCAD format will need to be submitted to the Department of Public Works Engineering Archive, located at 212 Canco Road, Portland, Maine 04102.

12. Mylar Copies

Mylar copies of the as-built drawings for public streets and other public infrastructure in the subdivision must be submitted to Public Works prior to the issuance of a certificate of occupancy.

13. Impact Fees

New development or changes of use that result in net new residential dwelling units, non- residential building square footage, or water meters, are subject to the City of Portland's impact fee ordinance (Chapter 14, Article XVII). Impact fees are calculated at the time of building permit and must be paid prior to the certificate of occupancy. For more information, visit <https://www.portlandmaine.gov/2409/Impact-Fees>

The Development Review Coordinator must be notified five (5) working days prior to the date required for final site inspection. The Development Review Coordinator can be reached at the Planning and Urban Development Department at drc@portlandmaine.gov or (207)874-8901. All site plan requirements must be completed and approved by the Development Review Coordinator prior to issuance of a Certificate of Occupancy. Please schedule any property closing with these requirements in mind.

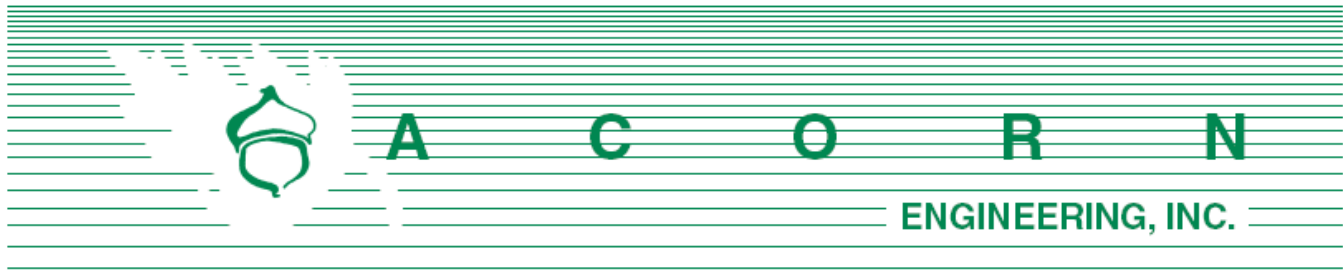
If there are any questions, please contact Taylor Colbeth by phone at 207-874-8721 or email at tcolbeth@portlandmaine.gov.

Sincerely,

Brandon Mazer, Planning Board Chair

Attachments:

1. Planning Board Report



Planning and Urban Development Department
 Zach Powell, Senior Planner
 City of Portland, Maine
 389 Congress Street, 4th Floor
 Portland, ME 04101

February 6, 2025

Subject: Major Site Plan Application
 61 Preble Street Redevelopment

Zach:

On behalf of 60 Elm Street LLC, we are pleased to submit the accompanying package of submission materials related to the proposed redevelopment of 61 Preble Street (previously known as 60 Elm Street). The project proposes merging parcels 033 M001001 and 033 M012001 into one to facilitate the redevelopment. The site is within the B3 Downtown Business Zone and is also located in the Bayside Height Overlay Zone. Subject to the previous Zoning Code and Technical Manual, this project represents Phase 1B of the previously approved West Bayside Master Development Plan (MDP) approved in June of 2023. As discussed with Planning Staff, in tandem with this Site Plan application, a Major Amendment to the MDP is also being applied for to document and permit changes in the overall phasing and unit allocation within the MDP. Overall, the guiding principles and overall unit count under the MDP will not change. Please refer to that specific cover letter and amendment application for more information.

The Phase 1B project proposes to redevelop the existing 2-story commercial building and surface parking lot into a 10-story building featuring a ground-level retail/commercial space with 217 residential units above. The building footprint has been designed to feature a courtyard with space for outdoor commercial use as well as residential amenities. The project will reconstruct a significant amount of public sidewalk while granting public access easements to accommodate a generous furnishing zone with street trees, while also proposing to construct a curb extension on Preble Street to improve pedestrian safety at the Preble/Oxford intersection. Lastly, the project will result in drastic improvements to the quality and runoff rates of stormwater.

60 Elm Street LLC, and the design team look forward to your review of this project. If you have any questions regarding these materials or the completeness of the application materials, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, reading 'Sam Lebel'.

Sam Lebel, P.E.
 Project Manager
 Acorn Engineering, Inc.

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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		
☒	NA	Project Description Cover letter with detailed project description
☒	NA	Completed Checklist (this document)
☒	NA	Evidence of Right, Title, and Interest Deeds, leases, or purchase and sales agreements
Yes	☒	Evidence of State or Federal Approvals Permits or letters of non-jurisdiction, if applicable
☒	NA	Zoning Assessment (see Zoning Assessment Table) Summary of compliance with use and dimensional standards of the land use code
☒	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
☒	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
☒	NA	Waiver Requests (see Waiver Table) Written request for waiver describing request and compliance with applicable waiver standards
☒	NA	Financial Capability Letter or evidence from a financial institution or third party verifying financial capacity to undertake project
☒	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

C. Right, Title & Interest

See attached quitclaim deeds for the project property encompassed by the following parcels:

- **61 Preble Street:** 033 M001001
- **60 Elm Street:** 033 M012001

As part of this redevelopment project, both parcels will be merged to facilitate the proposed building to reside at 61 Preble Street (033 M001001).



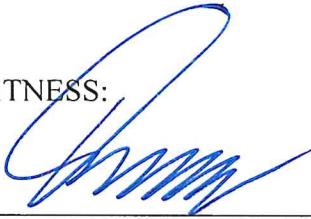
DLN: _____
QUITCLAIM DEED WITH COVENANT
Maine Statutory Short Form

MAINE REAL ESTATE TAX PAID

KNOW ALL PERSONS BY THESE PRESENTS THAT **BAYSIDE I, LLC**, a Maine limited liability with a principal place of business in Portland, County of Cumberland, State of Maine, for consideration paid, grants to **WBP COMMERCIAL LLC**, a Maine limited liability company with an address of 82 Hanover Street, Portland, Maine 04101, with **QUITCLAIM COVENANT**, the land, together with any buildings and improvements thereon, in Portland, County of Cumberland, and State of Maine more particularly described in **Exhibit A** attached hereto and made a part hereof.

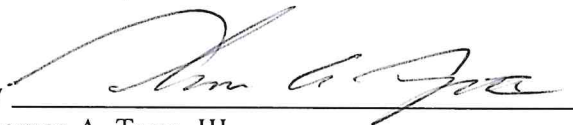
IN WITNESS WHEREOF, the said Bayside I, LLC has caused this instrument to be executed by Thomas A Toye, III, its Sole Member thereunto duly authorized as of this 12th day of October, 2022.

WITNESS:



BAYSIDE I, LLC

By



Thomas A. Toye, III
Its: Sole Member

STATE OF MAINE
COUNTY OF CUMBERLAND

October 12, 2022

Then personally appeared the above named Thomas A. Toye, III, Sole Member as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Bayside I, LLC.



Attorney at Law/Notary Public

Printed Name

Jason G. Howe, Esq.
Bar No. 0004860

EXHIBIT A
(Legal Description, 190 Lancaster Street East)

A CERTAIN PARCEL OF LAND WITH THE BUILDINGS THEREON SITUATED ON THE SOUTHWESTERLY SIDE OF ELM STREET, THE NORTHWESTERLY SIDE OF OXFORD STREET AND THE NORTHEASTERLY SIDE PREBLE STREET IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND, STATE OF MAINE AS SHOWN PLAN TITLED "LAND DIVISION PLAN BAYSIDE I, LLC" MADE FOR RECORD OWNER BAYSIDE I, LLC BY OWEN HASKELL, INC. DATED SEPTEMBER 14, 2022, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE POINT OF INTERSECTION OF THE NORTHEASTERLY SIDELINE OF PREBLE STREET AND THE NORTHWESTERLY SIDELINE OF OXFORD STREET;

THENCE, N 42°34'18" W ALONG THE SIDELINE OF SAID PREBLE STREET 182.30 FEET;

THENCE THE FOLLOWING COURSES AND DISTANCES THROUGH THE LAND OF THE GRANTOR:

N 47° 31' 17" E A DISTANCE OF 109.53 FEET;

N 44° 45' 38" W A DISTANCE OF 7.27 FEET;

N 47° 34' 12" E A DISTANCE OF 93.02 FEET TO THE SOUTHWESTERLY SIDELINE OF ELM STREET;

THENCE, S 43° 45' 13" E ALONG THE SIDELINE OF SAID ELM STREET 193.26 FEET TO THE NORTHWESTERLY SIDELINE OF SAID OXFORD STREET;

THENCE, S 48° 33' 13" W ALONG THE SIDELINE OF OXFORD STREET 206.30 FEET TO THE POINT OF BEGINNING. CONTAINING 38,301 S.F. OR 0.88 ACRES, MORE OR LESS.

BEARINGS ARE REFERENCED TO CITY GRID.

MEANING AND INTENDING TO CONVEY AND HEREBY CONVEYING A PORTION OF THE LAND DESCRIBED AS PARCEL 2 IN DEED FROM OCTOBER CORPORATION TO BAYSIDE I, LLC DATED JANUARY 26, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 15298, PAGE 91.

EXHIBIT A
(Legal Description 62 Elm Street)

A CERTAIN LOT OR PARCEL OF LAND, WITH THE BUILDINGS THEREON,
SITUATED ON THE EASTERLY SIDE OF PREBLE STREET AND SOUTHERLY SIDE OF
OXFORD STREET IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND, AND
STATE OF MAINE, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE EASTERLY SIDE OF PREBLE STREET
AND SOUTHERLY SIDE OF OXFORD STREET, THENCE N 48° 33' 13" E ALONG THE
SOUTHERLY SIDE OF OXFORD STREET A DISTANCE OF 114.66 FEET;

THENCE, S 43° 08' 59" E BY THE NORTHERLY FACE OF THE EXISTING BRICK
BUILDING A DISTANCE OF 124.83 FEET TO LAND NOW OR FORMERLY OF
NORTHERN INVESTORS LLC AS DESCRIBED IN DEED BOOK 32422, PAGE 197;

THENCE, S 47° 21' 26" W ALONG LAND OF SAID NORTHERN INVESTORS LLC AND
BY THE FACE OF THE SAID BRICK BUILDING A DISTANCE OF 115.91 FEET TO THE
EASTERLY SIDELINE OF SAID PREBLE STREET;

THENCE, N 42° 34' 00" W ALONG THE SIDELINE OF PREBLE STREET A DISTANCE OF
127.22 FEET TO THE POINT OF BEGINNING, CONTAINING 14,526 S.F. OR 0.33 ACRES,
MORE OR LESS.

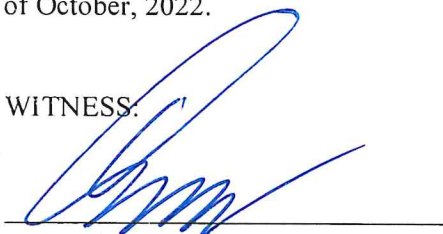
MEANING AND INTENDING TO CONVEY AND HEREBY CONVEYING A PORTION OF
THE LAND DESCRIBED AS PARCEL 1 IN DEED FROM OCTOBER CORPORATION TO
BAYSIDE I, LLC DATED JANUARY 26, 2000 AND RECORDED IN THE CUMBERLAND
COUNTY REGISTRY OF DEEDS IN BOOK 15298, PAGE 91.

DLN: _____
QUITCLAIM DEED WITH COVENANT
Maine Statutory Short Form

KNOW ALL PERSONS BY THESE PRESENTS THAT **BAYSIDE I, LLC**, a Maine limited liability with a principal place of business in Portland, County of Cumberland, State of Maine, for consideration paid, grants to **60 ELM STREET LLC**, a Maine limited liability company with an address of 82 Hanover Street, Portland, Maine 04101, with **QUITCLAIM COVENANT**, the land, together with any buildings and improvements thereon, in Portland, County of Cumberland, and State of Maine more particularly described in **Exhibit A** attached hereto and made a part hereof.

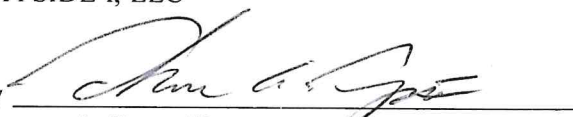
IN WITNESS WHEREOF, the said Bayside I, LLC has caused this instrument to be executed by Thomas A. Toye, III, its Sole Member thereunto duly authorized as of this 12th day of October, 2022.

WITNESS:



BAYSIDE I, LLC

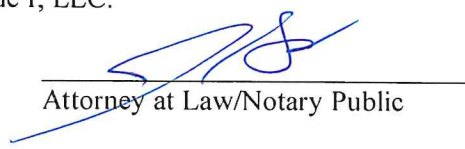
By


Thomas A. Toye, III
Its: Sole Member

STATE OF MAINE
COUNTY OF CUMBERLAND

October 12, 2022

Then personally appeared the above named Thomas A. Toye, III, Sole Member as aforesaid, and acknowledged the foregoing instrument to be his free act and deed in his said capacity and the free act and deed of said Bayside I, LLC.



Attorney at Law/Notary Public

Printed Name

Jason G. Howe, Esq.
Bar No. 0004860

MAINE REAL ESTATE TAX PAID

EXHIBIT A
(Legal Description, 60 Elm Street)

A CERTAIN LOT OR PARCEL OF LAND SITUATED ON THE WESTERLY SIDE OF ELM STREET AND SOUTHERLY SIDE OF OXFORD STREET IN THE CITY OF PORTLAND, COUNTY OF CUMBERLAND, AND STATE OF MAINE, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE INTERSECTION OF THE WESTERLY SIDE OF ELM STREET AND SOUTHERLY SIDE OF OXFORD STREET, THENCE, S 43° 40' 43" E ALONG THE WESTERLY SIDELINE OF ELM STREET A DISTANCE OF 122.92 FEET TO LAND NOW OR FORMERLY OF NORTHEAST INVESTORS, LLC (aka NORTHEAST INVESTORS (MAINE), LLC) AS DESCRIBED IN DEED BOOK 32422, PAGE 197;

THENCE, S 47° 21' 26" W ALONG LAND OF SAID NORTHEAST INVESTORS, LLC A DISTANCE OF 93.70 FEET;

THENCE, N 43° 08' 59" W BY THE NORTHERLY FACE OF THE EXISTING BRICK BUILDING A DISTANCE OF 124.83 FEET TO THE SOUTHERLY SIDELINE OF SAID OXFORD STREET;

THENCE N 48° 33' 13" E ALONG THE SIDELINE OF OXFORD STREET A DISTANCE OF 92.61 FEET TO THE POINT OF BEGINNING, CONTAINING 11,535 S.F. OR 0.26 ACRES, MORE OR LESS.

MEANING AND INTENDING TO CONVEY AND HEREBY CONVEYING A PORTION OF THE LAND DESCRIBED AS PARCEL 1 IN DEED FROM OCTOBER CORPORATION TO BAYSIDE I, LLC DATED JANUARY 26, 2000 AND RECORDED IN THE CUMBERLAND COUNTY REGISTRY OF DEEDS IN BOOK 15298, PAGE 91.

Received
Recorded Register of Deeds
Oct 13, 2022 02:25:54P
Cumberland County
Jessica M. Spaulding

Portland, Maine



Yes. Life's good here.

Planning & Urban Development Department

ZONING ANALYSIS Relevant Zone(s) B3

All Projects:

	Required	Proposed
Lot Size	N/A	26,062 SF
Area Per Dwelling Unit	N/A	120 SF
Minimum Street Frontage	15 FT	457 FT
Front Yard Minimum	N/A	3.17 FT
Front Yard Maximum	5 FT	7.11 FT
Rear Yard	None	5.08 FT
Yard Right	None	0.20 FT
Yard Left	None	5.44 FT
Side Street Setback	None	N/A
Step Back	None	N/A
Maximum Lot Coverage	None*	N/A
Minimum Lot Coverage	N/A	N/A
Maximum Height	105**	104.9'
Open Space	N/A	N/A
Maximum Impervious Area	N/A	N/A
Pavement Setback	N/A	N/A
Floor Area Ratio	None	N/A
Off Street Parking Spaces	None***	0
Loading Bays	N/A	
Other 1		
Other 2		
Other 3		

*Max 25% of lot area for portions of structures exceeding 125 feet in height

**See Bayside Height Overlay Map

***Parking provided at adjacent Public Market garage, under common ownership

****Max length of undifferentiated blank wall along publicly accessible way

Note: Dimensional Standards, Height Map, and Zoning Analysis is based off of the Land Use Code in effect on June 13, 2023 when the Master Development Plan was approved by the Planning Board

E. Summary of Written Easements

Existing Easements:

Existing easement information as provided on the plan titled “Topographic Survey” prepared and identified by Owen Haskell, Inc. last revised 3/29/23.

- CMP Easement within the property Book/Page 6921/105.

It’s anticipated that this easement will be extinguished as part of this project.

Proposed Easements/Licenses:

- Public Access Easement granted by Applicant for pedestrian sidewalk access along the property’s frontage on Preble, Oxford, and Elm Streets.
- Access easement granted to CMP for transformers and primary service access/maintenance.
- Foundation License requested from the City of Portland in limited areas for footing encroachment in the ROW.
- Aerial License requested from the City of Portland in limited areas for canopy encroachment in the ROW.



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.
.... No waivers are being requested at this time.			
....			

G. Financial Capacity

Please find attached the status of good standing from the Secretary of State and letter from the Applicant's bank.





MAINE

Department of the Secretary of State
Bureau of Corporations, Elections and Commissions

Corporate Name Search

Information Summary

[Subscriber activity report](#)

This record contains information from the CEC database and is accurate as of: Wed Jan 22 2025 10:00:25. Please print or save for your records.

Legal Name	Charter Number	Filing Type	Status
60 ELM STREET LLC	20237395DC	LIMITED LIABILITY COMPANY	GOOD STANDING

Filing Date	Expiration Date	Jurisdiction
09/14/2022	N/A	MAINE

Other Names (A=Assumed ; F=Former)
NONE

Principal Home Office Address

Physical

82 HANOVER STREET, SUITE 5
PORTLAND, ME 04101

Mailing

188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04102

Clerk/Registered Agent

Physical

HAWLEY R. STRAIT
C/O BERNSTEIN SHUR, 100 MIDDLE STREET
PORTLAND, ME 04101

Mailing

HAWLEY R. STRAIT
C/O BERNSTEIN SHUR, PO BOX 9729
PORTLAND, ME 04104-5029

New Search

Click on a link to obtain additional information.

List of Filings

[View list of filings](#)

Obtain additional information:

Certificate of Existence (Good Standing) ([more info](#))

[Short Form without amendments \(\\$30.00\)](#) [Long Form with amendments \(\\$30.00\)](#)

Certificate of Legal Existence ([more info](#))

[Short Form without amendments \(\\$30.00\)](#) [Long Form with amendments \(\\$30.00\)](#)

You will need Adobe Acrobat version 3.0 or higher in order to view PDF files.
If you encounter problems, visit the [troubleshooting page](#).



If you encounter technical difficulties while using these services, please contact the [Webmaster](#). If you are unable to find the information you need through the resources provided on this web site, please contact the Division of Corporations, UCC & Commissions Reporting and Information Section at 207-624-7752 or [e-mail](#).

© Department of the Secretary of State



February 4, 2025

City of Portland
Planning Department
389 Congress St, 4th Floor
Portland, ME 04101

RE: Reveler Development / Development at 60 Elm St (61 Preble St), Portland, ME

To Whom it May Concern,

On behalf of Bar Harbor Bank & Trust, I am pleased to provide this letter in support of Reveler Development on their plans to develop the property at 60 Elm Street (61 Preble St) in Portland, Maine. Based on our review of the financial aspect of the project, I believe that the Reveler Development team has the financial capacity and technical experience to successfully complete this project.

I have known and worked with the principals of Reveler Development for several years and have been involved with the financing of prior projects. Bar Harbor Bank & Trust currently has a lending relationship with Reveler Development and I am interested in providing financing for the subject project. While this letter of support is not a commitment to lend, the Bank would welcome the opportunity to look at providing financing to the Reveler Development team on the subject project.

Sincerely,

A handwritten signature in blue ink, appearing to read "Joe Delano", is written over a horizontal line.

Joe Delano
Senior Vice President

H. Technical Capacity

Port Property is the largest apartment manager in the city and Reveler has completed several development projects within Downtown, East End, Longfellow, Oakdale, West Bayside/Parkside, and West End. The apartment homes in Port Property's portfolio consist of modern infill mixed use buildings and historic buildings. The modern infill mixed use buildings have re-activated underserved areas of the city with vibrancy. These historic buildings have been renovated with modern amenities but retain much of their unique historic charm. Portland gives residents plenty to see and do with its walkable downtown, chic restaurants, boutique shopping, and waterfront activities. Convenient living in Maine's largest city has resulted in Port Property apartments to be a perfect living location. Some examples include:

- 341 Cumberland Ave – The Earl
- 638 Congress St – The Lafayette
- 117 Preble St – Schlotterbeck & Foss
- 82 Hanover St– Hanover Works
- 132 Marginal Way – The Linden
- 52 Hanover St – The Armature

Acorn Engineering, Inc. has successfully permitted and provided civil/site engineering for dozens of Major Site Plan projects in Portland, many of which have been constructed. Some examples include:

- Munjoy Heights
- 70 Anderson St.
- 89 Anderson St. – East Bayside Lofts
- 667 Congress St – The Hiawatha
- 82 Hanover St – Hanover Works
- 132 Marginal Way – The Linden
- 52 Hanover St – The Armature

Dry Landscape Architecture, LLC. (Dry LA), is an innovative design firm that focuses on creating exceptional spaces through a unique approach to landscape architecture. Specializing in public spaces, placemaking, storytelling, urban planning, and ecological function through design. Their expertise lies in transforming ideas into thriving environments that engage and inspire. The team recognizes and utilizes the power of open spaces to shape human experiences and interactions. By incorporating elements of storytelling, they infuse meaning and narrative into the design, creating a sense of place that resonates with the community. Dry LA, has experience in Maine, New Hampshire, and Massachusetts. Some examples include:

- Lockwood Hotel, Colby College, Waterville, ME
- Paul Revere Mall, Boston, MA
- Phillips Exeter Academy; South Campus, Exeter, NH
- Emerald Necklace Tree Inventory, Boston, MA
- Emmanuel College, Boston, MA
- Powers Farm, Randolph, MA



Market Square Architects is a national full-service architecture and interiors design firm specializing in multi-family housing, senior living, industrial, education, healthcare, custom residential, and retail. MSA has designed more than 5,000 units of completed multifamily housing over the last 5 years, with many more currently in development. With a home office located in Portsmouth, New Hampshire, and regional locations in Austin, Texas and Nashville, Tennessee, the firm manages projects across the country. It was established in 2016 by Adam Wagner, AIA and Robert Harbeson, AIA based on a commitment to client-focused design. This approach has helped the firm build a loyal client base and fueled significant growth earning it Inc. 5000 awards in 2021, 2022, 2023 and 2024.

Select Relevant Completed Projects:

- **The Eddy** – Biddeford, ME - A four-story, 250-unit multifamily development currently in construction (completion scheduled for Spring 2025).
- **75 Canal** – Manchester, NH - 332,000 sf ground-up construction. Class A 250-unit multifamily development on an urban site.
- **The Residences at Cross Point** – Lowell, MA - A 6-story building providing 240 luxury apartments on an urban site.
- **Residences at Chestnut** – Manchester, NH - Three-building, 187-unit multifamily property currently in construction.
- **Taylor Pointe** – Nashua, NH - Three five-story multifamily buildings totaling 232,000 square feet of market rate residential, retail, and community space over podium parking.
- **The Howard** – Rochester, NH - 55,000 sf ground up construction on an urban site with 45 units.
- **Building 1300, Via Toscana** – Salem, NH – Located in the Tuscan Village mixed-use development, this 480,000 sf, six-story mixed-use building includes five stories of luxury, class-A apartments over retail and parking podium.



I. Conformity with Land Use Ordinance

OVERVIEW

The proposed 217-unit residential building with ground level retail has been designed to conform to City standards. This project conforms with the applicable standards of Portland's Land Use Ordinance Section 14.6.1-4 as demonstrated in the following narrative. Since this project represents Phase 1B of the previously approved West Bayside Master Development Plan (MDP), it should be noted that this project is subject to the existing Zoning Ordinance, Height Maps, and Technical Manual in effect on June 13, 2023 when the MDP was approved by the Planning Board.

14.6.1 Transportation Standards

A. Impact on Surrounding Street Systems:

- a. The project is not anticipated to create any significant hazard to safety on the surrounding street network. The site is bordered by Preble Street, Oxford Street, and Elm Street. A Traffic Movement Permit Application was previously approved. The trip generation has been updated as part of this Major Site Plan application, demonstrating a net reduction in trips to the removal of the existing land uses at 60-62 Elm Street.
- b. According to the City of Portland Federal Street Classification map, the site is located along Preble and Elm Streets which are minor arterial and Oxford Street, a local road. The development does not intend to substantially increase congestion on the surrounding streets.

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 and in accordance with the Technical Manual.
- b. Continuous internal walkways are proposed and will connect to the existing sidewalks along Elm and Preble Street and Oxford Street. Please refer to the site plan for locations of the publicly accessible sidewalk network.
- c. There are no proposed curb cuts.
- d. The development does not anticipate stacking capacity issues with the proposed development.
- e. There is no proposed driveway or parking on site.



2) Loading and Servicing:

The building will be encompassed by Preble, Elm, and Oxford Streets. On-street parking is proposed to remain along Preble and Oxford Street as shown on the Site Plan. One, “30-Minute” commercial vehicle loading zone is proposed along Preble Street. It is anticipated that service and loading vehicles will utilize the “30 – minute commercial” on street parking bordering the development when needed for commercial deliveries, trash pickup, and move-in/move-outs.

3) Curbs and Sidewalks:

- a. The development proposes curbing and sidewalks on all frontages along Preble, Elm, and Oxford Street. In addition, sidewalk, curbing, and ADA accessible ramp repairs are currently proposed on the opposite side of Oxford Street, to facilitate construction of the underground electric utility infrastructure. All curbing and sidewalks are to be installed in accordance with the City’s Technical Manual and the approved surface approved as part of the West Bayside Master Development Plan.
- b. There are existing sidewalks along all abutting Streets. Any curbing or sidewalk disturbed during construction is to be repaired and rebuilt as necessary in conformance with City standards.
- c. Not applicable
- d. Not applicable

C. Public Transit Access:

- 1) The proposed development is situated along Elm and Preble Streets, which are currently public transit routes. In addition, there are existing transit shelters within a quarter of a mile radius including the METRO parking garage/Pulse Station which is less than 500’ from the Site. Therefore, providing a transit shelter for the proposed development is not necessary.
- 2) Not applicable.
- 3) Not applicable.

D. Parking:

1) Vehicular Parking

- a. The parking requirements for the project will be determined by the planning board. The adjacent Public Market garage has ample capacity and is owned



under common ownership.

- b. A parking study is not anticipated to be needed due to the adjacent parking garage and proximity to public transit.
 - c. Not applicable
 - d. Not applicable
- 2) Location and Required Number of Bicycle Parking Spaces:
- a. A minimum of 88 bicycle spaces are required for the proposed 217 dwelling units. A room for bike and equipment storage is included inside the building providing room to store approximately 88 bicycles. Additional bike racks are proposed along the Oxford Street frontage. Please refer to the Site Plan, Landscape plan, and Architectural Ground Floor Plan for more information.
 - b. Not applicable
- 3) Snow Storage:
- a. The Owner will be responsible for managing snow at their discretion and in accordance with City code.
 - b. Snow storage areas will not encroach on parking, walkways, or stormwater management systems.
- 4) Electric Vehicle (EV) charging
- a. Not applicable; there is no proposed parking on site.

E. Transportation Demand Management (TDM):

- 1) A Transportation Demand Management (TDM) has not been prepared for this application due to the adjacent capacity in the abutting Public Market parking garage that's owned by the Developer.
- 2) Not applicable

14.6.2 Environmental Quality Standards

A. Preservation of Significant Natural Features:

- 1. The site does not consist of any significant natural features. There are no known endangered species or plants existing on the site.
- 2. Not applicable



3. Not applicable

B. Landscape Preservation:

- 1) There is one 8" DBH street tree along the property line that is proposed to be removed as part of the project.
- 2) Protection of the existing tree is not feasible in relation to the proposed building. Please refer to the site landscaping plan for more information on the proposed landscaping improvements and street tree network and species selection.
- 3) The development is not subject to zoning setbacks therefore is not required to meet the minimum tree preservation standard as outlined in Chapter 14, land use code.
- 4) A waiver is not requested.
- 5) Not applicable.

C. Site Landscaping and Buffers

- 1) The development is not subject to minimum zoning setbacks within the B3 zone and there are no existing trees on site.
- 2) Buffers
 - a. The solid waste locations will be located within the building and accessed along Preble Street.
 - b. Not applicable
 - c. Given the mixed use nature and lack of setbacks, there are no vegetative buffers proposed.
- 3) Parking Landscaping
 - a. Not applicable
 - b. Not applicable.
 - c. Not applicable.



4) Street Trees

- a. Street trees are proposed along all property frontages, and will be provided in accordance with the approved master development plan. This project (Phase 1B of MDP) proposes to incorporate 12 new street trees as part of the sidewalk reconstruction. Spacing ranges around 25'-30' feet along frontages, with some variation to avoid conflicts with proposed and existing utilities. If a tree is located below overhead power lines, specific trees species will be proposed whose mature height will not interfere with the power lines. Please refer to the Landscaping plans for more information on the proposed improvements.
- b. Not applicable.

D. Water Quality, Stormwater Management and Erosion Control:

1. The site was designed to minimize impervious area where feasible and reduce both the volume and rate of stormwater runoff from the lot.
 - a. The site drainage will not be directed to flow or create ponding 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. As demonstrated in the Stormwater Management Report, provisions are in place to ensure stormwater from the development will not exceed the pre-development flows.
 - c. Per the request of Portland DPW, the maximum permissible stormwater outflow rate into the City's system during the design storm event was designed to not exceed 0.1 CFS per acre of watershed area draining to the detention system. The detention system onsite will provide storage for 1" times the impervious area while providing treatment prior to discharge.
2. 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.
3. The development is not anticipated to pose a contamination risk to groundwater during or after construction. The development proposes adequate and sanitary disposal of sewage in accordance with Section 2 of the Technical Manual. The project will be serviced by a public wastewater system.

14.6.3 Public Infrastructure and Community Safety Standards



A. Consistency with City Master Plans:

1. The project has been designed to be consistent with the proposed West Bayside Master Development Plan, City's Zoning Ordinance, Design Manual, and off-site infrastructure.
2. The site plan is to include necessary easements, rights, and improvements to all connections to the off premise public infrastructure.

B. Public Safety and Fire Prevention:

1. The site has been designed to enhance the security of the public and private areas on site to reduce the potential for crime.
2. Emergency access is provided on three sides of the building, from Preble, Oxford, and Elm Street.

C. Public Utilities

1. Requests for Ability to Serve letters have been sent to the respective companies. Responses are forthcoming as the design progresses.
2. The electrical service will be wired underground via two new 9'x9' transformers, as shown on the Utility Plan.
3. The new sewer and stormwater infrastructure will meet the provisions of the Technical Manual and the comments received from DPW as part of the Master Development Plan
4. The project will be served by connection to the public sewer system within Oxford Street. The stormwater management system is designed to meet the standards of Chapter 500.
5. Solid waste is proposed to be stored within the building as shown on the architectural plans. A private contractor will provide removal services.

16.4.4 Site Design Standards**A. Massing, Ventilation and Wind Impact:**

- a. Please refer to Section O, Architectural Design Narrative for an overview and demonstration of compliance with the various standards.



B. Shadows:

As the site is located within the B-3 zone and does not abut any existing publicly accessible open space, a shadow study for the proposed development is not required.

C. Snow and Ice Loading:

The structure will not distribute snow and ice onto adjacent properties.

D. View Corridors:

The proposed development is not located along a public view corridor.

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. It is our understanding that there are no known archaeological resources that exist on the site.

F. Exterior Lighting:

- a. Site Lighting.
 - i. Exterior lighting will be designed to meet the requirements set forth in the Technical Manual and not to negatively impact the abutting properties.
 - ii. Lighting has been designed to not adversely impact the abutting residential properties. Shielding shall be implemented when necessary.
- b. Architectural and Specialty Lighting.
 - i. No architectural and Specialty lighting is proposed, at this time.
 - ii. No up-lighting is proposed, at this time.
- c. Street lighting has been proposed in accordance with the City Technical Manual and is to include the required peninsula decorative lighting.



G. Noise and Vibration:

- a. All proposed heating, ventilation and air conditioning equipment, and emergency generators are to meet the applicable state and federal emissions requirements as defined by the Architect. They are to be located within the interior of the site or the top of the building and will be screened by a parapet.

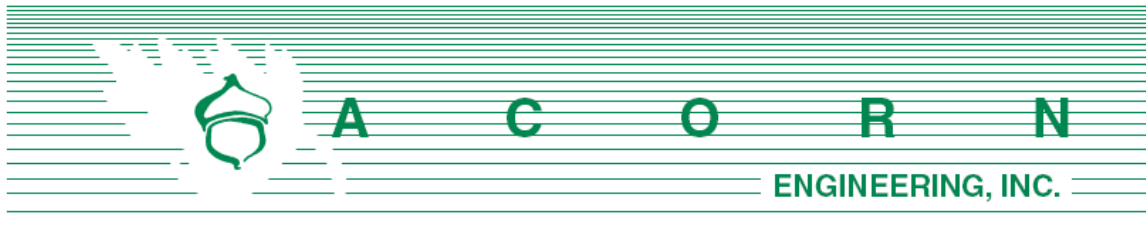
H. Signage and Wayfinding:

1. The size, scale, proportions, design, materials, placement, and source and intensity of illumination of all permanent building or freestanding signs have been designed to complement the subject building and its immediate context:
 - a) If proposed, signage does not conceal architectural features from view.
 - b) If proposed, signage will complement the subject building and its immediate context.
 - c) If proposed, signage will not adversely affect visibility at intersections or access drives.
 - d) If proposed, signage will be facing downwardly to avoid glare and light spillover to towards the sky.
 - e) No proposed signs will be located along rooftops.
2. All street and wayfinding signage shall enable users to safely and easily navigate into, around, and out of the site. Directional signs will not adversely affect visibility at intersections on or off of the site, if proposed.

I. Design Standards.

- a. The Architect has designed the project to meet the standards set forth in the B3 Downtown Business zoning district, as well as the City of Portland Design Manual. Please refer to the Architectural Plans.





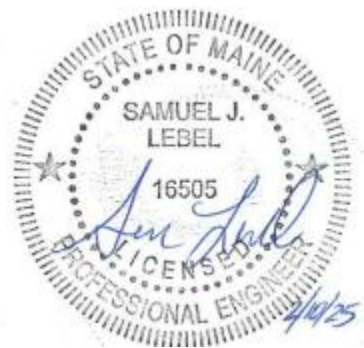
J. STORMWATER MANAGEMENT **REPORT**

Prepared For:

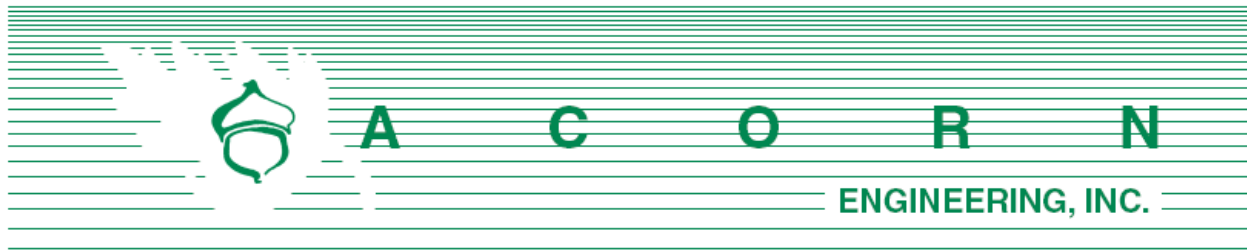
**60 Elm Street LLC
511 Congress Street, Floor 6
Portland, Maine 04101**

Prepared By:

**Acorn Engineering, Inc.
PO Box 3372
Portland, Maine 04104**



February 2025



INTRODUCTION

Acorn Engineering, Inc. has been retained by 60 Elm LLC, to provide civil engineering services for the proposed development at 61 Preble Street in Portland, Maine. The property consists of approximately 0.60 acres of land to be transformed into a 10-story building primarily for residential use with commercial space on the first floor. The project proposes merging parcels 033 M001001 and 033 M012001 into one to encompass the redevelopment project.

A stormwater analysis was prepared to address the effects of the proposed development on both the quantity and quality of stormwater runoff. The purpose of this report is to demonstrate that the project will meet and exceed the requirements set forth by Maine DEP Chapter 500 Basic, General, and Flooding Standards and the following requirements from the City of Portland (the City), provided below. Please note, the 61 Preble Street redevelopment project represents Phase 1B of the previously approved West Bayside Master Development Plan (MDP) approved in June of 2023. As such, the project was designed to the standards set forth within the code and technical manual established at that time. See the outline below of the relevant sections from the City of Portland technical manual and city code along with the date of the standard being referenced.

- City of Portland Land Use Ordinance Article 14.6.2.D. ; (Rev. Date: 12/18/23)
- City of Portland Technical Manual – Section 5 – Portland Stormwater Management Standards and Maine DEP Chapter 500 Stormwater Management.; (Rev. Date: 12/8/20)

EXISTING CONDITIONS

The project site is bordered by Preble, Oxford, and Elm Street. A boundary plan has been prepared by Owen Haskell Inc., dated December 8th, 2022, last revised March 22nd, 2024. Summit Geoengineering Services (SGS) conducted a geotechnical investigation for the site concluded on October 22nd, 2024.

The project is located in the Bayside Height Overlay Zone and is within the B3 Downtown Business Zone. It is our understanding that there are no natural resources on site and that the development is not within an urban impaired stream watershed.

The site is almost entirely impervious, currently comprised of a two-story building and a medium to high use surface parking lot with slopes ranging up to 10% throughout the site, with slopes ranging up to 5-9% along Preble Street, and 5-7% along Elm Street. No formal stormwater treatment or detention presently resides onsite. Most of the site drains to the



Preble Street Municipal Separate Storm Sewer System (MS4). Roughly a quarter of the site drains to the combined sewer in Elm Street.

PROPOSED DEVELOPMENT

The proposed development intends to demolish the existing building and parking lot and transform the site into a 10-story multi-use building with 217 residential units and a ground floor commercial space. The site will feature interconnecting sidewalks along Preble, Oxford, and Elm Street, offering a 5' wide furnishing zone and minimum 6' pedestrian zone up to the building face, where feasible.

The site was designed with the intent to control the rate of runoff leaving the site. The stormwater collection, treatment, and distribution systems on site have been designed to detain runoff generated from the proposed development.

As part of this project, an MS4 extensions from Preble Street system is being proposed approximately 75' from the existing drainage manhole at the corner of Preble and Oxford Street. The extension will feature a 12" storm drain within Oxford Street to convey the detained and treated stormwater from the on-site detention system to the existing 12" storm drain, prior to entering the 24" separated storm drain within Preble Street. As a result, nearly 97% of the site's runoff will enter the MS4 system within Preble Street.

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

The redevelopment of 61 Preble Street will not create more than 1,000 SF of new impervious area, nor will it result in more than 5,000 SF of non-roof redeveloped impervious area.

Stormwater treatment is being provided on site downstream of the detention system

The project has been designed to utilize StormFilter cartridges as a filter meeting the requirements of the General Standards (Section 4.B) of the Chapter 500 by CONTECH Engineered Solutions LLC, approved by the Maine DEP March 13th, 2015, revised in February 24th, 2023.

The StormFilter system proposed will also provide a slow, metered release of the water quality volume through R-Tank subsurface chamber system. The StormFilters are proposed downstream of the R-Tank system, and will receive flows from the R-Tank's underdrain system. Treatment is accomplished via the 4 cartridges within the Storm-Filter manhole. The Storm-Filter cartridge filter media is selected depending on the targeted pollutant removal. As it is not anticipated that oils and grease will be entering the StormFilter Cartridges, the "X Cartridge" has been selected for this system.



Please refer to the Post Development Watershed Map in Attachment B for reference on the proposed area to be treated.

Treatment Area

Based on the approval letter by the MDEP they recommend using 4.5 cartridges per acre of impervious being treated. The project proposes to treat 0.50 acres of impervious surface area draining to the R-Tank further discharged into the StormFilter Manhole to be treated within the Storm Filter Cartridges. See *Table 1* below for the comparison of the City's recommended cartridges with what is proposed in part of this project.

Table 1 – StormFilter Cartridge Sizing			
	1-Year Peak Flow (cfs)	Required Cartridges	Provided Cartridges
StormFilter Cartridges	0.88	4	4

As represented in *Tables 1 and 2*, the site is in accordance with Chapter 500, General Standard rules and the MDEP approval letter for StormFilter treatment.

The proposed treatment of impervious and developed areas are as follows:

Table 2 –Treatment Area					
	Existing Area (SF)	Proposed Area (SF)	Net Change (SF)	Proposed Area with Treatment (SF)	% Overall, Area Treated
Impervious Area	25,052	24,004	-1,047	21,408	89%
Developed Area	26,062	26,062	0	22,097	85%
*Developed area includes impervious area, landscaped, or unvegetated area in accordance with MDEP.					



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, the stormwater runoff shall be rounded to the nearest tenth of a cubic feet per second (cfs).

Based upon the MDP comments from City Staff/DPW, an on-site stormwater detention volume equal to 1" of rainfall over the total impervious area is required for projects connecting into the City's separated storm drain system. The proposed flows generated for the 61 Preble Street development are as follows in *Table 3* Below.

Table 3: Required Detention Volume	
1" of rainfall over the entire impervious area:	2,000 cubic-feet
1" of rainfall over impervious area draining to R-Tanks:	1,784 cubic-feet
Proposed Storage Volume:	2,000 cubic-feet

The proposed development intends to store 2,000 cubic-feet of stormwater. Detention on site is accomplished utilizing R-Tank subsurface chambers. The chambers have been sized to provide 2,000 cubic feet of available storage. The system was sized to meet the City's request and to drain between 24 to 48 hours.

Furthermore, the maximum permissible stormwater outflow rate into the City's system during the 1" design storm event is to be less than or equal to 0.1 CFS per acre of watershed area draining to the detention system. The R-Tank system is sized to provide for 0.60 acres of area draining to the R-Tank system. The site has been designed to detain and release stormwater runoff equal to 0.06 CFS off the site for the entire development during the design storm event. Please refer to the attached HydroCAD report for more information.

Due to the grading constraints of the site, a small portion of the courtyard will not be treated/attenuated. Approximately 960 square feet will drain directly to the MS4. However, the 1" rain event cumulatively represents a 0.05 CFS into the MS4 and storage for the 2,000 CF target is still being provided.



Pre and Post Development Subcatchments:

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.

Curve Number (CN)

Within the pre-development model, the vegetated areas were considered poor and fair grass, and impervious areas consisted of connected pavement.

The post development landscaped areas were given a good rating for new landscaped or loam/seeded areas and fair rating for the vegetated areas to remain. Refer to the attached pre and post development maps provides a visual representation of the land covers from the pre and post conditions.

Pre Development Calculations:

The site is currently occupied by an existing 2-story building and surface parking lot. The sites topography breaks down into two sub-catchments as outlined below

- **Point of Interest 1: Preble Street Separated Storm Drain (MS4):**
 - **Sub-catchment 1.1:** This catchment consists of the existing building roof runoff which appears to outlet directly into a private catch basin on the abutting property, prior to entering into the Preble Street Separated Sewer.
 - **Sub-catchment 1.2:** This sub-catchment appears to drain to the Preble Street Separated Sewer via sheet flow through the parking lot and within Oxford Street to the existing catch basin network.
- **Point of Interest 2: Elm Street Combined Sewer:**
 - **Sub-catchment 2:** This catchment consists of the uphill parking lot on the Northeast side of the property. Runoff generated from this lot appears to drain towards the curb cut along Elm Street, sheeting towards the existing Catch basin at the Elm and Oxford Street corner, prior to entering the Elm Street Combined Sewer.

Table 4 – Pre-Development Peak Stormwater Flows			
Drainage Area	2-Year Storm Event (cfs)	10-Year Storm Event (cfs)	25-Year Storm Event (cfs)
POI #1	2.0	3.0	3.8
POI #2	0.5	0.8	1.0
TOTAL RUNOFF:	2.5	3.8	4.8



Post Development Calculations:

The redevelopment proposes an 18,779 SF, 10-story building onsite with a subsurface stormwater detention system and downstream treatment system. The site will generally maintain the existing topography and sub-catchments as outlined below.

➤ **Point of Interest 1: Preble Street Separated Storm Drain (MS4):**

❖ **Pond 1: R-Tank Subsurface Storage System:**

- **Sub-catchment 1.1:** This catchment consists of the proposed building's roof area. 100% of the roof runoff is proposed to be routed directly into the R-Tanks Subsurface storage system. Flows captured and detained will further be conveyed via the proposed 12" MS4 extension within Oxford Street, prior to entering into the Preble Street MS4.
- **Sub-catchment 1.2:** This sub-catchment consists of the courtyard area which drains directly into the subsurface system.
- **Sub-catchment 1.3:** Southwesterly side of the side consisting of the Preble Street Sidewalk and raised planted beds along the building.
- **Sub-catchment 1.4:** Consists of the Northwestern side of the site and is comprised of Oxford Street Sidewalk within the right of way and the public access easement.

➤ **Point of Interest 2: Elm Street Combined Sewer:**

- **Sub-catchment 2:** This catchment consists of northeast sidewalk, sheeting towards the existing Catch basin at the Elm and Oxford Street corner, prior to entering the Elm Street Combined Sewer.

Table 5 – Post - Development Peak Stormwater Flows			
Drainage Area	2-Year Storm Event (cfs)	10-Year Storm Event (cfs)	25-Year Storm Event (cfs)
POI #1	2.4	3.1	3.2
POI #2	0.02	0.05	0.07
TOTAL RUNOFF:	2.4	3.2	3.2



Pre and Post Development Calculations:

Pre and Post development conditions will maintain the same general topography and will drain to the same point of interest at the Preble Street MS4. Overall, the proposed development will result in a decrease of impervious area within the property line. *Table 2*, Treatment area above provides a breakdown of the existing and proposed impervious area within the property line and total developed. *Table 6* below provides the comparison of the pre and post development peak flows for 2, 10, 25, 50, and 100-yr storm events.

Table 6 – Comparison of Pre & Post Development Overall Peak Stormwater Flows						
Drainage Area	2-Year Storm Event (cfs)		10-Year Storm Event (cfs)		25-Year Storm Event (cfs)	
	Pre	Post	Pre	Post	Pre	Post
Total	2.5	2.4	3.8	3.2	4.8	3.2

As shown in *Table 6*, the net impact of the post development peak flows will be below the predevelopment levels. 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 has been derived from the following resources:

- Soil Conservation Service Medium Intensity Soil Survey for York County

Soil borings and test pits were conducted by Summit GeoEngineering to further assess the conditions on site. These results are forthcoming. In accordance with Maine Best Management Practices (BMP). The USDA soil report and geotechnical report were submitted as part of this submission.

CONCLUSION

The proposed development was designed to meet the requirements set forth in Chapter 500 Basic, General, and Flooding Standards and the MDP requirements set forth by the City.

Please find the following attachments for more information on the stormwater analysis in addition to the proposed construction and maintenance plan for the development.



ATTACHMENTS

Attachment A: Pre-Development Watershed Map
Attachment B: Post-Development Watershed Map
Attachment C: Pre & Post HydroCAD Calculations
Attachment D: Soil Survey



SECTION J

STORMWATER MANAGMENT REPORT

Attachment A: Pre Development Watershed Map



SECTION J

STORMWATER MANAGMENT REPORT

Attachment B: Post Development Watershed Map

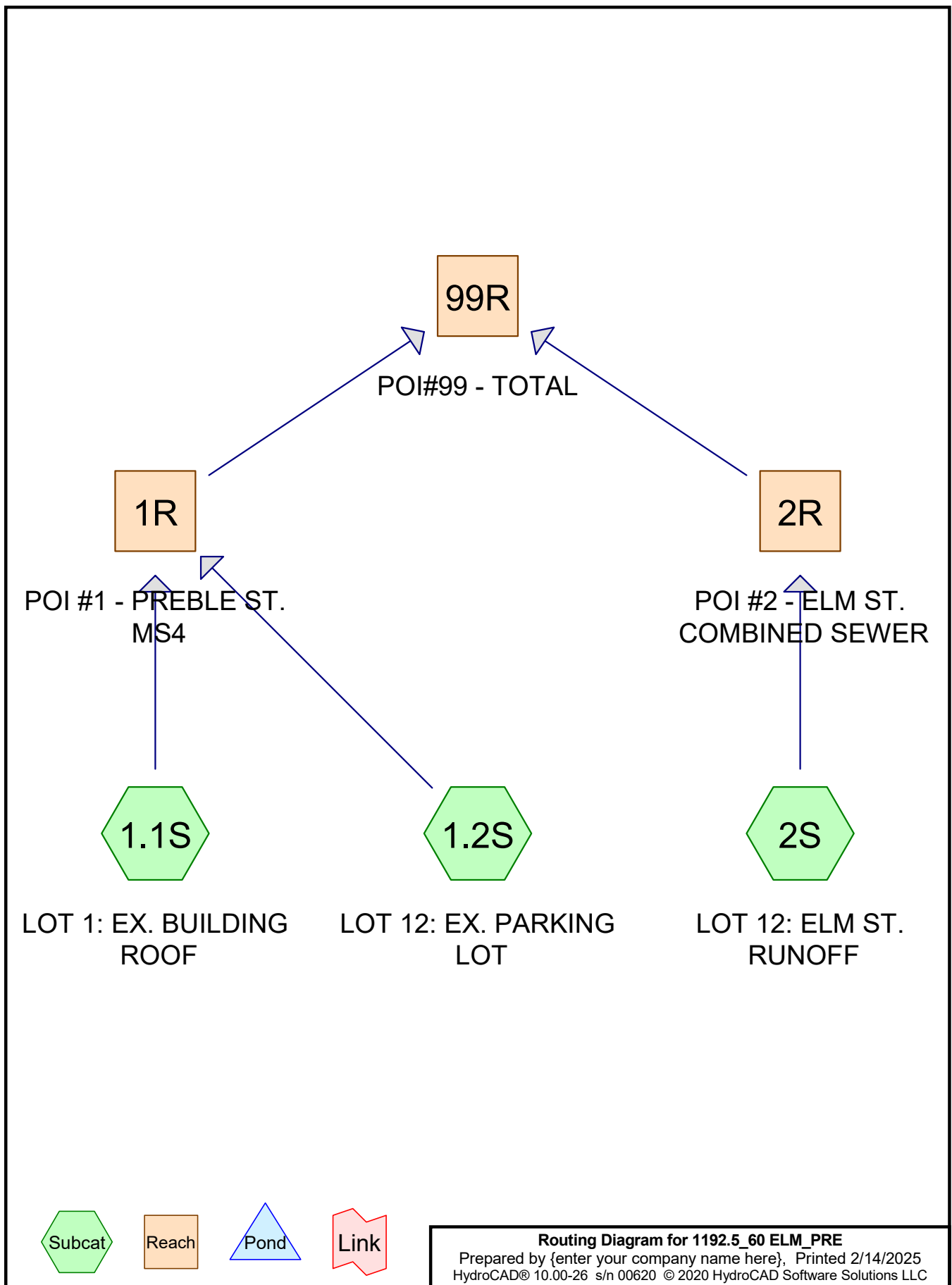


SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: Pre Development HydroCAD





1192.5_60 ELM_PRE

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Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.017	69	50-75% Grass cover, Fair, HSG B (1.2S)
0.005	68	<50% Grass cover, Poor, HSG A (2S)
0.002	61	>75% Grass cover, Good, HSG B (1.2S)
0.334	98	EX. BUILDING ROOF (1.1S)
0.241	98	Paved parking, HSG A (1.2S, 2S)
0.599	97	TOTAL AREA

1192.5_60 ELM_PRE

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Page 3

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.017	0.000	0.000	0.000	0.017	50-75% Grass cover, Fair	1.2S
0.005	0.000	0.000	0.000	0.000	0.005	<50% Grass cover, Poor	2S
0.000	0.002	0.000	0.000	0.000	0.002	>75% Grass cover, Good	1.2S
0.000	0.000	0.000	0.000	0.334	0.334	EX. BUILDING ROOF	1.1S
0.241	0.000	0.000	0.000	0.000	0.241	Paved parking	1.2S, 2S
0.247	0.019	0.000	0.000	0.334	0.599	TOTAL AREA	

1192.5_60 ELM_PRE*Type II 24-hr 2-YR Rainfall=3.10"*

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Page 4

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: LOT 1: EX. Runoff Area=14,536 sf 100.00% Impervious Runoff Depth>2.65"
Tc=6.0 min CN=98 Runoff=1.42 cfs 0.074 af

Subcatchment 1.2S: LOT 12: EX. PARKING Runoff Area=5,944 sf 86.31% Impervious Runoff Depth>2.29"
Tc=6.0 min CN=94 Runoff=0.54 cfs 0.026 af

Subcatchment 2S: LOT 12: ELM ST. Runoff Area=5,610 sf 96.01% Impervious Runoff Depth>2.57"
Tc=6.0 min CN=97 Runoff=0.54 cfs 0.028 af

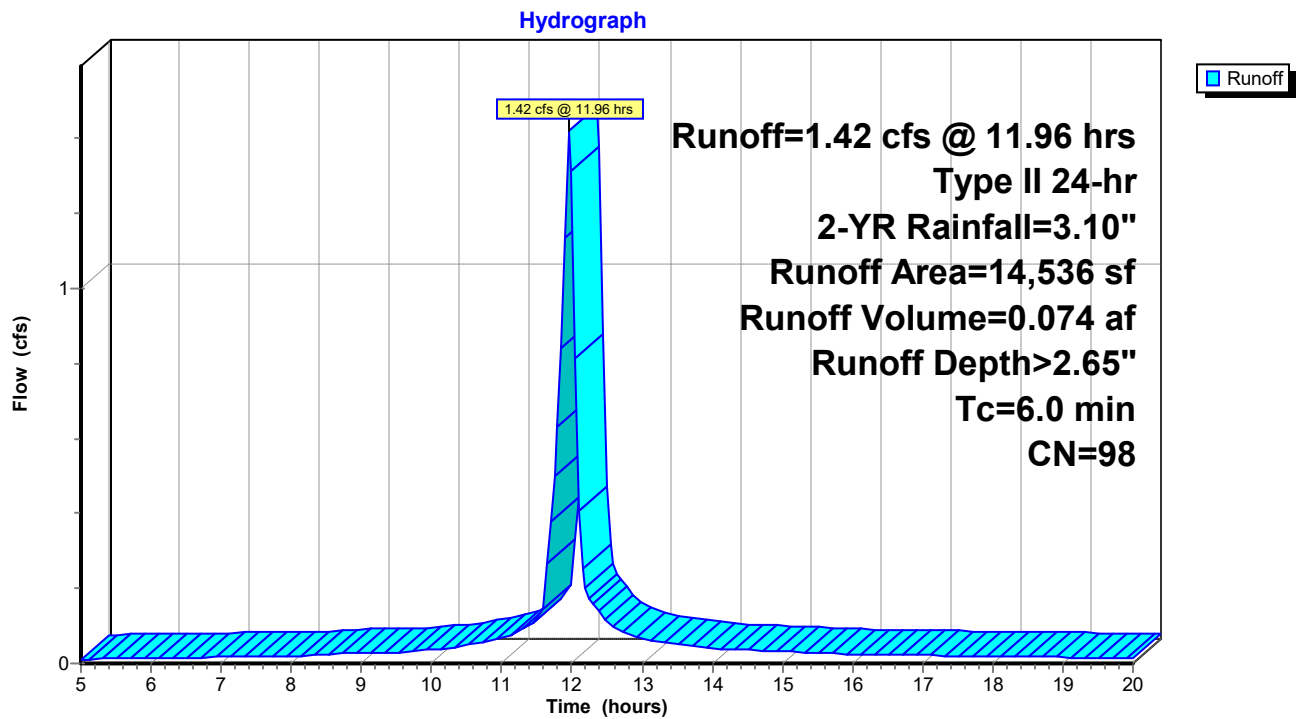
Reach 1R: POI #1 - PREBLE ST. MS4 Inflow=1.96 cfs 0.100 af
Outflow=1.96 cfs 0.100 af

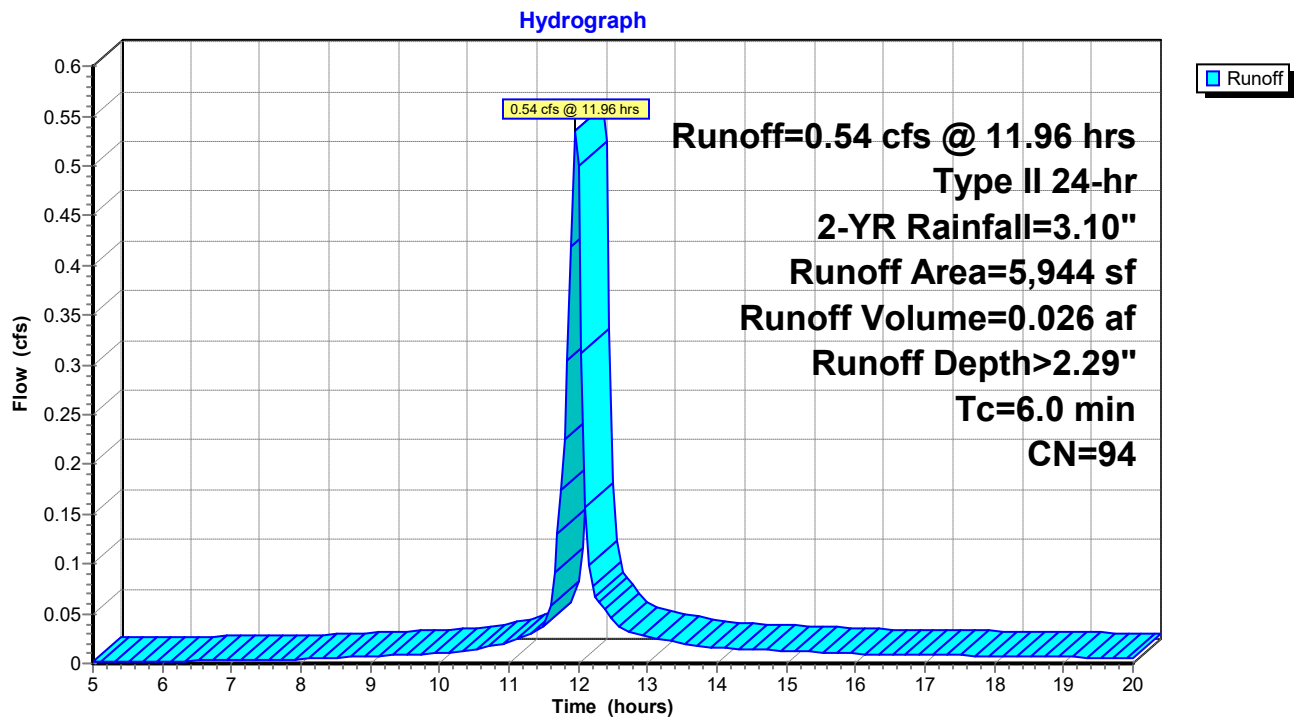
Reach 2R: POI #2 - ELM ST. COMBINED SEWER Inflow=0.54 cfs 0.028 af
Outflow=0.54 cfs 0.028 af

Reach 99R: POI#99 - TOTAL Inflow=2.50 cfs 0.127 af
Outflow=2.50 cfs 0.127 af

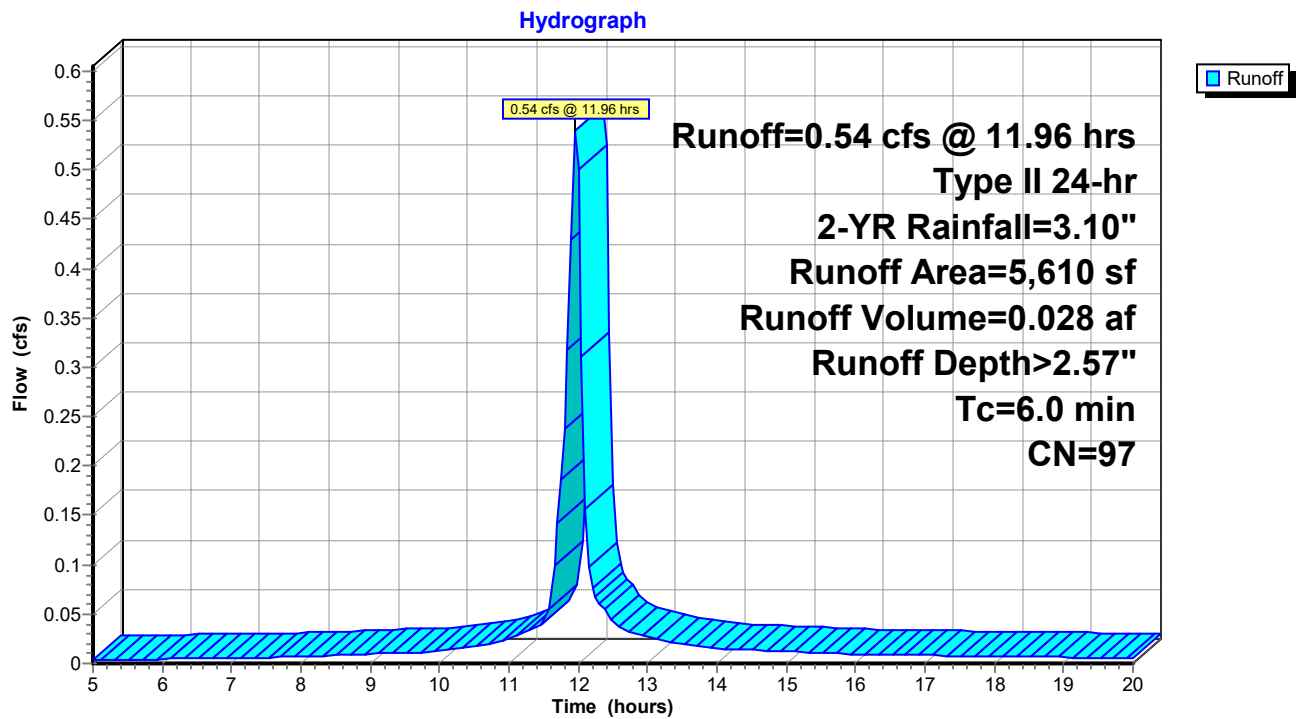
Total Runoff Area = 0.599 ac Runoff Volume = 0.127 af Average Runoff Depth = 2.55"
3.98% Pervious = 0.024 ac 96.02% Impervious = 0.575 ac

Subcatchment 1.1S: LOT 1: EX. BUILDING ROOF

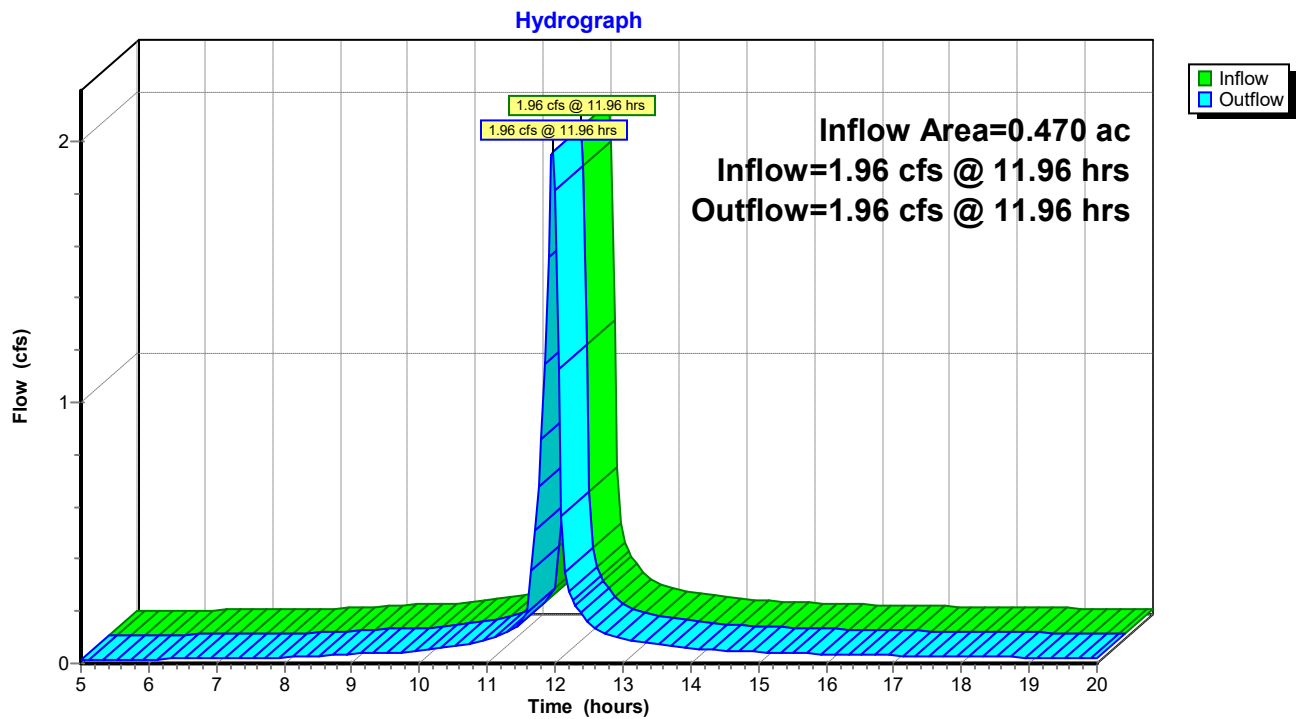


Subcatchment 1.2S: LOT 12: EX. PARKING LOT

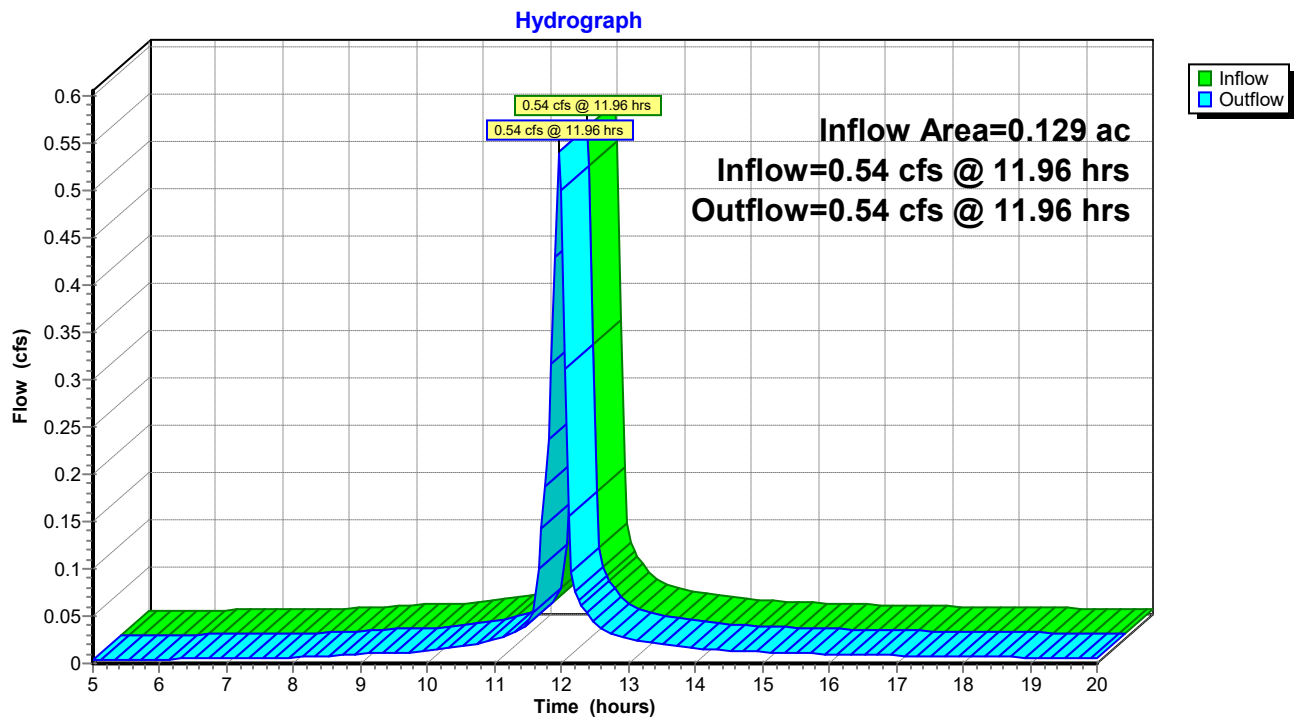
Subcatchment 2S: LOT 12: ELM ST. RUNOFF



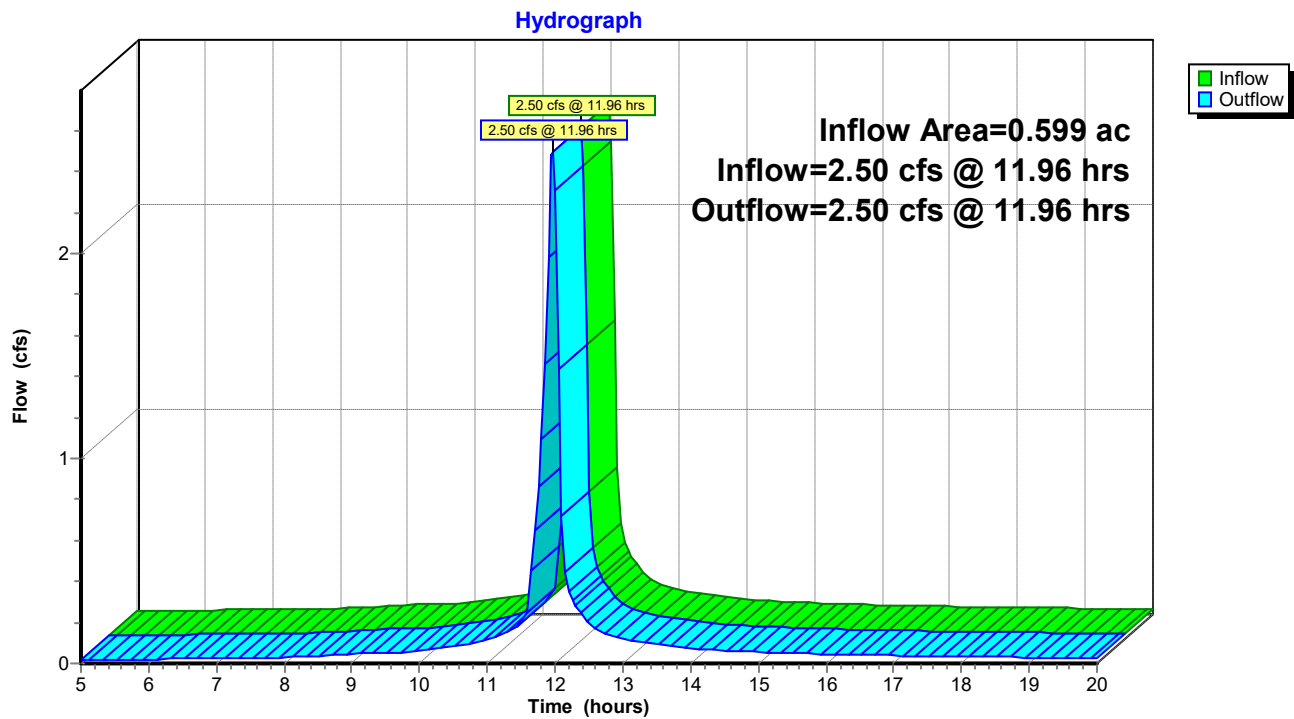
Reach 1R: POI #1 - PREBLE ST. MS4



Reach 2R: POI #2 - ELM ST. COMBINED SEWER



Reach 99R: POI#99 - TOTAL



1192.5_60 ELM_PRE*Type II 24-hr 10-YR Rainfall=4.60"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: LOT 1: EX. Runoff Area=14,536 sf 100.00% Impervious Runoff Depth>4.01"
Tc=6.0 min CN=98 Runoff=2.12 cfs 0.111 af

Subcatchment 1.2S: LOT 12: EX. PARKING Runoff Area=5,944 sf 86.31% Impervious Runoff Depth>3.66"
Tc=6.0 min CN=94 Runoff=0.83 cfs 0.042 af

Subcatchment 2S: LOT 12: ELM ST. Runoff Area=5,610 sf 96.01% Impervious Runoff Depth>3.93"
Tc=6.0 min CN=97 Runoff=0.81 cfs 0.042 af

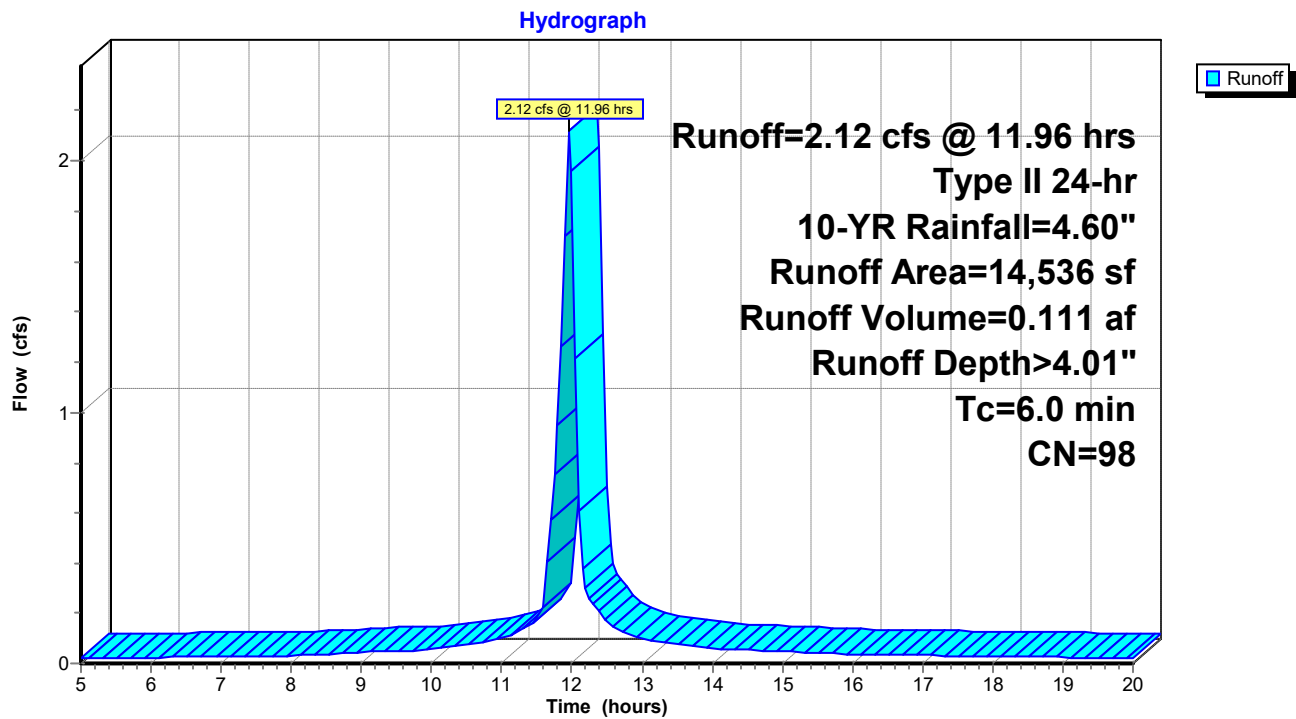
Reach 1R: POI #1 - PREBLE ST. MS4 Inflow=2.95 cfs 0.153 af
Outflow=2.95 cfs 0.153 af

Reach 2R: POI #2 - ELM ST. COMBINED SEWER Inflow=0.81 cfs 0.042 af
Outflow=0.81 cfs 0.042 af

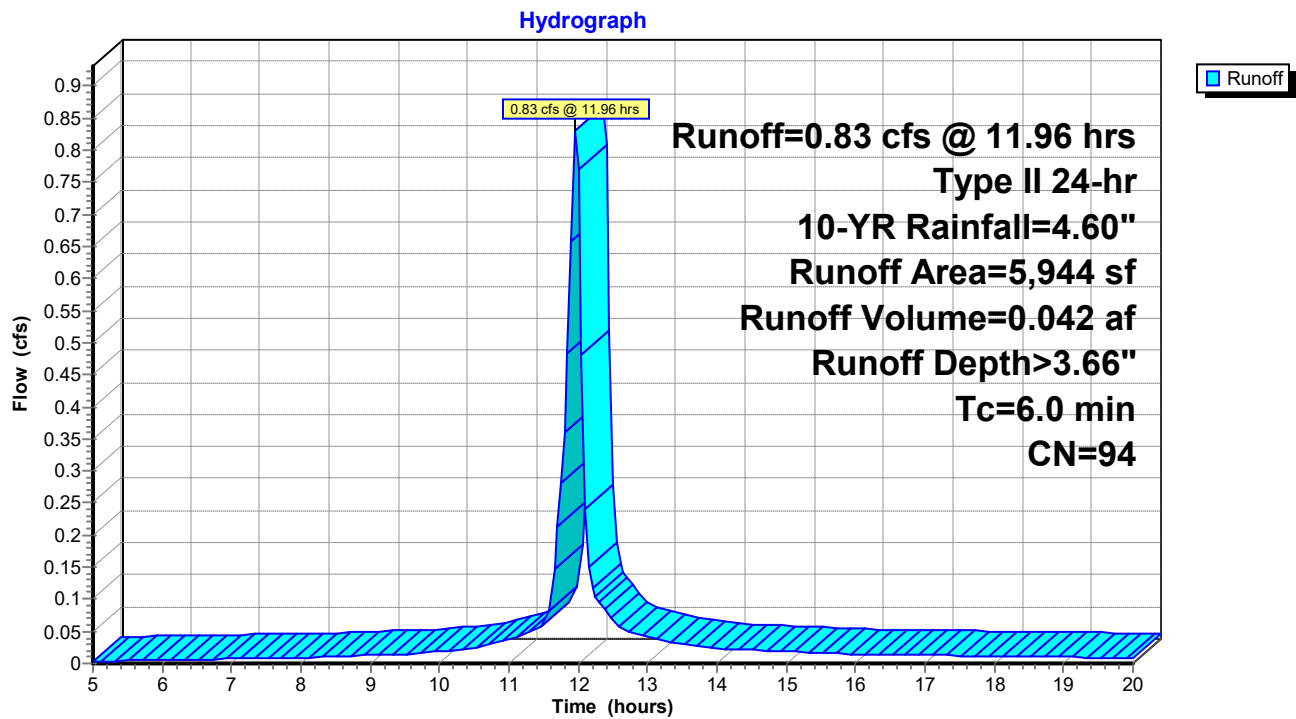
Reach 99R: POI#99 - TOTAL Inflow=3.77 cfs 0.195 af
Outflow=3.77 cfs 0.195 af

Total Runoff Area = 0.599 ac Runoff Volume = 0.195 af Average Runoff Depth = 3.91"
3.98% Pervious = 0.024 ac 96.02% Impervious = 0.575 ac

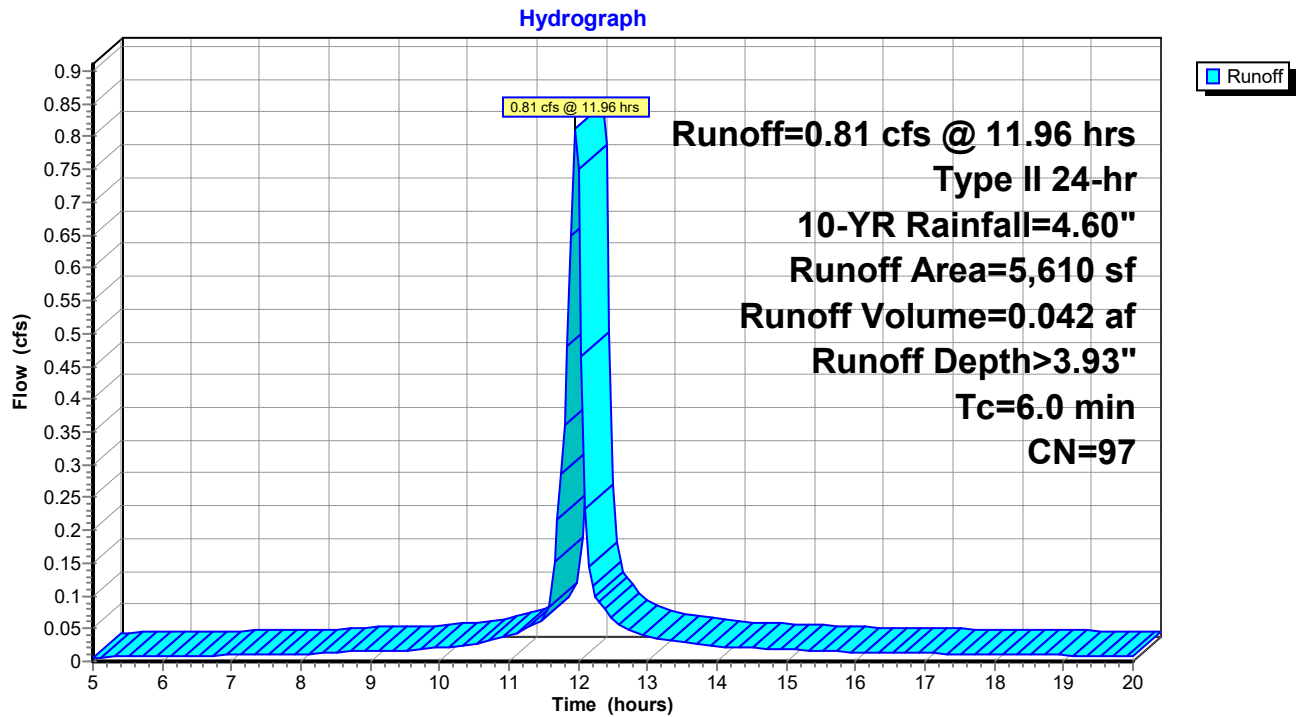
Subcatchment 1.1S: LOT 1: EX. BUILDING ROOF



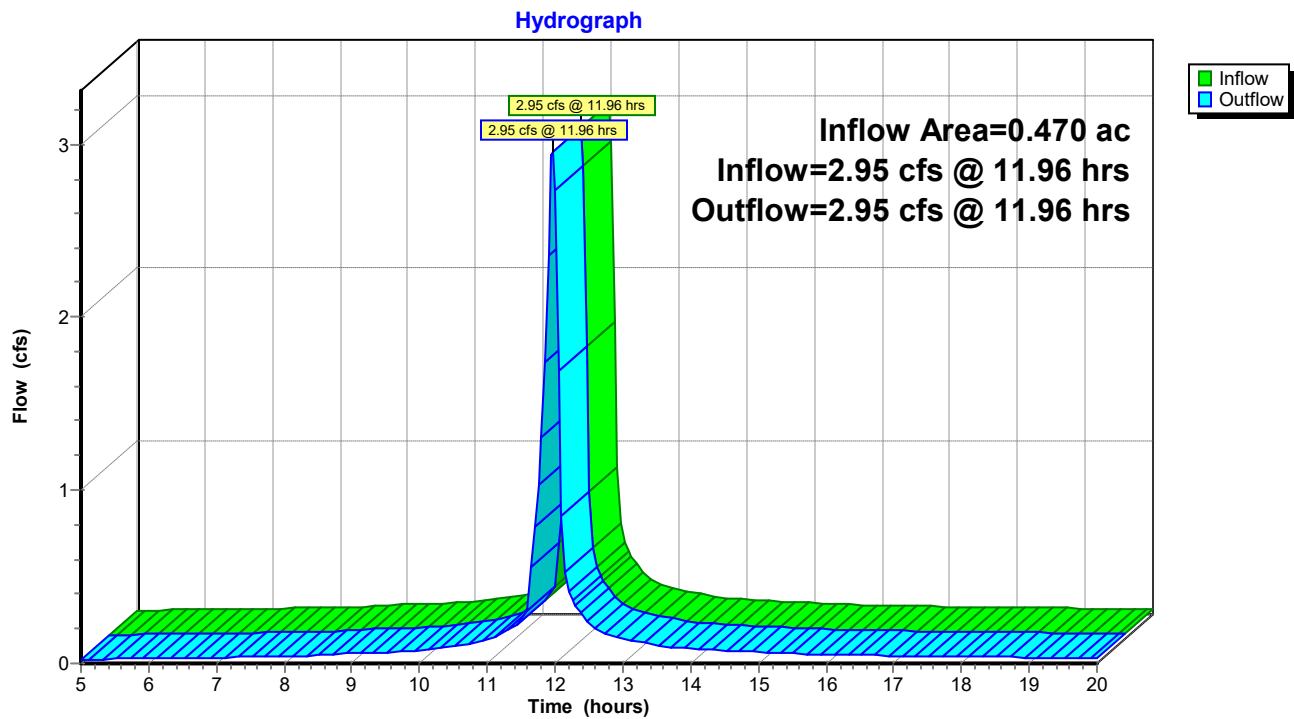
Subcatchment 1.2S: LOT 12: EX. PARKING LOT



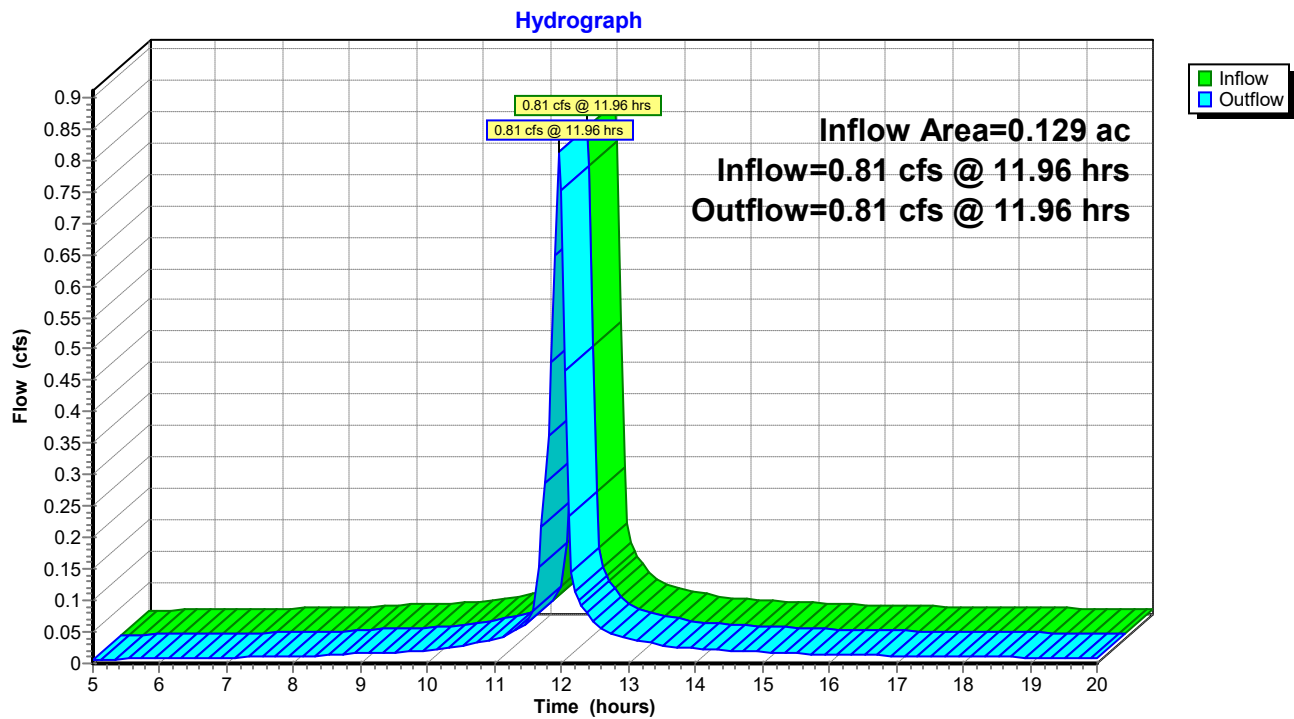
Subcatchment 2S: LOT 12: ELM ST. RUNOFF



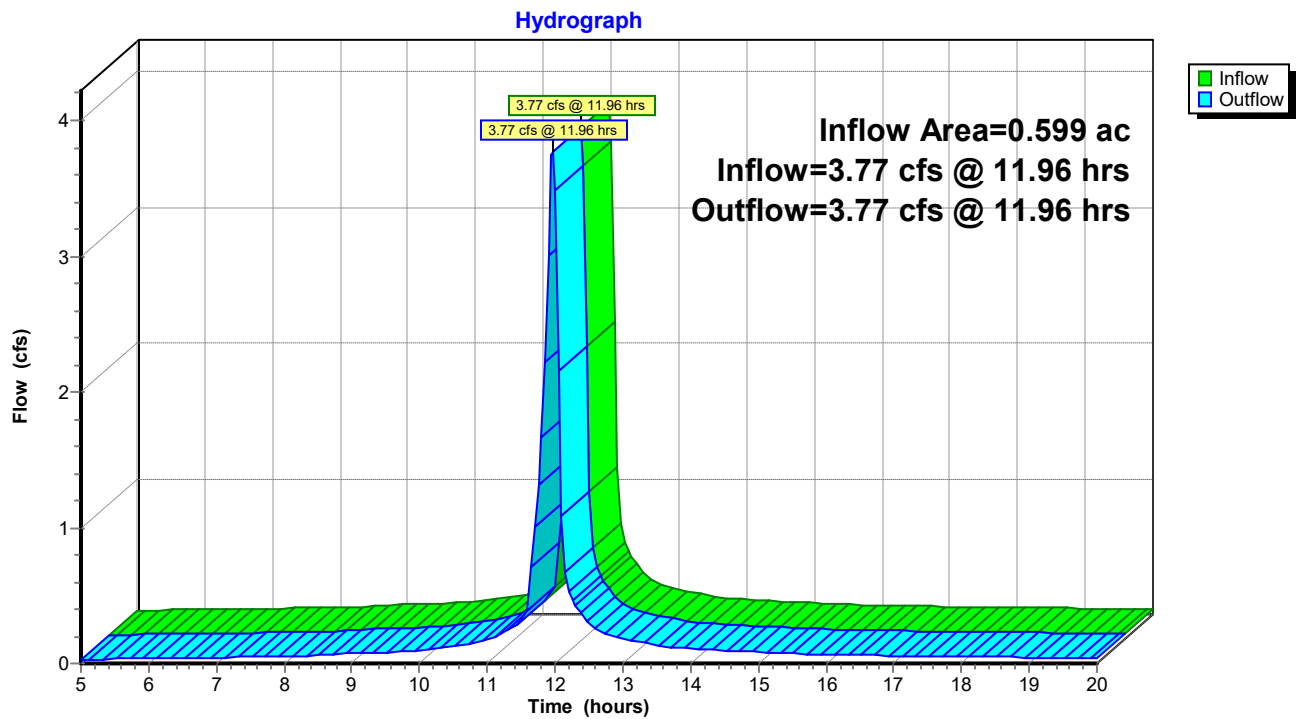
Reach 1R: POI #1 - PREBLE ST. MS4



Reach 2R: POI #2 - ELM ST. COMBINED SEWER



Reach 99R: POI#99 - TOTAL



1192.5_60 ELM_PRE*Type II 24-hr 25-YR Rainfall=5.80"*

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.1S: LOT 1: EX. Runoff Area=14,536 sf 100.00% Impervious Runoff Depth>5.09"
Tc=6.0 min CN=98 Runoff=2.68 cfs 0.142 af

Subcatchment 1.2S: LOT 12: EX. PARKING Runoff Area=5,944 sf 86.31% Impervious Runoff Depth>4.76"
Tc=6.0 min CN=94 Runoff=1.07 cfs 0.054 af

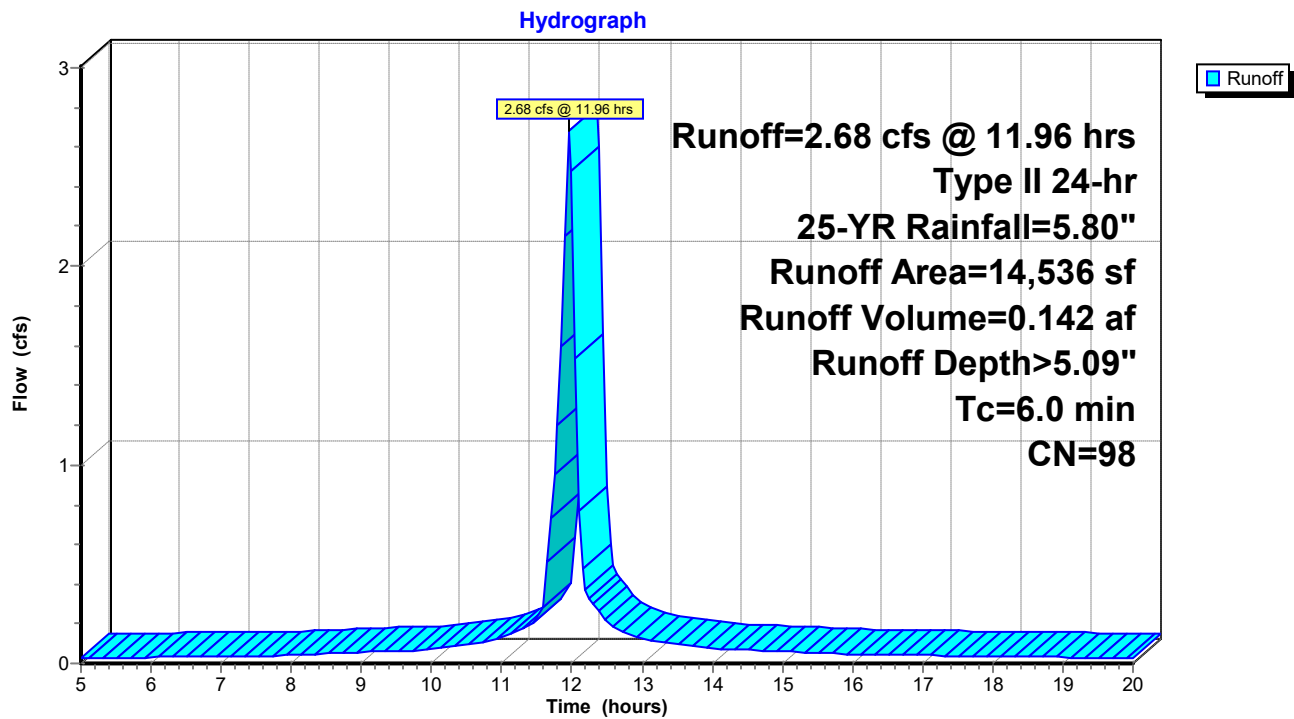
Subcatchment 2S: LOT 12: ELM ST. Runoff Area=5,610 sf 96.01% Impervious Runoff Depth>5.02"
Tc=6.0 min CN=97 Runoff=1.03 cfs 0.054 af

Reach 1R: POI #1 - PREBLE ST. MS4 Inflow=3.75 cfs 0.196 af
Outflow=3.75 cfs 0.196 af

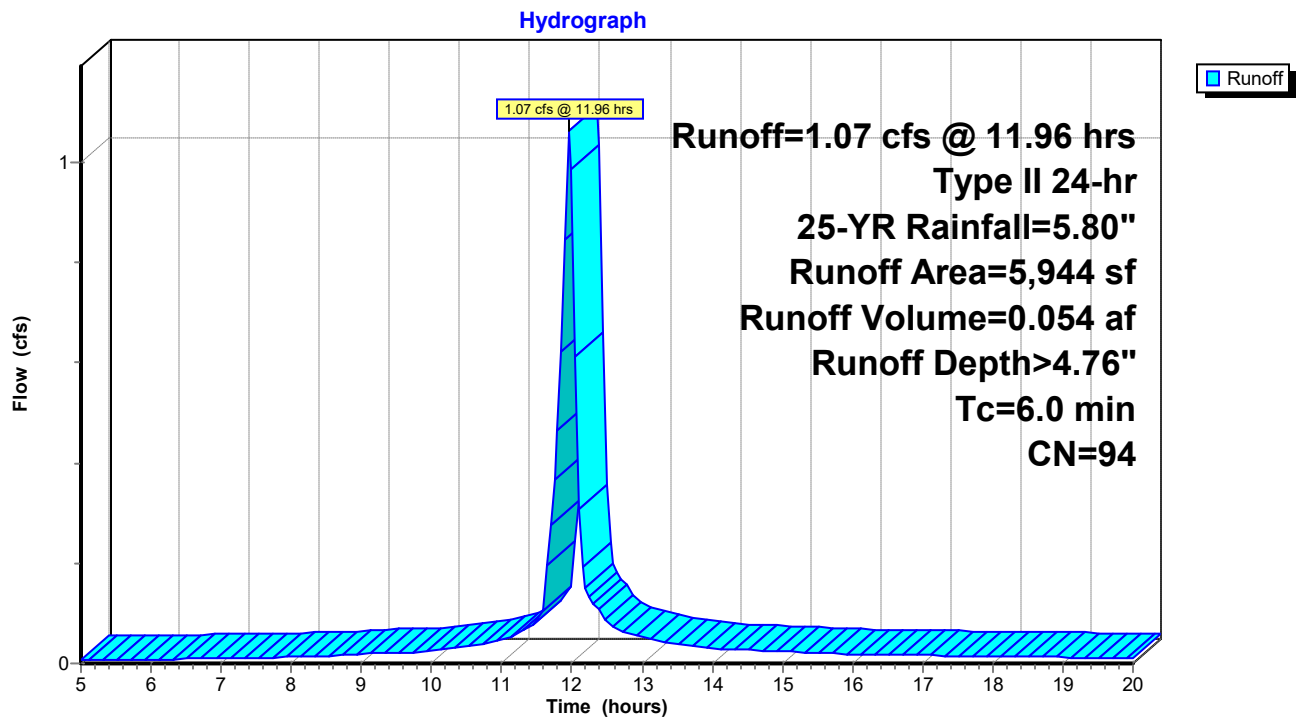
Reach 2R: POI #2 - ELM ST. COMBINED SEWER Inflow=1.03 cfs 0.054 af
Outflow=1.03 cfs 0.054 af

Reach 99R: POI#99 - TOTAL Inflow=4.78 cfs 0.249 af
Outflow=4.78 cfs 0.249 af

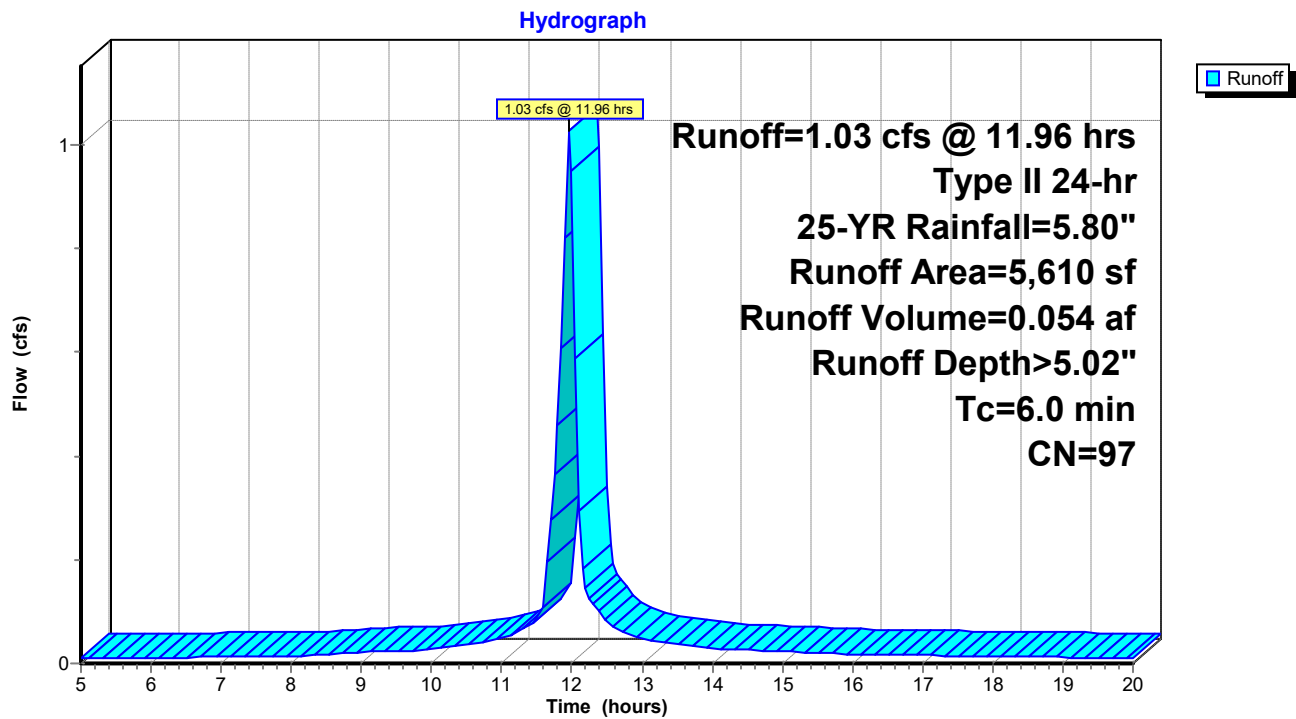
Total Runoff Area = 0.599 ac Runoff Volume = 0.249 af Average Runoff Depth = 5.00"
3.98% Pervious = 0.024 ac 96.02% Impervious = 0.575 ac

Subcatchment 1.1S: LOT 1: EX. BUILDING ROOF

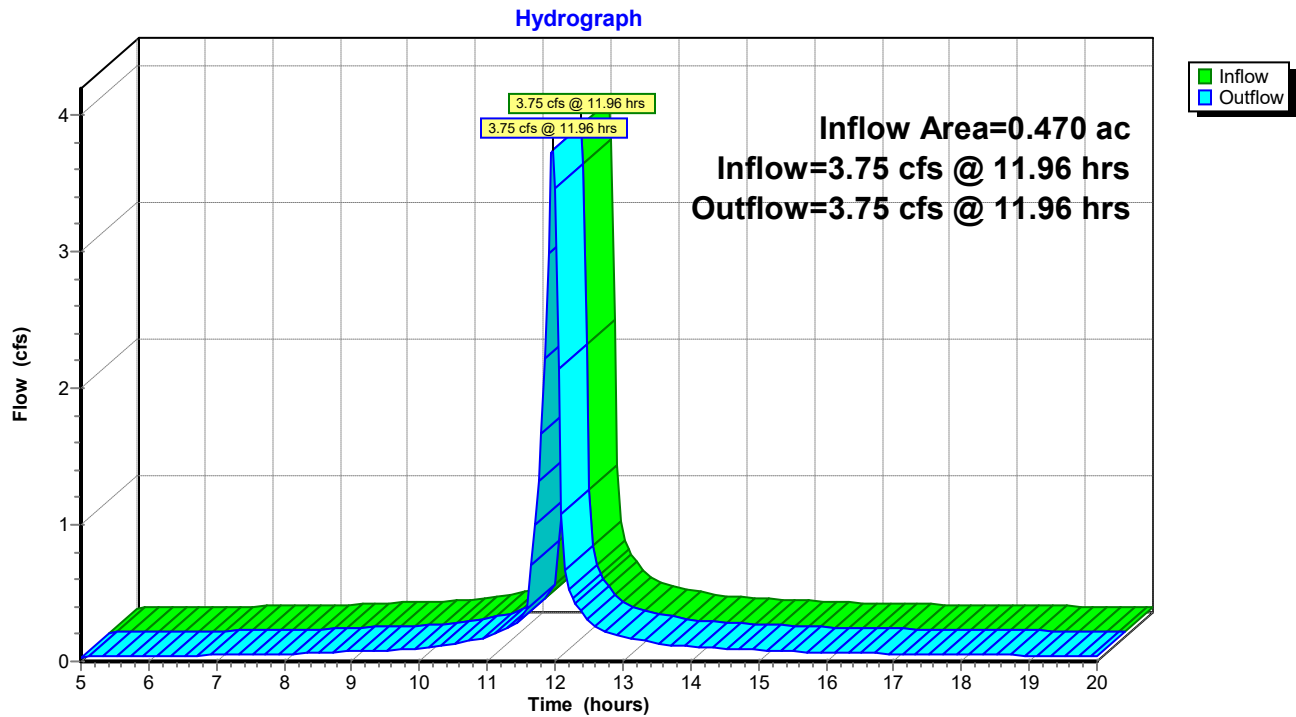
Subcatchment 1.2S: LOT 12: EX. PARKING LOT



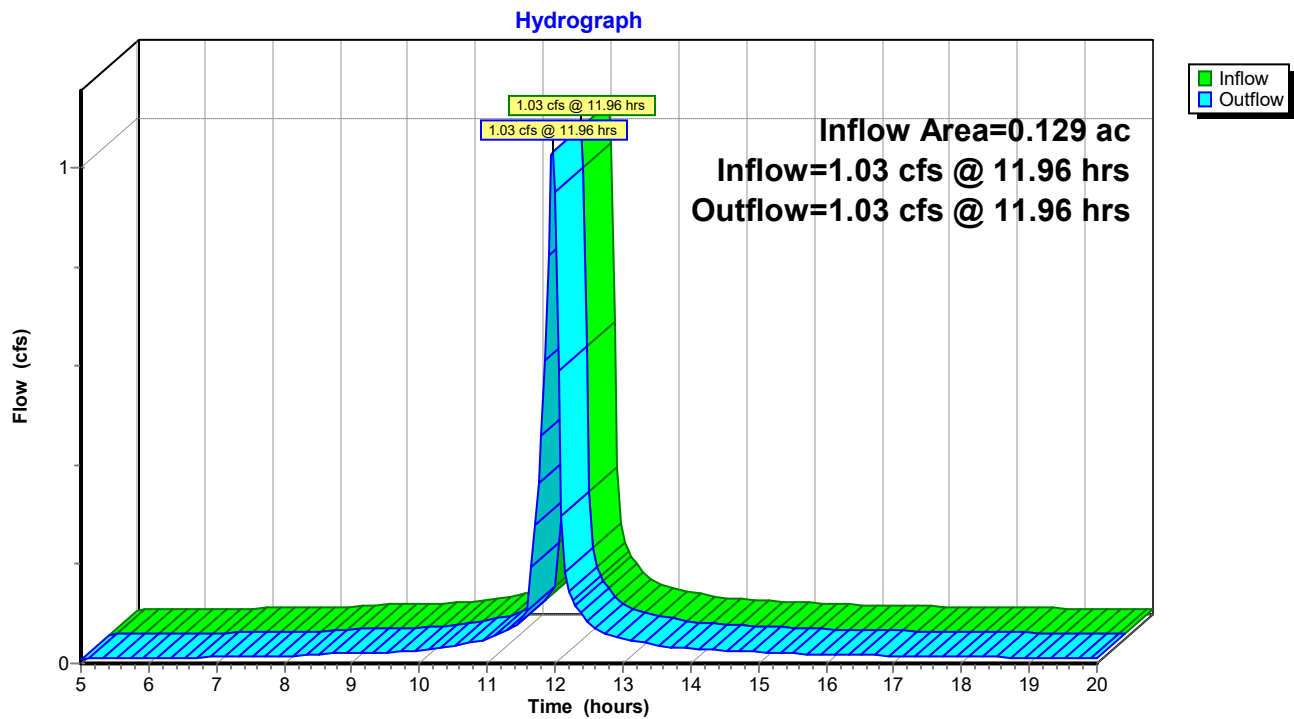
Subcatchment 2S: LOT 12: ELM ST. RUNOFF



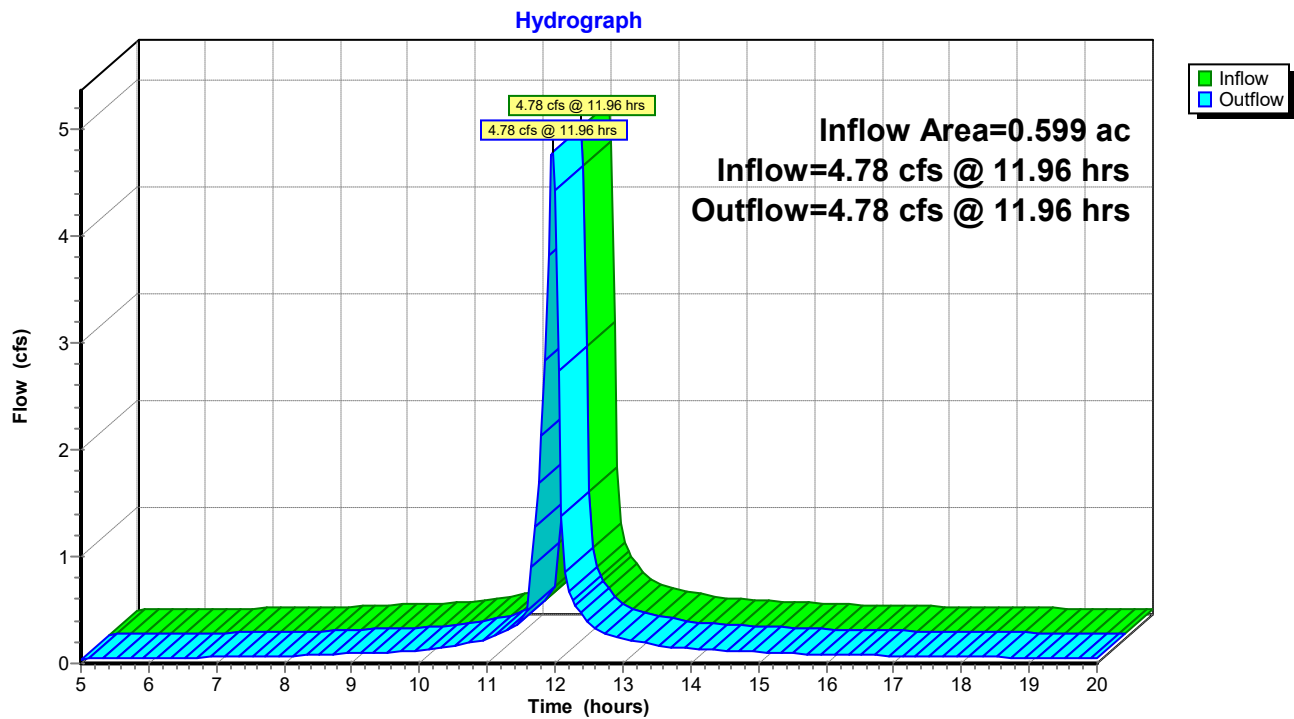
Reach 1R: POI #1 - PREBLE ST. MS4



Reach 2R: POI #2 - ELM ST. COMBINED SEWER



Reach 99R: POI#99 - TOTAL

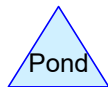
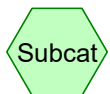
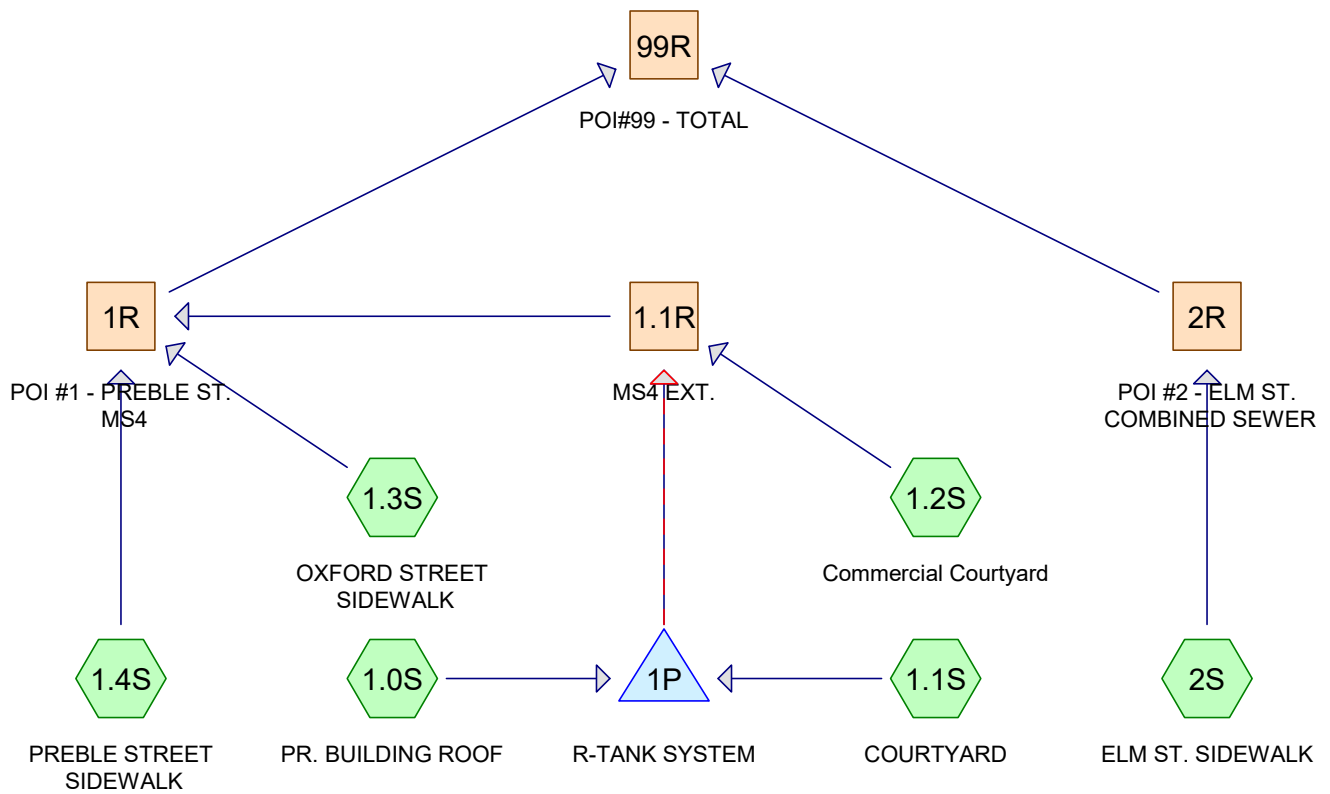


SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: Post Development HydroCAD





Routing Diagram for 1192.5_60 ELM_POST_2-13-25

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1192.5_60 ELM_POST_2-13-25

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.012	69	50-75% Grass cover, Fair, HSG B (1.4S)
0.033	61	>75% Grass cover, Good, HSG B (1.1S, 1.3S, 1.4S, 2S)
0.431	98	PR. BUILDING ROOF (1.0S)
0.022	98	Patio/Pavers (1.2S)
0.004	98	Sidewalk (2S)
0.096	98	Unconnected pavement, HSG A (1.1S, 1.3S, 1.4S)
0.001	58	Woods/grass comb., Good, HSG B (1.1S)
0.599	95	TOTAL AREA

1192.5_60 ELM_POST_2-13-25

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.096	HSG A	1.1S, 1.3S, 1.4S
0.047	HSG B	1.1S, 1.3S, 1.4S, 2S
0.000	HSG C	
0.000	HSG D	
0.457	Other	1.0S, 1.2S, 2S
0.599		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.012	0.000	0.000	0.000	0.012	50-75% Grass cover, Fair	1.4S
0.000	0.033	0.000	0.000	0.000	0.033	>75% Grass cover, Good	1.1S, 1.3S, 1.4S, 2S
0.000	0.000	0.000	0.000	0.431	0.431	PR. BUILDING ROOF	1.0S
0.000	0.000	0.000	0.000	0.022	0.022	Patio/Pavers	1.2S
0.000	0.000	0.000	0.000	0.004	0.004	Sidewalk	2S
0.096	0.000	0.000	0.000	0.000	0.096	Unconnected pavement	1.1S, 1.3S, 1.4S
0.000	0.001	0.000	0.000	0.000	0.001	Woods/grass comb., Good	1.1S
0.096	0.047	0.000	0.000	0.457	0.599	TOTAL AREA	

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1.1R	0.00	-0.35	70.0	0.0050	0.012	12.0	0.0	0.0
2	1P	32.08	31.78	30.0	0.0100	0.011	12.0	0.0	0.0
3	1P	34.03	33.93	2.0	0.0500	0.010	4.0	0.0	0.0
4	1P	38.32	37.80	26.0	0.0200	0.011	8.0	0.0	0.0

1192.5_60 ELM_POST_2-13-25

Type II 24-hr 2-YR Rainfall=3.10"

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.0S: PR. BUILDING ROOF Runoff Area=18,779 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=1.89 cfs 0.103 af

Subcatchment 1.1S: COURTYARD Runoff Area=3,438 sf 78.21% Impervious Runoff Depth=2.08"
Tc=6.0 min CN=90 Runoff=0.28 cfs 0.014 af

Subcatchment 1.2S: Commercial Courtyard Runoff Area=960 sf 100.00% Impervious Runoff Depth=2.87"
Tc=6.0 min CN=98 Runoff=0.10 cfs 0.005 af

Subcatchment 1.3S: OXFORD STREET Runoff Area=1,057 sf 89.03% Impervious Runoff Depth=2.45"
Tc=6.0 min CN=94 Runoff=0.10 cfs 0.005 af

Subcatchment 1.4S: PREBLE STREET Runoff Area=1,176 sf 45.75% Impervious Runoff Depth=1.39"
Tc=6.0 min CN=81 Runoff=0.07 cfs 0.003 af

Subcatchment 2S: ELM ST. SIDEWALK Runoff Area=690 sf 22.75% Impervious Runoff Depth=0.72"
Tc=6.0 min CN=69 Runoff=0.02 cfs 0.001 af

Reach 1.1R: MS4 EXT. Avg. Flow Depth=0.69' Max Vel=3.87 fps Inflow=2.24 cfs 0.107 af
12.0" Round Pipe n=0.012 L=70.0' S=0.0050 ' Capacity=2.73 cfs Outflow=2.23 cfs 0.107 af

Reach 1R: POI #1 - PREBLE ST. MS4 Inflow=2.39 cfs 0.115 af
Outflow=2.39 cfs 0.115 af

Reach 2R: POI #2 - ELM ST. COMBINED SEWER Inflow=0.02 cfs 0.001 af
Outflow=0.02 cfs 0.001 af

Reach 99R: POI#99 - TOTAL Inflow=2.41 cfs 0.116 af
Outflow=2.41 cfs 0.116 af

Pond 1P: R-TANK SYSTEM Peak Elev=39.33' Storage=2,105 cf Inflow=2.17 cfs 0.117 af
Discarded=0.00 cfs 0.000 af Primary=2.14 cfs 0.101 af Outflow=2.14 cfs 0.101 af

Total Runoff Area = 0.599 ac Runoff Volume = 0.131 af Average Runoff Depth = 2.62"
7.80% Pervious = 0.047 ac 92.20% Impervious = 0.552 ac

Summary for Subcatchment 1.0S: PR. BUILDING ROOF

Runoff = 1.89 cfs @ 11.97 hrs, Volume= 0.103 af, Depth= 2.87"

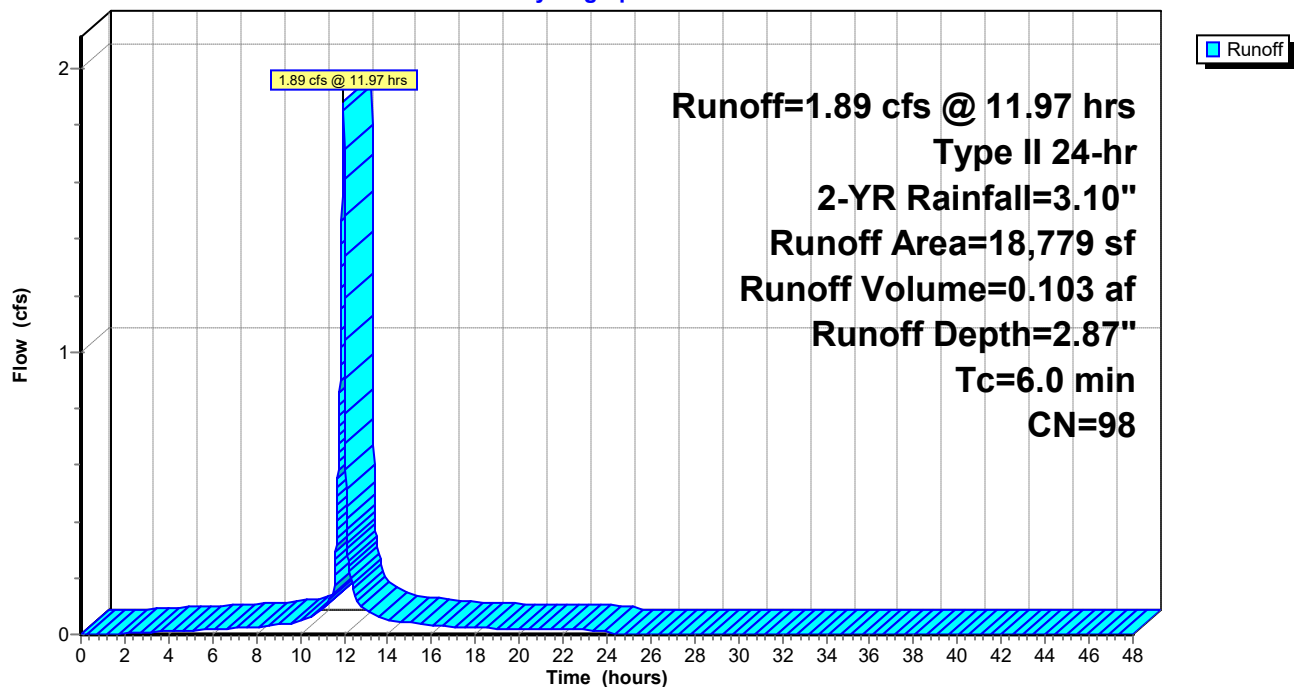
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
* 18,779	98	PR. BUILDING ROOF
18,779		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.0S: PR. BUILDING ROOF

Hydrograph



Summary for Subcatchment 1.1S: COURTYARD

Runoff = 0.28 cfs @ 11.97 hrs, Volume= 0.014 af, Depth= 2.08"

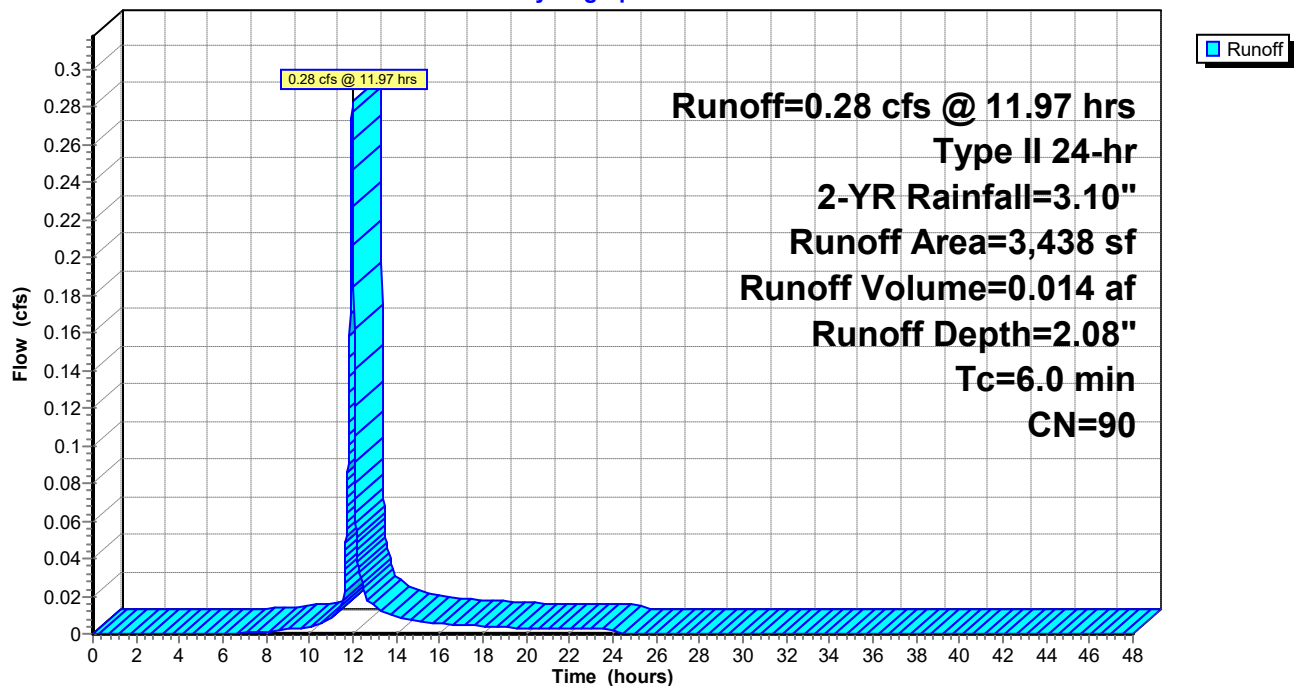
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
2,689	98	Unconnected pavement, HSG A
689	61	>75% Grass cover, Good, HSG B
60	58	Woods/grass comb., Good, HSG B
3,438	90	Weighted Average
749		21.79% Pervious Area
2,689		78.21% Impervious Area
2,689		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.1S: COURTYARD

Hydrograph



Summary for Subcatchment 1.2S: Commercial Courtyard

Runoff = 0.10 cfs @ 11.97 hrs, Volume= 0.005 af, Depth= 2.87"

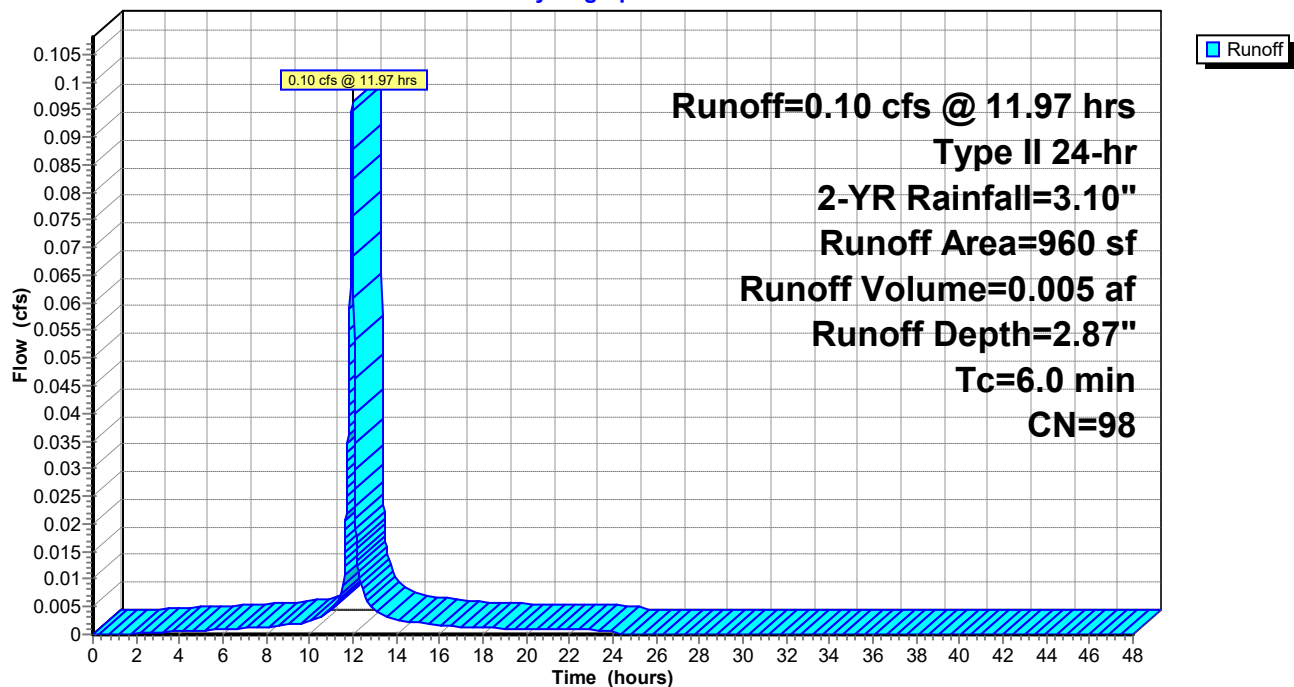
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
* 960	98	Patio/Pavers
960		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.2S: Commercial Courtyard

Hydrograph



Summary for Subcatchment 1.3S: OXFORD STREET SIDEWALK

Runoff = 0.10 cfs @ 11.97 hrs, Volume= 0.005 af, Depth= 2.45"

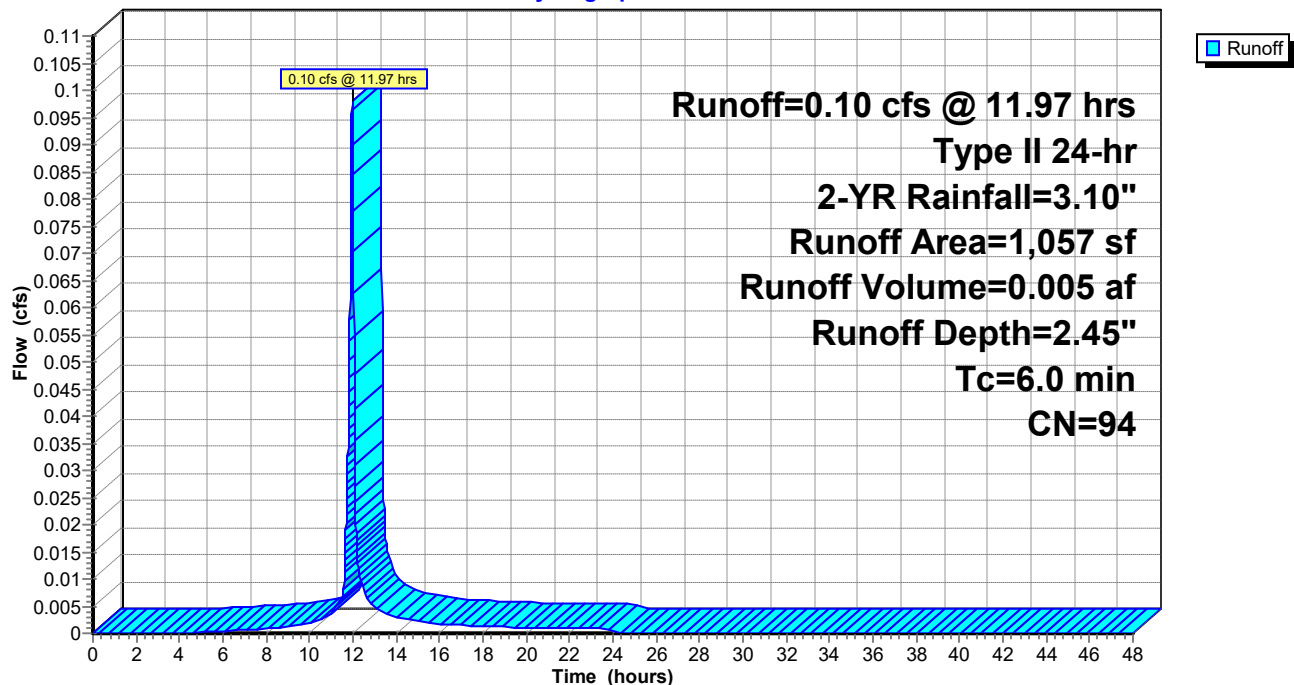
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
941	98	Unconnected pavement, HSG A
116	61	>75% Grass cover, Good, HSG B
1,057	94	Weighted Average
116		10.97% Pervious Area
941		89.03% Impervious Area
941		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.3S: OXFORD STREET SIDEWALK

Hydrograph



Summary for Subcatchment 1.4S: PREBLE STREET SIDEWALK

Runoff = 0.07 cfs @ 11.98 hrs, Volume= 0.003 af, Depth= 1.39"

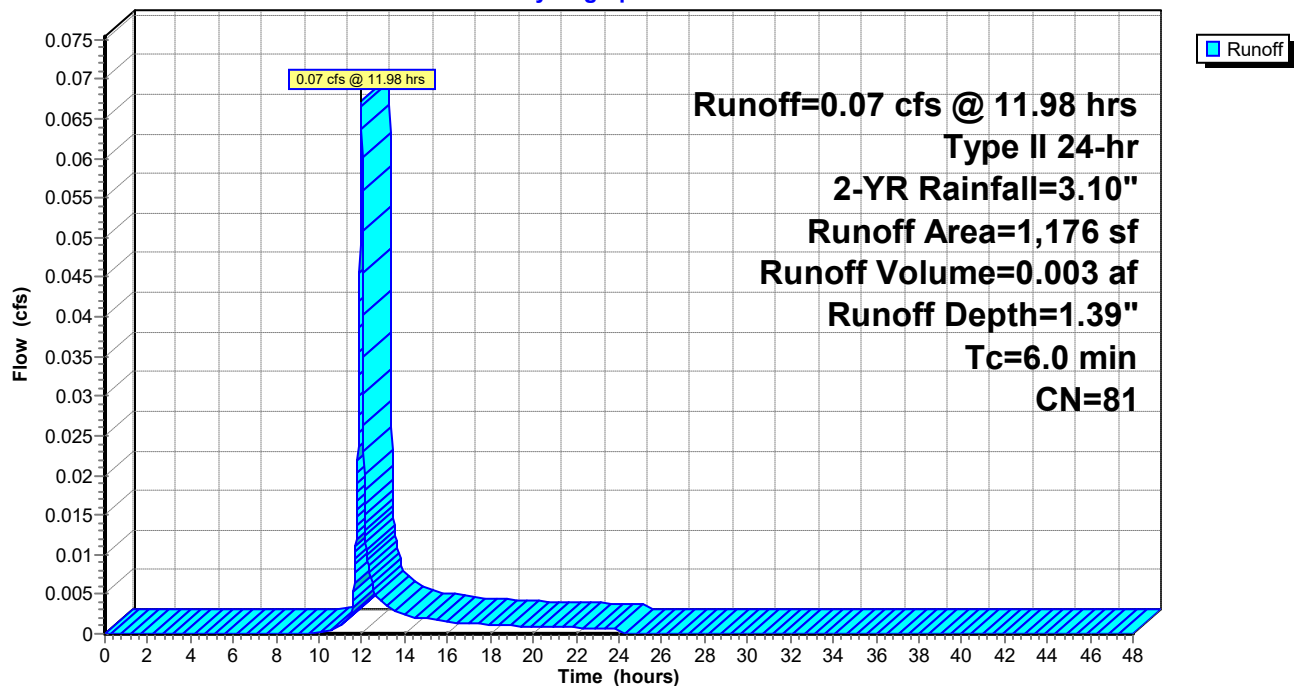
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-YR Rainfall=3.10"

Area (sf)	CN	Description
538	98	Unconnected pavement, HSG A
525	69	50-75% Grass cover, Fair, HSG B
113	61	>75% Grass cover, Good, HSG B
1,176	81	Weighted Average
638		54.25% Pervious Area
538		45.75% Impervious Area
538		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.4S: PREBLE STREET SIDEWALK

Hydrograph



Summary for Subcatchment 2S: ELM ST. SIDEWALK

Runoff = 0.02 cfs @ 11.98 hrs, Volume= 0.001 af, Depth= 0.72"

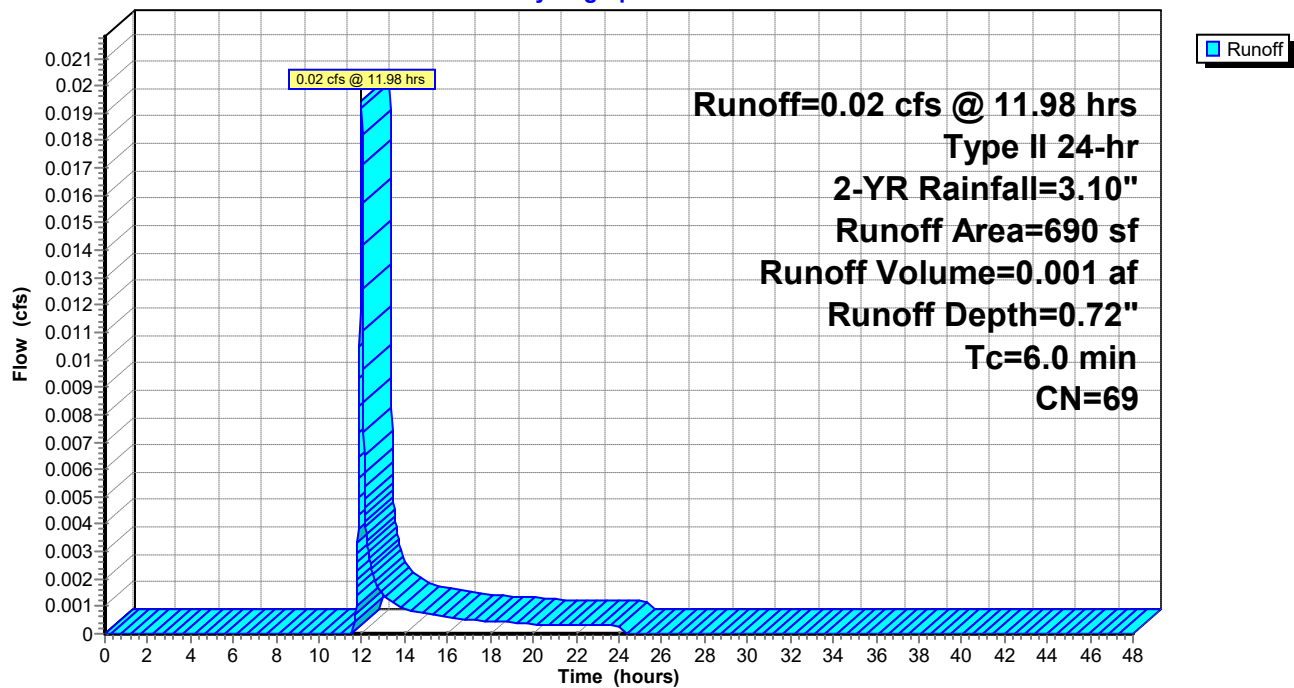
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-YR Rainfall=3.10"

	Area (sf)	CN	Description
*	157	98	Sidewalk
	533	61	>75% Grass cover, Good, HSG B
	690	69	Weighted Average
	533		77.25% Pervious Area
	157		22.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2S: ELM ST. SIDEWALK

Hydrograph



Summary for Reach 1.1R: MS4 EXT.

