



**LEBANON PLANNING BOARD
JUNE 10, 2024 - 6:30 PM
COUNCIL CHAMBERS, CITY HALL OR
REMOTE VIA VIRTUAL PLATFORM
LEBANONNH.GOV/LIVE**

1. Call to Order

- A. To participate in this meeting, please [join live via Microsoft Teams](#) or call 929-229-5356 (access code: 742 678 70#). If you have trouble accessing this meeting, please [email tim.corwin@lebanonnh.gov](mailto:tim.corwin@lebanonnh.gov).

2. Notice of Regional Impact

3. Public Hearing Items

- A. **Dartmouth Hitchcock Medical Center, 1 Medical Center Drive (Tax Map 10, Lot 8), zoned MC:** Applicant requests a Site Plan amendment to expand and reconfigure four existing parking lots and to widen a driveway, together with associated site improvements. **PB2024-12-SPA**
- B. **CP Centerra LLC, 12 Centerra Parkway (Tax Map 10, Lots 11, Plot 100), zoned IND-L:** Pursuant to Section 9.1 of the Site Plan Review Regulations, applicant requests a modification to a previously approved site plan (PB2022-45-SPR) for a restaurant with a drive through together with associated site improvements. Applicant proposes changes to the site circulation, parking, landscaping, and utilities. **PB2024-18-SPA**
- C. **City of Lebanon, 12 South Park Street (Tax Map 91, Lot 253), zoned LD:** Site plan review for a proposed +/- 24,796 sq. ft. municipal fire station to replace the existing facility, together with associated site improvements. **PB2024-21-GOV**
- D. **Brickyard One Nominee Trust, 174 Hanover Street Ext (Tax Map 48, Lot 4), 0 Hanover Street Ext (Tax Map 48, Lot 2), 0 Hanover Street Ext (Tax Map 48, Lot 1), and 238 Hanover Street (Tax Map 63, Lot 1), zoned R-1, R-O-1 & R-3:** Site plan review for a proposed 474-unit multi-family residential development totaling +/- 731,600 sq. ft. in size, consisting of 11 buildings together with parking, utilities, landscaping, access, and other related site improvements. **PB2024-22-SPR - Postponed to 7/8/2024**

4. Other Business

- A. **XYZ Dairy, LLC, 0 Beyerle Street (Tax Map 58, Lot 18), zoned R-3:** Request for a Conditional Use Permit pursuant to Section 310.2 and 309 of the Zoning Ordinance for a proposed cottage development with 16 dwelling units and a community building, together with related site improvements. **PB2024-23-CON**

5. Approval of Minutes

- A. April 15, 2024

- B. April 22, 2024
- C. April 29, 2024
- D. May 6, 2024 - Site Walk
- E. May 20, 2024

6. Adjournment

The order of agenda items is subject to change.

Meetings are open for in-person and remote attendance. Members of the public that wish to attend remotely may do so by going to LebanonNH.gov/Live where you will find instructions on how to enter the meeting. Members of the public will be able to participate and ask questions through the City's virtual platform or by phone. Please note: Should technical difficulties occur during the meeting that disrupts virtual or phone connection(s), the meeting will continue without remote access capabilities.



CITY OF LEBANON ~ PLANNING & DEVELOPMENT

PLANNING BOARD

June 10, 2024 Meeting

Staff Memorandum – PB2024-12-SPA – *postponed from 5/13/24*

APPLICATION INFORMATION

Agenda Item: 3.A

Application ID:

PB2024-12-SPA

Application Type:

Site Plan amendment to expand and reconfigure four existing parking lots and to widen a driveway, together with associated site improvements

Property Location & Tax Map:

1 Medical Center Drive (Tax Map 10, Lot 8)

Applicant/Property Owner:

Mary Hitchcock Memorial Hospital

Zoning District:

Medical Center

Future Land Use Map:

Medical Office

Property Size (per City Assessor):

+/-289 acres

Overlay Districts:

Wetlands Conservation District

LEGAL NOTICE

Dartmouth Hitchcock Medical Center, 1 Medical Center Drive (Tax Map 10, Lot 8), zoned MC: Applicant requests a Site Plan amendment to expand and reconfigure four existing parking lots and to widen a driveway, together with associated site improvements. PB2024-12-SPA

PLANS AND APPLICATION MATERIALS

- ▶ Application form
- ▶ Letter dated April 30, 2024 from Nicholas Fiore, P.E., of Engineering Ventures, PC (project description; 2 pages)
- ▶ Application for Waivers (2 pages)
- ▶ Site Plan Review Regulations Technical Checklist (5 pages)
- ▶ Letter dated April 29, 2024 from Nicholas Fiore, P.E., of Engineering Ventures, PC (response to staff comments; 9 pages)
- ▶ Letter from April 30, 2024 from David Stiger, DHMC Facilities Manager (re: EV Charging Stations Zoning Ordinance compliance; 3 pages)
- ▶ Certified Notification List (3 pages)
- ▶ Fee Schedule (1 page)
- ▶ Plan set titled "Dartmouth-Hitchcock Medical Center Main Campus Parking Expansion" prepared by Engineering Ventures, PC, dated March 11, 2024, EV Project #23310 (27 Sheets)

Included with on-line agenda packet only:

- ▶ Drainage Analysis report prepared by Engineering Ventures, PC, dated April 30, 2024, EV Project #21147 (103 pages)

COMPLETENESS REVIEW

This application has been reviewed in accordance with the Lebanon Site Plan Review Regulations. The Planning and Development Department recommends that the Board find that the application is complete enough to accept jurisdiction and to commence review.

APPLICATION OVERVIEW

The subject property is a +/-289-acre parcel owned by the applicant. The property is currently developed as the Dartmouth Hitchcock Medical Center (DHMC), consisting of multiple buildings, which provide in-patient and out-patient clinical services and medical research along with

associated site improvements.

At this time, the applicant proposes to expand and reconfigure four existing parking lots and to widen a driveway, together with additional associated site improvements. As more fully described in the attached letter dated April 30, 2024, from Nik Fiore, PB, of Engineering Ventures, PC, “three of the lot expansions will better meet staff parking needs, and the fourth will provide needed additional parking for the hospital’s emergency department. Additionally, the project includes a slight widening of the driveway in the compressed natural gas (CNG) area to better accommodate access for the delivery vehicles”.

STAFF COMMENTS

PLANNING

Jurisdiction

The proposed development constitutes a “major change” to the property (as that term is defined in Article II of the Site Plan Review Regulations) and, therefore, requires Site Plan Review by the Planning Board and demonstration of compliance with the Article V submission requirements and Article VI design requirements.

Waiver Requests

Pursuant to Section 7.1 (“Waiver of Regulations”), the applicant has requested partial waivers from certain provisions of the Site Plan Review Regulations, as follows:

- **Section 5.1.E.5** – *requiring a current survey certified by a land surveyor licensed in New Hampshire*
- **Partial Waiver of Article V submission requirements and Article VI design requirements** – The applicant is only proposing to redevelop a portion of the property. However, the Site Plan Review Regulations apply to the entire lot and not just the portion of the property that the applicant proposes to redevelop. Therefore, the applicant is requesting a general waiver from having to comply with any of the Article V submission requirements and Article VI design requirements outside of the specific area of the lot proposed to be redeveloped.

Pursuant to Section 7.1 of the Site Plan Review Regulations, the Board may grant a waiver of any part of the Regulations if it finds, by majority vote, that either:

- A. Strict conformity would pose an unnecessary hardship to the Applicant and waiver would not be contrary to the spirit and intent of the regulations; or
- B. Specific circumstances relative to the site plan, or conditions of the land in such site plan, indicate that the waiver will properly carry out the spirit and intent of the regulations.

The applicant’s basis for each waiver request is described in the attached Application for Waivers. Note that the granting of a waiver from a design requirement does not relieve an applicant from making the improvements that are depicted on the approved site plan, even if the depicted improvement would have been covered by the waiver had it not been included on the approved site plan.

SECTION 5 – SUBMISSION REQUIREMENTS

5.1 (Drawings and Other Submittals): The applicant has provided the attached materials pursuant to the submission requirements of Section 5.1 of the Site Plan Review Regulations.

SECTION 6 – DESIGN AND CONSTRUCTION REQUIREMENTS

6.2 (Landscaping Standards): The applicant has submitted landscaping plans in accordance with Section 5.1.E.15 of the Site Plan Review Regulations and the landscaping design standards set forth in Section 6.2. See Sheets 18-21 of the plan set.

6.3 (Utilities & Fire Protection): As noted below, the Lebanon Fire Department has reviewed this application and has no concerns or comments regarding the proposal.

6.4 (Fees and Assessments in Effect at time of Connection): Not applicable.

6.6 (Stormwater Management): The applicant proposes certain stormwater improvements for each expansion area, as more fully described in the Stormwater Narrative included as part of the applicant's Drainage Analysis. The City Engineer has reviewed the applicant's drainage calculations and notes that the proposed 1" orifice pipes will clog easily and will require regular maintenance, and recommends that the applicant consider an alternative, if possible. The City Engineer is otherwise comfortable with the stormwater management design.

6.7 (Lighting): The applicant has submitted lighting plans in accordance with Section 5.1.E.12 of the Site Plan Review Regulations and the lighting design standards set forth in Section 6.7. See Sheets 25-27 of the plan set.

6.8 (Off-Site Improvements): The applicant does not propose any off-site improvements.

6.9 (Premature and Scattered Development): This section provides that the Planning Board "may disapprove a site plan application that proposes development that is scattered or premature, so as to involve danger or injury to health, safety, or prosperity of the community. For purposes of this section, a development shall be considered scattered or premature if it will cause, or poses an undue risk of causing, a substantial or appreciable adverse impact upon any of the factors or parameters set forth in the General or Specific Purposes of Site Plan Review, as outlined in Sections 1.4 and 1.5 of these Regulations." Staff does not recommend a finding that the proposed development is scattered and premature as such a finding would appear to be without basis.

6.10 (Additional Regulations for the Lebanon Downtown District): *Not applicable.*

CITY ASSESSOR

No comment provided.

BUILDING INSPECTOR

No comment provided.

ENGINEERING/PUBLIC WORKS

The City Engineer provided comments to the applicant which have been satisfactorily addressed.

FIRE DEPARTMENT

The Lebanon Fire Department has reviewed this application and has no concerns or comments regarding the proposal.

POLICE DEPARTMENT

No comment provided.

