HALEY WARD

13 June 2025

Peter Stith, Technical Advisory Committee Chair
City of Portsmouth
1 Junkins Avenue
Portsmouth, NH 03801

RE: Request for TAC (Site Plan) Review at 361 Hanover Street, Site Development

Dear Mr. Stith and Technical Advisory Committee Members:

On behalf of 361 Hanover Steam Factory, LLC, we are pleased to submit the attached plan set for **Site Plan Review** for the above-mentioned project and request that we be placed on the agenda for your **July 1, 2025,** Technical Advisory Committee (TAC) Meeting. The project consists of the **addition and renovation of the existing building and the construction of four new structures** at 361 Hanover Street, with the associated and required site improvements. The new structures will be entirely residential to add much needed housing stock in a desirable location where significant walkable amenities are in proximity. The project was submitted for **Design Review** as required under Section 2.4.2 of the Site Plan Regulations on March 5, 2025, with revised plans based on comments from the Planning Board review submitted on March 27, 2025, and a subsequent Public Hearing at the April 17, 2025, Planning Board meeting. The result of that submission was to vest the project for a period of one year from that date to the current Zoning Ordinance requirements.

This application is a re-submission to address comments from the April 1, 2025, TAC Committee meeting, where the applicant was asked to re-design the site; to move the proposed driveway to align with Pearl Street, to show Fire Truck access with on-site turning, and to open up the proposed driveway for better sight distances. Those requests have been addressed with this submission.

The applicant submitted requests to the Portsmouth Zoning Board to vary some site elements to the current Zoning, and at their February 18, 2025, meeting the Zoning Board granted the following Variances:

- Variance from Section 10.642 to allow residential principal use on the ground floor of the buildings;
- Variance from Section 10.5A41 - Figure 10.5A41.10D to a) allow for "Apartment", "Rowhouse" and "Duplex" building types where they are not permitted; and b) allow a ground floor height of 10.5 feet where 12 feet is required.

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Project Overview

The project is a re-purposing of the existing structure on the site, known as the Heinemann Building, shown on Tax Map 138 – Lot 63. The project is in the online portal as Land Use Application (LU) – 24-196. The property will be subdivided with the smaller building, known as the Last Chance Garage, placed on a separate lot. The site plan proposal is re-developing the larger lot with the Heinemann Building into entirely residential use by additions to the existing building, and four proposed new buildings, according to the attached site plans. The project received some zoning relief as described above but otherwise is fully compliant with the Portsmouth Zoning Ordinance.

Subdivision

The applicant is proposing to subdivide the existing parcel into two conforming parcels, each with one of the existing buildings contained thereon. The Subdivision Plan details the proposed property division. The plan shows the configuration of the existing lot. The Property has a long history of Industrial and Commercial land use. Built in the late 19th century as a 5-story brick and heavy timber structure with a flat roof and slab at first floor level, the Heinemann Building was originally owned and occupied by the Portsmouth Steam Factory. In the late 19th century, a fire impacted the building, reducing the building to a two-story building. In the 1950s, the building was occupied with an auto dealership and later, in the 1970s, with JSA, an architectural design firm. In the 21st Century, the building was occupied by Heinemann, an international publishing company. A single story "modern" block addition with a shed roof was added mid-century toward the rear facing Foundry Place, which was used as a loading dock for shipping and receiving. The existing condition shows a paved parking area behind the Heinemann Building and a bump out of the property lines. The area to the northeast of the Heinemann Building, towards what is now Foundry Place and the Foundry Place Garage, previously housed the Portsmouth Department of Public Works (DPW) Rock Street facility. Between that facility and the Heinemann Building there was a parking area which had been leased to the Heinemann Building and used for parking. That lease has expired and there is no intention to renew it. The property is currently in Condominium ownership. The Condominium will be dissolved, and the unit owners will become fee simple owners of the individual lots. The plans show access and utility easements, as necessary to continue to serve the new individual lots.

Site Plan Submission

The submission requirements of the City of Portsmouth Site Plan Regulations have been reviewed. The information supplied herein is intended to assist in a determination of the project's compliance. Plans are drawn in accordance with scale and size requirements, with dates, titles, north orientation, Map and Lot, Zoning, revision blocks, and Legends. The proposed uses and Square footage of use are shown on the Architectural plans. The professional's seals with license numbers are on the submitted plans. The Existing Conditions plan shows the site topography, building location with floor elevation, feature locations, and driveway access / egress and current parking configuration. Available utility information

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is shown. Subsequent plans show the proposed development with the associated site improvements and construction details.

Site Zoning

Consistent with other properties along Foundry Place and Hill Street, the property is zoned Character District 5 (CD5). The CD5 District is an urban zoning district that allows for a wide array of higher density commercial and residential uses. The Property is also subject to several Overlay Districts. The northern half of the property is located within the North End Incentive Overlay District (NEIOD) and the entire property is also located within the Downtown Overlay District (DOD).

The goals and objectives of the North End Vision Plan are focused on generating buildings, land uses, and site designs that support economic development while being respectful and sensitive to the surrounding context. Buildings are intended to step up or down in transitional areas, such as the property at 361 Hanover Street, in response to the surrounding land use pattern. This stepping element is why the North End Incentive Overlay District, and its encouragement of larger buildings, does not carry over to the parking lot portion of the property along Hanover Street. Additionally, the North End Vision Plan encourages ground-floor commercial uses to activate the sidewalk and enhance the pedestrian experience. Thus, the Downtown Overlay District was extended into much of the North End. Although the Downtown Overlay District includes 361 Hanover Street, it is important to acknowledge that no other parcel spans the area between Foundry Place and Hanover Street, and as a result of the Downtown Overlay District following the property lines of the entire development parcel, there are no other properties fronting on Hanover Street that are included in the Downtown Overlay District. The encouraged ground-floor commercial uses have been eliminated in this site redevelopment, as this site is sufficiently immersed in the residential section of the neighborhood to warrant this adjustment, and keep the entire use residential.

The project Site Plan C3 details information regarding the proposed uses, including building size and parking counts. The required parking under the Portsmouth Zoning Ordinance (PZO) is as follows:

2 Units between 500-750 SF = 2 Spaces Required
38 Units over 750 SF = 50 Spaces Required
Visitor Spaces – 1 per 5 units = 8 Spaces Required
DOD Overlay Space Reduction (Section 10.1115.23) = 4 Spaces Deducted
Total Required Spaces = 56
Total Spaces Provided = 66 Spaces

We submit that the 4-space reduction is part of the Visitor parking requirement. There are two exterior guest parking spaces, and there will be 2 parking spaces in Building A for guests who are at the invitation of the unit owners with garage door access code. As required the stacked parking spaces, 12 in Building A and three in Building E, will be assigned to a specific unit within those Buildings. Interior parking spaces are detailed on the Parking Plan C-8.

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Site Plan C3 shows the proposed open space / non-impervious areas in green color. The proposed project reduces the impervious surface total for the project and brings it into conformance with the 5% Open Space requirement. The Open Space Calculations are included in the attached Open Space Exhibit. The proposed building uses, all conforming under the property variance, are listed on this sheet. Information regarding other Zoning Development Standards are detailed in the Table in the upper left-hand corner of Site Plan C3. Ordinance conforming bike racks will be provided.

Vehicular and Pedestrian Circulation

The application package includes a technical Memorandum prepared by Vanesse & Associates, Inc. (VAi), the project Traffic Consultant, calculating site Trip Generation utilizing Institute of Traffic Engineers (ITE) Trip Generation Calculations. The Memorandum details the changes in traffic generation due to the project and the potential impact on the adjacent roadway network. The project will not impact traffic operations on the adjacent roadway network. The Summary and Recommendations are detailed on Pages 15-16. Pedestrian access is shown on the site plans and consists of strategically placed sidewalks. Fire Truck turning movement detail is included in the Plan Set as Fire Truck Turning Template T2. The plan re-design did not require a revision to the study.

Screening and Landscaping

The site currently is only landscaped with two trees at the existing building corners, which will have to be removed. The proposed landscaping improvements expand the site landscaping along the Rock Street and Hanover Street frontages, as well as within the site. The space in front of buildings D and E at the street line is landscaped, and some more robust street trees are proposed along the Rock Street frontage. There are two Ash trees which will be removed, which require Portsmouth Tress and Greenery Committee (T&GC) approval. Also, proposed tree species planted on city property require T&GC approval. The developer submitted the plans and obtained the requisite approval. Landscaping is detailed on Landscape Plans L1 – L3.

Water and Sewage Systems

The site is served by municipal water and sewer. The development proposes appropriate connections to the water and sewer infrastructure on Hanover Street. The plan shows the subsequent Mill and Pave operation to restore the street surface. The utility demand generated by the additions and renovations are not expected to exceed the capacity of the existing infrastructure. Utilities are detailed on the Utility Plan C4.

Stormwater Management

The proposed site stormwater infrastructure is shown on Grading and Drainage Plan C5. The proposed drainage system has been designed to capture site runoff and deliver it to the adjacent city closed pipe system in the manner which the site currently flows. The roof drain filters provide post-development runoff treatment for a majority of the site. Erosion and sediment control practices will be implemented

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for both the temporary condition during construction, and for final stabilization after construction. Infiltration of guttered roof run-off is also shown on the plans and detailed on the Roof Drainage Plan C6. Therefore, and as a result of these measures, there are no negative impacts to downstream receptors or adjacent properties anticipated as a result of this project.

Site Lighting

The re-development will introduce adequate lighting of the driveway and pedestrian corridors to provide a welcoming and safe pedestrian and vehicular experience. The lighting will all be building mounted. The lighting intensities are detailed on the Lighting Plan C7, and the proposed fixture cut sheets are included in the Supplemental Material submission.

Site Signage

The site will be served by building mounted street number identification signage, the final design will be determined with TAC input. The project will be a Condominium Development, so a general identification sign will be proposed. The only other signage is required traffic, delivery, and parking controls, such as the ADA signage.

Site Utilities and Solid Waste

Site utilities include natural gas, underground electric and communications services. The existing services will be adjusted and new conduits constructed as needed. The developer placed a work order with Eversource to complete the electrical services design process. Proposed service locations are detailed on the Utility Plan C4.

Solid Waste for Building A will be collected in an interior trash room, with access for trash haulers to pick up the trash on a regular schedule. Solid Waste for Buildings B, C, D, and E will be inside storge in the garage spaces, also with private pickup.

The following plans are included in our submission:

- Cover Sheet – Shows the Development Team, Legend, Site Location, and Site Zoning.
- Subdivision Plan – This plan shows the division of the existing parcel into two conforming lots.
- Easement Plan – This plan shows the required property easements.
- Orthophoto Plan – This plan shows the site's relationship to the surrounding properties.
- Existing Conditions Plan C1 – This plan shows the existing site conditions in detail.
- Demolition Plan C2 – This plan shows proposed site demolition prior to construction.
- Site Plan C3 – This plan shows the site development layout with the associated zoning information and notations.
- Landscape Plans L1 to L3 - These plans show proposed landscaping and details.
- Utility Plan C4 – This plan shows site utilities.

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- Grading Plan C5 - This plan shows project site grading, structure locations and elevations.
- Roof Drainage Plan C6 - This plan show the proposed roof types and drainage directions.
- Lighting Plan C7 – This plan show proposed project lighting.
- Parking Plan C8 - This plan shows the interior parking spaces.
- Fire Truck Turning Template T2 – This plans show turning movements for Portsmouth Fire Apparatus.
- Architectural Plans – These plans show building floor plans.
- Detail Sheets D1 to D5: These plans show the associated construction details.

Also attached to this submission is additional material to aid in the review of the application:

- ✓ Site Plan Application Checklist
- ✓ BOA Approval Document
- ✓ Planning Board Design Review Document
- ✓ Stormwater Inspection and Maintenance Plan
- ✓ Green Building Statement
- ✓ Lighting Specifications
- ✓ Traffic Memorandum
- ✓ Site Photographs
- ✓ Open Space Exhibit
- ✓ Zoning Development Standards Table

We look forward to TAC review of this submission and look forward to an in-person presentation at your meeting.

Sincerely,

John R. Chagnon, PE

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City of Portsmouth, New Hampshire

Site Plan Application Checklist

This site plan application checklist is a tool designed to assist the applicant in the planning process and for preparing the application for Planning Board review. The checklist is required to be completed and uploaded to the Site Plan application in the City's online permitting system. A pre-application conference with a member of the planning department is strongly encouraged as additional project information may be required depending on the size and scope. The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all site plan review requirements. Please refer to the Site Plan review regulations for full details.

Applicant Responsibilities (Section 2.5.2): Applicable fees are due upon application submittal along with required attachments. The application shall be complete as submitted and provide adequate information for evaluation of the proposed site development. Waiver requests must be submitted in writing with appropriate justification.

Name of Applicant: 361 Hanover Steam Factory LLC Date Submitted: 6/13/2025

Application # (in City's online permitting): LU 24-196

Site Address: 361 Hanover Street Map: 138 Lot: 63

Application Requirements			
☑	**Required Items for Submittal**	**Item Location (e.g. Page or Plan Sheet/Note #)**	**Waiver Requested**
☐	Complete application form submitted via the City's web-based permitting program (2.5.2.1**(2.5.2.3A)**	Online	N/A
☐	All application documents, plans, supporting documentation and other materials uploaded to the application form in viewpoint in digital Portable Document Format (PDF). One hard copy of all plans and materials shall be submitted to the Planning Department by the published deadline. **(2.5.2.8)**	Online	N/A

Site Plan Review Application Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☐	Statement that lists and describes "green" building components and systems. **(2.5.3.1B)**	Online	
☐	Existing and proposed gross floor area and dimensions of all buildings and statement of uses and floor area for each floor. **(2.5.3.1C)**	Architectural Plans	N/A
☐	Tax map and lot number, and current zoning of all parcels under Site Plan Review. **(2.5.3.1D)**	C1 Existing Conditions Plan	N/A

Site Plan Review Application Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☐	Owner's name, address, telephone number, and signature. Name, address, and telephone number of applicant if different from owner. **(2.5.3.1E)**	Cover	N/A
☐	Names and addresses (including Tax Map and Lot number and zoning districts) of all direct abutting property owners (including properties located across abutting streets) and holders of existing conservation, preservation or agricultural preservation restrictions affecting the subject property. **(2.5.3.1F)**	Subdivision Plan	N/A
☐	Names, addresses and telephone numbers of all professionals involved in the site plan design. **(2.5.3.1G)**	Cover	N/A
☐	List of reference plans. **(2.5.3.1H)**	Subdivision Plan	N/A
☐	List of names and contact information of all public or private utilities servicing the site. **(2.5.3.1I)**	Cover	N/A

Site Plan Specifications			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☐	Full size plans shall not be larger than 22 inches by 34 inches with match lines as required, unless approved by the Planning Director.. **(2.5.4.1A)**	Required on all plan sheets	N/A
☐	Scale: Not less than 1 inch = 60 feet and a graphic bar scale shall be included on all plans. **(2.5.4.1B)**	Required on all plan sheets	N/A
☐	GIS data should be referenced to the coordinate system New Hampshire State Plane, NAD83 (1996), with units in feet. **(2.5.4.1C)**	Sheet C1 Existing	N/A
☐	Plans shall be drawn to scale and stamped by a NH licensed civil engineer. **(2.5.4.1D)**	Required on all plan sheets	N/A
☐	Wetlands shall be delineated by a NH certified wetlands scientist and so stamped. **(2.5.4.1E)**	N/A	N/A
☐	Title (name of development project), north point, scale, legend. **(2.5.4.2A)**	Cover	N/A
☐	Date plans first submitted, date and explanation of revisions. **(2.5.4.2B)**	All Sheets	N/A
☐	Individual plan sheet title that clearly describes the information that is displayed. **(2.5.4.2C)**	Required on all plan sheets	N/A
☐	Source and date of data displayed on the plan. **(2.5.4.2D)**	Property Survey	N/A

Site Plan Specifications – Required Exhibits and Data			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☐	**1. Existing Conditions: (2.5.4.3A)** • Surveyed plan of site showing existing natural and built features; • Existing building footprints and gross floor area; • Existing parking areas and number of parking spaces provided; • Zoning district boundaries; • Existing, required, and proposed dimensional zoning requirements including building and open space coverage, yards and/or setbacks, and dwelling units per acre; • Existing impervious and disturbed areas; • Limits and type of existing vegetation; • Wetland delineation, wetland function and value assessment (including vernal pools); • SFHA, 100-year flood elevation line and BFE data, as required.	C1 Existing Conditions Plan	
☐	**2. Buildings and Structures: (2.5.4.3B)** • Plan view: Use, size, dimensions, footings, overhangs, 1st fl. elevation; • Elevations: Height, massing, placement, materials, lighting, façade treatments; • Total Floor Area; • Number of Usable Floors; • Gross floor area by floor and use.	Architectural Plans	
☐	**3. Access and Circulation: (2.5.4.3C)** • Location/width of access ways within site; • Location of curbing, right of ways, edge of pavement and sidewalks; • Location, type, size and design of traffic signing (pavement markings); • Names/layout of existing abutting streets; • Driveway curb cuts for abutting prop. and public roads; • If subdivision; Names of all roads, right of way lines and easements noted; • AASHTO truck turning templates, description of minimum vehicle allowed being a WB-50 (unless otherwise approved by TAC).	Sheet C3 Site Plan	
☐	**4. Parking and Loading: (2.5.4.3D)** • Location of off street parking/loading areas, landscaped areas/buffers; • Parking Calculations (# required and the # provided).	Sheet C8 Parking Plan	
☐	**5. Water Infrastructure: (2.5.4.3E)** • Size, type and location of water mains, shut-offs, hydrants & Engineering data; • Location of wells and monitoring wells (include protective radii).	Sheet C4 Utility	
☐	**6. Sewer Infrastructure: (2.5.4.3F)** • Size, type and location of sanitary sewage facilities & Engineering data, including any onsite temporary facilities during construction period.	Sheet C4 Utility	

☐	**7. Utilities: (2.5.4.3G)** • The size, type and location of all above & below ground utilities; • Size type and location of generator pads, transformers and other fixtures.	Sheet C4 Utility	
☐	**8. Solid Waste Facilities: (2.5.4.3H)**	Architectural Plans	
	• The size, type and location of solid waste facilities.		
☐	**9. Storm water Management: (2.5.4.3I)** • The location, elevation and layout of all storm-water drainage. • The location of onsite snow storage areas and/or proposed off-site snow removal provisions. • Location and containment measures for any salt storage facilities • Location of proposed temporary and permanent material storage locations and distance from wetlands, water bodies, and stormwater structures.	Sheet C5 Grading & Drainage Plan Sheet C6 Roof Drainage Plan	
☐	**10. Outdoor Lighting: (2.5.4.3J)** • Type and placement of all lighting (exterior of building, parking lot and any other areas of the site) and photometric plan.	Sheet C7 Lighting Plan	
☐	**11.** Indicate where dark sky friendly lighting measures have been implemented. **(10.1)**	Sheet C7 Lighting Plan	
☐	**12. Landscaping: (2.5.4.3K)** • Identify all undisturbed area, existing vegetation and that which is to be retained; • Location of any irrigation system and water source.	Sheet L1-L3 Landscape Plans	
☐	**13. Contours and Elevation: (2.5.4.3L)** • Existing/Proposed contours (2 foot minimum) and finished grade elevations.	Sheet C5 Grading & Drainage Plan	
☐	**14. Open Space: (2.5.4.3M)** • Type, extent and location of all existing/proposed open space.	Open Space Exhibit	
☐	**15. All easements, deed restrictions and non-public rights of ways. (2.5.4.3N)**	Easement Plan	
☐	**16. Character/Civic District (All following information shall be included): (2.5.4.3P)** • Applicable Building Height (10.5A21.20 & 10.5A43.30); • Applicable Special Requirements (10.5A21.30); • Proposed building form/type (10.5A43); • Proposed community space (10.5A46).	Sheet C3 Site Plan	
☐	**17. Special Flood Hazard Areas (2.5.4.3Q)** • The proposed development is consistent with the need to minimize flood damage; • All public utilities and facilities are located and construction to minimize or eliminate flood damage; • Adequate drainage is provided so as to reduce exposure to flood hazards.	N/A	

Other Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☐	Traffic Impact Study or Trip Generation Report, as required. **(3.2.1-2)**	Online	
☐	Indicate where Low Impact Development Design practices have been incorporated. **(7.1)**	Detail Sheets	
☐	Indicate whether the proposed development is located in a wellhead protection or aquifer protection area. Such determination shall be approved by the Director of the Dept. of Public Works. **(7.3.1)**	N/A	
☐	Stormwater Management and Erosion Control Plan. **(7.4)**	Detail Sheet D1 & D4	
☐	Inspection and Maintenance Plan **(7.6.5)**	Online	

Final Site Plan Approval Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☐	All local approvals, permits, easements and licenses required, including but not limited to: • Waivers; • Driveway permits; • Special exceptions; • Variances granted; • Easements; • Licenses. **(2.5.3.2A)**	Cover Sheet	
☐	Exhibits, data, reports or studies that may have been required as part of the approval process, including but not limited to: • Calculations relating to stormwater runoff; • Information on composition and quantity of water demand and wastewater generated; • Information on air, water or land pollutants to be discharged, including standards, quantity, treatment and/or controls; • Estimates of traffic generation and counts pre- and post-construction; • Estimates of noise generation; • A Stormwater Management and Erosion Control Plan; • Endangered species and archaeological / historical studies; • Wetland and water body (coastal and inland) delineations; • Environmental impact studies. **(2.5.3.2B)**	Supplemental Materials	
☐	A document from each of the required private utility service providers indicating approval of the proposed site plan and indicating an ability to provide all required private utilities to the site. **(2.5.3.2D)**	TBD	

Final Site Plan Approval Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☐	A list of any required state and federal permit applications required for the project and the status of same. **(2.5.3.2E)**	Cover Sheet	
☐	A note shall be provided on the Site Plan stating: "All conditions on this Plan shall remain in effect in perpetuity pursuant to the requirements of the Site Plan Review Regulations." **(2.5.4.2E)**	Cover Sheet	N/A
☐	For site plans that involve land designated as "Special Flood Hazard Areas" (SFHA) by the National Flood Insurance Program (NFIP) confirmation that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334. **(2.5.4.2F)**	N/A	
☐	Plan sheets submitted for recording shall include the following notes: a. "This Site Plan shall be recorded in the Rockingham County Registry of Deeds." b. "All improvements shown on this Site Plan shall be constructed and maintained in accordance with the Plan by the property owner and all future property owners. No changes shall be made to this Site Plan without the express approval of the Portsmouth Planning Director." **(2.13.3)**	Sheet C3 Site Plan	N/A

Applicant's Signature:  **Date:** 6/12/2025

CITY OF PORTSMOUTH
Planning & Sustainability
Department
1 Junkins Avenue
Portsmouth, New
Hampshire 03801
(603) 610-7216

ZONING BOARD OF ADJUSTMENT

February 24, 2025

361 Hanover Steam Factory LLC
361 Hanover Street
Portsmouth, New Hampshire 03801

RE: **Board Of Adjustment Request for Property Located at 361 Hanover Street, Portsmouth, NH (LU-24-196)**

Dear Property Owner:

The Zoning Board of Adjustment, at its regularly scheduled meeting of **Wednesday, February 19, 2025**, considered your application for expanding and renovating the existing commercial building and converting it to multi-family residential and to construct three new multi-family residential buildings which requires the following: 1) Variance from Section 10.642 to allow residential principal uses on the ground floor of the buildings; 2) Variance from Section 10.5A41 - Figure 10.5A41.10D to a) allow for "Apartment", "Rowhouse" and "Duplex" building types where they are not permitted; and b) allow a ground floor height of 10.5 feet where 12 feet is required. Said property is shown on Assessor Map 138 Lot 63 and lies within the Character District 5 (CD5) and Downtown Overlay District. As a result of said consideration, the Board voted to **grant** the request with the following **condition**:

1) The design and location of the buildings may change as a result of Planning Board review and approval.

The Board's decision may be appealed up to thirty (30) days after the vote. Any action taken by the applicant pursuant to the Board's decision during this appeal period shall be at the applicant's risk. Please contact the Planning & Sustainability Department for more details about the appeals process.

Approvals may also be required from other City Commissions or Boards. Once all required approvals have been received, applicant is responsible for applying for and securing a building permit from the Inspection Department prior to starting any project work.

This approval shall expire unless a building permit is issued within a period of two (2) years from the date granted unless an extension is granted in accordance with Section 10.236 of the Zoning Ordinance.

The Findings of Fact associated with this decision are available: attached here or as an attachment in the Viewpoint project record associated with this application and on the Planning Board Meeting website:

https://www.cityofportsmouth.com/planportsmouth/zoning-board-adjustment/zoning-board-adjustment-archived-meetings-and-material

The minutes and audio recording of this meeting are available by contacting the Planning & Sustainability Department.

Very truly yours,

Beth Margeson, Vice Chair of the Zoning Board of Adjustment

cc: Shanti Wolph, Chief Building Inspector

Rosann Maurice-Lentz, City Assessor
John Bosen, DTC Law
John Chagnon, Ambit Engineering, Inc.

CITY OF PORTSMOUTH
Planning & Sustainability Department
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PLANNING BOARD

April 21, 2025

361 Hanover Steam Factory, LLC
41 Industrial Drive, Unit 20
Exeter, NH 03833

RE: Request for Design Review for Property Located at 361 Hanover Street in Portsmouth, New Hampshire (LUPD-25-2)

Dear Property Owner:

The Planning Board, at its meeting on Thursday, April 17, 2025 considered your application requesting Design Review for the construction of new residential buildings along Hanover Street and the renovation of the existing building with associated site improvements. Said property is located on Assessor Map 138 Lot 63 and lies within the Character District 5 (CD5), Downtown Overlay District (DOD), and North End Incentive Overlay District (NEIOD). As a result of said consideration, the Board voted to find the design review process complete.

The minutes and audio recording of this meeting are available by contacting the Planning Department.

Very truly yours,

Rick Chellman, Chairman of the Planning Board

cc: Shanti Wolph, Chief Building Inspector

Rosann Maurice-Lentz, City Assessor
Peter H. Rice, Director of Public Works

John Chagnon, Ambit Engineering
John Bosen, DTC Law

STORMWATER INSPECTION & MAINTENANCE PLAN

FOR

361 Hanover Street
Portsmouth, NH

Introduction

The intent of this plan is to provide 361 Hanover Street (herein referred to as "owner") with a list of procedures that document the inspection and maintenance requirements of the drainage structures for this development.

The following inspection and maintenance program is necessary to keep the stormwater management system functioning properly. These measures will also help minimize potential environmental impacts. By following the enclosed procedures, the owner will be able to maintain the functionality of the drainage structures and maximize their ability to drain the site effectively from stormwater runoff.

Annual Report

The owner shall prepare an annual Inspection & Maintenance Report. The report shall include a summary of the system's maintenance and repair by transmission of the Inspection & Maintenance Log and other information as required. A copy of the report shall be delivered annually to the City of Portsmouth Public Works Department.

Inspection & Maintenance Checklist/Log

The following pages contain a Stormwater Management System Inspection & Maintenance Checklist and a blank copy of the Stormwater Management System Inspection & Maintenance Log. These forms are provided to the owner as a guideline for performing the inspection and maintenance. This is a guideline and should be periodically reviewed for conformance with current practice and standards.

DRAINAGE STRUCTURE COMPONENTS

Non-Structural BMP's

Non-Structural best management practices (BMP's) include temporary and permanent measures that typically require less labor and capital inputs and are intended to provide protection against erosion of soils. Examples of non-structural BMP's on this project include but are not limited to: temporary and permanent mulching, temporary and permanent grass cover, trees, shrubs and ground covers, miscellaneous landscape plantings, dust control, tree protection, topsoiling, sediment barriers, and a stabilized construction entrance.

Structural BMP's

Structural BMP's are more labor and capital-intensive structures or installations that require more specialized personnel to install. Examples on this project include but are not limited to storm drain catch basins, roof drains and pipes.

Inspection and Maintenance Requirements

The following summarizes the inspection and maintenance requirements for the various BMP's that may be found on this project.

1. **Landscaped areas:** After each rain event of 0.5" or more during a 24-hour period, inspect landscaped areas for signs of disturbance, such as erosion. If damaged areas are discovered, immediately repair the damage. Repairs may include adding new topsoil, lime, seed, fertilizer and mulch.
2. **Plantings**: Planting and landscaping (trees, shrubs) shall be monitored bi-monthly during the first year to insure viability and vigorous growth. Replace dead or dying vegetation with new stock and adjust the conditions that caused the dead or dying vegetation. During dryer times of the year, provide weekly watering or irrigation during the establishment period of the first year. Make the necessary adjustments to ensure long-term health of the vegetated covers, i.e. provide more permanent mulch or compost or other means of protection. Clean up dead leaves yearly to avoid drainage issues.
3. **Storm Drain Catch Basins and Pipes:** Monitor drain inlets and outlets during construction. Monitor sediment levels in catch basin sumps and remove as necessary.
4. **Roof Drains:** Maintain roof drains and review periodically for clogs. Roof drain filters will be installed within the buildings. Follow the Maintenance Specification as Detailed in the Plan Set.

Stormwater Management System

Inspection & Maintenance Checklist for Post Construction Condition—for 361 Hanover Street, Portsmouth, NH

BMP/System Component	Minimum Inspection Frequency	Minimum Inspection Requirements	Maintenance/Cleanout Threshold
Closed Drainage System			
Drainage Pipes and Roof Drains	Yearly	*Check for sediment clogging, or soiled runoff.*	Clean entire drainage system and remove all sediments if discovered in piping.
Catch Basins	Bi-Annually	*Check for excessive accumulation of sediment in sump*	Remove sediment as necessary
Annual Report	Yearly	*Prepare Annual Report, including all Inspection & Maintenance Logs. Provide to City (if required).*	N/A

Stormwater Management System Maintenance Summary

Inspection & Maintenance Log—for 361 Hanover Street, Portsmouth, NH

BMP/System Component	Date Inspected	Inspector	Problems Noted, Required Maintenance *(List Items/Comments)*	Date of Maintenance	Performed By

Data Sheets

SCOTT M BROWN

ESTD | ARCHITECTS | 2007

MEMORANDUM

DATE:	March 14, 2025
TO:	City of Portsmouth Planning Board
PROJECT:	Redevelopment Plan at 361 Hanover Street Portsmouth, NH 03801
REGARDING:	Green Building/Energy Compliance Statement

Building energy compliance/performance will be measured by The Home Energy Rating System (HERS) Index. This is the industry standard by which a home's energy efficiency is measured. It's also the nationally recognized system for inspecting and calculating a home's energy performance. The target rating will be HERS 50 or less which far exceeds the 2018 IECC requirement of HERS 61 for Climate Zone 5.

Proposed buildings will exceed most of the requirements of the 2018 Energy Conservation Code including the following features:

Building Shell Features:

- Slab Insulation – R-10.0 Edge, R-10.0 Under
- Windows – U-Value: .280, SHGC: .4
- Exposed Floor – R-30.0
- Walls – R-20 plus R-5 cont. insulation
- Roof - R-49
- Infiltration Rate – 3.0 ACH50 (Blower Door Test)

Mechanical System Features:

- Building Load Calculations - Performed in accordance with ASHRAE 140
- Air Source Heat Pump – Electric Heating 10.0 HPSF, Cooling 18.0 SEER
- Water Heating – Conventional Electric, .92 EF, 40.0 Gal.
- Ventilation System – Balanced ERV, 150 CFM, 75.0 Watts, Compliance with ASHRAE 62
- Programmable Thermostats- Heating/Cooling
- Plumbing Fixtures - Fixture flow rates to comply with the International Green Construction Code (IgCC). Showers, Sinks and lavatories with flows of

2.0/1.8/1.5gpm respectively.
- Toilets - Dual-flush tank-type toilets with flows of 0.9/1.28gal per flush

Lights and Appliance Features:

- Interior Lighting – 100% LED most being Energy Star and/or DLC (Design Lighting Consortium) rated.
- Exterior Lighting - 100% LED, to include auto daylight shutoffs.
- Lighting Controls - Use of Dimmers, Daylighting Control Sensors and Photoelectric Sensors which further enhance energy savings and meet energy codes.
- Refrigerator – <600 kWh/yr
- Dishwasher – <270 kWh/yr
- Range/Oven Fuel – Natural Gas, Electric Induction Cooktop Option
- Clothes Dryer Fuel - Electric

Building Features:

- Wiring for Electric Vehicle Ready Spaces – 1 per Unit
- Solar ready roof zones on roof pitches of 3/12 or less (oriented between 110° and 270° of true north) and capped roof penetration sleeves for future solar to be provided.

CLRv3 Select

Commercial Recessed LED Downlight

Project

Catalog

Type

Date

Product Description

Designed for both new construction and retrofit applications, the CLR Select series can be installed directly into drywall, a ceiling grid or an existing 4", 6" or 8" mounting frame using spring loaded retention tabs. The CCT and output selectable design allows for easy adjustment to 3000, 3500, 4000, or 5000K and standard, medium or high output. With Standard and Low Output models available, the lighting can be easily tailored to match the space or meet rebate levels. With accessory trims in black and offering a full range of dimming via 1-10 volts, the CLR Select is adaptable to most any environment. The versatility of this light source is perfect for commercial applications, such as educational, governmental, retail and grocery, office or hospitality lighting.

Construction
- Spun aluminum trim
- Plastic driver housing
- 3' flexible metal conduit (FMC) whip
- Matte white powder coat
- Black faceplates available

Optical System
- Precision engineered polystyrene diffuser provides high uniformity, and reduced glare
- No visible diodes, hot-spots, or shadows
- 4 CCT selection (3000K, 3500K, 4000K, 5000K) via switch on driver cover

Electrical
- 5 Wire whip - 3 Input (L,N,G) and 2 controls (DIM+, DIM-)
- Universal range input 120 - 277 VAC, 60Hz
- 3 wattage selection (Standard, Medium, High) via switch on driver cover
- Default Setting of 4000K and Standard output
- 2 models of output - Standard and Low

Controls
- Dimming via 1-10VDC controls
- Available Bluetooth Wireless Controls Accessory. See: www.nicorlighting.com/network-lighting-controls

Mounting and Installation
- Adjustable, spring loaded retention tabs ensure secure fixture retention on ceilings up to 1 ½" thick
- Easy installation into most 4", 6" or 8" incandescent or fluorescent frames
- Frame not needed for new construction installation
- NON-IC Operating temperature of 0°F to 104°F (-18°C to 40°C)
- IC Operating temperature of 0°F to 77°F (-18° to 25°C)
- Metal rough-in templates and frames available
- For installations where power surge may be possible, NICOR recommends installing additional surge protection at the fixture or electrical distribution panel

Listings
- cULus 1598 Listed for wet locations
- Certified for direct contact with insulation - 4" model only
- Meets ASTM E283 airtight requirements
- TAA compliant
- RoHS compliant
- Meets FCC Part 15, Subpart B, Class A standards for conducted and radiated emissions
- TM-21 Reported L70(9k) life >72,000 hours
- LM-79, LM-80 testing performed in accordance with IESNA standards

Warranty
- 5-year limited system warranty standard
- Warranty does not cover product failure due to an overvoltage event (power surge)

CLRv3

Commercial LED Downlight

4", 6", 8" Diameters

Selectable Wattage & CCT

1) 4" only

CLRv3 Select

Commercial Recessed LED Downlight

Ordering

Ordering Information *Example: CLR63SUS9WH*

Series	Diameter	Version	Wattage	Voltage	CCT	CRI	Color
CLR	☐ **4** (4 inch)	**3** (Version 3.0)	◯ **S** (Selectable)	**U** (120-277V)	**S** (Selectable)	**9** (90 CRI)	**WH** (White)
	◯ **6** (6 inch)		◯ **SL** (Selectable Low Lumen)				
	◯ **8** (8 inch)						

Specifications and dimensions subject to change without notice.

Recommended Dimmers*

Lutron NTSTV-DV-WH

Lutron DVSTV

Cooper SF10P

Legrand RH4FBL3PW

Accessories

Accessories sold separately

Black 4" Trim	CLR43-TR-BK
Black 6" Trim	CLR63-TR-BK
Black 8" Trim	CLR83-TR-BK
3" , 4" , 6" Rough In Flat Template	ROUGHIN-TEMPLATE-346
8" Rough in Template	ROUGHIN-TEMPLATE-8
4" Rough In Frame	DLE4-ROUGHIN-FRAME
6" Rough In Frame	DLE6-ROUGHIN-FRAME
3", 4", 6" Rough In Frame	MULTIFRAME-346-1
Emergency Battery Backup	EMI200-1-UNV
Bluetooth Wireless Controls	NLCDOWN1

CLRv3 Select

Commercial Recessed LED Downlight

Performance Data			Standard Output			Low Output		
Model Number	Output Setting	Nominal CCT	Light Output (lm)	Power Draw (W)	Efficiency (Lm/W)	Light Output (lm)	Power Draw (W)	Efficiency (Lm/W)
CLR43SUS9WH CLR43SLUS9WH	Standard	3000	806	7.0	115.2	594	6.9	86.5
		3500	818		116.9	615	6.7	91.6
		4000	829		118.4	622	6.6	93.9
		5000	830		118.6	600	6.8	88.4
	Medium	3000	1137	9.9	114.8	686	7.8	87.4
		3500	1164		117.6	710	7.7	92.6
		4000	1183		119.5	718	7.6	94.9
		5000	1174		118.6	693	7.8	89.3
	High	3000	1269	10.8	117.5	768	8.8	87.0
		3500	1300		120.4	795	8.6	92.2
		4000	1322		122.4	804	8.5	94.4
		5000	1309		121.2	776	8.7	88.9
CLR63SUS9WH CLR63SLUS9WH	Standard	3000	1238	12.8	96.7	639	6.9	92.1
		3500	1288		100.6	685	6.7	102.5
		4000	1314		102.7	703	6.7	105.5
		5000	1319		103.0	681	6.9	98.8
	Medium	3000	1654	17.5	94.5	798	8.9	89.6
		3500	1737		99.3	857	8.6	99.6
		4000	1782		101.8	879	8.6	102.6
		5000	1767		101.0	852	8.9	96.0
	High	3000	2119	24.0	88.3	1011	10.9	92.8
		3500	2132		88.8	1085	10.5	103.2
		4000	2250		93.8	1113	10.5	106.3
		5000	2273		94.7	1079	10.8	99.5
CLR83SUS9WH CLR83SLUS9WH	Standard	3000	2602	24.9	104.5	1017	11.6	87.3
		3500	2750		110.4	1042	11.4	91.1
		4000	2802		112.5	1044	11.5	91.0
		5000	2764		111.0	1026	11.6	88.4
	Medium	3000	2988	29.3	102.0	1525	15.5	98.3
		3500	3194		109.0	1564	15.3	102.5
		4000	3257		111.2	1566	15.3	102.4
		5000	3192		109.0	1539	15.5	99.5
	High	3000	3480	34.9	99.7	2135	21.3	100.0
		3500	3521		100.9	2189	21.0	104.4
		4000	3668		105.1	2193	21.0	104.2
		5000	3692		105.8	2154	21.3	101.3

CLRv3 Select

Commercial Recessed LED Downlight

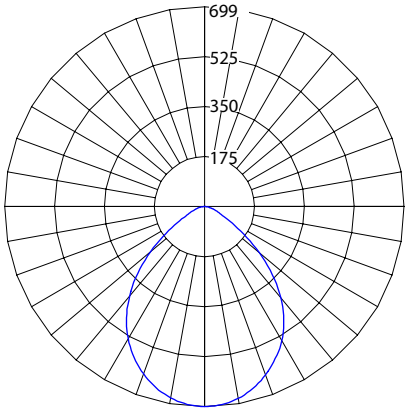
Photometric Data - Standard Output

CLR4 11W, 3000K

Input Voltage (VAC)	120-277
System Level Power (W)	10.8
Delivered Lumens (Lm)	1269
System Efficacy (Lm/W)	117.5
Correlated Color Temp (K)	3048
Color Rendering Index (CRI)	95 R9=64
Beam Angle	83.6
Spacing Criteria	1.16

Data Multiplier

	30K	35K	40K	50K
Low	0.635	0.645	0.653	0.654
Med	0.896	0.918	0.932	0.925
High	1.000	1.028	1.046	1.035



Intensity Summary (Candle Power)

Angle	Mean CP
0	699
5	696
15	663
25	594
35	480
45	312
55	150
65	73
75	37
85	10
90	0

Cone of Light Tabulation

Mounted height (Inches)	Footcandles Beam Center	Diameter (Feet)
4	43.7	7.2
6	19.4	10.7
8	10.9	14.3
10	7.0	17.9
12	4.8	21.5
14	3.5	25.0
16	2.7	28.6

Zonal Lumen Summary

Zone	Lumens	% of Luminaire
0-30	519	40.9%
0-40	806	63.6%
0-60	1156	91.1%
0-90	1269	100%
90-180	0	0%
0-180	1269	100%

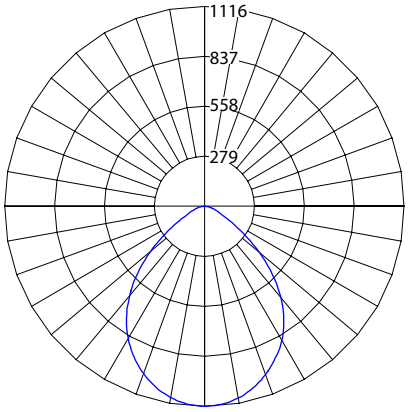
Data Multiplier applies to Lumens, Candle Power, Cone of Light, and Zonal Lumen Summary. See Performance Table for Lm, Watts and LPW values.

CLR6 24W, 3000K

Input Voltage (VAC)	120-277
System Level Power (W)	24.0
Delivered Lumens (Lm)	2119
System Efficacy (Lm/W)	88.3
Correlated Color Temp (K)	3000
Color Rendering Index (CRI)	93 R9=61
Beam Angle	87.9
Spacing Criteria	1.16

Data Multiplier

	30K	35K	40K	50K
Low	0.548	0.608	0.620	0.622
Med	0.780	0.820	0.841	0.834
High	1.000	1.006	1.062	1.073



Intensity Summary (Candle Power)

Angle	Mean CP
0	1116
5	1108
15	1045
25	930
35	759
45	525
55	260
65	99
75	45
85	11
90	0

Cone of Light Tabulation

Mounted height (Inches)	Footcandles Beam Center	Diameter (Feet)
4	69.7	7.7
6	30.9	11.6
8	17.4	15.4
10	11.1	19.3
12	7.7	23.1
14	5.6	27.0
16	4.3	30.8

Zonal Lumen Summary

Zone	Lumens	% of Luminaire
0-30	829	39.1%
0-40	1305	61.6%
0-60	1953	92.2%
0-90	2119	100%
90-180	0	0%
0-180	2119	100%

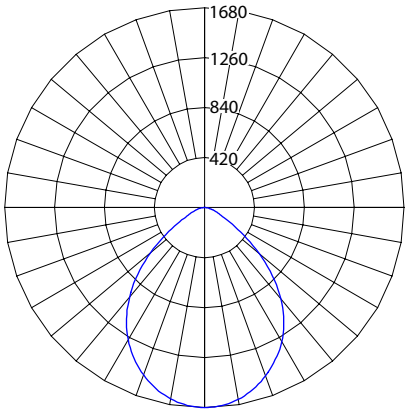
Data Multiplier applies to Lumens, Candle Power, Cone of Light, and Zonal Lumen Summary. See Performance Table for Lm, Watts and LPW values.

CLR8 34W, 3000K

Input Voltage (VAC)	120-277
System Level Power (W)	34.9
Delivered Lumens (Lm)	3480
System Efficacy (Lm/W)	99.7
Correlated Color Temp (K)	3065
Color Rendering Index (CRI)	93 R9=62
Beam Angle	93.8
Spacing Criteria	1.18

Data Multiplier

	30K	35K	40K	50K
Low	0.748	0.790	0.805	0.794
Med	0.859	0.918	0.936	0.917
High	1.000	1.012	1.054	1.061



Intensity Summary (Candle Power)

Angle	Mean CP
0	1678
5	1665
15	1574
25	1408
35	1183
45	895
55	551
65	208
75	61
85	15
90	0

Cone of Light Tabulation

Mounted height (Inches)	Footcandles Beam Center	Diameter (Feet)
4	104.9	8.5
6	46.6	12.8
8	26.1	17.1
10	16.7	21.4
12	11.6	25.6
14	8.5	29.9
16	6.5	34.2

Zonal Lumen Summary

Zone	Lumens	% of Luminaire
0-30	1252	36%
0-40	1992	57.2%
0-60	3178	91.3%
0-90	3480	100%
90-180	0	0%
0-180	3480	100%

Data Multiplier applies to Lumens, Candle Power, Cone of Light, and Zonal Lumen Summary. See Performance Table for Lm, Watts and LPW values.

CLRv3 Select

Commercial Recessed LED Downlight

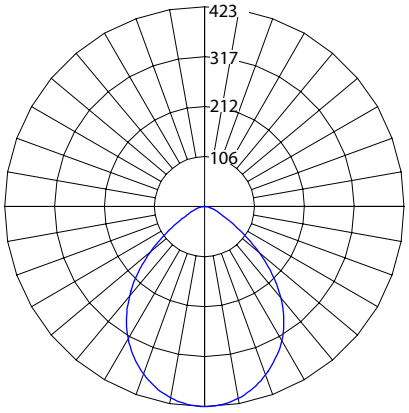
Photometric Data - Low Output

CLR4 9W, 3000K

Input Voltage (VAC)	120-277
System Level Power (W)	8.8
Delivered Lumens (Lm)	768
System Efficacy (Lm/W)	87.0
Correlated Color Temp (K)	3048
Color Rendering Index (CRI)	95 R9=64
Beam Angle	80.1
Spacing Criteria	1.16

Data Multiplier

	30K	35K	40K	50K
Low	0.773	0.801	0.810	0.781
Med	0.893	0.924	0.935	0.902
High	1.000	1.035	1.047	1.010



Intensity Summary (Candle Power)

Angle	Mean CP
0	423
5	421
15	401
25	359
35	290
45	189
55	91
65	44
75	22
85	6
90	0

Cone of Light Tabulation

Mounted height (Inches)	Footcandles Beam Center	Diameter (Feet)
4	26.4	12.8
6	11.7	19.2
8	6.6	25.6
10	4.2	32.0
12	2.9	38.4
14	2.1	44.8
16	1.6	51.2

Zonal Lumen Summary

Zone	Lumens	% of Luminaire
0-30	314	40.9%
0-40	488	63.6%
0-60	699	91.1%
0-90	768	100%
90-180	0	0%
0-180	768	100%

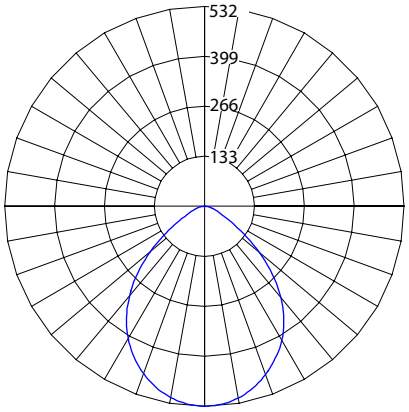
Data Multiplier applies to Lumens, Candle Power, Cone of Light, and Zonal Lumen Summary. See Performance Table for Lm, Watts and LPW values.

CLR6 11W, 3000K

Input Voltage (VAC)	120-277
System Level Power (W)	10.9
Delivered Lumens (Lm)	1011
System Efficacy (Lm/W)	92.8
Correlated Color Temp (K)	3022
Color Rendering Index (CRI)	93 R9=61
Beam Angle	89.0
Spacing Criteria	1.16

Data Multiplier

	30K	35K	40K	50K
Low	0.632	0.678	0.695	0.674
Med	0.789	0.848	0.869	0.843
High	1.000	1.073	1.101	1.067



Intensity Summary (Candle Power)

Angle	Mean CP
0	532
5	528
15	499
25	444
35	362
45	250
55	124
65	47
75	22
85	5
90	0

Cone of Light Tabulation

Mounted height (Inches)	Footcandles Beam Center	Diameter (Feet)
4	33.3	7.7
6	14.8	11.6
8	8.3	15.4
10	5.3	19.3
12	3.7	23.1
14	2.7	27.0
16	2.0	30.8

Zonal Lumen Summary

Zone	Lumens	% of Luminaire
0-30	395	39.1%
0-40	623	61.6%
0-60	932	92.2%
0-90	1011	100%
90-180	0	0%
0-180	1011	100%

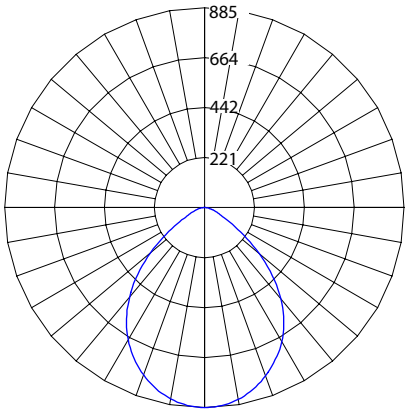
Data Multiplier applies to Lumens, Candle Power, Cone of Light, and Zonal Lumen Summary. See Performance Table for Lm, Watts and LPW values.

CLR8 22W, 3000K

Input Voltage (VAC)	120-277
System Level Power (W)	21.3
Delivered Lumens (Lm)	2154
System Efficacy (Lm/W)	101.3
Correlated Color Temp (K)	3065
Color Rendering Index (CRI)	93 R9=62
Beam Angle	91.3
Spacing Criteria	1.18

Data Multiplier

	30K	35K	40K	50K
Low	0.476	0.488	0.489	0.481
Med	0.714	0.733	0.733	0.721
High	1.000	1.025	1.027	1.009



Intensity Summary (Candle Power)

Angle	Mean CP
0	884
5	877
15	829
25	742
35	623
45	472
55	290
65	110
75	32
85	8
90	0

Cone of Light Tabulation

Mounted height (Inches)	Footcandles Beam Center	Diameter (Feet)
4	55.3	8.5
6	24.5	12.8
8	13.8	17.1
10	8.8	21.4
12	6.1	25.6
14	4.5	29.9
16	3.4	34.2

Zonal Lumen Summary

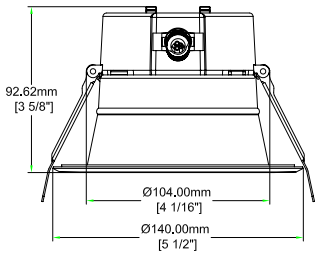
Zone	Lumens	% of Luminaire
0-30	659	36%
0-40	1049	57.2%
0-60	1674	91.3%
0-90	1833	100%
90-180	0	0%
0-180	1833	100%

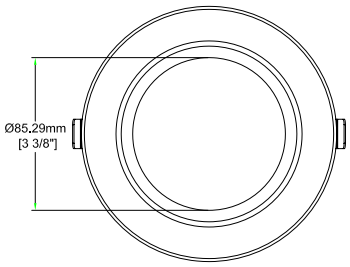
Data Multiplier applies to Lumens, Candle Power, Cone of Light, and Zonal Lumen Summary. See Performance Table for Lm, Watts and LPW values.