Inflow Area = 0.532 ac, 96.77% Impervious, Inflow Depth > 2.41" for 2-YR event
 Inflow = 2.24 cfs @ 11.98 hrs, Volume= 0.107 af
 Outflow = 2.23 cfs @ 11.99 hrs, Volume= 0.107 af, Atten= 0%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 3.87 fps, Min. Travel Time= 0.3 min

Avg. Velocity = 0.99 fps, Avg. Travel Time= 1.2 min

Peak Storage= 40 cf @ 11.99 hrs

Average Depth at Peak Storage= 0.69'

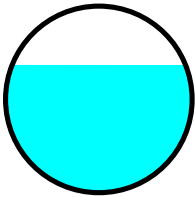
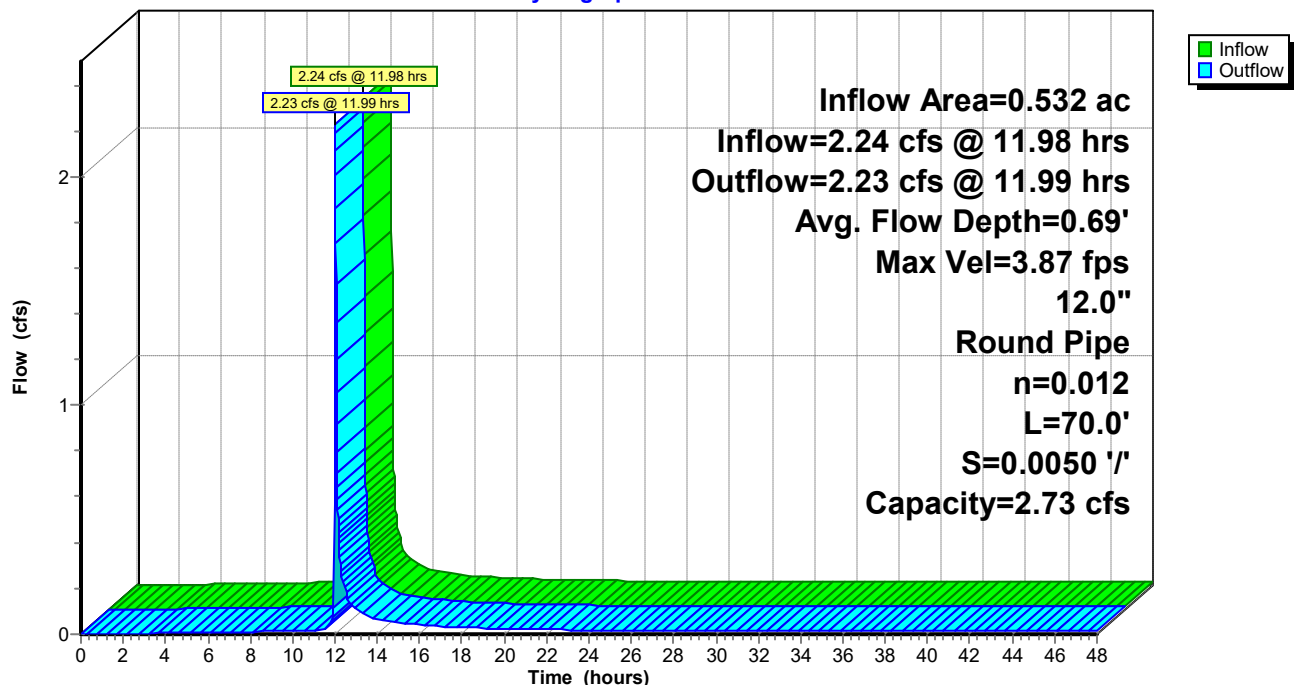
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.73 cfs

12.0" Round Pipe

n= 0.012 Corrugated PP, smooth interior

Length= 70.0' Slope= 0.0050 '/'

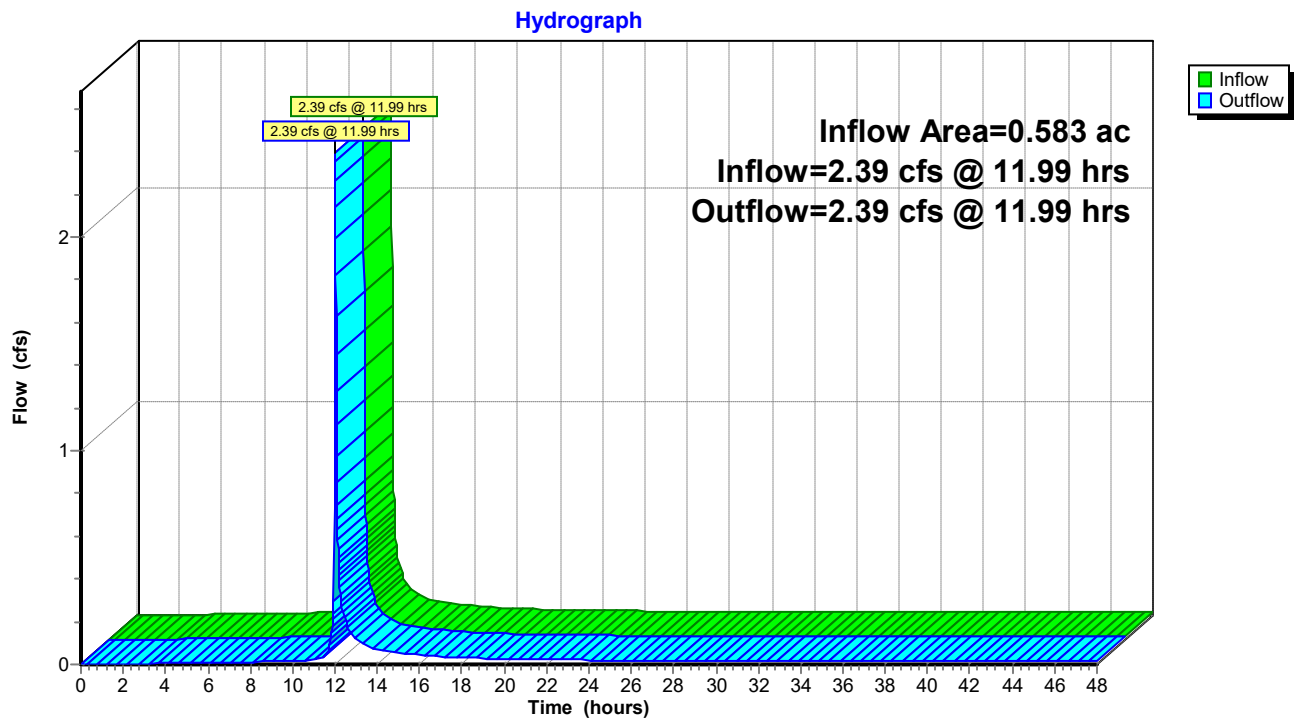
Inlet Invert= 0.00', Outlet Invert= -0.35'

**Reach 1.1R: MS4 EXT.****Hydrograph**

Summary for Reach 1R: POI #1 - PREBLE ST. MS4

Inflow Area = 0.583 ac, 94.09% Impervious, Inflow Depth > 2.36" for 2-YR event
Inflow = 2.39 cfs @ 11.99 hrs, Volume= 0.115 af
Outflow = 2.39 cfs @ 11.99 hrs, Volume= 0.115 af, Atten= 0%, Lag= 0.0 min

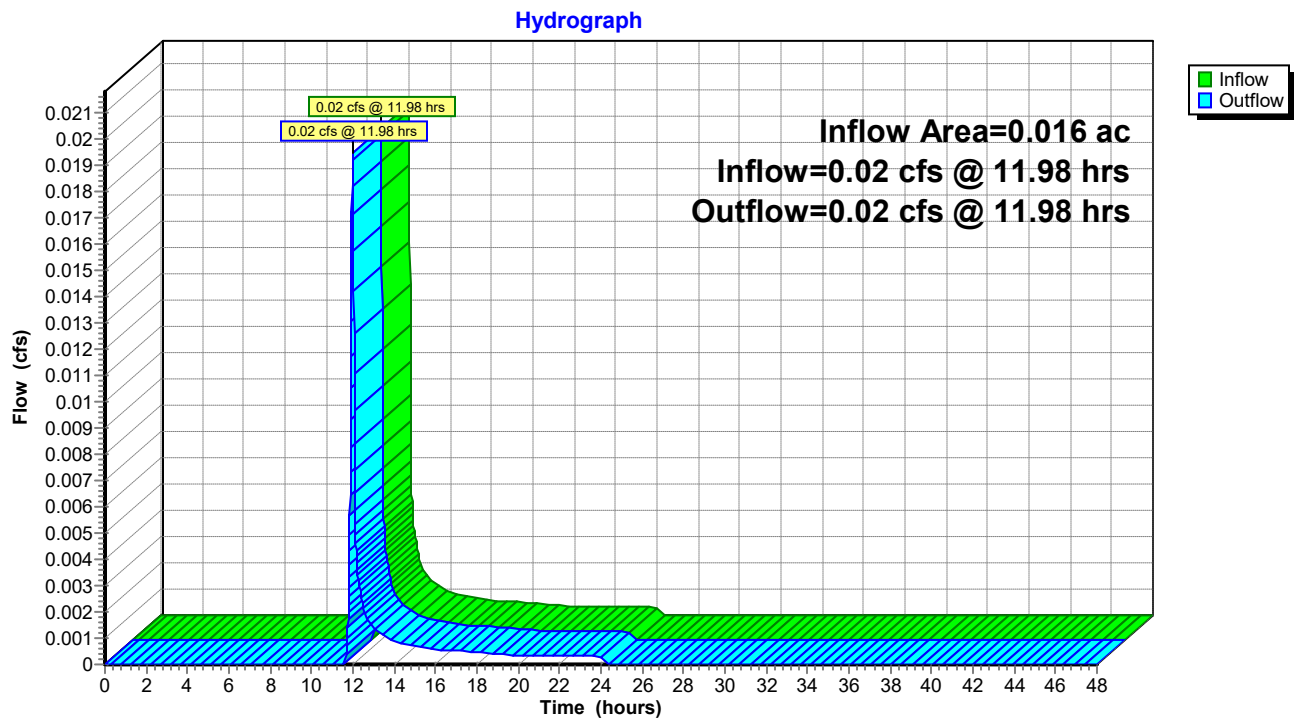
Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: POI #1 - PREBLE ST. MS4

Summary for Reach 2R: POI #2 - ELM ST. COMBINED SEWER

Inflow Area = 0.016 ac, 22.75% Impervious, Inflow Depth = 0.72" for 2-YR event
Inflow = 0.02 cfs @ 11.98 hrs, Volume= 0.001 af
Outflow = 0.02 cfs @ 11.98 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

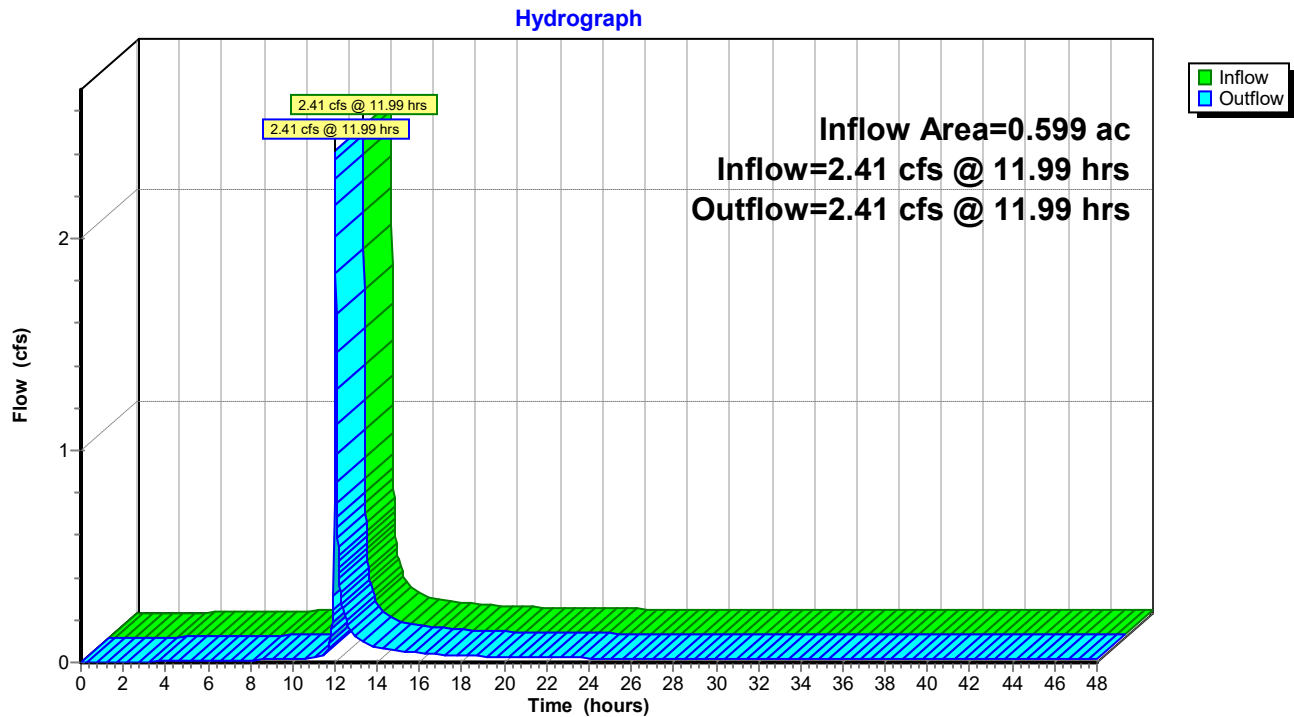
Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: POI #2 - ELM ST. COMBINED SEWER

Summary for Reach 99R: POI#99 - TOTAL

Inflow Area = 0.599 ac, 92.20% Impervious, Inflow Depth > 2.32" for 2-YR event
Inflow = 2.41 cfs @ 11.99 hrs, Volume= 0.116 af
Outflow = 2.41 cfs @ 11.99 hrs, Volume= 0.116 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI#99 - TOTAL

Summary for Pond 1P: R-TANK SYSTEM

Inflow Area = 0.510 ac, 96.63% Impervious, Inflow Depth = 2.75" for 2-YR event
 Inflow = 2.17 cfs @ 11.97 hrs, Volume= 0.117 af
 Outflow = 2.14 cfs @ 11.98 hrs, Volume= 0.101 af, Atten= 1%, Lag= 0.9 min
 Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Primary = 2.14 cfs @ 11.98 hrs, Volume= 0.101 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 39.33' @ 11.98 hrs Surf.Area= 562 sf Storage= 2,105 cf

Plug-Flow detention time= 525.1 min calculated for 0.101 af (87% of inflow)
 Center-of-Mass det. time= 462.1 min (1,221.4 - 759.3)

Volume	Invert	Avail.Storage	Storage Description
#1B	33.95'	742 cf	22.37'W x 25.11'L x 6.20'H Field B 3,483 cf Overall - 1,629 cf Embedded = 1,854 cf x 40.0% Voids
#2B	34.95'	1,547 cf	ACF R-Tank HD 3 x 126 Inside #1 Inside= 15.7"W x 50.4"H => 5.24 sf x 2.35'L = 12.3 cf Outside= 15.7"W x 50.4"H => 5.51 sf x 2.35'L = 12.9 cf 126 Chambers in 14 Rows
#3	44.10'	205 cf	RTANK OVERFLOWS (Prismatic) Listed below (Recalc) x 2
		2,494 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
44.10	25	0	0
44.30	1,000	102	102

Device	Routing	Invert	Outlet Devices
#1	Primary	32.08'	12.0" Round 12" SD L= 30.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 32.08' / 31.78' S= 0.0100 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.79 sf
#2	Device 1	33.26'	STORM FILTER MH X 4.00 0.270" Diameter, C= 0.600, 0.263" Trickle Diameter Starts@34.76'
#3	Device 2	34.03'	4.0" Round RTANK 4" UD TO SF. L= 2.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.03' / 33.93' S= 0.0500 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#4	Device 1	39.00'	4.0' long x 0.7' breadth OCS WEIR WALL Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 Coef. (English) 2.76 2.82 2.93 3.09 3.18 3.22 3.27 3.30 3.32 3.31 3.32
#5	Device 4	38.32'	8.0" Round RTANK 8" OVERFLOWS X 3.00 L= 26.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 38.32' / 37.80' S= 0.0200 '/' Cc= 0.900 n= 0.011, Flow Area= 0.35 sf

1192.5_60 ELM_POST_2-13-25

Type II 24-hr 2-YR Rainfall=3.10"

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#6	Discarded	44.25'	10.0' long x 5.0' breadth SF PONDING
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00			
2.50 3.00 3.50 4.00 4.50 5.00 5.50			
Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65			
2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88			

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=33.95' (Free Discharge)
↑ **6=SF PONDING** (Controls 0.00 cfs)

Primary OutFlow Max=2.12 cfs @ 11.98 hrs HW=39.33' (Free Discharge)
↑ **1=12" SD** (Passes 2.12 cfs of 7.76 cfs potential flow)
↑ **2=STORM FILTER MH** (Orifice Controls 0.02 cfs @ 11.86 fps)
↑ **3=RTANK 4" UD TO SF.** (Passes 0.02 cfs of 0.75 cfs potential flow)
↑ **4=OCS WEIR WALL** (Weir Controls 2.11 cfs @ 1.60 fps)
↑ **5=RTANK 8" OVERFLOWS** (Passes 2.11 cfs of 2.28 cfs potential flow)

Pond 1P: R-TANK SYSTEM - Chamber Wizard Field B**Chamber Model = ACF R-Tank HD 3 (ACF Environmental R-Tank HD)**

Inside= 15.7"W x 50.4"H => 5.24 sf x 2.35'L = 12.3 cf

Outside= 15.7"W x 50.4"H => 5.51 sf x 2.35'L = 12.9 cf

9 Chambers/Row x 2.35' Long = 21.11' Row Length +24.0" End Stone x 2 = 25.11' Base Length

14 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 22.37' Base Width

12.0" Base + 50.4" Chamber Height + 12.0" Cover = 6.20' Field Height

126 Chambers x 12.3 cf = 1,547.5 cf Chamber Storage

126 Chambers x 12.9 cf = 1,628.9 cf Displacement

3,483.0 cf Field - 1,628.9 cf Chambers = 1,854.1 cf Stone x 40.0% Voids = 741.6 cf Stone Storage

Chamber Storage + Stone Storage = 2,289.1 cf = 0.053 af

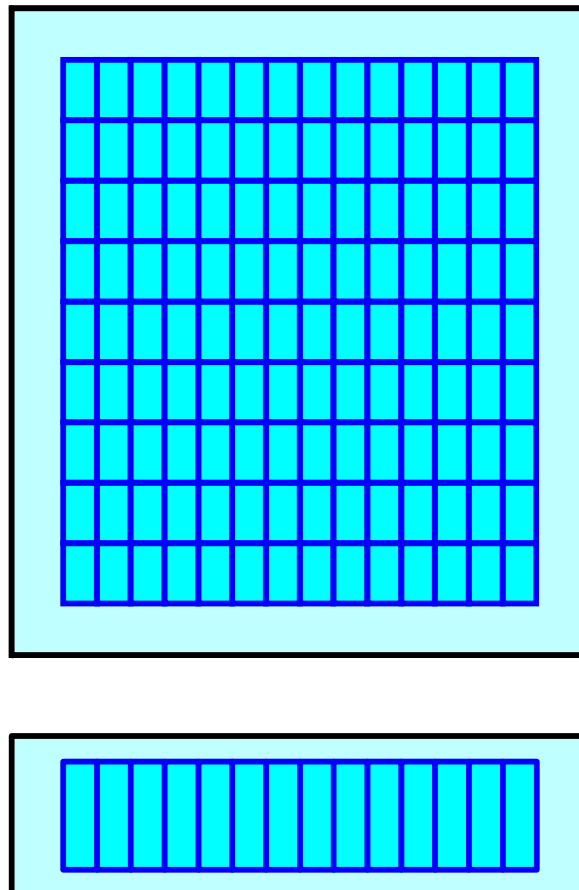
Overall Storage Efficiency = 65.7%

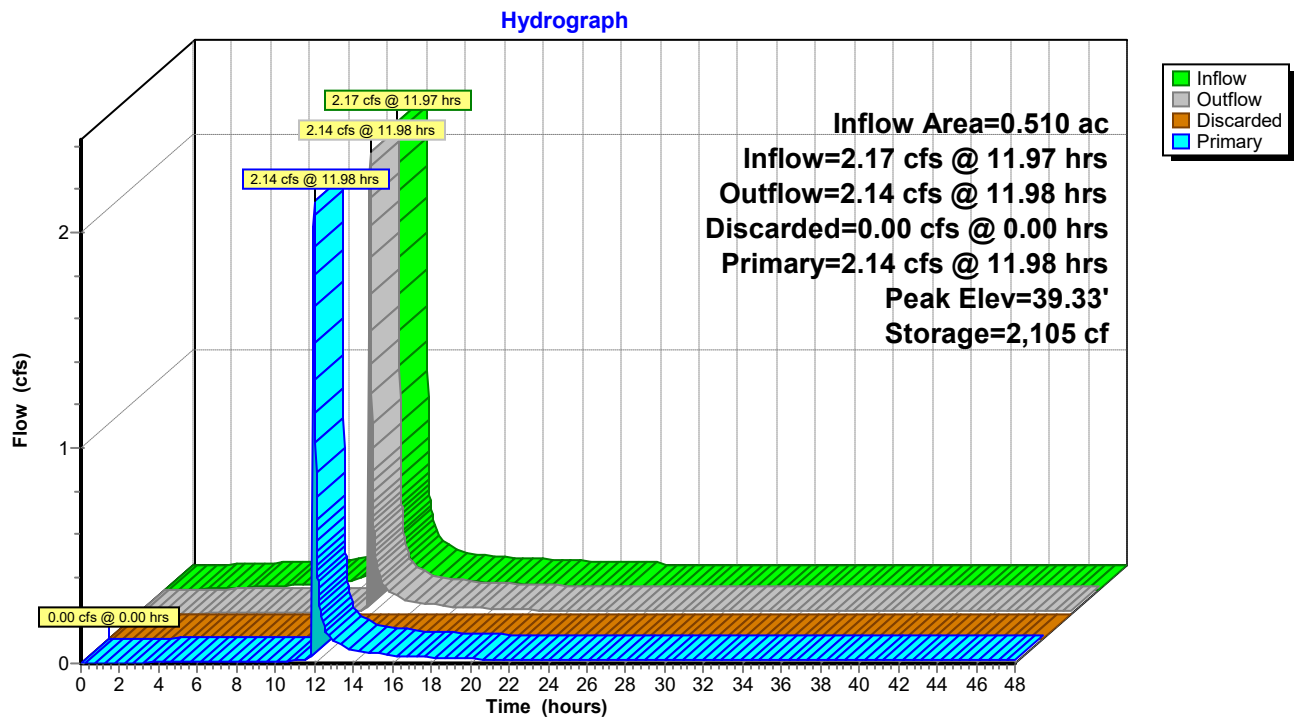
Overall System Size = 25.11' x 22.37' x 6.20'

126 Chambers

129.0 cy Field

68.7 cy Stone



Pond 1P: R-TANK SYSTEM

1192.5_60 ELM_POST_2-13-25*Type II 24-hr 10-YR Rainfall=4.60"*

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.0S: PR. BUILDING ROOF Runoff Area=18,779 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=2.82 cfs 0.157 af

Subcatchment 1.1S: COURTYARD Runoff Area=3,438 sf 78.21% Impervious Runoff Depth=3.49"
Tc=6.0 min CN=90 Runoff=0.46 cfs 0.023 af

Subcatchment 1.2S: Commercial Courtyard Runoff Area=960 sf 100.00% Impervious Runoff Depth=4.36"
Tc=6.0 min CN=98 Runoff=0.14 cfs 0.008 af

Subcatchment 1.3S: OXFORD STREET Runoff Area=1,057 sf 89.03% Impervious Runoff Depth=3.91"
Tc=6.0 min CN=94 Runoff=0.15 cfs 0.008 af

Subcatchment 1.4S: PREBLE STREET Runoff Area=1,176 sf 45.75% Impervious Runoff Depth=2.63"
Tc=6.0 min CN=81 Runoff=0.13 cfs 0.006 af

Subcatchment 2S: ELM ST. SIDEWALK Runoff Area=690 sf 22.75% Impervious Runoff Depth=1.67"
Tc=6.0 min CN=69 Runoff=0.05 cfs 0.002 af

Reach 1.1R: MS4 EXT. Avg. Flow Depth=1.00' Max Vel=3.96 fps Inflow=3.32 cfs 0.172 af
12.0" Round Pipe n=0.012 L=70.0' S=0.0050 ' Capacity=2.73 cfs Outflow=2.87 cfs 0.172 af

Reach 1R: POI #1 - PREBLE ST. MS4 Inflow=3.13 cfs 0.186 af
Outflow=3.13 cfs 0.186 af

Reach 2R: POI #2 - ELM ST. COMBINED SEWER Inflow=0.05 cfs 0.002 af
Outflow=0.05 cfs 0.002 af

Reach 99R: POI#99 - TOTAL Inflow=3.17 cfs 0.188 af
Outflow=3.17 cfs 0.188 af

Pond 1P: R-TANK SYSTEM Peak Elev=39.63' Storage=2,173 cf Inflow=3.28 cfs 0.180 af
Discarded=0.00 cfs 0.000 af Primary=3.18 cfs 0.164 af Outflow=3.18 cfs 0.164 af

Total Runoff Area = 0.599 ac Runoff Volume = 0.204 af Average Runoff Depth = 4.08"
7.80% Pervious = 0.047 ac 92.20% Impervious = 0.552 ac

Summary for Subcatchment 1.0S: PR. BUILDING ROOF

Runoff = 2.82 cfs @ 11.97 hrs, Volume= 0.157 af, Depth= 4.36"

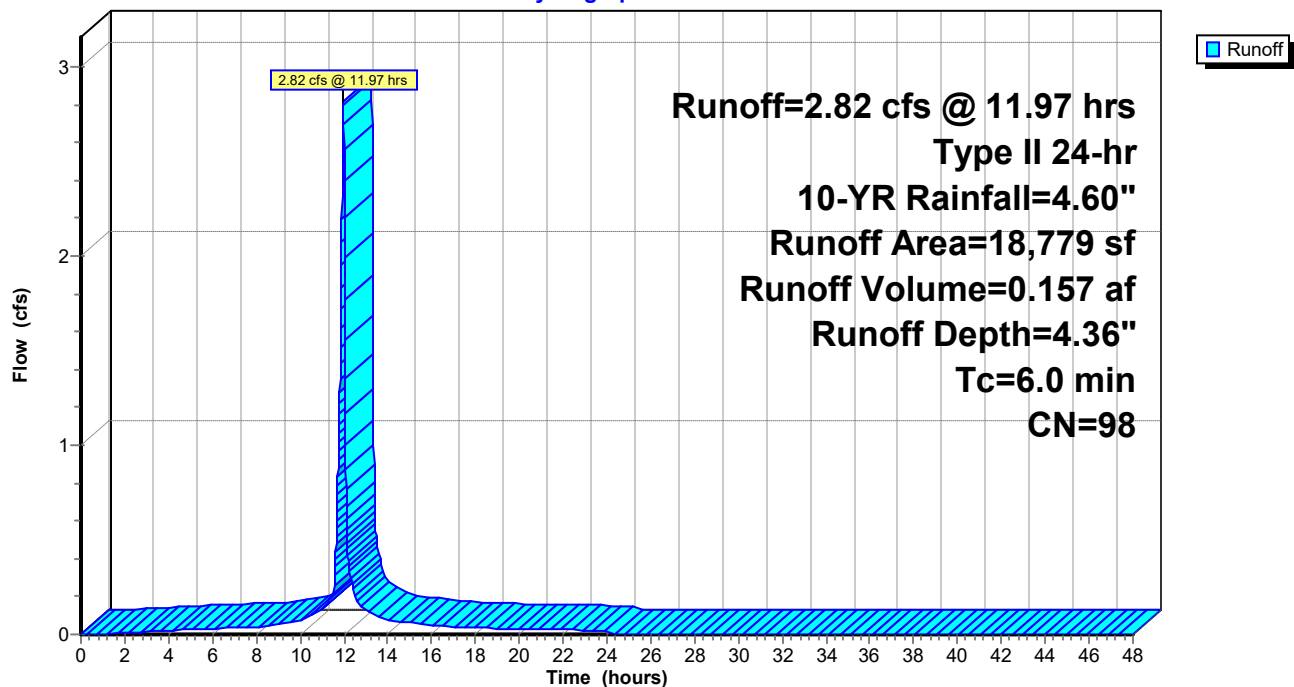
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
* 18,779	98	PR. BUILDING ROOF
18,779		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.0S: PR. BUILDING ROOF

Hydrograph



Summary for Subcatchment 1.1S: COURTYARD

Runoff = 0.46 cfs @ 11.97 hrs, Volume= 0.023 af, Depth= 3.49"

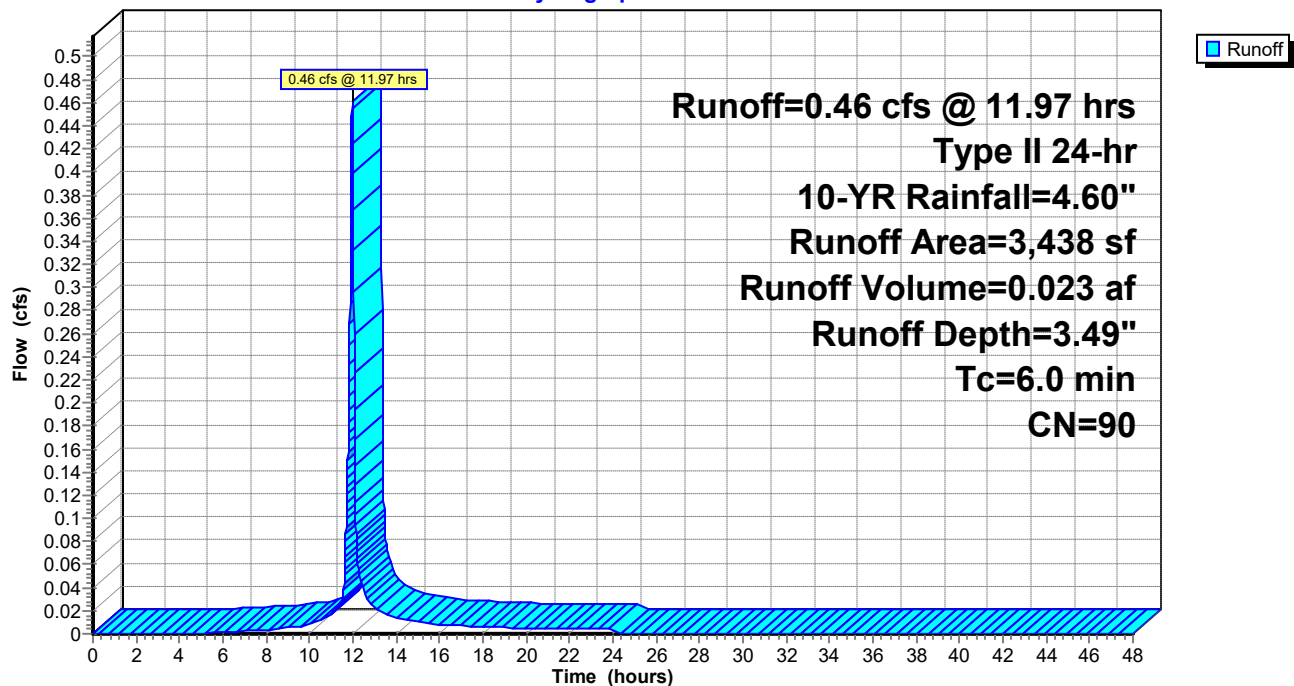
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
2,689	98	Unconnected pavement, HSG A
689	61	>75% Grass cover, Good, HSG B
60	58	Woods/grass comb., Good, HSG B
3,438	90	Weighted Average
749		21.79% Pervious Area
2,689		78.21% Impervious Area
2,689		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.1S: COURTYARD

Hydrograph



Summary for Subcatchment 1.2S: Commercial Courtyard

Runoff = 0.14 cfs @ 11.97 hrs, Volume= 0.008 af, Depth= 4.36"

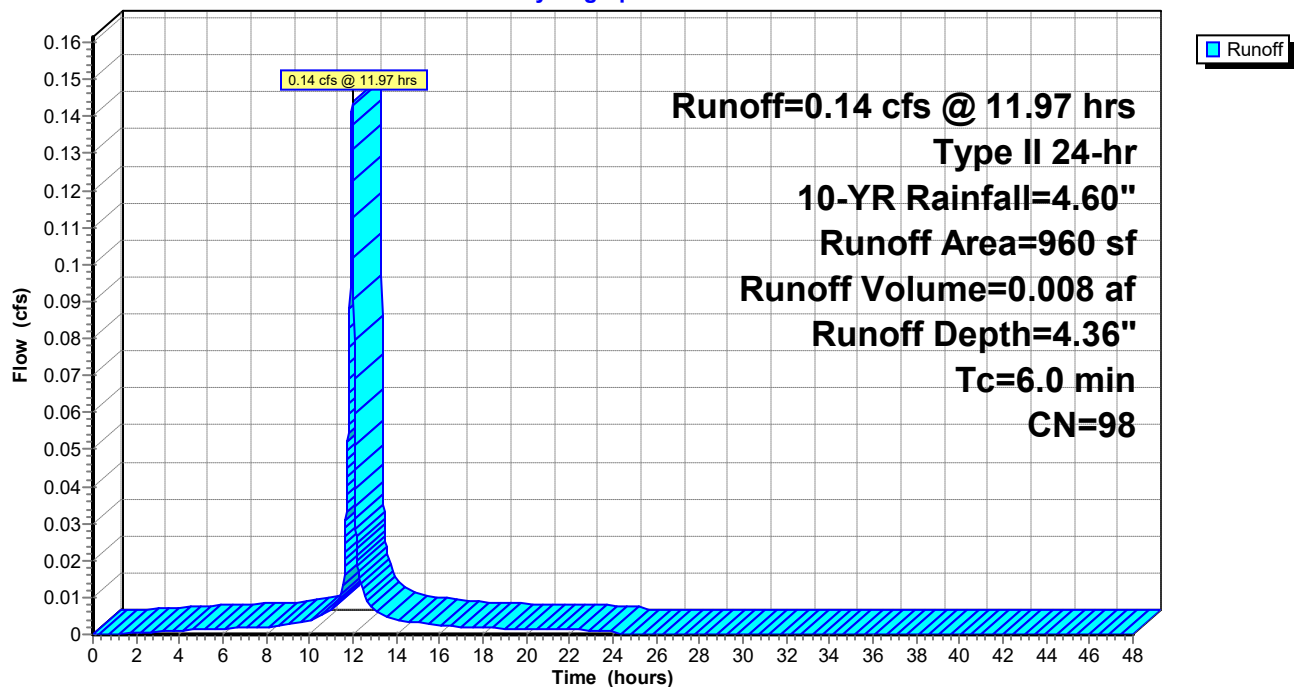
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
* 960	98	Patio/Pavers
960		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.2S: Commercial Courtyard

Hydrograph



Summary for Subcatchment 1.3S: OXFORD STREET SIDEWALK

Runoff = 0.15 cfs @ 11.97 hrs, Volume= 0.008 af, Depth= 3.91"

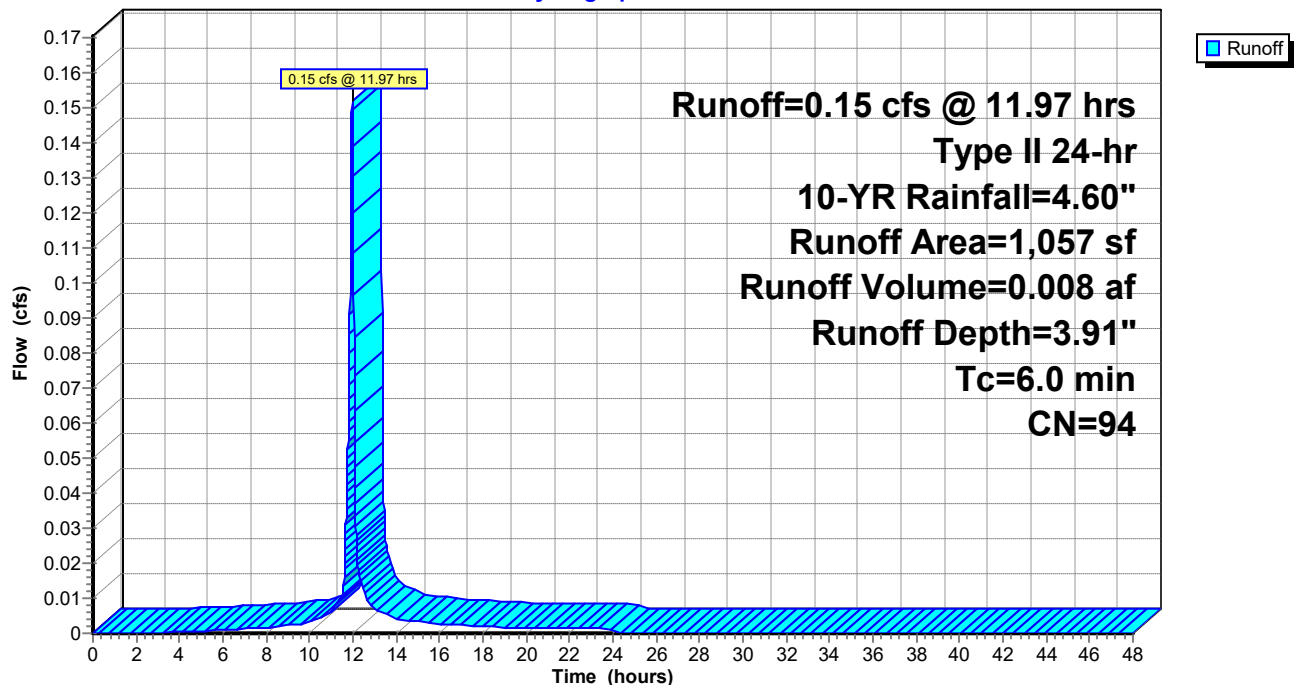
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
941	98	Unconnected pavement, HSG A
116	61	>75% Grass cover, Good, HSG B
1,057	94	Weighted Average
116		10.97% Pervious Area
941		89.03% Impervious Area
941		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.3S: OXFORD STREET SIDEWALK

Hydrograph



Summary for Subcatchment 1.4S: PREBLE STREET SIDEWALK

Runoff = 0.13 cfs @ 11.97 hrs, Volume= 0.006 af, Depth= 2.63"

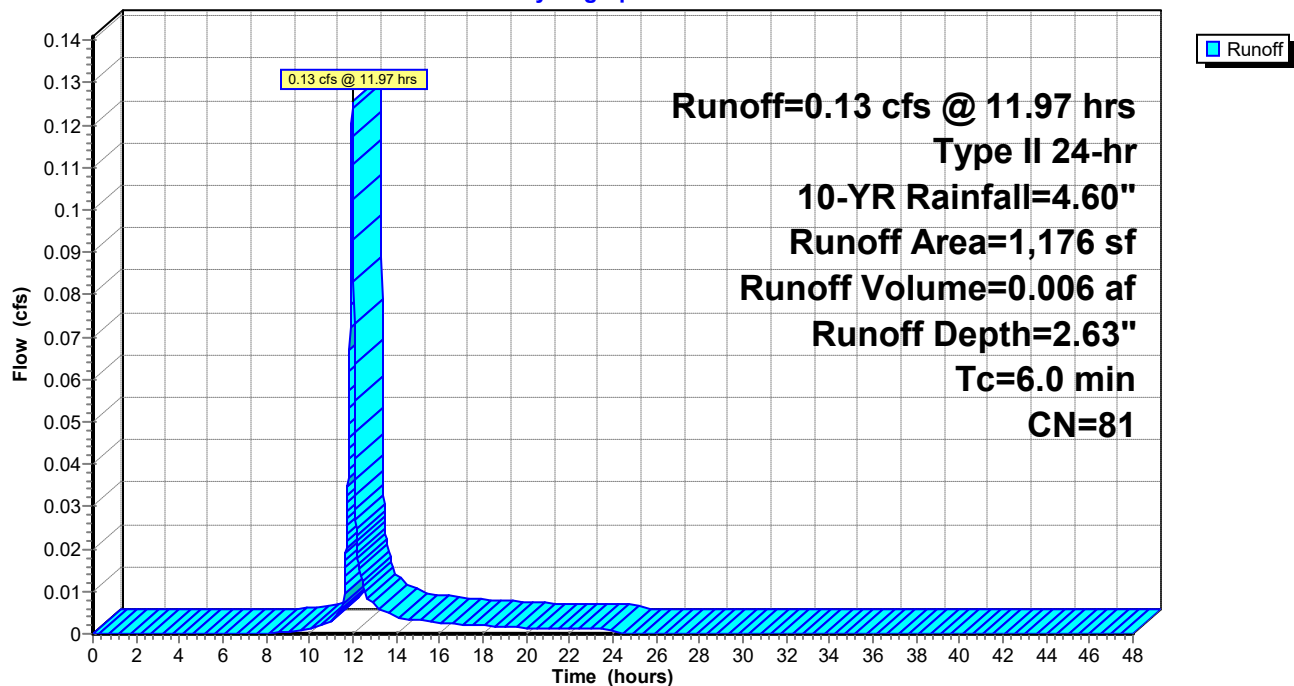
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YR Rainfall=4.60"

Area (sf)	CN	Description
538	98	Unconnected pavement, HSG A
525	69	50-75% Grass cover, Fair, HSG B
113	61	>75% Grass cover, Good, HSG B
1,176	81	Weighted Average
638		54.25% Pervious Area
538		45.75% Impervious Area
538		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.4S: PREBLE STREET SIDEWALK

Hydrograph



Summary for Subcatchment 2S: ELM ST. SIDEWALK

Runoff = 0.05 cfs @ 11.98 hrs, Volume= 0.002 af, Depth= 1.67"

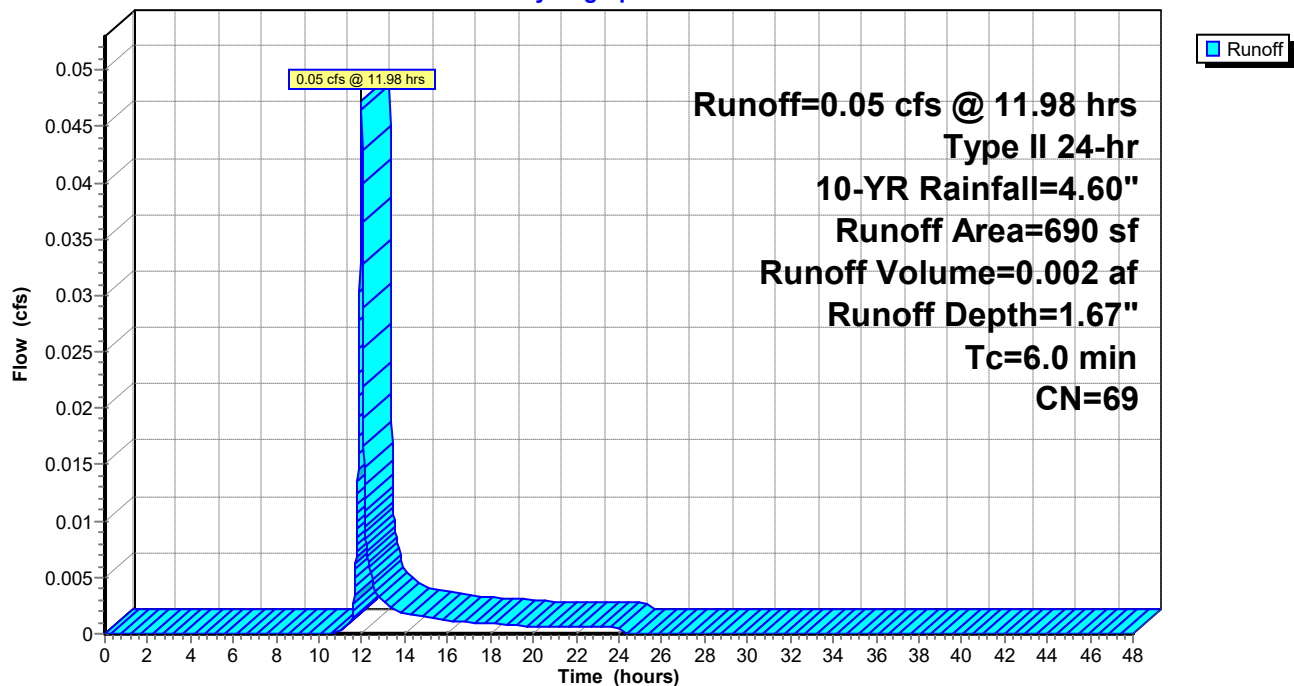
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-YR Rainfall=4.60"

	Area (sf)	CN	Description
*	157	98	Sidewalk
	533	61	>75% Grass cover, Good, HSG B
	690	69	Weighted Average
	533		77.25% Pervious Area
	157		22.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2S: ELM ST. SIDEWALK

Hydrograph



Summary for Reach 1.1R: MS4 EXT.

Inflow Area = 0.532 ac, 96.77% Impervious, Inflow Depth > 3.89" for 10-YR event
 Inflow = 3.32 cfs @ 11.99 hrs, Volume= 0.172 af
 Outflow = 2.87 cfs @ 11.94 hrs, Volume= 0.172 af, Atten= 14%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 3.96 fps, Min. Travel Time= 0.3 min

Avg. Velocity= 1.05 fps, Avg. Travel Time= 1.1 min

Peak Storage= 55 cf @ 11.95 hrs

Average Depth at Peak Storage= 1.00'

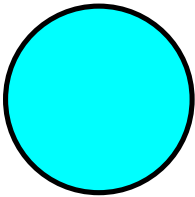
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.73 cfs

12.0" Round Pipe

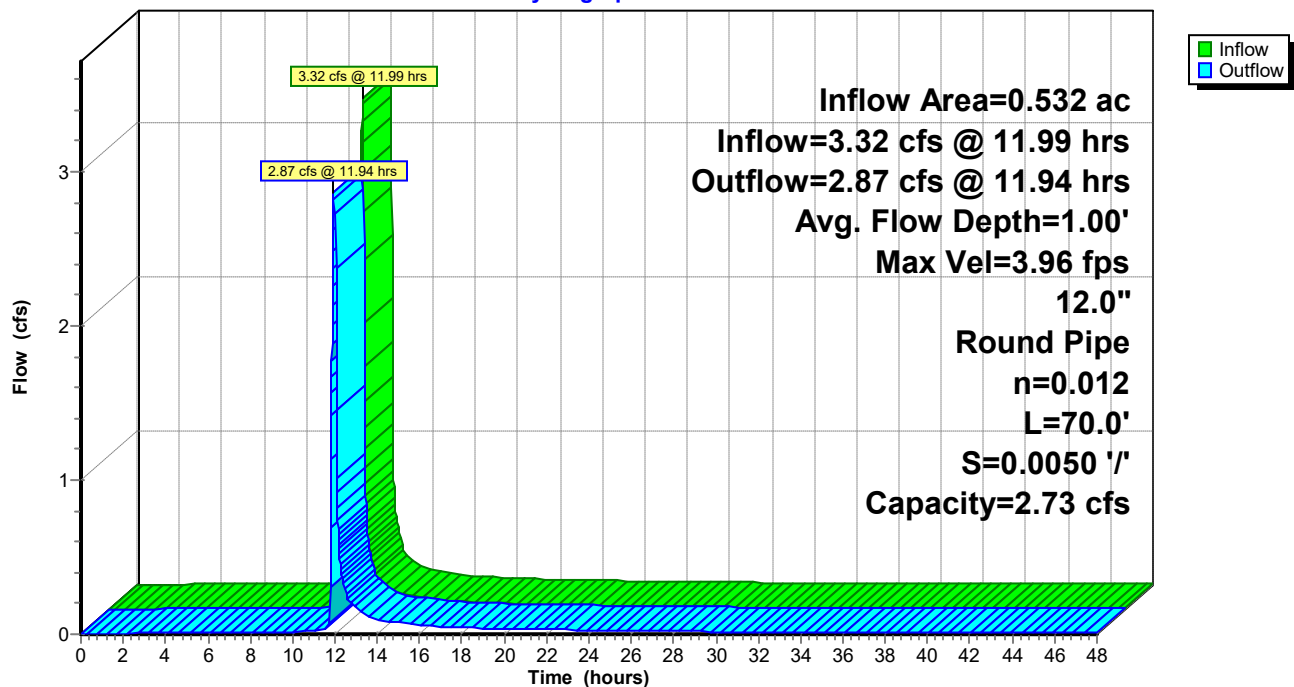
n= 0.012 Corrugated PP, smooth interior

Length= 70.0' Slope= 0.0050 '/'

Inlet Invert= 0.00', Outlet Invert= -0.35'

**Reach 1.1R: MS4 EXT.**

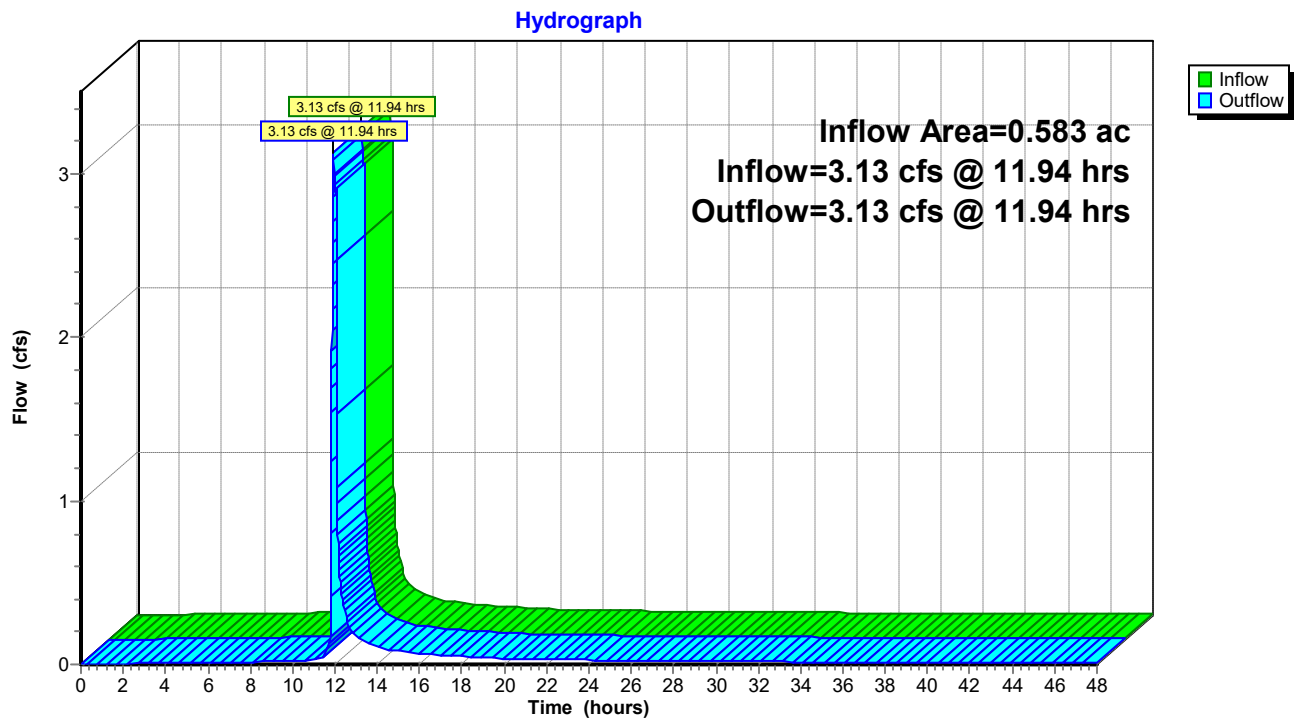
Hydrograph



Summary for Reach 1R: POI #1 - PREBLE ST. MS4

Inflow Area = 0.583 ac, 94.09% Impervious, Inflow Depth > 3.83" for 10-YR event
Inflow = 3.13 cfs @ 11.94 hrs, Volume= 0.186 af
Outflow = 3.13 cfs @ 11.94 hrs, Volume= 0.186 af, Atten= 0%, Lag= 0.0 min

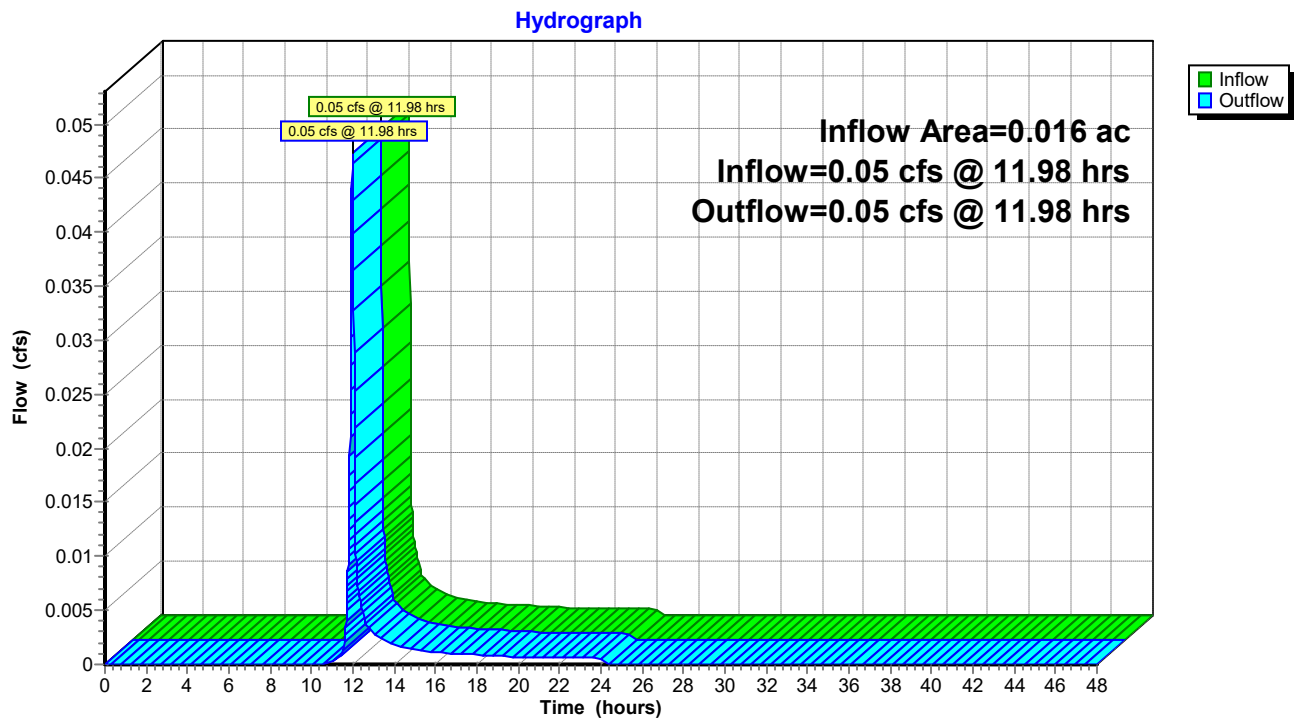
Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: POI #1 - PREBLE ST. MS4

Summary for Reach 2R: POI #2 - ELM ST. COMBINED SEWER

Inflow Area = 0.016 ac, 22.75% Impervious, Inflow Depth = 1.67" for 10-YR event
Inflow = 0.05 cfs @ 11.98 hrs, Volume= 0.002 af
Outflow = 0.05 cfs @ 11.98 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min

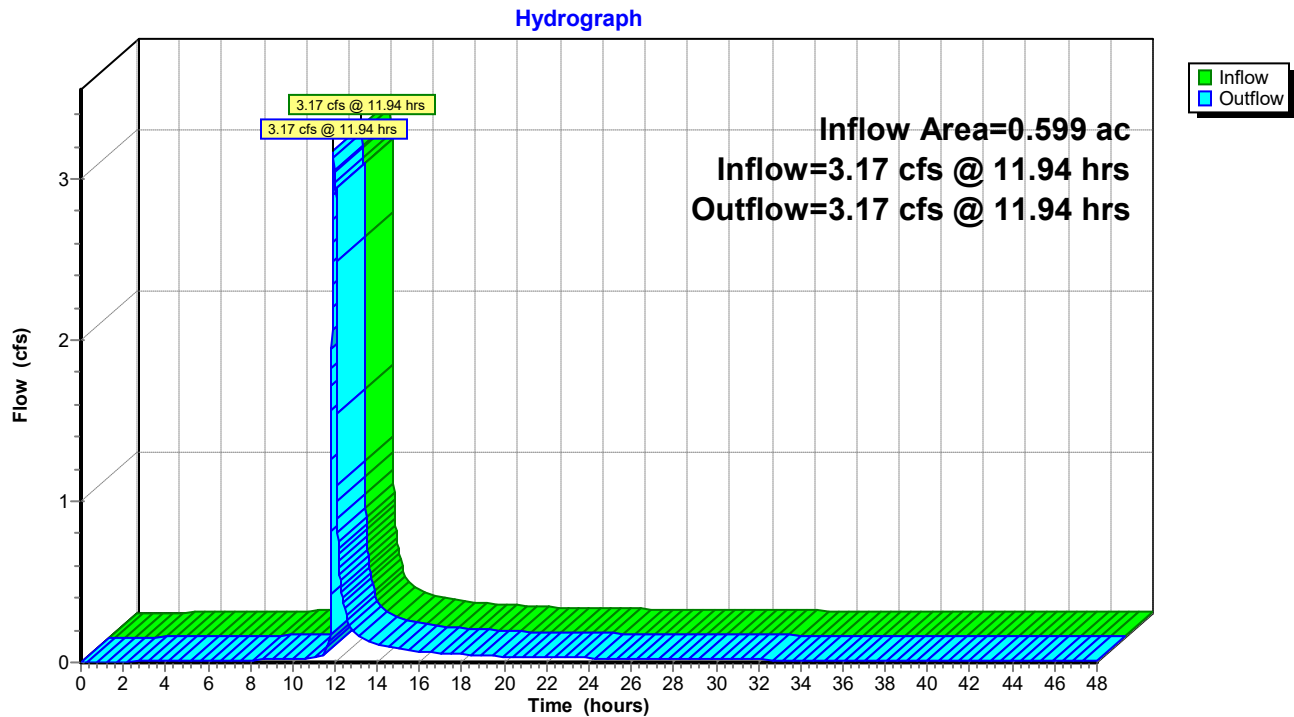
Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: POI #2 - ELM ST. COMBINED SEWER

Summary for Reach 99R: POI#99 - TOTAL

Inflow Area = 0.599 ac, 92.20% Impervious, Inflow Depth > 3.77" for 10-YR event
Inflow = 3.17 cfs @ 11.94 hrs, Volume= 0.188 af
Outflow = 3.17 cfs @ 11.94 hrs, Volume= 0.188 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI#99 - TOTAL

Summary for Pond 1P: R-TANK SYSTEM

Inflow Area = 0.510 ac, 96.63% Impervious, Inflow Depth = 4.23" for 10-YR event
 Inflow = 3.28 cfs @ 11.97 hrs, Volume= 0.180 af
 Outflow = 3.18 cfs @ 11.99 hrs, Volume= 0.164 af, Atten= 3%, Lag= 1.1 min
 Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Primary = 3.18 cfs @ 11.99 hrs, Volume= 0.164 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 39.63' @ 11.99 hrs Surf.Area= 562 sf Storage= 2,173 cf

Plug-Flow detention time= 348.9 min calculated for 0.164 af (91% of inflow)
 Center-of-Mass det. time= 302.1 min (1,053.3 - 751.1)

Volume	Invert	Avail.Storage	Storage Description
#1B	33.95'	742 cf	22.37'W x 25.11'L x 6.20'H Field B 3,483 cf Overall - 1,629 cf Embedded = 1,854 cf x 40.0% Voids
#2B	34.95'	1,547 cf	ACF R-Tank HD 3 x 126 Inside #1 Inside= 15.7"W x 50.4"H => 5.24 sf x 2.35'L = 12.3 cf Outside= 15.7"W x 50.4"H => 5.51 sf x 2.35'L = 12.9 cf 126 Chambers in 14 Rows
#3	44.10'	205 cf	RTANK OVERFLOWS (Prismatic) Listed below (Recalc) x 2
		2,494 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
44.10	25	0	0
44.30	1,000	102	102

Device	Routing	Invert	Outlet Devices
#1	Primary	32.08'	12.0" Round 12" SD L= 30.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 32.08' / 31.78' S= 0.0100 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.79 sf
#2	Device 1	33.26'	STORM FILTER MH X 4.00 0.270" Diameter, C= 0.600, 0.263" Trickle Diameter Starts@34.76'
#3	Device 2	34.03'	4.0" Round RTANK 4" UD TO SF. L= 2.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.03' / 33.93' S= 0.0500 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#4	Device 1	39.00'	4.0' long x 0.7' breadth OCS WEIR WALL Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 Coef. (English) 2.76 2.82 2.93 3.09 3.18 3.22 3.27 3.30 3.32 3.31 3.32
#5	Device 4	38.32'	8.0" Round RTANK 8" OVERFLOWS X 3.00 L= 26.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 38.32' / 37.80' S= 0.0200 '/' Cc= 0.900 n= 0.011, Flow Area= 0.35 sf

1192.5_60 ELM_POST_2-13-25

Type II 24-hr 10-YR Rainfall=4.60"

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#6 Discarded 44.25' **10.0' long x 5.0' breadth SF PONDING**
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
2.50 3.00 3.50 4.00 4.50 5.00 5.50
Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65
2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=33.95' (Free Discharge)
↑ **6=SF PONDING** (Controls 0.00 cfs)

Primary OutFlow Max=3.18 cfs @ 11.99 hrs HW=39.63' (Free Discharge)
↑ **1=12" SD** (Passes 3.18 cfs of 7.93 cfs potential flow)
↑ **2=STORM FILTER MH** (Orifice Controls 0.02 cfs @ 12.15 fps)
↑ **3=RTANK 4" UD TO SF.** (Passes 0.02 cfs of 0.77 cfs potential flow)
↑ **4=OCS WEIR WALL** (Passes 3.16 cfs of 5.91 cfs potential flow)
↑ **5=RTANK 8" OVERFLOWS** (Inlet Controls 3.16 cfs @ 3.02 fps)

Pond 1P: R-TANK SYSTEM - Chamber Wizard Field B**Chamber Model = ACF R-Tank HD 3 (ACF Environmental R-Tank HD)**

Inside= 15.7"W x 50.4"H => 5.24 sf x 2.35'L = 12.3 cf

Outside= 15.7"W x 50.4"H => 5.51 sf x 2.35'L = 12.9 cf

9 Chambers/Row x 2.35' Long = 21.11' Row Length +24.0" End Stone x 2 = 25.11' Base Length

14 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 22.37' Base Width

12.0" Base + 50.4" Chamber Height + 12.0" Cover = 6.20' Field Height

126 Chambers x 12.3 cf = 1,547.5 cf Chamber Storage

126 Chambers x 12.9 cf = 1,628.9 cf Displacement

3,483.0 cf Field - 1,628.9 cf Chambers = 1,854.1 cf Stone x 40.0% Voids = 741.6 cf Stone Storage

Chamber Storage + Stone Storage = 2,289.1 cf = 0.053 af

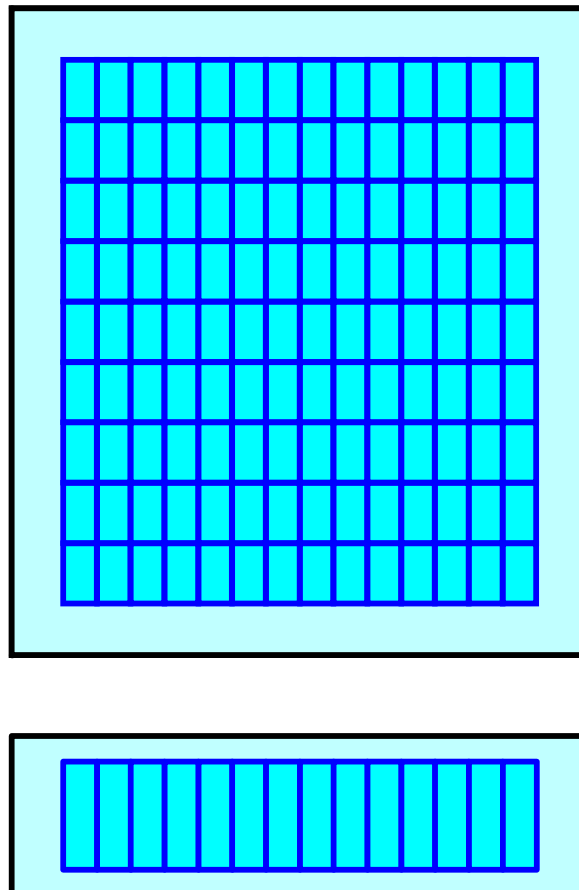
Overall Storage Efficiency = 65.7%

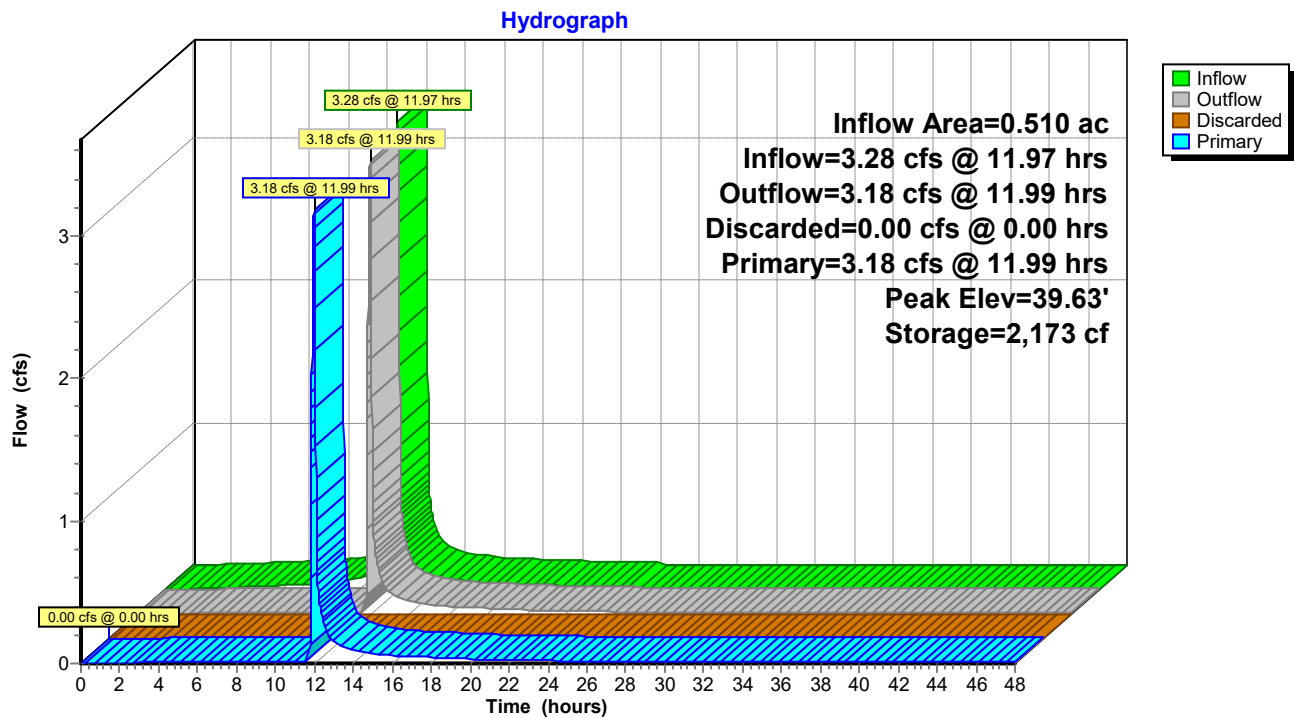
Overall System Size = 25.11' x 22.37' x 6.20'

126 Chambers

129.0 cy Field

68.7 cy Stone



Pond 1P: R-TANK SYSTEM

1192.5_60 ELM_POST_2-13-25*Type II 24-hr 25-YR Rainfall=5.80"*

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1.0S: PR. BUILDING ROOF Runoff Area=18,779 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=3.56 cfs 0.200 af

Subcatchment 1.1S: COURTYARD Runoff Area=3,438 sf 78.21% Impervious Runoff Depth=4.65"
Tc=6.0 min CN=90 Runoff=0.60 cfs 0.031 af

Subcatchment 1.2S: Commercial Courtyard Runoff Area=960 sf 100.00% Impervious Runoff Depth=5.56"
Tc=6.0 min CN=98 Runoff=0.18 cfs 0.010 af

Subcatchment 1.3S: OXFORD STREET Runoff Area=1,057 sf 89.03% Impervious Runoff Depth=5.10"
Tc=6.0 min CN=94 Runoff=0.19 cfs 0.010 af

Subcatchment 1.4S: PREBLE STREET Runoff Area=1,176 sf 45.75% Impervious Runoff Depth=3.70"
Tc=6.0 min CN=81 Runoff=0.17 cfs 0.008 af

Subcatchment 2S: ELM ST. SIDEWALK Runoff Area=690 sf 22.75% Impervious Runoff Depth=2.56"
Tc=6.0 min CN=69 Runoff=0.07 cfs 0.003 af

Reach 1.1R: MS4 EXT. Avg. Flow Depth=1.00' Max Vel=3.96 fps Inflow=4.16 cfs 0.225 af
12.0" Round Pipe n=0.012 L=70.0' S=0.0050 ' Capacity=2.73 cfs Outflow=2.89 cfs 0.225 af

Reach 1R: POI #1 - PREBLE ST. MS4 Inflow=3.17 cfs 0.244 af
Outflow=3.17 cfs 0.244 af

Reach 2R: POI #2 - ELM ST. COMBINED SEWER Inflow=0.07 cfs 0.003 af
Outflow=0.07 cfs 0.003 af

Reach 99R: POI#99 - TOTAL Inflow=3.22 cfs 0.247 af
Outflow=3.22 cfs 0.247 af

Pond 1P: R-TANK SYSTEM Peak Elev=39.99' Storage=2,254 cf Inflow=4.17 cfs 0.230 af
Discarded=0.00 cfs 0.000 af Primary=3.99 cfs 0.215 af Outflow=3.99 cfs 0.215 af

Total Runoff Area = 0.599 ac Runoff Volume = 0.263 af Average Runoff Depth = 5.26"
7.80% Pervious = 0.047 ac 92.20% Impervious = 0.552 ac

Summary for Subcatchment 1.0S: PR. BUILDING ROOF

Runoff = 3.56 cfs @ 11.97 hrs, Volume= 0.200 af, Depth= 5.56"

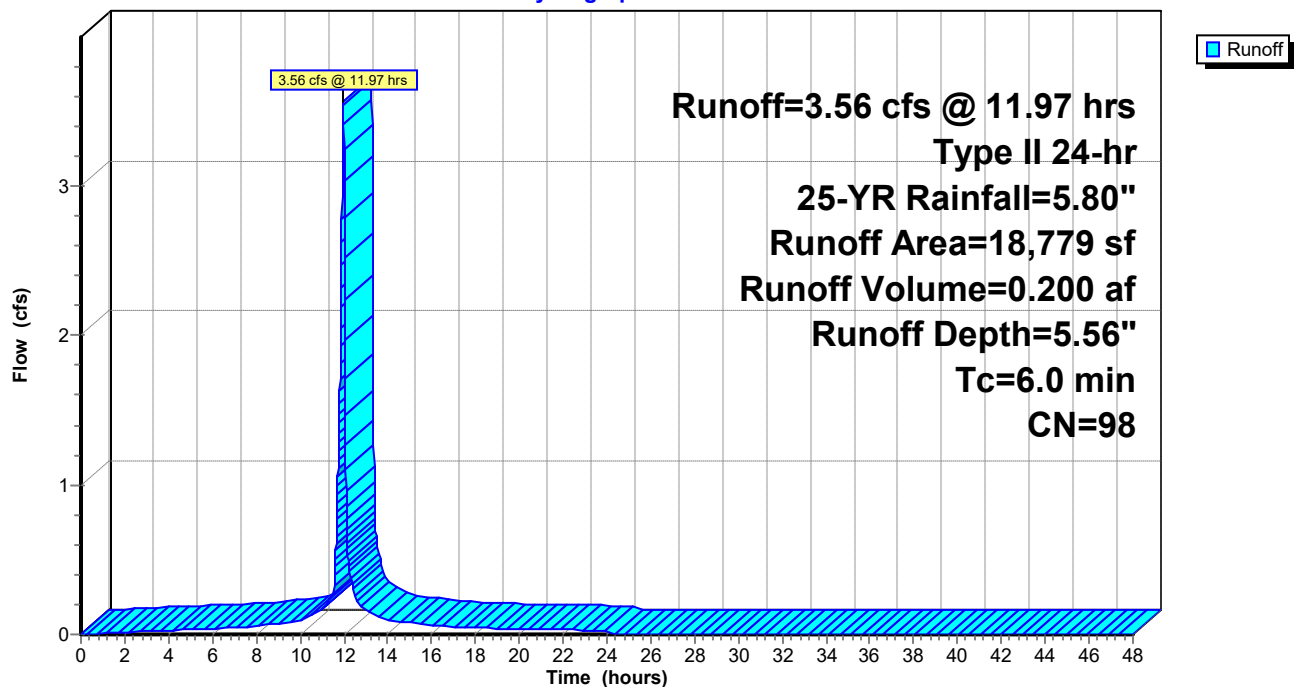
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
* 18,779	98	PR. BUILDING ROOF
18,779		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.0S: PR. BUILDING ROOF

Hydrograph



Summary for Subcatchment 1.1S: COURTYARD

Runoff = 0.60 cfs @ 11.97 hrs, Volume= 0.031 af, Depth= 4.65"

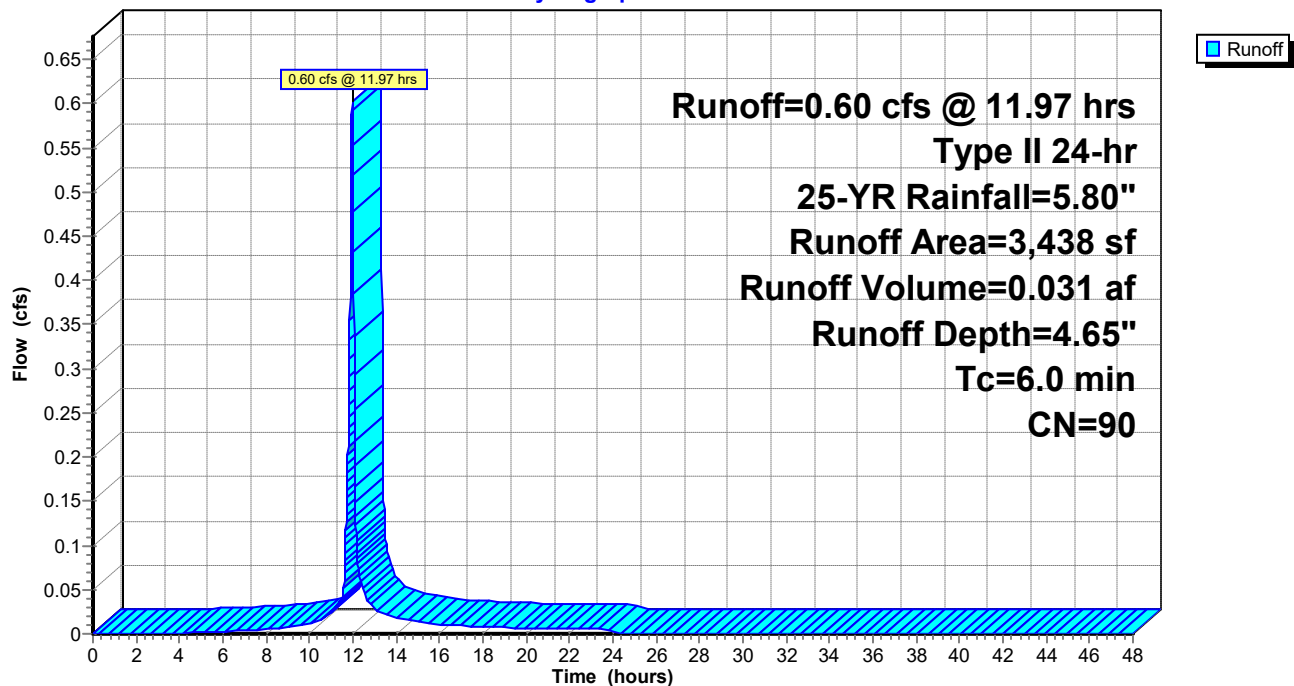
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
2,689	98	Unconnected pavement, HSG A
689	61	>75% Grass cover, Good, HSG B
60	58	Woods/grass comb., Good, HSG B
3,438	90	Weighted Average
749		21.79% Pervious Area
2,689		78.21% Impervious Area
2,689		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.1S: COURTYARD

Hydrograph



Summary for Subcatchment 1.2S: Commercial Courtyard

Runoff = 0.18 cfs @ 11.97 hrs, Volume= 0.010 af, Depth= 5.56"

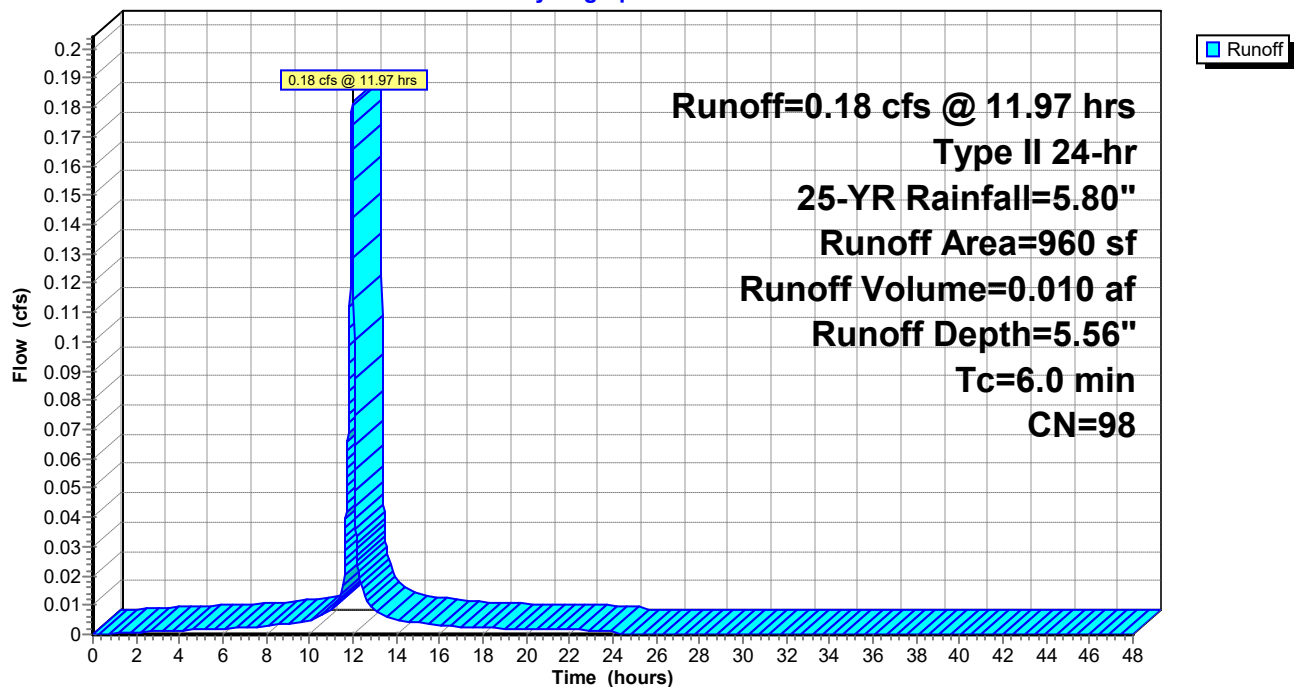
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
* 960	98	Patio/Pavers
960		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.2S: Commercial Courtyard

Hydrograph



Summary for Subcatchment 1.3S: OXFORD STREET SIDEWALK

Runoff = 0.19 cfs @ 11.97 hrs, Volume= 0.010 af, Depth= 5.10"

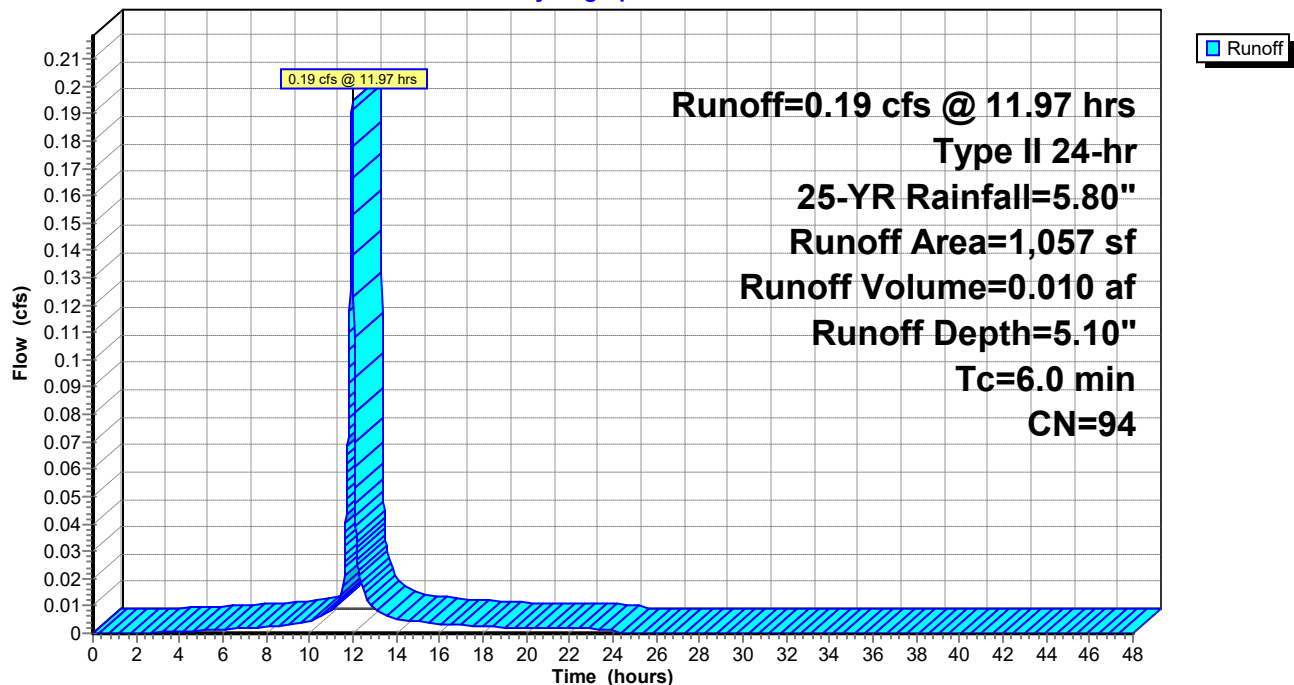
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
941	98	Unconnected pavement, HSG A
116	61	>75% Grass cover, Good, HSG B
1,057	94	Weighted Average
116		10.97% Pervious Area
941		89.03% Impervious Area
941		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.3S: OXFORD STREET SIDEWALK

Hydrograph



Summary for Subcatchment 1.4S: PREBLE STREET SIDEWALK

Runoff = 0.17 cfs @ 11.97 hrs, Volume= 0.008 af, Depth= 3.70"

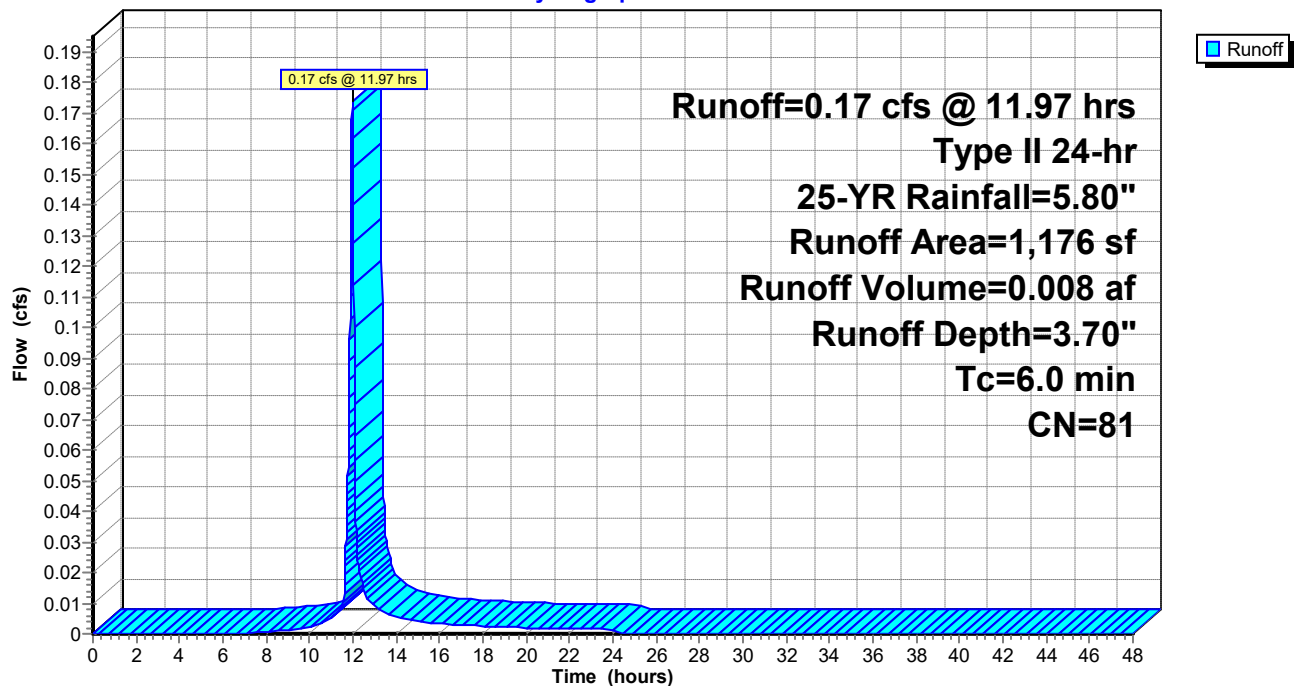
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
538	98	Unconnected pavement, HSG A
525	69	50-75% Grass cover, Fair, HSG B
113	61	>75% Grass cover, Good, HSG B
1,176	81	Weighted Average
638		54.25% Pervious Area
538		45.75% Impervious Area
538		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.4S: PREBLE STREET SIDEWALK

Hydrograph



Summary for Subcatchment 2S: ELM ST. SIDEWALK

Runoff = 0.07 cfs @ 11.98 hrs, Volume= 0.003 af, Depth= 2.56"

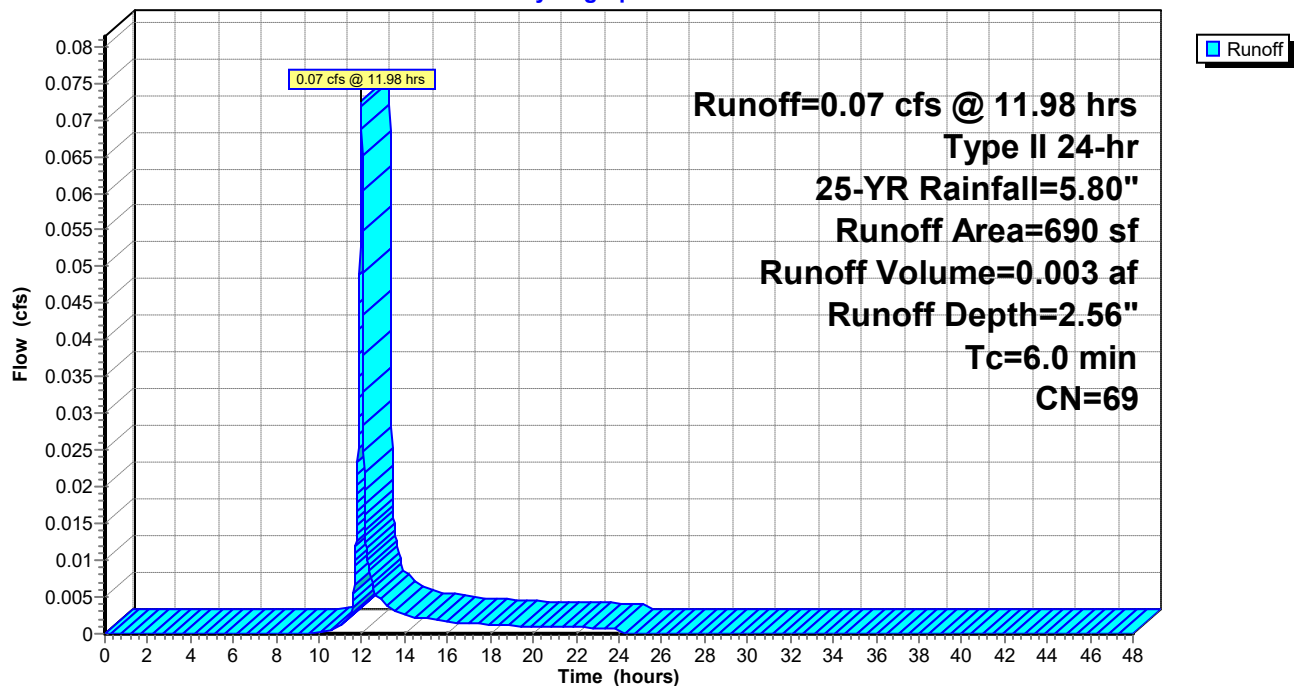
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 25-YR Rainfall=5.80"

	Area (sf)	CN	Description
*	157	98	Sidewalk
	533	61	>75% Grass cover, Good, HSG B
	690	69	Weighted Average
	533		77.25% Pervious Area
	157		22.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2S: ELM ST. SIDEWALK

Hydrograph



Summary for Reach 1.1R: MS4 EXT.

Inflow Area = 0.532 ac, 96.77% Impervious, Inflow Depth > 5.08" for 25-YR event
 Inflow = 4.16 cfs @ 11.99 hrs, Volume= 0.225 af
 Outflow = 2.89 cfs @ 11.90 hrs, Volume= 0.225 af, Atten= 31%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 3.96 fps, Min. Travel Time= 0.3 min

Avg. Velocity= 1.09 fps, Avg. Travel Time= 1.1 min

Peak Storage= 55 cf @ 11.91 hrs

Average Depth at Peak Storage= 1.00'

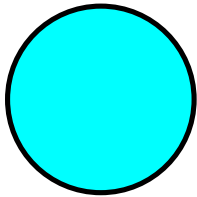
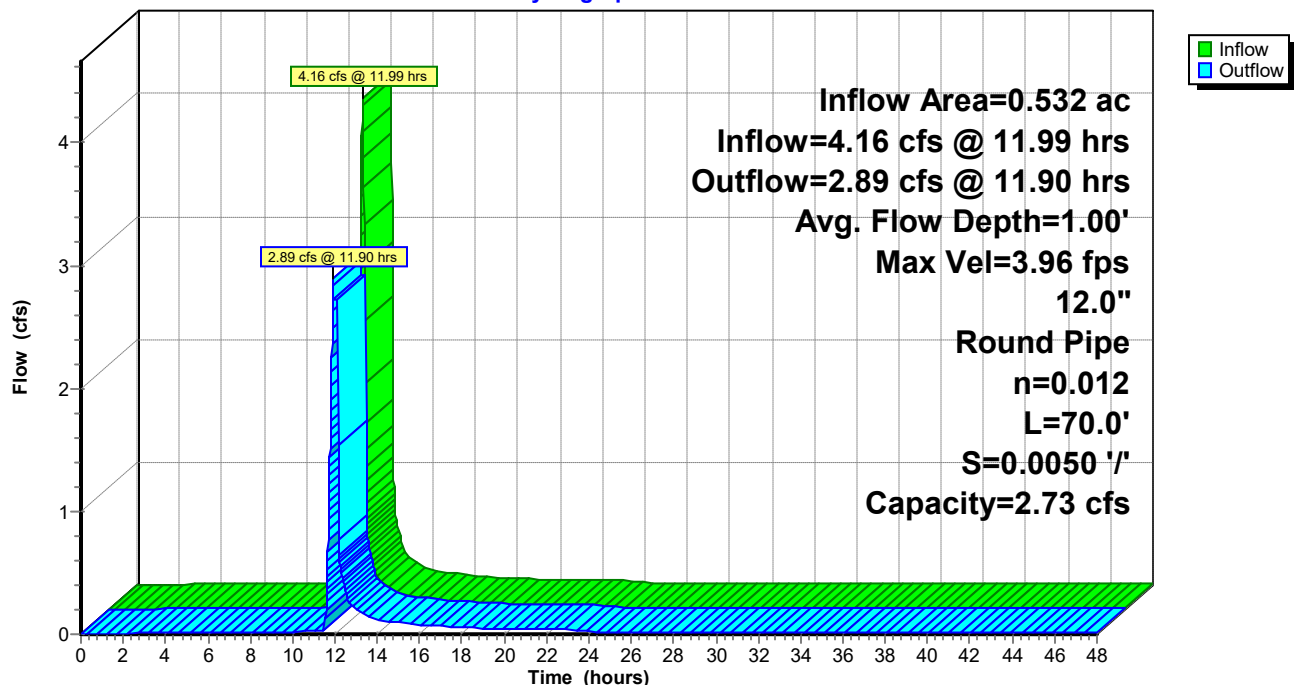
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.73 cfs

12.0" Round Pipe

n= 0.012 Corrugated PP, smooth interior

Length= 70.0' Slope= 0.0050 '/'

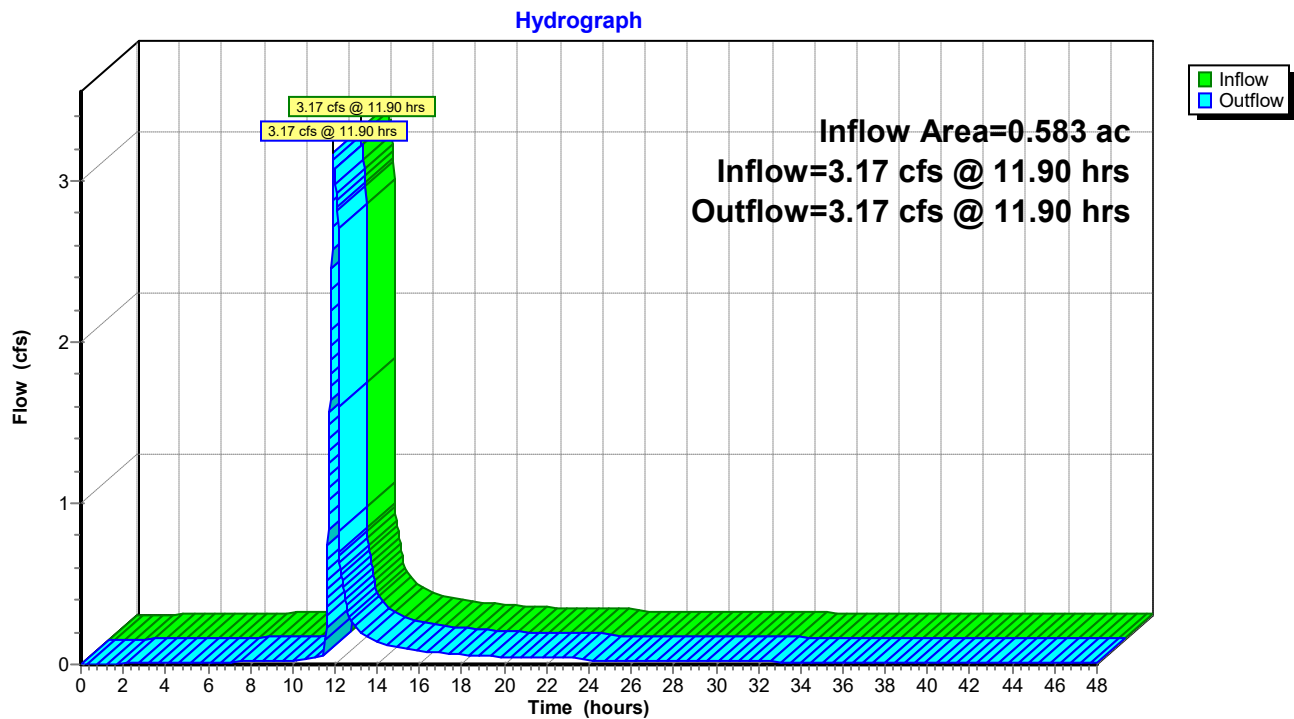
Inlet Invert= 0.00', Outlet Invert= -0.35'

**Reach 1.1R: MS4 EXT.****Hydrograph**

Summary for Reach 1R: POI #1 - PREBLE ST. MS4

Inflow Area = 0.583 ac, 94.09% Impervious, Inflow Depth > 5.02" for 25-YR event
Inflow = 3.17 cfs @ 11.90 hrs, Volume= 0.244 af
Outflow = 3.17 cfs @ 11.90 hrs, Volume= 0.244 af, Atten= 0%, Lag= 0.0 min

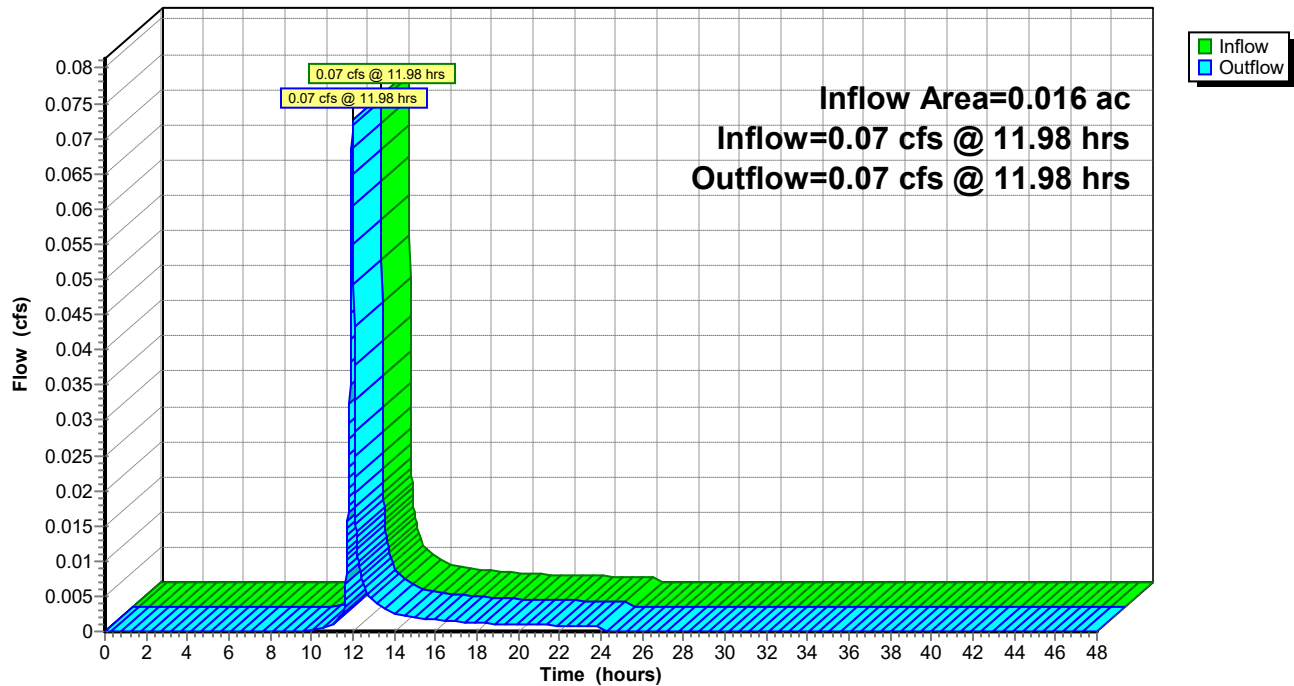
Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: POI #1 - PREBLE ST. MS4

Summary for Reach 2R: POI #2 - ELM ST. COMBINED SEWER

Inflow Area = 0.016 ac, 22.75% Impervious, Inflow Depth = 2.56" for 25-YR event
Inflow = 0.07 cfs @ 11.98 hrs, Volume= 0.003 af
Outflow = 0.07 cfs @ 11.98 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min

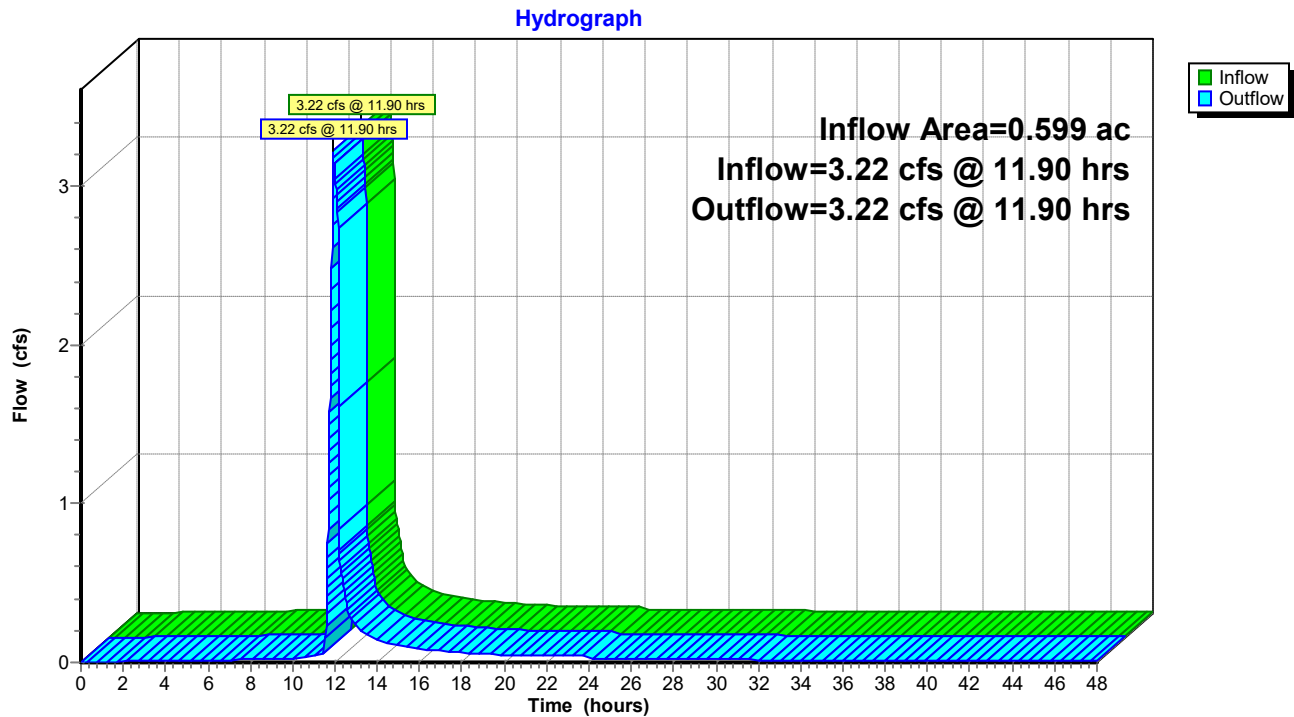
Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: POI #2 - ELM ST. COMBINED SEWER**Hydrograph**

Summary for Reach 99R: POI#99 - TOTAL

Inflow Area = 0.599 ac, 92.20% Impervious, Inflow Depth > 4.95" for 25-YR event
Inflow = 3.22 cfs @ 11.90 hrs, Volume= 0.247 af
Outflow = 3.22 cfs @ 11.90 hrs, Volume= 0.247 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI#99 - TOTAL

Summary for Pond 1P: R-TANK SYSTEM

Inflow Area = 0.510 ac, 96.63% Impervious, Inflow Depth = 5.42" for 25-YR event
 Inflow = 4.17 cfs @ 11.97 hrs, Volume= 0.230 af
 Outflow = 3.99 cfs @ 11.99 hrs, Volume= 0.215 af, Atten= 4%, Lag= 1.3 min
 Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Primary = 3.99 cfs @ 11.99 hrs, Volume= 0.215 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 39.99' @ 11.99 hrs Surf.Area= 562 sf Storage= 2,254 cf

Plug-Flow detention time= 280.5 min calculated for 0.215 af (93% of inflow)
 Center-of-Mass det. time= 242.2 min (989.1 - 747.0)

Volume	Invert	Avail.Storage	Storage Description
#1B	33.95'	742 cf	22.37'W x 25.11'L x 6.20'H Field B 3,483 cf Overall - 1,629 cf Embedded = 1,854 cf x 40.0% Voids
#2B	34.95'	1,547 cf	ACF R-Tank HD 3 x 126 Inside #1 Inside= 15.7"W x 50.4"H => 5.24 sf x 2.35'L = 12.3 cf Outside= 15.7"W x 50.4"H => 5.51 sf x 2.35'L = 12.9 cf 126 Chambers in 14 Rows
#3	44.10'	205 cf	RTANK OVERFLOWS (Prismatic) Listed below (Recalc) x 2
		2,494 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
44.10	25	0	0
44.30	1,000	102	102

Device	Routing	Invert	Outlet Devices
#1	Primary	32.08'	12.0" Round 12" SD L= 30.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 32.08' / 31.78' S= 0.0100 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.79 sf
#2	Device 1	33.26'	STORM FILTER MH X 4.00 0.270" Diameter, C= 0.600, 0.263" Trickle Diameter Starts@34.76'
#3	Device 2	34.03'	4.0" Round RTANK 4" UD TO SF. L= 2.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.03' / 33.93' S= 0.0500 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#4	Device 1	39.00'	4.0' long x 0.7' breadth OCS WEIR WALL Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 Coef. (English) 2.76 2.82 2.93 3.09 3.18 3.22 3.27 3.30 3.32 3.31 3.32
#5	Device 4	38.32'	8.0" Round RTANK 8" OVERFLOWS X 3.00 L= 26.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 38.32' / 37.80' S= 0.0200 '/' Cc= 0.900 n= 0.011, Flow Area= 0.35 sf

1192.5_60 ELM_POST_2-13-25

Type II 24-hr 25-YR Rainfall=5.80"

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#6	Discarded	44.25'	10.0' long x 5.0' breadth SF PONDING
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00			
2.50 3.00 3.50 4.00 4.50 5.00 5.50			
Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65			
2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88			

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=33.95' (Free Discharge)
↑ **6=SF PONDING** (Controls 0.00 cfs)

Primary OutFlow Max=3.99 cfs @ 11.99 hrs HW=39.99' (Free Discharge)
↑ **1=12" SD** (Passes 3.99 cfs of 8.13 cfs potential flow)
↑ **2=STORM FILTER MH** (Orifice Controls 0.02 cfs @ 12.49 fps)
↑ **3=RTANK 4" UD TO SF.** (Passes 0.02 cfs of 0.80 cfs potential flow)
↑ **4=OCS WEIR WALL** (Passes 3.97 cfs of 12.59 cfs potential flow)
↑ **5=RTANK 8" OVERFLOWS** (Inlet Controls 3.97 cfs @ 3.79 fps)

Pond 1P: R-TANK SYSTEM - Chamber Wizard Field B**Chamber Model = ACF R-Tank HD 3 (ACF Environmental R-Tank HD)**

Inside= 15.7"W x 50.4"H => 5.24 sf x 2.35'L = 12.3 cf

Outside= 15.7"W x 50.4"H => 5.51 sf x 2.35'L = 12.9 cf

9 Chambers/Row x 2.35' Long = 21.11' Row Length +24.0" End Stone x 2 = 25.11' Base Length

14 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 22.37' Base Width

12.0" Base + 50.4" Chamber Height + 12.0" Cover = 6.20' Field Height

126 Chambers x 12.3 cf = 1,547.5 cf Chamber Storage

126 Chambers x 12.9 cf = 1,628.9 cf Displacement

3,483.0 cf Field - 1,628.9 cf Chambers = 1,854.1 cf Stone x 40.0% Voids = 741.6 cf Stone Storage

Chamber Storage + Stone Storage = 2,289.1 cf = 0.053 af

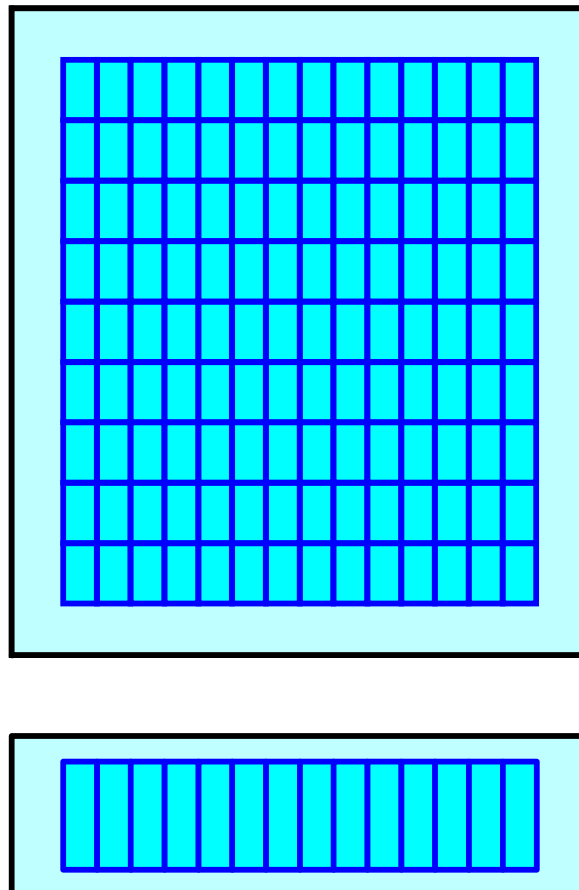
Overall Storage Efficiency = 65.7%

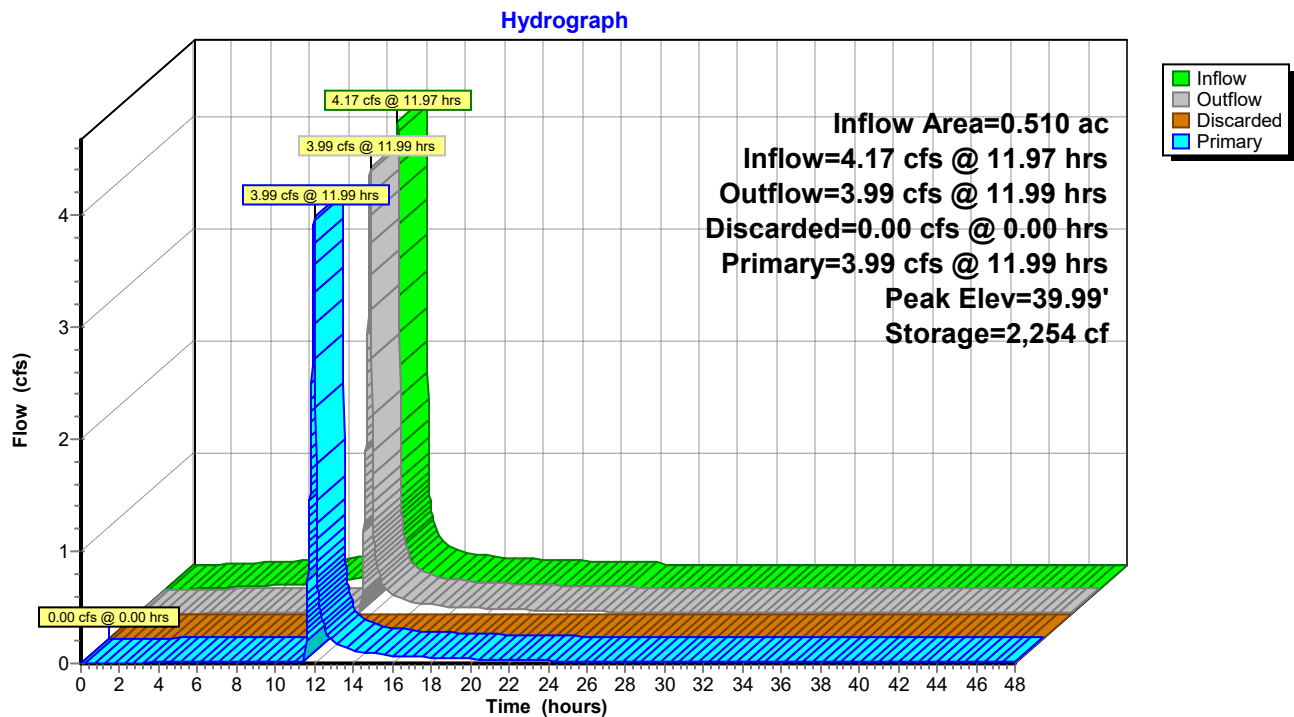
Overall System Size = 25.11' x 22.37' x 6.20'

126 Chambers

129.0 cy Field

68.7 cy Stone



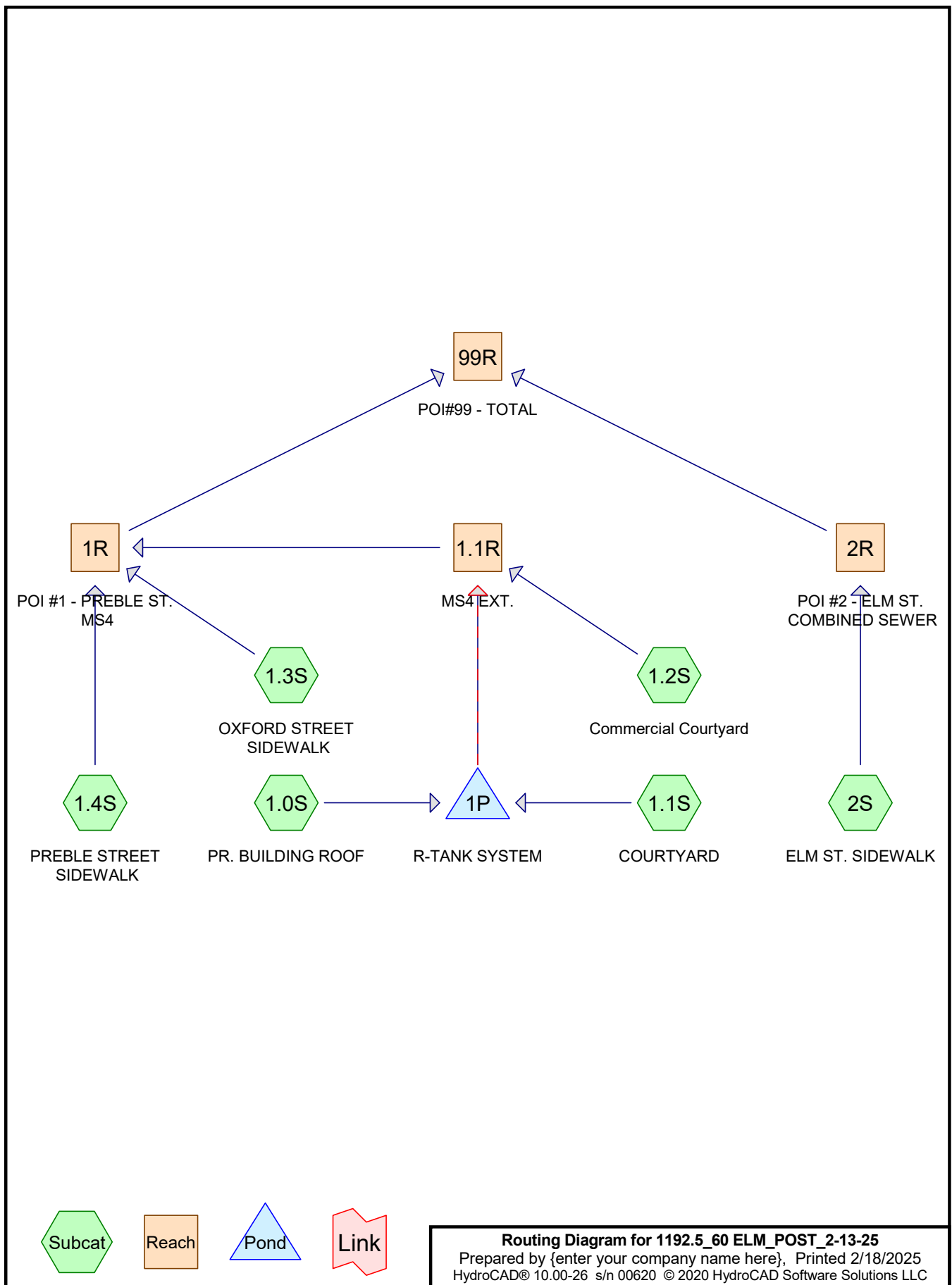
Pond 1P: R-TANK SYSTEM

SECTION J

STORMWATER MANAGMENT REPORT

Attachment C: Post Development HydroCAD Water Quality Storm Event





Summary for Subcatchment 1.0S: PR. BUILDING ROOF

Runoff = 0.76 cfs @ 11.97 hrs, Volume= 0.039 af, Depth= 1.08"

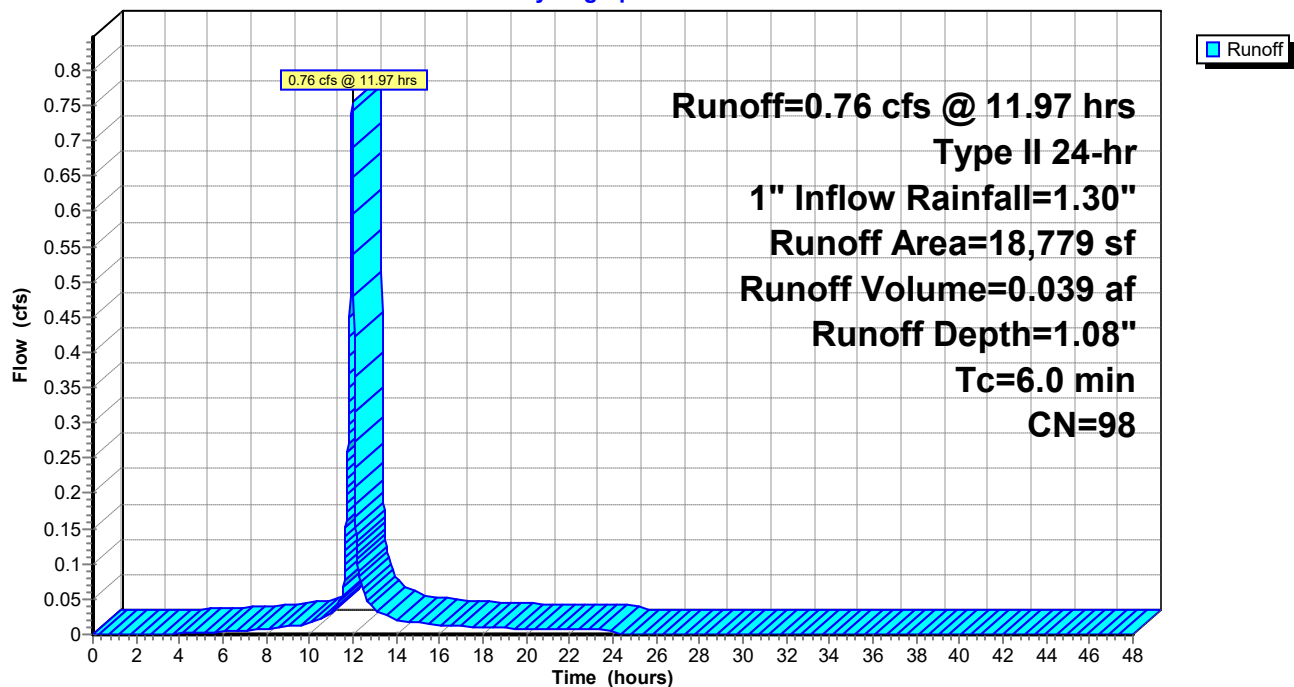
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 1" Inflow Rainfall=1.30"

Area (sf)	CN	Description
* 18,779	98	PR. BUILDING ROOF
18,779		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.0S: PR. BUILDING ROOF

Hydrograph



Summary for Subcatchment 1.1S: COURTYARD

Runoff = 0.08 cfs @ 11.98 hrs, Volume= 0.003 af, Depth= 0.53"

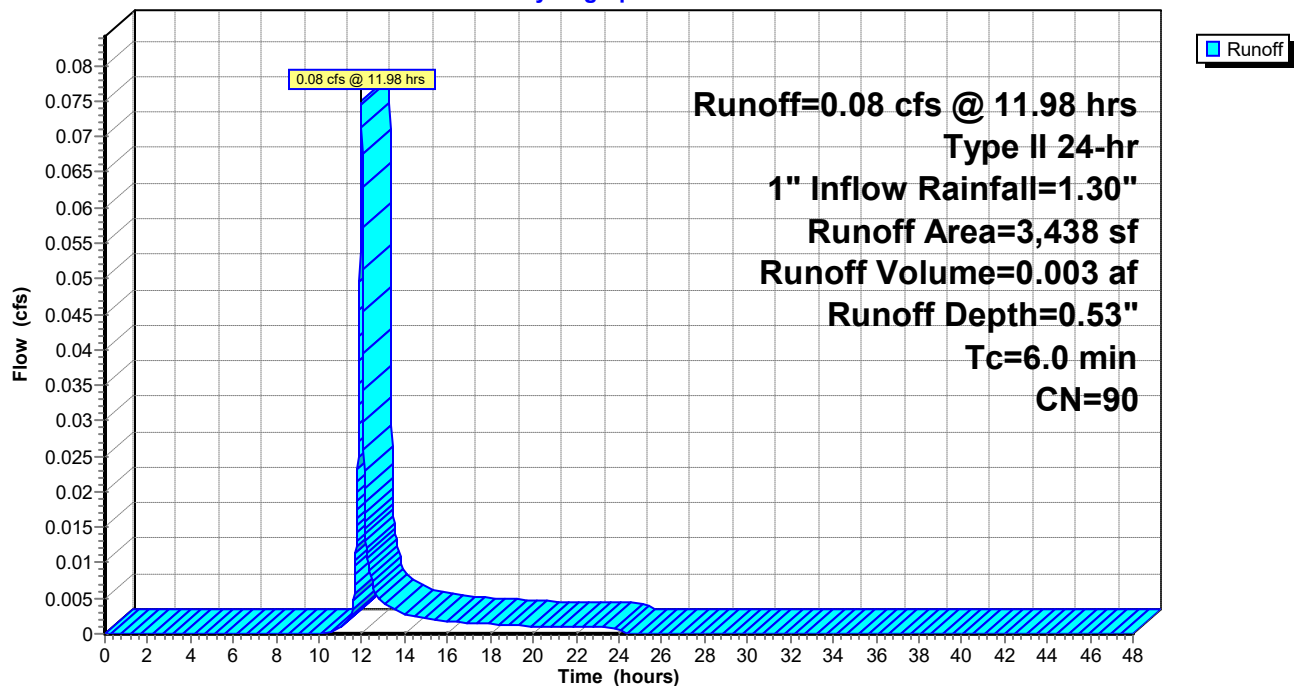
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 1" Inflow Rainfall=1.30"

Area (sf)	CN	Description
2,689	98	Unconnected pavement, HSG A
689	61	>75% Grass cover, Good, HSG B
60	58	Woods/grass comb., Good, HSG B
3,438	90	Weighted Average
749		21.79% Pervious Area
2,689		78.21% Impervious Area
2,689		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.1S: COURTYARD

Hydrograph



Summary for Subcatchment 1.2S: Commercial Courtyard

Runoff = 0.04 cfs @ 11.97 hrs, Volume= 0.002 af, Depth= 1.08"

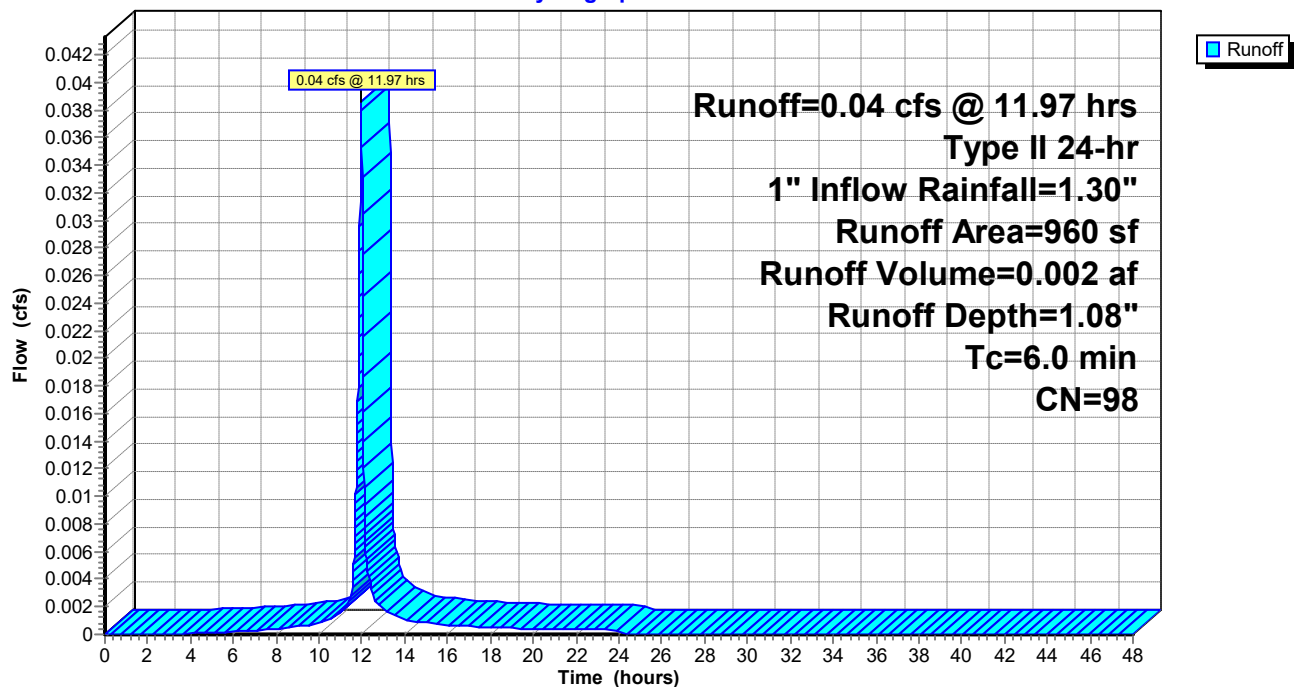
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 1" Inflow Rainfall=1.30"

	Area (sf)	CN	Description
*	960	98	Patio/Pavers
	960		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.2S: Commercial Courtyard

Hydrograph



Summary for Subcatchment 1.3S: OXFORD STREET SIDEWALK

Runoff = 0.03 cfs @ 11.97 hrs, Volume= 0.002 af, Depth= 0.76"

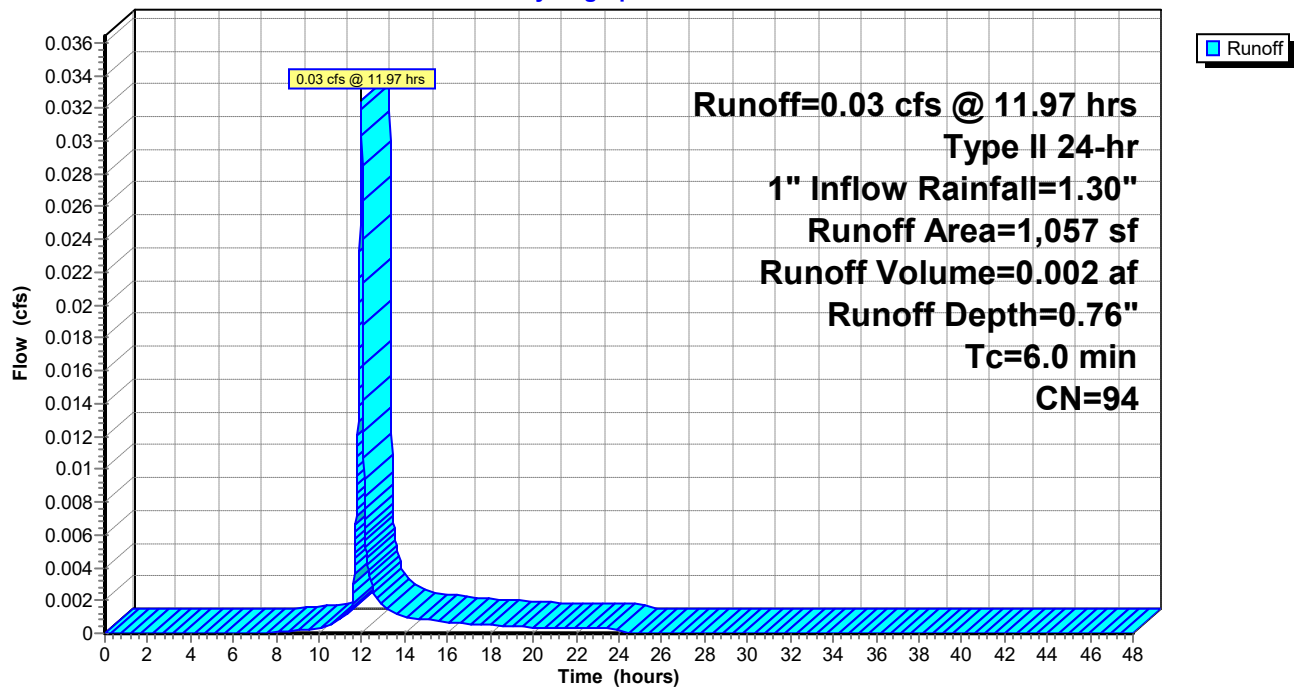
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 1" Inflow Rainfall=1.30"

Area (sf)	CN	Description
941	98	Unconnected pavement, HSG A
116	61	>75% Grass cover, Good, HSG B
1,057	94	Weighted Average
116		10.97% Pervious Area
941		89.03% Impervious Area
941		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.3S: OXFORD STREET SIDEWALK

Hydrograph



Summary for Subcatchment 1.4S: PREBLE STREET SIDEWALK

Runoff = 0.01 cfs @ 11.99 hrs, Volume= 0.000 af, Depth= 0.22"

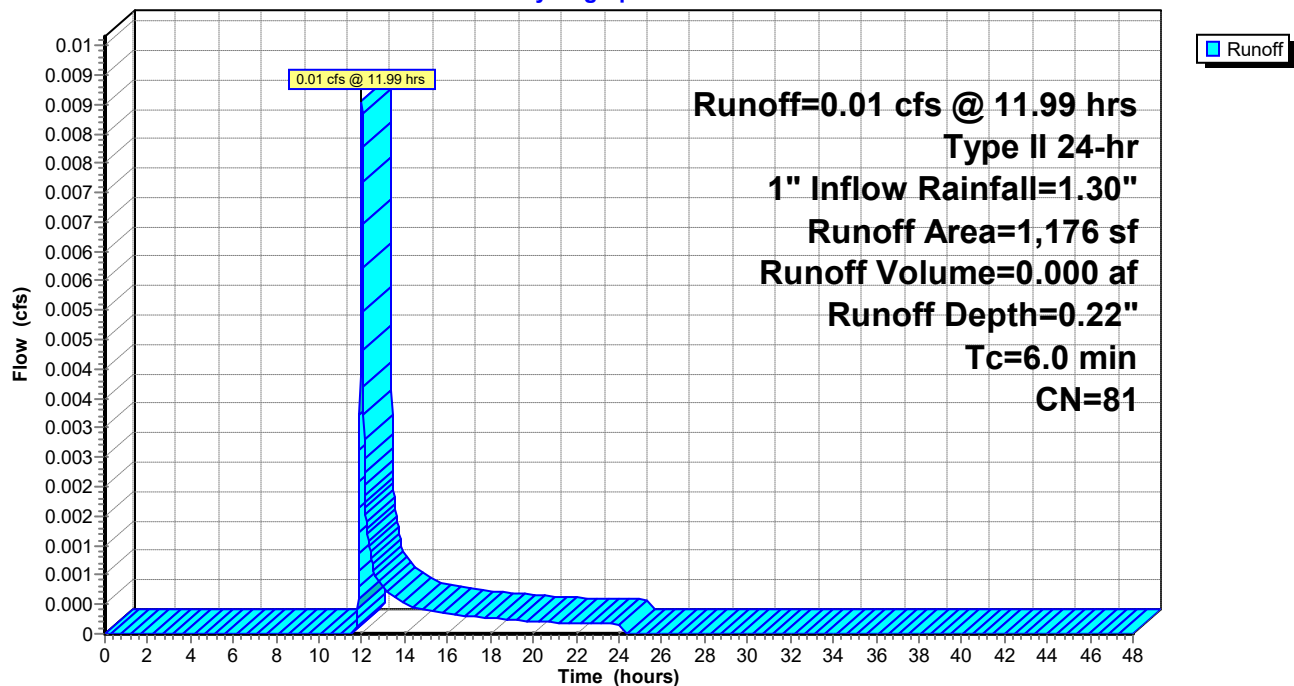
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 1" Inflow Rainfall=1.30"

Area (sf)	CN	Description
538	98	Unconnected pavement, HSG A
525	69	50-75% Grass cover, Fair, HSG B
113	61	>75% Grass cover, Good, HSG B
1,176	81	Weighted Average
638		54.25% Pervious Area
538		45.75% Impervious Area
538		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 1.4S: PREBLE STREET SIDEWALK

Hydrograph



Summary for Subcatchment 2S: ELM ST. SIDEWALK

Runoff = 0.00 cfs @ 13.38 hrs, Volume= 0.000 af, Depth= 0.03"

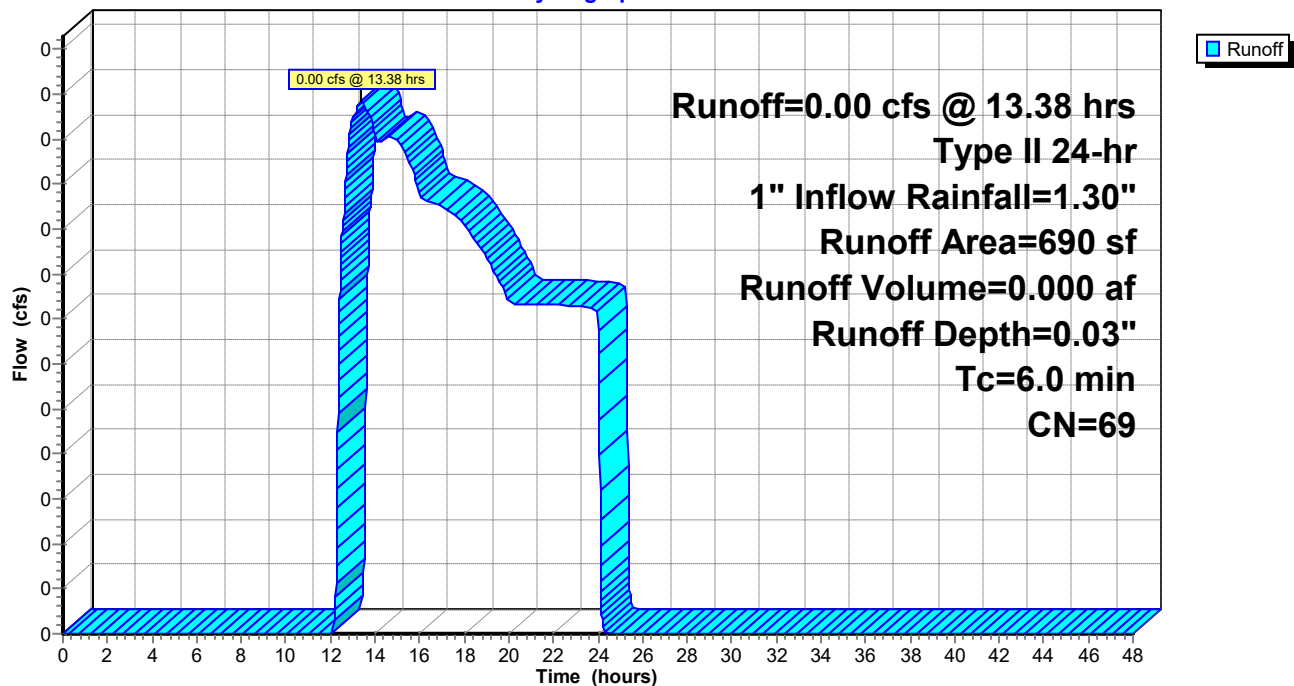
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type II 24-hr 1" Inflow Rainfall=1.30"

	Area (sf)	CN	Description
*	157	98	Sidewalk
	533	61	>75% Grass cover, Good, HSG B
	690	69	Weighted Average
	533		77.25% Pervious Area
	157		22.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry,

Subcatchment 2S: ELM ST. SIDEWALK

Hydrograph



Summary for Reach 1.1R: MS4 EXT.

Inflow Area = 0.532 ac, 96.77% Impervious, Inflow Depth > 0.96" for 1" Inflow event
 Inflow = 0.05 cfs @ 11.97 hrs, Volume= 0.043 af
 Outflow = 0.05 cfs @ 11.99 hrs, Volume= 0.043 af, Atten= 1%, Lag= 1.4 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Max. Velocity= 1.35 fps, Min. Travel Time= 0.9 min

Avg. Velocity= 0.84 fps, Avg. Travel Time= 1.4 min

Peak Storage= 3 cf @ 11.98 hrs

Average Depth at Peak Storage= 0.09'

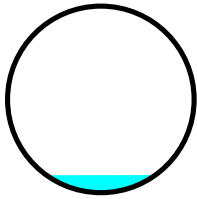
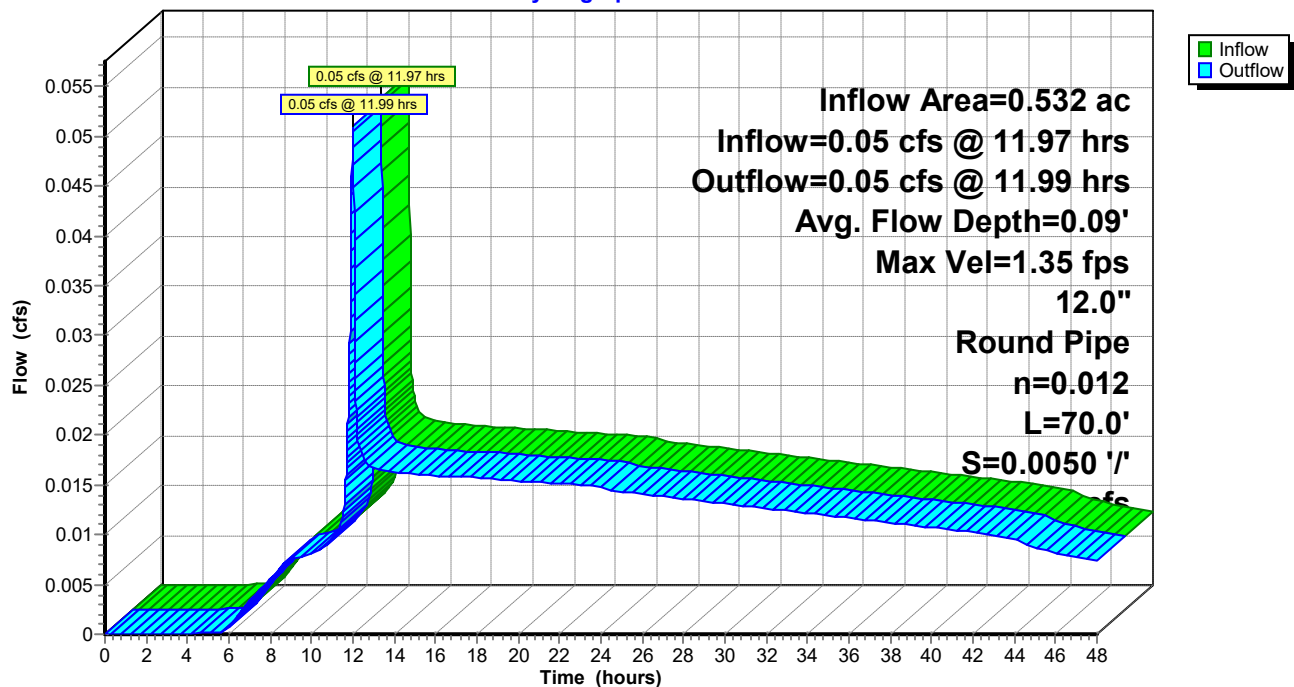
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 2.73 cfs

12.0" Round Pipe

n= 0.012 Corrugated PP, smooth interior

Length= 70.0' Slope= 0.0050 '/'

Inlet Invert= 0.00', Outlet Invert= -0.35'

**Reach 1.1R: MS4 EXT.****Hydrograph**

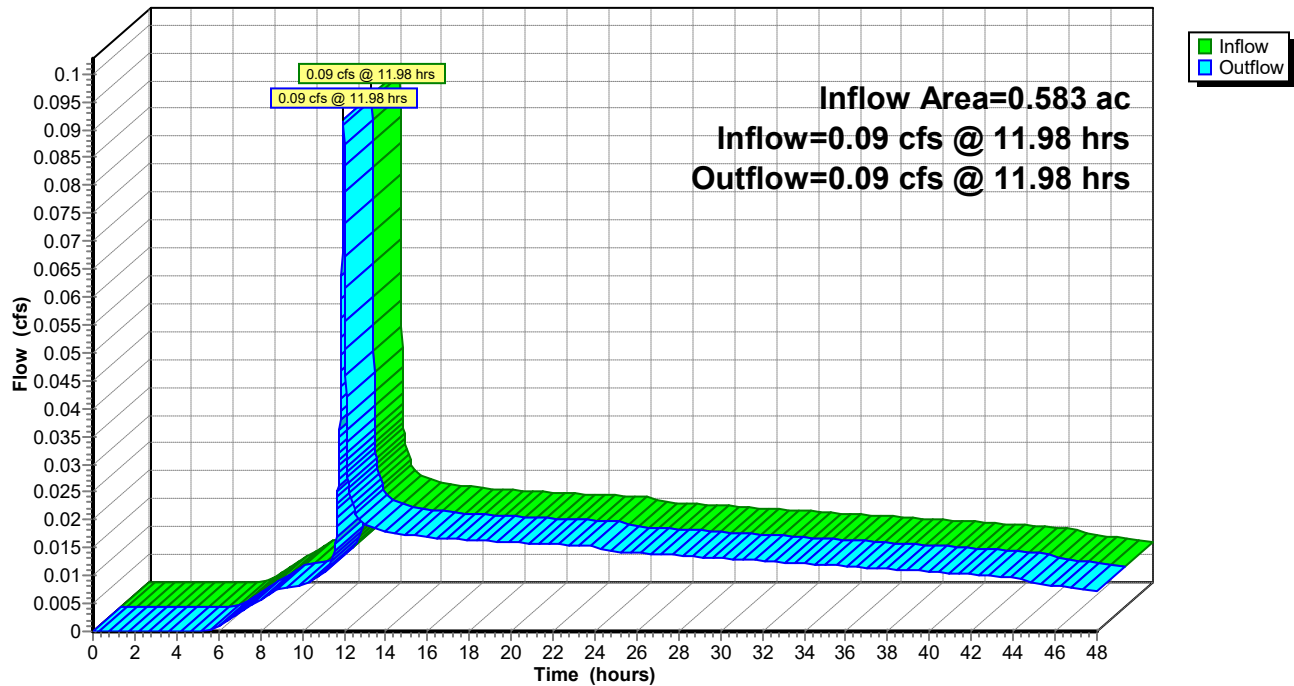
Stage-Area-Storage for Reach 1.1R: MS4 EXT.

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
0.00	0.0	0	0.52	0.4	29
0.01	0.0	0	0.53	0.4	30
0.02	0.0	0	0.54	0.4	30
0.03	0.0	0	0.55	0.4	31
0.04	0.0	1	0.56	0.5	32
0.05	0.0	1	0.57	0.5	32
0.06	0.0	1	0.58	0.5	33
0.07	0.0	2	0.59	0.5	34
0.08	0.0	2	0.60	0.5	34
0.09	0.0	2	0.61	0.5	35
0.10	0.0	3	0.62	0.5	36
0.11	0.0	3	0.63	0.5	36
0.12	0.1	4	0.64	0.5	37
0.13	0.1	4	0.65	0.5	38
0.14	0.1	5	0.66	0.5	38
0.15	0.1	5	0.67	0.6	39
0.16	0.1	6	0.68	0.6	40
0.17	0.1	6	0.69	0.6	40
0.18	0.1	7	0.70	0.6	41
0.19	0.1	7	0.71	0.6	42
0.20	0.1	8	0.72	0.6	42
0.21	0.1	8	0.73	0.6	43
0.22	0.1	9	0.74	0.6	44
0.23	0.1	10	0.75	0.6	44
0.24	0.1	10	0.76	0.6	45
0.25	0.2	11	0.77	0.6	45
0.26	0.2	11	0.78	0.7	46
0.27	0.2	12	0.79	0.7	47
0.28	0.2	13	0.80	0.7	47
0.29	0.2	13	0.81	0.7	48
0.30	0.2	14	0.82	0.7	48
0.31	0.2	15	0.83	0.7	49
0.32	0.2	15	0.84	0.7	49
0.33	0.2	16	0.85	0.7	50
0.34	0.2	16	0.86	0.7	50
0.35	0.2	17	0.87	0.7	51
0.36	0.3	18	0.88	0.7	51
0.37	0.3	18	0.89	0.7	52
0.38	0.3	19	0.90	0.7	52
0.39	0.3	20	0.91	0.8	53
0.40	0.3	21	0.92	0.8	53
0.41	0.3	21	0.93	0.8	53
0.42	0.3	22	0.94	0.8	54
0.43	0.3	23	0.95	0.8	54
0.44	0.3	23	0.96	0.8	54
0.45	0.3	24	0.97	0.8	54
0.46	0.4	25	0.98	0.8	55
0.47	0.4	25	0.99	0.8	55
0.48	0.4	26	1.00	0.8	55
0.49	0.4	27			
0.50	0.4	27			
0.51	0.4	28			

Summary for Reach 1R: POI #1 - PREBLE ST. MS4

Inflow Area = 0.583 ac, 94.09% Impervious, Inflow Depth > 0.92" for 1" Inflow event
Inflow = 0.09 cfs @ 11.98 hrs, Volume= 0.045 af
Outflow = 0.09 cfs @ 11.98 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.0 min

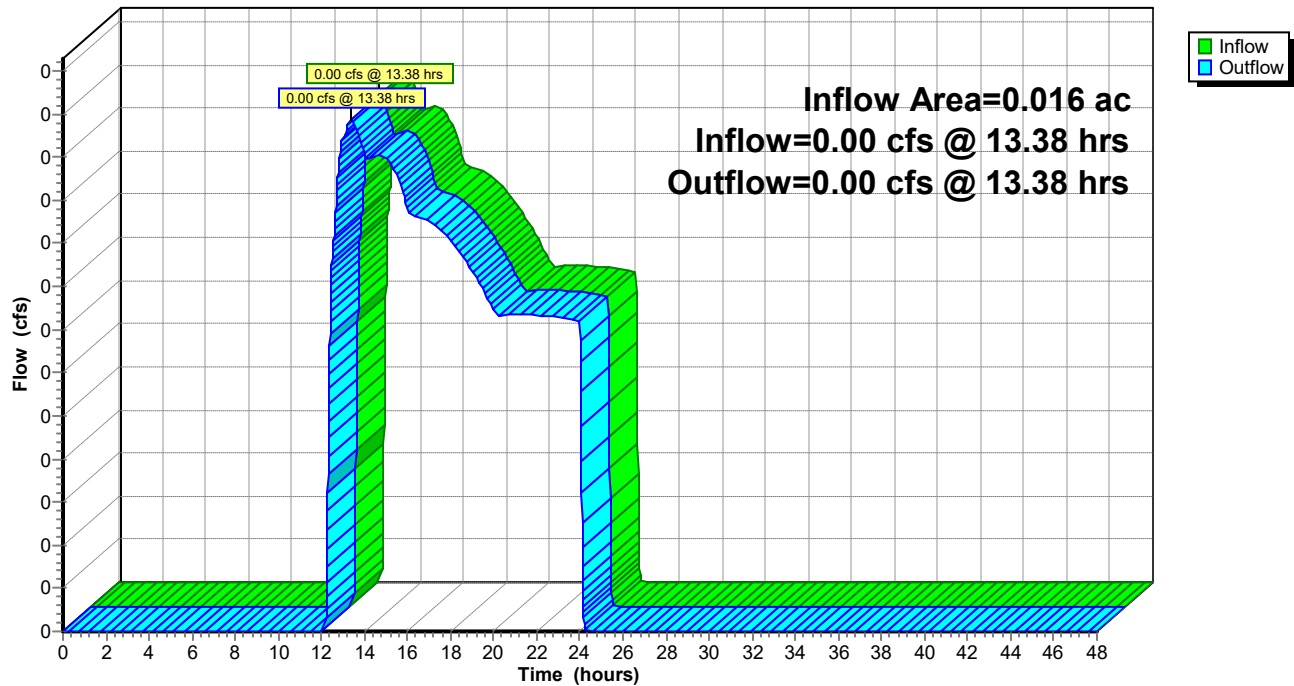
Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 1R: POI #1 - PREBLE ST. MS4**Hydrograph**

Summary for Reach 2R: POI #2 - ELM ST. COMBINED SEWER

Inflow Area = 0.016 ac, 22.75% Impervious, Inflow Depth = 0.03" for 1" Inflow event
Inflow = 0.00 cfs @ 13.38 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 13.38 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

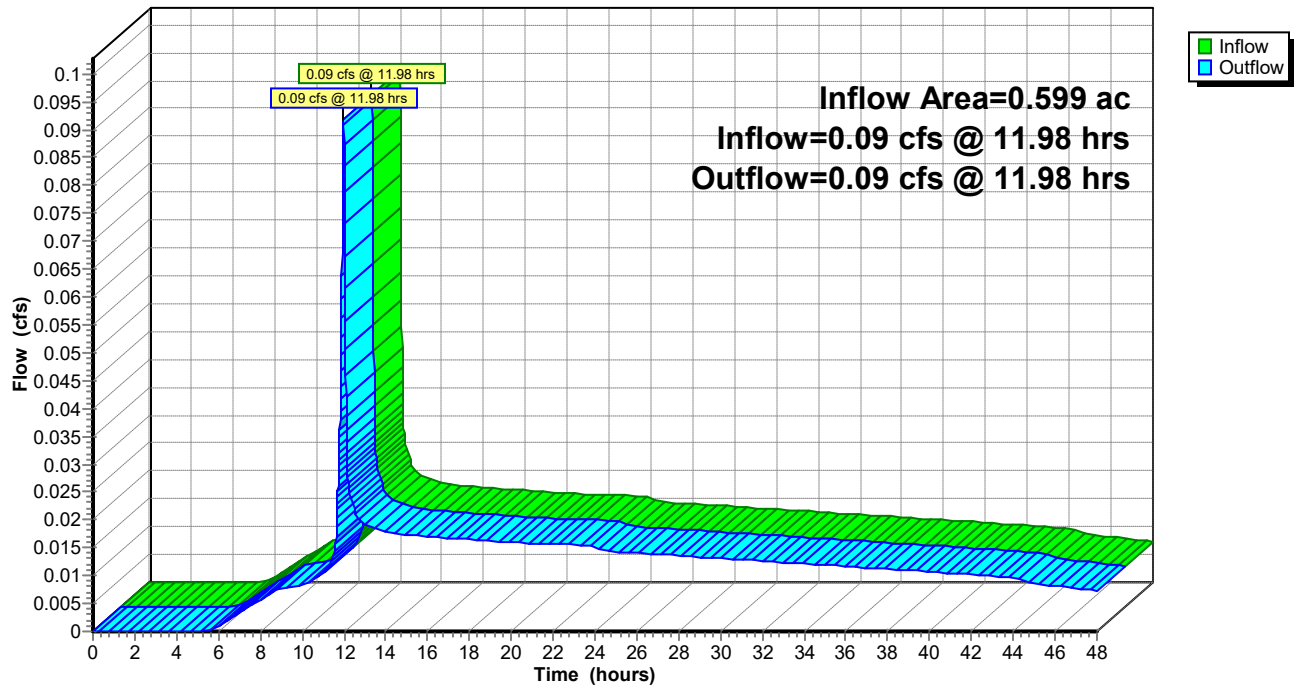
Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 2R: POI #2 - ELM ST. COMBINED SEWER**Hydrograph**

Summary for Reach 99R: POI#99 - TOTAL

Inflow Area = 0.599 ac, 92.20% Impervious, Inflow Depth > 0.90" for 1" Inflow event
Inflow = 0.09 cfs @ 11.98 hrs, Volume= 0.045 af
Outflow = 0.09 cfs @ 11.98 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Reach 99R: POI#99 - TOTAL**Hydrograph**

Summary for Pond 1P: R-TANK SYSTEM

Inflow Area = 0.510 ac, 96.63% Impervious, Inflow Depth = 1.00" for 1" Inflow event
 Inflow = 0.83 cfs @ 11.97 hrs, Volume= 0.042 af
 Outflow = 0.02 cfs @ 15.88 hrs, Volume= 0.041 af, Atten= 98%, Lag= 234.8 min
 Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Primary = 0.02 cfs @ 15.88 hrs, Volume= 0.041 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 37.23' @ 15.88 hrs Surf.Area= 562 sf Storage= 1,223 cf

Plug-Flow detention time= 850.4 min calculated for 0.041 af (96% of inflow)
 Center-of-Mass det. time= 826.4 min (1,608.1 - 781.7)

Volume	Invert	Avail.Storage	Storage Description
#1B	33.95'	742 cf	22.37'W x 25.11'L x 6.20'H Field B 3,483 cf Overall - 1,629 cf Embedded = 1,854 cf x 40.0% Voids
#2B	34.95'	1,547 cf	ACF R-Tank HD 3 x 126 Inside #1 Inside= 15.7"W x 50.4"H => 5.24 sf x 2.35'L = 12.3 cf Outside= 15.7"W x 50.4"H => 5.51 sf x 2.35'L = 12.9 cf 126 Chambers in 14 Rows
#3	44.10'	205 cf	RTANK OVERFLOWS (Prismatic) Listed below (Recalc) x 2
		2,494 cf	Total Available Storage

Storage Group B created with Chamber Wizard

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
44.10	25	0	0
44.30	1,000	102	102

Device	Routing	Invert	Outlet Devices
#1	Primary	32.08'	12.0" Round 12" SD L= 30.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 32.08' / 31.78' S= 0.0100 '/' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.79 sf
#2	Device 1	33.26'	STORM FILTER MH X 4.00 0.270" Diameter, C= 0.600, 0.263" Trickle Diameter Starts@34.76'
#3	Device 2	34.03'	4.0" Round RTANK 4" UD TO SF. L= 2.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 34.03' / 33.93' S= 0.0500 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.09 sf
#4	Device 1	39.00'	4.0' long x 0.7' breadth OCS WEIR WALL Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 Coef. (English) 2.76 2.82 2.93 3.09 3.18 3.22 3.27 3.30 3.32 3.31 3.32
#5	Device 4	38.32'	8.0" Round RTANK 8" OVERFLOWS X 3.00 L= 26.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 38.32' / 37.80' S= 0.0200 '/' Cc= 0.900 n= 0.011, Flow Area= 0.35 sf

1192.5_60 ELM_POST_2-13-25

Type II 24-hr 1" Inflow Rainfall=1.30"

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#6	Discarded	44.25'	10.0' long x 5.0' breadth SF PONDING
Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00			
2.50 3.00 3.50 4.00 4.50 5.00 5.50			
Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65			
2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88			

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=33.95' (Free Discharge)
↑ **6=SF PONDING** (Controls 0.00 cfs)

Primary OutFlow Max=0.02 cfs @ 15.88 hrs HW=37.23' (Free Discharge)
↑ **1=12" SD** (Passes 0.02 cfs of 6.44 cfs potential flow)
↑ **2=STORM FILTER MH** (Orifice Controls 0.02 cfs @ 9.59 fps)
↑ **3=RTANK 4" UD TO SF.** (Passes 0.02 cfs of 0.58 cfs potential flow)
↑ **4=OCS WEIR WALL** (Controls 0.00 cfs)
↑ **5=RTANK 8" OVERFLOWS** (Controls 0.00 cfs)

Pond 1P: R-TANK SYSTEM - Chamber Wizard Field B**Chamber Model = ACF R-Tank HD 3 (ACF Environmental R-Tank HD)**

Inside= 15.7"W x 50.4"H => 5.24 sf x 2.35'L = 12.3 cf

Outside= 15.7"W x 50.4"H => 5.51 sf x 2.35'L = 12.9 cf

9 Chambers/Row x 2.35' Long = 21.11' Row Length +24.0" End Stone x 2 = 25.11' Base Length

14 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 22.37' Base Width

12.0" Base + 50.4" Chamber Height + 12.0" Cover = 6.20' Field Height

126 Chambers x 12.3 cf = 1,547.5 cf Chamber Storage

126 Chambers x 12.9 cf = 1,628.9 cf Displacement

3,483.0 cf Field - 1,628.9 cf Chambers = 1,854.1 cf Stone x 40.0% Voids = 741.6 cf Stone Storage

Chamber Storage + Stone Storage = 2,289.1 cf = 0.053 af

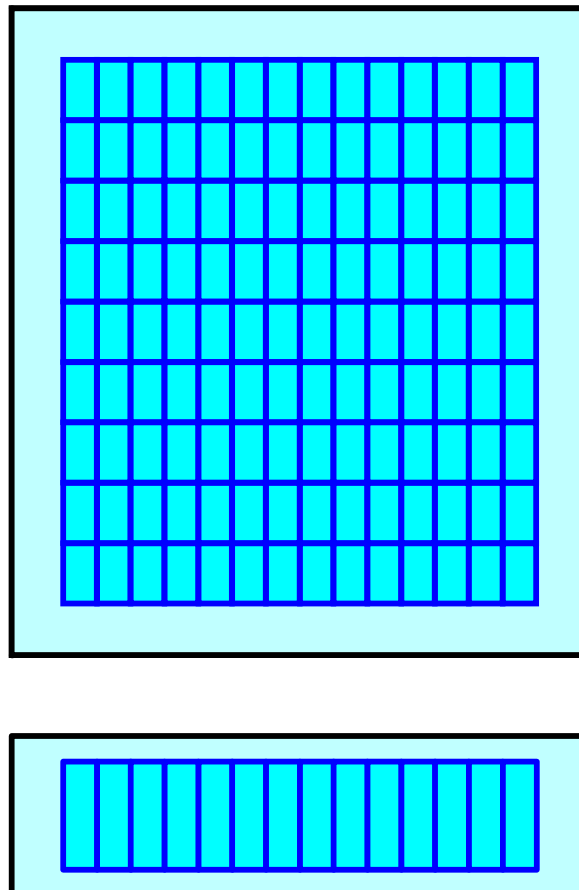
Overall Storage Efficiency = 65.7%

Overall System Size = 25.11' x 22.37' x 6.20'

126 Chambers

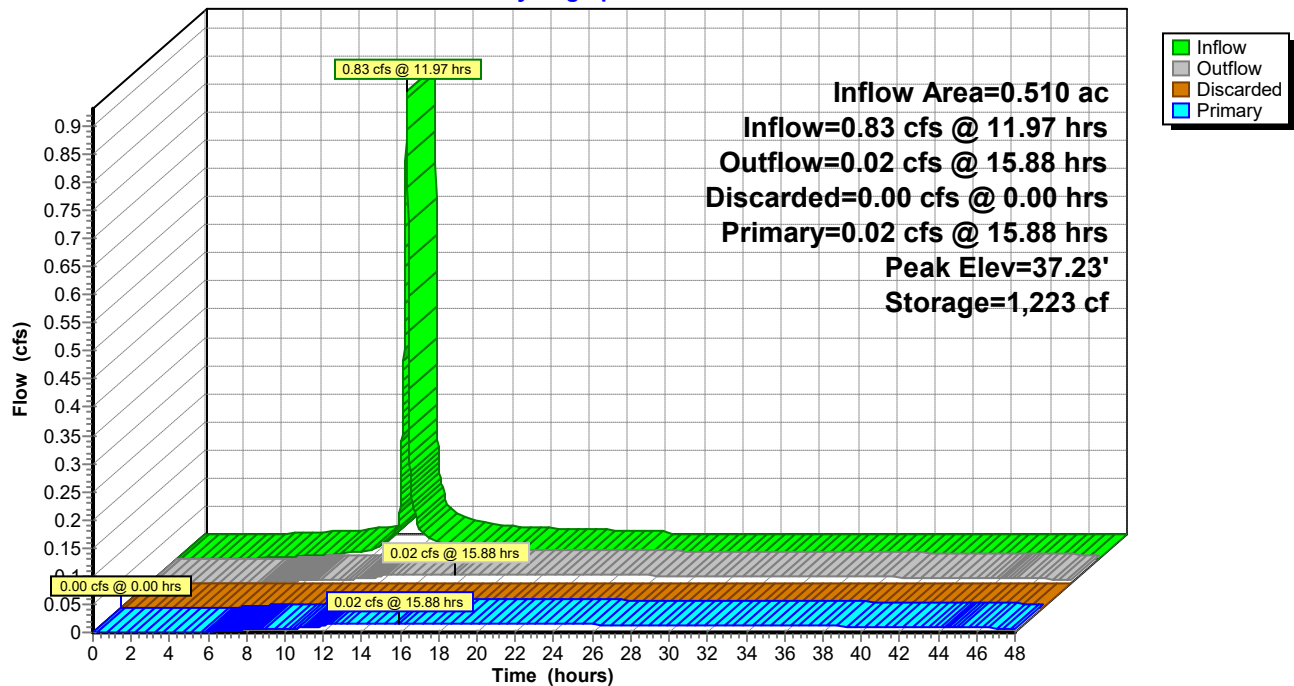
129.0 cy Field

68.7 cy Stone



Pond 1P: R-TANK SYSTEM

Hydrograph



1192.5_60 ELM_POST_2-13-25*Type II 24-hr 1" Inflow Rainfall=1.30"*

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Stage-Area-Storage for Pond 1P: R-TANK SYSTEM

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
33.95	0	35.51	470	37.07	1,153
33.98	7	35.54	483	37.10	1,167
34.01	13	35.57	496	37.13	1,180
34.04	20	35.60	509	37.16	1,193
34.07	27	35.63	523	37.19	1,206
34.10	34	35.66	536	37.22	1,219
34.13	40	35.69	549	37.25	1,232
34.16	47	35.72	562	37.28	1,245
34.19	54	35.75	575	37.31	1,259
34.22	61	35.78	588	37.34	1,272
34.25	67	35.81	601	37.37	1,285
34.28	74	35.84	615	37.40	1,298
34.31	81	35.87	628	37.43	1,311
34.34	88	35.90	641	37.46	1,324
34.37	94	35.93	654	37.49	1,337
34.40	101	35.96	667	37.52	1,351
34.43	108	35.99	680	37.55	1,364
34.46	115	36.02	693	37.58	1,377
34.49	121	36.05	707	37.61	1,390
34.52	128	36.08	720	37.64	1,403
34.55	135	36.11	733	37.67	1,416
34.58	142	36.14	746	37.70	1,429
34.61	148	36.17	759	37.73	1,443
34.64	155	36.20	772	37.76	1,456
34.67	162	36.23	785	37.79	1,469
34.70	169	36.26	799	37.82	1,482
34.73	175	36.29	812	37.85	1,495
34.76	182	36.32	825	37.88	1,508
34.79	189	36.35	838	37.91	1,521
34.82	196	36.38	851	37.94	1,535
34.85	202	36.41	864	37.97	1,548
34.88	209	36.44	877	38.00	1,561
34.91	216	36.47	891	38.03	1,574
34.94	222	36.50	904	38.06	1,587
34.97	233	36.53	917	38.09	1,600
35.00	247	36.56	930	38.12	1,613
35.03	260	36.59	943	38.15	1,627
35.06	273	36.62	956	38.18	1,640
35.09	286	36.65	969	38.21	1,653
35.12	299	36.68	983	38.24	1,666
35.15	312	36.71	996	38.27	1,679
35.18	325	36.74	1,009	38.30	1,692
35.21	339	36.77	1,022	38.33	1,705
35.24	352	36.80	1,035	38.36	1,719
35.27	365	36.83	1,048	38.39	1,732
35.30	378	36.86	1,061	38.42	1,745
35.33	391	36.89	1,075	38.45	1,758
35.36	404	36.92	1,088	38.48	1,771
35.39	417	36.95	1,101	38.51	1,784
35.42	431	36.98	1,114	38.54	1,797
35.45	444	37.01	1,127	38.57	1,811
35.48	457	37.04	1,140	38.60	1,824

1192.5_60 ELM_POST_2-13-25*Type II 24-hr 1" Inflow Rainfall=1.30"*

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Stage-Area-Storage for Pond 1P: R-TANK SYSTEM (continued)

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
38.63	1,837	40.19	2,289	41.75	2,289
38.66	1,850	40.22	2,289	41.78	2,289
38.69	1,863	40.25	2,289	41.81	2,289
38.72	1,876	40.28	2,289	41.84	2,289
38.75	1,889	40.31	2,289	41.87	2,289
38.78	1,903	40.34	2,289	41.90	2,289
38.81	1,916	40.37	2,289	41.93	2,289
38.84	1,929	40.40	2,289	41.96	2,289
38.87	1,942	40.43	2,289	41.99	2,289
38.90	1,955	40.46	2,289	42.02	2,289
38.93	1,968	40.49	2,289	42.05	2,289
38.96	1,981	40.52	2,289	42.08	2,289
38.99	1,995	40.55	2,289	42.11	2,289
39.02	2,008	40.58	2,289	42.14	2,289
39.05	2,021	40.61	2,289	42.17	2,289
39.08	2,034	40.64	2,289	42.20	2,289
39.11	2,047	40.67	2,289	42.23	2,289
39.14	2,060	40.70	2,289	42.26	2,289
39.17	2,069	40.73	2,289	42.29	2,289
39.20	2,076	40.76	2,289	42.32	2,289
39.23	2,082	40.79	2,289	42.35	2,289
39.26	2,089	40.82	2,289	42.38	2,289
39.29	2,096	40.85	2,289	42.41	2,289
39.32	2,103	40.88	2,289	42.44	2,289
39.35	2,109	40.91	2,289	42.47	2,289
39.38	2,116	40.94	2,289	42.50	2,289
39.41	2,123	40.97	2,289	42.53	2,289
39.44	2,130	41.00	2,289	42.56	2,289
39.47	2,136	41.03	2,289	42.59	2,289
39.50	2,143	41.06	2,289	42.62	2,289
39.53	2,150	41.09	2,289	42.65	2,289
39.56	2,157	41.12	2,289	42.68	2,289
39.59	2,163	41.15	2,289	42.71	2,289
39.62	2,170	41.18	2,289	42.74	2,289
39.65	2,177	41.21	2,289	42.77	2,289
39.68	2,184	41.24	2,289	42.80	2,289
39.71	2,190	41.27	2,289	42.83	2,289
39.74	2,197	41.30	2,289	42.86	2,289
39.77	2,204	41.33	2,289	42.89	2,289
39.80	2,211	41.36	2,289	42.92	2,289
39.83	2,217	41.39	2,289	42.95	2,289
39.86	2,224	41.42	2,289	42.98	2,289
39.89	2,231	41.45	2,289	43.01	2,289
39.92	2,238	41.48	2,289	43.04	2,289
39.95	2,244	41.51	2,289	43.07	2,289
39.98	2,251	41.54	2,289	43.10	2,289
40.01	2,258	41.57	2,289	43.13	2,289
40.04	2,265	41.60	2,289	43.16	2,289
40.07	2,271	41.63	2,289	43.19	2,289
40.10	2,278	41.66	2,289	43.22	2,289
40.13	2,285	41.69	2,289	43.25	2,289
40.16	2,289	41.72	2,289	43.28	2,289

Stage-Area-Storage for Pond 1P: R-TANK SYSTEM (continued)

Elevation (feet)	Storage (cubic-feet)
43.31	2,289
43.34	2,289
43.37	2,289
43.40	2,289
43.43	2,289
43.46	2,289
43.49	2,289
43.52	2,289
43.55	2,289
43.58	2,289
43.61	2,289
43.64	2,289
43.67	2,289
43.70	2,289
43.73	2,289
43.76	2,289
43.79	2,289
43.82	2,289
43.85	2,289
43.88	2,289
43.91	2,289
43.94	2,289
43.97	2,289
44.00	2,289
44.03	2,289
44.06	2,289
44.09	2,289
44.12	2,292
44.15	2,304
44.18	2,324
44.21	2,354
44.24	2,392
44.27	2,439
44.30	2,494

SECTION J

STORMWATER MANAGMENT REPORT

Attachment D: USDA Soil Survey





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 16, 2025

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

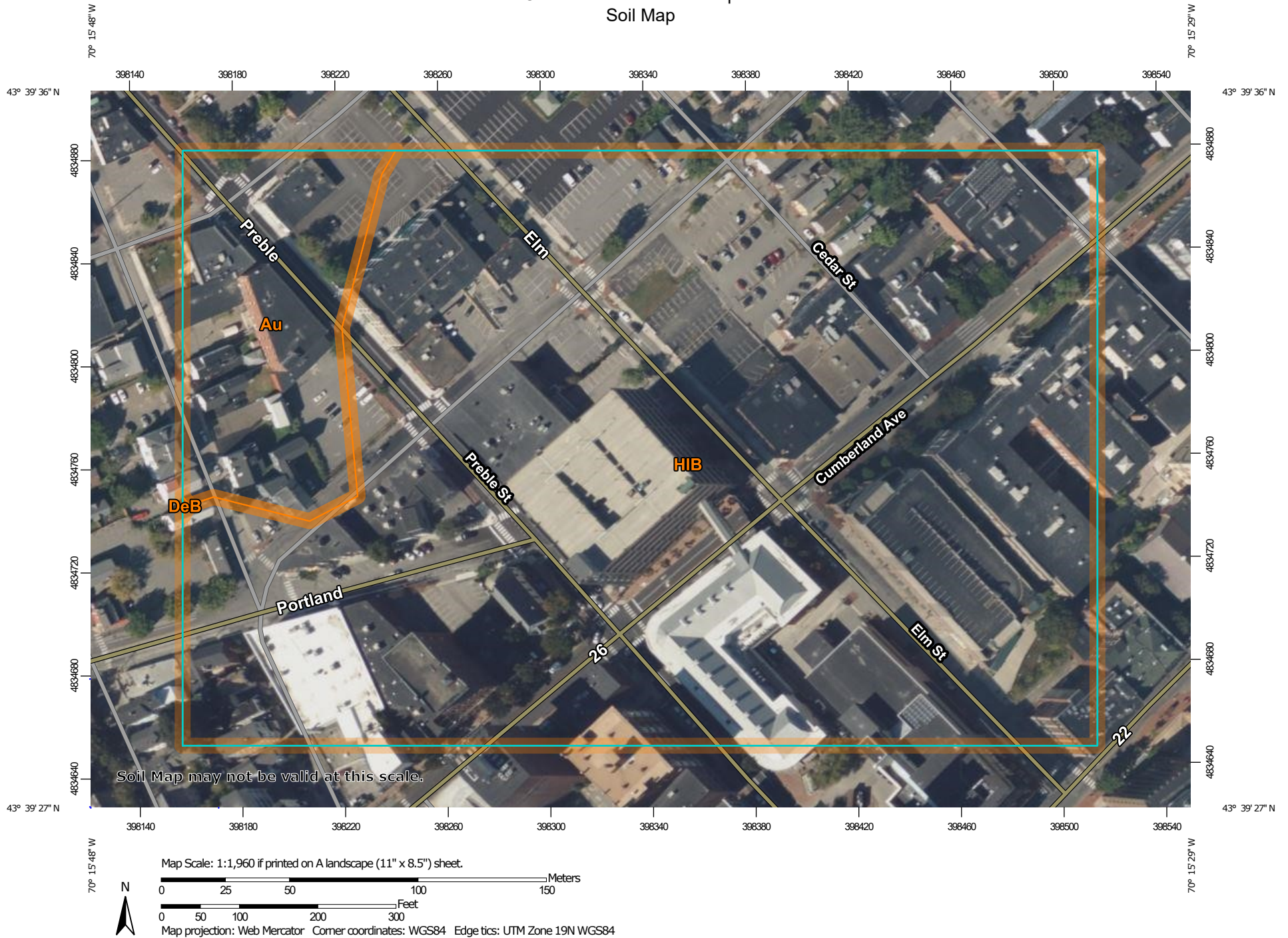
Custom Soil Resource Report

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.