OTHER COMMENTS

The Lebanon Tree Advisory Board has reviewed the application and provides the following comments:

1. "Acer ginnala is considered an exotic invasive by many northern states due to heavy seeding into forested areas. Lebanon is in the process of updating its outdated recommended planting list and Acer ginnala has been removed. We would recommend replacing with another suitable shade tree for dry sites, such as Hackberry (*Celtis occidentalis*), Serviceberry (*Amelanchier canadensis*), Kentucky Coffeetree (*Gymnocladus dioica* 'Espresso'), Pin Oak (*Quercus palustris*) or Red Oak (*Quercus rubra*)."
2. "[The applicant] may consider replacing the Red Pine (*Pinus resinosa*) with a more broadly spreading shade tree, to better suit the goal of shading large expanses of asphalt. See [comment #1] for recommended alternatives."

STAFF RECOMMENDATIONS

If the Planning Board moves to approve this request, then based on the information reviewed by City staff, the Planning and Development Department recommends that the Planning Board approve the application with the conditions noted below:

General Conditions

1. It shall be the applicant's responsibility to be familiar with and aware of these conditions of approval, and it shall be the applicant's responsibility to satisfy these conditions of approval and to satisfy them within the relevant timeframes outlined below.
2. The project is subject to the Site Plan Review Regulations adopted May 13, 1991, last revised January 23, 2023, and the Zoning Ordinance adopted January 16, 2013, last amended February 7, 2024, which are the regulations in effect at the time the application was submitted.
3. "Active and substantial development," as defined in Section 8.4.A.1 of the Site Plan Review Regulations, shall be achieved within two (2) years of the date of this approval (8.4.A.2), subject to an extension if applied for by the applicant and if approved by the Planning Board per Section 8.4.A.3. If active and substantial development is not achieved within two (2) years of the date of the Planning Board's approval, the development shall be subject to any changes in the City's land use regulations.
4. "Substantial completion," as defined in Section 8.4.B.1 of the Site Plan Review Regulations, shall be achieved within five (5) years of the date of this approval. If substantial completion is not achieved within five (5) years of the date of the Planning Board's approval, the development shall be subject to any changes in the City's land use regulations.

5. All required landscape plantings shall meet the minimum size requirements for such plantings set forth in Section 6.2.B of the Site Plan Review Regulations at the time of installation.
6. Edge-of-disturbance fencing shall be installed and maintained before and during any site work, to be verified by the City Engineer or City's third-party inspector on site.
7. The property owner is responsible for the maintenance and operation of the stormwater management system in accord with the O&M plan, and such responsibility shall run with the land. (Section 6.6.H.2.b of the Site Plan Review Regulations).

Conditions to be Satisfied Prior to the Start of Any Construction Activities

8. Within 30 days of the Planning Board's approval, the applicant shall update the plan sheets as follows to the satisfaction of the Planning and Development Department:
 - a) Under the Site Schedule on Sheet 13 (C204) renumber notations C4, C5, and C6 to C3, C4, and C5, respectively;and shall provide the Planning and Development Department with a digital copy of the revised plan sheets saved in a PDF-A format for archival purposes.
9. All engineering review fees shall be paid in full as required by Section 4.7.E.1 of the Site Plan Review Regulations. (*Staff note: applicant can request an invoice from the Department of Public Works*).

Conditions to be Satisfied Prior to the Issuance of a Certificate of Completion

10. Prior to the start of any construction activities on the property, the applicant shall obtain or update (if appropriate) any required State approvals, including but not limited an amendment to the property's NH DES Alteration of Terrain Permit, if needed.

Conditions to be Satisfied Prior to the Issuance of a Certificate of Completion

11. All improvements depicted on the plan shall be completed, and shall be constructed as depicted on the approved plan, including any modifications to the plan as may be approved by the Planning Board in accordance with the Site Plan Review Regulations.

Attachments

cc: Mary Hitchcock Memorial Hospital c/o David Stiger (via e-mail)
Engineering Ventures, PC c/o Nicholas Fiore (via e-mail)
File

CITY OF LEBANON APPLICATION FOR

SPECIAL EXCEPTION	☐	☒	SITE PLAN REVIEW
VARIANCE	☐	☐	SUBDIVISION
MOTION FOR REHEARING	☐	☐	LOT LINE ADJUSTMENT
APPEAL OF AN ADMIN. DECISION	☐	☐	CONDITIONAL USE PERMIT

☐ OTHER _____
PROPERTY OWNER (APPLICANT):

NAME: Mary Hitchcock Memorial Hospital TEL.#: 603-650-5741

MAILING ADDRESS: attn: David Stiger, One Medical Center Drive, Lebanon, NH 03756

E-MAIL ADDRESS: David.L.Stiger@hitchcock.org

CO-APPLICANT, AGENT, OR LESSEE:

NAME: Engineering Ventures, P.C. TEL.#: 603-442-9333

MAILING ADDRESS: attn: Nicholas Fiore, 85 Mechanic Street, Suite E2-3, Lebanon, NH 03766

E-MAIL ADDRESS: nikf@engineeringventures.com

PROJECT LOCATION:

TAX MAP #: 10 LOT#: 8 PLOT #: ZONE: MC

STREET ADDRESS OF PROJECT: One Medical Center Drive, Lebanon

IS THIS PROPERTY LOCATED IN THE: **WETLANDS** ☐ YES ☒ NO **HISTORIC DISTRICT** ☐ YES ☒ NO
FLOOD PLAIN ☐ YES ☒ NO

SCOPE OF PROJECT:

Minor expansions to existing parking lots.

TYPE OF OCCUPANCY:

EXISTING ☐ VACANT ☐ ONE FAMILY ☐ TWO FAMILY ☐ MULTI-FAMILY ☒ COMMERCIAL ☐ INDUSTRIAL
 PROPOSED ☐ VACANT ☐ ONE FAMILY ☐ TWO FAMILY ☐ MULTI-FAMILY ☒ COMMERCIAL ☐ INDUSTRIAL
 IF USE IS **COMMERCIAL** OR **INDUSTRIAL**, PLEASE NOTE **SPECIFIC**
 USE: Medical center

SIGNATURE BLOCK:

FOR PLANNING BOARD APPLICATIONS ONLY: I, the undersigned, hereby submit this application on the date noted below with the knowledge and understanding that the Planning Board shall determine if the submitted application is complete according to its regulations at its next regularly scheduled meeting on _____, 20____, unless I personally request, in writing, that the Board delay its determination of completeness to a later date.

PROPERTY

OWNER:

David L Stiger

DATE: 3.7.2024

NOTE: IF, AS OWNER, YOU WISH TO DESIGNATE AN AGENT TO ACT ON YOUR BEHALF, PLEASE READ THE FOLLOWING AND SIGN BELOW: I hereby designate the person listed above as my agent for the purpose of procuring the necessary local permits for the proposed work as described herein. Representations made by my agent may be accepted as though made by me personally, and I understand that I am bound by any official decision made on the basis of such representation.

PROPERTY

OWNER:

David L Stiger

DATE: 3.7.2024

DATE RECEIVED	FILE # (MAP/LOT)	APPLICATION #		
3/11/2024	10-8	PB2024-12-SPA		

April 30, 2024

City of Lebanon Planning Board
c/o Tim Corwin, Senior Planner and Zoning Administrator
51 North Park St
Lebanon, NH 03766

RE: Site Plan Review Application
DHMC Parking Lot Expansions
Tax Map 10 Lots 8

Dear Chair Faunce & the Lebanon Planning Board,

On behalf of Mary Hitchcock Memorial Hospital, Engineering Ventures, PC (EV) is pleased to submit the enclosed Site Plan Review application package for parking lot expansions to four (4) parking lots of the Dartmouth Hitchcock Medical Center campus. Three of the lot expansions will better meet staff parking needs, and the fourth will provide needed additional parking for the hospital's emergency department. Additionally, the project includes some widening of the driveway in the compressed natural gas (CNG) area to better accommodate access for the delivery vehicles.

Lot 2, near the north end of campus will be expanded in 3 locations and gain a total of 26 spaces.

Lot 4, south of Borwell Building, will receive a small addition of 6 parking spaces.

Lots 8, also south of Borwell Building, will be expanded to add 16 spaces.

The Emergency Department parking lot, Lot E, will be reconfigured somewhat and expanded. The existing lot will be widened by 2 feet, lengthened to add spaces, configured with angled parking, and made one way. The driveway will be reconfigured to remove a slip lane and reduce conflicting turning movements. An additional lot will be added east of the main driveway. In total, the parking area will expand from 28 existing spaces to 52.

Construction is slated to begin in June of this year. The hope is to have it completed this year as well, but it might not be completed until spring or summer of 2025, depending on contractor and materials availabilities.

We look forward to discussing this project with you at the staff review on Monday, May 13, 2024. Please let us know if you need anything else in the meantime.

Best Regards,
ENGINEERING VENTURES, PC



Nicholas A. Fiore, PE
Vice President

Cc: Dave Stiger, DH

Enc: SPR Application Form, Checklist, Certified Notification List, & Waivers Application
Written Responses to Staff Comments
Full set of revised plans: 1 @ 24x36 and 6 @ 11x17
Drainage Analysis
Electric Vehicle Parking Memo (by DH)



City of Lebanon, New Hampshire APPLICATION FOR WAIVERS

Office Use Only

Date Received: _____

File No.: _____

PROJECT INFORMATION

Name of Applicant: Mary Hitchcock Memorial Hospital

Project Name: DHMC Parking Lot Expansions

Project Address: 1 Medical Center Drive, Lebanon, NH 03756

WAIVER REGULATIONS

In order to grant a Waiver from a requirement of the City of Lebanon Site Plan Review or Subdivision Regulations, the Planning Board must find that the Waiver is justified under one of the following criteria (See Article VII of the Site Plan Review Regulations and Section 7.15 of the Subdivision Regulations):

Criteria A. Strict conformity would pose an unnecessary hardship to the Applicant and waiver would not be contrary to the spirit and intent of the regulations;

OR

Criteria B. Specific circumstances relative to the site plan, or conditions of the land in such site plan, indicate that the waiver will properly carry out the spirit and intent of the regulations.

WAIVER REQUEST(S)

I (we) hereby request a Waiver from:

[You can respond in the space provided, or attach a separate statement. Please be prepared to address each request during your public hearing. You must show that you have justified granting the Waiver(s).]