CLRv3 Select

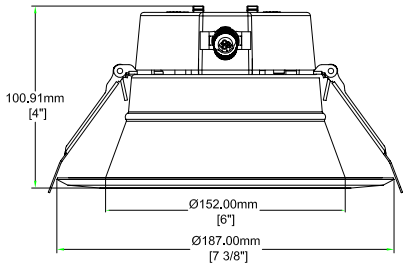
Commercial Recessed LED Downlight

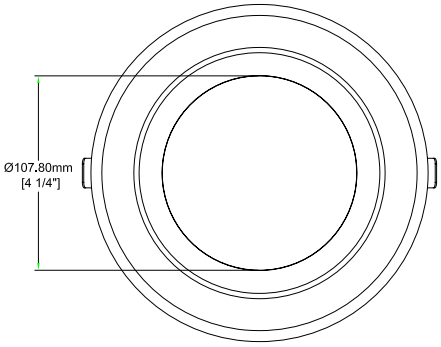
Dimensions



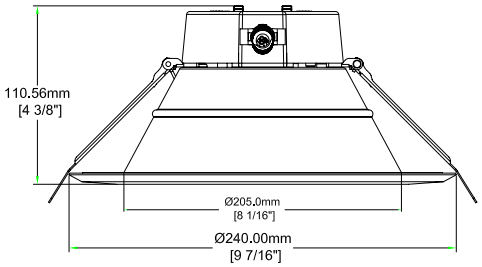


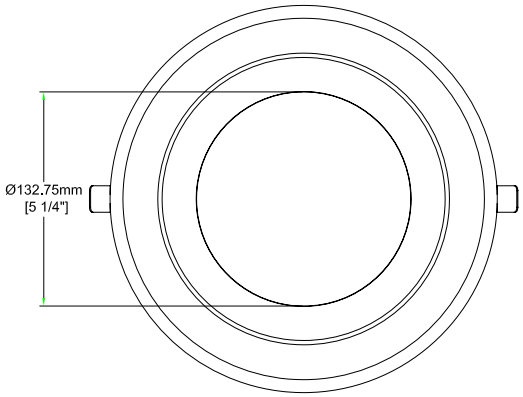
CLR4v3





CLR6v3





CLR8v3

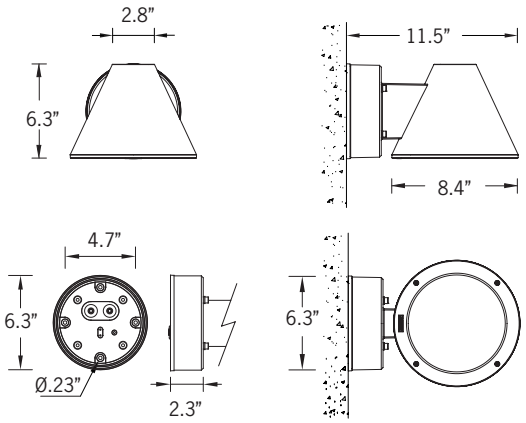
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

UCI-30131

Cinati Type I, II, III & IV Surface

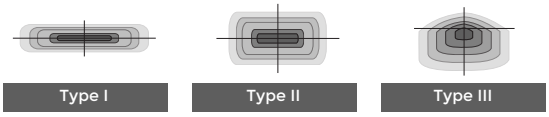
18w LED 2309 Lumens | 30w LED 3848 Lumens
21w COB 1984 Lumens
IP65 • Suitable For Wet Locations
IK08 • Impact Resistant (Vandal Resistant)
Weight 8 lbs



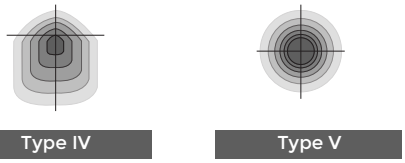
Mounting Detail

microVOS TECHNOLOGY

Ligman’s micro Variable Optical System provides the ability to interchange, mix & rotate optics to provide specific light distributions for optimized spacing and uniformity.

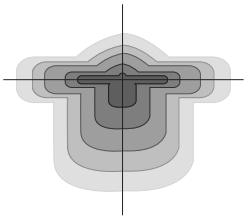


Type I | Type II | Type III



Type IV | Type V

The variable optic system allows for the designer to create hybrid distributions for precise lighting requirements.



HYBRID
TYPE I & TYPE IV

Construction

Aluminum
Less than 0.1% copper content – Marine Grade 6060 extruded & LM6 Aluminum High Pressure die casting provides excellent mechanical strength , clean detailed product lines and excellent heat dissipation.

Pre paint
8 step degrease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before product painting.

Memory Retentive -Silicon Gasket
Provided with special injection molded “fit for purpose” long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

Thermal management
LM6 Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermals below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours.

Surge Suppression
Standard 10kv surge suppressor provided with all fixtures.

BUG Rating
B2 - U0 - G0

Finishing
All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence.

Paint
UV Stabilized 4.9Mil thick powder coat paint and baked at 200 Deg C. This process ensures that Ligman products can withstand harsh environments. Rated for use in natatoriums.

Inspired by Nature Finishes
The Inspired by nature Finishing is a unique system of decorative powder coating. Our metal decoration process can easily transform the appearance of metal or aluminum product into a wood grain finish.

This patented technology enables the simulation of wood grain, and even marble or granite finish through the use of decorative powder coating.

The wood grain finish is so realistic that it’s almost undistinguishable from real wood, even from a close visual inspection. The system of coating permeates the entire thickness of the coat and as a result, the coating cannot be removed by normal rubbing, chipping, or scratching.

The Coating Process
After pre-treatment the prepared parts are powder coated with a specially formulated polyurethane powder. This powder provides protection against wear, abrasion, impact and corrosion and acts as the relief base color for the finalized metal decoration.

The component is then wrapped with a sheet of non-porous film with the selected decoration pattern printed on it using special high temperature inks.

This printed film transfer is vacuum-sealed to the surface for a complete thermo print and then transferred into a customized oven. The oven transforms the ink into different forms within the paint layer before it becomes solid. Finally, the film is removed, and a vivid timber look on aluminum remains.

Wood grain coating can create beautiful wood-looking products of any sort. There are over 300 combinations of designs currently in use. Wood grains can be made with different colors, designs, etc.

Our powder coatings are certified for indoor and outdoor applications and are backed by a comprehensive warranty. These coatings rise to the highest conceivable standard of performance excellence and design innovation.

Added Benefits
• Resistance to salt-acid room, accelerated aging
• Boiling water, lime and condensed water resistant
• Anti-Graffiti, Anti-Slip, Anti-Microbial, Anti-Scratch
• Super durable (UV restant)
• TGIC free (non-toxic)

Hardware
Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes
Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

Crystal Clear Low Iron Glass Lens
Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

Optics & LED
Precise optic design provides exceptional light control and precise distribution of light.
LED CRI > 80

Lumen - Maintenance Life
L80 /B10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

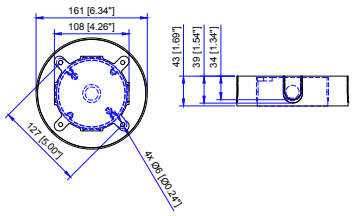
Cone-shaped wall-mounted downlight fixtures. Simple clean form hiding multiple high-performance glare free optic choices.

A cone shaped wall wash luminaire. Suitable for outdoor up, or down light applications. This luminaire is provided with precision optics and high powered LEDs, to provide narrow, medium, wide and very wide distributions. The vandal resistant tempered glass is available in clear or lightly frosted versions.

This product is suitable for commercial, as well as residential applications and with the selection of optics available can provide an excellent lighting solution. Integral electronic driver. Fixture is mounted over a 3” octagonal junction box.

To meet International Dark Sky criteria, 3000k or warmer LEDs must be selected and luminaire fix mounted (+/- 15˚ allowable to permit leveling).

Additional Options (Consult Factory For Pricing)



SCBT
Surface Conduit Box Trim

NOTE: This trim covers a shallow single gang, surface mount junction box [Provided by contractor]
Example: Hubbell: - 5322-0 - 1-Gang Weatherproof Box, Five 1/2” in. Threaded Outlets - or - 5332-0 - 1-Gang Weatherproof Box, Five 3/4 in. Threaded Outlets

UCI-30131

Cinati Type I, II, III & IV Surface

microVOS TECHNOLOGY

LIGMAN LIGHTING USA

PROJECT		DATE	
QUANTITY		TYPE		NOTE	

ORDERING EXAMPLE || UCI - 30131 - 18w - T2 - W30 - 02 - 120/277v - Options

UCI-30131	LAMP	BEAM	LED COLOR	FINISH COLOR	VOLTAGE
	18w LED 2309 Lumens	**For 18w and 30w LED Only** T1 - Type I Distribution T2 - Type II Distribution	W27 - 2700K W30 - 3000K W35 - 3500K	01 - BLACK RAL 9011 02 - DARK GREY RAL 7043 03 - WHITE RAL 9003	120/277v Other - Specify
	30w LED 3848 Lumens	T3 - Type III Distribution T4 - Type IV Distribution	W40 - 4000K	04 - METALLIC SILVER RAL 9006 05 - MATTE SILVER RAL 9006 06 - LIGMAN BRONZE 07 - CUSTOM RAL	
	21w COB 1984 Lumens	**For 21w COB Only** N - Narrow 8˚ M - Medium 16˚ W - Wide 36˚ VW - Very Wide 70˚			

INSPIRED BY NATURE FINISHES

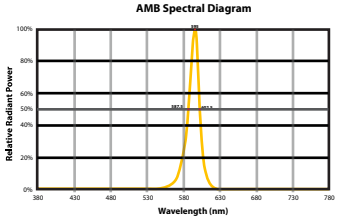
- SW01 - OAK FINISH
- SW02 - WALNUT FINISH
- SW03- PINE FINISH
- DF - DOUGLAS FIR FINISH
- CW - CHERRY WOOD FINISH
- NW - NATIONAL WALNUT FINISH
- SU01 - CONCRETE FINISH
- SU02 - SOFTSCAPE FINISH
- SU03 - STONE FINISH
- SU04 - CORTEN FINISH

THERE IS AN ADDITIONAL COST FOR THESE FINISHES

ADDITIONAL OPTIONS

NAT - Natatorium Rated
DIM - 0-10v Dimming
SCBT - Surface Conduit Box Trim
F - Frosted Lens
AMB - Turtle Friendly Amber LED

CITY OF FLAGSTAFF & TURTLE FRIENDLY COMPLIANT



Narrow-Spectrum Amber LEDs
Peak wavelength between 585 & 595 nanometers and a full width of 50% power no greater than 15 nanometers.

More Custom Finishes Available Upon Request

Consult factory for pricing and lead times


Oak


Cherry


Beech


Carbon


Walnut


Chestnut


Bamboo


Galvanized


Pine


Mahogany


Birch


Steel


Example: Inspired by Nature Finish

Intertek

Cinati Product Family

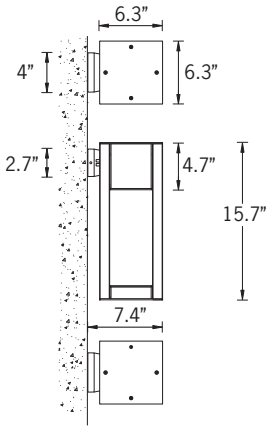
Cinati 1

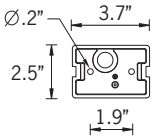
- UCI-30131-21w-1984lm
- UCI-30131-18w-2309lm
- UCI-30131-30w-3848lm

UVA-30001
Vancouver 24 Surface

LIGMAN LIGHTING USA

8w COB 331 Lumens
IP65 • Suitable For Wet Locations
IK08 • Impact Resistant
Weight 13.6 lbs





Mounting Detail

Construction

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Pre paint
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Surge Suppression
Standard 10kv surge suppressor provided with all fixtures.

BUG Rating
Contact Factory

Finishing
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Paint
UV Stabilized 4.9Mil thick powder coat paint and baked at 200 Deg C. This process ensures that Ligman products can withstand harsh environments. Rated for use in natatoriums.

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Our powder coatings are certified for indoor and outdoor applications and are backed by a comprehensive warranty. These coatings rise to the highest conceivable standard of performance excellence and design innovation.

Added Benefits
• Resistance to salt-acid room, accelerated aging
• Boiling water, lime and condensed water resistant
• Anti-Graffiti, Anti-Slip, Anti-Microbial, Anti-Scratch
• Super durable (UV resistant)
• TGIC free (non-toxic)

Hardware
Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes
Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

Crystal Clear Low Iron Glass Lens
Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

Optics & LED
Precise optic design provides exceptional light control and precise distribution of light.
LED CRI > 80

Lumen - Maintenance Life
L80 /B10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

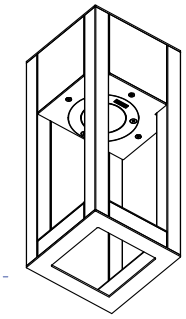
Contemporary urban lighting furniture.
Open-sided, three lattice pattern options or your bespoke design.

A stylish Dark Sky Compliant square high performance wall mounted luminaire with downward light distribution using LED lamps. This light column offers optimal visual comfort through glare control by utilizing a controlled optics designed by Ligman. These luminaires have a square design providing a unique wide light distribution, offering an architecturally appealing shadow pattern on the mounted surface. The internal sides of the supporting pillars are accented by light from the LED.

Color temperature 2700K, 3000K, 3500K and 4000K. The minimalistic shape provides distinctive lighting effects by night and decorative urban effect during the day. Suitable for pedestrian areas, precincts, building surrounds, shopping centers, squares and parks. The Vancouver comes standard with a unique waterproof internal driver housing compartment that is situated at the top of the pole to stop water and dust from entering the electrical components. This fixture is supplied completely wired with powercord and waterproof gland from the driver enclosure to the base of the column to ensure quick trouble-free installation.

Custom heights are available, please specify in options. Designed to complement the Vancouver Light Column and bollard.

Additional Options (Consult Factory For Pricing)



OB
Open Bottom

UVA-30001

Vancouver 24 Surface

LIGMAN LIGHTING USA

PROJECT		DATE	
QUANTITY		TYPE		NOTE	

ORDERING EXAMPLE || UVA - 30001 - 8w - W30 - 02 - 120/277v - Options

UVA-30001				
	LAMP	LED COLOR	FINISH COLOR	VOLTAGE
	8w COB 331 Lumens	W27 - 2700K W30 - 3000K W35 - 3500K W40 - 4000K	01 - BLACK RAL 9011 02 - DARK GREY RAL 7043 03 - WHITE RAL 9003 04 - METALLIC SILVER RAL 9006 05 - MATTE SILVER RAL 9006 06 - LIGMAN BRONZE 07 - CUSTOM RAL	120/277v Other - Specify

ADDITIONAL OPTIONS

NAT - Natatorium Rated
F - Frosted Lens
OB - Open Bottom
HGT - Custom Height [Specify]

INSPIRED BY NATURE FINISHES

SW01 - OAK FINISH
SW02 - WALNUT FINISH
SW03- PINE FINISH
DF - DOUGLAS FIR FINISH
CW - CHERRY WOOD FINISH
NW - NATIONAL WALNUT FINISH
SU01 - CONCRETE FINISH
SU02 - SOFTSCAPE FINISH
SU03 - STONE FINISH
SU04 - CORTEN FINISH

THERE IS AN ADDITIONAL COST FOR THESE FINISHES

More Custom Finishes Available Upon Request

Consult factory for pricing and lead times

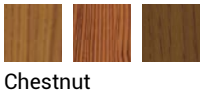

Oak


Cherry


Beech


Carbon

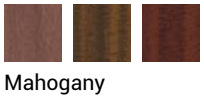

Walnut


Chestnut


Bamboo


Galvanized


Pine


Mahogany

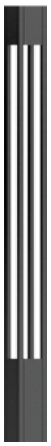

Birch


Steel

Example: Inspired by Nature Finish

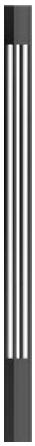
Intertek

Vancouver Product Family



Vancouver 1

- UVA-20001-40w-2969lm [9.4"x9.4"-14.7']



Vancouver 2

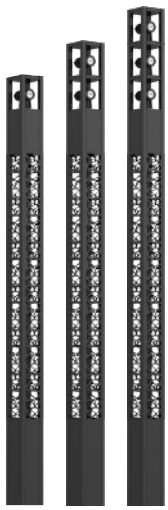
- UVA-20011-20w-1414lm [6.3"x6.3"-9.8']

Vancouver 3

- UVA-10001-21w-1270lm [9.4"x9.4"-39.3"]

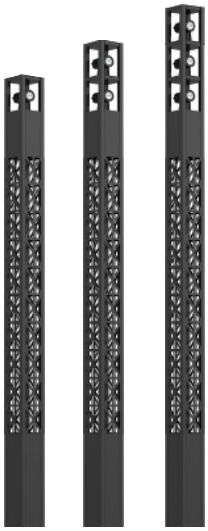
Vancouver 4

- UVA-10011-15w-837lm [6.3"x6.3"-39.3"]



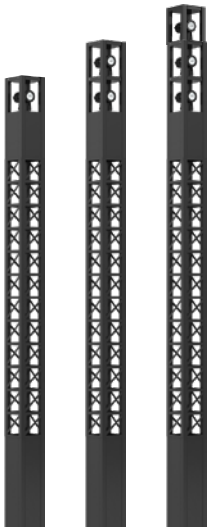
Vancouver 5

- UVA-20021-39/21w-1336/1673lm [9.4"x9.4"-13.3']
- UVA-20022-39/2x21w-1336/2x1673lm [9.4"x9.4"-14.5']
- UVA-20023-39/3x21w-1336/3x1673lm [9.4"x9.4"-15.7']



Vancouver 6

- UVA-20031-39/21w-1167/1673lm [9.4"x9.4"-13.3']
- UVA-20032-39/2x21w-1167/2x1673lm [9.4"x9.4"-14.5']
- UVA-20033-39/3x21w-1167/3x1673lm [9.4"x9.4"-15.7']



Vancouver 7

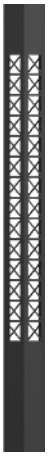
- UVA-20041-39/21w-1670/1673lm [9.4"x9.4"-13.3']
- UVA-20042-39/2x21w-1670/2x1673lm [9.4"x9.4"-14.5']
- UVA-20043-39/3x21w-1670/3x1673lm [9.4"x9.4"-15.7']

Vancouver 8

- UVA-20051-40w-1336lm [9.4"x9.4"-12.1']

Vancouver 9

- UVA-20061-40w-1167lm [9.4"x9.4"-12.1']



Vancouver 10

- UVA-20071-40w-1670lm [9.4"x9.4"-12.1']

Vancouver 11

- UVA-10021-21w-570lm [9.4"x9.4"-39.3']

Vancouver 12

- UVA-10031-21w-490lm [9.4"x9.4"-39.3']

Vancouver 13

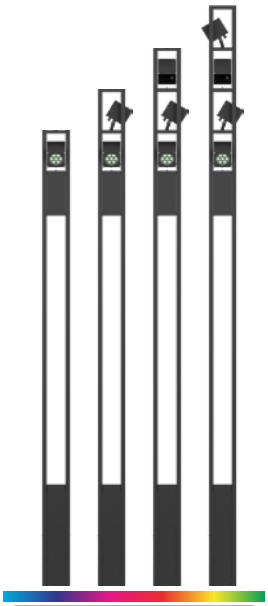
- UVA-10041-21w-704lm [9.4"x9.4"-39.3']

Vancouver 14

- UVA-70001-8w-331lm [6.3"x6.3"-15.7"]

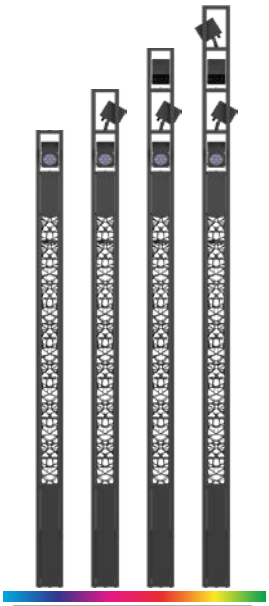
Vancouver 15

- UVA-70011-21w-815lm [9.4"x9.4"-15.7"]



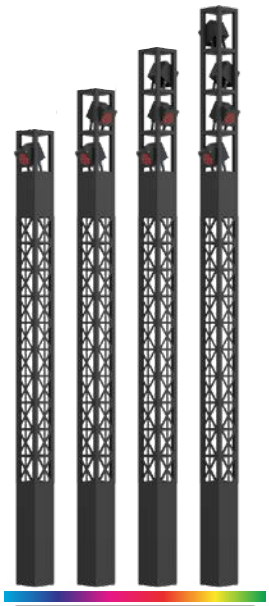
Vancouver 16

- UVA-20111-33w-1429lm [9.4"x9.4"-13.3']
- UVA-20112-66w-4287lm [9.4"x9.4"-14.5']
- UVA-20113-99w-5716lm [9.4"x9.4"-15.7']
- UVA-20114-132w-7145lm [9.4"x9.4"-17']



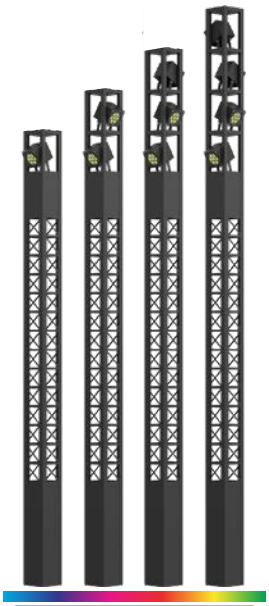
Vancouver 17

- UVA-20121-33w-2858 lm [9.4"x9.4"-13.3']
- UVA-20122-66w-4287lm [9.4"x9.4"-14.5']
- UVA-20123-99w-5716lm [9.4"x9.4"-15.7']
- UVA-20124-132w-7145lm [9.4"x9.4"-17']



Vancouver 18

- UVA-20131-33w-2858lm [9.4"x9.4"-13.3']
- UVA-201312-66w-4287lm [9.4"x9.4"-14.5']
- UVA-20133-99w-5716lm [9.4"x9.4"-15.7']
- UVA-20134-132w-7145lm [9.4"x9.4"-17']



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Vancouver 20

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Vancouver 21

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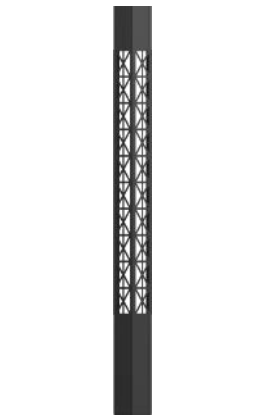

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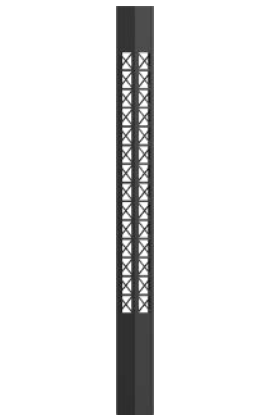

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Vancouver 25

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Vancouver 26

- UVA-30012-21w-490lm [6.3"x6.3"-23.6"]

Vancouver 27

- UVA-30013-21w-740lm [6.3"x6.3"-23.6"]

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- UVA-30022-39w-1167lm [9.4"x9.4"-39.3"]
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Vancouver 30

- UVA-30023-39w-1670lm [9.4"x9.4"-39.3"]
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Vancouver 31

• UVA-10101-7w-200lm [4.7" x 4.7" - 23.6"]

Vancouver 33

• UVA-10051-15w-1083lm [6.3" x 6.3" - 39.3"]

Vancouver 34

• UVA-10061-21w-1571lm [9.4" x 9.4" - 39.3"]

Vancouver 35

• UVA-10071-21w-1571lm [9.4" x 9.4" - 39.3"]

Vancouver 36

• UVA-10072-21w-1571lm [9.4" x 9.4" - 39.3"]

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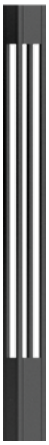

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Vancouver 47

• UVA-20221-39/2x21w-4469/2x1688lm [9.4"x9.4"-14.5']

Vancouver 48

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Vancouver 49

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Vancouver 50

• UVA-20232-39/2x21w-2781/2x1688lm [9.4"x9.4"-14.5']

Vancouver 51

• UVA-20233-39/2x21w-2781/2x1688lm [9.4"x9.4"-15.7']

Vancouver 52

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Vancouver 53

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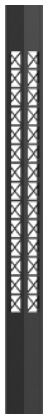

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Vancouver 56

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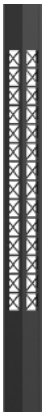
Vancouver 60

• UVA-20281-76w-4140lm [9.4"x9.4"-12']

Vancouver 61

• UVA-20282-76w-4140lm [9.4"x9.4"-12']



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Vancouver 65

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Vancouver 66

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Vancouver 67

- UVA-30041-20w-1326lm [6.3."x6.3"-23.6"]

Vancouver 68

- UVA-30042-20w-1326lm [6.3."x6.3"-23.6"]

Vancouver 69

- UVA-30043-20w-1326lm [6.3."x6.3"-23.6"]

Vancouver 70

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Vancouver 71

- UVA-30052-40w-2781lm [9.4"x9.4"-39.3"]

Vancouver 72

- UVA-30053-40w-2781lm [9.4"x9.4"-39.3"]

361 Hanover Photo Page


Muster
Point
191
HILL
STREET
Portsmouth
NH

MEMORANDUM

TO: 361 Hanover Steam Factory, LLC
c/o Mr. Shayne Forsley
Hampshire Development Corp.
41 Industrial Drive #20
Exeter, NH 03833

FROM: Mr. Jeffrey S. Dirk, P.E.*, PTOE, FITE
Managing Partner *and*
Mr. Makenlove Marc
Transportation Engineer
Vanasse & Associates, Inc.
35 New England Business Center Drive
Suite 140
Andover, MA 01810-1066
(978) 269-6830
jdirk@rdva.com
**Professional Engineer in CT, MA, ME, NH, RI and VA*

DATE: March 7, 2025

RE: 10068

SUBJECT: Traffic Impact Study
Kearsarge Mill Residential Development – 361 Hanover Street
Portsmouth, New Hampshire

Vanasse & Associates, Inc. (VAI) has conducted a Traffic Impact Study (TIS) in order to determine the potential impacts on the transportation infrastructure associated with the proposed redevelopment of the Kearsarge Mill located at 361 Hanover Street in Portsmouth, New Hampshire, to accommodate a multifamily residential development (hereafter referred to as the "Project"). This study has been completed in accordance with the New Hampshire Department of Transportation (NHDOT) guidelines for the preparation of a TIS as defined in the Driveway Permit Policy and evaluates the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; and identifies and analyzes existing traffic conditions and future traffic conditions, both with and without the Project, along Hanover Street and Bridge Street. Based on this assessment, we have concluded the following with respect to the Project:

1. Using trip-generation statistics published by the Institute of Transportation Engineer (ITE),[1] the Project is expected to generate approximately 384 vehicle trips on an average weekday (two-way, 24-hour volume), with approximately 38 vehicle trips expected during the weekday morning peak-hour and 41 vehicle trips expected during the weekday evening peak-hour;

2. The Project will not have a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions), with no (0) changes in level of service (LOS) and all movements at the study area intersections shown to continue to operate at LOS B or better, where an LOS "D" or better is defined as "acceptable" operating conditions. Project-related impacts were generally defined as an increase in average motorist delay of up to 1.1 seconds that resulted in a corresponding increase in vehicle queuing of up to one (1) vehicle;

[1] *Trip Generation*, 11th Edition; Institute of Transportation Engineers; Washington, DC; 2021.

3. Under 2025 Opening Year Build and 2035 Build conditions, all movements exiting the Project site driveway to Hanover Street were shown to operate at LOS A with negligible vehicle queuing. All movements along Hanover Street approaching the Project site driveway were shown to operate at LOS A, also with negligible vehicle queuing; and

4. Lines of sight at the intersection of the Project site driveway with Hanover Street were found to exceed the recommended minimum distance for the intersection to operate in a safe manner based on the appropriate speed.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with implementation of the recommendations defined herein.

The following details our assessment of the Project.

PROJECT DESCRIPTION

The Project will entail the renovation of the Kearsarge Mill building located at 361 Hanover Street in Portsmouth, New Hampshire, and the construction of three (3) new multifamily residential buildings that will front along Hanover Street. When complete, up to 48 residential units will be provided and dispersed between four (4) buildings as follows: the existing four-story Kearsarge Mill building (Building "A") will be renovated to accommodate up to 34 residential units; two new three story buildings (Buildings "B" and "C") that will accommodate four (4) residential units and two (2) residential units, respectively; and a new three story building (Building "D") that will accommodate eight (8) residential units. The Project site encompasses approximately 1.0± acres of land bounded by Foundry Place to the north; Hanover Street to the south; residential properties to the east; and Rock Street and the Rock Street park to the west. The Project site is currently improved with the Kearsarge Mill building and supporting parking and appurtenances. Figure 1 depicts the Project site location in relation to the existing roadway network.

Access to the Project site will be provided by way of a new driveway that will intersect the south side of Hanover Street approximately 60 feet east of Rock Street. On-site parking will be provided for 71 vehicles, consisting of both surface parking and covered parking beneath the residential units that are to be located in the Kearsarge Mill building.

STUDY METHODOLOGY

This study was prepared in consultation with the City of Portsmouth and NHDOT; was performed in accordance with the NHDOT guidelines for the preparation of TISs as defined in the Driveway Permit Policy and the standards of the Traffic Engineering and Transportation Planning Professions for the preparation of such reports; and was conducted in three distinct stages.

The first stage of the study involved an assessment of existing conditions in the study area and included an inventory of roadway geometrics, pedestrian and bicycle facilities, and public transportation services; observations of traffic flow; and the collection of daily and peak-period traffic counts.

In the second stage of the study, future conditions on the transportation system were projected and analyzed. Specific travel demand forecasts for the Project were assessed along with future demands on the transportation system that are expected due to growth independent of the Project. In accordance with NHDOT guidelines for the preparation of TISs, four future conditions were evaluated: 1) 2025 No-Build

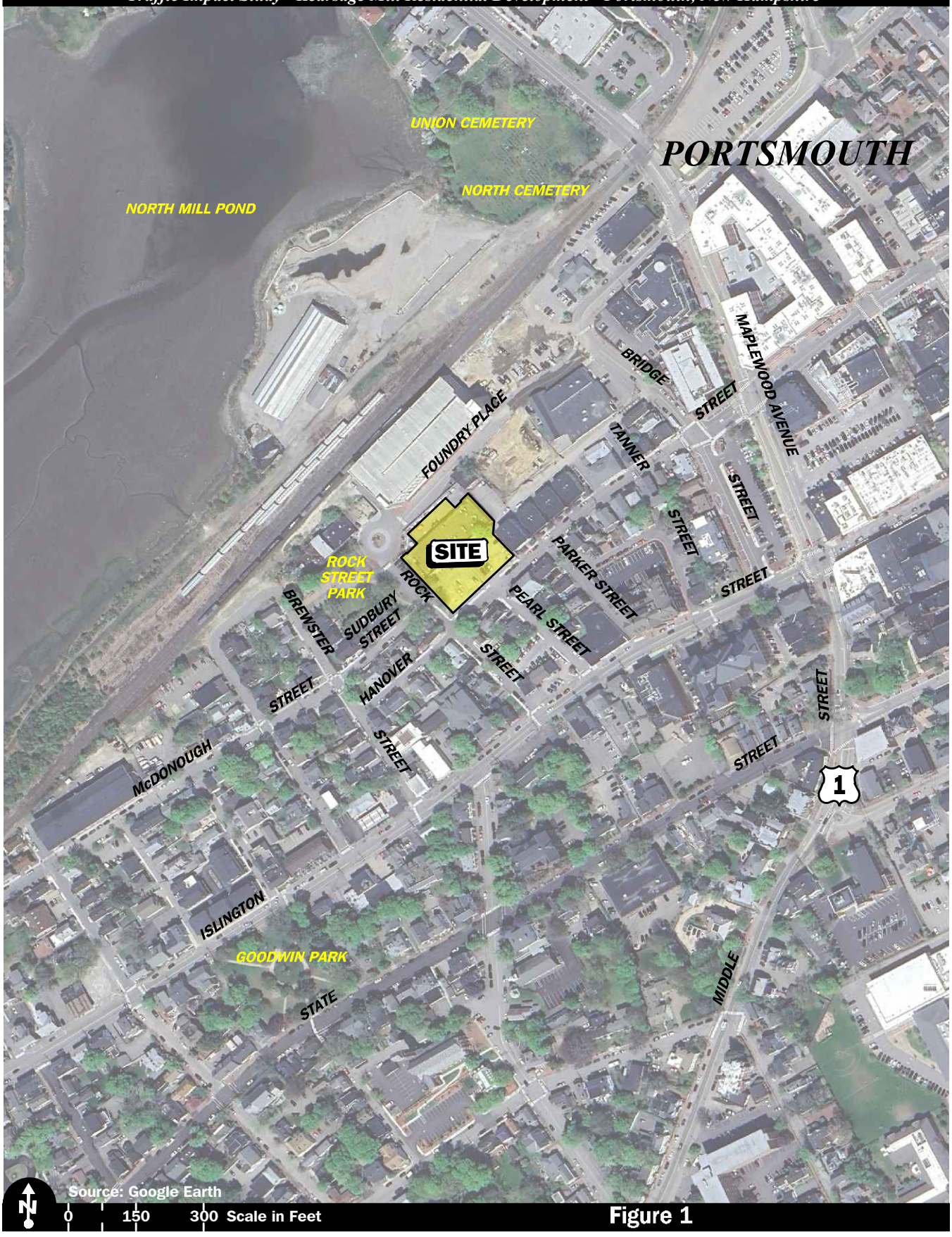

Figure 1

Site Location Map

Vanasse & Associates inc

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conditions *without* the Project; 2) 2025 Opening-Year Build conditions *with* the Project; 3) 2035 No-Build conditions *without* the Project; and 4) 2035 Build conditions (ten-year projection from opening-year) *with* the Project. The analyses conducted in stage two of the study identify existing or projected future roadway capacity and traffic safety issues.

The third stage of the study presents and evaluates measures to address roadway and intersection capacity issues and safety concerns, if any, identified in stages one and two of the study.

EXISTING CONDITIONS

A comprehensive field inventory of existing conditions within the study area was conducted in August 2024. The field investigation consisted of an inventory of existing roadway geometrics; pedestrian and bicycle facilities; public transportation services; traffic volumes; and operating characteristics; as well as posted speed limits and land use information within the study area. The study area that was assessed for the Project consisted of Hanover Street, Rock Street, Pearl Street, Bridge Street, and Foundry Place, and the following intersections: Hanover Street at Rock Street; Hanover Street at Pearl Street; Hanover Street at Bridge Street; and Bridge Street at Foundry Place. The following describes the study area roadways and intersections.

Roadways

Hanover Street

Hanover Street is a Tier 5, Class 5, local roadway that is under City jurisdiction and traverses the study area in a general west-east direction, conveying traffic in a one-way eastbound direction between Pearl Street and Bridge Street and one-way westbound between Rock Street and Brewster Street, with two-way traffic between Pearl Street and Rock Street. The one-way roadway segments vary from 30 feet in width with one-street parking along both sides to 18-feet with on-street parking along one side. The two-way segment is approximately 27-feet in width with on-street parking along one side. A posted speed limit is not provided and, as such, the statutory speed limit pursuant to RSA 265:60 is 30 miles per hour (mph) in a residential district.[2] Sidewalks are provided along both sides of the roadway within the study area. Illumination is provided by way of streetlights mounted on wood poles. Land use along Hanover Street in the vicinity of the Project site consists of residential and commercial properties.

Rock Street

Rock Street is a Tier 5, Class 5, local roadway under City jurisdiction that traverses the study area in a general northwest-southeast direction , conveying one-way northbound traffic between Islington Street and Hanover Street and two-way traffic between Hanover Street and Sudbury Street. The one-way roadway segment is approximately 28-feet in width with on-street parking along one side, with the two-way segment varying from 16 to 20-feet in width. A posted speed limit is not provided and, as such, the statutory speed limit pursuant to RSA 265:60 is 30 mph in a residential district. Sidewalks are provided along both sides of the roadway. Illumination is provided by way of streetlights mounted on wood poles. Land use along Rock Street in the vicinity of the Project site consists of residential and commercial properties and the Rock Street Park.

[2]RSA 265:60 defines the "reasonable and prudent standard" as follows: "No person shall drive a vehicle on a way at a speed greater than is reasonable and prudent under the conditions and having regard to the actual and potential hazards then existing. In every event speed shall be so controlled as may be necessary to avoid colliding with any person, vehicle, or other conveyance on or entering the way in compliance with the legal requirements and the duty of all persons to use due care."

Pearl Street

Pearl Street is a Tier 5, Class 5, local roadway under City jurisdiction that traverses the study area in a general northwest-southeast direction and accommodates two-way travel between Islington Street and Hanover Street. Within the study area, Pearl Street provides an approximate 28-foot wide traveled-way with parking along one side and a faded double-yellow centerline approaching Hanover Street. A posted speed limit is not provided and, as such, the statutory speed limit pursuant to RSA 265:60 is 30 mph in a residential district. Sidewalks are provided along both sides of the roadway. Illumination is provided by way of streetlights mounted on wood poles. Land use along Pearl Street in the vicinity of the Project site consists of residential and commercial properties.

Bridge Street

Bridge Street is a Tier 5, Class 5, local roadway under City jurisdiction that traverses the study area in a general northwest-southeast direction and conveys two-way traffic between Islington Street and Maplewood Avenue. Within the study area, Bridge Street provides two 10- to 19-foot-wide travel lanes separated by a double-yellow centerline with no marked shoulders and on-street parking along one or both sides of the roadway where defined by pavement markings. A posted speed limit is not provided and, as such, the statutory speed limit pursuant to RSA 265:60 is 30 mph in a residential district. Sidewalks are provided along both sides of the road within the study area. Illumination is provided by way of streetlights mounted on wood poles, steel poles, and ornamental lighting fixtures. Land use along Bridge Street in the vicinity of the Project site consists of residential and commercial properties.

Foundry Place

Foundry Place is a Tier 5, Class 5, local roadway under City jurisdiction that traverses the study area in a general northeast-southwest direction and conveys two-way traffic between Bridge Street its terminus in a cul-de-sac approximately 600 feet southwest of Bridge Street. Within the study area, Foundry Place provides two 12-foot-wide travel lanes separated by a double-yellow centerline with no marked shoulders. A posted speed limit is not provided and, as such, the statutory speed limit pursuant to RSA 265:60 is 30 mph in a residential district. A sidewalks is provided along the north side of the roadway within the study area. Illumination is provided by ornamental lighting fixtures. Land use along Foundry Place in the vicinity of the Project site consists of residential and commercial properties, Rock Street Park and the Foundry Place garage. Direct access to the Project will not be provided from Foundry Place.

Intersections

Table 1 and Figure 2 summarize existing lane use, traffic control, and pedestrian and bicycle accommodations at the study area intersections as observed in August 2024.

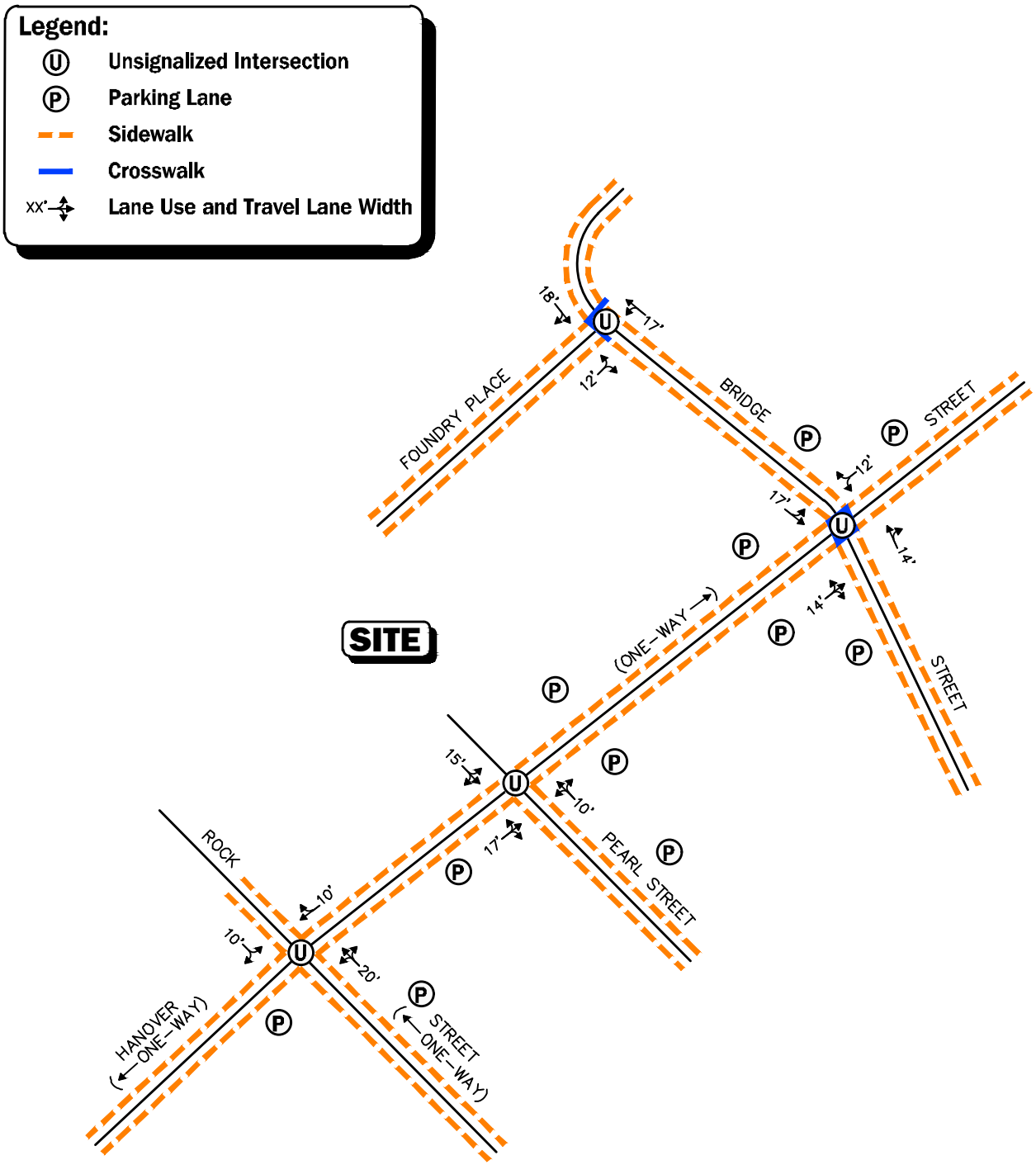

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Figure 2

Existing Intersection Lane Use, Travel Lane Width, and Pedestrian Facilities

Vanasse & Associates inc

Table 1
STUDY AREA INTERSECTION DESCRIPTION

Intersection	Traffic Control Type[a]	No. of Travel Lanes Provided	Shoulder Provided? (Yes/No/Width)	Pedestrian Accommodations? (Yes/No/Description)	Bicycle Accommodations? (Yes/No/Description)
Hanover St./ Rock St.	S	1 general-purpose lane provided on Hanover St. westbound and Rock St. southbound; Hanover St. west leg is one-way westbound; Rock St. south leg is one-way northbound on-street parking along one or both sides of Hanover St. and Rock St. south leg	No	Yes; sidewalks along both sides of the intersecting roadways	Yes; shared traveled-way[b]
Hanover St./ Pearl St	S	1 general-purpose lane provided on Hanover St. west leg and on Pearl St.; Hanover St. east leg is one-way eastbound; on-street parking along one or both sides of Hanover St. and Pearl St.	No	Yes; sidewalks along both sides of the intersecting roadways	Yes; shared traveled-way on Hanover St.
Hanover St./ Bridge St	S	1 general-purpose lane provided on Bridge St. and Hanover St. east leg; Hanover St. west leg is one-way eastbound; on-street parking along one or both sides of Hanover St. and Bridge St.	No	Yes; sidewalks along both sides of the intersecting roadways; crosswalks across all legs	Yes; shared traveled-way
Bridge St./ Foundry Pl.	S	1 general-purpose travel lane on all approaches	No	Yes; sidewalks along both sides of the intersecting roadways; crosswalks provided across Foundry Pl. and the Bridge St. north leg	Yes; shared traveled-way

[a]S = stop signal control.
[b]Combined shoulder and travel lane width equal to or exceeding 14 feet.

Existing Traffic Volumes

In order to determine existing traffic-volume demands and flow patterns within the study area, automatic traffic recorder (ATR) counts, turning movement counts (TMCs), and vehicle classification counts were completed in August 2024. The ATR counts were conducted on August 6th through 7th, 2024 (Tuesday through Wednesday, inclusive) on Hanover Street east of Rock Street in order to record weekday daily traffic conditions over an extended period, with weekday morning (7:00 to 9:00 AM) and evening (3:00 to 6:00 PM) peak-period TMCs performed at the study area intersections on Tuesday, August 6, 2024. These time periods were selected for analysis purposes as they are representative of the peak-traffic-volume hours for both the Project and the adjacent roadway network.

Traffic Volume Adjustments

In order to evaluate the potential for seasonal fluctuation of traffic volumes within the study area, 2019 peak-hour and average daily traffic count data were reviewed for NHDOT Continuous Count Station No. 02125001, which is located on Dover Point Road in Strafford, were reviewed. Based on a review of this data, it was determined that traffic volumes for the month of August are approximately 1.0 percent below peak-month (June) conditions. As such, the August traffic volumes were adjusted upward by 1.0 percent in order to be representative of peak-month conditions in accordance with NHDOT standards.

In order to account for the impact on the traffic volume and trip patterns resulting from the COVID-19 pandemic, traffic-volume data collected at NHDOT Continuous Count No. 02125001 was reviewed. Traffic-volume data for August 2024 was compared to data collected at the same location in August 2019. The following summarizes the comparison between the August 2024 and August 2019 traffic volumes:

- Average Daily Traffic Volumes: -0.3%
- Weekday Morning Peak-Hour Traffic Volumes: -3.0%
- Weekday Evening Peak-Hour Traffic Volumes: +2.4%

As such, the average weekday traffic volumes were adjusted upward by 0.3 percent (multiplied by 1.003) and the weekday morning peak-hour traffic volumes were adjusted upward by 3.0 percent (multiplied by 1.03); no adjustment was required to the weekday evening peak-hour traffic volumes as the August 2024 traffic volumes were found to be 2.4 percent higher than the traffic volumes in August 2019.

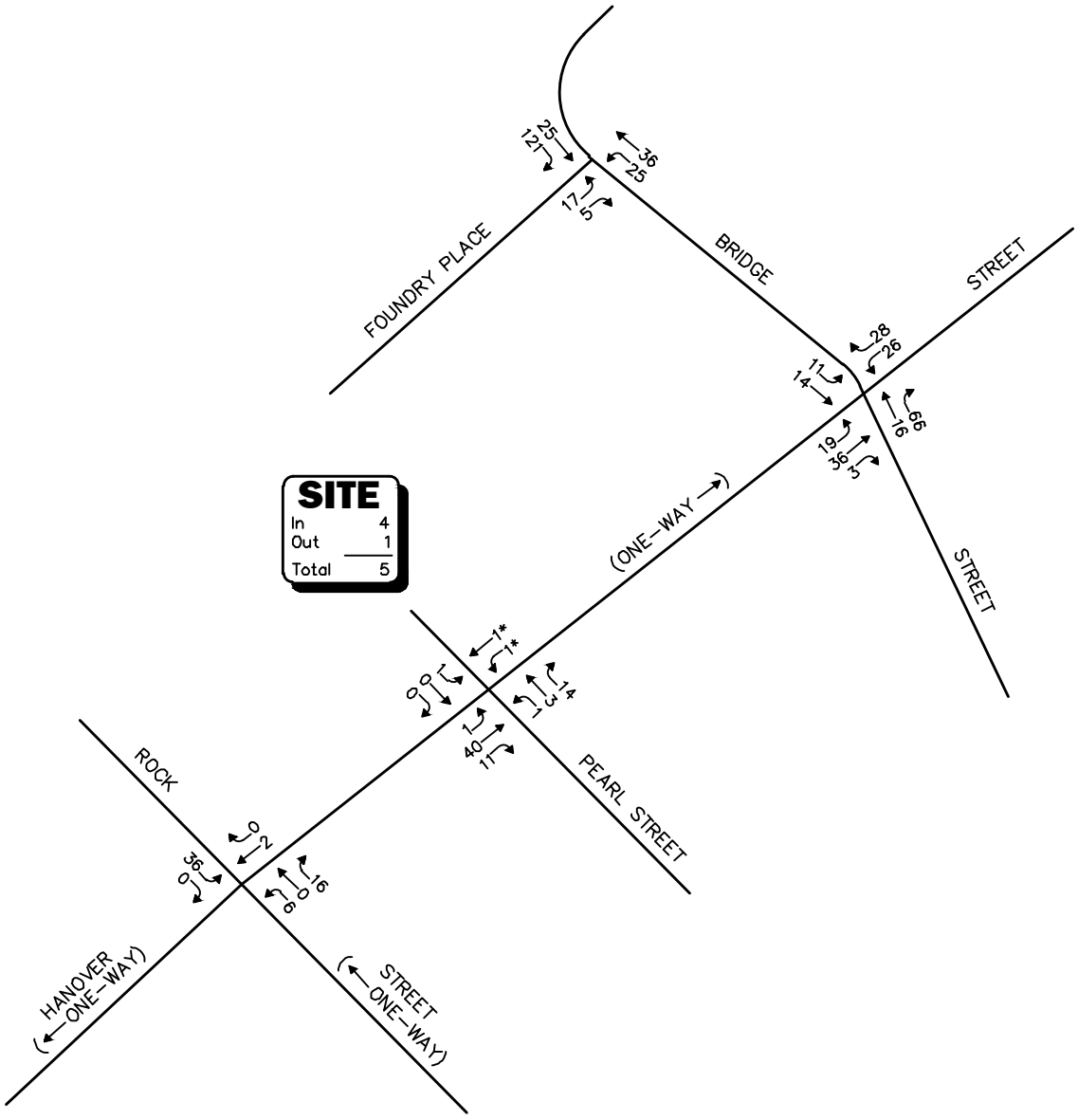
The 2024 Existing peak-month traffic volumes are summarized in Table 2, with the weekday morning and evening peak-month, peak-hour traffic volumes graphically depicted on Figures 3 and 4, respectively. Note that the peak-hour traffic volumes that are presented in Table 2 were obtained from the aforementioned figures.

Table 2
2024 EXISTING PEAK-MONTH TRAFFIC VOLUMES

Location/Peak Hour	AWT[a]	VPH[b]	K Factor[c]	Directional Distribution[e]
Hanover Street, east of Rock Street:	510	--	--	--
Weekday Morning (8:00 – 9:00 AM)	--	54	10.6	96.3% EB
Weekday Evening (3:45 – 4:45 PM)	--	42	8.2	90.5% EB

[a]Average weekday traffic in vehicles per day.
[b]Vehicles per hour.
[c]Percent of daily traffic occurring during the peak hour.
[d]Percent traveling in peak direction.
EB = eastbound.

As can be seen in Table 2, Hanover Street east of Rock Street was found to accommodate approximately 510 vehicles on an average weekday (two-way, 24-hour volume) under peak-month conditions, with approximately 54 vehicles per hour (vph) during the weekday morning peak-hour and 42 vph during the weekday evening peak-hour.