Custom Soil Resource Report Soil Map



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 21, Aug 26, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

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
Au	Au Gres loamy sand	2.3	11.5%
DeB	Deerfield loamy fine sand, 3 to 8 percent slopes	0.0	0.0%
HIB	Hinckley loamy sand, 3 to 8 percent slopes	18.1	88.5%
Totals for Area of Interest		20.4	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

Au—Au Gres loamy sand

Map Unit Setting

National map unit symbol: blgr
Elevation: 10 to 1,800 feet
Mean annual precipitation: 29 to 50 inches
Mean annual air temperature: 41 to 46 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Farmland of local importance

Map Unit Composition

Au gres and similar soils: 85 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Au Gres

Setting

Landform: Outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy glaciofluvial deposits derived from granite and gneiss

Typical profile

H1 - 0 to 10 inches: loamy sand
H2 - 10 to 32 inches: loamy sand
H3 - 32 to 65 inches: sand

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): High (2.00 to 6.00 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: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Hydric soil rating: Yes

Minor Components

Saugatuck

Percent of map unit: 6 percent
Landform: Outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf

Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Walpole

Percent of map unit: 2 percent
Landform: Outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Scantic

Percent of map unit: 2 percent
Landform: Coastal plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

DeB—Deerfield loamy fine sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2xfg9
Elevation: 0 to 1,190 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Deerfield and similar soils: 85 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Deerfield

Setting

Landform: Kame terraces, outwash plains, outwash terraces, outwash deltas
Landform position (three-dimensional): Tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy outwash derived from granite, gneiss, and/or quartzite

Typical profile

Ap - 0 to 9 inches: loamy fine sand
Bw - 9 to 25 inches: loamy fine sand
BC - 25 to 33 inches: fine sand
Cg - 33 to 60 inches: sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well 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: About 15 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Sodium adsorption ratio, maximum: 11.0
Available water supply, 0 to 60 inches: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: A
Ecological site: F144AY027MA - Moist Sandy Outwash
Hydric soil rating: No

Minor Components

Wareham

Percent of map unit: 5 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

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

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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

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

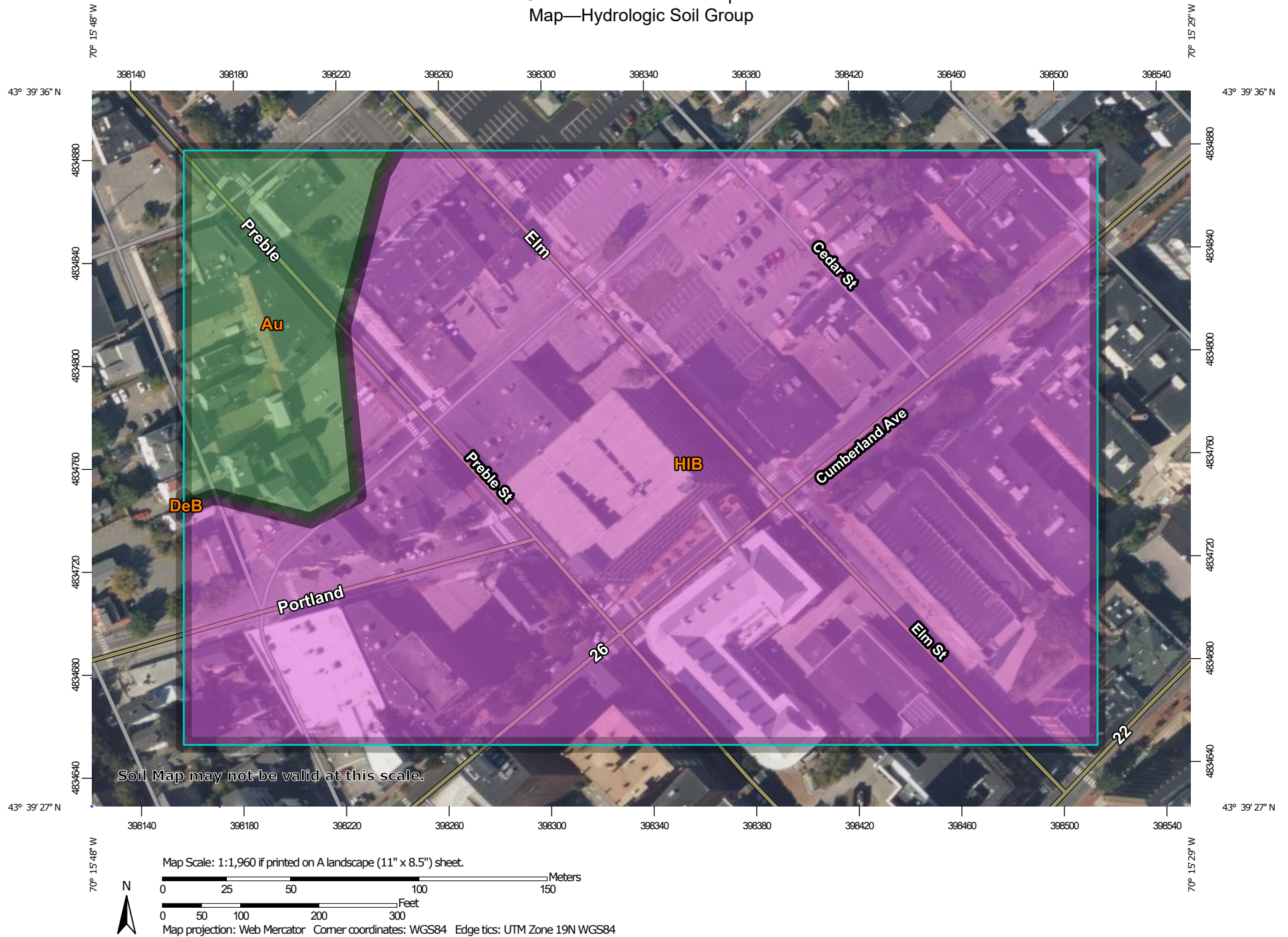
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Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Custom Soil Resource Report Map—Hydrologic Soil Group



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

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 21, Aug 26, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Au	Au Gres loamy sand	A/D	2.3	11.5%
DeB	Deerfield loamy fine sand, 3 to 8 percent slopes	A	0.0	0.0%
HIB	Hinckley loamy sand, 3 to 8 percent slopes	A	18.1	88.5%
Totals for Area of Interest			20.4	100.0%

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

References

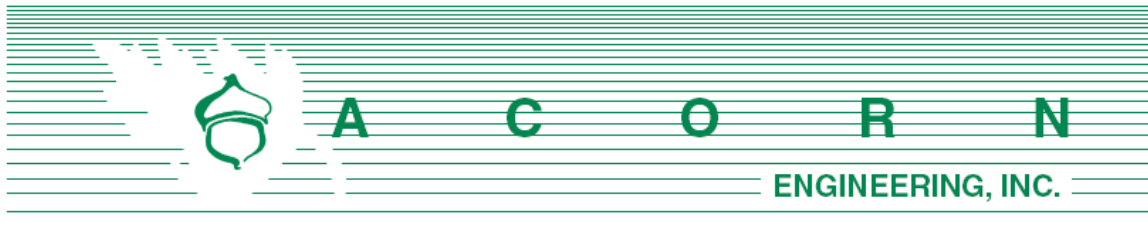
- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf



K. EROSION & SEDIMENTATION **CONTROL REPORT**

Prepared For:

**60 Elm Street LLC
511 Congress Street. Floor 6
Portland, Maine 04101**

Prepared By:

**Acorn Engineering, Inc.
PO Box 3372
Portland, Maine 04104**



February 2025

INTRODUCTION

Acorn Engineering Inc. has been retained by 60 Elm Street LLC, to provide civil engineering services for the proposed development at 61 Preble Street in Portland, Maine. The property consists of approximately 0.60 acres of land to be transformed into a 9-10-story building primarily for residential use with retail and restaurant space on the first floor. The project will reside at Map, Book Lot (033 M001001, 033 M012001) whose lot line will be adjusted to encompass the entire development.

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 Preble Street, Oxford Street, and Elm Street. A boundary plan has been prepared by Owen Haskell Inc., dated December 8th, 2022, last revised March 2nd, 2024.

The applicable zoning districts are B3 Downtown Business and is within the Bayside Height Overlay Zone.

The site currently consists of a 0.60-acre parcel with approximately 96% impervious cover, between the existing parking lot and building on site. Currently the lot has slopes ranging up to 9% with the primary drainage point being the Preble Street separated sewer. Some of the runoff enters the sewer system.

The site is currently developed and does not contain or propose onsite wastewater. Proposed stormwater management features on site are to be lined and will not be infiltration systems. Please refer to the Stormwater Management Report for and plan details for more information on the proposed systems.

It is our understanding that the site is not located within any protected natural resources or within the watershed of an urban impaired stream. Therefore, per City standards this document intends to comply with the Basic standards pursuant to Maine DEP Chapter 500 Stormwater Management Rules.

1.1 Existing Soils

Onsite soil information derived from the following resources:

- Soil Conservation Service Medium Intensity Soil Survey for Cumberland County
- United States Department of Agriculture Web Soil Survey



- Geotechnical Report prepared by Summit Geoengineering Services, dated 10/22/24

Summit Geoengineering Services (SGS) conducted a geotechnical investigation for the site concluded on October 22nd, 2024. SGS's scope of work consisted of the observations of six soil borings, one observation well, laboratory testing, and the preparation of the attached geotechnical report summarizing their findings. Please refer to the geotechnical report prepared by Summit Geoengineering services analysis and site recommendations. As addressed in SGS's report, an environmental assessment was performed by TRC companies.

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
Au Gres Loamy Sand	0.15	0.15
Deerfield Loamy Fine Sand	0.20	0.20
Hinckley loamy Sand	0.17	0.17

The soil "K" value for the soil, listed above, shows a low susceptibility to erosion. The site's susceptibility to erosion is from the Soil Conservation Service Medium Intensity Soil Survey for Cumberland County. Although the soil "K" value shows a low 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.

1.2 Existing Erosion Problems

There are no signs of erosion.

1.3 Critical Areas

Critical areas on site that may require special attention during construction would be the existing urban fill to be managed on site, with some export.

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 filter fabric (woven or non-woven) shall be placed below the aggregate 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 Preble, Oxford, and Elm 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.
- 2.1.6 During demolition, 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 $\frac{1}{2}$ 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 Oxford 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

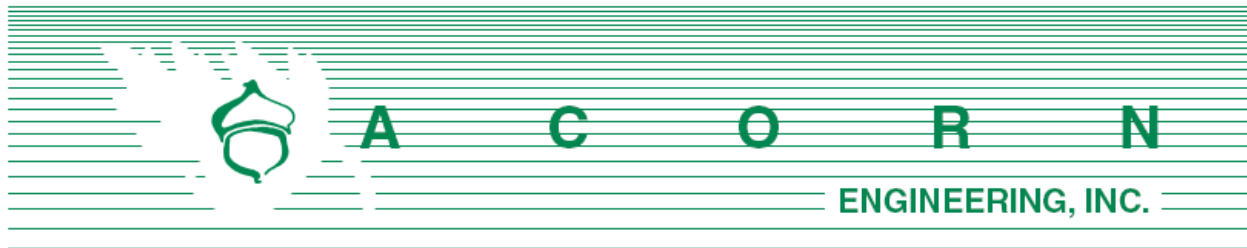
Mulching

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.





Chief Chad Johnston
City of Portland Fire Department
380 Congress St.
Portland, ME 04101

February 13, 2025

Subject: 61 Preble Street Redevelopment– Fire Department Checklist
Section L of Application

On behalf of 60 Elm Street, LLC, the design team is pleased to respond to the Portland Fire Department Site Review Checklist.

1. Name, address, telephone number of applicant

60 Elm Street, LLC
188 State Street, 3rd Floor
Portland, Maine 04101
(207) 939-5432

2. Name, address, telephone number of architect

Market Square Architecture
104 Congress Street, #203
Portsmouth, NH 03801
(603) 294-9547

3. Proposed uses of any structures [NFPA and IBC classification]

IBC Uses:

- Assembly (A-3)
- Business (B)
- Mercantile (M)
- Residential (R-2)

NFPA uses:

- Assembly
- Residential (Apartment Building)
- Mercantile
- Business



4. Square footage of all structures, including decks [total and per story]

Proposed Building		
Ground	11,400	sf
2 nd Floor	14,880	sf
3 rd – 10 th Floor	18,180	sf
Total	171,720	sf

5. Elevation of all structures

The proposed building height is 104.9' per Portland Planning Code (measured from average grade to top of roof beams), and 106'-0" per IBC (measured from average grade to average height of the highest roof surface).

6. Proposed fire protection of all structures

The proposed project will be of Type I-B non-combustible construction. This project will be full sprinklered per NFPA 13. The primary structural frame, exterior bearing walls, and floors will have a 2-hr fire resistance rating. The roof will have a 1-hr fire resistance rating.

The building will be serviced by a 10" sprinkler service with additional protection per code. 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

An existing hydrant is located along Oxford Street, at the corner of Elm and Oxford Street, in front of the main entrance. No new hydrants are proposed as part of this project. 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

The redevelopment is anticipated to be serviced by the existing water main within Preble Street. A 10" fire line, 6" domestic line, and 2" domestic line will serve the proposed development. The building is expected to have internal sprinkler risers and a Fire Department pump connection.

9. Access to all structures [min. 2 sides]

Access to the structure is provided directly on the public right-of-way along Preble, Oxford, and Elm Streets.



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 project site is located in a densely developed area and is surrounded by three public streets. The following pavement street width is currently available:

- Preble Street: 38.4 feet wide and 18.2 feet wide between parking stall and edge of pavement.
- Oxford Street: 31.5 feet and 24.5 feet wide between parking stall and edge of pavement.
- Elm Street: 30.6 feet and 11.6 feet wide between the bike lane and edge of pavement.

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: Not applicable

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: The building is accessible from at least 3 sides.

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 (all 3 streets).

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: The proposed elevators will meet this requirement.

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, P.E.
Project Manager
Acorn Engineering, Inc.



M. Calculation of Wastewater Flowrate

The proposed project will include the redevelopment of a site that is currently occupied by an office and commercial use building. The redevelopment proposes transforming this lot into a mixed-use 10-story building primarily for residential use with retail and restaurant-space on the first floor. 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
<i>Existing - Commercial Use Building</i>			
Office / Commercial Space:	unknown	unknown	1,288*
<i>Proposed</i>			
Eating Place, 2 meals	50 seats & 8 employees	20 gpd per seat plus 12 gpd per employee	1,096
Studio	63	120	7,560
1-bedroom	138	120	16,560
2-bedroom	16	180	2,880
Total Existing			1,288
Total Proposed			28,096
Net Change			26,808
Values based on STATE OF MAINE: SUBSURFACE WASTEWATER DISPOSAL RULES, most recent edition			
*Existing water usage represents the average water used based on the data obtained from owners' Portland Water district bills for 2023 and 2024.			



CITY OF PORTLAND WASTEWATER CAPACITY APPLICATION

Portland Dept. of Public Works -
Water Resources
212 Canco Road
Portland, Maine 04103



Bradley Roland, P.E.
Water Resources Division
Department of Public Works
212 Canco Road
Portland, ME 04103

Date: 2/7/25

1. Please, Submit Utility, Site, and Locus Plans.

Site Address: 61 Preble Street, Portland, Maine 04101

Proposed Use: 10-story Mixed use building; Chart Block Lot Number: 33-M-001001, 012001
1 Retail/Commercial, 217 Residential

Previous Use: Existing 2- Story commercial building and surface parking lot

Existing Sanitary Flows: 1,288 GPD

Existing Process Flows: - GPD

Description and location of City sewer that is to
receive the proposed building sewer lateral.

Proposed doghouse manhole within Oxford Street

for new 10" sewer lateral to connect to the existing 12" within Oxford Street.

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: Zach Powell Phone: 207-756-8083

Owner/Developer Name: 60 Elm St., LLC

Owner/Developer Address: 188 State Street, Portland, ME 04101

Phone: 207-939-5432

Fax: _____ E-mail: mbarton@reveler.com

Engineering Consultant Name: Acorn Engineering Inc.

Engineering Consultant Address: 16 Middle Street, Suite 302, Portland, ME

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: 28,096 GPD

Peaking Factor/ Peak Times: _____

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)

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:	TBD
Size of External Grease Interceptor:	750 gallon
Retention Time:	TBD
Peaking Factor/ Peak Times:	TBD

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:	_____	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.

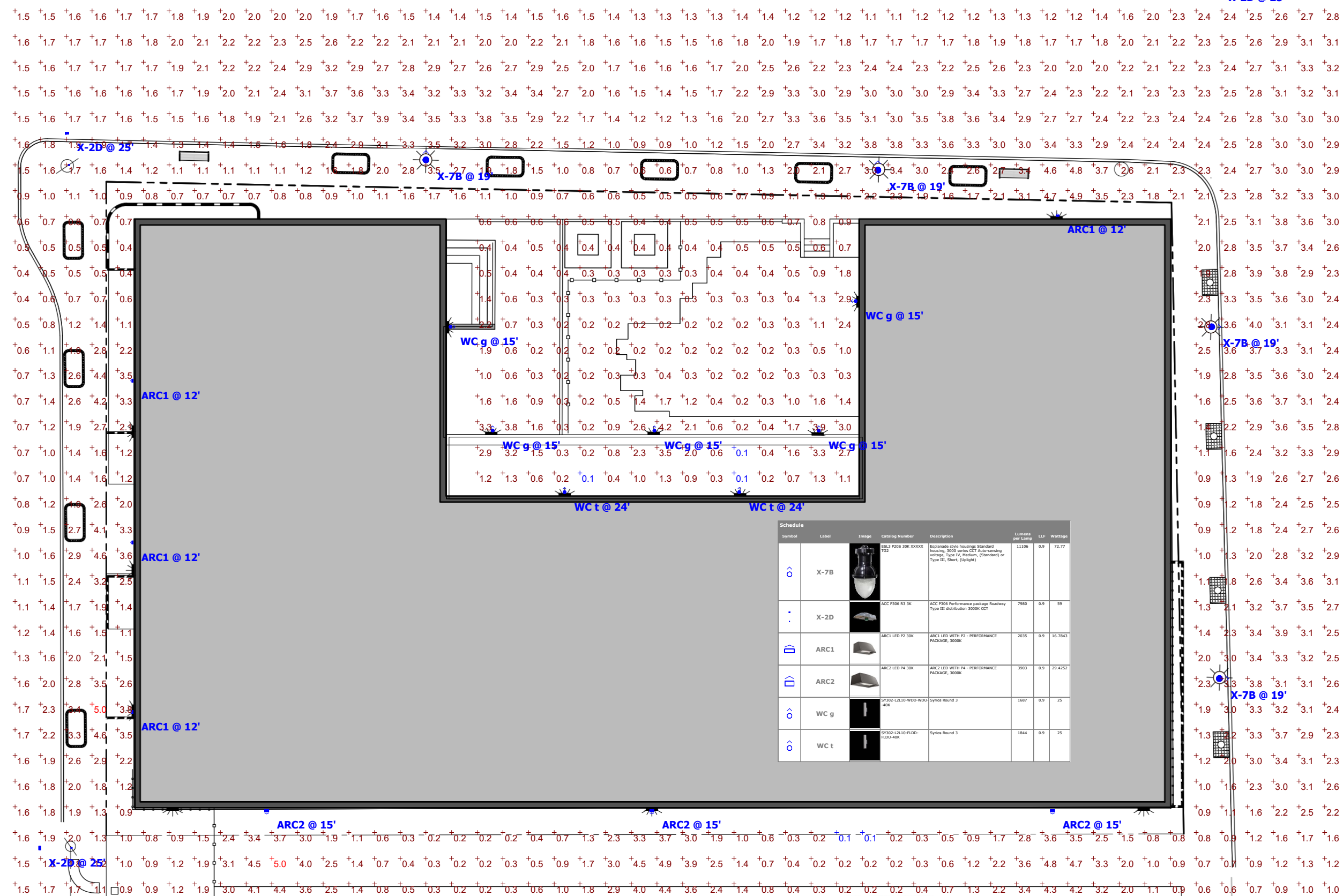
Note: Please submit detailed calculations showing the derivation of your design flows, either in the space provided, or attached, as a separate sheet.

N. Lighting

The proposed site lighting is to be in accordance with the City's Technical Manual. As such, the Peninsula "medium street" decorative light fixtures are proposed along the Oxford Street frontage. Please refer to the photometric plan prepared by Dry Landscape Architecture LLC. Cut sheets for the proposed site lighting are forthcoming and will be provided when available.



C:\temp\dry\040103\040103.dwg 2/25/2025 2:04:10 PM 2/25/2025



Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone	+	1.9 fc	5.0 fc	0.1 fc	50.0:1	19.0:1

Schedule	Symbol	Label	Image	Catalog Number	Description	Lumens per Lamp	LPF	Wattage
	⊖	X-7B		ESL3 P205 30K XXXXX T12	Explanade style housing Standard housing, 3000 series CCT Auto-sensing sensor, Type III, Medium, (Standard) or Type III, Short, (slange)	11106	0.9	72.77
	·	X-2D		ACC P306 R3 3K	ACC P306 Performance package Roadway Type III distributor, 3000K CCT	7980	0.9	59
	⌊	ARC1		ARC1 LED P2 30K	ARC1 LED WITH P2 - PERFORMANCE PACKAGE, 3000K	2035	0.9	16.7843
	⌊	ARC2		ARC2 LED P4 30K	ARC2 LED WITH P4 - PERFORMANCE PACKAGE, 3000K	3983	0.9	29.4252
	⊖	WC g		SYNOD-L2L10-WD-WDU-48K	Synod Round 3	1687	0.9	25
	⊖	WC t		SYNOD-L2L10-FLED-TLUD-48K	Synod Round 3	1844	0.9	25

- 12.3. GENERAL STANDARDS
Outdoor lighting standards listed below apply to all new developments.
- Uniformity: As measured in foot candles at grade, maximum to minimum illumination levels shall not exceed a ratio of twenty (20) to one (1).
 - Illumination Levels: Minimum, Maximum, and Average illumination levels for areas intended to be lighted, as measured at grade, shall be:
- | | |
|---------|------------------------|
| Minimum | 0.2 foot candles (fc) |
| Maximum | 5.0 foot candles (fc) |
| Average | 1.25 foot candles (fc) |

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.

Prepared For:

60 ELM STREET
APARTMENTS,LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:

Dry landscape architecture, l.l.c
31 miller ave.
biddeford, me 04005

Date:

FEBRUARY 3, 2025

Issued For:

PLANNING BOARD WORKSOP

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Title:

LIGHTING PLAN

GI PREBLE STREET
REDEVELOPMENT
Portland ME 04103

Revisions:

North:

Sheet No.:

L3

Scale: 1" = 10'-0"

61 Preble Design Narrative

Zone: B3 Downtown Business Zone

Bayside Height Overlay Map: Intermediate Urban Height District (105')

Downtown View Corridor Protection: N/A

Pedestrian Activity District: N/A

Introduction & Project Summary

The project team proposes to develop a 10-story mixed-use residential building at 61 Preble Street in the Bayside district. The project site is bounded by Preble, Oxford, and Elm Streets on three sides, and the Portland Public Market Parking Garage on the remaining side. The ground floor will consist of a 2000 square foot commercial space at the corner of Preble and Oxford, and a primary residential lobby and leasing office at the corner of Elm and Oxford. A secondary residential lobby, including residential bike storage and back-of-house uses will be located mid-block on Preble Street. This portion of the building includes an interior trash room, with both internal and street access along Preble Street. A residential egress stair with recessed entry will be located mid-block on Elm Street. Levels 2 – 10 will be dedicated to residential units and resident amenity space. The project proposes a U-shaped footprint, with an outdoor courtyard fronting on Oxford Street. The courtyard will provide outdoor space serving building residents and commercial space. A second story patio will also open onto this space, providing outdoor access for residents. Parking for residents will be provided in the adjacent parking garage.

Relationship to the Pedestrian Environment

The proposed project is intended to significantly improve the site's relationship to the pedestrian environment. The project team has strived to locate active interior uses along street facing facades to the greatest extent feasible. Facades will feature large storefront openings at programmatically appropriate locations, and multiple points of access to the various uses. Storefront will have a black anodized finish, providing both durability and a contemporary expression. High quality cladding materials such as brick and precast concrete will provide both durability and texture to the pedestrian environment while nodding to the historical use of these materials in the bayside district and specifically on this site. Brick patterns and precast concrete elements will provide visual interest at the pedestrian scale and make specific reference to the existing building currently at this location. All points of public access to the building will be fully accessible per the standards of the ADA.

A commercial space is to be located at the corner of Preble and Oxford Streets, with points of access on both streets as well as direct access to the Oxford Street courtyard. Ground floor facades will be generously glazed on three sides with large expanses of storefront window. Points of entry to this space will have canopies, providing pedestrian comfort in inclement weather as well as wayfinding clarity in the streetscape.



The primary residential lobby and leasing area will be located at the corner of Oxford and Elm Streets. This space will feature storefront glazing facing both streets and the courtyard. A canopy will denote the residential entrance location. Residential lobby and gathering functions are programmed adjacent to the glazing, further activating the street frontage.

The courtyard, located between the commercial and residential wings, will serve both uses and provide visual interest and streetside activity along Oxford Street. All exterior areas will be accessible from within the building, ensuring access to all users.

A secondary residential lobby located mid-block on Preble Street will further enhance the streetscape in this neighborhood. Featuring a fully glazed, recessed entry, this point of access will see foot traffic from building residents coming from the Preble Street garage access. Bicycle storage serving the building residents will be located between the lobby and commercial space. Storefront glazing along Preble Street will provide both a sense of security for bike storage users and visual interest for streetside passers-by. The design team has taken care to locate mechanical and service spaces away from the street facing facades to the greatest extent possible, and to locate the building's trash room as far from points of public access as feasible.

Due to the significant change in grade between Oxford Street and the parking garage, storefront openings and active interior uses are not feasible in the street fronting areas closer to the garage. At these areas, masonry recesses will be employed to break up expanses of wall and to provide articulation and depth to the façade. We also propose planting areas at the base of the building in these locations so that landscape elements can soften the pedestrian experience and provide visual interest.

Pedestrian Activities District and PAD encouragement areas

This project does not fall within the PAD or PAD encouragement areas.

Relationship to Existing Development

The proposed project will draw on Portland's rich architectural history, expressed through contemporary forms and materials, to provide a handsome and timely project that sits comfortably within the existing fabric of Portland's Downtown district and improves the existing built environment at the project location.

Street Walls and Setbacks:

The existing lot currently features an at-grade parking lot for approximately half of the project area. 61 Preble adheres to the setback requirements for this lot, providing a well-defined street wall facing all three frontages, thereby significantly improving the street wall definition on this block. The building complies with the maximum setback requirement, and proposed streetscape improvements will provide an 11' wide sidewalk with ample space for pedestrian circulation and streetscape amenities. The building will have a well-defined presence at all corners, anchoring the structure to the site and providing clear boundaries at the intersections. Architectural features

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1 Music Circle North, Suite 311, Nashville, TN 37203
(603) 501-0202



including glazing and cladding variations on the levels above will emphasize these corners and reinforce this presence.

Open Space:

The courtyard on Oxford Street will provide mid-block interest and relief, inserting an inviting open space along this corridor. While the street wall steps back at this location, it is replaced with an attractively landscaped area, activated by the adjacent programming. This area will feature usable patio space at a variety of levels resulting in a complex layering of forms and uses.

Building Form, Scale, and Massing:

As part of the Intermediate Urban Height District, the proposed project complies with the City of Portland's 105-foot height limit for this lot. At ten stories and approximately 104', this project will be taller than the immediate context yet comfortably sized as a Downtown building. Downtown Portland features a number of buildings this height and taller, making a project of this scale appropriately sized for the area. The adjacent 7-story parking structure further blends the scale of this development into the existing urban fabric. Future development in the Bayside district will further reinforce this trend, with many adjacent lots zoned for similar heights.

By employing a U-shaped footprint, the project's longest public frontage along Oxford Street will be subdivided into three sections: two wings of the building and the courtyard between. At the street level, this has the perceived effect of two separate buildings, breaking down the block into smaller sections as is typical of the scale of development in Portland. As viewed from a distance, the side of the building (which faces smaller-scale development) will be perceived as less massive.

Building Façade Proportion and Composition:

While contemporary in design, the proposed project deploys a classical organizing principle: a clearly defined base, middle, and top. Levels 1 and 2 will feature a brick masonry façade, providing a well-defined base while also referencing the existing two-story brick structure that currently residing on site. Brick masonry detailing will provide texture and interest at the human scale, as is appropriate for street level design. In the middle section, this project is characterized by well-proportioned material changes to further break up the mass of each façade. By transitioning between fields of earth tone cladding with gray panel features and larger glazing, the façade is broken into more slender volumes, enhancing the proportions of the structure. The top story of the building features dark gray metal panel throughout, differentiating the top of the building from other stories and providing another scaling element. Accent bands and a deep cornice cap the building, providing shadow lines, depth, and visual interest when viewed both from the sidewalk and from a distance. At the two primary corners of the building glazing sizes are increased to provide additional visual interest at these notable locations.

Pedestrian Circulation and Building Entrances:

As noted above, the proposed project deploys building entrances in a number of locations, creating a dynamic circulation program that enhances the pedestrian environment. Residential lobbies are

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located in both ground floor wings, giving building users multiple ways to engage the street. Additionally, an exit stairway with recessed entry along Elm Street provides another location where building residents will exit the structure. The commercial space features entrances on both Preble and Oxford Streets. And both the main residential lobby and the commercial space will connect directly to the courtyard, adding yet another point of access to the project.

Parking:

The project proposes no new structured or surface off-street parking. Parking for the project will be provided at the adjacent Portland Public Market parking garage.

Increased Setback Beyond Street Build-to Line:

As noted above, the project proposes a mid-block setback along Oxford Street to create a landscaped courtyard serving the building. This courtyard will provide outdoor space that serves the commercial tenant, the residential lobby, and residential amenity spaces on the second floor of the building. This space will enhance the pedestrian experience, creating outdoor seating areas to activate the street frontage. From a formal perspective, this courtyard also affords improved massing of the building, resulting in more slender proportions. From a programmatic perspective, the courtyard separates the commercial from residential uses while cleverly tying them together in a shared central space.

Rooftop Appurtenances

The proposed project will have one stairway penthouse and two elevator overruns at the rooftop level. Exterior cladding of a finish similar to the primary building exterior will be deployed so that these elements are perceived as a part of the greater whole. Rooftop equipment will consist of common and commercial area HVAC and life safety ventilation equipment required for high rise construction. The proposed design features parapet walls extending at least 4 feet above the roof surface, significantly screening most equipment from view.

Shadow impact on open space

Due to the project's location, there are no public plazas, parks, or publicly accessible open spaces that will be affected by shadows from the proposed project.

Wind impacts

Introducing a taller structure to this site is expected to somewhat increase wind impacts in the area. However, we expect that adjacency to the existing parking structure will help buffer the effects to a certain degree, and future development of taller structures will also have a positive impact. Additionally, several strategies have been deployed to mitigate this outcome. Most importantly, the U-shaped footprint of the building will create a significant recess along Oxford Street that will help temper wind speeds along this façade. Additionally, recessed entries and canopies at the primary points of access are expected to help reduce the impact of wind by disrupting its path.



Setbacks from existing structures

The only adjacent existing structure is the Public Market Parking Garage. The proposed project will be situated more than 5 feet from the shared property line and sit over 15 feet from the structure itself. Snow loading, building structure, and means of egress at the garage will not be affected by the proposed development. The project team has also designed the façade facing the garage per the fire and life safety standards of the Maine State Building Code to ensure that this adjacency poses no reasonable threat to the users of either building.

Building Tops

Located within the B-3 Zone and Bayside Height Overlay Zone, the project does not exceed the 105' height limit established for this lot. At less than 150 feet in height the project is therefore not governed by this requirements of this section. However, as discussed above, the proposed project has deployed many of the strategies recommended in this section of the Downtown Design Guidelines.

P. Utilities

The proposed project will include installation of multiple utility services to the proposed building.

Water:

There is an existing 16" water main within Preble Street, 12" water main within Oxford Street, and an 8" water main within Elm Street. It is proposed to connect into the existing 16" water main within Preble Street with three services to feed the proposed building. The connections include a 2" and 6" domestic service, and a 10" fire service line.

Sewer:

An existing 12" sewer exists within Oxford Street which is furthermore routed to the existing 18" Sewer within Preble Street. It is proposed to connect a new 10" PVC lateral via a doghouse manhole over the existing 12" sewer main within Oxford Street. A backflow preventer is proposed at the property line before connecting into the existing manhole.

Stormwater:

Stormwater Treatment and storage is accomplished through the use of a subsurface stormwater detention system. As part of the West Bayside Master Development Plan, the site is required to store stormwater and release stormwater at an attenuated rate to not exceed maximum permissible outflow rate of 0.1 cfs into the city system during a design storm of 1" rainfall over the developed impervious area draining to the system.

An MS4 extension is proposed within Oxford Street to facilitate routing stormwater flows from the Subsurface system onsite to the existing separated storm drain within Preble Street. The extension proposed to extend approximately 75' within Oxford Street to a proposed Drainage Manhole, which will intercept the flows from the onsite detention system. Please refer to the Grading & Drainage plans as well as the Stormwater Management Report for more information.

Electric/Communications:

Currently it is proposed to drop 3-phase underground from the Oxford and Elm Street intersection to further serve two padmount transformers on-site, as shown on the utility plan. The existing overhead single-phase and communications lines along the property frontage are proposed to be relocated onto the northwest side of Oxford Street, as noted on the plan. Depending on the final building design and proposed loads to be generated, this design may change. Potential improvements and temporary routing to the existing network and the proposed, are to be coordinated with the appropriate utility companies.



Gas:

It is our understanding that a 2" gas main exists within Elm, Oxford, and Preble Street. It is proposed to connect a new gas line to the 2" gas main within Oxford Street and is proposed to serve the development. See 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. Responses from the utility companies are forthcoming.



Q. Construction Management Plan

Project Address: 61 Preble St (formerly known as 60 Elm St), Portland Maine, 04101

Project Description:

The project proposes to redevelop the current parcel consisting of a two-story building and a surface level parking lot into a proposed 10-story building. The building will contain 217 residential units with retail and restaurant space on the first floor. The project will be providing a paved travel way for internal circulation, reduce overall impervious area on site, in addition to including stormwater management features to reduce stormwater runoff.

Project Team Summary:

<u>Owner:</u>	60 Elm Street, LLC
<u>General Contractor:</u>	Penobscot General Contractors
<u>Civil & Environmental Engineer:</u>	Acorn Engineering, Inc.
<u>Architect:</u>	Market Square Architecture
<u>Geotechnical Engineer:</u>	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 14-11 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. In addition to the best practices set forth in the Inclusionary Zoning Guidelines for Developers of rental housing.

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:

<u>Project Start Date:</u>	Spring 2026
<u>Project End Date:</u>	Fall 2027

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 vehicles 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 Lancaster and Oxford 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 the 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 redevelopment:
 - Gravel & Stone – 2,000 CY Earthwork subcontractor(s) pit to project site.



- Hot Mix Asphalt – 50 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 approved 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 Plan (C-10) and Architectural Plans.

A trash room is proposed within the building with access from Preble Street. A private hauler will be contracted for removal.



Transportation Overview

Introduction

As part of the Major Site Plan application, the following overview and Trip analysis was completed for the proposed redevelopment of 61 Preble Street. The project proposes 217 Residential units as well as ground floor commercial space which varies from the previously approved Master Development Plan (MDP) and Traffic Movement Permit (TMP). This document, along with the other application documents, outline the changes to each component.

The project is less than 500 feet from the METRO parking garage and Pulse Bus stop. The project does not propose parking on site due to the neighboring Public Market garage on Cumberland Avenue which is owned by the Applicant. The existing site contains a number of existing commercial uses within the 2-story building which are outlined in the attached trip generation/TMP update. Approximately half of the site is comprised of parking lots. There are three existing curb cuts on site, all of which will be closed.

Oxford Street Improvements/Considerations

As part of the West Bayside MDP, the project is required to provide a study of a potential Oxford Street 2-way conversion prior to the occupancy of Phase 2. As part of the MDP Amendment being submitted concurrently with this application, it is proposed to designate the 61 Preble Street project as Phase 1B and the 196 Lancaster project as Phase 2. The proposed project submitted under this Site Plan application for Phase 1B, does contemplate a potential conversion of Oxford Street to 2-way. Should this occur in the future, it's anticipated that the on-street parking may be switched from the southerly side (as currently proposed as part of this Site Plan application) of the roadway to the northerly side. This is consistent with the Phase 1A - 89 Elm St. project (under construction as of 1/29/25), which will install a curb extension and on-street parking, along the northerly side of Oxford Street.

As part of this project, a curb extension is proposed at the corner of Oxford and Preble. This proposal results in a number of benefits including additional space to create ramping/detectable pads for pedestrians. This extension is proposed in tandem with a crosswalk to provide the fourth leg of a typical intersection crosswalk system. The proposed extension inherently reduces the travel distance across Preble Street for a pedestrian. With a single-lane, one-way travel lane in a downtown setting, this crossing represents a viable option with excellent sight lines for pedestrians who come across this desire line on a daily basis. The Applicant is proposing to provide this infrastructure improvement at their expense and would relocate drainage as needed to facilitate the bump-out, as shown in the plan set.

Pedestrian and Bicycle Facilities

The project will reconstruct approximately 455 linear feet of public sidewalk fronting the property. The redevelopment project will grant a public access easement along all frontages to facilitate a 5' wide furnishing zone with decorative lighting, benches, and bike racks, along with a minimum 6' wide pedestrian zone where feasible which further extends into the parcel. Consistent with the proposed streetscape approved during the MDP. In addition, a bike room with 88 spaces is provided within the building for residents.

Trip Generation and TMP update

Please refer to the enclosed report by VHB, the project's traffic engineer. The amendment to the TMP/MDP will result in a lower trip generation when compared to the original approvals.





To: City of Portland

Date: February 10, 2025

Memorandum

Project #: 55678.00

From: Jennifer Conley, PE, PTOE

Re: West Bayside Redevelopment
Transportation Materials

Introduction

Vanasse Hangen Brustlin, Inc. (VHB) has been requested to provide updated technical transportation data to support the updated Master Development Plan (MDP) for a proposed mixed-use development in the West Bayside neighborhood. The project will be constructed on multiple streets in the West Bayside neighborhood, including Preble Street, Elm Street, Lancaster Street, and Oxford Street.

The following memorandum outlines several key updates:

- › Overall changes to the MDP update
- › Traffic Movement Permit (TMP) for Phases 1a, 1b, and 2
- › Updates to TMP Phases
- › Site plan review requirements

Overview of Master Development Plan Changes

The following summarizes the approved development program, the proposed master development program and the net changes to the overall Master Development Plan:

Previous Development Program:

- › Multi-Family Housing – 603 Dwelling Units
- › Affordable Housing – 201 Dwelling Units
- › Commercial Space – 28,500 SF

Updated Master Development Program:

- › Multi-Family Housing – 603 Dwelling Units
- › Affordable Housing – 201 Dwelling Units
- › Commercial Space – 21,900 SF

Summary of Changes:

- › Housing Units: The number of multi-family and affordable housing units remains the same. This consistency maintains the initial goals of the project regarding residential development.
- › Commercial Space: The square footage allocated to commercial space has been reduced from 28,500 SF to 21,900 SF, a decrease of 6,600 square feet.

The update maintains a consistent ratio of proposed market rate and affordable housing units throughout its implementation, ensuring the total number of housing units is unchanged, regardless of any modifications or specific adjustments made to different phases of the development site.

This update ensures that the overall trip generation from the most recent MDP submission will not increase due to these changes.

Traffic Movement Permit (Phases 1a, 1b, and 2)

The development received a Traffic Movement Permit for Phases 1a, 1b, and 2. Table 1 outlines the program that was included in the TMP.

Table 1 **TMP Development Program**

Phase	TMP
Phase 1a – 89 Elm Street	
Affordable Housing	201 units
Restaurant	2,000 SF
Retail	4,000 SF
Phase 1b – 196 Lancaster Street	
Multi-Family Housing	130 units
Coffee Shop	2,000 SF
Restaurant	4,000 SF
Phase 2 – 60 Elm Street	
Multi-Family Housing	85 units
Retail	2,000 SF

Trip generation estimates for the TMP were based on the Institute of Transportation Engineers (ITE) publication, Trip Generation, 11th Edition. The ITE Trip Generation Manual categorizes various land uses and provides weekday daily, weekday morning peak hour, and weekday evening peak hour unadjusted vehicle trip generation estimates for each use. Trip generation estimates for the proposed uses were projected using data published in the ITE Trip Generation Manual based on the metrics and land use codes presented in Table 2.

Table 2 **Project Program and ITE Land Use Code**

Land Use	Size	Land Use Code	
Multi-family housing	215 units	221	Multifamily Housing (Mid-Rise)
Affordable housing	201 units	223	Affordable Housing
General retail	6,000 sf	822	Strip Retail Plaza (<40k)
Coffee shop	2,000 sf	936	Coffee/Donut Shop without drive through window
Restaurant	6,000 sf	932	High-Turnover (Sit-Down)

Source: ITE Trip Generation 11th Edition

Table 3 summarizes the trip-generation estimates from the TMP based on ITE Trip Generation Manual (11th Edition) methodologies described above. The trip-generation calculation worksheets are attached to this memorandum.

Table 3 TMP Overall Unadjusted Trips

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Phase 1a – 89 Elm Street						
Affordable Housing	29	72	101	54	38	92
Restaurant	10	9	19	11	7	18
Retail	8	6	14	18	18	36
Phase 1b – 196 Lancaster Street						
Multi-Family Housing	12	38	50	31	20	51
Coffee Shop	95	91	186	33	32	65
Restaurant	21	17	38	22	14	36
Phase 2 – 60 Elm Street						
Multi-Family Housing	8	25	33	20	13	33
<u>Retail</u>	<u>4</u>	<u>3</u>	<u>7</u>	<u>9</u>	<u>9</u>	<u>18</u>
Overall Total	187	261	448	198	151	349

TMP Updates

The following table summarizes the changes to the TMP development program. Commercial uses in Phase 1a are projected to decrease by 2,800 square feet. Phase 1b and Phase 2 are switching, making the new Phase 1b 60 Elm Street and the new Phase 2 196 Lancaster Street. Residential units are increased at 60 Elm Street by 132 units and decreased at 196 Lancaster Street by 7 units.

The additional units listed at 60 Elm Street above are being constructed on an adjacent parcel (62 Elm Street) that although identified in the TMP, was not associated with redevelopment at that time. As part of the update, the new program for 60 Elm Street is inclusive of the property addressed in deed as 62 Elm Street but will be addressed as 61 Preble Street as a part of this redevelopment. The deeds associated with the parcel at 61 Preble Street was part of the previously approved TMP application and no additional rights of way or site access driveways are proposed.

As a part of the TMP development program update, the existing uses located at 61 Preble Street will now be demolished:

- › 13,850 SF Medical Office
- › 6,400 SF Medical Office
- › 5,300 SF Outpatient Adult Day Care

Because redevelopment of this portion of the site was not contemplated at that time, the trips associated with these uses were not accounted for in the TMP.

Table 4 **TMP Development Program Updates**

Phase	TMP	Phase	TMP Development Program Update
Phase 1a – 89 Elm Street		Phase 1a – 89 Elm Street	
Affordable Housing	201 units	Affordable Housing	201 units
Restaurant	2,000 SF	Restaurant	1,600 SF
Retail	4,000 SF	Retail	1,600 SF
Phase 1b – 196 Lancaster Street		Phase 2 – 196 Lancaster Street	
Multi-Family Housing	130 units	Multi-Family Housing	123 units
Coffee Shop	2,000 SF	Coffee Shop	2,000 SF
Restaurant	4,000 SF	Restaurant	3,500 SF
Phase 2 – 60 Elm Street		Phase 1b – 61 Preble Street	
Multi-Family Housing	85 units	Multi-Family Housing	217 units
Retail	2,000 SF	Retail	2,000 SF
Medical Office	-	Medical Office	-25,550 SF

Trip Generation

Tables 5 and 6 summarize the trip-generation estimates for the updates with the TMP phases based on the same approved ITE Trip Generation Manual (11th Edition) methodologies described above and compared the permitted vs updated trip generation estimates and calculates a net change. The trip-generation calculation worksheets are attached to this memorandum.

Table 5 Updated TMP Total Unadjusted Trips

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Phase 1a – 89 Elm Street						
Affordable Housing	29	72	101	54	38	92
Restaurant	8	7	15	9	5	14
Retail	4	3	7	8	9	17
Phase 2 – 196 Lancaster Street						
Multi-Family Housing	12	38	50	29	19	48
Coffee Shop	95	91	186	33	32	65
Restaurant	18	16	34	19	13	32
Phase 1b – 61 Preble Street						
Multi-Family Housing	20	68	88	52	33	85
Retail	4	3	7	9	9	18
Medical Office	-63	-16	-79	-30	-70	-100
Overall Total	127	282	409	183	88	271

Table 6 Trip Generation Comparison

	AM Peak Hour TMP	AM Peak Hour TMP Update	AM Peak Hour Net Change	PM Peak Hour TMP	PM Peak Hour TMP Update	PM Peak Hour Net Change
Overall In	187	127	(-60)	198	183	(-15)
Overall Out	261	282	(+21)	151	88	(-63)
Overall Total	448	409	(-39)	349	271	(-78)

TMP Update Summary

Section 1: The proposed update to Phases 1a, 1b, and 2 are not anticipated to exceed the MaineDOT Traffic Movement Permit threshold of 100 additional peak hour trips and is not anticipated to need additional permitting. The proposed update is anticipated to generate a reduction of **-39 AM peak hour trips and -78 PM peak hour trips.**

Section 2: A crash analysis was conducted as part of the previous permitting process.

Section 3: No additional site access driveways are being proposed as part of this update.

Section 4: All deeds associated with these properties are part of the original approved TMP application.

Section 5: No additional public or private rights of way are being proposed.

Section 6: There are no major schedule changes to the development program.

Section 7: Because the redevelopment results in fewer trips, the conclusions of the Section 7: Traffic Impact Study remain valid and no further study is required.

Site Plan Review

The inclusion of 61 Preble Street does not require additional transportation analysis for site plan review beyond what has already been provided. As outlined above, the anticipated impact on surrounding street systems, public transit, access and circulation, or off-street parking will be consistent with the prior development, given that it is expected to generate a comparable volume of trips and adhere to established travel patterns.

Conclusions

In summary, the updated technical transportation data for the revised Master Development Plan (MDP) in the West Bayside neighborhood indicates that the planned modifications will have a minimal impact on traffic levels. The reduction in commercial space from 28,500 square feet to 21,900 square feet effectively lowers the vehicle trip generation for the MDP update.

The TMP redevelopment plan show a decrease of -39 vehicle trips during the AM peak hour and -78 vehicle trips during the PM peak hour, relative to the previously permitted development.

The project continues to meet the transportation related site plan review requirements.

TMP

Site Land Uses and Descriptions				AM PK HR OF ADJACENT STREET TRAFFIC												PM PK HR OF ADJACENT STREET TRAFFIC											
Code	Land Use	Size	Unit	directional dist.		average			regression		# trips		Entering	Exiting	directional dist.		average			regression		# trips		Entering	Exiting		
				% enter	% exit	# studies	Avg Rate	Std Dev.	Total by Avg	r ²	total by Eq'n	Method Chosen			Total Trips	% enter	% exit	# studies	Avg Rate	Std Dev.	Total by Avg	r ²	total by Eq'n			Method Chosen	Total Trips
Overall Trip Gen				23%	77%	30	0.37	0.09	80	0.91	83	Regression	83	19	64	61%	39%	31	0.39	0.08	84	0.91	84	Regression	84	51	33
221	Multifamily Housing (Mid-Rise)	215	Dwelling Units	29%	71%	7	0.50	0.39	101	0.73	91	Average	101	29	72	59%	41%	8	0.46	0.28	92	0.67	86	Average	92	54	38
936	Coffee/Donut Shop without Drive-Thru	2	1000 SF GFA	51%	49%	25	93.08	42.71	186	N/A	N/A	Average	186	95	91	50%	50%	16	32	12.64	65	N/A	N/A	Average	65	33	32
822	Strip Retail Plaza (<40k)	6	1000 SF GFA	60%	40%	5	2.36	0.94	14	0.57	21	Regression	21	12	8	50%	50%	25	6.59	2.94	40	0.56	54	Regression	54	27	27
932	High-Turnover (Sit-Down)	6	1000 SF GFA	55%	45%	37	9.57	11.61	57	N/A	N/A	Average	57	31	26	61%	39%	104	9.05	6.18	54	N/A	N/A	Average	54	33	21
89 Elm St Only Phase 1a				29%	71%								101	29	72	59%	41%							92	54	38	
932	High-Turnover (Sit-Down)	2	1000 SF GFA	55%	45%								19	10	9	61%	39%							18	11	7	
822	Strip Retail Plaza (<40k)	4	1000 SF GFA	60%	40%								14	8	6	50%	50%							36	18	18	
196 Lancaster Only Phase 1b				23%	77%								50	12	38	61%	39%							51	31	20	
221	Multifamily Housing (Mid-Rise)	130	Dwelling Units	51%	49%								186	95	91	50%	50%							65	33	32	
932	High-Turnover (Sit-Down)	4	1000 SF GFA	55%	45%								38	21	17	61%	39%							36	22	14	
60 Elm St Only Phase 2				23%	77%								33	8	25	61%	39%							33	20	13	
221	Multifamily Housing (Mid-Rise)	85	Dwelling Units	60%	40%								7	4	3	50%	50%							18	9	9	
Based on ITE 11th Edition				total entering exiting												total entering exiting											
				AM Peak Hour Total Site Trips:												PM Peak Hour Total Site Trips:											
				448 187 261												349 198 151											

UPDATE

Site Land Uses and Descriptions				AM PK HR OF ADJACENT STREET TRAFFIC										PM PK HR OF ADJACENT STREET TRAFFIC																	
Code	Land Use	Size	Unit	directional dist.		average			regression		# trips		Entering	Exiting	directional dist.		average			regression		# trips		Entering	Exiting						
				% enter	% exit	# studies	Avg Rate	Std Dev.	Total by Avg	r ²	total by Eq'n	Method Chosen			Total Trips	% enter	% exit	# studies	Avg Rate	Std Dev.	Total by Avg	r ²	total by Eq'n			Method Chosen	Total Trips				
Overall Trip Gen				23%	77%	30	0.37	0.09	126	0.91	138	Regression	138	32	106	61%	39%	31	0.39	0.08	133	0.91	133	Regression	133	81	52				
221	Multifamily Housing (Mid-Rise)	340	Dwelling Units	29%	71%	7	0.50	0.39	101	0.73	91	Average	101	29	72	59%	41%	8	0.46	0.28	92	0.67	86	Average	92	54	38				
936	Coffee/Donut Shop without Drive-Throu	2	1000 SF GFA	51%	49%	25	93.08	42.71	186	N/A	N/A	Average	186	95	91	50%	50%	16	32	12.64	65	N/A	N/A	Average	65	33	32				
822	Strip Retail Plaza (<40k)	3.6	1000 SF GFA	60%	40%	5	2.36	0.94	8	0.57	15	Regression	14	8	6	50%	50%	25	6.59	2.94	24	0.56	38	Regression	35	17	18				
932	High-Turnover (Sit-Down)	5.1	1000 SF GFA	55%	45%	37	9.57	11.61	49	N/A	N/A	Average	49	26	23	61%	39%	104	9.05	6.18	46	N/A	N/A	Average	46	28	18				
*720	Medical-Dental Office Building	25.55	1000 SF GFA	79%	21%	24	3.10	1.49	79	0.80	71	Average	79	63	16	30%	70%	30	3.93	1.86	100	0.77	101	Average	100	30	70				
89 Elm St Only Phase 1a				29%	71%								101	29	72	59%	41%							92	54	38					
223	Affordable Housing	201	Dwelling Units	55%	45%								15	8	7	61%	39%							14	9	5					
822	Strip Retail Plaza (<40k)	1.6	1000 SF GFA	60%	40%								7	4	3	50%	50%							16	8	9					
196 Lancaster Only Phase 2				23%	77%								50	12	38	61%	39%							48	29	19					
221	Multifamily Housing (Mid-Rise)	123	Dwelling Units	51%	49%								186	95	91	50%	50%							65	33	32					
936	Coffee/Donut Shop without Drive-Throu	2	1000 SF GFA	55%	45%								34	18	16	61%	39%							32	19	13					
932	High-Turnover (Sit-Down)	3.5	1000 SF GFA																												
61 Preble St Only Phase 1b				23%	77%								88	20	68	61%	39%							85	52	33					
221	Multifamily Housing (Mid-Rise)	217	Dwelling Units	60%	40%								7	4	3	50%	50%							18	9	9					
822	Strip Retail Plaza (<40k)	2	1000 SF GFA																												
*720	Medical-Dental Office Building	25.55	1000 SF GFA	79%	21%	24	3.10	1.49	79	0.80	71	Average	79	63	16	30%	70%	30	3.93	1.86	100	0.77	101	Average	100	30	70				
Based on ITE 11th Edition				total										entering		exiting		total										entering		exiting	
*Existing Uses taken as a trip generation credit				AM Peak Hour Total Site Trips:										409	127	282	PM Peak Hour Total Site Trips:										271	183	88		

Land Use: 221

Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing includes apartments and condominiums located in a building that has between four and 10 floors of living space. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways.

Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (mid-rise) (Land Use 226), and mid-rise residential with ground-floor commercial (Land Use 231) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.5 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, Montana, New Jersey, New York, Ontario (CAN), Oregon, Utah, and Virginia.

Source Numbers

168, 188, 204, 305, 306, 321, 818, 857, 862, 866, 901, 904, 910, 949, 951, 959, 963, 964, 966, 967, 969, 970, 1004, 1014, 1022, 1023, 1025, 1031, 1032, 1035, 1047, 1056, 1057, 1058, 1071, 1076

Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 11

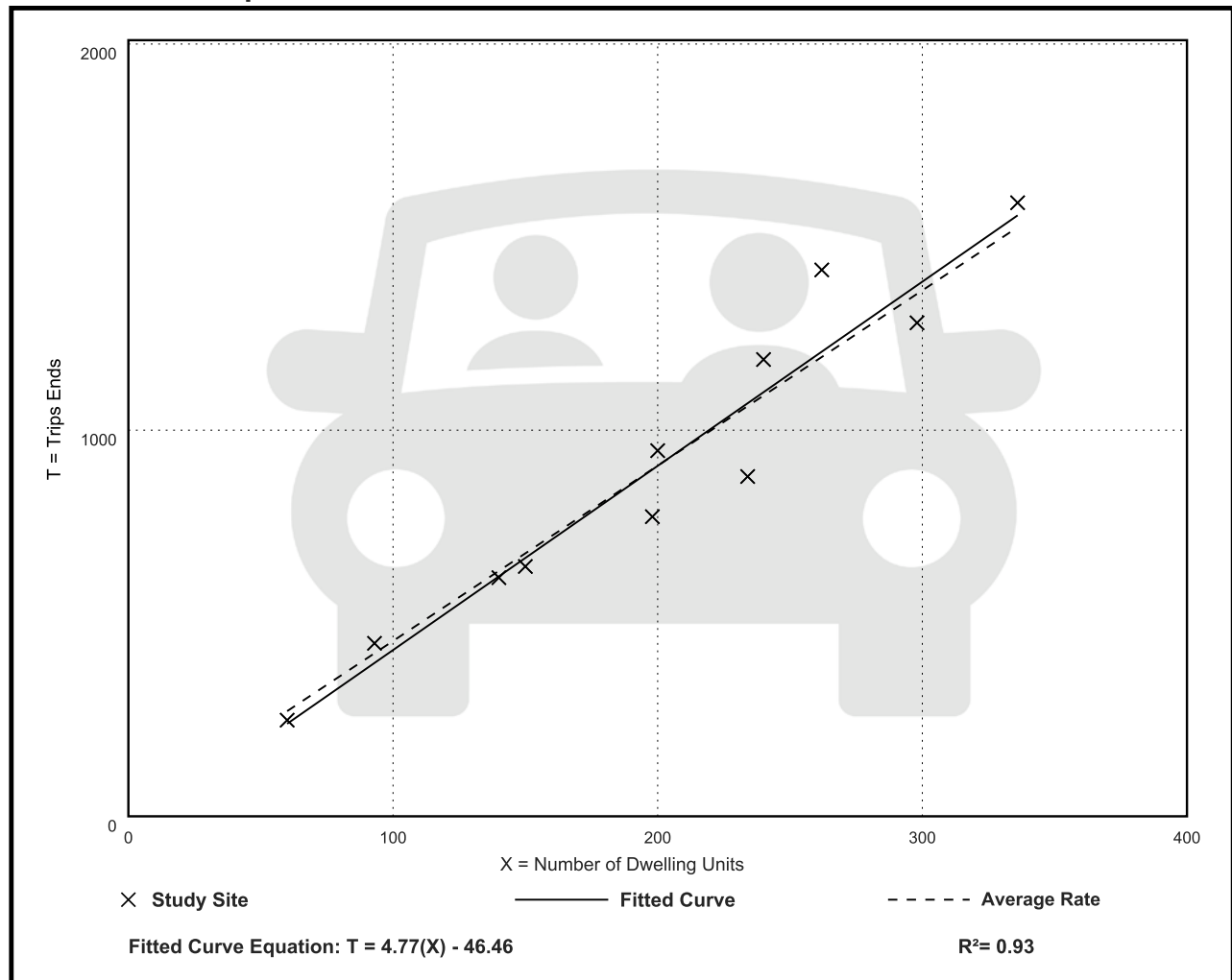
Avg. Num. of Dwelling Units: 201

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.54	3.76 - 5.40	0.51

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 30

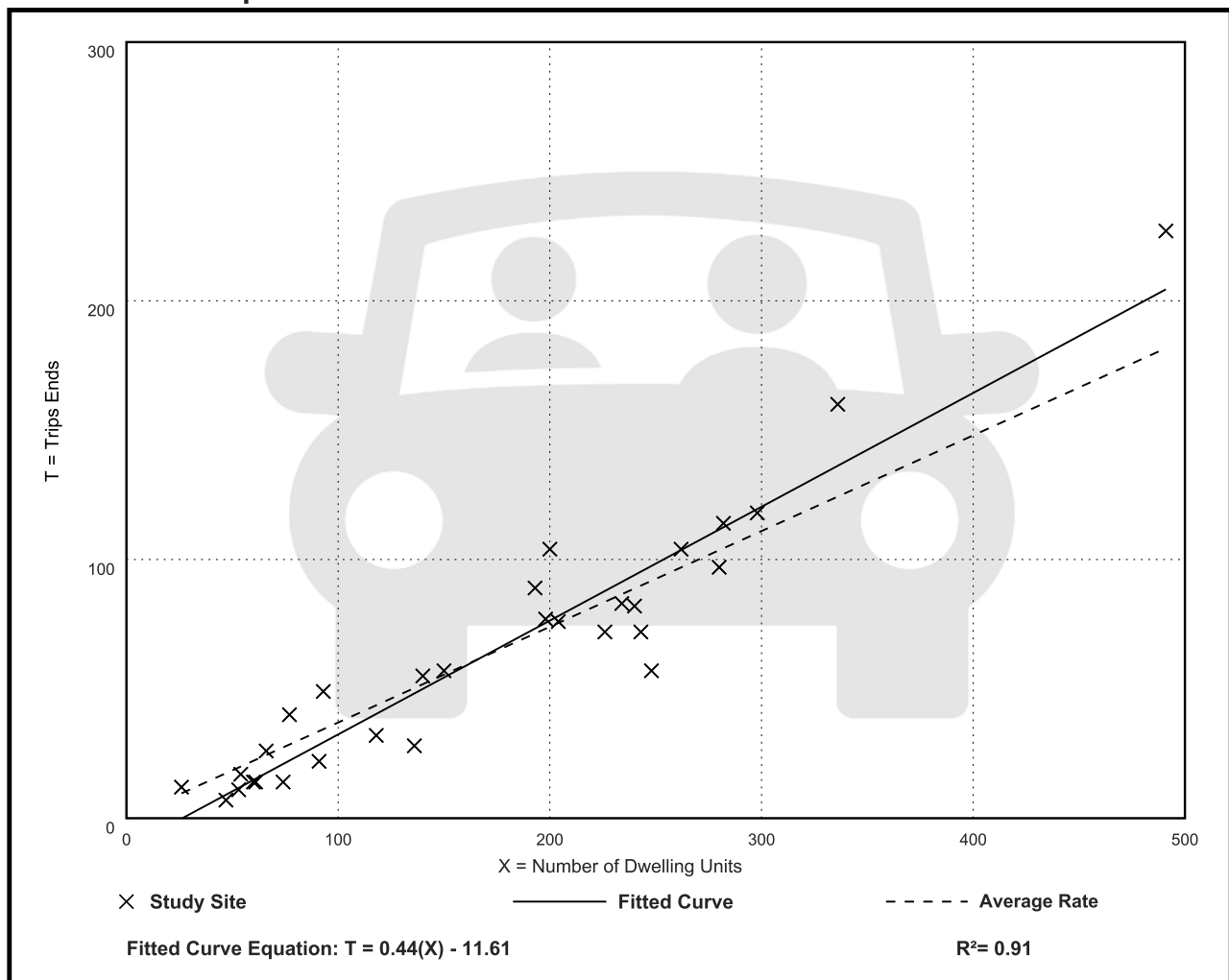
Avg. Num. of Dwelling Units: 173

Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 31

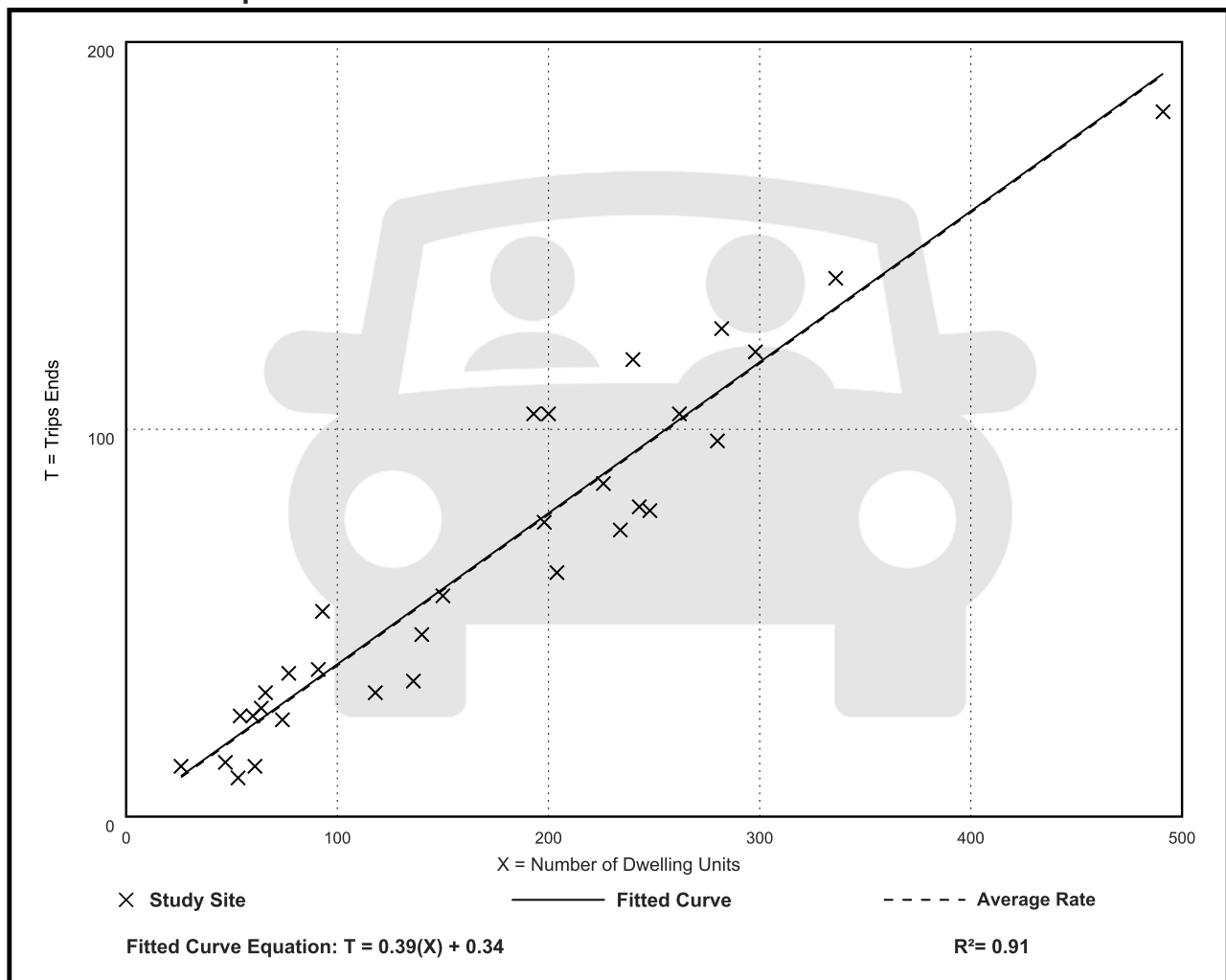
Avg. Num. of Dwelling Units: 169

Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 23

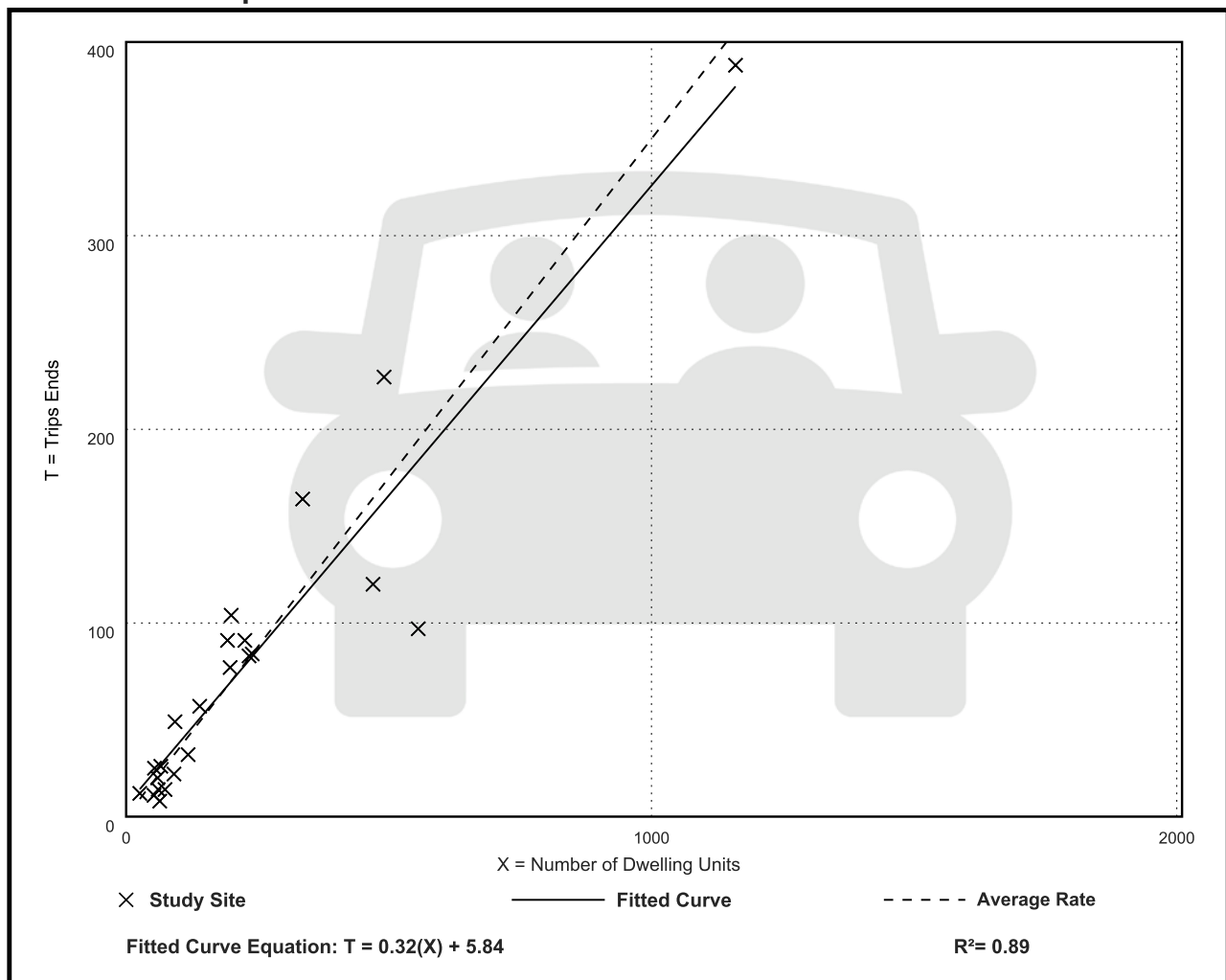
Avg. Num. of Dwelling Units: 226

Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.35	0.13 - 0.53	0.11

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 22

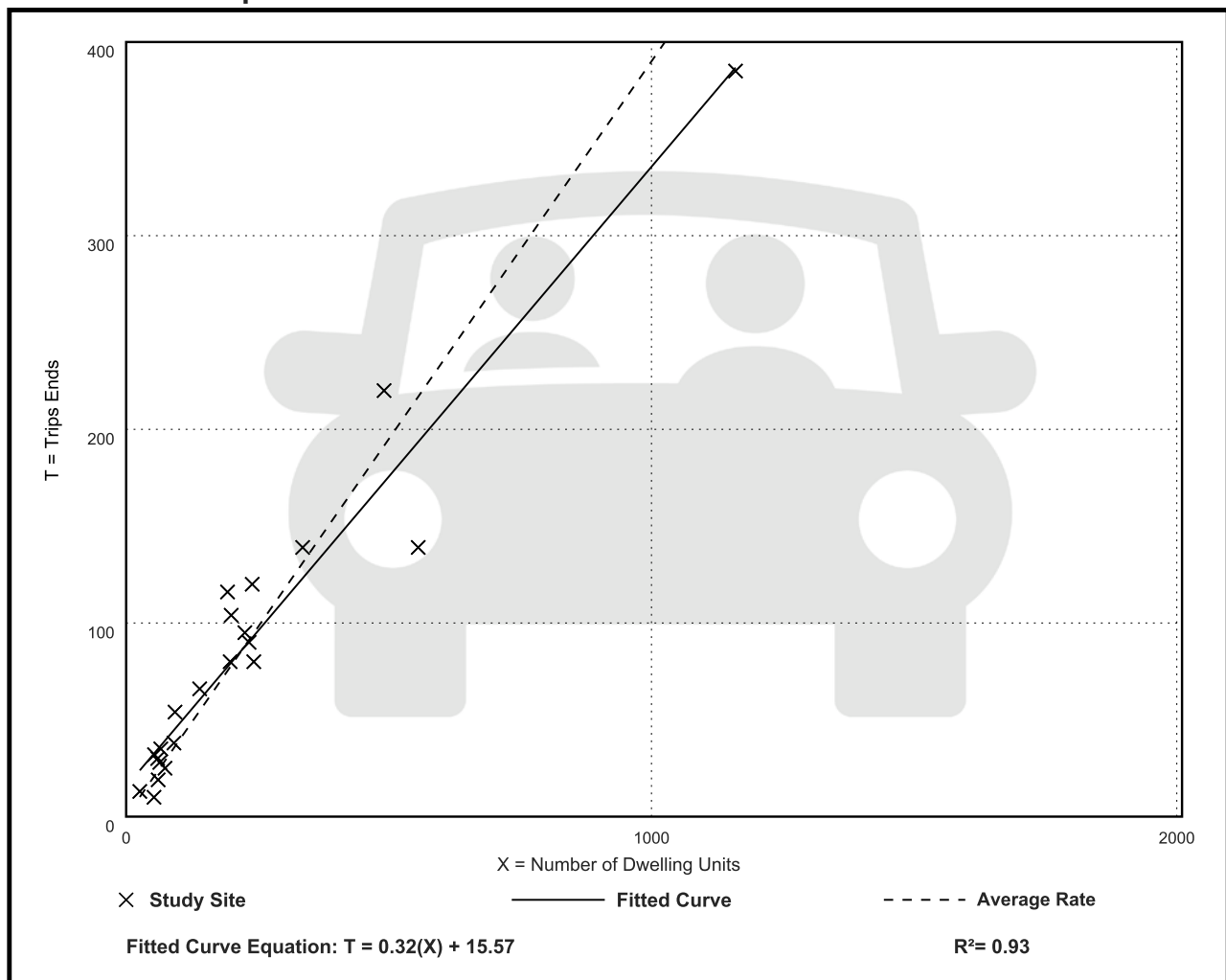
Avg. Num. of Dwelling Units: 221

Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.60	0.10

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Saturday

Setting/Location: General Urban/Suburban

Number of Studies: 5

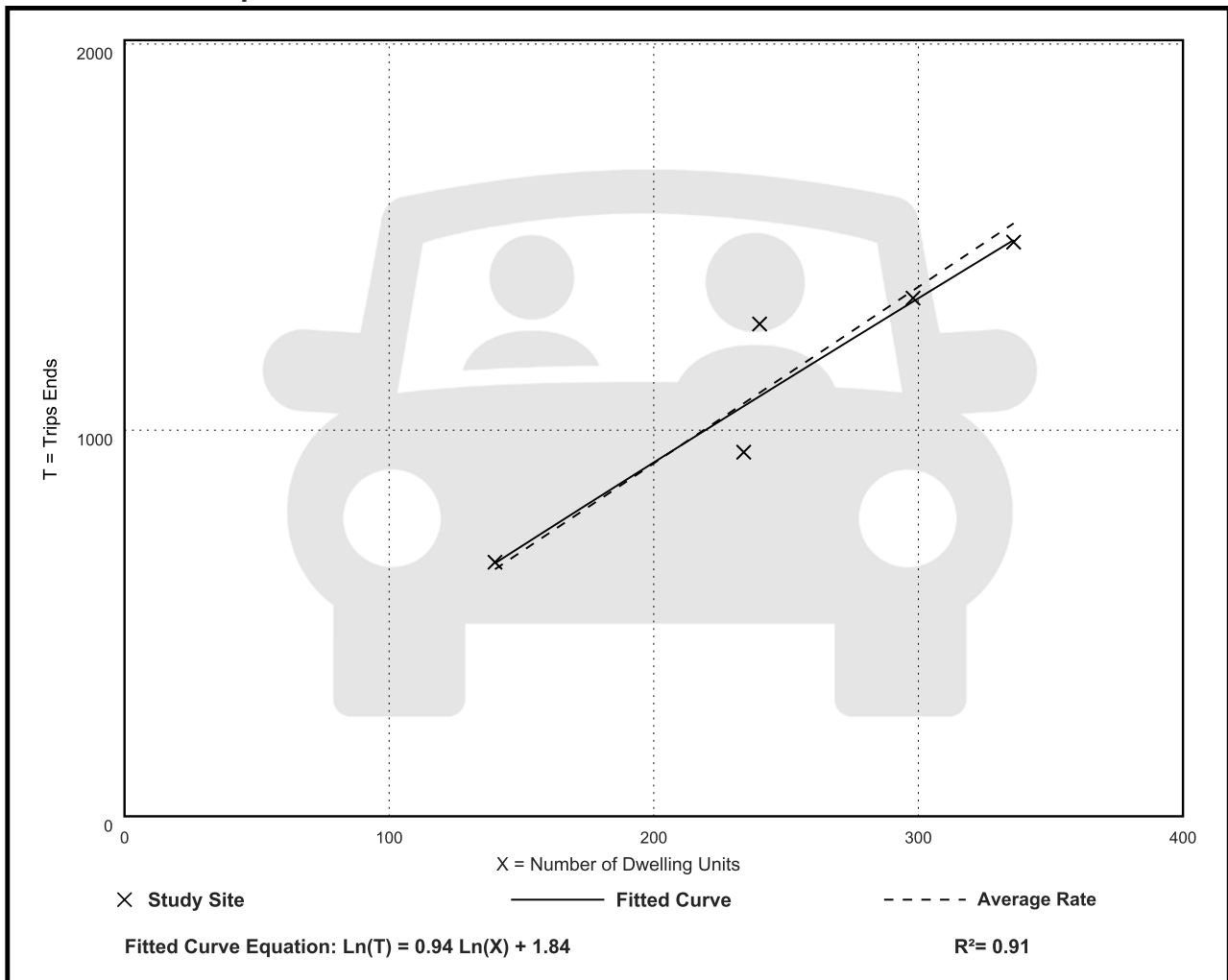
Avg. Num. of Dwelling Units: 250

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.57	4.03 - 5.31	0.46

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 5

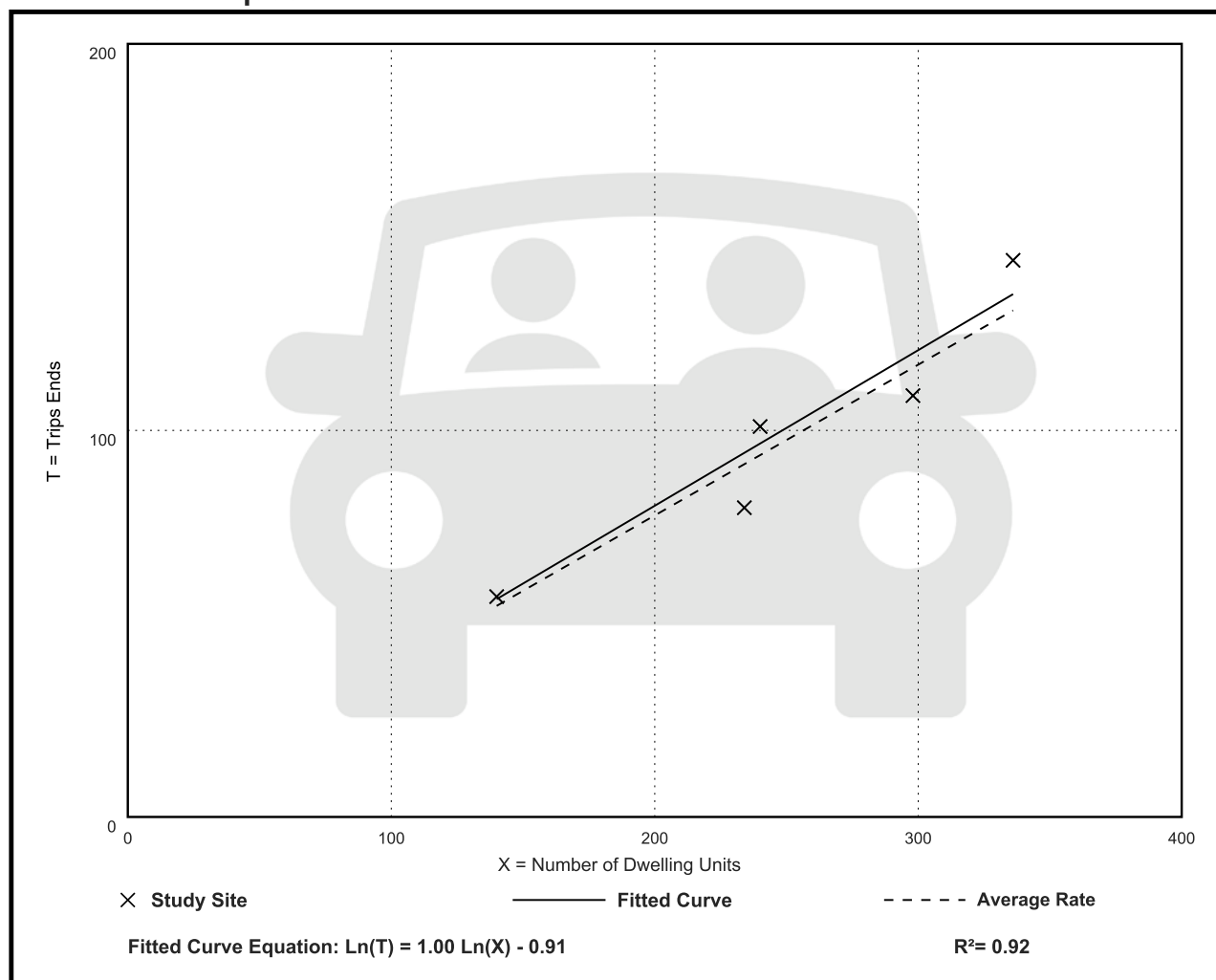
Avg. Num. of Dwelling Units: 250

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.34 - 0.43	0.04

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Sunday

Setting/Location: General Urban/Suburban

Number of Studies: 5

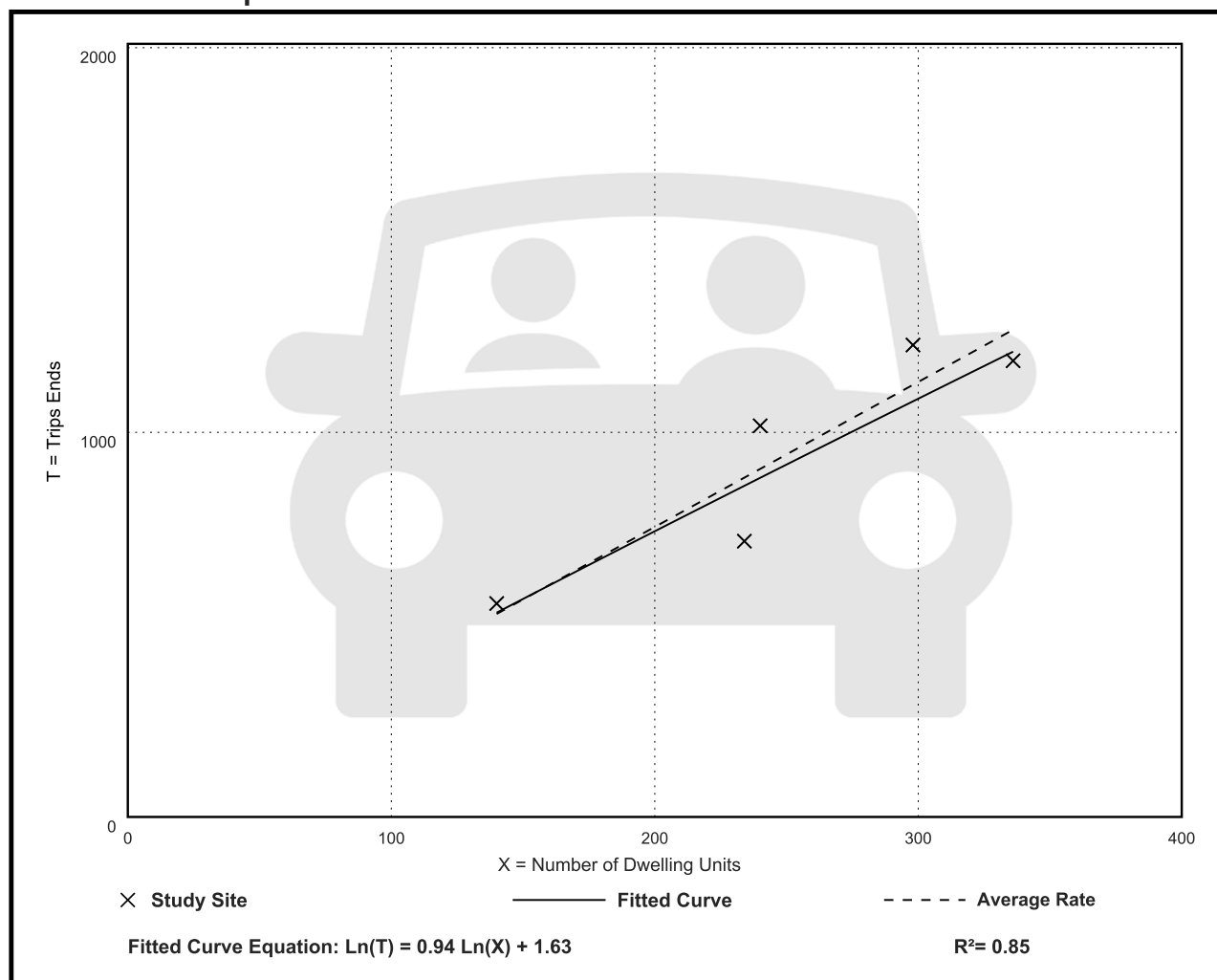
Avg. Num. of Dwelling Units: 250

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
3.77	3.06 - 4.24	0.48

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 5

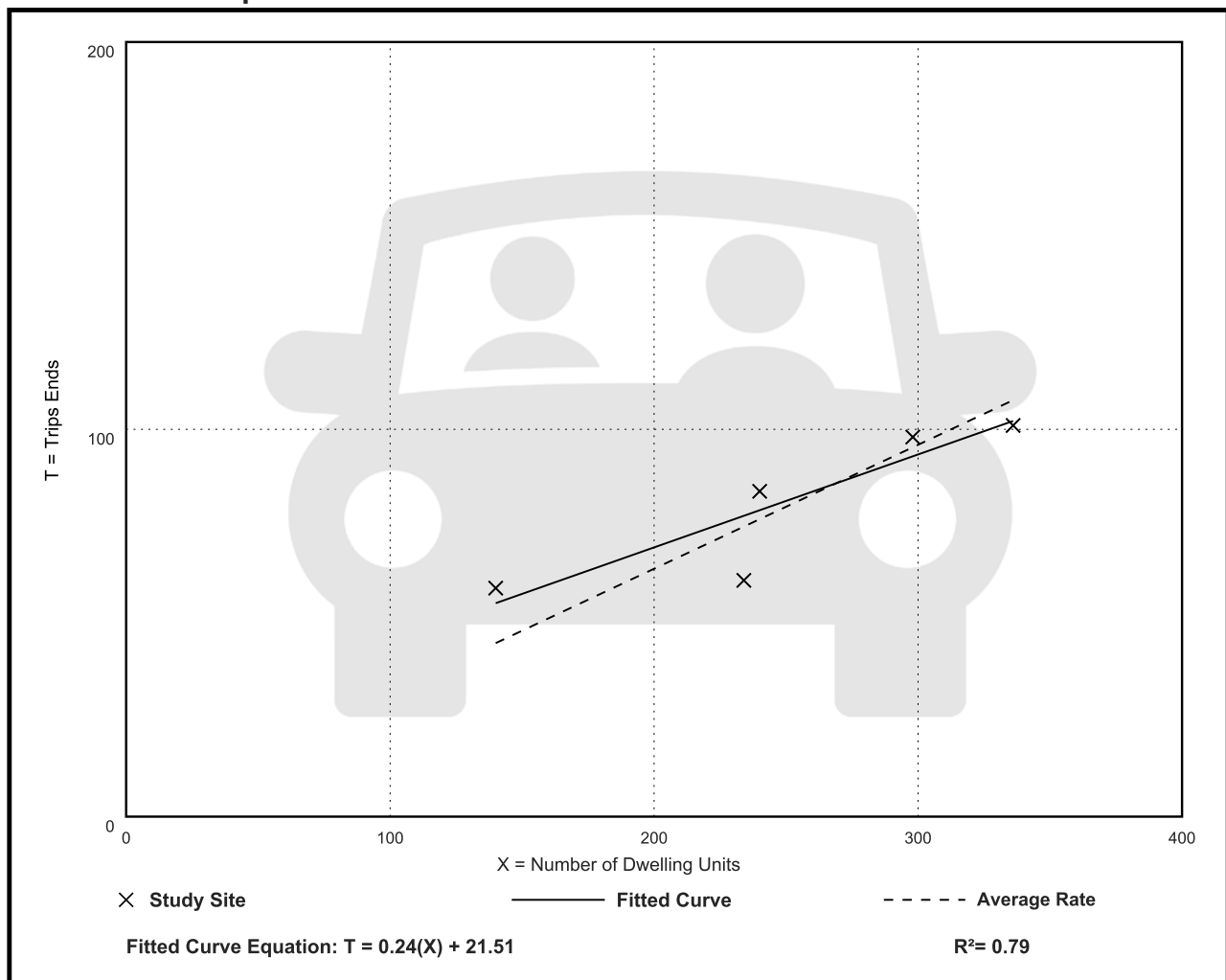
Avg. Num. of Dwelling Units: 250

Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.32	0.26 - 0.42	0.05

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Residents

On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Residents: 386

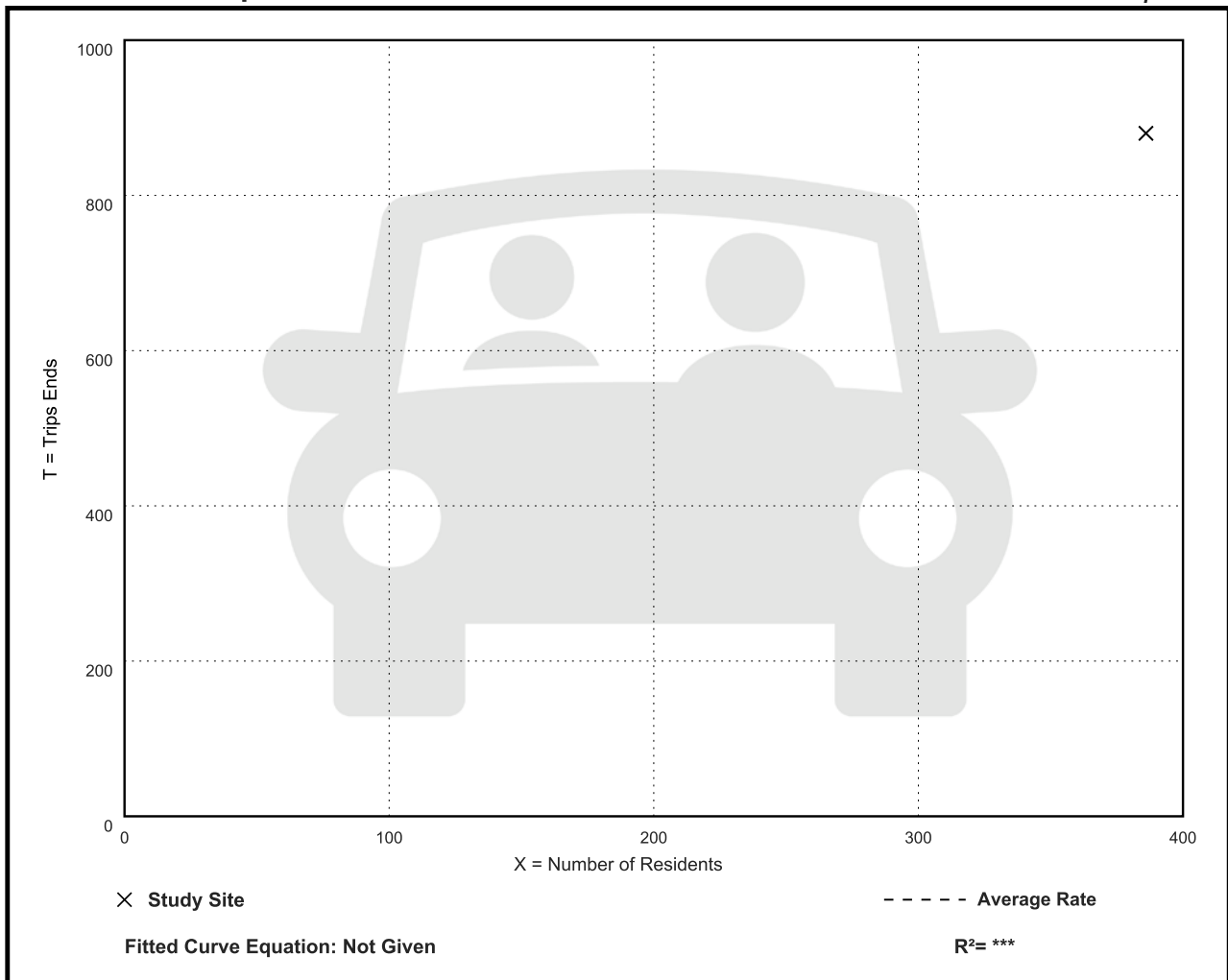
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
2.28	2.28 - 2.28	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Residents

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Residents: 386

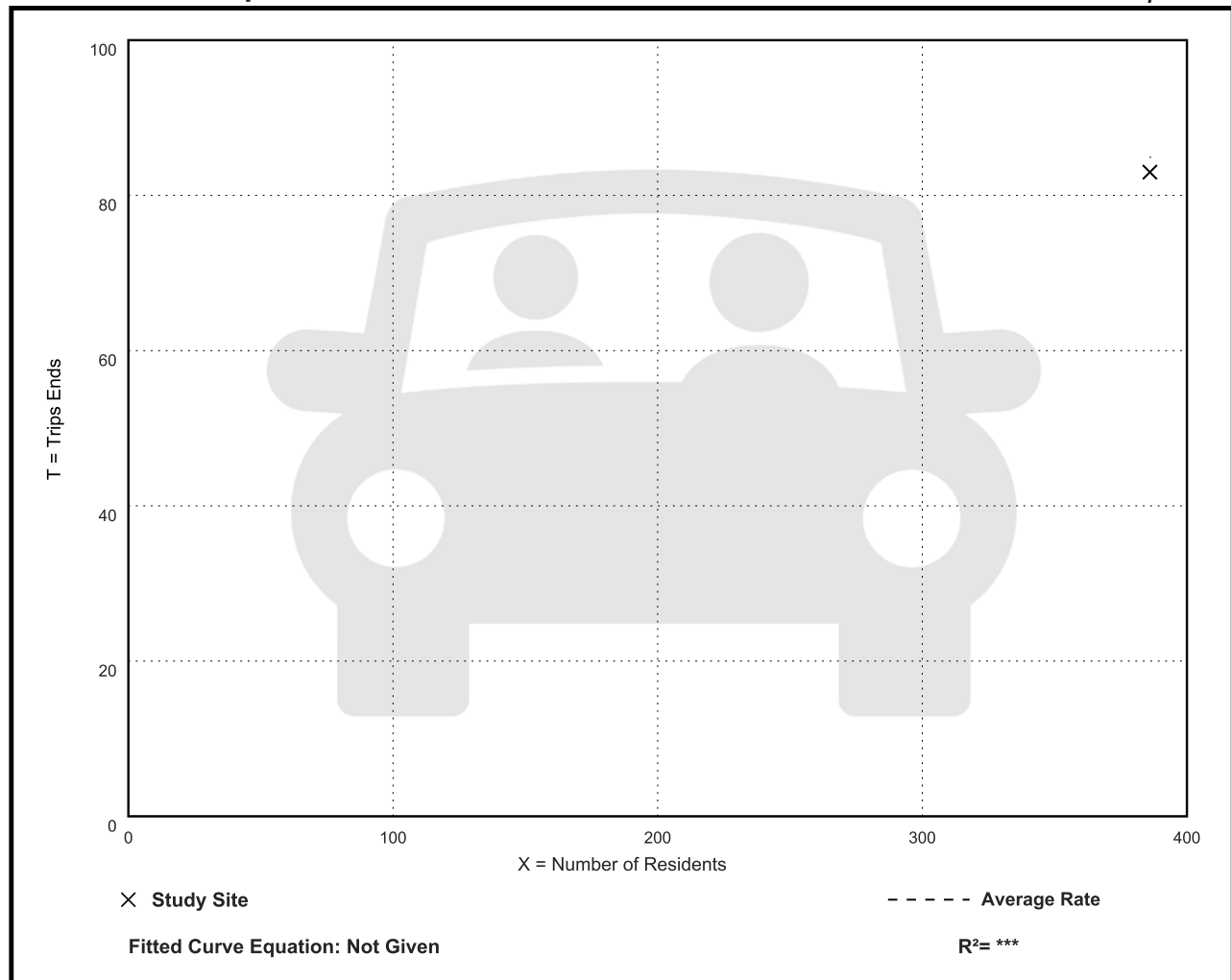
Directional Distribution: 20% entering, 80% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.22	0.22 - 0.22	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Residents

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Residents: 386

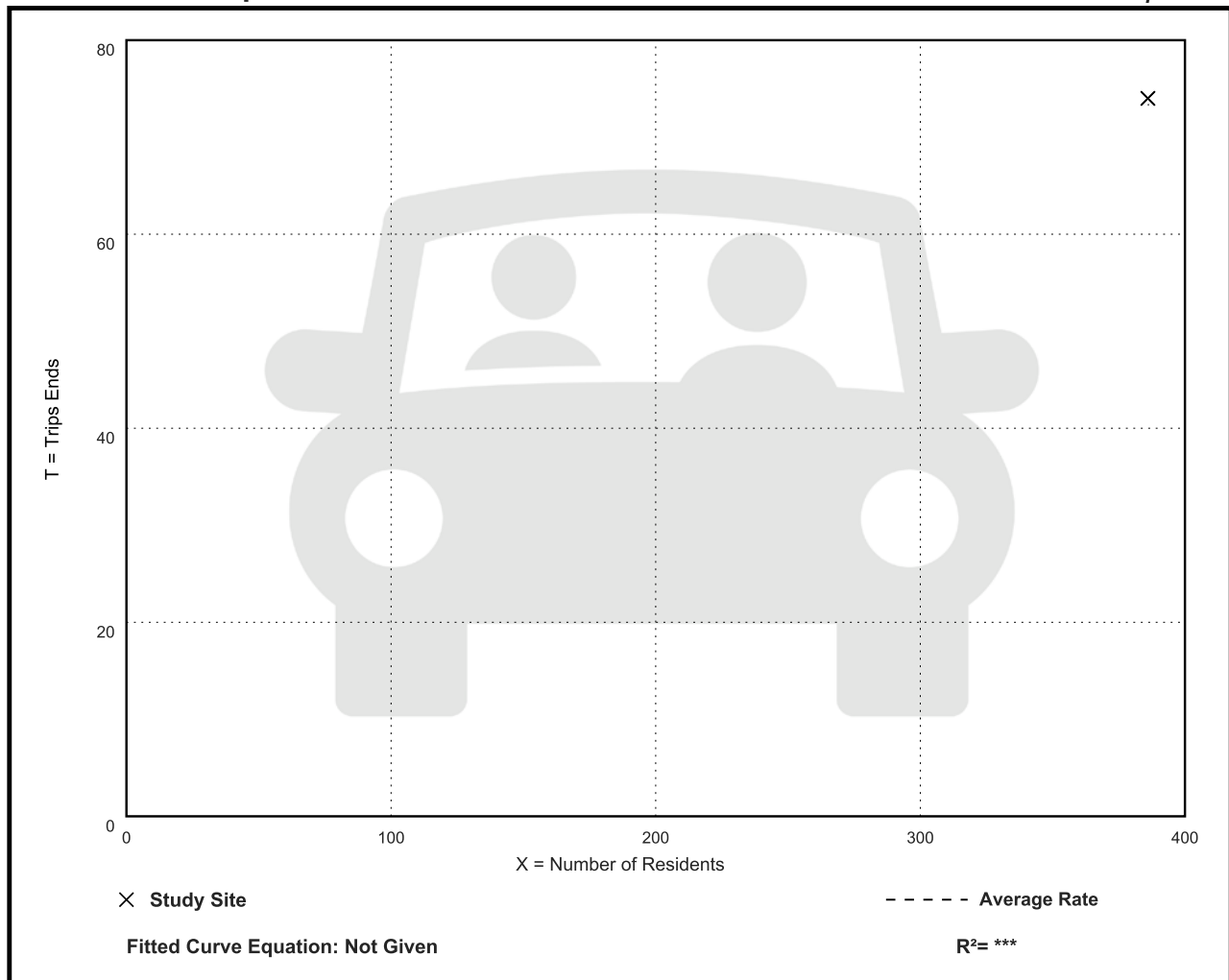
Directional Distribution: 64% entering, 36% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.19	0.19 - 0.19	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Residents

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Residents: 386

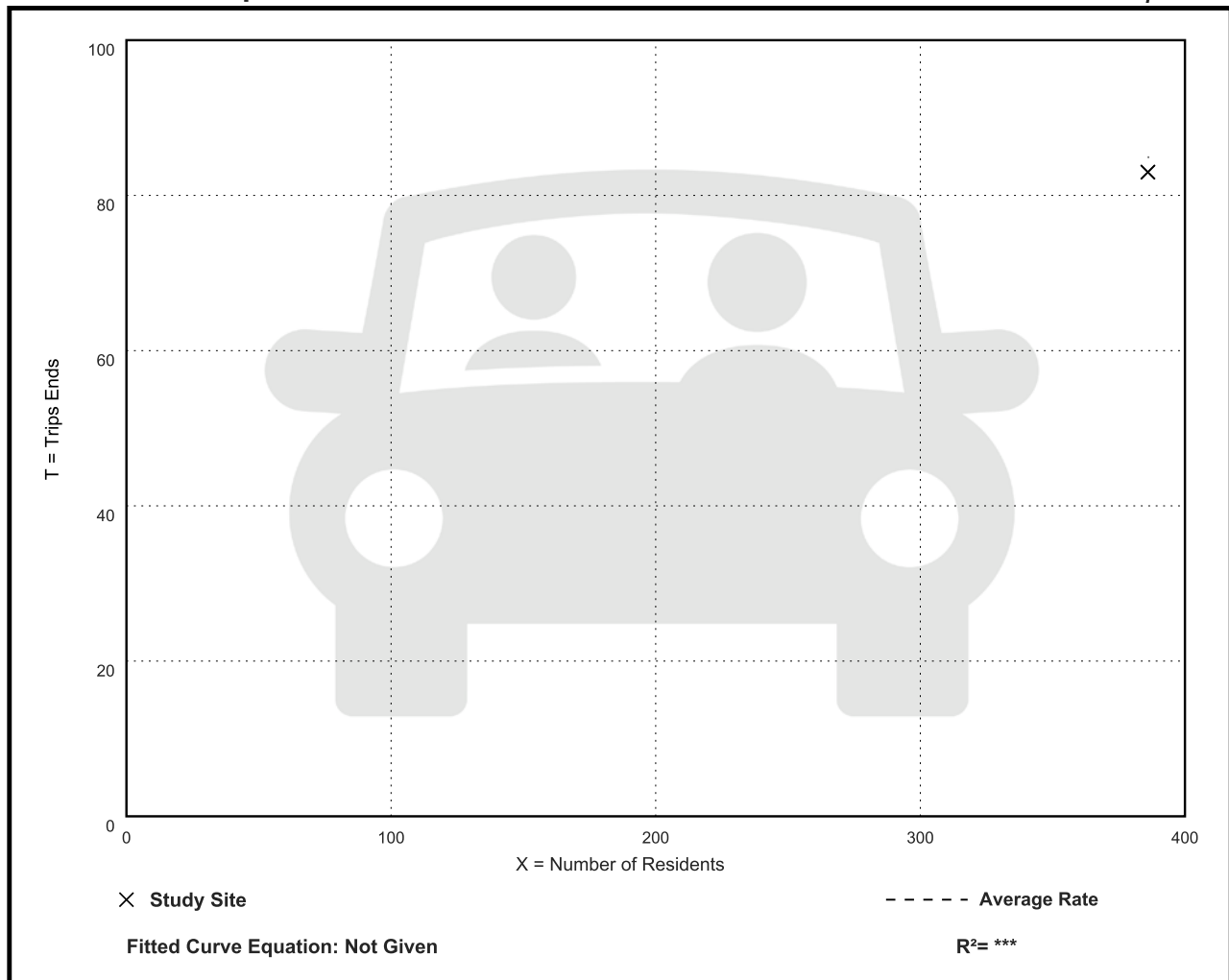
Directional Distribution: 20% entering, 80% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.22	0.22 - 0.22	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Residents

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Residents: 386

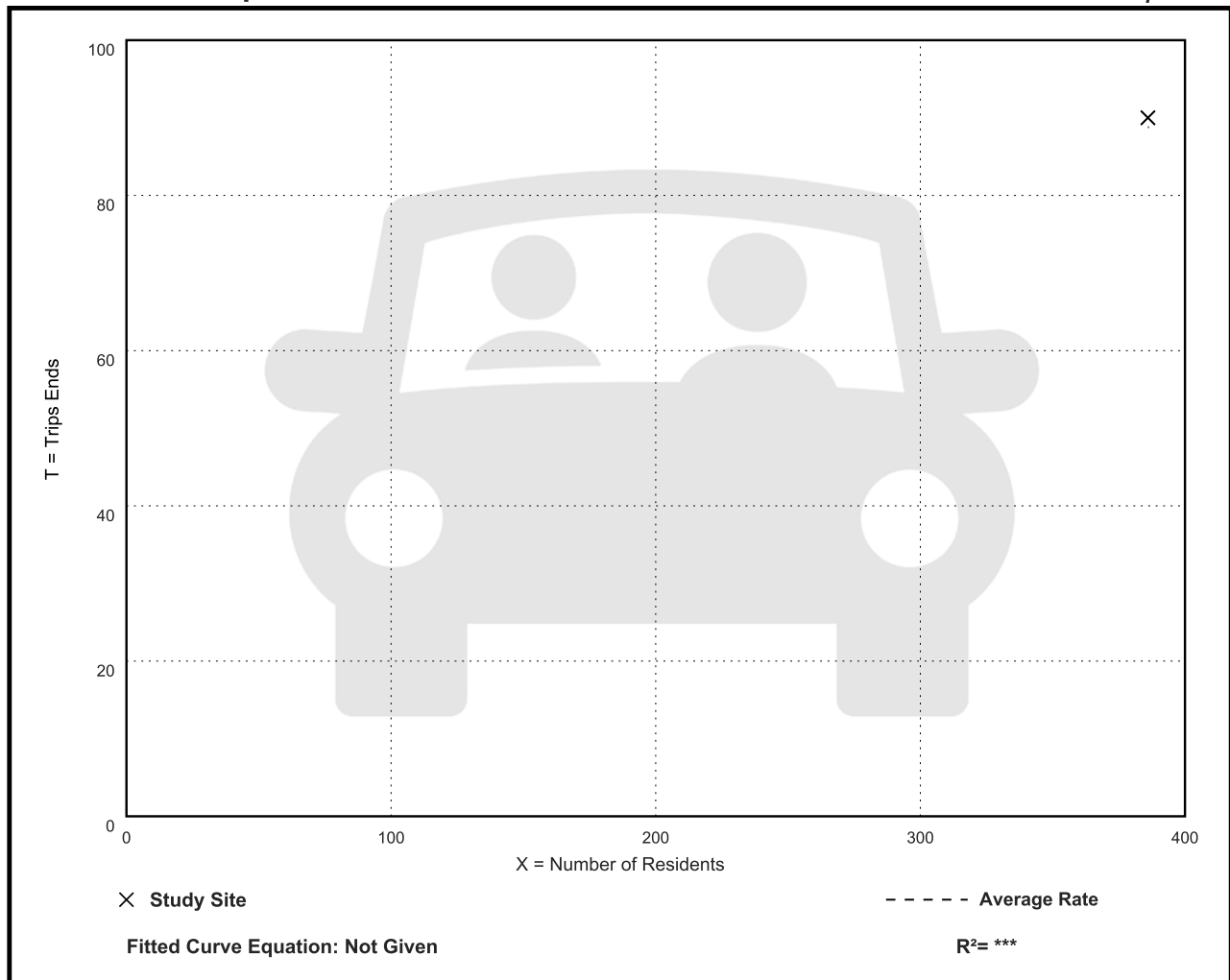
Directional Distribution: 64% entering, 36% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.23	0.23 - 0.23	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Residents

On a: Saturday

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Residents: 386

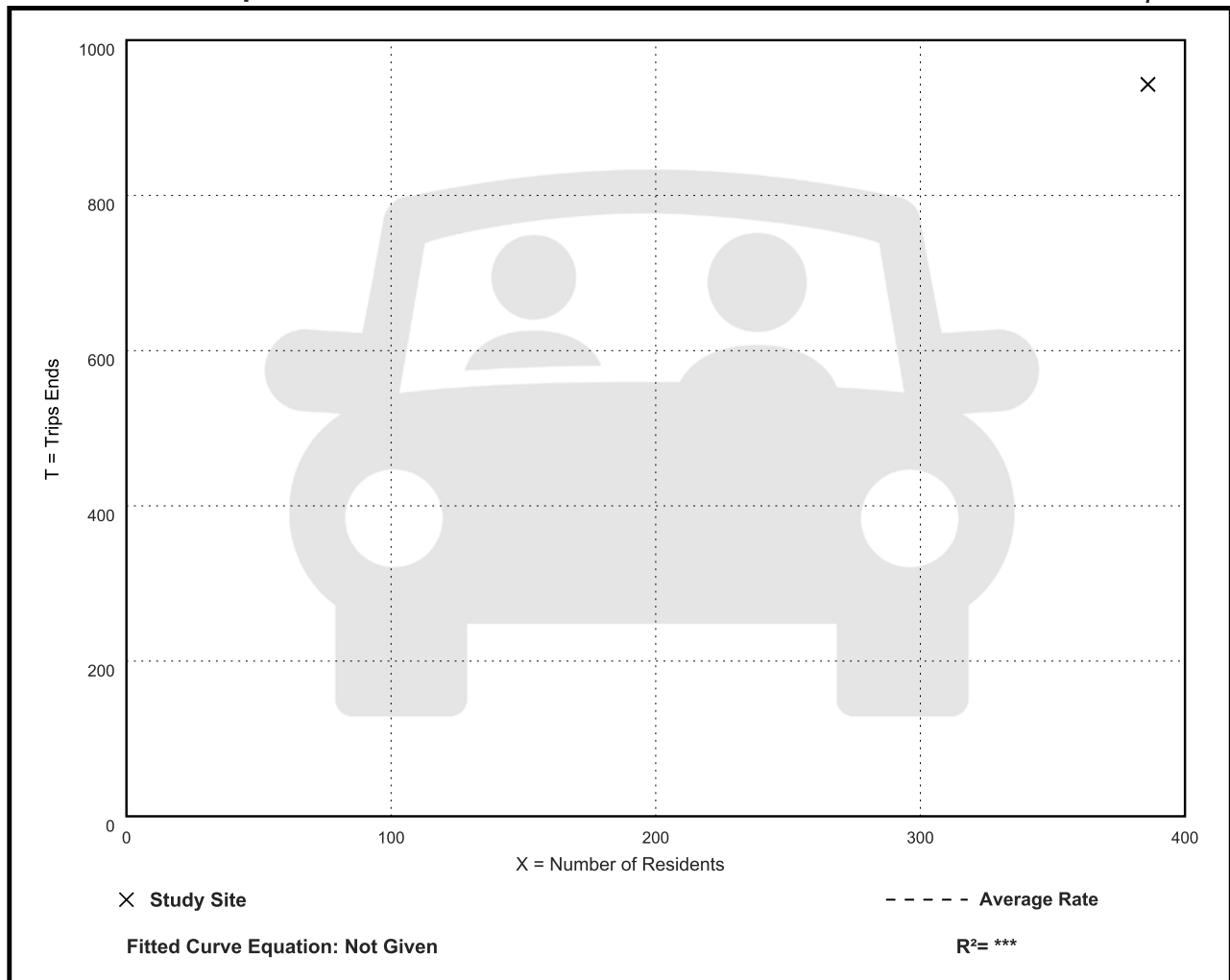
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
2.44	2.44 - 2.44	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Residents

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Residents: 386

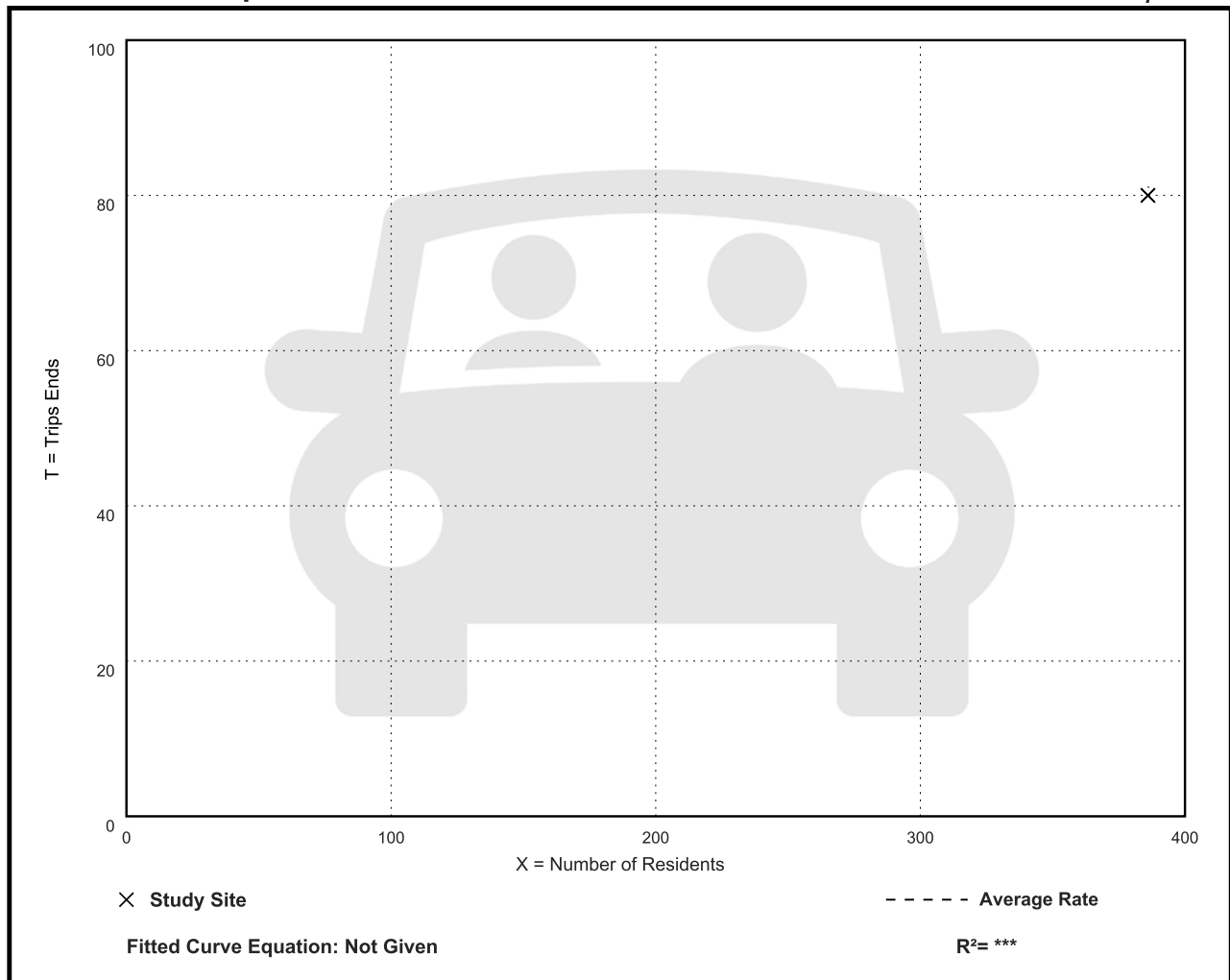
Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.21	0.21 - 0.21	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Residents

On a: Sunday

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Residents: 386

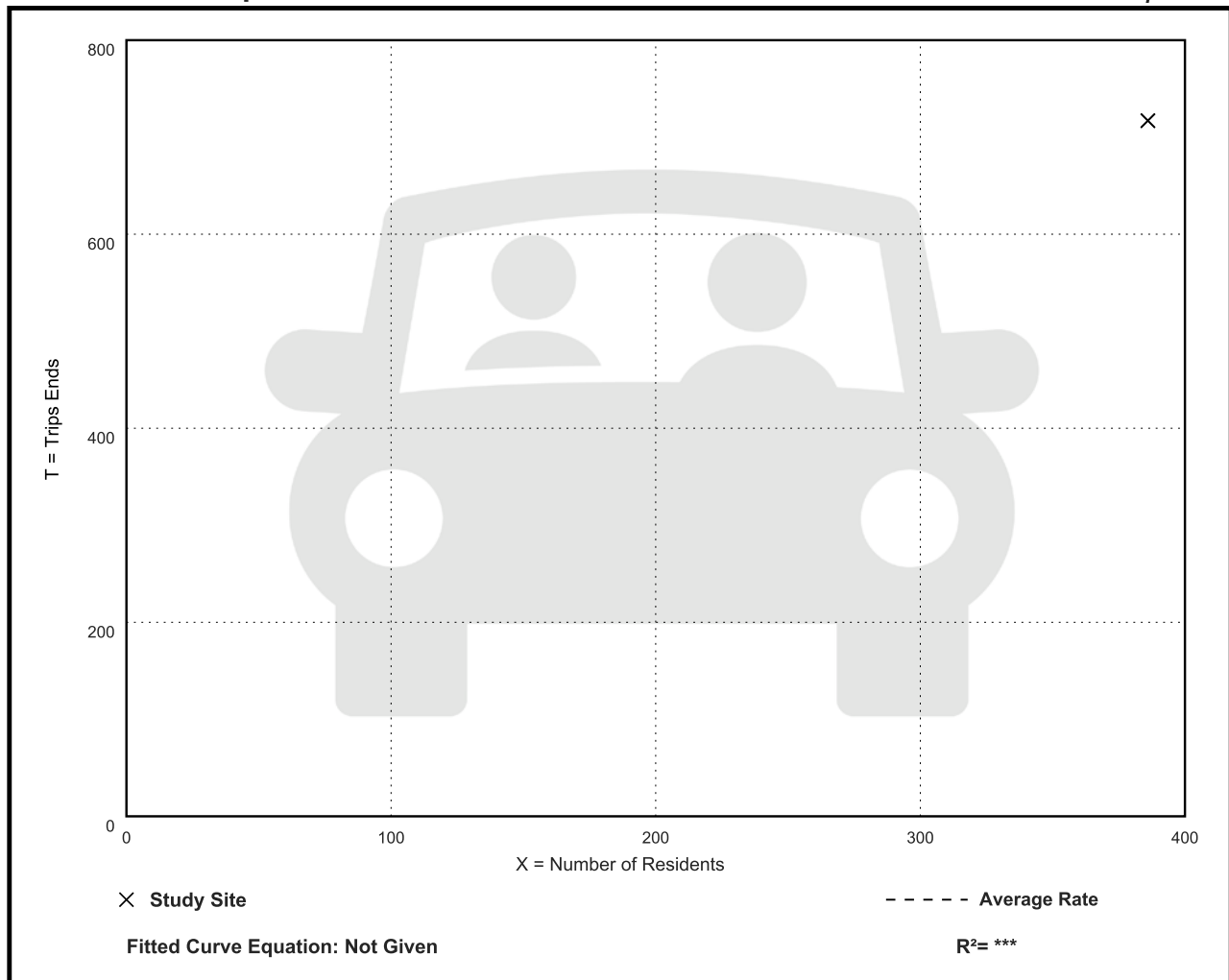
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
1.86	1.86 - 1.86	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Residents

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Residents: 386

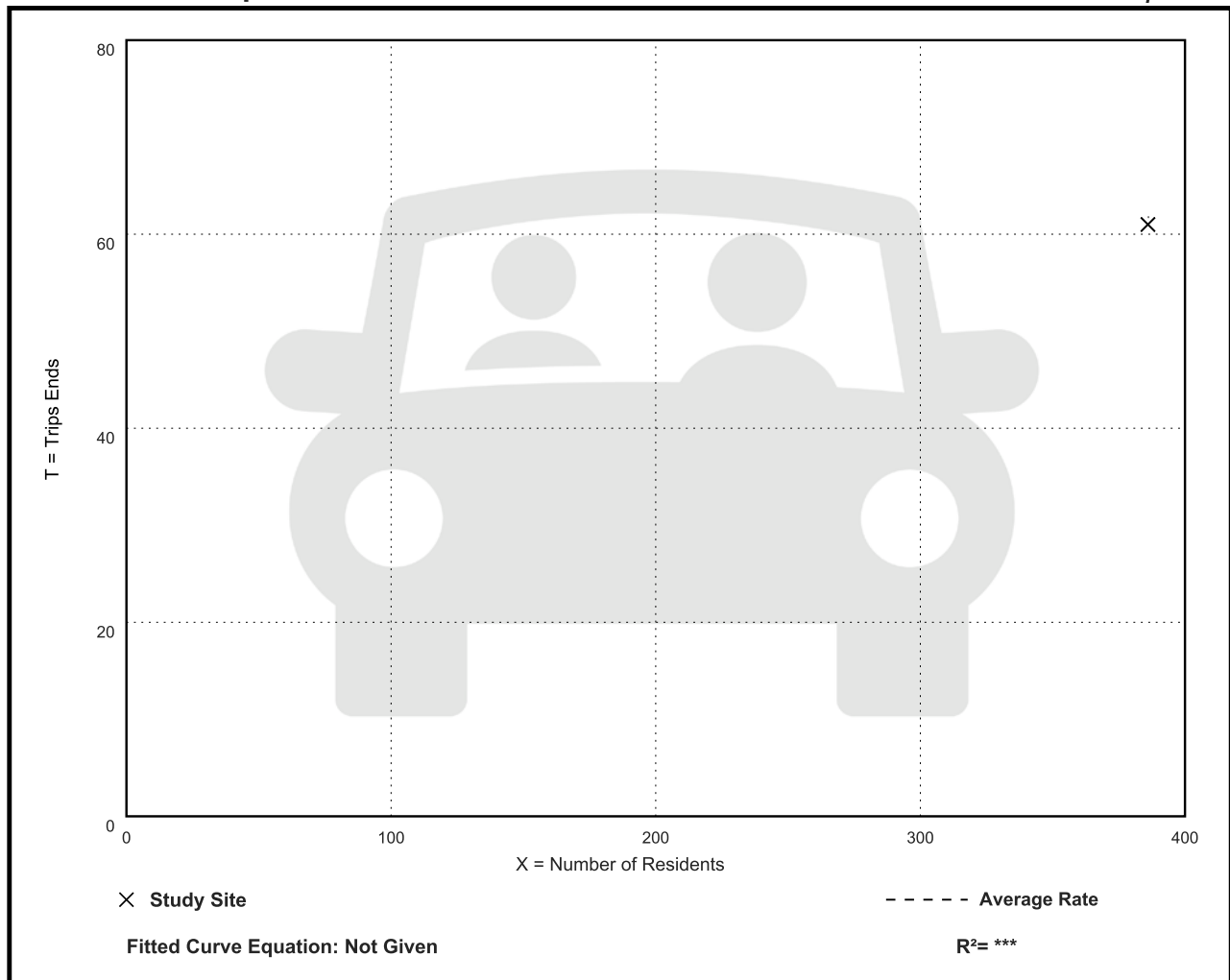
Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.16	0.16 - 0.16	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Walk+Bike+Transit Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 7

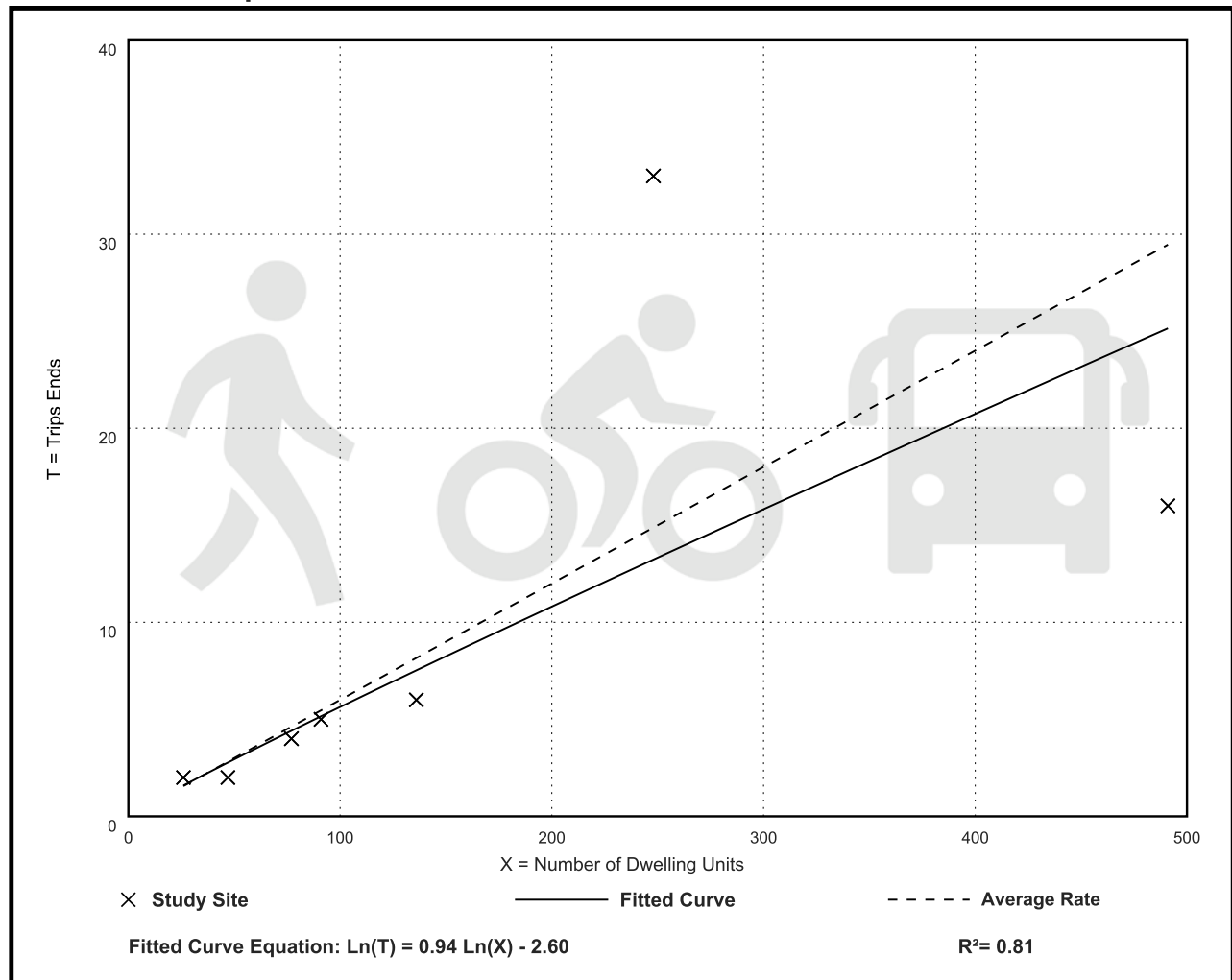
Avg. Num. of Dwelling Units: 159

Directional Distribution: 27% entering, 73% exiting

Walk+Bike+Transit Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.06	0.03 - 0.13	0.04

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Walk+Bike+Transit Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 8

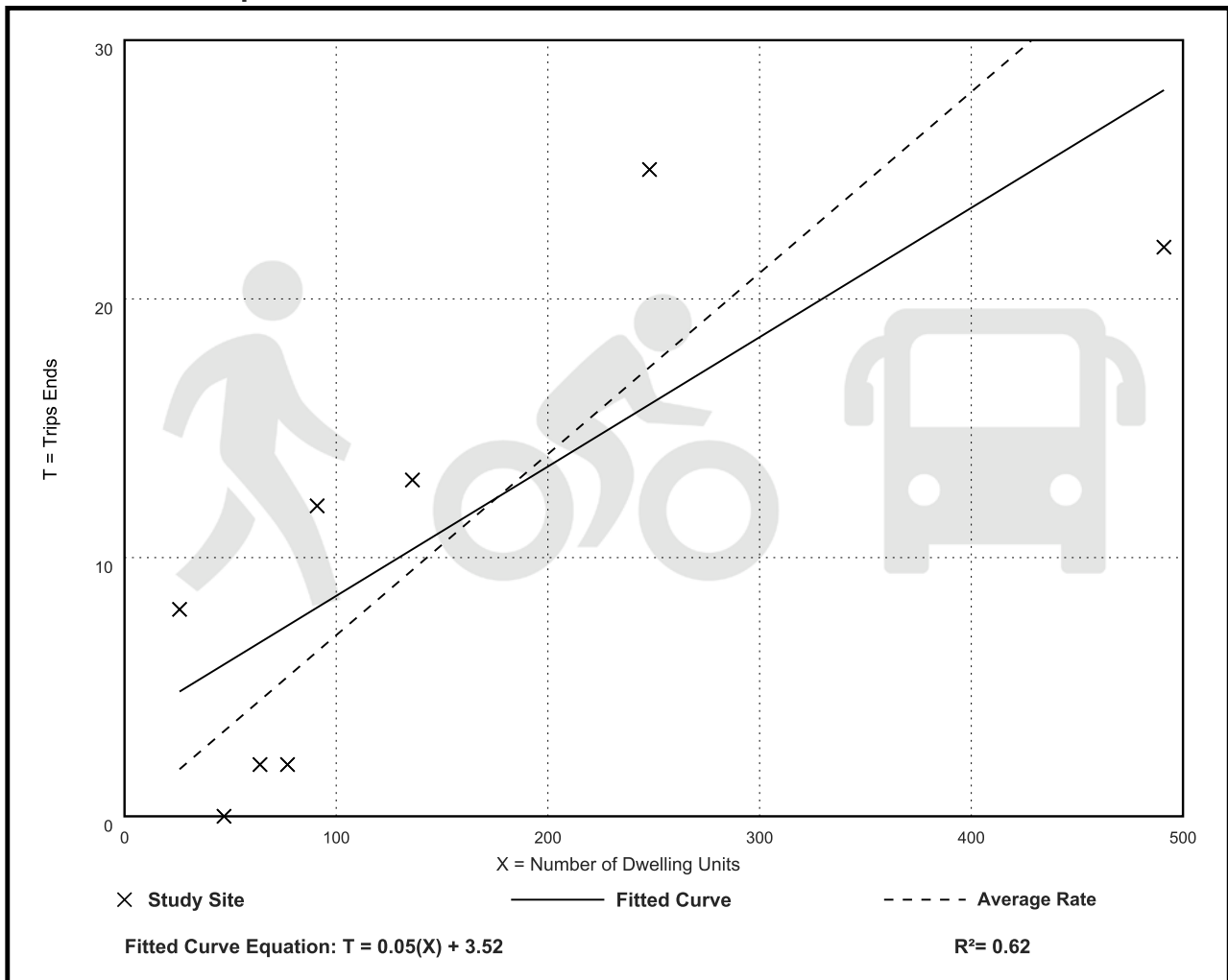
Avg. Num. of Dwelling Units: 148

Directional Distribution: 55% entering, 45% exiting

Walk+Bike+Transit Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.07	0.00 - 0.31	0.05

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Walk+Bike+Transit Trip Ends vs: Dwelling Units

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 5

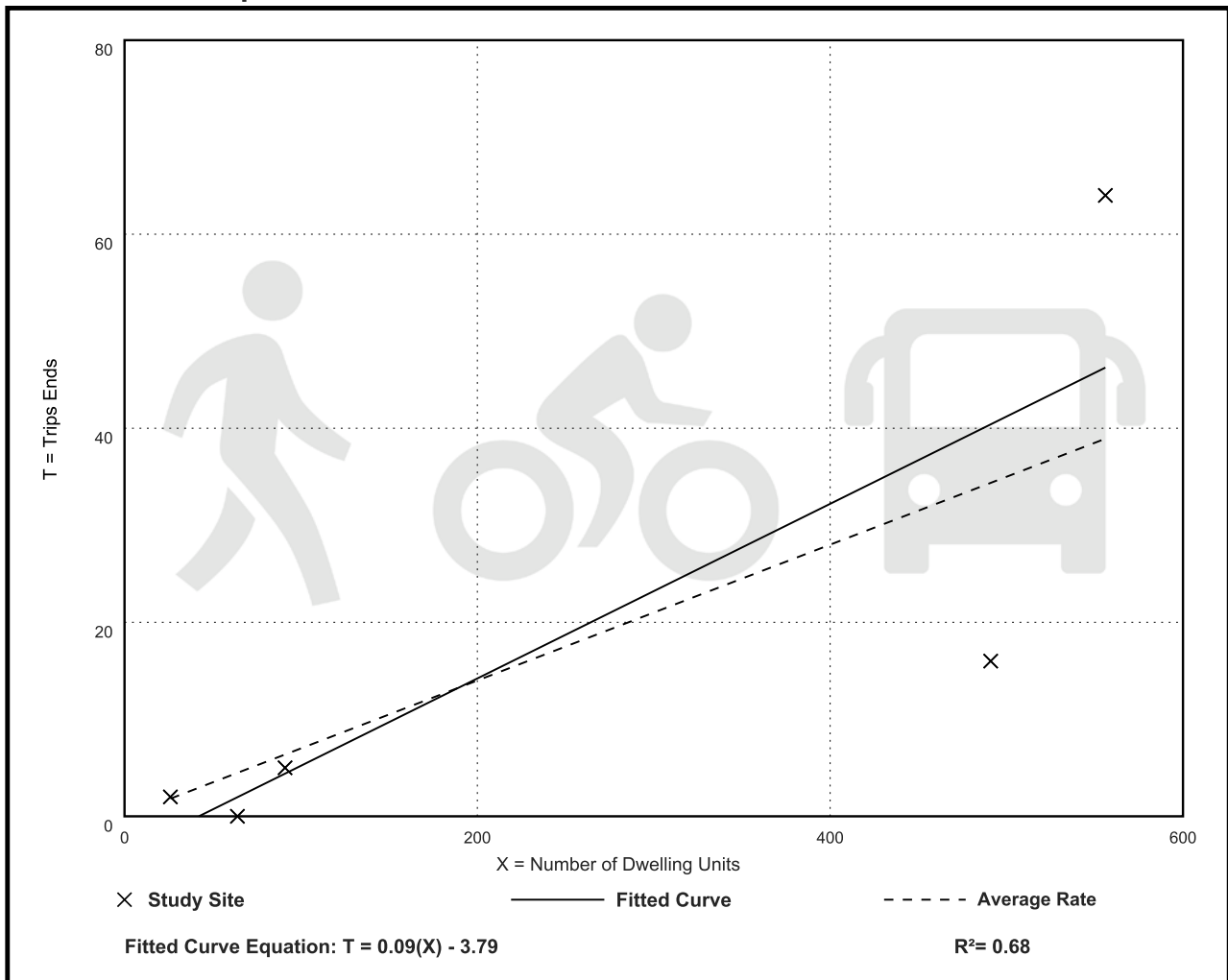
Avg. Num. of Dwelling Units: 246

Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.07	0.00 - 0.12	0.05

Data Plot and Equation



Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Walk+Bike+Transit Trip Ends vs: Dwelling Units

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 5

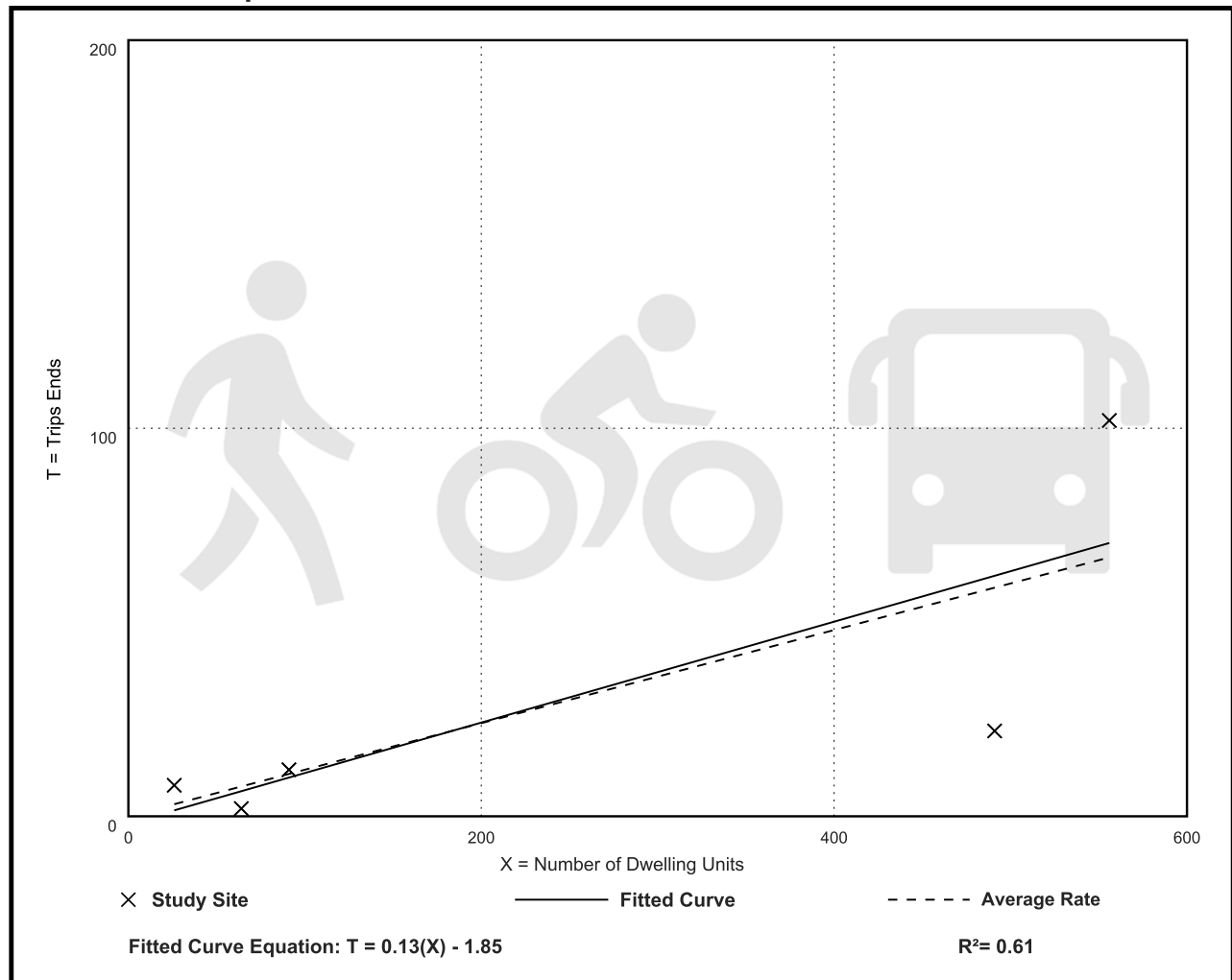
Avg. Num. of Dwelling Units: 246

Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.12	0.03 - 0.31	0.08

Data Plot and Equation



Multifamily Housing (Mid-Rise) Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Dwelling Units: 393

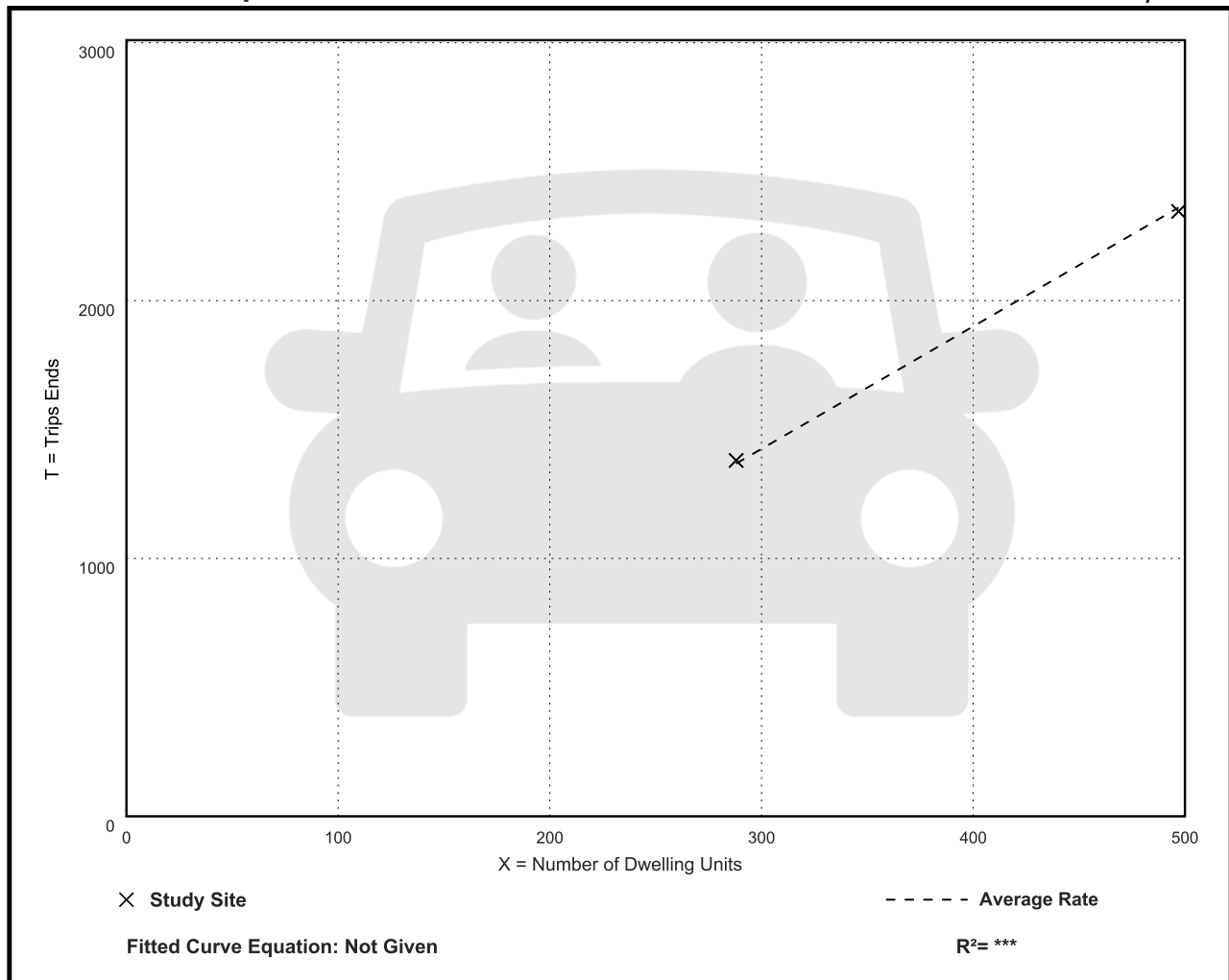
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.75	4.72 - 4.79	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (Mid-Rise) Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 7

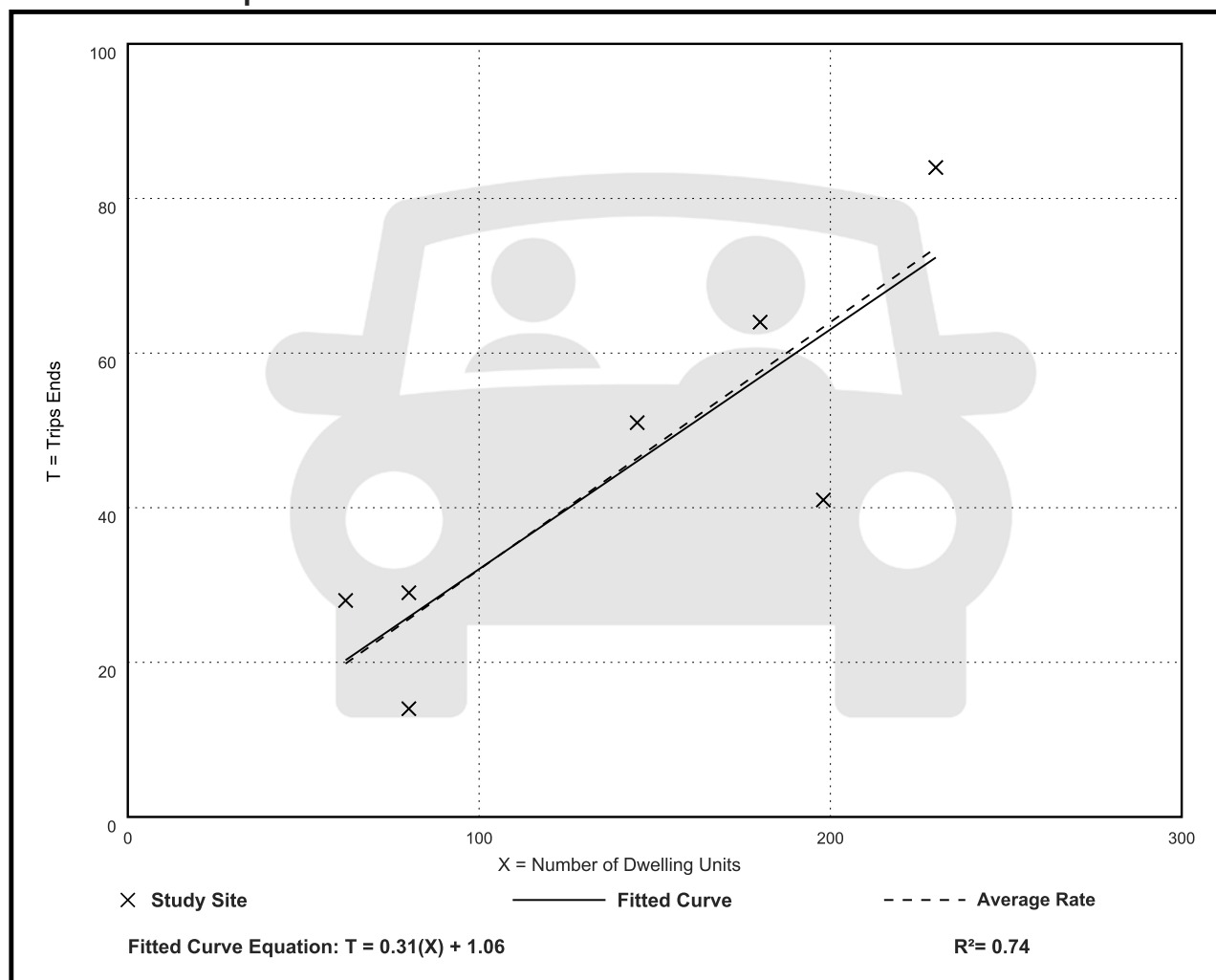
Avg. Num. of Dwelling Units: 139

Directional Distribution: 56% entering, 44% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.32	0.18 - 0.45	0.09

Data Plot and Equation



Multifamily Housing (Mid-Rise) Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 7

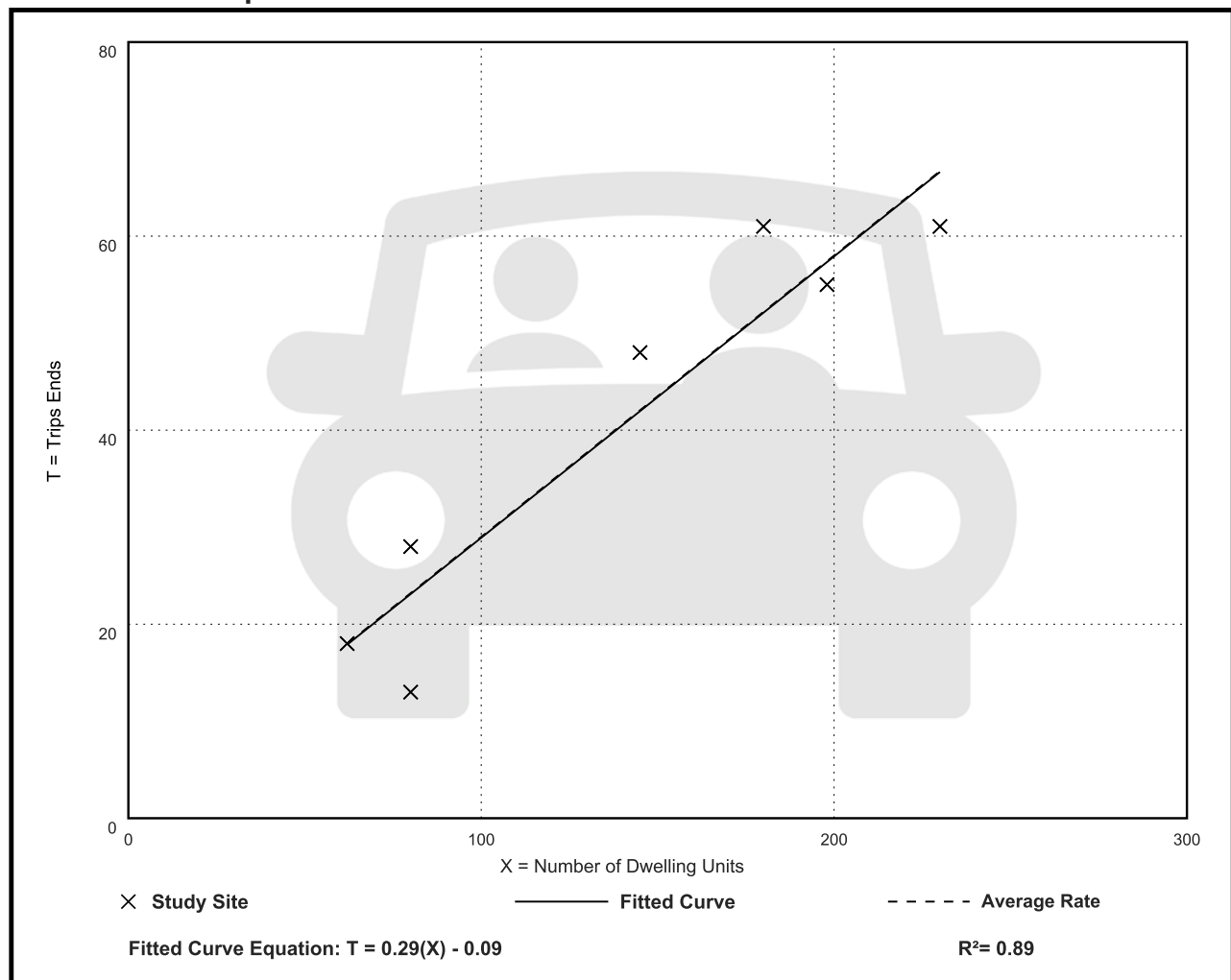
Avg. Num. of Dwelling Units: 139

Directional Distribution: 43% entering, 57% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.29	0.16 - 0.35	0.05

Data Plot and Equation



Multifamily Housing (Mid-Rise) Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Dwelling Units: 130

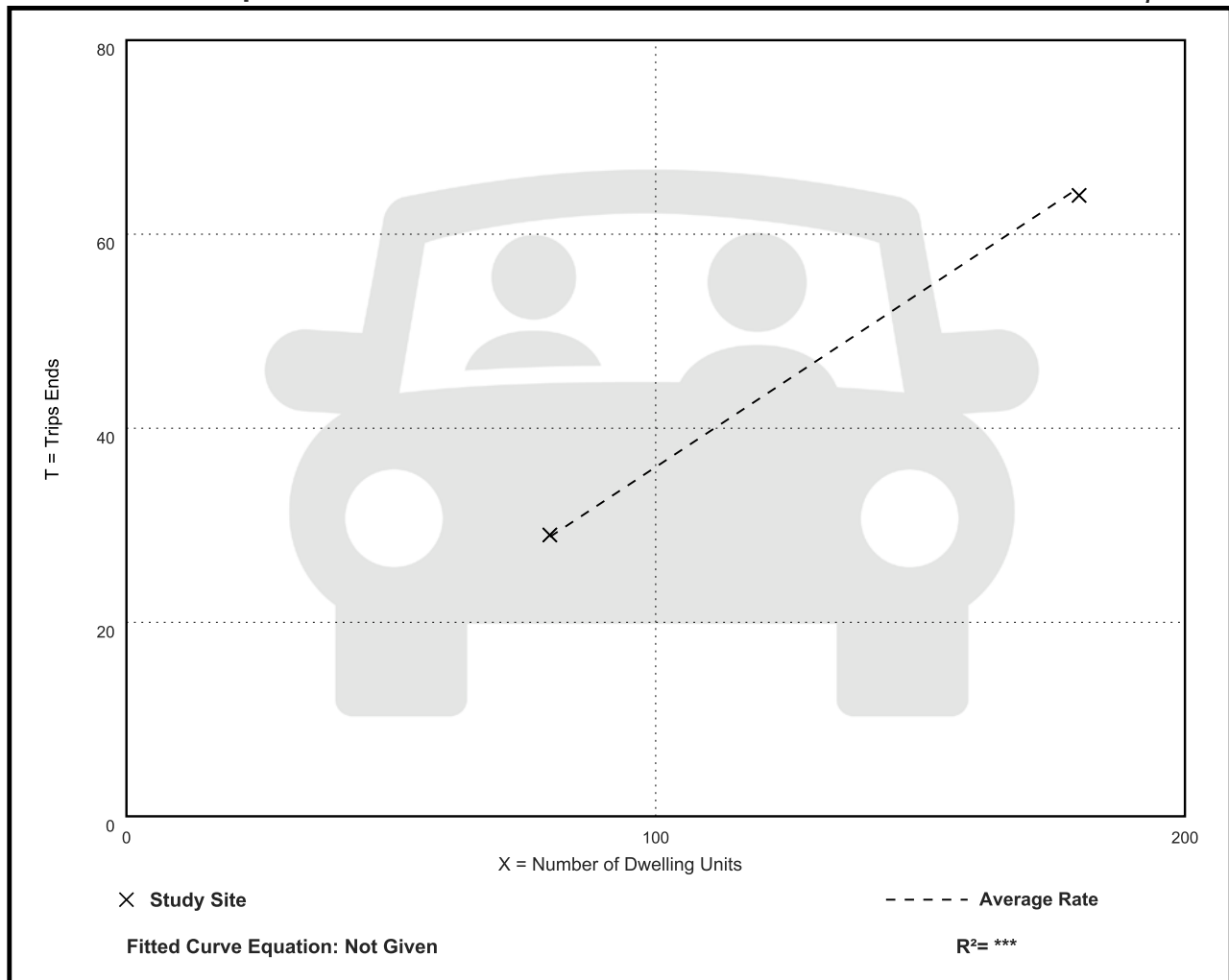
Directional Distribution: 38% entering, 62% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.36 - 0.36	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (Mid-Rise) Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Dwelling Units: 130

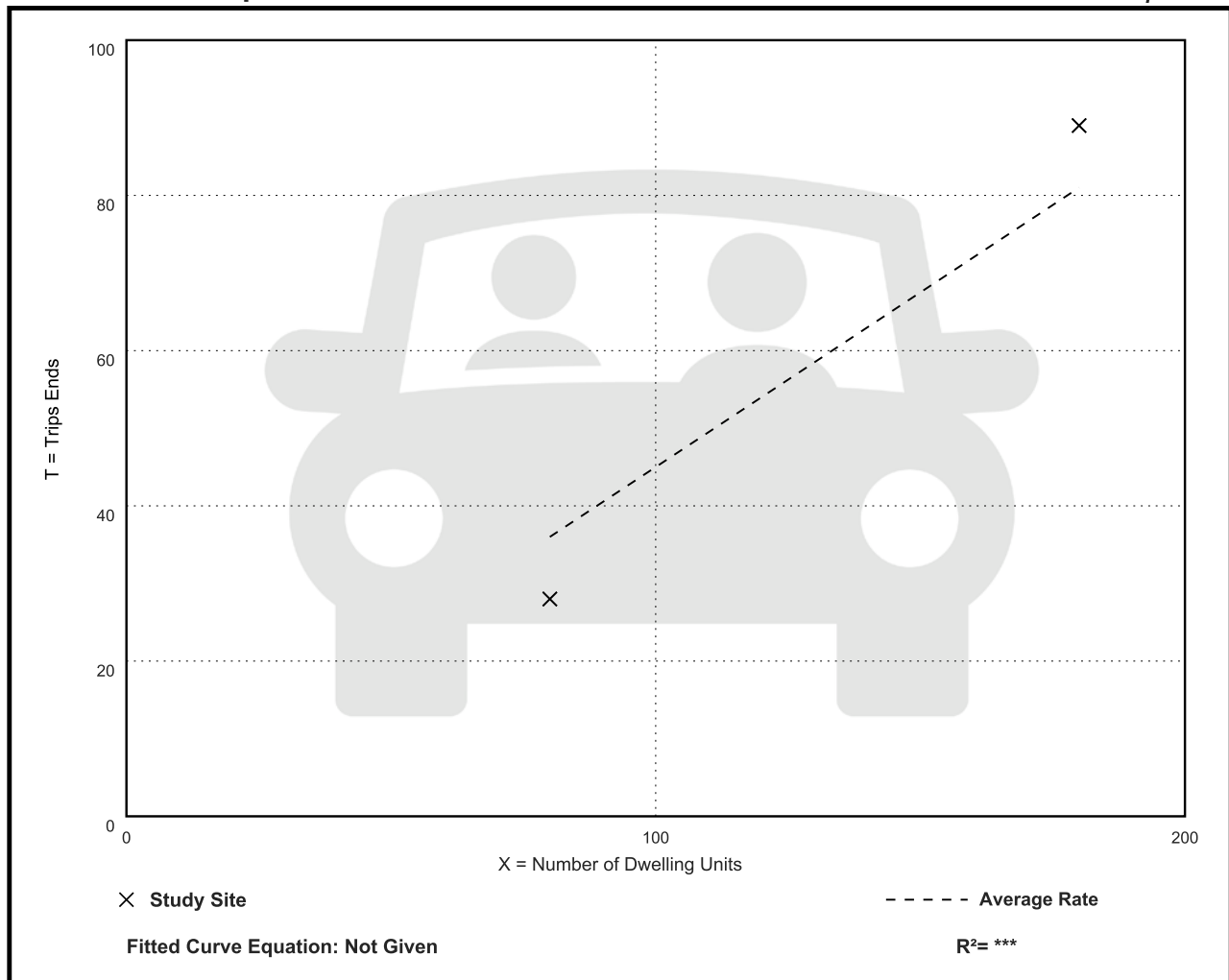
Directional Distribution: 75% entering, 25% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.45	0.35 - 0.49	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (Mid-Rise) Close to Rail Transit (221)

Walk+Bike+Transit Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 5

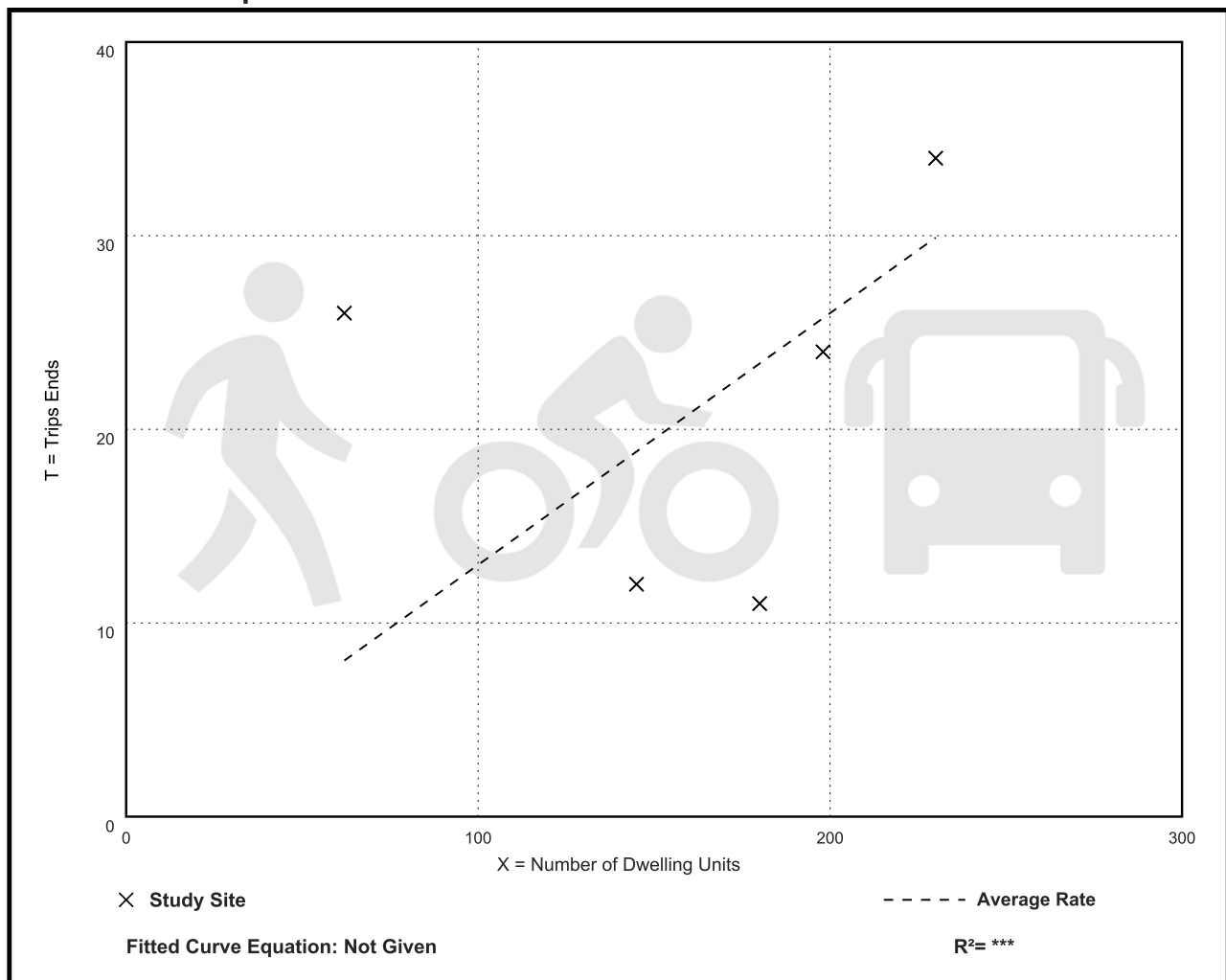
Avg. Num. of Dwelling Units: 163

Directional Distribution: 57% entering, 43% exiting

Walk+Bike+Transit Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.13	0.06 - 0.42	0.10

Data Plot and Equation



Multifamily Housing (Mid-Rise) Close to Rail Transit (221)

Walk+Bike+Transit Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 5

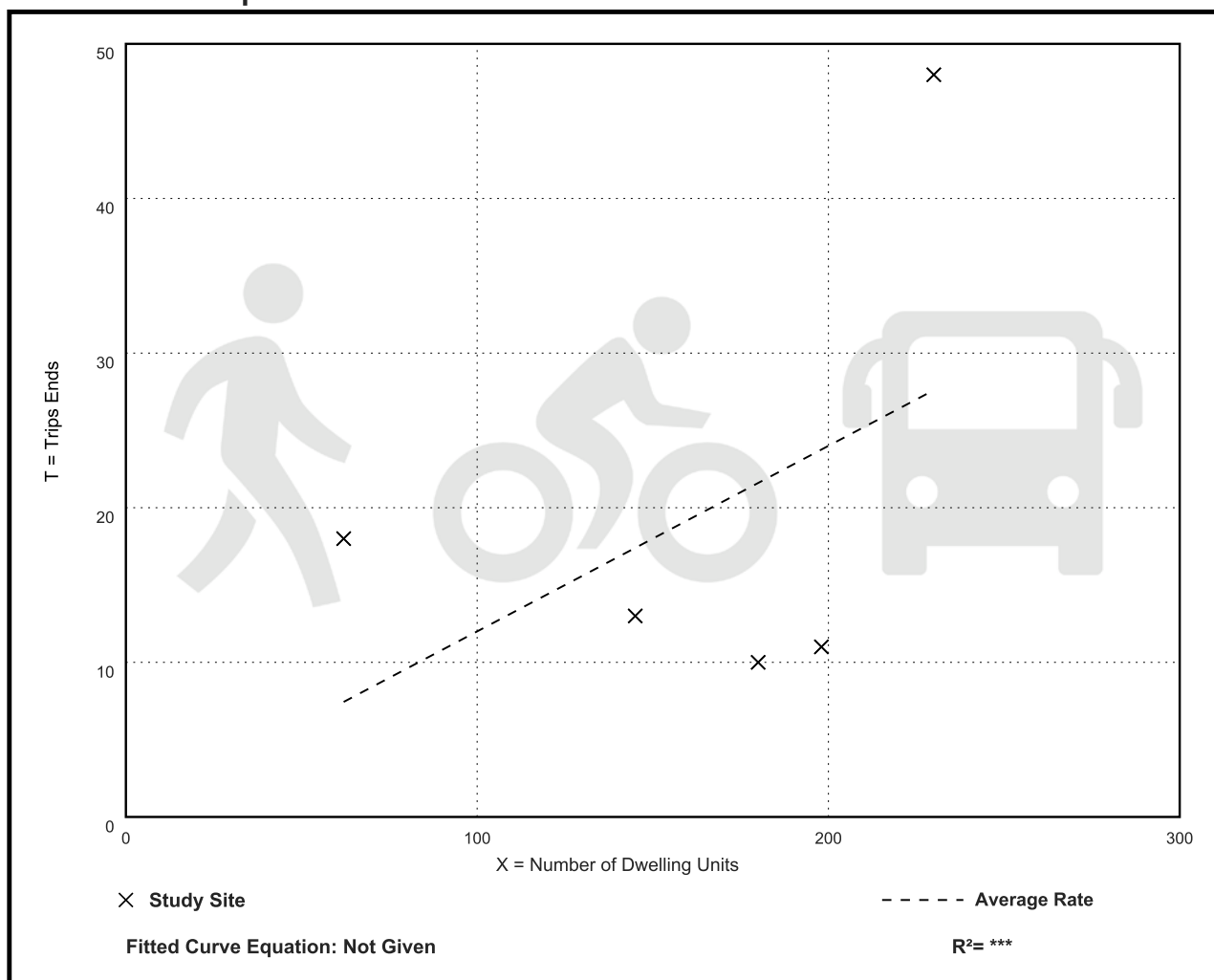
Avg. Num. of Dwelling Units: 163

Directional Distribution: 42% entering, 58% exiting

Walk+Bike+Transit Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.12	0.06 - 0.29	0.09

Data Plot and Equation



Multifamily Housing (Mid-Rise) Close to Rail Transit (221)

Walk+Bike+Transit Trip Ends vs: Dwelling Units

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Dwelling Units: 180

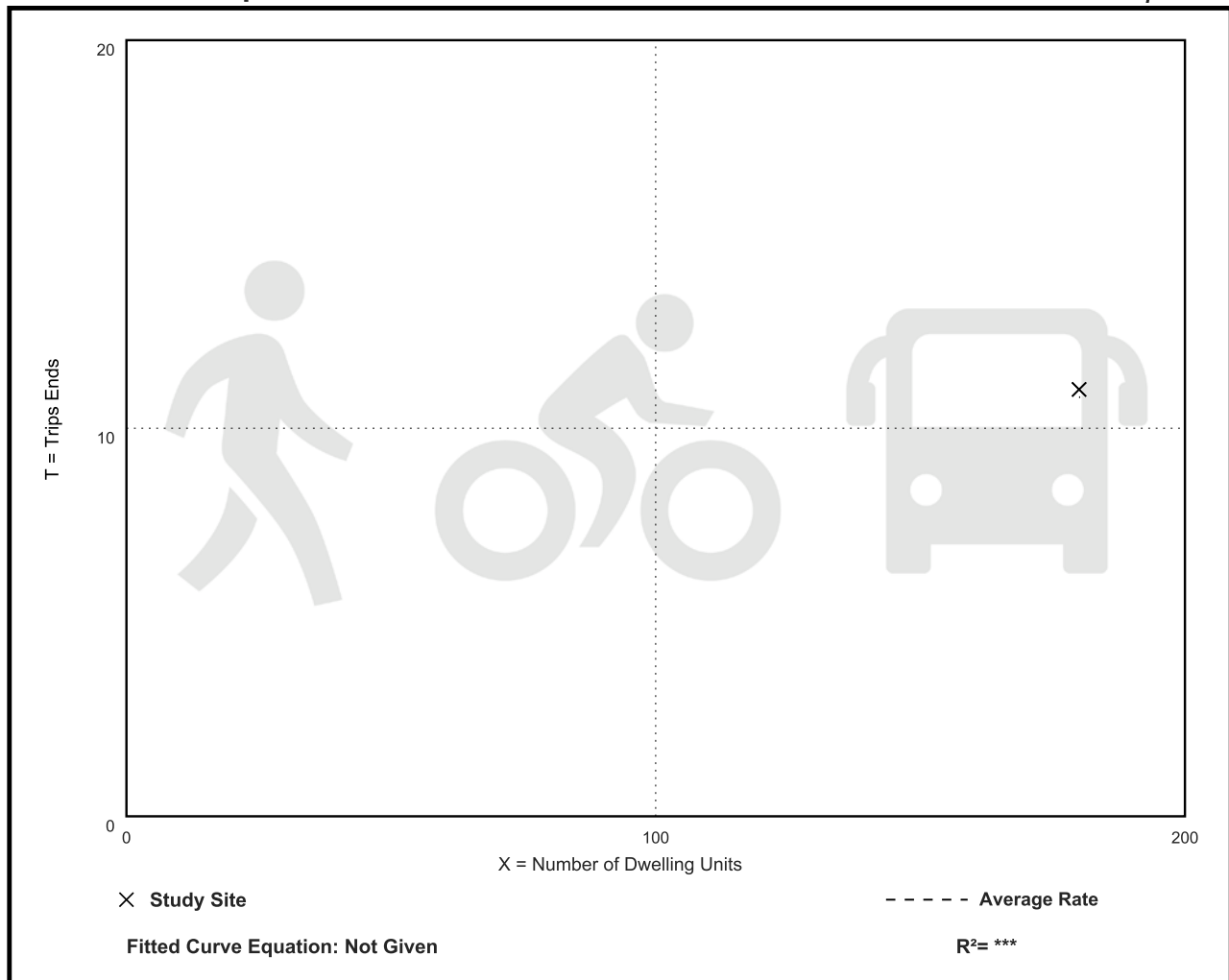
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.06	0.06 - 0.06	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (Mid-Rise) Close to Rail Transit (221)

Walk+Bike+Transit Trip Ends vs: Dwelling Units

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Dwelling Units: 180

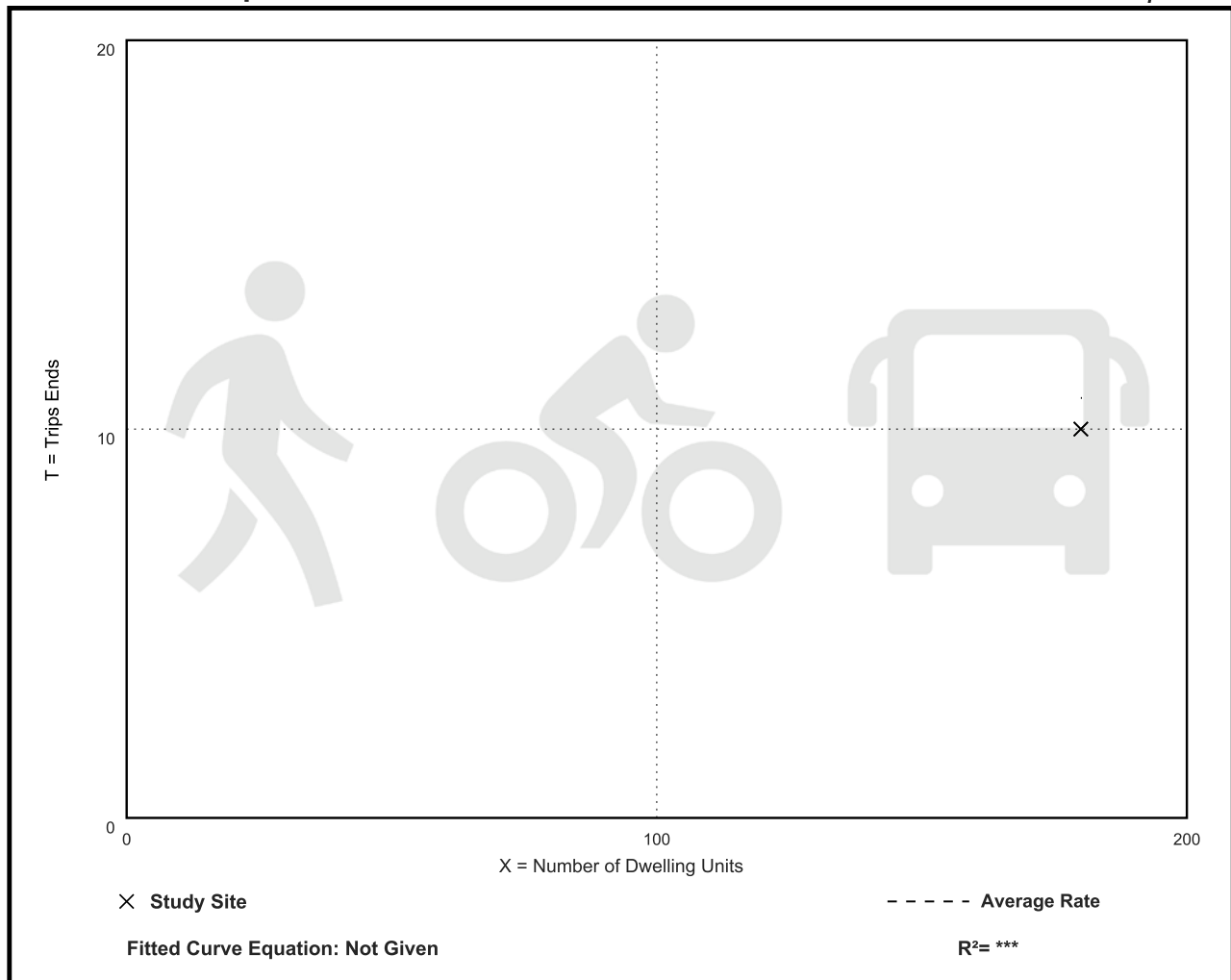
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.06	0.06 - 0.06	***

Data Plot and Equation

Caution – Small Sample Size



Land Use: 223

Affordable Housing

Description

Affordable housing includes all multifamily housing that is rented at below market rate to households that include at least one employed member. Eligibility to live in affordable housing can be a function of limited household income and resident age. Multifamily housing (low-rise) (Land Use 220), multifamily housing (mid-rise) (Land Use 221), and multifamily housing (high-rise) (Land Use 222) are related land uses.