5.1.E(5)

1. Section 5.1.E(5) of the (circle one) **Site Plan Review / Subdivision Regulations**. A Waiver of this Section meets (circle one) **Criteria A / Criteria B** because A topographic survey of the project sites was conducted for this project, but the site is such a small portion of the entire property that it would have been impractical to survey the whole property. A current boundary survey is on file with the City. The project will have no effect of any rights-of-way or easements on the property.
2. Section All of the (circle one) **Site Plan Review / Subdivision Regulations**. A Waiver of this Section meets (circle one) **Criteria A / Criteria B** because This project is limited to a relatively small portion of a large property. The Applicant request a general waiver from having to satisfy the Site Plan Review Regulations outside the portion of the property that is proposed to be redeveloped.

3. Section ____ of the (*circle one*) **Site Plan Review / Subdivision Regulations**. A Waiver of this Section meets (*circle one*) **Criteria A / Criteria B** because _____
- _____
- _____
4. Section ____ of the (*circle one*) **Site Plan Review / Subdivision Regulations**. A Waiver of this Section meets (*circle one*) **Criteria A / Criteria B** because _____
- _____
- _____
5. Section ____ of the (*circle one*) **Site Plan Review / Subdivision Regulations**. A Waiver of this Section meets (*circle one*) **Criteria A / Criteria B** because _____
- _____
- _____
6. Section ____ of the (*circle one*) **Site Plan Review / Subdivision Regulations**. A Waiver of this Section meets (*circle one*) **Criteria A / Criteria B** because _____
- _____
- _____
7. Section ____ of the (*circle one*) **Site Plan Review / Subdivision Regulations**. A Waiver of this Section meets (*circle one*) **Criteria A / Criteria B** because _____
- _____
- _____
8. Section ____ of the (*circle one*) **Site Plan Review / Subdivision Regulations**. A Waiver of this Section meets (*circle one*) **Criteria A / Criteria B** because _____
- _____
- _____

SIGNATURE

I (we) hereby submit this application to the Planning Board and attest that to the best of my (our) knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. As the applicant or as the agent of the applicant, I attest that I am duly authorized to act in this capacity.

Signature of Applicant:  Date: 03/11/2024

CITY OF LEBANON, NH SITE PLAN REVIEW REGULATIONS TECHNICAL CHECKLIST	
PROJECT NAME: DHMC Parking Lot Expansions	
APPLICANT: Mary Hitchcock Memorial Hospital	DATE: 04/30/2024
GENERAL SUBMISSION REQUIREMENTS:	

All applications to the Planning Board for Site Plan Review must be submitted by 12:00 Noon on the day of the filing cutoff. [§4.7.B] Submissions must be accompanied by the following information or review of the application may be delayed:

A properly completed and signed Application Form *(available at www.lebanonnh.gov)*. [§5.1.A]

The appropriate filing fees. [§5.1.B]

A written project description. [§5.1.C]

A list of the names and mailing addresses of all persons to be notified, by certified mail, of the public hearing. [§5.1.D]

A completed and signed Application for Waivers *(available at www.lebanonnh.gov)* [§5.1.G.3]

A completed and signed Technical Checklist *(available at www.lebanonnh.gov)*. [§4.7.B]
[Applicants must complete the entire checklist to ensure that all necessary information and materials have been provided with the application or that written requests for waivers have been properly provided in accordance with Article VII of the Site Plan Review Regulations, as appropriate.]

Two (2) full-size sets of the Site Plan set. [§5.1.E]

A digital copy of the Site Plan set in .PDF format. [§5.1.F]

NOTE: Applications shall contain sufficient information to enable the City Staff and the Planning Board to evaluate the proposed development for compliance with the Zoning Ordinance, the Planning Board's Regulations, and other applicable City Codes, and for the Planning Board to make an informed decision.

All required application materials shall be submitted as a single inclusive package, including any appropriate waiver requests as permitted by the Regulations. Submission of a complete application package ensures that the review process by City Staff is as efficient and effective as possible.

The purpose of the filing deadline is to provide adequate time for City review of the proposal. Submission of any altered, additional, or substitute application materials required by Article V of these Regulations, subsequent to the filing deadline, other than as directed by City Staff, shall cause the application to be deemed untimely filed, and such application shall not be heard until a subsequent month.

CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST

PLAN SUBMITTAL TECHNICAL CHECKLIST:

NOTE: Site plan drawings shall include the information described below pursuant to Article V of the Lebanon Site Plan Review Regulations. Plans shall be submitted on sheets no larger than 24" x 36". Plan sets with multiple sheets shall include sheets of uniform size and be bound on the left edge. When more than three (3) sheets are required, an additional cover sheet shall be attached including a table of contents. A scale of not smaller than one (1) inch equals 40 feet is suggested. All lettering shall be of a size and type that is legible.

In order to facilitate the use of the City's Geographic Information System (GIS) for planning purposes, all surveys and engineered plans submitted for Site Plan Review shall utilize the NH State Plane Coordinate system and shall reference the North American Vertical Datum of 1988 (NAVD 88), unless prior approval to use an alternate coordinate system and/or vertical datum is granted by the Planning & Development Department.

A written request for waiver shall be required, pursuant to Article VII of the Site Plan Review Regulations, for any submission requirement for which the information or data is not provided by the applicant. [§5.1.G(4)] NOTE: The submission requirements described in paragraphs 5.1.E(1) through 5.1.E(4) shall not be waivable under the procedures of Article VII of the Site Plan Review Regulations. [§5.1.E]

[Checklist begins on following page]

**CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST**

[illegible]

CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST

Plan Requirements (cont.)	Info. Provided	Waiver Sought
5.1.E(6) - Existing and proposed grades, including topographic contours, with spot elevations. Where the grade is less than 20%, the contours shall be at 2-foot intervals; otherwise they shall be at 5-foot intervals. All contours shall be referenced to USGS or FEMA Flood Insurance Rate Map (FIRM) datums, as appropriate. Existing topographic information shall be prepared by a professional engineer registered in New Hampshire or land surveyor licensed in New Hampshire.	☒	☐
5.1.E(7) - Shape, size, height, and location of all existing structures located on site and within 200 feet of site.	☒	☐
5.1.E(7) - Elevation views indicating shape, size, height, and location of all proposed structures, including expansions of or additions to existing buildings. Such elevation views shall provide sufficient detail to allow for review by the Board and City staff of the adequacy of proposed access and egress points, walkways, lighting, and other site-related improvements.	☐	☐
5.1.E(8) - Location of existing natural features such as streams, marshes, lakes, ponds, wetlands, rock outcrops, or wooded areas, and existing man-made features such as roads and structures. Indicate those natural and man-made features that are to be removed, retained, or altered.	☒	☐
5.1.E(8) - Wetlands on the property shall be delineated by a NH Certified Wetlands Scientist, whose seal and signature shall appear on the plan. Documentation in the form of U.S. Army Corps of Engineers New England District Wetlands Delineation Data Sheets and/or other field notes and materials concerning the delineation shall be submitted.	N/A ☐	☐
5.1.E(9) - Zoning District, Tax Map and Lot number, and use of abutting properties within 200 feet of property.	☒	☐
5.1.E(9) - Location of streets, pedestrian paths/trails, and bicycle routes within 200 feet of the site boundary; and the location of curb cuts and vehicle accesses within 200 feet of the site boundary.	☒	☐
5.1.E(10) - Proposed streets, driveways, emergency vehicle accesses, parking spaces, and sidewalks, with indication of dimensions and direction of travel. Show required sight distances at curb cuts and dimensions for the inside radii of all curves.	☒	☐
5.1.E(10) - Vehicle and bicycle parking spaces shall be numbered.	N/A ☐	☐
5.1.E(10) - Loading spaces and facilities used in connection with any structures on the site shall be shown	N/A ☐	☐
5.1.E(10) - Total square footage and percentage of the lot covered by impervious cover shall be shown.	☒	☐
5.1.E(11) - Parking area safety measures including raised crosswalks/speed tables, signage, walkway lighting, striping and similar markings such as dedicated pedestrian/bicycle crossings and lanes through parking areas, fire lanes, compact and/or electric vehicle parking/charging, parking wayfinding, ADA signage and access aisles.	☒	☐
5.1.E(12) - Size and location of all existing and proposed public and private utilities. <i>(Note: the applicant is encouraged to submit a Sewer Use Permit Application and obtain a Notice of Permitted Allocation, and to obtain a Water Use Permit prior to submission of the Site Plan Review application.)</i>	☒	☐

CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST

Plan Requirements (cont.)	Info. Provided	Waiver Sought
5.1.E(13) - Plan for outdoor lighting showing proposed location, mounting height, fixture type, lamp type, color correlated temperature (CCT), and wattage of all exterior free-standing lighting or building-mounted fixtures.	☒	☐
5.1.E(13) - Analyses and illuminance-level diagrams, to include average and minimum foot-candle measurements, showing that proposed installation conforms to the lighting-level standards in Site Plan Review Regulations.	☒	☐
5.1.E(13) - Manufacturer's specification information for each proposed light fixture and lamp (NOTE: This information may be provided on the plan or as a separate attachment).	☒	☐
5.1.E(13) - Drawings of all relevant building elevations showing location and height of all building-mounted fixtures, the portions of any walls or architectural features to be illuminated, illumination levels of walls or architectural features, and aiming points for any remote light fixtures.	N/A ☐	☐
5.1.E(14) - Plan for location of free-standing or building-mounted signs, including location, mounting, aiming, and shielding of any remote light fixtures for externally-lit signs.	N/A ☐	☐
5.1.E(14) - For internally-lit signs, relevant information concerning the method of illumination and the opacity of the sign background, showing that the proposed installation conforms to the requirements of the Regulations.	N/A ☐	☐
5.1.E(15) - The location and boundaries of any Overlay Districts established pursuant to Article IV of the Zoning Ordinance (including but not limited to the Wetlands Conservation District, Riverbank Protection District, Steep Slopes District, and Floodplain District) and, if applicable, protected shorelands pursuant to the Shoreland Water Quality Protection Act (NH RSA 483-B).	N/A ☐	☐
5.1.E(15) - For properties located within the Floodplain District, the 100-year flood elevation, floodway, shoreland protection zone, and flood plain limits shall be identified.	N/A ☐	☐
5.1.E(16) - Landscaping plan showing proposed new plantings to be installed and existing natural vegetation to be retained. Plan shall show in detail the number, size (height and/or caliper), and species (botanical and common names) of all proposed shrubs and trees.	☒	☐
5.1.E(16) - Existing trees over 12 inches in diameter (measured 4.5 feet above ground surface) within 25 feet of the disturbed area, must be counted and shown on the plan, if included towards fulfilling landscaping requirements.	N/A ☐	☐
5.1.E(16) - Calculations for square footage of perimeter landscaping.	N/A ☐	☐
5.1.E(16) - Parking lot shading calculations shall be provided by depicting new trees and shrubs at 10-year crown size.	☒	☐
5.1.E(17) - Existing and proposed surface and subsurface storm drainage facilities, including City storm drainage facilities located within 200' of site.	☒	☐
5.1.E(17) - Plans for retention, detention, slow release, and treatment of storm water shall be provided shall be provided in accordance with the requirements of Section 6.6.	☒	☐
5.1.E(18) - Section 6.6. Stormwater Management submission requirements.	See Stormwater Checklist	
5.1.E(19) - Plans for snow removal and storage.	☒	☐

CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST

Plan Requirements (cont.)	Info. Provided	Waiver Sought
5.1.E(20) - A plan for the development showing provisions for automobile, transit, bicyclist, and pedestrian access and circulation. Such plan shall show both existing and proposed means of access to the site including connections with, public streets, sidewalks, transit stops, and formal paths/trails. Plans shall include any traffic calming and traffic control devices necessary in conjunction with the site development, as well as the location of all existing transit routes and transit stops located or passing within 1/4 mile (1,320 feet) of the property.	☒	☐
5.1.E(21) - Construction detail drawings including, but not limited to, pavements, walks, steps, curbing, drainage structures, water and/or sewer utilities, ground-mounted signage (e.g., fire lanes, ADA parking, commercial), surface treatments, transit shelters, energy generation units (e.g., solar), bike rack style, electric vehicle charging, outdoor lighting, outdoor furniture, retaining walls, tree boxes and other site systems or structures. Accompanying specifications and cutsheets may be required.	☒	☐
5.1.E(21) - Where applicable, roadway, drainage, water and sewer utility profile drawings shall be provided at a scale of 1"=40 feet (horizontal) and 1"=4 feet (vertical) and typical cross-section drawings shall be provided at a scale of 1"=5 feet (horizontal and vertical), unless prior approval to use an alternate scale is granted by the Reviewing Engineer. (NOTE: Ordinarily, only two (2) sets of such construction drawings shall be provided to the Planning and Development Department with the application submission.)	N/A ☐	☐
5.1.E(22) - Depict any current and proposed easements, rights-of-way, and deed restrictions including those related to sewer, electrical utility, shared access, etc.	☒	☐
5.1.E(23) - For multi-family structures, plans for on-site recreational facilities.	N/A ☐	☐
5.1.E(24) - Where a fire, emergency equipment, or similar vehicle turnaround area is provided, it must have an adequate turn radius. Provide CAD Autoturn data or a similar basis of design for the turn radius, if requested by Lebanon Fire or Engineering staff. City staff may also ask for this information at any time.	N/A ☐	☐
Supporting Documents and Information, Where Applicable	Info. Provided	Not Applicable
5.1.G(1) - An estimated timetable, to include phasing schedules, for construction and completion of buildings, parking, facilities, landscaping, and other required improvements.	☒	☐
5.1.G(2) - Any development estimated to generate a net increase of 100 peak hour trips or 1,000 average daily trips (based upon the most current edition of the ITE Trip Generation Manual) shall prepare and submit a Traffic Impact Study in accordance with standard traffic analysis conventions as set forth by the NHDOT. The Board may, at its discretion, require the submission of a Traffic Impact Study for developments estimated to generate less than 100 peak hour trips or 1,000 average daily trips if the Board has reason to believe such development could adversely affect levels of service or have other adverse impacts.	N/A ☐	☐
5.1.G(3) - Written requests for waivers from all applicable provisions of these Regulations shall be provided pursuant to Article VII - "Waiver Procedure". (note: use Application for Waivers form).	☒	☐
5.1.G(4) - For multi-family dwelling developments and mixed-use developments resulting in a net increase of 50 dwelling units or more, the application shall include the information and impact statements identified in Section 6.9.B.	N/A ☐	☐

NOTE: THE APPLICANT IS RESPONSIBLE FOR PROVIDING THE REQUIRED INFORMATION PURSUANT TO ARTICLE V OF THE SITE PLAN REVIEW REGULATIONS. PLEASE BE AWARE THAT THIS CHECKLIST IS FOR INFORMATION AND GUIDANCE ONLY AND DOES NOT REPRESENT THE LAW DICTATING SUBMITTAL REQUIREMENTS NOR IS IT COMPLETE AND INCLUSIVE THEREOF.

Completed By: Engineering Ventures - Nicholas A. Fiore

**CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST**

CITY OF LEBANON, NH STORMWATER REVIEW REGULATIONS TECHNICAL CHECKLIST	
PROJECT NAME: DHMC Parking Lot Expansions	
APPLICANT: Mary Hitchcock Memorial Hospital	DATE: 04/30/2024

NOTE: Stormwater plans shall include the information described below pursuant to Article VI of the Lebanon Site Plan Review Regulations. Plans shall be submitted on sheets no larger than 24" x 36". Plan sets with multiple sheets shall include sheets of uniform size and be bound on the left edge. When more than three (3) sheets are required, an additional cover sheet shall be attached including a table of contents. A scale of not smaller than one (1) inch equals 40 feet is suggested. All lettering shall be of a size and type that is legible.

In order to facilitate the use of the City's Geographic Information System (GIS) for planning purposes, all surveys and engineered plans submitted shall utilize the NH State Plane Coordinate system and shall reference the North American Vertical Datum of 1988 (NAVD 88), unless prior approval to use an alternate coordinate system and/or vertical datum is granted by the Planning Office.

A written request for waiver shall be required, pursuant to Article VII of the Site Plan Review Regulations, for any submission requirement for which the information or data is not provided by the applicant. [§6.6.I]

[Stormwater checklist begins on following page]

**CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST**

[illegible]

CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST

Plan Requirements (cont.)	Info. Provided	Waiver Sought
g. Plan references and notes (including sequence of soil disturbance) h. Proposed and existing public and private utilities i. Proposed project components to become property of or the responsibility of the City shall be labeled as such j. Existing and proposed impervious cover, with areas used to calculate effective impervious cover (EIC, as defined herein) clearly identified and the square footage of each type identified and labeled. k. Test Pit(s) locations and data where stormwater practices are proposed, as appropriate. l. Details of individual design elements shown on separate plan sheets following the Proposed Conditions SMP. The Existing Conditions SMP & the Proposed Conditions SMP shall be provided on sheets no larger than 24" x 36", at a scale of one (1) inch = 20 feet for urban areas, and one (1) inch = 40 feet for non-urban areas. The City Engineer will make the final determination as to the appropriate scale, ensuring that all important site and hydrologic features are easily recognized. If plan shall encompass more than two (2) sheets, at the required 1:40 or 1:20 scale, a separate large scale representation plan sheet (e.g. 1:100) is required to be provided, so as to show entirety of site, as well as off-site contributing areas.	☒ ☒ ☐ N/A ☒ ☐ N/A ☒	☐ ☐ ☐ ☐ ☐ ☐
6.6.C.2 - In addition to the above described SMP plan sheets, the following SMP supplemental information is required: 1. A drainage analysis that includes calculations comparing pre- and post-development stormwater runoff rates (cubic feet per minute) and volumes (cubic feet) based on a 1-inch rainstorm, and the 2-year, 25-year, 50-year, and 100-year, 24-hour frequency storms. Calculations shall include, but not be limited to, the sizing of all structures and BMPs, including sizing of emergency overflow structures based on the 50-year 24-hour frequency storm discharge rate, with 1-foot of free-board. Storm rates shall be based on current design depths from the Northeast Regional Climate Center - http://precip.eas.cornell.edu. <i>Any site that was primarily wooded in the last five years shall be considered undisturbed woods Any site from which wooded vegetation has been removed within 5 years prior to the first submission to the planning board with respect to a proposed development, or upon which, at some earlier time, clearing has occurred in anticipation of development, shall be treated as undisturbed woodland for purposes of calculating pre-development runoff volumes. For purposes of this paragraph any tree cutting which occurred without leaving stands of healthy, growing trees within areas near waters and highways, as required by RSA 227-J:9, I, shall be presumed to have occurred in anticipation of development</i>	☒	☐

**CITY OF LEBANON, NH
SITE PLAN REVIEW REGULATIONS
TECHNICAL CHECKLIST & STORMWATER CHECKLIST**

Plan Requirements (cont.)	Info. Provided	Waiver Sought
2. A drainage analysis results summary tabulated (pre & post) for each proposed outfall or catchment outlet point including runoff rates and volumes for each storm event analyzed above.	☒	☐
3. An Erosion and Sediment Control Plan for all proposed construction activities in accordance with the NH Stormwater Management Manual Volume 3, (December 2008 or current revision; downloadable from the website)	☒	☐
4. A comprehensive Operation and Maintenance Plan for long-term maintenance of all proposed stormwater management elements and BMPs including the proposed schedule of inspections and anticipated maintenance (see section H.2 Operations & Maintenance Plan for detailed requirements).	☒	☐
<u>6.6.D</u> - Phased Development: For phased developments, the plans and calculation requirements under this section (6.6) shall apply as though the development of the entire parcel were being proposed in one single application. The review and approval process for phased development applications is provided in section 4.9 of the Lebanon Site Plan Regulations.	☐ N/A	☐

NOTE: THE APPLICANT IS RESPONSIBLE FOR PROVIDING THE REQUIRED INFORMATION PURSUANT TO ARTICLE VI OF THE SITE PLAN REVIEW REGULATIONS. PLEASE BE AWARE THAT THIS CHECKLIST IS FOR INFORMATION AND GUIDANCE ONLY AND DOES NOT REPRESENT THE LAW DICTATING SUBMITTAL REQUIREMENTS NOR IS IT COMPLETE AND INCLUSIVE THEREOF.

Completed By: Engineering Ventures - Nicholas A. Fiore

(Last Revised 9/20/2021)

Planning office Use Only:

Date Received ___/___/___ Checklist Complete YES or NO Checked by: _____

April 29, 2024

City of Lebanon Planning & Development Department
Attn: Tim Corwin, Senior Planner and Zoning Administrator
51 North Park St
Lebanon, NH 03766

RE: DHMC Main Campus Parking Expansion
City of Lebanon, New Hampshire
Planning & Zoning Review

Dear Mr. Corwin,

On behalf of DHMC please find below written responses to comments provided by your office on the above referenced Site Plans Review application. All the comments are repeated below. The highlighted comments are the ones you asked us to specifically address. Our responses are provided in red.