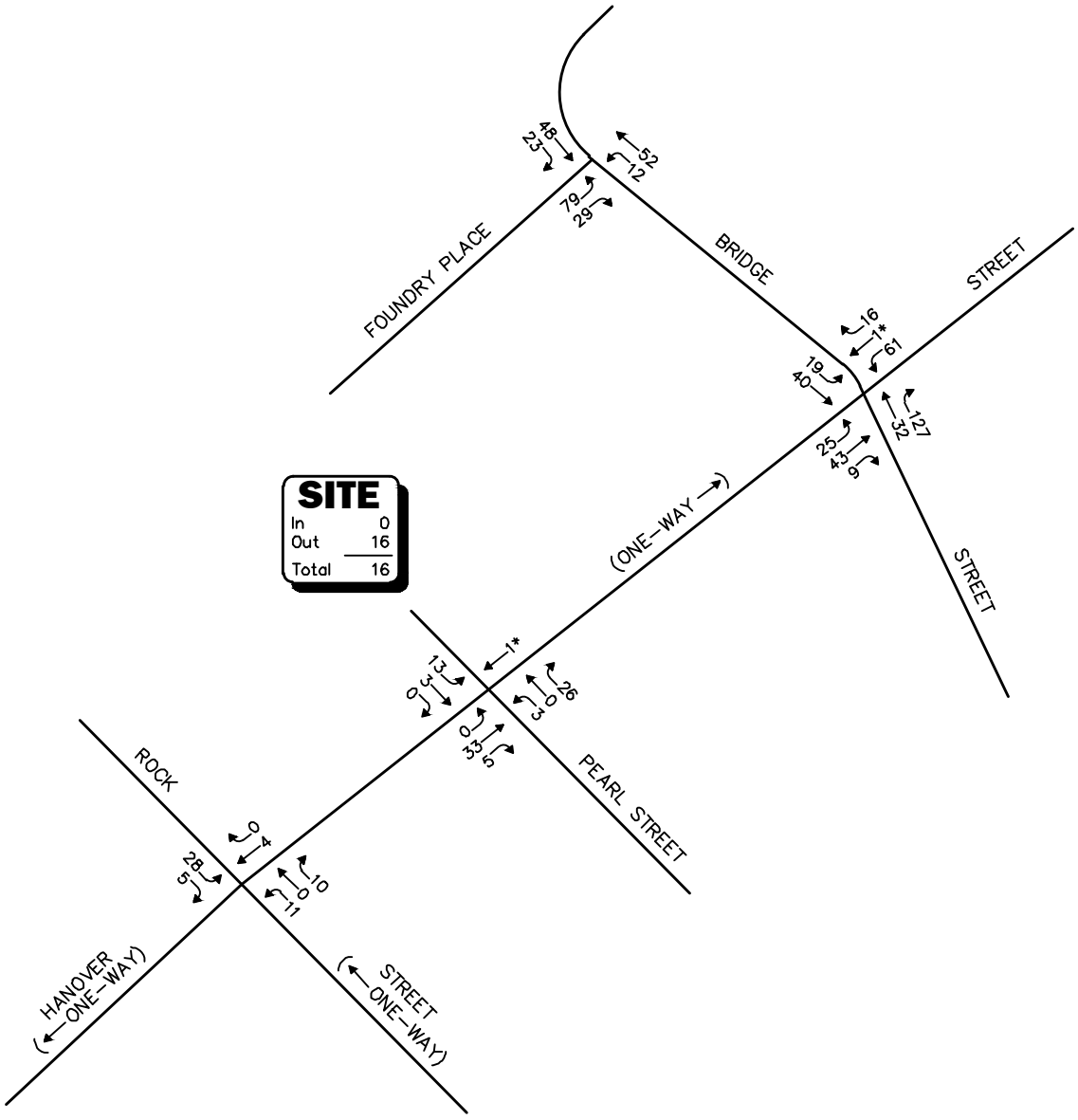
*Illegal movement.
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 3

**2024 Existing
Peak-Month
Weekday Morning
Peak-Hour Traffic Volumes**

Vanasse & Associates inc



*Illegal movement.
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

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Figure 4

**2024 Existing
Peak-Month
Weekday Evening
Peak-Hour Traffic Volumes**

Vanasse & Associates inc

Spot Speed Measurements

Vehicle travel speed measurements were performed on Hanover Street in the vicinity of the Project site in conjunction with the ATR counts, the results of which are summarized in Table 3.

Table 3
VEHICLE TRAVEL SPEED MEASUREMENTS

	Hanover Street	
	Eastbound	Westbound
Mean Travel Speed (mph)	13	11
85th Percentile Speed (mph)	14	13
Statutory Speed Limit (mph)	30	30

mph = miles per hour.

As can be seen in Table 3, the mean vehicle travel speed along Hanover Street in the vicinity of the Project site was found to be 13 mph in the eastbound direction and 11 mph westbound. The measured 85th percentile vehicle travel speed, or the speed at which 85 percent of the observed vehicles traveled at or below, was found to be 14 mph in the eastbound direction and 13 mph westbound, which is 16 to 17 mph below the statutory speed limit (30 mph) in the vicinity of the Project site. The 85th percentile speed is used as the basis of engineering design and in the evaluation of sight distances and is often used in establishing posted speed limits.

Pedestrian and Bicycle Facilities

A comprehensive field inventory of pedestrian and bicycle facilities within the study area was undertaken in August 2024. The field inventory consisted of a review of the location of sidewalks and pedestrian crossing locations along the study roadways, as well as the location of existing and planned future bicycle facilities. Sidewalks are provided along both sides of the study area roadways, with marked crosswalks provided at the Bridge Street/Hanover Street and Bridge Street/Foundry Place intersections. Formal bicycle facilities are not provided within the study area; however, the study area roadways generally provide sufficient width to accommodate bicycle travel in a shared-traveled-way configuration.[3]

Public Transportation

Regularly scheduled public transportation services are not provided within the study area; however, east of the Project site, the Cooperative Alliance for Seacoast Transportation (COAST) provides fixed-route bus services by way of the following routes:

- *Route 13:* Dover/Portsmouth
- *Route 40:* Islington/Borthwick Trolley
- *Route 41:* Lafayette Trolley

[3] A minimum combined travel lane and paved shoulder width of 14 feet is required to support bicycle travel in a shared-traveled-way condition.

- *Route 42:* Pease Shuttle
- *Route 43:* Newington/Portsmouth
- *Route 44:* Portsmouth City Hall/Kittery (PNSY Gate 1)

All six bus routes include a stop at Hanover Station, which is 0.3 mile to the northeast of the Project site, or an approximate 7-minute walking distance. Route 40 has a stop located at the Islington Street/ Tenner Street intersection, which is located 0.1 miles to the southeast of the Project site, or an approximate 3-minute walking distance. In addition to fixed-route bus services, COAST provides paratransit services for eligible persons who cannot use fixed-route transit at all or some of the time due to a physical, cognitive, or mental disability in compliance with the Americans with Disabilities Act (ADA).

The public transportation schedules and fare information are attached.

Motor Vehicle Crash Data

Motor vehicle crash data for the study area intersections has been requested from the Portsmouth Police Department in order to examine motor vehicle crash trends occurring within the study area. The data will be summarized in a supplement to this TIS once the data is received.

FUTURE CONDITIONS

Traffic volumes in the study area were projected to the years 2025 and 2035, which reflect the anticipated opening-year of the Project and a ten-year planning horizon from opening-year, respectively, consistent with NHDOT TIS guidelines. The future condition traffic-volume projections incorporate identified specific development projects by others, as well as general background traffic growth as a result of development external to the study area and presently unforeseen projects. Anticipated Project-generated traffic volumes superimposed upon the 2025 and 2035 No-Build traffic volumes reflect the Build conditions with the Project.

Future Traffic Growth

Future traffic growth is a function of the expected land development in the immediate area and the surrounding region. Several methods can be used to estimate this growth. A procedure frequently employed estimates an annual percentage increase in traffic growth and applies that percentage to all traffic volumes under study. The drawback to such a procedure is that some turning volumes may actually grow at either a higher or a lower rate at particular intersections.

An alternative procedure identifies the location and type of planned development, estimates the traffic to be generated, and assigns it to the area roadway network. This procedure produces a more realistic estimate of growth for local traffic; however, potential population growth and development external to the study area would not be accounted for in the resulting traffic projections.

To provide a conservative analysis framework, both procedures were used, the salient components of which are described below.

Specific Development by Others

The City of Portsmouth Planning Department was contacted in order to determine if there were any projects planned within the Town that would have an impact on future traffic volumes within the study area. Based on this consultation, the following projects were identified for review in conjunction with this assessment:

- ***Proposed Lot 5, Deer Street Development, 70 Maplewood Avenue, Portsmouth, New Hampshire.*** This project entails the construction of a mixed-use development to be located at 70 Maplewood Avenue, east of the Project site. The Project will consist of a four-story mixed-use building with retail, office, hotel, and commercial space.

- ***Proposed Lot 2 Community Space, Foundry Place, Portsmouth, New Hampshire.*** This project entails the construction of community space to be located at Foundry Place, east of the Foundry Place garage. The community space will consist of an 8,521 sf open space plaza.

- ***Proposed Lot 3, Deer Street Development, Deer Street, Portsmouth, New Hampshire.*** This project entails the construction of a mixed-use development to be located at 165 Deer Street, northeast of the Project site. The Project will consist of a five-story hotel with a rooftop restaurant and bar.

- ***Proposed Lot 4, Deer Street Development, Deer Street, Portsmouth, New Hampshire.*** This project entails the construction of a mixed-use development to be located at 163 Deer Street, northeast of the Project site. The Project will consist of a four-story commercial and office building with a restaurant on the first floor.

- ***Proposed Lot 6, Deer Street Development, Deer Street, Portsmouth, New Hampshire.*** This project entails the construction of a mixed-use development to be located at 89 and 99 Foundry Place, east of the Project site. The project will consist of a four-story multifamily residential building with ground floor commercial space.

Traffic volumes associated with identified specific development projects by others were obtained from information filed with the City and using trip-generation data published by the ITE[4] for similar land uses as those identified. No other developments were identified at this time that are expected to result in an increase in traffic within the study area beyond the general background traffic growth rate.

General Background Traffic Growth

Traffic-volume data compiled by NHDOT from count station No. 02125001 was reviewed in order to determine general traffic growth trends in the area. This data indicates that traffic volumes have fluctuated over the 10-year period between 2009 and 2019, with the average traffic growth rate found to be approximately 0.04 percent. In order to provide a prudent planning condition from which to assess the potential impact of the Project on the transportation infrastructure, a higher 1.0 percent per year compounded annual background traffic growth rate was used in order to account for future traffic growth and presently unforeseen development within the study area.

Roadway Improvement Projects

The City of Portsmouth and NHDOT were contacted in order to determine if there were any planned roadway improvement projects expected to be completed within the study area. Based on these discussions, no roadway improvement projects are currently scheduled within the study area beyond routine maintenance activities.

[4]Institute of Transportation Engineers, op. cit. 1.

No-Build Traffic Volumes

The 2025 and 2035 No-Build peak-month, peak-hour traffic volumes were developed by applying the 1.0 percent per year compounded annual background traffic growth rate to the 2024 Existing peak-month, peak-hour traffic volumes and then adding the peak-hour traffic volumes associated with the identified specific development projects by others. The resulting 2025 No-Build weekday morning and evening peak-month, peak-hour traffic volumes are shown on Figures 5 and 6, respectively, with the corresponding 2035 No-Build peak-month, peak-hour traffic volumes shown on Figure 7 and 8.

PROJECT-GENERATED TRAFFIC

As proposed, the Project will entail the construction of up to 48 multifamily residential housing units. In order to develop the traffic characteristics of the Project, trip-generation statistics published by the ITE[5] for a similar land use as that proposed were used. ITE Land Use Code (LUC) 220, *Multifamily Housing (Low Rise)*, was used to develop the anticipated traffic characteristics of the Project, the results of which are summarized in Table 4.

Table 4
TRIP GENERATION SUMMARY

Time Period	Vehicle Trips[a]		
	Entering	Exiting	Total
Average Weekday	192	192	384
Weekday Morning Peak-Hour	9	29	38
Weekday Evening Peak-Hour	26	15	41

[a]Based on ITE LUC 220, *Multifamily Housing (Low Rise)*; 48 units.

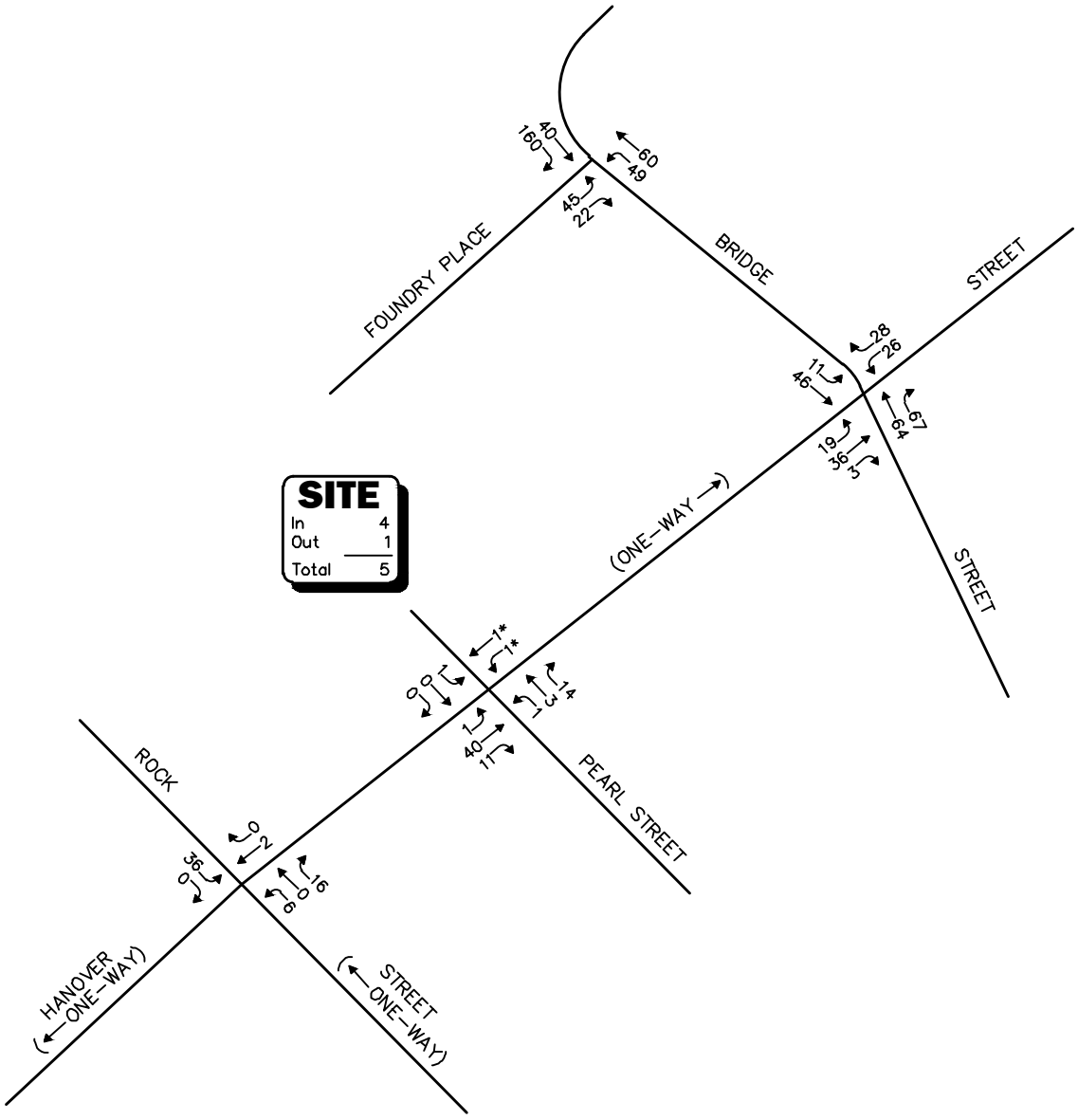
Project-Generated Traffic-Volume Summary

As can be seen in Table 4, the Project is predicted to generate approximately 384 vehicle trips on an average weekday (two-way, 24-hour volume, or 192 vehicles entering and 192 exiting) and approximately 38 vehicle trips (9 vehicles entering and 29 exiting) expected during the weekday morning peak-hour and 41 vehicle trips (26 vehicles entering and 15 exiting) expected during the weekday evening peak-hour.

Trip Distribution and Assignment

The directional distribution of generated trips to and from the Project site was determined based on a review of U.S. Census Journey-to-Work data for the City of Portsmouth and then refined based on a review of existing traffic patterns within the study area. The general trip distribution for the Project is graphically depicted on Figure 9, with the additional traffic expected to be generated by the Project assigned onto the study area roadway network as shown on Figures 10 and 11.

[5]Institute of Transportation Engineers, op. cit. 1.



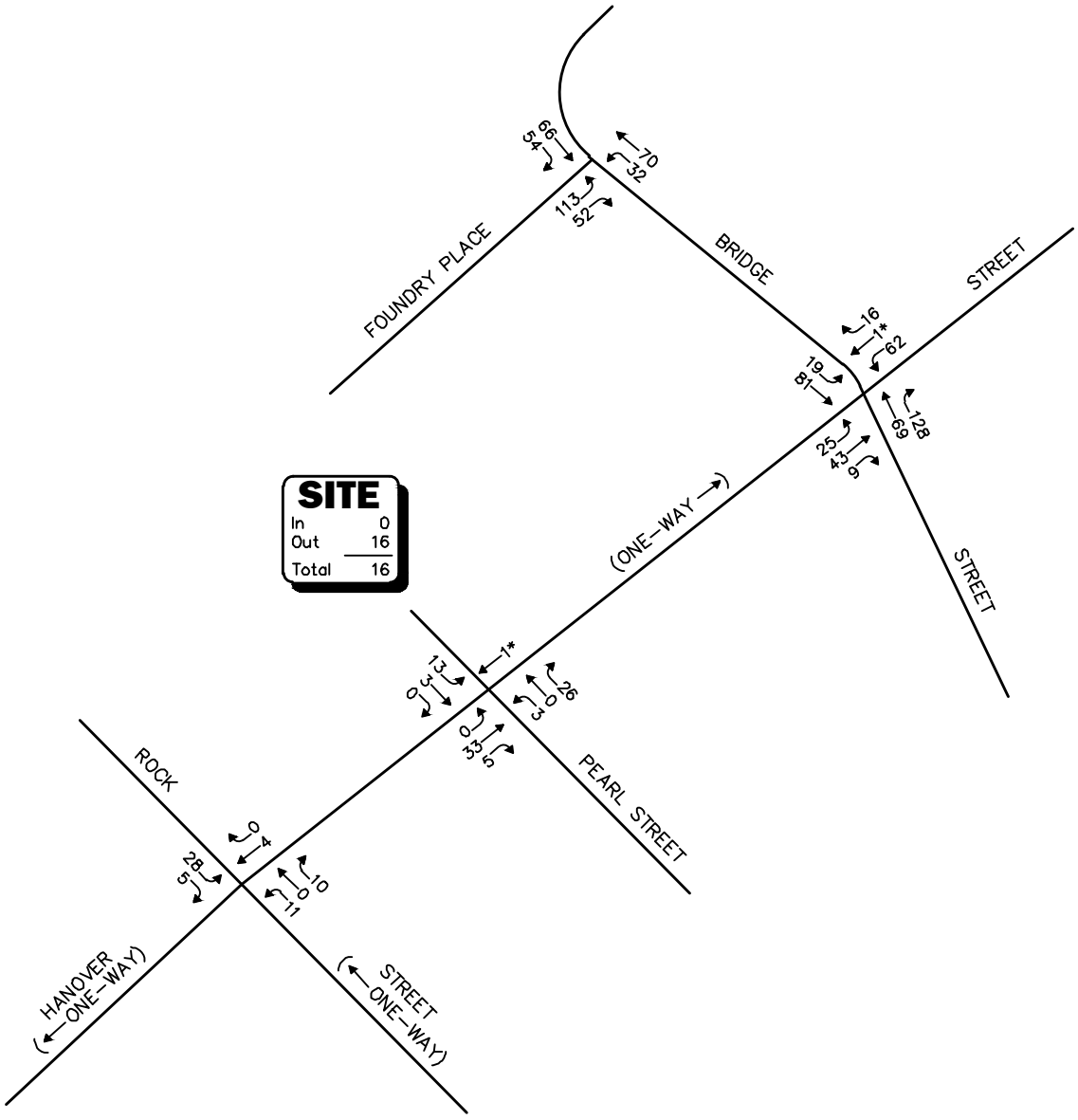
*Illegal movement.
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 5

Vanasse & Associates inc

2025 No-Build
Peak-Month
Weekday Morning
Peak-Hour Traffic Volumes



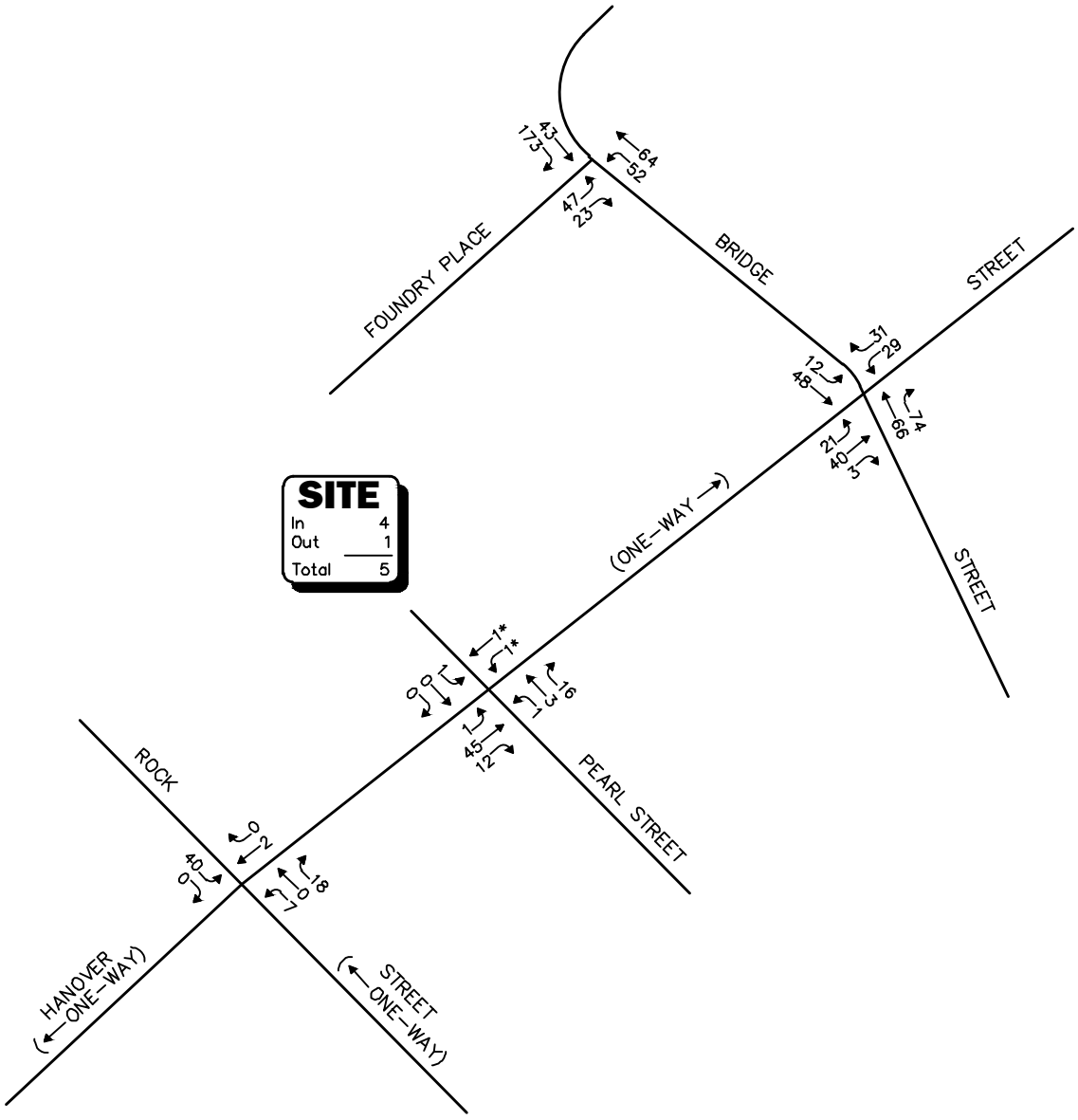
***Illegal movement.**
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 6

Vanasse & Associates inc

2025 No-Build
Peak-Month
Weekday Evening
Peak-Hour Traffic Volumes



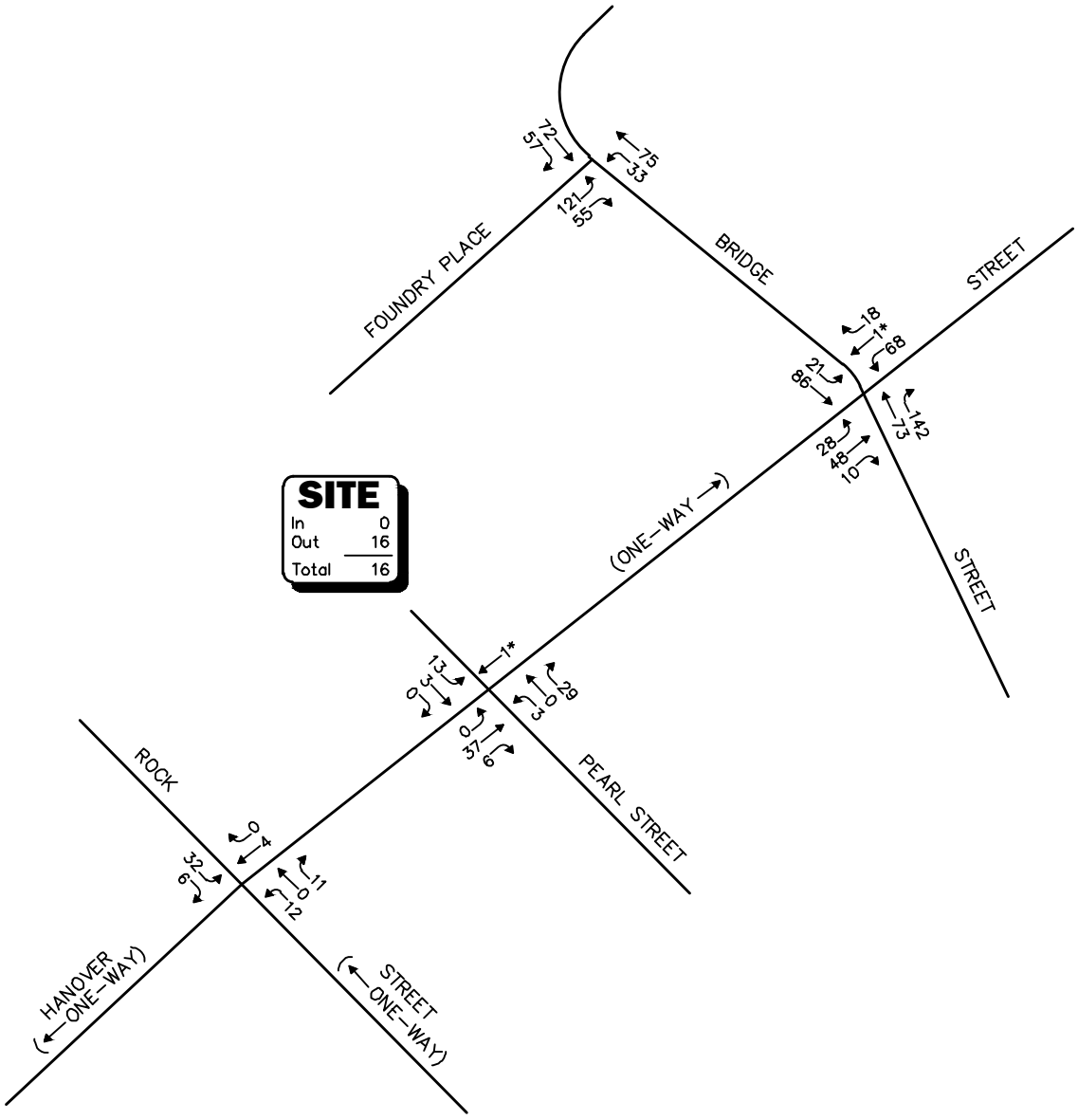
*Illegal movement.
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 7

2035 No-Build
Peak-Month
Weekday Morning
Peak-Hour Traffic Volumes

Vanasse & Associates inc



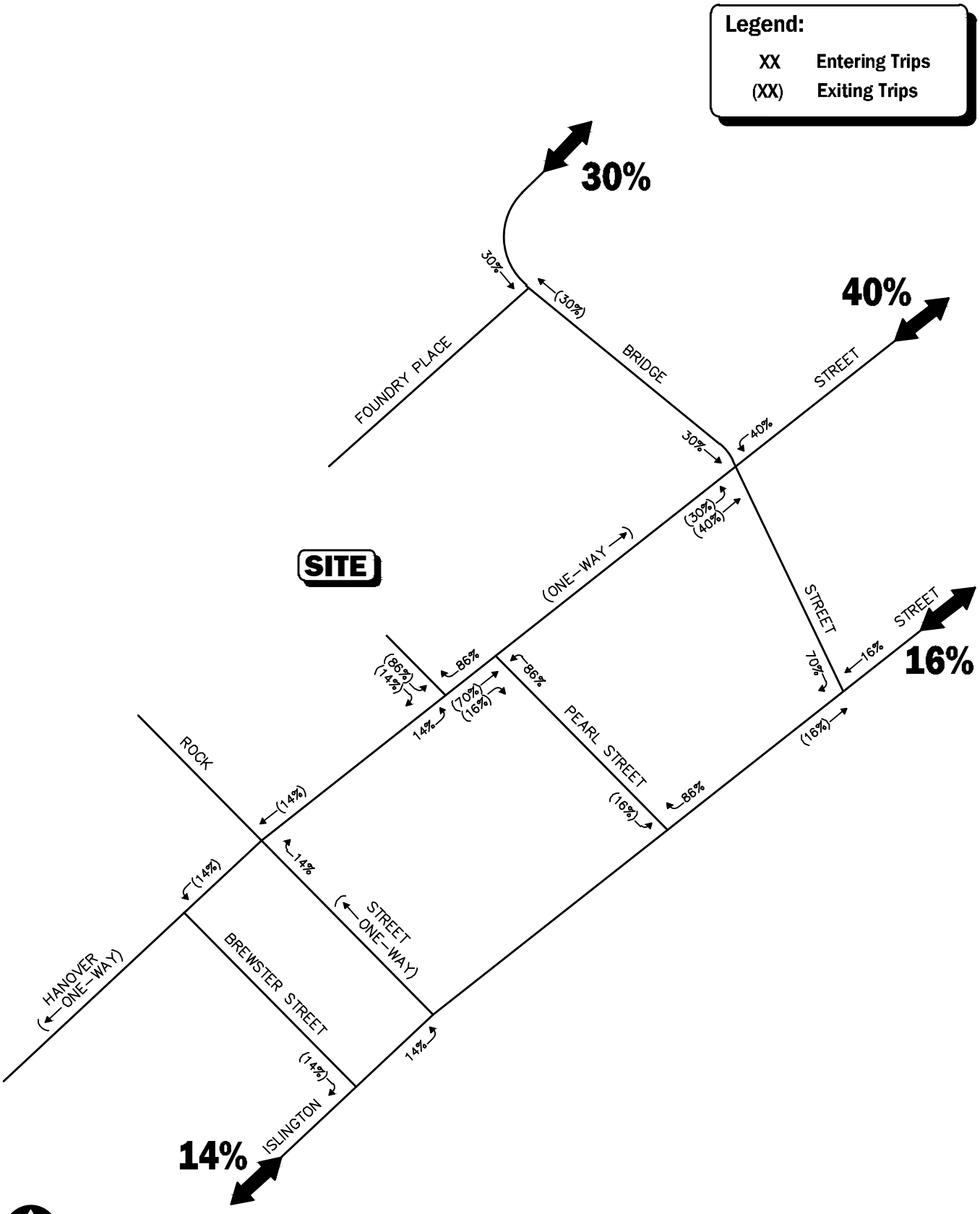
*Illegal movement.
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 8

**2035 No-Build
Peak-Month
Weekday Evening
Peak-Hour Traffic Volumes**

Vanasse & Associates inc

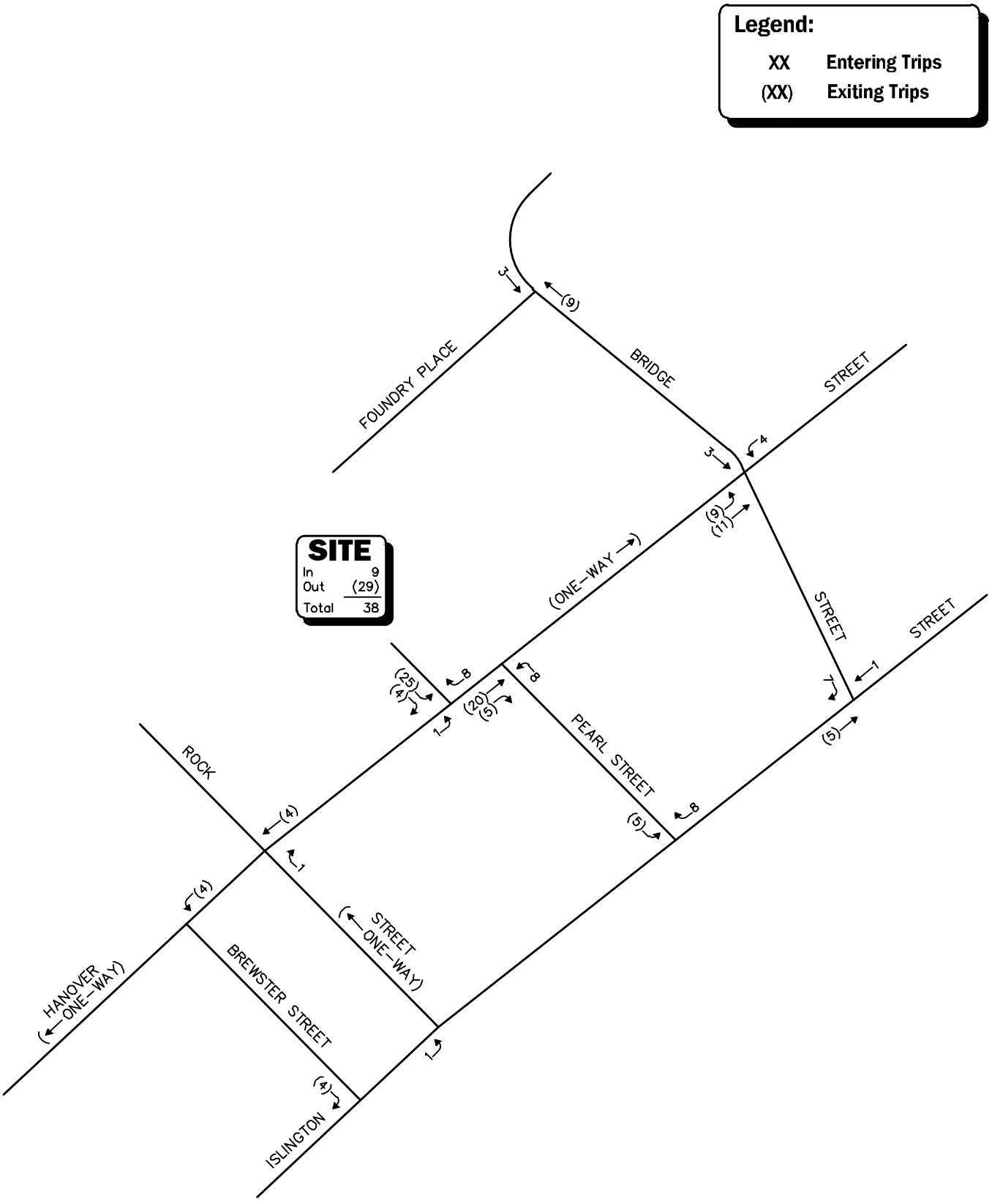


Not To Scale

Figure 9

Trip Distribution Map

Vanasse & Associates inc

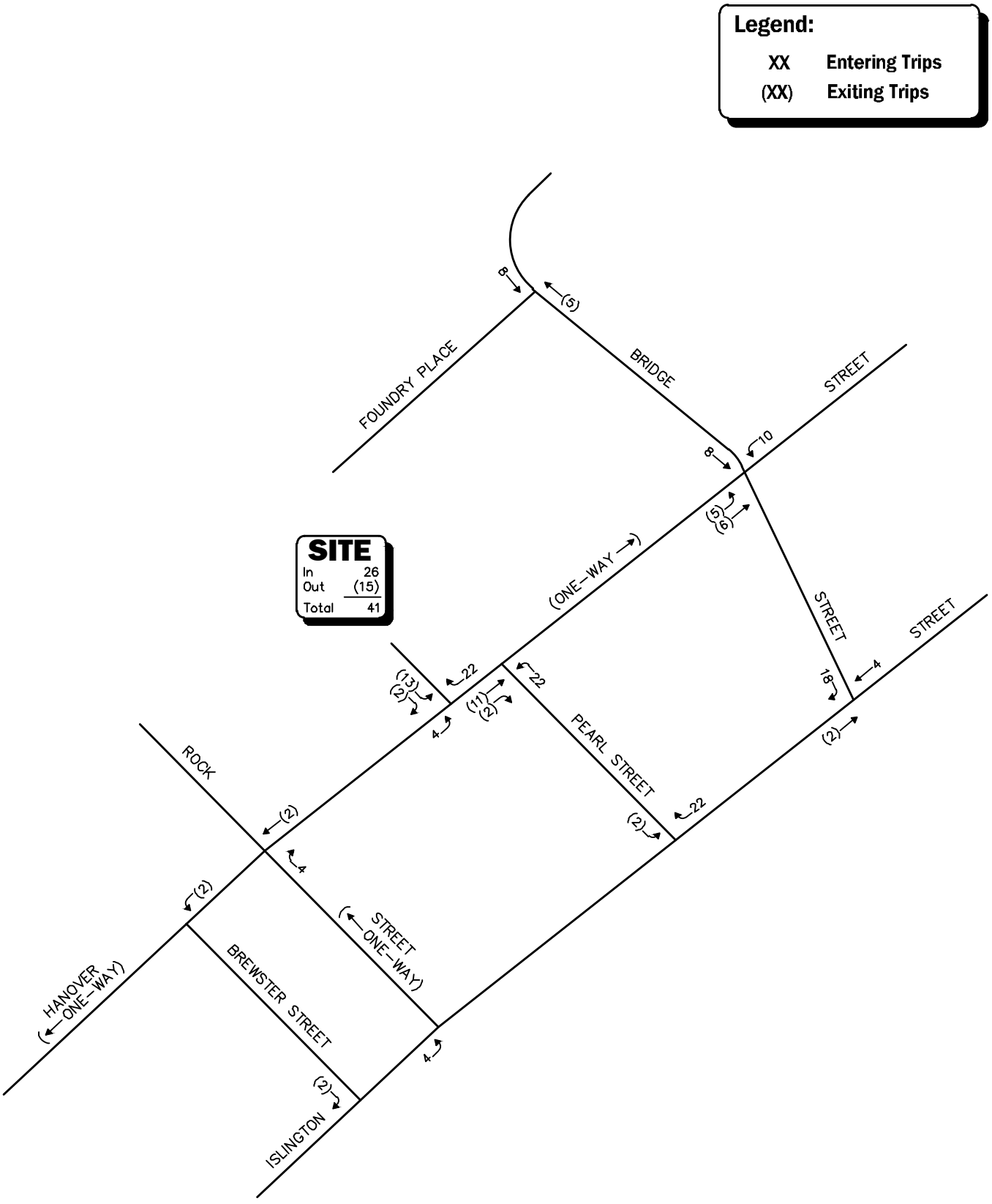


Not To Scale

Figure 10

Project-Generated Peak-Month Weekday Morning Peak-Hour Traffic Volumes

Vanasse & Associates inc



Not To Scale

Figure 11

Project-Generated
Peak-Month
Weekday Evening
Peak-Hour Traffic Volumes

Vanasse & Associates inc

Build Traffic Volumes

The 2025 Opening-Year Build and 2035 Build condition traffic volumes were developed by adding the peak-hour Project-generated traffic to the corresponding 2025 and 2035 No-Build peak-month, peak-hour traffic volumes. The resulting 2025 Opening-Year Build condition weekday morning and evening peak-hour traffic volumes are graphically depicted on Figures 12 and 13, respectively, with the corresponding 2035 Build condition peak-month, peak-hour traffic volumes depicted on Figures 14 and 15.

TRAFFIC OPERATIONS ANALYSIS

In order to assess the potential impact of the Project on the roadway network, a detailed traffic operations analysis (motorist delays, vehicle queuing, and level of service) was performed at the study area intersections. Capacity analyses provide an indication of how well transportation facilities serve the traffic demands placed upon them, with vehicle queue analyses providing a secondary measure of the operational characteristics of an intersection or section of roadway under study.

In brief, six levels of service are defined for each type of facility. They are given letter designations ranging from A to F, with LOS "A" representing the best operating conditions and LOS "F" representing congested or constrained operations. An LOS of "E" is representative of a transportation facility that is operating at its design capacity while an LOS of "D" is generally defined as the limit of "acceptable" traffic operations. Since the level of service of a traffic facility is a function of the flows placed upon it, such a facility may operate at a wide range of levels of service depending on the time of day, day of week, or period of the year. The Synchro® 12 intersection capacity analysis software, which is based on the analysis methodologies and procedures presented in the *7th Edition Highway Capacity Manual* (HCM)[6] for unsignalized intersections.

Analysis Results

Level-of-service and vehicle queue analyses were conducted for 2024 Existing, 2025 No-Build, 2025 Opening-Year Build, 2035 No-Build, and 2035 Build conditions for the study area intersections and the Project site driveway. The results of the intersections capacity and vehicle queue analyses are summarized in Table 5, with the detailed analysis results presented in the Attachment.

The following is a summary of the level-of-service and vehicle queue analyses for the intersections within the study area. For context, we note that an LOS of "D" or better is generally defined as "acceptable" operating conditions.

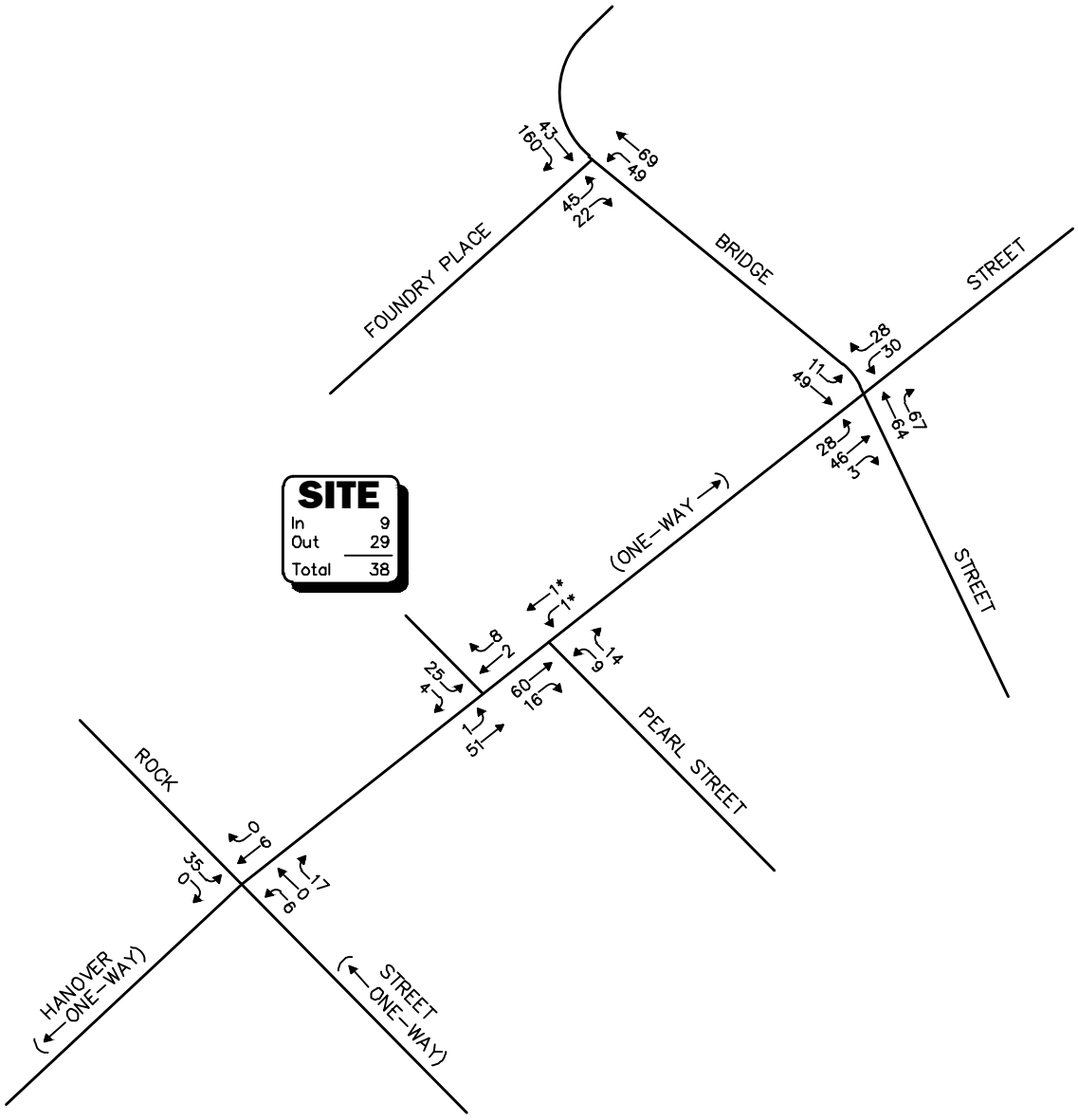
Hanover Street at Rock Street

Under 2025 Opening-Year and 2035 Build peak-month conditions, no changes in level of service or vehicle queuing were shown to occur over No-Build conditions as a result of the addition of Project-related traffic, with all movements continuing to operate at LOS A with negligible vehicle queueing.

Hanover Street at Pearl Street

Under 2025 Opening-Year Build peak-month conditions, no changes in level of service or vehicle queuing were shown to occur over No-Build conditions as a result of the addition of Project-related traffic, with all movements continuing to operate at LOS A with negligible vehicle queueing.

[6]*Highway Capacity Manual*, Transportation Research Board; Washington, DC; 2022.



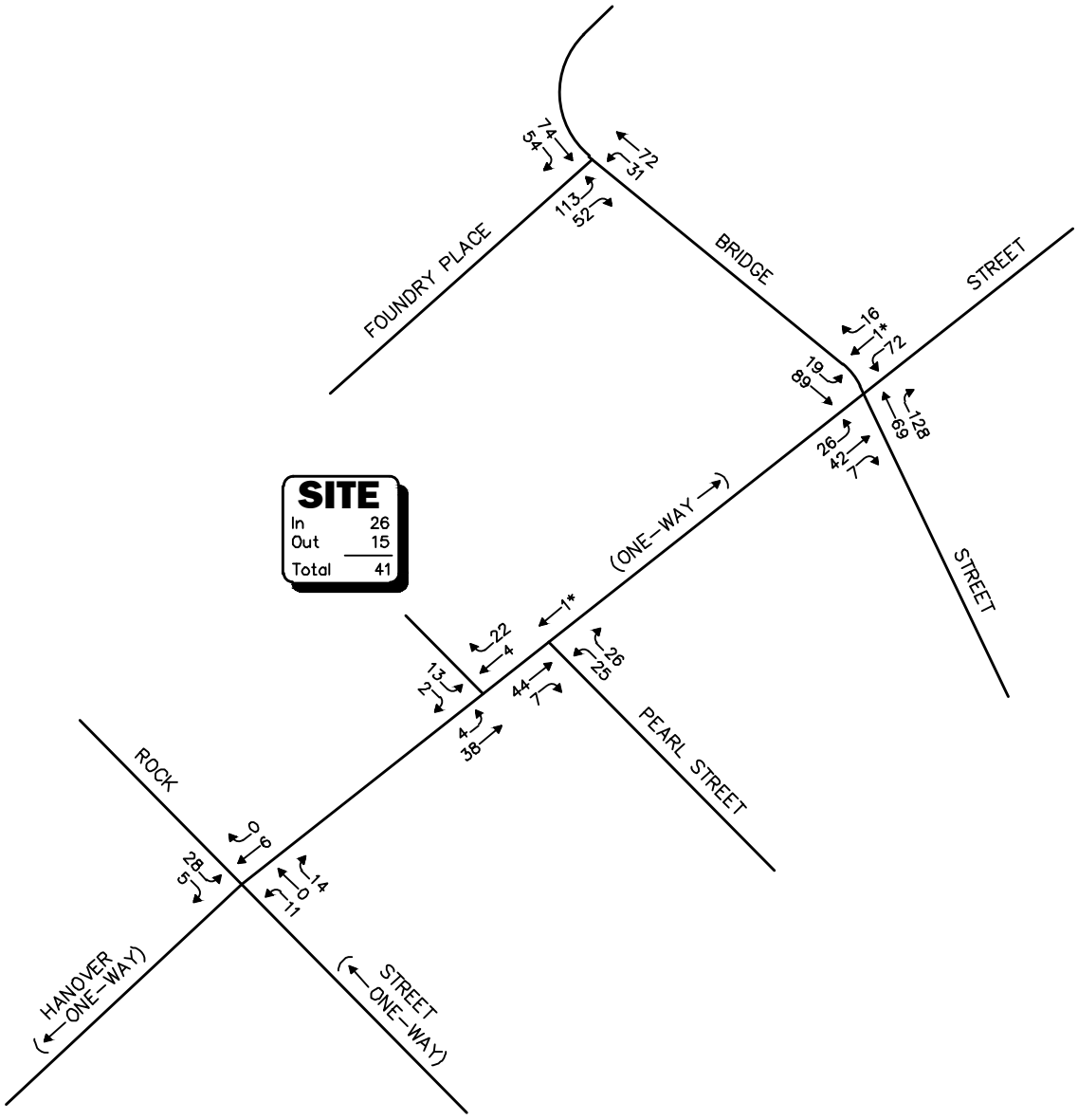
*Illegal movement.
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 12

**2025 Opening-Year Build
Peak-Month
Weekday Morning
Peak-Hour Traffic Volumes**

Vanasse & Associates inc



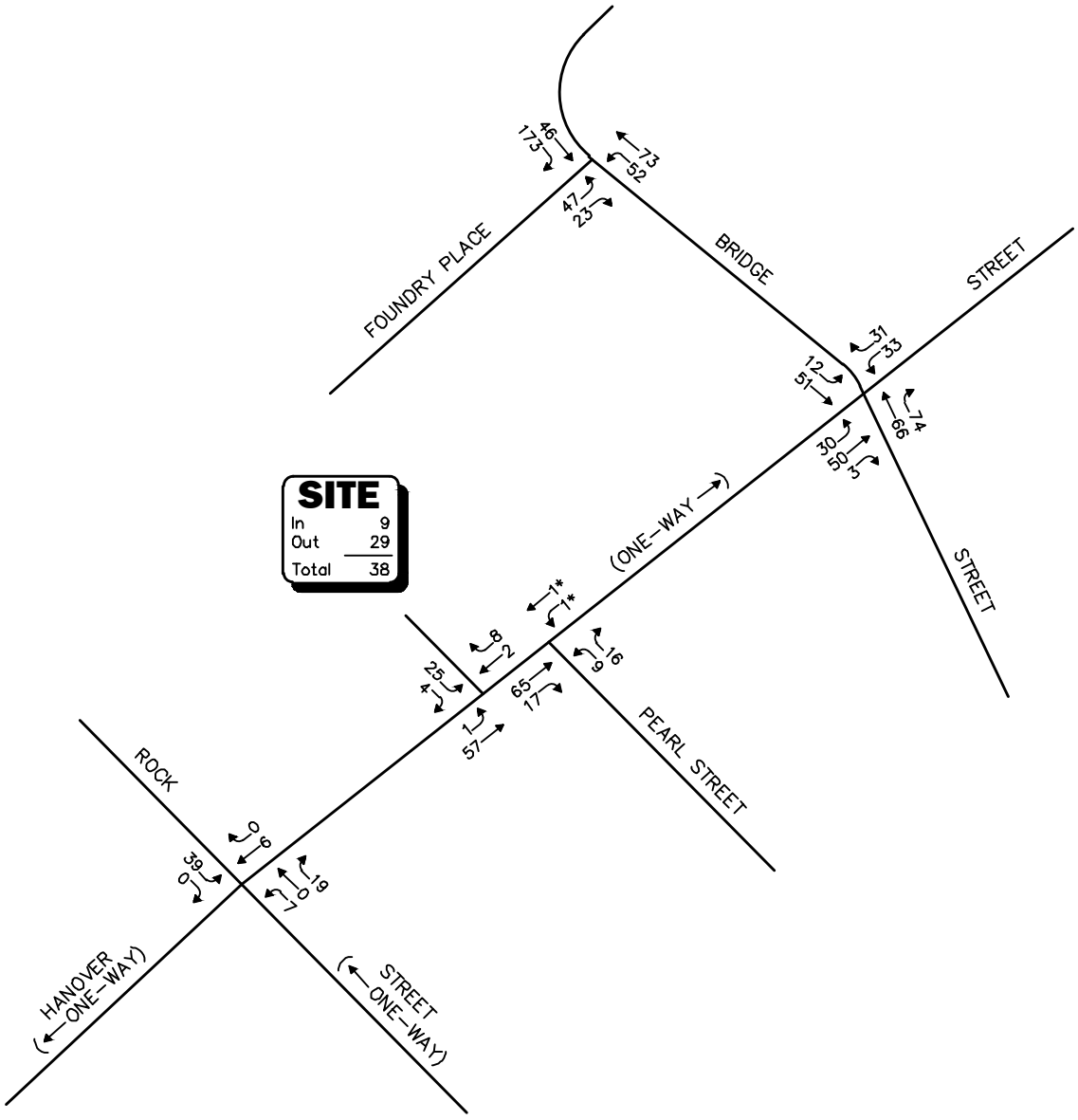
*Illegal movement.
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 13

**2025 Opening-Year Build
Peak-Month
Weekday Evening
Peak-Hour Traffic Volumes**

Vanasse & Associates inc



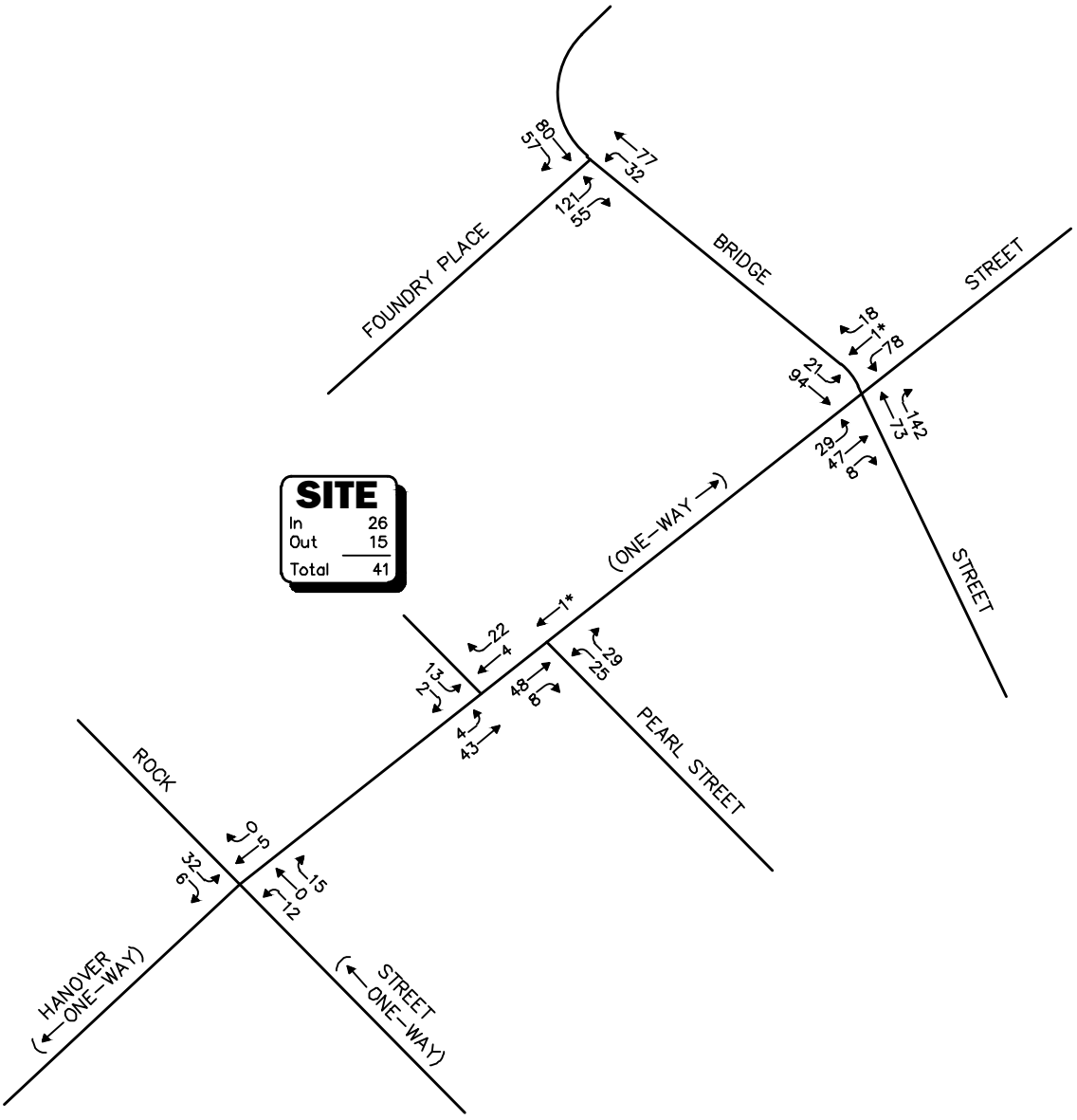
*Illegal movement.
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 14

**2035 Build
Peak-Month
Weekday Morning
Peak-Hour Traffic Volumes**

Vanasse & Associates inc



*Illegal movement.
Note: Imbalances exist due to numerous curb cuts and side streets that are not shown.