Land Use Subcategory

Data are presented for three subcategories for this land use: (1) sites with income limitations for its tenants (denoted as income limits in the data plots), (2) sites with both minimum age thresholds and income limitations for its tenants (denoted as senior in the data plots), and (3) sites designed for and occupied by residents with special needs, such as persons with physical and mental impairments, single mothers, recovering addicts and others living in a group setting.

Additional Data

For most study sites contained in this land use, all dwelling units in the development are classified as affordable units. For residential study sites that provide a mix of market value and affordable units, the study sites with at least 75 percent of the dwelling units designated as affordable are also included in this land use database.

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1980s and 2010s in California, Ontario (CAN), and New Jersey.

Source Numbers

237, 918, 1003, 1004, 1046, 1057

Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Bedrooms

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Bedrooms: 219

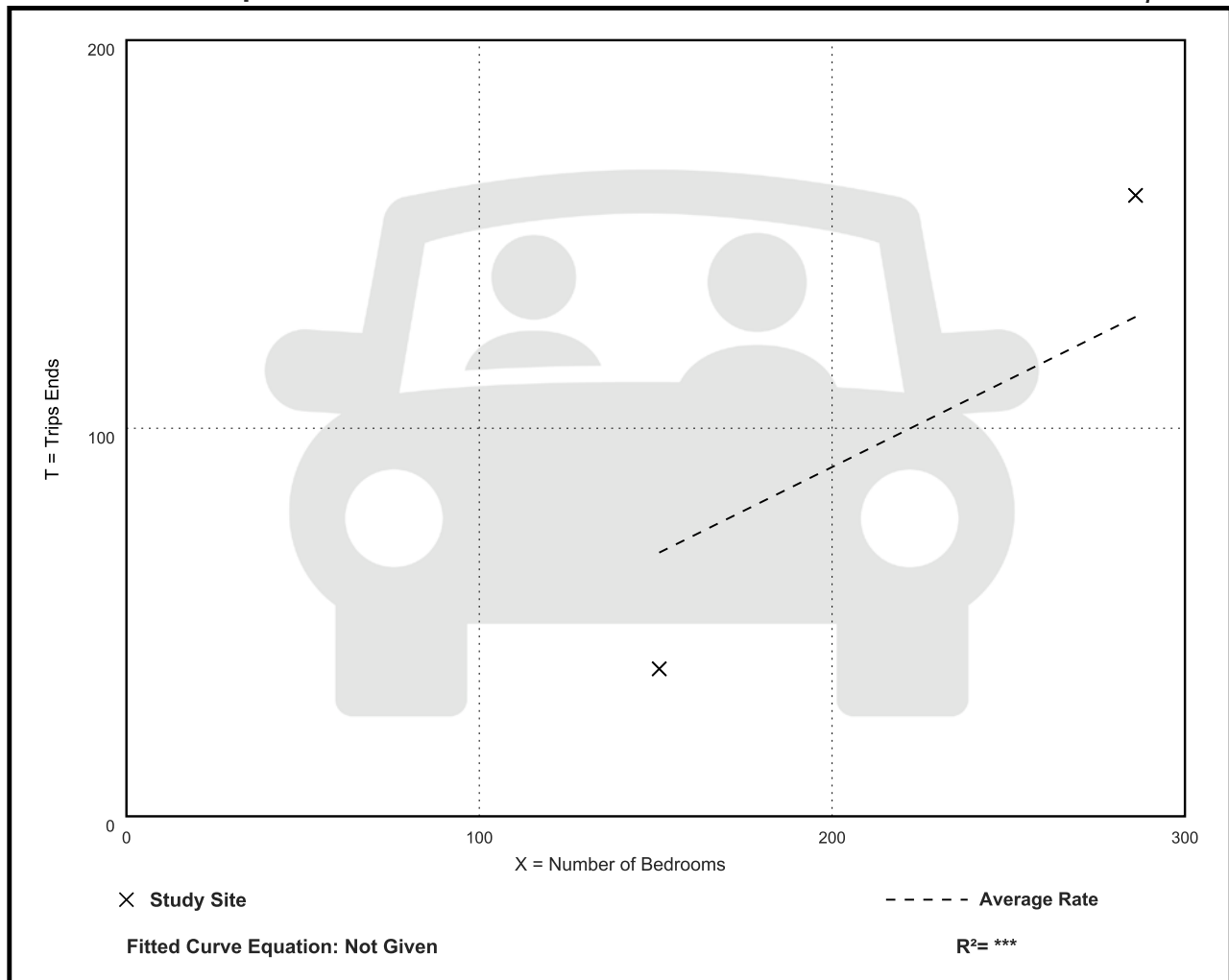
Directional Distribution: 37% entering, 63% exiting

Vehicle Trip Generation per Bedroom

Average Rate	Range of Rates	Standard Deviation
0.45	0.25 - 0.56	***

Data Plot and Equation

Caution – Small Sample Size



Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Bedrooms

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Bedrooms: 219

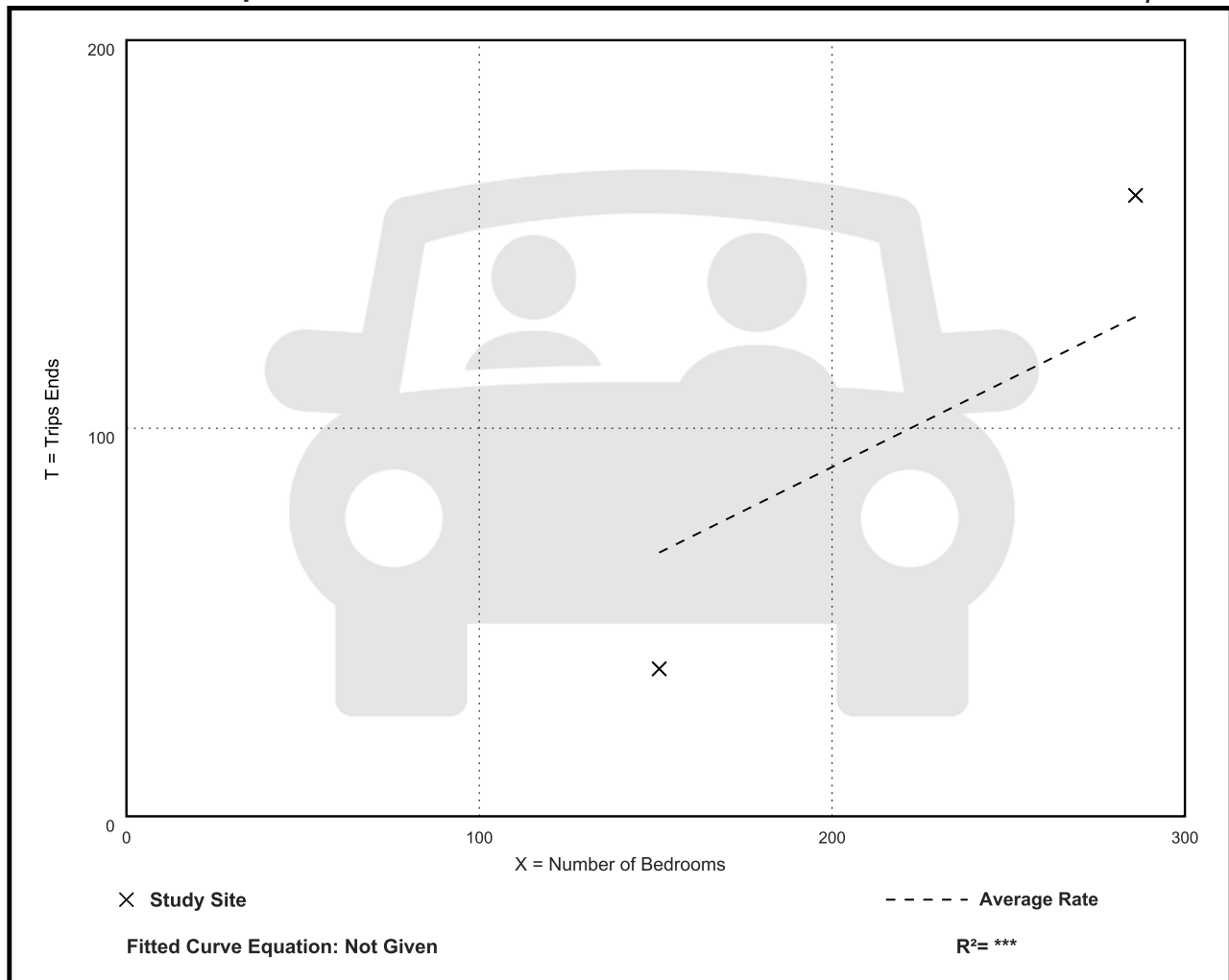
Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Bedroom

Average Rate	Range of Rates	Standard Deviation
0.45	0.25 - 0.56	***

Data Plot and Equation

Caution – Small Sample Size



Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Bedrooms

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Bedrooms: 219

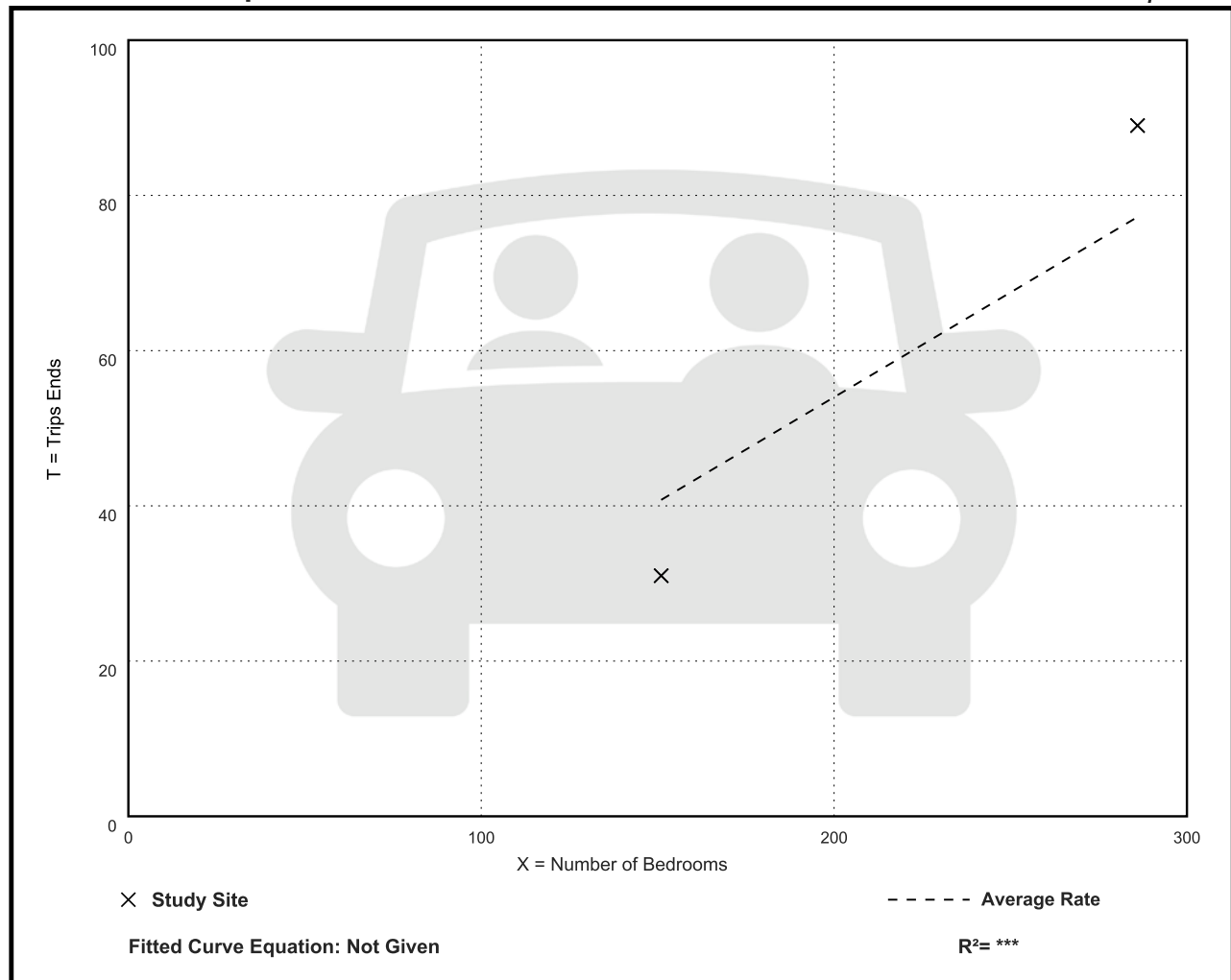
Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per Bedroom

Average Rate	Range of Rates	Standard Deviation
0.27	0.21 - 0.31	***

Data Plot and Equation

Caution – Small Sample Size



Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 5

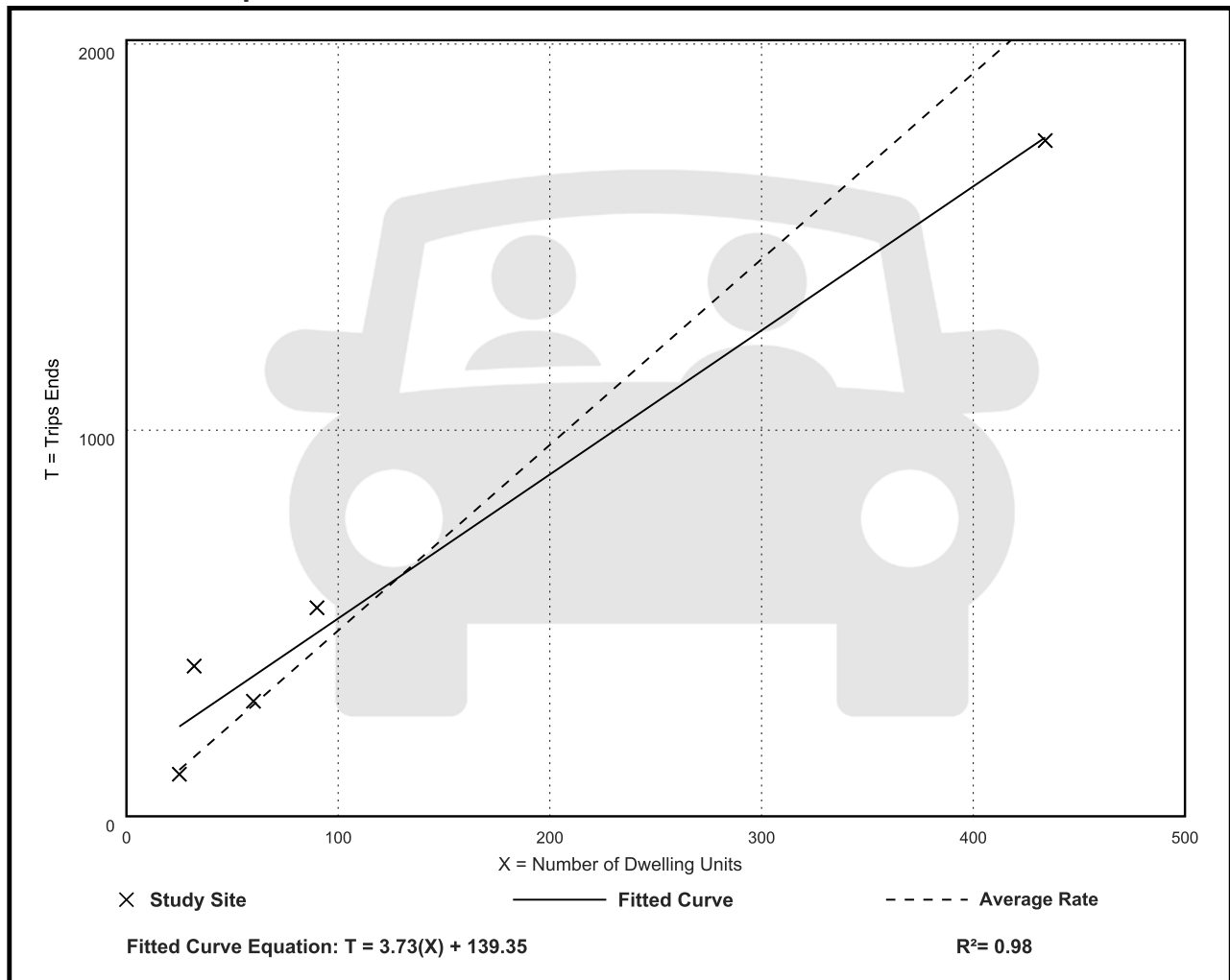
Avg. Num. of Dwelling Units: 128

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.81	4.03 - 12.16	2.03

Data Plot and Equation



Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 6

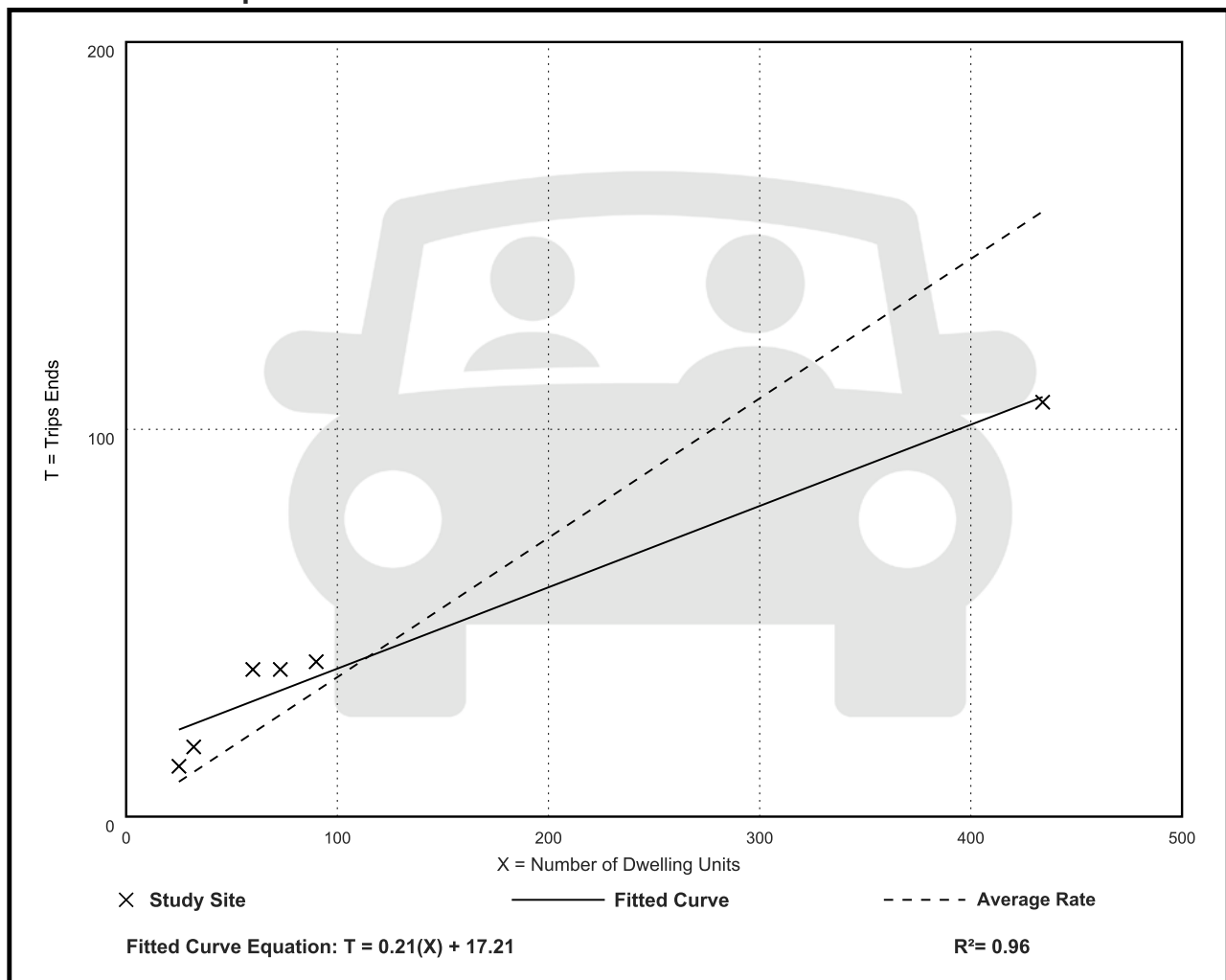
Avg. Num. of Dwelling Units: 119

Directional Distribution: 29% entering, 71% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.25 - 0.63	0.16

Data Plot and Equation



Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 8

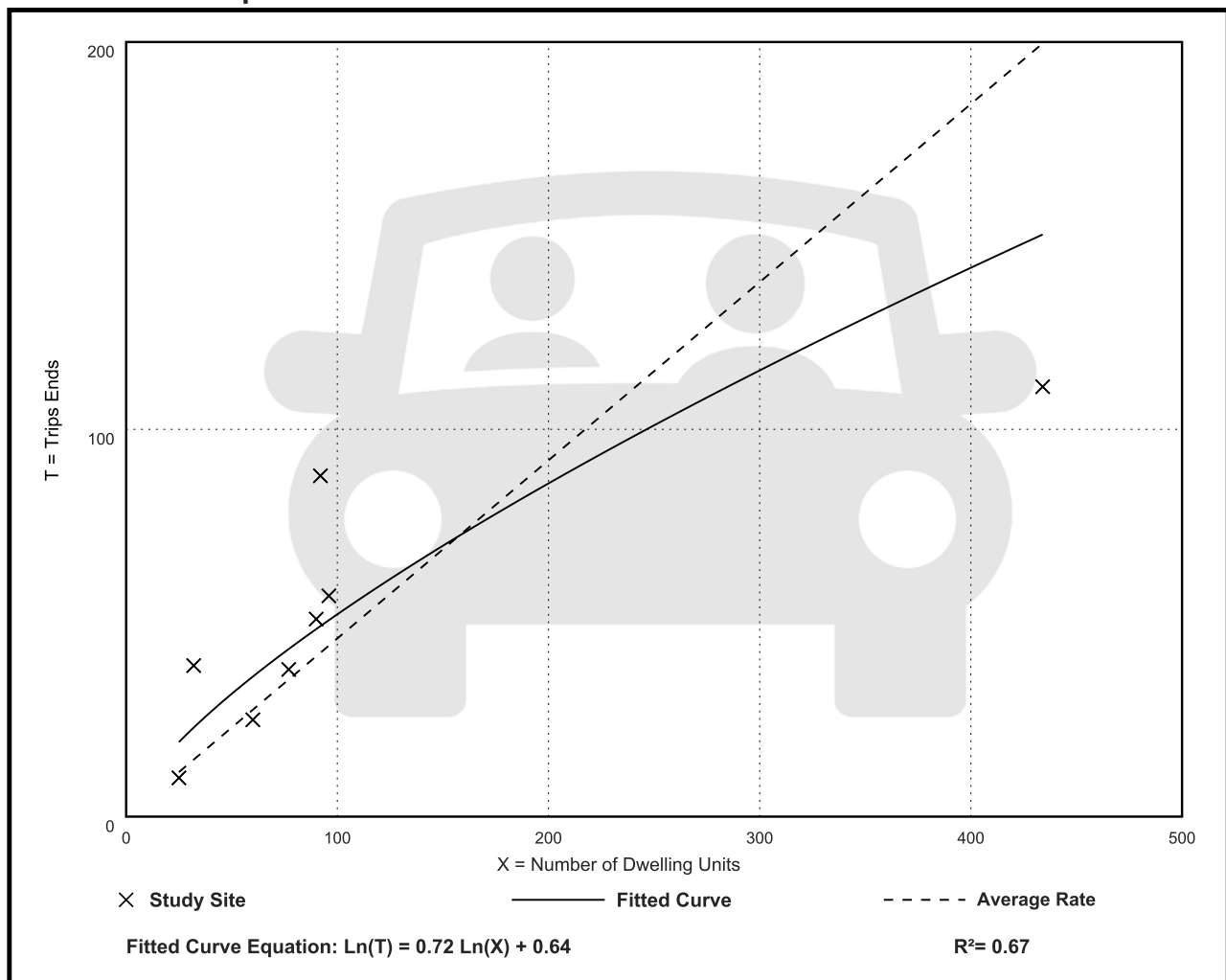
Avg. Num. of Dwelling Units: 113

Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.46	0.26 - 1.22	0.28

Data Plot and Equation



Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 6

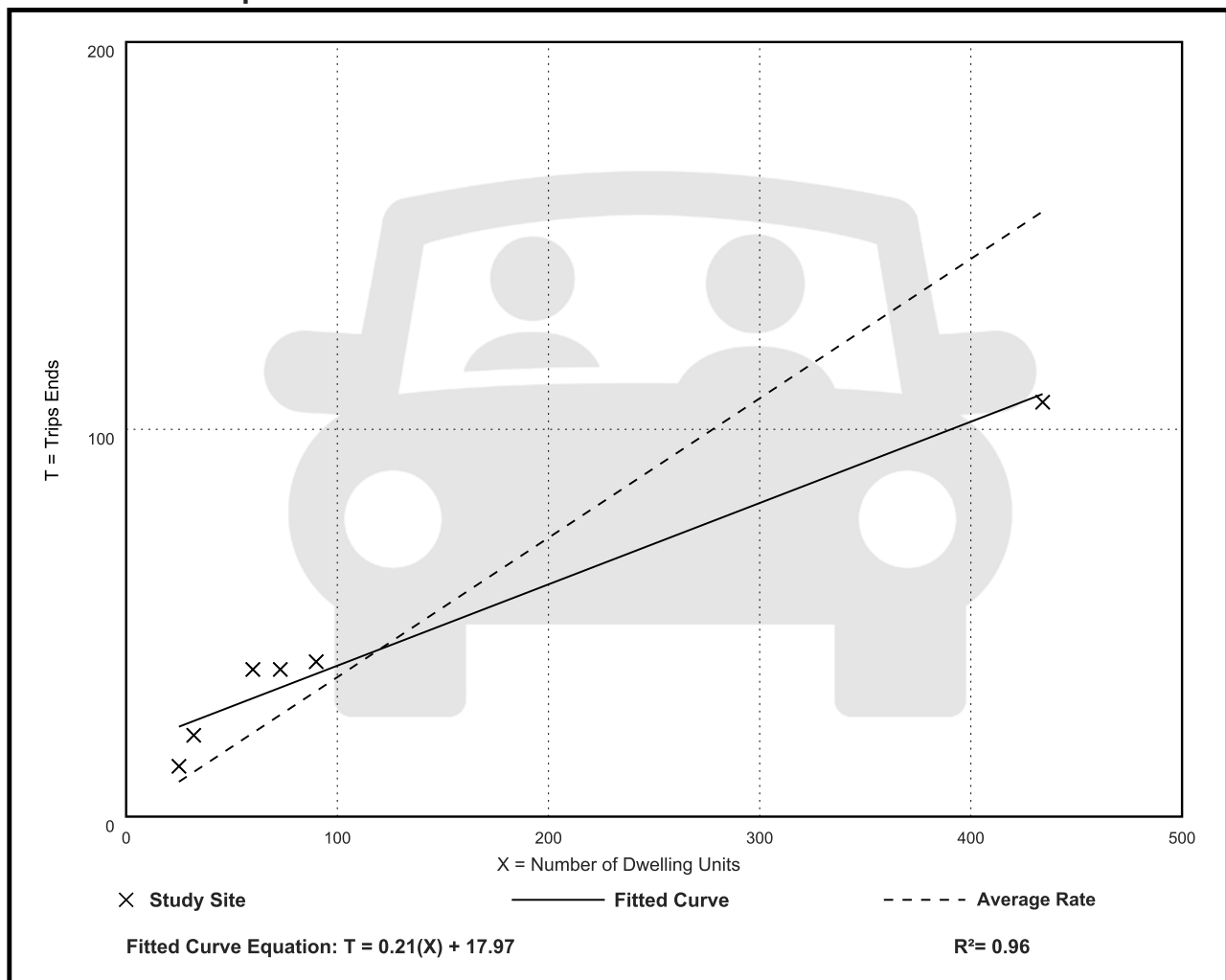
Avg. Num. of Dwelling Units: 119

Directional Distribution: 26% entering, 74% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.25 - 0.66	0.16

Data Plot and Equation



Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 10

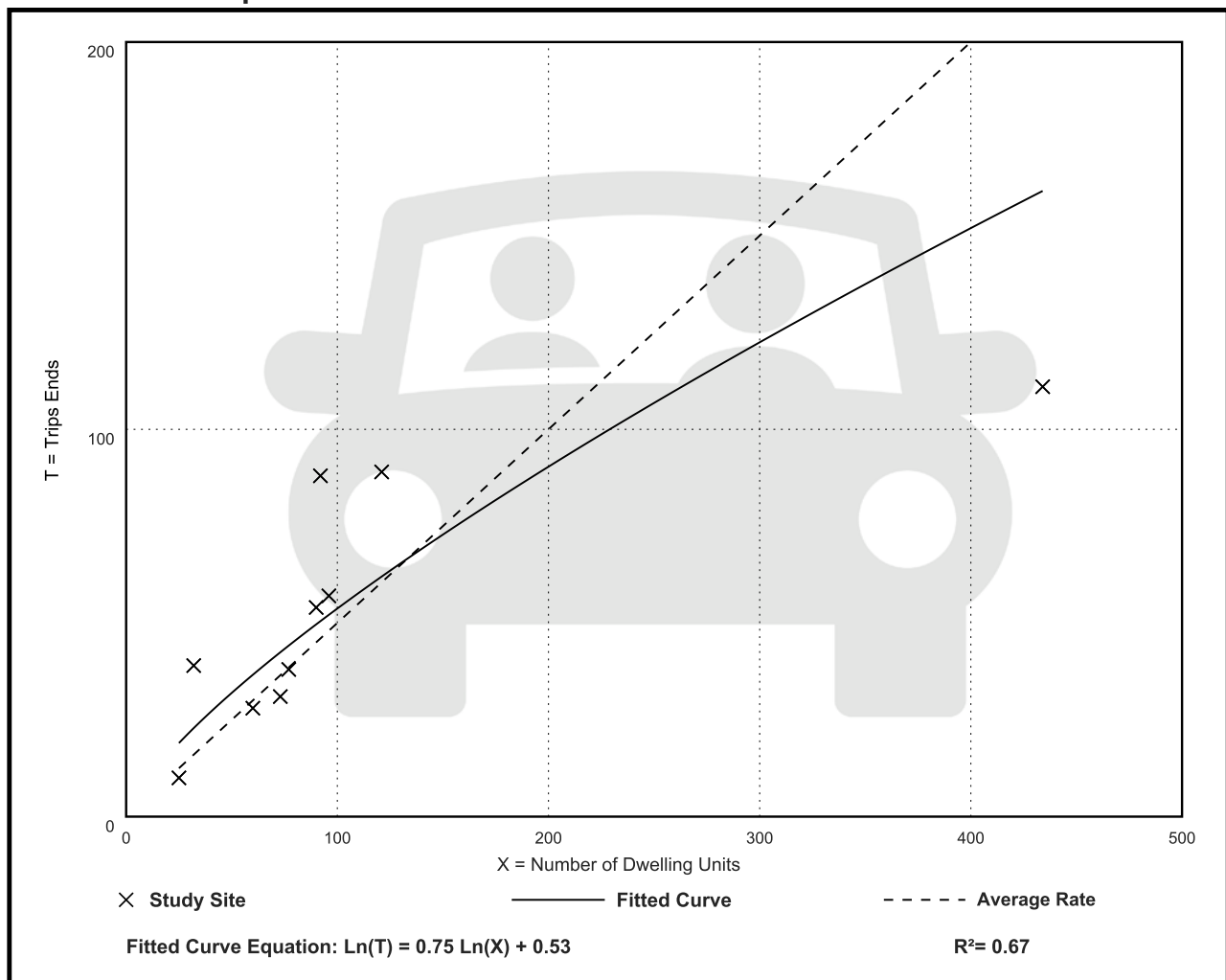
Avg. Num. of Dwelling Units: 110

Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.50	0.26 - 1.22	0.27

Data Plot and Equation



Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Dwelling Units
On a: Saturday

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Dwelling Units: 32

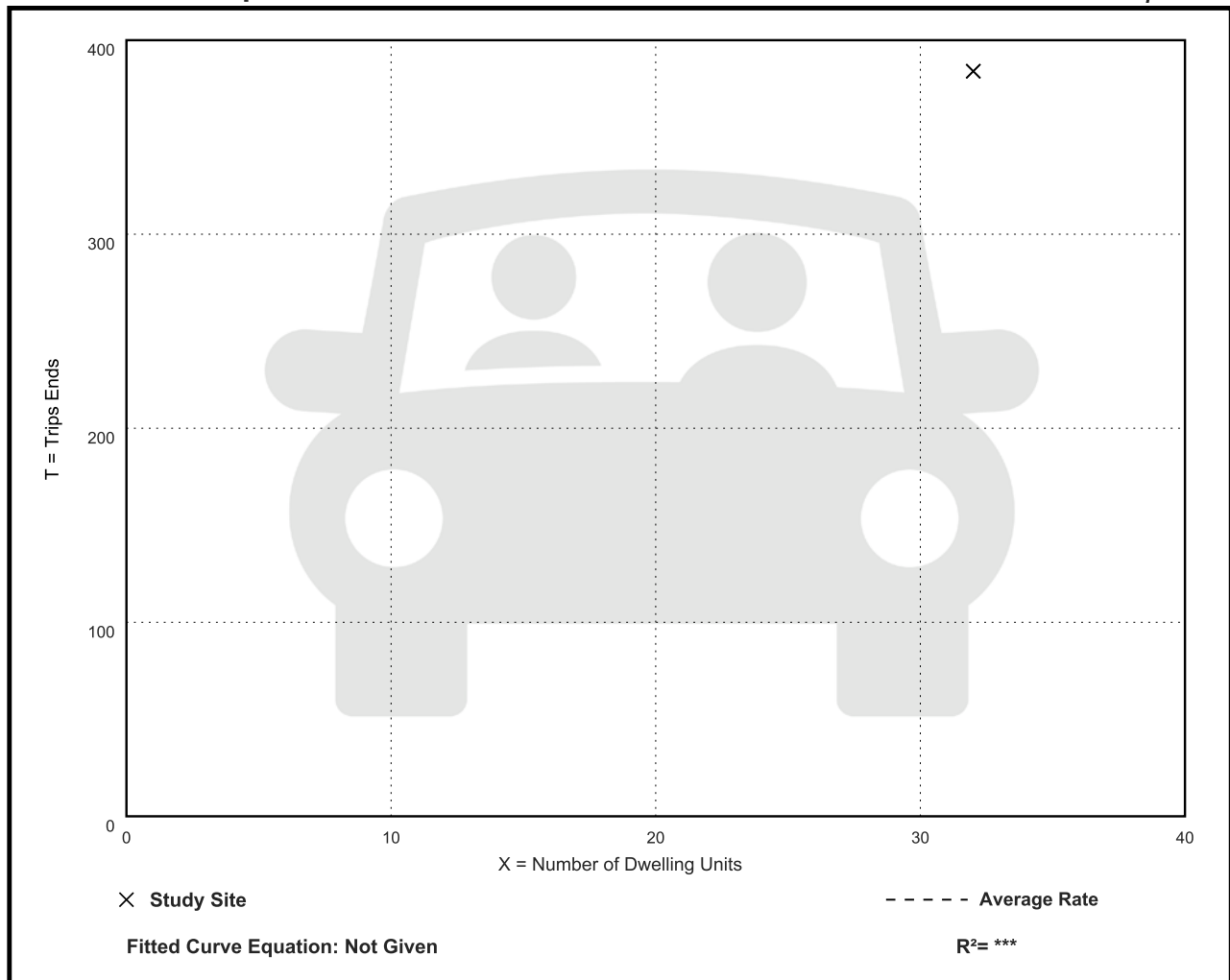
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
12.00	12.00 - 12.00	***

Data Plot and Equation

Caution – Small Sample Size



Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Dwelling Units

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Dwelling Units: 32

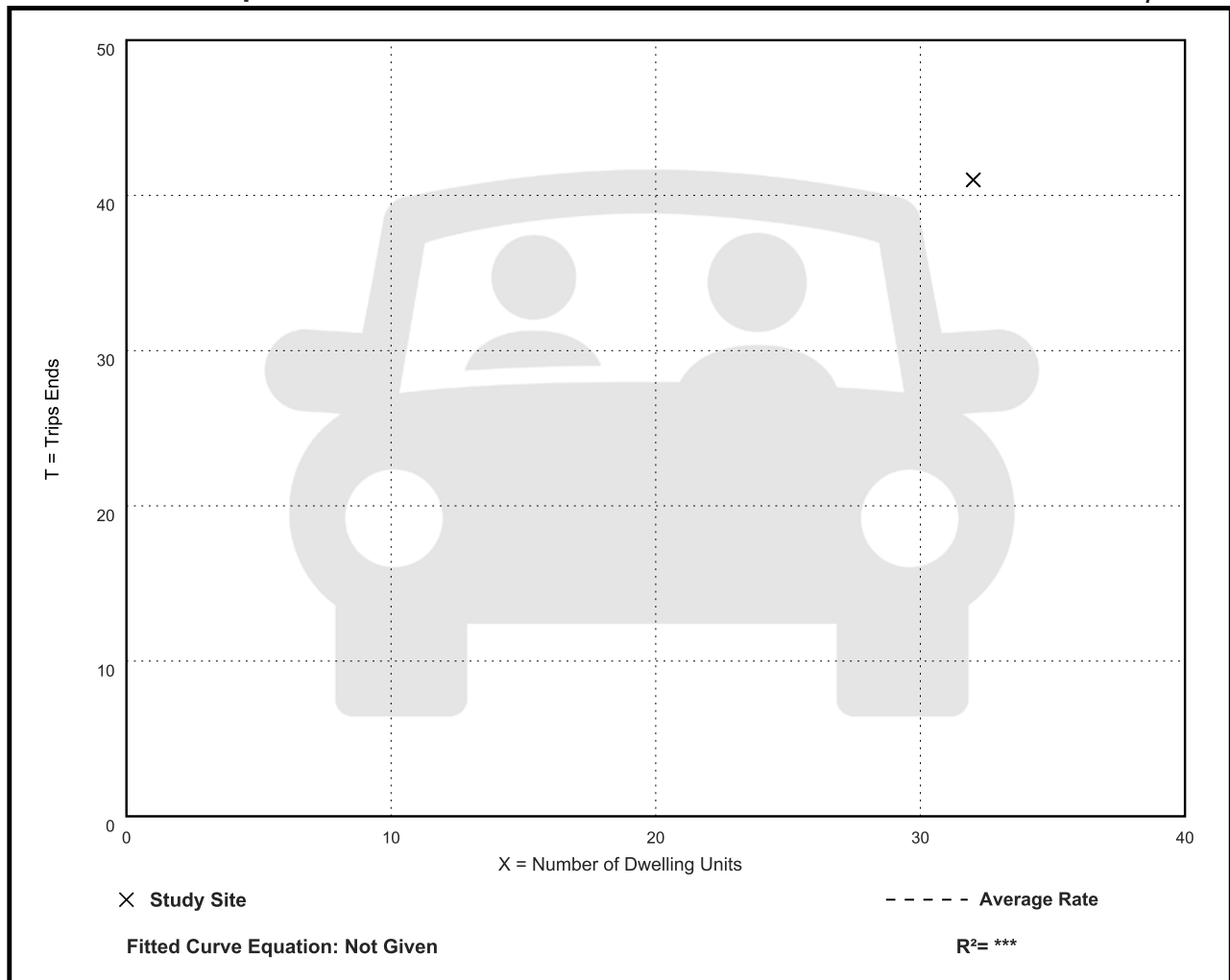
Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
1.28	1.28 - 1.28	***

Data Plot and Equation

Caution – Small Sample Size



Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Dwelling Units
On a: Sunday

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Dwelling Units: 32

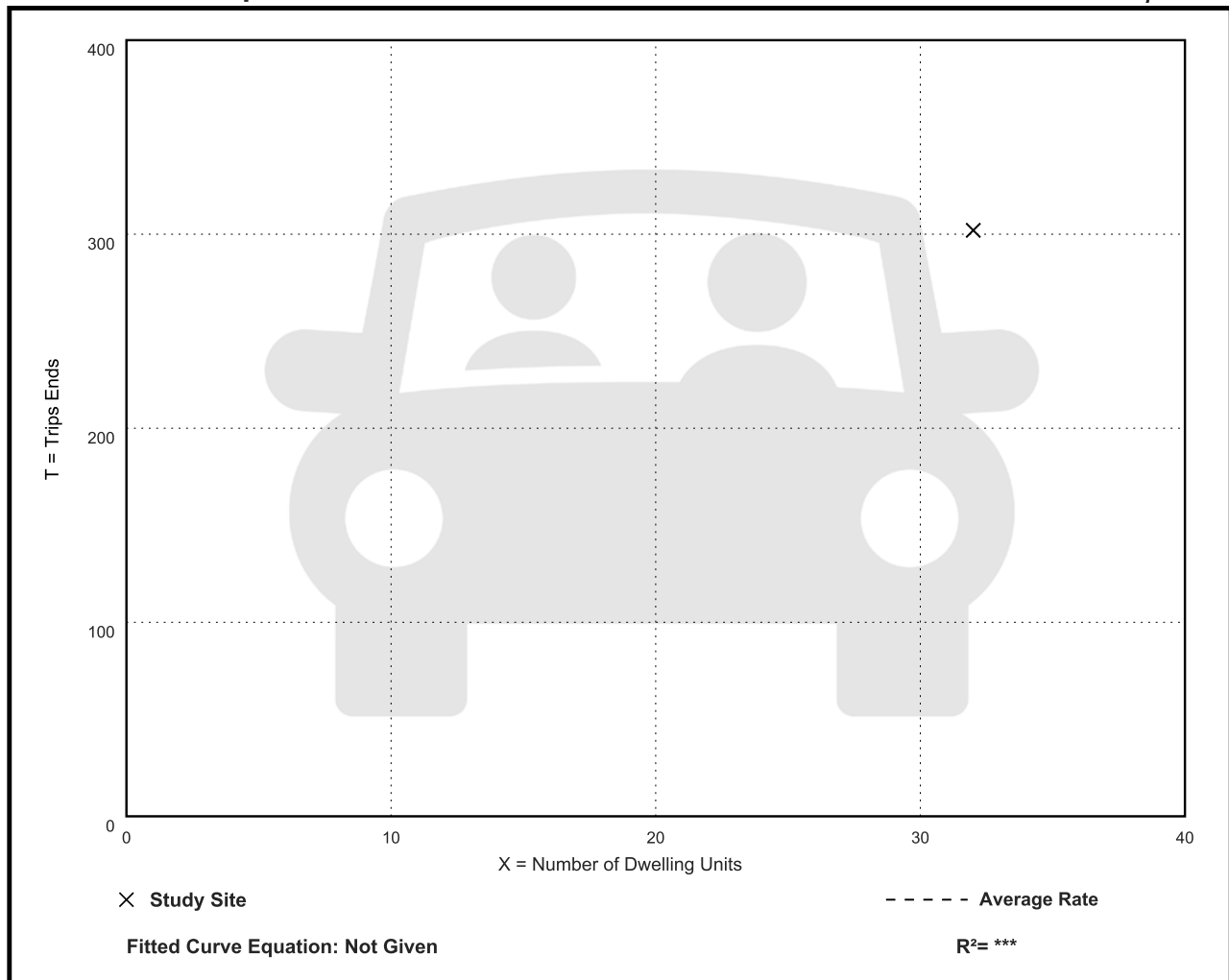
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.44	9.44 - 9.44	***

Data Plot and Equation

Caution – Small Sample Size



Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Dwelling Units

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Dwelling Units: 32

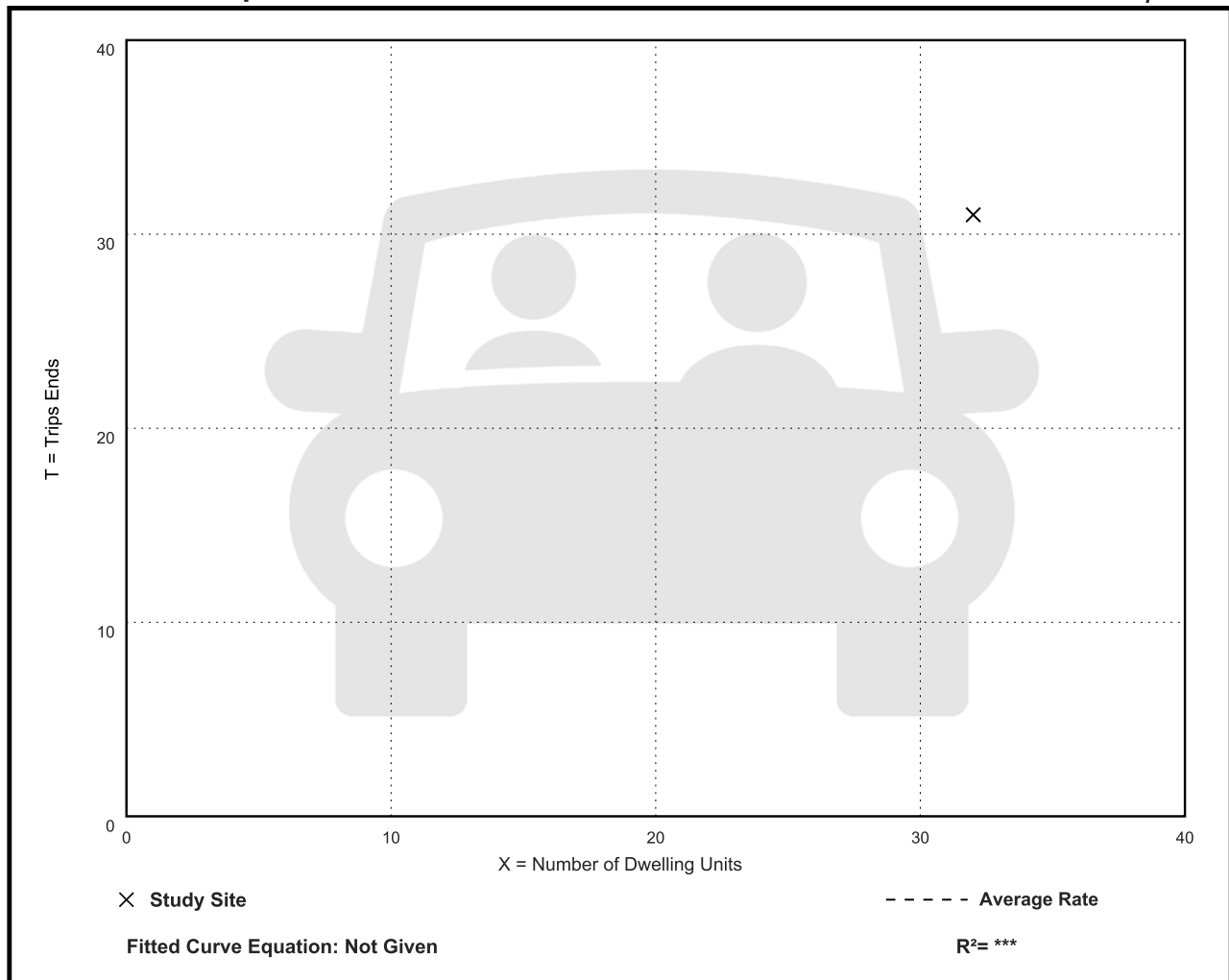
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.97	0.97 - 0.97	***

Data Plot and Equation

Caution – Small Sample Size



Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Residents
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Residents: 140

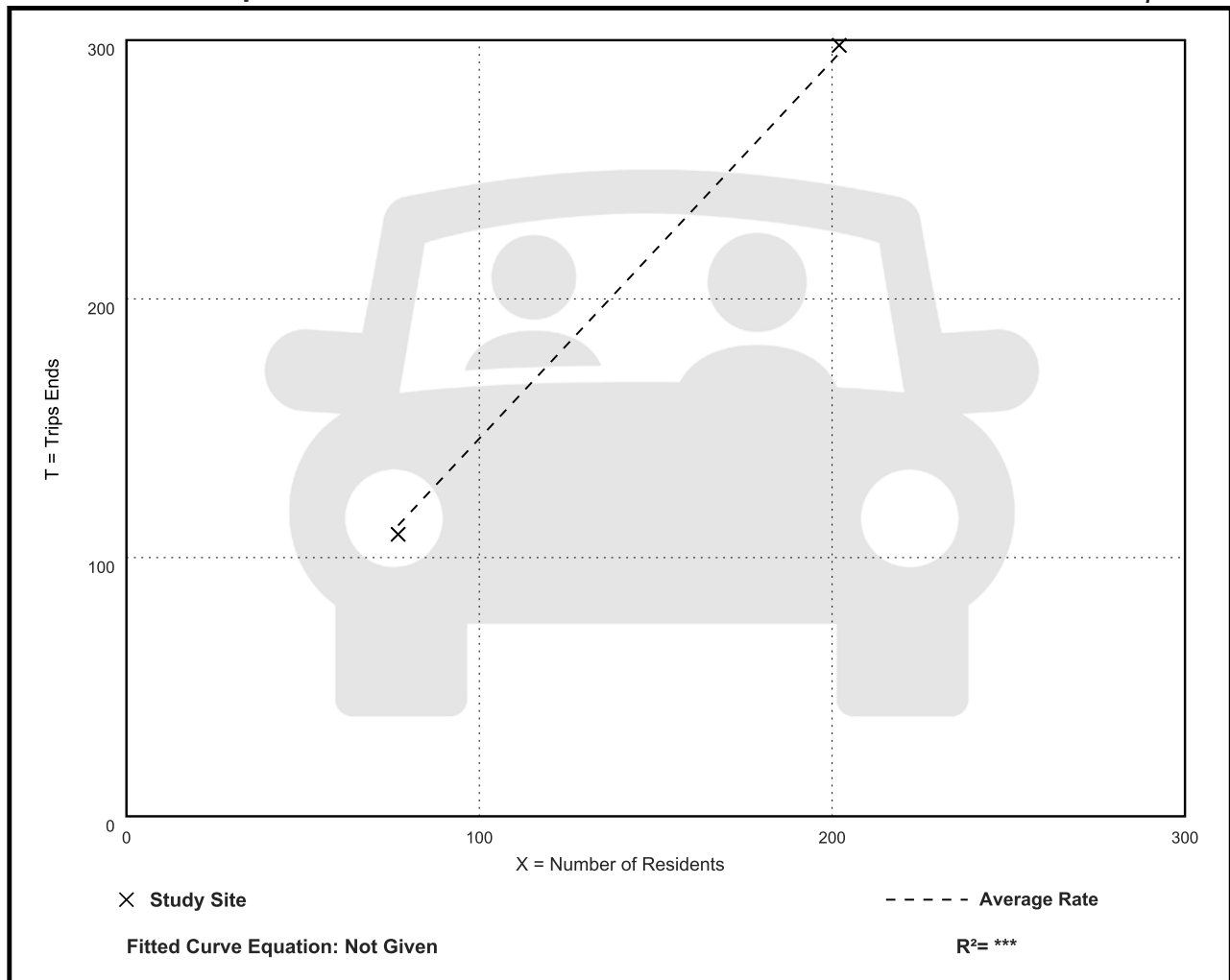
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
1.46	1.42 - 1.48	***

Data Plot and Equation

Caution – Small Sample Size



Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Residents

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Residents: 140

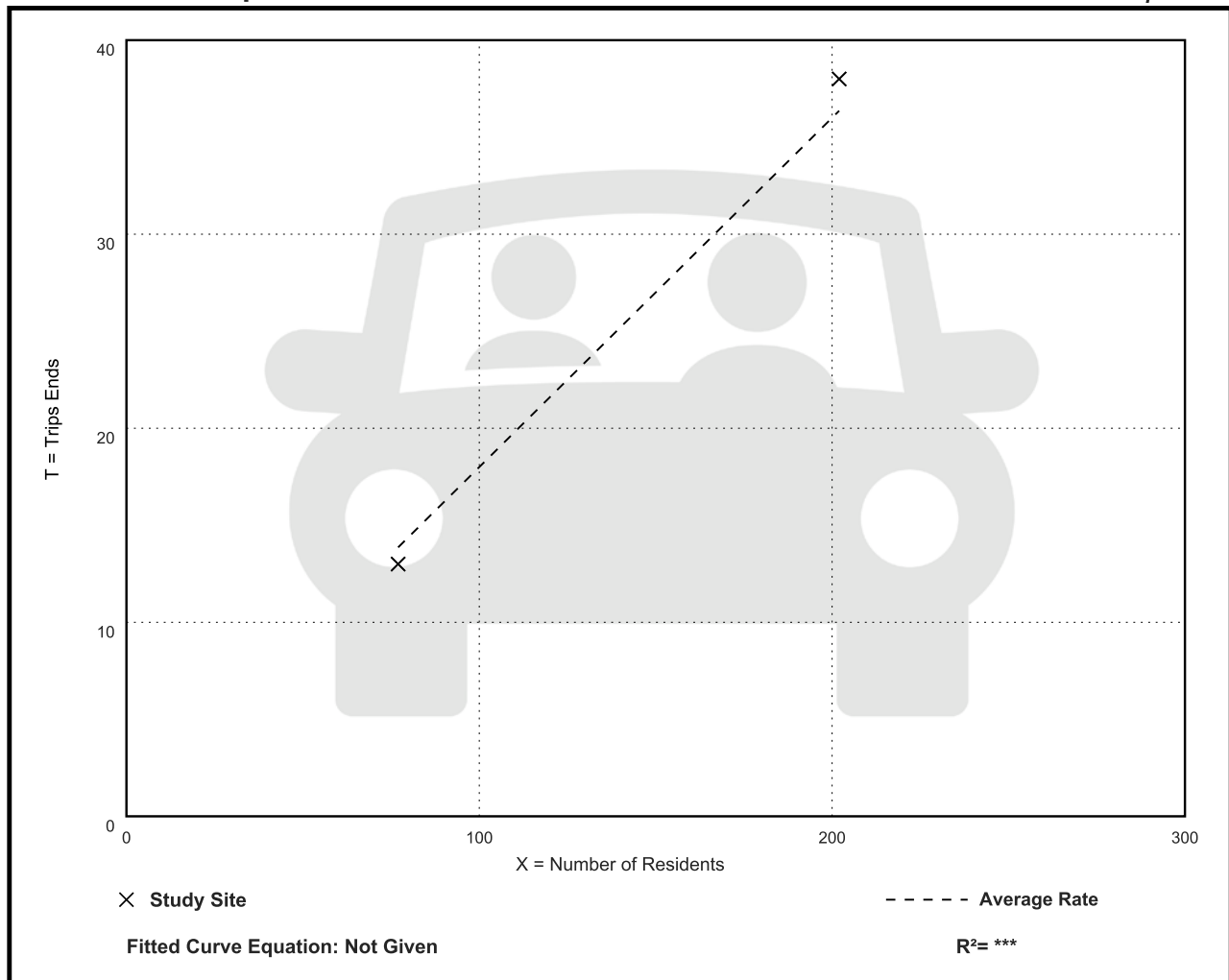
Directional Distribution: 31% entering, 69% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.18	0.17 - 0.19	***

Data Plot and Equation

Caution – Small Sample Size



Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Residents

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Residents: 140

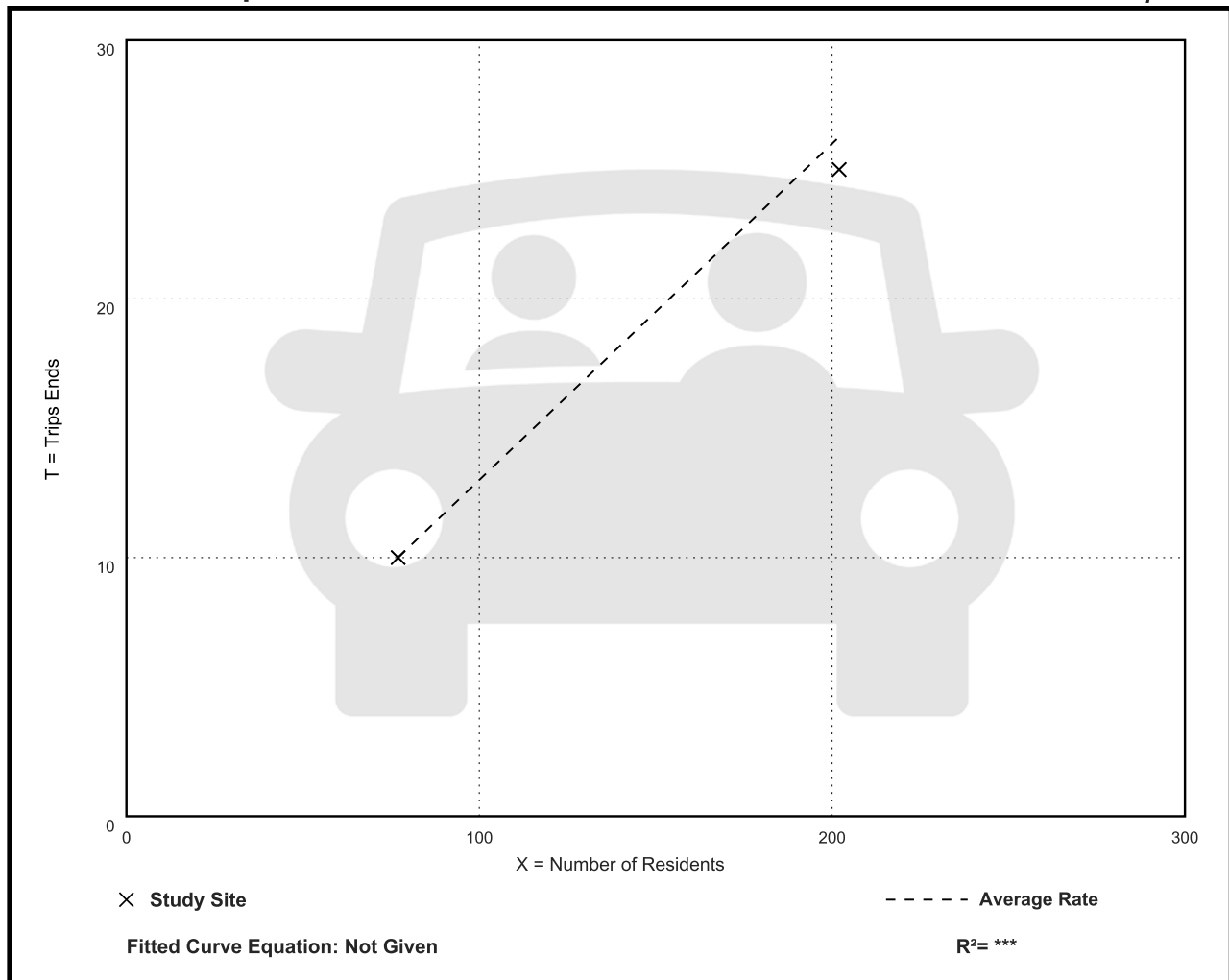
Directional Distribution: 71% entering, 29% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.13	0.12 - 0.13	***

Data Plot and Equation

Caution – Small Sample Size



Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Residents

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Residents: 140

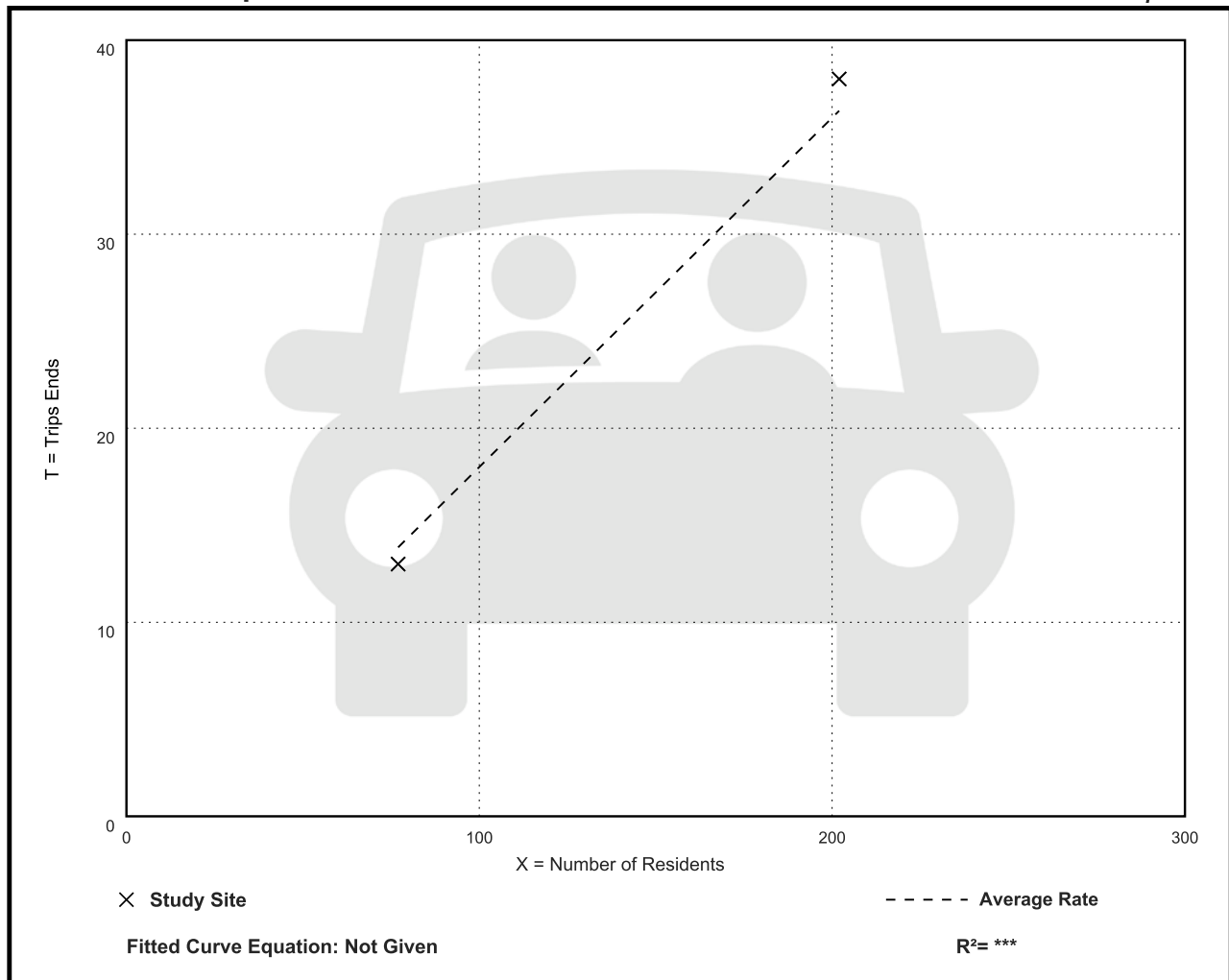
Directional Distribution: 31% entering, 69% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.18	0.17 - 0.19	***

Data Plot and Equation

Caution – Small Sample Size



Affordable Housing - Income Limits (223)

Vehicle Trip Ends vs: Residents

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Residents: 140

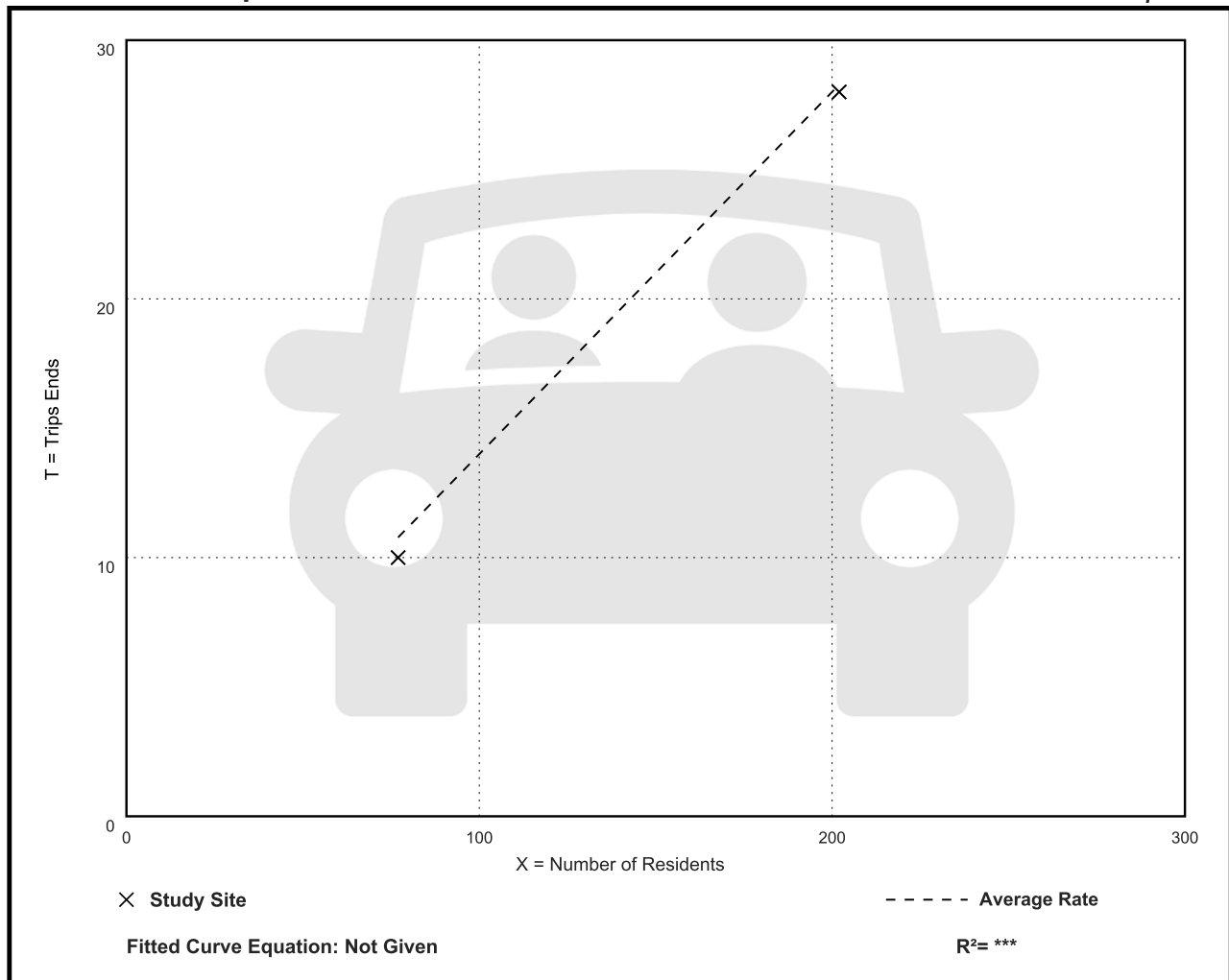
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.14	0.13 - 0.14	***

Data Plot and Equation

Caution – Small Sample Size



Affordable Housing - Senior (223)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 3

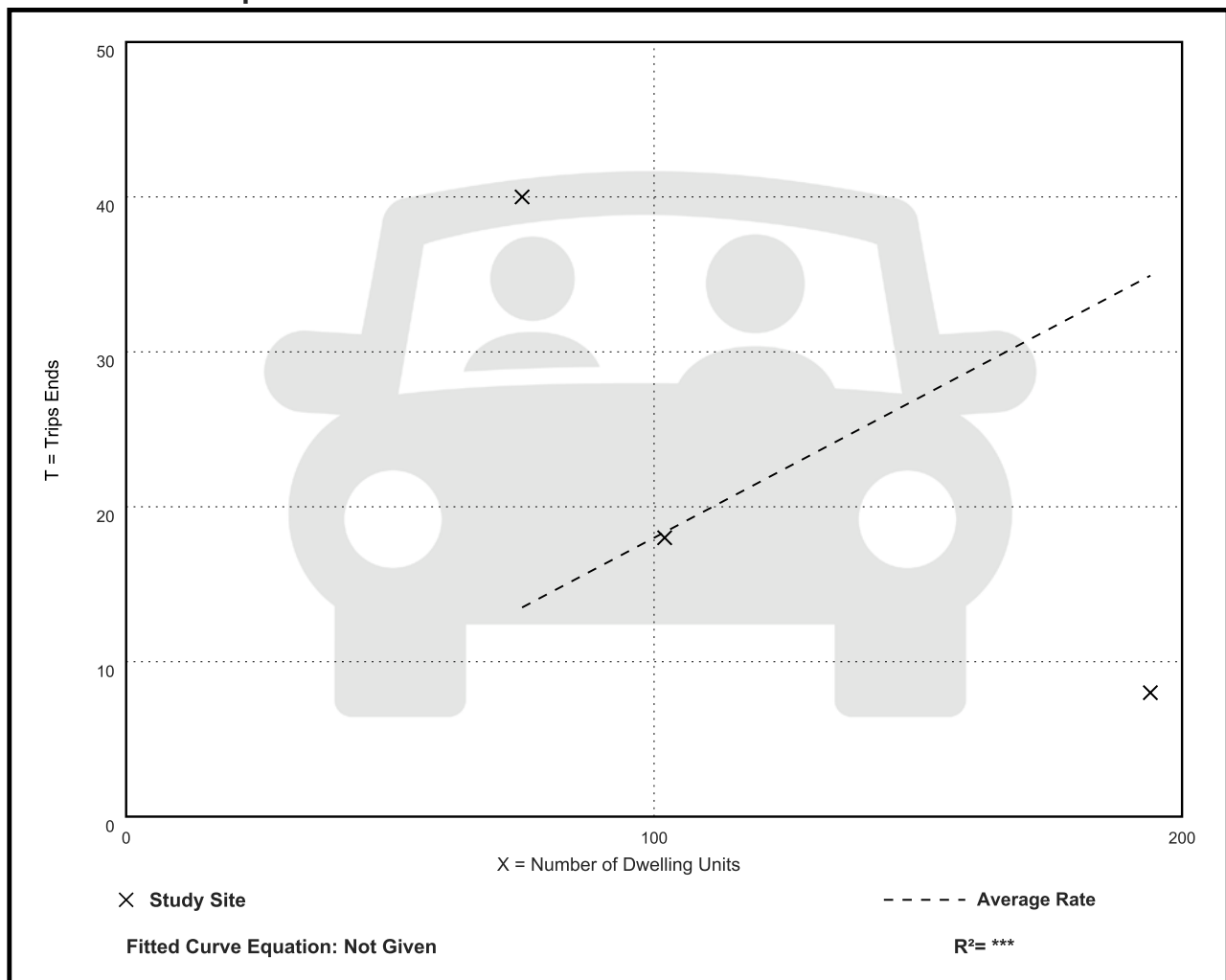
Avg. Num. of Dwelling Units: 124

Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.18	0.04 - 0.53	0.23

Data Plot and Equation



Affordable Housing - Senior (223)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Dwelling Units: 148

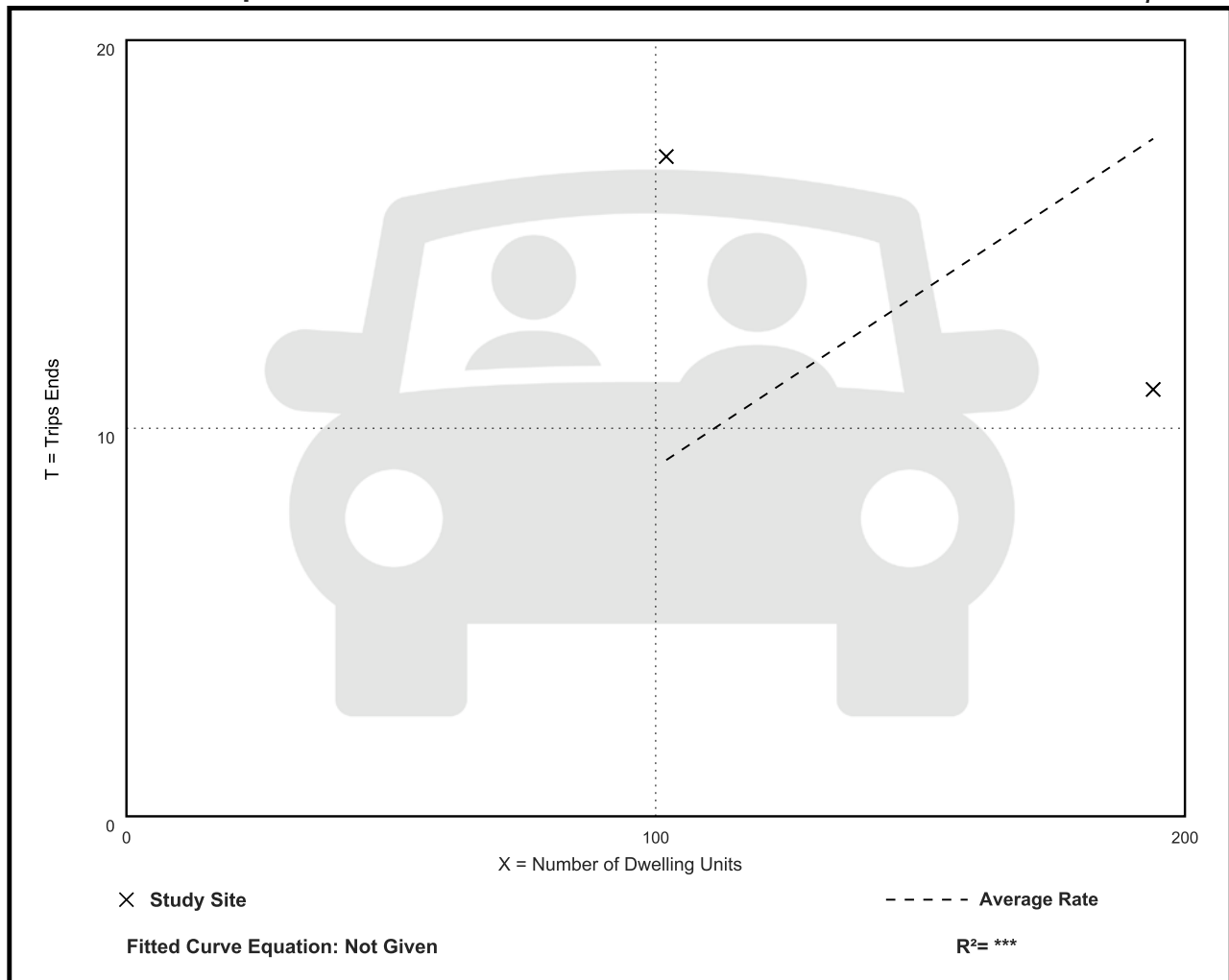
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.09	0.06 - 0.17	***

Data Plot and Equation

Caution – Small Sample Size



Affordable Housing - Senior (223)

Vehicle Trip Ends vs: Dwelling Units

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Dwelling Units: 194

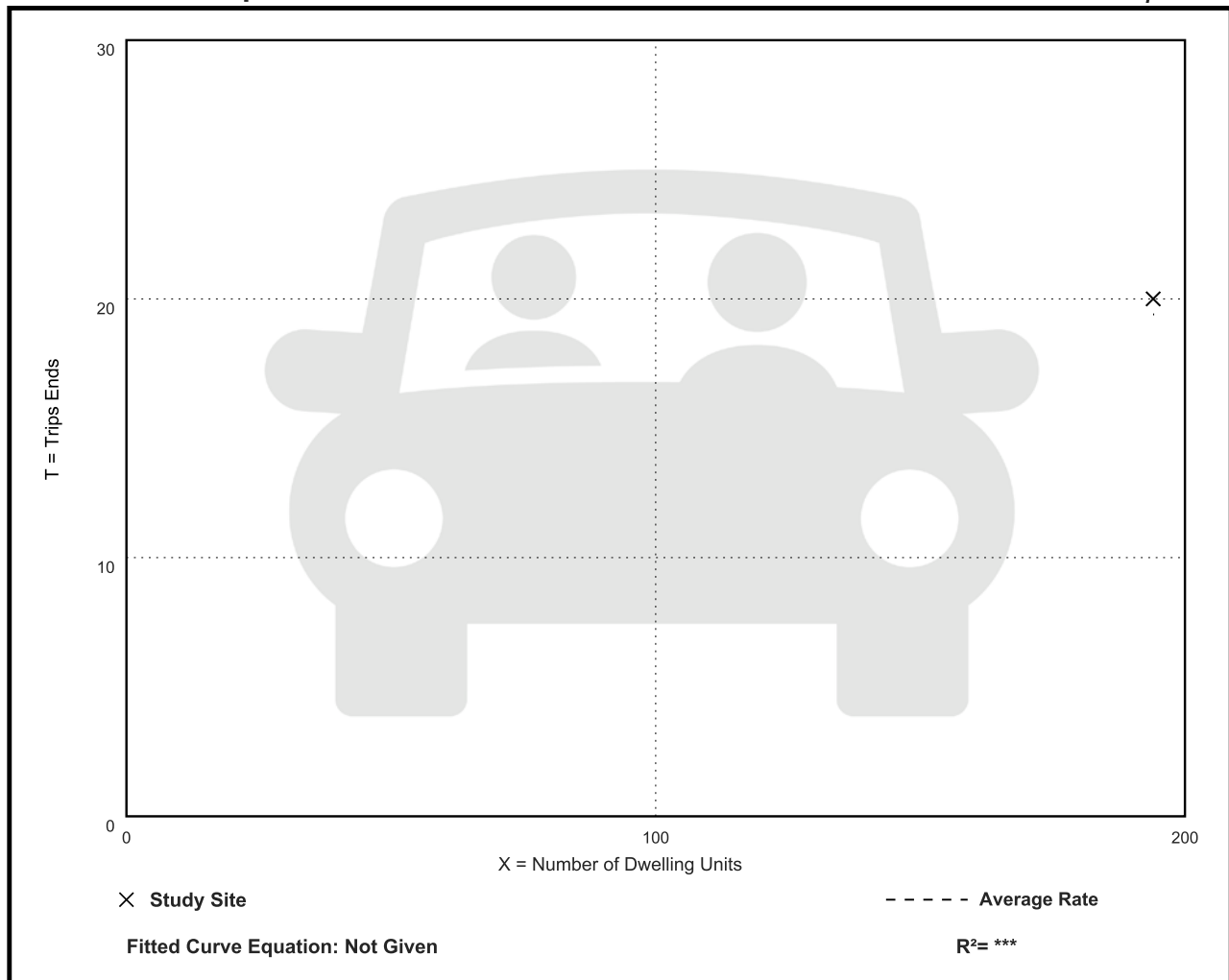
Directional Distribution: 64% entering, 36% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.10	0.10 - 0.10	***

Data Plot and Equation

Caution – Small Sample Size



Land Use: 822

Strip Retail Plaza (<40k)

Description

A strip retail plaza is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has less than 40,000 square feet of gross leasable area (GLA). Because a strip retail plaza is open-air, the GLA is the same as the gross floor area of the building.

The 40,000 square feet GFA threshold between strip retail plaza and shopping plaza (Land Use 821) was selected based on an examination of the overall shopping center/plaza database. No shopping plaza with a supermarket as its anchor is smaller than 40,000 square feet GLA.

Shopping center (>150k) (Land use 820), shopping plaza (40-150k) (Land Use 821), and factory outlet center (Land Use 823) are related uses.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Delaware, Florida, New Jersey, Ontario (CAN), South Dakota, Vermont, Washington, and Wisconsin.

Source Numbers

304, 358, 423, 428, 437, 507, 715, 728, 936, 960, 961, 974, 1009

Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 4

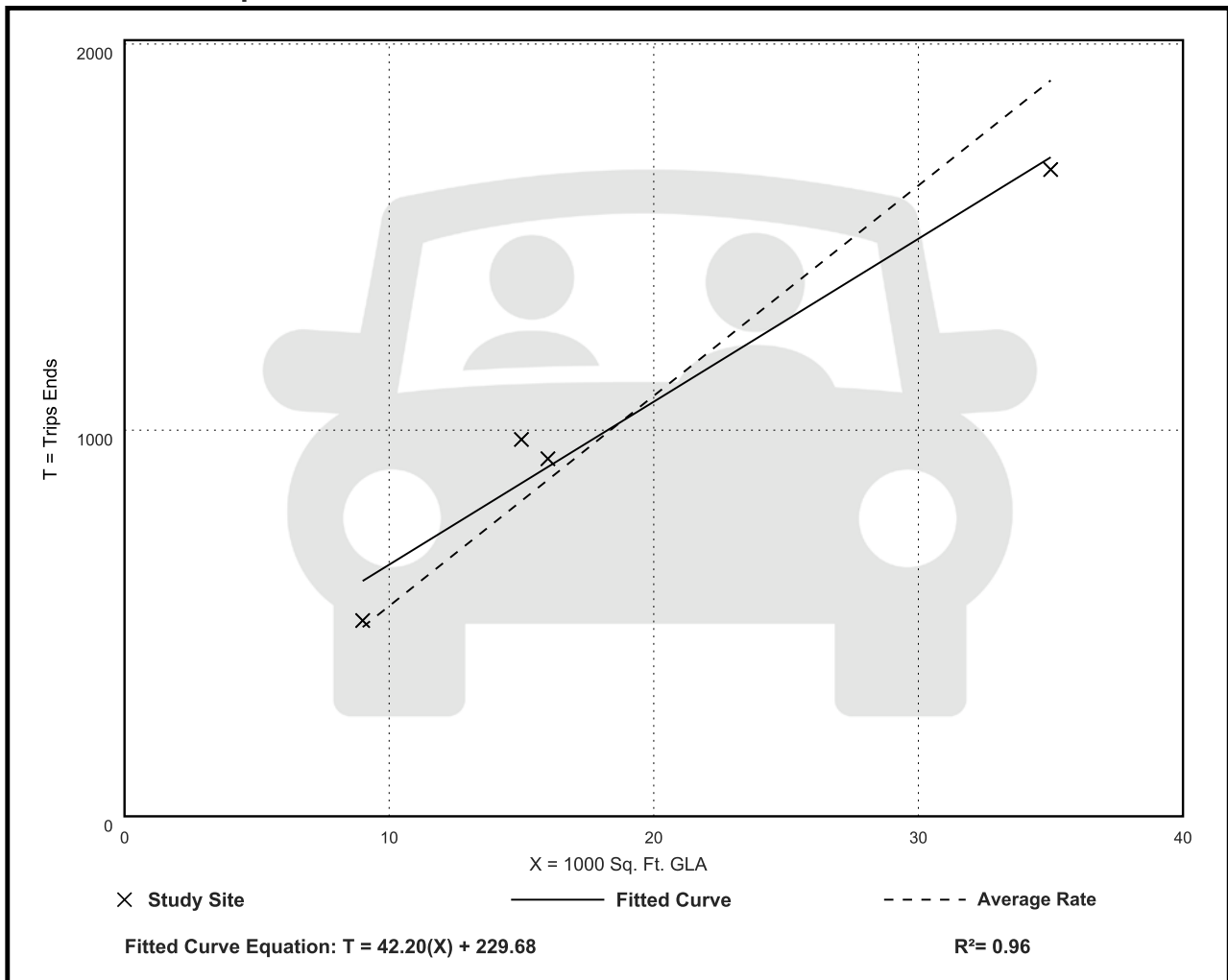
Avg. 1000 Sq. Ft. GLA: 19

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
54.45	47.86 - 65.07	7.81

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 5

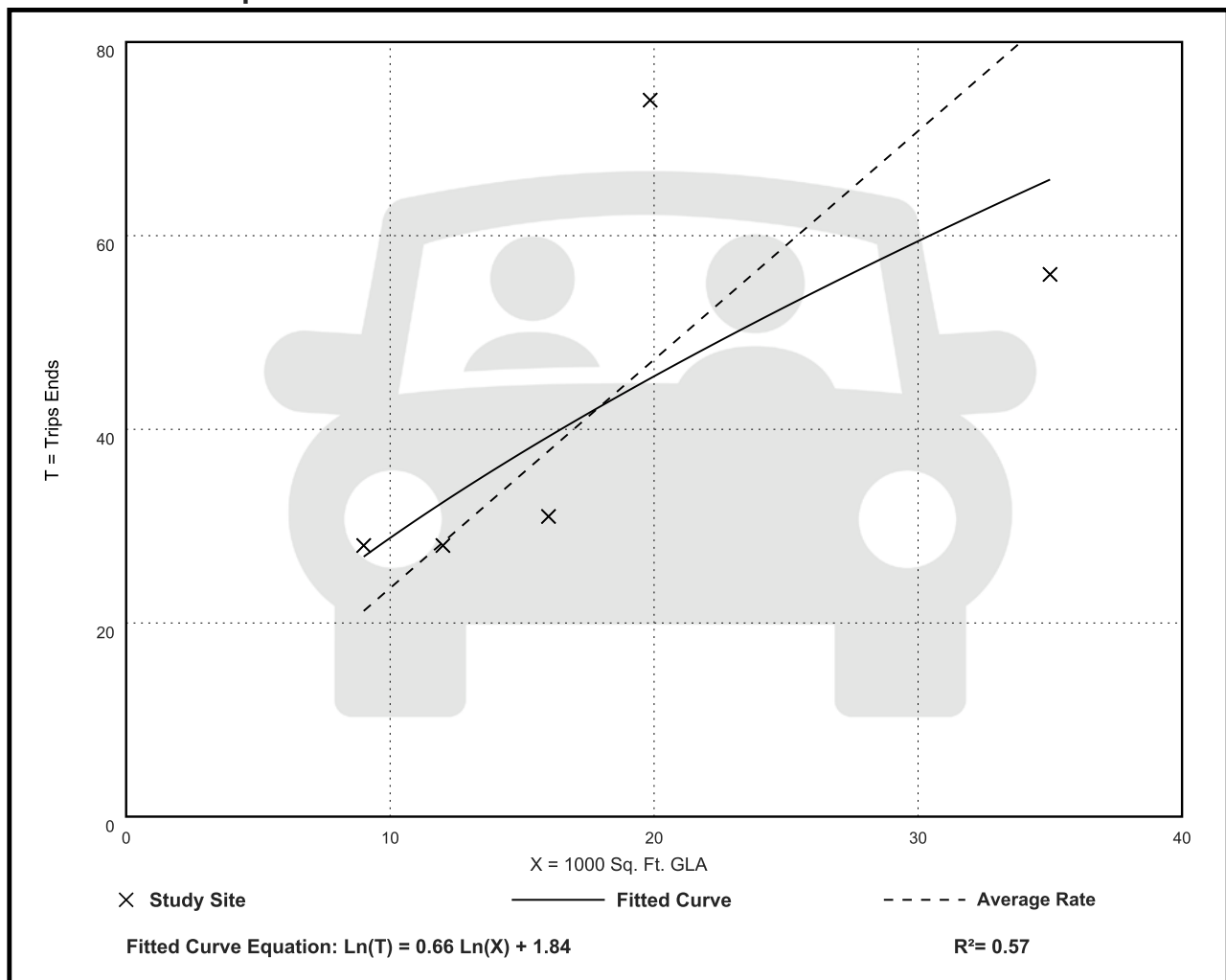
Avg. 1000 Sq. Ft. GLA: 18

Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
2.36	1.60 - 3.73	0.94

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 25

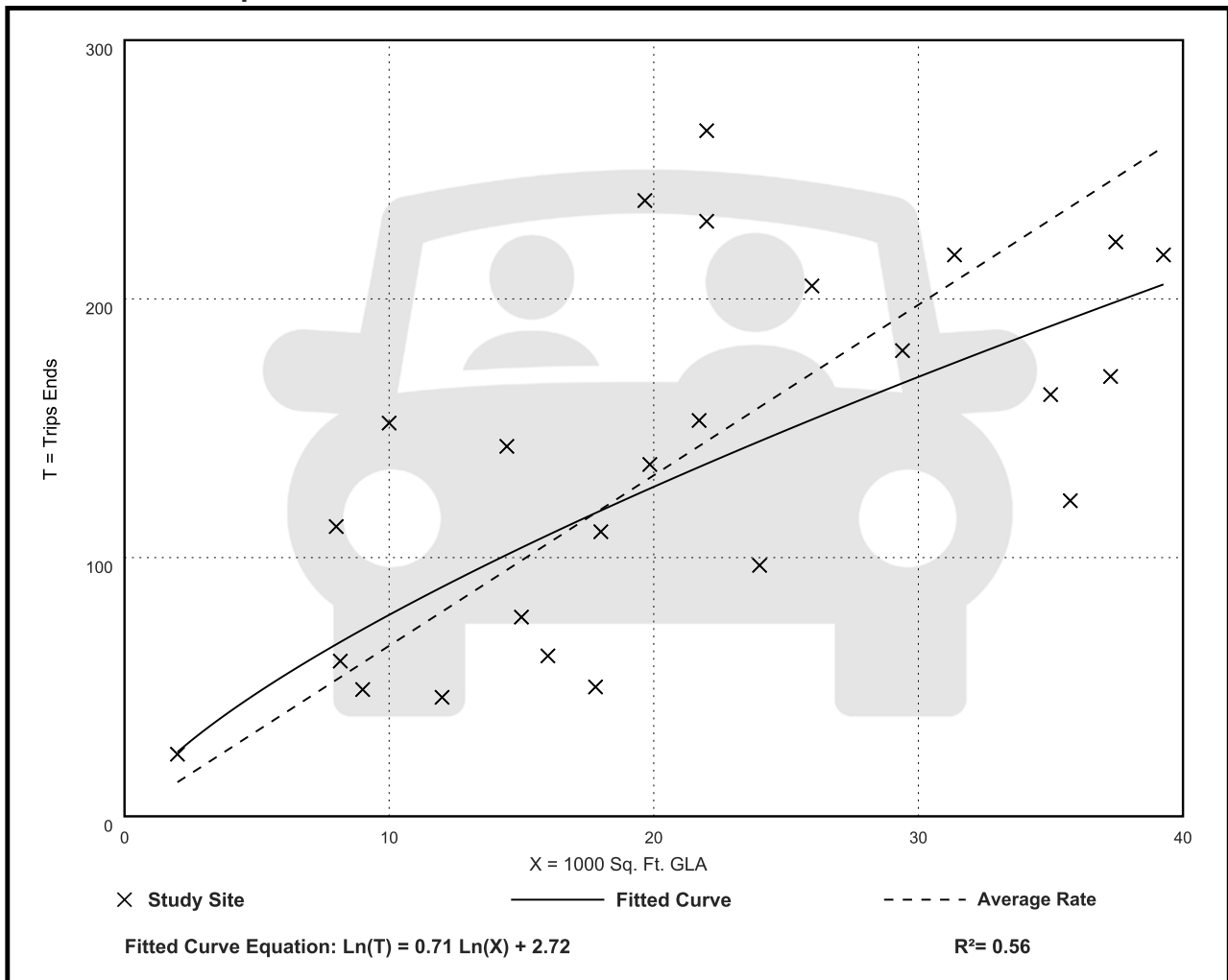
Avg. 1000 Sq. Ft. GLA: 21

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.59	2.81 - 15.20	2.94

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 6

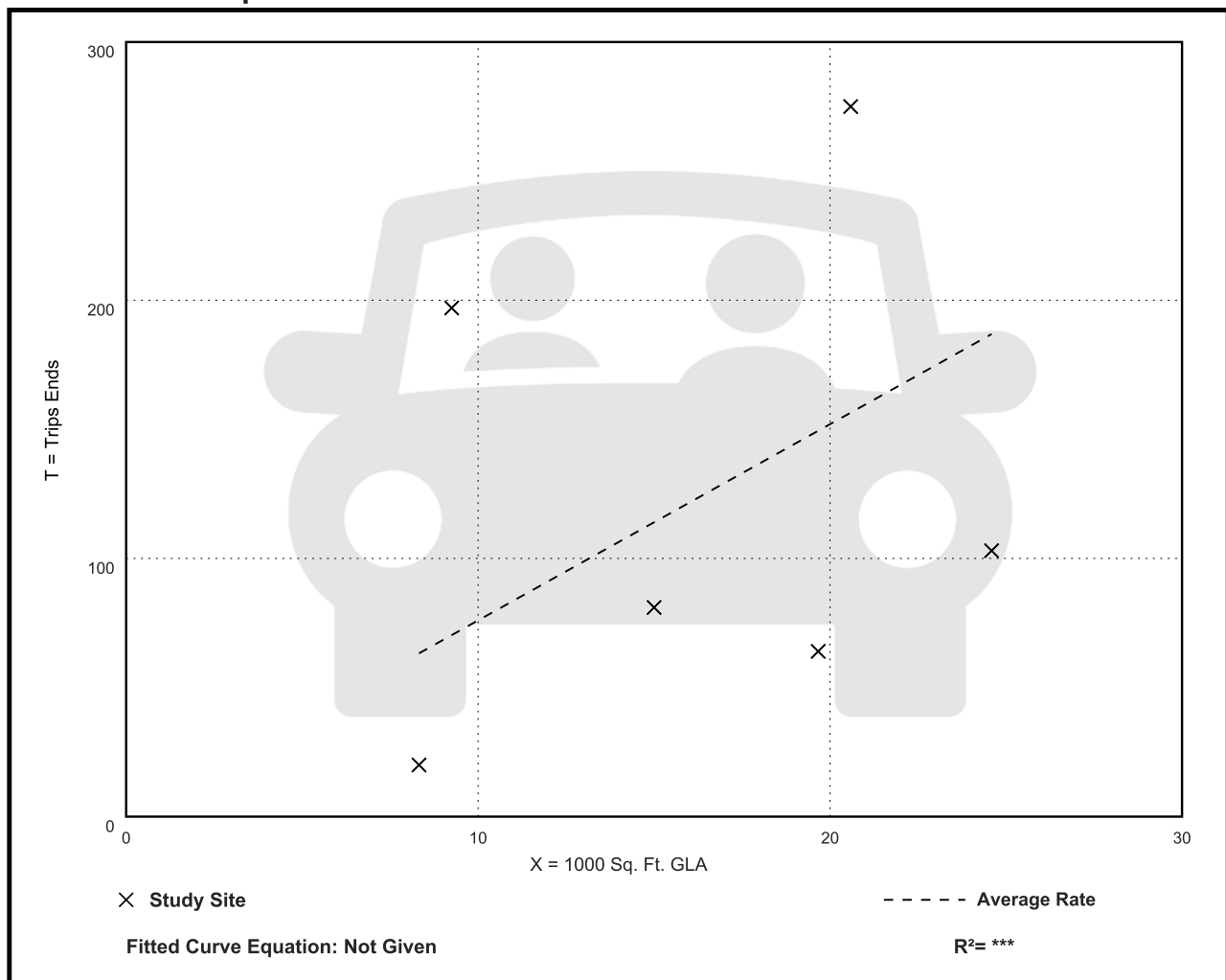
Avg. 1000 Sq. Ft. GLA: 16

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
7.60	2.40 - 21.30	6.45

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 5

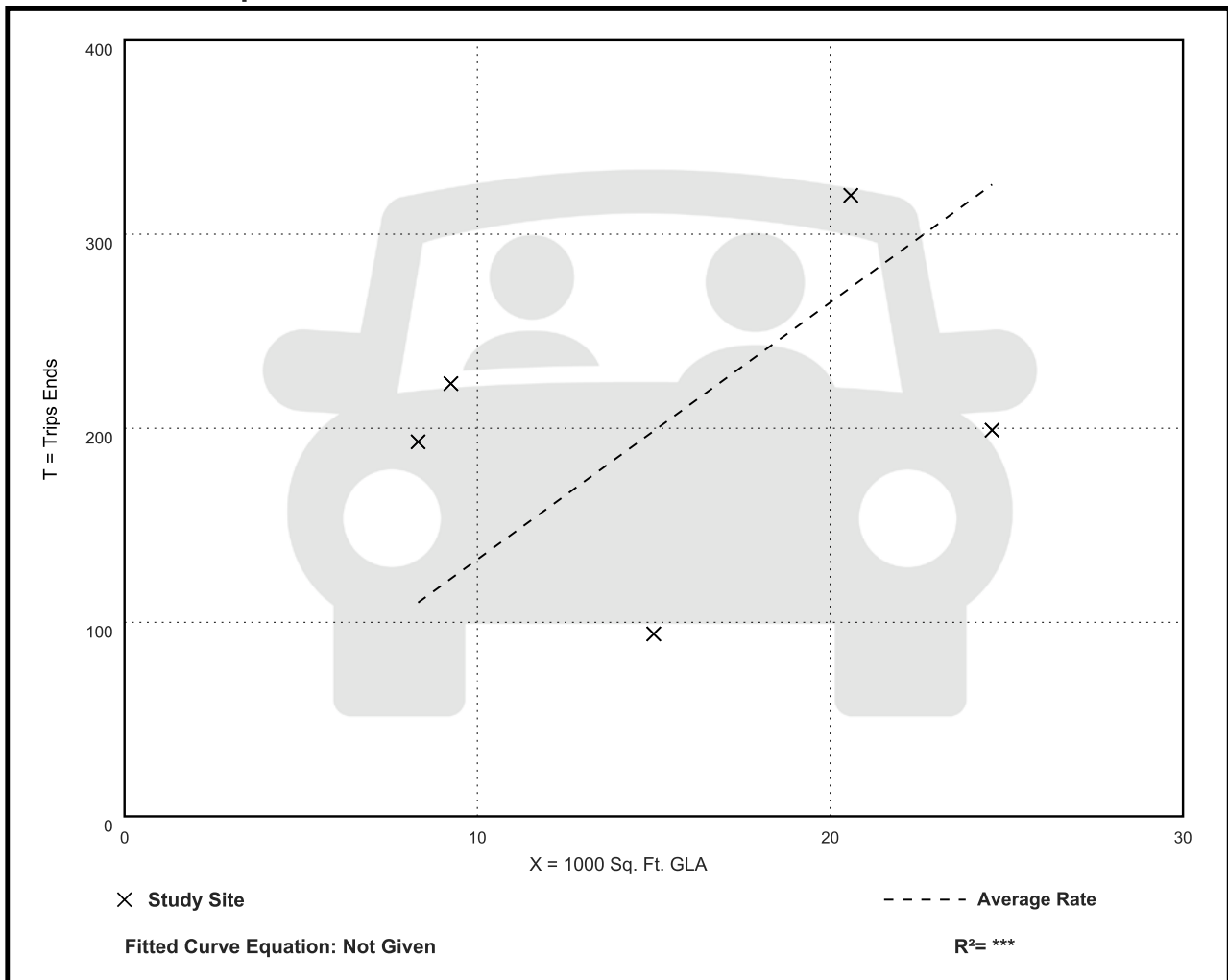
Avg. 1000 Sq. Ft. GLA: 16

Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
13.24	6.27 - 24.11	7.40

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 12

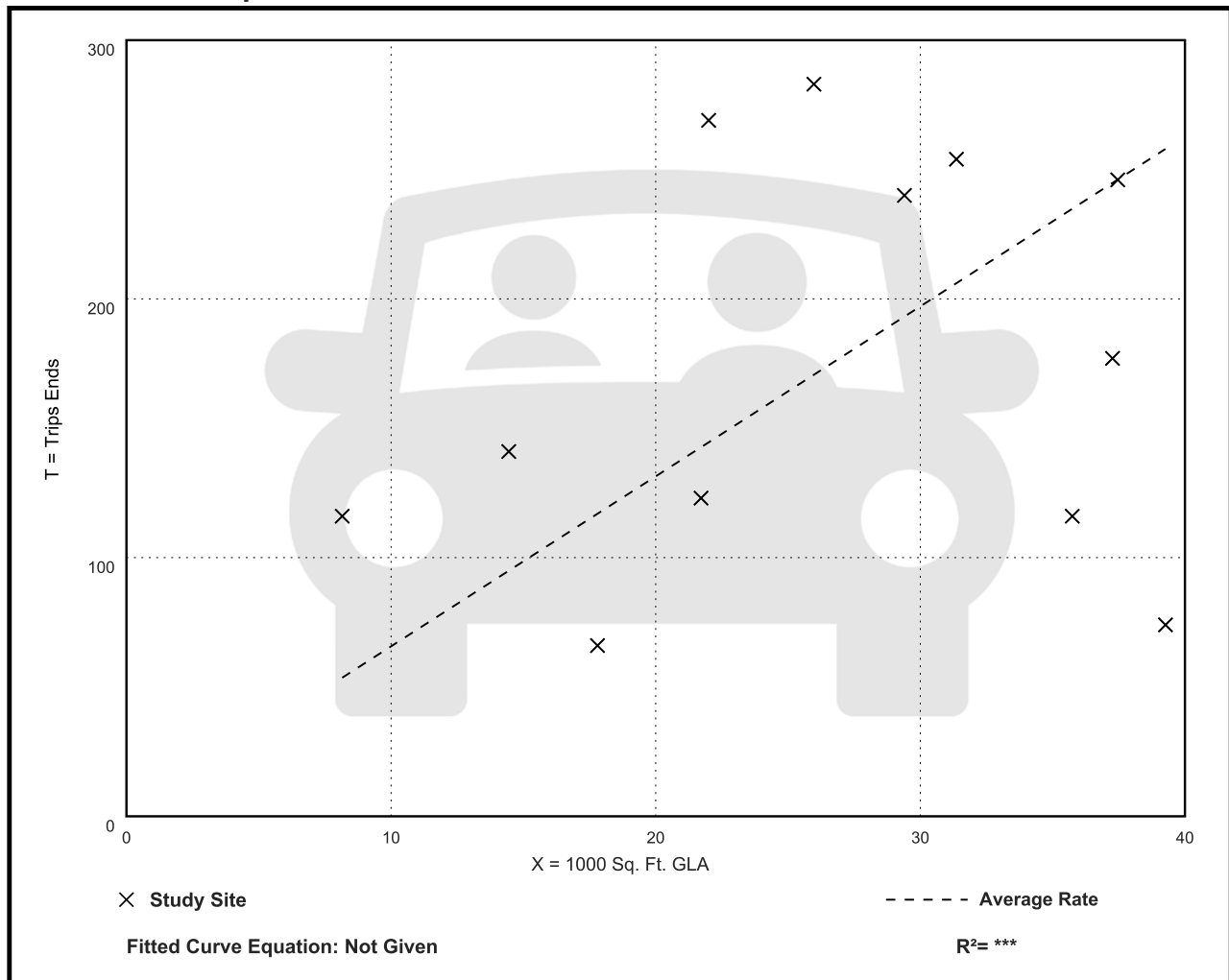
Avg. 1000 Sq. Ft. GLA: 27

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.57	1.88 - 14.23	3.45

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: Employees

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Employees: 21

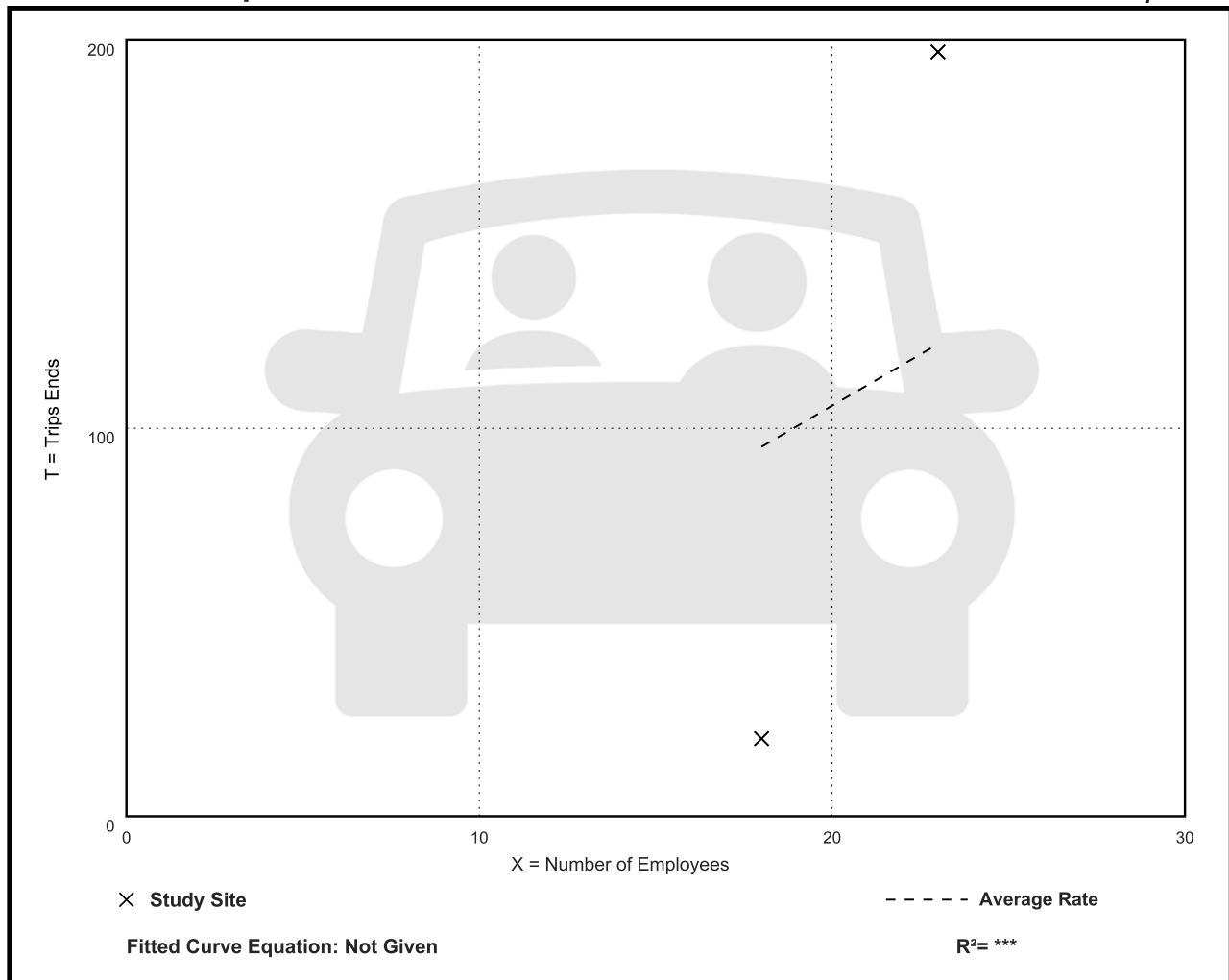
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
5.29	1.11 - 8.57	***

Data Plot and Equation

Caution – Small Sample Size



Strip Retail Plaza (<40k) (822)

Vehicle Trip Ends vs: Employees

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Employees: 21

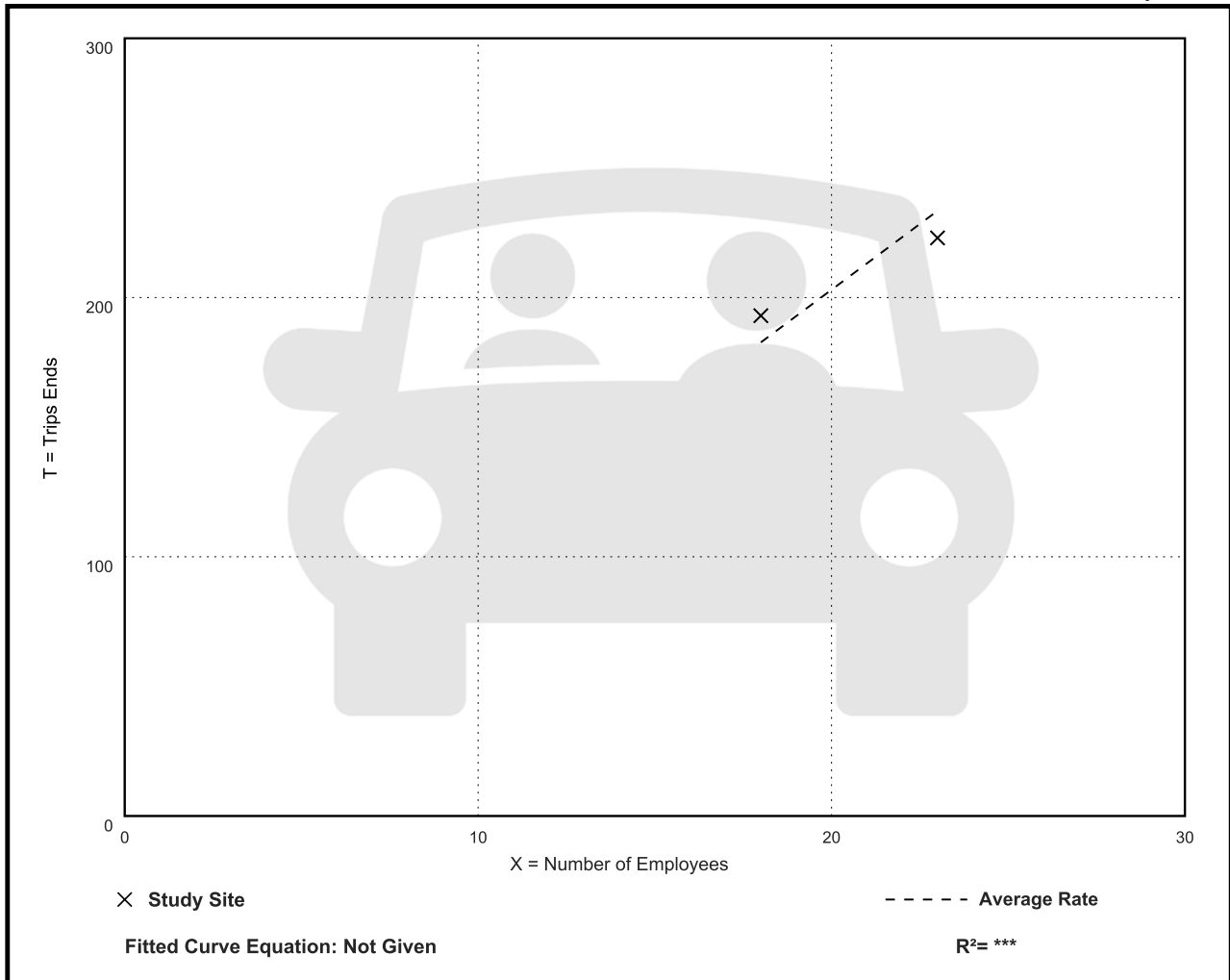
Directional Distribution: 56% entering, 44% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
10.15	9.70 - 10.72	***

Data Plot and Equation

Caution – Small Sample Size



Strip Retail Plaza (<40k) (822)

Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. 1000 Sq. Ft. GLA: 20

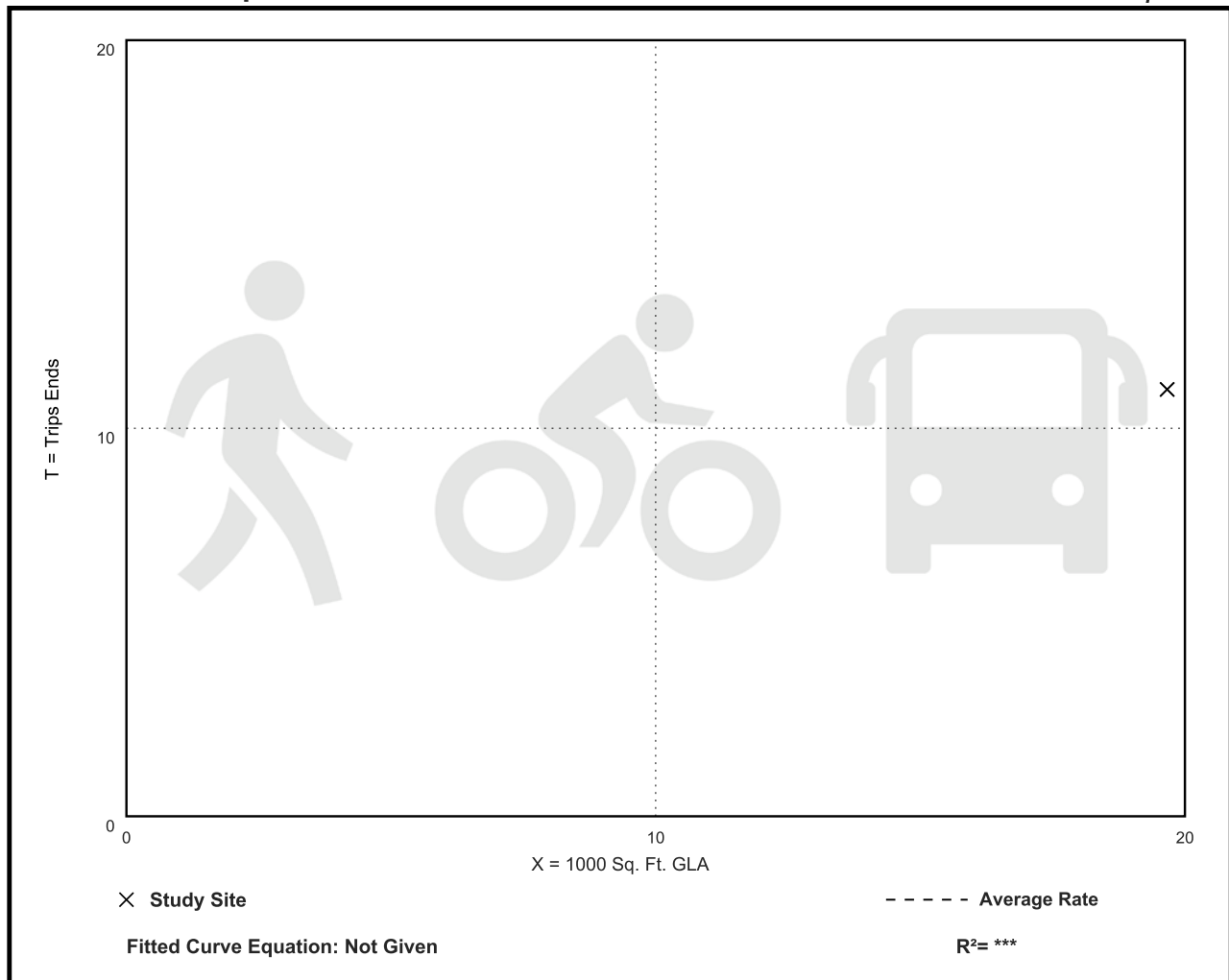
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
0.56	0.56 - 0.56	***

Data Plot and Equation

Caution – Small Sample Size



Strip Retail Plaza (<40k) (822)

Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 5

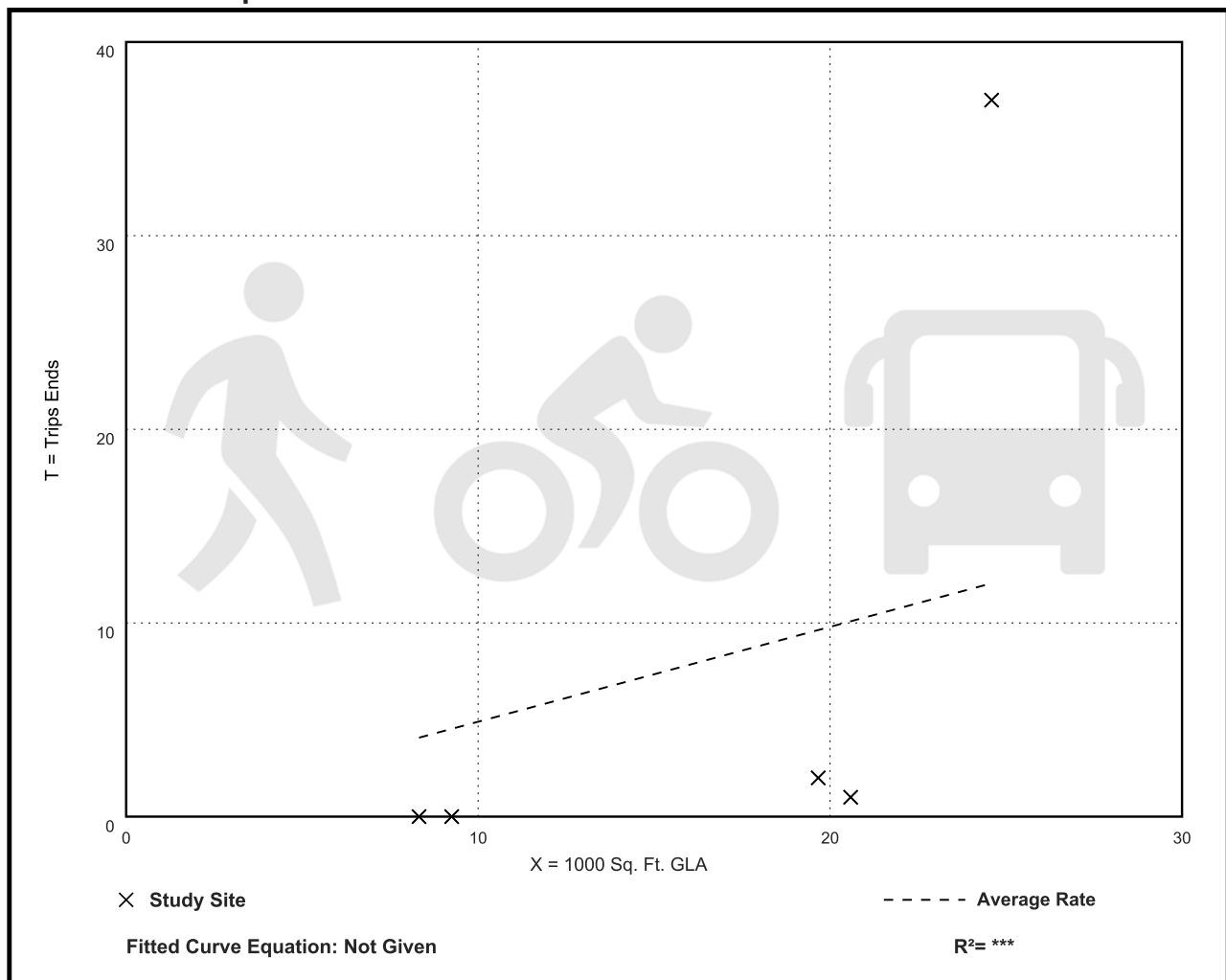
Avg. 1000 Sq. Ft. GLA: 16

Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
0.49	0.00 - 1.50	0.74

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GLA

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 5

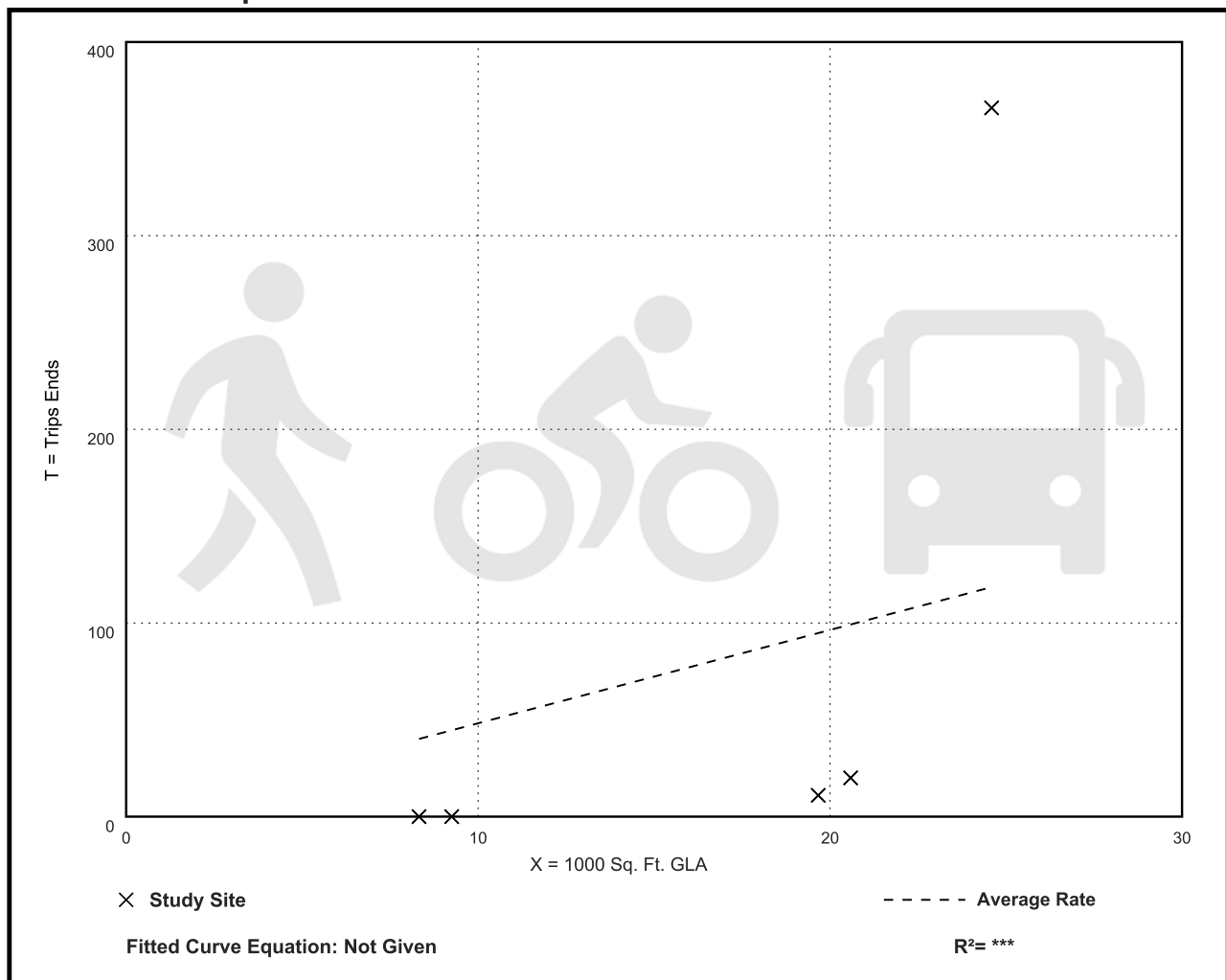
Avg. 1000 Sq. Ft. GLA: 16

Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
4.82	0.00 - 14.88	7.35

Data Plot and Equation



Strip Retail Plaza (<40k) (822)

Walk+Bike+Transit Trip Ends vs: Employees

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Employees: 21

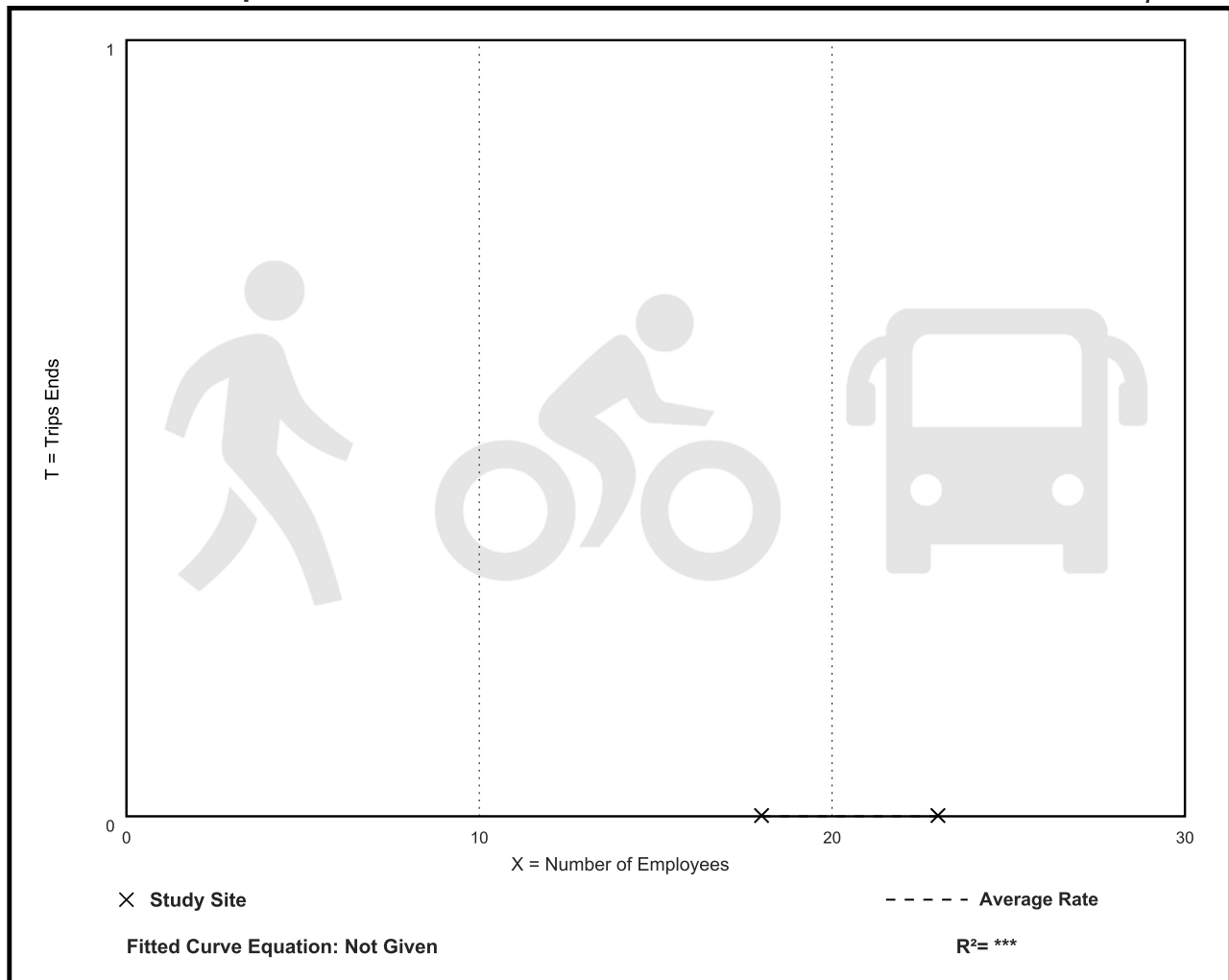
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.00	0.00 - 0.00	***

Data Plot and Equation

Caution – Small Sample Size



Strip Retail Plaza (<40k) (822)

Walk+Bike+Transit Trip Ends vs: Employees

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Employees: 21

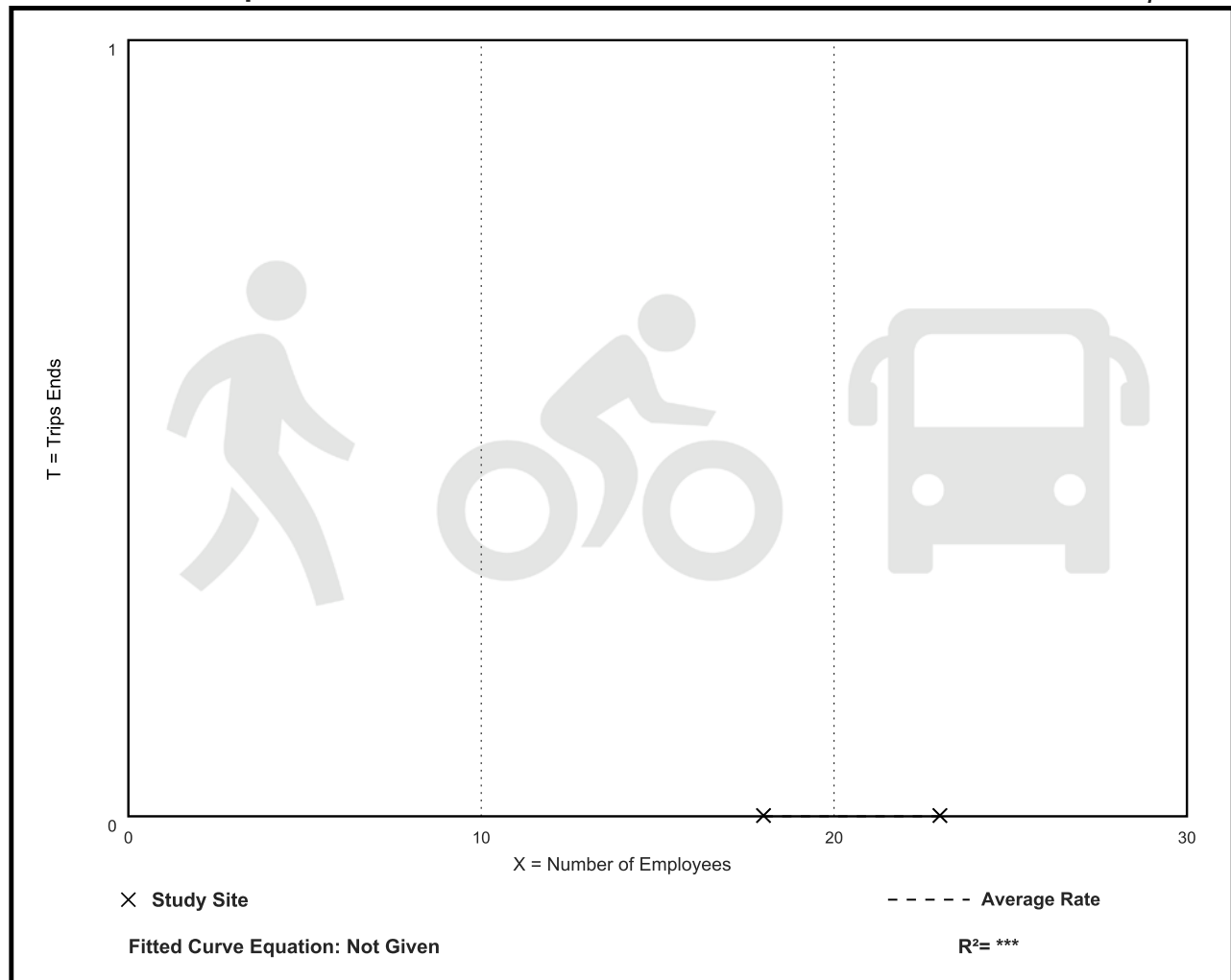
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.00	0.00 - 0.00	***

Data Plot and Equation

Caution – Small Sample Size



Land Use: 932

High-Turnover (Sit-Down) Restaurant

Description

This land use consists of sit-down, full-service eating establishments with a typical duration of stay of 60 minutes or less. This type of restaurant is usually moderately priced, frequently belongs to a restaurant chain, and is commonly referred to as casual dining. Generally, these restaurants serve lunch and dinner; they may also be open for breakfast and are sometimes open 24 hours a day. These restaurants typically do not accept reservations. A patron commonly waits to be seated, is served by wait staff, orders from a menu, and pays after the meal.

Some facilities offer carry-out for a small proportion of its customers. Some facilities within this land use may also contain a bar area for serving food and alcoholic drinks.

Fast casual restaurant (Land Use 930), fine dining restaurant (Land Use 931), fast-food restaurant without drive-through window (Land Use 933), and fast-food restaurant with drive-through window (Land Use 934) are related uses.

Additional Data

Users should exercise caution when applying statistics during the AM peak periods, as the sites contained in the database for this land use may or may not be open for breakfast. In cases where it was confirmed that the sites were not open for breakfast, data for the AM peak hour of the adjacent street traffic were removed from the database.

If the restaurant has outdoor seating, its area is not included in the overall gross floor area. For a restaurant that has significant outdoor seating, the number of seats may be more reliable than GFA as an independent variable on which to establish a trip generation rate.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Florida, Georgia, Indiana, Kentucky, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Vermont, and Wisconsin.