STAFF COMMENTS MISSED BY AI:

- *Site Plan Regs:*
 - 5.1.E.4.e.8 – heights of existing buildings
 - 5.1.E.10 – plans shall indicate direction of travel –
 - EV added flow direction arrows to landscape plans; sheets C209-C212
 - 5.1.E.13 – lighting plan missing –
 - The revised plan set now includes lighting plans.
 - 5.1.E.18 – section 6.6. submission requirements (drainage report / stormwater calculations not provided)
 - This resubmission package includes a drainage report and stormwater calculations.
 - Section 6.2.E.1 – parking area shading requirements
 - EV added shading calc table to landscape plans; sheets C209-C212.
 - Section 6.5.I.3 – bicycle parking requirements
- *General plan comments:*
 - Sheet numbers missing from some of the plan sheets
 - Cover sheet:
 - Zoning chart note 4 – indicate that wetland areas are located outside areas of proposed disturbance
 - The Zoning Chart is revised accordingly.
 - “Applicants” should be singular
 - Revised accordingly.
 - *Recommendation:* Identify prior site plans that the property is currently subject to
 - *Recommendation:* Identify Planning Board application number
 - *Recommendation:* Identify Site Plan Review Regulations that that plan is subject to (ie adoption date and revision date of current SPRs)
 - Sheet 3 (C002)
 - Is abutter’s list up to date?
 - The abutter’s list has been verified and revised as needed.

- If E4H Architects is a project consultant, add to the cover sheet, if not, remove from abutter's list and remove the corresponding footnote –
 - e4h has been removed from the table.
- Footnote (E) to the abutter's list is non-sensical – please reword –
 - Footnote (E) has been revised.
- **Recommendation: Delineate limits of disturbance on existing plan sheets**
 - Demo items have been added to existing conditions plans; sheets C101-C104
- **Sheet 8 (C104) is mislabeled along the bottom of the sheet as "SITE PLAN"**
 - The mislabeling has been corrected.
- **Recommendation for site plan sheets: identify total area of net new paving and/or impervious coverage for each project area**
- **Sheet 10 (C201)**
 - Note C7 points to a light pole instead of the stop sign
 - The C7 tag has been corrected.
 - The Stormwater Schedule identifies a note "C4" but "C4" does not seem to appear anywhere on the plan
 - The Stormwater Schedule includes D1 thru D3, but not C4. There is a C4 in the Site Schedule and it is used twice on the walkways associated with Lot 8. No action taken.
- **Sheet 11 (C202)**
 - Please label the signs at the exit from the new parking lot (C8?)
 - Callout tags for C8 "stop sign" have been added accordingly.
 - The Site Schedule identifies a note "D3" but "D3" does not seem to appear anywhere on the plan
 - The site schedule includes C1 thru C 12, but no D3. The stormwater schedule include a D3 and a D3 tag points to a stormwater manhole. The revised plans have manhole D3 in a different location.
 - Please remove existing features that will be eliminated or changed (e.g. the plan shows light poles straddling the edge of the existing parking lot that's proposed to be widened
 - Plans have been updated accordingly.
- **Sheet 14 (C205) – the driveway entrance is mismarked "E4" instead of "E5"**
 - The "E4" tag has been revised to "E5".
- **Sheet 18 (C209) –**
 - the plant schedule identifies 16 new plants where only 7 are shown
 - The schedule has been revised to clearly indicate schedule is a combination of all sites. This will make things easier for the contractor.
 - parking lot shading calculations not provided
 - This sheet now includes a table showing shade calculations.
- **Sheet 19 (C210) –**
 - the plant schedule identifies 16 new plants where only 5 are shown
 - The schedule has been revised to clearly indicate schedule is a combination of all sites. This will make things easier for the contractor.
 - parking lot shading calculations not provided

- This sheet now includes a table showing shade calculations.

- o Sheet 20 (C211) –

- the plant schedule identifies 16 new plants where only 4 are shown
 - The schedule has been revised to clearly indicate schedule is a combination of all sites. This will make things easier for the contractor.
- parking lot shading calculations not provided
 - This sheet now includes a table showing shade calculations.

AUTOREVIEW AI COMMENTS [Except as we may have discussed during our staff review meeting, please address only those comments highlighted below in yellow]

1. 5.1.E Table of Contents:

The cover sheet shall include a table of contents.

The PDF does not contain C302, but it includes two instances of C301.

- The sheet numbering has been revised to change the second C301 to C302.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Cover Sheet

2. 5.1.E(2) Contact Information:

The plan only partially addresses the following. Please provide the names and mailing addresses of the Holders of any easements, rights of way, or other restrictions, based on the current records of the City Assessor available at City Hall.

Please indicate location of all easements on subject property.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Overview Plan

3. 5.1.E(3) Contact Information:

Names and Address of the following information is missing/incorrect/incomplete:

Soil Scientist

Wetland Scientist

Landscape Architect

Please include this information on the Cover Sheet

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Cover Sheet

4. 5.1.E(4)(e)(5) Parking:

The plan only partially addresses the following. Number of existing and proposed on- and off-street parking spaces as a table.

The table must identify:

- the permitted (maximum) number of parking spaces and the calculations for each,
 - future proposed, and
 - existing parking capacity.
- The Zoning Chart has been revised to include the maximum number of parking spaces allowed, the future proposed parking spaces, and the existing parking spaces.

If the site is part of an existing development or subdivision, the master table must provide such information for all related sites and phases, individually and as a project total

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Cover Sheet

5. 5.1.E(4)(e)(9) Building Stories:

The Plan does not address the following. Gross Square Footage of Each Story.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Cover Sheet

6. 5.1.E(4)(e)(11) Setbacks:

The plan only partially addresses the following. Required and proposed front, side, and rear yard setbacks.

- The revised Zoning Table now includes setback distances in the “Existing” and “Proposed Total” columns. Setbacks area also dimensioned on sheet C002.

Note 5 has been referenced in the Site Data Table on the Cover Sheet; however, Note 5 has not been included within the provided Notes section.

- The revised Cover Sheet now includes Note 5 and Note 6.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Cover Sheet

7. 5.1.E(4)(e)(12) Lot Coverage:

The plan only partially addresses the following. Max. allowable lot coverage w/ existing and proposed calculations.

The Existing and Proposed Total percentages for Impervious Area Lot have been provided. However, the percentage for Proposed Work has not been included, even though the Proposed Total Percentage has been updated.

- The revised Zoning Table now includes the 0.20% value under the proposed work column.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations:

Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Cover Sheet

8. 5.1.E(5) Current Survey:

The plan does not address the following. A current survey certified by a land surveyor licensed in New Hampshire, depicting the perimeter boundaries of the lot(s) of the proposed site, including compass bearings, distances, and lot areas, and depicting the location of any existing improvements on the property and the width and location of any rights-of-way and/or easements on the property.

Add surveyor stamp confirming compliance with Section 5.1.E.5 requiring a current survey certified by a land surveyor licensed in New Hampshire.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations:

Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Overall Existing Site Plan Layout

9. 5.1.E(8) – Natural and Man-Made Features:

The plan only partially addresses the following. The location of existing natural features such as streams, marshes, lakes, ponds, wetlands, rock outcrops, or wooded areas, and existing man-made features such as roads and structures. The plan shall indicate those natural and man-made features that are to be removed, retained, or altered. Wetlands on the property shall be delineated by an NH Certified Wetlands Scientist, whose seal and signature shall appear on the plan. In addition, documentation in the form of the U.S. Army Corps of Engineers New England District Wetlands Delineation Data Sheets and/or other field notes and materials concerning the delineation shall be submitted to the Planning Office.

Identify natural and man-made features to be removed with parking expansions.

- The revised existing conditions plans now include demolition items.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations:

Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Site Legend and Notes

10. 5.1.E(10) Proposed Streets, Driveways, Emergency Vehicle Accesses, Parking Spaces, And Sidewalks:

Show required sight distances at curb cuts – Sight triangle is not present on the Site Plan. There shall be no obstruction to vision between the heights of three (3) feet and ten (10) feet above the street surface within any triangular area formed by: 1. The intersection of two street lines and a third line joining them at points 25 feet away from their intersection. 2. The intersection of a driveway and a street line and a third line joining them at points 25 feet away from their intersection.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations:

Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on C209, C210

11. 5.1.G(1) Timetable and Phasing:

The plan does not provide the following information. An estimated timetable, to include phasing schedules (where applicable), for construction and completion of buildings, parking facilities, landscaping, and other required improvements.

Provide an estimated timetable for construction and completion of buildings, parking facilities, landscaping, and other required improvements.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Site Legend and Notes

12. 5.1.E(10) Proposed Streets, Driveways, Emergency Vehicle Accesses, Parking Spaces, And Sidewalks:

Proposed streets, driveways, emergency vehicle accesses, parking spaces, and sidewalks, with indication of dimensions and direction of travel. Show required sight distances at curb cuts and dimensions for the inside radii of all curves. Vehicle and bicycle parking spaces shall be numbered. Loading spaces and facilities used in connection with any structures on the site shall be shown. The total square footage and percentage of the lot covered by impervious cover shall also be shown.

All parking spaces must be numbered. There is a misnumbering observed on the indicated parking space. Kindly rectify the numbering to align with the surrounding numbering scheme.

- The parking spaces have been renumbered. Please note that the Lot 2 work includes repaving two (2) existing parking spaces, and they are labeled as E1 and E2 on sheet C203.

The percentage of impervious cover on the proposed lot in the Site Data Table within the Cover Sheet requires updating with a variable.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Cover Sheet, C203

13. 6.5.E Groundwater Protection Requirements:

Please provide a statement identifying how this project complies with Section 6.5.g Ground Water protection.

- Note No. 18 has been added to sheet C001. Additionally, the project includes new and expanded rain gardens which provide treatment for of stormwater from the expanded parking areas so that runoff is cleaned for it becomes groundwater.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 6.5 Coordination of Roads, Parking, Loading, Recreation, and Safety:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Site Legend and Notes

14. 607.3.A Maximum Off-Street Parking Requirement:

The plan does not address the maximum off-street parking allowance. The maximum off-street parking allowed is 120% of the minimum requirement set forth in Section 607.2.