Not To Scale

Figure 15

**2035 Build
Peak-Month
Weekday Evening
Peak-Hour Traffic Volumes**

Vanasse & Associates inc

Under 2035 Build peak-month conditions, no changes in level of service was shown to occur over No-Build conditions, with all movements at the intersection shown to continue to operate at LOS A. Project-related impacts were generally defined as an increase in an average motorist delay of less than 1.0 seconds that resulted in a corresponding increase in vehicle queuing of up to one (1) vehicle.

Hanover Street at Bridge Street

Under 2025 Opening-Year and 2035 Build peak-month conditions, no changes in level of service or vehicle queuing were shown to occur over No-Build conditions as a result of the addition of Project-related traffic, with all movements continuing to operate at LOS A with vehicle queues of up to one (1) vehicle.

Bridge Street at Foundry Place

Under 2025 Opening-Year and 2035 Build peak-month conditions, no changes in level of service or vehicle queuing were shown to occur over No-Build conditions as a result of the addition of Project-related traffic, with all movements continuing to operate at LOS B or better with vehicle queues of up to (2) vehicles.

Hanover Street at the Project Site Driveway

Under 2025 Opening-Year and 2035 Build peak-month conditions, all movements at the Project site driveway intersection with Hanover Street were shown to operate at LOS A during both the weekday morning and evening peak hours with negligible vehicle queuing predicted.

Table 5
UNSIGNALIZED INTERSECTION LEVEL-OF-SERVICE AND VEHICLE QUEUE SUMMARY

	2024 Existing				2025 No-Build				2025 Opening-Year Build				2035 No-Build				2035 Build			
Unsignalized Intersection/Peak Hour/Movement	Demand[a]	Delay[b]	LOS[c]	Queue 95th[d]	Demand	Delay	LOS	Queue 95th	Demand	Delay	LOS	Queue 95th	Demand	Delay	LOS	Queue 95th	Demand	Delay	LOS	Queue 95th
Hanover Street at Rock Street																				
Weekday Morning:																				
Hanover Street WB TH/RT	2	7.1	A	0	2	7.1	A	0	6	7.1	A	0	2	7.1	A	0	6	7.2	A	0
Rock Street NB LT/TH/RT	22	6.7	A	0	22	6.7	A	0	23	6.7	A	0	25	6.7	A	0	26	6.7	A	0
Rock Street SB LT/RT	36	7.3	A	0	36	7.3	A	0	35	7.4	A	0	40	7.4	A	0	39	7.4	A	0
Weekday Evening:																				
Hanover Street WB TH/RT	4	7.1	A	0	4	7.1	A	0	6	7.1	A	0	4	7.1	A	0	5	7.2	A	0
Rock Street NB LT/TH/RT	21	6.9	A	0	21	6.9	A	0	23	6.9	A	0	23	6.9	A	0	27	6.9	A	0
Rock Street SB LT/RT	33	7.2	A	0	33	7.2	A	0	33	7.3	A	0	27	7.3	A	0	38	7.3	A	0
Hanover Street at Pearl Street																				
Weekday Morning:																				
Hanover Street EB LT/TH/RT	52	0.1	A	0	52	0.1	A	0	76	0.1	A	0	58	0.1	A	0	82	0.1	A	0
Hanover Street WB LT/TH	2	2.6	A	0	2	2.6	A	0	2	2.6	A	0	2	2.6	A	0	2	2.6	A	0
Pearl Street NB LT/TH/RT	18	8.8	A	0	18	8.8	A	0	23	8.9	A	0	20	8.8	A	0	25	8.9	A	0
Pearl Street SB LT/TH/RT	1	8.3	A	0	1	8.3	A	0	--	--	--	--	1	8.3	A	0	--	--	--	--
Weekday Evening:																				
Hanover Street EB LT/TH/RT	38	0.0	A	0	38	0.0	A	0	51	0.0	A	0	43	0.0	A	0	56	0.0	A	0
Hanover Street WB TH	1	0.0	A	0	1	0.0	A	0	1	0.0	A	0	1	0.0	A	0	1	0.0	A	0
Pearl Street NB LT/TH/RT	29	8.8	A	0	29	8.8	A	0	51	9.0	A	0	32	8.9	A	0	54	9.1	A	1
Pearl Street SB LT/TH/RT	16	8.6	A	0	16	9.1	A	0	--	--	--	--	16	9.1	A	0	--	--	--	--
Hanover Street at Bridge Street																				
Weekday Morning:																				
Hanover Street EB LT/TH/RT	58	7.7	A	1	58	8.0	A	1	77	8.2	A	1	64	8.1	A	1	83	8.3	A	1
Hanover Street WB LT/RT	54	7.3	A	0	54	7.6	A	1	60	8.0	A	1	60	7.8	A	1	64	7.9	A	1
Bridge Street NB TH/RT	82	7.2	A	1	130	8.0	A	1	131	8.1	A	1	140	8.1	A	1	140	8.2	A	1
Bridge Street SB LT/TH	25	7.5	A	0	57	7.9	A	0	58	7.9	A	0	60	8.0	A	1	63	8.1	A	1
Weekday Evening:																				
Hanover Street EB LT/TH/RT	77	8.1	A	1	77	8.4	A	1	99	8.8	A	1	86	8.6	A	1	84	8.7	A	1
Hanover Street WB LT/TH/RT	78	8.3	A	1	79	8.6	A	1	75	8.6	A	1	87	8.8	A	1	97	9.0	A	1
Bridge Street NB TH/RT	159	7.9	A	1	197	8.5	A	1	197	8.6	A	1	215	8.8	A	1	215	8.9	A	1
Bridge Street SB LT/TH	59	8.1	A	1	100	8.6	A	1	108	8.7	A	1	107	8.8	A	1	115	8.9	A	1
Bridge Street at Foundry Place																				
Weekday Morning:																				
Foundry Place EB LT/RT	22	10.0	A	0	67	11.5	B	1	67	11.6	B	1	69	11.8	B	1	70	12.3	B	1
Bridge Street NB LT/TH	61	3.2	A	0	109	3.6	A	0	118	3.6	A	0	116	3.6	A	0	125	4.7	A	0
Bridge Street SB TH/RT	146	0.0	A	0	200	0.0	A	0	203	0.0	A	0	216	0.0	A	0	219	0.0	A	0
Weekday Evening:																				
Foundry Place EB LT/RT	108	10.5	B	1	165	12.5	B	2	165	12.7	B	2	176	13.1	B	2	176	13.2	B	2
Bridge Street NB LT/TH	64	1.4	A	0	102	2.4	A	0	103	2.4	A	0	108	2.3	A	0	109	2.3	A	0
Bridge Street SB TH/RT	71	0.0	A	0	120	0.0	A	0	128	0.0	A	0	129	0.0	A	0	137	0.0	A	0
Hanover at the Project Site Driveway																				
Weekday Morning:																				
Hanover Street EB TH/RT	--	--	--	--	--	--	--	--	52	0.1	A	0	--	--	--	--	58	0.1	A	0
Hanover Street WB LT/TH	--	--	--	--	--	--	--	--	10	0.0	A	0	--	--	--	--	10	0.0	A	0
Project Site Driveway SB LT/RT	--	--	--	--	--	--	--	--	29	8.9	A	0	--	--	--	--	29	8.9	A	0
Weekday Evening:																				
Hanover Street EB TH/RT	--	--	--	--	--	--	--	--	42	0.7	A	0	--	--	--	--	47	0.6	A	0
Hanover Street WB LT/TH	--	--	--	--	--	--	--	--	26	0.0	A	0	--	--	--	--	26	0.0	A	0
Project Site Driveway SB LT/RT	--	--	--	--	--	--	--	--	15	8.9	A	0	--	--	--	--	15	8.9	A	0

[a]Demand in vehicles per hour.
[b]Average control delay per vehicle (in seconds).
[c]Level of service.
[d]Queue length in vehicles.
NB = northbound; SB = southbound; EB = eastbound; WB = westbound; LT = left-turning movements; TH = through movements; RT = right-turning movements.

SIGHT DISTANCE MEASUREMENTS

Sight distance measurements were performed at the Project site driveway intersection with Hanover Street in accordance with the American Association of State Highway and Transportation Officials (AASHTO)[7] requirements. Both stopping sight distance (SSD) and intersection sight distance (ISD) measurements were performed. In brief, SSD is the distance required by a vehicle traveling at the design speed of a routeway, on wet pavement, to stop prior to striking an object in its travel path. ISD or corner sight distance (CSD) is the sight distance required by a driver entering or crossing an intersecting roadway to perceive an oncoming vehicle and safely complete a turning or crossing maneuver with oncoming traffic. In accordance with AASHTO standards, if the measured ISD is at least equal to the required SSD value for the appropriate design speed, the intersection can operate in a safe manner. Table 6 presents the measured SSD and ISD at the subject intersection.

Table 6
SIGHT DISTANCE MEASUREMENTS[a]

	Feet		
Intersection/Sight Distance Measurement	Required Minimum (SSD)	Desirable (ISD)[b]	Measured
Hanover Street at the Project Site Driveway			
Stopping Sight Distance:			
Hanover Street approaching from the East	115	--	188
Hanover Street approaching from the West	115	--	281
Intersection Sight Distance:			
Looking to the East from the Project Driveway	115	195	146
Looking to the West from the Project Driveway	115	225	150

[a]Recommended minimum values obtained from *A Policy on Geometric Design of Highways and Streets,* 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); 2018; and based on a 20-mph approach speed along Hanover Street.

[b]Values shown are the intersection sight distance for a vehicle turning right or left exiting a roadway under STOP control such that motorists approaching the intersection on the major street should not need to adjust their travel speed to less than 70 percent of their initial approach speed.

As can be seen in Table 6, the available lines of sight to and from Hanover Street at its intersection with the Project site driveway exceed the recommended minimum sight distance to function in a safe manner (SSD) based on a 20-mph approach speed which is slightly higher than the measured 85th percentile vehicle travel speed (13/16 mph).

[7] *A Policy on Geometric Design of Highway and Streets,* 7th Edition; American Association of State Highway and Transportation Officials (AASHTO); Washington D.C.; 2018.

SUMMARY

VAI has completed a detailed assessment of the potential impacts on the transportation infrastructure associated with the proposed redevelopment of the Kearsarge Mill located at 361 Hanover Street in Portsmouth, New Hampshire, to accommodate a multifamily residential development. This study has been completed in accordance with the NHDOT guidelines for the preparation of a TIS as defined in the Driveway Permit Policy and has evaluated the following specific areas as they relate to the Project: i) access requirements; ii) potential off-site improvements; and iii) safety considerations; under existing and future conditions, both with and without the Project. Based on this assessment, we have concluded the following with respect to the Project:

1. Using trip-generation statistics published by the ITE,[8] the Project is expected to generate approximately 384 vehicle trips on an average weekday (two-way, 24-hour volume), with approximately 38 vehicle trips expected during the weekday morning peak-hour and 41 vehicle trips expected during the weekday evening peak-hour;

2. The Project will not have a significant impact (increase) on motorist delays or vehicle queuing over Existing or anticipated future conditions without the Project (No-Build conditions), with no (0) changes in level of service and all movements at the study area intersections shown to continue to operate at LOS B or better, where an LOS "D" or better is defined as "acceptable" operating conditions. Project-related impacts were generally defined as an increase in average motorist delay of up to 1.1 seconds that resulted in a corresponding increase in vehicle queuing of up to one (1) vehicle;

3. Under 2025 Opening Year Build and 2035 Build conditions, all movements exiting the Project site driveway to Hanover Street were shown to operate at LOS A with negligible vehicle queuing. All movements along Hanover Street approaching the Project site driveway were shown to operate at LOS A, also with negligible vehicle queuing; and

4. Lines of sight at the intersection of the Project site driveway with Hanover Street were found to exceed the recommended minimum distance for the intersection to operate in a safe manner based on the appropriate speed.

In consideration of the above, we have concluded that the Project can be accommodated within the confines of the existing transportation infrastructure in a safe and efficient manner with the implementation of the recommendations that follow.

RECOMMENDATIONS

Project Access

Access to the Project site will be provided by way of a new driveway that will intersect the south side of Hanover Street approximately 60 feet east of Rock Street. The following recommendations are offered with respect to the design and operation of the Project site access and internal circulations, many of which are reflected on the site plans:

[8]Institute of Transportation Engineers, op. cit. 1.

- The Project site driveway will be 24 feet in width and will be designed to accommodate the turning and maneuvering requirements of moving vans, trash/recycling vehicles and the largest anticipated responding emergency vehicle.

- Vehicles exiting the Project site to Hanover Street should be placed under STOP-sign control.

- Where perpendicular parking is proposed, the drive aisle behind the parking should be a minimum of 23 feet in order to facilitate parking maneuvers.

- All signs and pavement markings to be installed within the Project site should conform to the applicable standards of the *Manual on Uniform Traffic Control Devices* (MUTCD).[9]

- Sidewalks have been provided within the Project site that link the existing and proposed buildings to the existing sidewalks along Hanover Street, Rock Street and Foundry Place and crosswalks are proposed for crossing Rock Street (two (2) locations), at the Hanover Street/Rock Street intersection and across Pearl Street.

- ADA-compliant wheelchair ramps should be provided at all pedestrian crossings to be constructed or modified in conjunction with the Project, including for crossing the Project site driveway, or the driveway should be designed so that the sidewalk crosses the driveway (i.e., pan-type drive).

- Signs and landscaping to be installed as a part of the Project within the intersection sight triangle areas should be designed and maintained so as not to restrict lines of sight.

- Snow accumulations (windrows) within sight triangle areas should be promptly removed where such accumulations would impede sightlines.

- Consideration should be given to providing electric vehicle (EV) charging stations for use by residents of the Project.

Transportation Demand Management

In an effort to encourage the use of alternative modes of transportation to single-occupant vehicles (SOVs), the following Transportation Demand Management (TDM) measures should be implemented as part of the Project:

- A transportation coordinator should be assigned for the Project, who may also have other duties and responsibilities, to coordinate the TDM program;

- A "welcome packet" should be provided to residents detailing available public transportation services, bicycle and walking alternatives, and other commuting options;

- A central maildrop should be provided within each building; and

- Secure bicycle parking should be provided at an appropriate location within the Project site, including exterior bicycle racks and interior weather protected bicycle parking.

With implementation of the aforementioned recommendations, safe and efficient access will be provided to the Project site and the Project can be accommodated within the confines of the existing transportation system.

[9] *Manual on Uniform Traffic Control Devices (MUTCD)*; Federal Highway Administration; Washington, D.C.; 2009.

OPEN SPACE CALCULATIONS			
AREA	GREEN SPACE	SIDEWALK	OPEN SPACE
A	1,092 S.F.	699 S.F.	1,791 S.F.
B	622 S.F.	423 S.F.	1,045 S.F.
TOTAL	1,732 S.F.	1,104 S.F.	2,836 S.F.

LOT SIZE: 38,528. TOTAL OPEN SPACE: 2,836 S.F.
2,836 S.F./38,528 = 7.3% – 5% IS REQUIRED

OPEN SPACE=7.3%

NORTH
NAD83(2011)
GRID
NHSPC

STATE OF NEW HAMPSHIRE No. 738 JOHN R. CHAGNON LICENSED LAND SURVEYOR SIGNATURE

11

8

GREEN SPACE 105 S.F.

5'

SIDEWALK 206 S.F.

GREEN SPACE 108 S.F.

GREEN SPACE 204 S.F.

7'

8'

SIDEWALK 331 S.F.

GREEN SPACE 64 S.F.

GREEN SPACE 386 S.F.

GREEN SPACE 192 S.F.

GREEN SPACE 33 S.F.

SIDEWALK 162 S.F.

GREEN SPACE 106 S.F.

SIDEWALK 104 S.F.

SIDEWALK 263 S.F.

GREEN SPACE 58 S.F.

6'

5'

GREEN SPACE 60 S.F.

5'

GREEN SPACE 243 S.F.

SIDEWALK 56 S.F.

GREEN SPACE 76 S.F.

GREEN SPACE 79 S.F.

#349

ROCK STREET
PUBLIC RIGHT OF WAY)

SCALE: 1"=20'

REV: JUNE
JANUARY 2025

OPEN SPACE EXHIBIT

SITE REDEVELOPMENT
361 HANOVER STREET
PORTSMOUTH, N.H.

GRAPHIC SCALE

10 0 10 20 30 40 50 FEET
3 0 5 10 15 METERS

HALEYWARD
ENGINEERING | ENVIRONMENTAL | SURVEYING
200 Griffin Rd. Unit 14
Portsmouth, New Hampshire 03801
603.430.9282
WWW.HALEYWARD.COM

FB 444 PG 1

5010135.2977.01

P:\NH\5010135 Hampshire_Development\2977.01-Hanover St., Portsmouth-JRC\JN 2977\2024 Site Plan\Plans & Specs\Site\2977.01 Site.dwg, 6/13/2025 12:11:44 PM

ZONING DEVELOPMENT STANDARD

CD5: CHARACTER DISTRICT 5, DOD: DOWNTOWN OVERLAY DISTRICT

	REQUIRED	EXISTING	PROPOSED - Building A	PROPOSED - Building B	PROPOSED - Building C	PROPOSED - Building D	PROPOSED - Building E
Height	2-3 stories 40'	**2 Stories/ 18' +/-**	**3 stories with attic/ 40'**	**3 stories / 36'**	**3 stories / 36'**	**3 stories / 36'**	**3 stories with attic/ 40'**
Penthouses	may exceed bldg height by 2'	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Roof appurtenance	may exceed bldg height by 10'	**<10'**	**<10'**	**No**	**<10'**	**No**	**<10'**
Façade Types		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Building Types	commercial, live-work, mixed use, flex space & community.	**Commerical**	**Apartment**	**Duplex**	**Duplex**	**Duplex**	**Apartment**
Front (principle) max S/B	5	**99'**	**99'**	**0'**	**52'**	**5'**	**5'**
Front (secondary) max S/B	5	**0'**	**0'**	**N/A**	**N/A**	**N/A**	**N/A**
Side S/B	NR	**NR**	**NR**	**NR**	**NR**	**NR**	**NR**
Rear yard S/B	5'	**N/A**	**N/A**	**>5'**	**>5'**	**>5'**	**>5'**
Front lotline buildout	80% min	**100%**	**N/A**	**N/A**	**80%**	**80%**	**80%**
Lot area (sf)	NR	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
LOT area per dwelling	NR	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Building coverage, maximum	95%	**38%**	**46.9%**	**4.1%**	**6.2%**	**4.1%**	**8.0%**
Maximum building footprint	20,000	**14,808**	**18,082**	**1,600**	**2,394**	**1,600**	**3,100**
Ground floor area per use, max	15,000	**14,808**	**<15,000**	**916**	**1,660**	**880**	**1,300**
Open space, minimum	5%	**<5%**	**>5%**	**>5%**	**>5%**	**>5%**	**>5%**
Permitted uses		**Commercial**	**Residential**	**Residential**	**Residential**	**Residential**	**Residential**
Block length, max (ft)	225	**205'**	**205'**	**N/A**	**57'**	**40'**	**50'**
Façade modulation length, max (ft)	100	**205**	**65**	**N/A**	**24'**	**40'**	**50'**
Entrance spacing, max (ft)	50	**>50'**	**50**	**N/A**	**20'**	**17'**	**20'**
Floor height above sidewalk, max	36"	**0'**	**N/A**	**N/A**	**24"**	**15"**	**18"**
Ground story height, min	12'	**10'**	**10.5'**	**12'**	**12'**	**12'**	**12'**
Second story height, min	10'	**10'**	**10.5'**	**11'**	**11'**	**11'**	**11'**
Glazing, shopfront, min	70%	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Glazing, other	20%-50%	**>20%**	**>20%**	**>20%**	**>20%**	**>20%**	**>20%**
Roof types	flat, gable, hip, gambrel, mansard	**Flat**	**Mansard**	**Hip**	**Mansard**	**Hip**	**Mansard**

PROPOSED DEVELOPMENT

361 HANOVER STREET

PORTSMOUTH, NEW HAMPSHIRE

SITE PERMIT PLANS

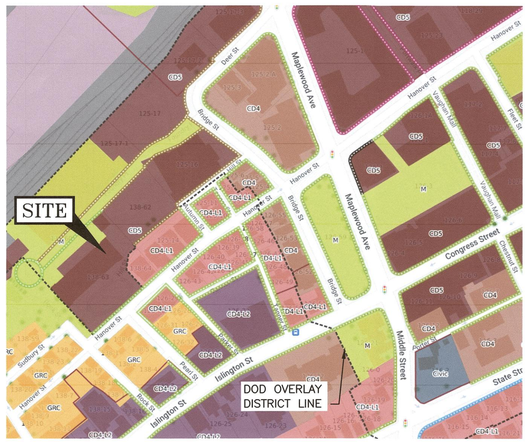
OWNER/APPLICANT:
361 HANOVER STEAM FACTORY, LLC
41 INDUSTRIAL DRIVE UNIT 20
EXETER, NH 03833
TEL. (603) 778-9999

CIVIL ENGINEER/LAND SURVEYOR:
HALEY WARD, INC.
200 GRIFFIN ROAD, UNIT 3
PORTSMOUTH, N.H. 03801
TEL. (603) 430-9282

ARCHITECT:
SCOTT BROWN
29 WATER STREET, SUITE 209
NEWBURYPORT, MA 01950
TEL. (978) 465-3535

PLANNING CONSULTANT:
NICHOLAS CRACKNELL
TEL. (978) 270-4789

LAND USE ATTORNEY:
BOSEN & ASSOCIATES
266 MIDDLE STREET
PORTSMOUTH, N.H. 03801
TEL. (603) 427-5500



MAP 10.5A21A
CHARACTER DISTRICTS AND CIVIC DISTRICTS

Character Districts
- CD5 Character District 5
- CD4 Character District 4
- CD4-W Character District 4-W
- CD4-L1 Character District 4-L1
- CD4-L2 Character District 4-L2

Civic District
- Civic District

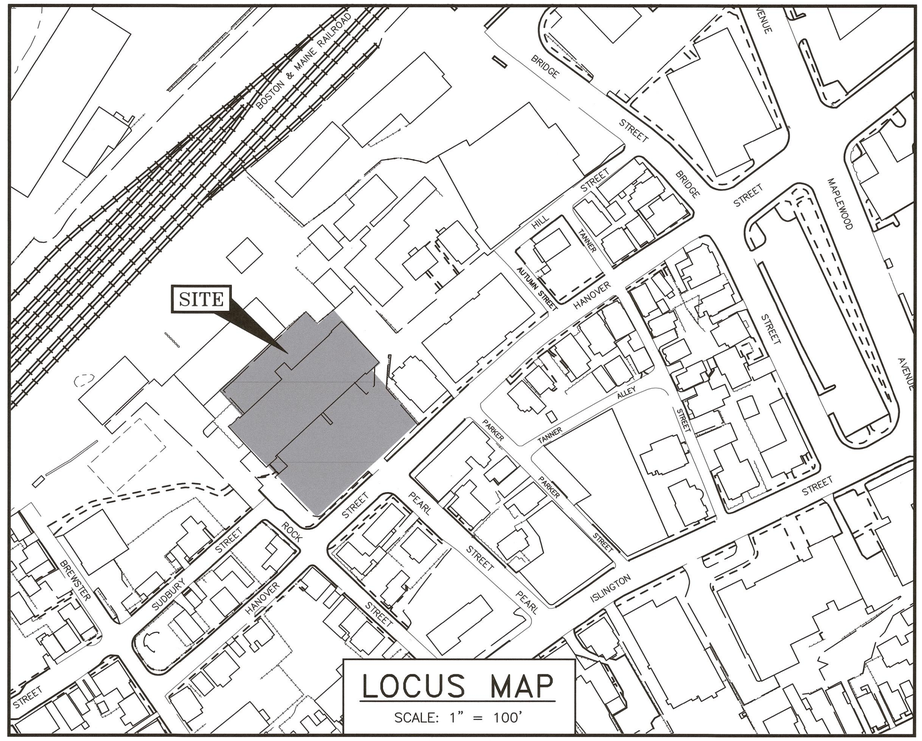
Municipal District
- Municipal District

Overlay Districts
- OLOD Osprey Landing Overlay District
- Downtown Overlay District
- Historic District

MAP 10.5A21B
BUILDING HEIGHT STANDARDS

Height requirement area	Maximum building height*
1 Story	20'
2 Stories	35'
2 Stories (short 3rd*)	35'
2-3 Stories	40'
2-3 Stories (short 4th*)	45'
2-4 Stories	50'
2-4 Stories (short 5th*)	60'
2-5 Stories	60'

*Penthouse Levels may exceed the building height by 2 feet.



LOCUS MAP
SCALE: 1" = 100'

INDEX OF SHEETS

UTILITY CONTACTS

ELECTRIC:
EVERSOURCE
1700 LAFAYETTE ROAD
PORTSMOUTH, N.H. 03801
Tel. (603) 436-7708, Ext. 555.5678
ATTN: NICHOLAS KOSKO

NATURAL GAS:
UNITIL
325 WEST ROAD
PORTSMOUTH, N.H. 03801
Tel. (603) 294-5144
ATTN: DAVE BEAULIEU

CABLE:
COMCAST
155 COMMERCE WAY
PORTSMOUTH, N.H. 03801
Tel. (603) 679-5695 (X1037)
ATTN: MIKE COLLINS

SEWER & WATER:
PORTSMOUTH DEPARTMENT OF PUBLIC WORKS
680 PEVERLY HILL ROAD
PORTSMOUTH, N.H. 03801
Tel. (603) 427-1530
ATTN: DOUG SPARKS

COMMUNICATIONS:
CONSOLIDATED COMMUNICATIONS
BENJAMIN WILLS
1575 GREENLAND ROAD
GREENLAND, N.H. 03840
Tel. (603) 427-5525

PORTSMOUTH APPROVAL CONDITIONS NOTE:
ALL CONDITIONS ON THIS PLAN SET SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE CITY OF PORTSMOUTH SITE PLAN REVIEW REGULATIONS.

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN _____ DATE _____

PERMIT LIST:
PORTSMOUTH ZONING BOARD: APPROVED 19 FEBRUARY 2025
PORTSMOUTH SITE REVIEW: PENDING

SITE EXCAVATION NOTE:

ARCHAEOLOGIST SHALL BE IDENTIFIED AND HIRED TO BE ON CALL FOR THE DURATION OF THE PROJECT IN CASE EVIDENCE OF A BURIAL GROUND IS DISCOVERED.

SITE EVACUATION SHALL FOLLOW PROCEDURES AS OUTLINED IN THE FOLLOWING STATUTES:

RSA 227-C:8-A DISCOVERY OF REMAINS AND NOTIFICATION OF AUTHORITIES (CONSTRUCTION SITES).

RSA 289:3 CEMETERIES-LOCATIONS (25 FEET FROM KNOWN CEMETERY LOCATION).

IF REMAINS ARE ENCOUNTERED CONTACT:

MARK DOPERALSKI
STATE ARCHAEOLOGIST
DIVISION OF HISTORICAL RESOURCES
NH DEPARTMENT OF NATURAL AND CULTURAL RESOURCES
172 PEMBROKE ROAD
CONCORD, NH 03301
http://www.nh.gov/nhdhr

LEGEND:

EXISTING	PROPOSED	
		PROPERTY LINE
		SETBACK
S	S	SEWER PIPE
SL	SL	SEWER LATERAL
G	G	GAS LINE
D	D	STORM DRAIN
W	W	WATER LINE
WS	WS	WATER SERVICE
UGE	UGE	UNDERGROUND ELECTRIC
OHW	OHW	OVERHEAD ELECTRIC/WIRES
	UD	FOUNDATION DRAIN
		EDGE OF PAVEMENT (EP)
100	100	CONTOUR
97x3	98x0	SPOT ELEVATION
		UTILITY POLE
		WALL MOUNTED EXTERIOR LIGHTS
		TRANSFORMER ON CONCRETE PAD
		ELECTRIC HANDHOLD
		SHUT OFFS (WATER/GAS)
	GV	GATE VALVE
	HYD	HYDRANT
CB	CB	CATCH BASIN
S	SMH	SEWER MANHOLE
D	DMH	DRAIN MANHOLE
T	TMH	TELEPHONE MANHOLE
14	14	PARKING SPACE COUNT
PM		PARKING METER
LSA		LANDSCAPED AREA
TBD	TBD	TO BE DETERMINED
CI	CI	CAST IRON PIPE
COP	COP	COPPER PIPE
DI	DI	DUCTILE IRON PIPE
PVC	PVC	POLYVINYL CHLORIDE PIPE
RCP	RCP	REINFORCED CONCRETE PIPE
AC	–	ASBESTOS CEMENT PIPE
VC	VC	VITRIFIED CLAY PIPE
EP	EP	EDGE OF PAVEMENT
EL.	EL.	ELEVATION
FF	FF	FINISHED FLOOR
INV	INV	INVERT
S =	S =	SLOPE FT/FT
TBM	TBM	TEMPORARY BENCH MARK
TYP	TYP	TYPICAL

DIG SAFE – ME – NH – RI – VT
1-888-344-7233
CALL TOLL FREE

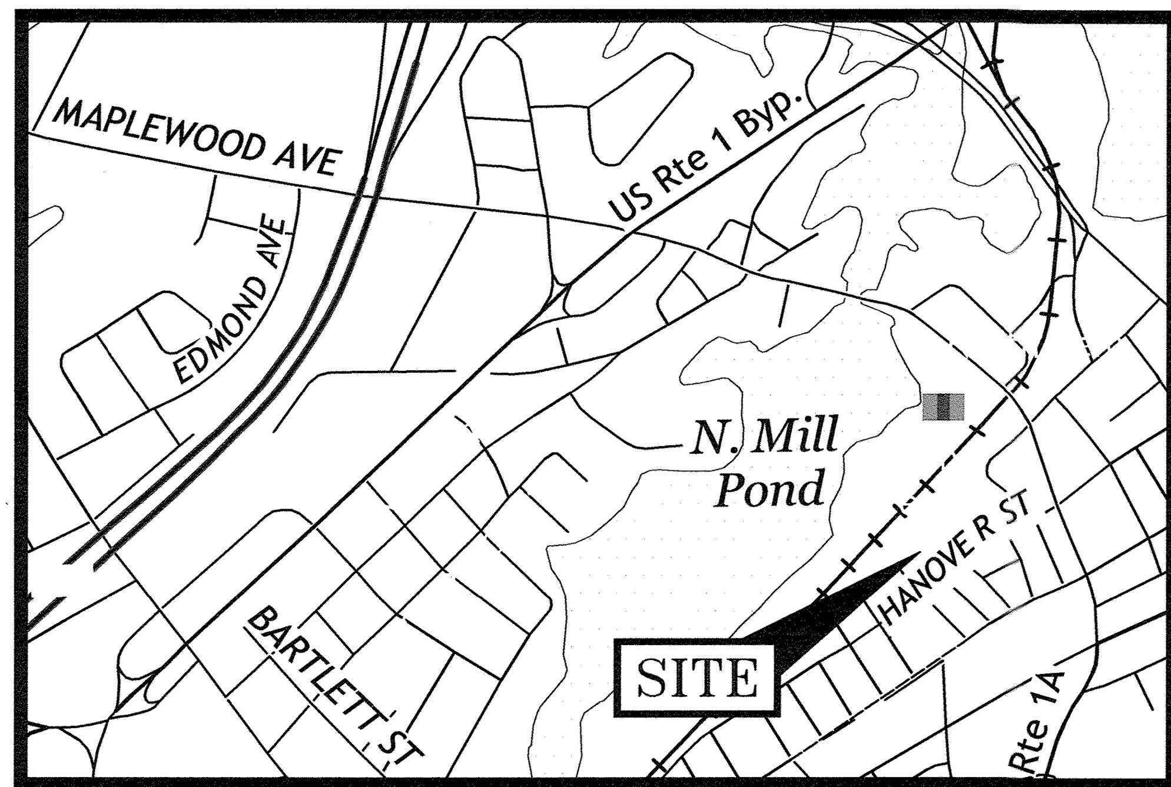
SITE PERMIT PLANS
PROPOSED DEVELOPMENT
361 HANOVER STREET
PORTSMOUTH, N.H.

HALEY WARD
ENGINEERING | ENVIRONMENTAL | SURVEYING
200 Griffin Rd. Unit 14
Portsmouth, New Hampshire 03801
603.430.9282
WWW.HALEYWARD.COM

PLAN SET SUBMITTAL DATE: 13 JUNE 2025

5010135.2977.01

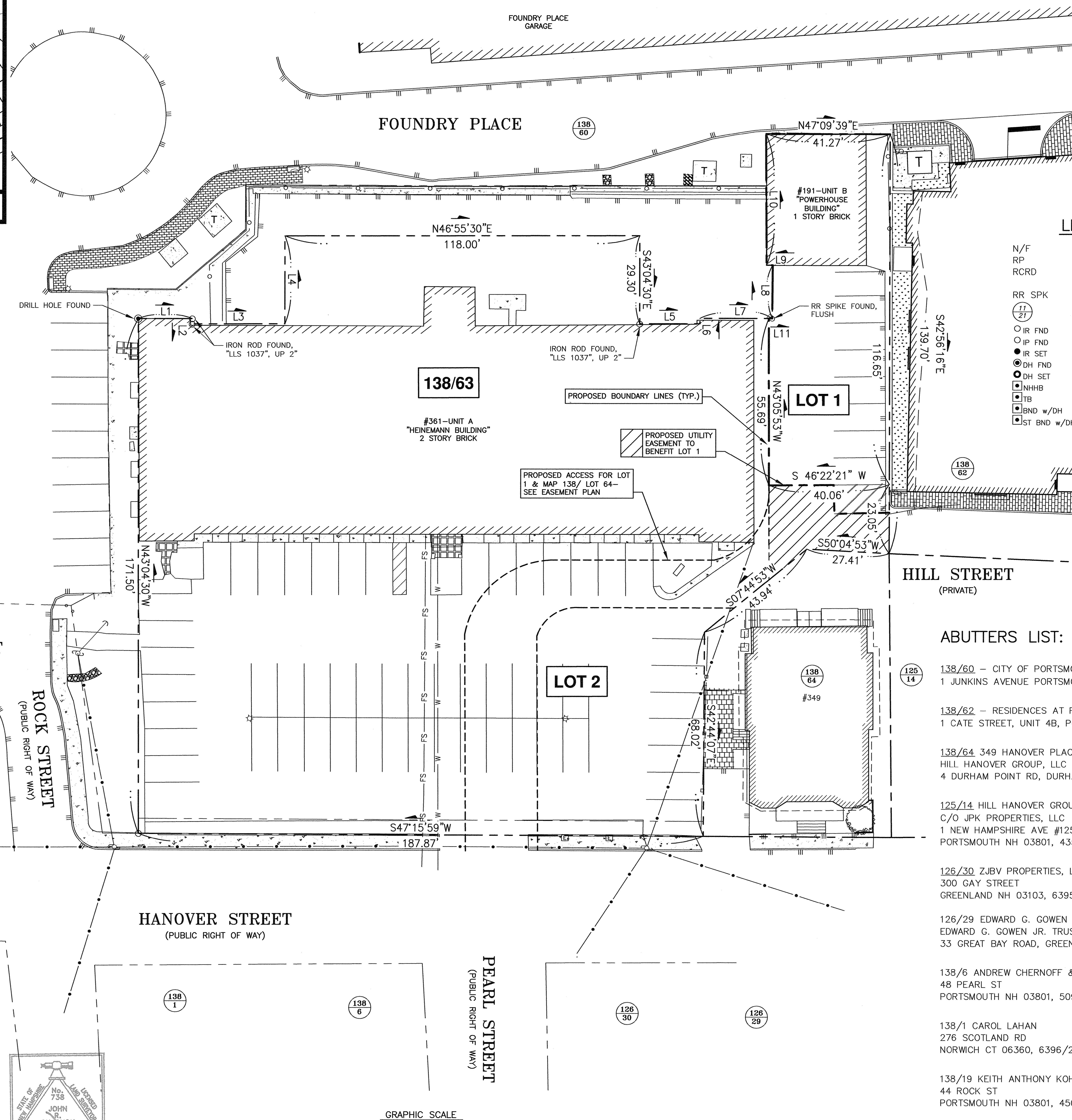
P:\NHS\5010135 Hampshire_Development\2977.01 Hanover St, Portsmouth, NH\CAD\2977.01 Cover Site Permit.dwg, 6/13/2025 12:00:00 PM



LOCATION MAP SCALE: 1" = 1000'

PLAN REFERENCES:

1) "PLAN OF LAND IN PORTSMOUTH, N.H. PORTSMOUTH MFG & POWER CO. TO FRANKIE BROOKS" BY JOHN W. DURGIN. DA TED FEBRUARY 1918. RCRD PLAN 078.
2) "SUBDIVISION OF LAND OF PORTSMOUTH MFG. & POWER CO. PORTSMOUTH, N.H." BY JOHN W. DURGIN. DATED NOVEMBER 1925. RCRD PLAN #368.
3) "LAND IN PORTSMOUTH, N.H. PORTS. MFG. & POWER CO. TO HAROLD S. WOODS" BY JOHN W. DURGIN. DATED NOVEMBER 1926. RCRD PLAN #389.
4) "CONDOMINIUM SITE PLAN FOR HANOVER PLACE CONDOMINIUM 349 HANOVER STREET COUNTY OF ROCKINGHAM PORTSMOUTH, NH" BY MILLETTE, SPRAGUE & COLWELL, INC. DATED SEPTEMBER 28, 2004 LAST REVISED DECEMBER 20, 2005. RCRD PLAN D-33379.
5) "CONSOLIDATION & SUBDIVISION PLAN TAX MAP 125, LOT 17 & TAX MAP 138, LOT 62 DEER STREET ASSOCIATES BRIDGE, DEER & HILL STREETS CITY OF PORTSMOUTH COUNTY OF ROCKINGHAM STA TE OF NEW HAMPSHIRE" BY AMBIT ENGINEERING, INC. DA TED JULY 2015. RCRD PLAN D-39699.
6) "KEARSARGE MILLS CONDOMINIUM PLANS" BY KIMBALL CHASE COMPANY, INC. DATED APRIL 15, 1986. RCRD PLAN D-14855.
7) "BOUNDARY LINE AGREEMENT PLAN KEARSARGE MILL CONDOMINIUMS PORTSMOUTH, N.H." BY JONES & BEACH ENGINEERS, INC. DATED APRIL 10, 1997 LAST REVISED APRIL 21, 1997. RCRD PLAN D-25421.
8) "AMENDED SITE PLAN, KEARSARGE MILL CONDOMINIUMS, 1 HANOVER STREET PORTSMOUTH, NH" BY KIMBALL CHASE CONSULTING ENGINEERS DATED 04-14-06 AND LAST REVISED 02-16-07. RCRD PLAN D-34716.



LEGEND

N/F	NOW OR FORMERLY
RP	RECORD OF PROBATE
RCRD	ROCKINGHAM COUNTY REGISTRY OF DEEDS
RR SPK	RAILROAD SPIKE
11/21	MAP 11/LOT 21
IR FND	IRON ROD FOUND
IP FND	IRON PIPE FOUND
IR SET	IRON ROD SET
DH FND	DRILL HOLE FOUND
DH SET	DRILL HOLE SET
NHHB	NHDOT BOUND FOUND
TB	TOWN BOUND
BND w/DH	BOUND WITH DRILL HOLE
ST BND w/DH	STONE BOUND WITH DRILL HOLE

LENGTH TABLE

LINE	BEARING	DISTANCE
L1	N47°00'11"E	18.00'
L2	S43°03'50"E	1.78'
L3	N46°55'30"E	30.75'
L4	N43°04'30"W	29.30'
L5	N46°55'30"E	20.00'
L6	N43°04'30"W	1.80'
L7	N46°55'30"E	24.05'
L8	N42°30'12"W	17.65'
L9	S46°42'22"W	2.04'
L10	N43°17'38"W	43.88'
L11	N46°55'30"E	1.12'

"I CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN ACCURACY OF THE CLOSED TRAVERSE THAT EXCEEDS THE PRECISION OF 1:15,000."

6.13.25

JOHN R. CHAGNON, LLS DATE

STATE OF NEW HAMPSHIRE LICENSED LAND SURVEYOR No. 738 JOHN R. CHAGNON SIGNATURE

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN DATE

ABUTTERS LIST:

138/60 – CITY OF PORTSMOUTH
1 JUNKINS AVENUE PORTSMOUTH NH 03801, 5848/0666

138/62 – RESIDENCES AT FOUNDRY PLACE, LLC
1 CATE STREET, UNIT 4B, PORTSMOUTH NH 03801, 6475/1570

138/64 349 HANOVER PLACE CONDOS MASTER CARD
HILL HANOVER GROUP, LLC
4 DURHAM POINT RD, DURHAM NH 03824, 4356/0010

125/14 HILL HANOVER GROUP, LLC.
C/O JPK PROPERTIES, LLC
1 NEW HAMPSHIRE AVE #125
PORTSMOUTH NH 03801, 4356/0010

126/30 ZJBV PROPERTIES, LLC
300 GAY STREET
GREENLAND NH 03103, 6395/1921

126/29 EDWARD G. GOWEN JR. REVOCABLE LIVING TRUST
EDWARD G. GOWEN JR. TRUSTEE
33 GREAT BAY ROAD, GREENLAND, NH 03840, 4327/2531

138/6 ANDREW CHERNOFF & REBEKAH CHERNOFF
48 PEARL ST
PORTSMOUTH NH 03801, 5096/0104

138/1 CAROL LAHAN
276 SCOTLAND RD
NORWICH CT 06360, 6396/2229

138/19 KEITH ANTHONY KOHLER & NICOLE GABRIELLE LAPIERRE
44 ROCK ST
PORTSMOUTH NH 03801, 4505/0807

138/22 SEAN G. CAUGHRAN
407 HANOVER ST
PORTSMOUTH NH 03801, 3289/1071

AMBIT ENGINEERING, INC.
A DIVISION OF HALEY WARD, INC.
WWW.HALEYWARD.COM
200 Griffin Road, Unit 3
Portsmouth, NH 03801
603.436.2315

NORTH NAD83(2011) GRID NHSPC

NOTES:

1) PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSORS MAP 138 AS LOT 63.

2) OWNERS OF RECORD:
UNIT A:
361 HANOVER STEAM FACTORY, LLC
41 INDUSTRIAL DRIVE UNIT 20
EXETER, N.H. 03833
6352/2959

UNIT B:
POWERHOUSE REALTY TRUST
C/O ADAMS DAVID B. TRUSTEE
210 GATES STREET
PORTSMOUTH, NH 03801
5419/1223

3) PARCEL IS NOT IN A SPECIAL FLOOD HAZARD AREA AS SHOWN ON FIRM PANEL 33015C0259F. EFFECTIVE JANUARY 29, 2021.

4) LOT AREAS:
EXISTING
43,245 S.F.
0.9928 AC.

PROPOSED LOT 1
4,717 S.F.
0.1083 AC.

PROPOSED LOT 2
38,528 S.F.
0.8845 AC.

5) PARCEL IS LOCATED IN CHARACTER DISTRICT 5 (CD5), NORTH END INCENTIVE OVERLAY DISTRICT (NEIOD) AND DOWNTOWN OVERLAY DISTRICT.

6) THE PURPOSE OF THIS PLAN IS TO SHOW A PROPOSED SUBDIVISION OF TAX MAP 139, LOT 63 IN PORTSMOUTH, NH INTO 2 LOTS.

7) PARCEL IS BURDENED BY THE FOLLOWING EASEMENTS:

A) ACCESS EASEMENT TO THE CITY OF PORTSMOUTH TO ALLOW ACCESS TO A PARKING AREA. SEE R.C.R.D. 4735/2971

B) ACCESS EASEMENT TO HANOVER PLACE CONDOMINIUM ASSOCIATION. THIS EASEMENT TO BE RE-DEFINED.

8) THE PARCEL HAS THE BENEFIT OF A REVOCABLE LICENSE BETWEEN THE CITY OF PORTSMOUTH AND THE KEARSARGE MILL UNIT ON THE PLAN ENTITLED "KEARSARGE MILL CONDOMINIUMS HANOVER STREET, PORTSMOUTH, NH SITE PLAN AMENDMENT" PREPARED BY KIMBALL CHASE CONSULTING ENGINEERS DATED APRIL 14, 2006, LICENSE AND SITE PLAN ARE AVAILABLE WITH THE RECORDS OF THE CITY OF PORTSMOUTH, SEE ALSO PLAN REFERENCE #6.

9) PROPERTY CORNERS WILL BE SET PRIOR TO RECORDING.