Source Numbers

126, 269, 275, 280, 300, 301, 305, 338, 340, 341, 358, 384, 424, 432, 437, 438, 444, 507, 555, 577, 589, 617, 618, 728, 868, 884, 885, 903, 927, 939, 944, 961, 962, 977, 1048

High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 50

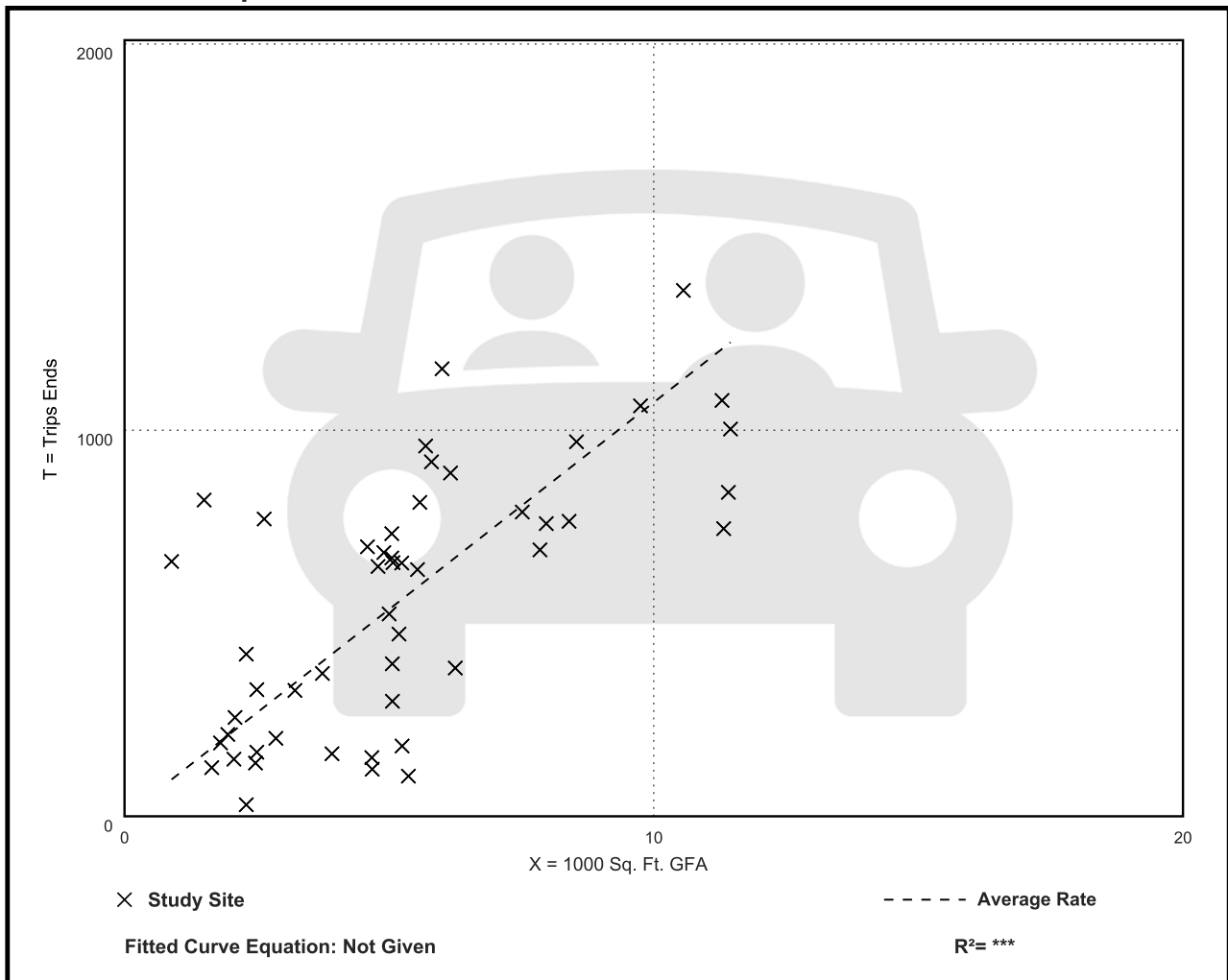
Avg. 1000 Sq. Ft. GFA: 5

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
107.20	13.04 - 742.41	66.72

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 37

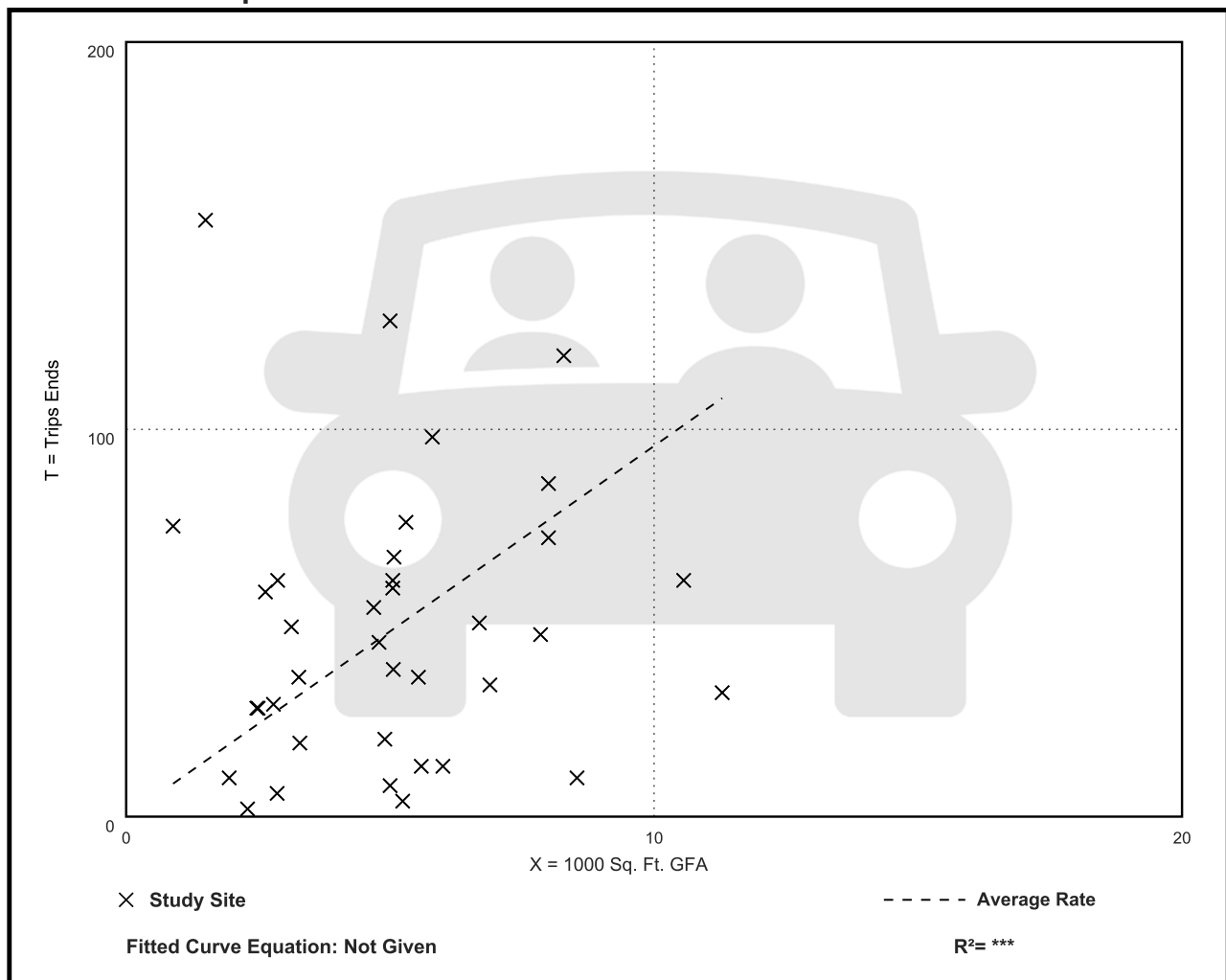
Avg. 1000 Sq. Ft. GFA: 5

Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.57	0.76 - 102.39	11.61

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 104

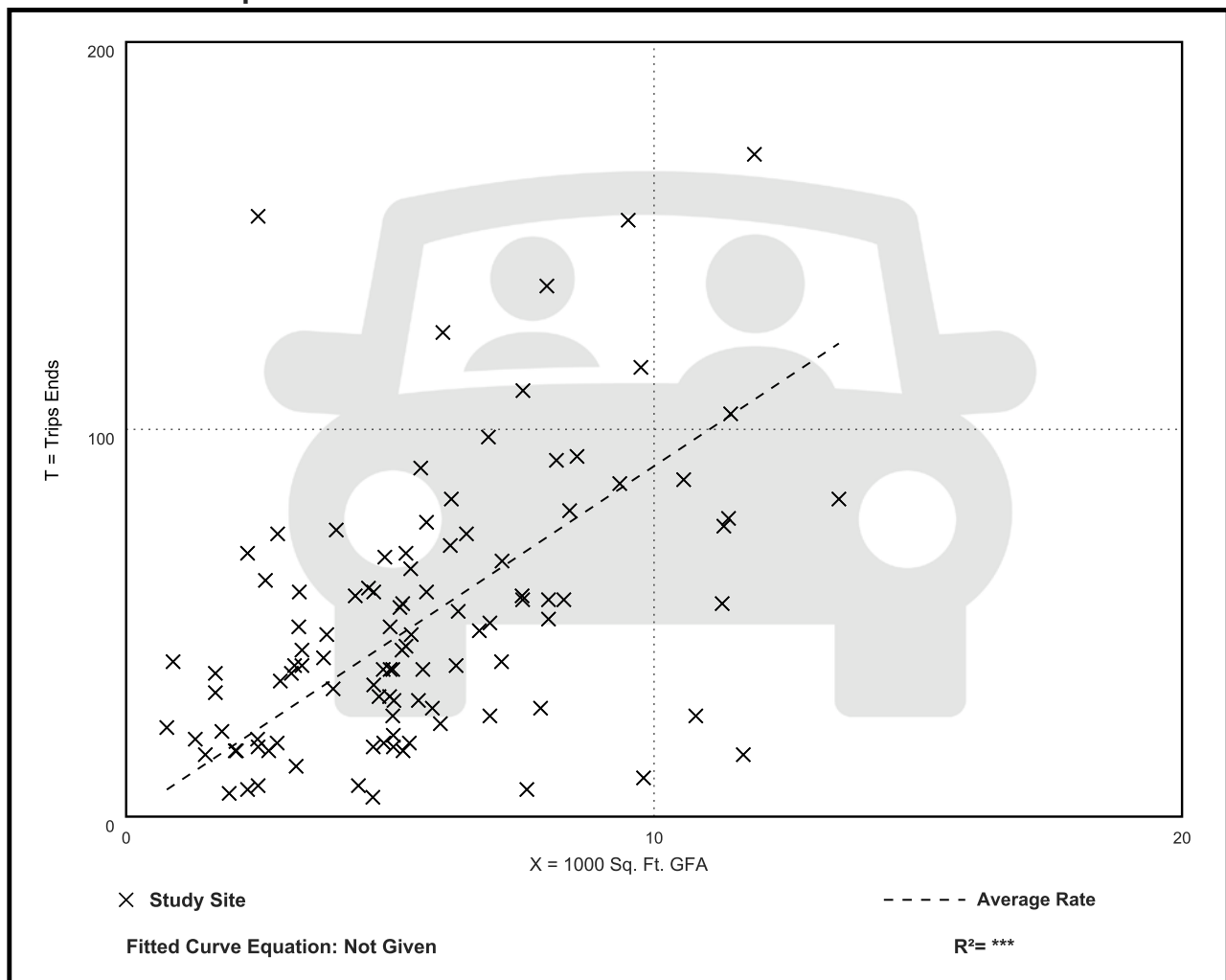
Avg. 1000 Sq. Ft. GFA: 6

Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.05	0.92 - 62.00	6.18

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 58

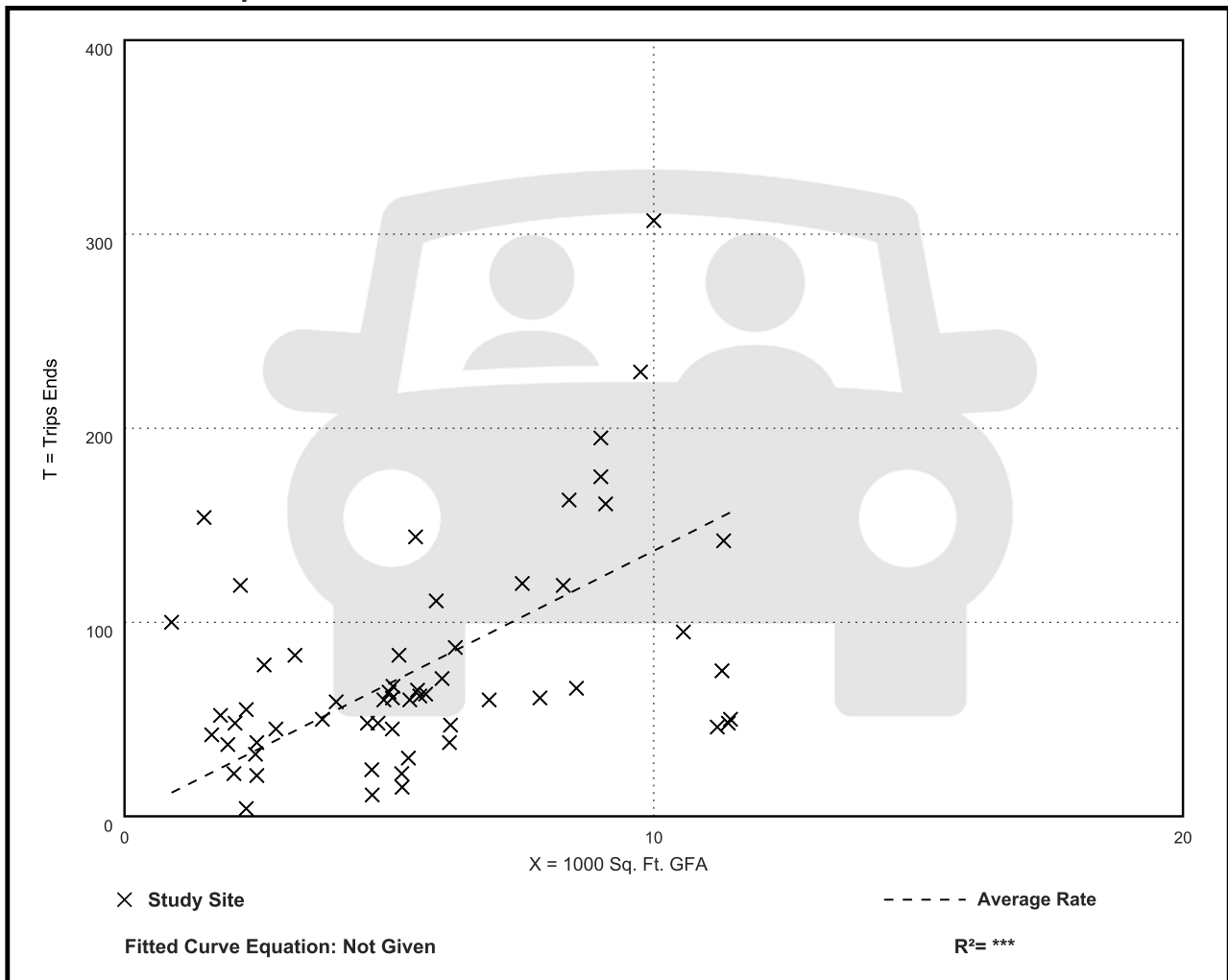
Avg. 1000 Sq. Ft. GFA: 6

Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
13.68	1.74 - 112.49	11.29

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 58

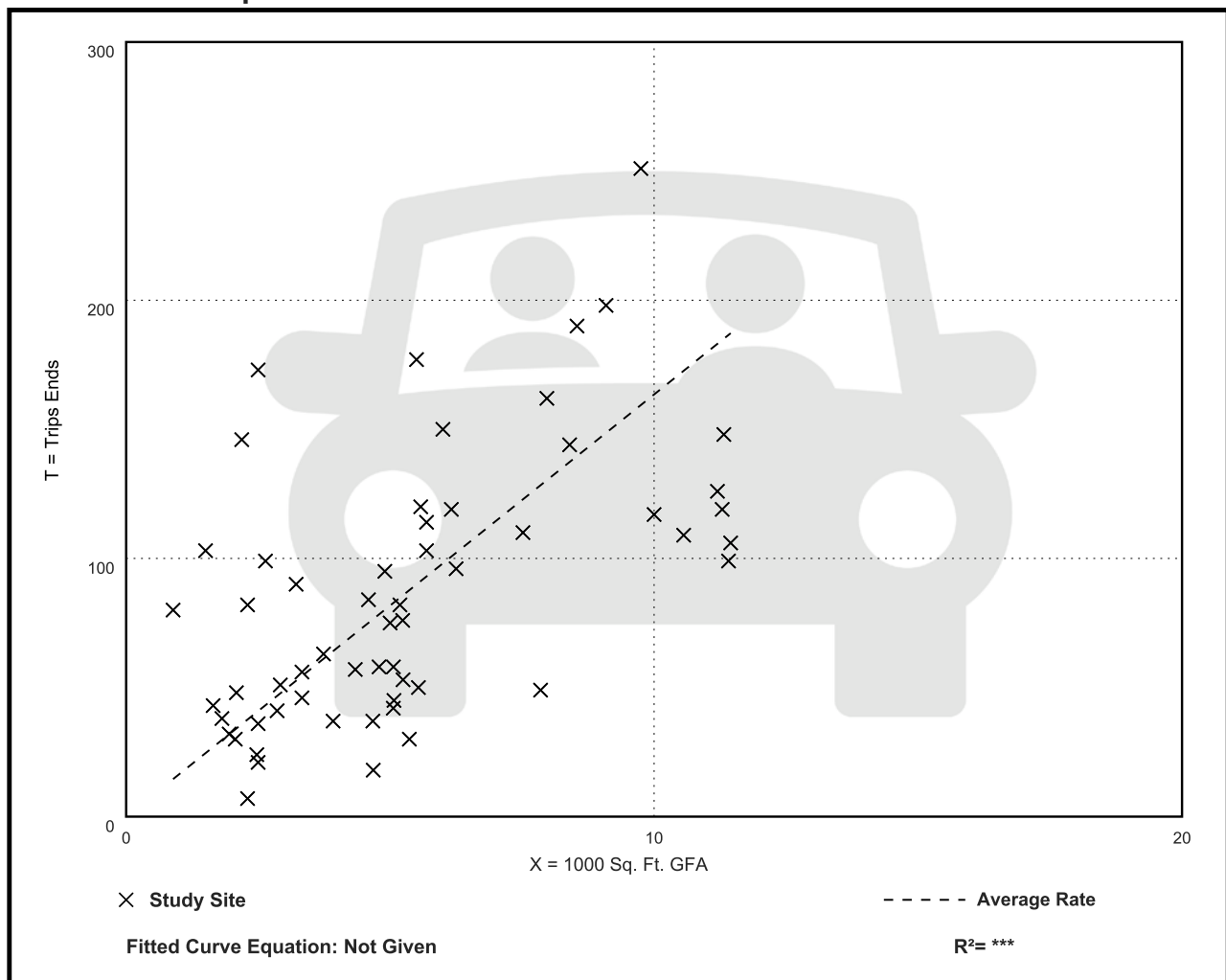
Avg. 1000 Sq. Ft. GFA: 5

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
16.35	3.04 - 89.99	10.84

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Friday

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. 1000 Sq. Ft. GFA: 9

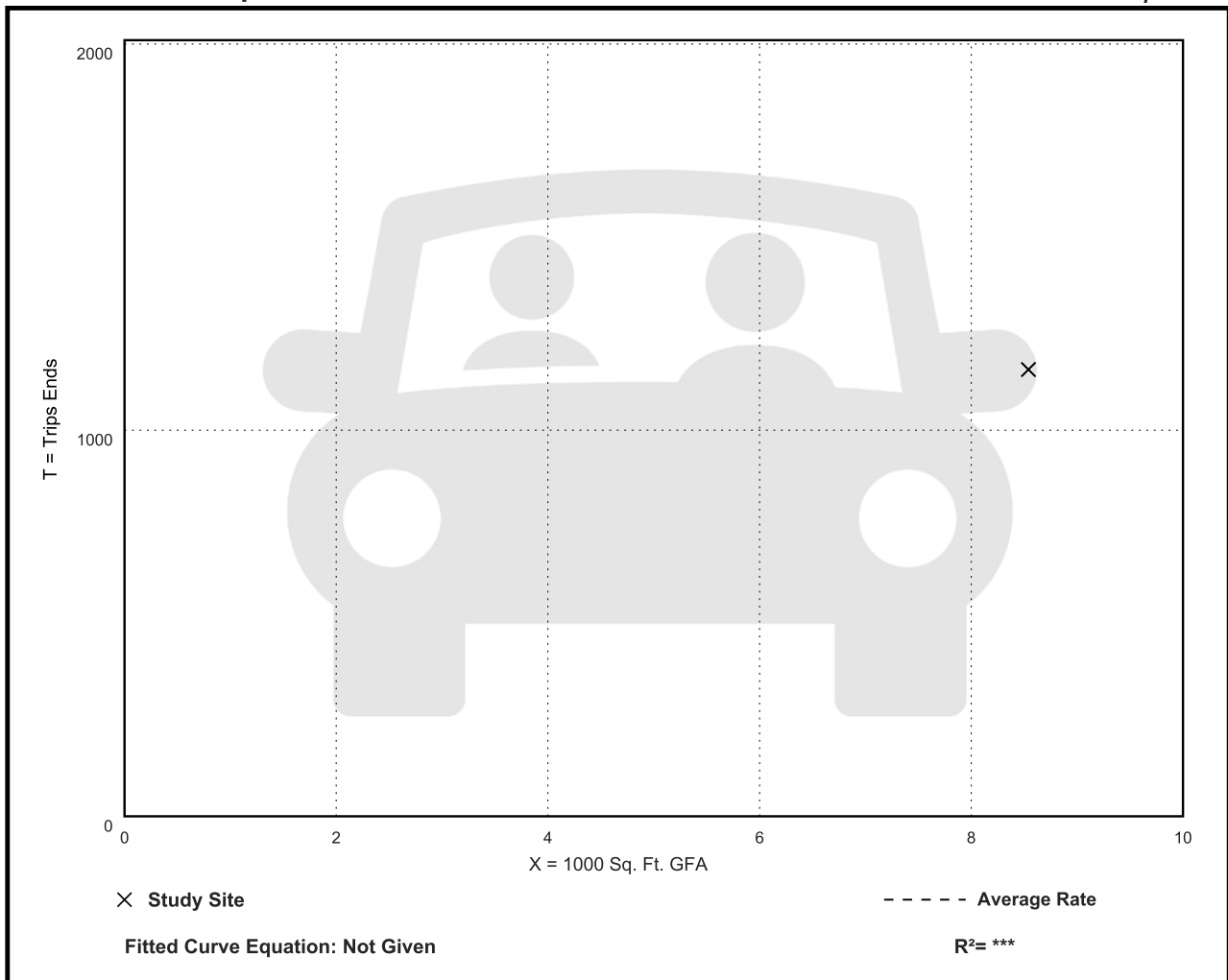
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
135.48	135.48 - 135.48	***

Data Plot and Equation

Caution – Small Sample Size



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Friday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. 1000 Sq. Ft. GFA: 9

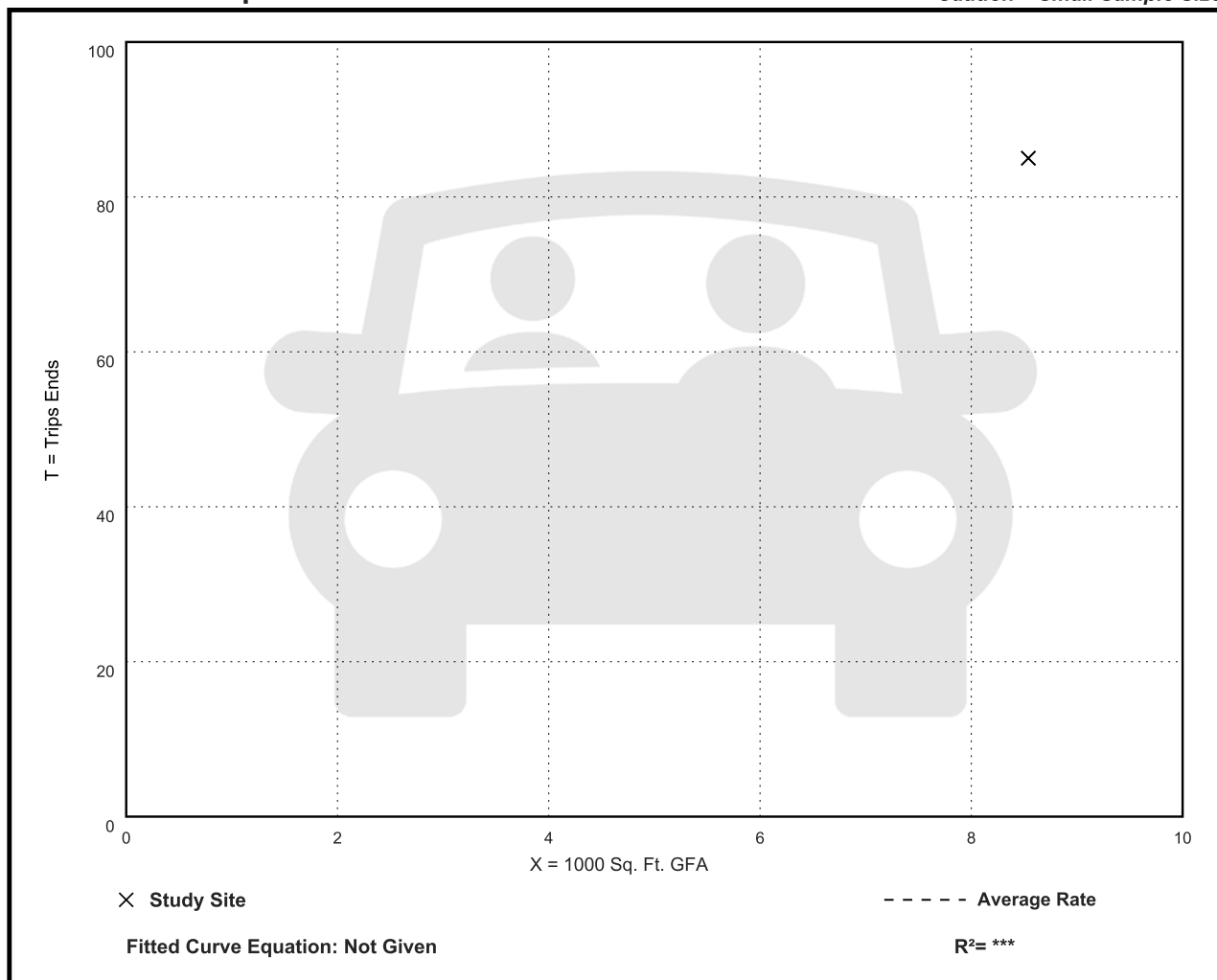
Directional Distribution: Not Available

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
9.95	9.95 - 9.95	***

Data Plot and Equation

Caution – Small Sample Size



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Friday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. 1000 Sq. Ft. GFA: 9

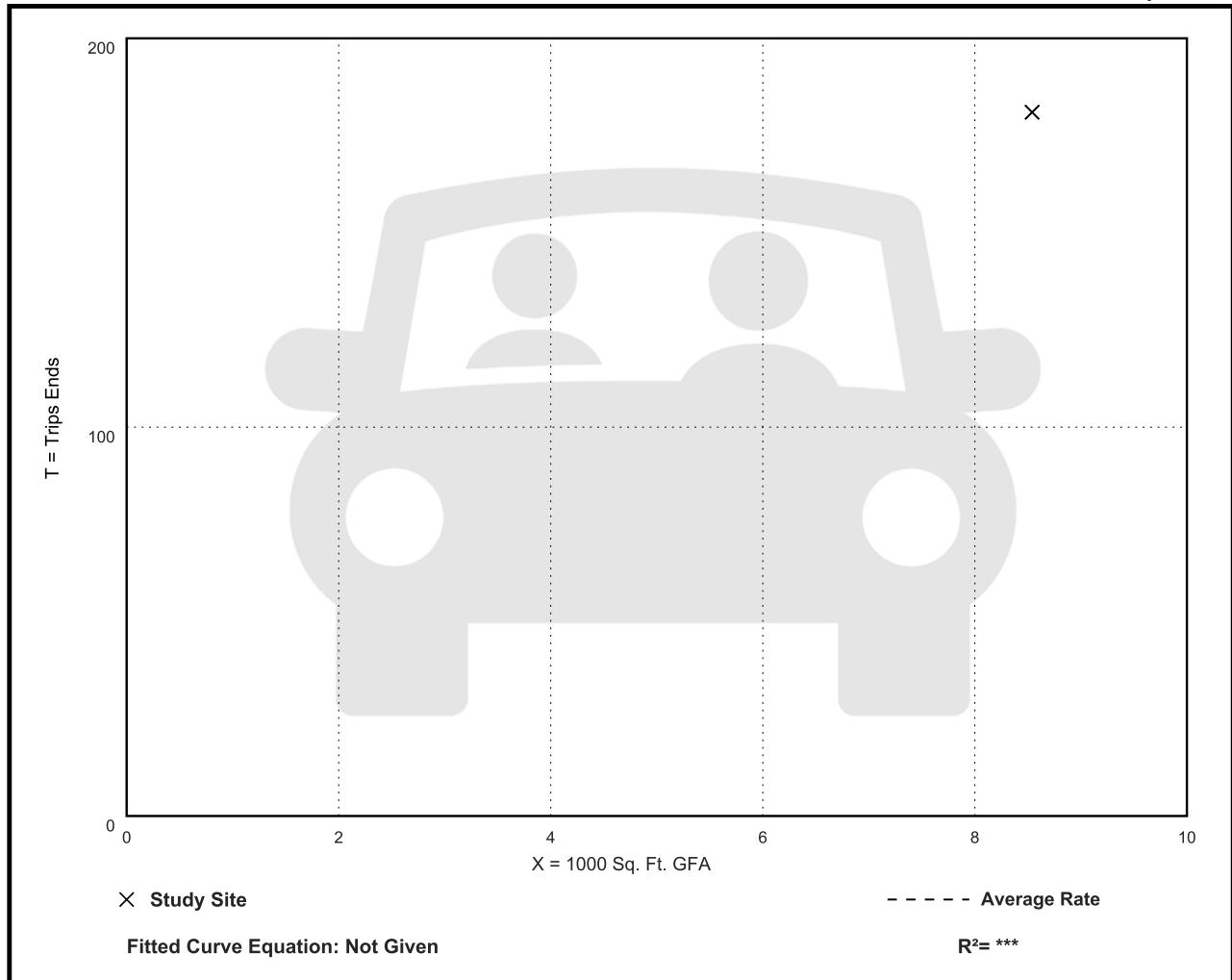
Directional Distribution: Not Available

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
21.19	21.19 - 21.19	***

Data Plot and Equation

Caution – Small Sample Size



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Saturday

Setting/Location: General Urban/Suburban

Number of Studies: 3

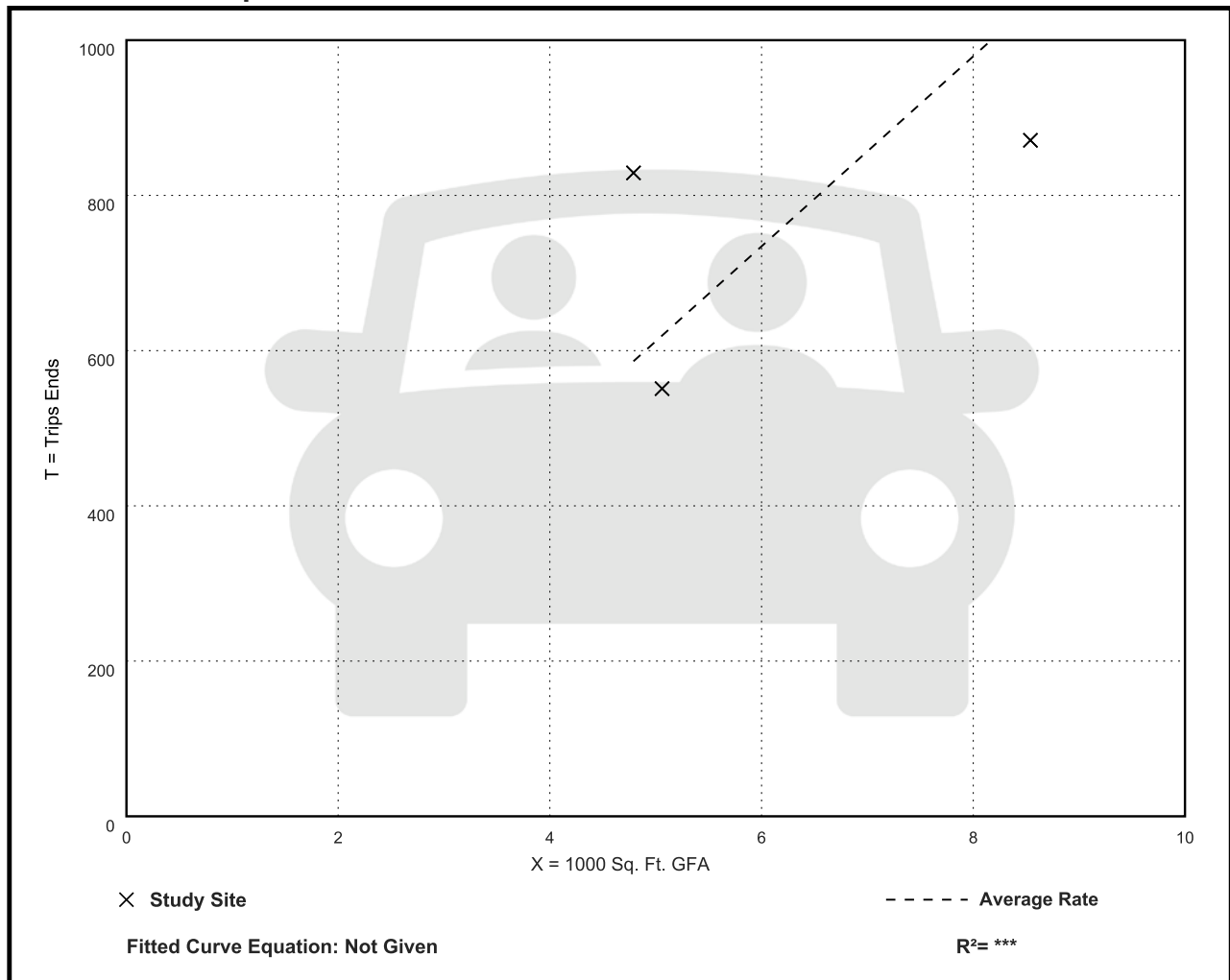
Avg. 1000 Sq. Ft. GFA: 6

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
122.40	101.99 - 173.07	36.99

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 22

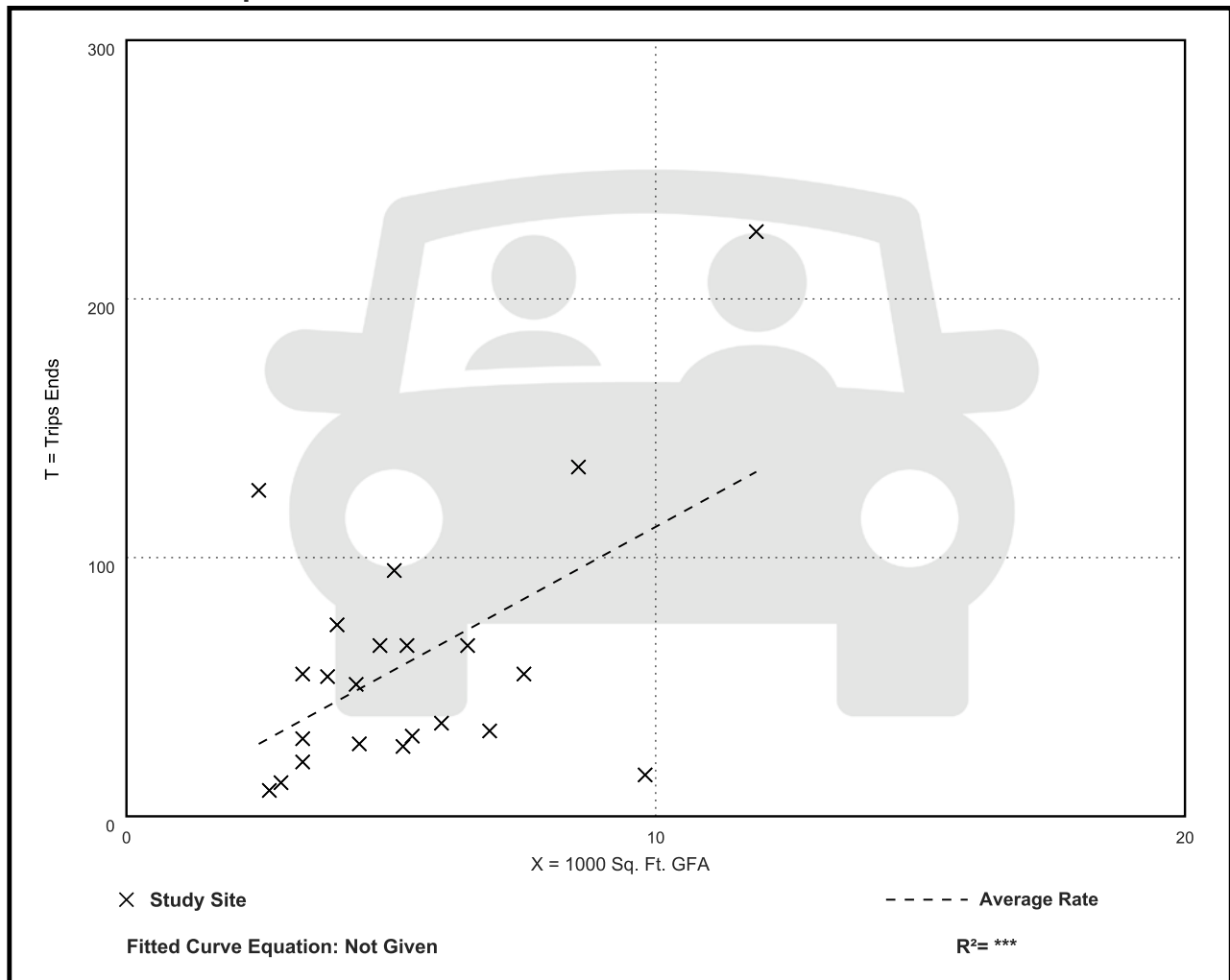
Avg. 1000 Sq. Ft. GFA: 5

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
11.19	1.63 - 50.40	8.30

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Sunday

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. 1000 Sq. Ft. GFA: 5

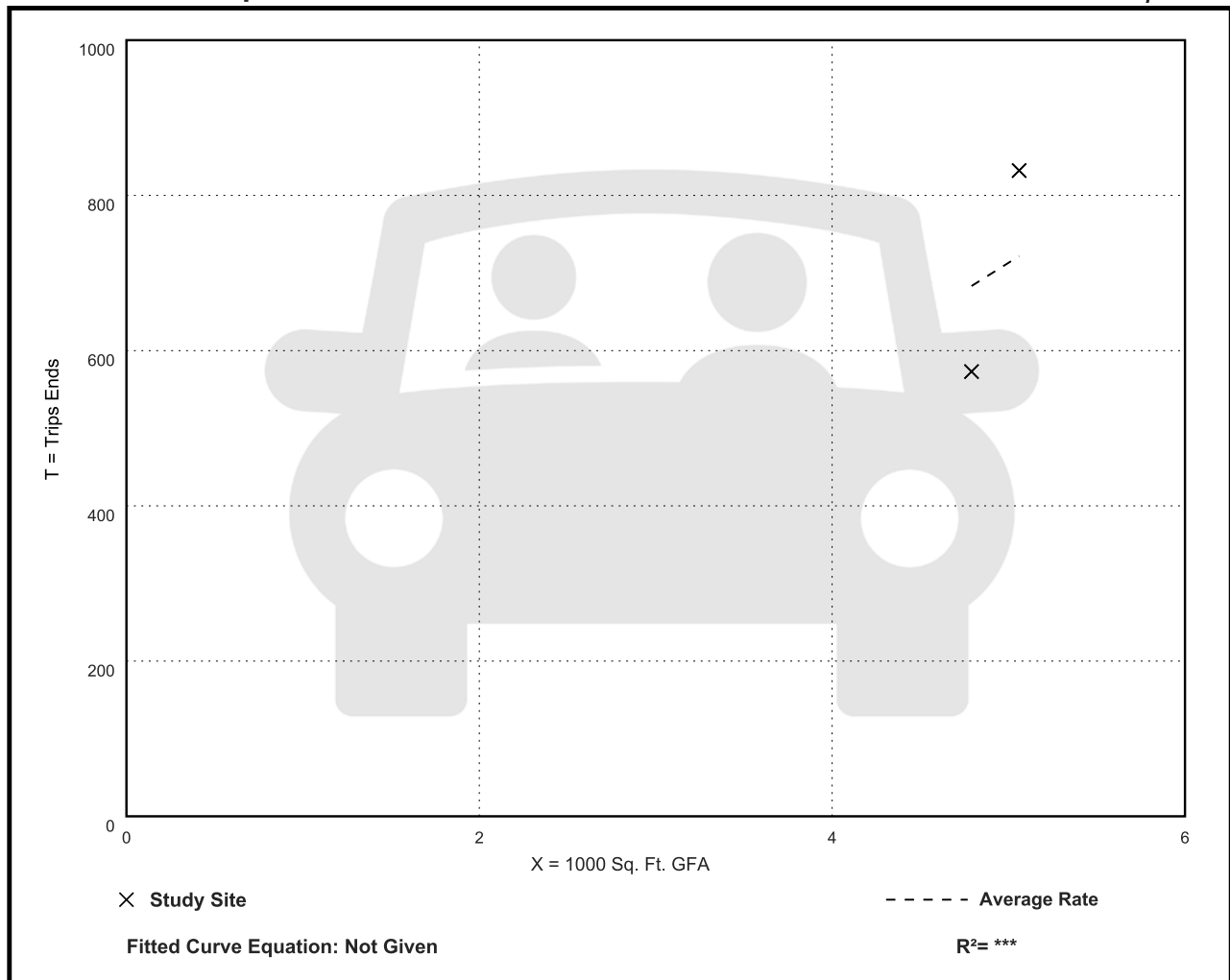
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
142.64	119.62 - 164.43	***

Data Plot and Equation

Caution – Small Sample Size



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 3

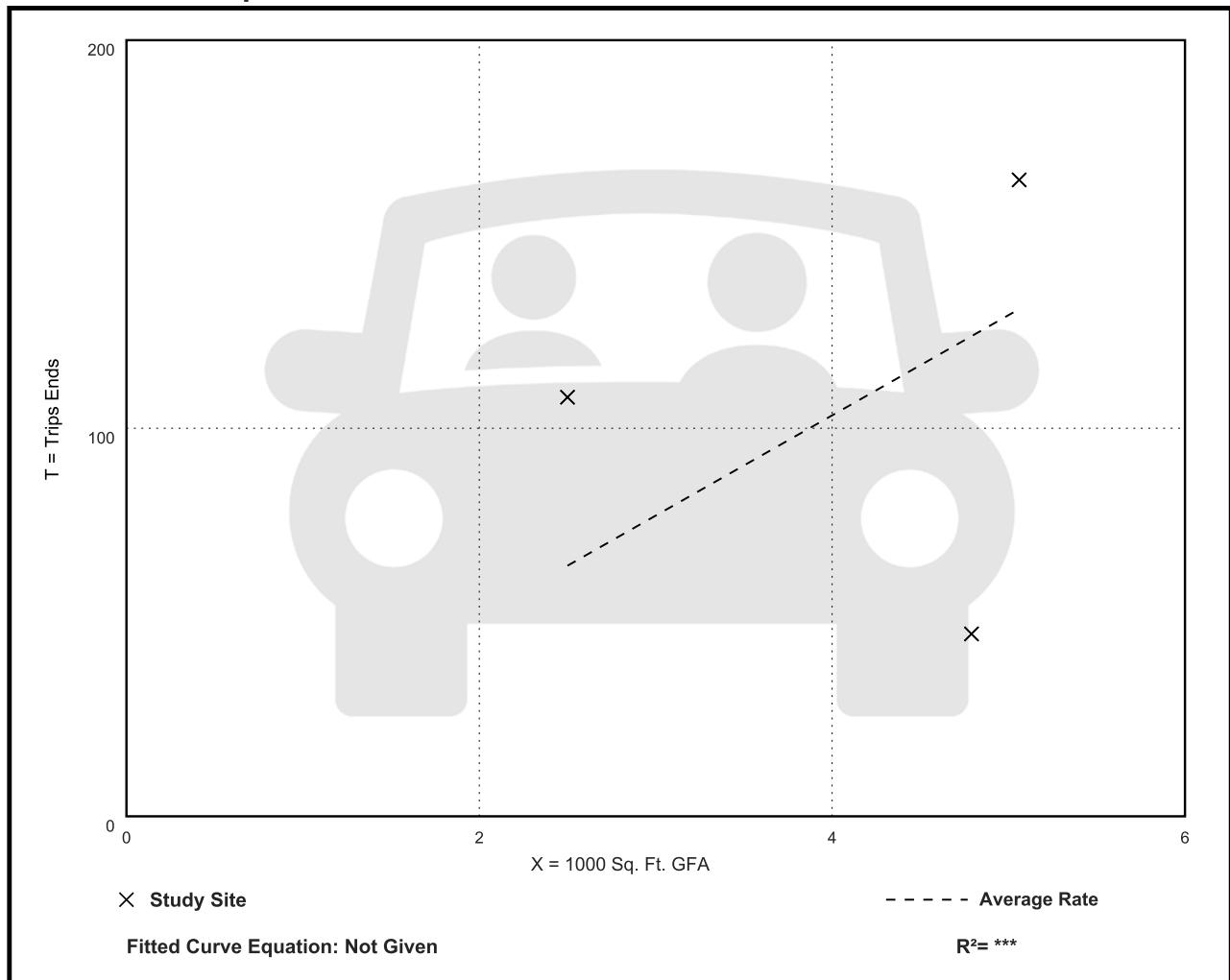
Avg. 1000 Sq. Ft. GFA: 4

Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
25.83	9.81 - 43.20	16.36

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: Seats
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Seats: 148

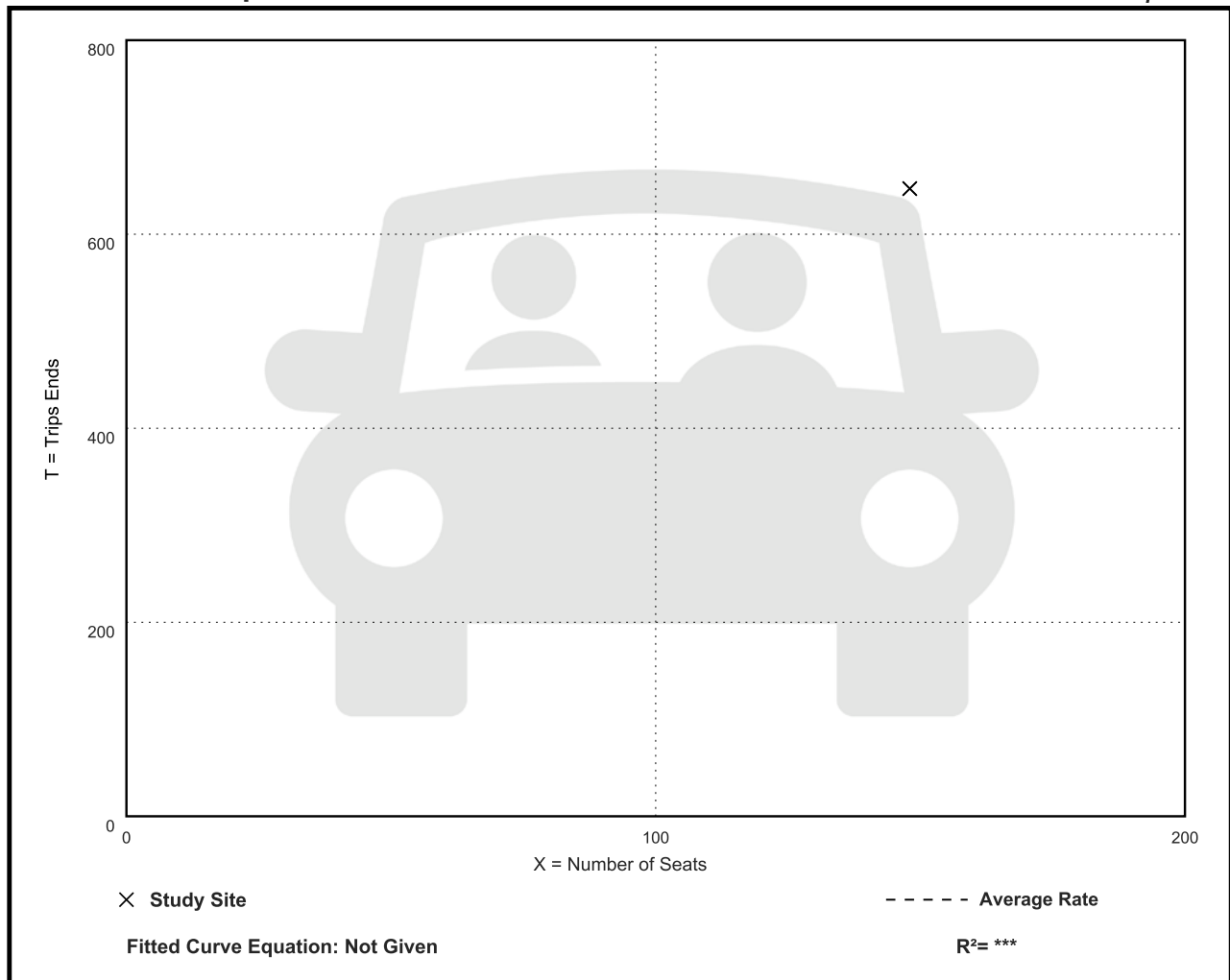
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
4.37	4.37 - 4.37	***

Data Plot and Equation

Caution – Small Sample Size



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: Seats

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 7

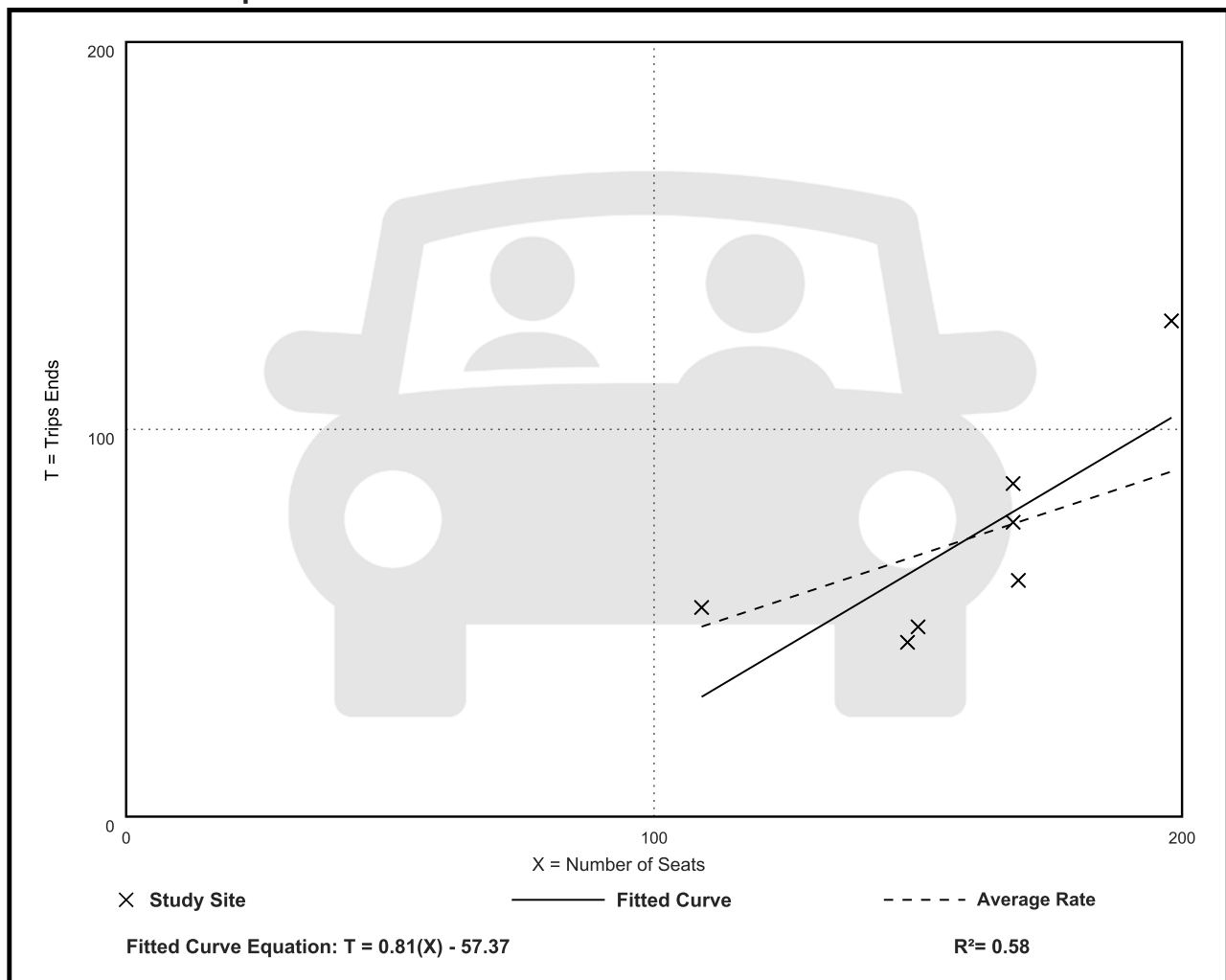
Avg. Num. of Seats: 159

Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.45	0.30 - 0.65	0.13

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: Seats

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 14

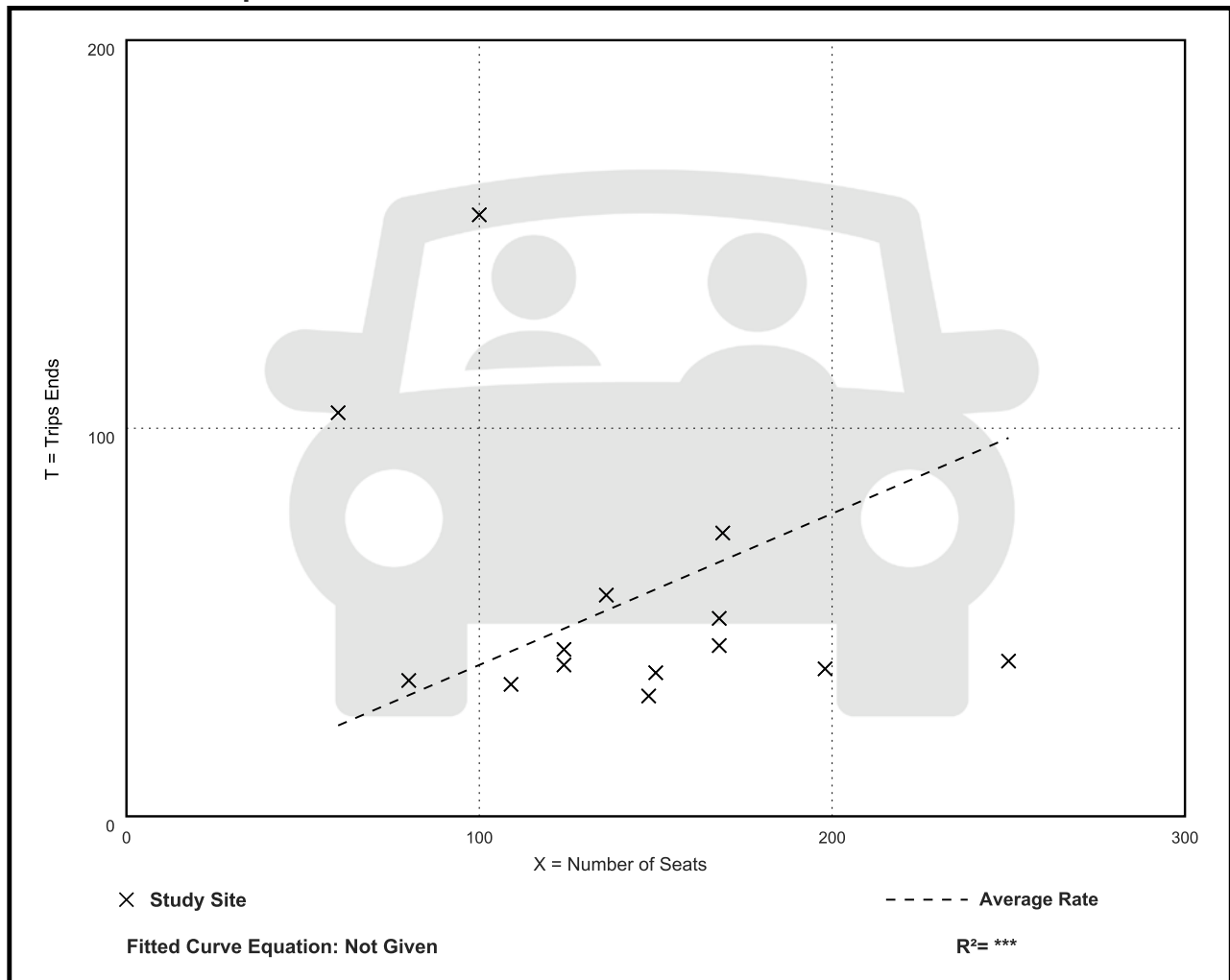
Avg. Num. of Seats: 142

Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.39	0.16 - 1.73	0.39

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: Seats

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 5

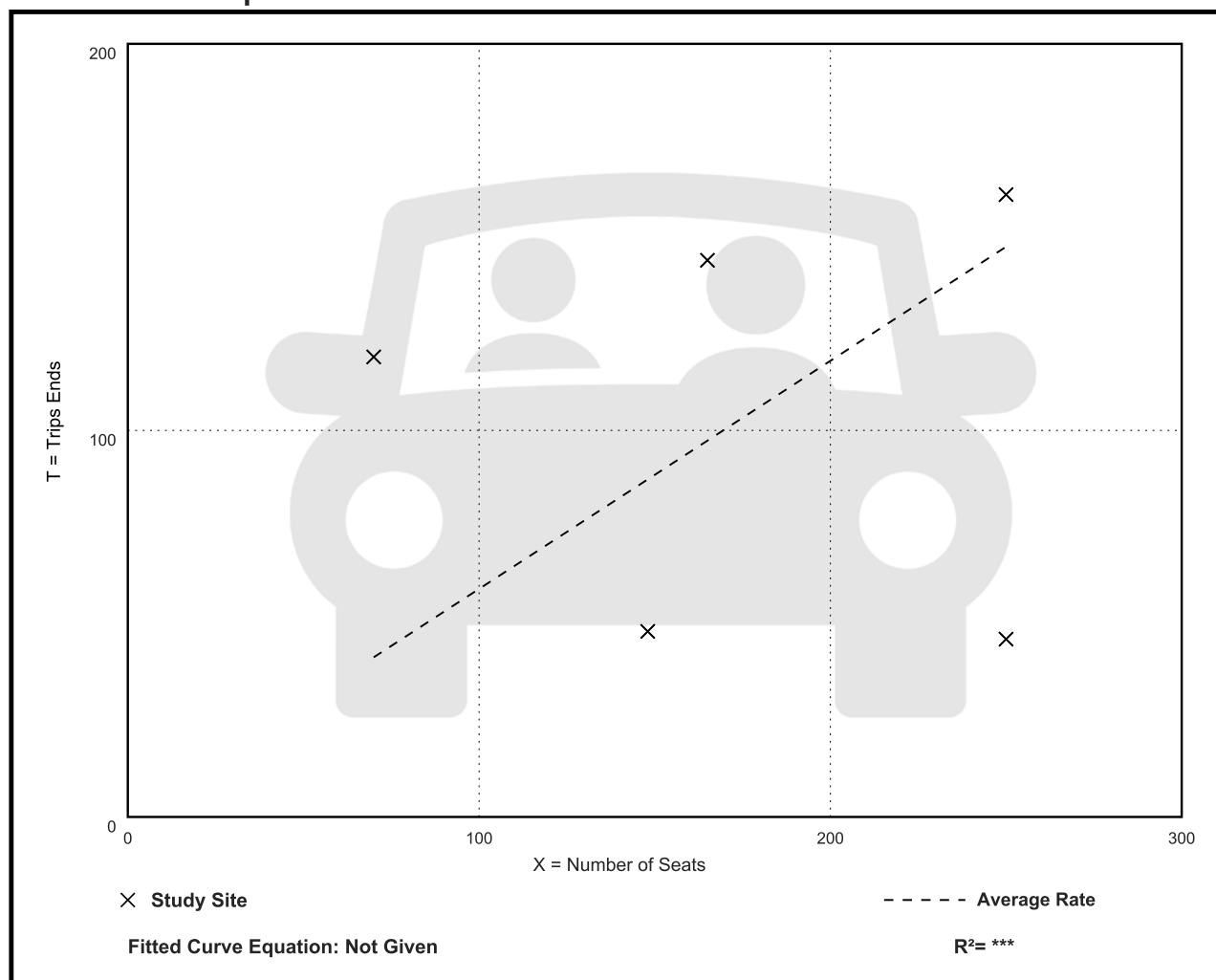
Avg. Num. of Seats: 177

Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.59	0.18 - 1.70	0.46

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: Seats

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 10

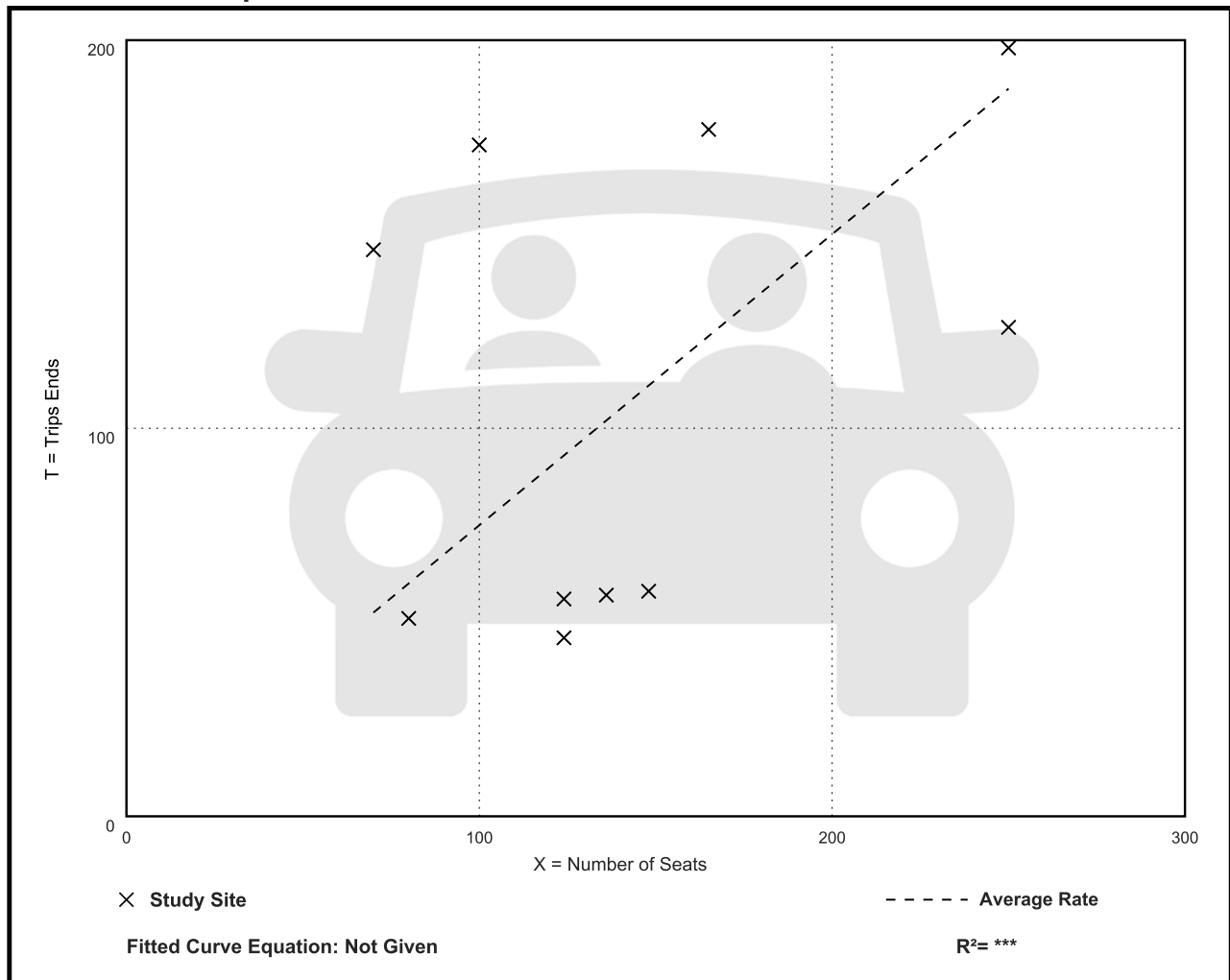
Avg. Num. of Seats: 145

Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.75	0.37 - 2.09	0.49

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: Seats
On a: Saturday

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Seats: 148

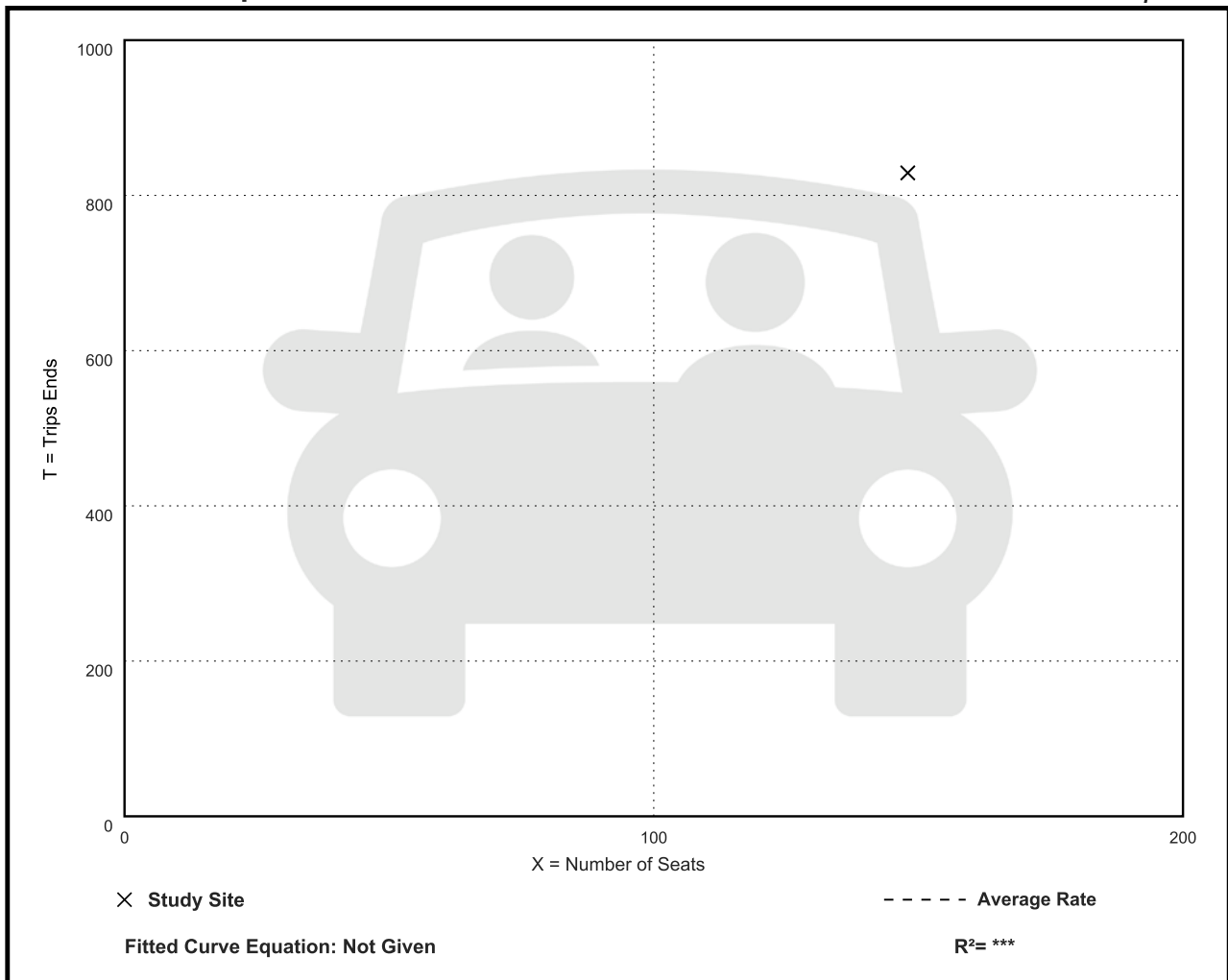
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
5.60	5.60 - 5.60	***

Data Plot and Equation

Caution – Small Sample Size



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: Seats

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 8

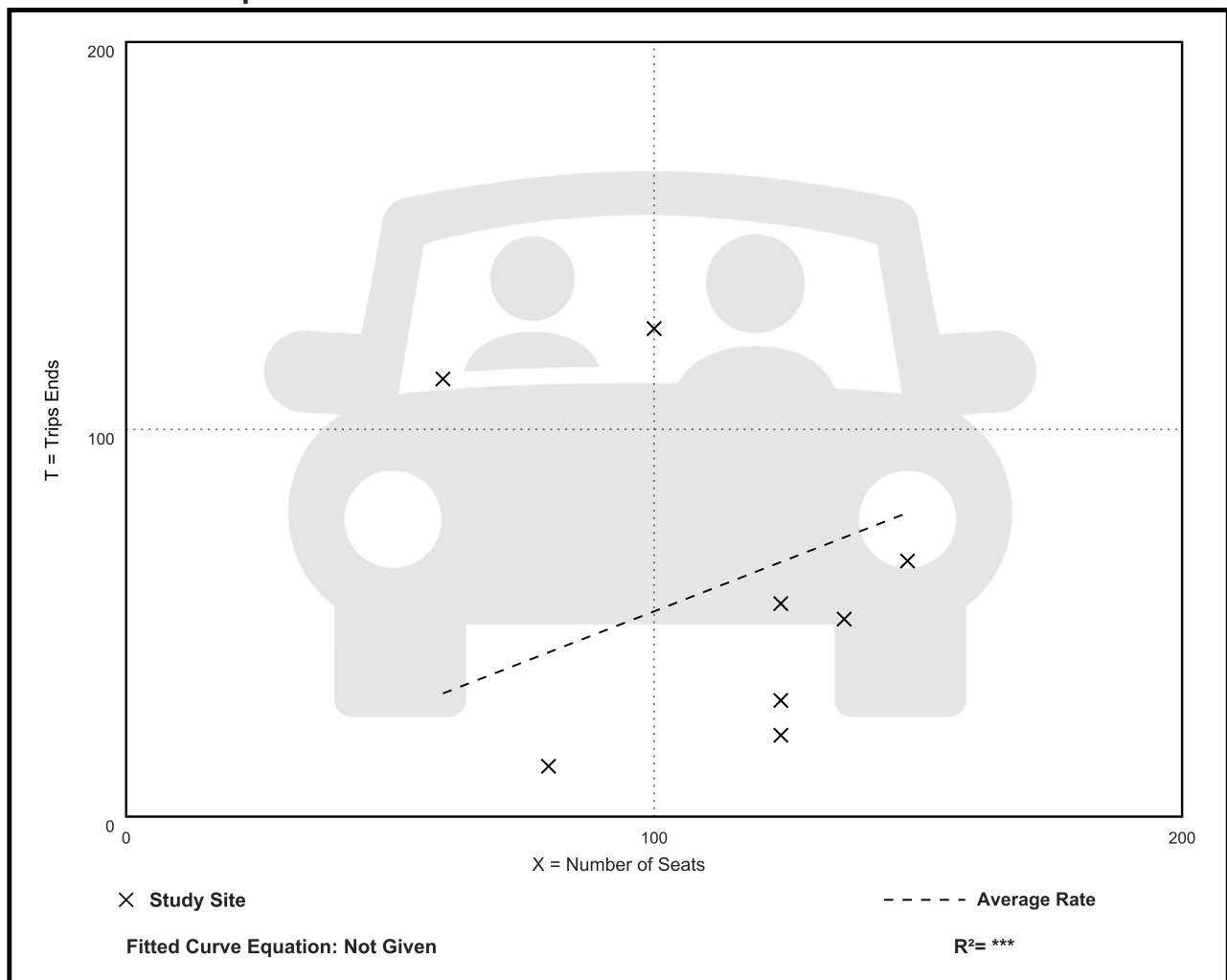
Avg. Num. of Seats: 112

Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.53	0.16 - 1.88	0.51

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: Seats
On a: Sunday

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Seats: 148

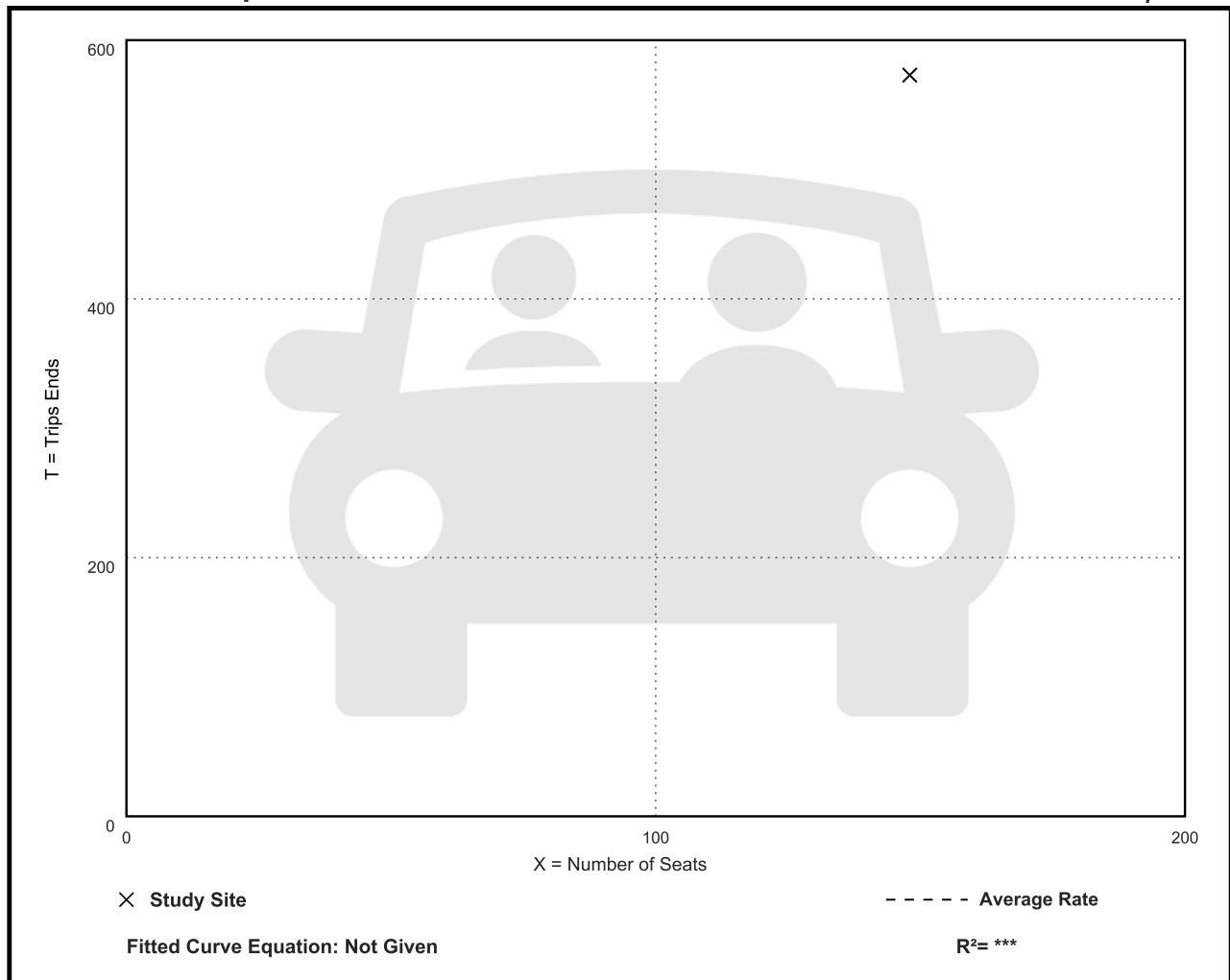
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
3.87	3.87 - 3.87	***

Data Plot and Equation

Caution – Small Sample Size



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: Seats

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Seats: 124

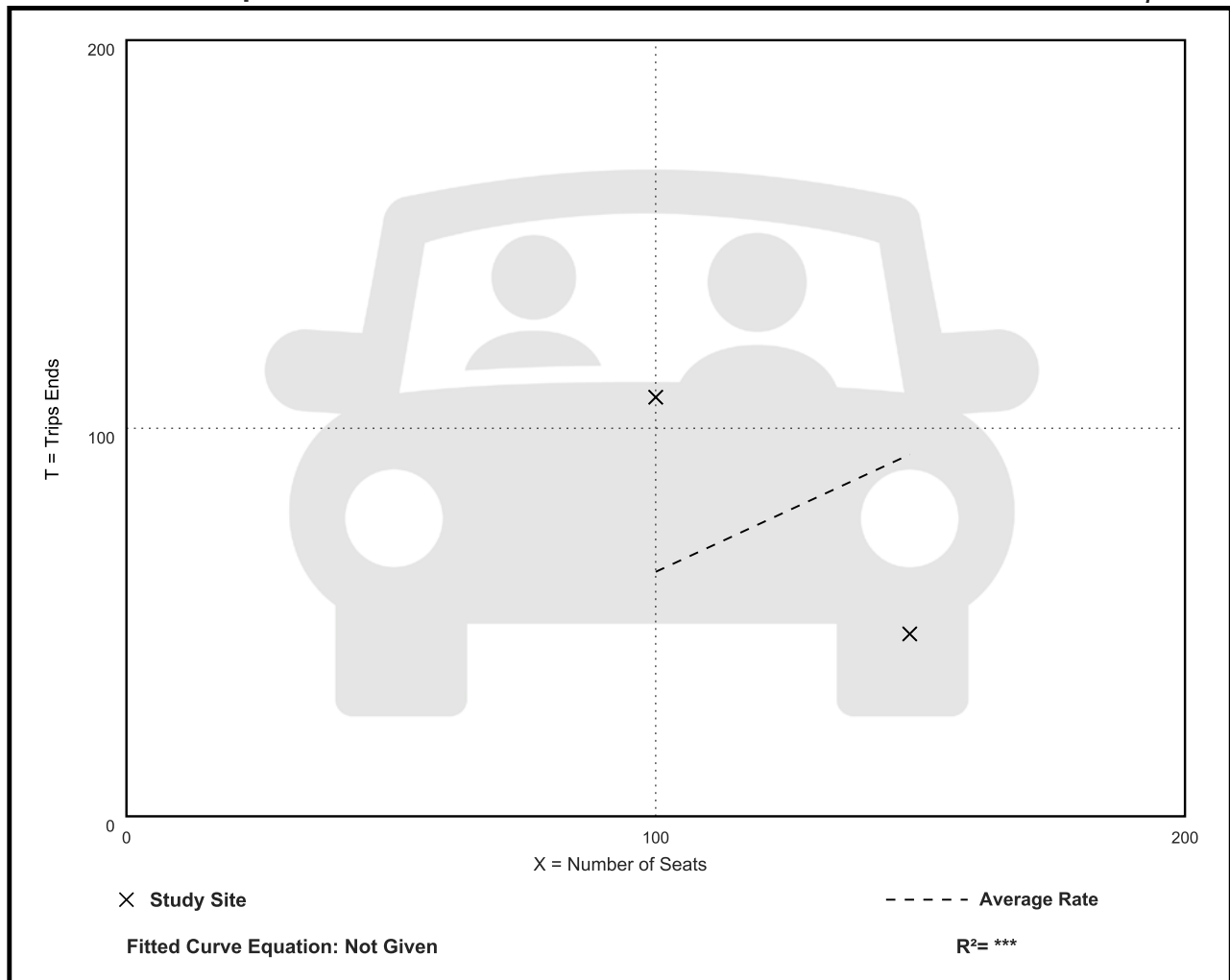
Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.63	0.32 - 1.08	***

Data Plot and Equation

Caution – Small Sample Size



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: Employees
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 31

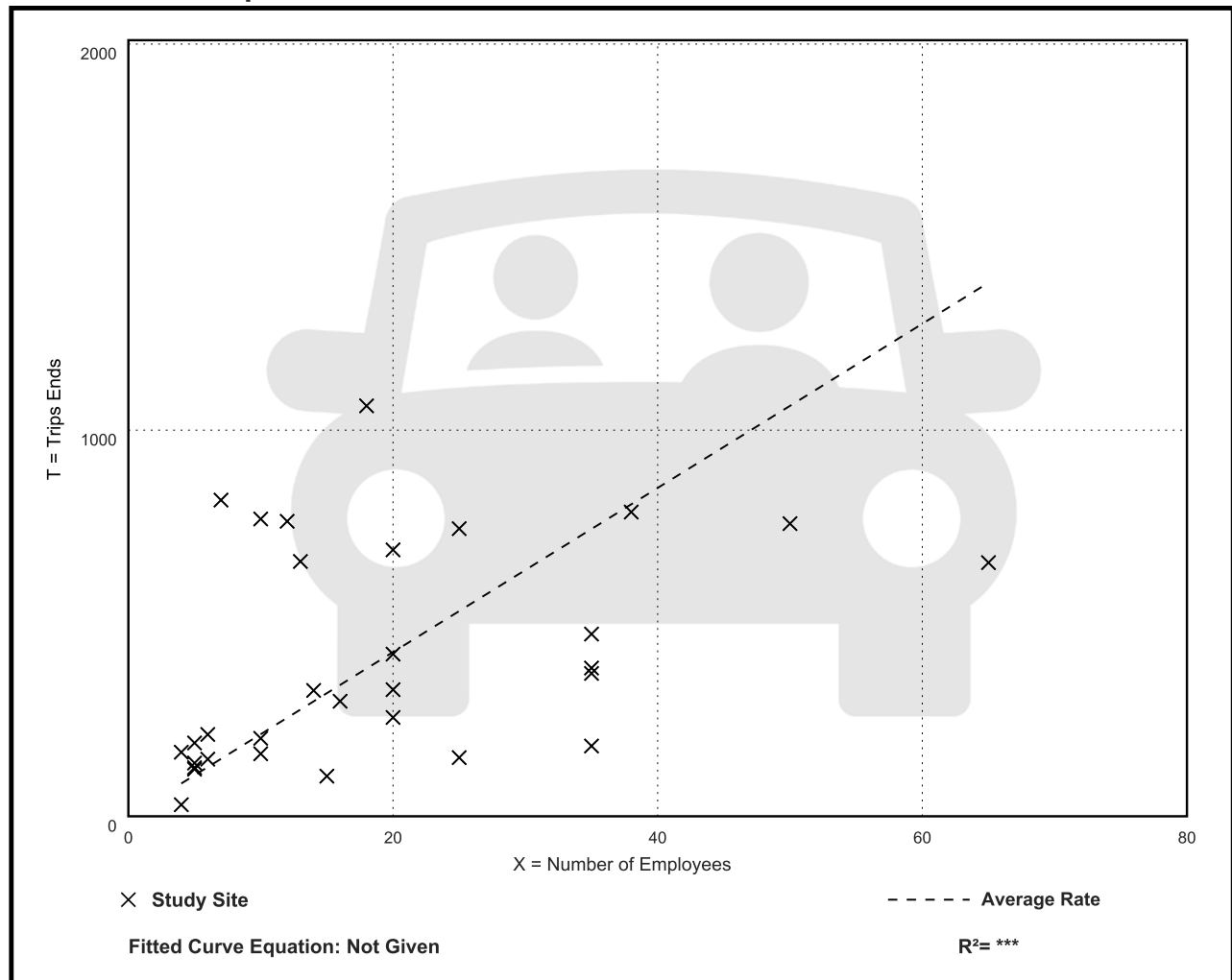
Avg. Num. of Employees: 19

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
21.26	5.20 - 117.00	18.96

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: Employees

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 10

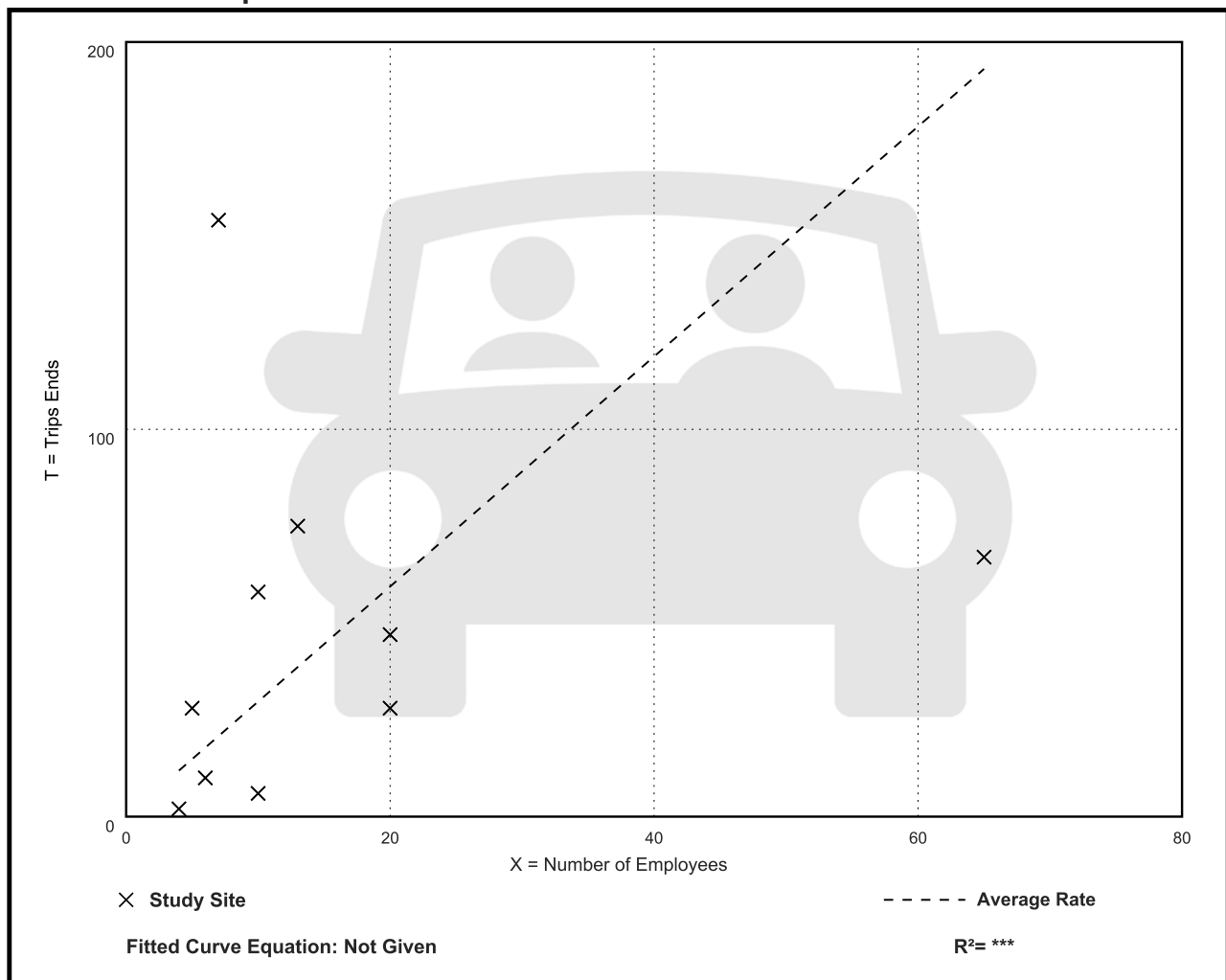
Avg. Num. of Employees: 16

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
2.97	0.50 - 22.00	4.67

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: Employees

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 28

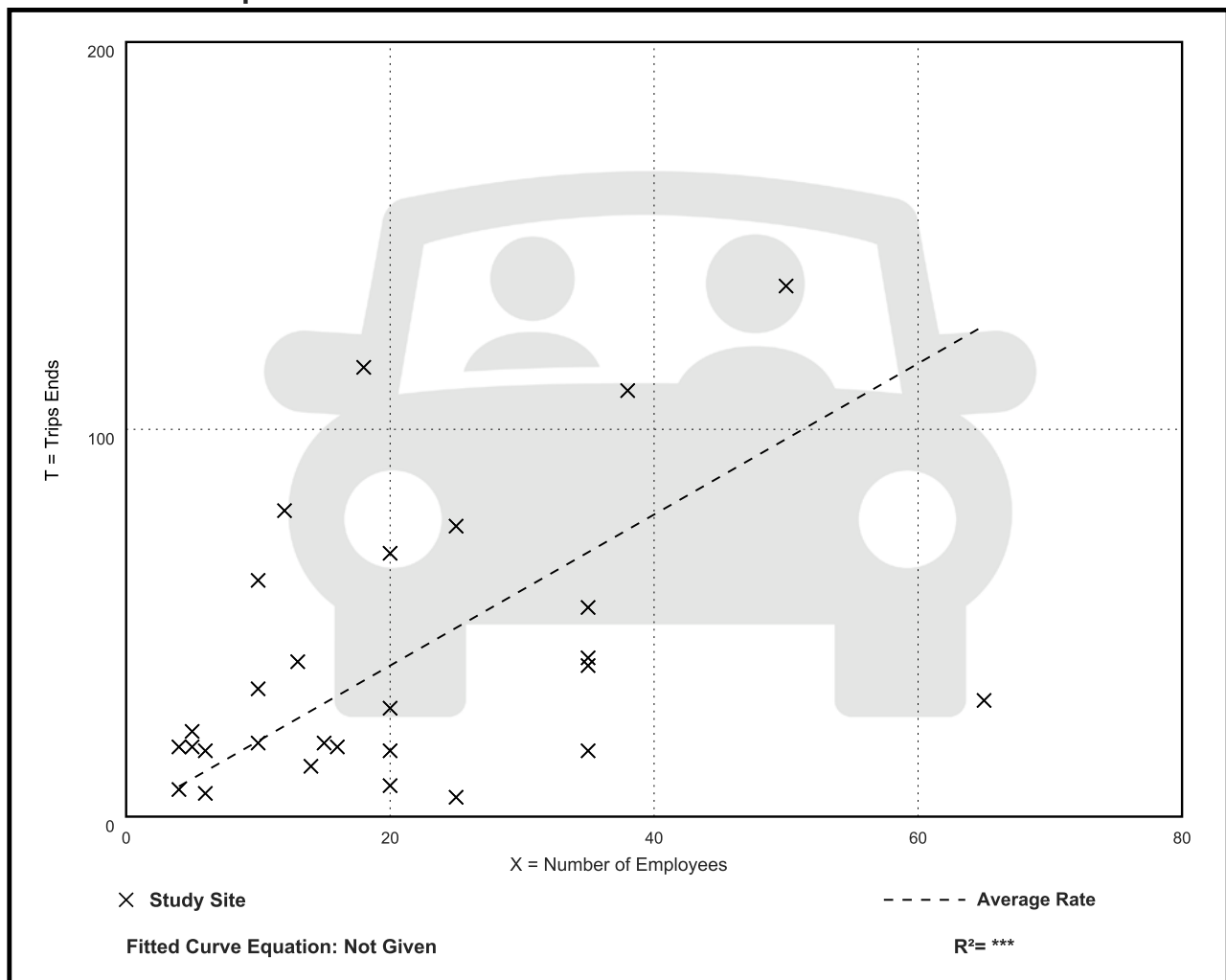
Avg. Num. of Employees: 20

Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
1.95	0.20 - 6.58	1.65

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: Employees

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 30

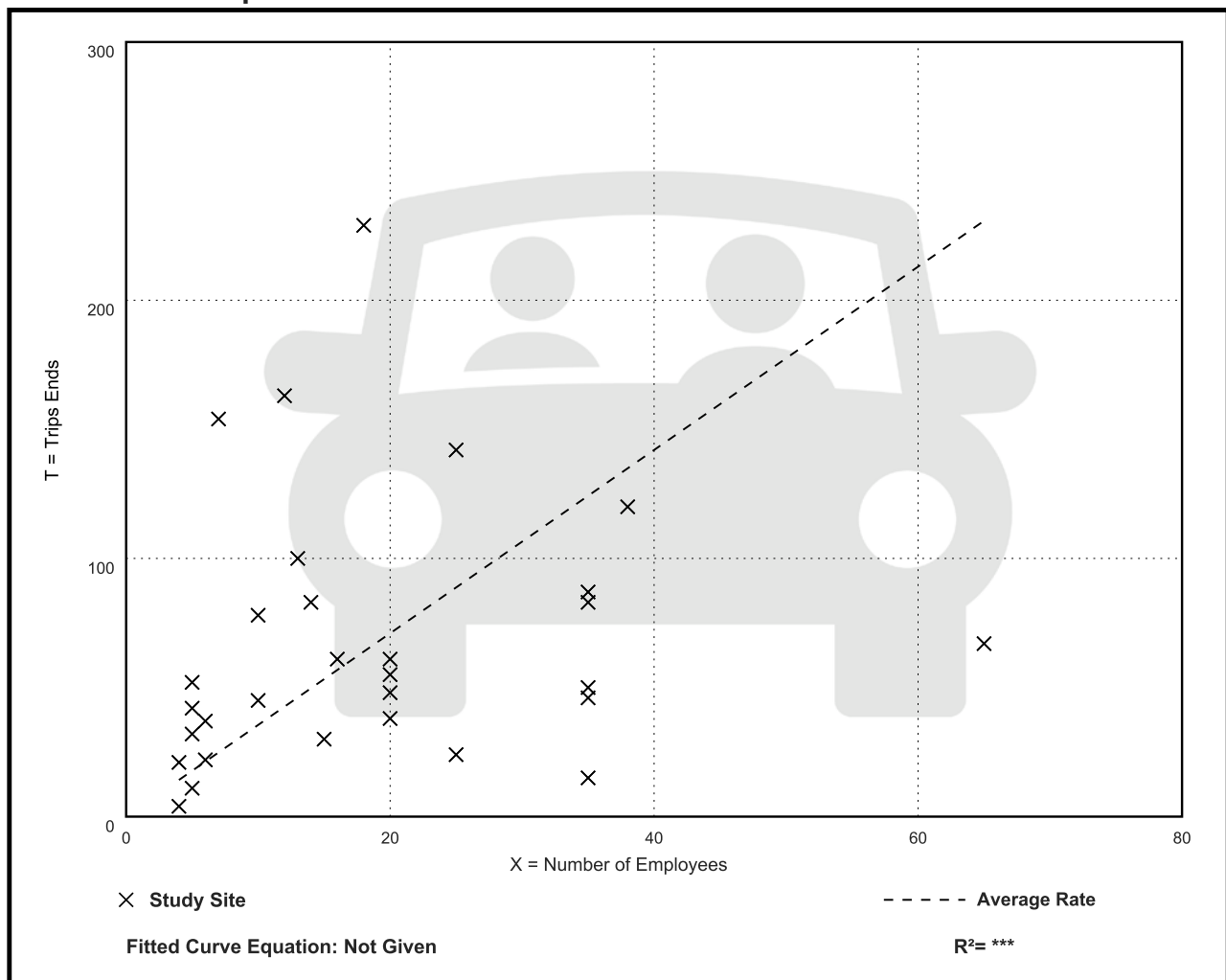
Avg. Num. of Employees: 19

Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
3.55	0.43 - 22.00	3.76

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Vehicle Trip Ends vs: Employees

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 32

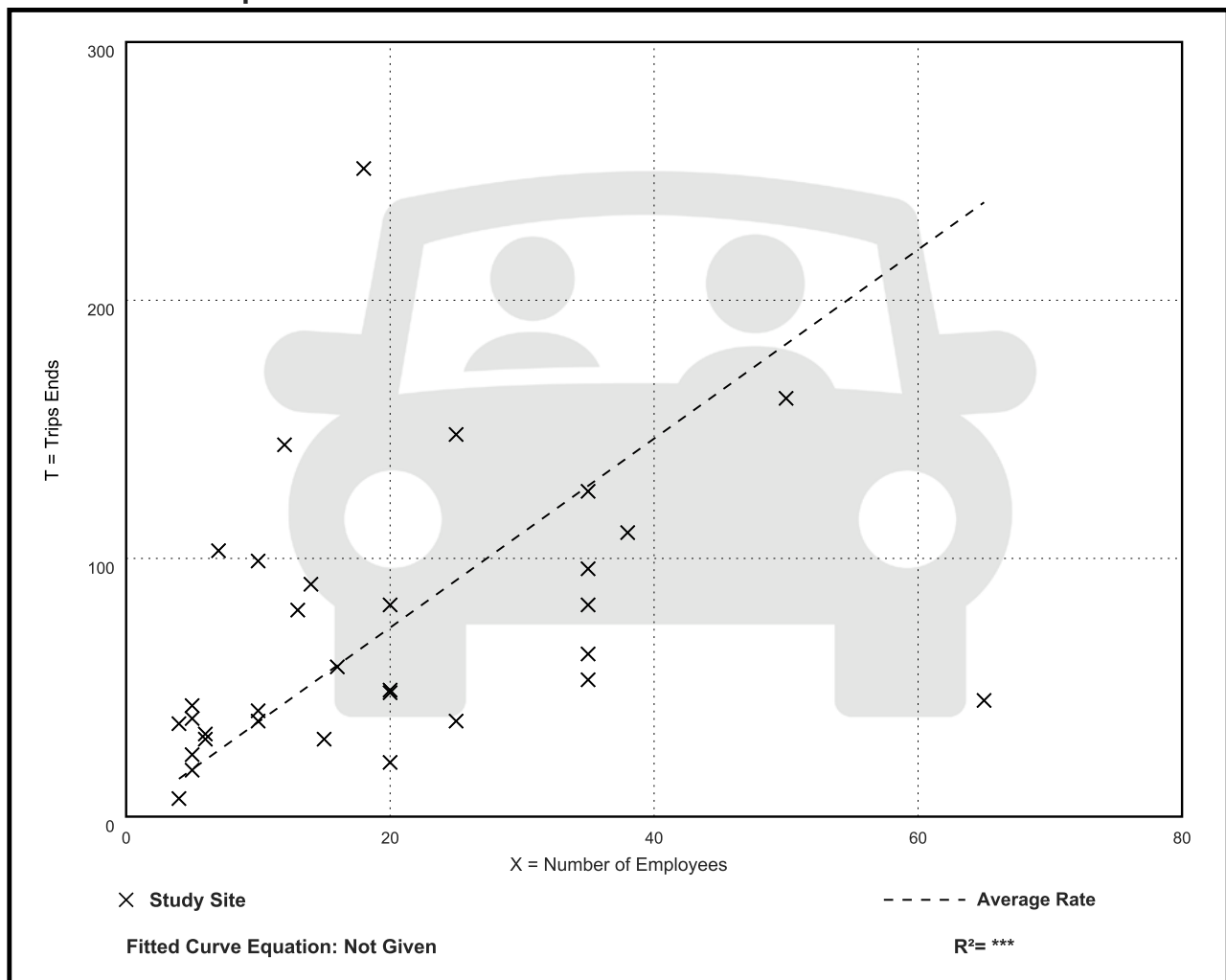
Avg. Num. of Employees: 19

Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
3.66	0.69 - 14.71	3.15

Data Plot and Equation



High-Turnover (Sit-Down) Restaurant (932)

Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. 1000 Sq. Ft. GFA: 8

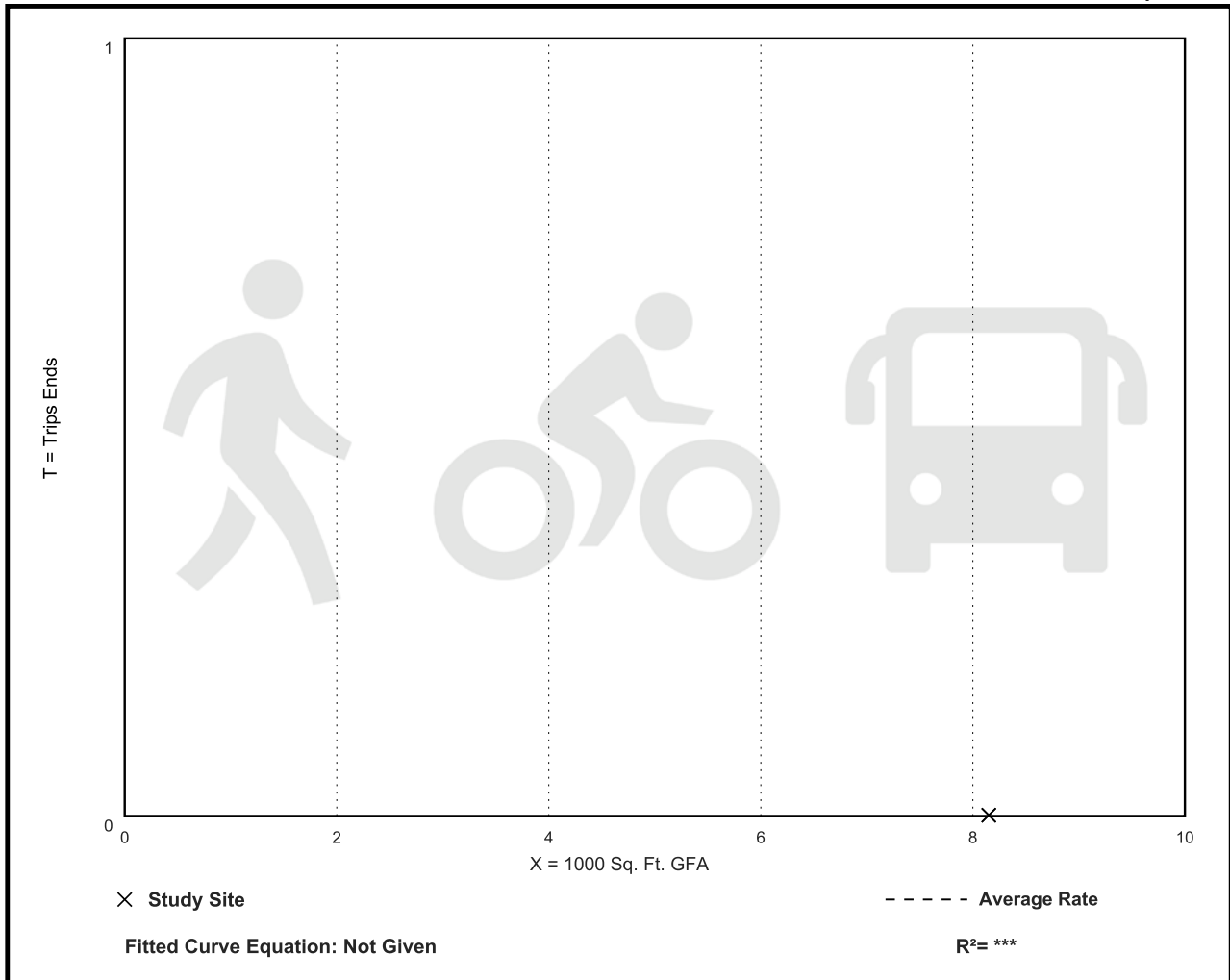
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.00	0.00 - 0.00	***

Data Plot and Equation

Caution – Small Sample Size



High-Turnover (Sit-Down) Restaurant (932)

Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. 1000 Sq. Ft. GFA: 11

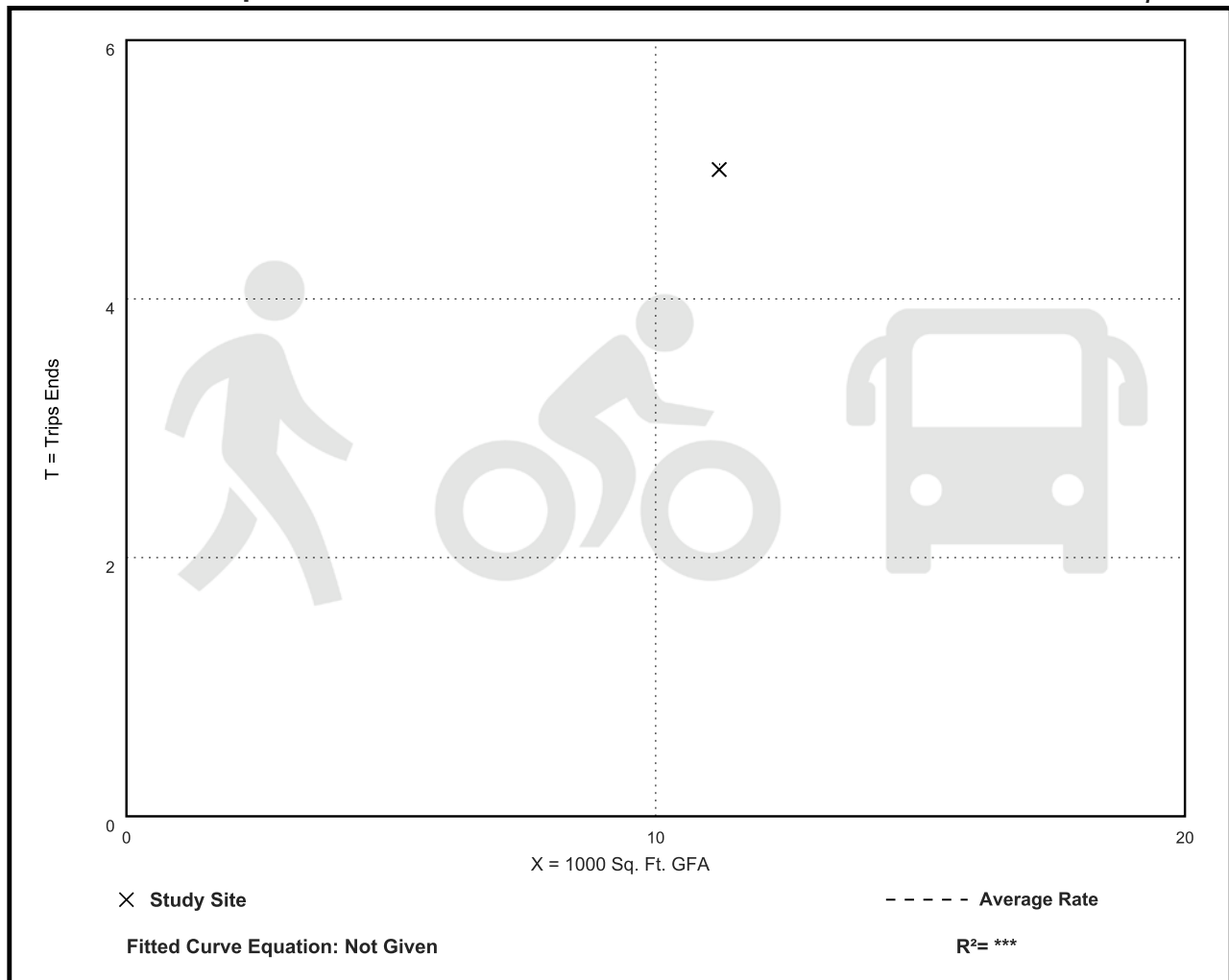
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.45	0.45 - 0.45	***

Data Plot and Equation

Caution – Small Sample Size



High-Turnover (Sit-Down) Restaurant (932)

Walk+Bike+Transit Trip Ends vs: Seats

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Seats: 250

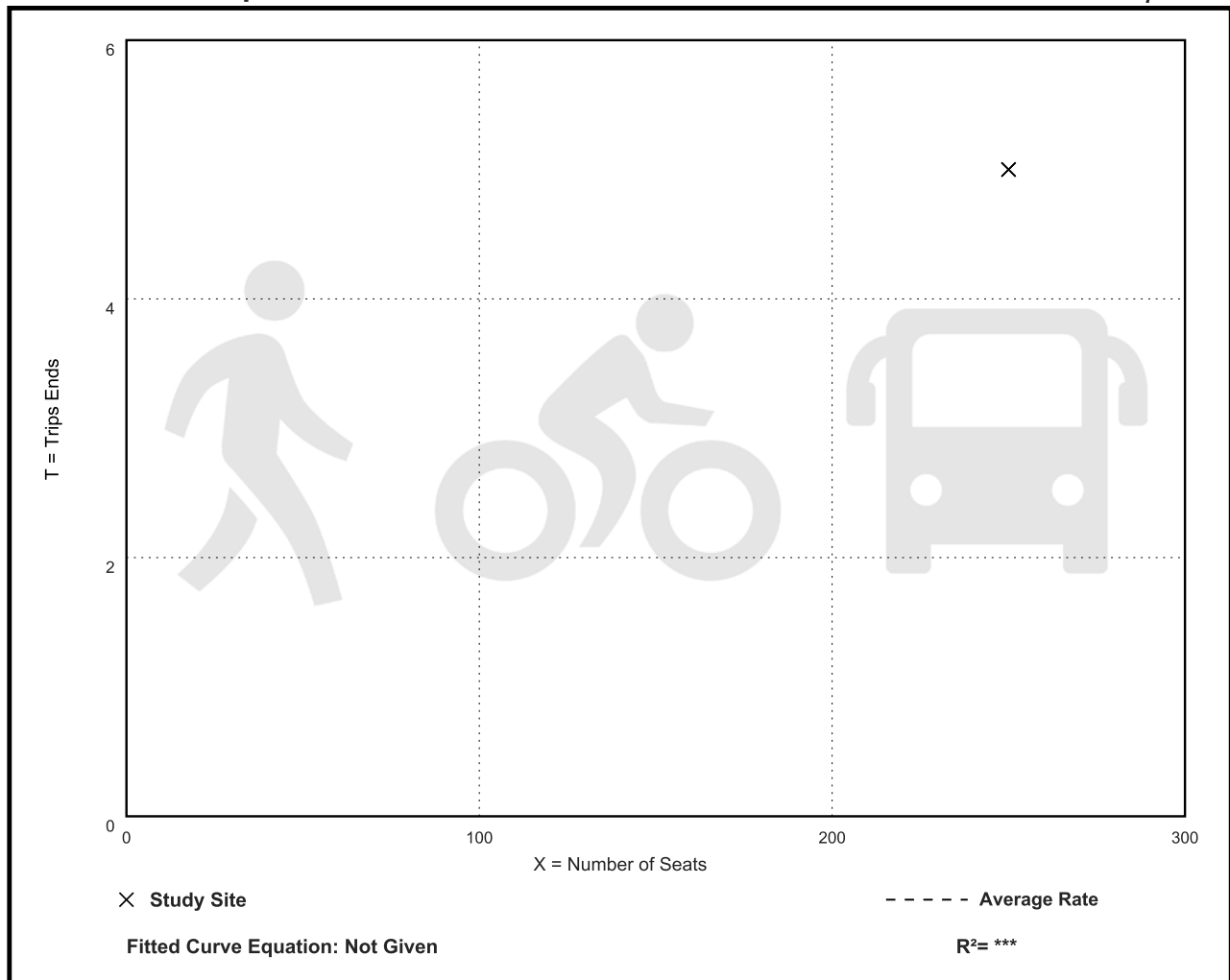
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
0.02	0.02 - 0.02	***

Data Plot and Equation

Caution – Small Sample Size



High-Turnover (Sit-Down) Restaurant (932)

Walk+Bike+Transit Trip Ends vs: Employees

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Employees: 35

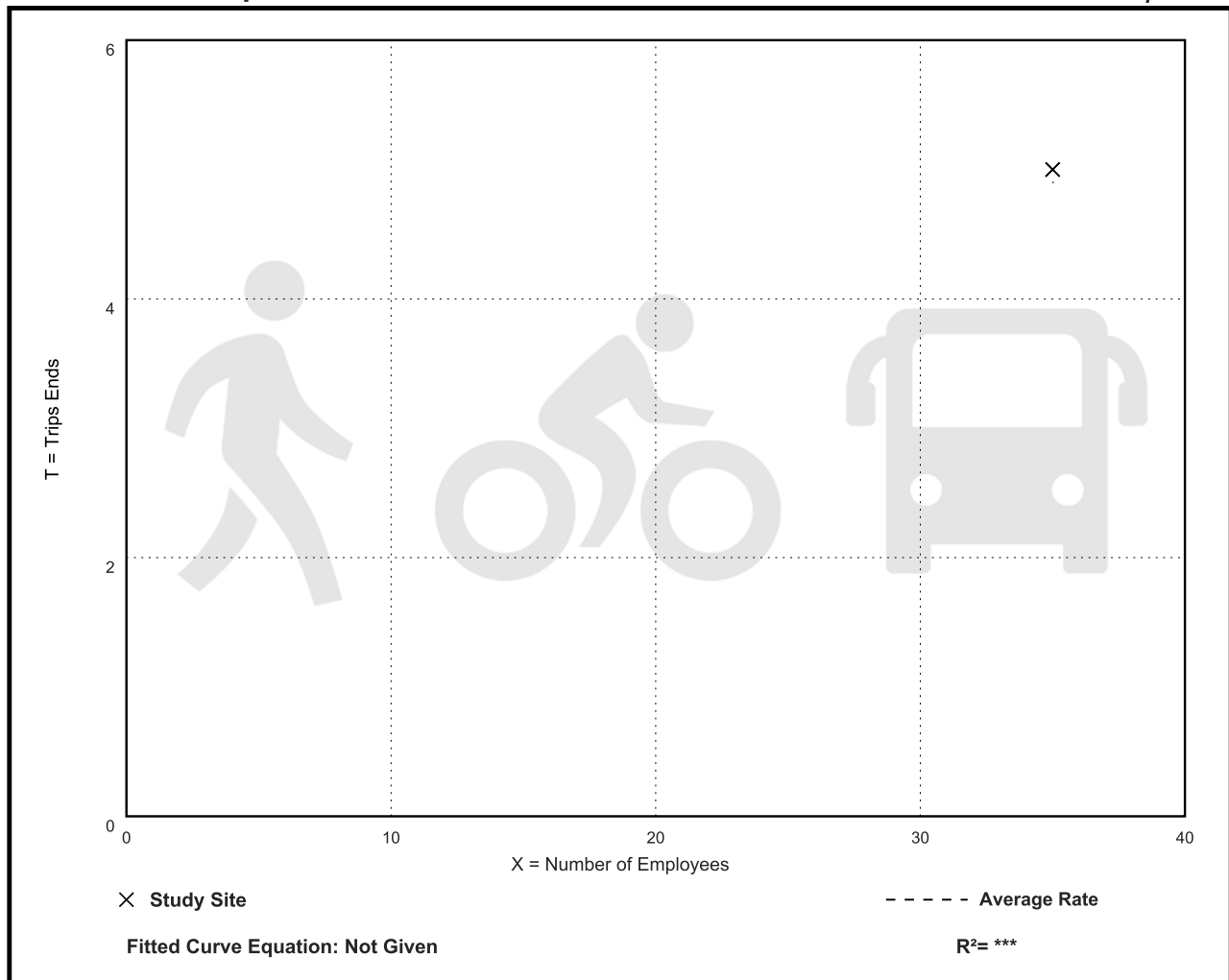
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.14	0.14 - 0.14	***

Data Plot and Equation

Caution – Small Sample Size



Land Use: 936

Coffee/Donut Shop without Drive-Through Window

Description

This land use includes any coffee and donut restaurant that does not have a drive-through window. The restaurant sells freshly brewed coffee (along with coffee-related accessories) and a variety of food/drink products such as donuts, bagels, breads, muffins, cakes, sandwiches, wraps, salads, and other hot and cold beverages. The restaurant marketing and sales may emphasize coffee beverages over food (or vice versa).

A coffee/donut shop typically holds long store hours (more than 15 hours) with an early morning opening. Limited indoor seating is generally provided for patrons, but table service is not provided.

Coffee/donut shop with drive-through window (Land Use 937) and coffee/donut shop with drive-through window and no indoor seating (Land Use 938) are related uses.

Additional Data

Many of the facilities in this land use were located within a shopping center or as an outparcel to a shopping center.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1990s, the 2000s, and the 2010s in California, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, and Vermont.

Specialized Land Use Data

One study provided data for a coffee/donut shop without a drive-through window that sells donuts and ice cream (source 563). The trip generating characteristics of this site differed from the sites included in this land use; therefore, trip generation information for this site is presented here and was excluded from the data plots. The site had a gross floor area of 2,400 square feet. It generated 48 vehicle trips during the weekday PM peak hour of adjacent street traffic and 52 vehicle trips during the weekday PM peak hour of the generator.

One study provided data for a coffee/donut shop without a drive-through window that sells donuts and sandwiches (source 563). The trip generating characteristics of this site differed from the sites included in this land use; therefore, trip generation information for this site is presented here and was excluded from the data plots. The site had a gross floor area of 4,000 square feet. It generated 239 vehicle trips during the weekday AM peak hour of adjacent street traffic, 52 vehicle trips during the weekday PM peak hour of adjacent street traffic, and 111 vehicle trips during the weekday PM peak hour of the generator.

Source Numbers

555, 563, 571, 594, 617, 618, 621, 728, 863, 902, 954, 955, 982, 1020

Coffee/Donut Shop without Drive-Through Window (936)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 25

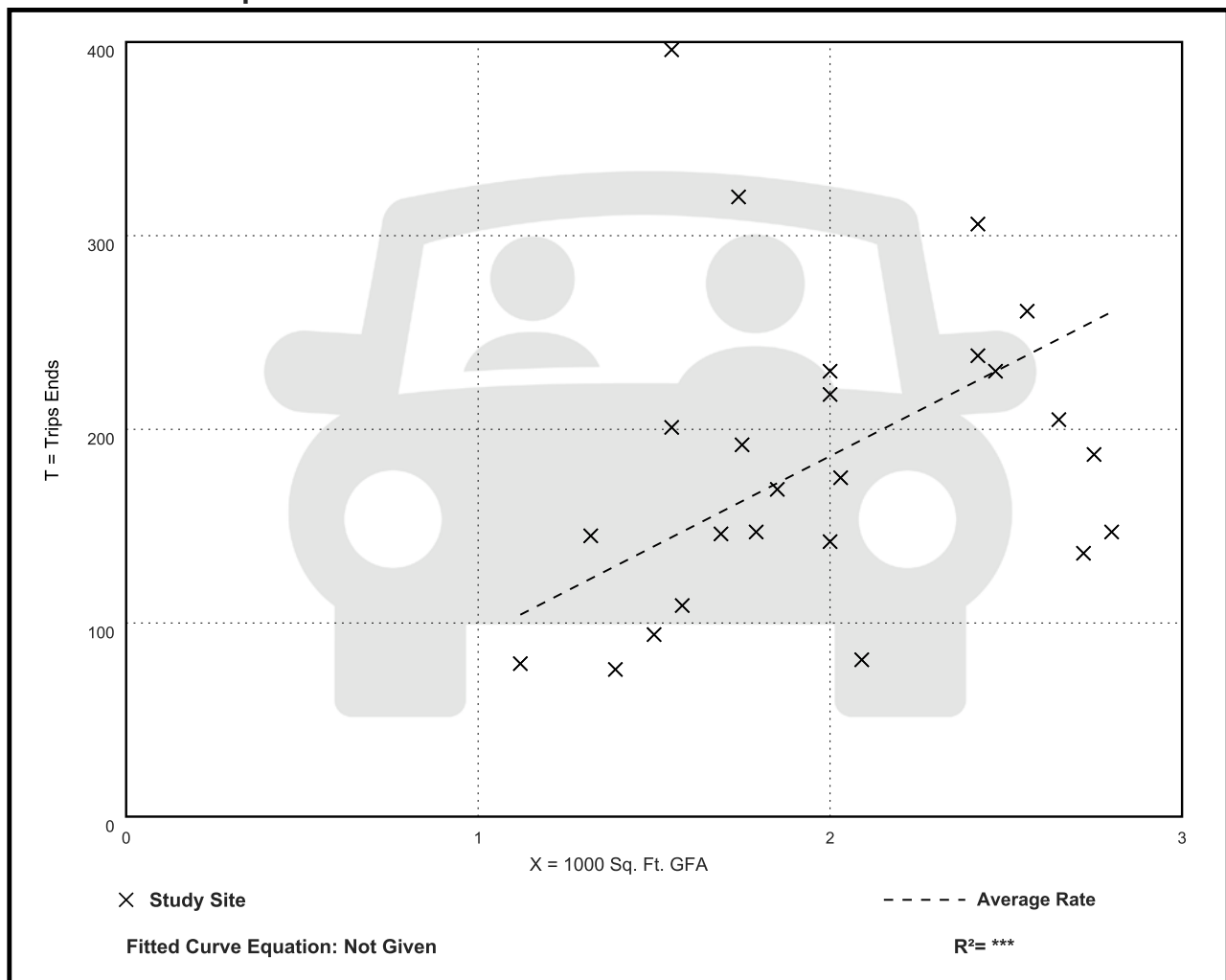
Avg. 1000 Sq. Ft. GFA: 2

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
93.08	38.76 - 255.48	42.71

Data Plot and Equation



Coffee/Donut Shop without Drive-Through Window (936)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 16

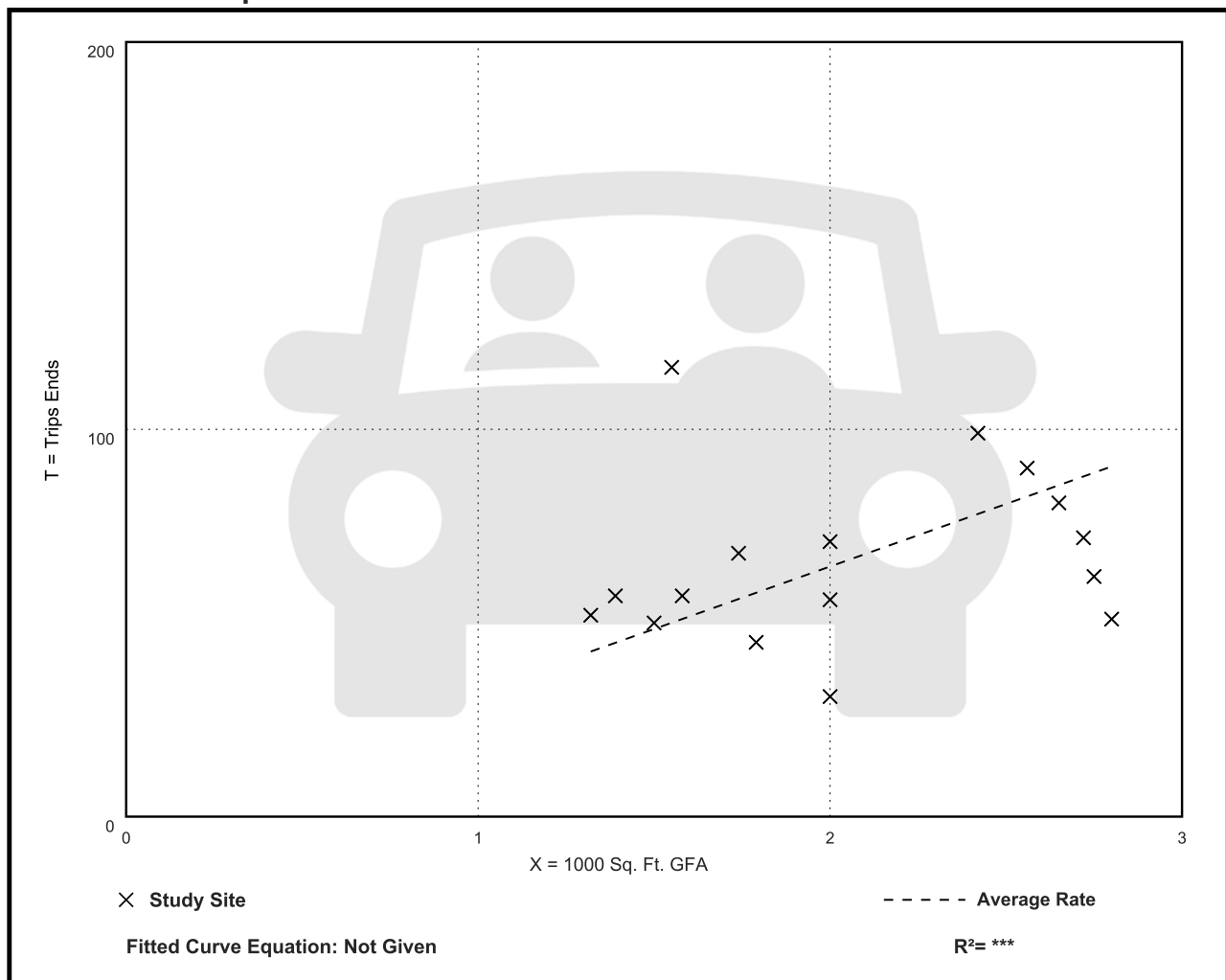
Avg. 1000 Sq. Ft. GFA: 2

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
32.29	15.50 - 74.84	12.64

Data Plot and Equation



Coffee/Donut Shop without Drive-Through Window (936)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 23

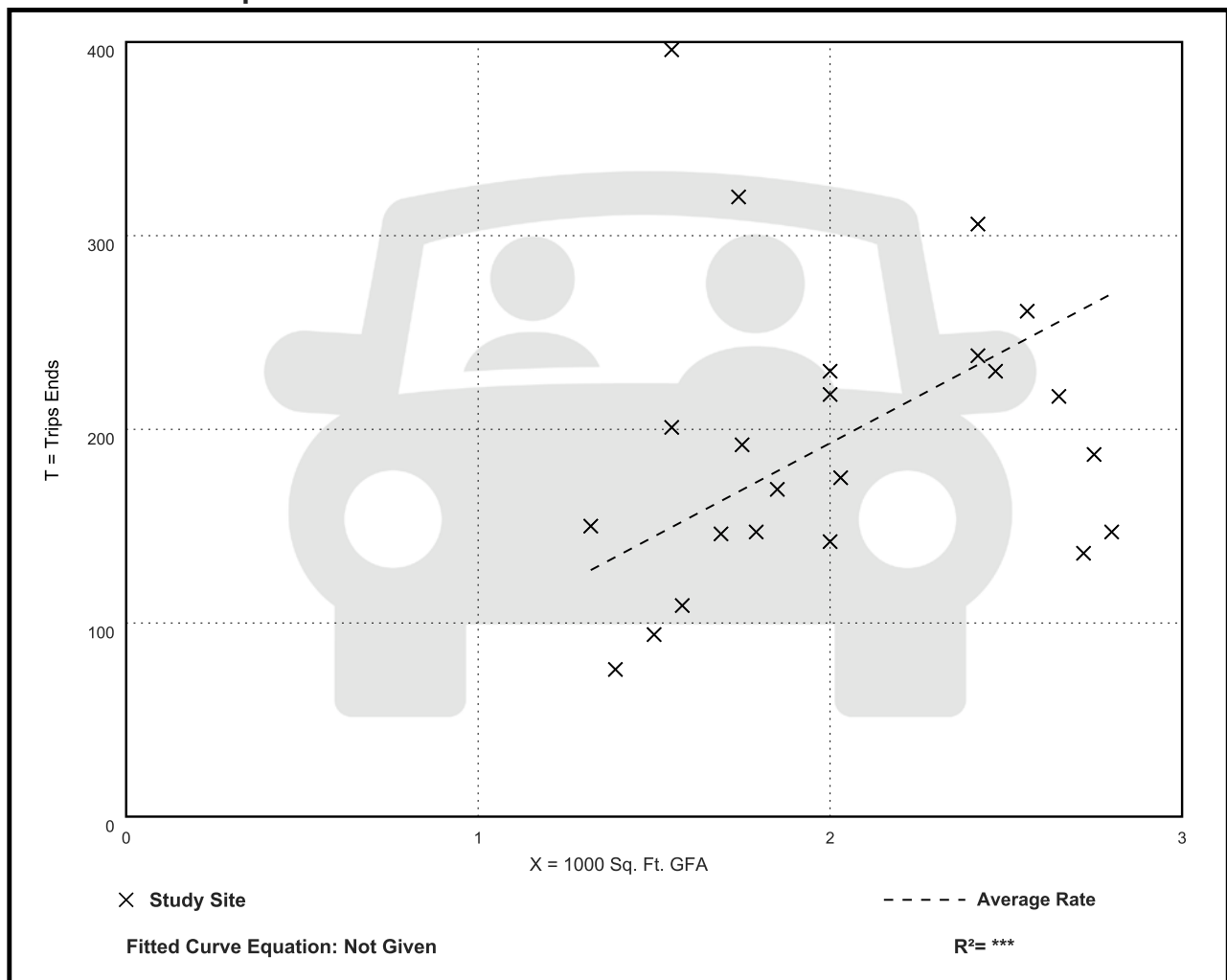
Avg. 1000 Sq. Ft. GFA: 2

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
96.43	50.00 - 255.48	42.32

Data Plot and Equation



Coffee/Donut Shop without Drive-Through Window (936)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 15

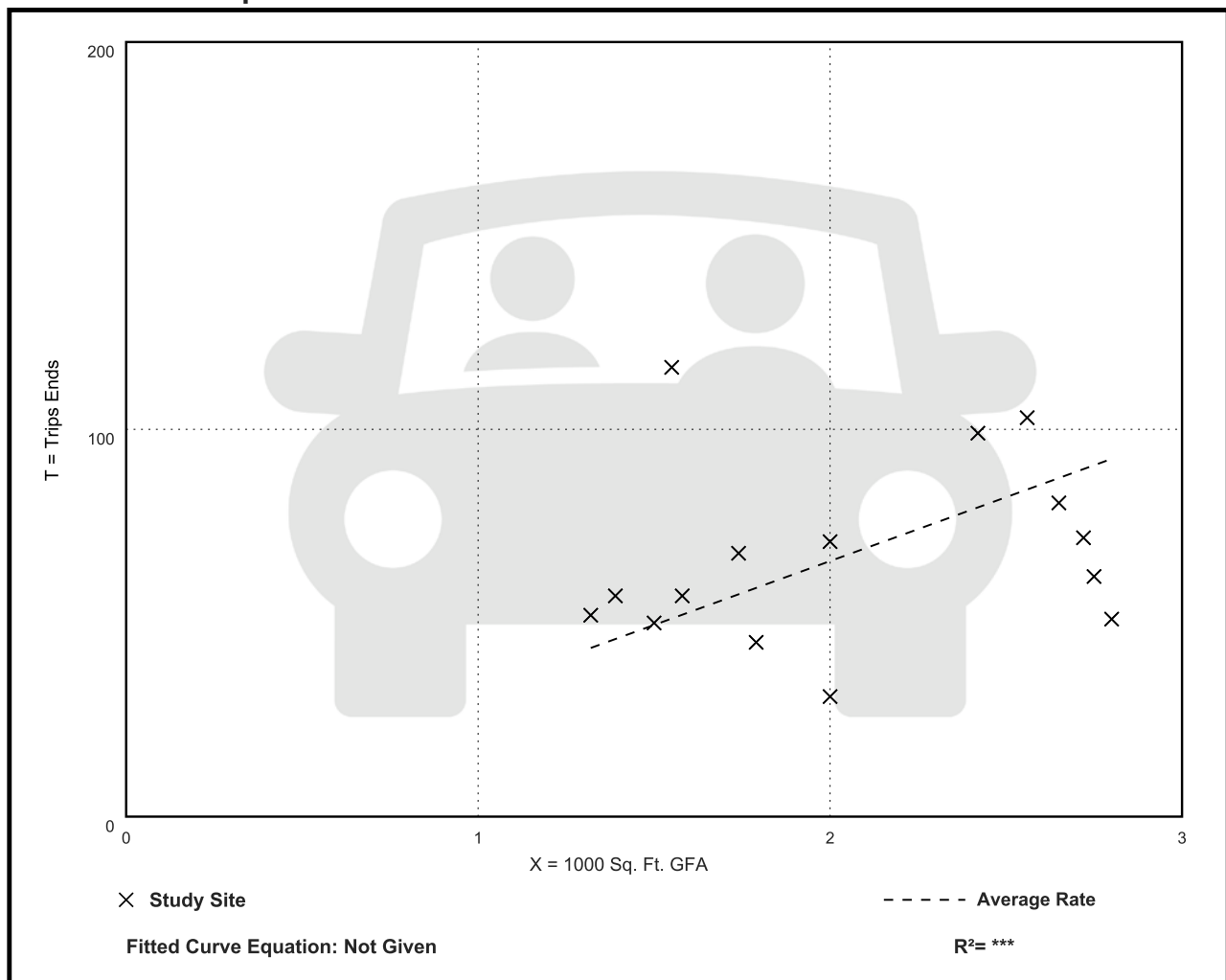
Avg. 1000 Sq. Ft. GFA: 2

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
32.99	15.50 - 74.84	13.20

Data Plot and Equation



Coffee/Donut Shop without Drive-Through Window (936)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 7

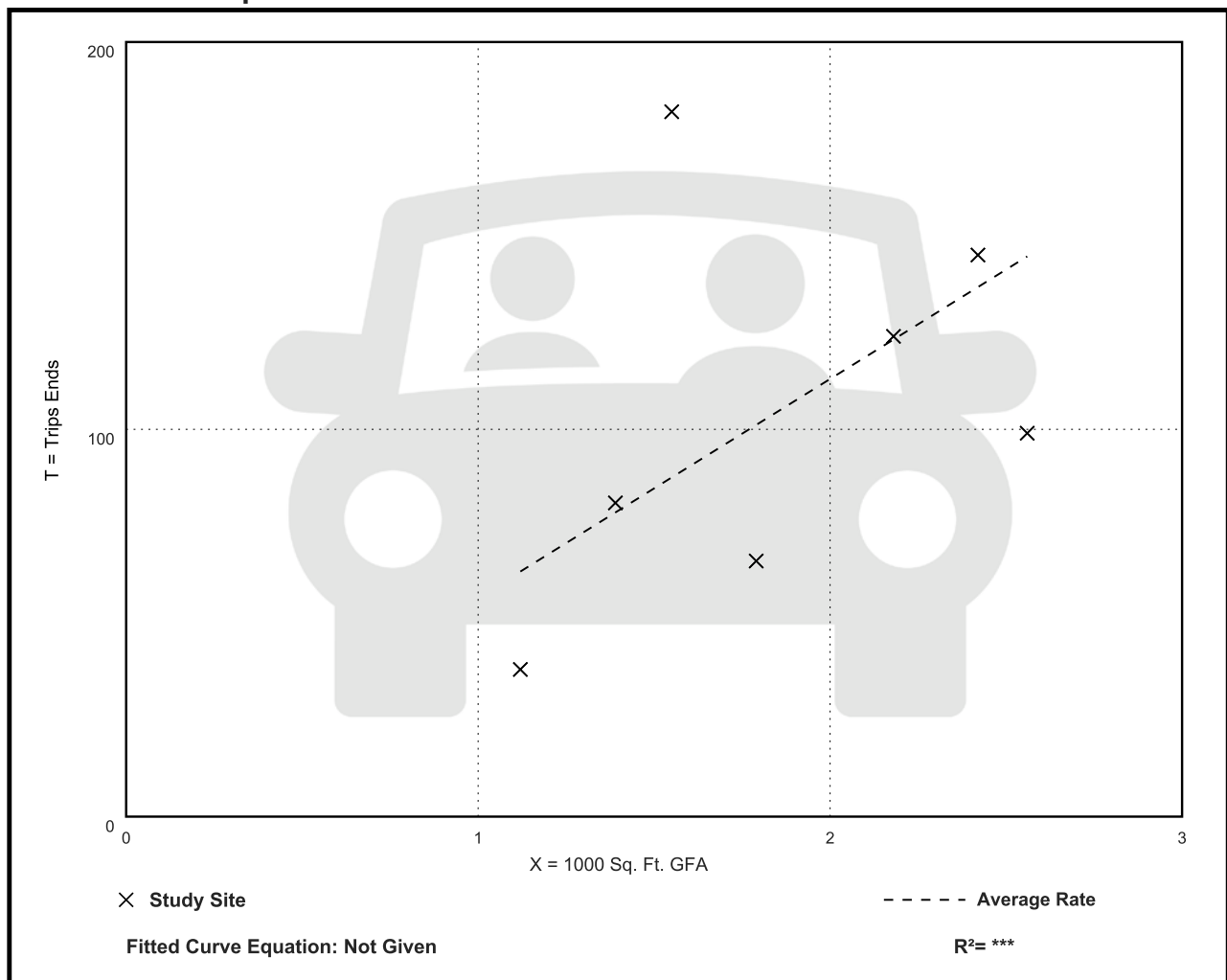
Avg. 1000 Sq. Ft. GFA: 2

Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
56.50	33.93 - 117.42	26.55

Data Plot and Equation



Coffee/Donut Shop without Drive-Through Window (936)

Vehicle Trip Ends vs: Seats

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Seats: 19

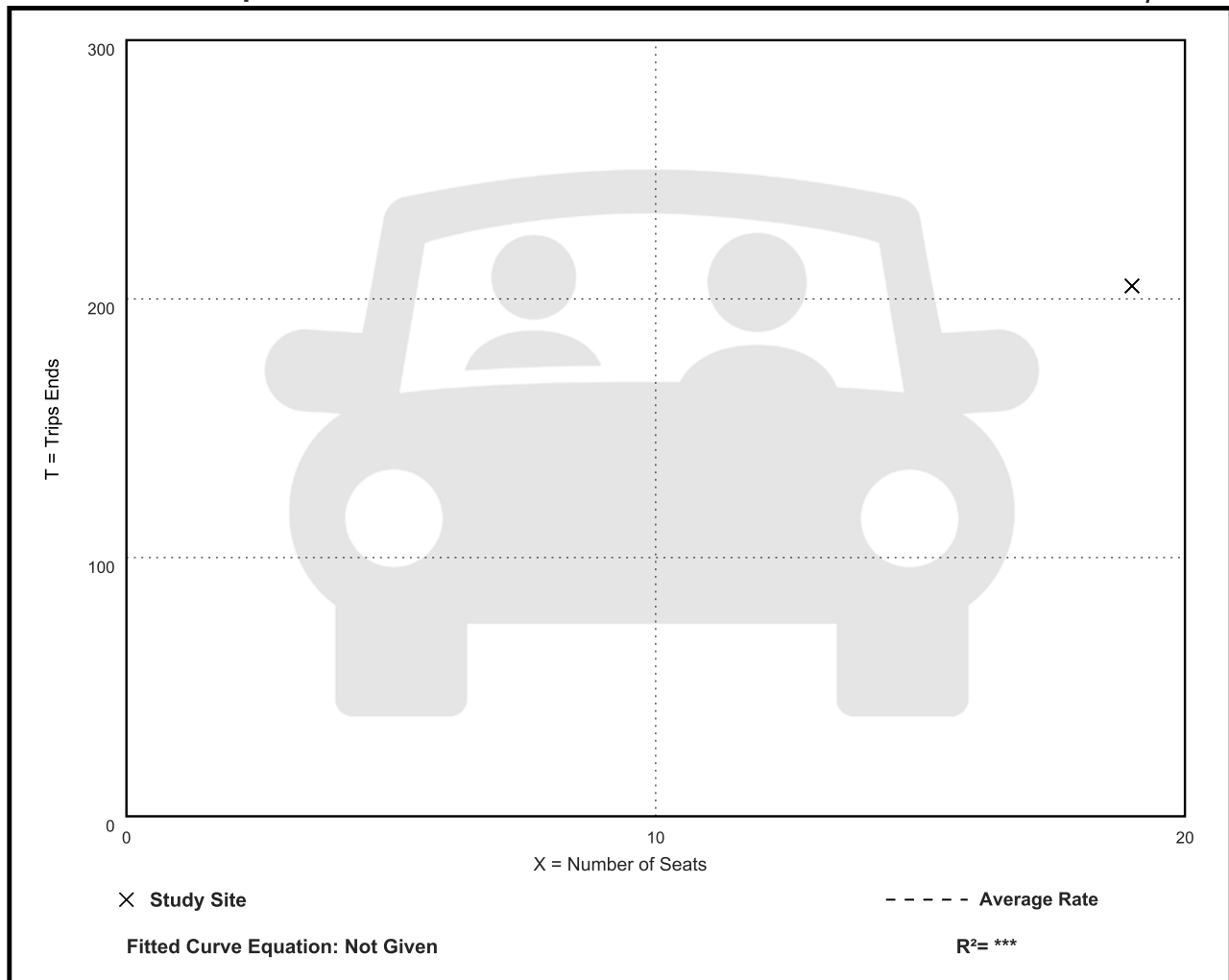
Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
10.79	10.79 - 10.79	***

Data Plot and Equation

Caution – Small Sample Size



Coffee/Donut Shop without Drive-Through Window (936)

Vehicle Trip Ends vs: Seats

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Seats: 19

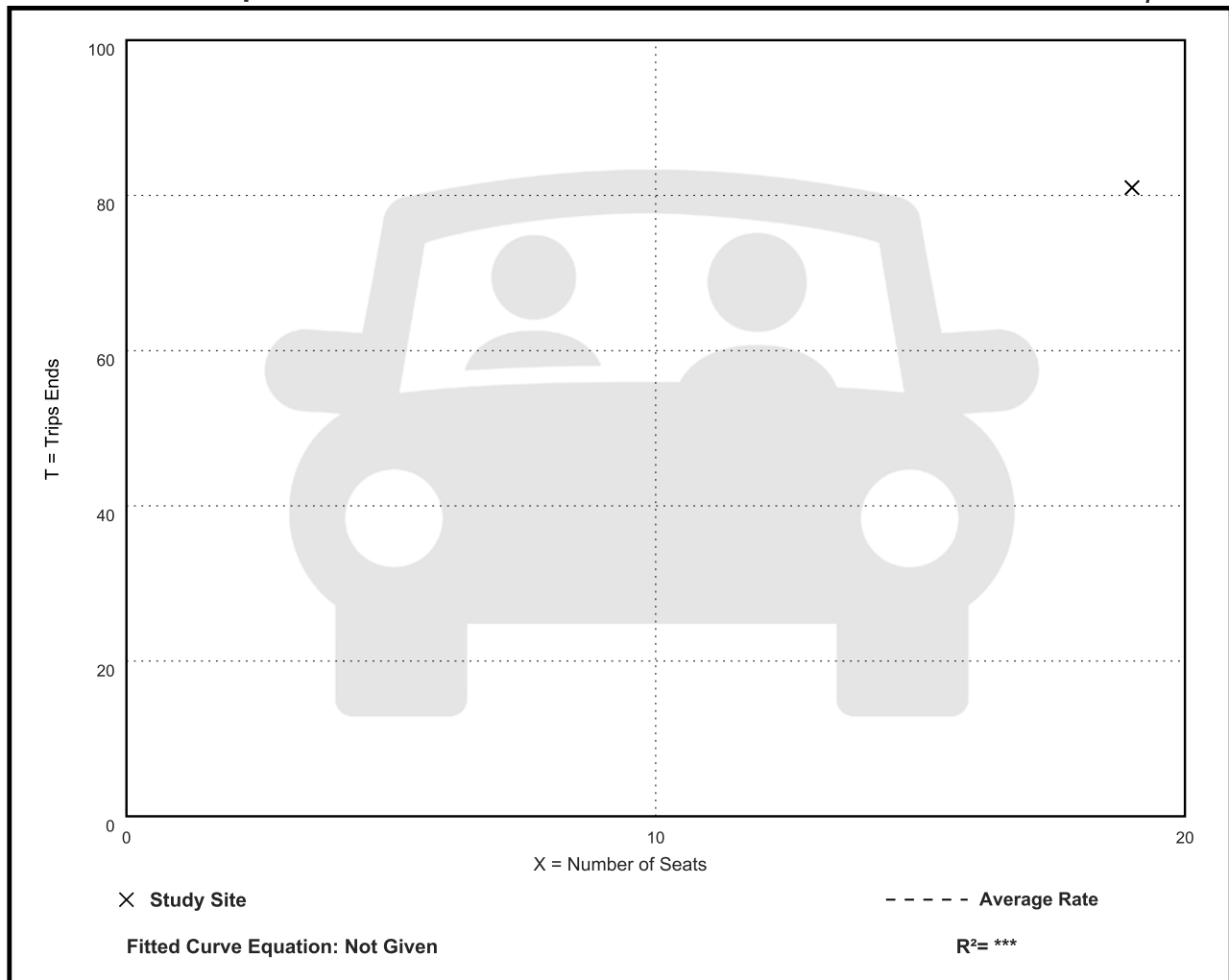
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
4.26	4.26 - 4.26	***

Data Plot and Equation

Caution – Small Sample Size



Coffee/Donut Shop without Drive-Through Window (936)

Vehicle Trip Ends vs: Seats

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Seats: 19

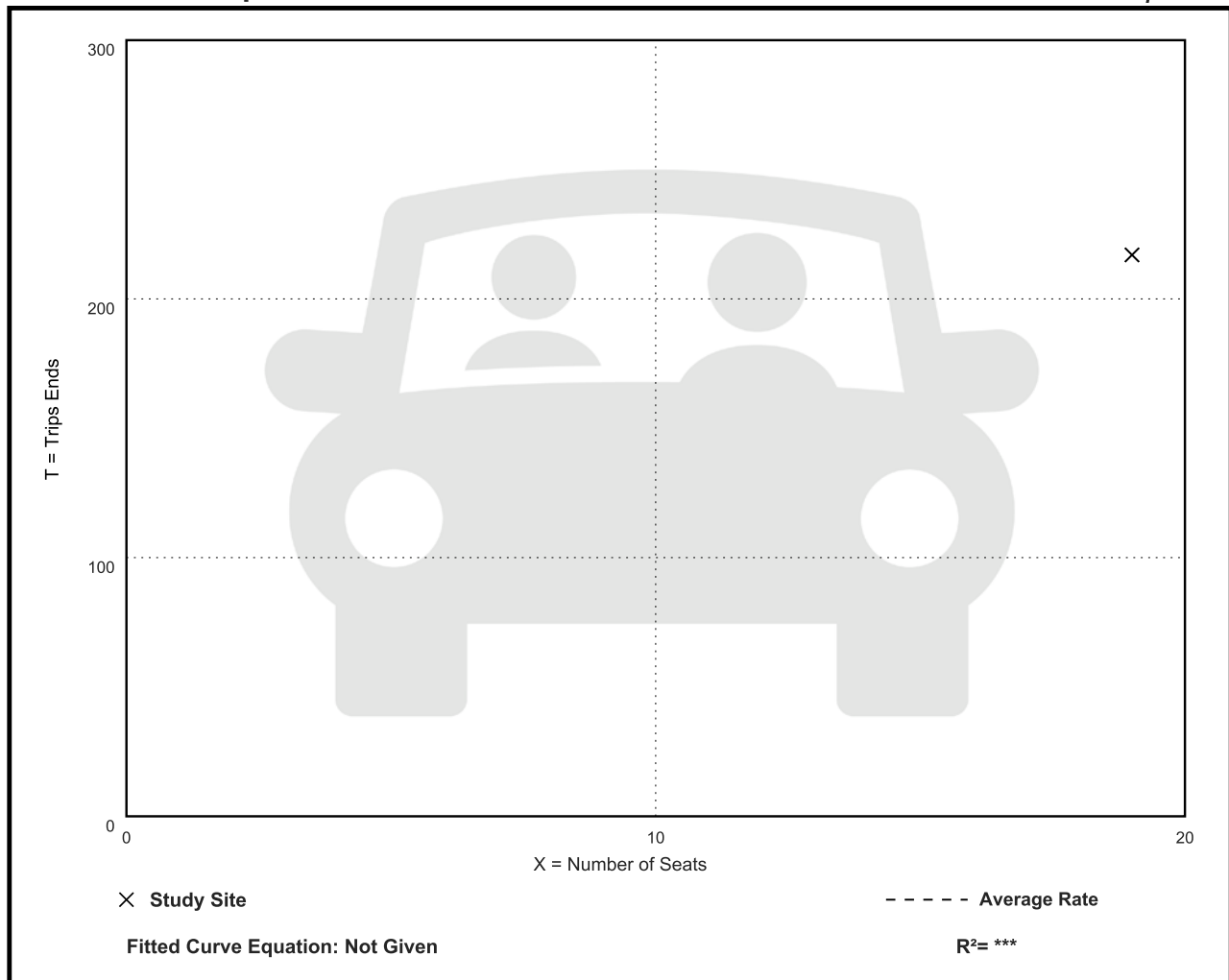
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
11.42	11.42 - 11.42	***

Data Plot and Equation

Caution – Small Sample Size



Coffee/Donut Shop without Drive-Through Window (936)

Vehicle Trip Ends vs: Seats

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Seats: 19

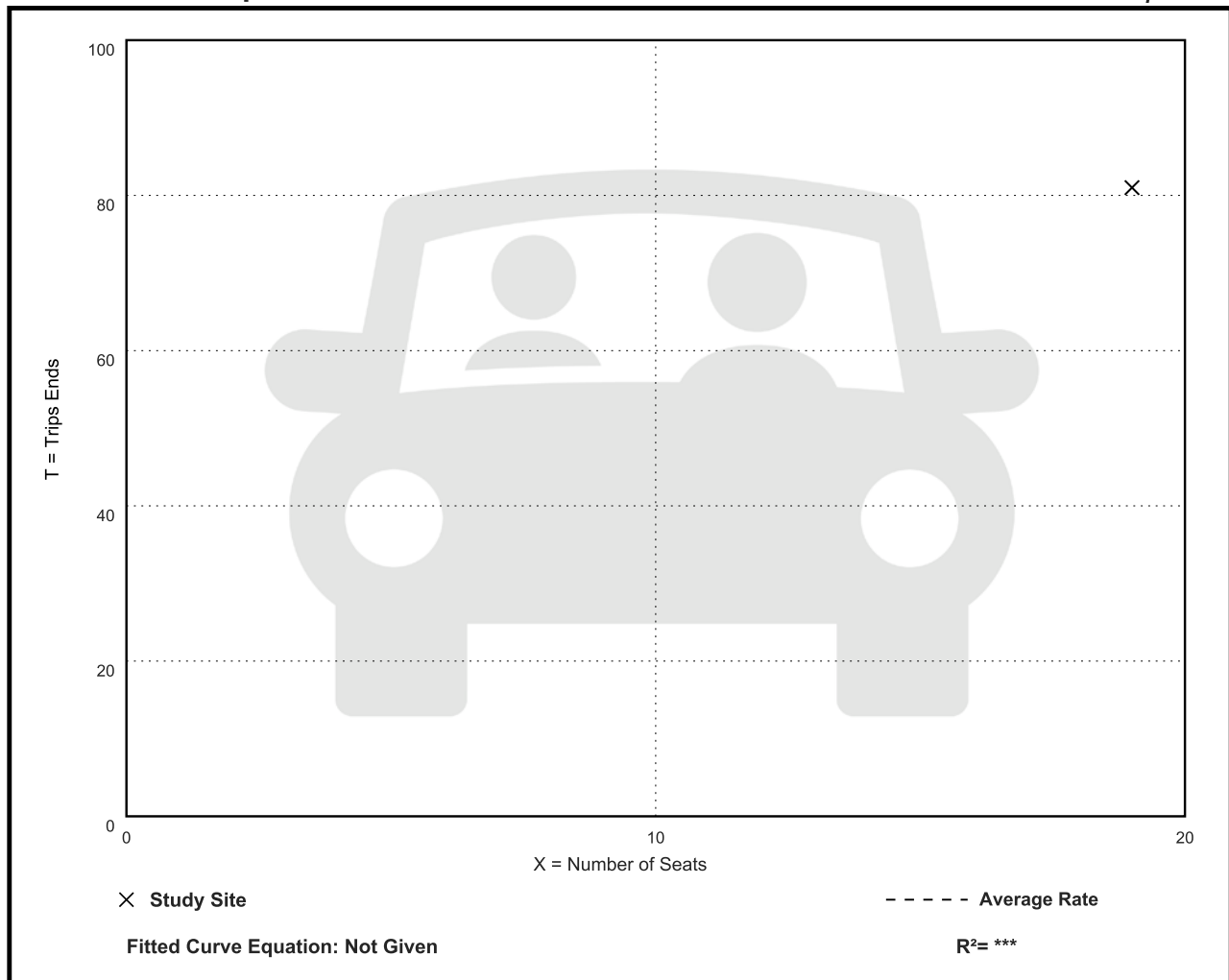
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Seat

Average Rate	Range of Rates	Standard Deviation
4.26	4.26 - 4.26	***

Data Plot and Equation

Caution – Small Sample Size



Land Use: 720

Medical-Dental Office Building

Description

A medical-dental office building is a facility that provides diagnoses and outpatient care on a routine basis but is unable to provide prolonged in-house medical and surgical care. One or more private physicians or dentists generally operate this type of facility. General office building (Land Use 710) and clinic (Land Use 630) are related uses.

Land Use Subcategory

Analysis of medical-dental office building data found that trip generation rates are measurably different for sites located within or adjacent to a hospital campus and sites that are stand-alone. Data plots are presented for these two land use subcategories.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Connecticut, Kentucky, Maryland, Minnesota, New Jersey, New York, Ohio, Oregon, Pennsylvania, South Dakota, Texas, Virginia, Washington, and Wisconsin.