The minimum requirement for parking spaces is 5,470. Currently, there are 5,618 parking spaces on the subject parcel, with a proposed increase to 5,691 by the applicant. The maximum allowable parking for the development is 6,837. Kindly include this information in the Site Data Table on the Cover Sheet.

- The revised Zoning Chart indicates minimum required and maximum allowable parking spaces.

5470 Minimum Stalls * 1.25 = 6837.5 Maximum Stalls

- Equation is incorrect. Should be $5470 * 1.20 = 6,564$ maximum stalls.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 5.1. Drawings and Other Submittals:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](https://lebanonnh.gov/DocumentCenter/View/805/Current-Zoning-Ordinance-PDF?bidId=)

City of Lebanon, New Hampshire: Planning & Development Department: Zoning Ordinance: Article VI Additional Standards for Specific Uses: Section 607 Parking: Section 607.3 Maximum Off-Street Parking Requirements:

<https://lebanonnh.gov/DocumentCenter/View/805/Current-Zoning-Ordinance-PDF?bidId=>

Flag located on Cover Sheet

15. 6.2.E.2 Parking Islands:

The plan only partially addresses the following. The end of each row of parking shall have a landscape bed to protect any vehicle parked next to a travel lane. End beds shall be at least 8 feet in width, except for corner radii, shall be long enough to protect tree roots and vehicles parked in the adjacent parking spaces, and shall be planted with deciduous trees for shade.

Not all parking islands feature deciduous trees, and not all are 8 feet wide.

- The only lot that has a true island is Lot 8 and that island is 8 feet wide and will have a tree planted as part of this project. Lots 2, 4 and Lot E do not have parking islands. Areas flagged as #15 on Lots 2, 4 and E are actually the ends of the parking itself and not an island.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 6.2. Landscaping Standards:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](https://lebanonnh.gov/DocumentCenter/View/805/Current-Zoning-Ordinance-PDF?bidId=)

Flag located on C209, C210, C211

16. 6.2.E.4 Parking Row Length:

The plan does not address the following. Any single or double row of parking longer than 100 feet shall be dispersed every 100 feet or less by a landscaped bed that is at least 8 feet by 8 feet, exclusive of curbing.

The indicated parking zones exceed 100 feet in length and fail to include the mandated dispersion of landscaped beds, each measuring at least 8 feet by 8 feet, spaced every 100 feet or less. See sheet C211

- Sheet C211 consists of two separate lots that have been misinterpreted as one continuous parking row. The longest row in each added parking area is 81 feet.

- The reconfiguration of the existing ED parking lot on C210 does exceed 100 feet. Islands have been omitted here to maximize parking spaces in the location of the campus's most critical needs, reduce potential conflicts for drivers helping patients out of cars, and reduce obstructions for snow removal. Additionally, these parking rows abut landscaped areas for their full length so the project is requesting that the Planning Board exclude this requirement per the last sentence of 6.2.E.4.

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 6.2. Landscaping Standards:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on C210, C211

17. 6.2.E.6 Tree Maturity Requirements:

The plan does not address the following. The number of trees required to meet the 30% shading requirement for parking areas shall be calculated at a minimum crown diameter of 30 feet, which each tree shall have attained within 10 years from planting. Trees at maturity must have a trunk diameter of at least 12 inches, measured 4 feet above the ground surface.

Provide a statement on the Landscape Plan addressing tree maturity requirements.

- Sheets C209 – C211 of the revised plan set include shade calculations for the parking areas.
- Tree diameters at maturity are as follows:
 - Amur Maple: 12" – 20"
 - Honeylocust: 24"-36"
 - Hawthorne: 6" x 3 trunks
 - Red Pine: 30" – 40"

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 6.2. Landscaping Standards:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on Site Legend and Notes

18. 6.2.H.2 Plants Tolerant to Dusty, Salty Locations:

The plants intended for placement near the proposed parking zones do not belong to the list of species known for their tolerance to dusty and salty environments. It is recommended to utilize salt-tolerant plants in areas prone to dust and salt exposure, such as parking lots or driveways.

Proposed Plants not on the Suggested Salt-Tolerant Species:

October Glory Maple – Replaced with Amur Maple

Red Oak – Replaced with Hawthorne

Northern White Cedar – Replaced with Red Pine

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 6.2. Landscaping Standards:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](#)

Flag located on C209, C210, C211

Shade Trees for Dusty, Salty Locations

<i>Acer ginnala</i>	Amur maple
<i>Crataegus spp.</i>	Hawthorne
<i>Gleditsia triacanthos</i>	Honey locust
<i>Pinus resinosa</i>	Red pine

19. 6.5.E.3 Parking Stall Sizing:

Parking spaces shall measure a minimum of 9 x 18 feet. Where the parking spaces are perpendicular to a landscape bed, they should measure 16 feet in length on the pavement, with an additional 2 feet of unobstructed overhang into the landscape bed, in order to reduce paved impervious surface area. Parking spaces perpendicular to a sidewalk area may overhang the sidewalk, provided that the sidewalk is a minimum of 6 feet wide, excluding curbing.

In response to the parking space requirements outlined, it's noted that there are 16 spaces measuring 8 x18 feet. This information is provided for reference purposes.

– EV revised dimensions to show the correct 9'x18' dimensions

City of Lebanon, New Hampshire: Planning & Development Department: Site Plan Regulations: Section 6.5. Coordination of Roads, Parking, Loading, Recreation, and Safety:

[Site-Plan-Regulations-PDF \(lebanonnh.gov\)](https://www.lebanonnh.gov/DocumentCenter/View/1000/Site-Plan-Regulations-PDF)

Flag located on C201

20. Discrepancy – Parking Counts:

There is an inconsistency between the text in the Site Data Table on the Cover Sheet and the visual representation on the plan concerning proposed parking spaces. The Site Data Table indicates a total of 73 new parking spots distributed among Lot 4 & 8 with 22 spaces, Lot 'E' with 25 spaces, and Lot 2 with 26 spaces. However, the plan displays 76 new parking spaces, with Lot 'E' having 27 new spaces for a total of 53, and Lot 2 having 27 new spaces.

– EV revised sheets C201, C202, and C203 to include “parking notes” which clearly summarize the parking count for each lot and the table on the cover sheet has been revised to reflect these numbers.

Flag located on Cover Sheet

Thank you for your time and consideration with this project. Please do not hesitate to call or email if you have any questions or need additional information.

Sincerely,
ENGINEERING VENTURES, PC



Nicholas A. Fiore, PE
Vice President

April 30, 2024

Attn: Tim Corwin
City of Lebanon – Planning and Zoning
51 North Park Street
Lebanon, NH 03766

RE: Dartmouth-Hitchcock Medical Center
Main Campus Parking Expansion 2024 - EV Charging Stations

VIA: E-mail

Dear Mr. Corwin

We are working with Nik Fiore at Engineering Ventures to expand our parking capacity at our main campus in Lebanon. This expansion includes additional parking for Emergency Department patients and visitor as well as additional staff parking where we can best fit it in. This letter is to address our approach to the Lebanon Zoning Ordinance section 607.8 regarding accommodations for Electric Vehicles. Our intent is to address this need with charging stations at other locations on our campus which are best served with power and which best serve the needs of our current and future electric vehicle users.

This project will add (73) parking space to our facility. The requirements and our approach to address are as follows:

- ❑ EVSE-installed spaces (2% = 2 spaces): DH will add charging at 2 spaces in our Colburn Hill Parking lot.
- ❑ EV-Ready spaces (10% = 8 spaces): DH has these spaces on site now at our Inpatient Pavilion.
- ❑ EV-Capable Spaces (50% = 37 spaces): DH has previously provided (33) EV charging stations in Lebanon.
- ❑ All DH installed charging stations are Level 2, each provided with a 40 amp service per parking space. This exceeds the Lebanon requirement which allows one 40 amp circuit to serve (2) parking spots.
- ❑ We have attached a plan that shows our current and proposed charging stations as well as a summary list of our current charging stations.

We believe DH has been a leader in providing EV charging capacity over the years, prior to any requirements being put in place that mandate EV charging capabilities for projects. The infrastructure required to support the zoning ordinance is extensive. We respectfully ask that the City consider our past efforts and currently built EV infrastructure as meeting the intent of Zoning ordinance 607.8 for this project.

Please contact me at (603) 650-5741 if there are any questions or if additional information is needed. We would be glad to meet with you to review the project documents in more detail if helpful.