NO.	DESCRIPTION	DATE
4	ACCESS EASEMENT LOCATION	06/13/25
3	EASEMENTS	4/11/25
2	PARKING, ACCESS ESMT., ABUTTER DETAIL	3/25/25
1	NOTE 7	12/3/24
0	ISSUED FOR COMMENT	4/3/24

REVISIONS

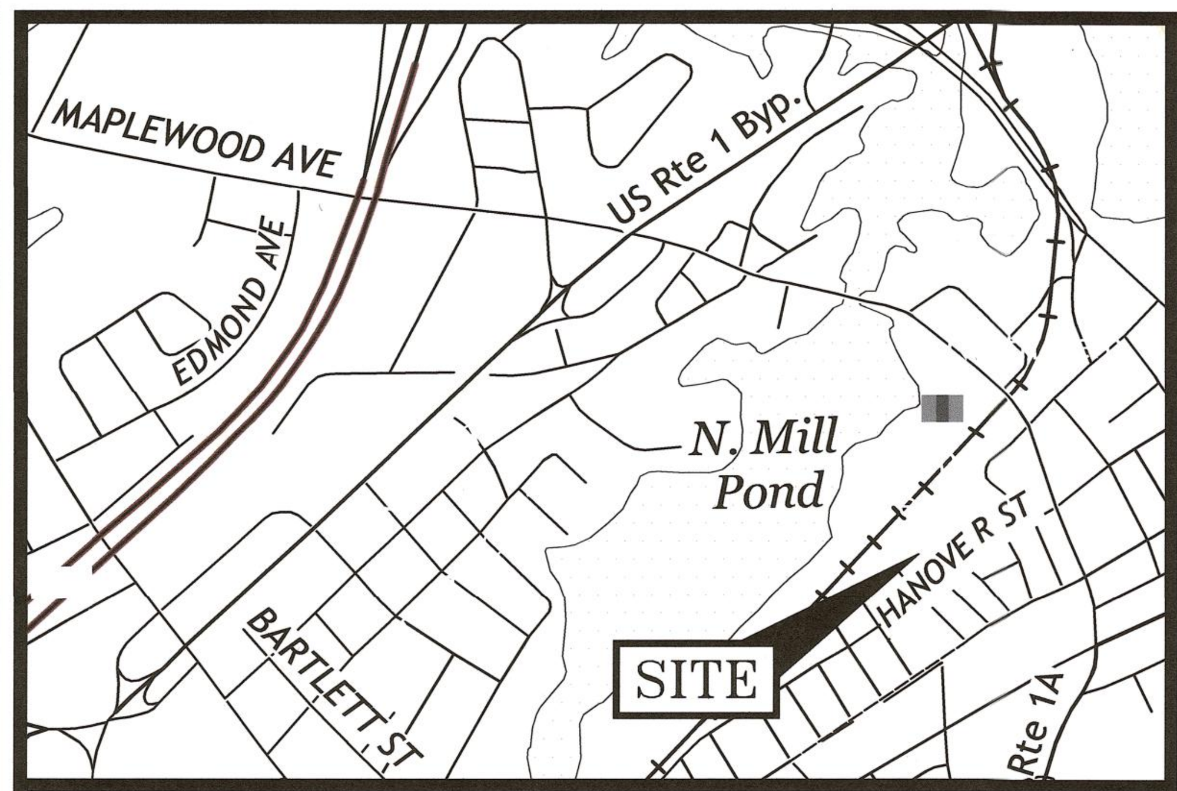
SUBDIVISION PLAN TAX MAP 138 – LOT 63

KEARSAGE MILL UNIT OWNERS ASSOCIATION

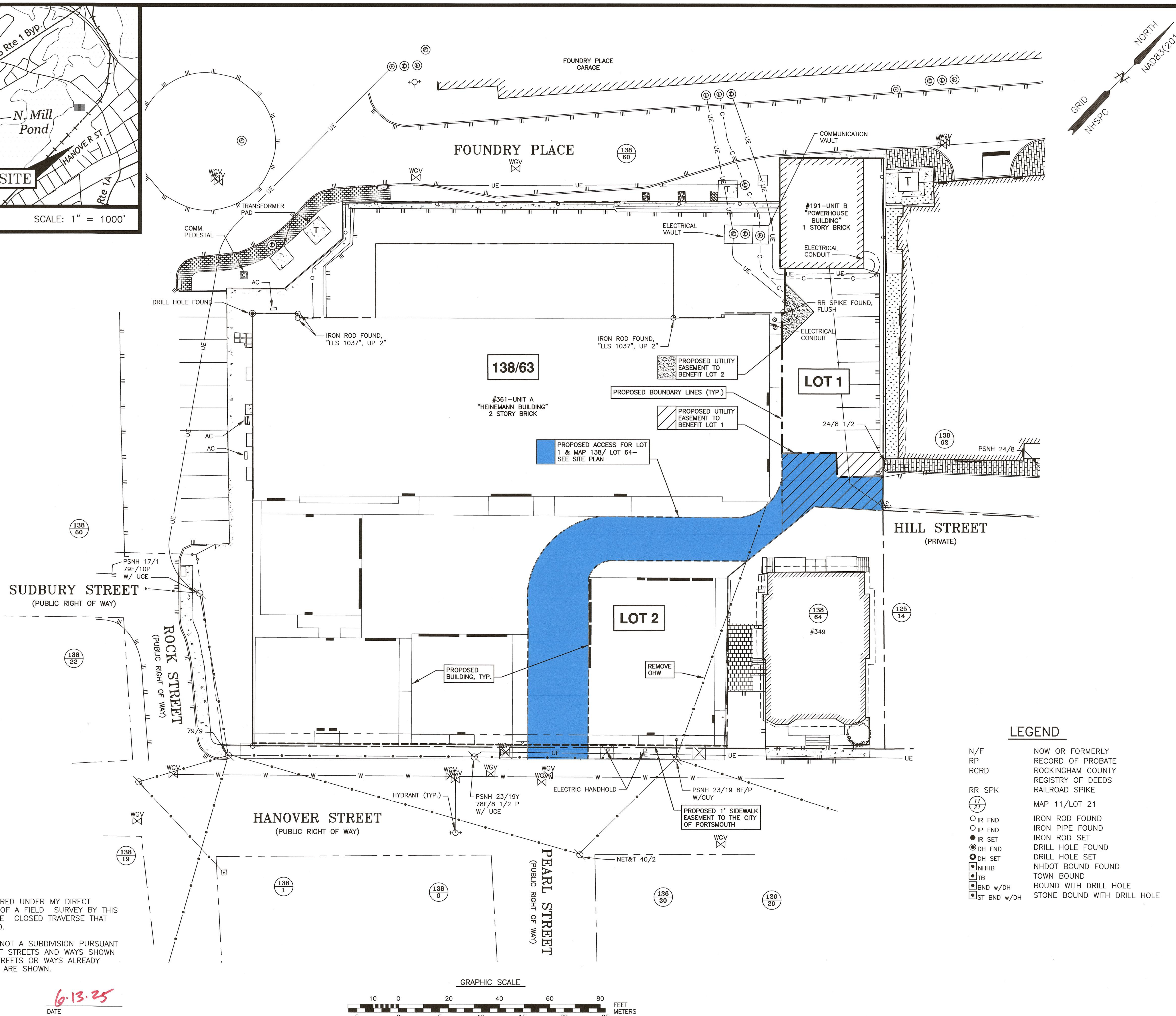
OWNERS: 361 HANOVER STEAM FACTORY, LLC & POWERHOUSE REALTY TRUST
FOUNDRY PLACE & HANOVER STREET
CITY OF PORTSMOUTH
COUNTY OF ROCKINGHAM
STATE OF NEW HAMPSHIRE

SCALE: 1"=20' JUNE 2025

FB 444 PG 1 5010135.2977.01



LOCATION MAP SCALE: 1" = 1000'



LEGEND

N/F	NOW OR FORMERLY
RP	RECORD OF PROBATE
RCRD	ROCKINGHAM COUNTY REGISTRY OF DEEDS
RR SPK	RAILROAD SPIKE
11/21	MAP 11/LOT 21
IR FND	IRON ROD FOUND
IP FND	IRON PIPE FOUND
IR SET	IRON ROD SET
DH FND	DRILL HOLE FOUND
DH SET	DRILL HOLE SET
NHHB	NHDOT BOUND FOUND
TB	TOWN BOUND
BND w/DH	BOUND WITH DRILL HOLE
ST BND w/DH	STONE BOUND WITH DRILL HOLE

STATE OF NEW HAMPSHIRE No. 738 JOHN CHAGNON LICENSED LAND SURVEYOR SIGNATURE

I CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY DIRECT SUPERVISION, THAT IT IS THE RESULT OF A FIELD SURVEY BY THIS OFFICE AND HAS AN ACCURACY OF THE CLOSED TRAVERSE THAT EXCEEDS THE PRECISION OF 1:15,000.

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN.

JOHN R. CHAGNON, LLS 738 — DATE: 6.13.25

AMBIT ENGINEERING, INC.
A DIVISION OF HALEY WARD, INC.
WWW.HALEYWARD.COM
200 Griffin Road, Unit 3
Portsmouth, NH 03801
603.436.2315

NOTES:

1) PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSORS MAP 138 AS LOT 63.

2) OWNERS OF RECORD:

UNIT A:
361 HANOVER STEAM FACTORY, LLC
41 INDUSTRIAL DRIVE UNIT 20
EXETER, N.H. 03833
6352/2959

UNIT B:
POWERHOUSE REALTY TRUST
C/O ADAMS DAVID B. TRUSTEE
210 GATES STREET
PORTSMOUTH, NH 03801
5419/1223

3) THE PURPOSE OF THIS PLAN IS TO SHOW PROPOSED EASEMENT ON TAX MAP 139, LOT 63 IN PORTSMOUTH, NH.

4) PARCELS WILL BE SUBJECT TO A BLANKET WATER SERVICE EASEMENT TO THE CITY OF PORTSMOUTH TO INCLUDE LEAK DETECTION AND METERING.

5) PARCEL WILL BE SUBJECT TO ELECTRIC SERVICE EASEMENTS TO EVERSOURCE.

NO.	DESCRIPTION	DATE
0	ISSUED FOR COMMENT	06/13/25

REVISIONS

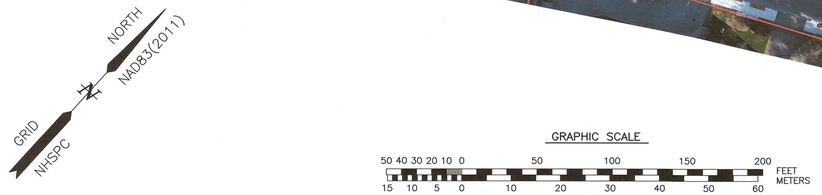
EASEMENT PLAN
TAX MAP 138 – LOT 63

KEARSAGE MILL UNIT OWNERS ASSOCIATION

OWNERS: 361 HANOVER STEAM FACTORY, LLC & POWERHOUSE REALTY TRUST
FOUNDRY PLACE & HANOVER STREET
CITY OF PORTSMOUTH
COUNTY OF ROCKINGHAM
STATE OF NEW HAMPSHIRE

SCALE: 1"=20' — JUNE 2025

FB 444 PG 1 — 5010135.2977.01



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Portsmouth, New Hampshire 03801
603.430.9282
WWW.HALEYWARD.COM

NOTES:

1. PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 138 AS LOT 63.

2. APPLICANT:
   361 HANOVER STEAM FACTORY, LLC
   41 INDUSTRIAL DRIVE UNIT 20
   EXETER, N.H. 03833

3. PARCEL IS NOT IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 33015C0259F. JANUARY 29 2021.

PROPOSED LOT AREAS:

LOT 138/63
38,528 S.F.±
0.8845 AC

LOT 138/63-1
4,717 S.F.
0.1083 AC

4. PARCEL IS LOCATED IN CHARACTER DISTRICT 5 (CD5), NORTH END INCENTIVE OVERLAY, AND DOWNTOWN OVERLAY DISTRICT.

DIMENSIONAL REQUIREMENTS:
*SEE PORTSMOUTH ZONING ORDINANCE AND TABLE.

MINIMUM LOT AREA: NR
SETBACKS:
FRONT: 5 FEET (MAXIMUM)
SIDE: NR
REAR: 5 FEET
MAXIMUM BUILDING COVERAGE: 95%
MINIMUM OPEN SPACE: 5%

5. THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS AND EXISTING DENSITY (TBD) OF THE "MCDONOUGH NEIGHBORHOOD" IN THE CITY OF PORTSMOUTH.

6. BOUNDARY LINES SHOWN HEREON ARE COMPILED FROM CITY OF PORTSMOUTH ASSESSOR'S MAPS AND TO BE CONSIDERED APPROXIMATE.

SITE REDEVELOPMENT
361 HANOVER STREET
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
0	ISSUED FOR COMMENT	06/13/25

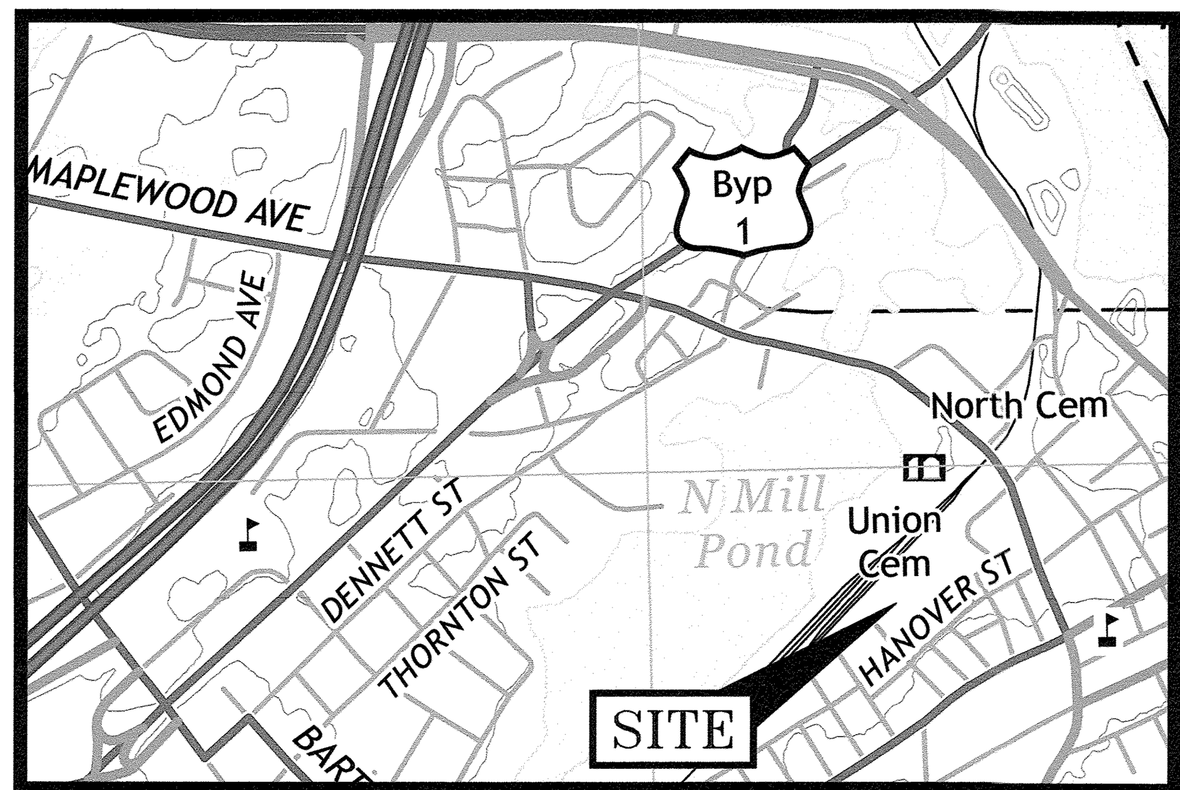
REVISIONS

SCALE: 1"=50' MAY 2025

ORTHOPHOTO PLAN

FB 444 & PG 1

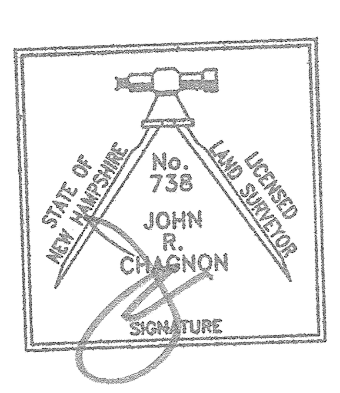
5010135.2977.01



LOCATION MAP   SCALE: 1"=1,000'

DRAINAGE STRUCTURE TABLE						
STRUCTURE	PROP/EX	RIM	PIPE SIZE/TYPE	INVERT IN	INVERT OUT	DIRECTION
CB 1	EX	20.66	8" CPP		17.46	SW
			8" CPP	17.51		SE
CB 2	EX	20.35	12" CPP		15.70	NW
	EX		8" CPP	15.80		NE
			8" CPP	16..50		SE
CB 3	EX	19.29	12" CPP		15.64	NW
			8" CPP	16.24		SW
			8" CPP	16.29		SE
CB 4	EX	18.90	12" CPP		15.65	SE
CB 5	EX	15.00	12" CPP		10.00	SW
			12" CPP	10.00		SE
CB 6	EX	15.60	12" CPP		12.85	SW
			8" CPP	13.20		NE
CB 7	EX	17.43	8" CPP		16.28	SW
CB 8	EX	12.15	12" CPP		7.45	NW
CB 9&10	EX	9.76	12" CPP		5.86	NE
CB 11	EX	10.07	12" CPP		6.17	SE
CB 12	EX	10.22	12" CPP		6.92	W
DMH 1	EX	19.81	12" CPP		15.56	SW
			12" CPP	15.56		E
DMH 2	EX	19.08	12" CPP		15.03	SW
			12" CPP	15.03		NE
			12" CPP	15.43		NW
			12" CPP	15.43		SE
DMH 3	EX	15.30	12" CPP		10.65	NW
			12" CPP	10.65		NE
DMH 4	EX	11.86	18" CPP		5.46	NW
			15" CPP	5.56		NE
			4" PVC	9.36		S
DMH 5	EX	9.87	NO DATA			
DMH 6	EX	11.84	NO DATA			
DMH 7	EX	10.19	18" CPP		6.29	SW
			12" CPP	6.44		NW
			12" CPP	6.39		E

SEWER STRUCTURE TABLE						
STRUCTURE	PROP/EX	RIM	PIPE SIZE/TYPE	INVERT IN	INVERT OUT	DIRECTION
SMH 1	EX	20.06	15" PVC		14.36	NE
			8" PVC	14.41		SE
SMH 2	EX	19.31	8" PVC		12.91	SW
SMH 3	EX	19.15	8" PVC		11.45	SW
			8" PVC	11.60		NE
			8" PVC	13.90		SE
SMH 4	EX	12.23	48" CI	-0.77		NW
			48" CI		-0.77	NE



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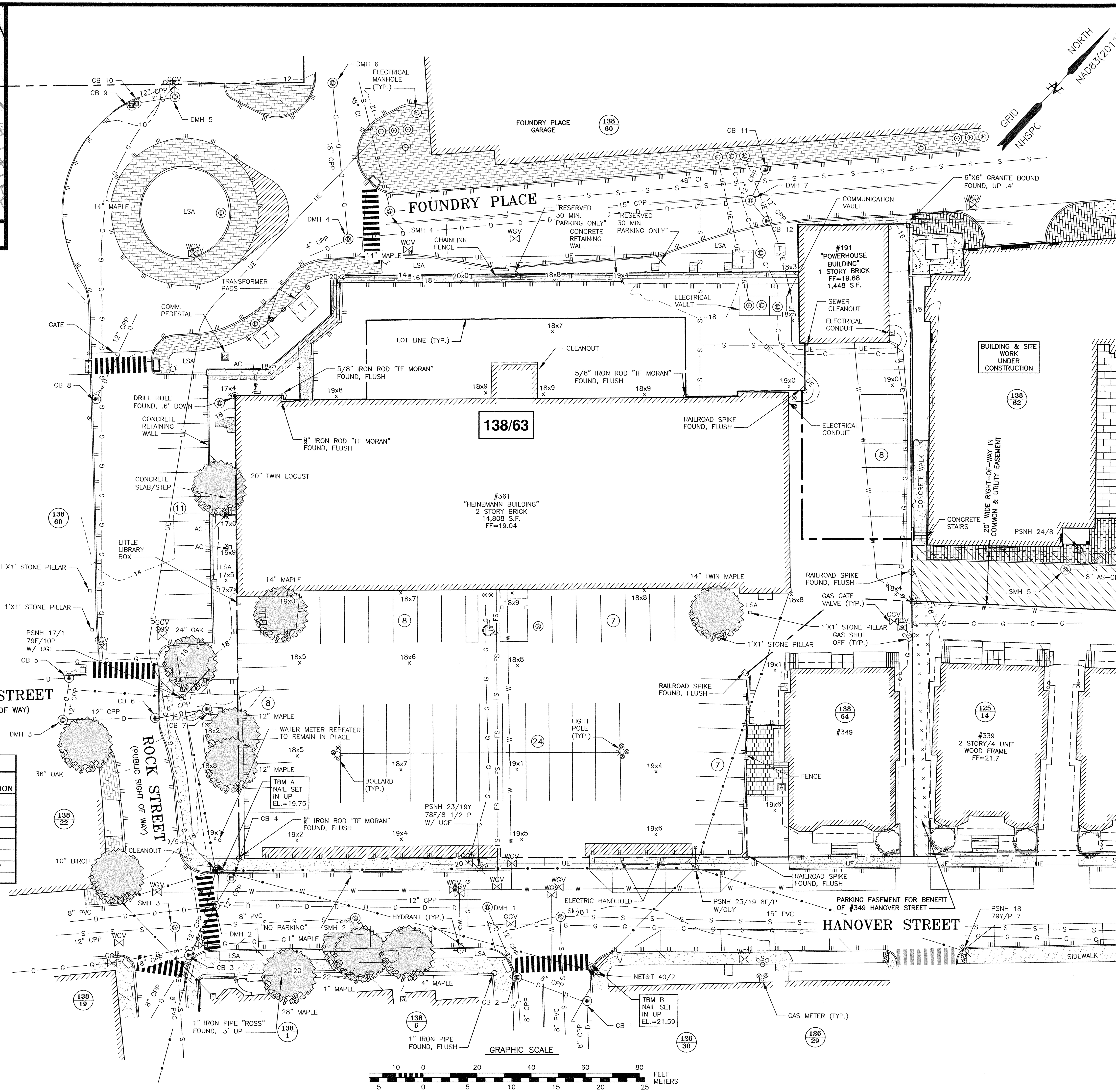
6-13-25

JOHN R. CHAGNON, LLS   DATE



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Portsmouth, New Hampshire 03801
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NOTES:

1. PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 138 AS LOT 63.
2. OWNER OF RECORD:
   361 HANOVER STEAM FACTORY, LLC
   41 INDUSTRIAL DRIVE UNIT 20
   EXETER, N.H. 03833
   6352/2959
3. PARCEL IS NOT IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 33015C0259F. JANUARY 29 2021.

EXISTING LOT AREA:
38,528 S.F.

4. PARCEL IS LOCATED IN CHARACTER DISTRICT 5 (CD5), NORTH END INCENTIVE OVERLAY DISTRICT, AND DOWNTOWN OVERLAY DISTRICT.

DIMENSIONAL REQUIREMENTS:
SEE ZONING ORDINANCE

5. THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS ON PORTSMOUTH ASSESSOR'S MAP 138 AS LOT 63, AS AMENDED.
6. VERTICAL DATUM IS NAVD88. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GNSS OBSERVATIONS.

SITE REDEVELOPMENT 361 HANOVER STREET PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
2	ELECTRICAL/COMM LINES	6/13/25
1	WATER METER REPEATER, UTILITIES	4/11/25
0	ISSUED FOR COMMENT	03/14/25

REVISIONS

SCALE: 1"=20'   JANUARY 2024

EXISTING CONDITIONS PLAN

C1

FB 444 & PG 1   5010135.2977.01

DEMOLITION NOTES

A) THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR THE DESIGNER. IT IS THE CONTRACTORS' RESPONSIBILITY TO LOCATE UTILITIES AND ANTICIPATE CONFLICTS. CONTRACTOR SHALL REPAIR EXISTING UTILITIES DAMAGED BY THEIR WORK AND RELOCATE EXISTING UTILITIES THAT ARE REQUIRED TO BE RELOCATED PRIOR TO COMMENCING ANY WORK IN THE IMPACTED AREA OF THE PROJECT.

B) ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTORS UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES. THE CONTRACTOR SHALL COORDINATE REMOVAL, RELOCATION, DISPOSAL, OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.

C) ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/ DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO THE ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

D) THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES AND CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITIES.

E) SAWCUT AND REMOVE PAVEMENT ONE FOOT OFF PROPOSED EDGE OF PAVEMENT TRENCH IN AREAS WHERE PAVEMENT IS TO BE REMOVED.

F) IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL THE PERMIT APPROVALS.

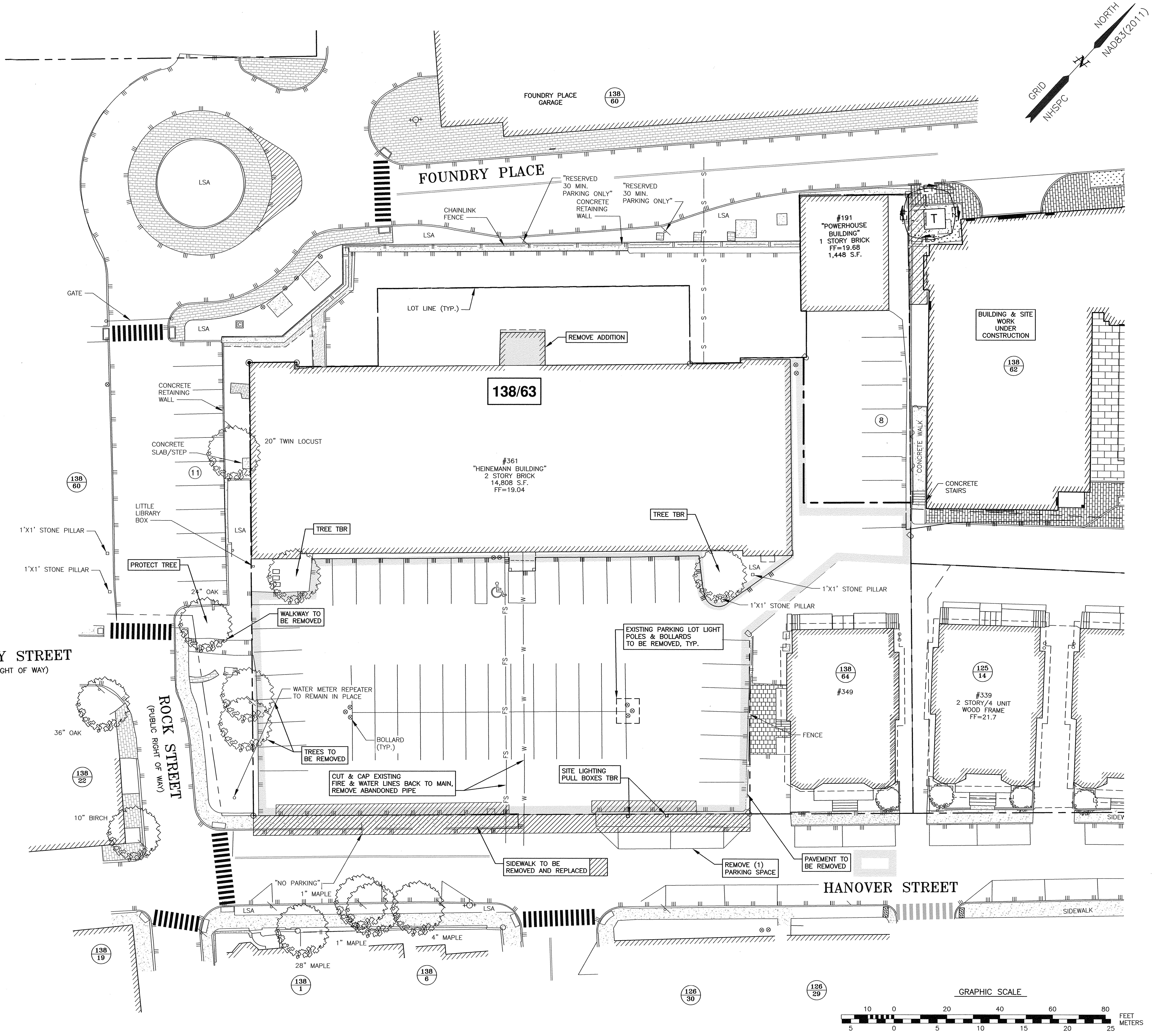
G) THE CONTRACTOR SHALL OBTAIN AND PAY FOR ADDITIONAL CONSTRUCTION PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR ANY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ADDITIONAL AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK.

H) THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE, UTILITIES, VEGETATION, PAVEMENT, AND CONTAMINATED SOIL WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ANY EXISTING DOMESTIC / IRRIGATION SERVICE WELLS IN THE PROJECT AREA IDENTIFIED DURING THE CONSTRUCTION AND NOT CALLED OUT ON THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER FOR PROPER CAPPING / RE-USE.

I) PROVIDE INLET PROTECTION BARRIERS AT ALL CATCH BASINS WITHIN CONSTRUCTION LIMITS AND MAINTAIN FOR THE DURATION OF THE PROJECT. INLET PROTECTION BARRIERS SHALL BE HIGH FLOW SILT SACK BY ACF ENVIRONMENTAL OR APPROVED EQUAL. INSPECT BARRIERS WEEKLY AND AFTER EACH RAIN OF 0.25 INCHES OR GREATER. CONTRACTOR SHALL COMPLETE A MAINTENANCE INSPECTION REPORT AFTER EACH INSPECTION. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT OR MORE OFTEN IF WARRANTED OR FABRIC BECOMES CLOGGED. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.

J) THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFELY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.

K) ANY CONTAMINATED MATERIAL REMOVED DURING THE COURSE OF THE WORK WILL REQUIRE HANDLING IN ACCORDANCE WITH NHDES REGULATIONS. CONTRACTOR SHALL HAVE A HEALTH AND SAFETY PLAN IN PLACE, AND COMPLY WITH ALL APPLICABLE PERMITS, APPROVALS, AUTHORIZATIONS, AND REGULATIONS



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Portsmouth, New Hampshire 03801
603.430.9282

WWW.HALEYWARD.COM

NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

4) COORDINATE ACCESS IN STREET/ROW AREAS ADJACENT TO DEMOLITION TO INSURE SAFE PASSAGE. UTILIZE DETOURS IF NEEDED.

5) EXISTING UTILITIES TO BE ABANDONED SHALL BE REMOVED TO THE UTILITY MAIN AND CAPPED PER THE UTILITY COMPANY REQUIREMENT.

SITE REDEVELOPMENT 361 HANOVER STREET PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
2	NOTES PER TAC REVIEW	04/11/25
1	LIMIT OF PAVEMENT DEMO	03/26/25
0	ISSUED FOR COMMENT	03/14/25

REVISIONS

STATE OF NEW HAMPSHIRE JOHN R. CHAGNON No. 7651 LICENSED PROFESSIONAL ENGINEER

SCALE: 1"=20'   JANUARY 2024

DEMOLITION PLAN

C2

FB 444 & PG 1

5010135.2977.01

ZONING DEVELOPMENT STANDARD

CD5: CHARACTER DISTRICT 5, DOD: DOWNTOWN OVERLAY DISTRICT

	REQUIRED	EXISTING	PROPOSED - Building A	PROPOSED - Building B	PROPOSED - Building C	PROPOSED - Building D	PROPOSED - Building E
Height	2-3 stories 40'	2 Stories/ 18' +/-	3 stories with attic/ 40'	3 stories / 36'	3 stories / 36'	3 stories / 36'	3 stories with attic/ 40'
Penthouses	may exceed bldg height by 2'	N/A	N/A	N/A	N/A	N/A	N/A
Roof appurtenance	may exceed bldg height by 10'	<10'	<10'	No	<10'	No	<10'
Façade Types		N/A	N/A	N/A	N/A	N/A	N/A
Building Types	commercial, live-work, mixed use, flex space & community.	Commerical	Apartment	Duplex	Duplex	Duplex	Apartment
Front (principle) max S/B	5	99'	99'	0'	52'	5'	5'
Front (secondary) max S/B	5	0'	0'	N/A	N/A	N/A	N/A
Side S/B	NR	NR	NR	NR	NR	NR	NR
Rear yard S/B	5'	N/A	N/A	>5'	>5'	>5'	>5'
Front lotline buildout	80% min	100%	N/A	N/A	80%	80%	80%
Lot area (sf)	NR	N/A	N/A	N/A	N/A	N/A	N/A
LOT area per dwelling	NR	N/A	N/A	N/A	N/A	N/A	N/A
Building coverage, maximum	95%	38%	46.9%	4.1%	6.2%	4.1%	8.0%
Maximum building footprint	20,000	14,808	18,082	1,600	2,394	1,600	3,100
Ground floor area per use, max	15,000	14,808	<15,000	916	1,660	880	1,300
Open space, minimum	5%	<5%	>5%	>5%	>5%	>5%	>5%
Permitted uses		Commercial	Residential	Residential	Residential	Residential	Residential
Block length, max (ft)	225	205'	205'	N/A	57'	40'	50'
Façade modulation length, max (ft)	100	205	65	N/A	24'	40'	50'
Entrance spacing, max (ft)	50	>50'	50	N/A	20'	17'	20'
Floor height above sidewalk, max	36"	0'	N/A	N/A	24"	15"	18"
Ground story height, min	12'	10'	10.5'	12'	12'	12'	12'
Second story height, min	10'	10'	10.5'	11'	11'	11'	11'
Glazing, shopfront, min	70%	N/A	N/A	N/A	N/A	N/A	N/A
Glazing, other	20%-50%	>20%	>20%	>20%	>20%	>20%	>20%
Roof types	flat, gable, hip, gambrel, mansard	Flat	Mansard	Hip	Mansard	Hip	Mansard

IMPERVIOUS SURFACE AREAS

(TO PROPERTY LINE)

STRUCTURE	PRE–CONSTRUCTION IMPERVIOUS (S.F.)	POST–CONSTRUCTION IMPERVIOUS (S.F.)
MAIN STRUCTURES	14615	23291
PAVEMENT	22,623	10,731
CONCRETE	656	105
WALKWAYS, COBBLES	117	1,640
STEPS/STOOPS	0	78
CURBING	31	0
TOTAL	38042	35845
LOT SIZE	38,528	38,528
% LOT COVERAGE	98.7%	93.0%

PROPOSED OPEN SPACE ON PROPOSED LOT 1: 356 S.F./7.5%
PROPOSED LOT 1 BUILDING COVERAGE 1,448 S.F./4,717 S.F.=30.7%
PROPOSED OPEN SPACE LOT 2: SEE OPEN SPACE EXHIBIT ON FILE

PARKING CALCULATIONS:

361 HANOVER STREET (DEVELOPMENT SITE):

PROPOSED USE:
BUILDING A: 26 UNITS
BUILDING B: 2 UNITS
BUILDING C: 2 UNITS
BUILDING D: 2 UNITS
BUILDING E: 8 UNITS
TOTAL: 40 UNITS

PARKING SPACES PROVIDED:
BUILDING A: 42 SPACES
BUILDING B: 4 SPACES
BUILDING C: 4 SPACES
BUILDING D: 4 SPACES
BUILDING E: 10 SPACES
GUEST: 2 SPACES
TOTAL: 66 SPACES

191 HILL STREET (SUBDIVIDED LOT):

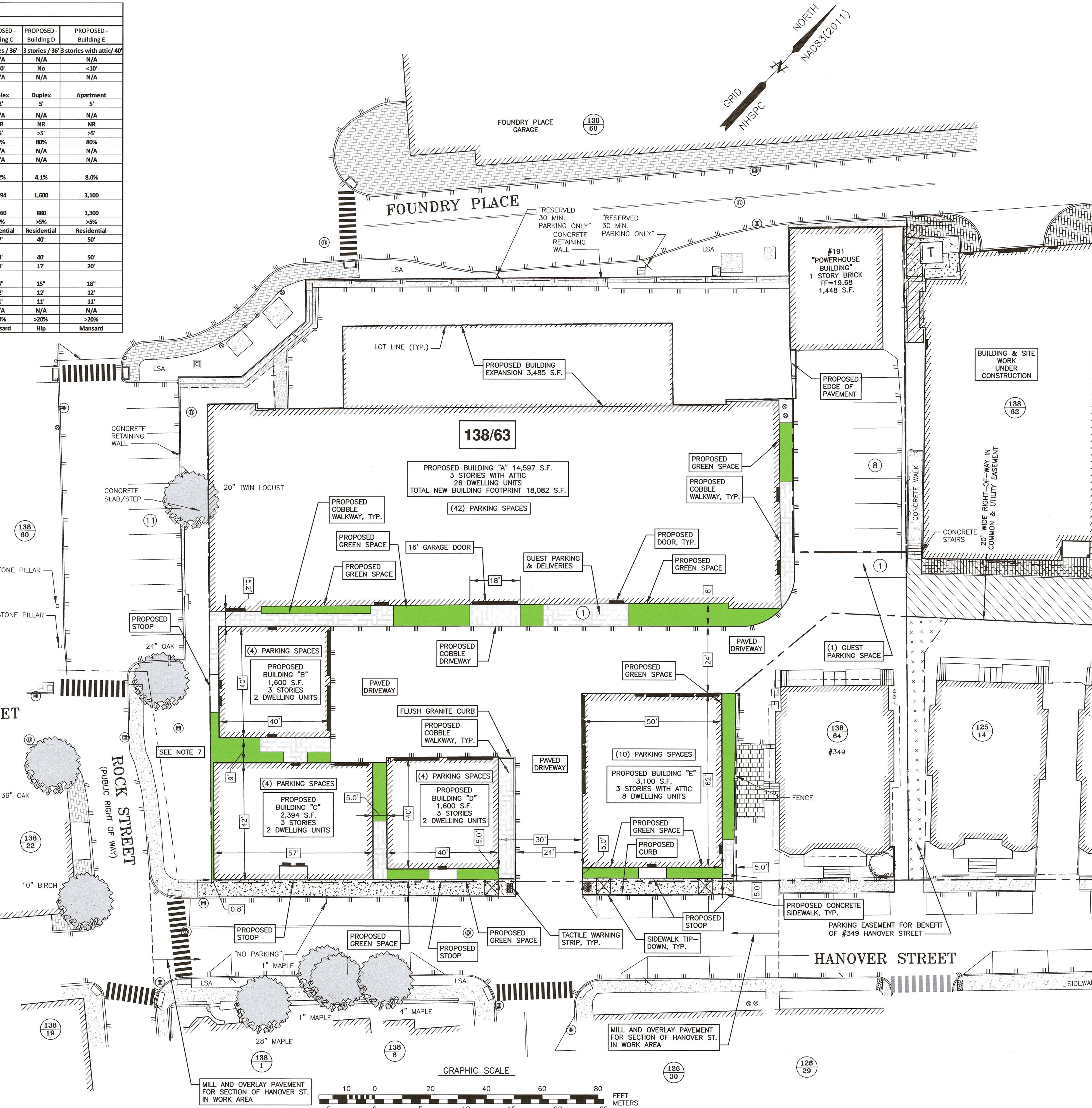
EXISTING USE: 1,500 S.F. TRADE
7.20–7.40 TRADE SERVICES
1 SPACE/400 S.F. GFA
1500/400= 4 SPACES REQUIRED
8 SPACES PROVIDED

THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.

ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN DATE



NOTES:

1. PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 138 AS LOT 63.
2. APPLICANT:
   361 HANOVER STEAM FACTORY, LLC
   41 INDUSTRIAL DRIVE UNIT 20
   EXETER, N.H. 03833
3. PARCEL IS NOT IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 33015C0259F. JANUARY 29 2021.

PROPOSED LOT AREAS:
LOT 138/63
38,528 S.F.±
0.8845 AC

LOT 138/63–1
4,717 S.F.
0.1083 AC

4. PARCEL IS LOCATED IN CHARACTER DISTRICT 5 (CD5), NORTH END INCENTIVE OVERLAY, AND DOWNTOWN OVERLAY DISTRICT.

DIMENSIONAL REQUIREMENTS:
*SEE PORTSMOUTH ZONING ORDINANCE AND TABLE.

MINIMUM LOT AREA: NR
SETBACKS:
FRONT: 5 FEET (MAXIMUM)
SIDE: NR
REAR: 5 FEET
MAXIMUM BUILDING COVERAGE: 95%
MINIMUM OPEN SPACE: 5%

5. THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED SITE DEVELOPMENT ON ASSESSOR'S MAP 138 LOT 63.
6. VERTICAL DATUM IS NAVD88. BASIS OF VERTICAL DATUM IS REDUNDANT RTN GNSS OBSERVATIONS.
7. DEVELOPER/CONDOMINIUM OWNERS WILL APPLY TO THE PORTSMOUTH DPW TO MAINTAIN THE LANDSCAPING IN THE "ADOPT A SPOT" PROGRAM.

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SITE REDEVELOPMENT 361 HANOVER STREET PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
0	ISSUED FOR COMMENT	06/13/25

REVISIONS

STATE OF NEW HAMPSHIRE No. 738 JOHN R. CHAGNON LICENSED LAND SURVEYOR SIGNATURE

SCALE: 1"=20' JANUARY 2024

SITE PLAN

C3

FB 444 & PG 1

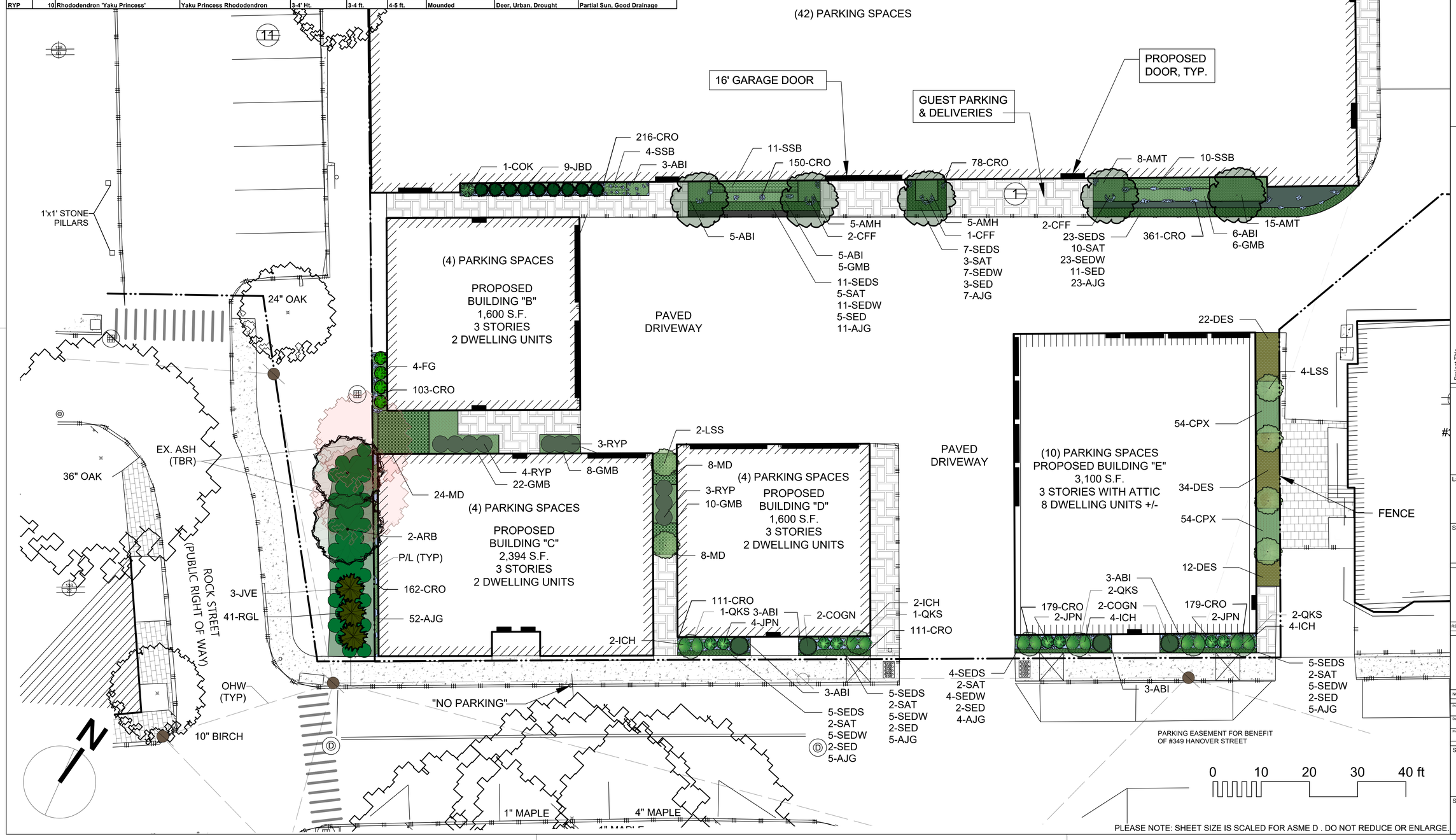
5010135.2977.01

Plant List - Trees and Shrubs

ID	Qty	Botanical Name	Common Name	Scheduled Size	Mature Height	Mature Spread	Growth Habit	Tolerances	Requirements
ARB	2	Acer rubrum 'Bowhall'	Bowhall Red Maple	1 1/2 - 2" Cal.	40-60 ft.	10-15 ft.	Upright, Pyramidal	Urban, Wet Soils	Full/Partial Sun, Moist Soil
CFF	5	Carpinus betulus 'Frans Fountaine'	Upright European Hornbeam	1 1/2 - 2" Cal.	30-40 ft.	10-20 ft.	Oval	Urban, Drought, Disease	Full/Partial Sun, Moist Soil
COGN	4	Chamaecyparis obtusa 'Nana Gracilis'	Hinoki Cypress	3-4' Ht.	3-6 ft.	2-4 ft.	Conical	Urban	Full/Partial Sun, Moist Soil
COK	1	Chamaecyparis obtusa 'Kosteri'	Kosteri Hinoki Cypress	2 1/2-3'	6 ft.	4 ft.	Pyramidal	Urban	Full/Partial Sun, Moist Soil
FG	4	Fothergilla gardenii	Dwarf Forthergilla	5 Gal.	4-5 ft.	4-5 ft.	Rounded	Urban, Moist Soil, Disease	Full/Partial Sun, Moist Soil
ICH	12	Ilex crenata 'Hetzii'	Heitz Japanese Holly	5 Gal.	3-4 ft.	3-4 ft.	Rounded	Urban	Full/Partial Sun
JBD	9	Juniperus communis 'Blueberry Delight'	Blueberry Delight Juniper	2 Gal.	18-24 in.	4-5 ft.	Spreading	Drought, Deer, Urban	Full Sun, Good Drainage
JPN	8	Juniperus procumbens 'Nana'	Dwarf Japanese Garden Juniper	3 Gal.	6-12 in.	6-8 ft.	Groundcover	Drought, Deer, Urban	Full Sun, Good Drainage
JVE	3	Juniperus virginiana 'Emerald Sentinel'	Emerald Sentinel Columnar Juniper	8-10'	15-20 ft.	6-8 ft.	Upright	Urban, Salt, Drought	Full Sun, Good Drainage
LSS	6	Liquidambar sty. 'Slender Silhouette'	Slender Silouette Liquidambar	1 1/2 - 2" Cal.	40-60 ft.	6-8 ft.	Fastigiate	Moist Soil, Urban	Full Sun, Moist, Rich Acidic Soil
MD	40	Microbiota decussata	Siberian Carpet Cypress	3 Gal.	18-24 in.	4-5 ft.	Spreading	Deer, Drought, Moist Soil	Full/Partial Sun, Good Drainage
PAN	6	Picea abies 'Nidiformis'	Bird's Nest Spruce	3 Gal.	3-4 ft.	5-6 ft.	Broad	Drought, Disease, Urban	Full/Partial Sun, Good Drainage
QKS	6	Quercus x Kindred Spirit®	Kindred Spirit Hybrid Oak	1 1/2 - 2" Cal.	20-30 ft.	6-8 ft.	Fastigiate	Urban, Drought	Full Sun
RGL	41	Rhus aromatica 'Gro Low'	Gro Low Sumac	2 Gal.	18-24 in.	6-8 ft.	Spreading	Urban, Drought	Full/Partial Sun
RYP	10	Rhododendron 'Yaku Princess'	Yaku Princess Rhododendron	3-4' Ht.	3-4 ft.	4-5 ft.	Mounded	Deer, Urban, Drought	Partial Sun, Good Drainage

Plant List - Perennials

ID	Qty	Botanical Name	Common Name	Scheduled Size	Mature Height	Mature Spread	Tolerances	Requirements
ABI	31	Amsonia 'Blue Ice'	Blue Star Flower	2 QT	8-18 in.	24 in.	Deer, Drought, Salt, Heat	Full Sun, Dry to Normal Soil
AJG	217	Ajuga reptans 'Gaiety'	Gaiety Bugleweed	2 QT	3-5 in.	6-9 in.	Deer, Drought, Salt, Heat	Sun/Shade
AMH	10	Amsonia hubrichtii	Arkansas Amsonia	1 Gal.	18-30 in.	24 in.	Deer, Drought, Salt, Heat	Sun/Partial Shade, Dry to Normal Soil
AMT	23	Amsonia tabernaemontana	Amsonia	1 Gal.	18-30 in.	30 in.	Deer, Drought, Salt, Heat	Sun/Partial Shade, Dry to Normal Soil
CPX	108	Carex pensylvanica	Pennsylvania Sedge	1 Gal.	8-18 in.	8-18 in.	Deer, Drought, Salt	Partial/Shade, Moist to Normal Soil
CRO	1650	Crocus hybrids	Crocus	Bulb	3-6 in.	3-5 in.	Deer, Drought	Sun/Partial Shade, Good Drainage
DES	68	Deschampsia cespitosa	Tufted Hair Grass	1 Gal.	18-30 in.	36 in.	Deer, Shade, Wet Soils, Drought, Salt	Sun/Partial Shade
GMB	51	Geranium macrorrhizum 'Bevan's Variety'	Bevan's Variety Geranium	1 Gal.	8-18 in.	36 in.	Deer, Rabbit, Drought	Sun/Partial Shade, Dry to Normal Soil
SAT	26	Sedum 'Angelina's Teacup'	Angelina's Teacup Stonecrop	2 QT	0-8 in.	12-18 in.	Deer, Rabbit, Drought, Salt, Heat	Sun/Partial Shade, Dry to Normal Soil
SED	27	Sedum Sunsparkler 'Dazzleberry'	Dazzleberry Stonecrop	2 QT	0-8 in.	18 in.	Deer, Rabbit, Drought, Salt, Heat	Sun, Dry to Normal Soil
SEDS	60	Sedum sexangulare	Stonecrop	2 QT	0-8 in.	10-12 in.	Deer, Rabbit, Drought, Salt, Heat	Sun, Dry to Normal Soil
SEDW	60	Sedum 'Weihenstephaner Gold'	Weihenstephaner Gold Stonecrop	1 Gal.	0-8 in.	12-18 in.	Deer, Rabbit, Drought, Salt, Heat	Sun, Dry to Normal Soil
SSB	25	Schizachyrium scoparium 'The Blues'	The Blues Little Bluestem	1 Gal.	18-30 in.	18 in.	Deer, Rabbit, Drought, Salt, Heat	Sun/Partial Shade, Dry to Normal Soil



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361 HANOVER

361 HANOVER STREET
PORTSMOUTH, NH

Project Title

TERRENCE P. PARKER 041 LICENSED LANDSCAPE ARCHITECT STATE OF NEW HAMPSHIRE

Landscape Architect

Scale
1:120

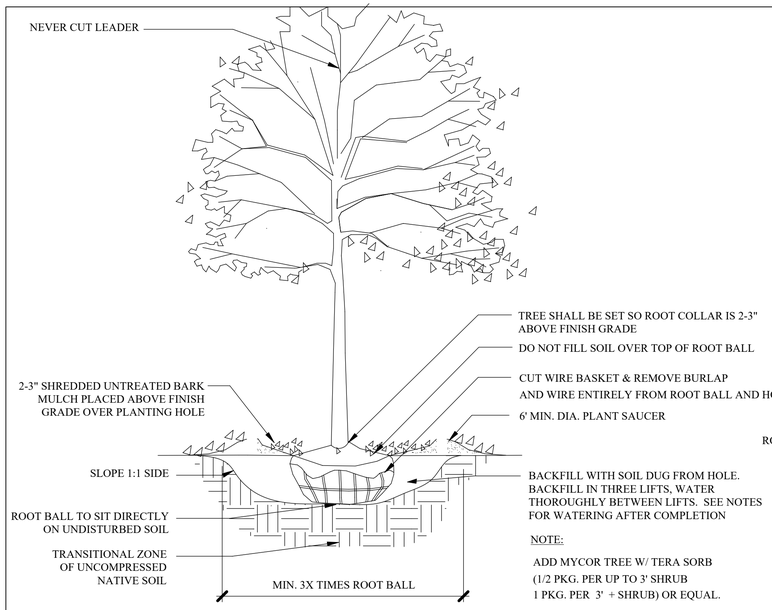
REV.	DATE	DESCRIPTION

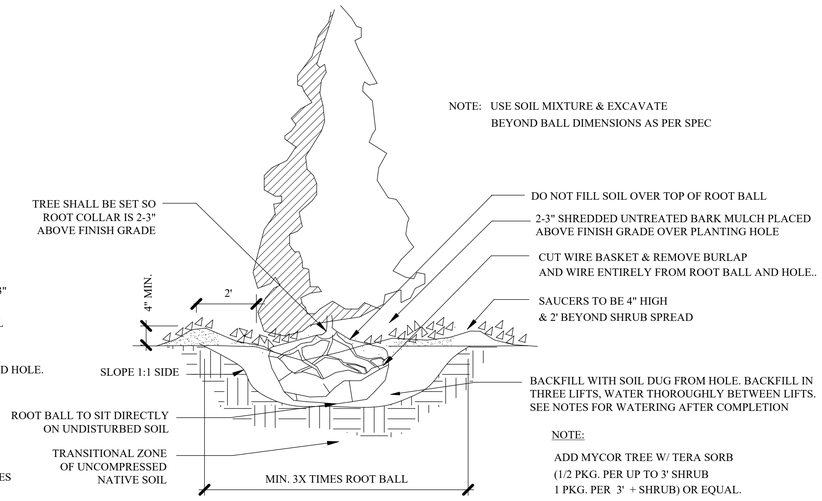
NO.	DATE	ISSUE NOTE

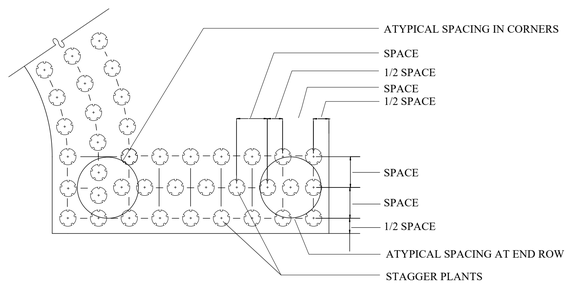
Project Manager | Drawn By
Date 6/12/2025 | Reviewed By
Project ID 361 HANOVER ST.