Source Numbers

104, 109, 120, 157, 184, 209, 211, 253, 287, 294, 295, 304, 357, 384, 404, 407, 423, 444, 509, 601, 715, 867, 879, 901, 902, 908, 959, 972

Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 18

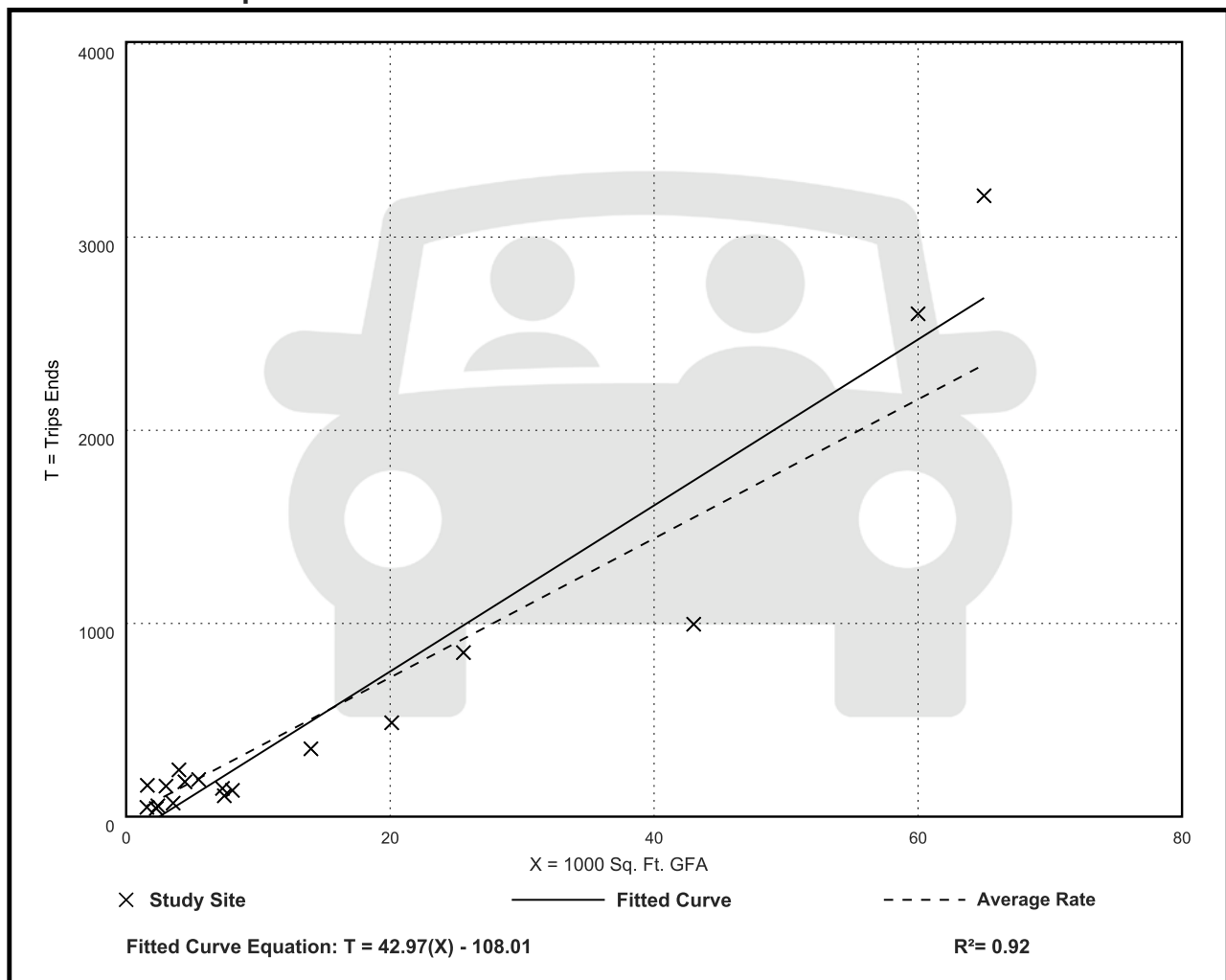
Avg. 1000 Sq. Ft. GFA: 15

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
36.00	14.52 - 100.75	13.38

Data Plot and Equation



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 24

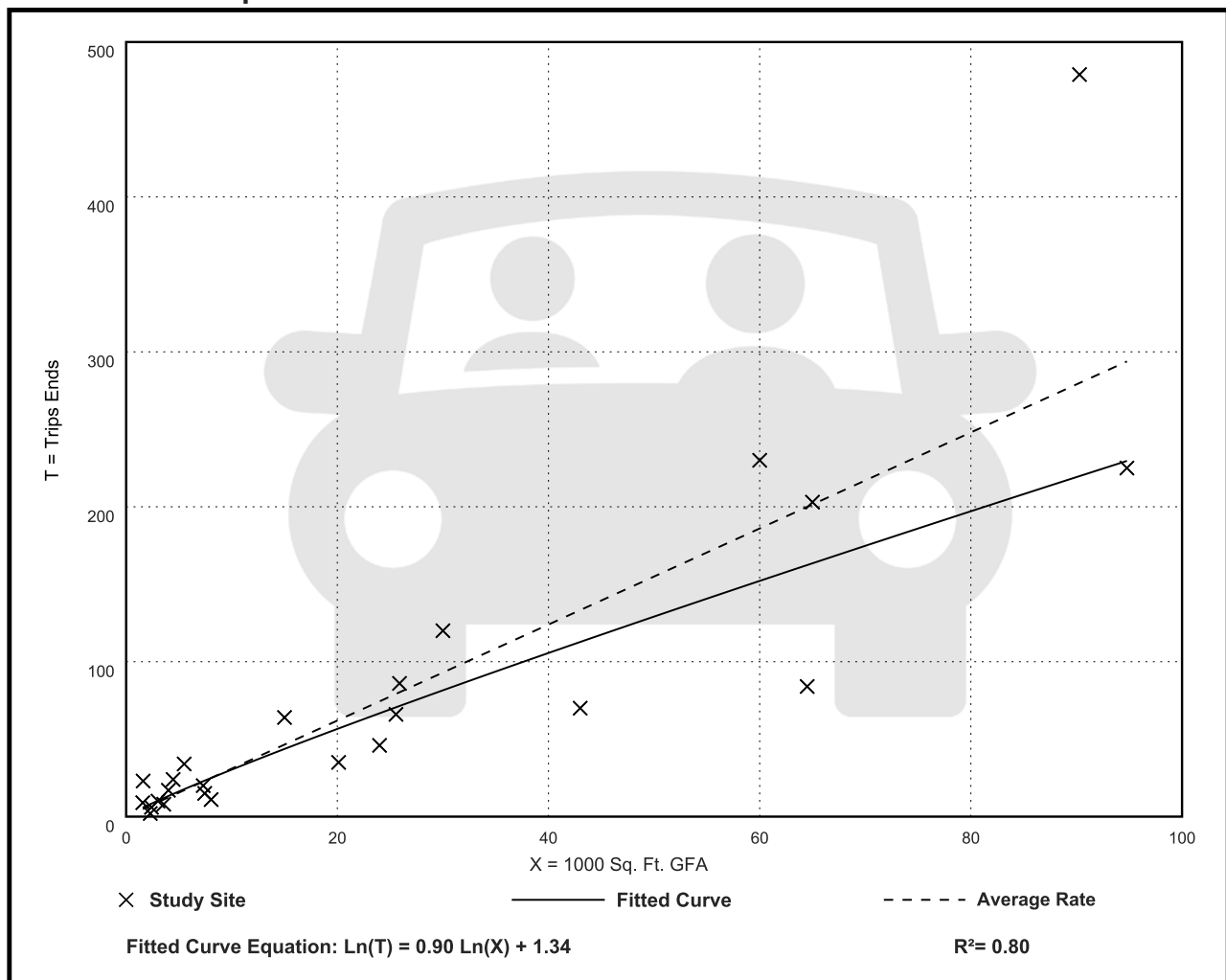
Avg. 1000 Sq. Ft. GFA: 25

Directional Distribution: 79% entering, 21% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.10	0.87 - 14.30	1.49

Data Plot and Equation



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 30

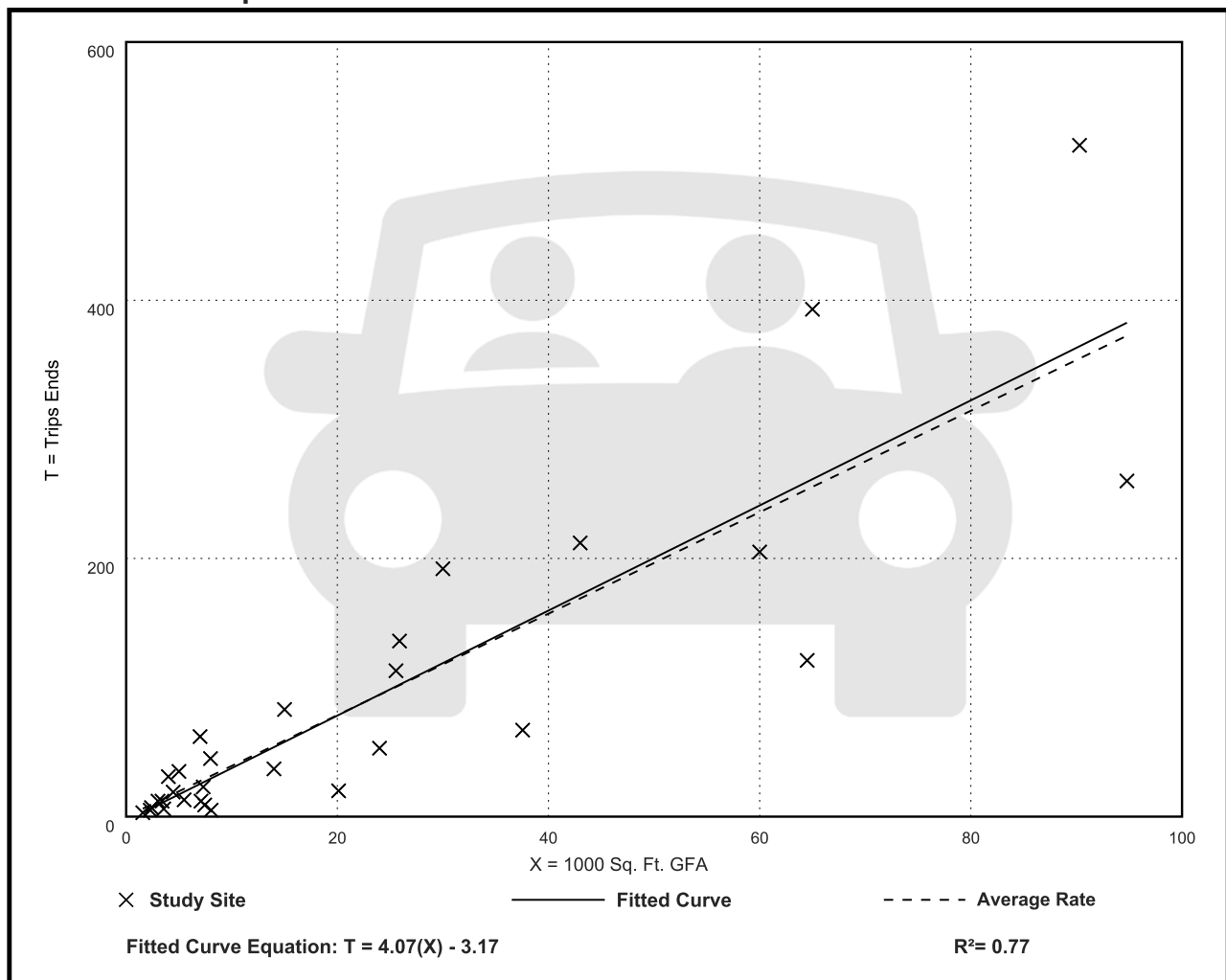
Avg. 1000 Sq. Ft. GFA: 23

Directional Distribution: 30% entering, 70% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.93	0.62 - 8.86	1.86

Data Plot and Equation



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 21

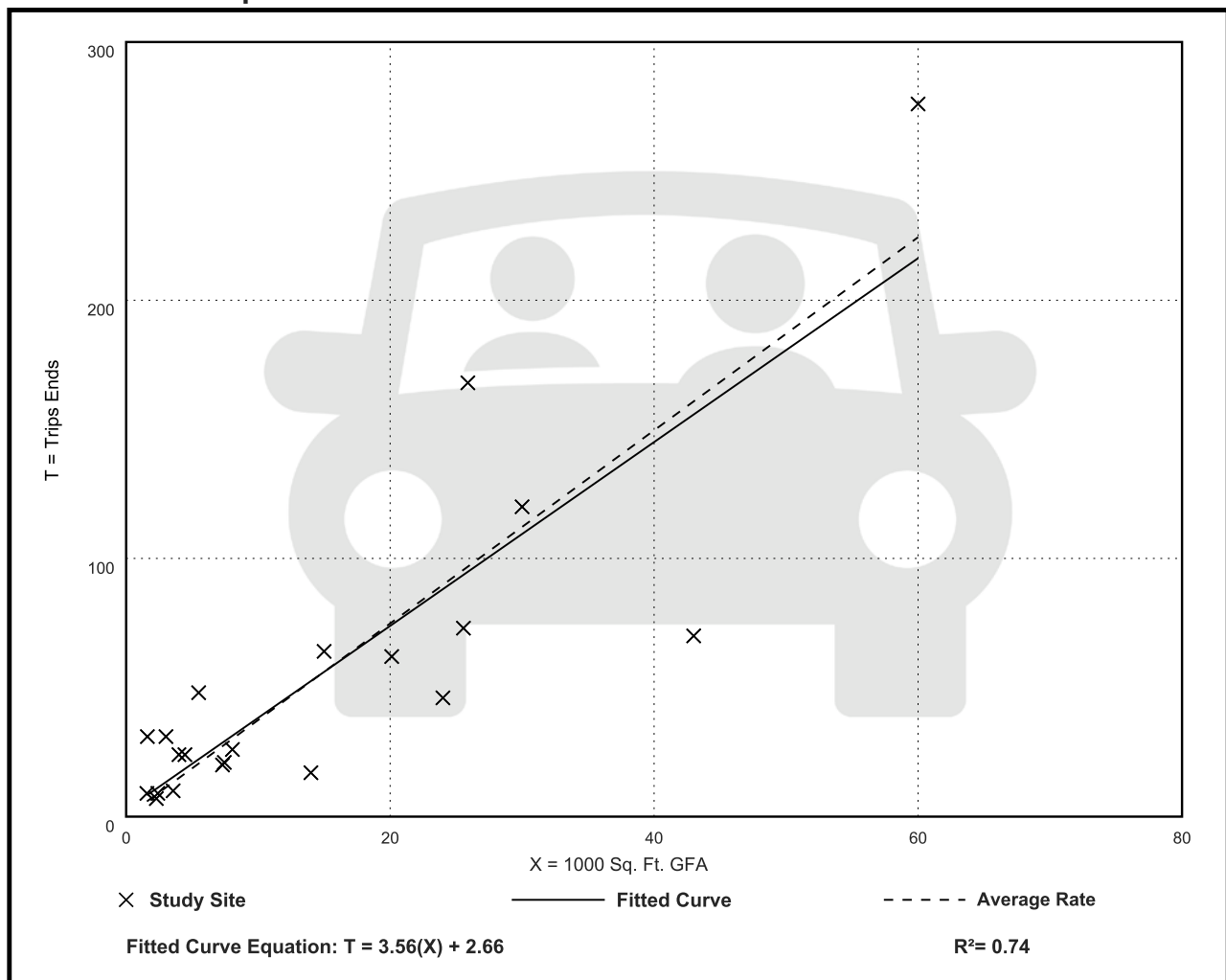
Avg. 1000 Sq. Ft. GFA: 15

Directional Distribution: 59% entering, 41% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.74	1.21 - 19.28	2.14

Data Plot and Equation



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 22

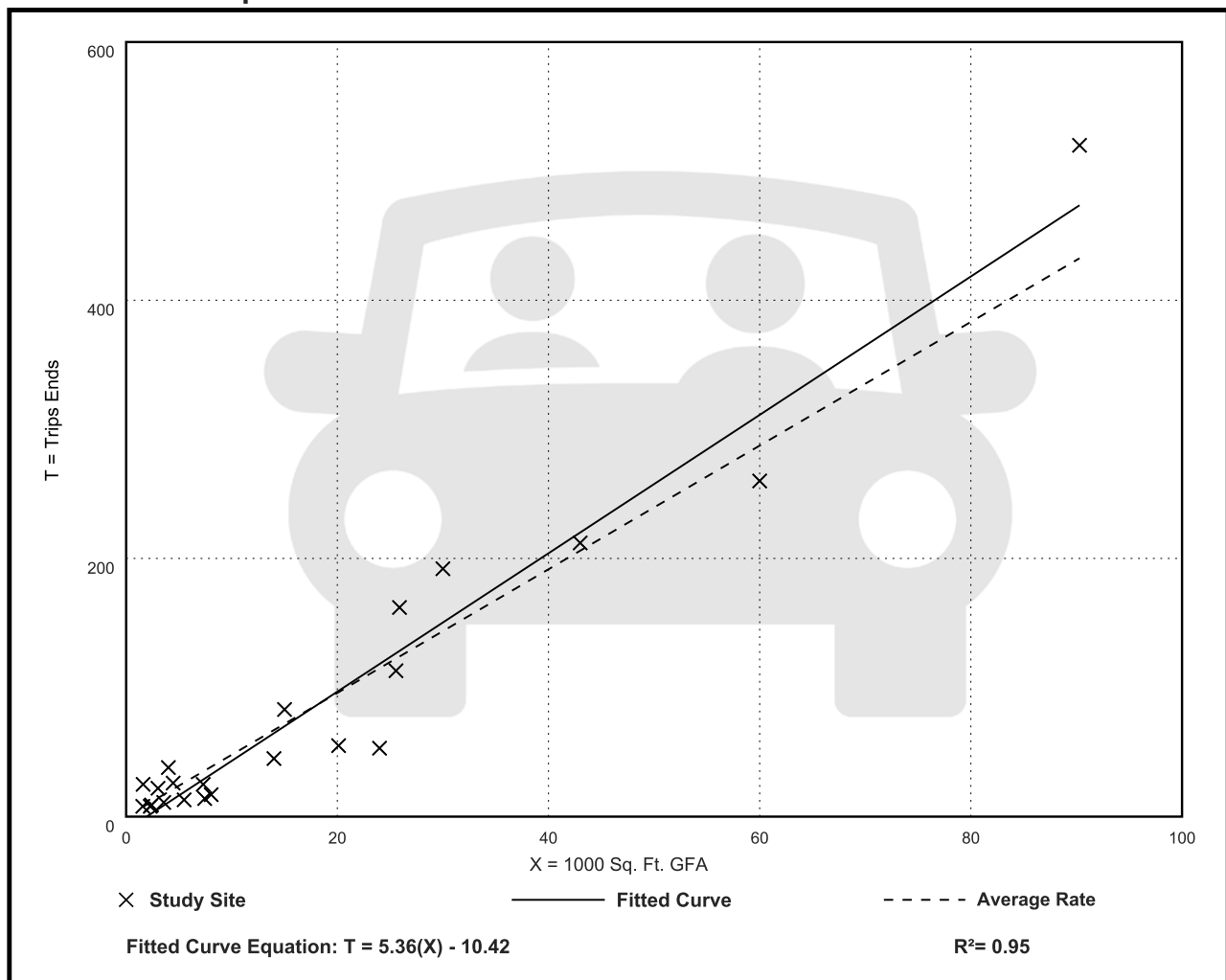
Avg. 1000 Sq. Ft. GFA: 18

Directional Distribution: 40% entering, 60% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
4.79	1.88 - 15.55	1.62

Data Plot and Equation



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Saturday

Setting/Location: General Urban/Suburban

Number of Studies: 3

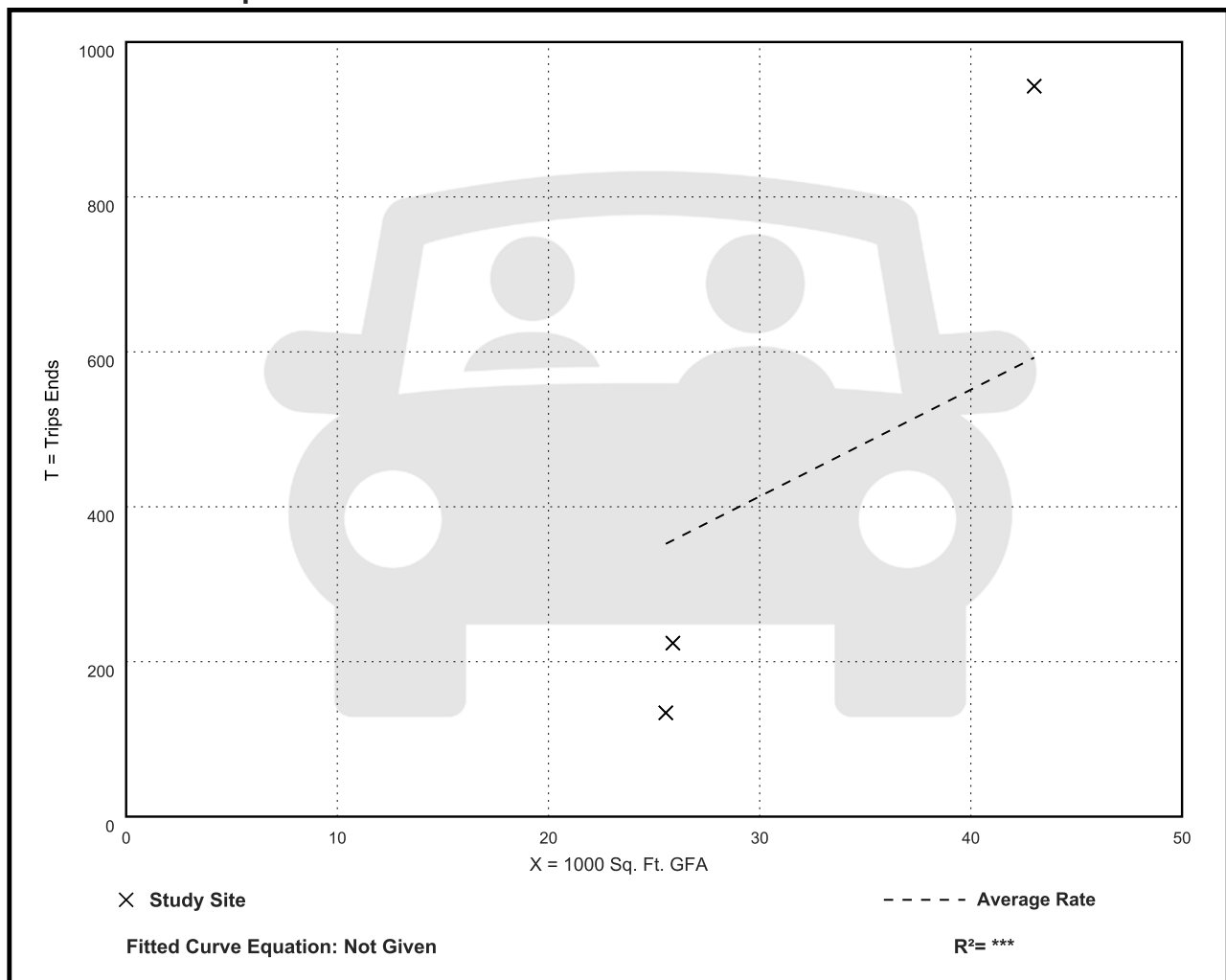
Avg. 1000 Sq. Ft. GFA: 31

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
13.78	5.24 - 21.93	9.26

Data Plot and Equation



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. 1000 Sq. Ft. GFA: 34

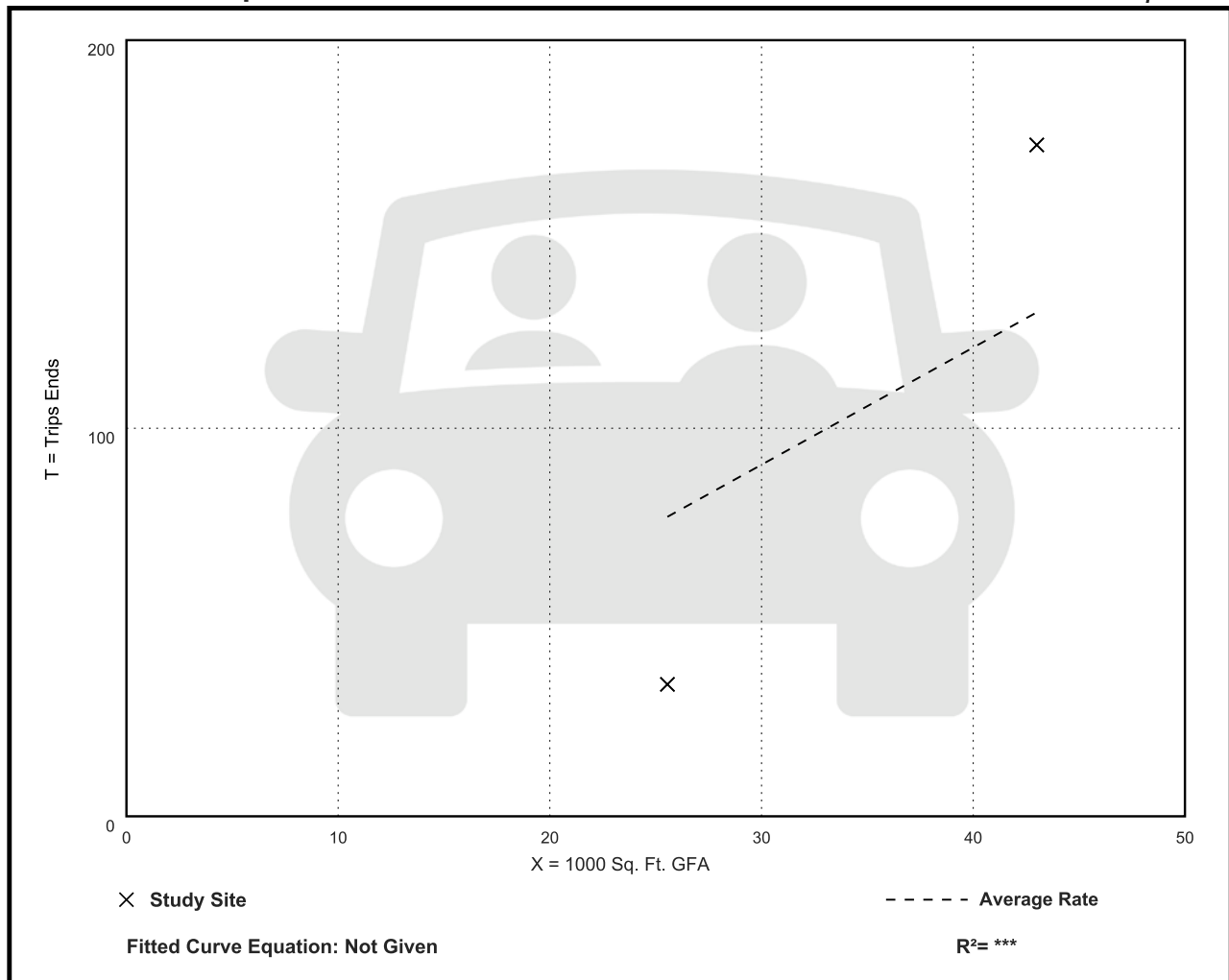
Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.02	1.33 - 4.02	***

Data Plot and Equation

Caution – Small Sample Size



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Sunday

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. 1000 Sq. Ft. GFA: 34

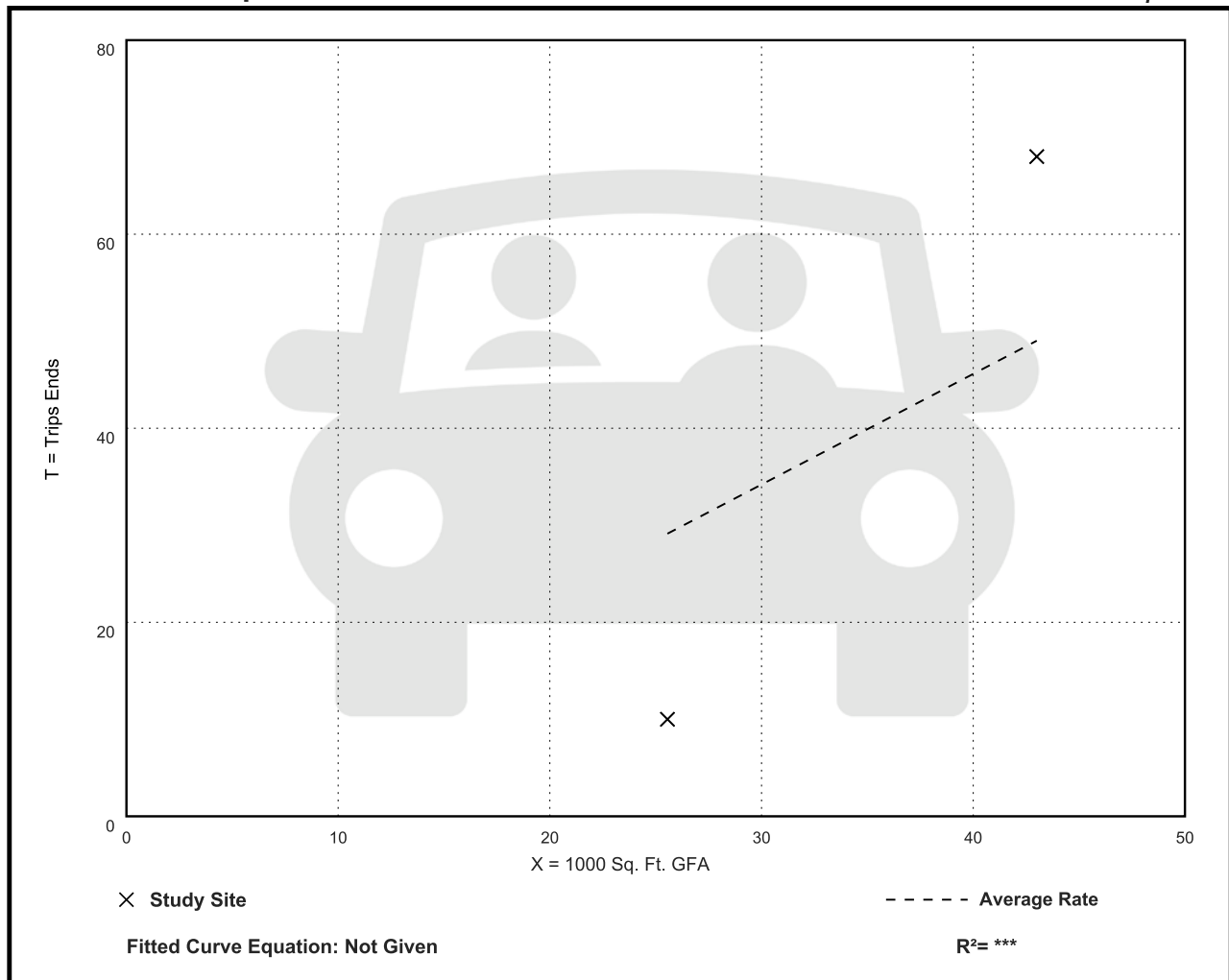
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.14	0.39 - 1.58	***

Data Plot and Equation

Caution – Small Sample Size



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. 1000 Sq. Ft. GFA: 34

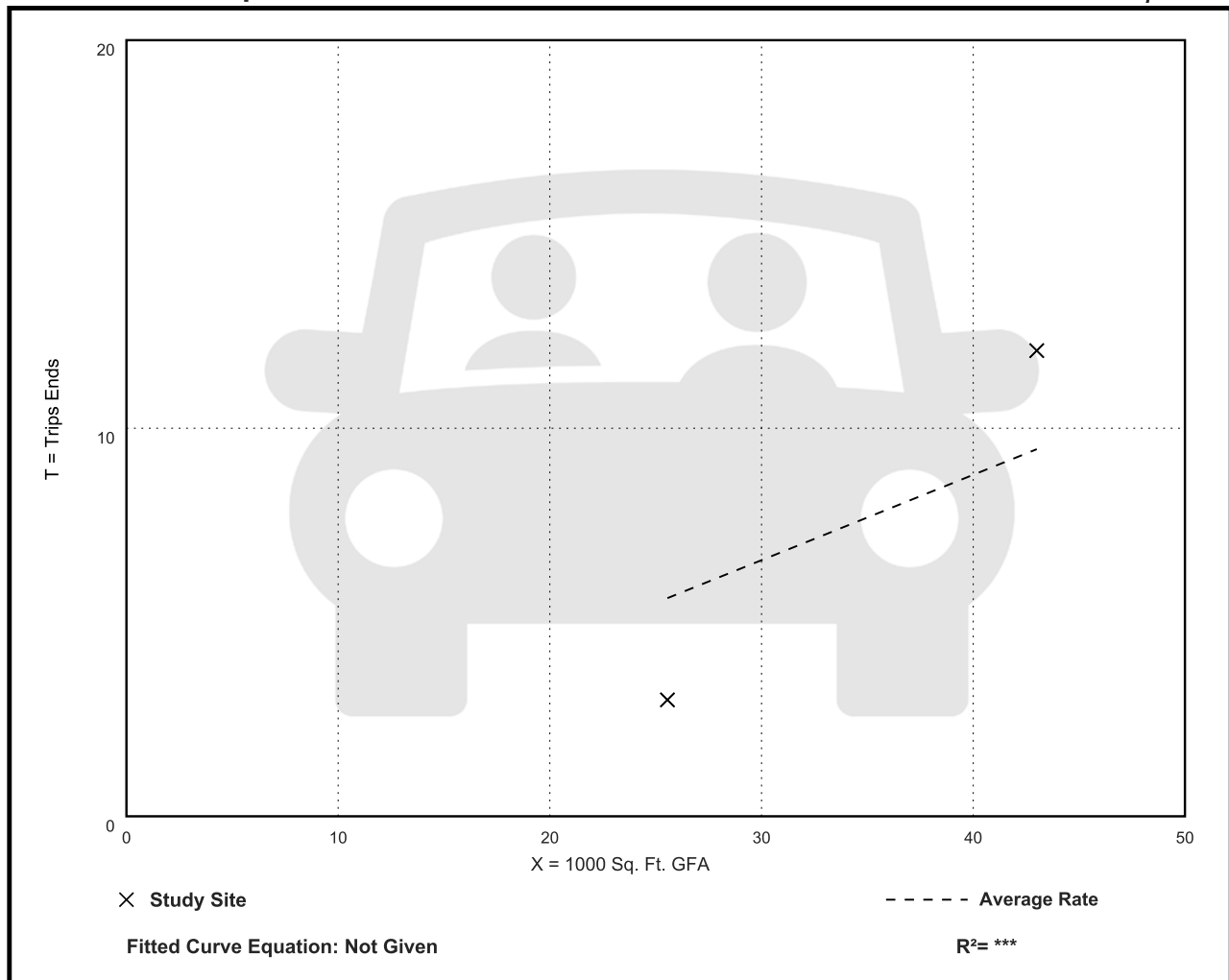
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.22	0.12 - 0.28	***

Data Plot and Equation

Caution – Small Sample Size



Medical-Dental Office Building - Stand-Alone (720)

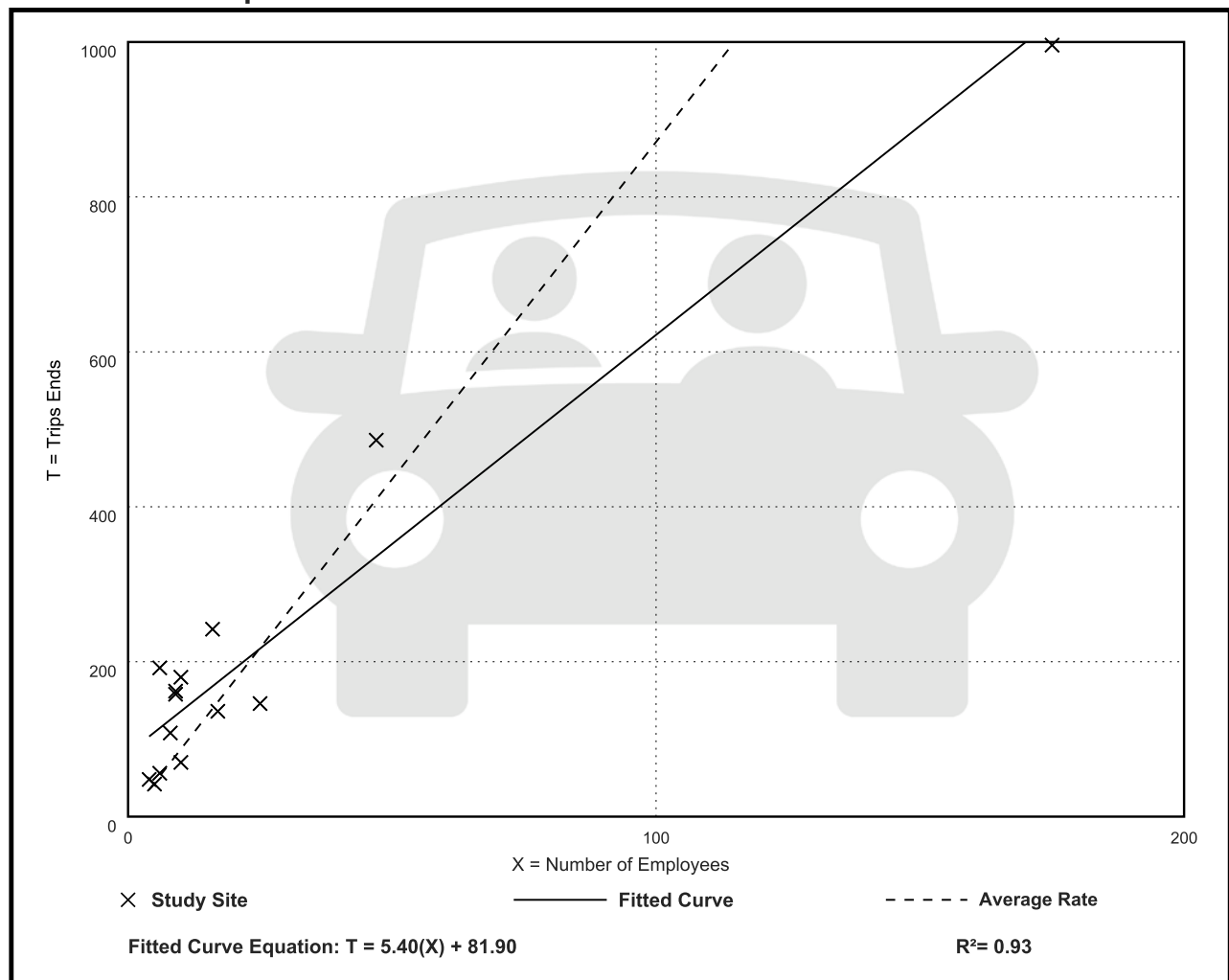
Vehicle Trip Ends vs: Employees
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 14
Avg. Num. of Employees: 25
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
8.71	5.69 - 32.00	5.12

Data Plot and Equation



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: Employees

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 16

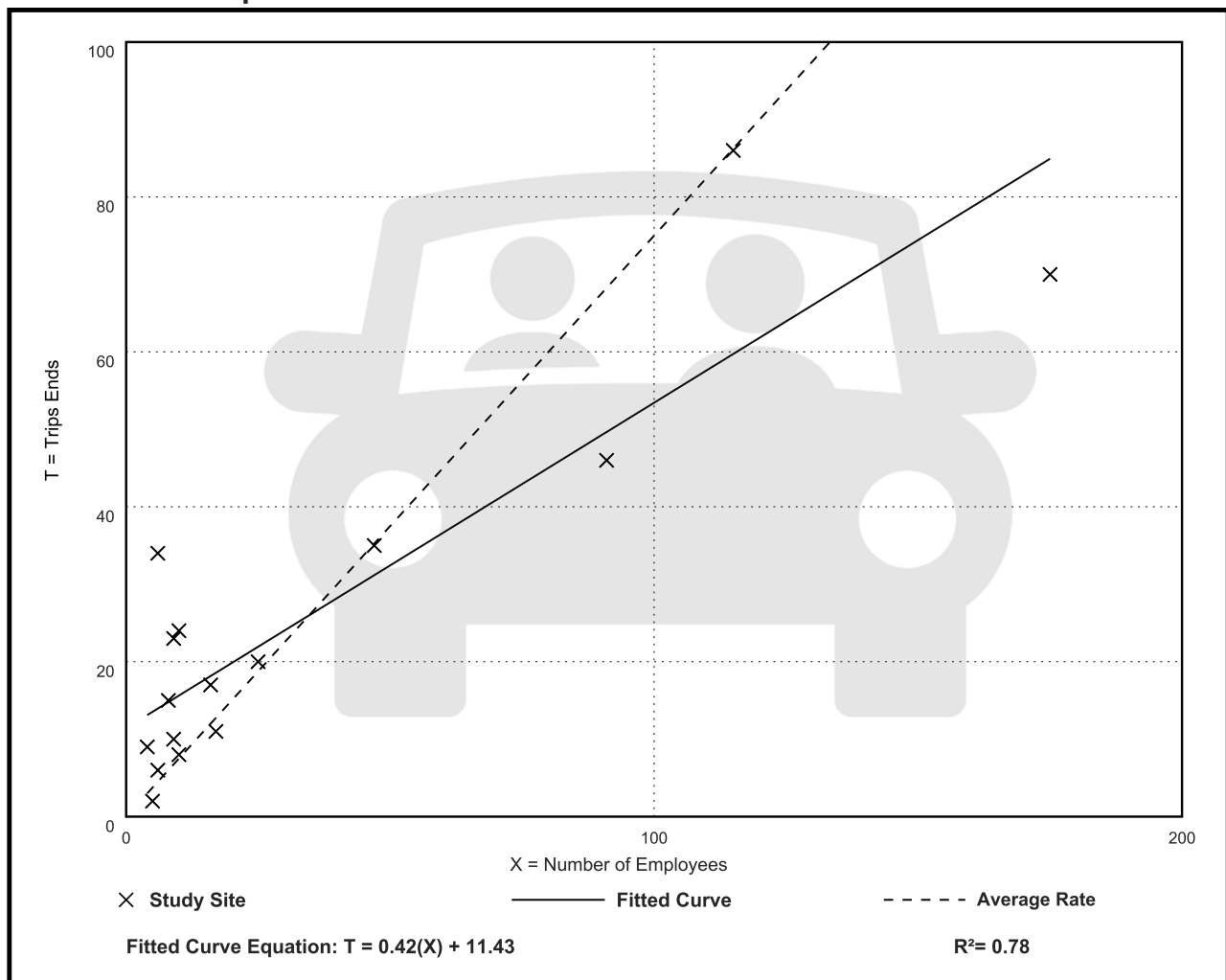
Avg. Num. of Employees: 35

Directional Distribution: 74% entering, 26% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.75	0.40 - 5.67	0.70

Data Plot and Equation



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: Employees

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 15

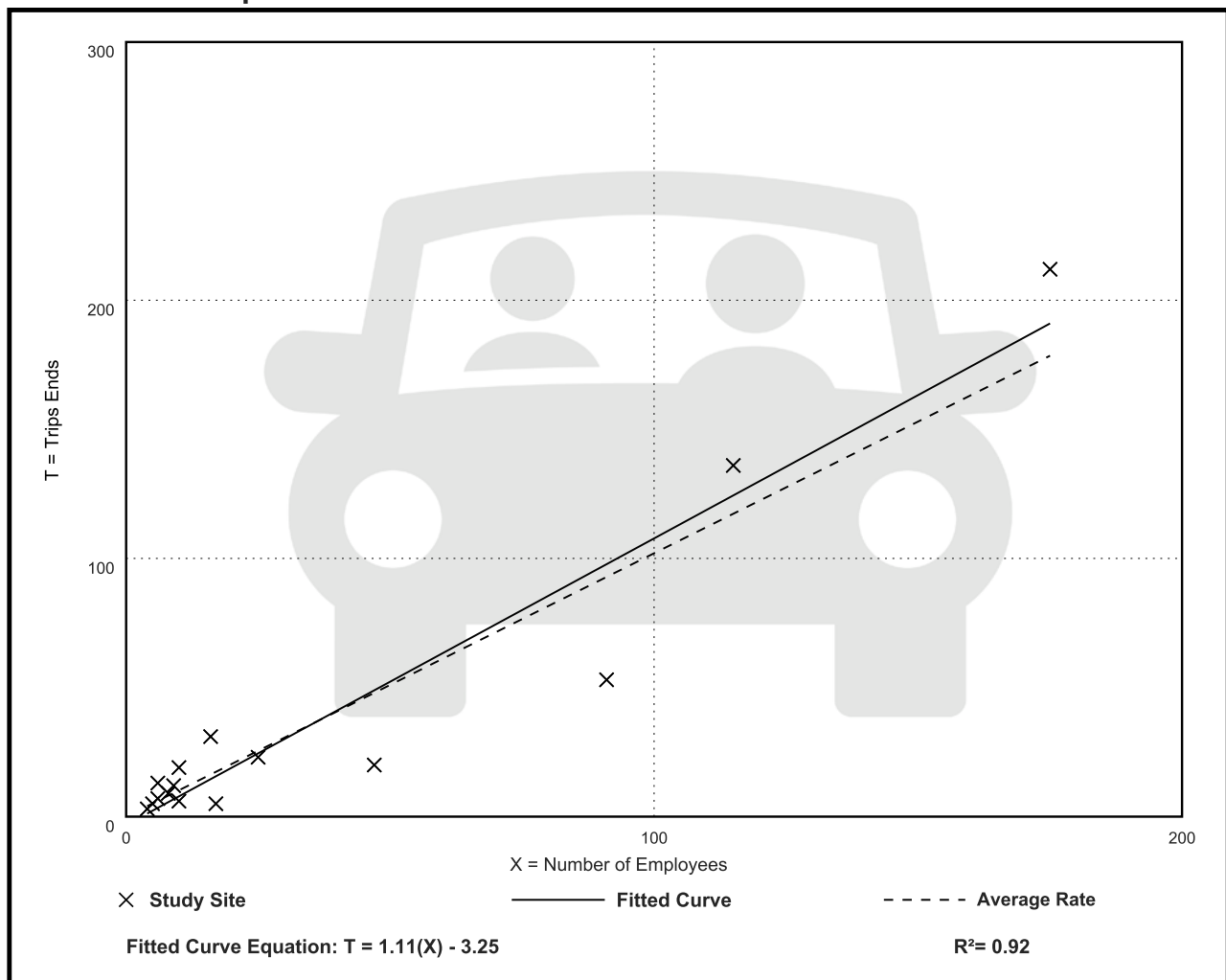
Avg. Num. of Employees: 36

Directional Distribution: 37% entering, 63% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
1.02	0.29 - 2.17	0.41

Data Plot and Equation



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: Employees

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 16

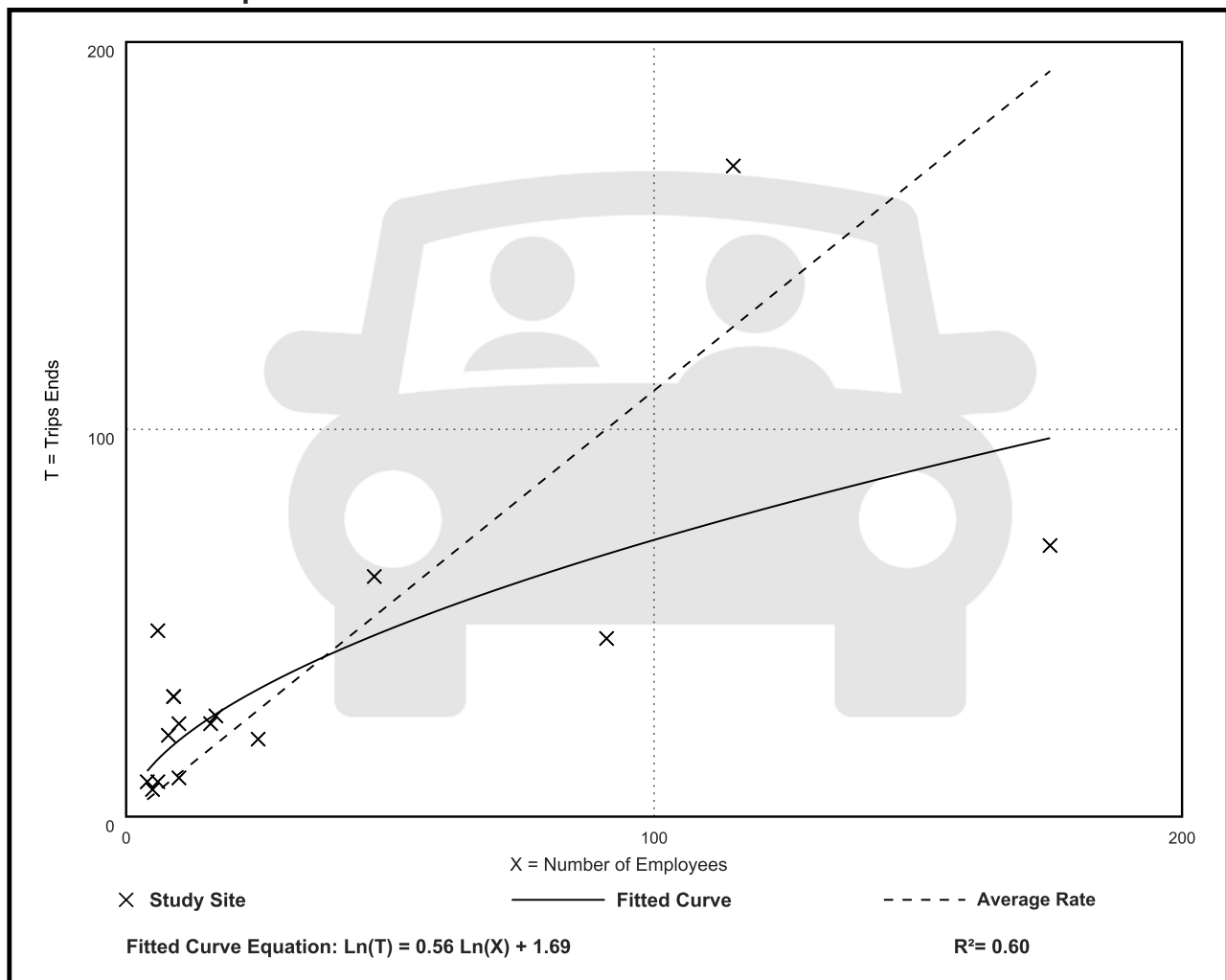
Avg. Num. of Employees: 35

Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
1.10	0.40 - 8.00	1.05

Data Plot and Equation



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: Employees

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 16

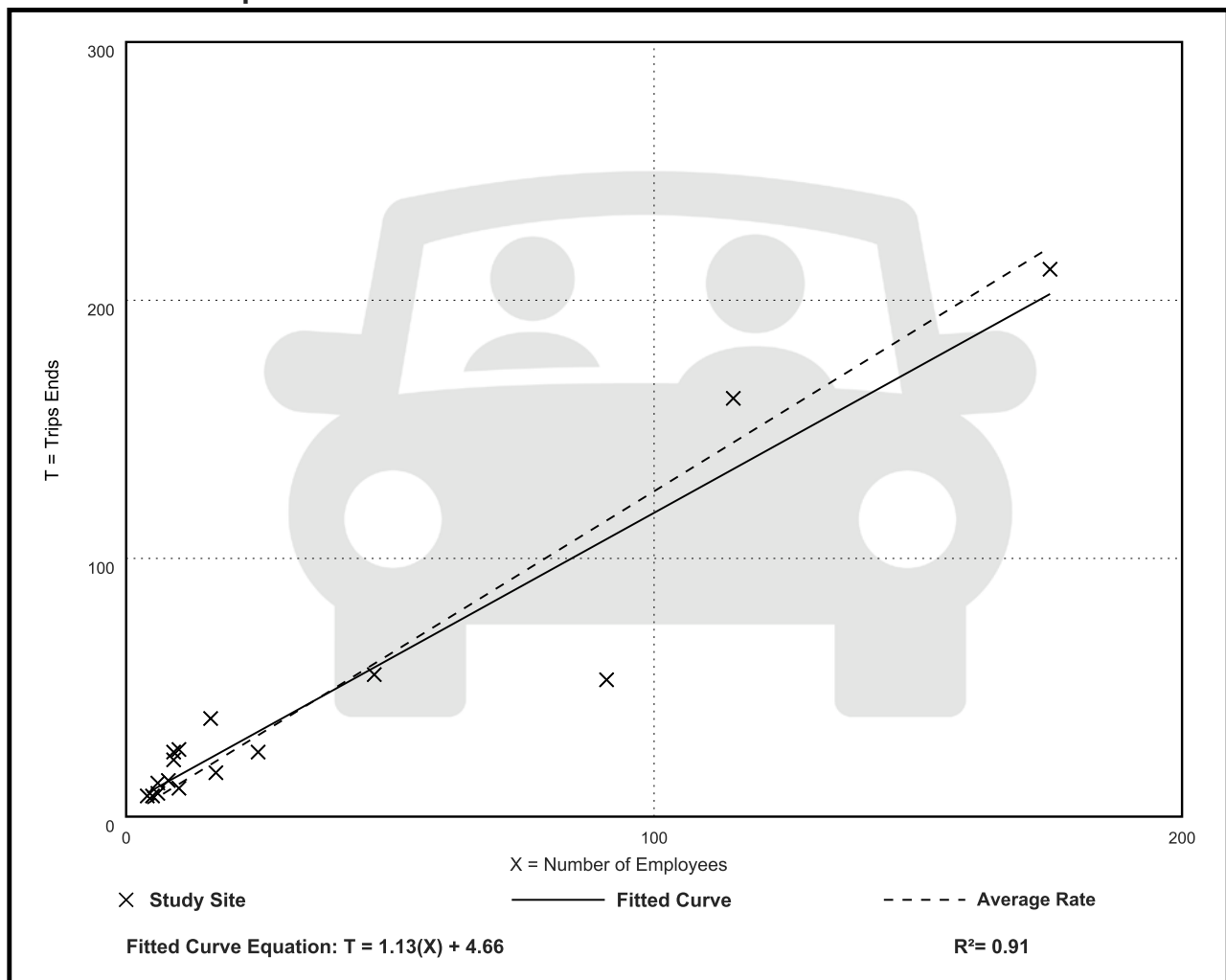
Avg. Num. of Employees: 35

Directional Distribution: 44% entering, 56% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
1.26	0.58 - 2.78	0.50

Data Plot and Equation



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: Employees

On a: Saturday

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. Num. of Employees: 145

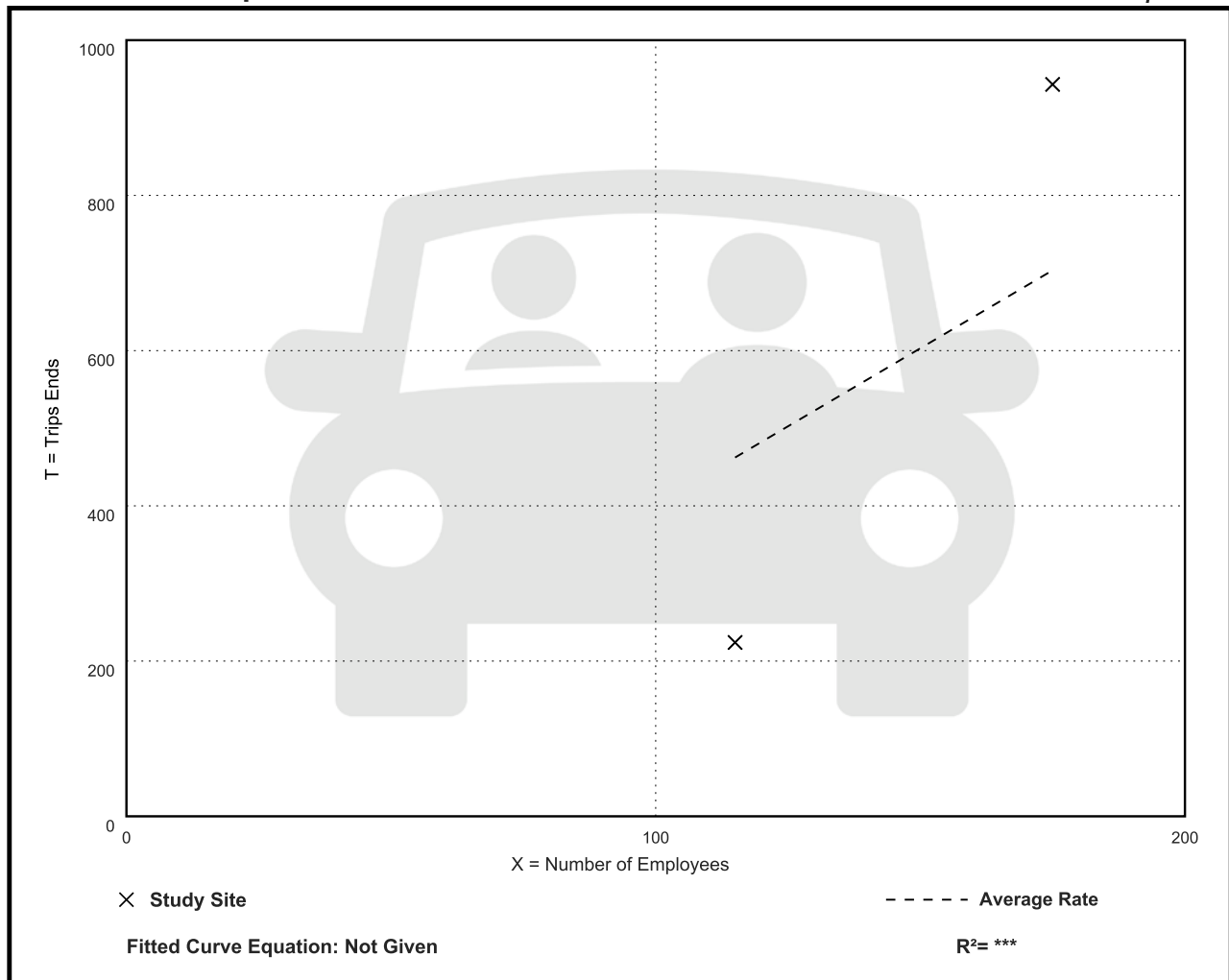
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
4.02	1.95 - 5.39	***

Data Plot and Equation

Caution – Small Sample Size



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: Employees

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Employees: 175

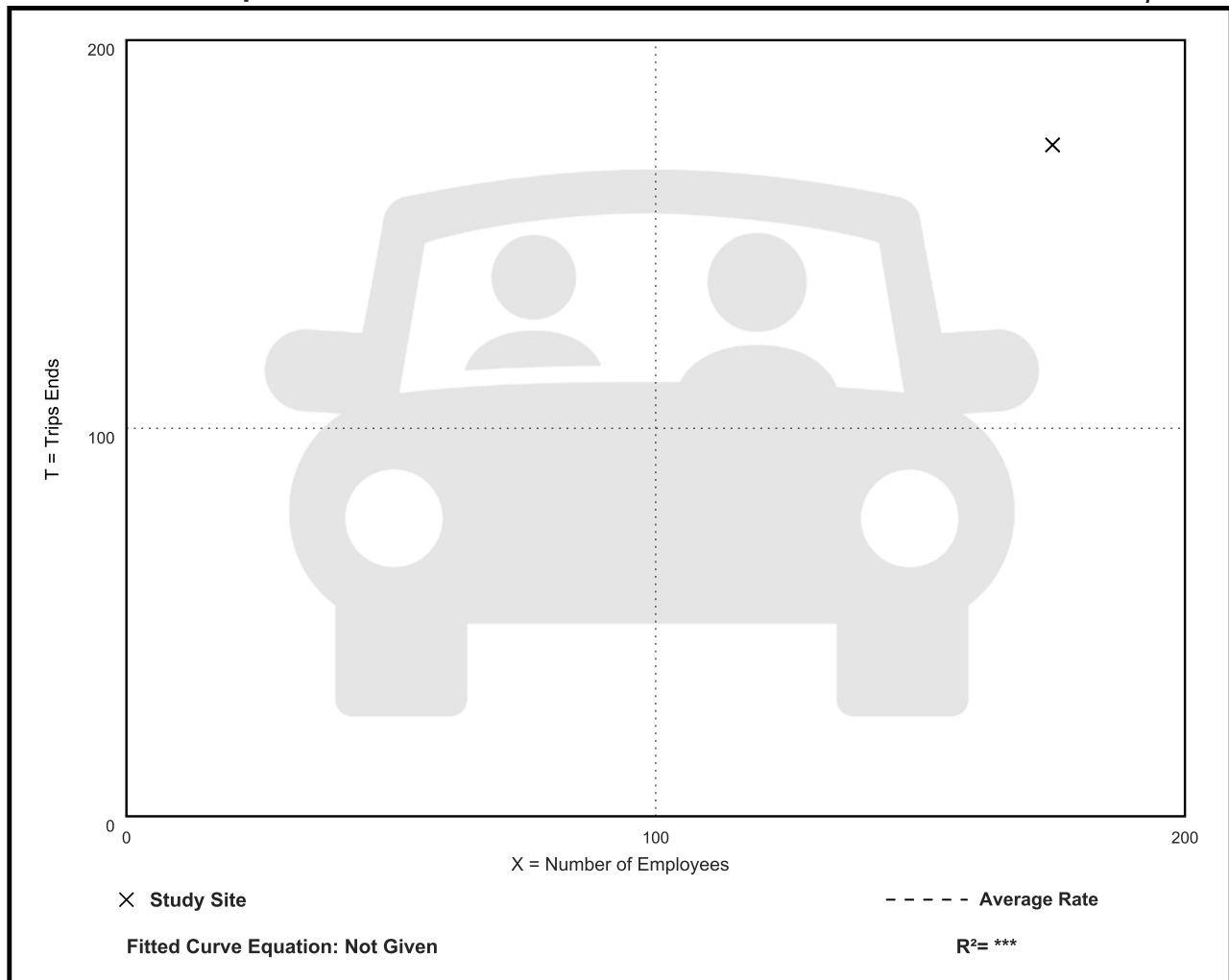
Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.99	0.99 - 0.99	***

Data Plot and Equation

Caution – Small Sample Size



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: Employees

On a: Sunday

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Employees: 175

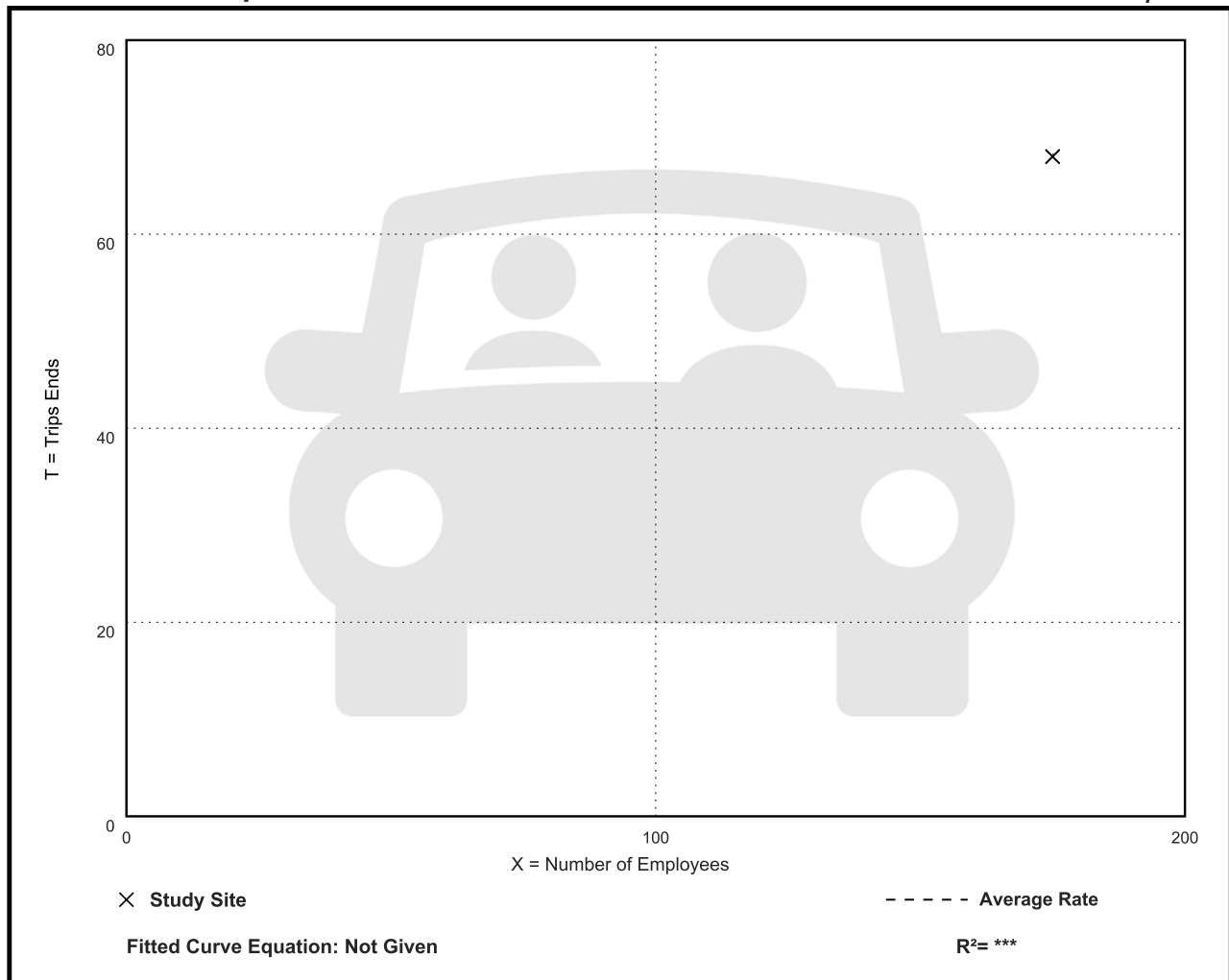
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.39	0.39 - 0.39	***

Data Plot and Equation

Caution – Small Sample Size



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: Employees

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Employees: 175

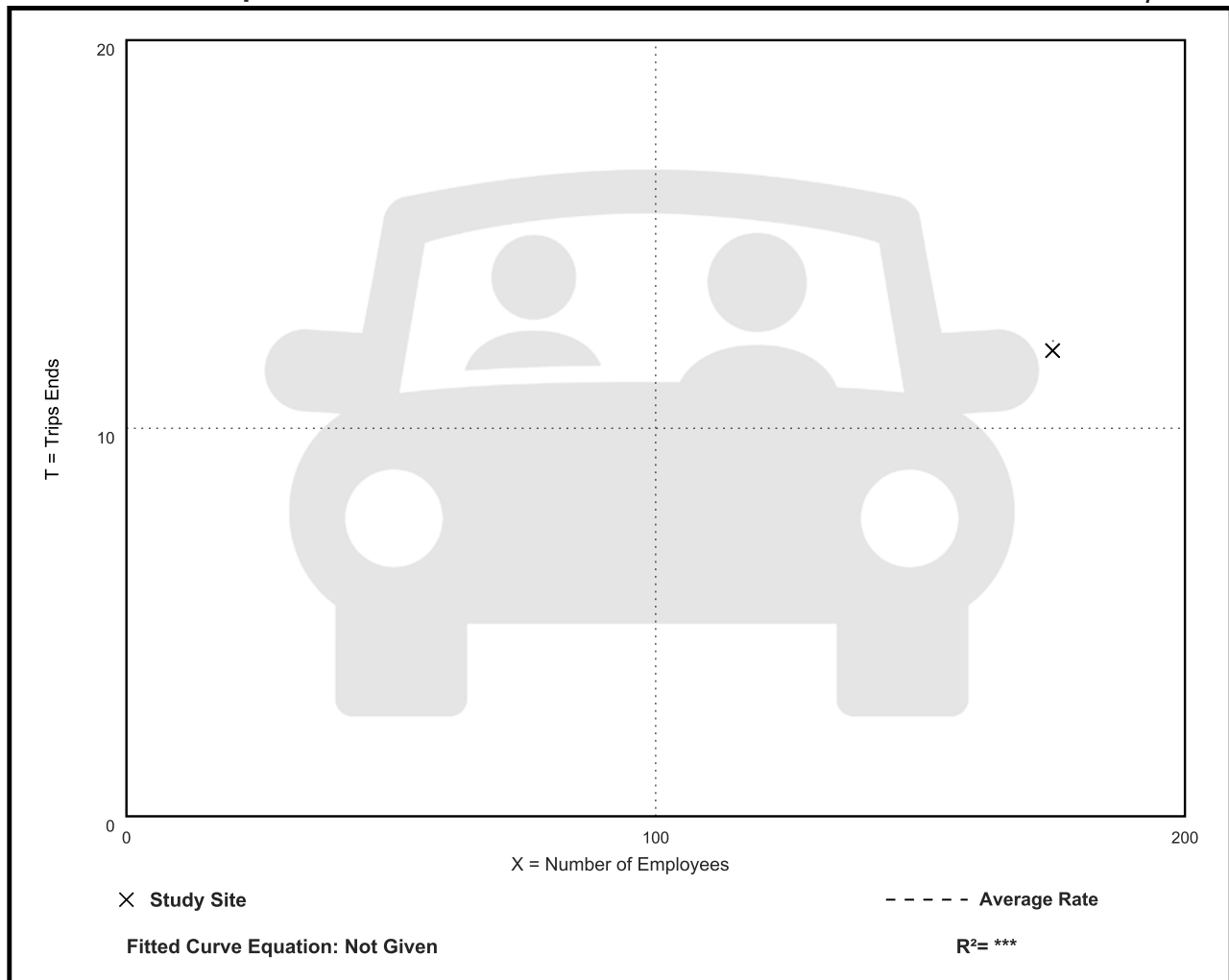
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.07	0.07 - 0.07	***

Data Plot and Equation

Caution – Small Sample Size



Medical-Dental Office Building Within/Near Hospital Campus (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 6

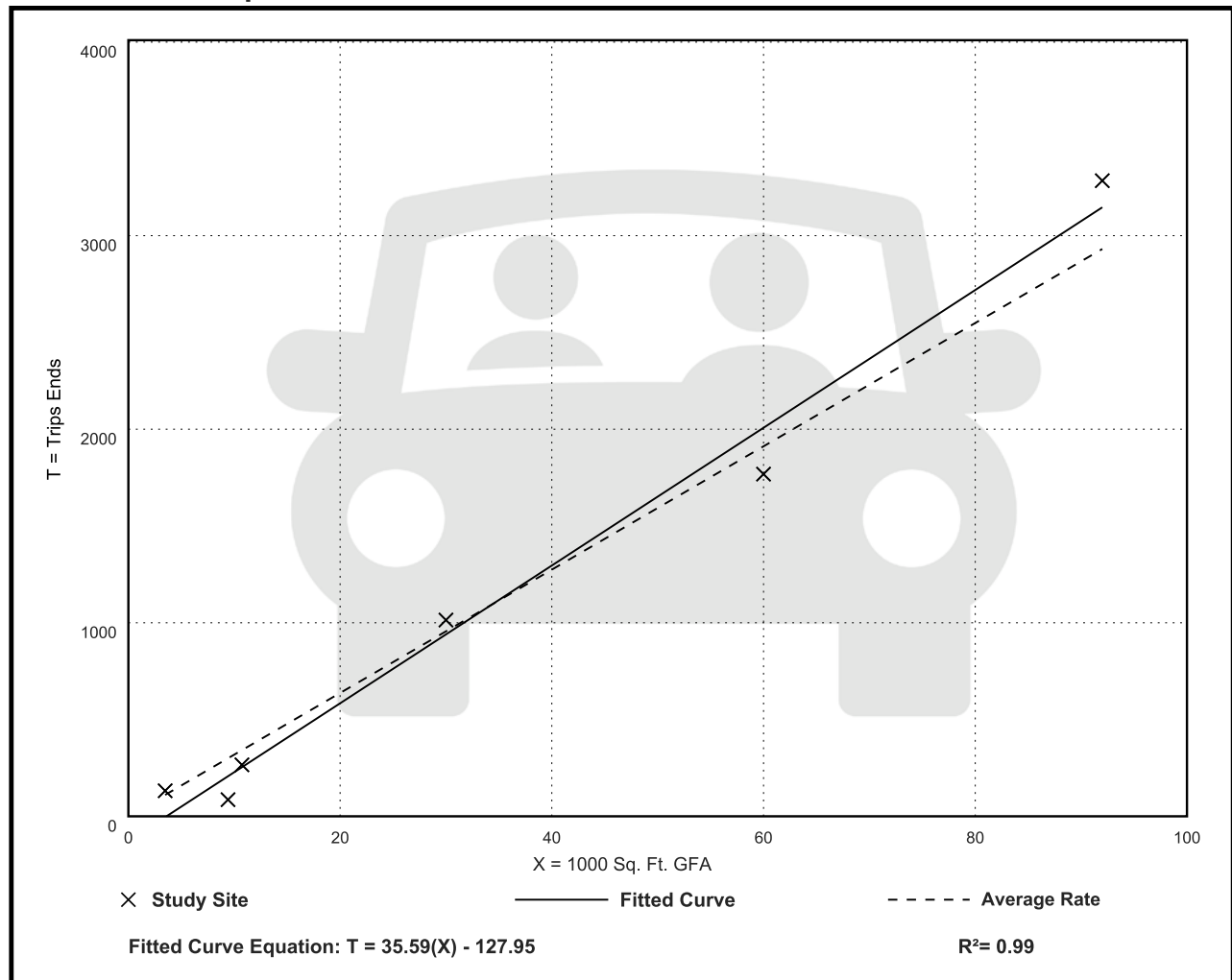
Avg. 1000 Sq. Ft. GFA: 34

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
31.86	9.14 - 37.99	6.54

Data Plot and Equation



Medical-Dental Office Building Within/Near Hospital Campus (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 8

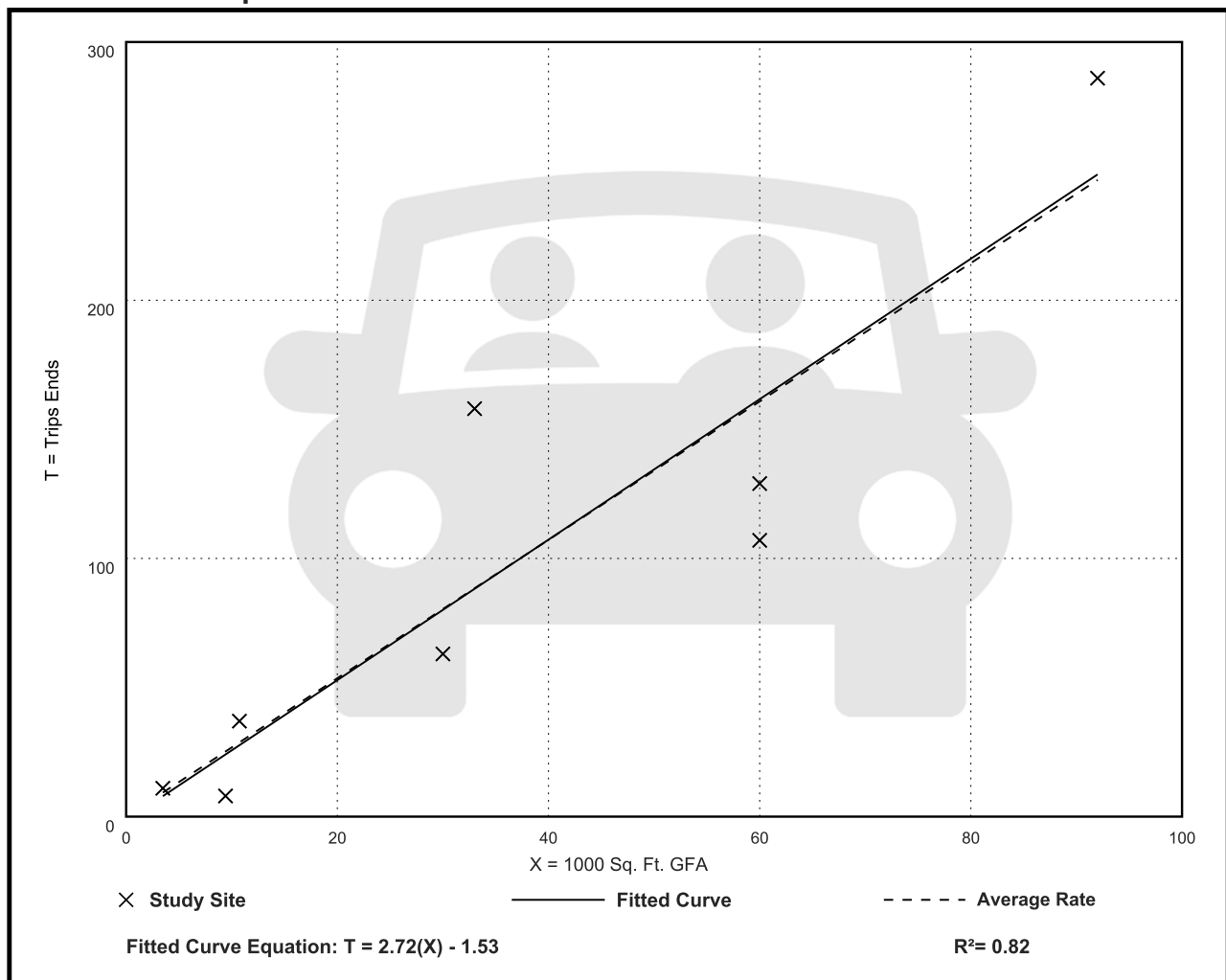
Avg. 1000 Sq. Ft. GFA: 37

Directional Distribution: 81% entering, 19% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.68	0.85 - 4.79	1.03

Data Plot and Equation



Medical-Dental Office Building Within/Near Hospital Campus (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 10

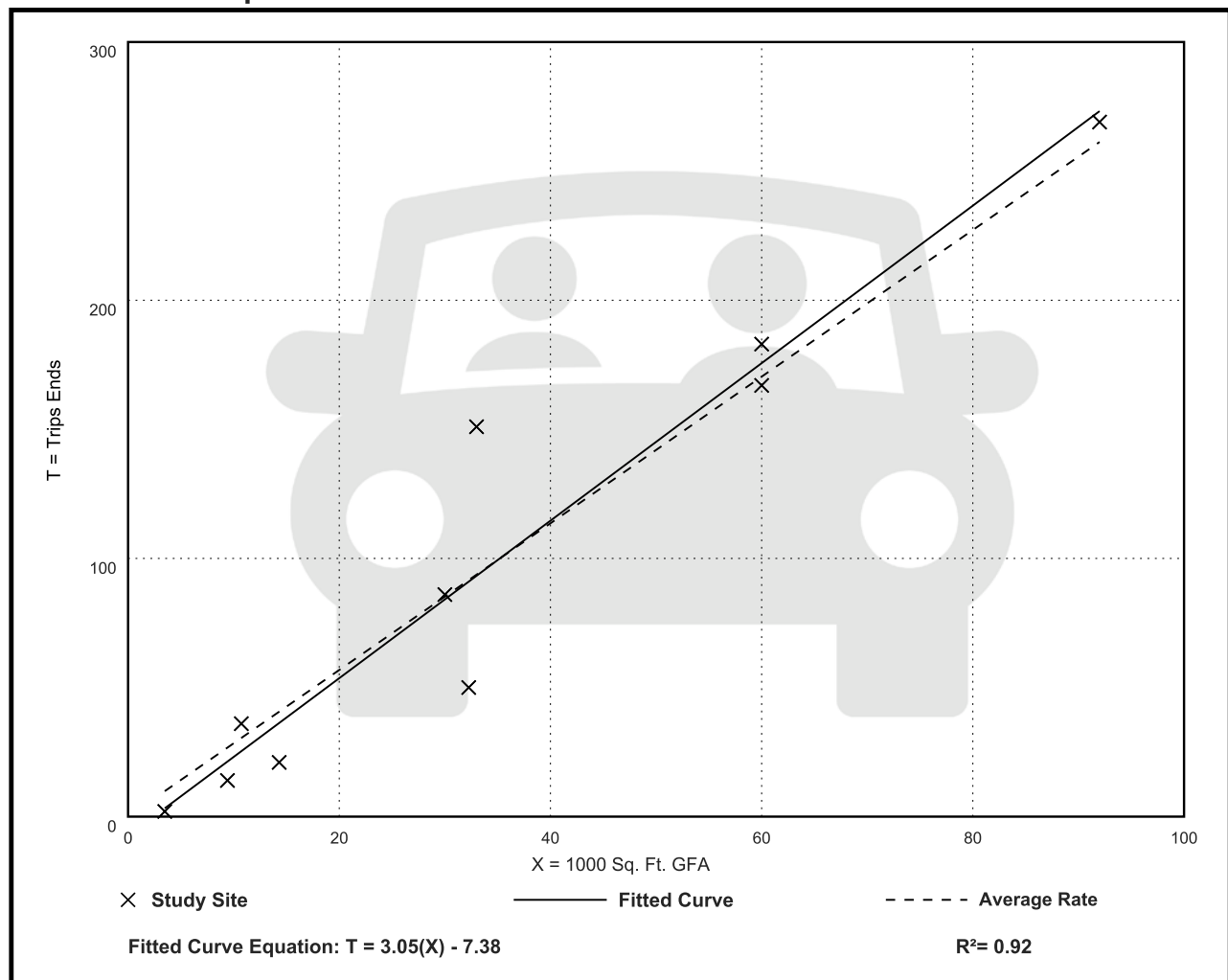
Avg. 1000 Sq. Ft. GFA: 35

Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.84	0.58 - 4.58	0.84

Data Plot and Equation



Medical-Dental Office Building Within/Near Hospital Campus (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 8

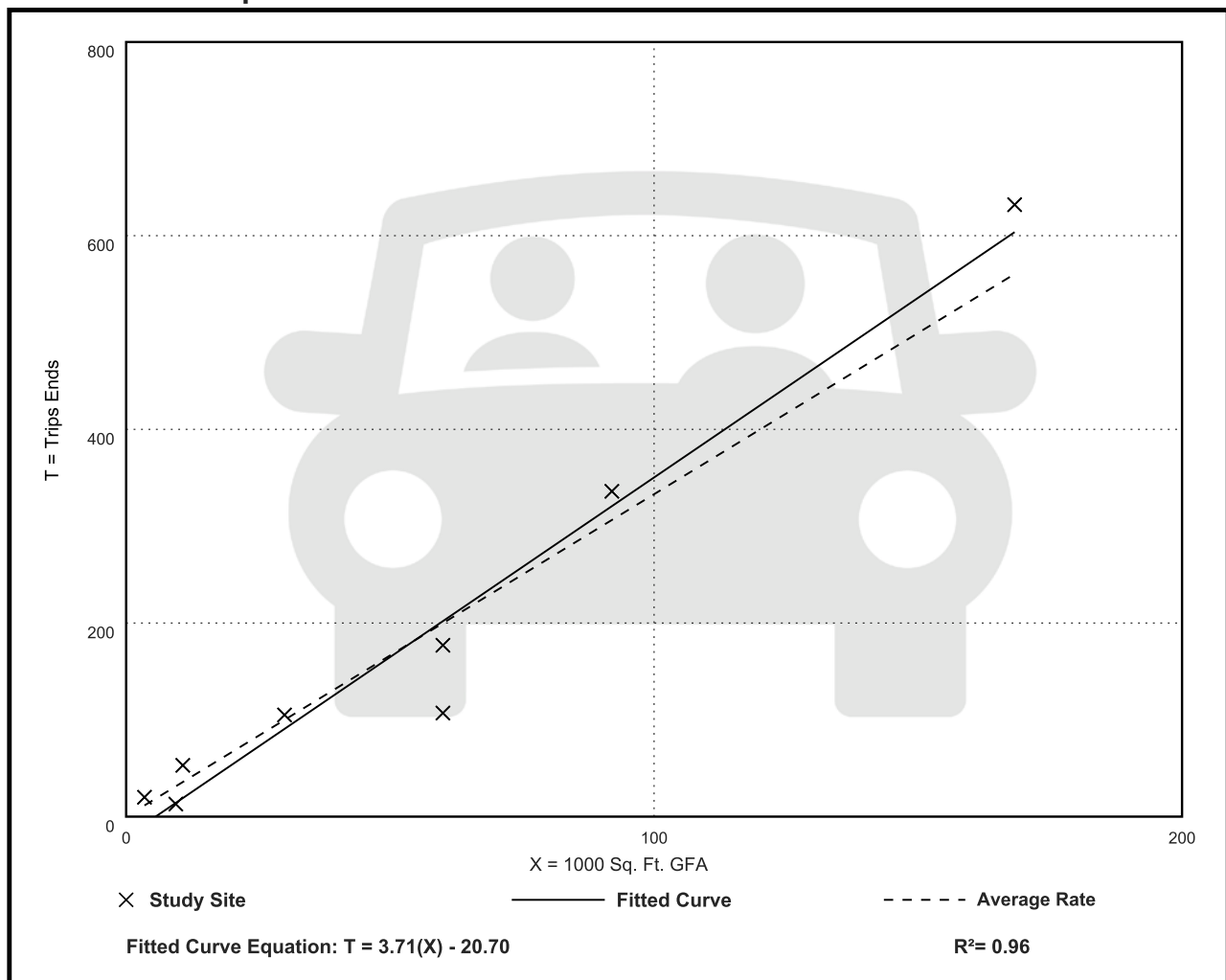
Avg. 1000 Sq. Ft. GFA: 54

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.33	1.38 - 5.76	0.85

Data Plot and Equation



Medical-Dental Office Building Within/Near Hospital Campus (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 8

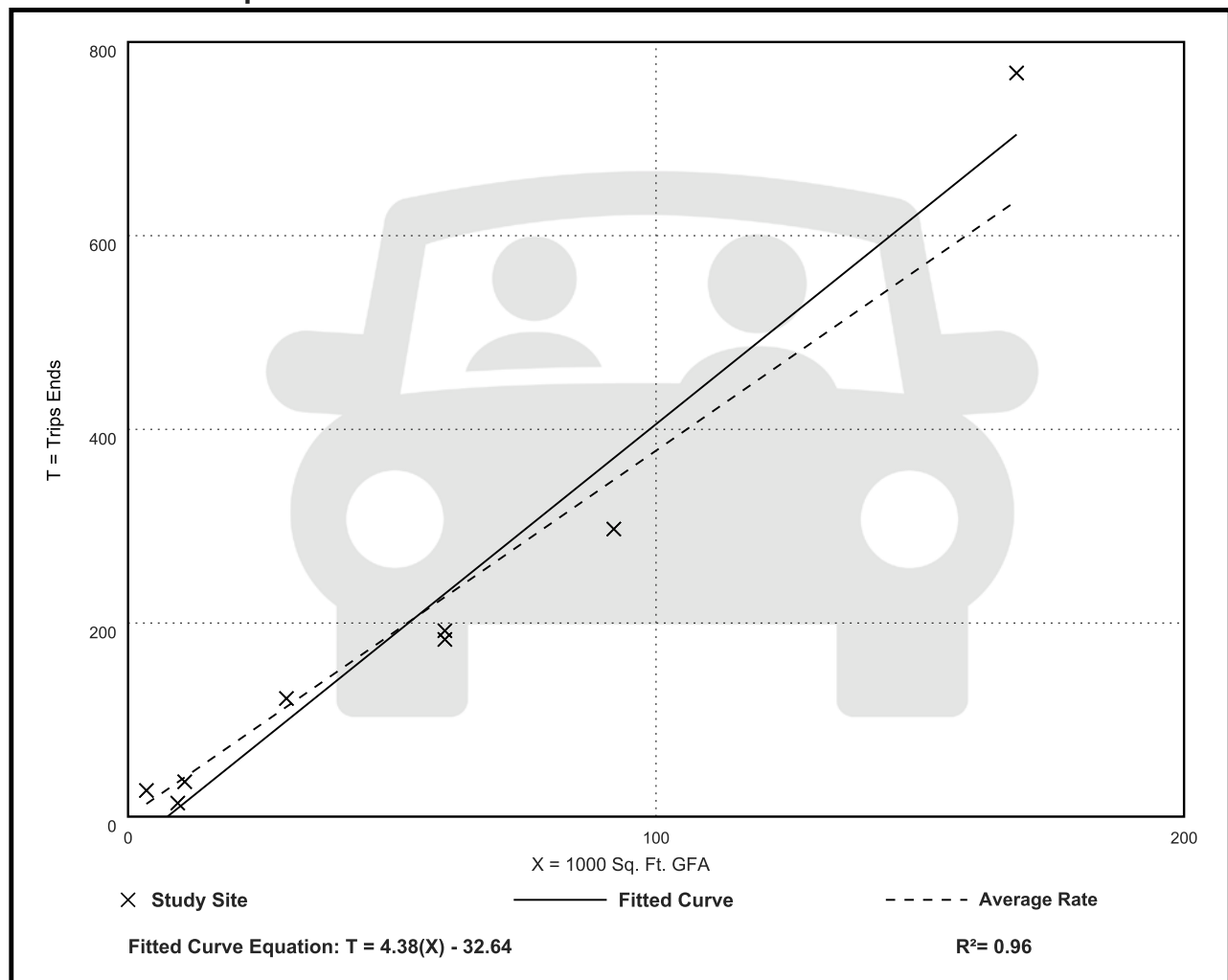
Avg. 1000 Sq. Ft. GFA: 54

Directional Distribution: 39% entering, 61% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.78	1.49 - 7.77	0.88

Data Plot and Equation



Medical-Dental Office Building Within/Near Hospital Campus (720)

Vehicle Trip Ends vs: Employees

On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 3

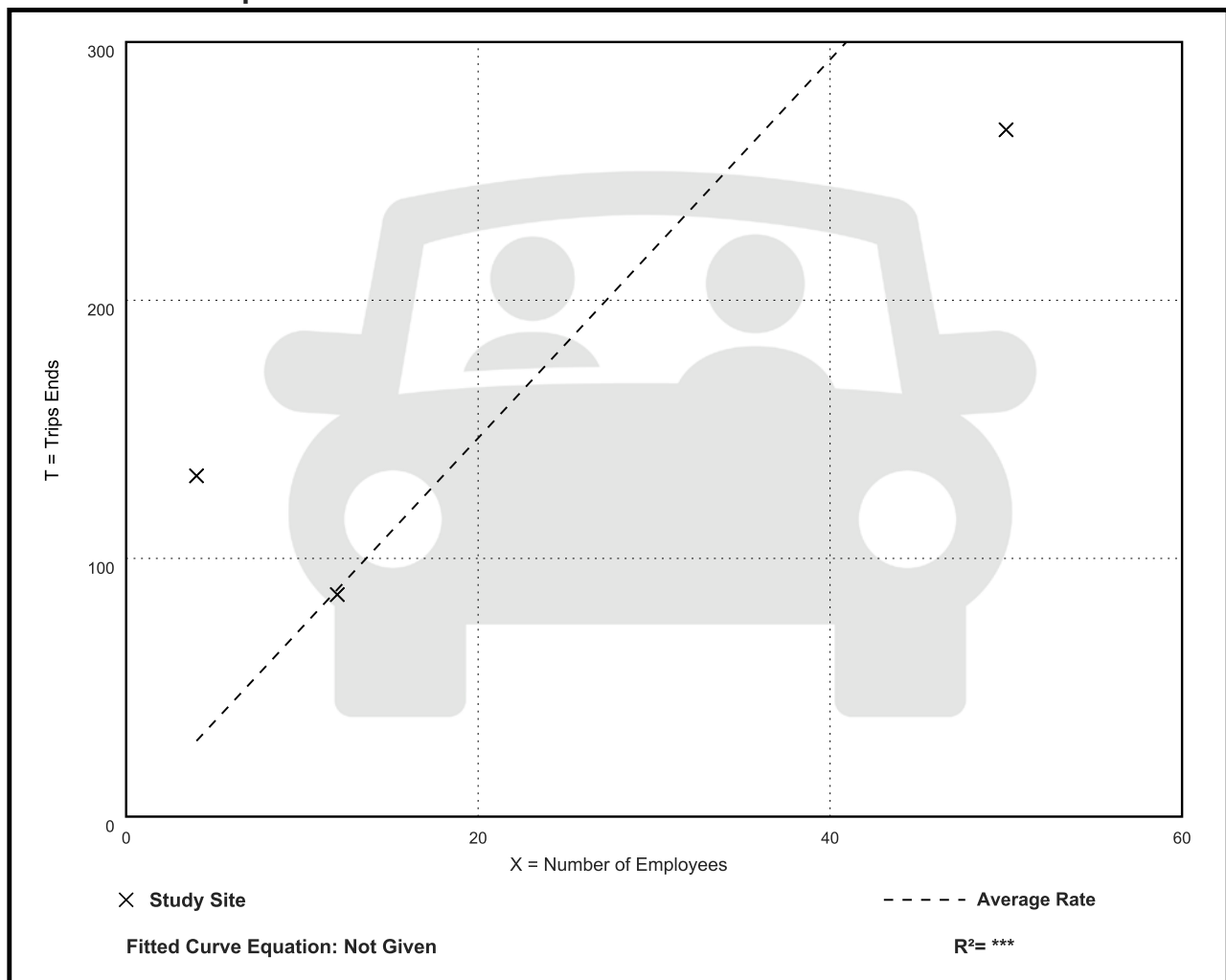
Avg. Num. of Employees: 22

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
7.33	5.32 - 33.00	8.03

Data Plot and Equation



Medical-Dental Office Building Within/Near Hospital Campus (720)

Vehicle Trip Ends vs: Employees

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 4

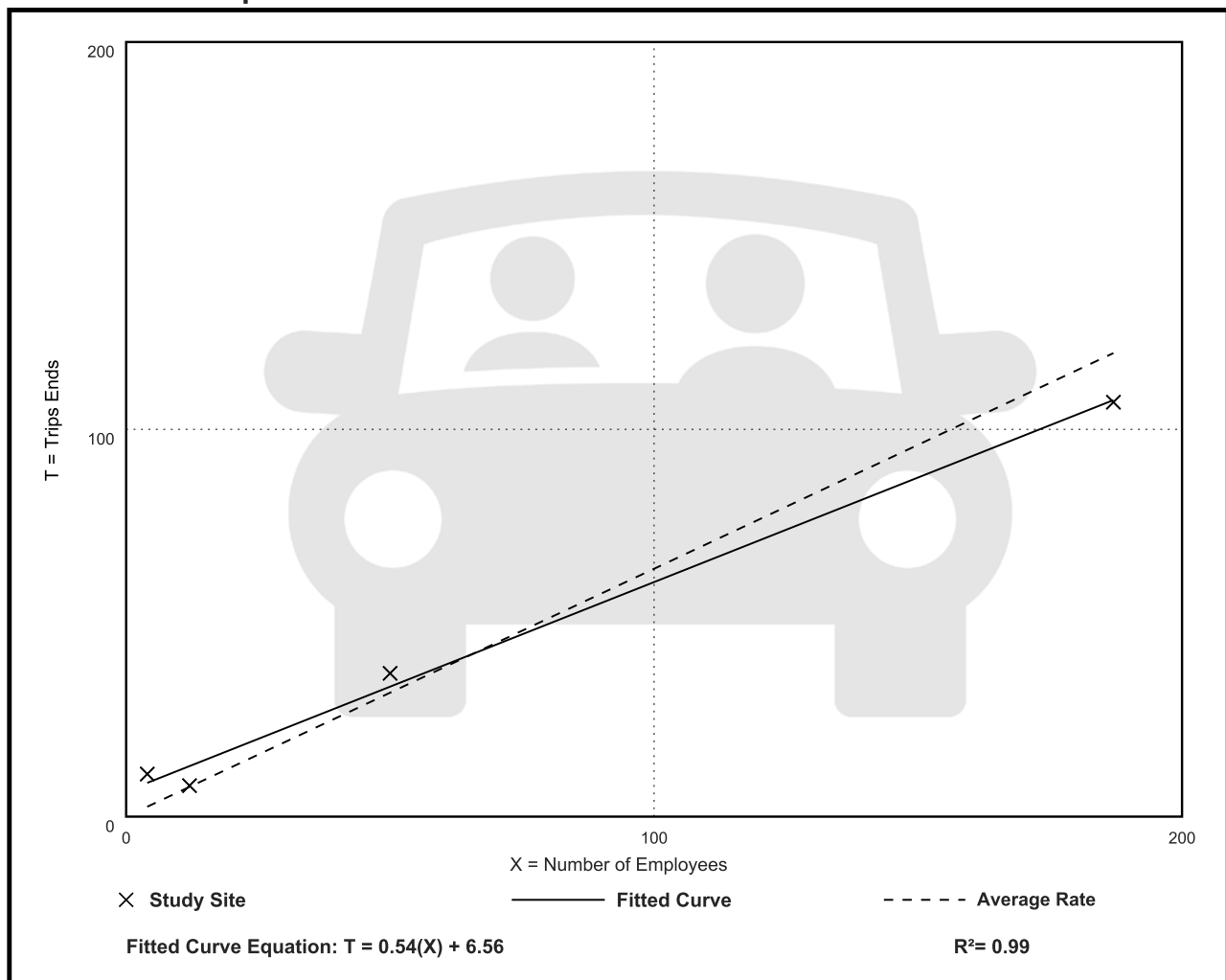
Avg. Num. of Employees: 63

Directional Distribution: 83% entering, 17% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.64	0.57 - 2.75	0.32

Data Plot and Equation



Medical-Dental Office Building Within/Near Hospital Campus (720)

Vehicle Trip Ends vs: Employees

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 4

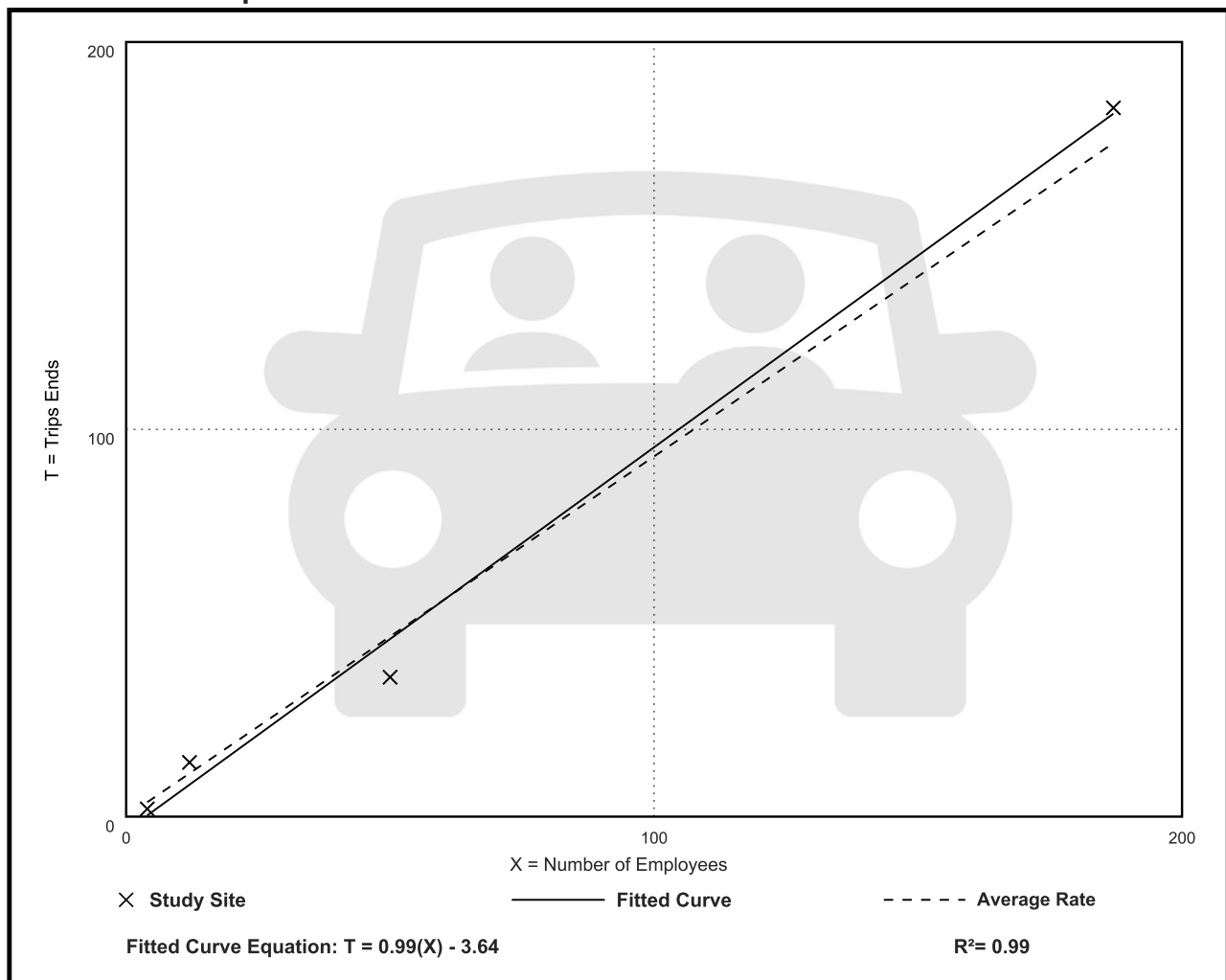
Avg. Num. of Employees: 63

Directional Distribution: 29% entering, 71% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.93	0.50 - 1.17	0.15

Data Plot and Equation



Medical-Dental Office Building Within/Near Hospital Campus (720)

Vehicle Trip Ends vs: Employees

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 4

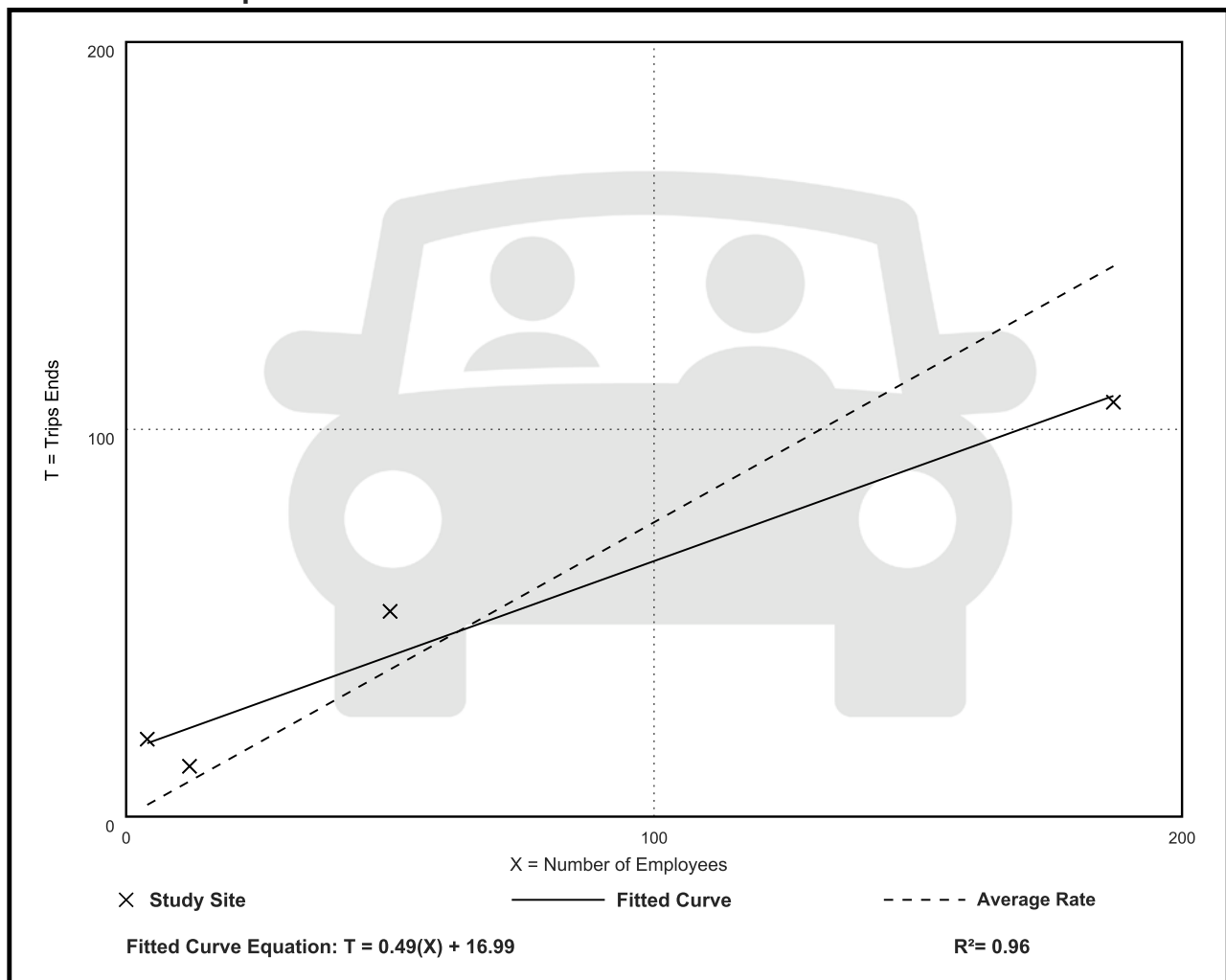
Avg. Num. of Employees: 63

Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.76	0.57 - 5.00	0.67

Data Plot and Equation



Medical-Dental Office Building Within/Near Hospital Campus (720)

Vehicle Trip Ends vs: Employees

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 4

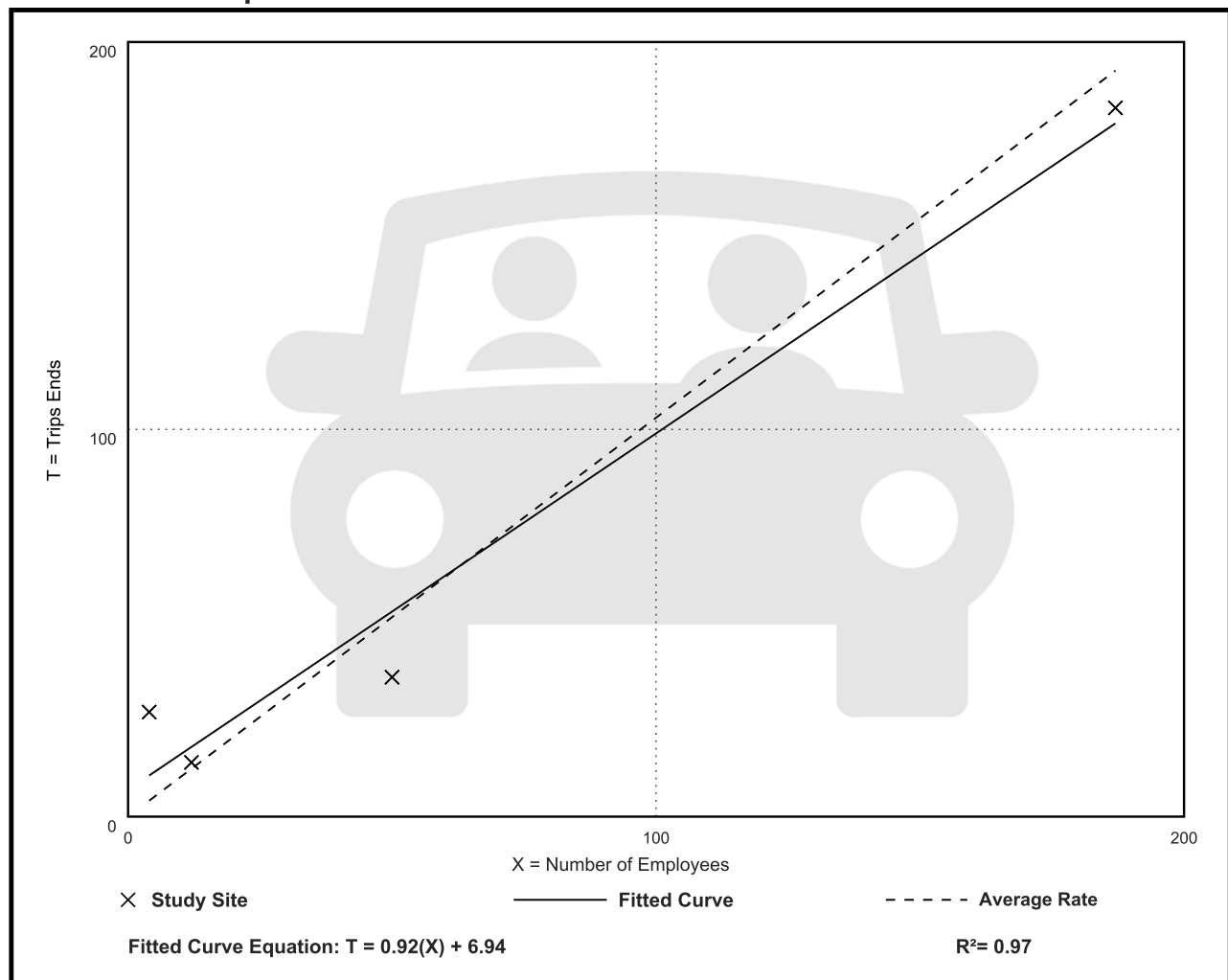
Avg. Num. of Employees: 63

Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
1.03	0.72 - 6.75	0.85

Data Plot and Equation



TDM Plan for 61 Preble Street, Portland

April 8, 2025

Prepared by Jeff Rosenblum, PE

LivableStreets Institute



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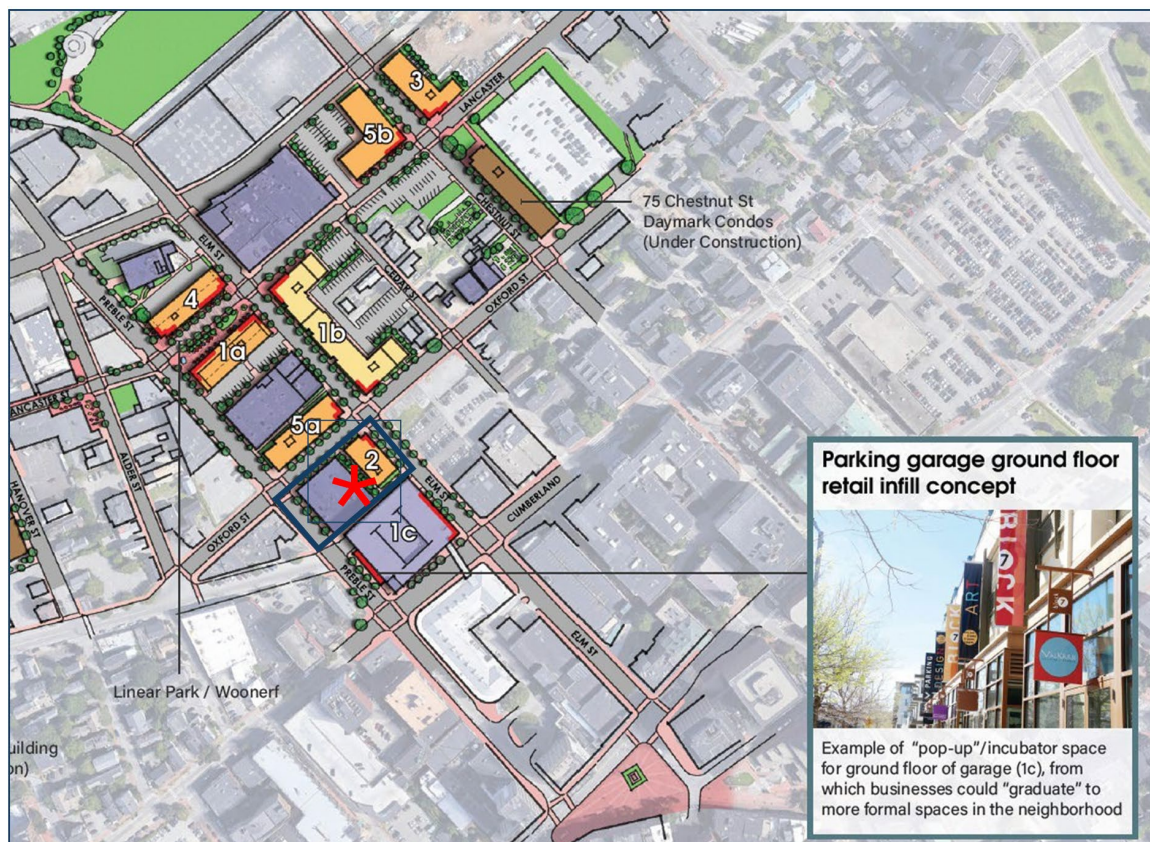
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Narrative

Development overview

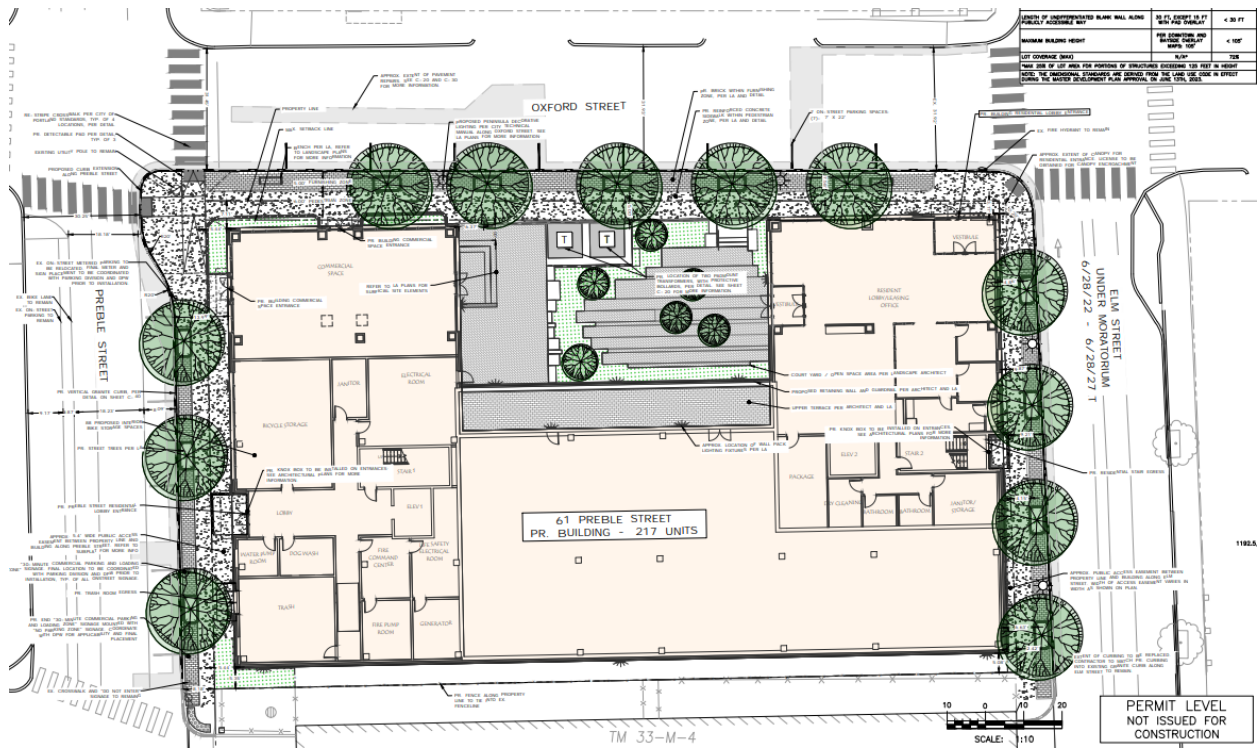
This project merges parcels 033 M001001 and 033 M012001 which taken together is part of what is being called 61 Preble Street (previously known as 60 Elm Street). This project represents Phase 1B of the previously approved West Bayside Master Development Plan (MDP) approved in June of 2023. This Phase 1B project proposes to redevelop the existing 2-story commercial building and surface parking lot into a 10-story building with ground-level retail/commercial space and 217 residential units above.

Site (location #2 on the map)



The building footprint has been designed to feature a courtyard with space for outdoor commercial use as well as residential amenities. The project will reconstruct a significant amount of public sidewalk while granting public access easements to accommodate a generous furnishing zone with street trees, while also proposing to construct a curb extension on Preble Street to improve pedestrian safety at the Preble/Oxford intersection. The site is located within the B3 Downtown Business Zone and in the Bayside Height Overlay Zone.

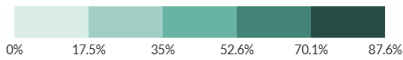
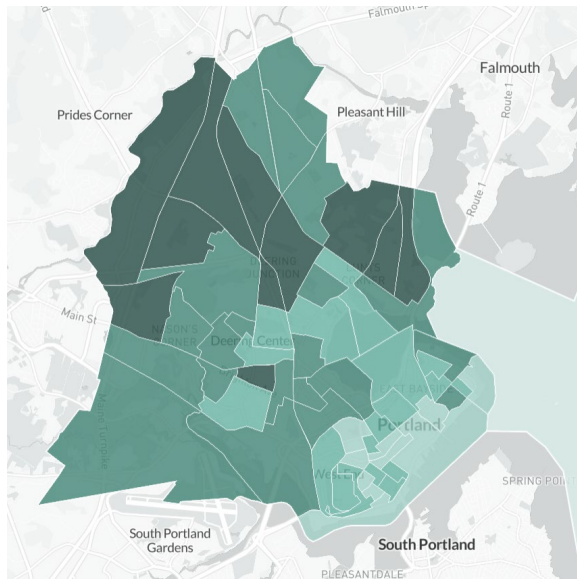
Site Plan



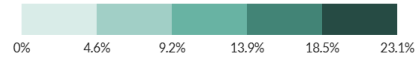
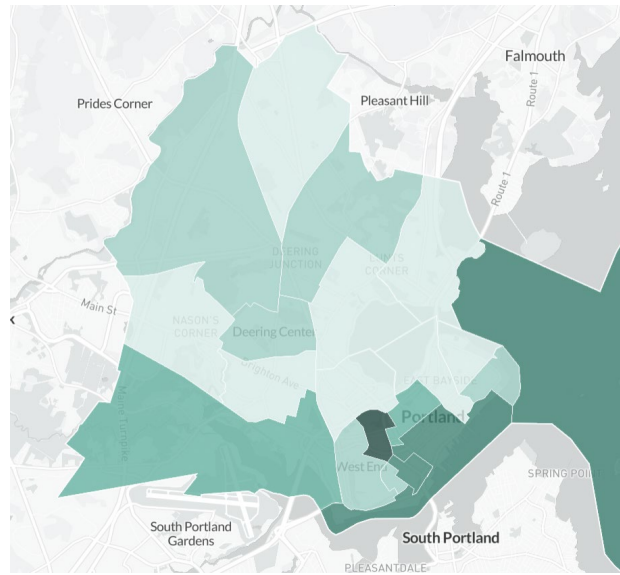
The updated Master Development Plan (MDP) maintains the number of residential units at 603, but reduces the commercial space from 28,500 SF to 21,900 SF, a decrease of 6,600 square feet. Because the change of use at the property exceeds 20,000 square feet, the project is subject to a Major Site Plan Development Application and approval from the Planning Board.

The demographics of people living on-peninsula show a higher propensity to commute other than by car and to have more zero-car households. Under 50 percent of workers primarily drive to work in the census blocks near the Site, and about 10-15% of households in the area do not own a car.

% workers who commute by car



% of no-car households



Source: [Census Reporter](#), ACS 2023 5-year

Trip generation calculations were conducted by VHB and presented in their memo dated 2/10/2025. They utilized ITE Trip Generation Manual (11th Edition) methodologies. These represent updated values based on the currently proposed site use. The trip generation is not anticipated to exceed the [MaineDOT Traffic Movement Permit threshold](#) of 100 additional peak hour trips and is not anticipated to need additional permitting.

Trip generation

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Phase 1b – 61 Preble Street						
Multi-Family Housing	20	68	88	52	33	85
Retail	4	3	7	9	9	18

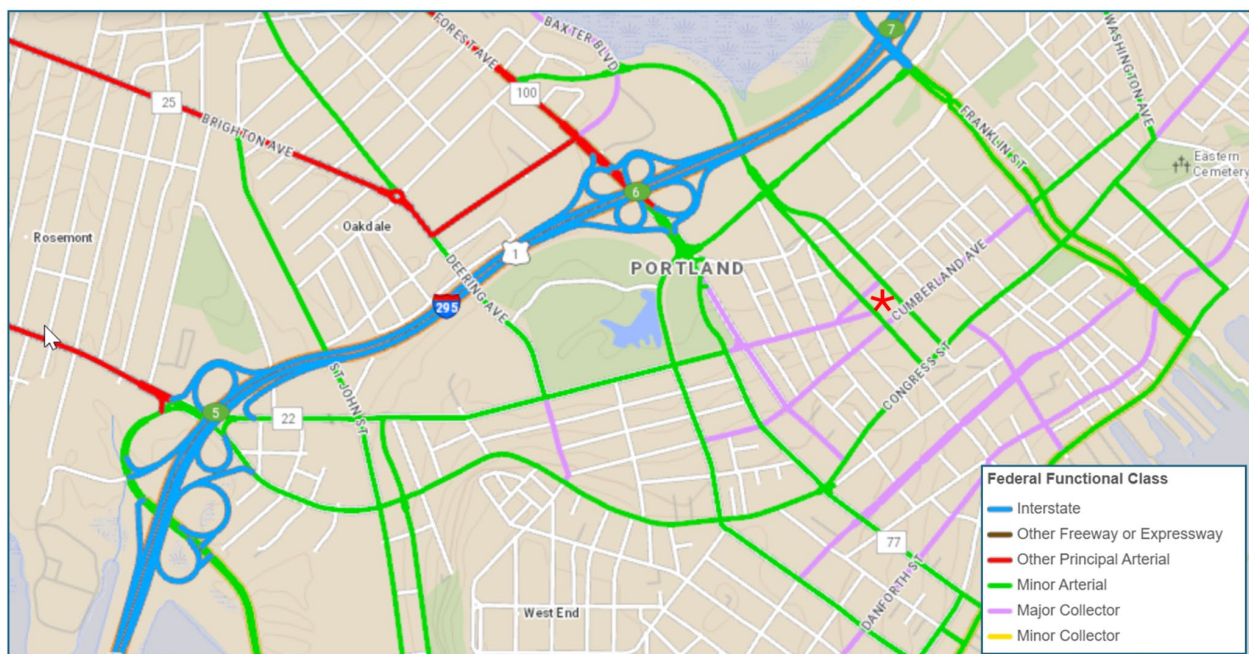
Vehicular access and circulation

The site is located on Elm Street between the intersections with Cumberland Avenue and Marginal Way. These streets are designed to provide multimodal access for walking, biking, and taking transit.

Street Map [Source: OpenStreetMaps]

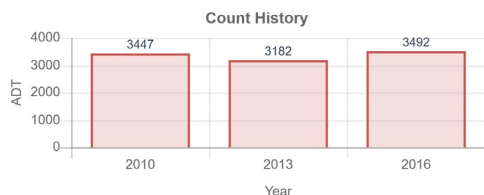


Designated Functional Classification of Streets in Portland Source: MaineDOT



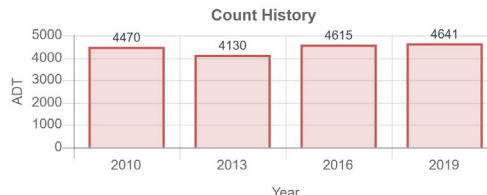
Traffic volumes on Elm Street and Preble Street have been holding relatively steady for the past 10-15 years. Each of these streets see about 250-300 vehicles per hour over the course of the workday, with spikes to about 400-500 cars per hour during the AM and PM peaks.

Preble Street ADT

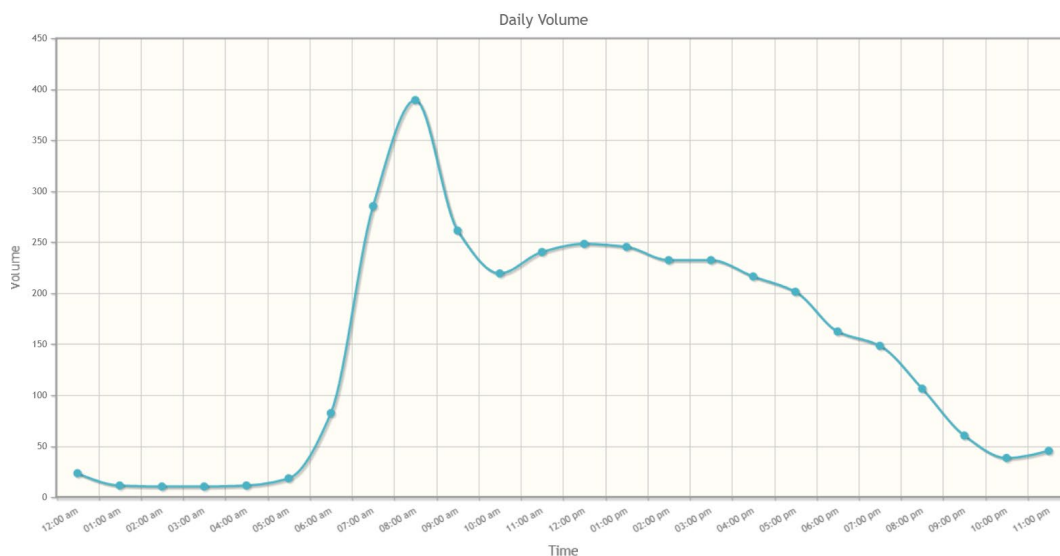


Elm Street ADT

[Source: [MaineDOT](#)]



Preble Street Traffic Volumes (2016) [Source: [MaineDOT](#)]



Elm Street Traffic volumes (2019) Source: [MaineDOT](#)



Bicycling environment

The relatively flat and compact nature of the City of Portland makes for a naturally bikeable City. The Site is connected to on-street bicycle lanes (on Preble St., Elm St., and Portland St) and is in close proximity to the Bayside Trail and Back Cove Trail.

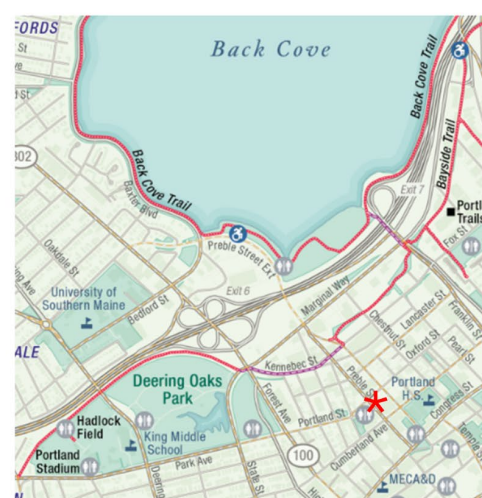
The City of Portland is working on design and construction of several shared use pathways in order to close gaps on a circumferential Peninsula loop and create connections to larger multi-use pathway networks that extend throughout the region. The planned Union Branch Pathway will extend from Forest Avenue along the former railroad alignment to Hadlock Field and Park Avenue, and the Libbytown Connection will be a shared use pathway from Park Avenue to the Portland Transportation Center.

The Better Bikeways Initiative has planned improvements for portions of Brighton Avenue, Deering Avenue, and Bates Street/Veranda Street. Bicycling in Portland is expected to get safer as Portland begins to implement separated bicycle lanes.

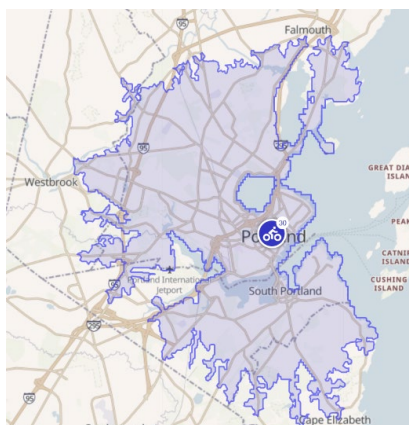
Bicycle facilities map



Bicycle trail map

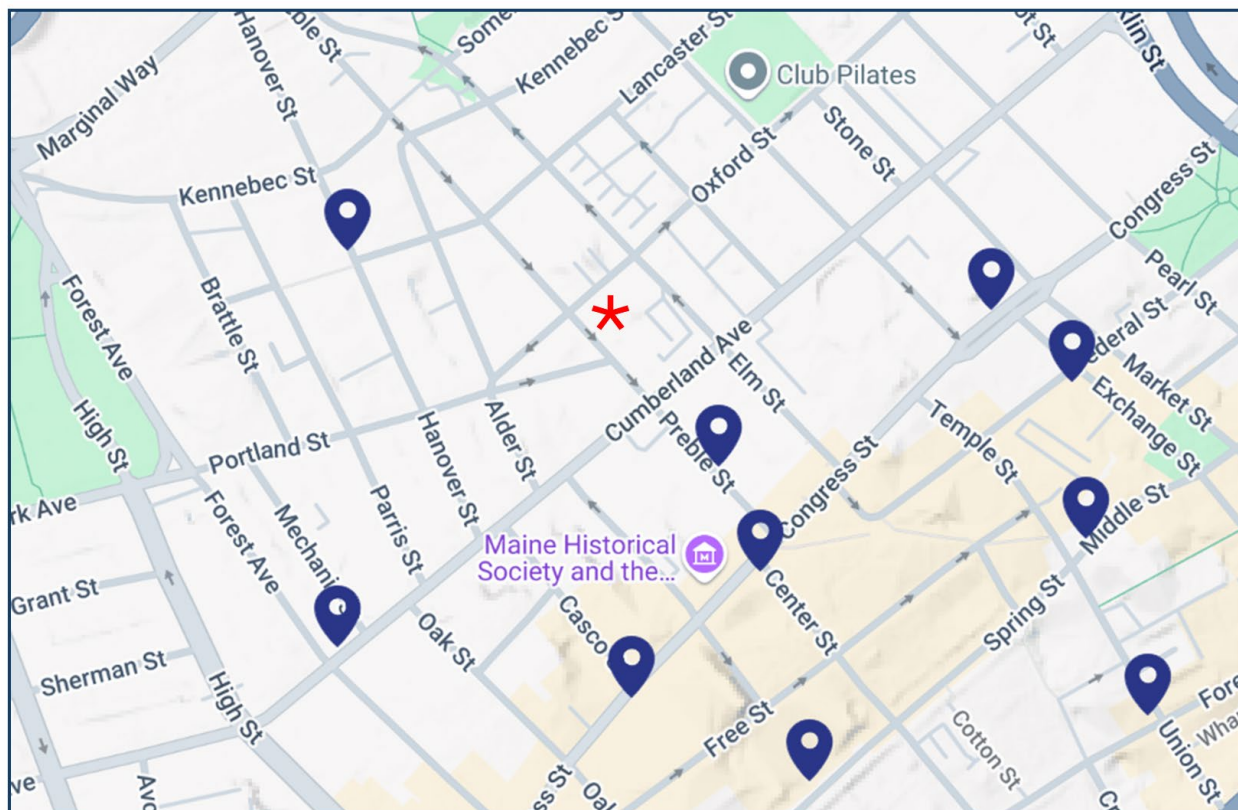


30 min. bicycling isochrone from the site [Source: www.commutetimemap.com]

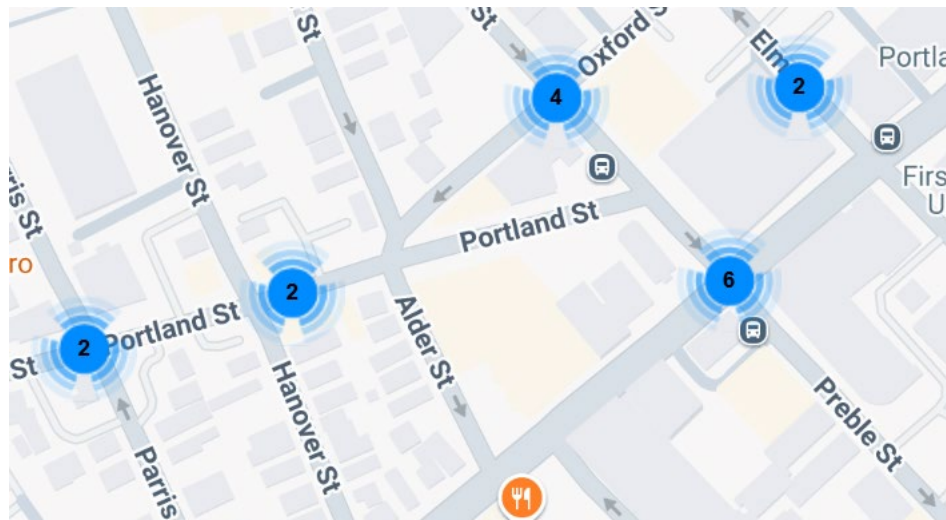


The City bike share has 200 bikes at over 40 stations. There is a station on Preble Street about a tenth of a mile from the Site, and another on Congress Street about two tenth's of a mile from the Site.

Bike Share Dock Locations [Source: <https://www.tandem-mobility.com/portland>]



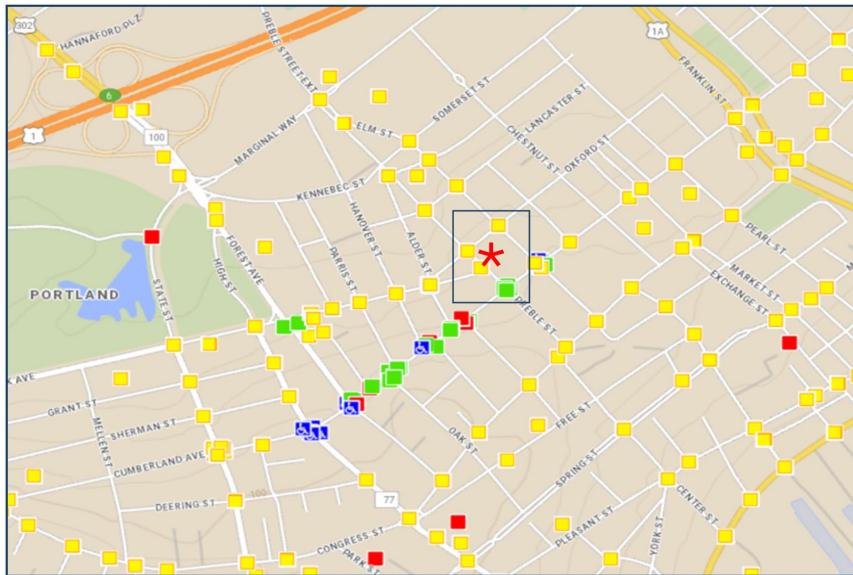
Reported Bicycle Crashes 2015-2024 [Source: [MaineDOT](#)]



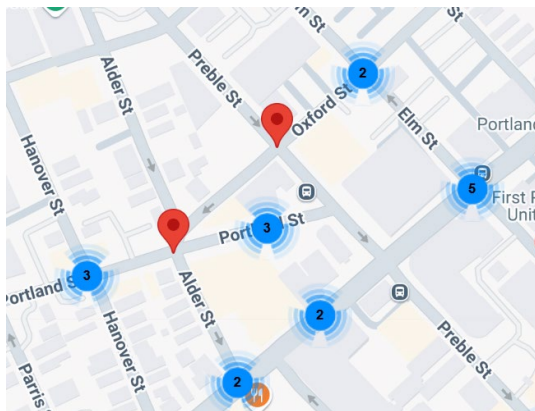
Walking environment

Portland is a very walkable city, and the Site is located a short walk from many amenities including Deering Oaks Park, Back Cove, and Downtown. The sidewalks are wide and the traffic speeds are generally slow in the area of the Site. The two primary issues that impact people walking are the quality of curb ramps and quality of sidewalk concrete/brick. According to the MaineDOT curb ramp inventory, many of the curb ramps in the area have not been inspected, but are in generally good condition in the Site area.

Curb ramp accessibility compliance map [Source: [MaineDOT](#)]



Reported Crashes involving a Pedestrian 2015-2024 [Source: [MaineDOT](#)]



The project will reconstruct a significant amount of public sidewalk while granting public access easements to accommodate a generous furnishing zone with street trees, while also proposing to construct a curb extension on Preble Street to improve pedestrian safety at the Preble/Oxford intersection.

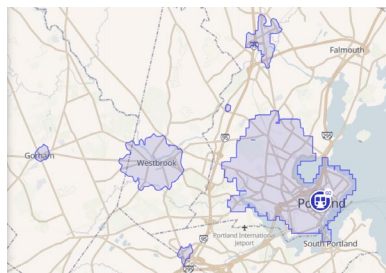
Transit service

The Site is well served by METRO bus. The site is along several bus routes as well as a close walking distance to the METRO Pulse hub. In addition, the South Portland Bus Service operates routes from this area to destinations across the Casco Bay Bridge, including Southern Maine Community College and services and offices in South Portland. A significant number of destinations can be reached by bus between 30 and 45 minute travel time.

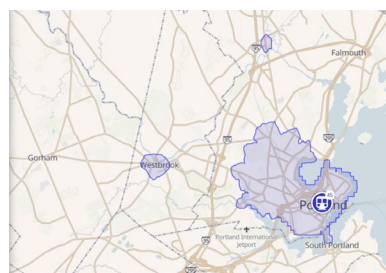
METRO Bus route map



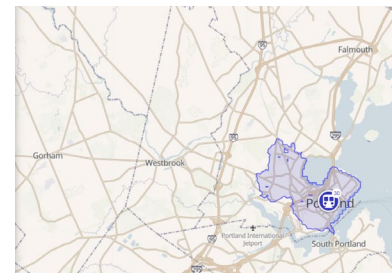
60 minute isochrone



45 minute isochrone



30 minute isochrone



[Source: commutetimemap.com]

Parking

The project does not propose parking on site because the neighboring Public Market garage on Cumberland Avenue is owned by the Applicant. This project is an excellent opportunity to take advantage of the walkability, bikeability, and transit access of its downtown location to reduce car ownership by tenants. As the project is within a quarter mile of fixed route public transit, it does not need to provide parking, provided it submits a Transportation Demand Management Plan (Source: [Portland Land Use Code](#) Table 19-B). Implementation of this TDM plan aims to reduce the number of tenants who rely on car ownership.

Designated Coordinator

The TDM Coordinator for this project will be:

Jen Munroe, Property Manager Port Property Management
82 Hanover Street, Suite 5
Portland, ME 04101 jennifer@portpropmgt.com
(207) 233-8418

Ms. Munroe will also serve as the TDM Coordinator for the 52 Hanover Street building which is currently under construction, so she will be able to apply best practices across the two buildings. Ms. Munroe may work with property management to implement details of this TDM plan but will be the one-stop contact when needed.

Mode Split Targets

Based on the land use and transportation context outlined above, and taking into consideration the TDM strategies to be employed, this project sets the following mode short term (2-5 year) and long term (7 year) mode split targets as follows:

Mode split targets

	Baseline	3-5 Year Target	7 Year Target
Drive Alone	44%	33%	22%
Carpool/Vanpool	3%	3%	3%
Transit	4%	8%	12%
Bicycle	4%	8%	12%
Walk	27%	30%	33%
Work from Home	18%	18%	18%

These targets will be reviewed and updated based upon the annual TDM reporting.

Trip and Parking Reduction Strategies

The core strategies of this TDM Plan are recommended in the [Portland TDM Program's Menu of Strategies](#) (March 2023). There are three categories of interventions: (1) Infrastructure/Transit/Mobility Improvements and Contributions, (2) Incentives, and (3) Information/Education/Marketing. Taken together, these strategies are expected to reduce car ownership of property residents and reduce the number of single occupancy vehicle trips taken.

Infrastructure/Transit/Mobility Improvements and Contributions

- **Public infrastructure:** The project will reconstruct a significant amount of public sidewalk and construct a curb extension on Preble Street to improve pedestrian safety at the Preble/Oxford intersection. The Applicant will grant public access easements to accommodate a generous furnishing zone with street trees.
- **Easements for bike-share/bus shelters.** The developer agrees to work with the City of Portland, Tandem Mobility, and METRO to identify possible locations if appropriate and provide no-cost easements for a bike-share docking station and/or a bus stop, and possibly provide a concrete pad if needed.
- **Transit Lounge:** The developer will develop a “transit lounge” in the lobby that provides a comfortable place to wait for buses, with posted schedules and potentially real-time transit bus information. A ride board will allow tenants to connect with each other regarding carpooling.
- **Real-time bus information:** The developer will work with METRO to potentially provide either a real-time transit information screen in the “transit lounge” or within a kiosk located in a common area either indoors or outdoors.
- **Bicycle Parking:** The development will provide at least 80 indoor bicycle parking spaces in a dedicated indoor bike room in the building.
- **Bike Repair Station:** The development will provide a bike repair station for the use of residents, located in a common area.

Incentives

- **Unbundled Parking.** The cost of parking has been "unbundled" from the cost of developing and operating the building. Tenants who choose to rent a parking space can do so separately from their rental agreement. This eliminates the “well I pay for it anyways” mentality of the renter, thereby incentivizing reduced car ownership of tenants.
- **Transit & Bike-share Incentives.** Providing no-cost opportunities for residents to try taking the bus or taking a bike-share is a proven way to encourage longer-term use of these modes. All tenants will be provided with access to the Umo app for use on METRO, BSOOB Transit and South Portland Bus Service (for tenants without smartphones, a METRO fare card will be provided.) The developer will provide \$50 per unit per lease cycle toward bus fares and/or bike-share rides.
- **Car and Bike Sharing:** The Applicant agrees to work with the City as it seeks to expand Portland Bikeshare and will sponsor a station nearby. While Portland currently does not have a car-sharing vendor, should one become available, the Applicant commits to working with the City to provide a carsharing vehicle nearby.
- **Telecommuting:** The building will be wired broadband infrastructure that meets the build-to standard of the Maine Connectivity Authority and ConnectMaine, in order to encourage telecommuting as a trip reduction strategy.

Information/ Education/Marketing

- **Welcome packet:** All new tenants will be provided with a welcome packet containing the following information:
 - Transit maps, schedules, and information about real-time transit trackers
 - Information about transportation providers, including transit operators, transportation-as-a-service (TAAS) companies, and other options to avoid driving
 - Information on bike routes, parking infrastructure, and other incentives.
- **Online information:** All information in the welcome packet will be provided online and updated as needed.
- **Annual Recognition:** To recognize and provide positive reinforcement for resident TDM efforts, the building management will also provide an annual recognition of leaders in trip reduction from the building.

Monitoring and Reporting

Responsibility

The TDM Coordinator, Jen Munroe, Property Manager Port Property Management, will be responsible for executing the TDM monitoring program, assessing the results, reporting back to the City of Portland.

Methods

The TDM plan includes two annual surveys:

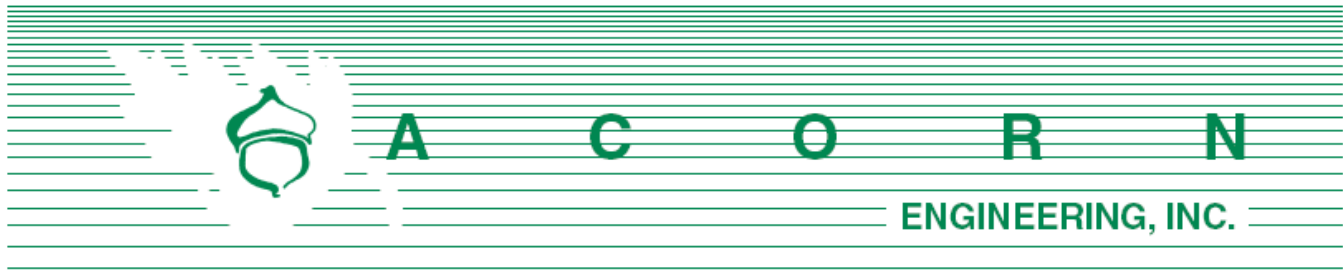
1. **Residents.** One survey targets residents in the building conducted electronically using contact information on file with the management office for each unit, and
2. **Employees.** A second survey will target employees of the ground level retail spaces conducted on paper provided directly to each of the employers for distribution.

The results of the two surveys will be tabulated. The survey will remain substantially consistent from year to year, to allow the results to be used to monitor the effectiveness of this TDM plan and allow for adjustments as needed.

Reporting

TDM Administrator will file an annual TDM report with the City's Department of Planning & Urban Development. The City's TDM Program has a standardized annual date for all active TDM reports to be due by May 15th of each year.

The City's [Annual TDM Program Reporting Form](#) will be used which includes: site information, an assessment of the effectiveness of TDM strategies, mode share data, tabulated survey results, and a qualitative assessment of the program and recommended changes for the upcoming year.



City of Portland Planning Department
 Taylor Colbeth, Planner
 389 Congress Street, 4th Floor
 Portland, Maine 04101

May 30, 2025

Subject: Site Plan Worksheet & Design Review Comment Response Letter
 61 Preble Street, Portland, Maine – Major Site Plan Application

On behalf of 60 Elm Street, LLC, Acorn Engineering is pleased to respond to the following comments from the City of Portland Planning and Urban Development Department review of the 61 Preble Street, Major Site Plan Application.

The following is in response to the staff comments that were identified as “not met” or required more information. Comments were derived from the following sources:

- Staff Comments - Site Plan Worksheet, received April 23rd, 2025
- Design Review Comments, received April 24th, 2025
- Zoning Worksheet, received April 25th, 2025
- Stormwater Reviewer Comments, received May 7th, 2025

To facilitate the review, comments are provided below in italics followed by the project team’s response.

Acorn Engineering, Inc. – Civil Engineer, Sam Lebel, PE
VHB – Transportation Designer, Michael Cristiani
Market Square Architects – Architect, Ben Harth, RA

Site Plan Worksheet - Staff Comments:

Impact on Surrounding Street System:

Overview: A traffic movement permit was previous approved for the West Bayside MDP. The applicant has updated the trip generation as part of this Major Site Plan application which demonstrates a net reduction in trips to the removal of the existing land uses at 60-62 Elm Street. The estimated trip generation is not anticipated to have a significant impact or substantially increase congestion on the surrounding street.

Updates Requested

- *The applicant shall provide supporting documentation for the use of land use code 720 medical office for the trip credit applied in the trip generation estimate.*

Response: The use of Land Use Code (LUC) 720 – *Medical-Dental Office Building* is appropriate and justified based on the nature of the existing uses on site. LUC 720 is defined by the Institute of Transportation Engineers (ITE) as “a facility that provides diagnoses and outpatient care on a routine basis but is unable to provide prolonged in-house medical and surgical care.” The current tenants—Spurwink, Greater Portland Health, and MVRA—each operate as outpatient medical providers:

- Spurwink delivers outpatient behavioral health and therapy services.
- Greater Portland Health operates as a community health center providing primary and preventative care to walk-in patients.
- MVRA (Maine Vocational & Rehabilitation Associates) offers outpatient rehabilitative and medical services.

All of these uses are consistent with the ITE’s description of LUC 720. Therefore, the application of this land use code for trip generation purposes, including the associated trip credit, is appropriate. Supporting documentation and ITE summary pages for LUC 720 are attached for reference.

- *The applicant has provided a summary table of the ITE assumptions for estimating traffic. The applicant should provide the ITE Trip Generation Land Use code summary pages for review and approval.*

Response: Please find ITE Trip Generation Land Use code summary pages attached to the revised . The Land Use Codes are consistent with previously approved Land Use Codes in the Traffic Movement Permit.

- *The applicant will be responsible for the implementation of improvements required in the MDP Traffic Movement Permit. These should be implemented prior to occupancy of any building associated with the MDP approval. The applicant is requesting the study of a two way Oxford Street occur prior to occupancy of Phase 2. The City will provide guidance on this in the future.*

Response: Please refer to the approval language from the TMP and 89 Elm Street (Phase 1A) Site Plan approval. Note the majority of the off-site requirements are required to be implemented prior to occupancy of Phase 2 of the MDP (196 Lancaster Street).

Access and Circulation:

Overview: *The applicant is proposing main entrances to the residential lobby and commercial space off the internal courtyard and Oxford Street. There are additional entrances to the residential spaces off of Preble Street and Elm Street. There is no proposed parking on-site. On-street parking is proposed to remain along Preble and Oxford Street. The applicant is also proposing one 30-minute loading zone on Preble Street to accommodate loading and unloading activities.*

Updates Requested:

- *The applicant shall update the plan set to show the proposed sidewalk easement.*



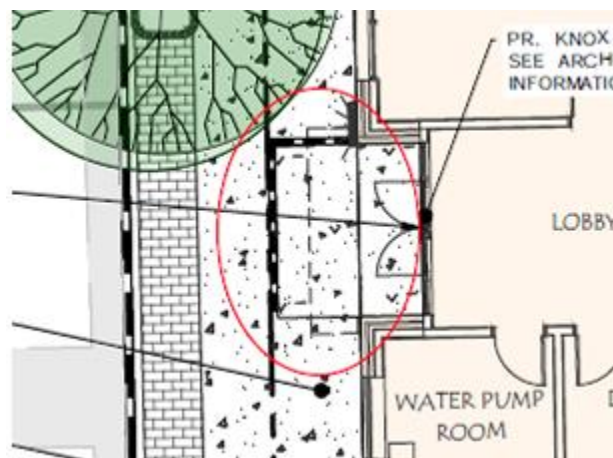
Response: The callout for the easements have been elaborated on; however, please note that consistent with previous sidewalk easements, in an effort to reduce congestion on the Site Plan, the easements have been fully detailed (bearings and distances, hatches, etc.) in standalone schematic exhibits that are incorporated into the easement agreement between the City and the Applicant, which is the proposed approach at 61 Preble Street. These exhibits provide clear detail on the easement areas which is not feasible to do on a typical Site Plan given the competing callouts, notes, linework, etc.

- *The applicant shall provide more detail on solid waste operations- what will be the anticipated number of weekly trips for hauling for the proposed 217 units? A proposed tree well is located in front of trash room doors- will this interfere with hauling operations?*

Response: The solid waste operations will be conducted by a private waste hauler, anticipated to occur 2-3 times a week depending on demand (number of people living in the building, time of year, etc).

The tree well is over 9 feet away from the trash room egress door, with 7 feet of separation between the open door and the tree well. The tree well can not move due to an existing electrical manhole to the south and proposed underground water utilities to the north.

- *The applicant shall provide more information on the building egresses and clarify what the below curb material is.*



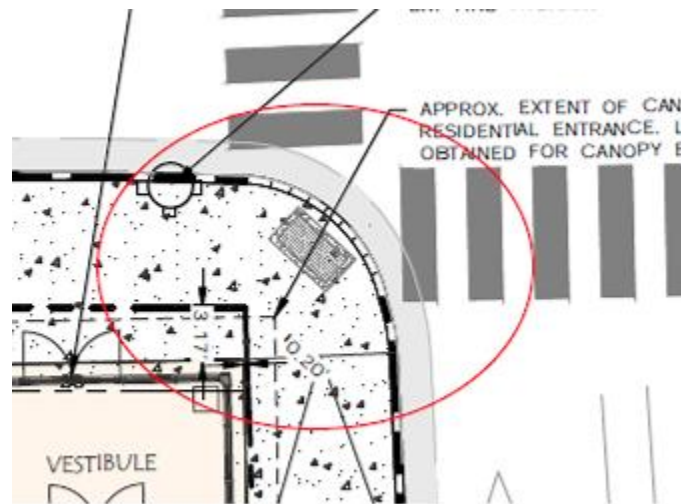
Response: Granite curbing is proposed outside the lobby entrance to create an ADA accessible walkway outside the lobby entrance. The curb will be flush with the door landing and tie into the grade on the southeast edge, with a reveal along the northwest edge as the road/sidewalk elevation drops off.

- *The applicant shall clarify what the slipform curb detail being used for in this project on Sheet C-40.*

Response: There is no slipform curb proposed – this detail has been deleted.



- The applicant shall update sheet C-10 to extend DWP or change to radial.



Response: Please refer to the revised civil plan set for the revised radial layout.

- The applicant shall provide details for items proposed in the furnishing zone.

Response: Please refer to the landscaping plans for more information.

- The applicant shall update Sheet C-30 to provide sidewalk cross slopes and additional spot grades at the Oxford & Preble Street ramp.
- The applicant shall update Sheet C-03 to include note for fire call box from C-20 to this sheet as well.

Response: Please refer to the revised civil plan set for these revisions.

Site Landscaping and Buffers:

Overview: The proposed development is within the B-3 Zone and does not have setback requirement, and is therefore not subject to one shade tree or six plantings per 30 linear feet of frontage as outlined in Standard 14.6.2.C.1. The applicant is proposing solid waste to be located in the interior of the building with access off Preble Street. The applicant is proposing a total of 12 new street trees on all property frontages

Updates Requested:

- Per Technical Manual section 4.6.1, the applicant is required to provide one street tree per dwelling unit, which would total 217 street trees for this proposed project. The applicant shall pay \$400 per street tree that is not provided, for a total of \$82,000 (205 x \$400), into the City's Tree Fund.

Response: Understood, this fee will be paid at a later date.



Water quality, stormwater management, and erosion control:

Overview: *The stormwater runoff for the development is proposed to be collected, attenuated, and released at a rate that does not exceed pre development flows. The proposed detention system will treat the stormwater prior to releasing. The applicant has coordinated with DPW to ensure that the proposed system will not overburden the existing City system.*

Updates Requested

- *ESC has been depicted on the submitted Construction Management Plan. The applicant shall provide a standalone Erosion & Sedimentation Control Plan.*

Response: Please refer to Sheet C-04 for this information.

- *The applicant shall provide information on ESCs that will be utilized during sidewalk reconstruction.*

Response: Filter socks in combination with jersey barriers and catch basin inlet protection are anticipated to be utilized during the reconstruction of the sidewalk, similar to the approach at 89 Elm Street. However, there are various methods and such, it is the responsibility of the contractor to implement and coordinate the final erosion control measures as part of their means and methods. A contractor/construction manager have not yet been selected for this project.

- *Inlet protection is required for all CBs within 100ft of the site.*

Response: Please refer to Sheet C-04; catch basin inlet protection is proposed for all catch basins within 100 feet of the site.

- *Construction entrance aggregate should be underlain with geotextile - this is not clear in the ESC report 2.1.1.*

Response: Please refer to the revised Erosion and Sedimentation Control Report.

Public Safety and Fire Prevention:

Overview: *The proposed development has been designed with CPTED principles including adequate lighting and natural surveillance. The proposed building has points of emergency egress along all three street frontages.*

Updates Requested

- *The applicant has proposed residential green space to the rear of the proposed building between the development and the existing parking garage. Has the applicant considered residential access gate to secure access to that area?*

Response: The area will be gated in to allow tenants to access the open space. Please refer to the Alley narrative prepared by Braden Drypolcher, RLA (Document V) regarding the intent and potential for the linear “green space” behind the proposed building. This design is also reflected in the Landscape and Civil plans.



Public Utilities:

Overview: *The applicant is proposing the undergrounding of utilities as part of the proposed project. The applicant has indicated that the new sewer and stormwater infrastructure will meet the standards of the Technical Manual and comments received by DPW provided as part of the MDP approval. The project will be served by connection to the public sewer on Oxford Street.*

Updates Requested:

- *The applicant shall submit ability to serve letters from the respective companies as they are received.*

Response: Understood, these letters will be provided as received. We have confirmed capacity to serve with the various utility companies.

- *DPW is currently reviewing the Applicant's wastewater capacity application and proposed sewer connection into the Oxford Street sewer. The municipal sewer is in poor shape and DPW has reached out to the developer and provided direction on infrastructure upgrades that will be required prior to approval of the connections.*

Response: As coordinated with DPW, the applicant has provided options for the proposed sewer connection. Option A proposes to tie the proposed sewer lateral into the existing sewer within Preble Street, and Option B proposes to replace the existing stretch of sewer main within Oxford Street, as depicted on the utility plan, sheet C-20.

Signage and Wayfinding:

Overview: *The applicant has not indicated proposed signage on building elevations. The applicant is proposing new on street parking spaces and a commercial loading parking spot along Preble Street that will require signage.*

Updates Requested:

- *The applicant shall confirm whether signage for the development is proposed. More Information Required*

Response: We propose building identification signage at the residential entries, mounted to the canopies. Commercial signage may include canopy mounted signage, wall mounted blade signage, and/or a wall mounted signage band above the storefront glazing. Building elevations have been updated to include this. All signage shown in the current elevations is preliminary and diagrammatic. Color, font, and text will likely evolve pending on commercial and residential branding.

- *The applicant shall provide more information on the proposed signage for the proposed on-street parking spaces.*

Response: The proposed on-street parking and signage has been clarified and will be further coordinated with DPW prior to, and during construction.



Design Standards:

Overview: *The City has provided the applicant with a design review memo. Staff had questions and comments regarding proposed open space, the location of transformers, and storefront windows.*

Updates Requested:

- *See design review memo for more details and requested revisions.*

Design Review Comments:Master Development Plan Standards of Review:

Framing of outdoor open space and linkages; - Not Met

Staff comment: The proposed development includes a furnishing zone with pedestrian amenities and public sidewalk to access existing open spaces within a half-mile radius that is consistent with the approved MDP. In addition, the building design includes a street-level courtyard accessible from the public sidewalk to contribute towards open space that Staff finds appropriate and consistent with the approved MDP.

Staff recommends removal of the linear green area at the rear of the proposed building shown on the MDP amendment. Staff finds this open space is not easily accessible and suggest a more utilitarian function for stormwater drainage with fencing for maintenance access only.

Response: Please refer to the “Alley Narrative” prepared by Braden Drypolcher, project landscape architect, regarding the intent and potential for the linear green space behind the proposed building. Refer to Section V. as previously shared with Staff prior to the Planning Board workshop.

Applicable Design Standards:

§(b)(1)a.1. Relationship of pedestrian environment:

- *§(b)(1)a.1.i. General: The exterior design of portions of buildings within the first thirty-five (35) feet of height shall enhance the character, attractiveness, comfort, security, and usability of the street level pedestrian environment. Factors to be considered include the design, placement, character and quality of the following: Storefronts and building facades, Building entrances, Blank facades; and Special features. **NOT MET***

Staff comment: The proposed building is enhanced within the first thirty-five feet by expansive storefront windows adjacent to the public sidewalk and curtainwall system as prominent form-defining corners that Staff finds activates the ground floor uses along Oxford Street. In addition, Staff finds the quality and durability of the proposed exterior materials which include brick, concrete or granite banding, dark trim windows and suspended metal canopies at primary entries contribute to the character, attractiveness and usability of the street-level pedestrian environment.



Staff requests the visible transmittance (VT) of .7 or higher along the ground-level for storefront windows and that the Applicant indicate onto the plan set.

Response: All street level storefront glazing will have a minimum visual transmittance of 0.7. See elevations A2.00-A2.02 for storefront notes requiring a VT of 0.7 or greater to be typical.

Staff suggests additional detailing at the recessed masonry that either incorporate additional windows with grid mullion (as shown at Level 2) or additional brick detailing to reduce large expansive blank facades adjacent to the public sidewalk.

Response: The interior program in these areas is primarily trash/storage space or filled earth, and therefore windows would not be appropriate. Additional brick detailing at the recessed masonry will be provided in the final building design. We intend to employ traditional masonry detailing such as soldier courses, sloped rowlocks, and/or varied coursing to achieve this.

§(b)(1)e. Relationship to existing development:

1. General: 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: Street walls and building setbacks; Open space; Building form, scale and massing; Façade proportion and composition; Pedestrian circulation and building entrances; Parking **NOT MET**

Staff comment: The built context of the surrounding area contains a variety of building types, architectural styles, and a mix of uses that vary in height and proximity to the street typically found throughout Portland's Bayside neighborhood. Staff finds that the proposed development and building design is integrated within the existing character of the general pattern found within the surrounding neighborhood. The proposed development includes a setback from the property line to accommodate a public sidewalk and streetscape amenities in the furnishing zone, proposed open space as a publicly accessible courtyard at Oxford Street, and building elements such as exterior façade variations, articulated building entries with canopies and prominent form-defining corners with curtainwall building features.

Staff finds that the proposed location of the transformers along Oxford Street does not reinforce the pedestrian environment and requests that the Applicant incorporate a screening element (see Figure A), relocate further from the public sidewalk or in a subsurface vault for Staff review.





Figure A: Precedent image to screen transformer adjacent to public sidewalk. Image courtesy of Google Maps

Response: The applicant intends to utilize two padmount transformers for the site, screened by a 4' tall metal Jerith fence. Please refer to the Landscape Architecture plans for more information on this proposed screening and layout. This method has been used effectively elsewhere in the City. Additionally, the team is exploring the possibility of adjusting the electrical design to allow for one transformer instead of two; however, this is subject to CMP policy and will be an ongoing discussion leading up to construction.

Multiple - Family Standards:

Comment 4: The design of proposed dwellings shall provide ample windows to enhance opportunities for sunlight and air in each dwelling in principle living areas and shall also provide sufficient storage areas. **Not Met**

Staff comment: The proposed building includes ample windows for each dwelling unit. **Staff requests that the Applicant indicate on the architectural floor plans where sufficient storage areas for each dwelling unit is provided.**

Response: Unit interior plans are provided with the current drawings. See sheets A1.02 and A1.03 for unit layouts which all contain both common area storage closets and bedroom area storage closets.

Zoning Worksheet:

Comment: Length of undifferentiated blank wall along publicly accessible way (max.)

Response: Please refer to the architectural elevations for compliance with this standard. The longest portion of undifferentiated blank wall is along Preble Street, measuring approximately 10'-3".



Comment: *Structure Height (max): 105 ft (Bayside Height Overlay Map)*

Response: The Average Grade and Building Height calculations are provided on Sheet C-30. The average grade plane is used as the height datum and therefore subtracted from the elevation of the top of the roof beam (in coordination with the Architectural plans) to determine the height, consistent with previous applications. The height of the building is 104.9' which is in compliance with the Bayside Height Overlay Map.

Comment: *Retail shall not include wholesale and bulk purchase lumber and construction supply sales. The applicant has not yet indicated what the retail space is intended to be. The applicant shall confirm that this supplemental use standard is being met.*

Response: Understood. The applicant has designed the space to accommodate a restaurant, café, and/or retail space, with the intention of meeting the city's supplemental standards. There is no intention to accommodate a wholesale and bulk purchase lumber/construction business.

Stormwater Reviewer Comments:

Comment: *The project is required to comply with MaineDEP Chapter 500 and City of Portland Technical Manual Section 5 standards for stormwater management. The Applicant has provided a stormwater management plan outlining the proposed approach for meeting these standards.*

- *Basic Standards – The project is required to provide erosion control measures in accordance with the Basic Standards as well as the City's Erosion Control Standards in Section 12 of the Technical Manual. As the City has noted in their comments, a separate Erosion and Sedimentation Control Plan should be provided.*

Response: Please refer to the new Erosion & Sedimentation Control Plan, Plan #16.

- *General/Redevelopment Standards – The project does not meet the thresholds to require treatment for either new impervious or redeveloped non-roof impervious area, but is providing for treatment with the proposed stormwater system.*
 - *A maintenance plan and stormwater maintenance agreement will be required.*

Response: The maintenance agreement will be provided prior to the building permit.

- *Flooding/Detention Standards – The Applicant has modeled their system to show that the project will be reducing flows to meet the Flooding Standard. The stormwater system will include a detention system, and DPW has noted that this will meet the requirement for detention.*

Comment: *The City requires a control manhole be installed after grease trap locations. A manhole is proposed 24 feet downstream of the proposed grease trap, the application should confirm that this will be adequate or provide another manhole closer to the grease trap. I would also suggest the applicant review the standards in Section 6 of the technical manual to ensure that the proposed*



grease trap meets the City's requirements, or request an allowance, i.e. there is a requirement for 3x24" access points, which I know can be a challenge for these size systems.

Response: The proposed grease trap intends to meet the requirements of the city code to the greatest extent feasible. We would request two access points for a smaller system. Additionally, we anticipate the manhole 24' downstream of the grease trap to be sufficient in serving as a control/sample manhole prior to entering the City's system.

Please note that we have provided two options for connecting the proposed sewer line into the City's system, part of which will be informed by the grease trap and its proximity to the foundation. As a condition of approval prior to the issuance of a building permit, we are requesting to revisit this design with DPW once the final grease trap size is known and the foundation has been designed by a structural engineer.

Please let us know if you have any additional questions or comments.

Sincerely,



Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.



Danielle McGowan, E.I.
Project Engineer
Acorn Engineering, Inc.



61 Preble Street: Phase 1B

Staff Comment Response 05.12.2025

Staff comment: The proposed development includes a furnishing zone with pedestrian amenities and public sidewalk to access existing open spaces within a half-mile radius that is consistent with the approved MDP. In addition, the building design includes a street-level courtyard accessible from the public sidewalk to contribute towards open space that Staff finds appropriate and consistent with the approved MDP.

Staff recommends removal of the linear green area at the rear of the proposed building shown on the MDP amendment. Staff finds this open space is not easily accessible and suggest a more utilitarian function for stormwater drainage with fencing for maintenance access only.

Linear Open Space - Comment Response:

15' wide by 200' +/- alley to be improved between the Phase 1B building and the existing Portland Public Market Garage. Area to include secure ornamental fence & gates at Elm and Preble Streets, walking path, shade garden plantings, granite post accents, drainage improvements and lighting. Fencing and gate design to be contextually appropriate and complementary to proposed building architecture. Door access from the proposed Phase 1B building to the alley providing controlled access to the alley.

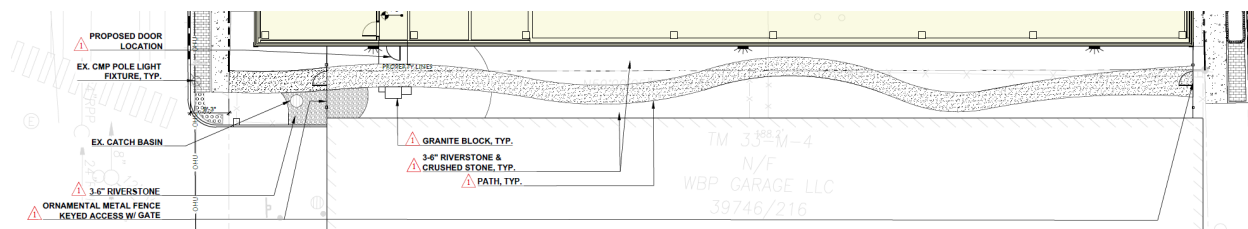


Figure 1: Sheet L1

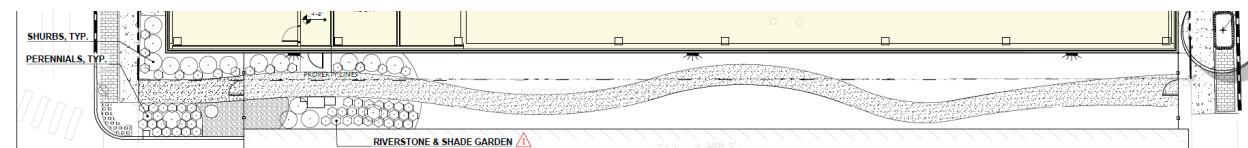


Figure 2: Sheet L2

Workforce Housing Compliance

61 Preble Street, Portland, ME

I. Applicable City Code

Chapter 14, Article 3

Relevant Definitions

Affordable housing. [Housing for which the percentage of income a household is charged in rent and other housing expenses or must pay in monthly mortgage payments (including condominium/HOA fees, mortgage insurance, other insurance and real estate taxes), does not exceed 30% of a household's income, or other amount established in City regulations that does not vary significantly from this amount.]

✔ *Definition met*

Low-income household. A household having an income not exceeding 80% of median income for area of residence as set forth in regulations promulgated from time to time by the United States Department of Housing and Urban Development pursuant to 42 U.S.C. sections 1437 et seq.

✔ *Definition met*

Low-income housing unit for rent. A dwelling unit for which:

1. The rent is affordable to a household earning 80% or less of Area Median Income (AMI) as defined by the United States Department of Housing and Urban Development (HUD).
2. The unit is rented to a household earning 80% or less of AMI.
3. The requirements of (A) and (B) above are limited by deed restriction or other legally binding agreement for the applicable length of time in this ordinance.

✔ *Definition met*

Workforce housing unit for rent. A dwelling unit for which:

1. The rent is affordable to a household earning 80% or less than of AMI.
2. The unit is rented to a household earning 80% or less of AMI.
3. The requirements of (A) and (B) above are limited by deed restriction or other legally binding agreement for the applicable length of time in this ordinance.

✔ *Definition met*

Owner. Any person that has any interest, legal or beneficial, in any parcel or lot.

✅ *Definition met – see below (II. Ownership Overview)*

Site. All contiguous land under the same ownership or control, whether proposed for development or not, except where development is limited to a lot or lots within a subdivision.

✅ *Definition met*

II. Ownership Overview

Reveler acquired and received approval from the city of Portland for case PL-002315-2022 for a master development plan including 201 units of workforce housing and 603 units of market rate housing using the off-site provision identified in Article 18 and the supporting Implementation Guidelines for Developers of Rental Housing.

Reveler received approval from the city of Portland for case PL-002403-2023 for a 201-unit affordable housing project and two retail spaces in one building consisting of three condominium units (1 – 201-unit residential building, 2 – pedestrian level retail units).

Reveler retained Avesta to manage/own the residential condominium unit.

Reveler and Avesta entered into a Workforce Housing Agreement with the City of Portland identifying the use of the 201 Affordable Units under the off-site provision for subsequent phases of the Master Development Plan.

Reveler is entering into a Workforce Housing Agreement as a conditional use associated with the subject Site Plan Application (PL-003222-2025).

Reveler will enter into Workforce Housing Agreements as a conditional use associated with remaining site plan applications associated with the Master Development Plan.

III. Applicable City Guidelines

Chapter 14, Article 18

Section 1 – N/A

Subsection 2.1 – N/A

Subsection 2.2 – PL-002315-2022; PL-003223-2025 – No incentive
PL-002403-2023; PL-003022-2024 – Incentive
PL-003222-2025 – No incentive

Subsection 2.3 – See below, ‘IV. IZ Compliance Overview’, IZ Implementation Guidelines for Developers of Rental Housing (Amended 12-11-18; 12-6-20).

[Inclusionary Zoning Implementation Guidelines for Developers of Rental Housing \(Amended 12-11-18\) \(12-6-20\) \(PDF\).pdf](#)

Subsection 2.4 – N/A

Subsection 2.5 – N/A

Section 3 – N/A

Section 4 – N/A

IV. IZ Compliance Overview

The following standards have been met, as set by the Inclusionary Zoning Implementation Guidelines for Developers of Rental Housing.

Phasing

Projects shall not be segmented or phased to avoid compliance with these provisions. In cases where projects are completed in phases, Workforce Units shall be provided in proportion to the development of market rate units unless otherwise permitted through regulations.