Sincerely,



David Stiger
DHMC Facilities

EV Charging stations requirements and existing information

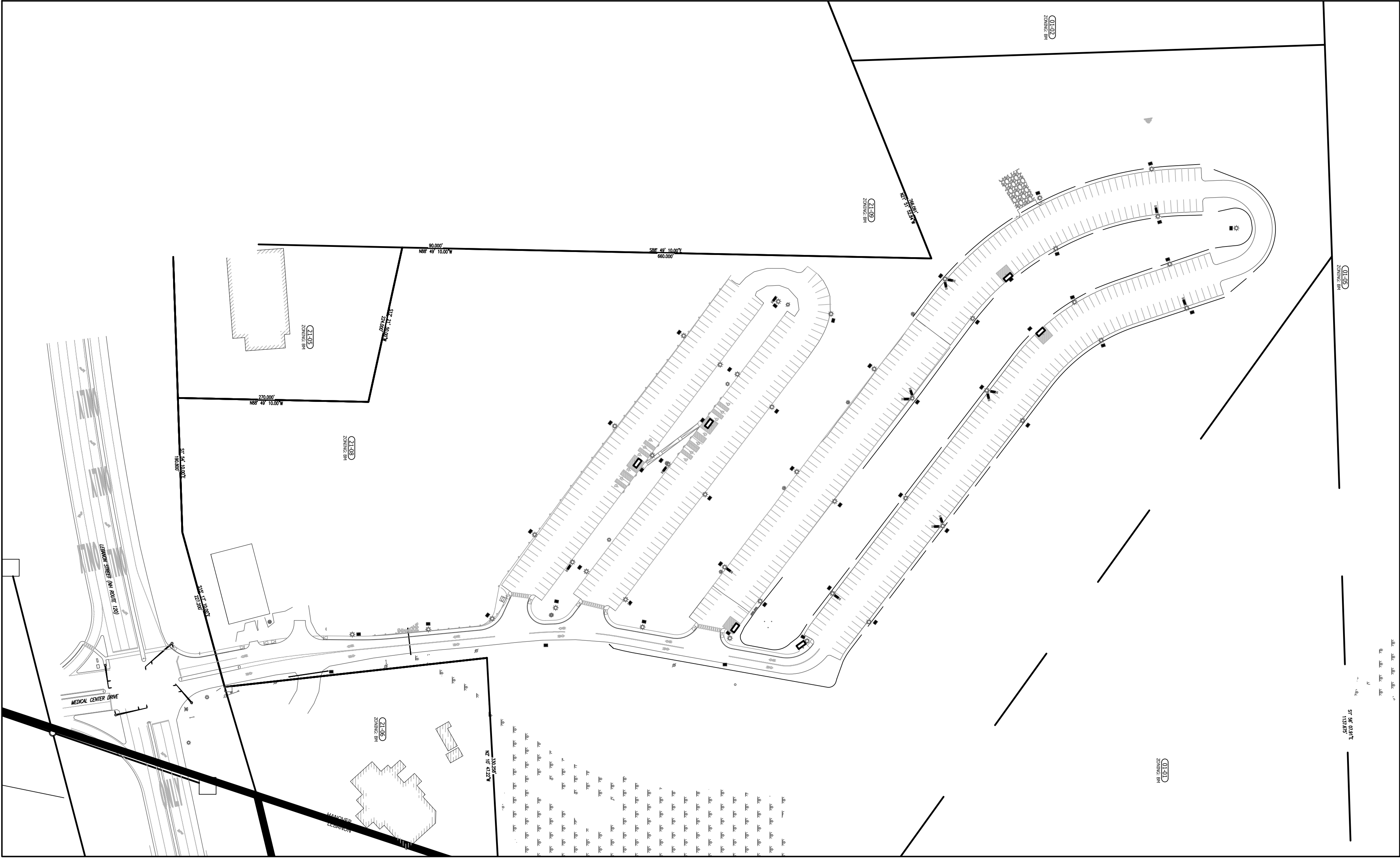
Parking expansion requirements per current zoning regulations:

- ❑ (73) spaces being added
- ❑ EV installed space = 2%, thus (2) parking spaces
- ❑ EV Ready space = 10%, thus (8) parking spaces
- ❑ EV Capable space = 50%, thus (37) parking spaces
- ❑ Charging to support Level 2 charger (40 amp, 208V).
- ❑ One circuit can support two charging stations.

Existing DH EV charging stations

- ❑ Parking Garage
 - 16 parking spaces served by (16) single level 2 stations
- ❑ Inpatient Pavilion
 - 8 parking spaces served by (4) double stations level 2, with (8) dedicated 40 Amp service.
 - 1 parking space served by (1) single station level 2
 - 8 parking spaces EV Ready for (4) double stations w/ (8) dedicated 40 amp service
 - Panel is set up with (18) circuits
 - 208 3 phase 400 amp panel w/ 112.5 kva Isolation transformer
- ❑ Medical Office Building
 - 2 parking spaces served by (2) single stations level 2
- ❑ Outpatient Surgery
 - 2 parking spaces served by (1) double stations level 2
- ❑ Hospice
 - 4 parking spaces served by (2) double stations level 2
- ❑ Colburn Hill
 - DH to add Level 2 charging for (2) parking spots as part of 2024 parking expansion

DHMC
EV Parking stations
4/30/24



LOT 9 INSET

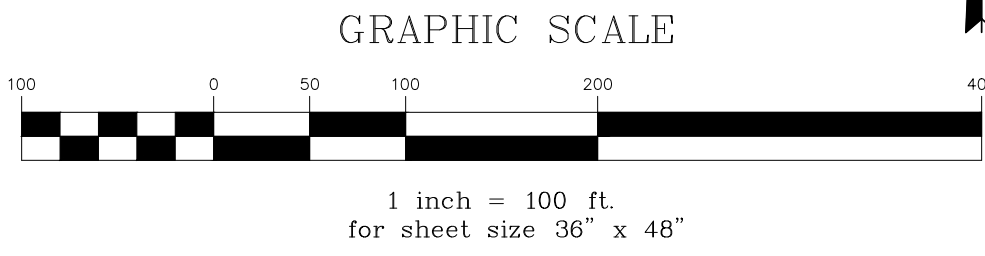
Hospice
(2) double Level 2 chargers = (4) parking spaces

Patient Pavilion
(1) single Level 2 space for ADA parking
(4) double Level 2 spaces = (8) parking spots
(4) future double Level 2 spaces = (8) parking spaces

Two parking spaces to be provided with Level 2 Charging stations

Parking Garage
(16) single Level 2 Charging stations = (16) parking spots

Outpatient Surgery Center
(1) Double Level 2 charging stations = (2) parking spaces



DHMC CAMPUS MAP

CERTIFIED NOTIFICATION LIST

Notice shall be sent by certified mail to the Owner; Applicant, if different from Owner; Abutters; Holders of conservation, preservation, or agricultural preservation restrictions (as defined under RSA 477:45) on the subject property; the holders of easements, rights-of-way, and other restrictions; and every engineer, architect, land surveyor, or soil or wetlands scientist whose seal appears on any plan submitted to the Board; and any other persons required by RSA 676:4, I(d). The names and mailing addresses shall be furnished by the Applicant.

672:3 Abutter. – "Abutter" means any person whose property is located in New Hampshire and adjoins or is directly across the street or stream from the land under consideration by the local land use board. For purposes of receiving testimony only, and not for purposes of notification, the term "abutter" shall include any person who is able to demonstrate that his land will be directly affected by the proposal under consideration. For purposes of receipt of notification by a municipality of a local land use board hearing, in the case of an abutting property being under a condominium or other collective form of ownership, the term abutter means the officers of the collective or association, as defined in RSA 356-B:3, XXIII. For purposes of receipt of notification by a municipality of a local land use board hearing, in the case of an abutting property being under a manufactured housing park form of ownership as defined in RSA 205-A:1, II, the term "abutter" includes the manufactured housing park owner and the tenants who own manufactured housing which adjoins or is directly across the street or stream from the land under consideration by the local land use board.

Source. 1983, 447:1. 1986, 33:2. 2002, 216:1, eff. July 15, 2002.

PLEASE PROVIDE NAMES & MAILING ADDRESSES FOR ALL PERSONS LISTED ABOVE.

Map & Lot Number: 10-8	Map & Lot Number: 10-8
Property Owner: 10-8-100, -200, -300 10-8-70100 Dartmouth Hitchcock Med Center Mary Hitchcock Memorial Hospital 10-10, -21, -22, -23, -25 The Hitchcock Clinic 24-6 c/o David Stiger, DHMC Facilities One Medical Center Drive, Lebanon, NH 03756	Applicant, Co-Applicant, Agent, or Lessee: Dartmouth Hitchcock Med Center c/o David Stiger, DHMC Facilities One Medical Center Drive Lebanon, NH 03756
Map & Lot Number: 5-1, 22-2, 24-4	Map & Lot Number:
Dartmouth College Trustees 10-11-1500 c/o Dan Justynski, Real Estate Office 10-11-1600 PO Box 5188 10-8-7020 Hanover, NH 03755 10-24-100 10-24-200	
Map & Lot Number: 6-1	Map & Lot Number: 10-9 & Hanover 21-6
Liberty Utilities 15 Buttrick Road Londonderry, NH 03053	Route 120 Realty Company c/o Mark Milowsky PO Box 92 Hanover, NH 03755

Map & Lot Number: 10-6-100	Map & Lot Number: 10-6-200
Northern NE Tele Oper LLC Fairpoint Communications Inc 770 Elm St, Tax Dept 2nd Floor Manchester, NH 03101	David's House Inc. Jaye Olmstead, Executive Director 461 Mount Support Road Lebanon, NH 03766
Map & Lot Number: 10-7	Map & Lot Number: 10-7-101
Hanover Road Professional Center PO Box 682 Hanover, NH 03755	Route 102 A-1 Holdings, LLC 10-7-102 Route 102 B-1 Holdings, LLC 10-7-201 Route 102 A-2 Holdings, LLC 1 Pine Drive Hanover, NH 03755
Map & Lot Number:	Map & Lot Number: 10-7-105
	MDM Land Company 1800 West Loop South Houston, TX 77027
Map & Lot Number:	Map & Lot Number: 10-7-202
	Caldwell, MW & TW Ttees 10-7-602 PO Box 176 Lyme Center, NH 03769
Map & Lot Number: 10-7-203	Map & Lot Number: 10-7-204
AJSNH LLC 1046 Goose Pond Rd Canaan, NH 03741	Tiempo de Vals Properties LLC 216 Whitaker Rd Meriden, NH 03770
Map & Lot Number: 10-7-205	Map & Lot Number: 10-7-302
Rentacs LTD Partnership 10-7-502 PO Box 177 Etna, NH 03750	SHUJAA LLC 367 NH Route 120, Unit B3 Lebanon, NH 03766
Map & Lot Number: 10-7-305	Map & Lot Number: 10-7-402
JCP LLC 367 NH Route 120, Unit E3 Lebanon, NH 03766	Geiling, Karen & James Ttees 19 Hollenbeck Ln Hanover, NH 03755

(Revised 2/8/2024)

Map & Lot Number: 10-7-405	Map & Lot Number: 10-7-702
Hanover Oral Surgery, PLLC 367 NH Route 120, Unit B5 Lebanon, NH 03766	BTA Real Estate LLC PO Box 730 Lebanon, NH 03766
Map & Lot Number: 10-7-802	Map & Lot Number: Hanover 21-1
Rumford Street Properties, LLC 210 Rumford St Concord, NH 03301	Jolley Assoc. P.O. Box 671 St. Albans, VT 05474
Map & Lot Number: Hanover 20-1	Map & Lot Number: Hanover 20-2
Town of Hanover c/o Dartmouth Real Estate Office PO Box 5188 Hanover, NH 03755	Town of Hanover PO Box 483 Hanover, NH 03755
Map & Lot Number:	Map & Lot Number:
Engineering Ventures PC c/o Nicholas Fiore 85 Mechanic St., Suite E2-3 Lebanon, NH 03766	City of Lebanon 51 N Park St Lebanon, NH 03766
Map & Lot Number:	Map & Lot Number:
Map & Lot Number:	Map & Lot Number:
Map & Lot Number:	Map & Lot Number:

(Revised 2/8/2024)

FEE SCHEDULE LEBANON PLANNING BOARD

Adopted January 24, 2022

LOT LINE ADJUSTMENT (Boundary Line Adjustment)		
		TOTALS
FILING FEE	\$25.00	\$25.00
ADVERTISING FEE	\$100	\$100
NOTIFICATION FEE (see note on page 2)	\$5.00 + Current USPS rate per certified notice (see below) X _____ notices	\$5.00 \$ _____ (abutter certified)
TOTAL DUE		\$ _____

MINOR SUBDIVISION		
		TOTALS
FILING FEE	\$150.00	\$150.00
ADVERTISING FEE	\$100.00	\$100.00
NOTIFICATION FEE (see note on page 2)	\$5.00 + Current USPS rate per certified notice (see below) X _____ notices	\$5.00 \$ _____ (abutter certified)
TOTAL DUE AT TIME OF FILING		\$ _____

**Engineering Review fees may also be required. See note on page 2.

PRELIMINARY REVIEW OF A MAJOR SUBDIVISION		
		TOTALS
FILING FEE	\$200.00	\$200.00
NUMBER OF LOTS* _____	\$30.00 per lot*	
ADVERTISING FEE	\$100.00	\$100.00
NOTIFICATION FEE (see note on page 2)	\$5.00 + Current USPS rate per certified notice (see below) X _____ notices	\$5.00 \$ _____ (abutter certified)
TOTAL DUE AT TIME OF FILING		\$ _____

*Or units when the subdivision does not create individual lots.