Sheet Title
LANDSCAPE PLAN

Sheet No.
L-1







NOTES:

1. PLACE PLANTS IN BED AS SHOWN, SPACING AS SPECIFIED IN PLANT SCHEDULE.
2. GROUNDCOVER SHALL BE TRIANGULAR SPACED IN ROWS PARALLEL TO STRAIGHT EDGES AND SHALL BE EVENLY SPACED IN ROWS PARALLEL TO CURVE EDGES.

CITY OF PORTSMOUTH PLANTING REQUIREMENTS

1. All planting holes shall be dug by hand- NO MACHINES. The only exceptions are new construction where new planting pits, planting beds with granite curbing, and planting sites with Silva Cells are being created. If a machine is used to dig in any of these situations and planting depth needs to be raised the material in the bottom of the planting hole MUST be firmed with machine to prevent sinking of the root ball.
2. ALL Wire and Burlap shall be removed from the root ball AND planting hole.
3. The root ball of the tree shall be worked so that the root collar of the tree is visible and no girdling roots are present.
4. The root collar of the tree shall be 2"-3" above grade of planting hole for finished depth.
5. All plantings shall be backfilled with soil from the site and amended no more than 20% with Organic Compost. The only exceptions are new construction where engineered soil is being used in conjunction with Silva Cells and where new planting beds are being created.
6. All plantings shall be backfilled in three lifts and ALL lifts shall be watered so the planting will be set and free of air pockets- NO EXCEPTIONS.
7. An earth berm shall be placed around the perimeter of the planting hole except where curbed planting beds or pits are being used.
8. 2"-3" of mulch shall be placed over the planting area.
9. At the time the planting is complete the planting shall receive additional water to ensure complete hydration of the roots, backfill material and mulch layer.
10. Stakes and guys shall be used where appropriate and/or necessary. Guy material shall be nondamaging to the tree.
11. All planting stock shall be specimen quality, free of defects, and disease or injury. The City of Portsmouth, NH reserves the right to refuse/reject any plant material or planting action that fails to meet the standards set forth in the ANSI A300 Part 6 Standard Practices for Planting and Transplanting and/or The City of Portsmouth, NH Planting Requirements.

LANDSCAPE NOTES:

1. THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK.
2. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTINGS SHOWN ON THE DRAWINGS.
3. ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
4. ALL PLANT SUBSTITUTIONS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT.
5. ALL PLANT MATERIALS SHALL BE EXACTLY AS SPECIFIED BY THE LANDSCAPE ARCHITECT. IF PLANT SPECIES CULTIVARS ARE FOUND TO VARY FROM THAT SPECIFIED AT ANY TIME DURING THE GUARANTEE PERIOD, THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO HAVE THE CONTRACTOR REPLACE THAT PLANT MATERIAL. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANT DELIVERED TO THE SITE FOR AESTHETIC REASONS BEFORE PLANTING. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE QUALITY FOR ALL THE PLANTS.
6. PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, UPON DELIVERY OR AT THE JOB SITE WHILE WORK IS ON-GOING TO CONFORMITY TO SPECIFIED QUALITY, SIZE AND VARIETY.
7. PLANTS FURNISHED IN CONTAINERS SHALL HAVE THE ROOTS WELL ESTABLISHED IN THE SOIL MASS AND SHALL HAVE AT LEAST ONE (1) GROWING SEASON. ROOT-BOUND PLANTS OR INADEQUATELY SIZED CONTAINERS TO SUPPORT THE PLANT MAY BE DEEMED UNACCEPTABLE.
8. NO PLANT SHALL BE PUT IN THE GROUND BEFORE GRADING HAS BEEN FINISHED AND APPROVED BY THE LANDSCAPE ARCHITECT.
9. ALL PLANTS SHALL BE INSTALLED AND DETAILED PER PROJECT SPECIFICATIONS.
10. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL BE WATERED WEEKLY, OR MORE OFTEN IF NECESSARY, DURING THE FIRST GROWING SEASON.
11. ALL PLANTS SHALL BE GUARANTEED BY THE CONTRACTOR FOR NOT LESS THAN ONE FULL YEAR FROM THE TIME OF PROVISIONAL ACCEPTANCE. DURING THIS TIME, THE OWNER SHALL MAINTAIN ALL PLANT MATERIALS IN THE ABOVE MANNER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE PLANTS TO ENSURE PROPER CARE. IF THE CONTRACTOR IS DISSATISFIED WITH THE CARE GIVEN, HE SHALL IMMEDIATELY, AND IN SUFFICIENT TIME TO PERMIT THE CONDITION TO BE RECTIFIED, NOTIFY THE LANDSCAPE ARCHITECT IN WRITING OR OTHERWISE FORFEIT HIS CLAIM. LANDSCAPE CONTRACTOR SHALL PRUNE PLANTINGS OF DEAD LIMBS OR TWIGS DURING THE FIRST YEAR OF GROWTH.
12. FINAL ACCEPTANCE BY THE LANDSCAPE ARCHITECT WILL BE MADE UPON THE CONTRACTOR'S REQUEST AFTER ALL CORRECTIVE WORK HAS BEEN COMPLETED.
13. LANDSCAPE CONTRACTOR SHOULD REPLACE DEAD PLANTINGS IMMEDIATELY UPON OWNER DIRECTION WITHIN THE WARRANTY PERIOD AND AGAIN AT THE END OF THE GUARANTEE PERIOD, THE CONTRACTOR SHALL HAVE REPLACED ANY PLANT MATERIAL THAT IS MISSING, NOT TRUE TO SIZE AS SPECIFIED, THAT HAVE DIED, THAT HAVE LOST THEIR NATURAL SHAPE DUE TO DEAD BRANCHES, EXCESSIVE PRUNING OR INADEQUATE OR IMPROPER CARE, OR THAT ARE, IN THE OPINION OF THE LANDSCAPE ARCHITECT, IN UNHEALTHY OR UNSIGHTLY CONDITION.
14. ALL LANDSCAPE AREAS TO BE GRASS COMMON TO REGION EXCEPT FOR INTERIOR LANDSCAPED ISLANDS OR WHERE OTHER PLANT MATERIAL IS CALLED FOR.
15. ALL TREES AND SHRUBS TO BE PLANTED IN MULCH BEDS WITH DEFINED AND CUT EDGES TO SEPARATE TURF GRASS AREAS.
16. FOR ANY LANDSCAPE AREA SO DESIGNATED TO REMAIN, WHETHER ON OR OFF-SITE, REMOVE WEEDS, ROCKS, CONSTRUCTION ITEMS, ETC., THEN APPLY GRASS SEED OR PINE BARK MULCH AS DEPICTED ON PLANS.
17. LANDSCAPE CONTRACTOR SHALL FEED AND PRUNE EX. TREES, ON OR JUST OFF SITE, THAT HAVE EXPERIENCED ROOT BASE INTRUSION OR DAMAGE DURING CONSTRUCTION IMMEDIATELY AND FOR THE DURATION OF THE WARRANTY PERIOD AT THE DIRECTION OF THE LANDSCAPE ARCHITECT.
18. EXISTING TREES TO REMAIN SHALL BE PROTECTED WITH TEMPORARY SNOW FENCING AT THE EDGE OF THE EX. TREE CANOPY THE CONTRACTOR SHALL NOT STORE VEHICLES OR MATERIALS WITHIN THE LANDSCAPED AREAS. ANY DAMAGE TO EXISTING TREES, SHRUBS OR LAWN SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
19. ALL MULCH AREAS SHALL RECEIVE A 3" LAYER OF SHREDDED PINE BARK MULCH.
20. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH PROJECT SPECIFICATIONS.

NOTE: 6 INCHES OF TOPSOIL WITH 25% COMPOST TO BE ADDED TO ALL PLANTING AREAS

PLEASE NOTE: SHEET SIZE IS SCALED FOR ASME D . DO NOT REDUCE OR ENLARGE.

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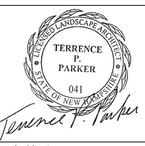
Project Title
361 HANOVER
361 HANOVER STREET
PORTSMOUTH, NH



Landscape Architect

Scale
AS NOTED

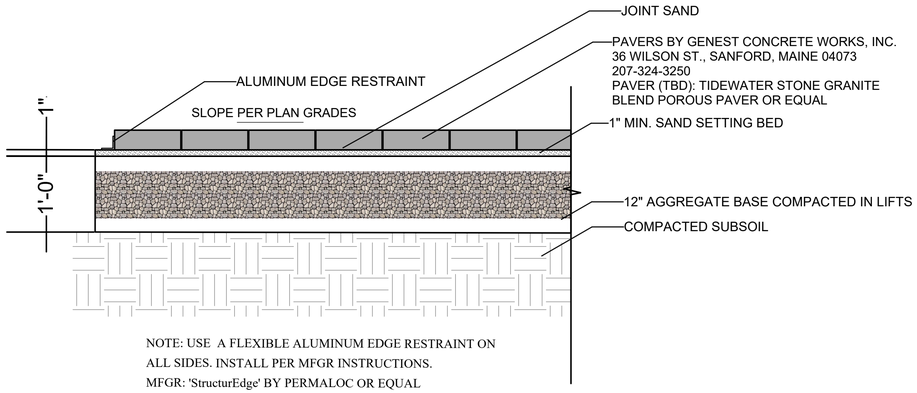
REV.	DATE	DESCRIPTION

NO.	DATE	ISSUE NOTE

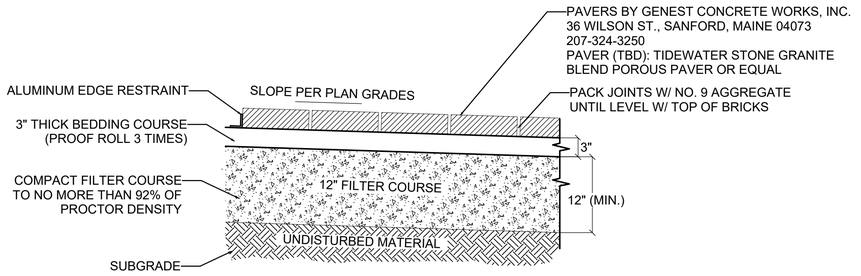
Project Manager | Drawn By
Date 6/12/2025 | Reviewed By
Project ID 361 HANOVER ST.

Sheet Title
LANDSCAPE DETAILS

Sheet No.
L-2



NOTE: USE A FLEXIBLE ALUMINUM EDGE RESTRAINT ON ALL SIDES. INSTALL PER MFGR INSTRUCTIONS.
MFGR: 'StructurEdge' BY PERMALOC OR EQUAL



NOTE: CONTRACTOR SHALL SUBMIT SIEVE ANALYSIS FOR EACH COURSE MATERIAL TO PROJECT LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO PLACEMENT.

USE A FLEXIBLE ALUMINUM EDGE RESTRAINT ON ALL SIDES.
INSTALL PER MFGR INSTRUCTIONS.
MFGR: 'StructurEdge' BY PERMALOC OR EQUAL

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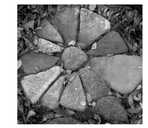

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Project Title

361 HANOVER

361 HANOVER STREET
PORTSMOUTH, NH

TERRENCE P. PARKER 041 LICENSED LANDSCAPE ARCHITECT STATE OF NEW HAMPSHIRE

Landscape Architect

Scale

AS NOTED

REV.	DATE	DESCRIPTION

NO.	DATE	ISSUE NOTE

Project Manager | Drawn By

Date 6/12/2025 | Reviewed By

Project ID 361 HANOVER ST.

Sheet Title

LANDSCAPE DETAILS

Sheet No.

L-3

UTILITY NOTES:

1) SEE EXISTING CONDITIONS PLAN FOR BENCHMARK INFORMATION.

2) COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY.

3) CONTRACTOR SHALL COORDINATE ALL ELECTRIC WORK INCLUDING BUT NOT LIMITED TO: CONDUIT CONSTRUCTION, MANHOLE CONSTRUCTION, UTILITY POLE CONSTRUCTION, OVERHEAD WIRE RELOCATION, AND TRANSFORMER CONSTRUCTION WITH POWER COMPANY.

4) ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, POLYWRAPPED, CEMENT LINED DUCTILE IRON PIPE.

5) ALL WATERMAIN INSTALLATIONS SHALL BE PRESSURE TESTED AND CHLORINATED AFTER CONSTRUCTION AND BEFORE ACTIVATING THE SYSTEM. CONTRACTOR SHALL COORDINATE WITH THE CITY OF PORTSMOUTH.

6) ALL SEWER PIPE SHALL BE PVC SDR 35 UNLESS OTHERWISE STATED.

7) ALL WORK WITHIN CITY R.O.W. SHALL BE COORDINATED WITH CITY OF PORTSMOUTH

8) CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO ABUTTING PROPERTIES THROUGHOUT CONSTRUCTION.

9) ANY CONNECTION TO EXISTING WATERMAIN SHALL BE CONSTRUCTED BY THE CITY OF PORTSMOUTH.

10) EXISTING UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE MAIN AND MEET THE DEPARTMENT OF PUBLIC WORKS STANDARDS FOR CAPPING OF WATER AND SEWER SERVICES.

11) ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, LATEST EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES.

12) THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH BUILDING DRAWINGS AND UTILITY COMPANIES.

13) ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.

14) ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.

15) THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATED TO THE OWNER PRIOR TO THE COMPLETION OF PROJECT.

16) THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED IN THESE DRAWING TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL.

17) CONTRACTOR SHALL PROVIDE EXCAVATION, BEDDING, BACKFILL AND COMPACTION FOR NATURAL GAS SERVICES.

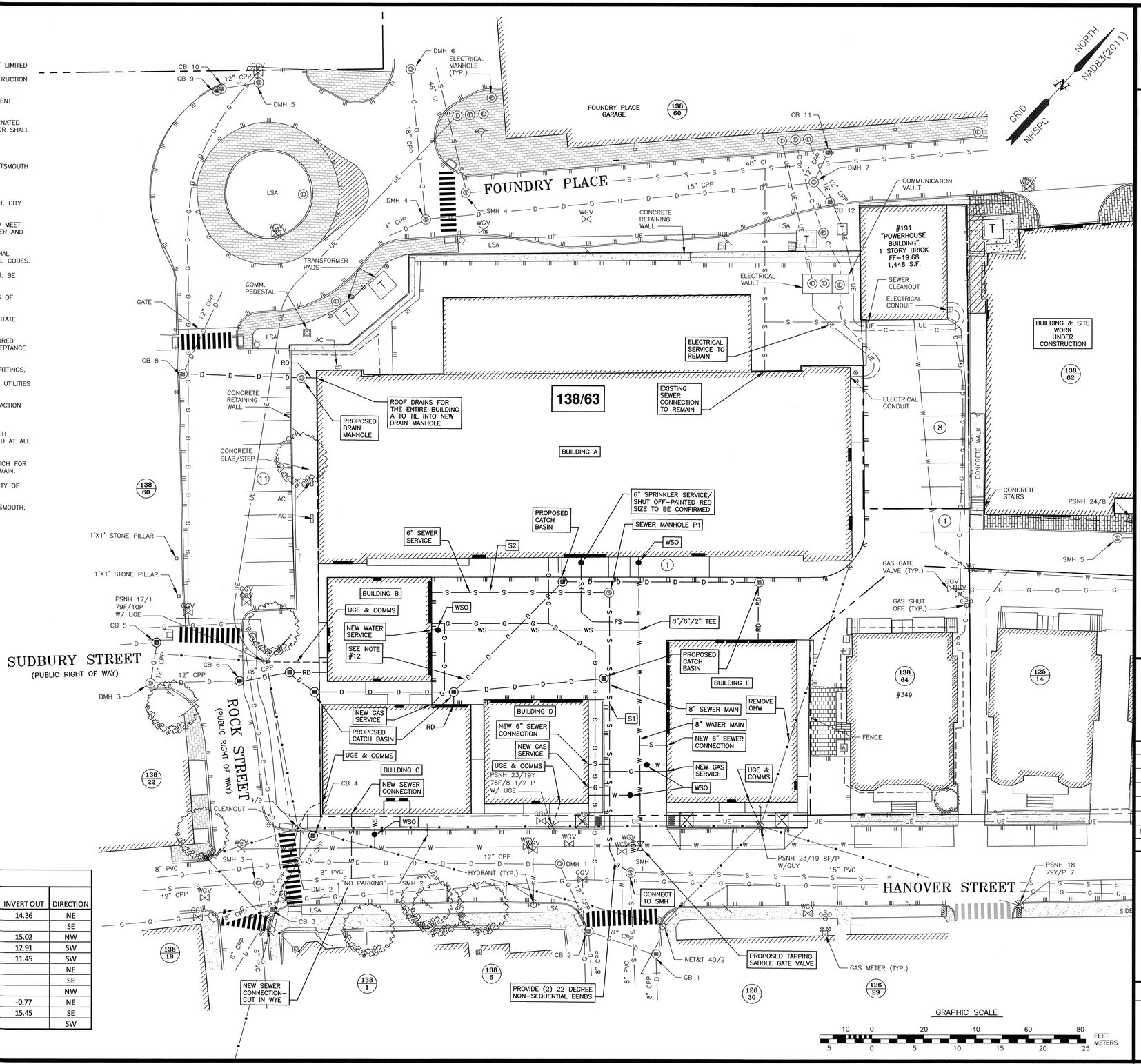
18) A 10-FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18-INCH MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER/SANITARY SEWER CROSSINGS WATER ABOVE SEWER.

19) SAWCUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.

20) GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF PORTSMOUTH.

21) COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE CITY OF PORTSMOUTH.

22) ALL SEWER PIPES WITH LESS THAN 6' COVER SHALL BE INSULATED.



SEWER PIPE SCHEDULE

PIPE	PROP/EX	PIPE SIZE/LENGTH	SLOPE
S1	PROP	8" X 108'	0.004
S2	PROP	6" X 66'	0.01

SEWER STRUCTURE TABLE

STRUCTURE	PROP/EX	RIM	PIPE SIZE/TYPE	INVERT IN	INVERT OUT	DIRECTION
SMH 1	EX	20.06	15" PVC		14.36	NE
			8" PVC	14.41		SE
SMH 1	PROP	20.06	8" PVC		15.02	NW
SMH 2	EX	19.31	8" PVC		12.91	SW
SMH 3	EX	19.15	8" PVC		11.45	SW
			8" PVC	11.60		NE
			8" PVC	13.90		SE
SMH 4	EX	12.23	48" CI	-0.77		NW
			48" CI		-0.77	NE
SMH P1	PROP		8" PVC		15.45	SE
SMH P1	PROP		6" PVC	15.62		SW

HALEYWARD
ENGINEERING | ENVIRONMENTAL | SURVEYING
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Portsmouth, New Hampshire 03801
603.430.9282
WWW.HALEYWARD.COM

NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

4) INSTALL CATCH BASIN INLET PROTECTION ON ALL EXISTING AND PROPOSED CATCH BASINS (IN THE PROJECT VICINITY) UNTIL CONSTRUCTION IS COMPLETED AND THE SITE IS STABILIZED.

5) ALL WATER MAIN AND SANITARY SEWER WORK SHALL MEET THE STANDARDS OF THE NEW HAMPSHIRE STATE PLUMBING CODE AND CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS.

6) UTILITY AS-BUILTS SHALL BE SUBMITTED TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS UPON COMPLETION OF THE PROJECT.

7) EVERSOURCE WORK ORDER #21498685.

8) PROPOSED SEWER FLOW:
40 UNITS X 170 GPD/UNITS = 6,800 GPD
TOTAL FLOW: 6,800 GPD

9) THE APPLICANT SHALL HAVE A COMMUNICATIONS SITE SURVEY CONDUCTED BY A MOTOROLA COMMUNICATIONS CARRIER APPROVED BY THE PORTSMOUTH'S COMMUNICATIONS DIVISION. THE RADIO COMMUNICATIONS CARRIER MUST BE FAMILIAR AND CONVERSANT WITH THE PORTSMOUTH POLICE AND FIRE RADIO SYSTEMS CONFIGURATION. IF THE SITE SURVEY INDICATES THAT IT IS NECESSARY TO INSTALL A SIGNAL REPEATER EITHER ON OR NEAR THE PROPOSED PROJECT, THOSE COSTS SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE PROPERTY OWNER WILL BE REQUIRED TO MAINTAIN ANY INSTALLED EQUIPMENT. THE PROPERTY OWNER SHALL BE RESPONSIBLE TO PAY FOR THE SITE SURVEY WHETHER OR NOT THE SURVEY INDICATES THAT EQUIPMENT IS NECESSARY. THE OWNER SHALL COORDINATE WITH THE SUPERVISOR OF RADIO COMMUNICATIONS FOR PORTSMOUTH. THE SURVEY SHALL BE COMPLETED AND ANY REQUIRED EQUIPMENT INSTALLED, TESTED, AND ACCEPTED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

10) FINAL CONDUIT LOCATION SUBJECT TO CONFIRMATION FROM UTILITY PROVIDERS.

11) EXISTING UTILITIES TO BE ABANDONED SHALL BE REMOVED TO THE UTILITY MAIN AND CAPPED PER THE UTILITY COMPANY REQUIREMENT.

12) ROOF DRAINS FOR BUILDING C & E WILL CONNECT TO THE DRAIN LINE. SEE SHEET C6 FOR GUTTER (SLOPE ROOF) CONNECTIONS.

13) SEWER SERVICES SHALL BE 6", WATER SERVICES SHALL BE 1", EXCEPT BUILDING A SHALL BE 2". SUBJECT TO FINAL DESIGN VERIFICATION.

SITE REDEVELOPMENT
361 HANOVER STREET
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
0	ISSUED FOR COMMENT	06/13/25
	REVISIONS	

JOHN R. CHAGNON NO. 7651 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE

SCALE: 1"=20' JANUARY 2024

UTILITY PLAN

C4

FB 444 & PG 1

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P:\5010135 Hampshire_Development\2977.01 Hanover St, Portsmouth-JSC\04 2977\2024 Site Plan\Plans & Specs\Dwg\2977.01 Dwg Reg 6/11/2025 9:59:08 AM

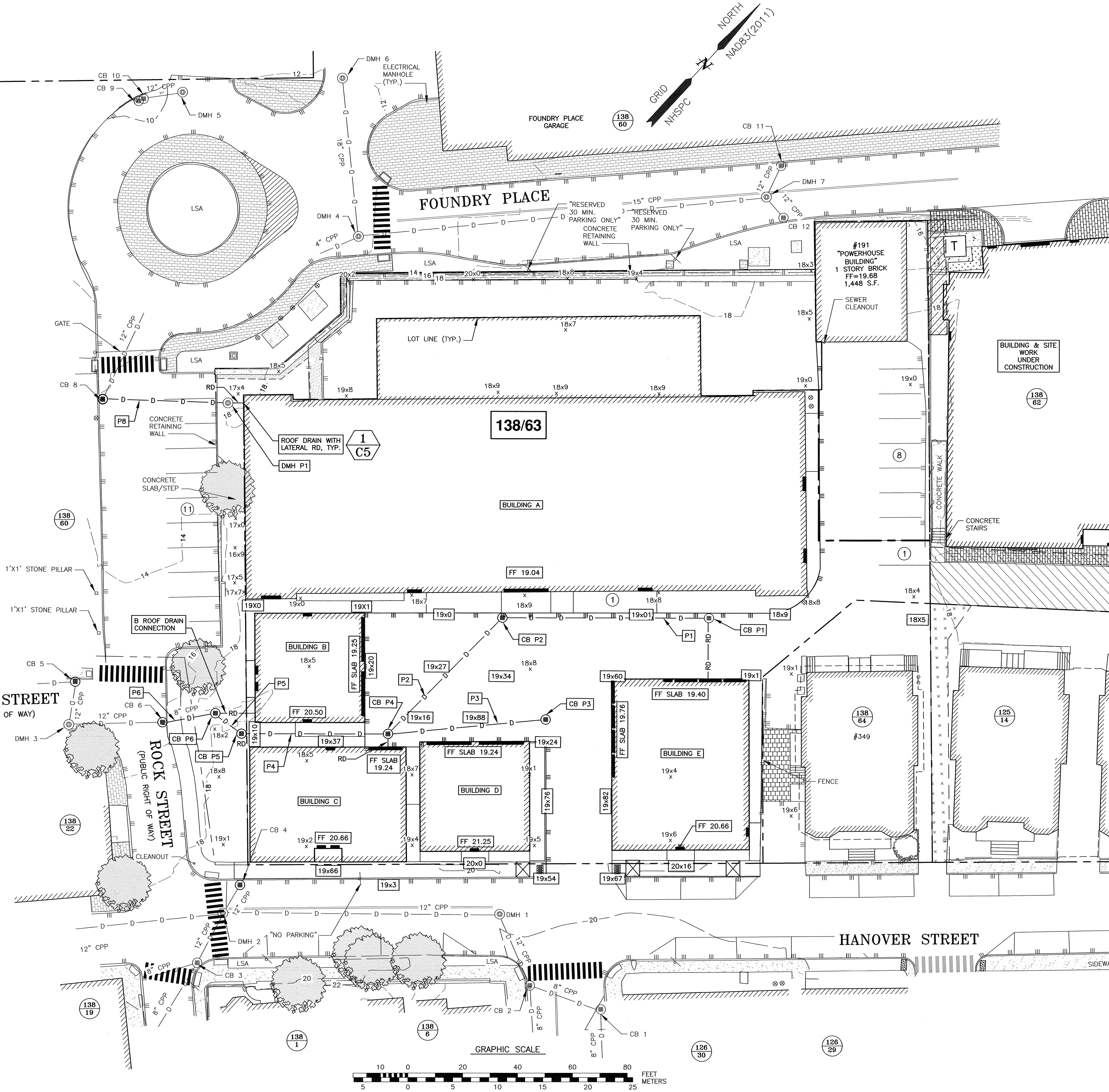
DRAINAGE STRUCTURE TABLE

STRUCTURE	PROP/EX	RIM	PIPE SIZE/TYPE	INVERT IN	INVERT OUT	DIRECTION
CB 1	EX	20.66	8" CPP		17.46	SW
			8" CPP	17.51		SE
CB 2	EX	20.35	12" CPP		15.70	W
	EX		8" CPP	15.80		NE
			8" CPP	16..50		SE
CB 3	EX	19.29	12" CPP		15.64	NW
			8" CPP	16.24		S
			8" CPP	16.29		SE
CB 4	EX	18.90	12" CPP		15.65	SE
CB 5	EX	15.00	12" CPP		10.00	SE
			12" CPP	10.00		SW
CB 6	EX	15.60	12" CPP		12.85	SW
			~~8" CPP~~	~~13.20~~		~~NE~~
CB 6 (CORE)	PROP		12" HDPE	12.95		
CB 7	EX	17.43	8" CPP		16.28	SW
CB 8	EX	12.15	12" CPP		7.45	NW
CB 8 (CORE)	PROP		12" HDPE	7.65		
CB 9&10	EX	9.76	12" CPP		5.86	NE
CB 11	EX	10.07	12" CPP		6.17	SE
CB 12	EX	10.22	12" CPP		6.92	SW
DMH 1	EX	19.81	12" CPP		15.56	SW
			12" CPP	15.56		E
DMH 2	EX	19.08	12" CPP		15.03	SW
			12" CPP	15.03		NE
			12" CPP	15.43		NW
			12" CPP	15.43		SE
DMH 3	EX	15.30	12" CPP		10.65	NW
			12" CPP	10.65		NE
DMH 4	EX	11.86	18" CPP		5.46	NW
			15" CPP	5.56		NE
			4" PVC	9.36		S
DMH 5	EX	9.87	NO DATA			
DMH 6	EX	11.84	NO DATA			
DMH 7	EX	10.19	18" CPP		6.29	SW
			12" CPP	6.44		NW
			12" CPP	6.39		NE

PROPOSED PIPING TABLE

PIPE	PROP/EX	PIPE SIZE/TYPE	SLOPE
P1	PROP	72'X12" HDPE	0.004
P2	PROP	54'X12" HDPE	0.004
P3	PROP	54'X12" HDPE	0.004
P4	PROP	50'X12" HDPE	0.004
P5	PROP	10'X12" HDPE	0.004
*P6	PROP	15'X12" HDPE	0.08
P8	PROP	41'X12" HDPE	0.004

*REPLACE EXISTING PIPE

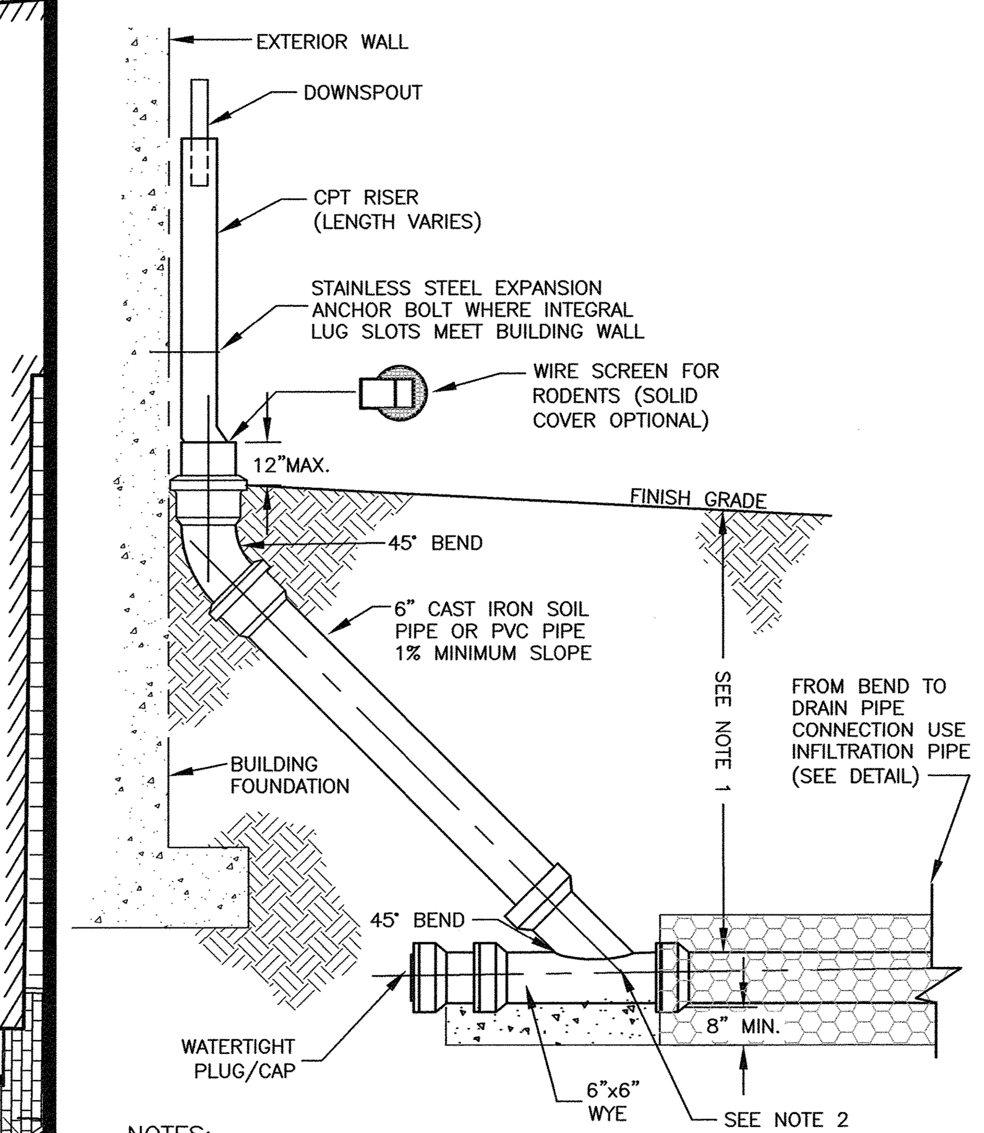


NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1–888–DIG–SAFE (1–888–344–7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY WITHIN 100 FEET OF UNDERGROUND UTILITIES. THE EXCAVATOR IS RESPONSIBLE TO MAINTAIN MARKS. DIG SAFE TICKETS EXPIRE IN THIRTY DAYS.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).



NOTES:

1) FOR ALL DEPTHS OF COVER LESS THAN 2 FEET, PIPE MUST BE SCHEDULE 40 PVC. FOR DEPTHS OF COVER GREATER THAN 2 FEET, FLEXIBLE PIPE MAY BE USED. REFER TO SPECIFICATIONS FOR ALLOWABLE PIPE TYPES.
2) A WATERTIGHT CONNECTION SHALL BE MAINTAINED WITH ANY TRANSITION FROM SCHEDULE 40 PVC PIPE TO ANY OTHER PIPE TYPE.
3) THE DOWNSPOUT COLLECTOR DRAIN SHALL BE INSTALLED BEFORE THE DOWWNSPOUTS ARE INSTALLED ON THE BUILDING. SITE WORK CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK TO AND INCLUDING THE RODENT SCREEN. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONNECTION AT THE POINT OF THE RODENT SCREEN.

1/C5 ROOF DRAIN WITH LATERAL — NTS

PROPOSED DRAINAGE STRUCTURE TABLE

STRUCTURE	PROP/EX	RIM	PIPE SIZE/TYPE	INVERT IN	INVERT OUT	
CB P1	PROP	18.74	12" HDPE		15.30	
CB P2	PROP	18.90	12" HDPE	15.01		
			12" HDPE		14.91	
CB P3	PROP	19.04	12" HDPE	15.01		
			12" HDPE		14.91	
CB P4	PROP	19.06	12" HDPE	14.69		
			12" HDPE		14.59	
CB P5	PROP	19.00	12" HDPE	14.39	14.29	
CB P6	PROP	17.50	12" HDPE	14.25	14.15	
DMH P1	PROP	MATCH GRADE	12" HDPE	7.82		
DMH P1			6" RD		15.00	

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SITE REDEVELOPMENT 361 HANOVER STREET PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
0	ISSUED FOR COMMENT	06/13/25

REVISIONS

STATE OF NEW HAMPSHIRE — JOHN R. CHAGNON — No. 7651 — LICENSED — PROFESSIONAL ENGINEER

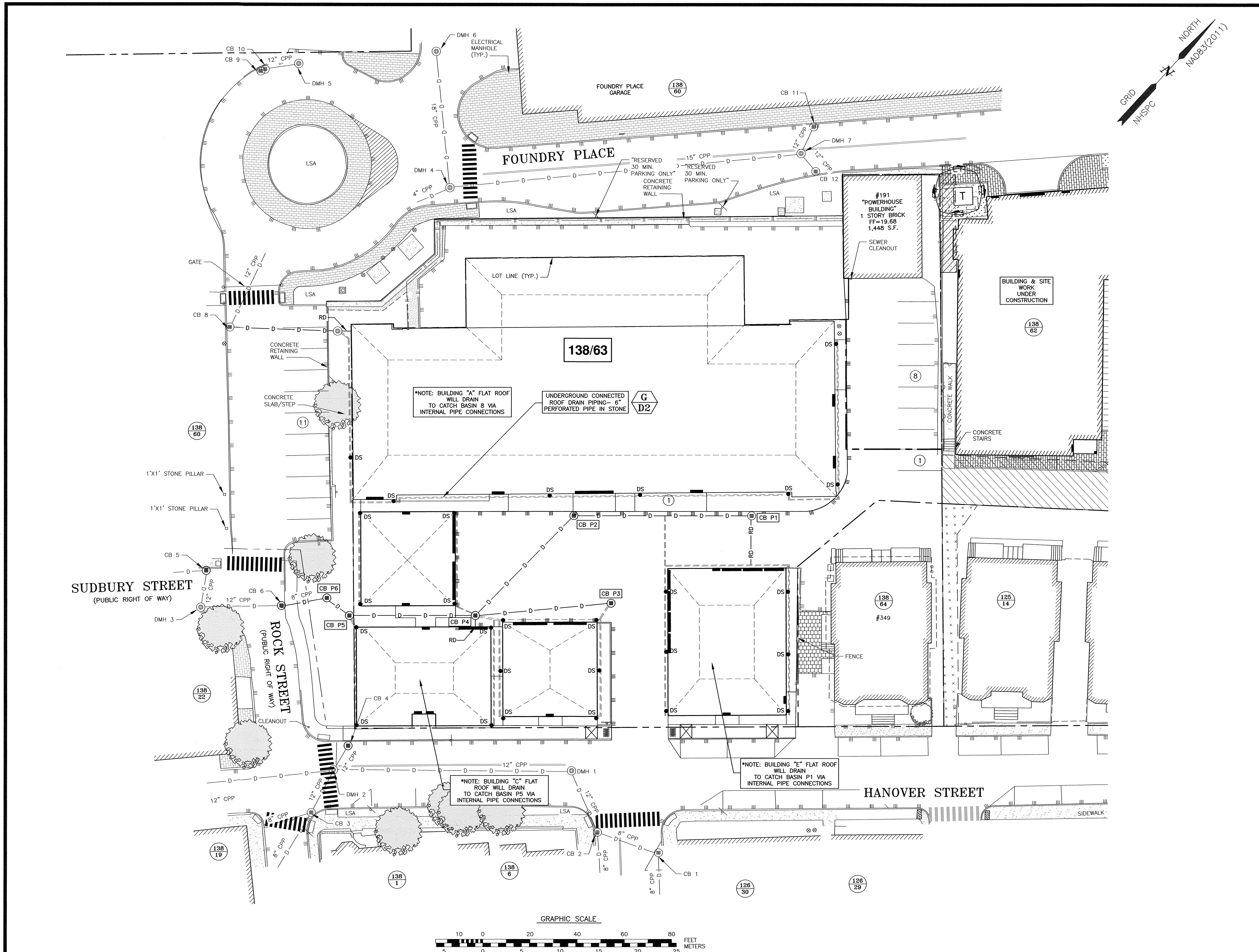
SCALE: 1"=20' JANUARY 2024

GRADING & DRAINAGE PLAN

C5

FB 444 & PG 1

5010135.2977.01



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NOTES:

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4) THE PURPOSE OF THIS PLAN IS TO SHOW THE ROOF DRAIN CONNECTIONS TO THE DRAINAGE SYSTEM.

SITE REDEVELOPMENT 361 HANOVER STREET PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
0	ISSUED FOR COMMENT	06/13/25

REVISIONS

STATE OF NEW HAMPSHIRE JOHN R. CHAGNON No. 7651 LICENSED PROFESSIONAL ENGINEER

SCALE: 1"=20'   JANUARY 2024

ROOF DRAINAGE PLAN

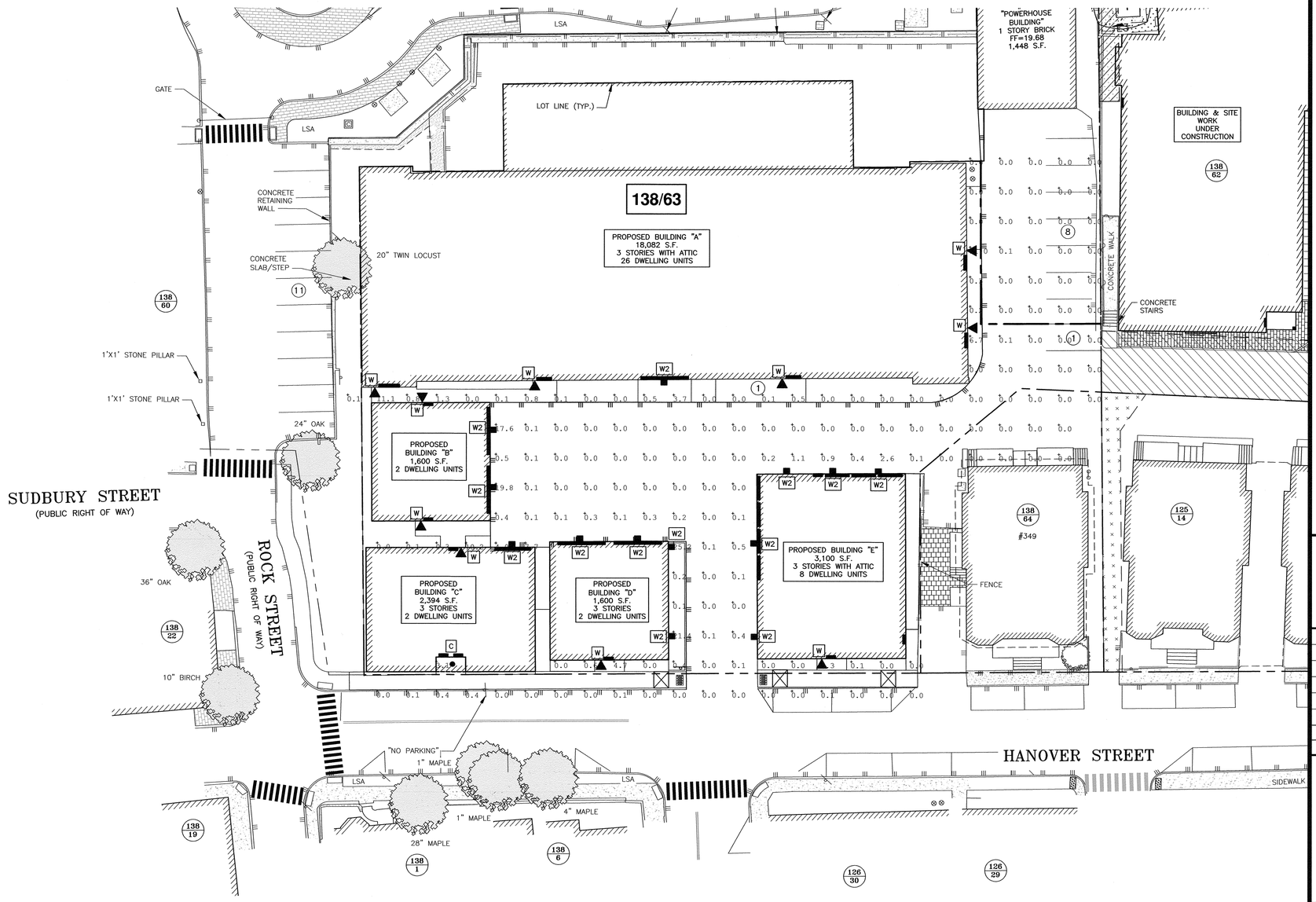
C6

FB 444 & PG 1

5010135.2977.01

Luminaire Schedule					
Symbol	Qty	Label	Arrangement	[MANUFAC]	Description
●	1	C	Single	NICOR	CLR43SUS9WH (7W,806LM)
▲	10	W	Single	LIGMAN	UVA-30001-8W-W30-01-120/277V
■	13	W2	Single	LIGMAN	UCI-30131-21W-W-W30-01-120/277V

NORTH
NAD83(2011)
GRID
NHSPC



GRAPHIC SCALE

10 0 20 40 60 80 FEET
5 0 5 10 15 20 25 METERS

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4) ALL LIGHTING SHALL BE SHIELDED TO MINIMIZE LIGHT TRESPASS AND DIRECT GLARE BEYOND THE PROPERTY.

5) ALL LIGHTS SHALL BE DARK SKY COMPLIANT AND DIRECTED DOWNWARD.

6) LIGHTING LAYOUT & FIXTURE SPECIFICATIONS DESIGNED/PROVIDED BY: EXPOSURE 2 LIGHTING. CONTACT: KEN SWEENEY 603-601-8080.

SITE REDEVELOPMENT
361 HANOVER STREET
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
0	ISSUED FOR COMMENT	06/13/25
	REVISIONS	

SCALE: 1"=20' JANUARY 2024

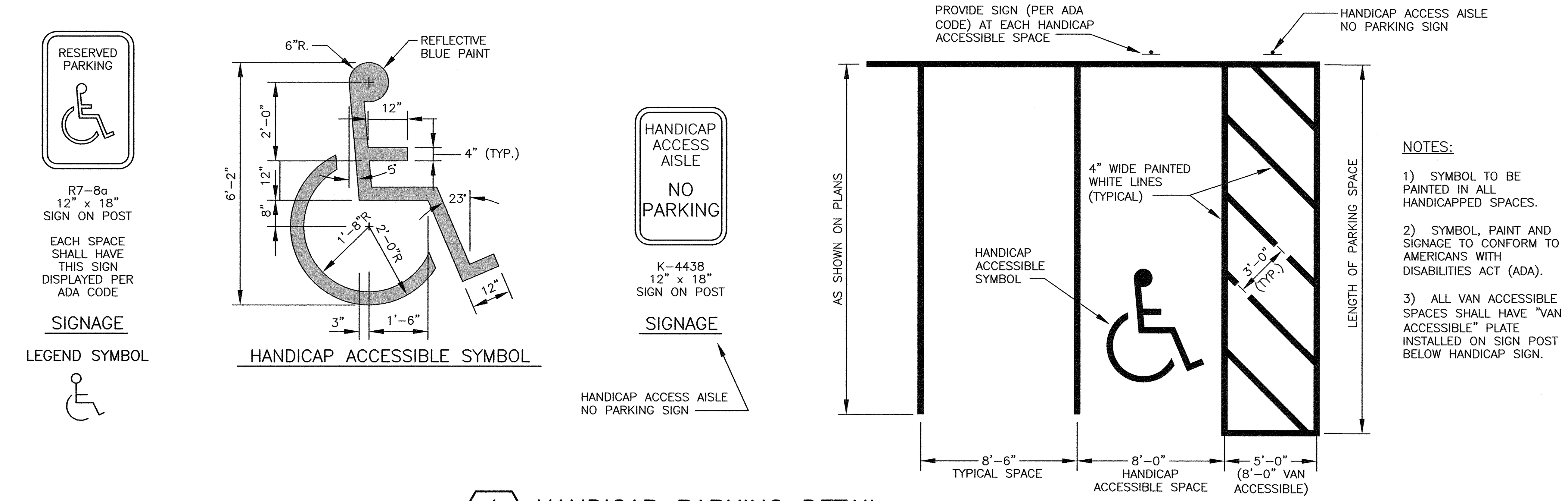
LIGHTING PLAN

C7

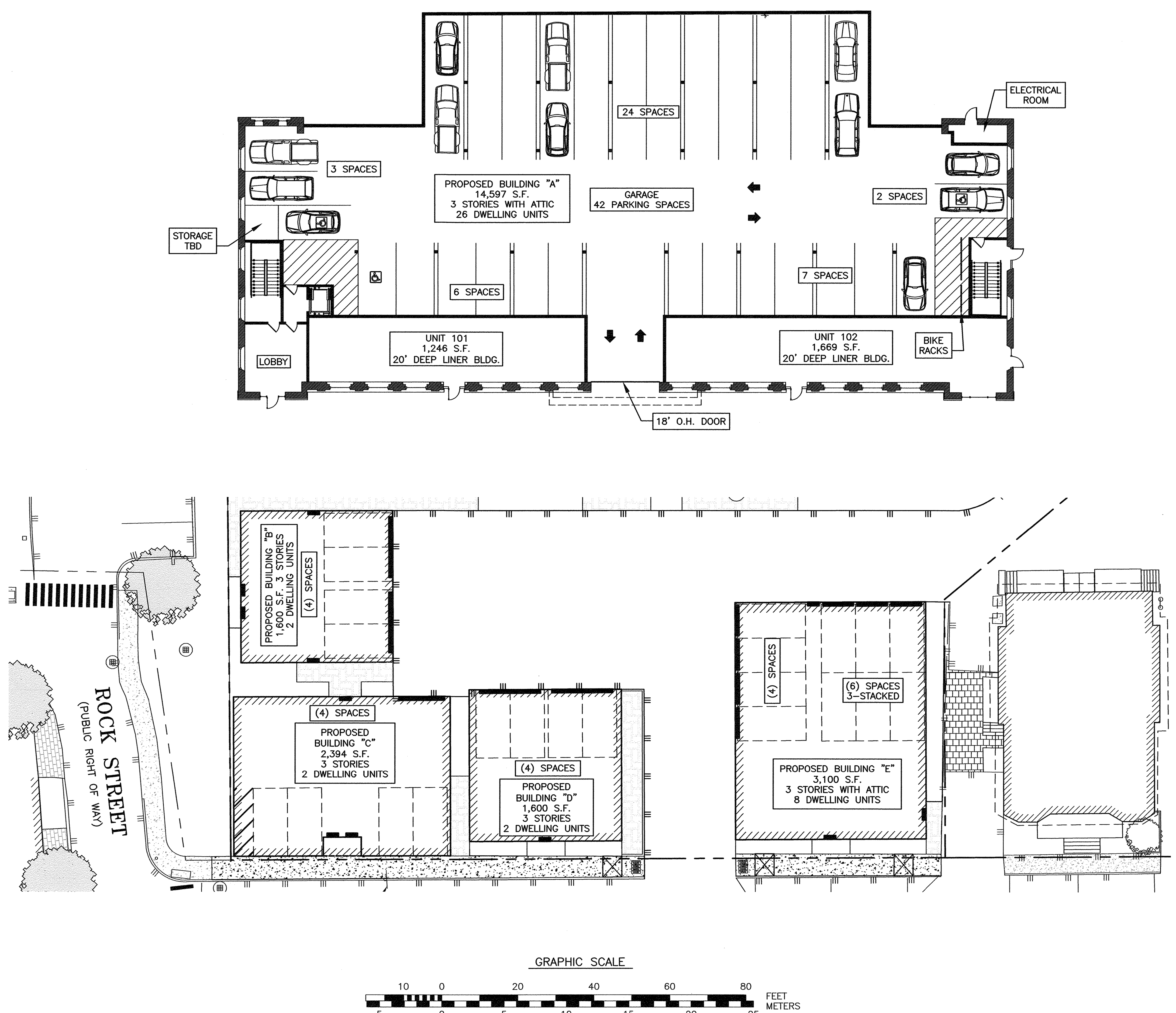
FB 444 & PG 1

5010135.2977.01

P:\NH\5010135 Hampshire_Development\2977.01 Hanover St., Portsmouth (RCW 2377)\324 Site Plan\Plans & Sheets\Dwg\2977.01 Site.dwg, 6/12/2025 7:59:16 AM



1/C8 HANDICAP PARKING DETAIL
NTS



PARKING CALCULATIONS:

361 HANOVER STREET (DEVELOPMENT SITE):

PROPOSED USE:

BUILDING A:	26 UNITS
BUILDING B:	2 UNITS
BUILDING C:	2 UNITS
BUILDING D:	2 UNITS
BUILDING E:	8 UNITS
TOTAL:	40 UNITS

PARKING SPACES PROVIDED:

BUILDING A:	42 SPACES
BUILDING B:	4 SPACES
BUILDING C:	4 SPACES
BUILDING D:	4 SPACES
BUILDING E:	10 SPACES
GUEST:	2 SPACES
TOTAL:	66 SPACES

191 HILL STREET (SUBDIVIDED LOT):

EXISTING USE: 1,500 S.F. TRADE
7.20–7.40 TRADE SERVICES
1 SPACE/400 S.F. GFA
1500/400= 4 SPACES REQUIRED
8 SPACES PROVIDED

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NORTH NAD83(2011)
GRID NHSPC

NOTES:

1. PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 138 AS LOT 63.
2. APPLICANT:
   361 HANOVER STEAM FACTORY, LLC
   41 INDUSTRIAL DRIVE UNIT 20
   EXETER, N.H. 03833
3. THE PURPOSE OF THIS PLAN IS TO SHOW THE PARKING FOR THE PROPOSED SITE DEVELOPMENT ON ASSESSOR'S MAP 138 LOT 63 IN THE CITY OF PORTSMOUTH.

SITE REDEVELOPMENT 361 HANOVER STREET PORTSMOUTH, N.H.

REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR COMMENT	06/13/25

STATE OF NEW HAMPSHIRE JOHN CHAGNON No. 738 LICENSED LAND SURVEYOR
SIGNATURE

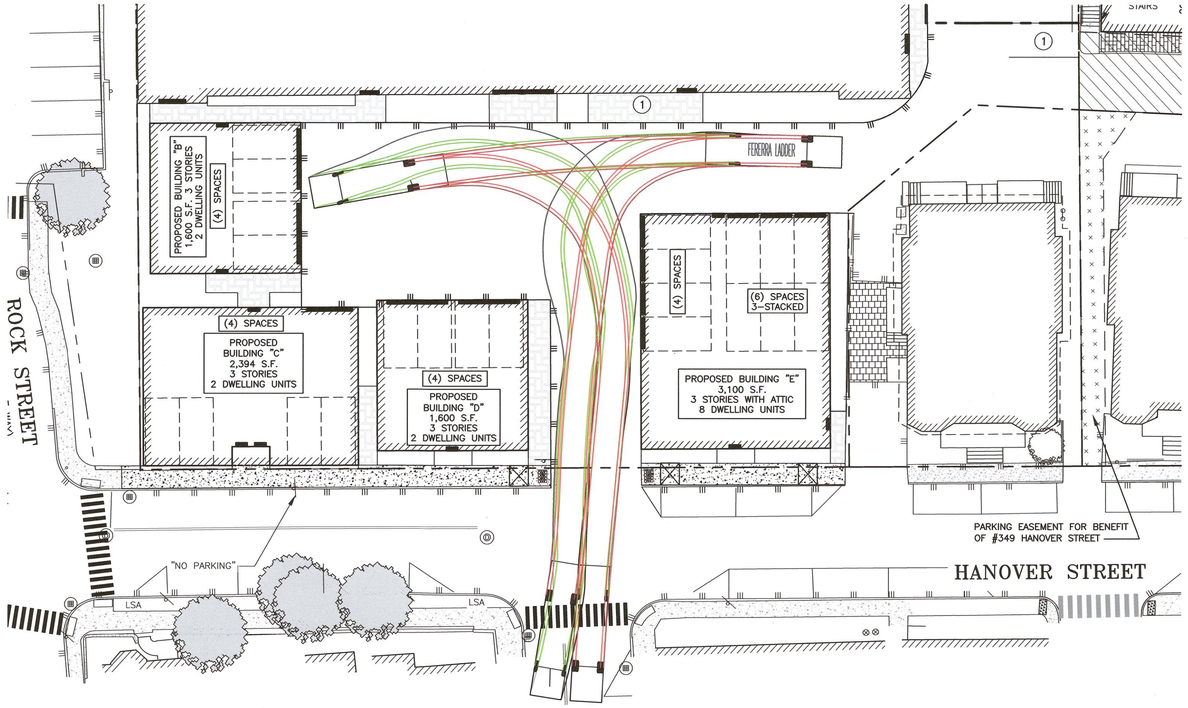
SCALE: 1"=20' JUNE 2025

PARKING PLAN

C8

FB 444 & PG 1

5010135.2977.01



GRAPHIC SCALE

10 0 20 40 60 80 FEET
5 0 5 10 15 20 25 METERS

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NOTES:

1. PARCEL IS SHOWN ON THE CITY OF PORTSMOUTH ASSESSOR'S MAP 138 AS LOT 63.
2. APPLICANT:
   361 HANOVER STEAM FACTORY, LLC
   41 INDUSTRIAL DRIVE UNIT 20
   EXETER, N.H. 03833
3. PARCEL IS NOT IN A FLOOD HAZARD ZONE AS SHOWN ON FIRM PANEL 33015C0259F. JANUARY 29 2021.

PROPOSED LOT AREAS:

LOT 138/63
38,528 S.F.±
0.8845 AC

LOT 138/63-1
4,717 S.F.
0.1083 AC

4. THE PURPOSE OF THIS PLAN IS TO SHOW A FIRE TRUCK TURNING TEMPLATE ON ASSESSOR'S MAP 138 LOT 63.

NORTH
NAD83(2011)
GRID
NHSPC

SITE REDEVELOPMENT
361 HANOVER STREET
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
0	ISSUED FOR COMMENT	06/13/25

REVISIONS

STATE OF NEW HAMPSHIRE
No. 738
JOHN R. CHAGNON
LICENSED LAND SURVEYOR
SIGNATURE

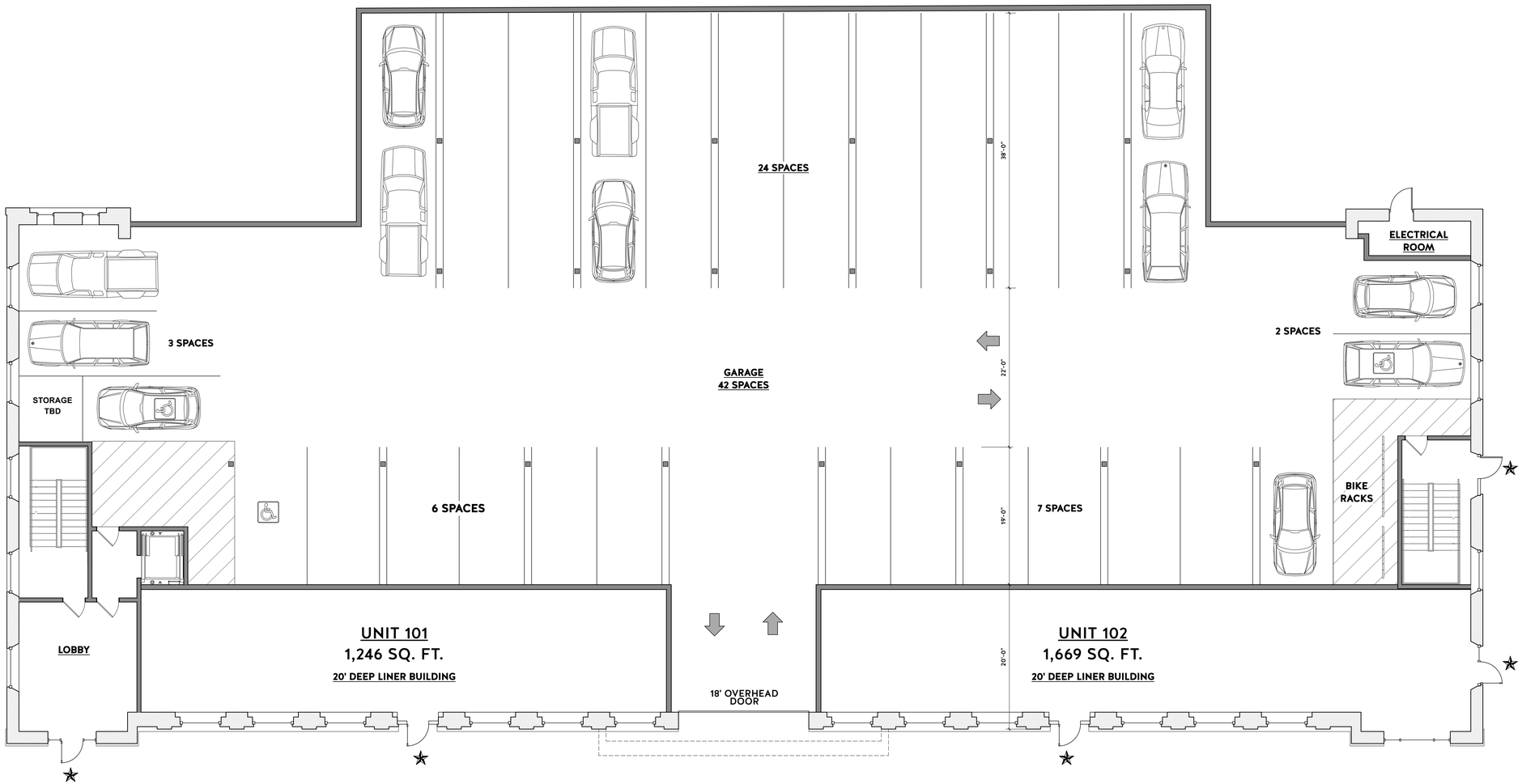
SCALE: 1"=20' JUNE 2025

FIRE TRUCK TURNING TEMPLATE

T2

FB 444 & PG 1

5010135.2977.01



1 GROUND FLOOR PLAN: BUILDING A
Scale: 1/8" = 1'-0"

0 5 10 15 FT

CAD File Name
361HanoverSt_GroundFloorLayoutPlans.vwx

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ESTD | ARCHITECTS | 2007

48 MARKET STREET
NEWBURYPORT, MA 01950
T. 978.465.3535
WWW.SCOTTBROWNARCHITECT.COM

SITE DEVELOPMENT
AT
361 HANOVER STREET
PORTSMOUTH, NH 03801

REVISION & REISSUE NOTES

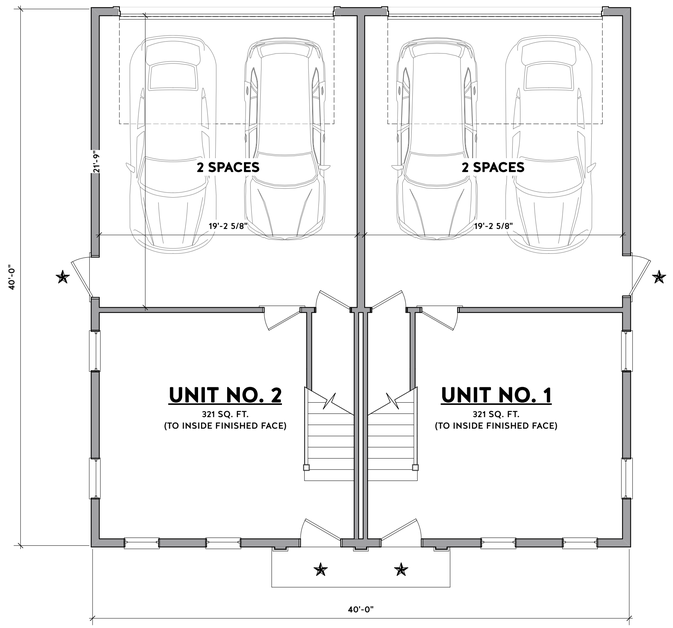
No.	Date	Notes
A	6-13-25	TAC SUBMISSION

Project #	Project Manager	Date
2024-09	X.X.	6-13-25

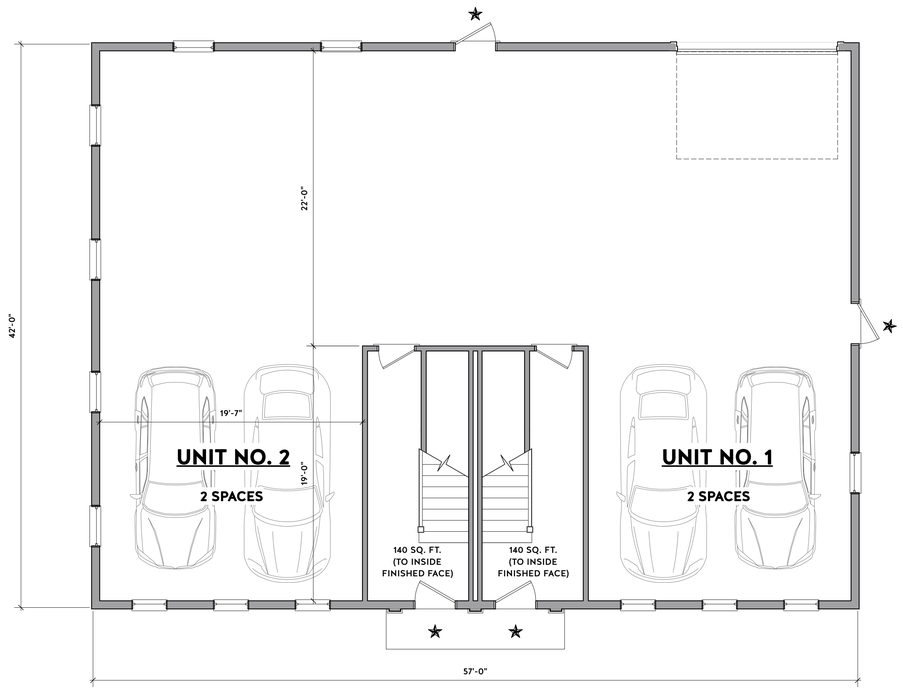
Scale: AS NOTED

GROUND FLOOR LAYOUT PLANS

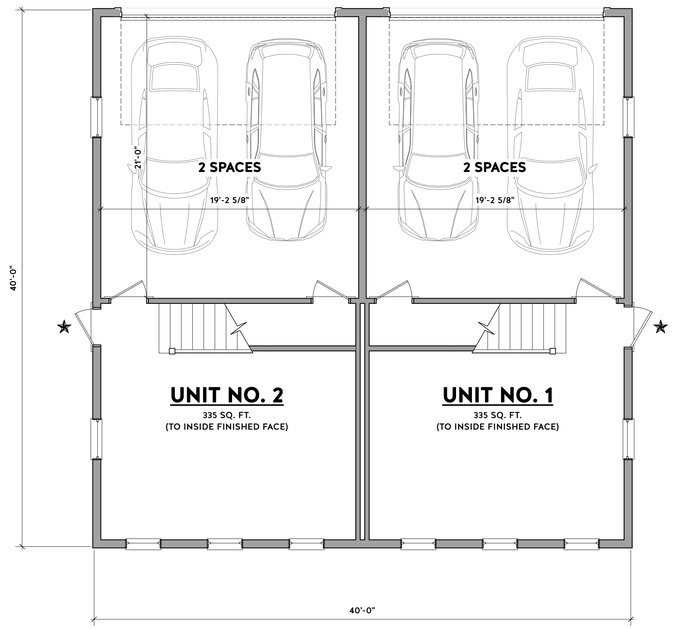
A1



2 GROUND FLOOR PLAN: BUILDING D
Scale: 3/16" = 1'-0"



3 GROUND FLOOR PLAN: BUILDING C
Scale: 3/16" = 1'-0"



1 GROUND FLOOR PLAN: BUILDING B
Scale: 3/16" = 1'-0"

0 5 10 FT

CAD File Name
361HanoverSt_GroundFloorLayoutPlans.vwx

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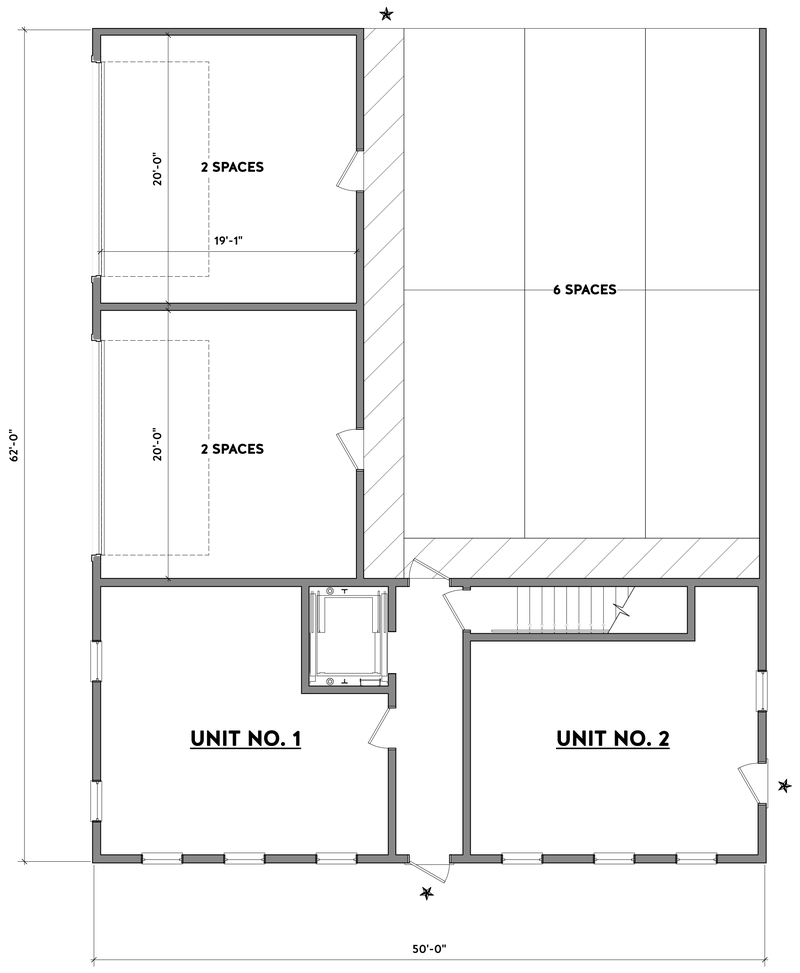
2024-09	X.X.	6-13-25

Scale: AS NOTED

GROUND FLOOR LAYOUT PLANS

A2



1 GROUND FLOOR PLAN: BUILDING E
Scale: 3/16" = 1'-0"

0 5 10 FT

CAD File Name
361HanoverSt_GroundFloorLayoutPlans.vwx

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Scale: AS NOTED

GROUND FLOOR LAYOUT PLANS

A3

EROSION CONTROL NOTES

CONSTRUCTION SEQUENCE

DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.

IF REQUIRED THE CONTRACTOR SHALL OBTAIN AN **NPDES** PHASE II STORMWATER PERMIT AND SUBMIT A NOTICE OF INTENT (N.O.I) BEFORE BEGINNING CONSTRUCTION AND SHALL HAVE ON SITE A STORMWATER POLLUTION PREVENTION PLAN (**S.W.P.P.P.**) AVAILABLE FOR INSPECTION BY THE PERMITTING AUTHORITY DURING THE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CARRYING OUT THE **S.W.P.P.P.** AND INSPECTING AND MAINTAINING ALL BMP'S CALLED FOR BY THE PLAN. THE CONTRACTOR SHALL SUBMIT A NOTICE OF TERMINATION (**N.O.T.**) FORM TO THE REGIONAL EPA OFFICE WITHIN 30 DAYS OF FINAL STABILIZATION OF THE ENTIRE SITE OR TURNING OVER CONTROL OF THE SITE TO ANOTHER OPERATOR.

THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF THIS PROJECT:
1. OBSERVATIONS OF THE PROJECT FOR COMPLIANCE WITH THE SWPPP SHALL BE MADE BY THE CONTRACTOR AT LEAST ONCE A WEEK OR WITHIN 24 HOURS OF A STORM 0.25 INCHES OR GREATER;
2. AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND DISTRIBUTED TO THE ENGINEER, THE OWNER, AND THE CONTRACTOR;
3. A REPRESENTATIVE OF THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES;
4. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.

INSTALL PERIMETER CONTROLS, i.e., SILTSOXX AND CATCH BASIN PROTECTION AROUND THE LIMITS OF DISTURBANCE BEFORE ANY EARTH MOVING OPERATIONS. THE USE OF HAYBALES IS NOT ALLOWED.

THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE(S) PRIOR TO ANY EXCAVATION ACTIVITIES. PLACE FODS AS NEEDED.

CUT AND GRUB ALL TREES, SHRUBS, SAPLINGS, BRUSH, VINES AND REMOVE OTHER DEBRIS AND RUBBISH AS REQUIRED. DEMOLISH BUILDINGS AND FENCES AS NEEDED.

ROUGH GRADE SITE.

LAYOUT AND INSTALL ALL BURIED UTILITIES AND SERVICES UP TO 10' OF THE PROPOSED BUILDING FOUNDATIONS. CAP AND MARK TERMINATIONS OR LOG SWING TIES.

CONSTRUCT BUILDING.

CONNECT UTILITIES.

PLACE BINDER LAYER OF PAVEMENT AND CONSTRUCT SIDEWALK BASE.

PLANT LANDSCAPING IN AREAS OUT OF WAY OF BUILDING CONSTRUCTION. PREPARE AND STABILIZE FINAL SITE GRADING BY ADDING TOPSOIL, SEED, MULCH AND FERTILIZER.

AFTER BUILDINGS ARE COMPLETED, FINISH ALL REMAINING LANDSCAPED WORK.

FINISH PAVE AND COMPLETE SIDEWALKS.

REMOVE TRAPPED SEDIMENTS FROM COLLECTION DEVICES AS APPROPRIATE, AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES UPON COMPLETION OF FINAL STABILIZATION OF THE SITE.

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF A BUILDING REDEVELOPMENT AND ADDITIONS WITH ASSOCIATED UTILITIES AND PARKING.

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 0.820 ACRES.

BASED ON THE USCS WEB SOIL SURVEY THE SOILS ON SITE CONSIST OF URBAN LAND WHICH HAS AN UNSPECIFIED HYDROLOGIC SOIL GROUP RATING, ASSUMED D.

THE STORMWATER RUNOFF FROM THE SITE WILL BE DISCHARGED VIA A CLOSED DRAINAGE SYSTEM TO THE CITY OF PORTSMOUTH CLOSED DRAINAGE SYSTEM WHICH ULTIMATELY FLOWS TO THE NORTH MILL POND.

GENERAL CONSTRUCTION NOTES

THE EROSION CONTROL PROCEDURES SHALL CONFORM TO SECTION 645 OF THE "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION" OF THE NHDOT, AND "STORM WATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE". THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING DEVELOPMENT. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED FOR MORE THAN 45 DAYS.

ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION.

THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.

DUST CONTROL: DUST CONTROL MEASURES SHALL INCLUDE BUT ARE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING.
DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ABUTTING AREAS.
IF TEMPORARY STABILIZATION PRACTICES, SUCH AS TEMPORARY VEGETATION AND MULCHING, DO NOT ADEQUATELY REDUCE DUST GENERATION, APPLICATION OF WATER OR CALCIUM CHLORIDE SHALL BE APPLIED IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES.

SILTSOXX SHALL BE PERIODICALLY INSPECTED DURING THE LIFE OF THE PROJECT AND AFTER EACH STORM. ALL DAMAGED SILTSOXX SHALL BE REPAIRED. SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED IN A SECURED LOCATION.

ALL FILLS SHALL BE PLACED AND COMPACTED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS.

ALL NON–STRUCTURAL, SITE–FILL SHALL BE PLACED AND COMPACTED TO 90% MODIFIED PROCTOR DENSITY IN LAYERS NOT EXCEEDING 18 INCHES IN THICKNESS UNLESS OTHERWISE NOTED.

FROZEN MATERIAL OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIAL, TRASH, WOODY DEBRIS, LEAVES, BRUSH OR ANY DELETERIOUS MATTER SHALL NOT BE INCORPORATED INTO FILLS.

FILL MATERIAL SHALL NOT BE PLACED ON FROZEN FOUNDATION SUBGRADE.

DURING CONSTRUCTION AND UNTIL ALL DEVELOPED AREAS ARE FULLY STABILIZED, ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER EACH ONE HALF INCH OF RAINFALL.

THE CONTRACTOR SHALL MODIFY OR ADD EROSION CONTROL MEASURES AS NECESSARY TO ACCOMMODATE PROJECT CONSTRUCTION.

ALL ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
- BASE COURSE GRAVELS HAVE BEEN INSTALLED ON AREAS TO BE PAVED
- A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED
- A MINIMUM OF 3 INCHES OF NON–EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED
- EROSION CONTROL BLANKETS HAVE BEEN INSTALLED.
- IN AREAS TO BE PAVED, "STABLE" MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM 304.2 HAVE BEEN INSTALLED.

STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY–ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA.

STABILIZATION MEASURES TO BE USED INCLUDE:
- TEMPORARY SEEDING;
- MULCHING.

1. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
2. WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN THESE AREAS, SILTSOXX, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DIKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.
3. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILTSOXX, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY OCTOBER 15.

MAINTENANCE AND PROTECTION

THE SILTSOXX BARRIER SHALL BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.

SILTSOXX SHALL BE REMOVED ONCE SITE IS STABILIZED, AND DISTURBED AREAS RESULTING FROM SILTSOXX REMOVAL SHALL BE PERMANENTLY SEEDED.

THE CATCH BASIN INLET BASKET SHALL BE INSPECTED WITHIN 24 HOURS AFTER EACH RAINFALL OR DAILY DURING EXTENDED PERIODS OF PRECIPITATION. REPAIRS SHALL BE MADE IMMEDIATELY, AS NECESSARY, TO PREVENT PARTICLES FROM REACHING THE DRAINAGE SYSTEM AND/OR CAUSING SURFACE FLOODING.
SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT, OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED.

WINTER NOTES

ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATED GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.

ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS;

AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT;

STOCKPILES

1. LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND CULVERTS.
2. ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF PRECIPITATION.
3. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
4. PROTECT ALL STOCKPILES FROM STORMWATER RUN–OFF USING TEMPORARY EROSION CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.

CONCRETE WASHOUT AREA

THE FOLLOWING ARE THE ONLY NON–STORMWATER DISCHARGES ALLOWED. ALL OTHER NON–STORMWATER DISCHARGES ARE PROHIBITED ON SITE:
1. THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FAILITY;
2. IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER;
3. CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS;
4. INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED.

ALLOWABLE NON–STORMWATER DISCHARGES

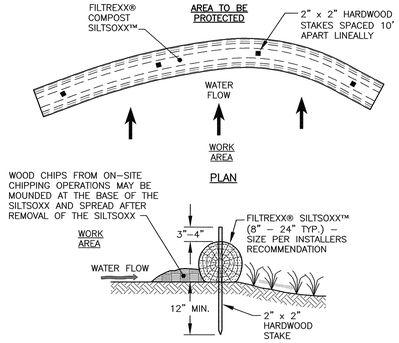
1. FIRE–FIGHTING ACTIVITIES;
2. FIRE HYDRANT FLUSHING;
3. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED;
4. WATER USED TO CONTROL DUST;
5. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING;
6. ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED;
7. PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED;
8. UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION;
9. UNCONTAMINATED GROUND WATER OR SPRING WATER;
10. FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED;
11. UNCONTAMINATED EXCAVATION DEWATERING;
12. LANDSCAPE IRRIGATION.

WASTE DISPOSAL

1. WASTE MATERIAL
   - ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER;
   - NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE;
   - ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
2. HAZARDOUS WASTE
   - ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER;
   - SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
3. SANITARY WASTE
   - ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

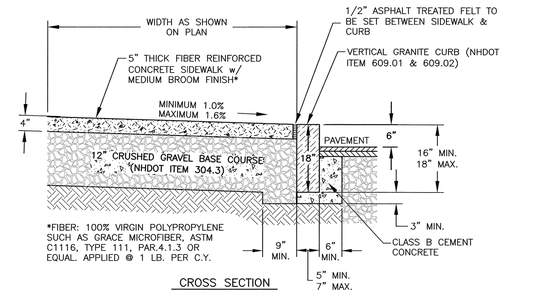
BLASTING NOTES

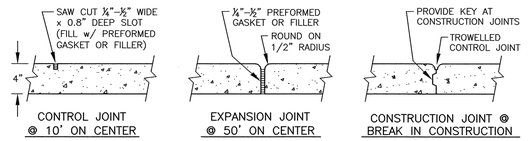
1. CONTRACTOR SHALL CONTACT THE NHDES AND/OR LOCAL JURISDICTION PRIOR TO COMMENCING ANY BLASTING ACTIVITIES.
2. FOR ANY PROJECT FOR WHICH BLASTING OF BEDROCK IS ANTICIPATED, THE APPLICANT SHALL SUBMIT A BLASTING PLAN THAT IDENTIFIES:
   - WHERE THE BLASTING ACTIVITIES ARE ANTICIPATED TO OCCUR;
   - THE ESTIMATED QUANTITY OF BLAST ROCK IN CUBIC YARDS; AND
   - SITE–SPECIFIC BLASTING BEST MANAGEMENT PRACTICES.



NOTES:
1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
2. FILLTREXX SYSTEM SHALL BE INSTALLED BY A CERTIFIED FILTREXX INSTALLER.
3. THE CONTRACTOR SHALL MAINTAIN THE COMPOST FILTRATION SYSTEM IN A FUNCTIONAL CONDITION AT ALL TIMES. IT WILL BE ROUTINELY INSPECTED AND REPAIRED WHEN REQUIRED.
4. SILTSOXX DEPICTED IS FOR MINIMUM SLOPES, GREATER SLOPES MAY REQUIRE ADDITIONAL PLACEMENTS.
5. THE COMPOST FILTER MATERIAL WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED, AS DETERMINED BY THE ENGINEER.

A / C5 FILTREXX® SILTSOXX™ FILTRATION SYSTEM (IF NEEDED) NTS





C / C3 CONCRETE SIDEWALK GRANITE CURB NTS

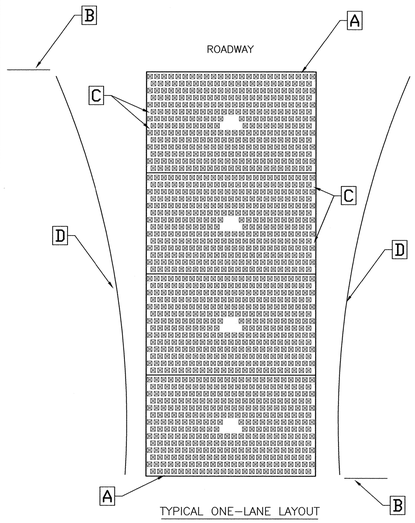
FODS TRACKOUT CONTROL SYSTEM

INSTALLATION:

THE PURPOSE AND DESIGN OF THE FODS TRACKOUT CONTROL SYSTEM IS TO EFFECTIVELY REMOVE MOST SEDIMENT FROM VEHICLE TIRES AS THEY EXIT A DISTURBED LAND AREA ONTO A PAVED STREET. THIS MANUAL IS A PLATFORM FROM WHICH TO INSTALL A FODS TRACKOUT CONTROL SYSTEM. (NOTE: THIS IS NOT A ONE SIZE FITS ALL GUIDE.) THE INSTALLATION MAY NEED TO BE MODIFIED TO MEET THE EXISTING CONDITIONS, EXPECTATIONS, OR DEMANDS OF A PARTICULAR SITE. THIS IS A GUIDELINE. ULTIMATELY THE FODS TRACKOUT CONTROL SYSTEM SHOULD BE INSTALLED SAFELY WITH PROPER ANCHORING AND SIGNS PLACED AT THE ENTRANCE AND EXIT TO CAUTION USERS AND OTHERS.

KEY NOTES:

A. FODS TRACKOUT CONTROL SYSTEM MAT.
B. FODS SAFETY SIGN.
C. ANCHOR POINT.
D. SILT OR ORANGE CONSTRUCTION FENCE.



INSTALLATION:
1. THE SITE WHERE THE FODS TRACKOUT CONTROL SYSTEM IS TO BE PLACED SHOULD CORRESPOND TO BEST MANAGEMENT PRACTICES AS MUCH AS POSSIBLE. THE SITE WHERE FODS TRACKOUT CONTROL SYSTEM IS PLACED SHOULD ALSO MEET OR EXCEED THE LOCAL JURISDICTION OR STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS.
2. CALL FOR UTILITY LOCATES 3 BUSINESS DAYS IN ADVANCE OF THE OF FODS TRACKOUT CONTROL SYSTEM INSTALLATION FOR THE MARKING OF UNDERGROUND UTILITIES. CALL THE UTILITY NOTIFICATION CENTER AT 811.
3. ONCE THE SITE IS ESTABLISHED WHERE FODS TRACKOUT CONTROL SYSTEM IS TO BE PLACED, ANY EXCESSIVE UNEVEN TERRAIN SHOULD BE LEVELED OUT OR REMOVED SUCH AS LARGE ROCKS, LANDSCAPING MATERIALS, OR SUDDEN ABRUPT CHANGES IN ELEVATION.
4. THE INDIVIDUAL MATS CAN START TO BE PLACED INTO POSITION. THE FIRST MAT SHOULD BE PLACED NEXT TO THE CLOSEST POINT OF EGRESS. THIS WILL ENSURE THAT THE VEHICLE WILL EXIT STRAIGHT FROM THE SITE ONTO THE PAVED SURFACE.
8. AFTER THE FIRST MAT IS PLACED DOWN IN THE PROPER LOCATION, MATS SHOULD BE ANCHORED TO PREVENT THE POTENTIAL MOVEMENT WHILE THE ADJOINING MATS ARE INSTALLED. ANCHORS SHOULD BE PLACED AT EVERY ANCHOR POINT (IF FEASIBLE) TO HELP MAINTAIN THE MAT IN ITS CURRENT POSITION.
9. AFTER THE FIRST MAT IS ANCHORED IN ITS PROPER PLACE, AN H BRACKET SHOULD BE PLACED AT THE END OF THE FIRST MAT BEFORE ANOTHER MAT IS PLACED ADJACENT TO THE FIRST MAT.
10. ONCE THE SECOND MAT IS PLACED ADJACENT TO THE FIRST MAT, MAKE SURE THE H BRACKET IS CORRECTLY SITUATED BETWEEN THE TWO MATS, AND SLIDE MATS TOGETHER.
11. NEXT THE CONNECTOR STRAPS SHOULD BE INSTALLED TO CONNECT THE TWO MATS TOGETHER.
12. UPON PLACEMENT OF EACH NEW MAT IN THE SYSTEM, THAT MAT SHOULD BE ANCHORED AT EVERY ANCHOR POINT TO HELP STABILIZE THE MAT AND ENSURE THE SYSTEM IS CONTINUOUS WITH NO GAPS IN BETWEEN THE MATS.
13. SUCCESSIVE MATS CAN THEN BE PLACED TO CREATE THE FODS TRACKOUT CONTROL SYSTEM REPEATING THE ABOVE STEPS.

USE AND MAINTENANCE
1. VEHICLES SHOULD TRAVEL DOWN THE LENGTH OF THE TRACKOUT CONTROL SYSTEM AND NOT CUT ACROSS THE MATS.
2. DRIVERS SHOULD TURN THE WHEEL OF THEIR VEHICLES SUCH THAT THE VEHICLE WILL MAKE A SHALLOW S–TURN ROUTE DOWN THE LENGTH OF THE FODS TRACKOUT CONTROL SYSTEM.
3. MATS SHOULD BE CLEANED ONCE THE VOIDS BETWEEN THE PYRAMIDS BECOME FULL OF SEDIMENT. TYPICALLY THIS WILL NEED TO BE PERFORMED WITHIN TWO WEEKS AFTER A STORM EVENT. BRUSHING IS THE PREFERRED METHOD OF CLEANING, EITHER MANUALLY OR MECHANICALLY.
4. THE USE OF ICE MELT, ROCK SALT, SNOW MELT, DE–ICER, ETC. SHOULD BE UTILIZED AS NECESSARY DURING THE WINTER MONTHS AND AFTER A SNOW EVENT TO PREVENT ICE BUILDUP.

REMOVAL
1. REMOVAL OF FODS TRACKOUT CONTROL SYSTEM IS REVERSE ORDER OF INSTALLATION.
2. STARTING WITH THE LAST MAT, THE MAT THAT IS PLACED AT THE INNERMOST POINT OF THE SITE OR THE MAT FURTHEST FROM THE EXIT OR PAVED SURFACE SHOULD BE REMOVED FIRST.
3. THE ANCHORS SHOULD BE REMOVED.
4. THE CONNECTOR STRAPS SHOULD BE UNBOLTED AT ALL LOCATIONS IN THE FODS TRACKOUT CONTROL SYSTEM.
5. STARTING WITH THE LAST MAT IN THE SYSTEM, EACH SUCCESSIVE MAT SHOULD THEN BE MOVED AND STACKED FOR LOADING BY FORKLIFT OR EXCAVATOR ONTO A TRUCK FOR REMOVAL FROM THE SITE.

B / C5 FODS (USE AS REQUIRED) NTS

HALEYWARD
ENGINEERING | ENVIRONMENTAL | SURVEYING
200 Griffin Rd. Unit 14
Portsmouth, New Hampshire 03801
603.430.9282
WWW.HALEYWARD.COM

NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1–888–DIG–SAFE (1–888–344–7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

SITE REDEVELOPMENT 361 HANOVER STREET PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
1	DETAIL C	4/11/25
0	ISSUED FOR COMMENT	3/14/25

REVISIONS

SCALE: AS SHOWN MARCH 2025

EROSION PROTECTION NOTES AND DETAILS **D1**

FB 444 PG 1 5010135.2977

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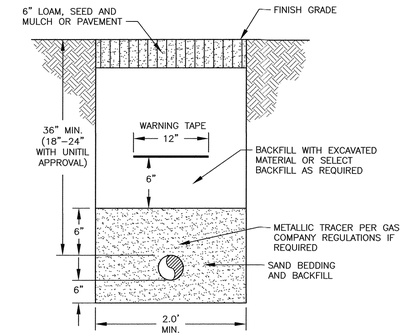
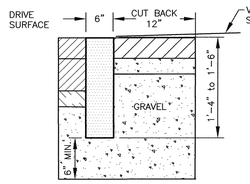


D / C4 GAS SERVICE TRENCH

NTS

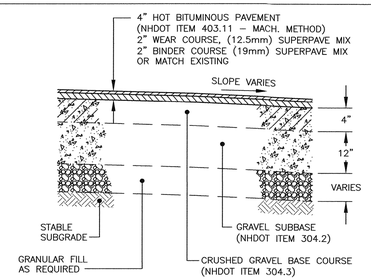


MIN. LENGTH OF CURB STONES 3FT.
MAX. LENGTH OF CURB STONES 10FT.
MAX. LENGTH OF STRAIGHT CURB STONES LAID ON CURVES SEE CHART

NOTE: ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATE LENGTH.

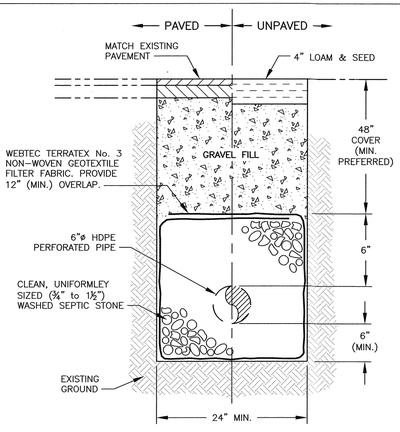
E / C3 FLUSHED GRANITE CURB

NTS



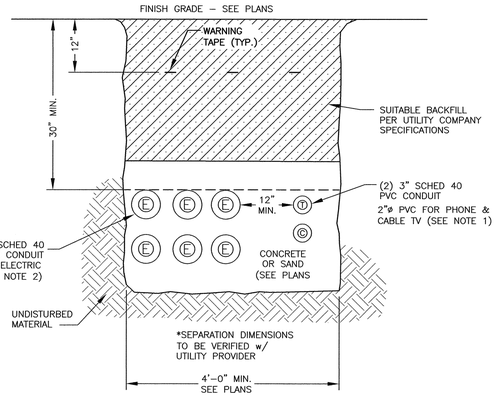
F / C3 TYPICAL PAVEMENT CROSS–SECTION

NTS



G / C5 UNDERGROUND CONNECTED ROOF DRAIN

NTS



H / C4 BURIED ELEC/COMM CABLE

NTS

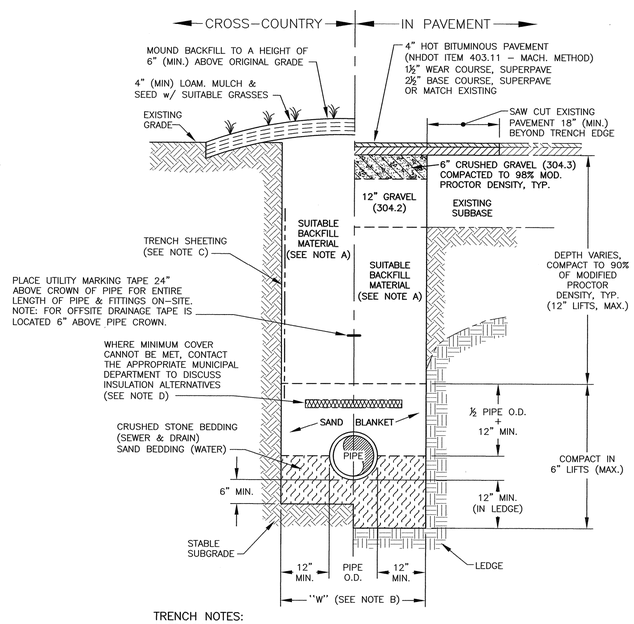
NOTES:
1) ALL CONDUIT TO BE U.L. LISTED, SCH. 80 UNDER ALL TRAVEL WAYS, & SCHED. 40 FOR THE REMAINDER.

2) NORMAL CONDUIT SIZES FOR PSNH ARE 3 INCH FOR SINGLE PHASE PRIMARY AND SECONDARY VOLTAGE CABLES, 4 INCH FOR THREE PHASE SECONDARY, AND 5 INCH FOR THREE PHASE PRIMARY.

3) ALL WORK TO CONFORM TO THE NATIONAL ELECTRICAL CODE (LATEST REVISION)

4) INSTALL A 200# PULL ROPE FOR EACH CONDUIT

5) VERIFY ALL CONDUIT SPECIFICATIONS WITH UTILITY COMPANY'S PRIOR TO ANY CONSTRUCTION.



TRENCH NOTES:

A) TRENCH BACKFILL:
– IN PAVED AREAS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX INCHES IN LARGEST DIMENSION, OR ANY MATERIALS DEEMED TO BE UNACCEPTABLE BY THE ENGINEER.

– IN CROSS–COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK OR PEAT, IF HE IS SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE.

B) "W" = MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES. FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE O.D..

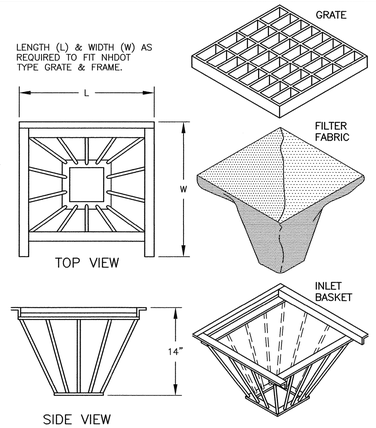
C) TRENCH SHEETING:
THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFE EXCAVATION PRACTICES.

D) MINIMUM PIPE COVER FOR UTILITY MAINS (UNLESS GOVERNED BY OTHER CODES):
- 5' MINIMUM FOR SEWER (IN PAVEMENT)
- 4' MINIMUM FOR SEWER (CROSS COUNTRY)
- 3' MINIMUM FOR STORMWATER DRAINS
- 5' MINIMUM FOR WATER MAINS

E) ALL PAVEMENT CUTS SHALL BE REPAIRED BY THE INFRARED HEAT METHOD.

I / C4 TYPICAL PIPE TRENCH

NTS



1) INLET BASKETS SHALL BE INSTALLED IMMEDIATELY AFTER CATCH BASIN CONSTRUCTION IS COMPLETE AND SHALL REMAIN IN PLACE AND BE MAINTAINED UNTIL PAVEMENT BINDER COURSE IS COMPLETE.

2) FILTER FABRIC SHALL BE PUSHED DOWN AND FORMED TO THE SHAPE OF THE BASKET. THE SHEET OF FABRIC SHALL BE LARGE ENOUGH TO BE SUPPORTED BY THE BASKET FRAME WHEN HOLDING SEDIMENT AND, SHALL EXTEND AT LEAST 6" PAST THE FRAME. THE INLET GRATE SHALL BE PLACED OVER THE BASKET/FRAME AND WILL SERVE AS THE FABRIC ANCHOR.

3) THE FILTER FABRIC SHALL BE A GEOTEXTILE FABRIC; POLYESTER, POLYPROPYLENE, STABILIZED NYLON, POLYETHYLENE, OR POLYVINYLIDENE CHLORIDE MEETING THE FOLLOWING SPECIFICATIONS:
- –RAB STRENGTH: 45 LB. MIN. IN ANY PRINCIPAL DIRECTION (ASTM D1682)
- –MULLEN BURST STRENGTH: MIN. 60 psi (ASTM D774)

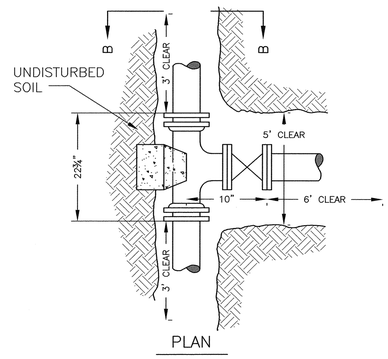
4) THE FABRIC SHALL HAVE AN OPENING NO GREATER THAN A NUMBER 20 U.S. STANDARD SIEVE AND A MINIMUM PERMEABILITY OF 120 gpm/s.f. (MULTIPLY THE PERMITTIVITY IN SEC.–1 FROM ASTM 54491–85 CONSTANT HEAD TEST USING THE CONVERSION FACTOR OF 74.)

5) THE INLET BASKET SHALL BE INSPECTED WITHIN 24 HOURS AFTER EACH RAINFALL OR DAILY DURING EXTENDED PERIODS OF PRECIPITATION. REPAIRS SHALL BE MADE IMMEDIATELY, AS NECESSARY, TO PREVENT PARTICLES FROM REACHING THE DRAINAGE SYSTEM AND/OR CAUSING SURFACE FLOODING.

6) SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT, OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED.

J / C5 CATCH BASIN INLET BASKET

NTS



NOTES:
1) ALL MATERIALS SHALL BE APPROVED BY THE PORTSMOUTH WATER DEPARTMENT PRIOR TO INSTALLATION AND USE.
2) ALL JOINTS SHALL BE MECHANICAL.
3) "CLEAR" DIMENSIONS SHOWN ATE REQUIRED FOR WORKSPACE. NO JOINTS ON PIPE BEING TAPPED WITHIN "CLEAR" AREA.
4) FORD TYPE STAINLESS STEEL TAPPING SADDLES OR APPROVED EQUAL ARE ALSO ACCEPTABLE.

K / C4 TAPPING SLEEVE AND GATE

INSTALL PER PORTSMOUTH REQUIREMENTS NTS

HALEYWARD
ENGINEERING | ENVIRONMENTAL | SURVEYING
200 Griffin Rd. Unit 14
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PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
2	DETAIL G	6/13/25
1	DETAIL G	4/11/25
0	ISSUED FOR COMMENT	3/14/25

REVISIONS

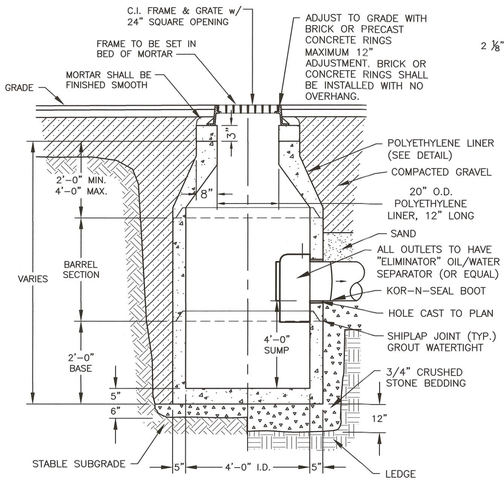
STATE OF NEW HAMPSHIRE – JOHN R. CHAGNON 16371 – LICENSED PROFESSIONAL ENGINEER

SCALE: AS SHOWN MARCH 2025

DETAILS D2

FB 444 PG 1

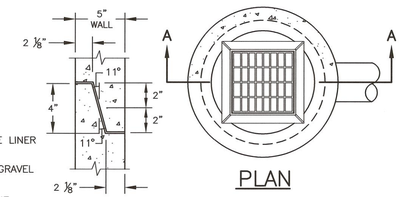
5010135.2977



SECTION A – A

L / C5 CATCH BASIN DETAIL

NTS



PLAN

DETAIL OF SHIPLAP JOINT

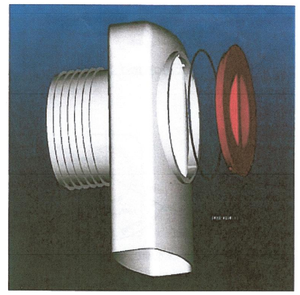
NOTES:
1. CONCRETE SHALL BE 4,000 P.S.I. AFTER 28 DAYS.
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER LINEAR FT. IN ALL SECTIONS & SHALL BE PLACED IN THE CENTER THIRD OF WALL.
3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
4. EACH CASTING TO HAVE LIFTING HOLES CAST IN.
5. RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
6. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
8. FITTING FRAME TO GRADE MAY BE DONE WITH PREFABRICATED ADJUSTMENT RINGS OR CLAY BRICKS (2 COURSES MAX.).
9. CONE SECTIONS MAY BE EITHER CONCENTRIC OR ECCENTRIC, OR FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CONE SECTION OF THE STRUCTURE AND WHERE PERMITTED.
10. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.

OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
11. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
12. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
13. "ELIMINATOR" OIL/WATER SEPARATOR SHALL BE INSTALLED TIGHT TO INSIDE OF CATCHBASIN.

CATCH BASIN POLYETHYLENE LINER NOTES:
1. POLYETHYLENE LINER (ITEM 604.0007) SHALL BE FABRICATED AT THE SHOP. DOWNSPOUT SHALL BE EXTRUSION FILLET WELDED TO THE POLYETHYLENE SHEET.
2. PLACE A CONTINUOUS BEAD OF AN APPROVED SILICONE SEALANT (SUBSIDIARY TO ITEM 604.0007) BETWEEN FRAME AND POLYETHYLENE SHEET.
3. PLACE CLASS AA CONCRETE TO 2" BELOW THE TOP OF THE GRATE ELEVATION (SUBSIDIARY TO DRAINAGE STRUCTURE).
4. USE ON DRAINAGE STRUCTURES 4' MIN. DIAMETER ONLY.
5. TRIM POLYETHYLENE SHEET A MAXIMUM OF 4" OUTSIDE THE FLANGE ON THE FRAME FOR THE CATCH BASIN BEFORE PLACING CONCRETE (EXCEPT AS SHOWN WHEN USED WITH 3-FLANGE FRAME AND CURB).
6. THE CENTER OF THE GRATE & FRAME MAY BE SHIFTED A MAXIMUM OF 6" FROM THE CENTER OF THE DOWNSPOUT IN ANY DIRECTION.
7. PLACED ONLY IN DRAINAGE STRUCTURES IN PAVEMENT.
8. SEE NHDOT DR-04, "DI-DB, UNDERDRAIN FLUSHING BASIN AND POLYETHYLENE LINER DETAILS," FOR ADDITIONAL INFORMATION.
9. CATCHBASINS WITHIN CITY RIGHT OF WAY SHALL HAVE A POLYETHYLENE LINER.

SIDEWALK TIP DOWN
(NON INTERSECTION) NTS

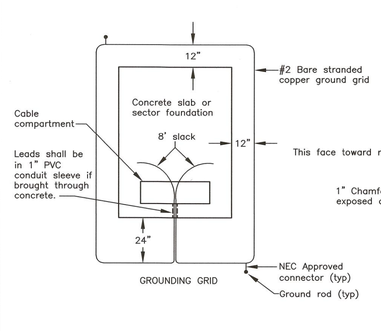
0 / C3 TYPICAL SIDEWALK TIP DOWNS



NOTES:
1. ALL CATCH BASIN OUTLETS TO HAVE "ELIMINATOR" OIL AND FLOATING DEBRIS TRAP MANUFACTURED BY KLEANSTREAM (NO EQUAL)
2. INSTALL DEBRIS TRAP TIGHT TO INSIDE OF STRUCTURE.
3. 1/4" HOLE SHALL BE DRILLED IN TOP OF DEBRIS TRAP.

M / C5 CATCH BASIN OIL TRAP

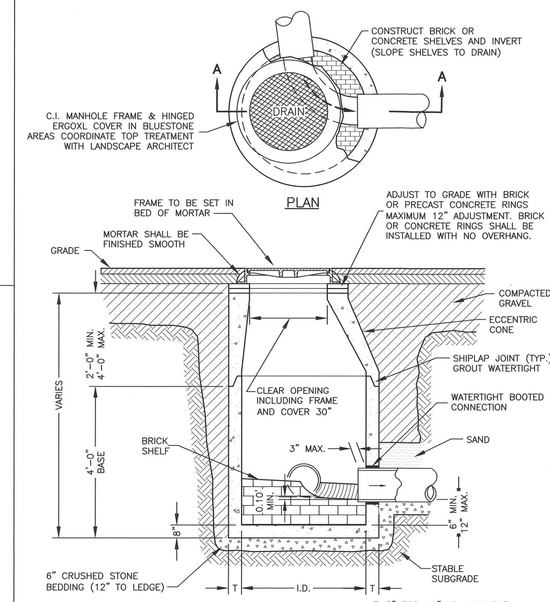
THE "ELIMINATOR" NTS



NOTES
1. See sheet "Requirements for Padmounted Transformer Slab Details".
2. All reinforcing to be #6 bars.
3. 1" PVC conduit sleeve for ground grid leads.
4. The ground grid shall be supplied and installed by the customer and is to be buried at least 12" below grade. Eight feet of extra wire for each ground grid leg shall be left exposed in the cable compartment to allow for the connection to the transformer. the two 8' ground rods may be either galvanized steel or copperweld and they shall be connected to the grid with NEC approved connectors.