✓ *This Standard has been met*

Size and Bedroom Count

Workforce Units need not be the same size as other units in the development but the number of bedrooms in such units, either on- or off-site, shall be ten percent (10%) of the total number of bedrooms in the development. For the purposes of this section, every 400 square feet in a market rate unit will count as a bedroom if the actual number of bedrooms in the unit is lower.

✓ *This Standard has been met*

Interior Standards

The design, quality, and materials of Workforce Units interiors need not be the same as market rate units. However, the Workforce Units may not be strategically designed to avoid offering basic amenities similar to what are included in the market rate units such as the following:

- Kitchen – refrigerator, stove, sink disposal, cabinets, range, hood, microwave, washer/dryer and countertop
- Bathroom – Sink, shower, toilet, shower curtain rod or door, storage and mirror.
- Flooring – Finished Floor (living area, dining area and one bedroom will have flooring other than carpet)
- Closets – Each unit to have common space storage and one closet in each bedroom (all closets to have shelf and pole)

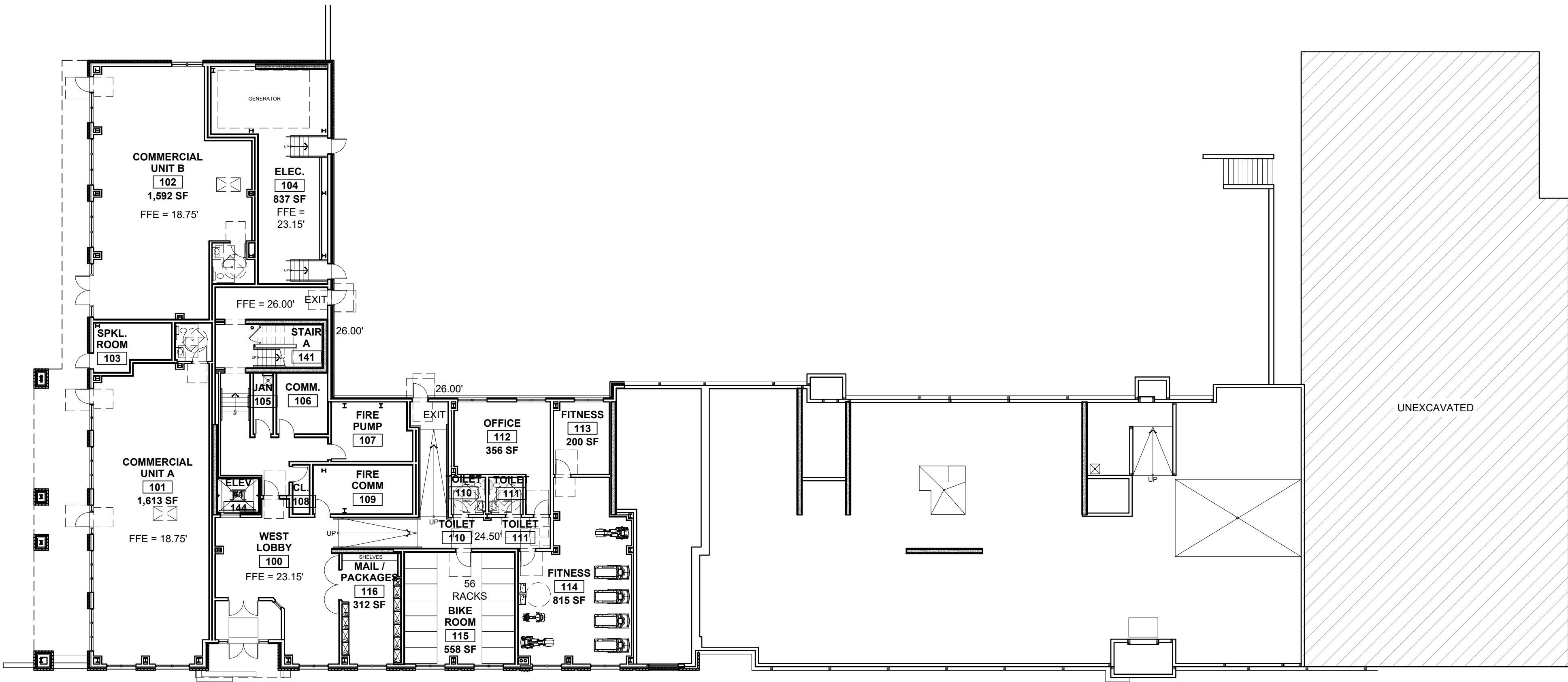
✓ *This Standard has been met*

The proposed resident common areas at 61 Preble St. (lobby space, fitness room, community room, mail room etc.) are consistent with the resident common areas at 89 Elm St.

The proposed building construction at 61 Preble St. (structure, envelope, HVAC, life safety, vertical transportation, etc.) is consistent with the building construction at 89 Elm St.

COLOR KEY:

- 61 PREBLE - STUDIO - 21 TOTAL
- 61 PREBLE - ONE BED - 32 TOTAL
- 61 PREBLE - ONE BED PLUS - 11 TOTAL
- 61 PREBLE - TWO BED - 8 TOTAL



1 FIRST FLOOR PLAN
1/16" = 1'-0"

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APARTMENTS
89 ELM STREET
PORTLAND, MAINE

RSA
RYAN SENATORE
ARCHITECTURE
500 CONGRESS STREET, SUITE 2
PORTLAND, MAINE 04101
O: 207-747-5159
C: 207-650-6414
senatorearchitecture.com

CONSULTANTS:

REVISIONS:

DATE: MAY 28, 2025

PROJECT No. 2241

DRAWN BY: RRT

CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
FIRST FLOOR
DIAGRAM PLAN

COLOR KEY:

- 61 PREBLE - STUDIO - 21 TOTAL
- 61 PREBLE - ONE BED - 32 TOTAL
- 61 PREBLE - ONE BED PLUS - 11 TOTAL
- 61 PREBLE - TWO BED - 8 TOTAL



1 SECOND FLOOR PLAN
1/16" = 1'-0"

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CONSULTANTS:

REVISIONS:

DATE: MAY 28, 2025

PROJECT No. 2241

DRAWN BY: RRT

CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
SECOND FLOOR
DIAGRAM PLAN

COLOR KEY:

- 61 PREBLE - STUDIO - 21 TOTAL
- 61 PREBLE - ONE BED - 32 TOTAL
- 61 PREBLE - ONE BED PLUS - 11 TOTAL
- 61 PREBLE - TWO BED - 8 TOTAL



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CONSULTANTS:

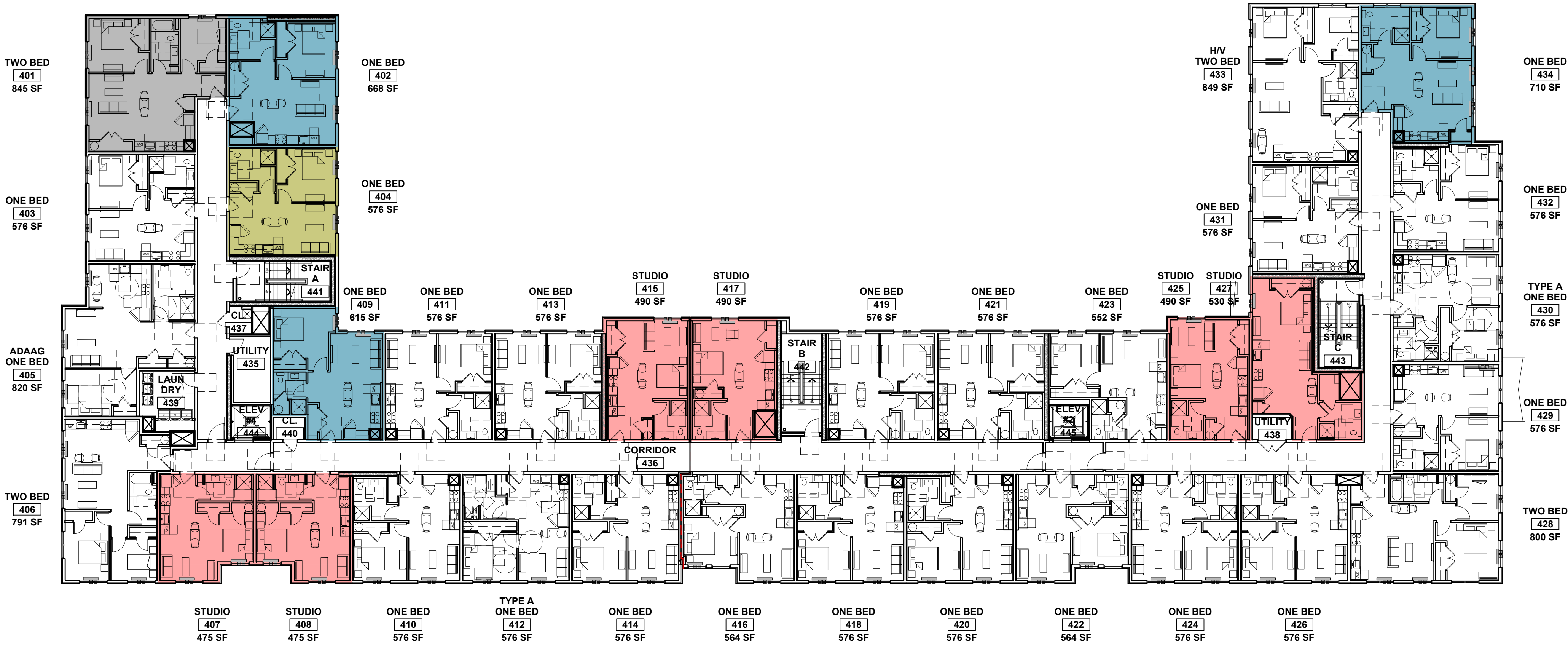
REVISIONS:

DATE: MAY 28, 2025
PROJECT No. 2241
DRAWN BY: RRT
CHECKED BY: RJS
SCALE: AS NOTED

SHEET TITLE:
THIRD FLOOR
DIAGRAM PLAN

COLOR KEY:

- 61 PREBLE - STUDIO - 21 TOTAL
- 61 PREBLE - ONE BED - 32 TOTAL
- 61 PREBLE - ONE BED PLUS - 11 TOTAL
- 61 PREBLE - TWO BED - 8 TOTAL



1 FOURTH FLOOR PLAN
1/16" = 1'-0"

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CONSULTANTS:

REVISIONS:

DATE: MAY 28, 2025

PROJECT No. 2241

DRAWN BY: RRT

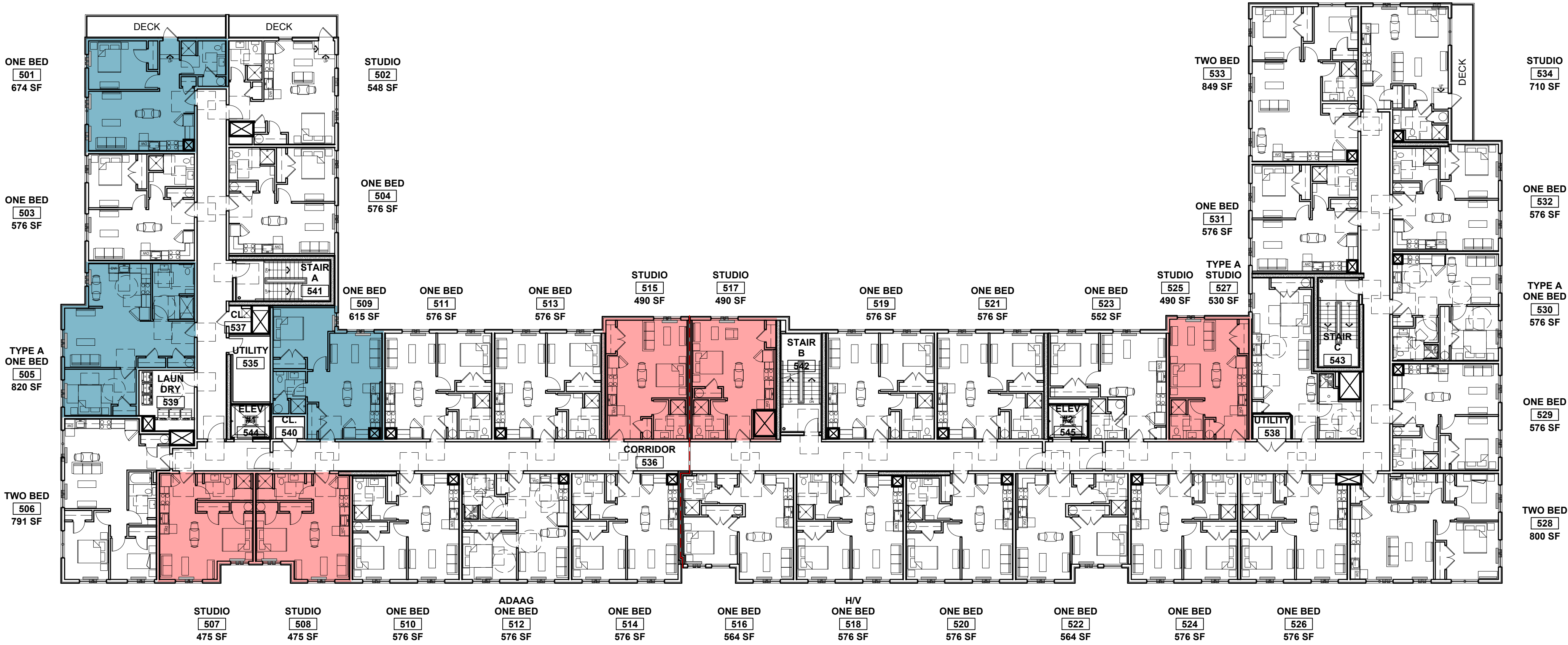
CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
FOURTH FLOOR
DIAGRAM PLAN

COLOR KEY:

- 61 PREBLE - STUDIO - 21 TOTAL
- 61 PREBLE - ONE BED - 32 TOTAL
- 61 PREBLE - ONE BED PLUS - 11 TOTAL
- 61 PREBLE - TWO BED - 8 TOTAL



1 FIFTH FLOOR PLAN
1/16" = 1'-0"

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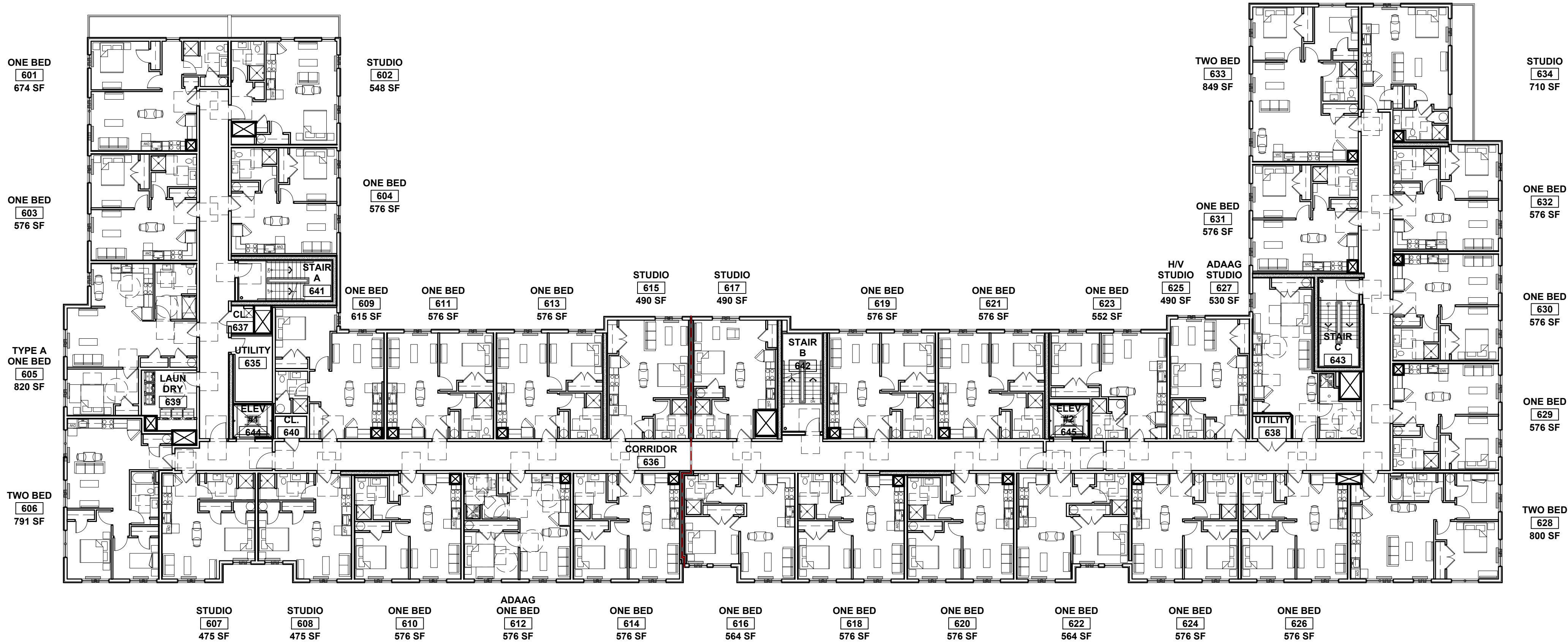
REVISIONS:

DATE: MAY 28, 2025
PROJECT No. 2241
DRAWN BY: RRT
CHECKED BY: RJS
SCALE: AS NOTED

SHEET TITLE:
FIFTH FLOOR
DIAGRAM PLAN

COLOR KEY:

- 61 PREBLE - STUDIO - 21 TOTAL
- 61 PREBLE - ONE BED - 32 TOTAL
- 61 PREBLE - ONE BED PLUS - 11 TOTAL
- 61 PREBLE - TWO BED - 8 TOTAL



1 SIXTH FLOOR PLAN
1/16" = 1'-0"

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CONSULTANTS:

REVISIONS:

DATE: MAY 28, 2025

PROJECT No. 2241

DRAWN BY: RRT

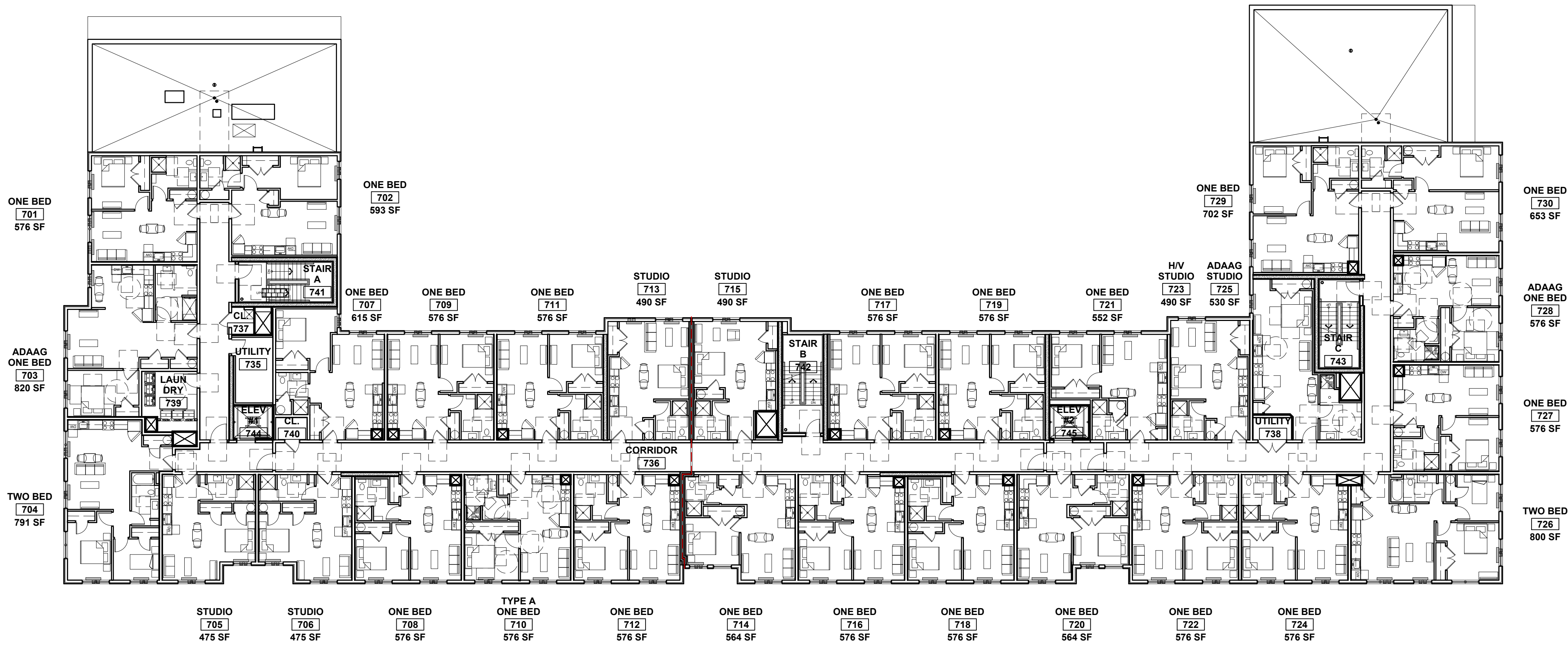
CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
SIXTH FLOOR
DIAGRAM PLAN

COLOR KEY:

- 61 PREBLE - STUDIO - 21 TOTAL
- 61 PREBLE - ONE BED - 32 TOTAL
- 61 PREBLE - ONE BED PLUS - 11 TOTAL
- 61 PREBLE - TWO BED - 8 TOTAL



1 SEVENTH FLOOR PLAN
1/16" = 1'-0"

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senatorearchitecture.com

CONSULTANTS:

REVISIONS:

DATE: MAY 28, 2025

PROJECT No. 2241

DRAWN BY: RRT

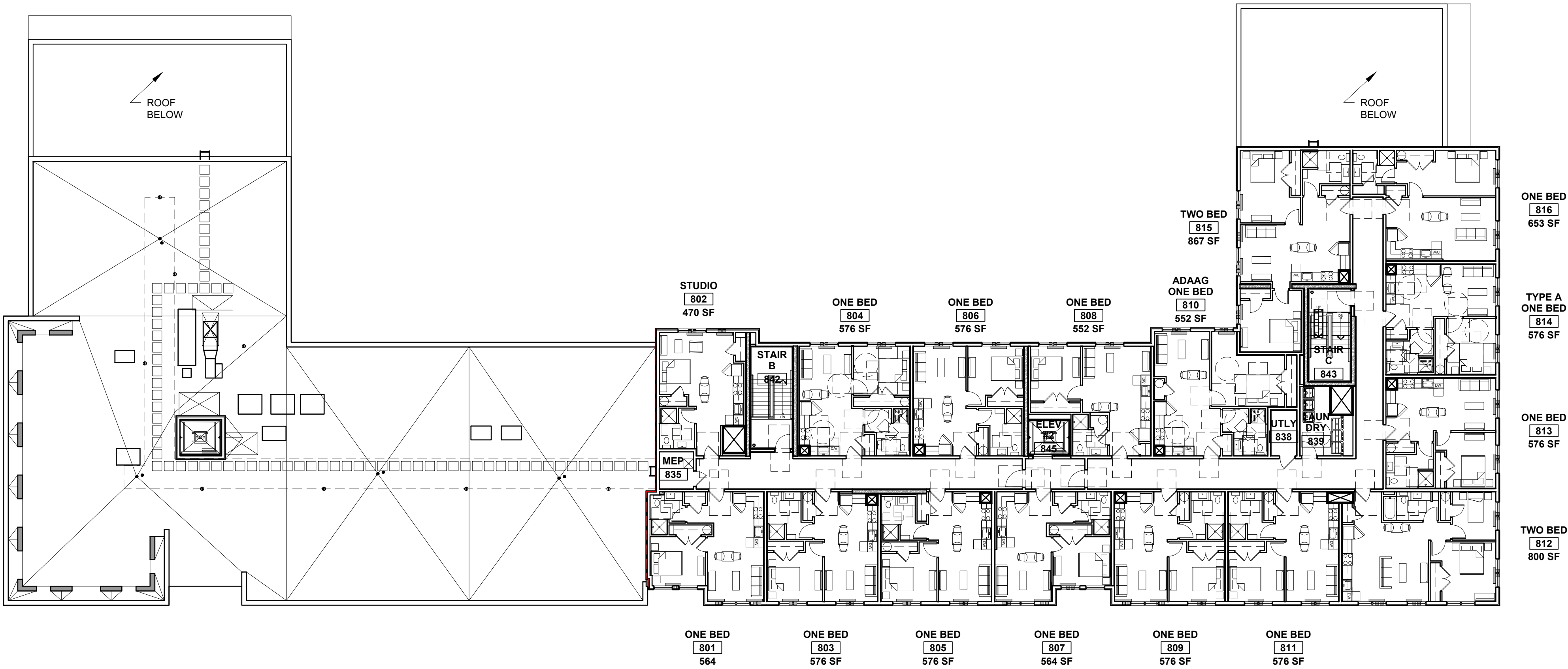
CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
SEVENTH
FLOOR DIAGRAM
PLAN

COLOR KEY:

- 61 PREBLE - STUDIO - 21 TOTAL
- 61 PREBLE - ONE BED - 32 TOTAL
- 61 PREBLE - ONE BED PLUS - 11 TOTAL
- 61 PREBLE - TWO BED - 8 TOTAL



1 EIGHTH FLOOR PLAN
1/16" = 1'-0"

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CONSULTANTS:

REVISIONS:

DATE: MAY 28, 2025

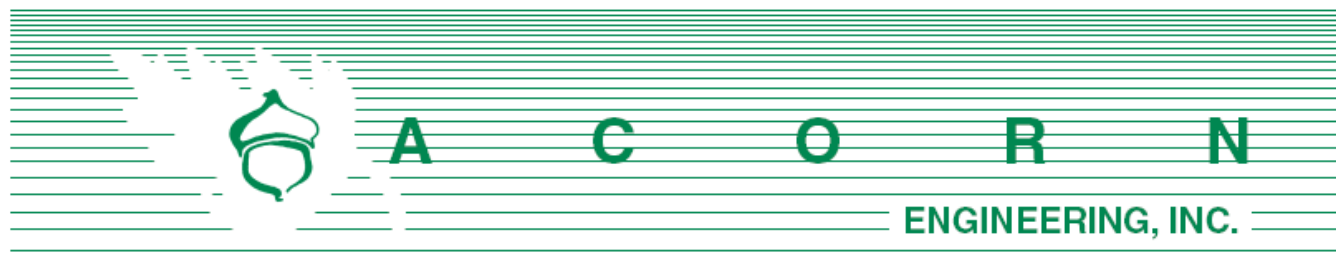
PROJECT No. 2241

DRAWN BY: RRT

CHECKED BY: RJS

SCALE: AS NOTED

SHEET TITLE:
EIGHTH FLOOR
DIAGRAM PLAN



City of Portland Planning Department
 Taylor Colbeth, Planner
 389 Congress Street, 4th Floor
 Portland, Maine 04101

June 17th, 2025

Subject: Comment Response Letter #2
 61 Preble Street, Portland, Maine – Major Site Plan Application

On behalf of 60 Elm Street, LLC and the design team, Acorn Engineering is pleased to respond to the following comments from the City of Portland Planning Staff and the Department of Public Works review of the 61 Preble Street, Major Site Plan Application.

The following is in response to the staff comments that were received via email from Taylor Colbeth received June 11th and June 13th, 2025.

Taylor Colbeth Comments received 6/11/25 and Sean King's Comments received 6/13/25:

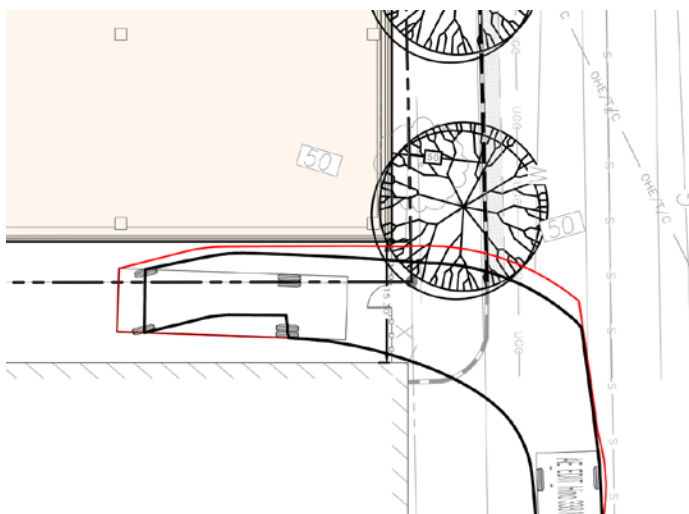
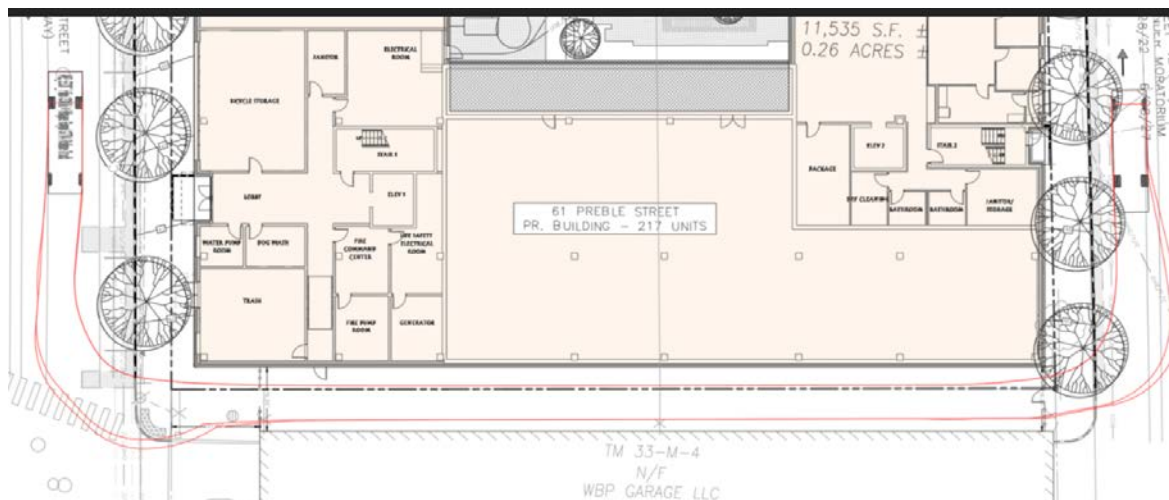
Comment 1: *DPW would like to see the applicant explore the feasibility of trash pickup in the alley between the development and the existing Public Market Garage. We understand this area has been activated with the secure access gates and walking path, but there could be benefit to getting the truck off the street during pickup times.*

Response: Vehicle Tracking movements were modeled using AutoCAD 2023 Vehicle Tracking modeling software to analyze the feasibility of a trash truck pulling into the alleyway between 61 Preble and the existing Public Market Parking Garage. Please refer to the turning movements below along both Preble and Elm Street. Given there is only 15.30' between the proposed building and the existing parking garage, trash vehicles do not have the flexibility to maneuver utilizing Elm Street as the entrance. Therefore, the only potential route is a one-way entrance off Preble and exit onto Elm which is also shown below. While this option could be feasible, there are a number of negative components associated with this design alternative:

- It would result in a large continuous curb cut from the existing parking garage entrance/exits (approximately 55+ feet on both Preble and Elm Street), resulting in less formal, less safe, and less intuitive garage accessways.
- The robust streetscape and continuous curbing/pedestrian priority will be diminished by incorporating a long continuous curb cut on Preble and Elm Streets which was a focal point of the MDP.
- Potential for one street tree to be removed on Elm Street and one on-street parking space to be removed on Preble Street.

- Relocation of an existing utility pole on Preble Street and associated reconfiguration of the existing complex overhead utility system including existing underground services. The extent, cost, and feasibility of this reconfiguration is unknown at this time.
- The open green space that was designed as part of the MDP Amendment and the 61 Preble Street workshop would need to be transformed into a paved swath, detracting from residents' quality of life and creating additional stormwater runoff. This area will be dark, and if fully impervious will be challenging to keep well drained and de-iced.

Based upon all these reasons, we do not think a dedicated alley for trash removal is appropriate. We appreciate the suggestion and the desire to move the trash removal off the street; however, the negative effects of this design alternative outweigh the positives. The Applicant will work with the private solid waste hauler to coordinate pick up times on non-peak hours to the greatest extent feasible.



Comment 2: We appreciate the effort to screen the proposed transformers in the courtyard, and understand that there are efforts to reduce to one transformer rather than two, but think there could be major benefits to both pedestrian activation and design to putting in subsurface transformers. Is there a reason that this route was not taken?

Staff finds that the proposed location of the transformers along Oxford Street does not reinforce the pedestrian environment and requests that the Applicant revise the location to an underground vault. Alternatively, the Applicant will be required to provide additional justification to the Planning Board to justify hardship for the proposed transformer location and minimal screening element in place of this design standard to create a high-quality design along the build-to line.

Response: A submersible transformer is not feasible given the location of the existing mainline communications duct bank in the Oxford Street sidewalk. Given CMP requires the submersible transformer be located in the public sidewalk, this is not a possibility given the existing underground infrastructure and the large footprint of the transformer vault and electrical appurtenances. Additionally, while the foundation has not been designed, the building will likely be supported by large spread footings which further complicate the available underground real estate for locating large utility infrastructure such as 38Y manholes or submersible transformers.

The Applicant is continuing to work diligently with CMP to reduce the transformer count to one. Additionally, the Applicant is committed to screening the transformer as well as providing an opportunity for public art on the transformer itself. These approaches have worked well in other locations in the City such as the large housing developments on York Street and Hanover Street (see below). The Applicant and design team are confident that the transformer can successfully co-exist with the programming of the courtyard area.





Comment 3:

The resubmitted plans indicate a stainless-steel trellis system to facilitate the growth of climbing vines onto the concrete unit retaining wall at the lower residential courtyard. Staff encourages the Applicant to either add a planting area, climbing vines and expand the trellis system along the concrete unit retaining wall at the commercial plaza or add an activated pedestrian element (e.g. wall-mounted artwork or other architectural articulation) to activate the commercial plaza proposed in the increased setback area.

Response: The design team has been intentional about the location of the trellis system to ensure its success given the varying levels of light. Other techniques have since been implemented – please refer to the additional courtyard images provided by the Landscape Architect which depict additional detail and material variation. It should also be noted that the intention is to enhance the courtyard design further once a tenant is committed to ground level commercial space. Their brand and business will help inform some of the more nuanced design decisions and aesthetic of the space.

Please let us know if you have any additional questions or comments.

Sincerely,

Sam Lebel, P.E.
Project Manager
Acorn Engineering, Inc.

Danielle McGowan, E.I.
Project Engineer
Acorn Engineering, Inc.



George Rheaultto Planning, Kevin, Matthew, me, tcolbeth 

Planning staff have rightly noted (because how dumb if they didn't) the problem with the solar orientation of the proposed residential tower. Unfortunately, as the screenshot below shows, the planning staff only seem to believe it raises concerns regarding the courtyard landscaping (which of course is important to interrogate on its own).

Excerpt from staff memo prepared for the May 13th workshop:

- The proposed courtyard is located on the north side of the proposed residential building, and is flanked on the east and west by buildings. City staff are evaluating whether the configuration of this plaza may impact the viability of proposed vegetation within the courtyard space, due to limited solar exposure.

I would argue this is a far more serious problem in terms of attracting quality tenants who would be willing to pay premium market rate rents. Most tenants are adverse to a "sun don't shine" apartment (a/k/a/ in bureaucratic terms as an "extreme solar deficit" dwelling space).

It would appear from the applicant's floor plan pages (for levels 2 and 3-10 - see attached) that 49 units are BURIED (ahem, "recessed") into the interior of the courtyard and would be in deep shadow for virtually all the daytime hours (MAYBE the level 10 units might catch some rays). The corner units of the courtyard on the Oxford Street frontage would be in heavy shadow as well but the windows in those units should catch at least a few hours of late-day western sun exposure (though perhaps more the units on the west side of the courtyard than those on the east side of the courtyard).

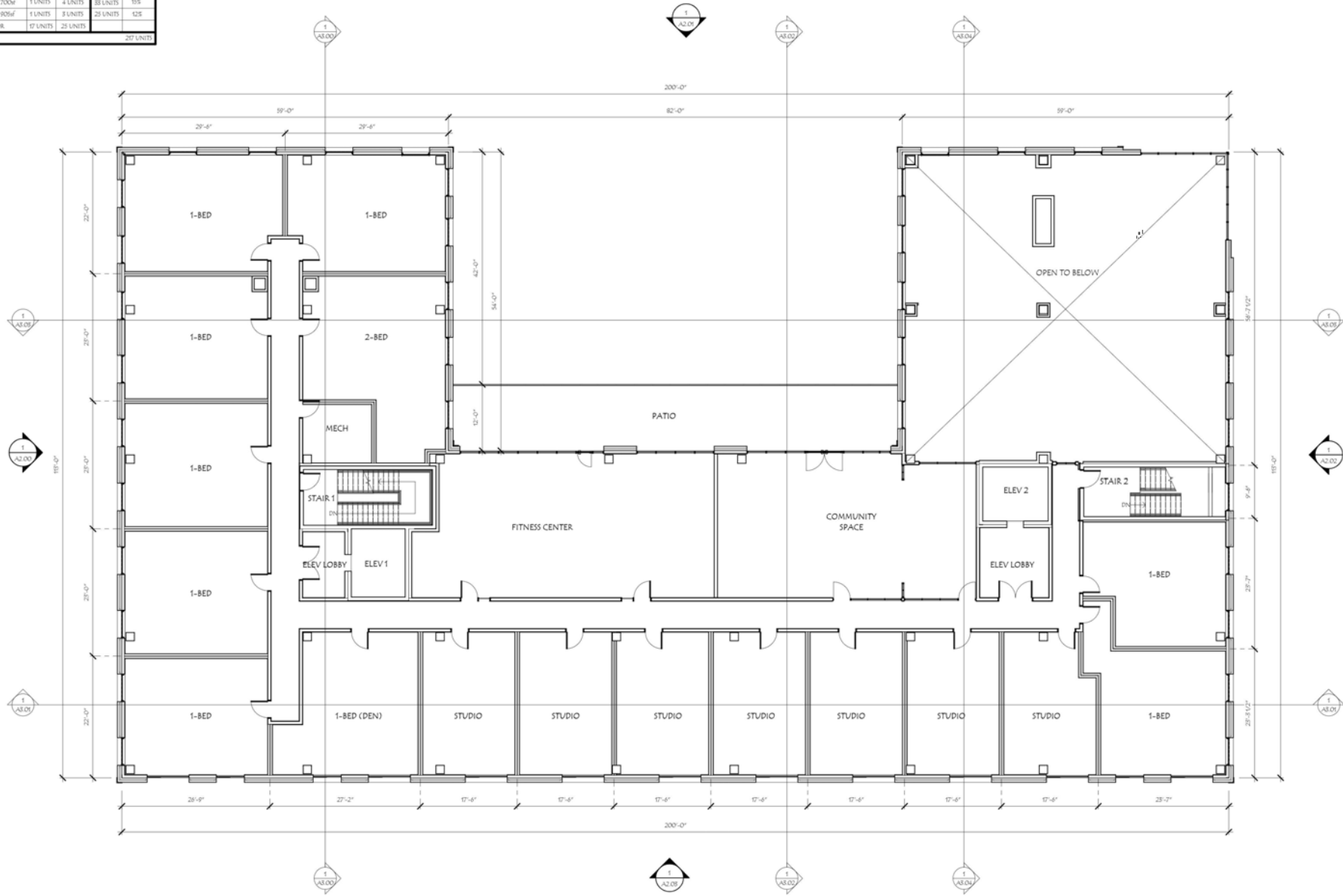
SOMEONE has to be on the non-sunny side of a building, but this is a LOT of units.

Now, depending on the quality of the building's windows, insulation and cladding package, tenants may be happy not to have to worry about solar heating impacts and long-term damage from UV exposure to their belongings. Especially during heat waves, it might be a perk to have an extreme solar deficit in your unit. In fact, the artists among them, should there be any, might even enjoy the "northern light" that many painters envy - free from the distorting glare and distraction of direct sunlight. And if vampires are real, this may also make the property attractive to them and perhaps should get a shout out in the applicant's tenant marketing efforts. Maine's Goth community may even adopt it as a flagship apartment option.

Another big problem with the courtyard units is the fact that the 8 units on each floor will each be able to have some pretty easy "Rear Window" viewing opportunities of their neighbors. I am sure that proper window shades and coverings will be provided as part of the fit-up of the units by the applicant, BUT not everyone remembers to keep their shades up or down as appropriate (and it is kinda exhausting to always have to do that especially if they are manually operated). So privacy concerns, as well as light concerns, will likely be prominent in the minds of potential renters on this side of the building. Here is a link to the "Rear Window" reference for the kiddos too young to get it straight-away: https://en.wikipedia.org/wiki/Rear_Window

In any event, the Planning Board should do its job and make some serious inquiries around these issues. The neighborhood is being promised a vibrant residential community here (as a consolation prize for destroying a historic building that all by itself contains 150+ years of storied history about the Preble Street corridor) but there is a real fear that the building will be a second-rate place to live right from the start especially in comparison to its various existing and future peninsula competitors that would present better to potential tenants than this one will.

UNIT MATRIX					
TYPE	AVG. AREA	LEVEL 2	LEVEL 3-10	TOTAL	PERCENT
STUDIO	470sf	7 UNITS	11 UNITS	18 UNITS	28%
1-BED	695sf	8 UNITS	11 UNITS	19 UNITS	29%
1-BED (DEN)	700sf	1 UNITS	4 UNITS	5 UNITS	8%
2-BED	909sf	1 UNITS	3 UNITS	4 UNITS	6%
TOTAL PER FLOOR		17 UNITS	29 UNITS	46 UNITS	
TOTAL UNITS		17 UNITS	29 UNITS	46 UNITS	



1 LEVEL 2 FLOOR PLANS
SCALE: 1/8" = 1'-0"

REVELER BAYSIDE PHASE 1B
 61 PREBLE STREET, PORTLAND, ME 04101

NOT FOR CONSTRUCTION

Title LEVEL 3-10 FLOOR PLAN	Scale:	1/8" = 1'-0"	Revisions # Description	Date
	Drawn By:	AMH		
A1.03	Checked By:	BH		
	Project No.:	2024-077		
	CONCEPT DESIGN			
	Date:	02/07/2025		

Public Comment - 61 Preble Street: Trashiness in Port Property/Reveler Building

External

Inbox

PC2

**George Rheault** <george.rheault@gmail.com>

to Planning, Kevin, Matthew, jmy, me

Jun 19, 2025, 12:18 PM (19

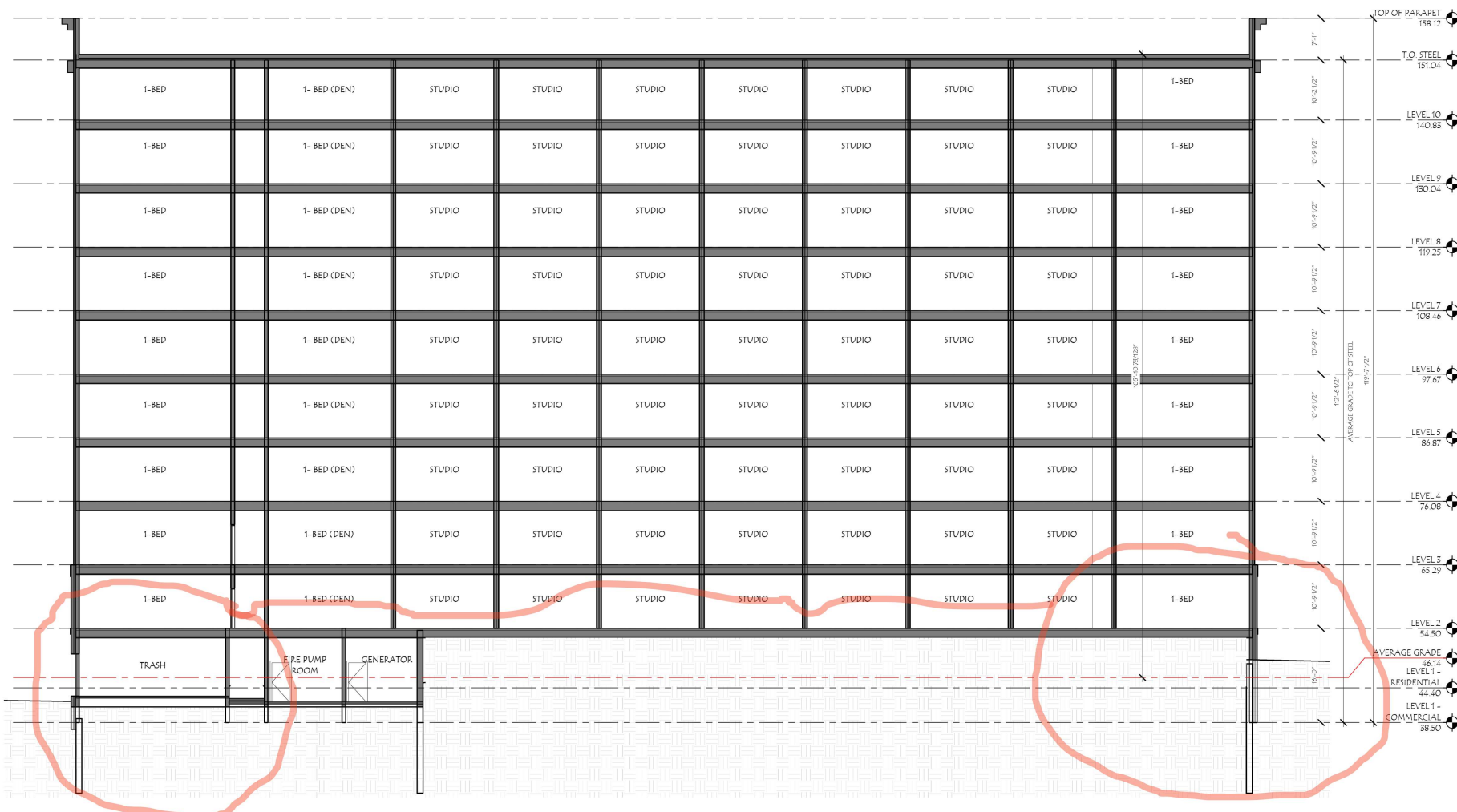
Effective and intelligent trash management in a large/dense apartment building is fundamental to the quality of life and reputation of this kind of residential community.

Word of mouth travels fast regarding the habitability of a poorly maintained apartment building where trash and trash-related concerns become endemic and top-of-mind to residents.

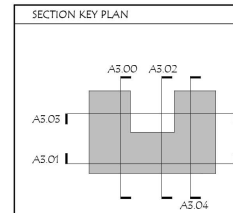
Planning staff have so far FAILED to ask meaningful questions (outside of a concern for a lone street tree) regarding trash management at this proposed landmark-destroying project.

1.) The floor plans do not depict ANY trash rooms on each floor except for the large trash room on the basement/ground level floor on the Preble Street side.
2.) There is no evidence of ANY trash chute system being deployed in this building.
3.) 217 units, including a decent collection of 2 bedroom units, suggests the occupancy of this building would very likely hover around 300 people (likely an underestimate depending on mating/coupling occurs with the 1 bedroom and studio units which is very likely due to Portland housing shortages and continued high prices). THAT IS A LOT OF TRASH AND AMOUNT generated on a daily, weekly and monthly basis especially with the kind of lifestyles people engage in today including among the cohort of likely renters for this type of property!
4.) There is NO SERVICE ELEVATOR which means ALL RUBBISH & RECYCLING must be processed through the two passenger elevators which will be heavily used by the tenants.
5.) There is NO SERVICE CONNECTION to the proposed TRASH ROOM from the EAST SIDE ELEVATOR. This suggests that the EAST SIDE ELEVATOR may not be contemplated for RUBBISH & RECYCLING transport at all. Which means that tenants on one side of the project must travel a good distance with their RUBBISH (wet and dry) & RECYCLING to the other side. This would mean tenants on the WEST SIDE of the project will be overly burdened and impacted with the smells and inconveniences associated with RUBBISH & RECYCLING collection population of the entire floor.
6.) It is not mentioned anywhere to what degree hallway corridor HVAC and air-conditioning will be sufficient to adequately address ventilation and odor problems from RUBBISH & RECYCLING in a smelly apartment corridor is NOT something that tenants want to come home to if they are being asked to pay a premium rent.
7.) Poorly designed trash management systems in a building of this size is far more likely to result in more vermin and pest control issues as tenants store more RUBBISH & RECYCLING in corridors for longer periods of time.
8.) Apartment landlords often apply an extra stand-alone "Trash Fee" to a tenant's overall rent when a building is associated with and requires more intensive trash-management services. How much is expected to be charged such a fee? Can the building be designed better so as to avoid such a surcharge?
9.) How often will tenants on the WEST SIDE of the building be disrupted by the noise/clatter and odors (from diesel and rubbish fumes) from more frequent garbage truck visits and storage inside the building? The dimensions and management of the trash room are not particularly clear so not sure how bins and dumpsters will be situated and whether residents will discard directly to the trash room itself and what is expected of them once they get there.

PLEASE think this through Planning Board members. We know NONE of you would ever live in a place like this. But you can't keep promoting this project as a net benefit to the neighborhood. It is clear that this will be a desirable residential option for people who have meaningful choices about where they would like to live.



1 ELM-PREBLE SECTION
SCALE: 1/8" = 1'-0"



REVELER BAYSIDE PHASE 1B 61 PREBLE STREET, PORTLAND, ME 04101	
NOT FOR CONSTRUCTION	
Title: BUILDING SECTIONS Scale: As Indicated Drawn By: A3.00 Checked By: BH Project No: 2024-079 Date: 02/07/2025	Revisions: # Description 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 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George Rheault <george.rheault@gmail.com>

9:31 AM (18 minutes ago)

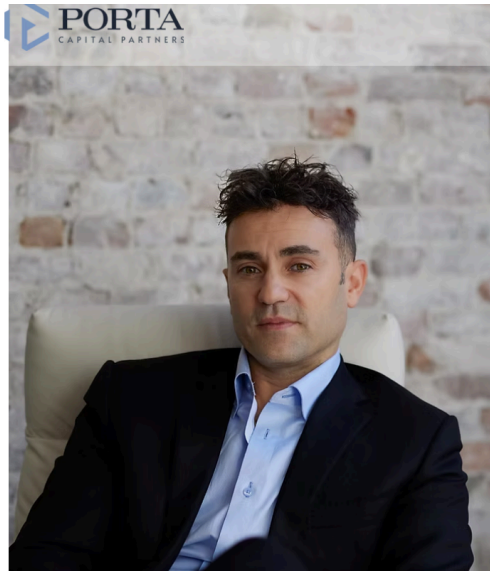


to Planning Board, kkraft, Matthew Grooms, Taylor Colbeth, jmy, Michael Goldman

The applicant must make clear the financial arrangements surrounding 61 Preble Street including to what extent Joe Porta is a party-in-interest in 61 Preble Street and/or the West Bayside MDP.

Planning Board please do your job by doing your due diligence and making the public record an accurate and complete disclosure.

<https://www.portacapitalpartners.com/>



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Management Team

JOE PORTA, FOUNDER

Porta Capital Partners was founded by Joe Porta, an established real estate investor and deal sponsor with 20 years of deal experience and owner of Porta & Co. Commercial Real Estate Services.

With over \$1 billion in deal volume, Joe leverages his industry network to originate deal opportunities and develop unique investment solutions. Throughout Joe's career, he has transacted some of the largest multi-family and office transactions in Maine. Porta & Co. Commercial Real Estate Services transacts over \$150 million per year in deal volume, representing many of Maine's largest company's real estate interests.

In 2023, Joe launched Porta Capital Partners to build upon his history of providing insightful investment advice and facilitating successful capital syndications.

Joe is on the Board of Directors for Landry-French Construction, Maine's largest, locally-owned construction company, and has been a Corporator for Gorham Savings Bank since 2016. He is a member of the Maine Real Estate & Development Association (MEREDA), has been a member of the Society of Industrial and Office Realtors (SIOR) for over 11 years, and the International Council of Shopping Centers (ICSC) and was previously Board President for the Maine Center for Creativity.



Under Construction



Address | West Bayside Portfolio, Portland, ME
Property Type | Office/Commercial
Commercial Space | 190,000 SF
PCP Equity Syndication | \$2,500,000
Co-GP | [Reveler Development](#)



Address | 8 Eddy Avenue, Biddeford, ME
Property Type | Multi-Family
Units | 250 Multi-Family
PCP Equity Syndication | \$14,950,000
Co-GP | [Reveler Development](#)

George Rheault <george.rheault@gmail.com>

9:32 AM (17 minutes ago)



to Planning Board, kkraft, Matthew Grooms, Taylor Colbeth, jmy, Michael Goldman

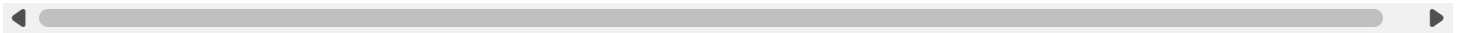
Since ALL the various pieces of the West Bayside Master Development Plan are inter-related via the MDP arrangement, as well as, most crucially, through the unlawful work-around involving inclusionary zoning compliance (with 89 Elm Street being allowed by city staff to stand-in for ALL the workforce units required to be built in the market-rate buildings including 61 Preble Street), it is vital that ALL legal agreements between the various parties linking the different distinct projects be disclosed as part of the "Right, Title & Interest" requirement of Major Site Plan review.

Public records reveal the existence of a "joint development agreement" between Port Properties affiliates and AVESTA. This JDA has not, to date, been introduced into the public record by city staff OR the applicant. It must be produced, so the public is fully aware of the complete understanding among the parties relating to 61 Preble Street and its relationship to 89 Elm Street.

Please postpone the public hearing until the JDA has been made available to the public and the public has had time to thoroughly review it and understand its implications for the 61 Preble Street project.

WHEREAS, the Assignor and Assignee entered into a joint development arrangement with respect to the Property pursuant to which they have agreed to redevelop a portion of the Property, more particularly described in Exhibit B attached hereto and made a part hereof (the "Site") by constructing a residential apartment building with two commercial units (the "Project"); and

For source of reference see attached "Omnibus Assignment, Assumption & Reaffirmation Agreement" dated on or about October 31, 2024.



OMNIBUS ASSIGNMENT, ASSUMPTION AND REAFFIRMATION AGREEMENT

This Omnibus Assignment, Assumption and Reaffirmation Agreement (this "Assignment") is executed as of the 31st day of October, 2024 by **NORWAY SAVINGS BANK**, a Maine banking association, having a mailing address of 261 Main Street, P.O. Box 347, Norway, Maine 04268-0347; and **COASTAL ENTERPRISES, INC.**, a Maine non-profit corporation, having a mailing address of 30 Federal Street Suite 100, Brunswick, Maine 04011 (collectively the "Lenders"), along with **89 ELM STREET LLC**, a Maine limited liability company, and **73 ELM STREET LLC**, a Maine limited liability company (collectively, "Assignor"), in favor of **AVESTA HOUSING DEVELOPMENT CORPORATION**, a Maine non-profit corporation, having a mailing address of 307 Cumberland Avenue, Portland, Maine 04101 ("Assignee").

WITNESSETH:

WHEREAS, on or about October 20, 2022 the Lenders made certain loans (the "Loans") to Assignor to help enable Assignor to acquire certain real property located at 89 Elm Street and 73 Elm Street in Portland, Maine (the "Property"); and

WHEREAS, the Assignor granted mortgages in favor of the Lenders which encumber the Property as collateral for the obligations under the Loans, and also executed and delivered to the Lenders those additional documents listed on Exhibit A, attached hereto, which further define the Assignor's obligations under the Loans (the "Loan Documents"); and

WHEREAS, the Assignor and Assignee entered into a joint development arrangement with respect to the Property pursuant to which they have agreed to redevelop a portion of the Property, more particularly described in Exhibit B attached hereto and made a part hereof (the "Site") by constructing a residential apartment building with two commercial units (the "Project"); and

WHEREAS, the Assignee has received an award of funds to complete certain soil remediation work which is required prior to commencement of the Project, which funds are available for such work only to the extent that the Site is owned by the Assignee; and

WHEREAS, the Assignor and Assignee have asked that the Lenders consent to a transfer of the Site from Assignor to Assignee (the "Transfer"), which Transfer would otherwise be prohibited by the Loan Documents, and that the Lenders join in an Easement Agreement which establishes certain mutual rights of access, utilities, shared systems and other rights associated with the ownership, use and operation of their respective portions of the Property to ensure the continued use and enjoyment thereof (the "Easement Agreement"); and

WHEREAS, the Lenders have consented to the Transfer provided that Assignee assume all of the obligations under the Loan Documents and that the Assignor remain fully liable for such obligations as well.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the undersigned agree as follows:

1. Assignment. Assignor hereby assigns to Assignee all of Assignor's obligations under the Loan Documents. Notwithstanding the foregoing, the Assignor agrees that it remains fully liable for all of its obligations under the Loan Documents.

2. Assumption. Assignee hereby accepts the foregoing assignment of obligations under the Loan Documents, assumes all of Assignor's obligations set forth therein, and hereby agrees to be bound by the terms thereof as if the Assignee were the original obligor and grantor thereunder. Assignee further acknowledges and agrees that in taking title to the Site, the Site is and shall remain encumbered thereby until specifically released by Lenders in a writing recorded with the Cumberland County Registry of Deeds. Notwithstanding anything to the contrary contained herein, Assignee's sole obligations to Lenders shall be those set forth in the Promissory Notes, Mortgages and Assignments of Lease and Rents in favor of each of the Lenders.

3. Consent of Lenders. Lenders hereby consent and agree to the following as of the date of this Agreement: (i) the Transfer; (ii) Assignor's assignment to the Assignee of its obligations in, to and under the Loan Documents; (iii) the Assignee's assumption of the Assignor's obligations under the Note and Mortgage; and (iv) that Lenders, following the execution of this Agreement, shall join in the conveyance accomplished by the Easement Agreement. As of the date of this Agreement, Assignor and Assignee, hereby release, discharge and exonerate Lenders and its respective partners, officers, employees, successors and assigns from and against any and all liability, loss, costs, damages and claims arising from or in any way related to the Loan Documents, whether known or unknown, asserted or unasserted.

4. Guarantors of Assumed Note.

The undersigned Guarantors acknowledge and agree that their guaranty dated on or about October 12, 2022 remains in full force and effect in accordance with the terms of said guaranty.

5. Representations and Warranties.

Assignor each represents and warrants as follows:

- a. Assignor is a duly organized limited liability company, validly existing and in good standing under the laws of Maine.
- b. Assignor has all requisite power, authority and legal right to execute and deliver this Agreement and all other documents necessary to effectuate the intent and purpose of this Agreement.
- c. Assignor has not previously assigned its interest in the Property or the Loan Documents.
- d. There is no outstanding default, violation, or delinquency by Assignor under the Loan Documents.

Assignee represents and warrants as follows:

- a. Assignee is a duly organized non-profit corporation, validly existing and in good standing under the laws of Maine.
- b. Assignee has all requisite power, authority and legal right to execute and deliver this Agreement and all other documents necessary to effectuate the intent and purpose of this Agreement and to perform its obligations under this Agreement and the Loan Documents.

- c. The execution and delivery of, and the performance of Assignee's obligations under, this Agreement and the Loan Documents do not and will not conflict with, result in the breach of, or constitute a default under any indenture, mortgage, agreement, contract or other document or instrument to which Assignee is a party or by which is it bound, violate any law, or contravene any judgment, decree or order of any court or governmental authority.
- d. There are no legal or governmental actions or proceedings pending or threatened against or affecting in any manner the ability of Assignee to execute and deliver, or perform its obligations under, this Agreement or the Loan Documents.
- e. In the event that the Assignee does not close on the construction financing for the Project or payoff the Loans prior to May 1, 2025, the Assignee shall reconvey the Site to the Assignor and the Assignor shall return the Site to the prior existing use as paved parking lots. Upon such reconveyance, the Assignee shall be released from all liability under the Loan Documents.

6. Miscellaneous. This Agreement shall be binding upon and inure to the benefit of the heirs, successors and assigns of the parties. This Agreement may be executed in several counterparts, each of which shall be deemed to be an original copy, and all of which together shall constitute one agreement binding on all parties hereto, notwithstanding that all the parties shall not have signed the same counterpart. This Agreement shall be construed in accordance with the laws of the State of Maine. The Recitals set forth above are hereby incorporated into this Agreement and made a part hereof. All headings in this Agreement are for convenience of reference only and are of no independent legal significance. This Agreement may not be amended except in a writing signed by the parties hereto. No waiver of any breach or term hereof shall be effective unless made in writing and signed by the party having the right to enforce such a breach or term, and no such waiver shall be construed as a waiver of any subsequent breach of the same or a different term. No course of dealing or delay or omission on the part of any party in exercising any right or remedy shall operate as a waiver thereof or otherwise be prejudicial thereto. If any term or provision of this Agreement or the application thereof to any person or circumstances shall, at any time or to any extent, be invalid or unenforceable, the remainder of this Agreement, or the application of such term or provision to persons or circumstances other than those as to which this Agreement is held invalid or unenforceable, shall not be affected thereby, and each term and provision of this Agreement shall be valid and be enforced to the fullest extent permitted by law.

7. Further Assurances. In furtherance of the agreements set forth herein, each of the parties hereto shall execute and deliver such additional instruments and documents required to confirm and assure the rights and obligations provided for herein, and render effective the consummation of the transactions contemplated hereby.

In witness whereof, the undersigned have set their hands and seals to this Omnibus Assignment, Assumption and Reaffirmation Agreement effective as of the date first set forth above.

LENDERS:

NORWAY SAVINGS BANK

By: 
Name: Dana Myles
Its: RVP

COASTAL ENTERPRISES, INC.

By: _____
Name: _____
Its: _____

(signatures continue on the following pages)

Signature page – Omnibus Assignment, Assumption and Reaffirmation Agreement

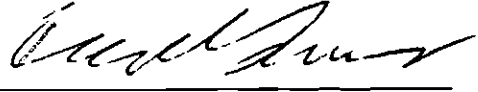
In witness whereof, the undersigned have set their hands and seals to this Omnibus Assignment, Assumption and Reaffirmation Agreement effective as of the date first set forth above.

LENDERS:

NORWAY SAVINGS BANK

By: _____
Name:
Its:

COASTAL ENTERPRISES, INC.

By: 
Name: Ryan Green
Its: Director of Lending

(signatures continue on the following pages)

Signature page – Omnibus Assignment, Assumption and Reaffirmation Agreement

ASSIGNEE:

**AVESTA HOUSING DEVELOPMENT
CORPORATION**

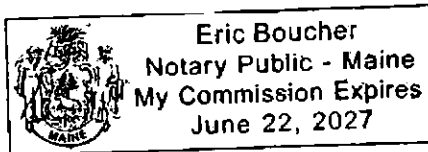
By: 
Name: Rebecca Hatfield
Its: President and CEO

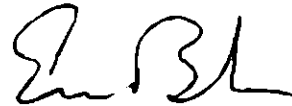
STATE OF MAINE
CUMBERLAND, SS

October 23, 2024

PERSONALLY APPEARED the above named Rebecca Hatfield, President and CEO of Avesta Housing Development Corporation as aforesaid, and acknowledged the foregoing instrument to be her free act and deed in her said capacity and the free act and deed of said nonprofit corporation.

Before me,





Notary Public/~~Attorney at Law~~

Print name: Eric Boucher
My commission expires: 6/22/27

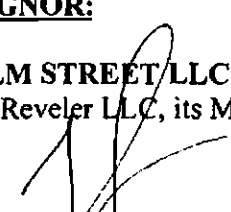
(signatures continue on the following pages)

Signature page – Omnibus Assignment, Assumption and Reaffirmation Agreement

ASSIGNOR:

89 ELM STREET LLC

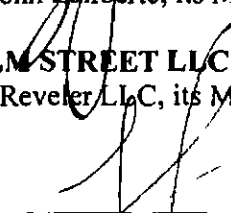
BY: Reveler LLC, its Manager

BY: 

John Laliberte, its Manager

73 ELM STREET LLC

BY: Reveler LLC, its Manager

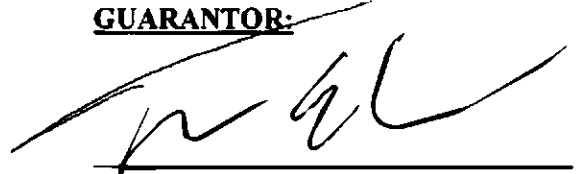
BY: 

John Laliberte, its Manager

(signatures continue on the following pages)

Signature page – Omnibus Assignment, Assumption and Reaffirmation Agreement

GUARANTOR:

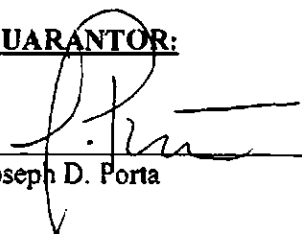
A handwritten signature in black ink, appearing to read 'T. Watson', is written over a horizontal line.

Thomas E. Watson

(signatures continue on the following page)

Signature page – Omnibus Assignment, Assumption and Reaffirmation Agreement

GUARANTOR:



Joseph D. Porta

(this is the final signature page)

Signature page – Omnibus Assignment, Assumption and Reaffirmation Agreement

EXHIBIT A

NORWAY SAVINGS BANK COLLATERAL DOCUMENTS

89 Elm Street

\$1,200,000 Promissory Note

Mortgage, Security Agreement and Fixture Filing on 89 Elm Street, Portland, Maine

Assignment of Leases and Rents on 89 Elm Street, Portland, Maine

Guarantees of Thomas E. Watson and Joseph D. Porta

Deposit Account Pledge and Escrow

73 Elm Street

\$268,890 Promissory Note

Mortgage, Security Agreement and Fixture Filing on 89 Elm Street, Portland, Maine

Assignment of Leases and Rents on 89 Elm Street, Portland, Maine

Guarantees of Thomas E. Watson and Joseph D. Porta

Deposit Account Pledge and Escrow

COASTAL ENTERPRISES, INC. COLLATERAL DOCUMENTS

89 Elm Street

\$1,200,000 Promissory Note

Mortgage, Security Agreement and Fixture Filing on 89 Elm Street, Portland, Maine

Assignment of Leases and Rents on 89 Elm Street, Portland, Maine

Guarantees of Thomas E. Watson and Joseph D. Porta

73 Elm Street

\$268,890 Promissory Note

Mortgage, Security Agreement and Fixture Filing on 89 Elm Street, Portland, Maine

Assignment of Leases and Rents on 89 Elm Street, Portland, Maine

Guarantees of Thomas E. Watson and Joseph D. Porta

EXHIBIT B

A certain lot or parcel of land, with the improvements thereon situated on the northeasterly sideline of Elm Street, the southeasterly sideline of Lancaster Street East and the northwesterly side of Oxford Street and in the City of Portland, County of Cumberland and State of Maine as shown plan titled "West Bayside MDP: Phase 1A – 89 Elm Plat 89 Elm Street Redevelopment - Portland" by Acorn Engineering dated 8/4/2022 revised through 6/6/2024, bounded and described as follows:

Beginning at the southerly corner of land now or formerly of David B. Nowlin as described in deed book 25148, page 336 on the northwesterly sideline of Oxford Street;

Thence, S 48°38'53" W along the northwesterly sideline of said Oxford Street 144.34 feet to the northeasterly sideline of Elm Street;

Thence, N 43°45'13" W along the northeasterly sideline of said Elm Street 327.06 feet to the southeasterly sideline of Lancaster Street;

Thence, N 49°39'27" E along the southeasterly sideline of said Lancaster Street 132.79 feet;

Thence, the following courses and distances through the land of the Grantor:

S 43°45'32" E a distance of 81.45 feet;

S 46°12'59" W a distance of 26.55 feet;

S 43°45'21" E a distance of 12.90 feet;

S 46°12'32" W a distance of 39.58 feet;

S 43°44'52" E a distance of 134.07 feet;

N 46°14'28" E a distance of 48.19 feet;

S 43°45'32" E a distance of 13.38 feet;

N 46°19'02" E a distance of 31.27 feet to land now or formerly of said Nowlin;

Thence, S 42°36'35" E along land of Nowlin 83.34 feet to the point of beginning, containing 34,787 s.f. or 0.80 acres, more or less.

Bearings are referenced to City Grid.

Public Comment - 61 Preble Street: David Silk Recusal Required



Subscribe



1 view



George Rheault <george.rheault@gmail.com>

9:36 AM (1 hour ago)



to Planning Board, kkraft, Matthew Grooms, Taylor Colbeth, jmy, Michael Goldman

FYI - David Silk's law firm Curtis Thaxter appears from public records to be intimately involved in the West Bayside Master Development Plan.

David Silk therefore had a legal and ethical obligation to recuse himself from anything related to the MDP program including Major Site Plan approval for 61 Preble Street (which depends on the MDP AND the 89 Elm Street project) and has not to date done that.

In case it is not clear, EVERY market-rate development proposed as part of the MDP is being allowed by city staff to "surf off" of the 89 Elm Street development for its inclusionary zoning compliance. Therefore, every project is linked together and a law firm and its partners profiting from the development of one project are by definition linked to the others as well.

----- Forwarded message -----

From: **George Rheault** <george.rheault@gmail.com>

Date: Mon, Jun 9, 2025 at 8:54 AM

Subject: Curtis Thaxter - Attorney for 89 Elm St Joint Development Between Reveler & AVESTA

To: Kevin Kraft <kkraft@portlandmaine.gov>

Cc: Michael Goldman <mig@portlandmaine.gov>

Kevin,

Maine State Housing Authority has provided me with documents that include a reference to Curtis Thaxter being the law firm for the 89 Elm Street development team.

Please see attachment.

I do not understand why that wouldn't result in a need for David Silk to recuse himself from any further deliberations involving Reveler and the West Bayside Master Development Plan (including the 61 Preble Street major site plan review and the MDP amendment that preceded it).

89 Elm Street is obviously the linchpin of Reveler's entire development scheme.

Please advise if this reference was in error or how else the public is supposed to make sense of this information.

Thank you.



89 Elm Project T...



kkraft <kkraft@portlandmaine.gov>

9:54 AM (12 minutes ago)



to George Rheault, Planning Board, Matthew Grooms, Taylor Colbeth, jmy, Michael Goldman, agram...@portlandmaine.gov

Good morning, George,

Thank you for following up on this. We've spoken with David regarding the concerns you raised. As part of his standard process, David conducts a conflict check with his firm for each application and was informed that there was no conflict.

It's important to note that when the original Master Development Plan and the 89 Elm Street Major Site Plan application were reviewed and approved, Avesta was not involved in the application process, nor was staff or the Board aware that Avesta may be involved in the future. Additionally, when David's firm conducted a conflict check for 61 Preble Street, Reveler was not identified as a client. That said, we understand the point you're raising. While Curtis Thaxter does represent Avesta, Board Member Silk is not personally associated with that client. Nonetheless, we have advised him to review the State's conflict of interest rules and determine whether a conflict exists. Although he is not soliciting work from or representing this client, he should also consider whether there may be an appearance of a conflict.

At a minimum, we've asked David to disclose the concern to the Board and assess whether any members object to his participation in a vote. If so, the Board may choose to take a formal vote on the matter, or he may opt to abstain.

Best,

Kevin



--

Kevin Kraft, AICP
Director Planning & Urban Development Department
389 Congress Street
Portland, Maine 04101
Phone: [207.874.8430](tel:207.874.8430)
kkraft@portlandmaine.gov



APPLICANT INFORMATION

Name of Applicant	Avesta Housing Development Corporation		
Taxpayer ID Number or Social Security Number	See Exhibit 5E9		
Contact Person & Title	Nate Howes		
Mailing Address	307 Cumberland Avenue		
	Portland, ME 04101		
Telephone Number	(207) 553-7777	FAX Number	
Email Address	nhowes@avestahousing.org		
Form/Type of Ownership	Drop Down Menus Limited Liability Corp. Existing		

Please Provide Detail for Proposed Owner Entity:

Note: to get 0.01%, type 0.01

Name of Participants	Position	% Interest	Address
89 Elm GP Corp.	Managing Member	0.11%	307 Cumberland Avenue, Portland, ME 04101
WNC FRE Affordable Housing Fund 2, LP	Investor Member	99.88%	17782 Sky Park Circle, Irvine CA 92614-6404
WNC Housing, LP	Special Limited Member	0.01%	17782 Sky Park Circle, Irvine CA 92614-6404

Identity of Interest:

[explain relationship between partners or principals in the ownership entity, any relationship between the owner and seller, the owner and contractor, the owner and management company, etc.]

Reveler, who is acting as the Development Consultant, is the managing member of the LLCs that will be selling the land to Avesta.

Development Team (please complete where applicable)

	Entity Name	Contact Name	Email	Telephone
Project Developer	Avesta Housing Development Corporation	Nate Howes	nhowes@avestahousing.org	(207) 553-7777
Architect	Senatore Architecture	Ryan Senatore	ryan@senatorearchitecture.com	(207) 747-5159
Attorney	Curtis Thaxter	Cito Selinger	cselinger@curthax.com	(207) 774-9000
Accountant	Otis Atwell	Greg Geisser	ggeisser@otisatwell.com	(207) 780-1100
Tax Professional	Otis Atwell	Greg Geisser	ggeisser@otisatwell.com	(207) 780-1100
General Contractor	Penobscot GC / Turner	Clay Maker / Maureen Kirkpatrick	cmaker@penobscotgc.com	(207) 838-8021
Construction Lender	MaineHousing			
Development Consultant	Reveler	John Anton	antonatlarge@gmail.com	207 650-8979
Service Provider	Avesta Housing Management Corporation	Amanda Gilliam	agilliam@avestahousing.org	(207) 553-7777
Management Agent	Avesta Housing Management Corporation	Amanda Gilliam	agilliam@avestahousing.org	(207) 553-7777

PC6

George Rheaultto Planning, Kevin, Matthew, tcolbeth, me, Michael 

Just making it clear that the objections surrounding the demolition of 61 Preble Street still stand as much at the "Major Site Plan" level as they did at the MDP level.

The fact that our Historic Preservation arm of our planning department did ZERO surveying or assessment of the existing historic resources in the vicinity of the MDP including at 61 Preble Street is a huge slap in the face to the West Bayside neighborhood. For example, the Munjoy Hill Historic District and the various individual landmarks peppered throughout Portland came into being as the result of efforts initiated by staff, often at odds with the wishes and ambitions of individual property owners. The fact that city staff have been explicitly ordered to stand down and act deaf, dumb and blind to the historic resources in West Bayside is a complete violation of trust in a neighborhood that has been deeply impacted by de jure government demolition policy for well over a hundred years.

FYI: The applicant's plan conflict with Comprehensive Plan goals on many MANY levels including (non-exclusive list):

EQUITABLE

"The benefits and costs of our city will be born FAIRLY ACROSS THE ENTIRE CITY."

"Our government will continue to be transparent and its policies fair and uniformly enforced."

SUSTAINABLE

"...we will BALANCE our historic fabric, sound infrastructure, and the BEST of new technology and design for the future."

DYNAMIC

"We will encourage an active and informed citizenry and facilitate civil discourse."

SECURE

"We will use compassion in our decision-making and in our approach to public safety."

"We believe a key component of security is a transparent and accessible government."

AUTHENTIC

"The UNIQUENESS and INTEGRITY of our neighborhoods will be maintained and enhanced."

"We will maintain our character through preservation, innovation, and excellence in design for the built environment."

----- Forwarded message -----

From: **George Rheault** <george.rheault@gmail.com>

Date: Thu, May 8, 2025 at 12:04 PM

Subject: Public Comment - West Bayside MDP Amendment: Erasure of Historic Fabric In Complete Violation of Comprehensive Plan

To: Planning Board <planningboard@portlandmaine.gov>, Kevin Kraft <kkraft@portlandmaine.gov>, Matthew Grooms <mgrooms@portlandmaine.gov>, <tcolbeth@portlandmaine.gov>, jmy <jmy@portlandmaine.gov>, Evan Schueckler <evans@portlandmaine.gov>, Robert Wiener <rwiener@portlandmaine.gov>

Cc: <klemosmchale@portlandlandmarks.org>, Mohney, Kirk <kirk.mohney@maine.gov>, Goebel-Bain, Michael W <Michael.W.Goebel-Bain@maine.gov>, Chapman-Mitchell, Christi <christi.chapman-mitchell@maine.gov>, Rideout, Megan M <megan.m.rideout@maine.gov>, Johnson, Mike D <Mike.D.Johnson@maine.gov>

By now, most current residents in Portland associate "historic preservation policy" in our community as being simply another way of describing a particular form of economic violence stylized into property-value enhancing gentrification.

By this is meant a process whereby authentic organic necessary urban development is prohibited and stunted in most of the areas where it would logically happen and instead is shunted into only a few "sacrifice zones" where just about anything goes including the destruction of historic buildings which have just as much claim to preservation as the often far less deserving structures in the "nice neighborhoods" but whose preservation is far less valuable to affluent homeowners and the real estate industry that depends upon them and the donors who fund the preservation lobby, who often are usually the very same actors, that enables the regulatory gatekeeping for those "nice neighborhoods."

It does NOT have to be this way.

So I therefore invite the members of our Planning Board, if they have any intellectual integrity of any kind, to savor the lofty preservation rhetoric found in our Comprehensive Plan and compare it to the vandalism and destruction which is before them for approval with respect to the Port Properties plans for the former D.E. McCann & Sons building.

Because the City of Portland's Historic Preservation Office (and their colleagues in Augusta) have been ordered to remain deaf, dumb and blind to the history of D.E. McCann & Sons and the physical legacy they left us in the Preble Street corridor, I am forced to rely upon a third-party write-up of that history from the New England Museum of Firefighting: <https://www.nemoff.org/post/made-in-maine-d-e-mccann-sons-fire-apparatus> SEE ATTACHMENT BELOW.

It is a deep shame that the historic preservation machinery of our state and local governments (and their private partners) cannot even ACKNOWLEDGE this history; never mind defend it one iota.

However, that deliberate withholding of any government sanction does not destroy that history. It only destroys ANY enthusiasm for what Port Properties is hoping to do with this site, including the somewhat laudatory (but obviously self-serving) effort to increase our housing stock and enliven the parking lot/parking garage scarred urban environment around the site (one loves how the extreme absence of any preservation minded efforts in this vicinity is an excuse to FURTHER AVOID ANY PRESERVATION ETHICS HERE).

The preservation of some or all of the existing facade of the D.E. McCann & Sons building is quite possible if our city planning staff had pushed this pathway from the beginning.

It might be inconvenient in the short-term for Port Properties but they would benefit in the end because it would actually demonstrate their good faith which so far has been completely absent in their "West Bayside" reinvention plans. The goodwill this nod to preservation would generate would be enormously worthwhile and help the project avoid the public relations disaster it will otherwise be permanently likely to be tagged with into the future (along with all the so-called preservationists who cowardly remained silent).

So will our Planning Board choose to be vandals or will they prefer instead to be forward-thinking guardians of the past in what is now called "West Bayside" (ahem, central downtown Portland) even though it was never referred to as such during any part of the D.E. McCann & Sons era? Time will tell!

N.B. Portland's entire regulatory framework around historic preservation concerns itself EXCLUSIVELY with exterior facades and has no authority regarding preservation of interiors or any such remaining fabric INSIDE 50+ year old buildings. So the interior condition of the subject building slated for demolition here is irrelevant and would be equally irrelevant if it was in one of our sanctified historic precincts.

In fact, everything about Portland historic preservation is about preserving "the feel" and aesthetics of "old-timey" Portland and is not just indifferent to what happens inside but quite content if nothing on the inside is saved, preserved or recognizable post-development. We saw that of course surrounding the 142 Free Street debate/battle with the Portland Museum of Art. There it was all about protecting the "skin" of a plain vanilla explicitly white supramacist architectural idiom.

So Port Properties, if it was forced to figure out a way to preserve the historical facade of 61-63 Preble Street would only have to concern itself with skin-deep preservation giving it a lot of flexibility to do what was necessary behind the facade and above and around it (and because this site has no formal preservation status, it won't get henpicked by the Historic Preservation Board as it pursues adequate solutions). While "architectural facadism" is disfavored by some preservationists it has many MANY successful precedents across the globe and gives projects that embrace it (even if awkwardly) very unique distinction and character that a ground up contemporary building could never hope to achieve.



Anthony Buono

Apr 6, 2023 · 3 min read

Made in Maine: D.E. McCann & Sons Fire Apparatus

Updated: Aug 28, 2023

New England was the home of many early builders of motor fire apparatus. Among the earliest was D.E. McCann & Sons. Daniel E. McCann was a blacksmith and carriage maker who opened a shop in Portland, Maine, in 1872. When McCann died in 1907, his 21-year-old son Carl took over the business. His older brother Dennis left his job in New York City and returned to Portland to join the business with Carl. In 1909, the McCann brothers sold their first fire apparatus. This was a horse-drawn combination wagon for the Portland Fire Department.



The McCann brothers then became dealers for Oldsmobile, Locomobile, Auburn and Chandler automobiles as well as several makes of commercial trucks. These included Knox and, later, Indiana Trucks in the late teens and early 1920s. Carl McCann was active in, and later would be the President of, the Portland Automobile Dealers' Association.

In 1912, D.E. McCann & Sons built its first motor fire apparatus. Two years later, the McCann factory burned down. Undeterred, the McCanns built a new and larger factory and continued in business.

D. E. McCANN'S SONS
Manufacturers and Dealers in
CARRIAGES AND SLEIGHS
We make a Specialty of
AUTOMOBILE PAINTING
63 and 65 Preble St., - Portland, Maine



This 1930 McCann custom triple combination pumper served in Bangor, Maine until 1978. It now is in the collection of the Bangor Fire Museum.

Initially McCann used a variety of commercial truck chassis for fire apparatus. Many were built on Ford and REO chassis. In the 1920s McCann built some fire apparatus on custom fire chassis that were purchased from the Stutz Fire Engine Company of Indianapolis. Later McCann used Diamond-T chassis. In 1927 McCann introduced its own line of custom fire apparatus. For a small regional builder, this was a significant accomplishment.



This is the second of the two McCann triple combination pumpers that served in Exeter, New Hampshire.

In the 1930s McCann started building fire apparatus on Gramm and Brockway chassis in addition to the other commercial makes that it had used in the 1920s. In the mid-1930s McCann redesigned the front ends of its custom apparatus. These bore a strong resemblance to Maxim custom apparatus as well as apparatus built by the Buffalo Fire Appliance Corporation of Buffalo, New York. In 1931, McCann moved its manufacturing operation from Portland down U.S. Route 1 to a facility in neighboring Scarborough.



The Fire Department in Laytonville, Maryland, still owns this 1930 McCann pumper that was built on a Brockway chassis.

In the 1930s McCann sold some apparatus outside of New England. These included a pumper sold to Laytonville, Maryland, in 1930, and a pair sold to Ridgefield Park, New Jersey, as well as a trio of triple combination pumpers for Washington, D.C. in 1935. The Washington, D.C. contract proved to be a nightmare.



This 1935 McCann triple combination pumper was one of three that were built for Washington, D.C.

The District's Fire Chief was unhappy that McCann was the low bidder because he wanted American-LaFrance to get the contract. He told Carl McCann that McCann was going to wish that he never had been awarded the contract. Problems with the Waterous pump on one of the three delayed their acceptance by the District. The delay cost McCann \$12,000 on the \$40,000 contract. Because of the low regard that the D.C. Chief had for the trio of McCann pumpers, one was assigned to Engine Company 4. This was the sole "negro" company in the segregated Washington D.C. Fire Department.



REO was a very popular choice for fire apparatus in the 1920s according to Bill Blunden in his 2020 book, *REO Fire Apparatus: The Chassis of Choice*.

This hand-drawn triple combination was built on

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chassis by McCann. It

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McCann ceased building fire apparatus around 1930. Examples of McCann fire apparatus can be found in several museums, including the Cole Transportation Museum, the Maine State Museum, the Exeter Fire Museum, the Portland Fire Museum. Several others are owned by fire companies and private collectors.

Much more information about the story D.E. McCann & Sons Fire Apparatus can be found in *McCann Fire Trucks*, by Elizabeth A. McCann, a 2006 self-published book by the daughter of Carl McCann.

Public Comment - 61 Preble Street: Ongoing Recusal & Non-Recusal RED FLAGS

External Inbox

PC7

**George Rheault**

to Planning, Kevin, Matthew, tcolbeth, me, Michael

FYI - Austin Smith's spousal conflict remains just as much an issue for the 61 Preble Street project at the major site plan approval phase as it did for the Master Development Plan a

The lame and non-substantive "waiver" of this conflict by a puppy-dog Planning Board did not remedy the situation (their investigation of the conflict was completely superficial and to see here" which was unreasonable and far below the standard that Portland's citizens should expect from this body in wrestling with a complicated conflict-of-interest issue).

It should also be reiterated AGAIN, that the CHAIR of the Planning Board, after aggressively and tenaciously advocating for the entirety of the West Bayside MDP project and its first already recused himself WITHOUT EXPLANATION from any further participation in the MDP or its individual components such as the 61 Preble Street major site plan matter.

Did Chair Mazer, or his law firm, take advantage of a variety of the "revolving door" politics of our government by getting rewarded with paying legal work AFTER doing his damndes privileges?

If so, this kind of thing reeks of shades of "after-the-fact quid pro quo" and suggests that this entire process has been tainted from the beginning.

At a minimum, the nature of Mr. Mazer's recusal should be clearly identified in the record so no one has to guess whether it was reasonable or ethical and whether it might have col matter more for Maine's attorney licensing body than our Planning Board, but they are closely tied together.]

----- Forwarded message -----

From: **George Rheault** <george.rheault@gmail.com>

Date: Mon, May 12, 2025 at 10:41 AM

Subject: Public Comment - West Bayside MDP: RED FLAG - Austin Smith Non-Recusal Despite Massive Spousal Conflict

To: Planning Board <planningboard@portlandmaine.gov>, Kevin Kraft <kkraft@portlandmaine.gov>, Matthew Grooms <mgrooms@portlandmaine.gov>, <tcolbeth@portlandmaine.gov>, Goldman <mig@portlandmaine.gov>

I very much appreciated Austin Smith being forthcoming about his wife's senior leadership position at Spurwink and the fact that the programs she oversees will be impacted by the at 61 Preble Street.

But disclosure alone does not address the massive appearance of a conflict-of-interest here.

It is jaw-droppingly confusing to have witnessed his expression of belief that he can be objective in his review and approval of this project despite the dramatic impact on his spouse

The rest of the Planning Board, including David Silk, who is an active member of the Maine Bar with extensive experience in land use matters, should be ashamed for shrugging the

The Planning Board should have required that the Corporation Counsel give them specific guidance here on this issue rather than relying upon their 5-second consideration (which including any knowledge about the impact on Spurwink to which his spouse might have made him privy to outside the Planning Board proceedings).

Any reasonable application of legal ethics standards across the United States of America would NOT permit a sitting judge to preside over a proceeding that directly involved their s employer's existing programmatic outlays.

A judicial official would immediately recognize that such a decision, with the power to impact their immediate family, could not be objective. There would be concerns that being a dk conditions that would completely color their involvement in the proceeding.

We all know, after 3+ months of the second Trump Administration, how vulnerable non-profit organizations are to governmental actions - positive or negative. While this was well-kr

The public currently has NO IDEA what kinds of discussions have taken place between the applicant and Spurwink regarding the underlying project. We have no idea if Spurwink h and a promise not to engage in any public opposition to their relocation which is obviously baked into any approval of the amendment. We also have no idea to what extent that Mr. the applicant's affiliates and no understanding of any leverage either side has with respect to a lease termination.

It is a hypothetical that SHOULD Mr. Smith VOTE NO on the project, he could subject his spouse or his spouse's employer to retaliation, either immediately or in due time, from the is a very reasonable hypothetical. And since Spurwink has not bothered to come forward independently and dispel any concerns about the MDP amendment's impact on their curr somewhere else without massive time, trouble and expense), the public is only left to wonder. And if we are all wondering about Mr. Smith's participation, then we cannot trust it in e

Please do not taint these proceedings any further with Mr. Smith's participation. He should recuse himself from any further review AND as a result, cause the Planning Board to RE present.

Please do the right thing here. Thank you.

FYI - here is how Mr. Smith's wife is presented on Spurwink's senior leadership page: <https://spurwink.org/about/leadership/>



AMY COHAN, LCSW

Senior Vice President of Outpatient & Community Services

Amy began her career at Spurwink in 1994 as an outpatient clinician in the Lewiston Schools and has had her heart in the Outpatient and Community School of Social Work in 1993, she has been working with children, youth and families in many clinical roles but her greatest professional and personal passion is family. Amy and her husband, Austin, keep busy with family, home and garden.

Public Comment - 61 Preble Street: Mitigation of Abutting Garage Environment External Inbox

**George Rheault**to Planning, Kevin, Matthew, tcolbeth, me, Michael 

We have heard nothing from the applicant about how they plan to address the needs of those tenants who will be asked to live their lives right up against a giant parking garage.

By my count, at least 90 units out of the 217 proposed units in 61 Preble Street will directly face the former Public Market Garage.

A large majority percentage of those 90 units will have their windows directly blocked from sunlight by the structured parking facility (though all 90 units are likely to be directly impacted less than its full capacity (~500 cars), the applicant's desire (and expensive economic bet) is that very soon it will be maxed out and operating at all hours for the monthly and daily capacity.

So what kind of things will the applicant do to make sure tenants living up against the parking garage won't be unhappy with such a neighbor?

Is the applicant going to modify the open panels of the garage so that light trespass (headlights), noise (honking, idling or revving engines, tires screeching, etc.) and vehicle fumes

Will the tenants have triple-pane windows to help them ease any distractions from the garage and keep out the particulate matter from all the vehicular activity? Is the HVAC filtration garage and they won't need to choose between opening their windows to be comfortable or exposing themselves to the hazards of the looming garage?

The Planning Board should consider meaningful conditions along these lines to ensure a successful and happy residential environment for those condemned to live up against the garage.

They should also demand the creation of accurate and complete RENDERINGS to help show what the garage facade will look like to those inside the units as well as the contextualized solely to vehicle owners and trespassing is common so that prospective tenants of 61 Pine Street will likely have to worry about PEEPERS, whether or not authorized to be in the garage.

The power invested in our "local control" planning board process and procedures (including municipal-level zoning) is built fundamentally on the idea that those closest to a land-use

Because Portland is the largest municipality in Maine, this principle breaks down because of course our Planning Board members only represent a tiny fraction of the community and

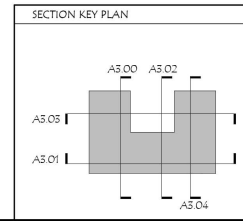
So we TRUST that our Planning Board will take its job seriously and conscientiously. Certainly the people who will live in the garage-side units are not yet known, but THEY are dependent

Unfortunately that kind of duty of care has been missing from the evaluation of the 61 Preble Street project. A rushed, virtually substance-free approval of the MDP amendment that disrespects the performance ever be allowed in any other Portland neighborhood? Certainly not.

But the lack of curiosity, the indifference to even asking some basic questions, is appalling and all of this callousness will ultimately create a BAD BUILDING that will NOT enhance the integrity. Ball is now in their court on this issue and others.



1 ELM-PREBLE SECTION
SCALE: 1/8" = 1'-0"



MARKET SQUARE ARCHITECTS

104 Congress St., 3rd Floor
Portland, ME 04101
PH: 603.520.0202

REVELER BAYSIDE PHASE 1B

61 PREBLE STREET, PORTLAND, ME 04101

NOT FOR CONSTRUCTION

Date

Revisions

#	Description	Date
1	As indicated	02/07/2025

Scale

Drawn By: A3.00

Checked By: BH

Project No: 2024-079

CONCEPT DESIGN

Date: 02/07/2025

Building Sections

A3.01

THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO FIELD VERIFICATION 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 SERVING 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 TOPTOGRAPHIC SURVEY BAYSIDE PARCELS LANCASTER, PREBEL, ELM, CEDAR, CHESTNUT AND OXFORD STREETS, PORTLAND, MAINE BY OWEN HASKELL, INC., DATED 2/17/2023, LAST REV. 10/22/24.

8. SUBSURFACE DATA HAS BEEN OBTAINED BY SUMMIT GEOENGINEERING SERVICES, INC. AND PROVIDED IN THE GEOTECHNICAL REPORT DATED 4/24/2023 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. CONTRACTOR TO DETERMINE SOIL CLASSIFICATION INDEPENDENTLY FOR TRENCH, SHORING, AND OTHER SIMILAR CONSTRUCTION MEANS AND METHODS APPLICATIONS.

11. 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.

12. THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION SURVEY OF INTERIOR SUBGRADE AND ABOVE GRADE ACCESSIBLE WALLS, CEILING, FLOORS, ROOF AND VISIBLE EXTERIOR AS VIEWED FROM THE GRADE LEVEL. THIS SHALL BE COMPLETED AT A MINIMUM FOR STRUCTURES IMMEDIATELY BUTTRESSING THE SITE. A COPY OF THE SURVEY SHOULD BE PROVIDED TO THE OWNER. DOCUMENT WITH PICTURES IN ADDITION TO THE SURVEY.

13. THE CONTRACTOR SHALL SURVEY ROCK SURFACE PRIOR TO EXCAVATION AND DEVELOP VOLUME CALCULATIONS TO SHARE WITH THE ENGINEER, ACORN ENGINEERING INC. (ACORN), IF ANY.

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 BACKFILLING, CONCRETE SHALL BE CURED PER STRUCTURAL ENGINEER'S SPECIFICATIONS.

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 CFR 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

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 OWNER AND COORDINATED BY THE CONTRACTOR.

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 LICENSED PROFESSIONAL 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.

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF MAJOR SITE PLAN – FROM THE CITY OF PORTLAND.
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.

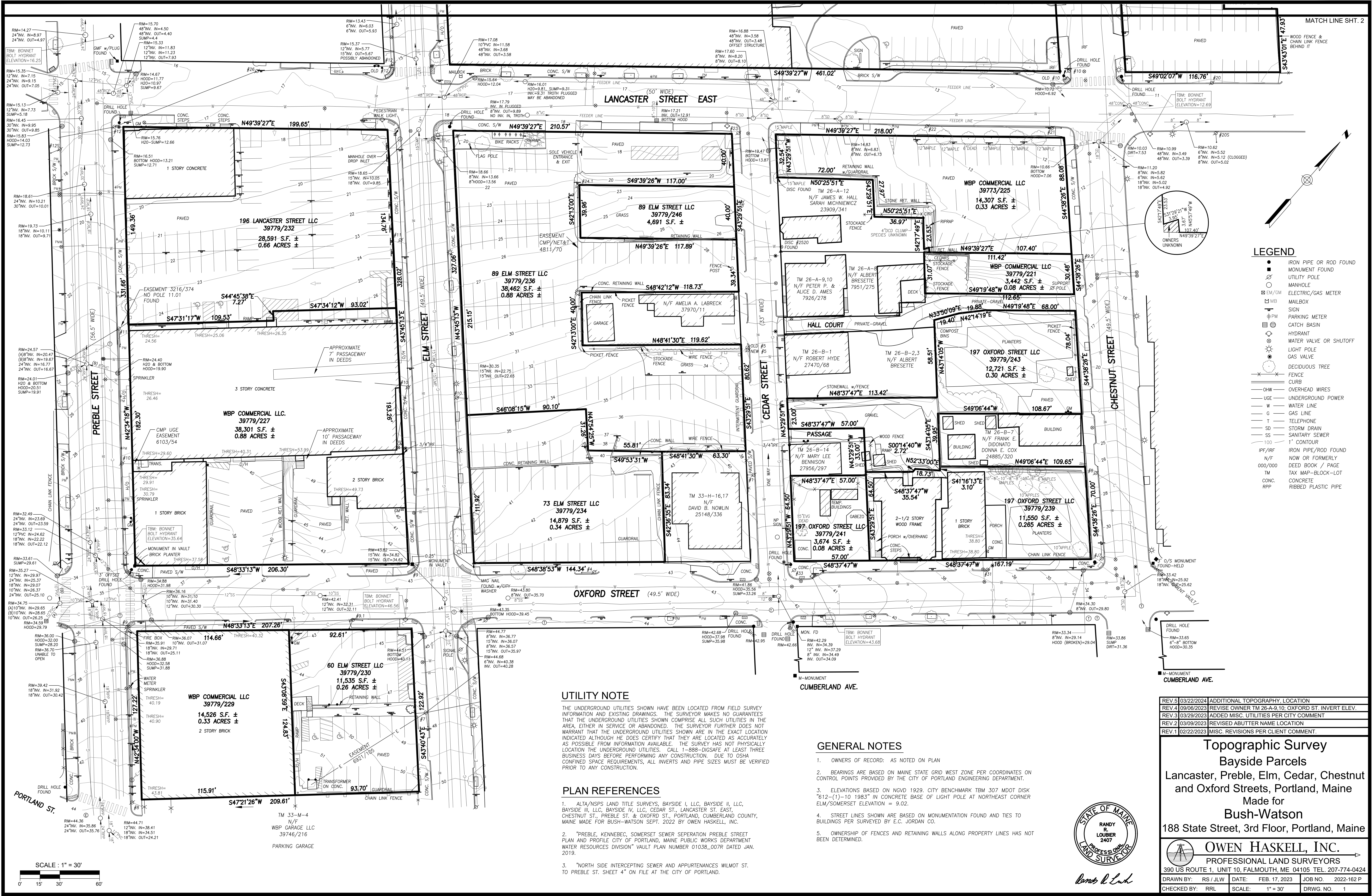
1. TOPSOIL STRIPPED FROM THE SITE THAT IS SUITABLE FOR REUSE AS LOAM (MEETS THE REQUIREMENTS WITHIN SECTION 615 OF THE MDOT STANDARD SPECIFICATIONS, MOST RECENT VERSION) AND IS FREE OF TRACEABLE AMOUNTS OF CONTAMINANTS) SHALL BE STOCKPILED WITHIN THE PROPOSED LIMIT OF WORK AREA. THE CONTRACTOR SHALL 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 MINIMUM SLOPE SHALL MEET OR EXCEED 0.5% IN ALL CASES WHERE NOT NOTED ON THE GRADING PLAN. SLOPES IDENTIFIED ON THE GRADING PLAN TAKE PRECEDENT. 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 GEOTECHNICAL REPORT PREPARED BY THE SUMMIT GEOENGINEERING SERVICES INC. FOR TOM WATSON & CO/BUSH-WATSON ON 3/14/2023.
6. CONTRACTOR TO REVIEW EXISTING SOIL CONDITIONS, TEST PITS, AND BORINGS. THERE WILL BE NO ADDITIONAL PAYMENT FOR UNSUITABLE SOILS.
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.

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, SEEDDED 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 PERMIT CONDITIONS, FINDINGS OF FACT AND ORDER (IF ANY), AND THE 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.

1. 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 UTILITY PIPES SHALL SLOPE HORIZONTALLY FROM ELEVATIONS INDICATED ON THE DRAWINGS. NO CRESTS OR SAGS IN THE PIPE WILL BE PERMITTED. ALL HORIZONTAL AND VERTICAL BENDS IN THE PIPING SHALL BE STRAIGHTLY 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.

1. THE FOLLOWING ITEMS ARE TYPICAL OF MATERIAL WHICH MAY BE ON SITE:
 - ROCK AND CONCRETE FOUNDATIONS
 - CONCRETE SLABS, PADS AND BLOCKS
 - BITUMINOUS ASPHALT PAVEMENT
 - GRANITE, CONCRETE, AND BITUMINOUS CURBING
 - CONCRETE AND BLOCK RETAINING WALLS
 - GUARDRAILS, FENCE POSTS AND FENCING
 - UNDERGROUND AND OVERHEAD UTILITY LINES
 - LIGHT POLES AND BASES
 - ABOVE AND OR BELOW GROUND 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. CONTRACTOR TO REFER TO ENVIRONMENTAL REPORTS AND EMMP PREPARED BY TRC
5. UPON A FINDING OF ARCHAEOLOGICAL RESOURCES ON THE SITE, CONSULTATION WITH THE CITY OF PORTLAND'S HISTORIC PRESERVATION PROGRAM AND THE MAINE HISTORIC PRESERVATION COMMISSION IS REQUIRED TO DETERMINE APPROPRIATE NEXT STEPS.

[illegible]



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.

PLAN REFERENCES

- ALTA/NSPS LAND TITLE SURVEYS, BAYSIDE I, LLC, BAYSIDE II, LLC, BAYSIDE III, LLC, BAYSIDE IV, LLC, CEDAR ST., LANCASTER ST. EAST, CHESTNUT ST., PREBLE ST. & OXFORD ST., PORTLAND, CUMBERLAND COUNTY, MAINE MADE FOR BUSH-WATSON SEPT. 2022 BY OWEN HASKELL, INC.
- "PREBLE, KENNEBEC, SOMERSET SEWER SEPARATION PREBLE STREET PLAN AND PROFILE CITY OF PORTLAND, MAINE PUBLIC WORKS DEPARTMENT WATER RESOURCES DIVISION" VAULT PLAN NUMBER 01038_007R DATED JAN. 2019.
- "NORTH SIDE INTERCEPTING SEWER AND APPURTENANCES WILMOT ST. TO PREBLE ST. SHEET 4" ON FILE AT THE CITY OF PORTLAND.

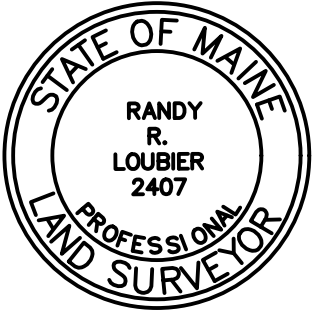
GENERAL NOTES

- OWNERS OF RECORD: AS NOTED ON PLAN
- BEARINGS ARE BASED ON MAINE STATE GRID WEST ZONE PER COORDINATES ON CONTROL POINTS PROVIDED BY THE CITY OF PORTLAND ENGINEERING DEPARTMENT.
- ELEVATIONS BASED ON NGVD 1929. CITY BENCHMARK TBM 307 MDT DISK "612-(1)-10 1983" IN CONCRETE BASE OF LIGHT POLE AT NORTHEAST CORNER ELM/SOMERSET ELEVATION = 9.02.
- STREET LINES SHOWN ARE BASED ON MONUMENTATION FOUND AND TIES TO BUILDINGS PER SURVEYED BY E.C. JORDAN CO.
- OWNERSHIP OF FENCES AND RETAINING WALLS ALONG PROPERTY LINES HAS NOT BEEN DETERMINED.

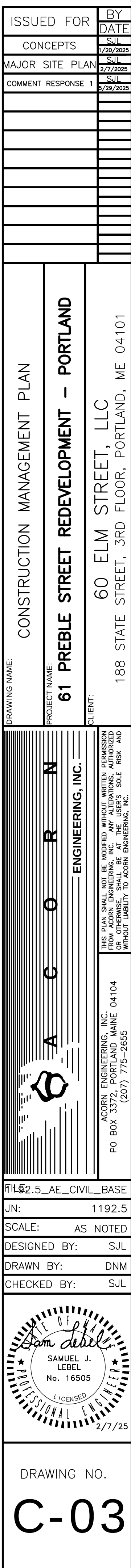
REV 5	03/22/2024	ADDITIONAL TOPOGRAPHY LOCATION
REV 4	09/08/2023	REVISE OWNER TM 26-A-9.10: OXFORD ST. INVERT ELEV.
REV 3	03/29/2023	ADDED MISC. UTILITIES PER CITY COMMENT
REV 2	03/09/2023	REVISED ABUTTER NAME LOCATION
REV 1	02/22/2023	MISC. REVISIONS PER CLIENT COMMENT.

Topographic Survey
Bayside Parcels
Lancaster, Preble, Elm, Cedar, Chestnut
and Oxford Streets, Portland, Maine
Made for
Bush-Watson
188 State Street, 3rd Floor, Portland, Maine

 OWEN HASKELL, INC. PROFESSIONAL LAND SURVEYORS 390 US ROUTE 1, UNIT 10, FALMOUTH, ME 04105 TEL. 207-774-0424	
DRAWN BY: RS/JRL	DATE: FEB. 17, 2023
CHECKED BY: JRL	SCALE: 1" = 30'
	JOB NO. 2022-162 P
	DRWG. NO. 1



Randy R. Loubser



1. ALL BRICK SIDEWALK AND VERTICAL GRANITE CURB TO BE REPLACED SHALL BE REBUILT TO CITY OF PORTLAND STANDARDS.
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 SHALL BE REMOVED TO OCCUR AT THE SAME TIME AS THE SIDEWALK SHALL BE PROPERLY DISPOSED OF AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. CURB TO BE REMOVED SHALL BE REPLACED WITH CONCRETE SLOPE SHALL BE 1:10 MINIMUM SLOPE.
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 REPAIR OF THE CURB.
8. CONTRACTOR SHALL VERIFY BOTTOM AND TOP OF CURB ELEVATIONS ALONG BUILDING FRONTS PRIOR TO CONSTRUCTION OF THE FOUNDATIONS. CONTACT ENGINEER PRIOR TO CONSTRUCTION IF DISCREPANCIES ARE FOUND.

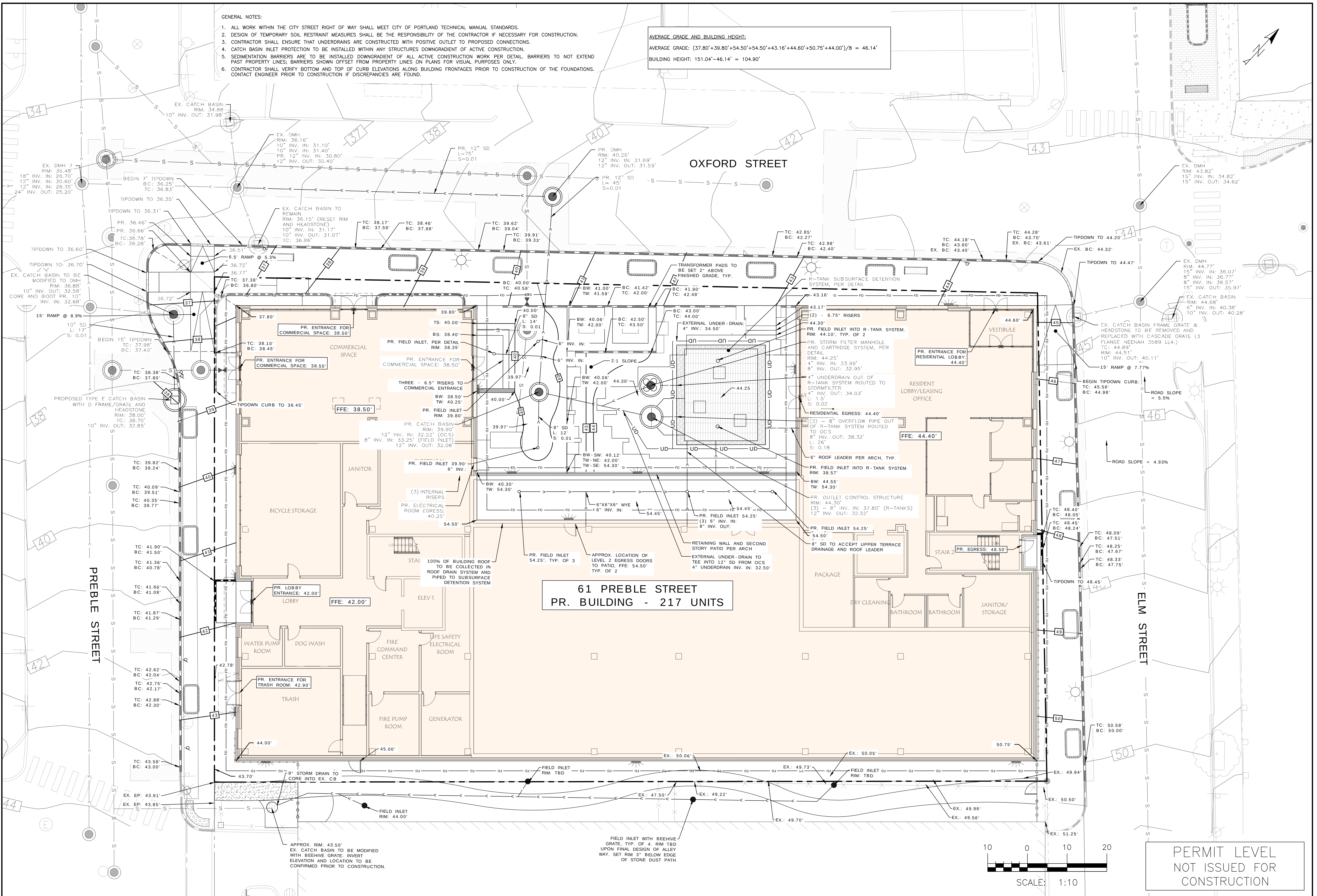
[illegible]


A C O R N
ENGINEERING, INC.

 ACORN ENGINEERING, INC. 04104
 P.O. BOX 3372, PORTLAND, MAINE
 (207) 775-2655

STATE OF MARYLAND
Sam Lebel
 SAMUEL J. LEBEL
 No. 16505
 LICENSED
 PROFESSIONAL ENGINEER
 2/7/25

[illegible]



ISSUED FOR	BY
CONCEPTS	SJL
MAJOR SITE PLAN	SJL
COMMENT RESPONSE 1	SJL

DATE: 7/20/2025

PROJECT NAME: 61 PREBLE STREET REDEVELOPMENT - PORTLAND

CLIENT: 60 ELM STREET LLC
188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

DRAWING NAME: GRADING & DRAINAGE PLAN

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED WITHOUT LIABILITY TO ACORN ENGINEERING, INC.

FILE: 62.5_AE_CIVIL_BASE

JN: 1192.5

SCALE: AS NOTED

DESIGNED BY: SJL

DRAWN BY: DNM

CHECKED BY: SJL

2/7/25

DRAWING NO. C-30

NOTES:

-
- ALL COMPLY WITH ADA STANDARDS
MAY BE REQUIRED BASED ON
VISIONS
- ADJACENT TO RAMP SHALL BE FLUSH
- MATERIAL SHALL BE PER CITY SIDEWALK
CY
- NS SHOULD MATCH SURFACE
FOR SIDEWALK CONSTRUCTION
E TO BE MIN. 7" WIDE, 4" WIDE IF
PRESENT.
- SIDEWALK
2% CROSS SLOPE
- LANDING
- SLOPED FLARE
- RAMP
1:12 SLOPE MAX
- SLOPED FLARE
- CAST IRON
DETECTABLE
WARNING
AREA
- GRANITE CURB
7" REVEAL (TYP)
- GRANITE TIPDOWN CURB
- 5'-0" MIN

NOTES:

-
- SEE SHEET C-30 FOR MORE INFORMATION ON PROPOSED GRADES
- TURNING SPACE
- RAMP
RAMP
MAX.
- RAMP
0%—0.5%
MAX.
- 10.0%
MAX.
- 6' TYP.
- 4'X4' CLEAR SPACE
- 5' MIN.
- A
- PLAN VIEW**

SIDEWALK RAMP DETECTABLE WARNING PANEL NOTES:

-

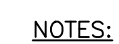
SECTION A-A

PLAN VIEW



- VERTICAL GRANITE CURB
NOT TO SCALE

VERTICAL GRANITE CURB
NOT TO SCALE



-
- Diagram illustrating a vertical curve on a road. The road surface is shown as a series of connected line segments. A vertical curve is indicated by a circular arc with a radius of $R=20'$. The curve starts at a point labeled "VERTICAL OBJECT(S) TO DELINEATE CURVE". The road surface is labeled "ESPLANADE AND/OR SIDEWALK".

NOTES:

-
- ESPLANADE AND OR SIDEWALK
- 5"
- FLUSH CURB
- 6"
- 12"
- 6"
- SUBGRADE TO BE 95% COMPACTED
- HOT BITUMINOUS PAVEMENT AND GRAVEL DEPTHS SHALL MEET THE REQUIREMENTS FOR CORRESPONDING STREET CLASSIFICATION.
- AGG. BASE CRUSHED GRAVEL, TYPE "B"
- 3,000 PSI CONCRETE

NOTES:

-
- The diagram illustrates a cross-section of a road construction project. On the left, the 'EXISTING PAVEMENT' is shown as a solid layer above 'EXISTING GRAVEL AND SUBGRADE'. A 'MILL EX. SURFACE COAT AND PROVIDE SHIPLAP JOINT WITH NEW SURFACE COURSE AND EX. BASE COURSE' is indicated at the edge. A dimension line shows a '5' MIN.' overlap. On the right, the new construction consists of a 'SAWCUT' edge, followed by a 'SURFACE COURSE HMA' (Hot Mix Asphalt) layer, a 'BINDER COURSE HMA' layer, and an 'AGGREGATE SUBBASE GRAVEL' layer. The bottom layer is the 'SUBGRADE'.

A cross-sectional diagram of a road structure. The diagram shows five distinct layers stacked vertically. From top to bottom, the layers are: a thin surface layer with a fine texture, a slightly thicker binder layer with a similar texture, a thicker aggregate base layer with a coarse, pebbly texture, a thicker aggregate subbase layer with a similar coarse texture, and a bottom subgrade layer with a diagonal hatched pattern. Four horizontal lines with circular end-caps point from the right to the interfaces between the layers. To the right of these lines, text labels each layer with its name and a value.

Layer	Value
SURFACE COURSE	MDOT 403.09
GRADE C	(12.5MM)
BINDER COURSE	MDOT 403.09
GRADE B	(19MM)
AGGREGATE BASE	MDOT 703.06
TYPE B	
AGGREGATE SUBBASE	MDOT 703.06
TYPE D	
SUBGRADE	

NOTES:

- | THICKNESS OF LAYERS | |
|---------------------|---|
| STANDARD | LAYERS |
| 1-1/2" | SURFACE COURSE MDOT 403.09 GRADE C (12.5mm) |
| 2-1/2" | BINDER COURSE MDOT 403.09 GRADE B (19mm) |
| 3" | AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B |
| 18" | AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D |

A cross-sectional diagram of a road pavement structure. The diagram shows five distinct layers stacked vertically. From top to bottom, the layers are:

- SURFACE COURSE MDOT 403.09 GRADE C (12.5MM)**: The top layer, represented by a fine, uniform stippled pattern.
- BINDER COURSE MDOT 403.09 GRADE B (19MM)**: The second layer, represented by a pattern of horizontal lines.
- AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B**: The third layer, represented by a pattern of small, irregular shapes.
- AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D**: The fourth layer, represented by a pattern of larger, more rounded shapes.
- SUBGRADE**: The bottom layer, represented by a pattern of diagonal lines.

 Each layer is labeled with a text box to its right, and a line points from the text to the corresponding layer in the diagram.

NOTES:

- | THICKNESS OF LAYERS | |
|---------------------|---|
| STANDARD | LAYERS |
| 2" | SURFACE COURSE MDOT 403.09 GRADE C (12.5mm) |
| 3" | BINDER COURSE MDOT 403.09 GRADE B (19mm) |
| 3" | AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B |
| 18" | AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D |

The diagram illustrates a cross-section of a road structure with five distinct layers. From top to bottom, the layers are:

- SURFACE COURSE MDOT 403.09 GRADE C (12.5MM)**: The top layer, shown with a fine, uniform texture.
- BINDER COURSE MDOT 403.09 GRADE B (19MM)**: The second layer, shown with a slightly coarser texture than the surface course.
- AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B OR A**: The third layer, shown with a coarse, irregular aggregate texture.
- AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D**: The fourth layer, shown with a very coarse, irregular aggregate texture.
- SUBGRADE**: The bottom layer, shown with a diagonal hatching pattern.

Each layer is labeled with its name, MDOT specification number, and grade or type, with a line pointing to the corresponding layer in the cross-section.

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 403.09 GRADE C (12.5mm)
2"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B OR A
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

LOCAL BITUMINOUS PAVEMENT PROFILE
NOT TO SCALE

[illegible]

SITE DETAILS - 1

DRAWING NAME:

PROJECT NAME: **61 PREBLE STREET REDEVELOPMENT – PORTLAND**

CLIENT: 60 ELM STREET, LLC

CLIENT:

THIS PLAN SHALL NOT BE MODIFIED WITHOUT WRITTEN PERMISSION FROM ACCORN ENGINEERING, INC. ANY ALTERATIONS, AUTHORIZED OR OTHERWISE, SHALL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY TO ACCORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
PO BOX 3372, PORTLAND MAINE 04104
(207) 775-2655

FILE 1192.5 AF DETAILS

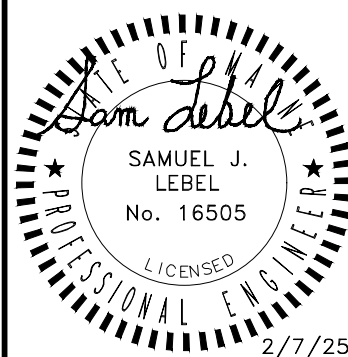
JN:	1192.5
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SCALE: AS NOTED

DESIGNED BY: SJL

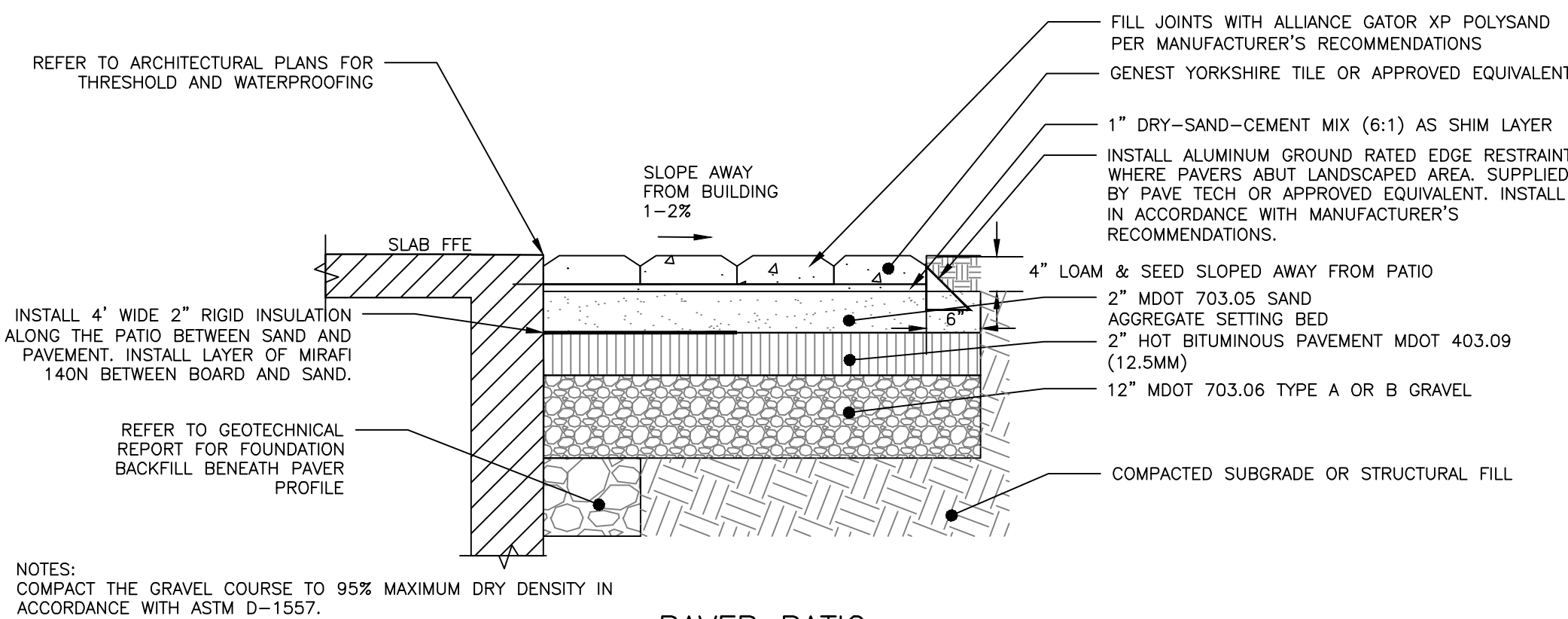
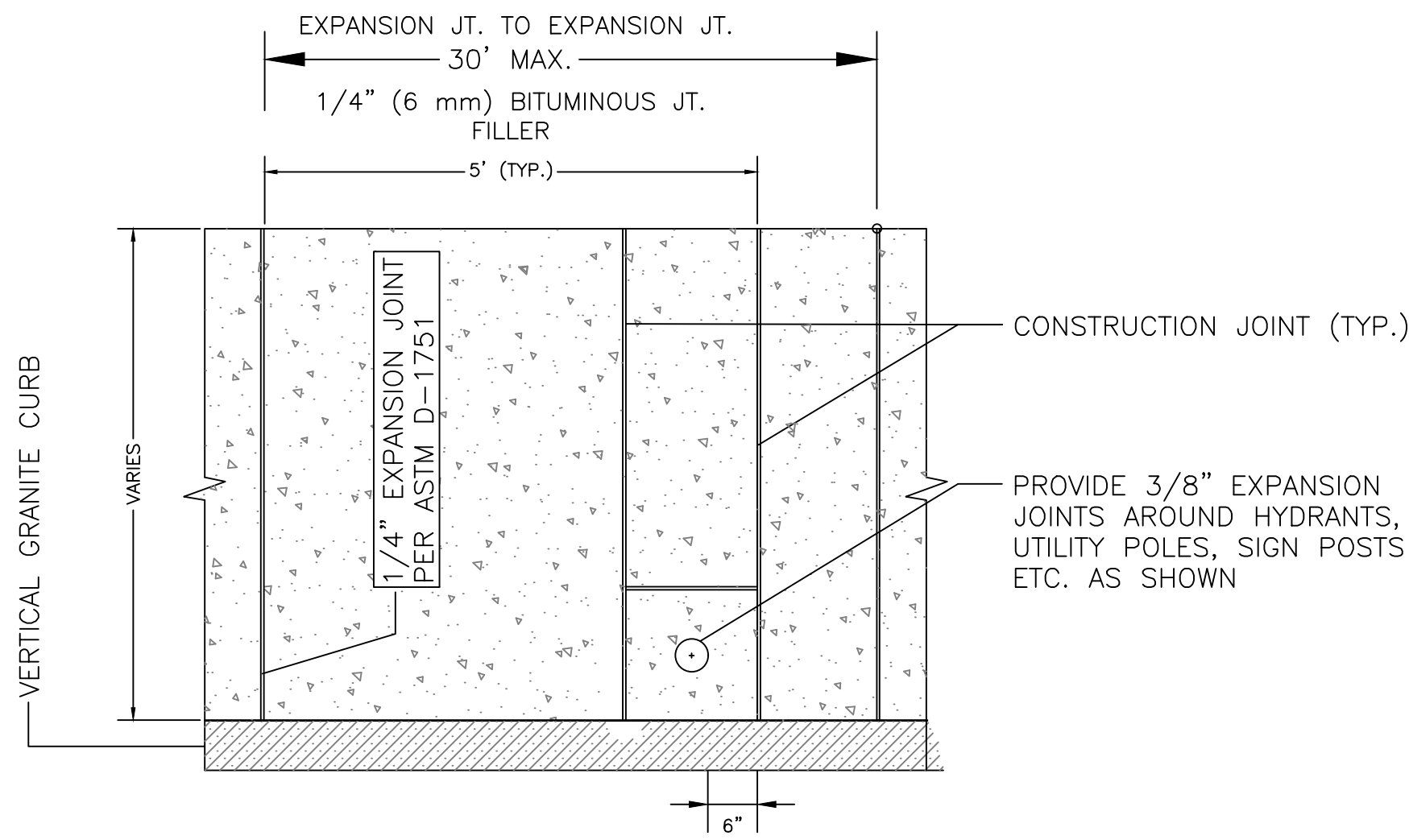
DRAWN BY: DNM

CHECKED BY: SJL



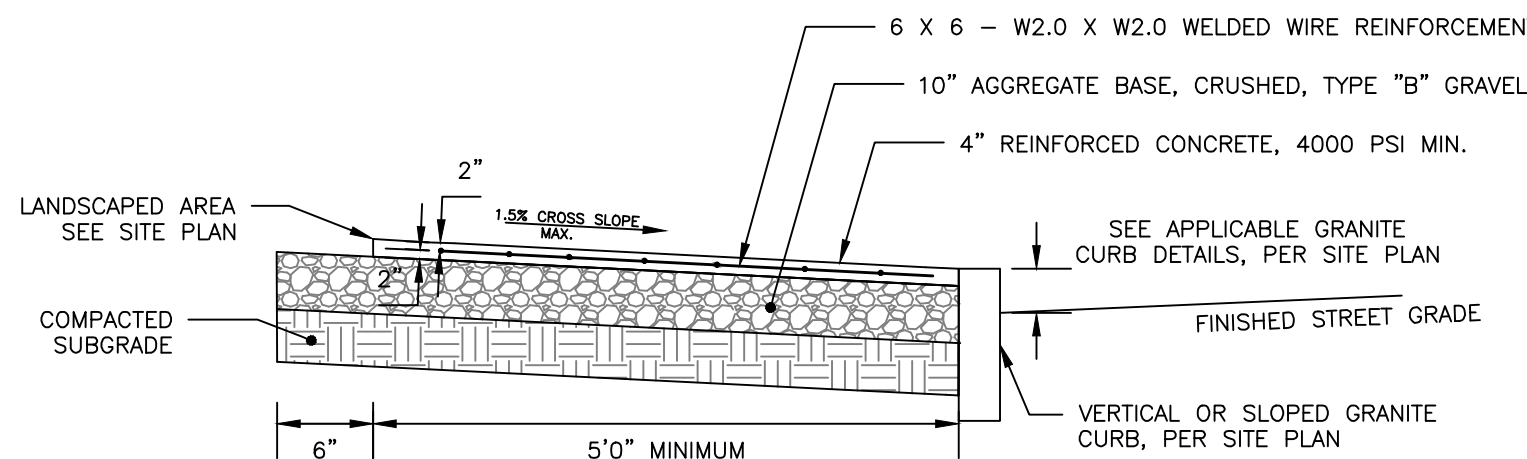
DRAWING NO.

C-40



THICKNESS OF LAYERS	
DEPTH	LAYERS
2"	SAND SETTING BED, MDOT 703.05
2"	HOT BITUMINOUS PAVEMENT, MDOT 403.09 (9.5MM)
12"	AGGREGATE BASE COURSE, MDOT 703.06 TYPE "B" GRAVEL

- NOTES:
1. AT A MINIMUM, TESTING SHALL CONSIST OF ENTRAINED AIR AND SLUMP TESTS ON SITE PRIOR TO POURING THE SIDEWALKS. ENTRAINED AIR TESTS SHALL BE DONE IN ACCORDANCE WITH AASHTO T152. TEST FIRST TWO LOADS AND EVERY THIRD LOAD THEREAFTER PROVIDED CONSISTENT RESULTS ARE ACHIEVED.
 2. WELDED WIRE FABRIC SHALL BE PLACED 2 INCHES ABOVE THE CRUSHED GRAVEL, AND 2 INCHES FROM ALL FINISHED EDGES. EXPANSION JOINTS AND CURBS. ALL FABRIC JOINTS SHALL BE OVERLAPPED A MINIMUM OF 1 FOOT AND BE PROPERLY TIED. IF THE CONTRACTOR ELECTS TO USE REBAR, ONLY 4-GAUGE WILL BE ACCEPTABLE. IF THE CONTRACTOR ELECTS TO USE A PRE-MIXED FIBER MESH, A SPECIFICATION SHEET MUST BE SUBMITTED AND PRE-APPROVED BY THE ENGINEER PRIOR TO ITS APPLICATION.
 3. SLABS SHALL BE PLACED ALTERNATELY IN LENGTHS NOT TO EXCEED 30 FEET OR AS DIRECTED AND SHALL BE SEPARATED BY AN EXPANSION JOINT OF PREFORMED EXPANSION FILLER 1/2 INCH IN THICKNESS.
 4. WHEN CONSTRUCTED ADJACENT TO A BUILDING, RETAINING WALL OR OTHER FIXED STRUCTURE, A 1/2 INCH THICK PREFORMED JOINT FILLER SHALL BE USED BETWEEN THE SLAB AND THE STRUCTURE.
 5. THE SIDEWALK SURFACE SHALL BE SCORED INTO BLOCK UNITS NO GREATER THAN 40 SQUARE FEET AS DIRECTED. THE DEPTH OF THE SCORING SHALL BE AT LEAST ONE QUARTER OF THE THICKNESS OF THE SLAB.
 6. ANY MATCHING INTO EXISTING SIDEWALKS SHALL BE DONE SO WITH A CLEAN VERTICAL FACE CONNECTION.
 7. THE SURFACE SHALL BE FINISHED TO PRODUCE A BROOMLIKE "BRUSHED" PATTERN. NO PLASTERING OF THE SURFACE WITH MORTAR WILL BE PERMITTED. THE FINISH SHALL RESULT IN A SURFACE OF UNIFORM TEXTURE AND COLOR. ALL OUTSIDE EDGES OF THE SLAB AND ALL JOINTS SHALL BE ROUNDED WITH A 1/2 INCH RADIUS EDGING TOOL.
 8. CONCRETE SHALL BE CURED FOR 72 HOURS. CURING SHALL BE BY MEANS OF THOMPSON'S WATER SEAL AS MANUFACTURED BY E.A. THOMPSON CO., INC. OF MEMPHIS, TENNESSEE, BOILED LINSEED OIL, WHITE PIGMENTED CURING COMPOUND, OR BY OTHER APPROVED METHODS. CONCRETE SIDEWALK TO BE SEALED WITH CONSOLIDECK SALTGUARD WB OR APPROVED EQUAL 28 DAYS AFTER PLACEMENT. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR APPLICATION.
 9. GENERAL CONTRACTOR TO COLLECT DELIVERY SLIPS AND TRANSFER TO THE OWNER.
 10. WHERE REINFORCED CONCRETE SIDEWALK IS PROPOSED IN A PUBLIC RIGHT OF WAY, THE DETAIL MUST BE APPROVED BY THE PUBLIC WORKS DEPARTMENT PRIOR TO THE INSTALLATION OF THE WALK.

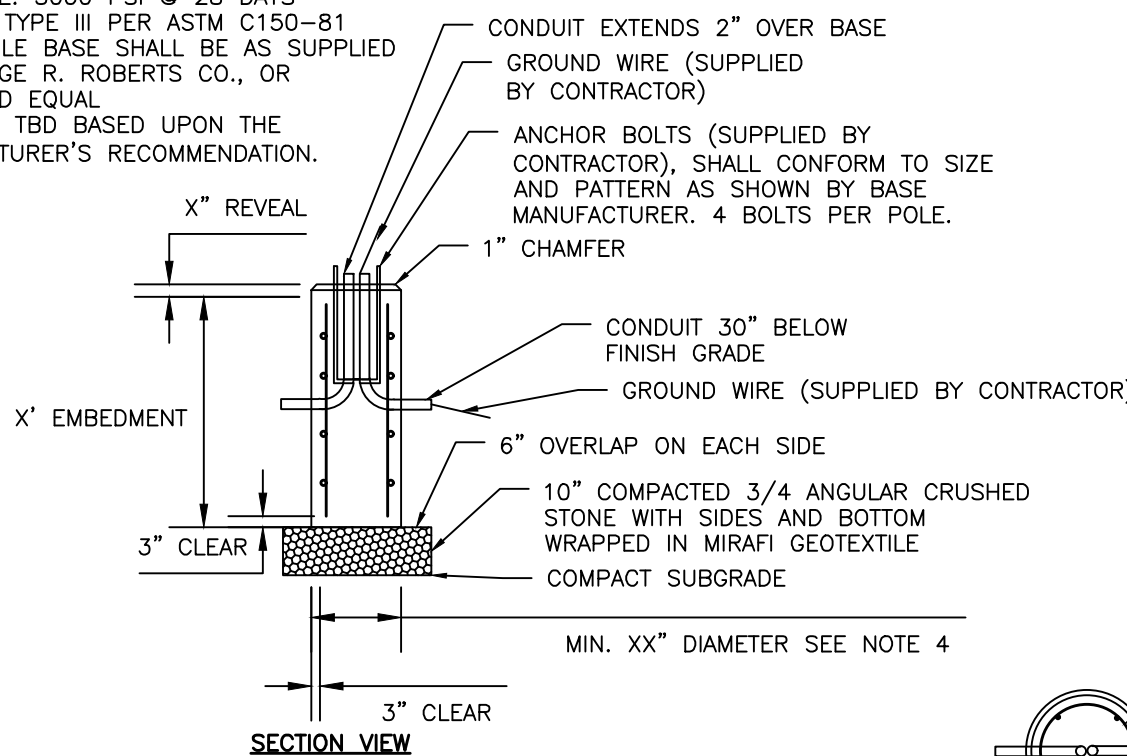


REINFORCED CONCRETE SIDEWALK
NOT TO SCALE

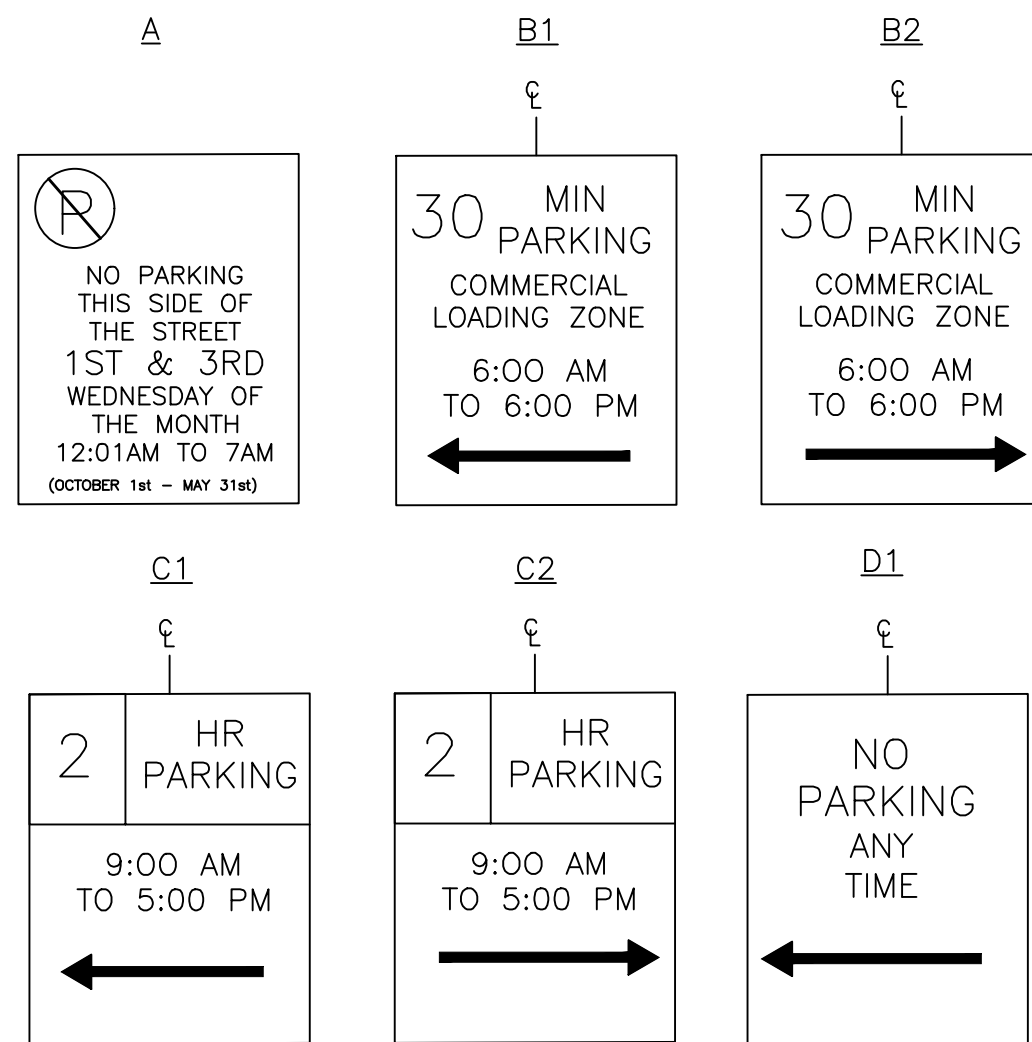
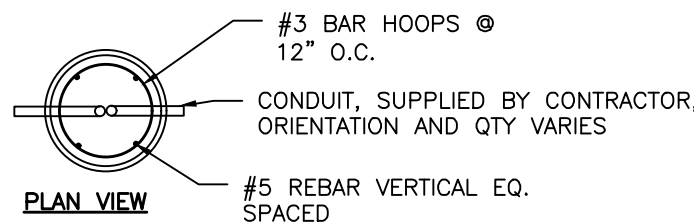
- NOTES:
1. CONCRETE: 5000 PSI @ 28 DAYS
 2. CEMENT: TYPE III PER ASTM C150-B1
 3. LIGHT POLE BASE SHALL BE AS SUPPLIED BY GEORGE R. ROBERTS CO., OR APPROVED EQUAL
 4. DIAMETER TBD BASED UPON THE MANUFACTURER'S RECOMMENDATION.

SCHEDULE		
HEIGHT OF POLE	MIN DIAMETER	MIN EMBEDMENT
<20'	1.5'	5'
20'-40'	2'	6'
>40'	3'	8'

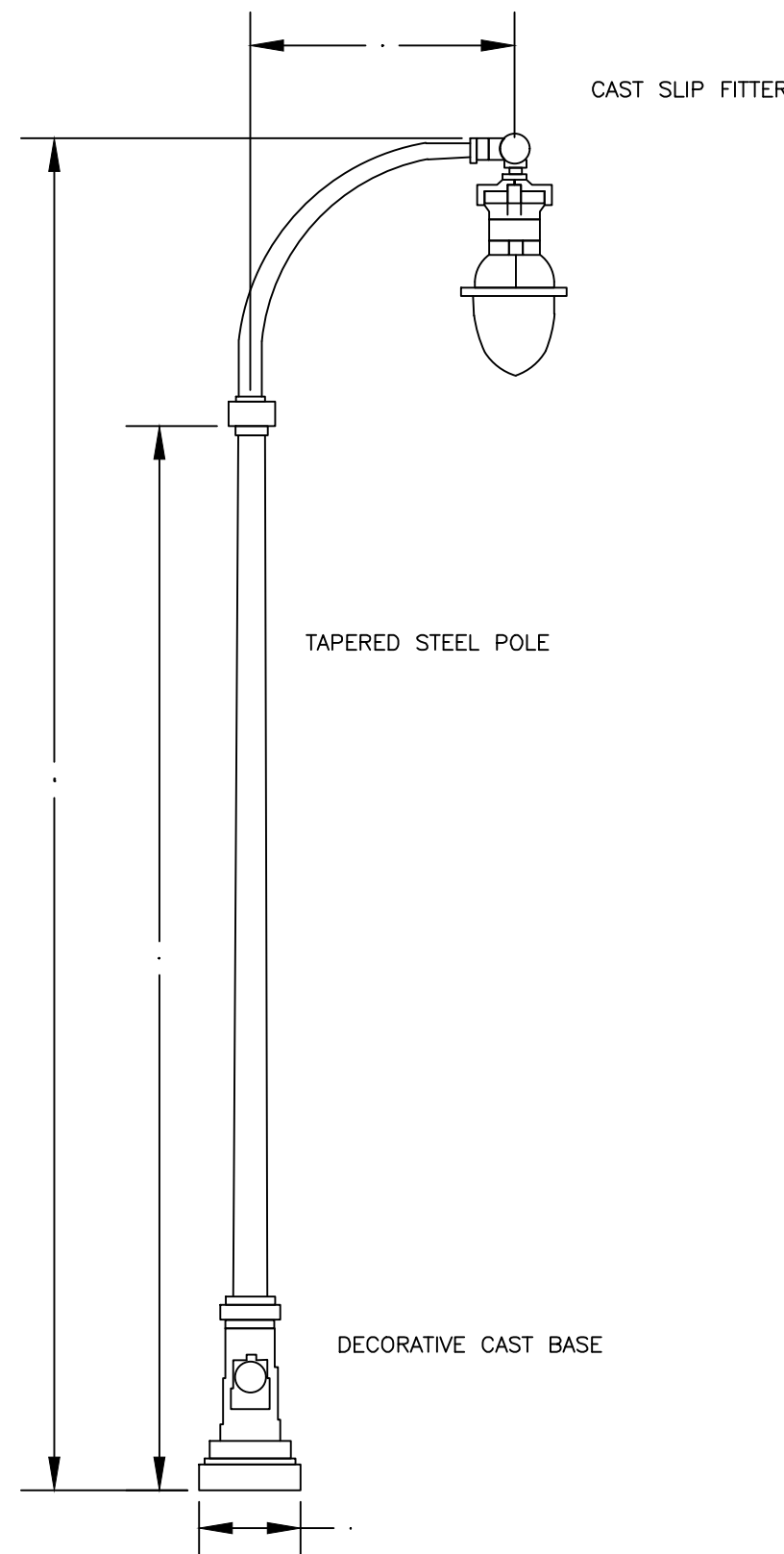
REVEALS	
APPLICATIONS	REVEAL
STREET/SIDEWALK	4"
OTHER PED HARDSCAPE	FLUSH
PEDESTRIAN LAWN/MULCH	4"
PARKING AREAS (OPEN TRAFFIC)	24-36"



LIGHT POLE BASE
NOT TO SCALE



PUBLIC SIGNAGE SCHEDULE
NOT TO SCALE



PENINSULA MEDIUM DECORATIVE LIGHTING ALONG OXFORD STREET
NOT TO SCALE

- NOTES:
1. LUMINAIRE
HOLOPHANE ESPLANADE LED II MODEL:ESL2-P205-30K-AS-CMC-TG3-S-P7-NL2X2-BHDF13-200CMC OR SPRING CITY COLUMBIA SERIES MODEL ALMCLU-LE080/EXX/X2-30-CR3-GR14-LACL6-FED-CU PENDANT MOUNT. CAST ALUMINUM HOUSING WITH STAINLESS STEEL HARDWARE. DROPPED REFRACTOR SHALL BE THERMAL RESISTANT BOROSILICATE GLASS. INTERNAL REFLECTOR AND PRISMATIC DIFFUSER SHALL PROVIDE AN IES TYPE IV DISTRIBUTION PATTERN. LED 3000K COLOR TEMPERATURE.
 2. BRACKET ARM
HOLOPHANE OUC ROADWAY ARM MODEL OUC 6063-T6 OR SPRING COLUMBIA ARM MODEL AARCA-15-51-53-TN2-36/7100-CU ALUMINUM CROSSARM WITH A POST-TOP FITTING FOR A 3 1/2" BY 8" TENON. SINGLE ARM 45° ORIENTED 180 DEGREES.
 3. SLIP FITTER
HOLOPHANE BOSTON HARBOR SERIES MODEL BHLF-200-SCA/AS 2 1/2" O.D. WITH SWIVEL CAST FITTER.
 4. LIGHTING POLE
HOLOPHANE MODEL CM17CSB-CA-RAL6012 OR SPRING CITY CAMBRIDGE SERIES MODEL SSHSM-G11-7.00-15.00-TN3.50/8.00-CU SMOOTH, TAPERED STEEL POLE SMOOTH SHAFT RATED FOR A 90 MPH WIND LOAD WITH A 1.3 GUST FACTOR. PROVIDE FOUR HOT-TIPPED GALVANIZED STEEL L-TYPE ANCHOR BOLTS. LIGHTING POLE SHALL BE HOT TIP GALVANIZED PRIOR TO POWDER COAT PAINT.
 5. DECORATIVE POLE BASE
HOLOPHANE CAMBRIDGE SERIES MODEL CM17CSB OR SPRING CITY CAMBRIDGE SERIES MODEL DWCBMB-17-CU DECORATIVE CLAMSHELL CAST ALUMINUM BASE. HARDWARE SHALL BE STAINLESS STEEL.
 6. DIMENSIONS
OVERALL HEIGHT = 19' 3"
POLE HEIGHT = 15' 0"
BRACKET ARM = 3' 9"
BASE DIAMETER = 17" TO 18"
 7. FINISH
BLACK (STANDARD)
- APPLICATION:
STREET/SIDEWALK LIGHTING
SPACING:
ONE SIDE: 80'-110' ON CENTER
PLACE IN FURNISHING ZONE OVERHANG TOWARDS STREET; WHERE FIXTURE CONFLICTS WITH OVERHEAD UTILITIES, MAY BE PLACED ON BACK OF SIDEWALK.

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

ISSUED FOR

BY

DATE

CONCEPTS

MAJOR SITE PLAN

COMMENT RESPONSE

1. ILLUSTRATIONS ARE FOR INFORMATIONAL PURPOSES ONLY. FINAL SIGNAGE SHALL BE COORDINATED, AND INSTALLED BY THE TRAFFIC DIVISION OF THE DEPARTMENT OF PUBLIC WORKS. CONTRACTOR SHALL TO INSTALL POST SLEEVES WITHIN THE CONCRETE SIDEWALK. LOCATIONS TO BE REVIEWED IN FIELD BY TRAFFIC DIVISION PRIOR TO POURING CONCRETE.

3. SIGN POST SHALL BE ALIGNED WITH CENTERLINE DENOTATION.

4. SIGN POSTS ARE OFFSET 5' FROM DRIVEWAYS AND 25' FROM INTERSECTIONS.

SITE DETAILS - 2

PROJECT NAME

61 PREBLE STREET REDEVELOPMENT - PORTLAND

CLIENT

60 ELM STREET, LLC

188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101

ACORN ENGINEERING, INC.

ENGINEERING, INC.

ACORN ENGINEERING, INC.

PO BOX 3372, PORTLAND MAINE 04104

(207) 775-2655

FILE:1192.5_AE_DETAILS

JN: 1192.5

SCALE: AS NOTED

DESIGNED BY: SUL

DRAWN BY: DNM

CHECKED BY: SUL

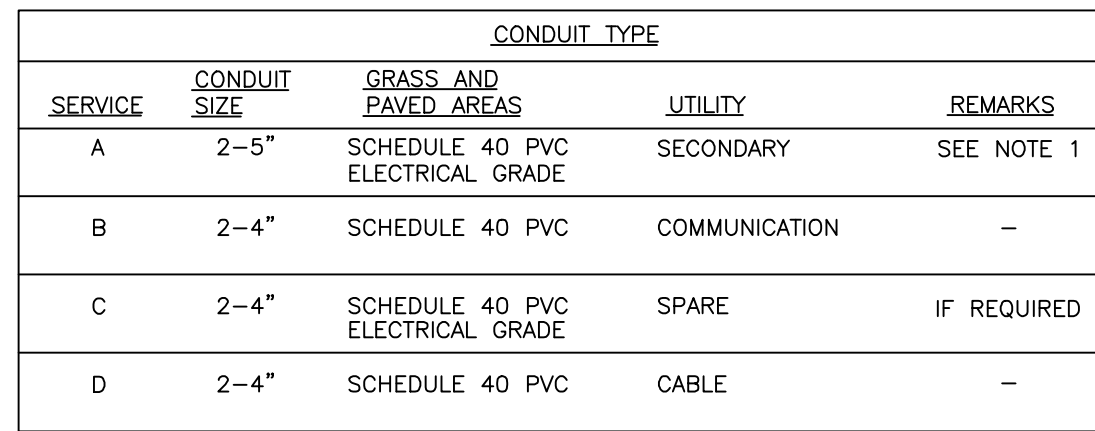
Samuel J. Lebel

PROFESSIONAL ENGINEER

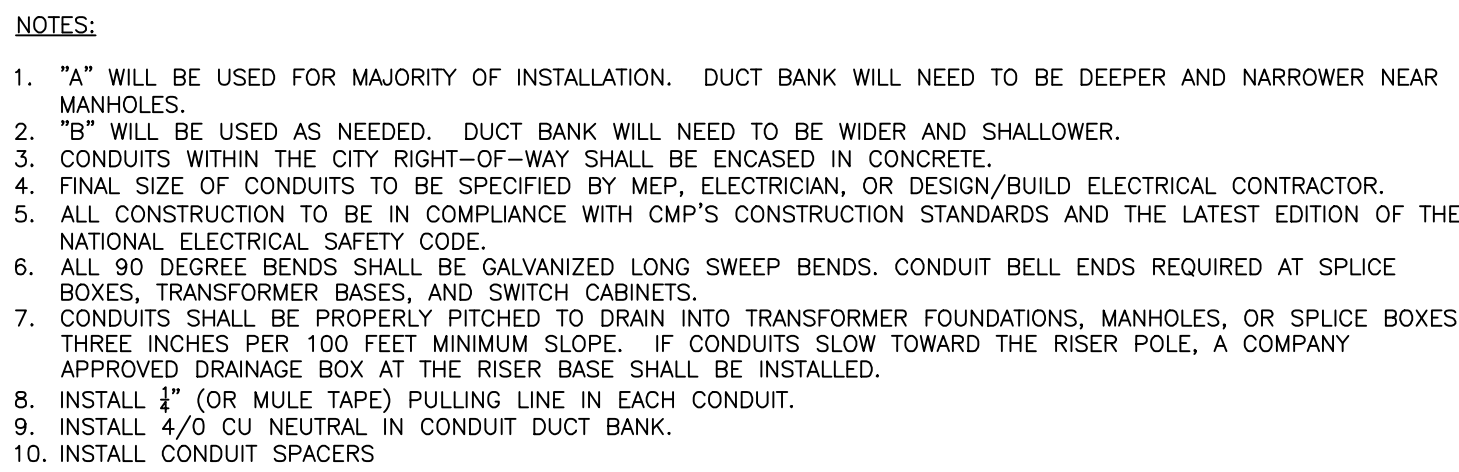
2/7/25

DRAWING NO.

C-41



- UTILITY TRENCH:
SECONDARY POWER, TELEPHONE, AND CABLE



NOTES:

1. VAULT SHALL BE DESIGNED TO WITHSTAND H2O LOADING WITH 6 INCHES OF OVERBURDEN. THE DESIGN SHALL ALSO COMPLY WITH THE STRENGTH REQUIREMENTS OF NATIONAL ELECTRICAL SAFETY CODE SECTION 323A. PROVED SHOP DRAWINGS STAMPED BY A STATE OF MAINE REGISTERED PROFESSIONAL ENGINEER AVAILABLE UPON REQUEST.
2. JOINTS SEALED WITH UPHAL.
3. MOUNTINGS FOR CABLE ROCKS ETC. COAST IN WALL BY FURTHER PLANS OR FIELD LOCATION.
4. MANHOLE SHALL BE SET ON A SUITABLE GRAVEL BASE.
5. CABLES ARE TO BE RACKED ALONG ONE WALL ONLY.

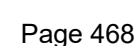
1. DIAMOND COVER DESIGN
2. SEAT MACHINED ON FRAME & COVER
3. WT.=553LBS

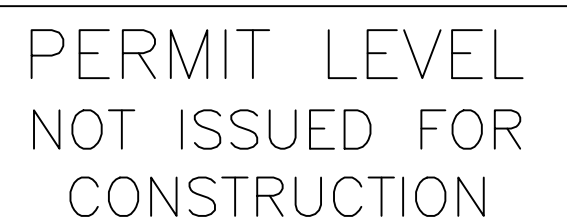
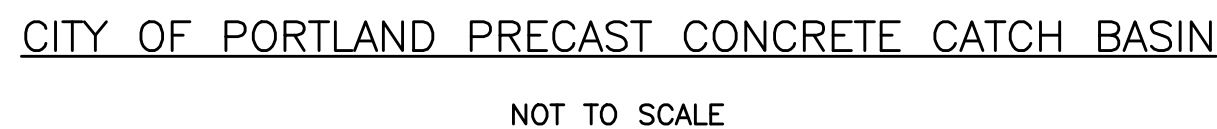
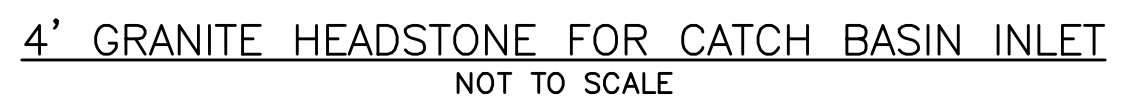
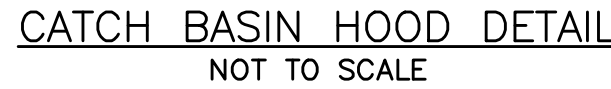
2'-8"
2'-10"
1"
2'-6"
3'-3.75"
0.75"
1.5"
6"

CMP JUNCTION BOX NOTES:

1. JUNCTION BOX TO COMPLY WITH NATIONAL ELECTRICAL SAFETY CODE SECTION 323A.
2. BOX TO BE DESIGNED TO WITHSTAND H2O WHEEL LOADING WITH 6" OVERBURDEN.
3. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
4. BOX TO BE INSTALLED WITH CMP'S TYPE 'B' CASTING (CMP 5/C62-1780, 62-1785, & 62-1880).
5. JUNCTION BOX AND SLAB TO BE SET ON MIN 6" COMPACTED 3/4" CRUSHED STONE.

PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION





STATE OF MARYLAND
Sam Lebel
 SAMUEL J. LEBEL
 No. 16505
 LICENSED
 PROFESSIONAL ENGINEER
 2/7/25

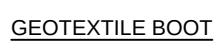
1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. CATCH BASIN TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.12 IN SQ./LF.
5. JOINTS SEALED WITH BUTYL RUBBER.
6. POLYPROPYLENE STEPS 12" O.C.



CUT AN X IN THE FABRIC ENVELOPE THAT IS SLIGHTLY LARGER THAN THE PIPE. PULL THE FABRIC FLAPS AROUND THE PIPE, AND SEAL WITH A STAINLESS STEEL BAND.



STAINLESS STEEL BAND USED TO
FASTEN FABRIC TO PIPES TO
PREVENT BACKFILL FROM
ENTERING STRUCTURE



PLAN VIEW

SECTION A-A

NOT TO SCALE

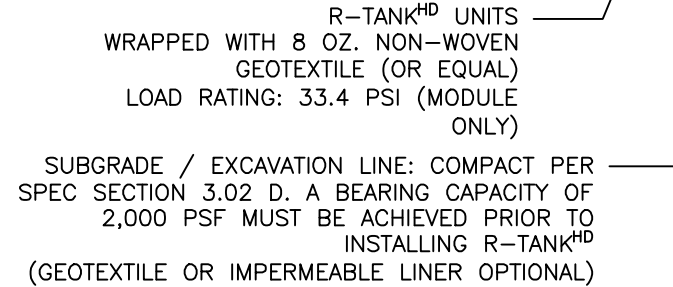
STORMFILTER DESIGN NOTES

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. 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.



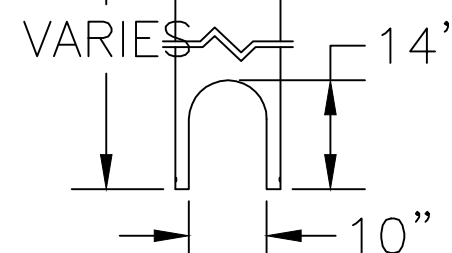
NOT TO SCALE

R TANK SYSTEM VARIES PER LOCATION. SEE SHEET C-30 & C-36 FOR MORE INFORMATION.



MODULE DATA

1. THE INSPECTION PORT IS USED IN THE MAINTENANCE MODULE TO INSPECT THE LEVEL OF SEDIMENT ACCUMULATION.
2. MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION DURING THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER. FLUSH MAINTENANCE ROW VIA THE ACCESS STRUCTURE FROM EITHER END AS NEEDED.
3. R-TANK⁴⁰ MAY BE USED IN TRAFFIC APPLICATIONS.
4. SEE TRAFFIC LOADING DETAIL FOR MINIMUM & MAXIMUM COVER REQUIREMENTS.
5. IF INSPECTION PORT IS LOCATED IN A NON-TRAFFIC AREA, A PLASTIC CAP CAN B USED IN LIEU OF A FRAME AND COVER WITH CONCRETE COLLAR



PERMIT LEVEL
NOT ISSUED FOR
CONSTRUCTION

DRAINAGE DETAILS - 2

PROJECT NAME: **61 PREBLE STREET REDEVELOPMENT – PORTLAND**

60 ELM STREET, LLC

188 STATE STREET, 3RD FLOOR, PORTLAND, ME 04101



A C O R
ENGINEERING, INC.

FILE1192.5_AE_DETAILS

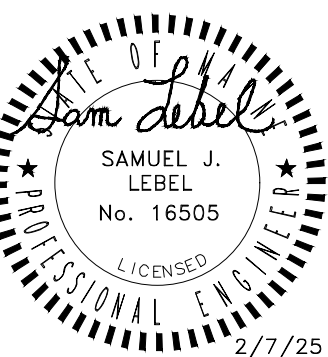
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SCALE: AS NOTED

DESIGNED BY: SJL

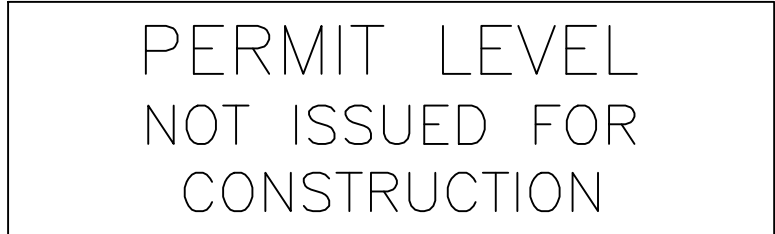
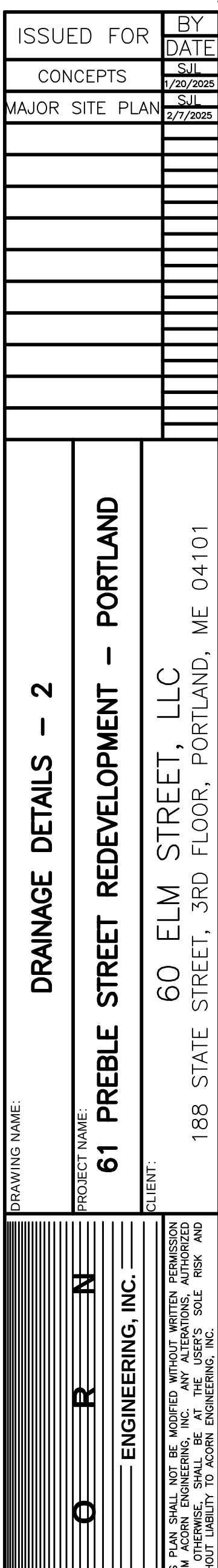
RAWN BY: DNM

HECKED BY: SJL



DRAWING NO.

C-45



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.

THE FOLLOWING TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE PLANNED FOR THE PROJECT'S CONSTRUCTION PERIOD:

- Page 473

REVELER BAYSIDE PHASE 1B

61 PREBLE STREET, PORTLAND, ME 04101



DRAWING LIST	
SHEET NUMBER	SHEET NAME
00_GENERAL	
CS	COVER SHEET
03_ARCHITECTURAL	
A1.01	LEVEL 1 FLOOR PLAN
A1.02	LEVEL 2 FLOOR PLAN
A1.03	LEVEL 3-10 FLOOR PLAN
A1.04	ROOF PLAN
A2.00	EXTERIOR ELEVATIONS
A2.01	EXTERIOR ELEVATIONS
A2.02	EXTERIOR ELEVATIONS
A2.03	EXTERIOR ELEVATIONS
A3.00	BUILDING SECTIONS
A3.01	BUILDING SECTIONS
A3.02	BUILDING SECTIONS
A3.03	BUILDING SECTIONS
A3.04	BUILDING SECTIONS
A5.00	MATERIAL BOARD
A7.00	PERSPECTIVE VIEWS



188 State St.
3rd Floor
Portland, ME 04102



30 Milk Street
2nd Floor
Portland, ME 04101
PH: 207.747.1515



241 US Route 1
Suite 401
Falmouth, ME, 04105
PH: 207.236.6390



16 Middle St.
Suite 302
Portland, ME 04101
PH: 207.775.2655



104 Congress St.
STE 203
Portsmouth, NH 03801
PH: 603.501.0202
www.marketsquarearchitects.com



31 Miller Ave
Biddeford, ME 04005
PH: 603.496.8020

OWNER:

PARTNER:

GENERAL CONTRACTOR:
BY OWNER

CIVIL ENGINEER:
BY OWNER

ARCHITECT:

LANDSCAPE ARCHITECT:
BY OWNER

CONCEPT DESIGN

02/07/2025

61 PREBLE UNIT MATRIX											
	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH	EIGHTH	NINTH	TENTH	TOTAL
FLOOR PLATE SF:	11,226 SF	14,850 SF	18,172 SF	18,172 SF	18,172 SF	18,172 SF	18,172 SF	18,172 SF	18,172 SF	18,172 SF	171,452 SF
STUDIO	0	6	7	7	7	7	7	7	7	7	62 UNITS
TYPE A	0	1	0	0	0	0	0	0	0	0	1 UNITS
STANDARD 1-BED	0	8	11	10	11	10	11	11	11	11	94 UNITS
TYPE A	0	0	0	1	0	1	0	0	0	0	2 UNITS
LARGE 1-BED	0	1	4	4	3	4	4	4	4	4	32 UNITS
TYPE A	0	0	0	0	1	0	0	0	0	0	1 UNITS
2-BED	0	1	3	3	3	3	2	3	3	3	24 UNITS
TYPE A	0	0	0	0	0	0	1	0	0	0	1 UNITS
TOTALS	0	17	25	25	25	25	25	25	25	25	217 UNITS

TOTAL TYPE B	212
TOTAL TYPE A	5
TOTAL	0
TOTAL	217

MARKET SQUARE ARCHITECTS

104 Congress St., STE 203
Portland, ME 04101
PH: 603.501.0202

REVELER BAYSIDE PHASE 1B

61 PREBLE STREET, PORTLAND, ME 04101

NOT FOR CONSTRUCTION

Date	
Revisions:	Description
#	
As Indicated	AMB
Scale:	BH
Drawn By:	2024079
Checked By:	CONCEPT DESIGN
Project No.:	05/30/2025
Date:	

LEVEL 1 FLOOR PLAN

A1.01

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1 LEVEL 1 FLOOR PLAN

SCALE: 1/8" = 1'-0"

61 PREBLE UNIT MATRIX											
	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH	EIGHTH	NINTH	TENTH	TOTAL
FLOOR PLATE SF:	11,226 SF	14,850 SF	18,172 SF	18,172 SF	18,172 SF	18,172 SF	18,172 SF	18,172 SF	18,172 SF	18,172 SF	171,452 SF
STUDIO	0	6	7	7	7	7	7	7	7	7	62 UNITS
TYPE A	0	1	0	0	0	0	0	0	0	0	1 UNITS
STANDARD 1-BED	0	8	11	10	11	10	11	11	11	11	94 UNITS
TYPE A	0	0	0	1	0	1	0	0	0	0	2 UNITS
LARGE 1-BED	0	1	4	4	3	4	4	4	4	4	32 UNITS
TYPE A	0	0	0	0	1	0	0	0	0	0	1 UNITS
2-BED	0	1	3	3	3	3	2	3	3	3	24 UNITS
TYPE A	0	0	0	0	0	0	1	0	0	0	1 UNITS
TOTALS	0	17	25	25	25	25	25	25	25	25	217 UNITS

TOTAL TYPE B	212
TOTAL TYPE A	5
TOTAL	217

MARKET SQUARE

ARCHITECTS

104 Congress St., STE 203
Portland, ME 04101
PH: 603.501.0202

REVELER BAYSIDE PHASE 1B

61 PREBLE STREET, PORTLAND, ME 04101

NOT FOR CONSTRUCTION

Date	
Revisions:	
#	Description
As Indicated	AMB
BH	
Project No.:	2024079
CONCEPT DESIGN	
Date:	05/30/2025

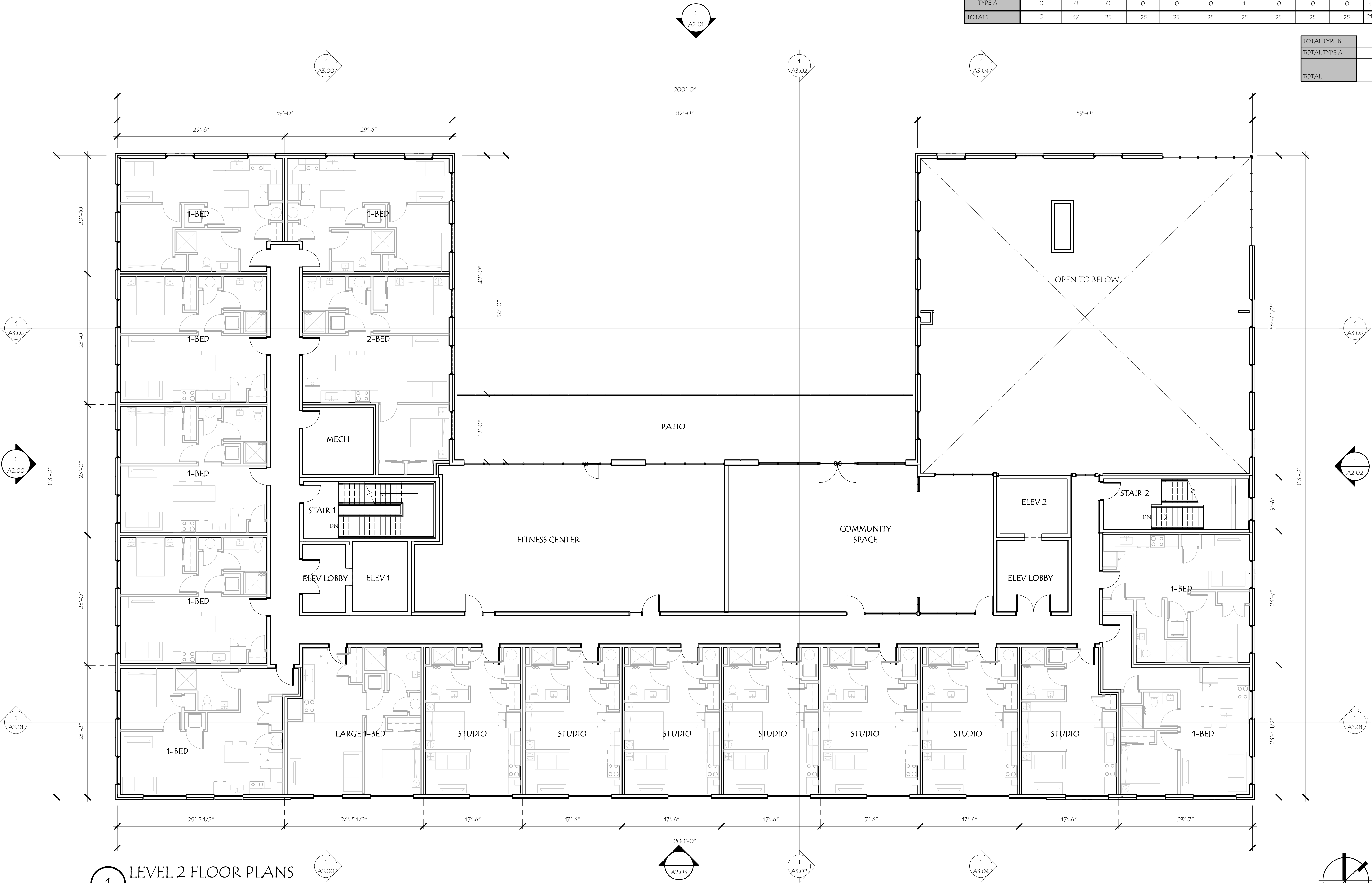
Title: LEVEL 2 FLOOR PLAN

A1.02

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1 LEVEL 2 FLOOR PLANS

SCALE: 1/8" = 1'-0"



61 PREBLE UNIT MATRIX											
	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH	EIGHTH	NINTH	TENTH	TOTAL
FLOOR PLATE SF:	11,226 SF	14,850 SF	18,172 SF	18,172 SF	18,172 SF	18,172 SF	18,172 SF	18,172 SF	18,172 SF	18,172 SF	171,452 SF
STUDIO	0	6	7	7	7	7	7	7	7	7	62 UNITS
TYPE A	0	1	0	0	0	0	0	0	0	0	1 UNITS
STANDARD 1-BED	0	8	11	10	11	10	11	11	11	11	94 UNITS
TYPE A	0	0	0	1	0	1	0	0	0	0	2 UNITS
LARGE 1-BED	0	1	4	4	3	4	4	4	4	4	32 UNITS
TYPE A	0	0	0	0	1	0	0	0	0	0	1 UNITS
2-BED	0	1	3	3	3	3	2	3	3	3	24 UNITS
TYPE A	0	0	0	0	0	0	1	0	0	0	1 UNITS
TOTALS	0	17	25	25	25	25	25	25	25	25	217 UNITS

TOTAL TYPE B	212
TOTAL TYPE A	5
	0
TOTAL	217

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104 Congress St., STE 203
Portland, ME 04101
PH: 603.501.0202

REVELER BAYSIDE PHASE 1B

61 PREBLE STREET, PORTLAND, ME 04101

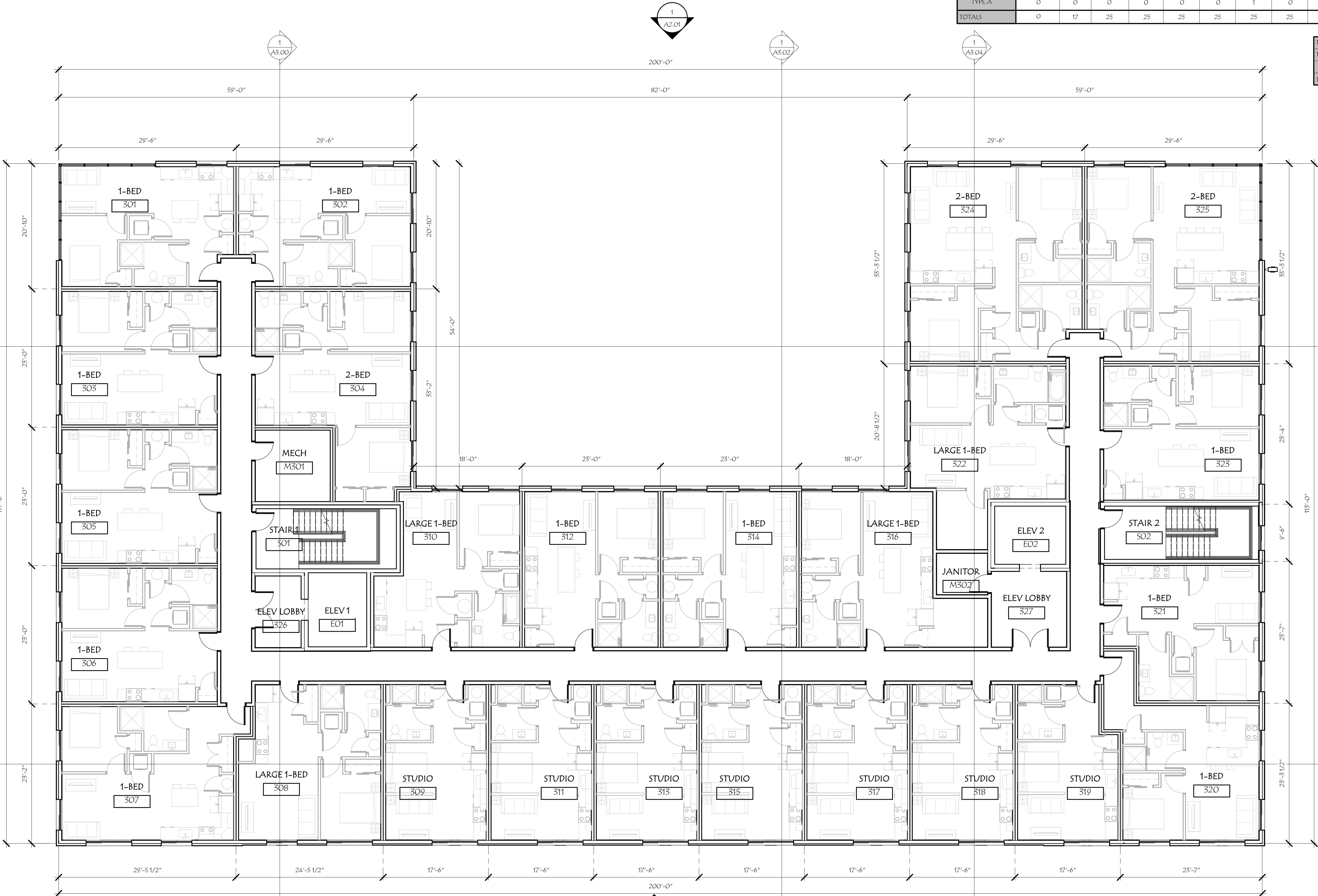
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Drawn By:	AMB	# Description	
Checked By:	BH		
Project No.:	2024079		
CONCEPT DESIGN			
Date:	05/30/2025		

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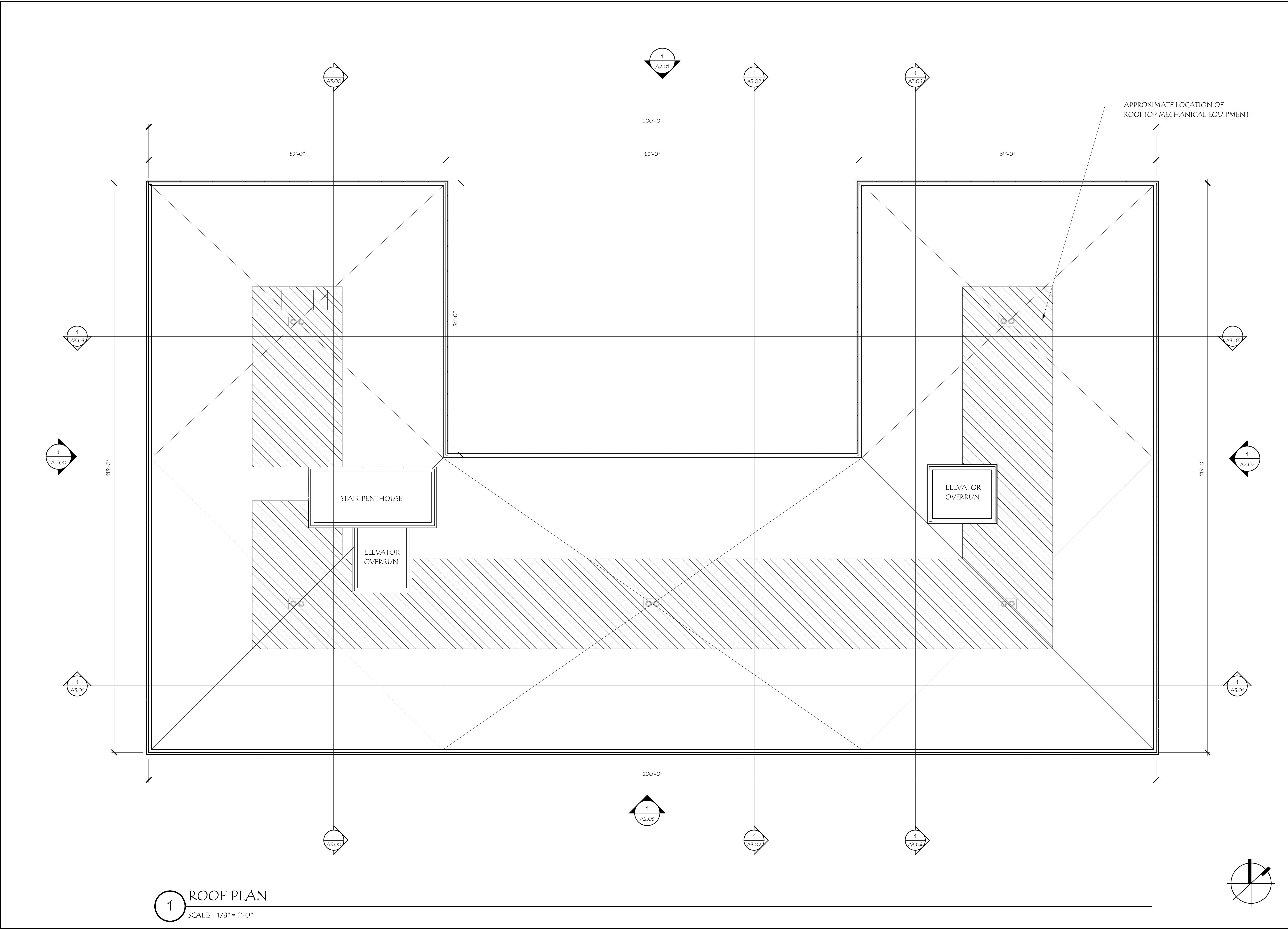
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1 LEVEL 3-10 FLOOR PLAN

SCALE: 1/8" = 1'-0"



1 ROOF PLAN
SCALE: 1/8" = 1'-0"



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Title: ROOF PLAN	Scale: 1/8" = 1'-0"	Revisions: # Description	Date
	Drawn By: AMB	AMB	
A1.04	Checked By: BH	BH	
	Project No.:	2024079	
	CONCEPT DESIGN		
	Date:	05/30/2025	

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1 EXTERIOR ELEVATION - PREBLE STREET
SCALE: 1/8" = 1'-0"

ELEVATION MATERIAL KEY		
TAG	MATERIAL	IMAGE
BRK-1	BRICK MASONRY CHARCOAL GRAY	
CP-1	PRECAST CONCRETE OR GRANITE ACCENT BAND	
MP-1	FIBER CEMENT PANEL NEUTRAL	
MP-2	METAL PANEL CLADDING: CHARCOAL GRAY	

SEE SHEET A5.00 FOR MATERIAL SHEET

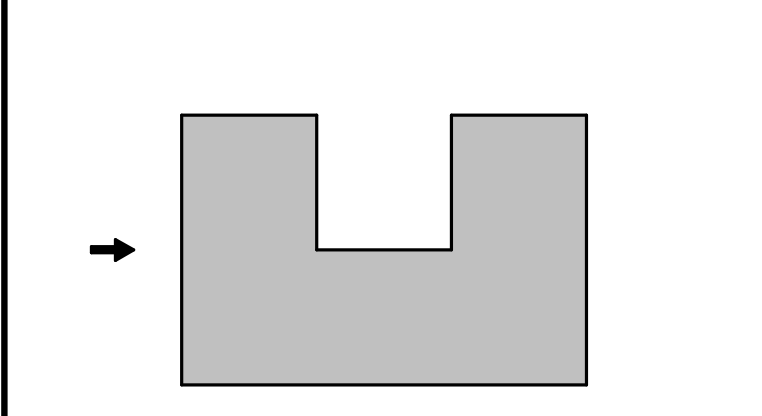


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#	Description	
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Checked By:		
Project No.:		
CONCEPT DESIGN		
Date:		

ELEVATION KEY PLAN



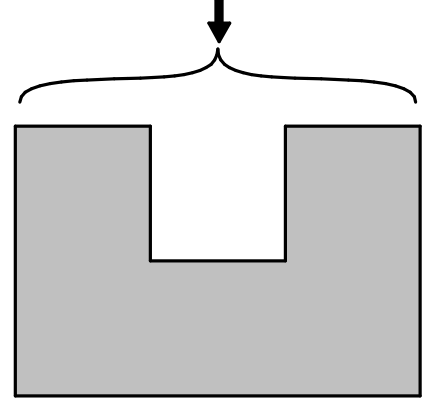
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TAG	MATERIAL	IMAGE
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CP-1	PRECAST CONCRETE OR GRANITE ACCENT BAND	
MP-1	FIBER CEMENT PANEL NEUTRAL	
MP-2	METAL PANEL CLADDING CHARCOAL GRAY	

SEE SHEET A5.00 FOR MATERIAL SHEET



ELEVATION KEY PLAN



1 EXTERIOR ELEVATION - OXFORD STREET
SCALE: 1/8" = 1'-0"



1 EXTERIOR ELEVATION - ELM STREET
SCALE: 1/8" = 1'-0"

ELEVATION MATERIAL KEY		
TAG	MATERIAL	IMAGE
BRK-1	BRICK MASONRY CHARCOAL GRAY	
CP-1	PRECAST CONCRETE OR GRANITE ACCENT BAND	
MP-1	FIBER CEMENT PANEL NEUTRAL	
MP-2	METAL PANEL CLADDING: CHARCOAL GRAY	

SEE SHEET A5.00 FOR MATERIAL SHEET



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				Date:

Title:
EXTERIOR
ELEVATIONS

A2.02

ELEVATION MATERIAL KEY		
TAG	MATERIAL	IMAGE
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CP-1	PRECAST CONCRETE OR GRANITE ACCENT BAND	
MP-1	FIBER CEMENT PANEL NEUTRAL	
MP-2	METAL PANEL CLADDING: CHARCOAL GRAY	

SEE SHEET A5.00 FOR MATERIAL SHEET

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Revisions:	Date
#	Description

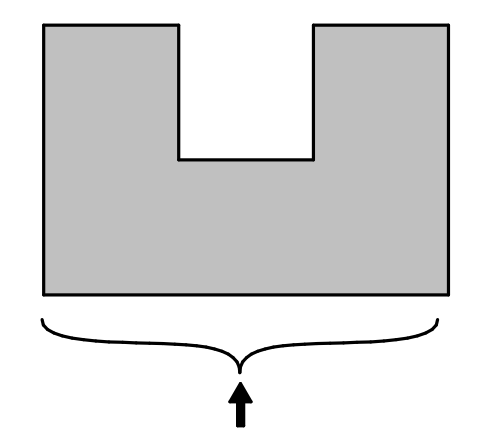
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ELEVATION KEY PLAN



1 EXTERIOR ELEVATION - CUMBERLAND ST
SCALE: NTS

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Date

Revisions:
Description

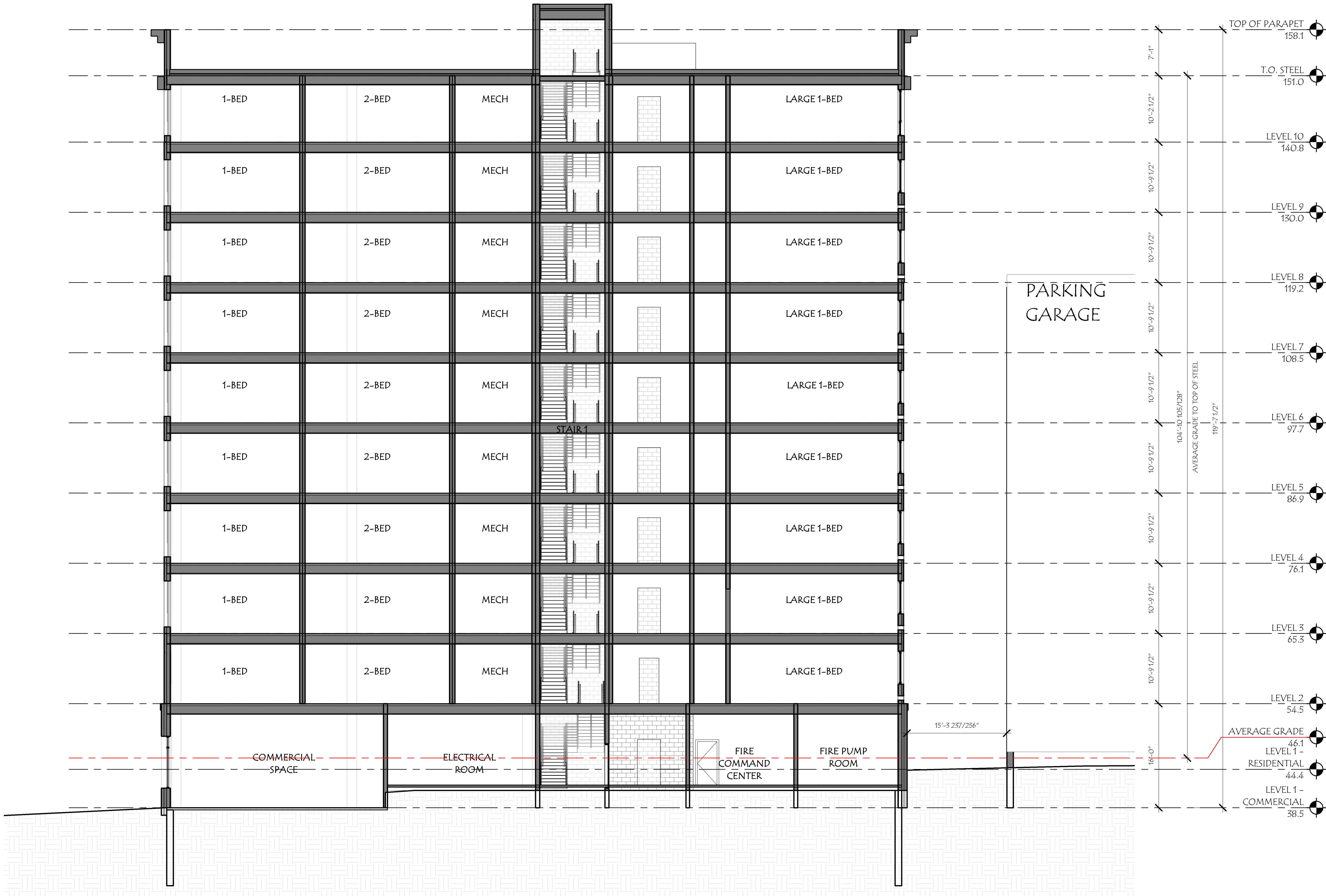
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AMB BH

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Drawn By:
Checked By:
Project No.:
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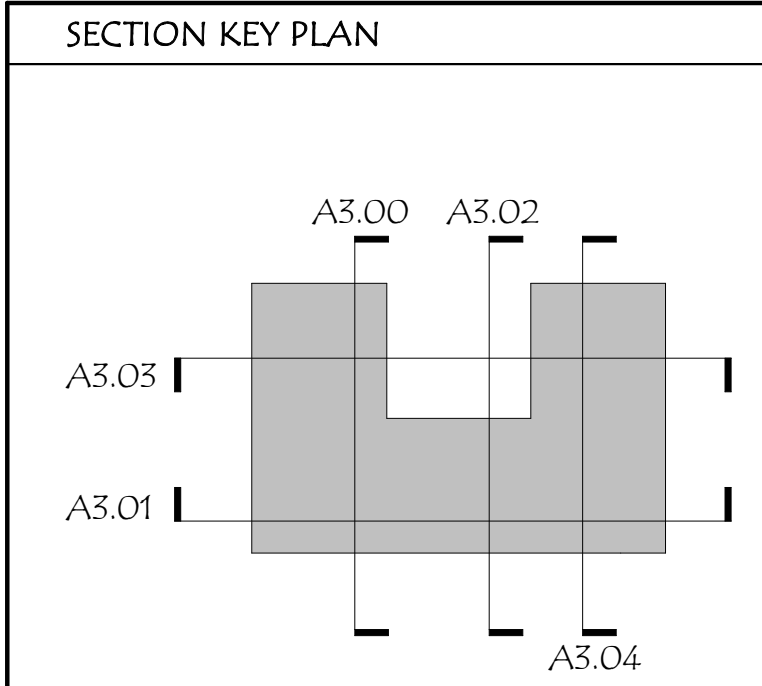
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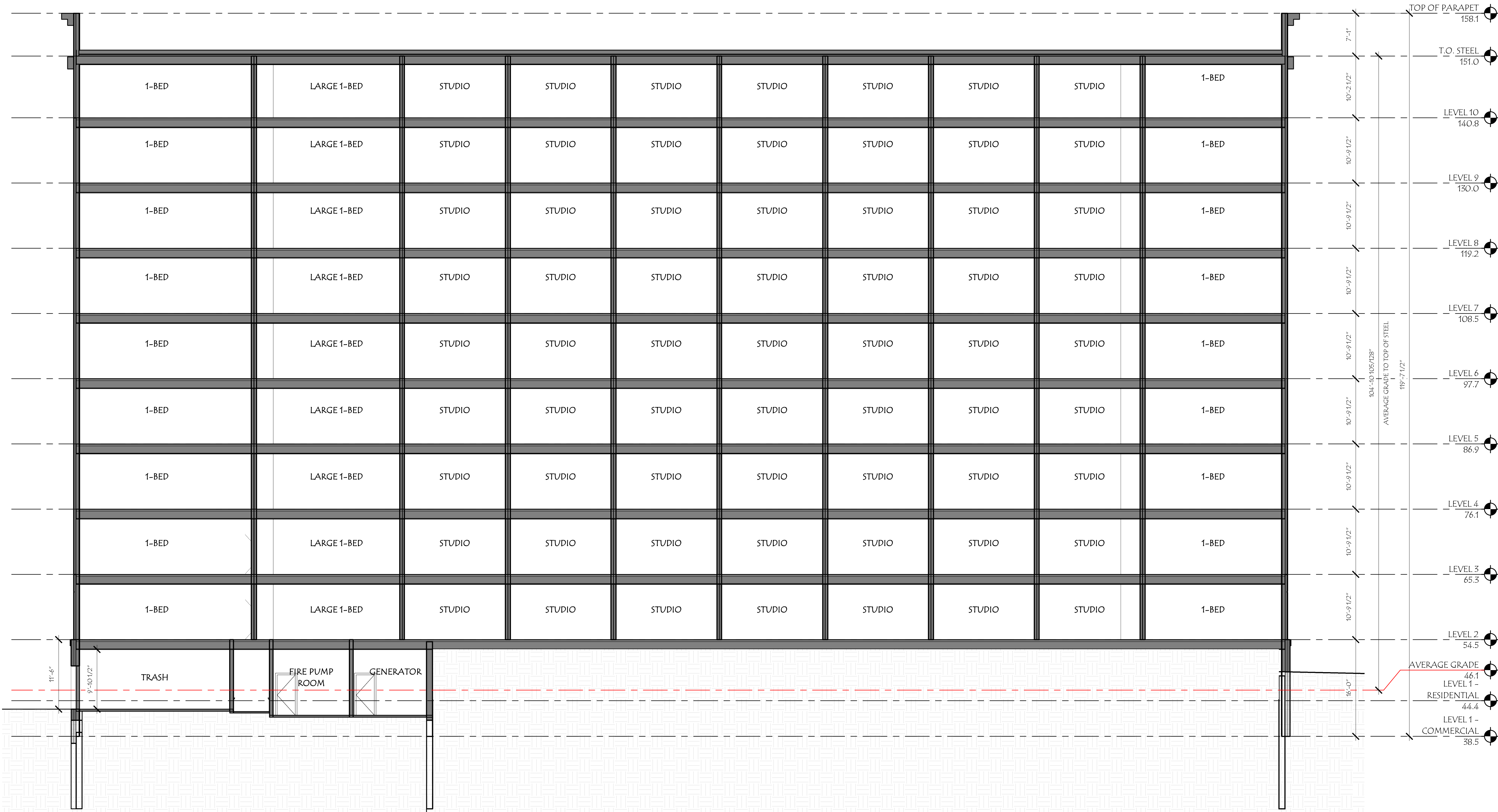
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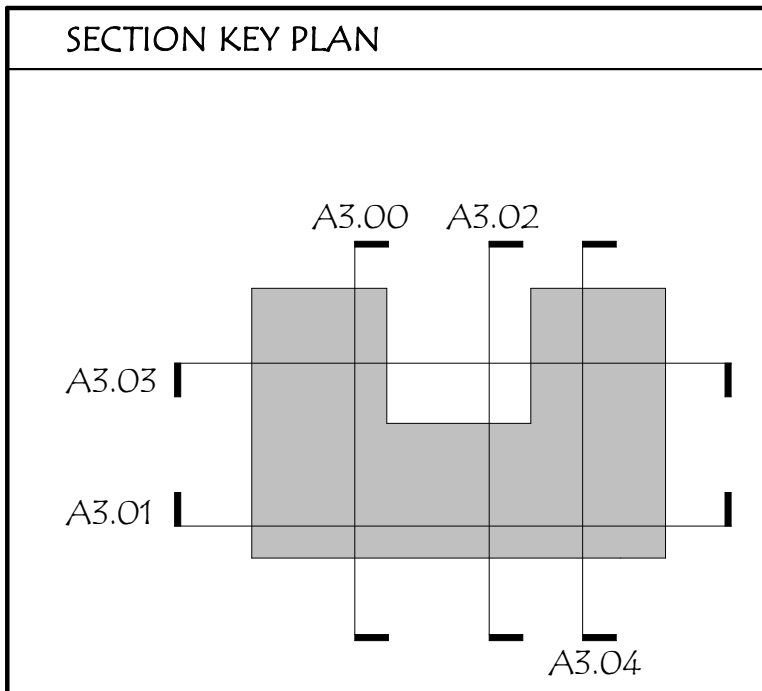


1 OXFORD- CUMBERLAND SECTION
SCALE: 1/8" = 1'-0"





1 ELM-PREBLE SECTION
SCALE: 1/8" = 1'-0"





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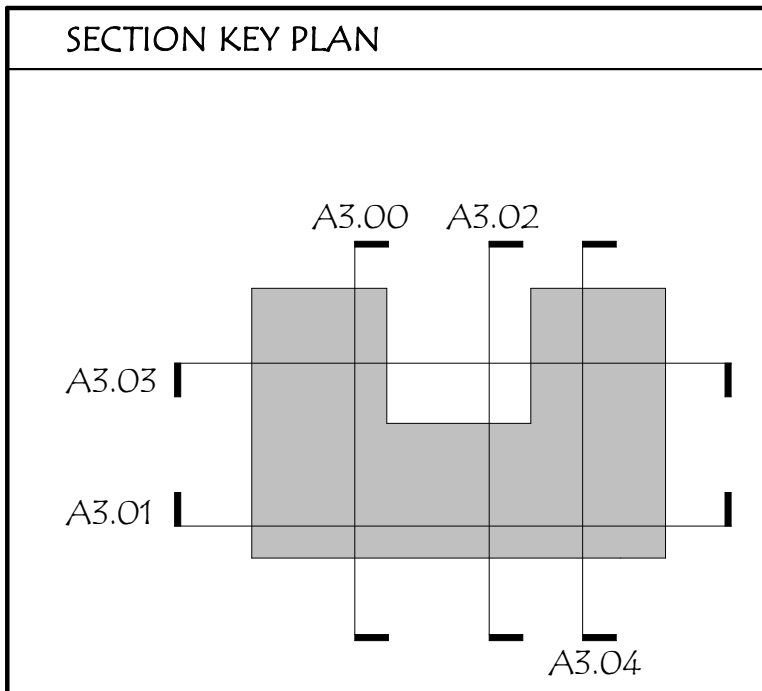
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Page 485



1 OXFORD-CUMBERLAND SECTION 2
SCALE: 1/8" = 1'-0"



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BUILDING SECTIONS

A3.02

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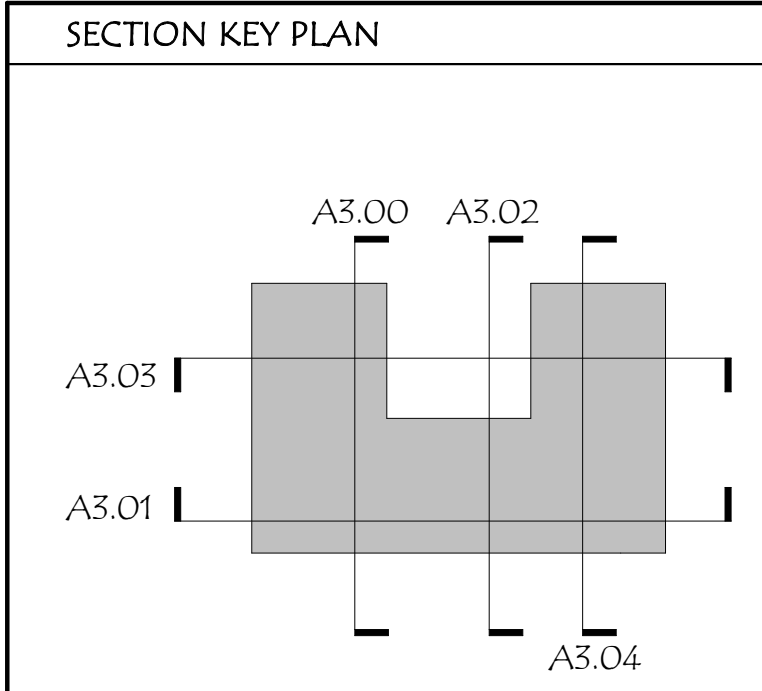
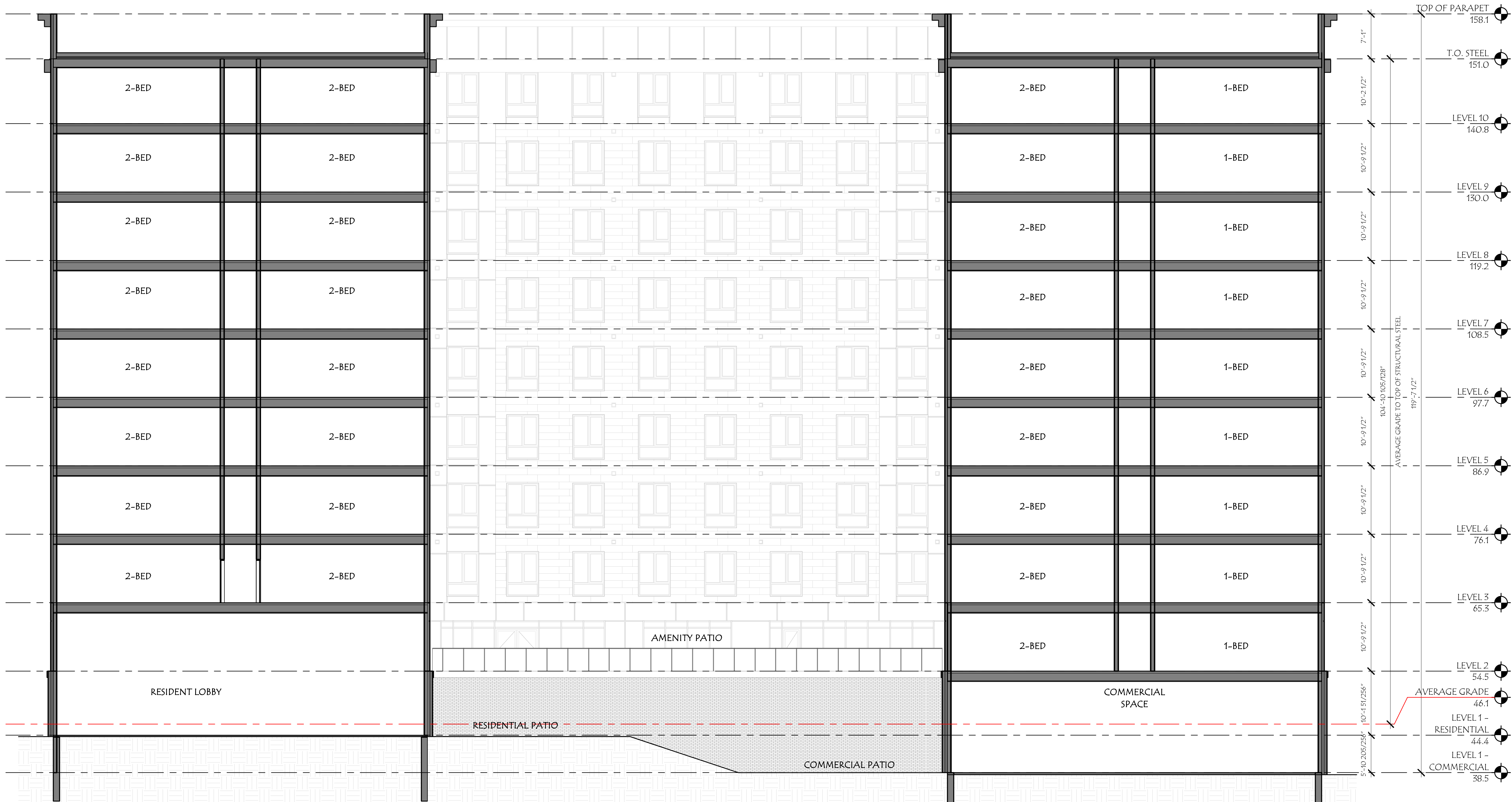
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AMB BH
2024079

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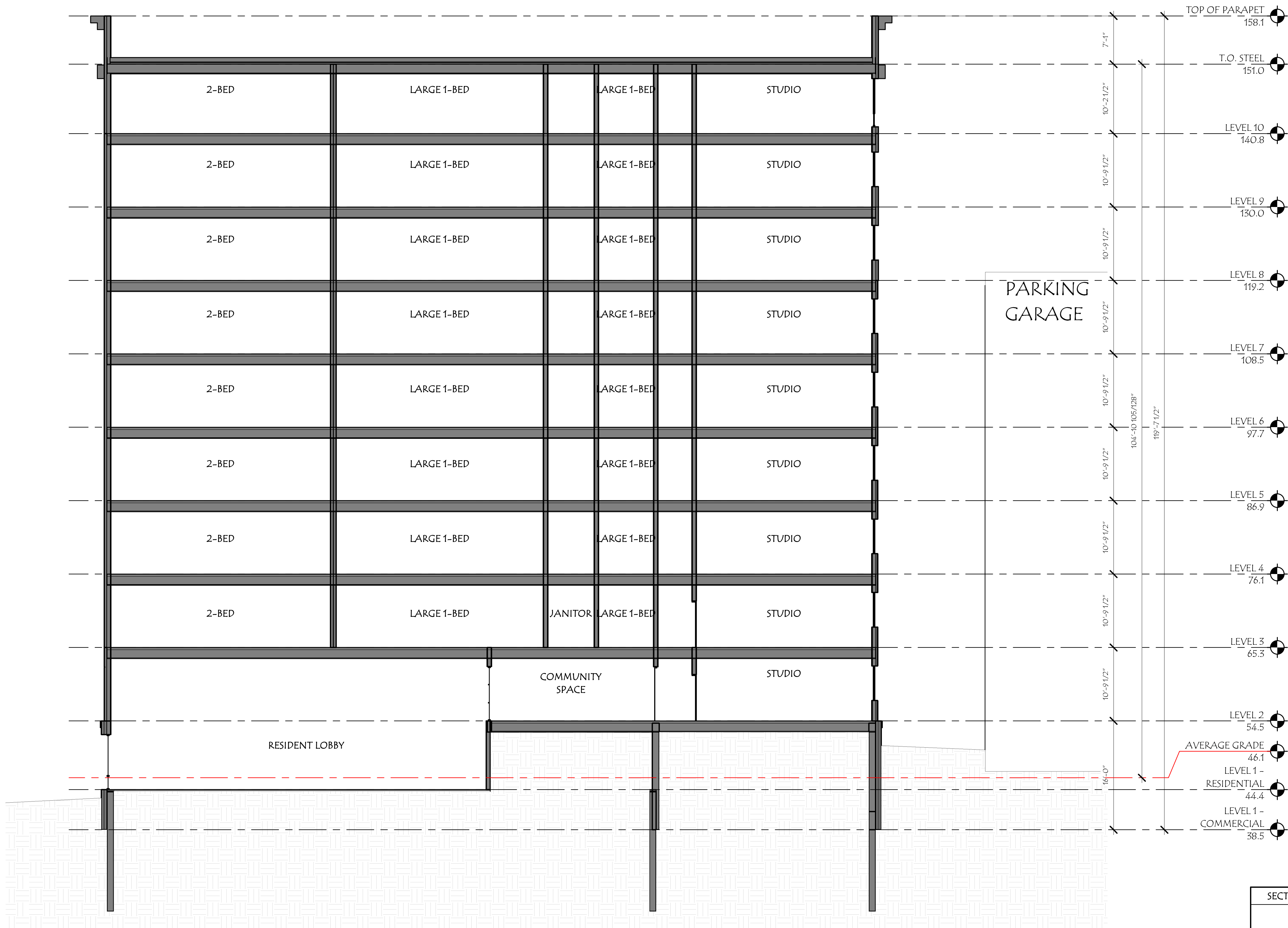
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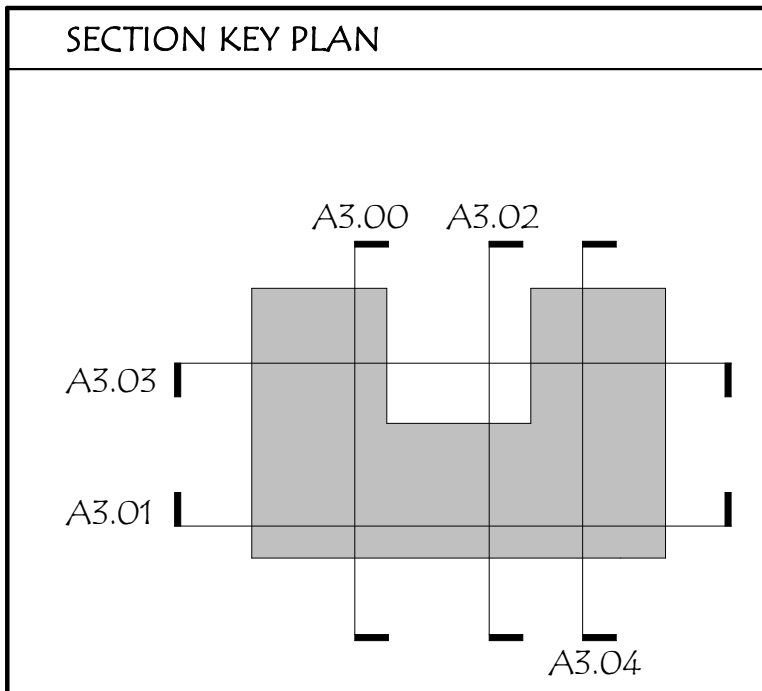
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1 ELM- PREBLE SECTION 2
SCALE: 1/8" = 1'-0"



1 OXFORD- CUMBERLAND SECTION 3
SCALE: 1/8" = 1'-0"



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REVELER BAYSIDE PHASE 1B

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1	As Indicated

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Date: 05/30/2025

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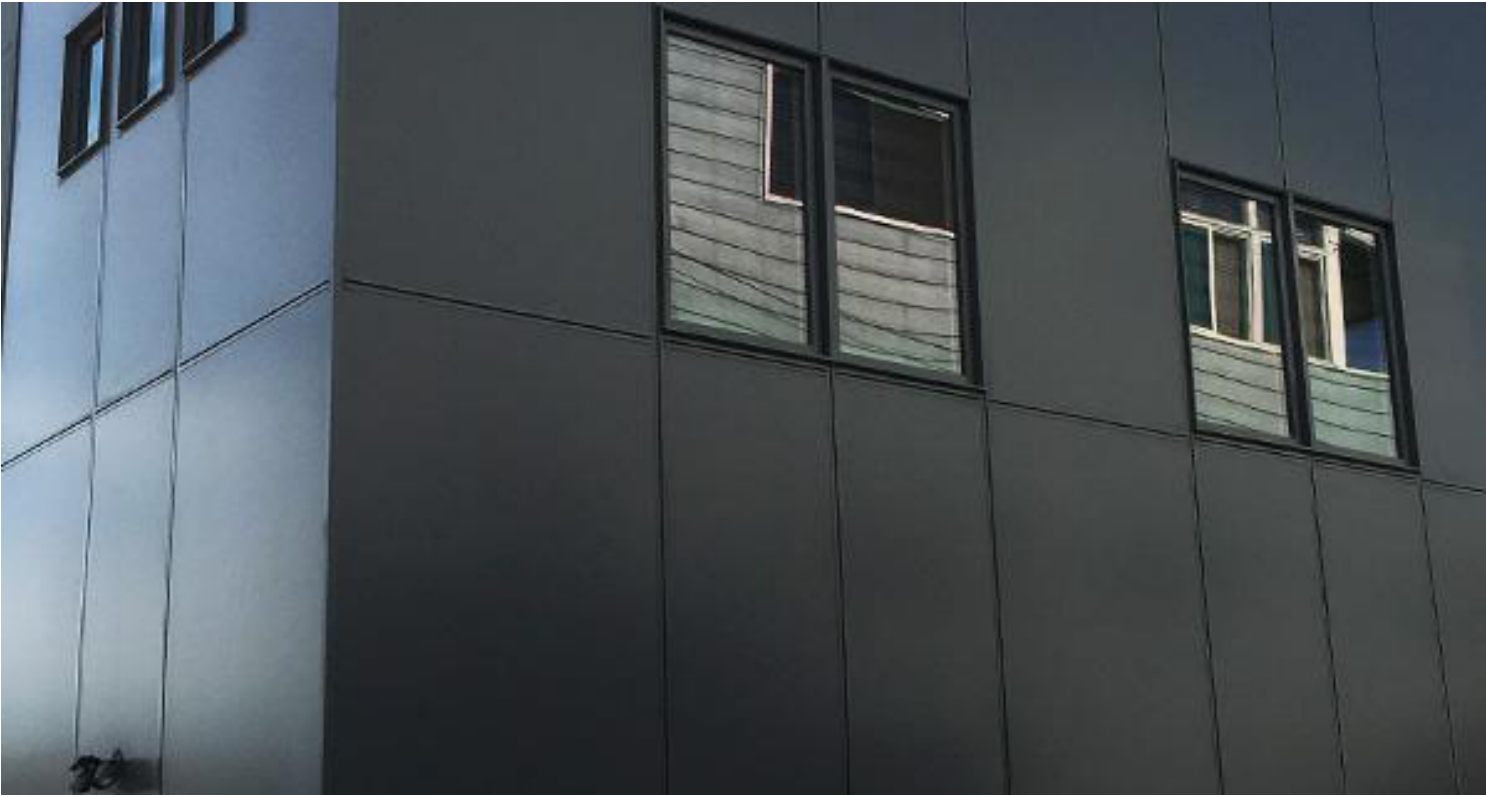
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A3.04

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METAL PANEL CLADDING: CHARCOAL GRAY



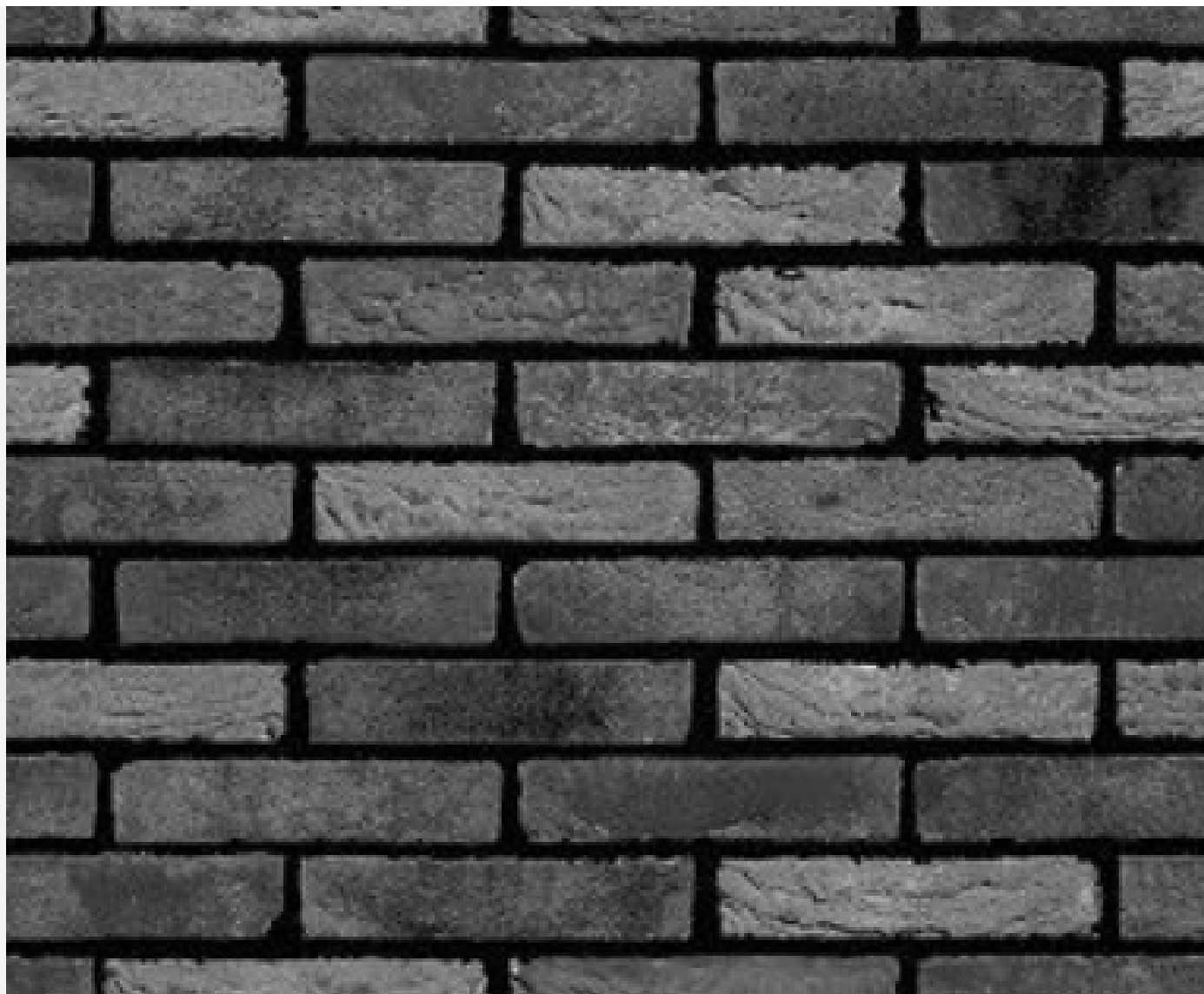
METAL PANEL CLADDING CORNICE



BLACK METAL RAILING WITH WIRE RAILS



BRICK MASONRY: CHARCOAL GRAY



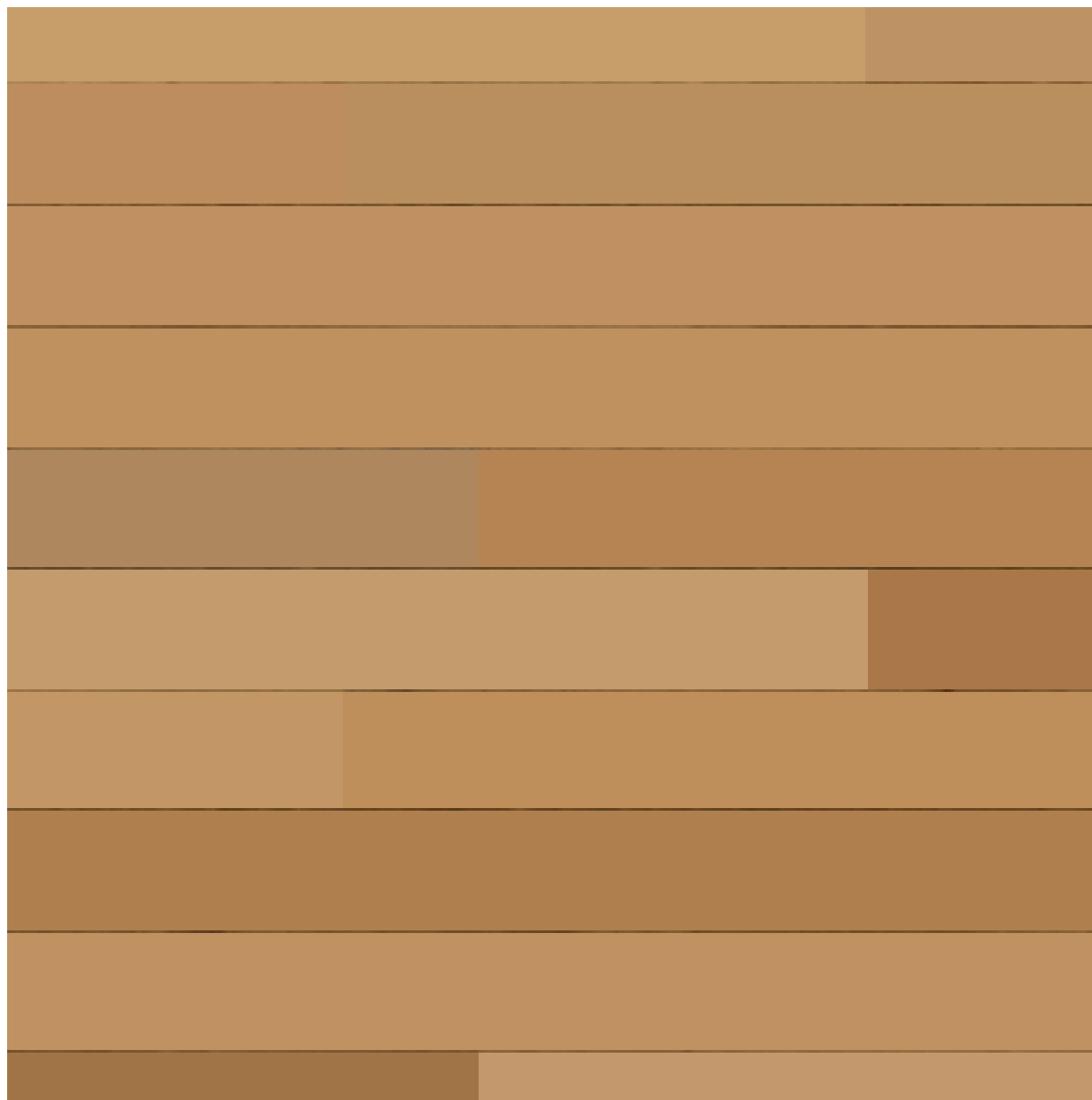
METAL CANOPY PAINTED BLACK



ANODIZED BLACK METAL STOREFRONT



FIBER CEMENT PANEL: NEUTRAL



PRECAST CONCRETE OR GRANITE ACCENT BAND



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#	Description

Scale:	
Author	Checker

Project No.:	
Drawn By:	Checked By:

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Date:	

Title:	
MATERIAL BOARD	
A5.00	

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1 3D View 1
SCALE:



2 3D View 2
SCALE:



3 3D View 3
SCALE:



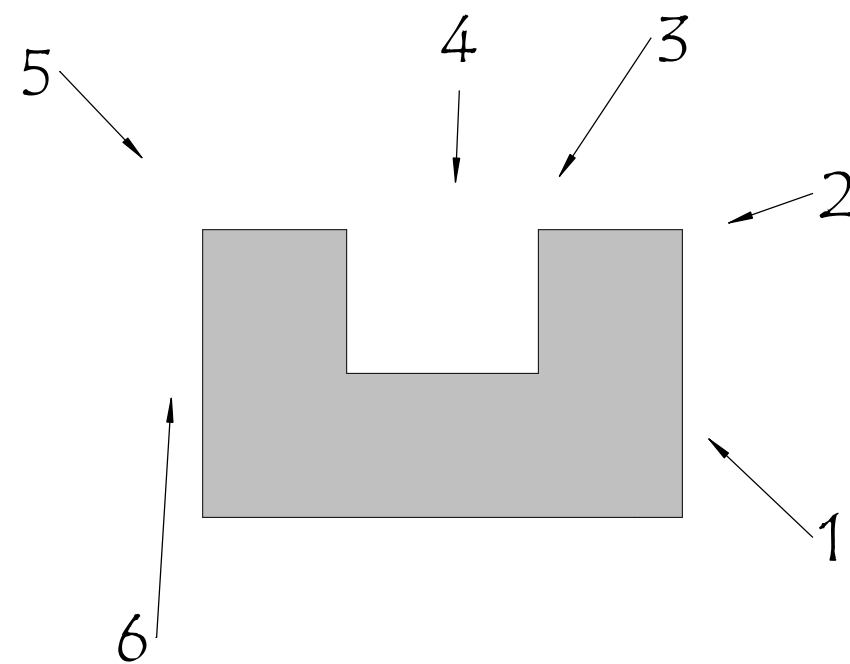
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SCALE:



5 3D View 5
SCALE:



6 3D View 6
SCALE:



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SQUARE

ARCHITECTS

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Portland, ME 04101
PH: 603.501.0202

REVELER BAYSIDE PHASE 1B

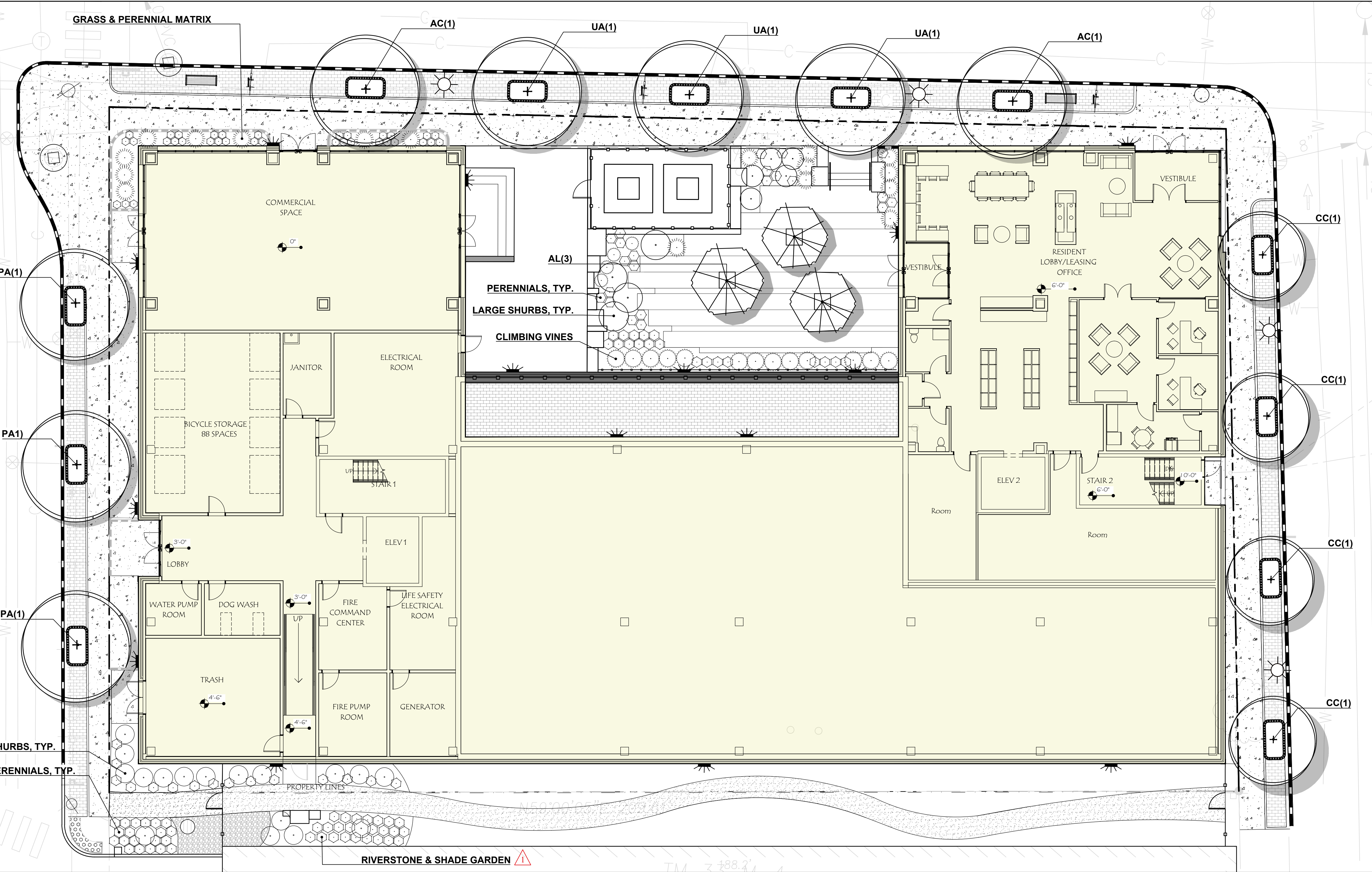
61 PREBLE STREET, PORTLAND, ME 04101

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CONSTRUCTION

Revisions:	Date
# Description	
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AMB	BH
2024079	05/30/2025
Scale:	Date:
Drawn By:	CONCEPT DESIGN
Checked By:	
Project No.:	
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PLANTING NOTES

- LANDSCAPE ARCHITECT TO APPROVE PLANT MATERIAL PRIOR TO DELIVERY TO SITE.
- PLANT MATERIAL PROVIDED BY THE CONTRACTOR IS TO CONFORM TO THE HIGHEST STANDARD AS ADOPTED BY THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSEYMEN, INC. (ANSI). PLANT MATERIAL IS TO BE HEALTHY SPECIMENS, FREE FROM DISEASE OR DAMAGE.
- THE CONTRACTOR IS TO FURNISH PLANTS AND SOD SHOWN ON THE DRAWINGS. PLANTS ARE TO CONFORM WITH THE BOTANICAL IDENTIFICATIONS. PLANTS ARE TO BE SOURCED FROM A NURSERY WITHIN THE SAME CLIMATIC ZONE AS THE SITE LOCATION. NO SUBSTITUTIONS OF PLANT SPECIES ARE PERMITTED WITHOUT PRIOR APPROVAL OF THE OWNER OR OWNER'S REPRESENTATIVE & THE LANDSCAPE ARCHITECT.
- SUBSTITUTIONS OF PLANT SPECIES SHALL BE A PLANT OF EQUIVALENT OVERALL FORM, HEIGHT AND BRANCHING HABIT, FLOWER, LEAF, FRUIT, COLOR, TIME OF BLOOM & CLIMATIC LOCATION AS APPROVED BY LANDSCAPE ARCHITECT.
- LOCATE AND VERIFY EXISTING & PROPOSED UTILITY LINE LOCATIONS PRIOR TO STAKING AND REPORT CONFLICTS TO LANDSCAPE ARCHITECT.
- PLANTING DEMOLITION DEBRIS, GARBAGE, LUMPS OF CONCRETE, STEEL AND OTHER MATERIALS DELETERIOUS TO PLANT'S HEALTH AS DETERMINED BY LANDSCAPE ARCHITECT SHALL BE REMOVED FROM PLANTING AREAS.
- THE CONTRACTOR IS TO VERIFY SITE LAYOUT & GRADES & INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR CHANGES IN LAYOUT AND/OR GRADING PRIOR TO CONSTRUCTION. NO PLANTING IS TO BE INSTALLED BEFORE ACCEPTANCE OF ROUGH GRADING.
- ALL PROPOSED TREE LOCATIONS SHALL BE STAKED OR LAID OUT IN THEIR APPROXIMATE LOCATION BY THE CONTRACTOR. THE CONTRACTOR SHALL ADJUST THE LOCATIONS AS REQUESTED BY THE LANDSCAPE ARCHITECT TO ACCOUNT FOR SUBSURFACE UTILITIES AND OTHER FIELD CONDITIONS. FINAL LOCATIONS OF PLANTS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
- INSTALL PLANTS WITH ROOT FLARES FLUSH WITH FINISHED GRADE. IMMEDIATELY REPLANT PLANTS THAT SETTLE OUT OF PLUMB OR BELOW FINISHED GRADE. PLANT AND STAKES ARE TO BE SET PLUMB UNLESS OTHERWISE NOTED. PLANT UNDER FULL TIME SUPERVISION OF CERTIFIED ARBORIST, NURSERYMAN, OR LICENSED LANDSCAPE ARCHITECT. PROVIDE WRITTEN VERIFICATION OF CERTIFICATION AND/OR LICENSE FOR LANDSCAPE ARCHITECT'S APPROVAL.
- WATER PLANTS THOROUGHLY AFTER INSTALLATION, A MINIMUM OF TWICE WITHIN THE FIRST 24 HOURS.
- CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN PLANT MATERIALS INCLUDING SOD/SEED AREAS IN A HEALTHY STATE DURING CONSTRUCTION AND DURING WARRANTY PERIODS. ANY DAMAGE TO PLANT MATERIAL DUE TO NEGLIGENCE BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
- REPAIR DAMAGE DUE TO LANDSCAPE INSTALLATION OPERATIONS INSIDE AND OUTSIDE OF LIMIT OF WORK.
- SOAK ALL PERENNIALS FOR 24 HOURS PRIOR TO INSTALLATION.
- A LIST OF PLANTS INCLUDING BOTANICAL NAMES, SIZES, AND SPACING ARE SHOWN ON THE DRAWINGS. QUANTITIES ARE PROVIDED FOR CONTRACTOR'S CONVENIENCE AND ARE TO BE VERIFIED. IN THE EVENT THAT QUANTITIES OR OMISSIONS OCCUR THE PLAN DRAWINGS ARE TO BE FOLLOWED.
- IRRIGATION: A TEMPORARY UNDERGROUND DRIP AND SPRINKLER IRRIGATION SYSTEM IS TO BE PROVIDED FOR ALL PLANT MATERIAL AND SOD OR SEEDED AREAS.
- DISTURBED SITE AREAS ARE TO BE DRESSED WITH 6" MIN. OF AMENDED TOPSOIL FOR LAWNS AND 12" MIN. FOR PLANT BEDS. TOPSOIL FOR SEEDED AND/OR SEEDED AREAS IS TO BE TWO PARTS SHARP SAND, ONE PART LOAM AND ONE PART ORGANIC COMPOST.
- PLANT BEDS ARE TO BE MULCHED TO A DEPTH OF 2" MIN. WITH NATURAL BARK MULCH WITH BARK SIZES NO LARGER THAN 3". PERENNIAL PLANT BEDS ARE TO BE MULCHED WITH BARK SIZES NO MORE THAN 1". TREES IN LAWN AREAS ARE TO HAVE MULCH RINGS OF 5' DIA.
- TREES ADJACENT TO PEDESTRIAN ROUTES AND WITHIN PARKING ISLANDS ARE TO BE LIMBED TO 6' ABOVE GRADE.
- ALL TREE SPECIES SHALL BE WATERED AT LEAST 2-4 TIMES EACH WEEK WITH 10-15 GALLONS ADMINISTERED TO EACH TREE DEPENDING ON THE WEATHER AND CURRENT MOISTURE LEVEL. WATERING WILL CONSIST OF 10-15 GALLONS ADMINISTERED TO EACH TREE EVERY TIME THEY ARE WATERED.

Prepared For:

60 ELM STREET, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:

Dry Landscape Architecture, LLC
31 Miller Ave.
Biddeford, ME 04005

Date:

FEBRUARY 7, 2025

Issued For:

PLANNING BOARD WORKSHOP

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Title:

PLANTING PLAN

Reveler Bayside
Phase 1B
61 PREBLE STREET
Portland ME 04103

Revisions:

REV. I - 05.28.25



SITE SOIL NOTES

- CONTRACTOR SHALL COORDINATE WITH OWNER'S REPRESENTATIVE FOR LOCATION OF STOCKPILE AREAS FOR STRIPPED TOPSOIL AND PLANTING SOIL PRODUCTS. CONTRACTOR SHALL ENSURE AREA IS PROTECTED AND CONTAMINATION OR DISTURBANCE OF STORED PRODUCTS IS NOT ALLOWED.
- CONTRACTOR SHALL ENSURE SUBGRADE IS SCARIFIED PRIOR TO INSTALLING PLANTING SOIL AND BLEND WITH INITIAL LIFT OR PLACEMENT OF PROPOSED PLANTING SOIL.
- COORDINATE PLACEMENT OF PLANTING SOIL WITH OTHER WORK, ESPECIALLY UTILITIES. PLACEMENT SHOULD OCCUR AFTER INSTALLATION OF ALL HARDSCAPE IMPROVEMENTS, IRRIGATION SYSTEM, UTILITIES, ETC. AND BEFORE INSTALLATION OF PLANTS.
- SILVA CELL SOIL FOR STREET TREE PLANTING SHALL BE HIGH QUALITY LOAM-BASED PLANTING SOIL FOR FILLING THE SILVA CELLS.

PLANT SCHEDULE

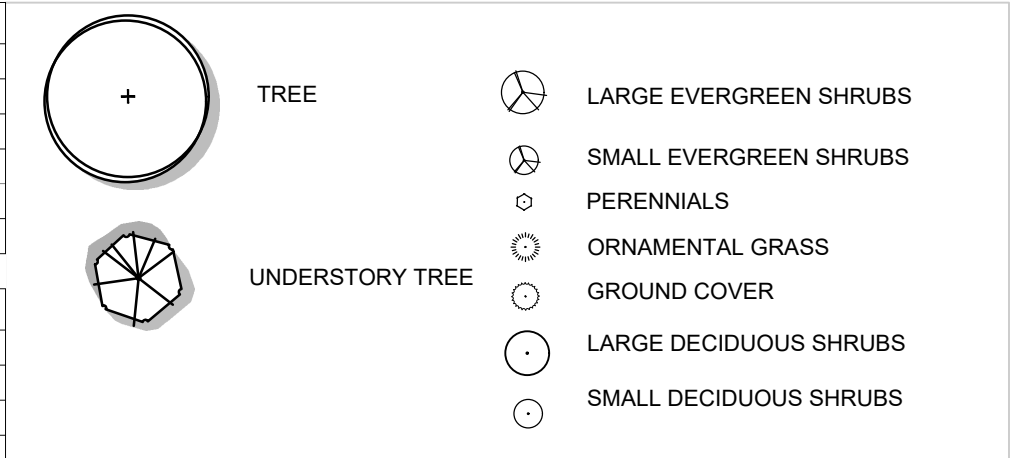
TREES						
CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
AG	<i>Amelanchier x grandiflora</i> 'Robin Hill'	Robin Hill Serviceberry	1	2" cal	as shown	
AL	<i>Amelanchier laevis</i>	Allegheny Serviceberry	3	14' ht.	as shown	
CC	<i>Cercis canadensis</i>	Eastern Redbud	4	2.5" cal	as shown	
PA	<i>Prunus avocetoides</i>	Flowering Cherry	3	2.5" cal	as shown	
UA	<i>Ulmus americana</i>	'Princeton', 'Pioneer', and 'Lacebark' TBD	3	2.5" cal	as shown	

SHRUBS - Large						
AZ	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
AZ	<i>Azalea Northern Hi-Lights</i>	Northern Hi-Lights Azalea	tbd	18"-2' H	48" OC	
RH	<i>Rhus glabra</i>	Smooth Sumac	tbd	3-3.5' H	48" OC	
MC	<i>Morella carolinensis</i>	Small Bayberry	tbd	18"-2' H	as shown	straight native species preferred
MP	<i>Myrica pensylvanica</i>	Northern Bayberry	tbd	4' H	48" OC	
VN	<i>Viburnum nudum</i>	Smooth Witherod	tbd	3-3.5' H	72" OC	" "

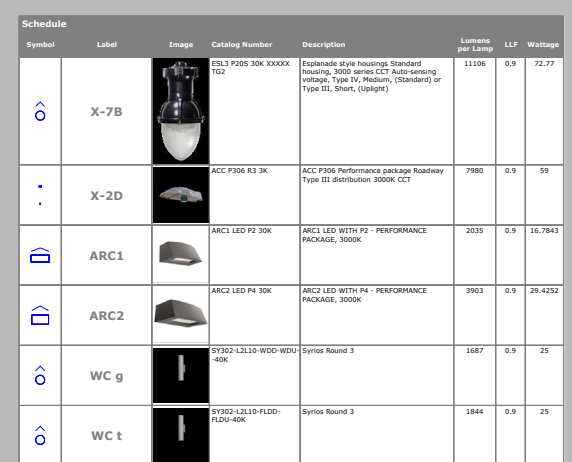
Perennials, Grasses, Ferns, & Ground covers						
CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
ara	<i>Ajuga reptans</i> 'Alba'	White-flower Bugle	tbd	#1 CONT.	18" O.C.	
dph	<i>Denstaeidia punctilobua</i>	Hay scented Fern	tbd	#1 CONT.	24" O.C.	
grc	<i>Geranium x 'Rozanne'</i>	Rozanne Cranesbill	tbd	#1 CONT.	24" O.C.	
lmb	<i>Liriope muscari</i> 'Big Blue'	Big Blue Lilyturf	tbd	#1 CONT.	18" O.C.	
pov	<i>Polygonatum odoratum</i> 'variegatum'	Solomons Seal	tbd	#2 CONT.	18" O.C.	
smm	<i>Salvia 'May Night'</i>	May Night Salvia	tbd	#1 CONT.	24" O.C.	
pvs	<i>Panicum virgatum</i> 'Shenandoah'	Shenandoah Switchgrass	tbd	#3 CONT.	24" O.C.	
scs	<i>Schizachyrium scoparium</i>	Little Bluestem	tbd	#3 CONT.	18" O.C.	

Vines						
CODE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	SPACING	NOTES
		Climbing Hydrangea	tbd	tbd	42" OC	
pac	<i>Parthenocissus quinquefolia</i>	Virginia Creeper	tbd	tbd	42" OC	

LEGEND



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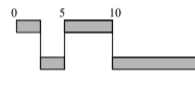
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12.3. GENERAL STANDARDS

Outdoor lighting standards listed below apply to all new developments.

- 1. Uniformity:** As measured in foot candles at grade, maximum to minimum illumination levels shall not exceed a ratio of twenty (20) to one (1).
- 2. Illumination Levels:** Minimum, Maximum, and Average illumination levels for areas intended to be lighted, as measured at grade, shall be:

Minimum	0.2 foot candles (fc)
Maximum	5.0 foot candles (fc)
Average	1.25 foot candles (fc)

Prepared For: 60 ELM STREET APARTMENTS, LLC 188 STATE STREET, 3RD FLOOR PORTLAND, ME 04101	
Prepared By: Dry landscape architecture, LLC 31 miller ave. biddeford, me 04005	
Date: FEBRUARY 3, 2025	
Issued For: PLANNING BOARD WORKSOP	
@ 25'	
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Title: LIGHTING PLAN	
61 PREBLE STREET REDEVELOPMENT Portland ME 04103	
Revisions:	
North: 	Sheet No.: L3
Scale: 1" = 10'-0"	
	

Corner of 89 Elm & Oxford Street

Note: Building materials and colors shown in this rendering are for graphic representation only. Please refer to the architectural plans for final material selections and colors.



Comment Response 05.12.2025

61 Preble Street - Phase 1B

Design Development
Portland, ME



reveler
DEVELOPMENT



PORTA
CAPITAL PARTNERS



Corner of Oxford Street & Preble Street

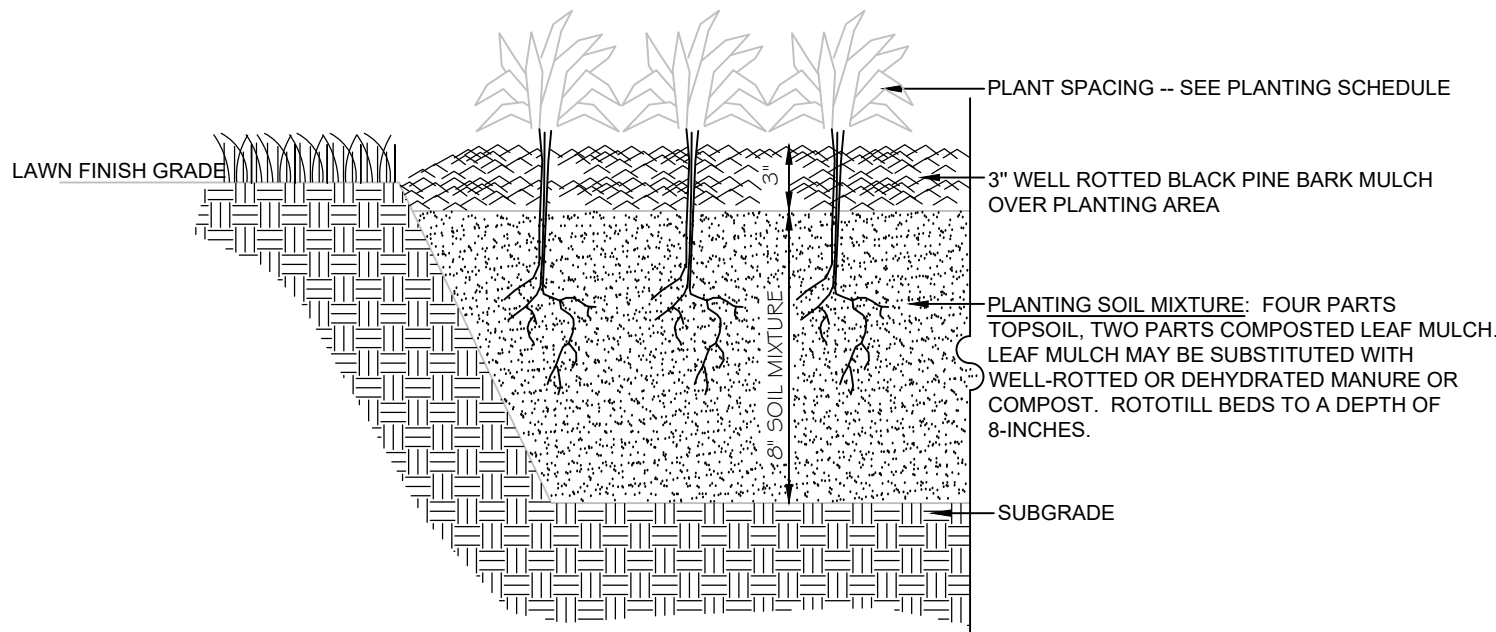
Note: Building materials and colors shown in this rendering are for graphic representation only. Please refer to the architectural plans for final material selections and colors.



Comment Response 05.12.2025

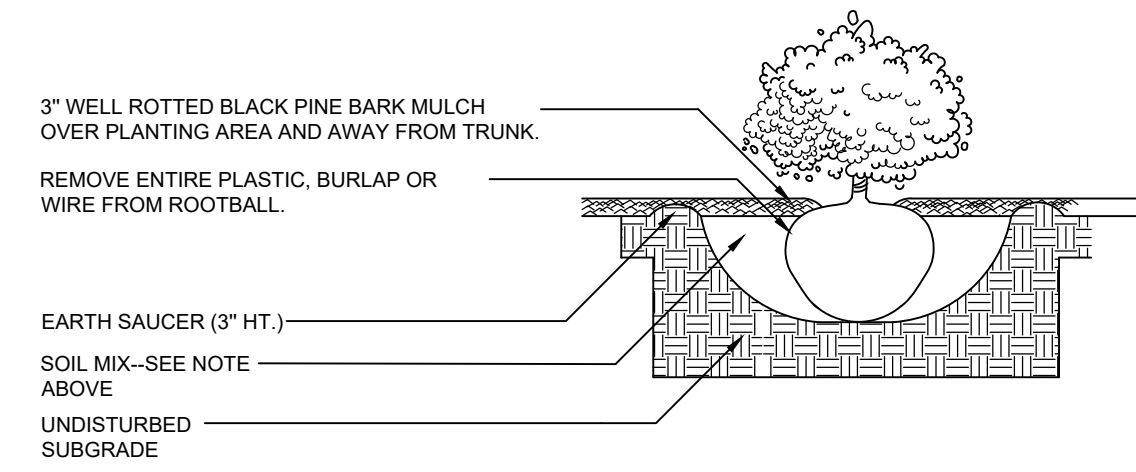
61 Preble Street - Phase 1B
Design Development
Portland, ME





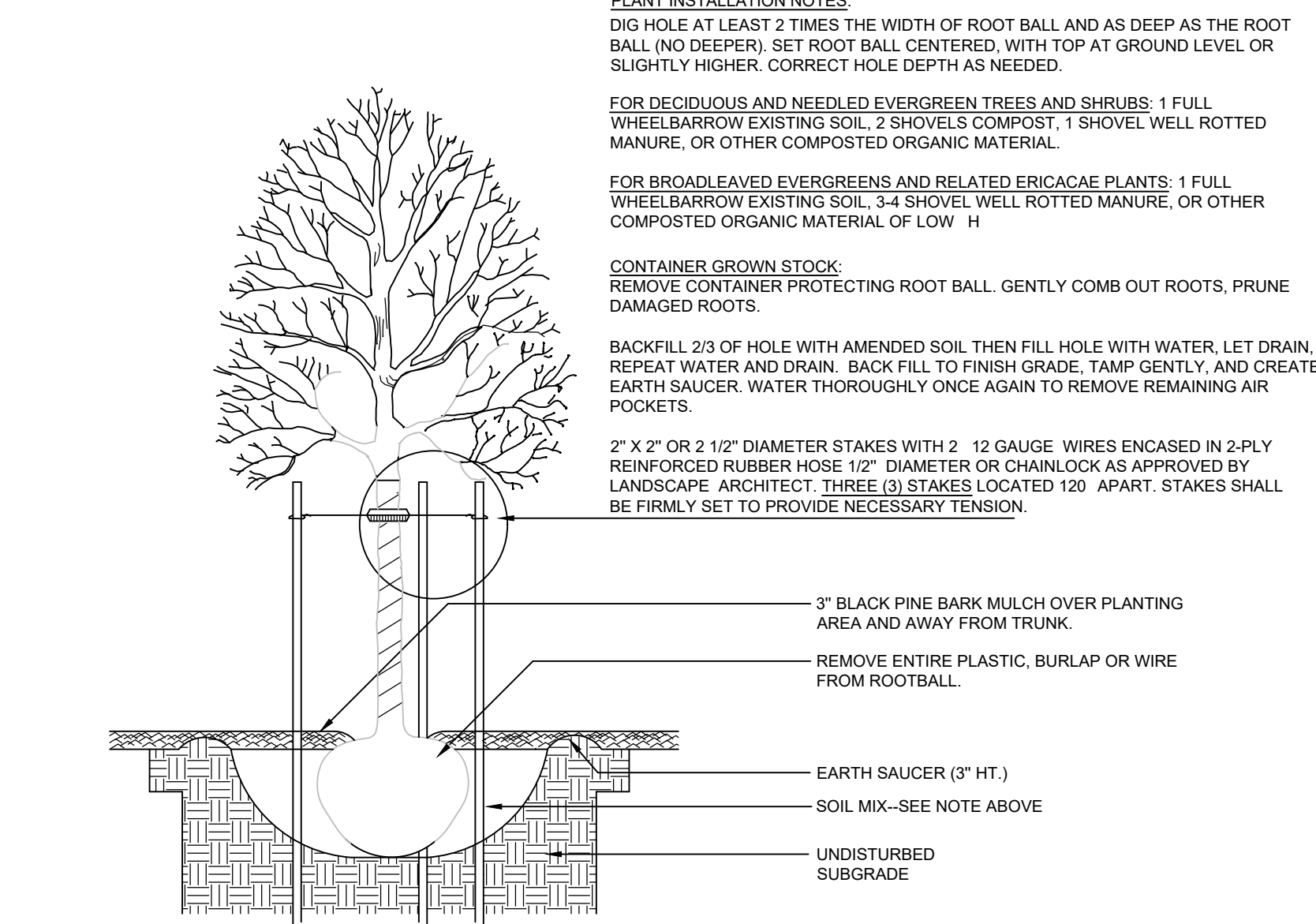
01 PLANTING BED AND MULCH DETAIL

SCALE: N.T.S.



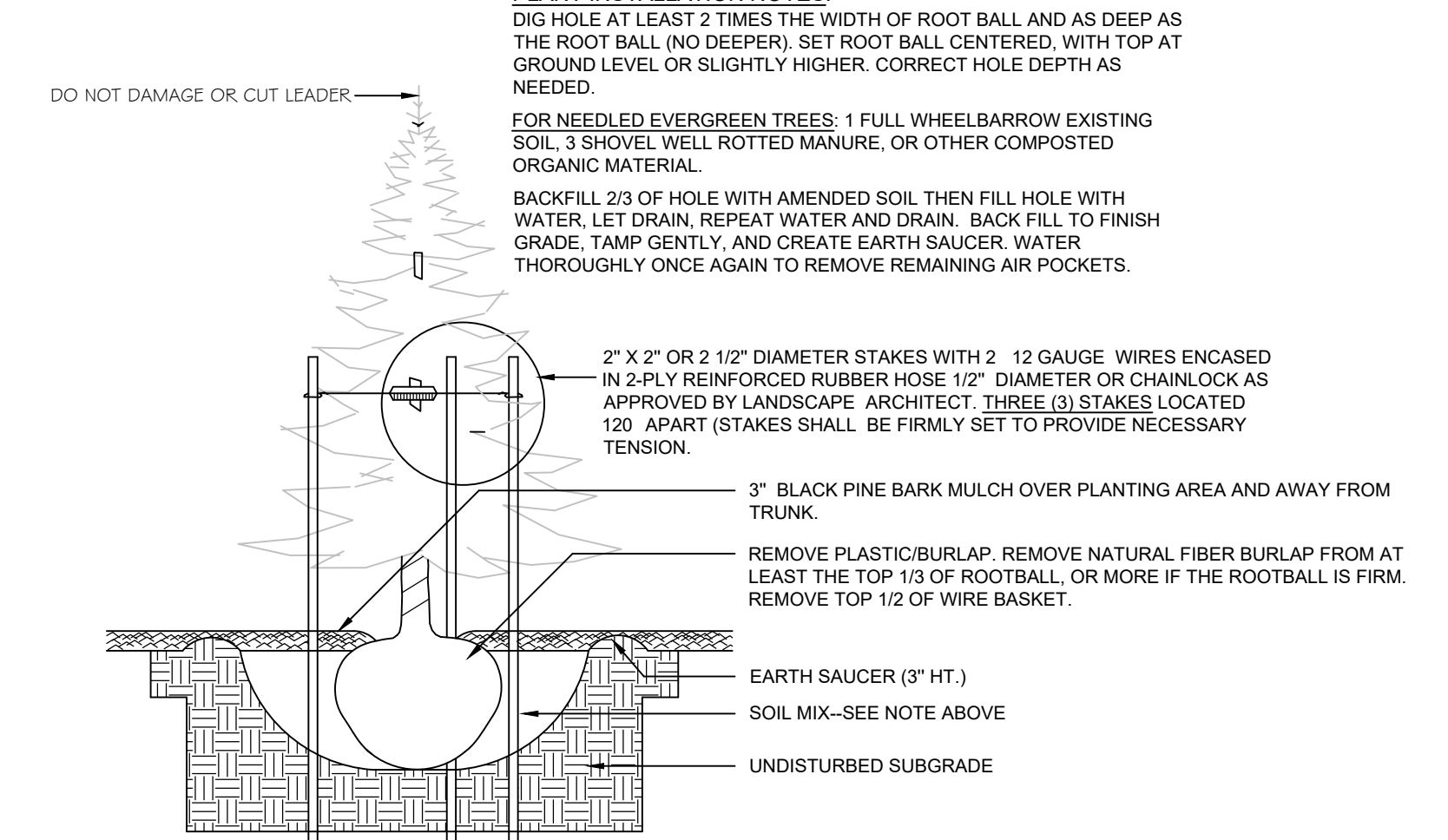
02 SHRUB INSTALLATION

SCALE: N.T.S.



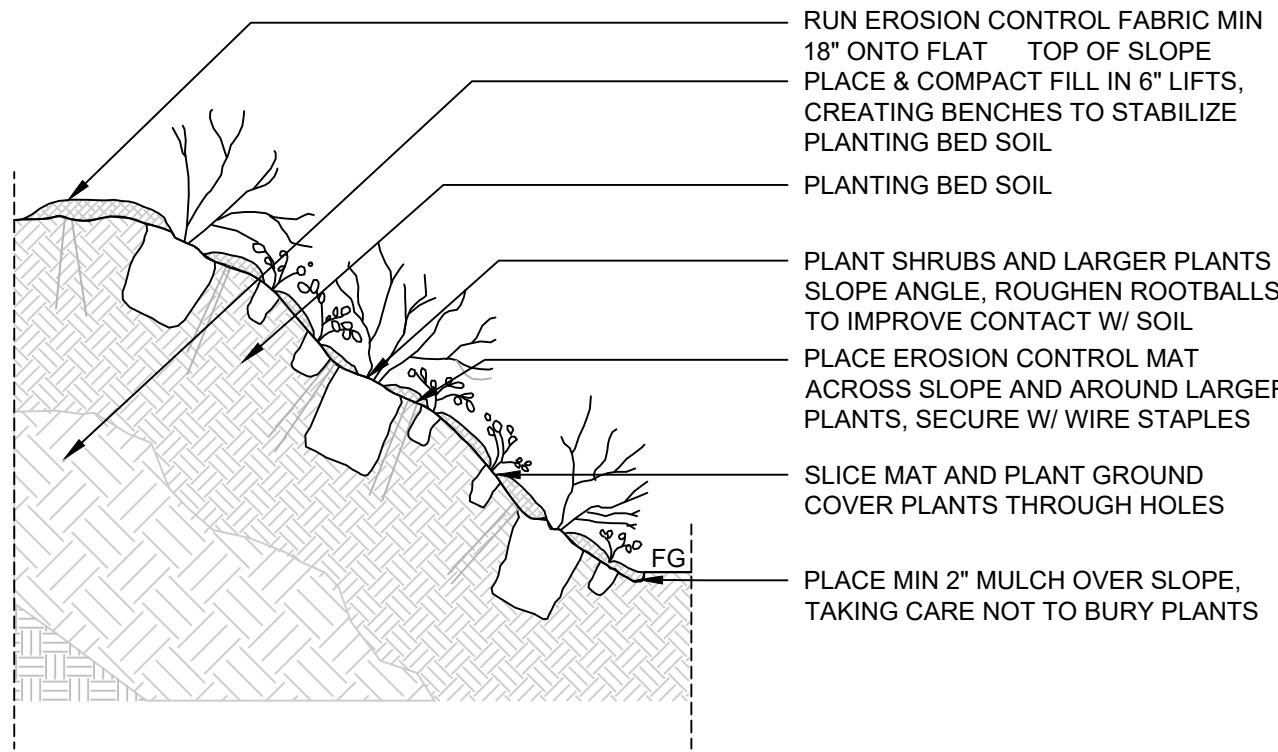
03 DECIDUOUS TREE DETAIL

SCALE: N.T.S.



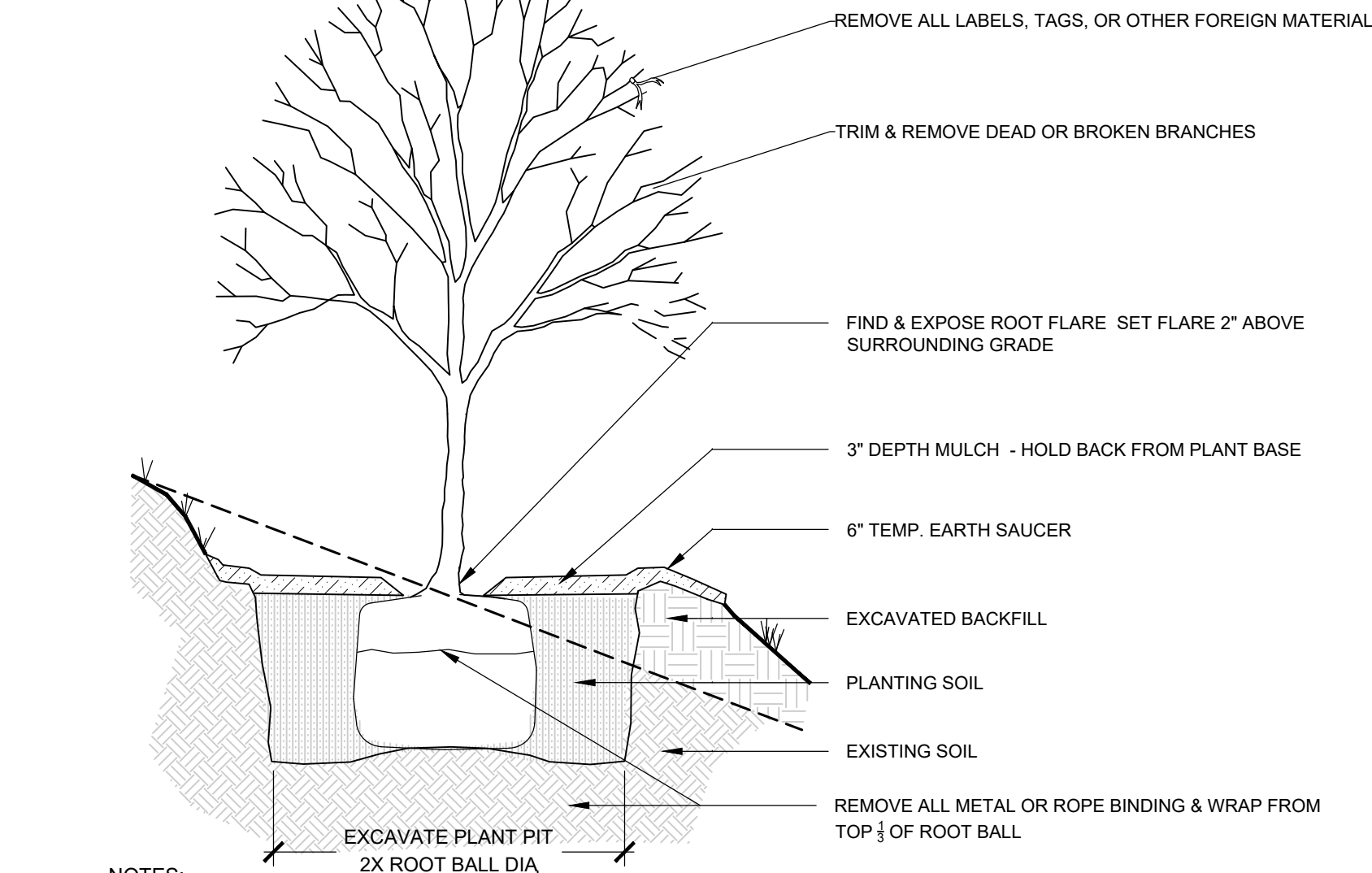
04 CONIFEROUS TREE DETAIL

SCALE: N.T.S.



05 SLOPE PLANTING DEATIL

SCALE: N.T.S.

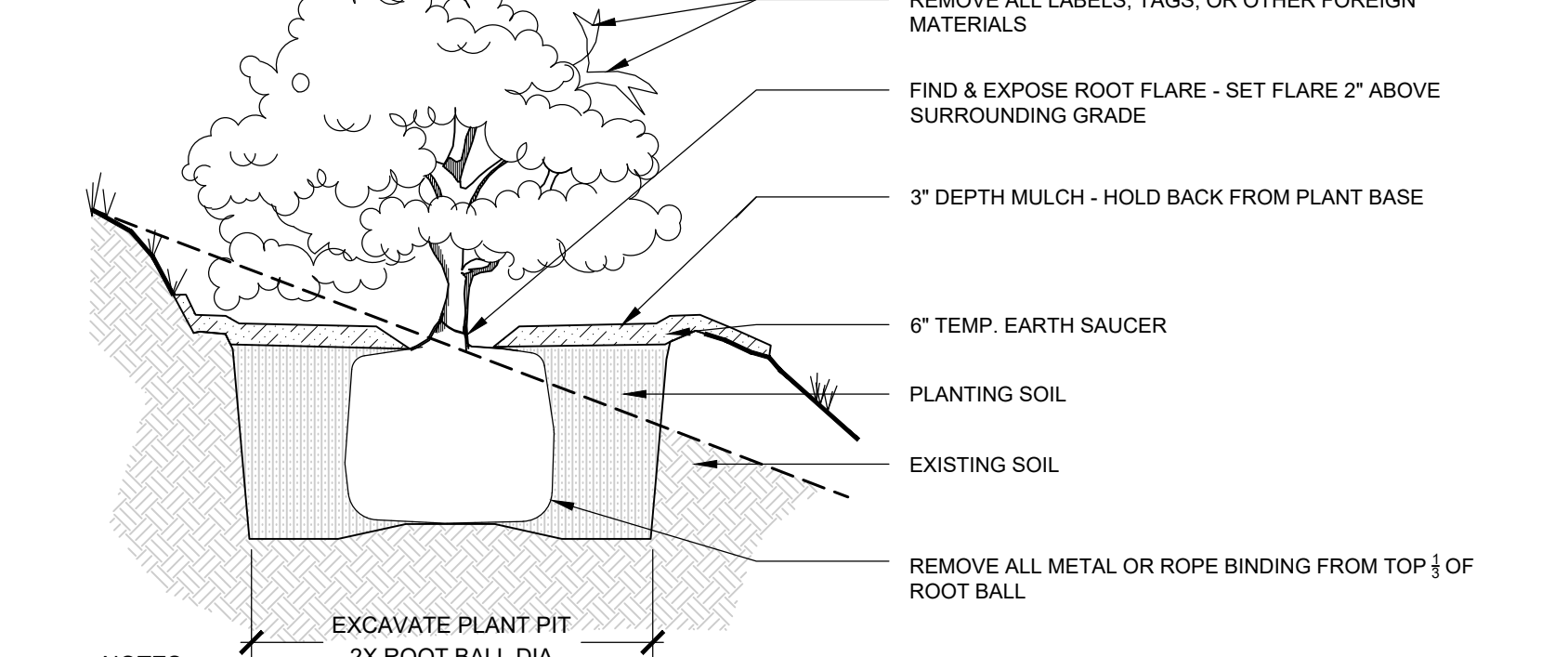


NOTES:

1. TREE TO BE SET PLUMB.
2. SECURE TREE AS MAY BE REQUIRED ACCORDING TO TREE SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

06 TREE PLANTING ON SLOPE

SCALE: N.T.S.

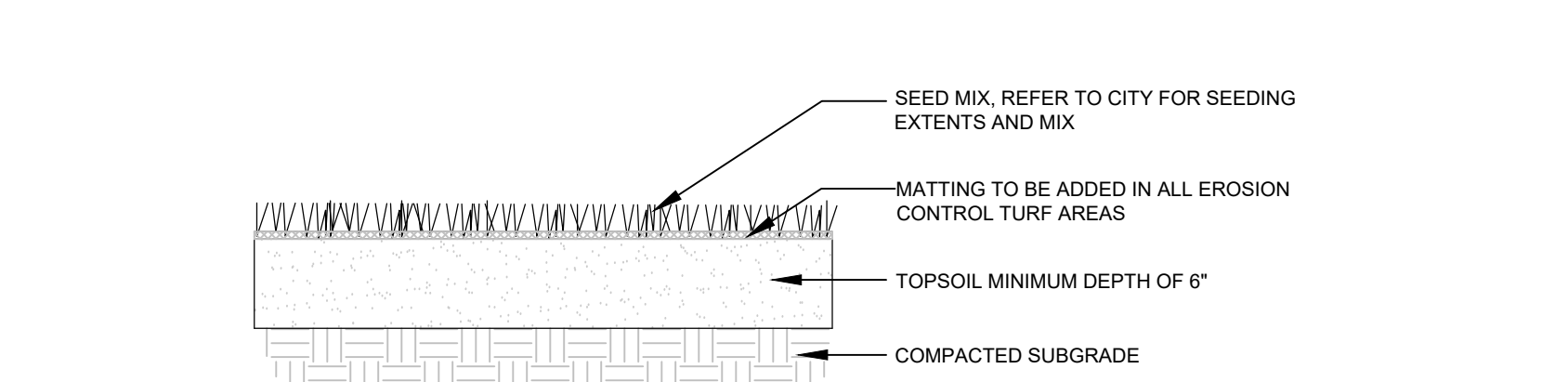


NOTES:

1. SHRUB TO BE SET PLUMB.
2. SECURE SHRUB AS MAY BE REQUIRED ACCORDING TO SIZE, LOCATION, & WIND/WEATHER CONDITIONS.
3. IF USING ROOTBALL STABILIZATION, FOLLOW MANUFACTURER'S RECOMMENDATIONS.

07 SHRUB PLANTING ON SLOPE

SCALE: N.T.S.



08 LAWN SEED MIX

SCALE: N.T.S.

UB 24-2 Specifications 24" DeepRoot® Tree Root Barrier

Specified tree root barrier is a mechanical barrier and root deflector used to prevent tree roots from damaging hardscapes and landscapes. Assembled in 24" (609 mm) long modules to create varying lengths for linear applications, or perimeter surround applications in varying sizes.

A. Materials

1. The contractor shall furnish and install tree root barrier as specified. The tree root barrier shall be either product #UB 24-2 as manufactured by DeepRoot® Green Infrastructure, LLC, 530 Washington Street, San Francisco, CA, www.deeproot.com (800.458.7668).

2. Root barrier shall be recyclable, black, injection molded panels with 0.887" (22.83 mm) wall thickness in modules 24" (609 mm) long and 24" (609 mm) deep.

3. Root barrier shall be manufactured with 75% reprocessed polypropylene with added ultraviolet inhibitors.

4. Root barrier shall be comprised of 24" (60.96 cm) panels. Each panel shall have no less than four (4) Molded Integral Vertical Root Directing Ribs of a minimum 0.075" (1.90 mm) thickness, protruding 1/2" (12.7 mm) at 90° from interior of the barrier panel, spaced 6" (152.4 mm) apart. (See Details A & D)

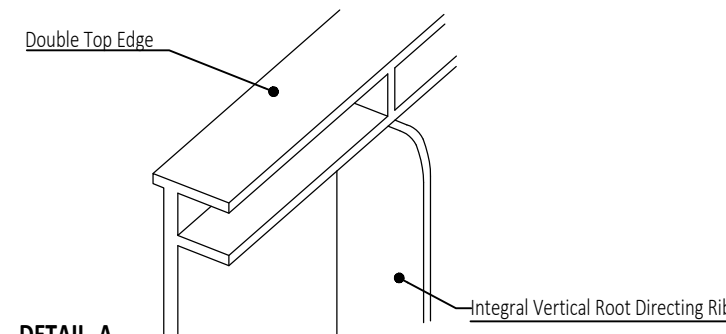
5. Root barrier shall have a Double Top Edge consisting of two parallel, integral, horizontal ribs at the top of the panel at 0.060" (1.52 mm) thickness, 3/8" (9.53 mm) wide and 1/4" (6.35 mm) apart with the lower rib attached to the vertical Root Directing Ribs (See Detail A).

6. Root barrier shall have a minimum of twelve (12) Anti-Lift Ground Lock Tabs consisting of integral horizontal ridges of minimum 0.075" (1.90 mm) thickness in the shape of a segment of an oblong, the 2" (50.8 mm) chord of the segment joining the panel wall and the segment, protruding 3/8" (9.53 mm) from the panel. The twelve ground locks on each panel shall be about equally spaced between each of the vertical root directing ribs (four (4) between each set of ribs, see Details B & D).

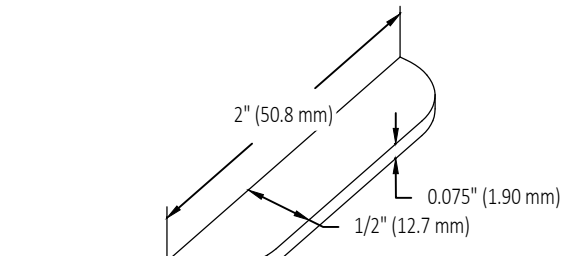
7. Root barrier shall have an integrated Zipper Joining System for assembly by sliding one panel into another (See Detail C).

U.S. Patents: 5,305,549; and 5,528,857. Other Patents Pending.

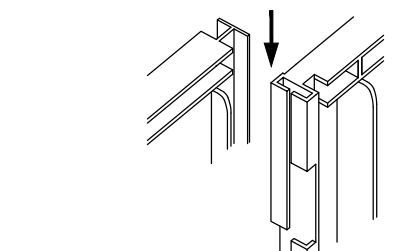
Properties	Typical Value	ASTM Test Method
Tensile strength @ yield - Wall	2,354 PSI	D638
Tensile strength @ yield - Hinge	2,846 PSI	D638
Yield Elongation - Wall	7.44%	D638
Yield Elongation - Hinge	7.01%	D638
Flexural Modulus	119,625 PSI	D790B
Notched Izod Impact - Wall	3.84 (ft-lbs)	D255A
Rockwell Hardness r. scale - Wall	84.4	D785A



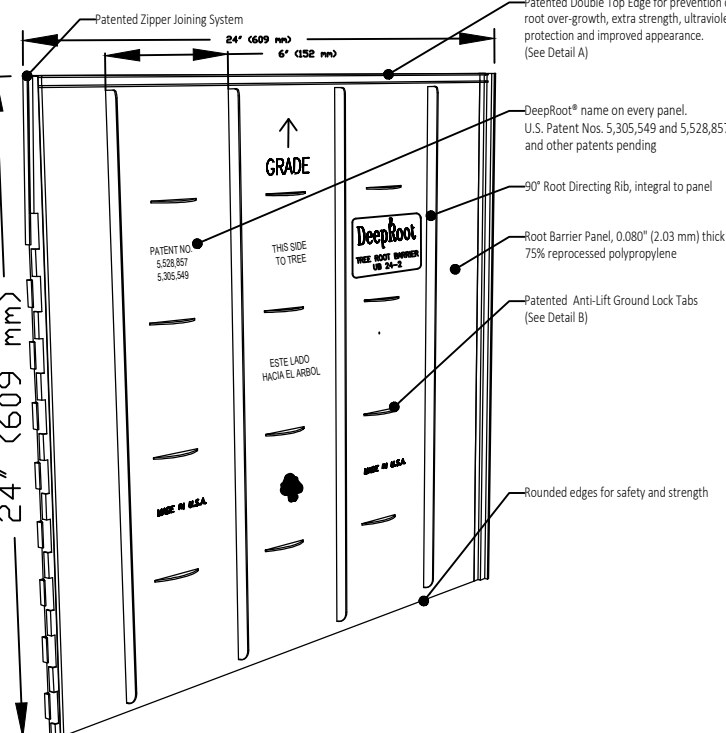
DETAIL A
DOUBLE TOP EDGE AND VERTICAL ROOT DIRECTING RIB



DETAIL B -
ANTI-LIFT GROUND LOCK TAB



DETAIL C - ZIPPER JOINING SYSTEM



DETAIL D - TREE ROOT BARRIER PANEL

© Copyright 2013 DeepRoot Green Infrastructure LLC

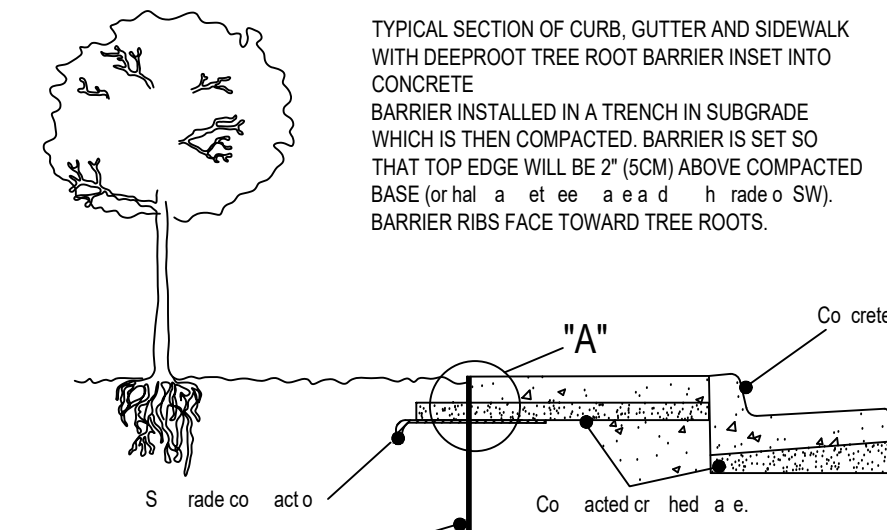
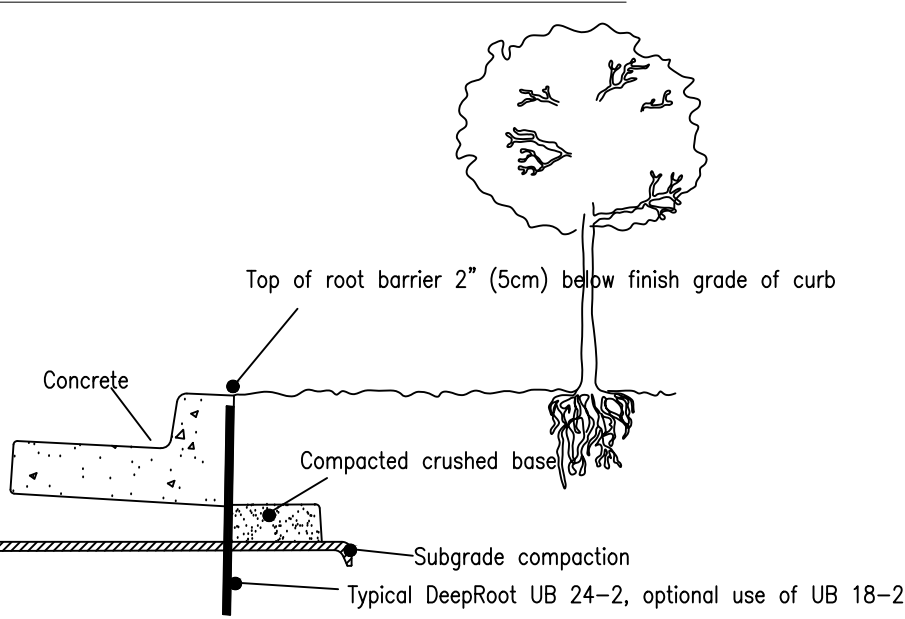
09 ROOT BARRIER 24"

SCALE: N.T.S.

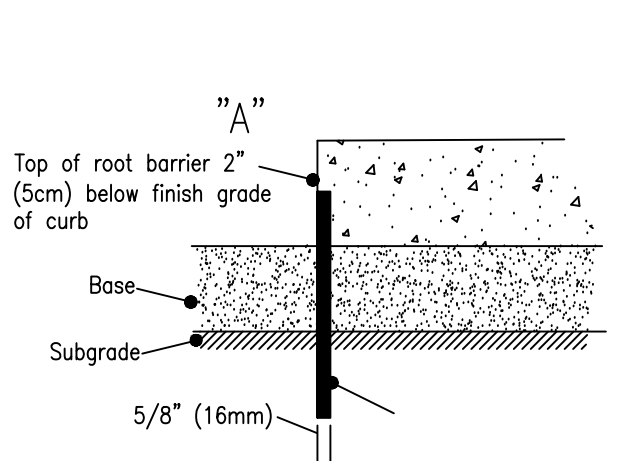
TYPICAL SECTION OF CURB AND GUTTER WITH DEEPROOT TREE ROOT BARRIER INSET INTO CONCRETE. BARRIER INSTALLED IN A TRENCH IN SUBGRADE WHICH IS THEN COMPACTED. BARRIER IS SET SO THAT TOP EDGE WILL BE 2" (5CM) BELOW FINISH GRADE OF CURB, AND SET FLUSH WITH EDGE OF CURB. BARRIER RIBS FACE TOWARD TREE ROOTS.

INSTALLATION SEQUENCE:

1. Prepare area and grade.
2. trench to a rate depth of 2" (5cm) below finish grade of curb, and set flush with edge of curb. BARRIER RIBS FACE TOWARD TREE ROOTS.
3. Place root barrier trench, set flush with edge of curb.
4. Backfill and compact to level.
5. Place or alter a barrier (if a sealed root barrier is to be used).



Top of root barrier 2" (5cm) below finish grade of curb



Top of root barrier 2" (5cm) below finish grade of curb

Compacted crushed base

Subgrade compaction

Typical DeepRoot UB 24-2, optional use of UB 18-2

IMPORTANT NOTE: Tree location shall be noted on plan.

Top of root barrier 2" (5cm) below finish grade of curb

Compacted crushed base

Subgrade compaction

Typical DeepRoot UB 24-2, optional use of UB 18-2

IMPORTANT NOTE: Tree location shall be noted on plan.

Top of root barrier 2" (5cm) below finish grade of curb

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Compacted crushed base

Subgrade compaction

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IMPORTANT NOTE: Tree location shall be noted on plan.

Top of root barrier 2" (5cm) below finish grade of curb

Compacted crushed base

Subgrade compaction

Typical DeepRoot UB 24-2, optional use of UB 18-2

IMPORTANT NOTE: Tree location shall be noted on plan.

Top of root barrier 2" (5cm) below finish grade of curb

Compacted crushed base

Subgrade compaction

Typical DeepRoot UB 24-2, optional use of UB 18-2

IMPORTANT NOTE: Tree location shall be noted on plan.

Prepared For:

60 ELM STREET, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:

Dry Landscape Lrchtecture, LLC
31 miller ave.
Biddeford, ME 04005

Date:

FEBRUARY 7, 2025

Issued For:

PLANNING BOARD WORKSOP

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Title:

DETAILS

Reveler Bayside
Phase IB
61 PREBLE STREET
Portland ME 04103

Revisions:

REV. 1 - 05.28.25



North:

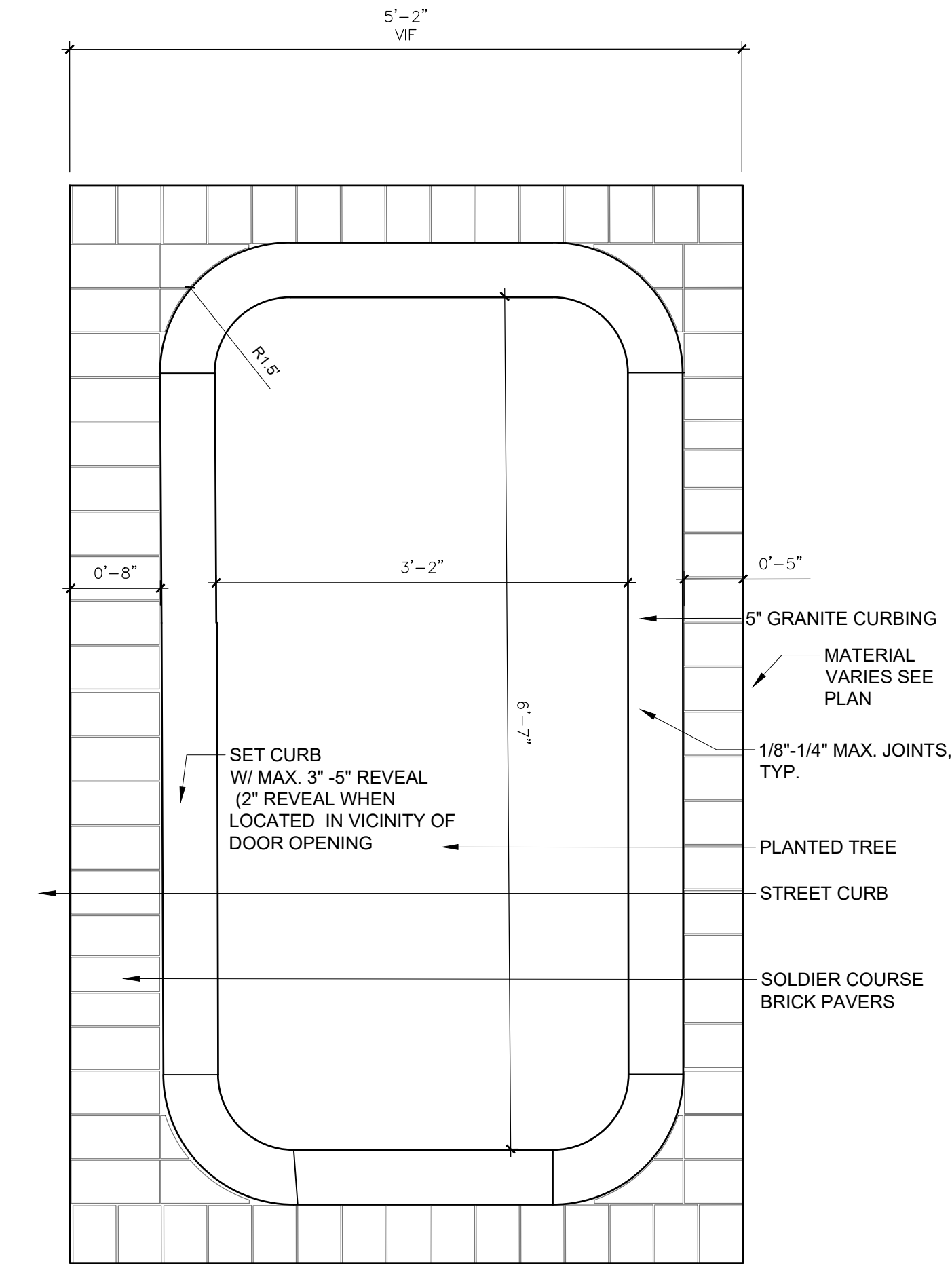
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LD1

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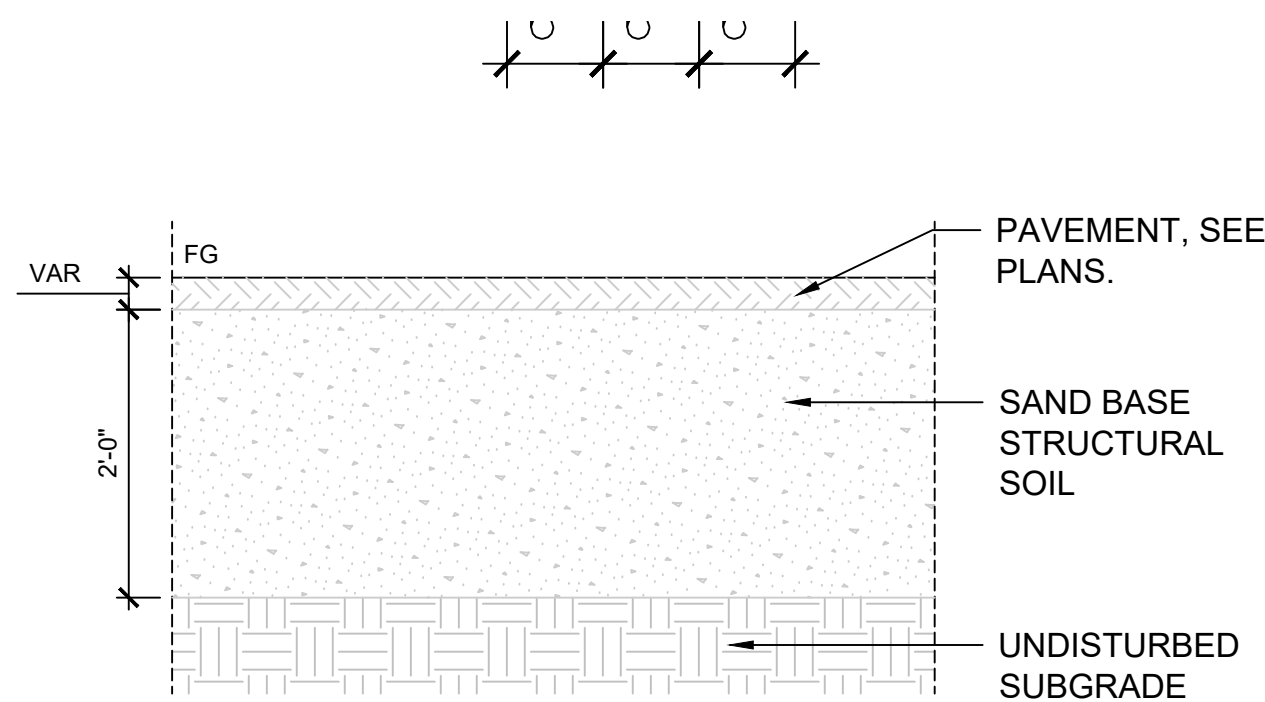
AS NOTED

NOTE: This drawing is PRELIMINARY REVIEW ONLY. It is NOT intended for use as a construction document.



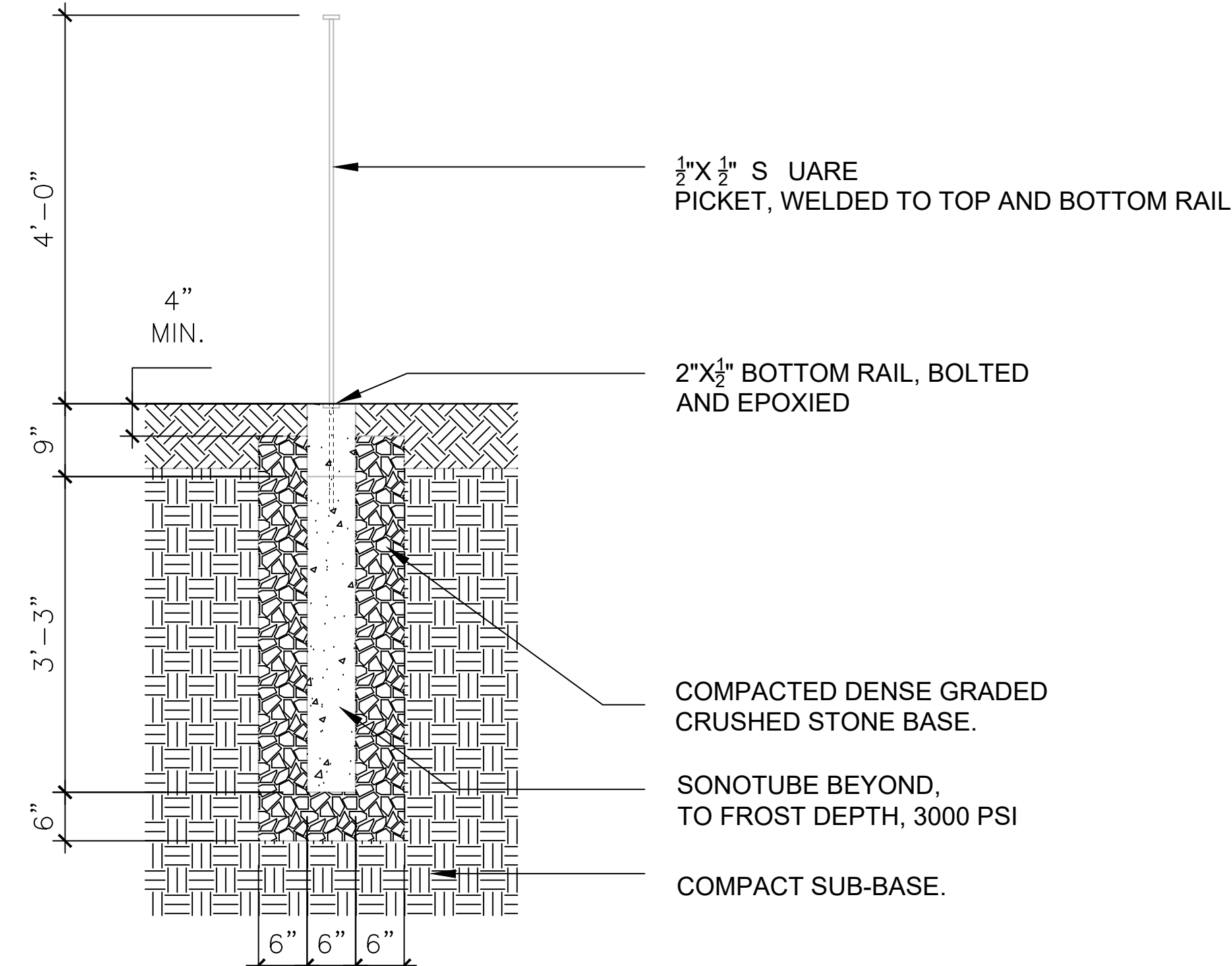
01 TREE WELL TYPE 1

SCALE: N.T.S.



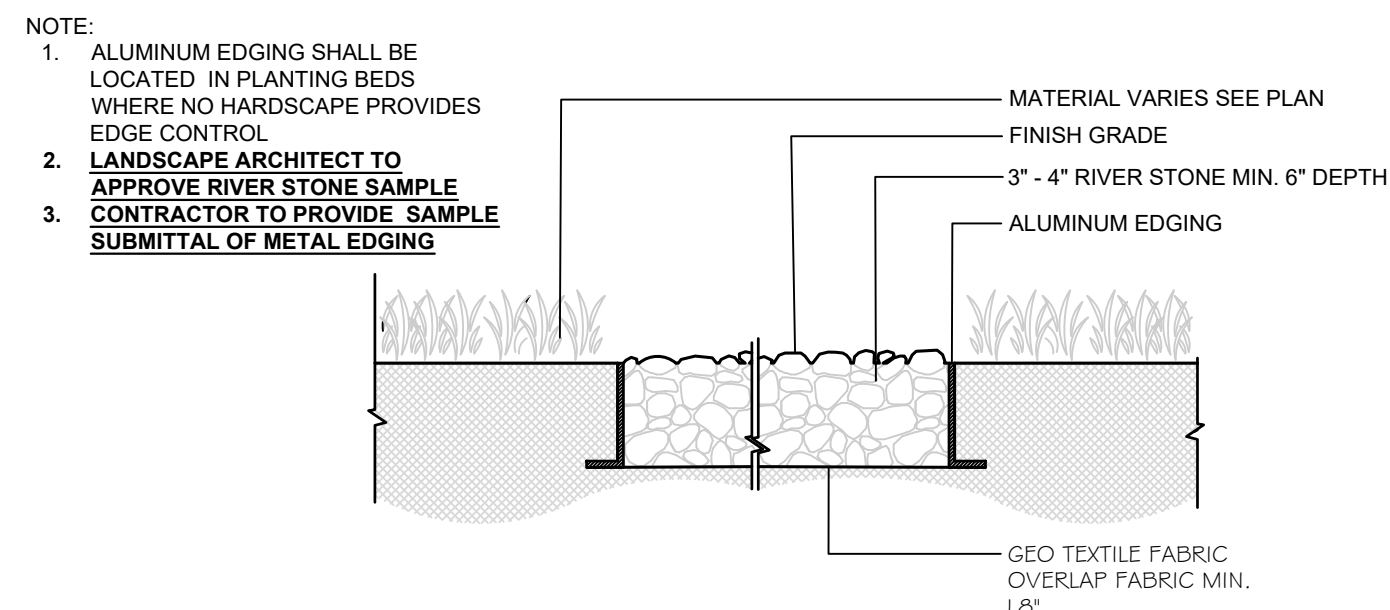
02 SAND BASE STRUCTURAL SOIL

SCALE: N.T.S.



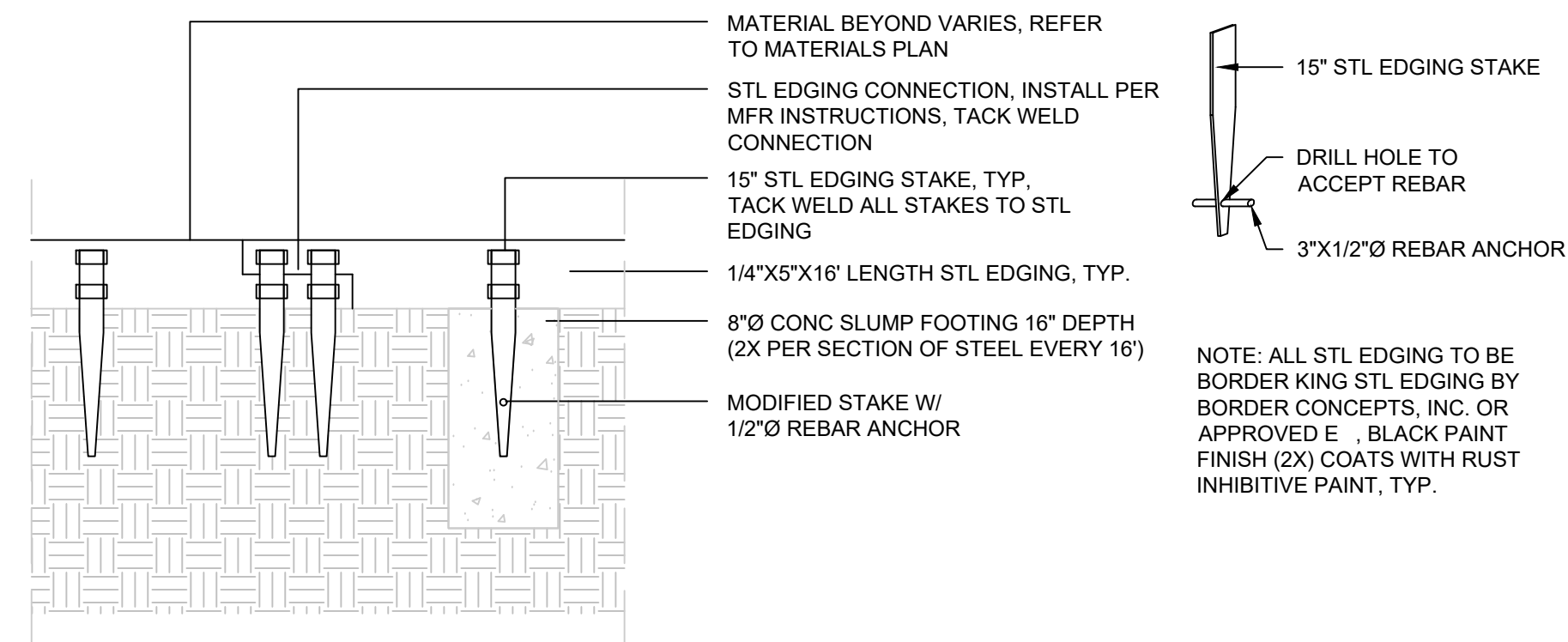
03 ORNAMENTAL METAL FENCE

SCALE: N.T.S.



04 RIVERSTONE W/ METAL EDGING

SCALE: N.T.S.



05 METAL EDGING

SCALE: N.T.S.

Prepared For:

60 ELM STREET, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:

Dry Landscape Lrchitecture, I.L.C
31 miller ave.
Biddeford, ME 04005

Date:

FEBRUARY 7, 2025

Issued For:

PLANNING BOARD WORKSOP

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Title:

DETAILS

Reveler Bayside
Phase 1B
61 PREBLE STREET
Portland ME 04103

Revisions:

REV. 1 - 05.28.25



North:

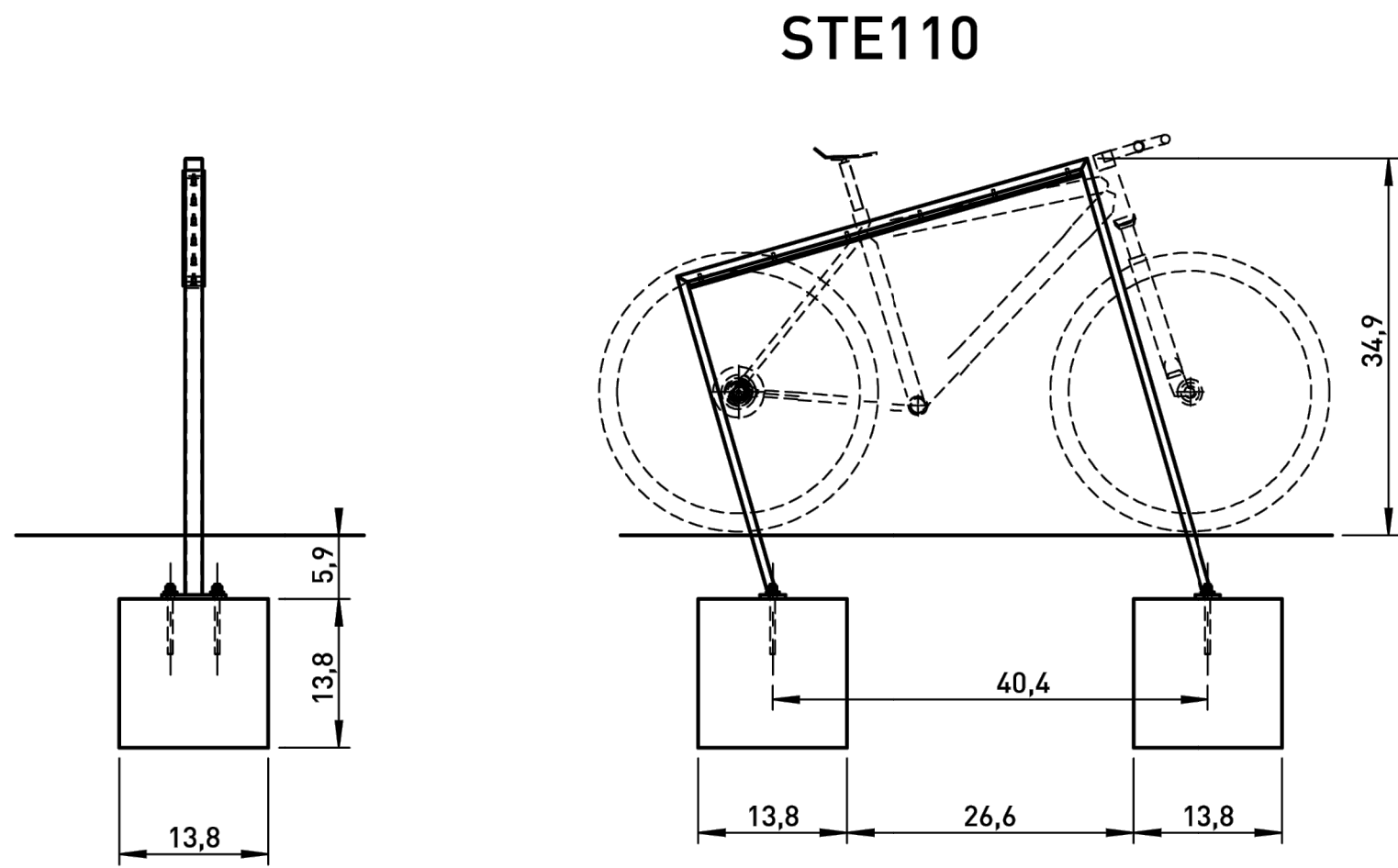
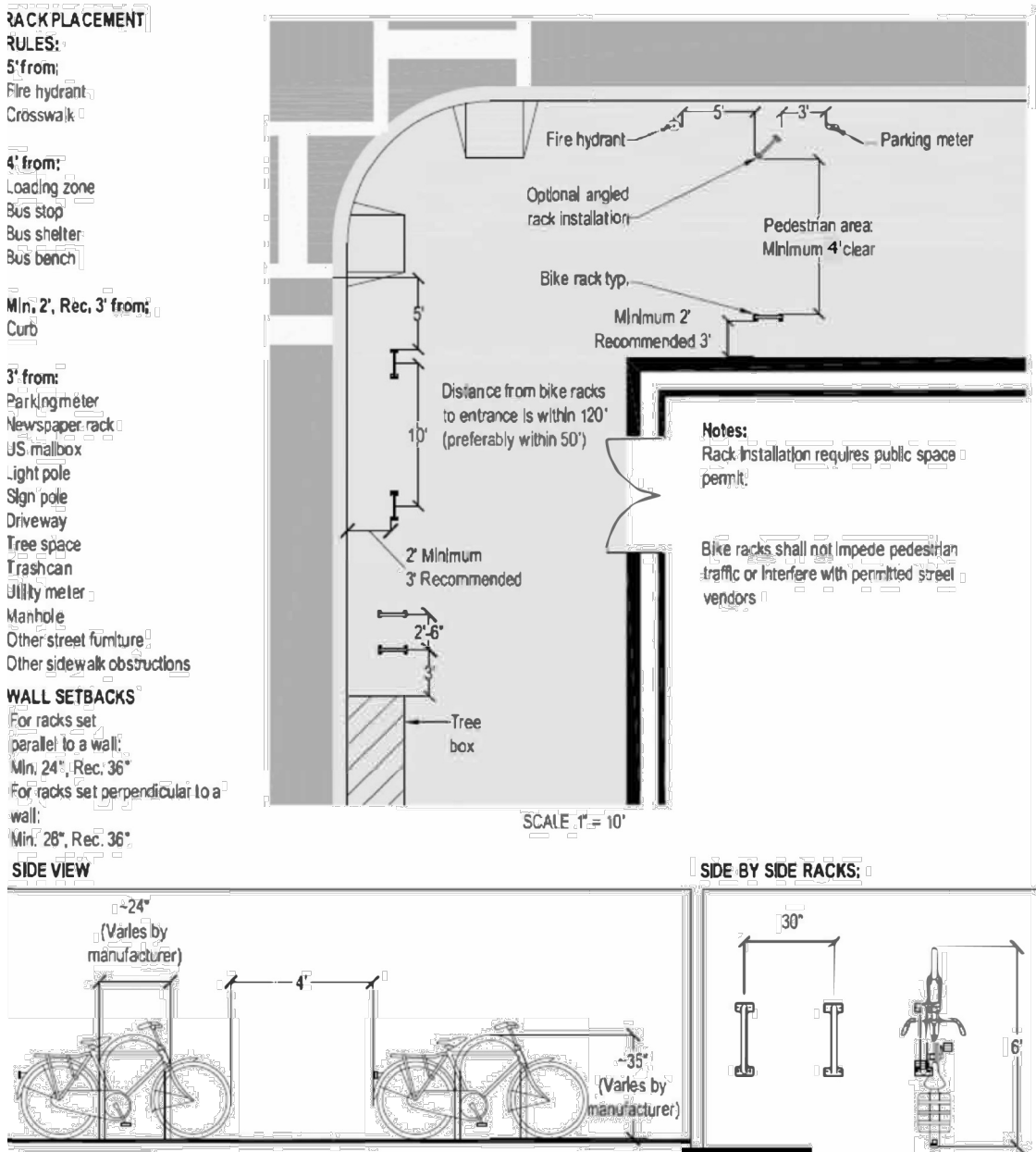
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LD2

Scale:

AS NOTED

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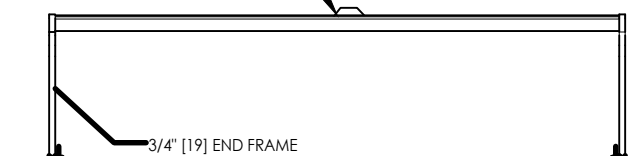
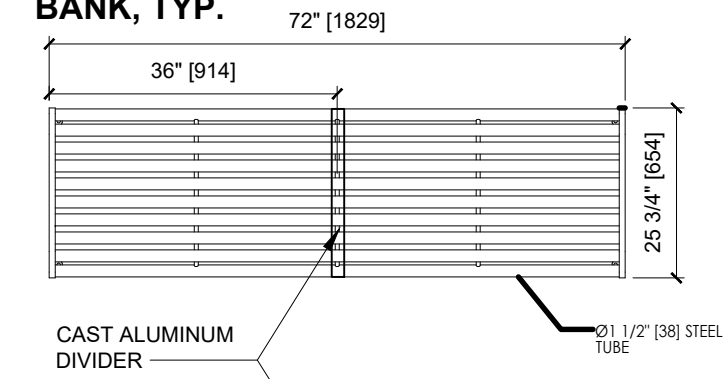
NOTE:
MANUFACTURER: MMCITE OR DERO BIKE HITCH
PRODUCT: MMCITE EDGETYRE STE110 - DERO BIKE HITCH
COLOR: MMCITE STE110 BLACK - DERO BIKE HITCH BLACK
MOUNTING: SEE MANUFACTURER SPECIFICATIONS FOR SUBSURFACE MOUNTING
CONTRACTOR SHALL PROVIDE SUBMITTAL FOR APPROVAL PRIOR TO PROCUREMENT

01 BIKE RACK & BIKE PARKING PLACEMENT GUIDE

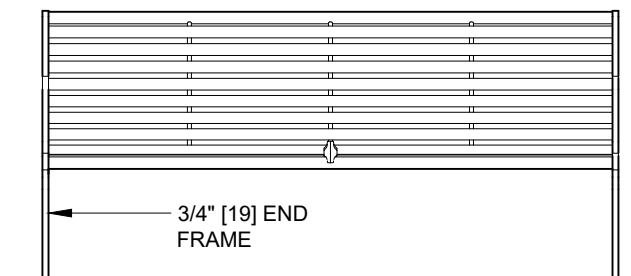
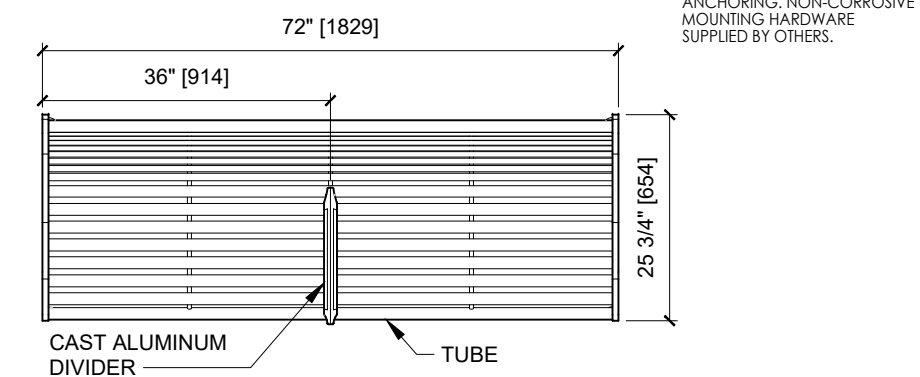
SCALE: N.T.S.

NOTE:
MANUFACTURER: LANDSCAPE FORMS
PRODUCT: 6' PARC VUE BENCH WITH CENTER DIVIDER - NO BACKREST
COLOR: BLACK
MOUNTING: SURFACE

COORDINATE FINAL BENCH FOUNDATIONS IN FIELD TO AVOID CONFLICT WITH EXISTING DUCT BANK, TYP.



TYPE 1



TYPE 2

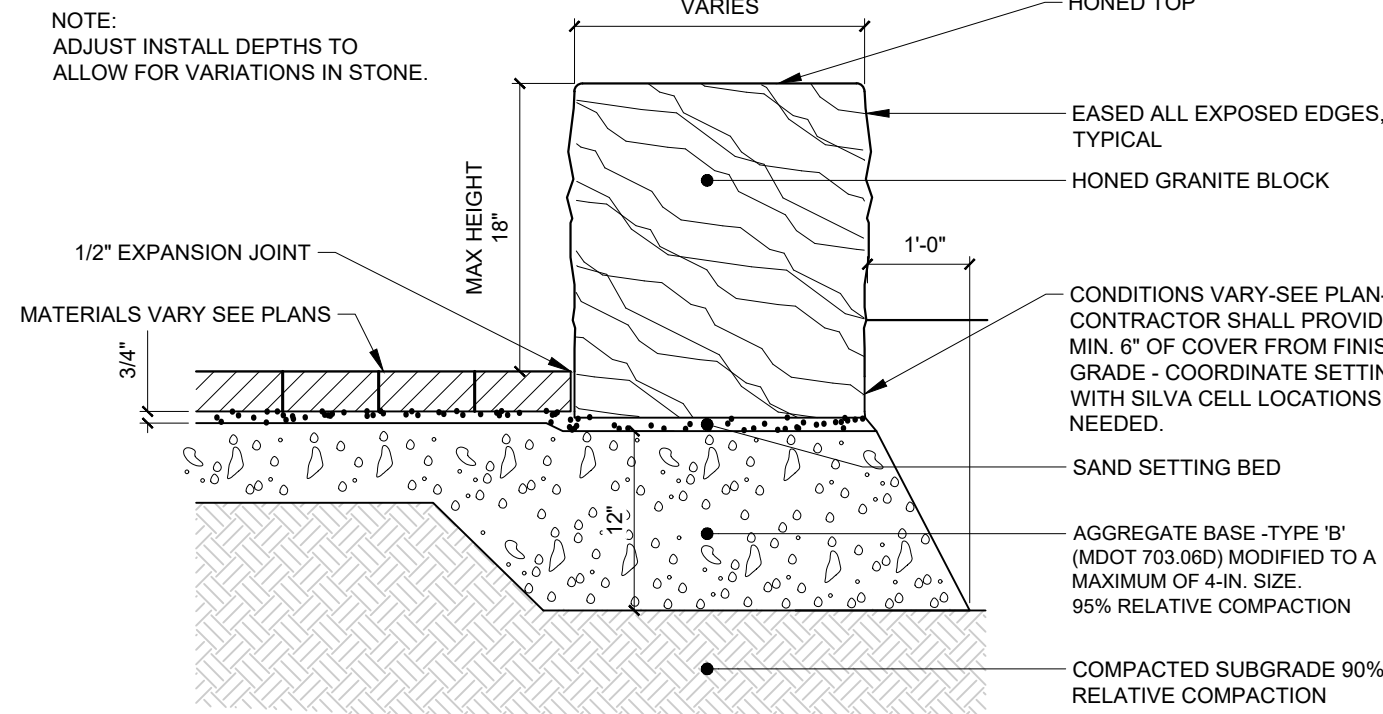
NOTE:
MANUFACTURER: LANDSCAPE FORMS
PRODUCT: 6' PARC VUE BENCH WITH CENTER DIVIDER - W/ BACKREST
COLOR: BLACK
MOUNTING: SURFACE

NOTE:
MANUFACTURER: LANDSCAPE FORMS
PRODUCT: 6' PARC VUE BENCH WITH CENTER DIVIDER - W/ BACKREST
COLOR: BLACK
MOUNTING: SURFACE

COORDINATE FINAL BENCH FOUNDATIONS IN FIELD TO AVOID CONFLICT WITH EXISTING DUCT BANK, TYP.

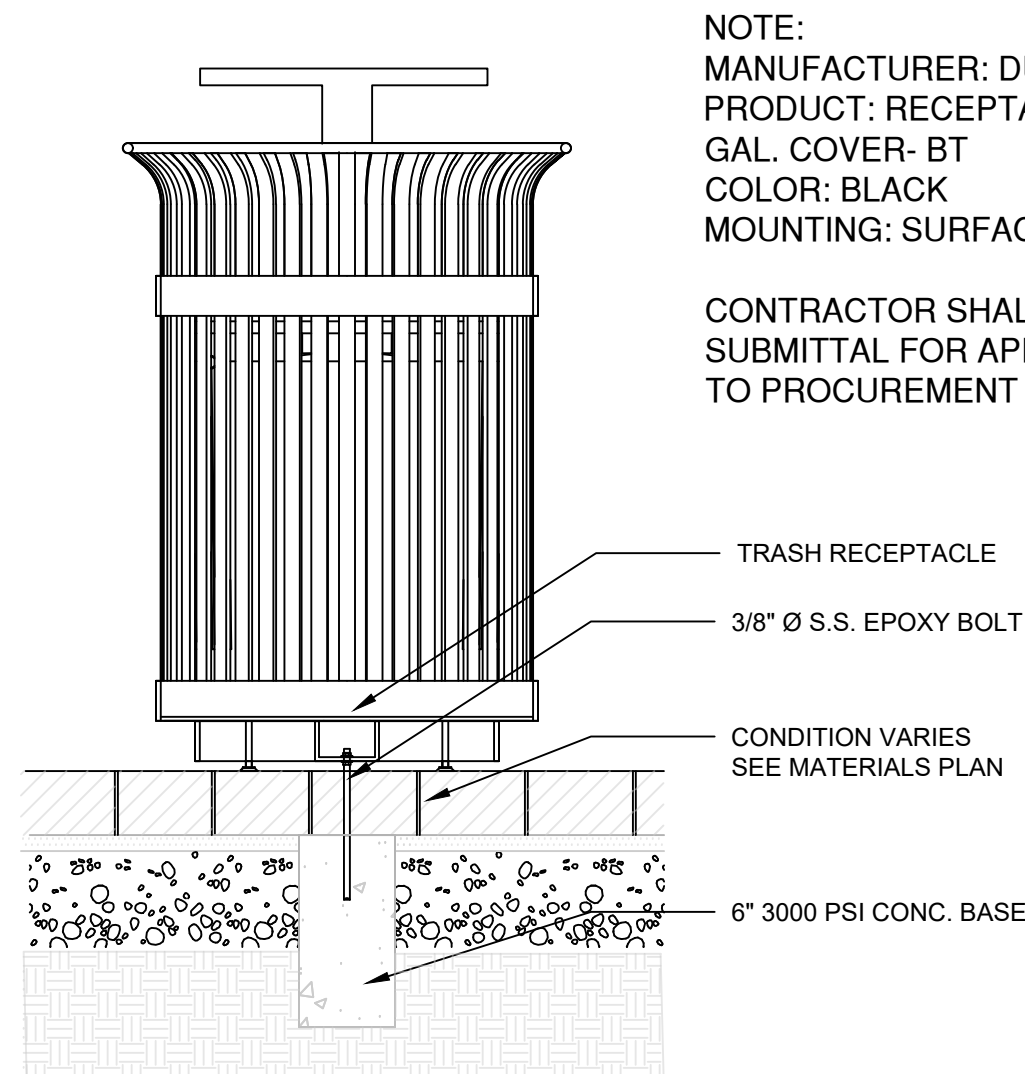
02 BENCH

SCALE: N.T.S.



03 MONOLITHIC GRANITE BLOCK

SCALE: N.T.S.



04 TRASH RECEPTACLE

SCALE: N.T.S.

Prepared For:

60 ELM STREET, LLC
188 STATE STREET, 3RD FLOOR
PORTLAND, ME 04101

Prepared By:

Dry Landscape Rchitecture, I.L.C
31 miller ave.
Biddeford, ME 04005

Date:

FEBRUARY 7, 2025

Issued For:

PLANNING BOARD WORKSOP

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Title:

DETAILS

Reveler Bayside
Phase 1B
61 PREBLE STREET
Portland ME 04103

Revisions:

REV. 1 - 05.28.25



North:

Sheet No.:

LD3

Scale:

AS NOTED

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Planning and Urban Development

Kevin Kraft, AICP

Director



To: Chair Mazer & the Portland Planning Board
From: Kevin Kraft, Director, Planning & Urban Development
Re: Tabling Request for 1584 Forest Avenue
Date: June 20, 2025

Staff is requesting that the Planning Board table the public hearing for the 1584 Forest Avenue Major Site Plan Application, submitted by Acre Properties and currently scheduled for June 24, 2025, to a date certain of Tuesday, July 8, 2025, or the next scheduled Planning Board meeting.

This request is intended to provide additional time for City staff, peer reviewers, and the applicant to finalize and review key components of the application, including compliance with Inclusionary Zoning (IZ), the Low Impact Development (LID) scoresheet, and transportation-related recommendations.