N / C4 TRANSFORMER PAD

IF NEEDED NTS



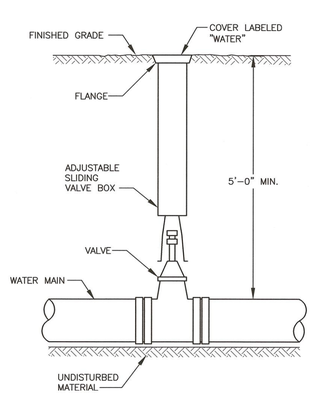
SECTION A – A

T=5" FOR 48" I.D. MANHOLE
T=6" FOR 60" I.D. MANHOLE
T=7" FOR 72" I.D. MANHOLE

NOTES:
1. CONCRETE SHALL BE 4,000 P.S.I. AFTER 28 DAYS.
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FOOT.
4. EACH CASTING TO HAVE LIFTING HOLES CAST IN.
5. ALL MANHOLES SHALL BE 48" I.D. UNLESS SPECIFIED OTHERWISE ON THE PLANS.
6. MANHOLE SHALL BE DESIGNED AND CONSTRUCTED TO WITHSTAND H-20 LOADING.
7. PARGE SPACES BETWEEN PIPE AND MANHOLE WITH MOTAR.

P / C5 DRAIN MANHOLE WITH BOOT DETAIL

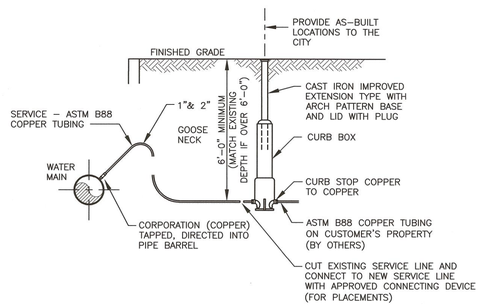
NTS



VALVE AND BOX DETAIL

NTS

NOTES:
1. GATE VALVE TO BE LOCATED WITHIN ROADWAY PAVEMENT WHERE POSSIBLE.
2. PROPER SIZE VALVE BOX SHALL BE INSTALLED WHERE GATE VALVES ARE SHOWN ON PLANS.



TYPICAL WATER SERVICE CONNECTION

NOTE:
PROVIDE WATER SERVICE SHUTOFF BOXES PER CITY STANDARDS.

Q / C4 WATER MAIN & SERVICE CONNECTION

COORDINATE WITH PORTSMOUTH DPW

HORIZONTAL ANCHOR DIMENSIONS FOR PIPE INSTALLATION IN ROCK

UP TO 150 P.S.I. WORKING PRESSURE

PIPE SIZE	TEE OR TAP SLEEVE		90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND	
	H	L	H	L	H	L	H	L	H	L
* 4"	0'–9"	1'–0"	0'–9"	1'–0"	0'–9"	1'–0"	0'–9"	1'–0"	0'–9"	1'–0"
6"	0'–9"	1'–0"	0'–9"	1'–0"	0'–9"	1'–0"	0'–9"	1'–0"	0'–9"	1'–0"
8"	1'–2"	1'–2"	1'–2"	1'–2"	1'–0"	1'–0"	0'–9"	1'–0"	0'–9"	1'–0"
10"	1'–4"	1'–4"	1'–4"	1'–4"	1'–0"	1'–0"	0'–9"	1'–0"	0'–9"	1'–0"
12"	1'–8"	1'–8"	1'–8"	1'–8"	1'–3"	1'–3"	1'–0"	1'–0"	0'–9"	1'–0"

* – FOR 3" AND SMALLER PIPES

HORIZONTAL ANCHOR DIMENSIONS FOR AVERAGE SOIL CONDITIONS

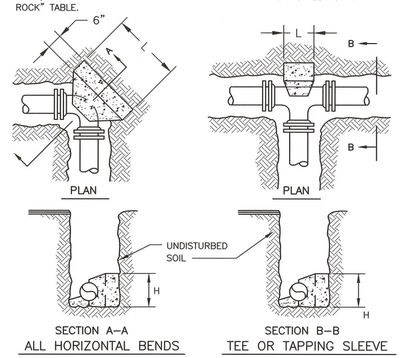
UP TO 150 P.S.I. WORKING PRESSURE

PIPE SIZE	TEE OR TAP SLEEVE		90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND	
	H	L	H	L	H	L	H	L	H	L
* 4"	1'–0"	2'–0"	1'–0"	2'–0"	1'–0"	1'–4"	0'–9"	1'–0"	0'–6"	1'–0"
6"	1'–0"	2'–0"	1'–0"	2'–0"	1'–0"	1'–4"	0'–9"	1'–0"	0'–6"	1'–0"
8"	1'–4"	2'–8"	1'–4"	2'–8"	1'–4"	1'–6"	1'–0"	1'–0"	0'–9"	1'–0"
10"	1'–8"	3'–4"	1'–8"	3'–4"	1'–8"	2'–0"	1'–3"	1'–3"	1'–0"	1'–0"
12"	2'–0"	4'–0"	2'–0"	4'–0"	2'–0"	2'–2"	1'–6"	1'–6"	1'–3"	1'–3"

* – FOR 3" AND SMALLER PIPES

NOTES:
1) TABLES ARE BASED ON AN ALLOWABLE SOIL PRESSURE OF 3000 PSF ON UNDISTURBED EARTH BEHIND THE ANCHOR BLOCK. WHERE SOIL HAS BEEN DISTURBED BY ADJACENT EXCAVATIONS OR WHERE SOIL CANNOT WITHSTAND SUCH A PRESSURE, THE TABLE DOES NOT APPLY.

2) WHERE ENTIRE DEPTH OF PIPE IS BELOW THE TOP SURFACE OF SOUND ROCK, USE "HORIZONTAL ANCHOR DIMENSIONS FOR PIPE INSTALLATION IN ROCK" TABLE.



HORIZONTAL ANCHORING

HALEYWARD
ENGINEERING | ENVIRONMENTAL | SURVEYING
200 Griffin Rd. Unit 14
Portsmouth, New Hampshire 03801
603.430.9282
WWW.HALEYWARD.COM

NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).

SITE REDEVELOPMENT
361 HANOVER STREET
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
2	DETAIL N	6/13/25
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0	ISSUED FOR COMMENT	3/14/25

REVISIONS

SCALE: AS SHOWN MARCH 2025

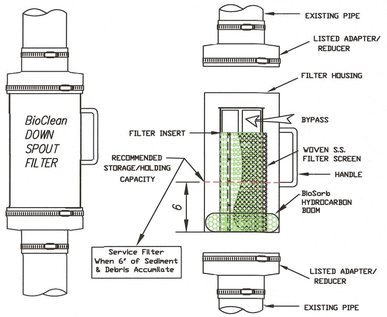
DETAILS D3

FB 444 PG 1

5010135.2977

SERVICE MANUAL
(Cleaning Procedures)

Bio Clean DOWNSPOUT FILTER
Screen Type With Hydrocarbon Boom



DETAIL OF PARTS

TOOLS AND EQUIPMENT NEEDED:

1. Medium size flat scred driver
2. BioSorb hydrocarbon boom. 25-1/2" X 2" dia. (Call Bio Clean to order)
3. Trash container or bag
4. Wooden dowel approx. 3' x 1/2' dia.

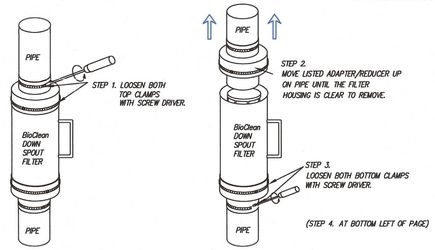
Bio Clean
A Forterra Company

P.O. BOX 869, Oceanside, Ca. 92049
(760) 433-7640 Fax (760) 433-3176
www.biocleanenvironmental.net

REMOVING FILTER

Bio Clean
A Forterra Company

P.O. BOX 869, Oceanside, Ca. 92049
(760) 433-7640 Fax (760) 433-3176
www.biocleanenvironmental.net



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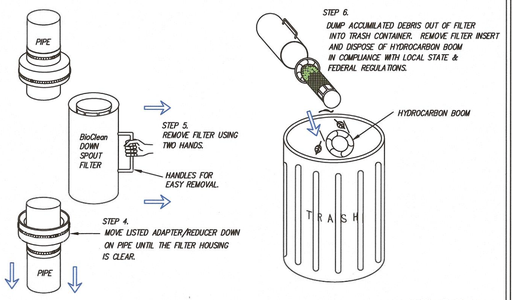
CLEANING FILTER



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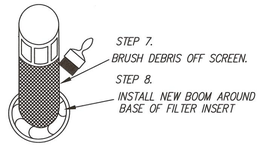
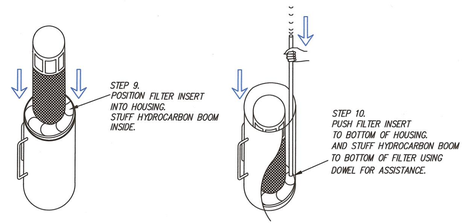


REPLACING FILTER INSERT



REPLACING FILTER

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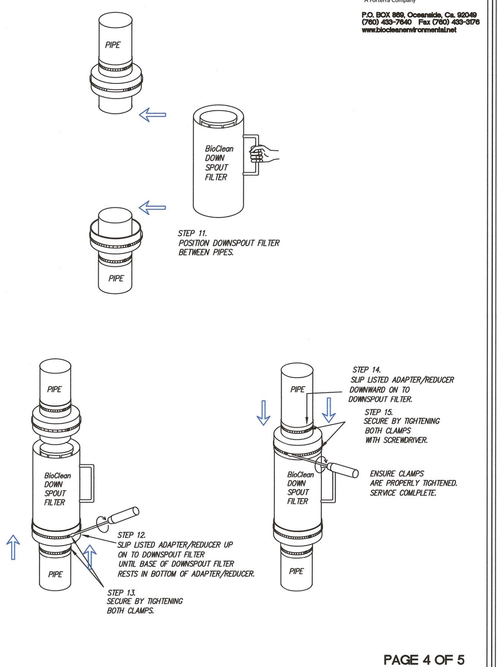
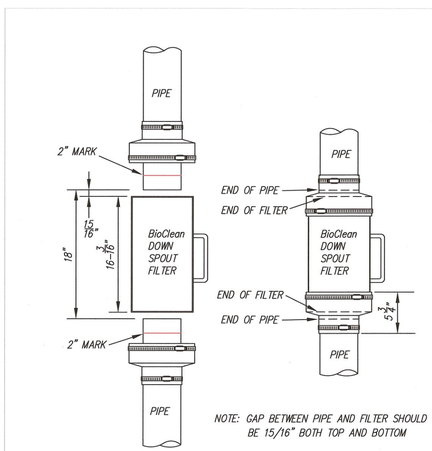


APPROPRIATE INSTALLATION

FILTER CENTERED BETWEEN PIPES WITH EVEN GAPS ON TOP AND BOTTOM



NOTE: GAP BETWEEN PIPE AND FILTER SHOULD BE 15/16" BOTH TOP AND BOTTOM

Bio Clean
A Forterra Company

P.O. BOX 869, Oceanside, Ca. 92049
(760) 433-7640 Fax (760) 433-3176
www.biocleanenvironmental.net

DOWNSPOUT FILTER

MAINTENANCE:

THE FILTER IS DESIGNED TO ALLOW FOR THE USE OF MANUAL OR VACUUM REMOVAL OF CAPTURED MATERIALS IN THE FILTER
STRUCTURE. FILTERS CAN BE CLEANED EASILY BY SIMPLY LOOSENING THE METAL CLAMPS AND REMOVING THE FILTER. THE HYDROCARBON
ADSORBENT MEDIA THEN IS REMOVED AND THE TRASH AND DEBRIS CAN BE REMOVED FROM THE STRUCTURE. AT EACH CLEANING, NEW
HYDROCARBON ADSORBENT MEDIA SHOULD BE REINSTALLED.

MAINTENANCE NOTES:

1. BIO CLEAN ENVIRONMENTAL SERVICES, INC. RECOMMENDS CLEANING AND DEBRIS REMOVAL MAINTENANCE A MINIMUM OF TWO TO FOUR TIMES PER YEAR, AND REPLACEMENT OF MEDIA BOOMS A MINIMUM OF TWICE A YEAR.
2. THE DOWNSPOUT FILTER CAN BE CLEANED BY LOOSING THE METAL CLAMPS AT BOTTOM AND TOP OF RUBBER BOOTS. REMOVE
THE FILTER BY GRASPING THE HANDLES, SLIDE DOWN THE BOTTOM BOOT OVER THE OUTFLOW PIPE AND SLIDE UP THE TOP BOOT OVER
INFLOW PIPE. PLACE THE FILTER ON THE GROUND. DISPOSE OF ANY TRASH AND SEDIMENTS COLLECTED IN FILTER.
3. ONCE THE FILTER IS FREE, REMOVE THE INTERIOR INSERT. REMOVE THE HYDROCARBON ADSORBENT MEDIA BY UNWRAPPING IT
FROM THE INTERIOR INSERT AND REPLACING WITH A NEW MEDIA, WRAPPING IT THE SAME WAY.
4. PLACE THE INTERIOR INSERT BACK INTO THE FILTER.
5. PLACE THE FILTER BACK IN LINE WITH THE PIPE AND SLIDE BACK THE TOP AND BOTTOM BOOTS IN PLACE AND TIGHTEN THE METAL CLAMPS SECURELY.
6. EVALUATION OF THE HYDROCARBON MEDIA SHALL BE PERFORMED AT EACH CLEANING. IF THE MEDIA IS FILLED WITH
HYDROCARBONS AND OILS IT SHOULD BE REPLACED.
7. TRANSPORT ALL DEBRIS, TRASH, ORGANICS AND SEDIMENTS TO APPROVED FACILITY FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REQUIREMENTS.
8. THE HYDROCARBON MEDIA WITH ABSORBED HYDROCARBONS IS CONSIDERED HAZARDOUS WASTE AND NEEDS TO BE HANDLED
AND DISPOSED OF AS HAZARDOUS MATERIAL. PLEASE REFER TO STATE AND LOCAL REGULATIONS FOR THE PROPER DISPOSAL OF USED MOTOR OIL/FILTERS.
9. FOLLOWING MAINTENANCE AND/OR INSPECTION, THE MAINTENANCE OPERATOR SHALL PREPARE A MAINTENANCE/INSPECTION RECORD. THE RECORD SHALL INCLUDE ANY MAINTENANCE ACTIVITIES PERFORMED, AMOUNT AND DESCRIPTION OF DEBRIS COLLECTED, AND CONDITION OF FILTER.
10. THE OWNER SHALL RETAIN THE MAINTENANCE/INSPECTION RECORD FOR A MINIMUM OF FIVE YEARS FROM THE DATE OF MAINTENANCE. THESE RECORDS SHALL BE MADE AVAILABLE TO THE GOVERNING MUNICIPALITY FOR INSPECTION UPON REQUEST AT ANY TIME.
11. ANY TOXIC SUBSTANCE OR ITEM FOUND IN THE FILTER IS CONSIDERED AS HAZARDOUS MATERIAL AND CAN ONLY BE HANDLED BY A CERTIFIED HAZARDOUS WASTE TRAINED PERSON (MINIMUM 24-HOUR HAZWOPER).

STORMWATER TREATMENT MAINTENANCE

HALEYWARD
ENGINEERING | ENVIRONMENTAL | SURVEYING
200 Griffin Rd. Unit 14
Portsmouth, New Hampshire 03801
603.430.9282
WWW.HALEYWARD.COM

NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

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SITE REDEVELOPMENT
361 HANOVER STREET
PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
0	ISSUED FOR COMMENT	3/14/25

REVISIONS

SCALE: AS SHOWN MARCH 2025

DETAILS D4

FB 444 PG 1

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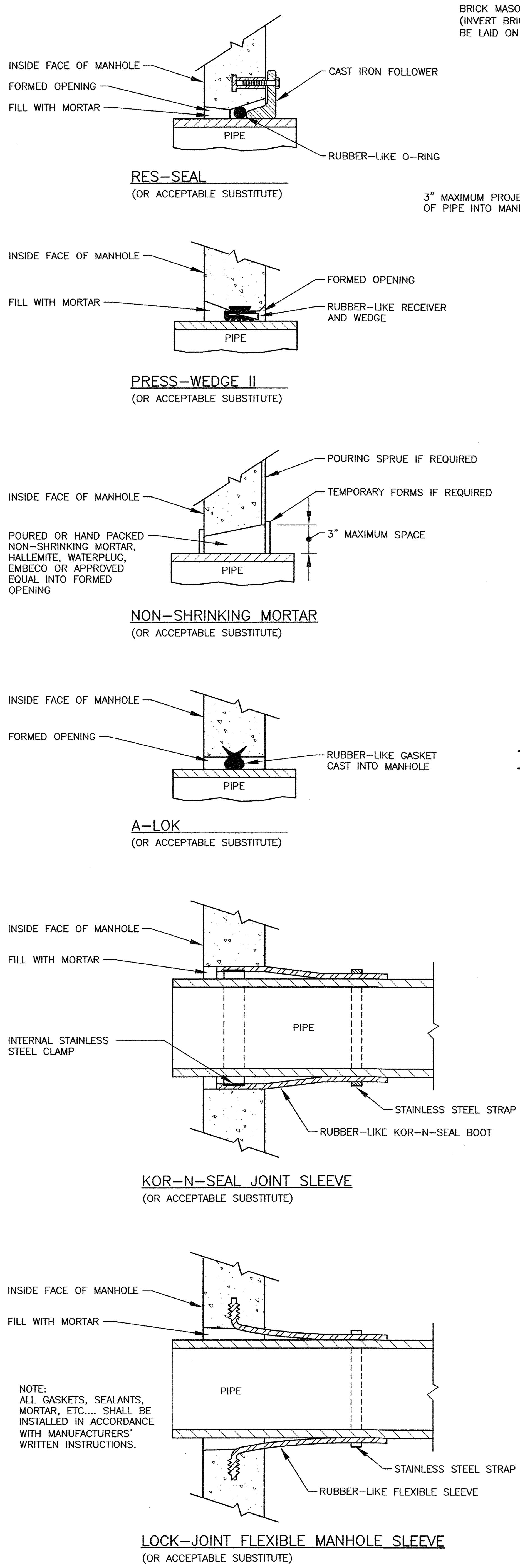
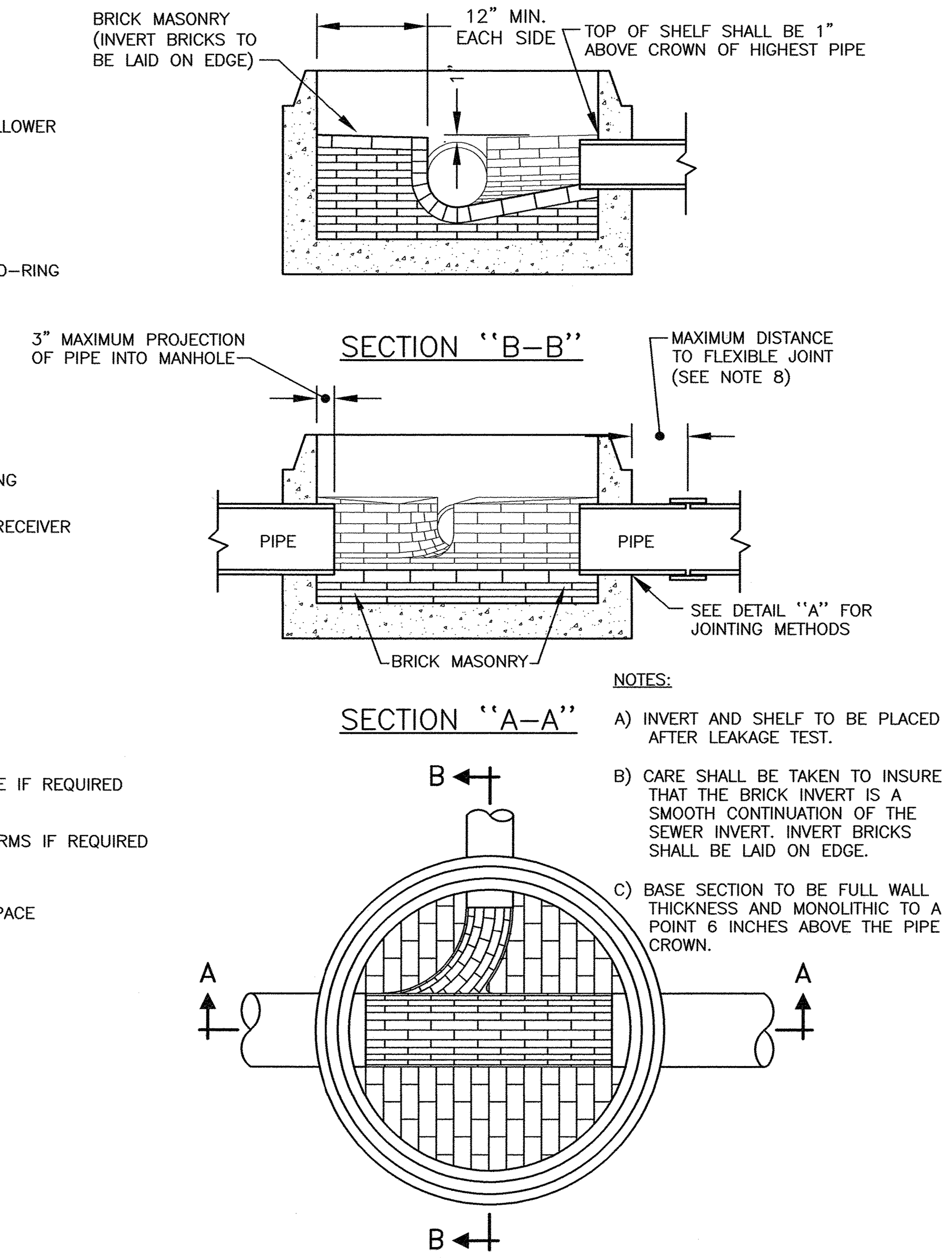
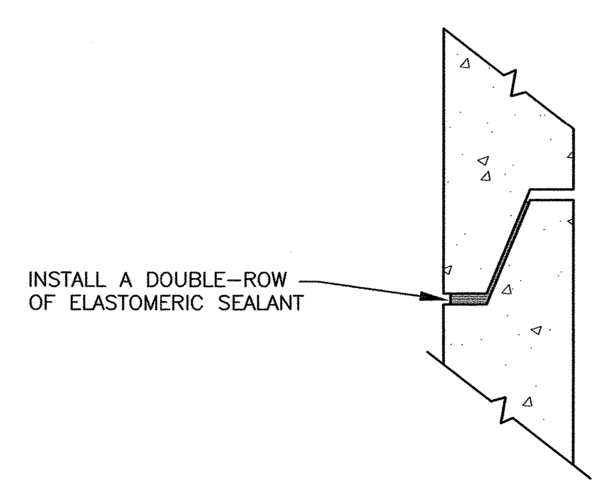


DETAIL "A" – PIPE TO MANHOLE JOINTS



TYPICAL MANHOLE – PLAN VIEW



ELASTOMERIC SEALANT

NOTE:
ALL GASKETS AND SEALANTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS.

DETAIL "B" – HORIZONTAL JOINTS

GENERAL NOTES

1) IT IS THE INTENTION THAT THE MANHOLE, INCLUDING ALL COMPONENT PARTS, HAVE ADEQUATE SPACE, STRENGTH AND LEAK PROOF QUALITIES CONSIDERED NECESSARY FOR THE INTENDED SERVICE. SPACE REQUIREMENTS AND CONFIGURATIONS, SHALL BE AS SHOWN ON THE DRAWING. MANHOLES SHALL BE AN ASSEMBLY OF PRECAST SECTIONS, WITH STEEL REINFORCEMENT, WITH ADEQUATE JOINTING, OR CONCRETE CAST MONOLITHICALLY IN PLACE WITH REINFORCEMENT. IN ANY APPROVED MANHOLE, THE COMPLETE STRUCTURE SHALL BE OF SUCH MATERIAL AND QUALITY AS TO WITHSTAND LOADS OF 8 TONS (H-20 LOADING) WITHOUT FAILURE AND PREVENT LEAKAGE IN EXCESS OF ONE GALLON PER DAY PER VERTICAL FOOT OF MANHOLE, CONTINUOUSLY FOR THE LIFE OF THE STRUCTURE. A PERIOD GENERALLY IN EXCESS OF 25 YEARS IS TO BE UNDERSTOOD IN BOTH CASES.

2) BARRELS AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE, OR POURED IN PLACE REINFORCED CONCRETE IF POURED AS A COMPLETE MANHOLE.

3) PRECAST CONCRETE BARREL SECTIONS, CONES AND BASES SHALL CONFORM TO ASTM C478.

4) LEAKAGE TEST MAY NOT BE FEASIBLE, BUT SHALL CONFORM TO ENV-WQ 704.17.

5) INVERTS AND SHELVES: MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT, CONSTRUCTED TO CONFORM TO THE SIZE OF THE PIPE AND FLOW. AT CHANGES IN DIRECTIONS, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE AND TANGENT TO THE CENTERLINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY.

6) FRAMES AND COVERS: MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. A THREE INCH (MINIMUM HEIGHT) WORD "SEWER" FOR SEWERS AND "DRAIN" FOR DRAINS SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER. CASTINGS SHALL CONFORM TO CLASS 30, ASTM A48.

7) BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE, FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33 STONE SIZE NO. 67.

100% PASSING	1 INCH SCREEN
90%–100% PASSING	3/4 INCH SCREEN
20%– 55% PASSING	3/8 INCH SCREEN
0%– 10% PASSING	#4 SIEVE
0%– 5% PASSING	#8 SIEVE

WHEN ORDERED BY THE ENGINEER TO STABILIZE THE BASE, SCREENED GRAVEL OR CRUSHED STONE 1/2 INCH TO 1-1/2 INCH SHALL BE USED.

8) FLEXIBLE JOINT: A FLEXIBLE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES:
RCP & CI PIPE – ALL SIZES – 48"

9) SHALLOW MANHOLE: IN LIEU OF A CONE SECTION, WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED HAVING AN ECCENTRIC ENTRANCE OPENING AND CAPABLE OF SUPPORTING H-20 LOADS.

10) MANHOLE STEPS MAY BE PERMITTED UPON REQUEST BY THE OWNER AS SECONDARY ADDITIONAL SAFETY FEATURE SUPPLEMENTARY TO THE PRIMARY PORTABLE LADDER ENTRY AND WHEN INSTALLED UNDER THE FOLLOWING CONDITIONS:

1. THE STEPS SHALL BE MANUFACTURED OF 5/8ths INCH ROUND STAINLESS STEEL, PLASTIC COVERED STEEL OR PLASTIC. THEY SHALL BE SHAPED SO THAT THEY CANNOT BE PULLED OUT OF THE CONCRETE WALL IN WHICH THEY ARE EMBEDDED.
2. THE STEPS SHALL BE EMBEDDED IN THE CONCRETE BY THE MANUFACTURER DURING MANUFACTURE OR IMMEDIATELY FOLLOWING REMOVAL OF FORMS. SECURING THE STEPS WITH MORTAR IN DRILLED OR CAST HOLES, WILL NOT BE ACCEPTABLE.
3. THE STEPS SHALL BE OF THE DROP TYPE WITH A DEPRESSED SECTION FOR HANDHOLD. APPROXIMATELY 14" x 10" IN DIMENSION.

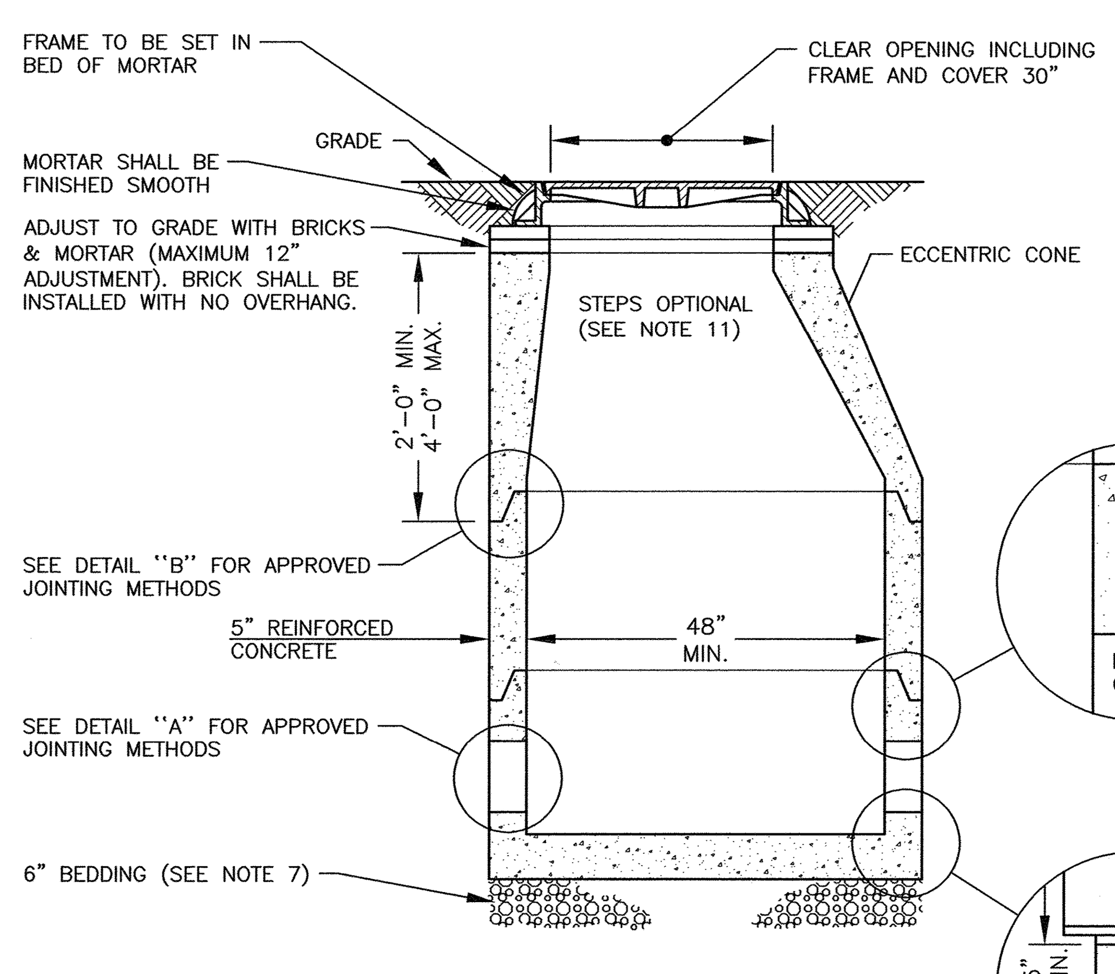
11) HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF A TYPE APPROVED BY THE ENGINEER, WHICH TYPE SHALL, IN GENERAL, DEPEND FOR WATER TIGHTNESS UPON AN ELASTOMERIC OR MASTIC-LIKE GASKET, IN 2 ROWS.

12) PIPE TO MANHOLE JOINTS SHALL BE ONLY AS APPROVED BY THE ENGINEER AND IN GENERAL, WILL DEPEND FOR WATERTIGHTNESS UPON EITHER AN APPROVED NON-SHRINKING MORTAR OR ELASTOMERIC SEALANT.

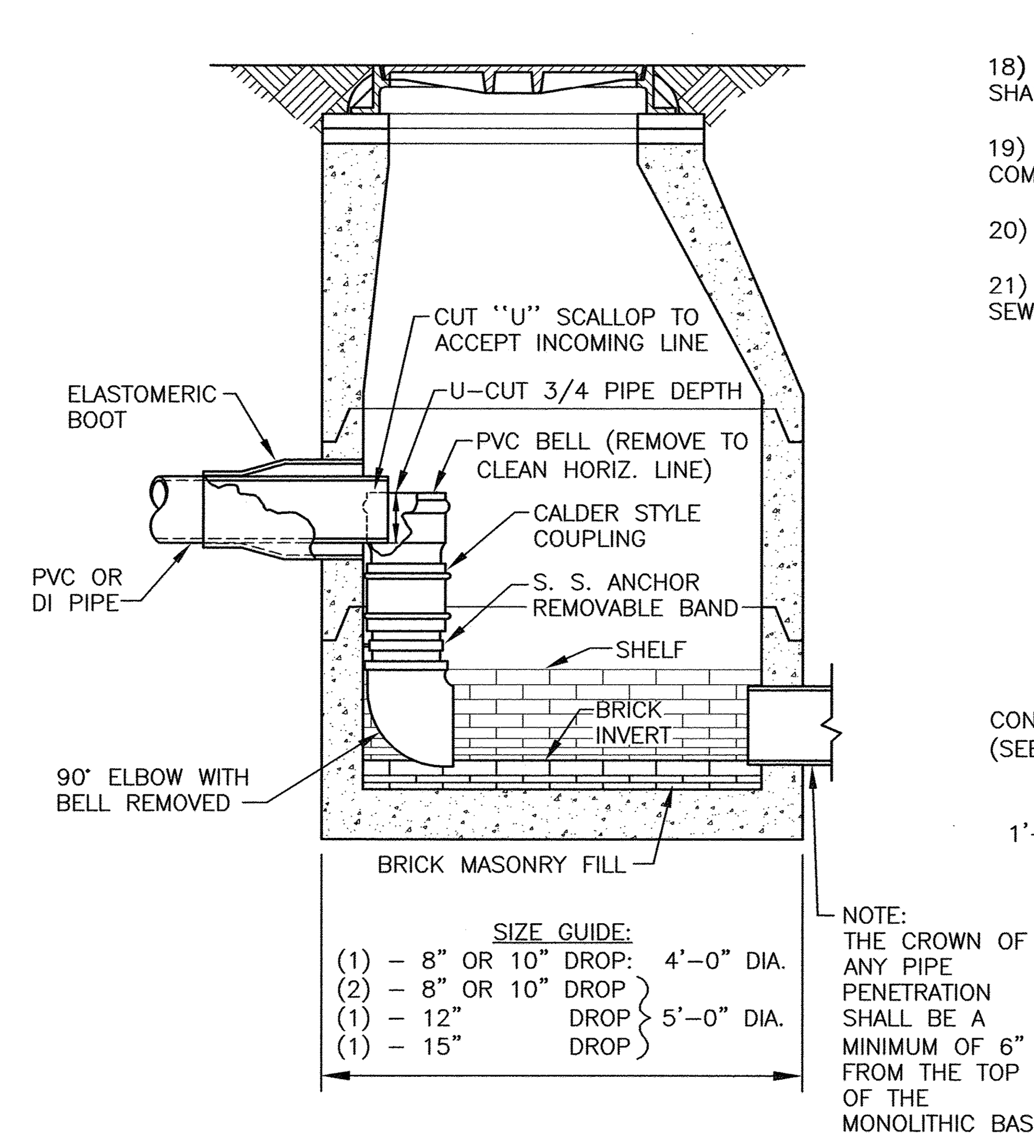
13) THE PURPOSE OF THIS PLAN IS TO SHOW STANDARDS FOR SEWER CONSTRUCTION.

14) ALL WORK SHALL BE IN COMPLIANCE WITH NHDES CODE OF ADMINISTRATIVE RULES PART ENV-WQ 704 DESIGN OF SEWERAGE.

15) BASE SECTIONS SHALL BE OF MONOLITHIC CONSTRUCTION TO A POINT AT LEAST 6 INCHES ABOVE THE CROWN OF THE LARGEST INCOMING PIPE.



TYPICAL SECTION



INSIDE DROP MANHOLE

GENERAL NOTES

1) MINIMUM PIPE SIZE FOR HOUSE SERVICE SHALL BE FOUR INCHES.

2) PIPE AND JOINT MATERIALS:

A. PLASTIC SEWER PIPE

1. PIPE AND FITTINGS SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS:

ASTM STANDARDS	GENERIC PIPE MATERIAL	SIZES APPROVED
D3034	*PVC (SOLID WALL)	8" THROUGH 15" (SDR 35)
F679	PVC (SOLID WALL)	18" THROUGH 27" (T-1 & T-2)
F794	PVC (RIBBED WALL)	8" THROUGH 36"
AWWA C900	PVC (SOLID WALL)	8" THROUGH 18"

*PVC: POLYVINYL CHLORIDE

2. JOINT SEALS FOR PVC PIPE SHALL BE OIL RESISTANT COMPRESSION RINGS OF ELASTOMERIC MATERIAL CONFORMING TO ASTM D-3212 AND SHALL BE PUSH-ON BELL AND SPIGOT TYPE.

3) DAMAGED PIPE SHALL BE REJECTED AND REMOVED FROM THE JOB SITE.

4) JOINTS SHALL BE DEPENDENT UPON A NEOPRENE OR ELASTOMERIC GASKET FOR WATER TIGHTNESS. ALL JOINTS SHALL BE PROPERLY MATCHED WITH THE PIPE MATERIALS USED. WHERE DIFFERING MATERIALS ARE TO BE CONNECTED, AS AT THE STREET SEWER WYE OR AT THE FOUNDATION WALL, APPROPRIATE MANUFACTURED ADAPTERS SHALL BE USED.

5) HOUSE SEWER INSTALLATION: THE PIPE SHALL BE HANDLED, PLACED AND JOINTED IN ACCORDANCE WITH INSTALLATION GUIDES OF THE APPROPRIATE MANUFACTURER. IT SHALL BE CAREFULLY BEDDED ON A 4 INCH LAYER OF CRUSHED STONE AND/OR GRAVEL AS SPECIFIED IN NOTE 10. BEDDING AND REFILL FOR DEPTH OF 12 INCHES ABOVE THE TOP OF THE PIPE SHALL BE CAREFULLY AND THOROUGHLY TAMPED BY HAND OR WITH APPROPRIATE MECHANICAL DEVICES.

6) THE PIPE SHALL BE LAID AT A CONTINUOUS AND CONSTANT GRADE FROM THE STREET SEWER CONNECTION TO THE FOUNDATION AT A GRADE OF NOT LESS THAN 1/4 INCH PER FOOT. PIPE JOINTS MUST BE MADE UNDER DRY CONDITIONS. IF WATER IS PRESENT, ALL NECESSARY STEPS SHALL BE TAKEN TO DEWATER THE TRENCH.

7) TESTING: WHEN REQUIRED BY THE GOVERNING AUTHORITY, TESTING SHALL CONFORM TO ENV-WQ 704.09.

8) ILLEGAL CONNECTIONS: NOTHING BUT SANITARY WASTE FLOW FROM HOUSE TOILETS, SINKS, LAUNDRY ETC. SHALL BE PERMITTED. ROOF LEADERS, FOOTING DRAINS, SUMP PUMPS OR OTHER SIMILAR CONNECTIONS CARRYING RAIN WATER, DRAINAGE OR GROUND WATER SHALL NOT BE PERMITTED.

9) HOUSE WATER SERVICE SHALL NOT BE LAID IN SAME TRENCH AS SEWER SERVICE, UNLESS IT IS ON A SHELF 12" HIGHER, AND 18" APART.

10) BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE, FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33 STONE SIZE NO. 67.

100% PASSING	1 INCH SCREEN
90%–100% PASSING	3/4 INCH SCREEN
20%– 55% PASSING	3/8 INCH SCREEN
0%– 10% PASSING	#4 SIEVE
0%– 5% PASSING	#8 SIEVE

WHERE ORDERED BY THE ENGINEER, OVEREXCAVATE UNSTABLE TRENCH BOTTOM AND BACKFILL WITH CRUSHED STONE.

11) LOCATION: THE LOCATION OF THE TEE OR WYE SHALL BE RECORDED AND FILED IN THE MUNICIPAL RECORDS. IN ADDITION, A FERROUS METAL ROD OR PIPE SHALL BE PLACED OVER THE TEE OR WYE AS DESCRIBED IN THE TYPICAL "CHIMNEY" DETAIL, TO AID IN LOCATING THE BURIED PIPE WITH A DIP NEEDLE OR PIPE FINDER.

12) CAST-IN-PLACE CONCRETE: SHALL CONFORM TO THE REQUIREMENTS FOR CLASS A (3000 PSI) CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AS FOLLOWS:

CEMENT: 6.0 BAGS PER CUBIC YARD
WATER: 5.75 GALLONS PER BAG OF CEMENT
MAXIMUM AGGREGATE SIZE: 3/4 INCH

13) BACKFILL UP TO SUBBASE GRAVEL SHALL BE WITH EXCAVATED SOIL FROM TRENCHING OPERATIONS. COMPACT IN 8" LIFTS WITH VIBRATORY PLATE COMPACTORS TO 90% OF MODIFIED PROCTOR DENSITY. IF FINE-GRAINED, COMPACT WITH POGO STICKS OR SHEEPSFOOT ROLLERS. PLACE NO LARGE ROCKS WITHIN 24" OF PIPE. TRENCHES THAT ARE NOT ADEQUATELY COMPACTED SHALL BE RE-EXCAVATED AND BACKFILLED UNDER THE SUPERVISION OF THE DESIGN ENGINEER OR GOVERNING BODY. UNSUITABLE BACKFILL MATERIAL INCLUDES CHUNKS OF PAVEMENT, TOPSOIL, ROCKS OVER 6" IN SIZE, MUCK, PEAT OR PIECES OF PAVEMENT.

14) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB-SITE SAFETY AND COMPLIANCE WITH GOVERNING REGULATIONS.

15) ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE. REFILL WITH BEDDING MATERIAL. FOR TRENCH WIDTH SEE TRENCH DETAIL.

16) SAND BLANKET: CLEAN SAND, FREE FROM ORGANIC MATTER, SO GRADED THAT 90% – 100% PASSES A 1/2 INCH SIEVE AND NOT MORE THAN 15% WILL PASS A #200 SIEVE. BLANKET MAY BE OMITTED FOR DUCTILE IRON AND REINFORCED CONCRETE PIPE PROVIDED THAT NO STONE LARGER THAN 2 INCHES IS IN CONTACT WITH THE PIPE.

17) BASE COURSE GRAVEL, IF ORDERED BY THE ENGINEER, SHALL MEET THE REQUIREMENTS OF DIVISION 300 OF THE LATEST EDITION OF THE:

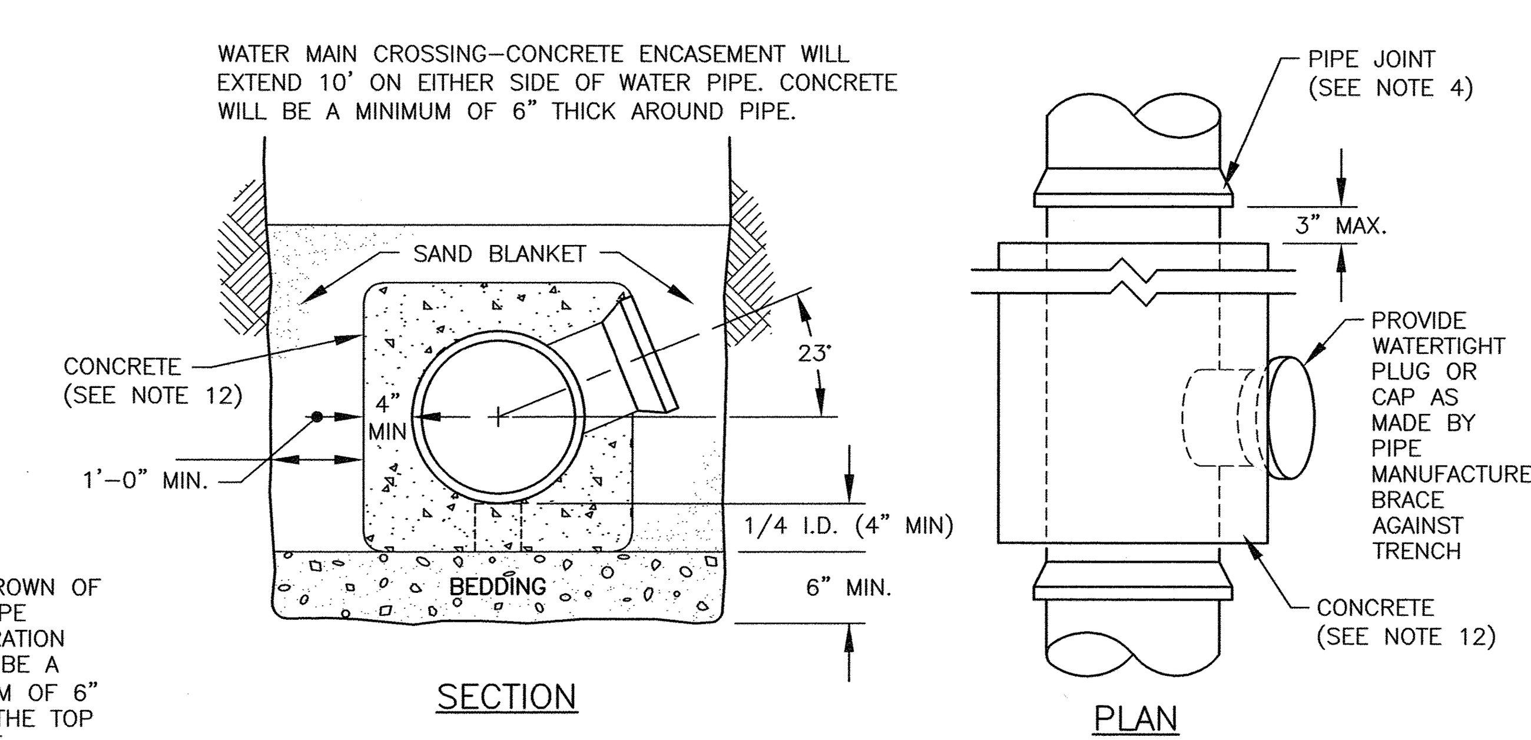
STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION.

18) IF FULL ENCASEMENT IS UTILIZED, DEPTH OF CONCRETE BELOW PIPE SHALL BE 1/4 I.D. (4" MIN.) BLOCK SUPPORT SHALL BE SOLID CONCRETE BLOCKS.

19) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION.

20) THE PURPOSE OF THIS PLAN IS TO SHOW STANDARDS FOR SEWER CONSTRUCTION.

21) ALL WORK SHALL BE IN COMPLIANCE WITH NHDES CODE OF ADMINISTRATIVE RULES PART ENV-WQ 704 DESIGN OF SEWERAGE.



CONCRETE FULL ENCASEMENT
NOT TO SCALE

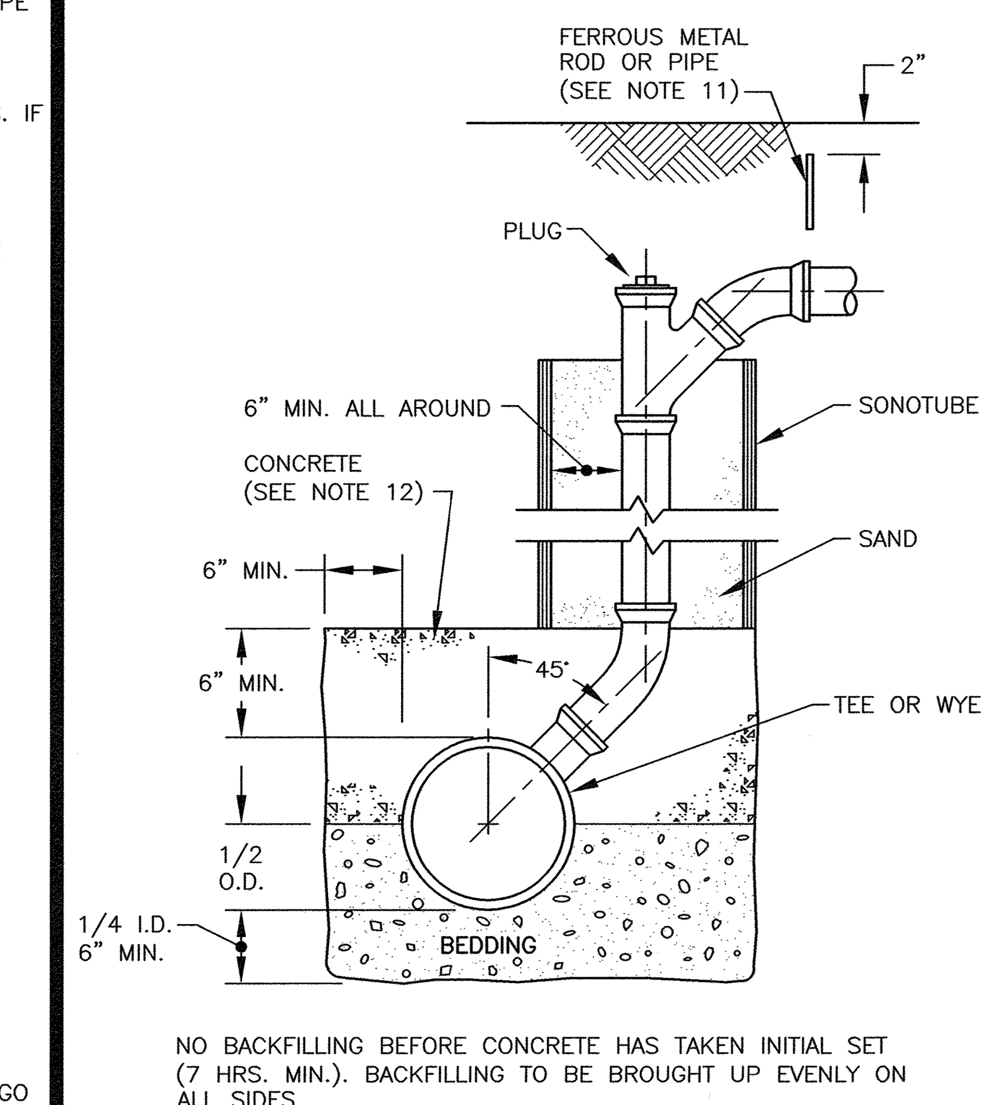
HALEYWARD
ENGINEERING | ENVIRONMENTAL | SURVEYING
200 Griffin Rd. Unit 14
Portsmouth, New Hampshire 03801
603.430.9282
WWW.HALEYWARD.COM

NOTES:

1) THE CONTRACTOR SHALL NOTIFY DIG SAFE AT 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.

2) UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVEGROUND OR UNDERGROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND/OR THE OWNER. UTILITY CONFLICTS SHOULD BE REPORTED AT ONCE TO THE DESIGN ENGINEER.

3) CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH THE "NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION. (NHDES DECEMBER 2008).



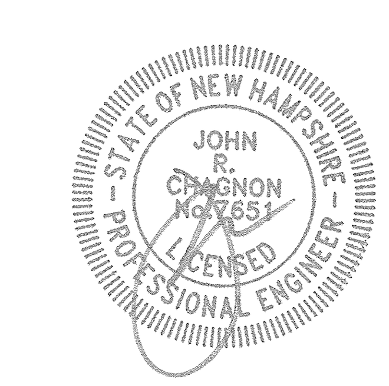
NO BACKFILLING BEFORE CONCRETE HAS TAKEN INITIAL SET (7 HRS. MIN.). BACKFILLING TO BE BROUGHT UP EVENLY ON ALL SIDES.

CHIMNEY (SEE NOTE)
NOT TO SCALE

SITE REDEVELOPMENT 361 HANOVER STREET PORTSMOUTH, N.H.

NO.	DESCRIPTION	DATE
0	ISSUED FOR COMMENT	3/14/25

REVISIONS



SCALE: AS SHOWN
MARCH 2025

SEWER DETAILS

D5

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN

DATE

P
C4
SEWER MANHOLE DETAILS
INSTALL PER PORTSMOUTH REQUIREMENTS
NTS