**Engineering Review fees will also be required. See note on page 2.

FINAL REVIEW OF A MAJOR SUBDIVISION		
		TOTALS
FILING FEE	\$500.00	\$500.00
FIRST FIVE (5) LOTS*	\$75.00 per lot*	
NUMBER OF LOTS 6+*	\$150.00 per lot*	
ADVERTISING FEE	\$100.00	\$100.00
NOTIFICATION FEE (see note on page 2)	\$5.00 + Current USPS rate per certified notice (see below) X _____ notices	\$5.00 \$ _____ (abutter certified)
TOTAL DUE TIME OF FILING		\$ _____

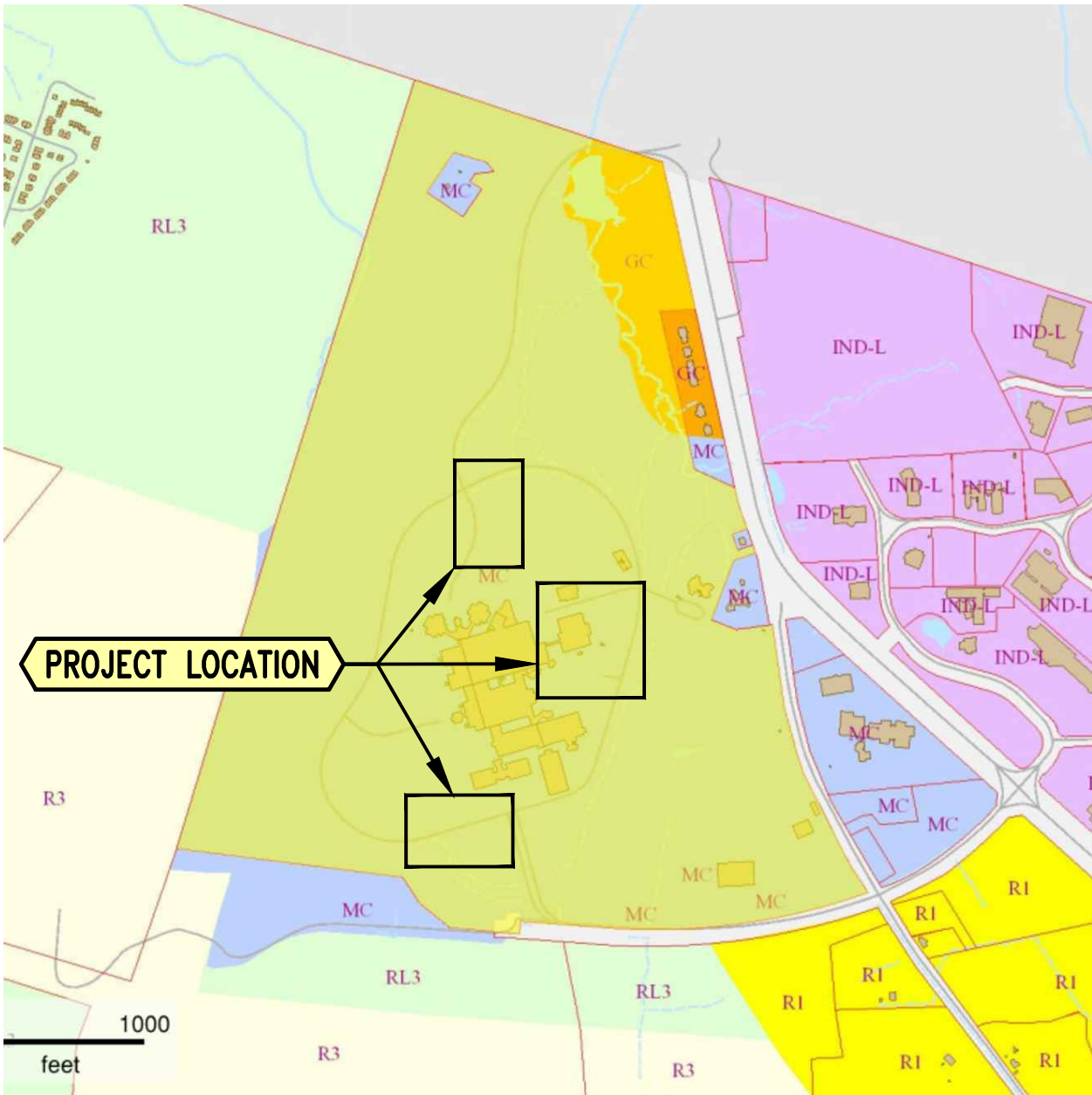
*Or units when the subdivision does not create individual lots.

**Engineering Review fees will also be required. See note on page 2.

SITE PLAN REVIEW		
		TOTALS
FILING FEE	\$250.00	\$250.00
SQUARE FOOTAGE _____ OSF	\$75.00 per 1,000 sq. ft. (gross floor area)	\$0.00
ADVERTISING FEE	\$100.00	\$100.00
NOTIFICATION FEE (see note on page 2)	\$5.00 + Current USPS rate per certified notice (see below) X <u>26</u> <u>22</u> notices	\$5.00 \$ <u>131.04</u> (abutter certified)

DARTMOUTH-HITCHCOCK MEDICAL CENTER

MAIN CAMPUS PARKING EXPANSION



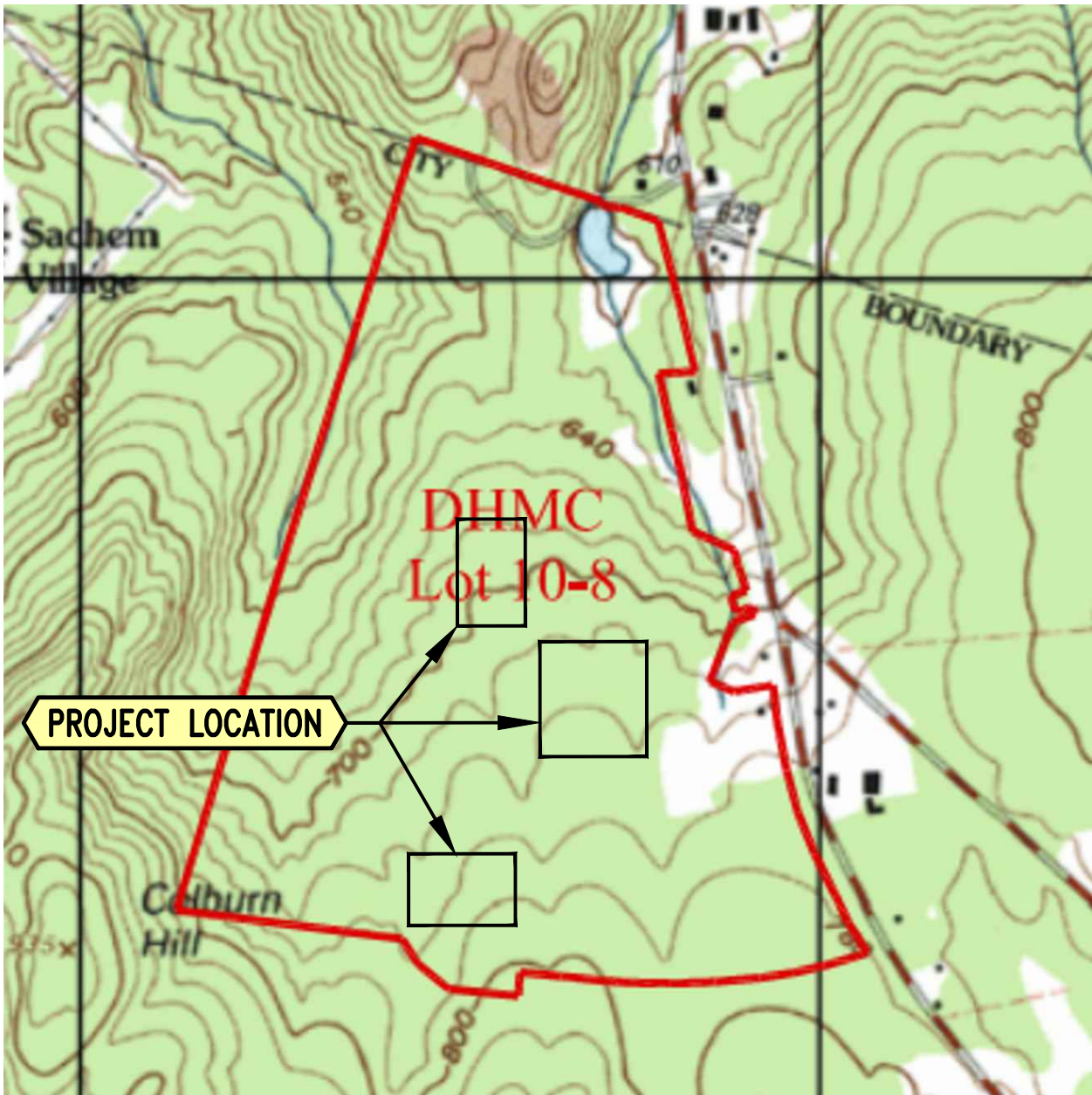
ZONING MAP

1"=1000'



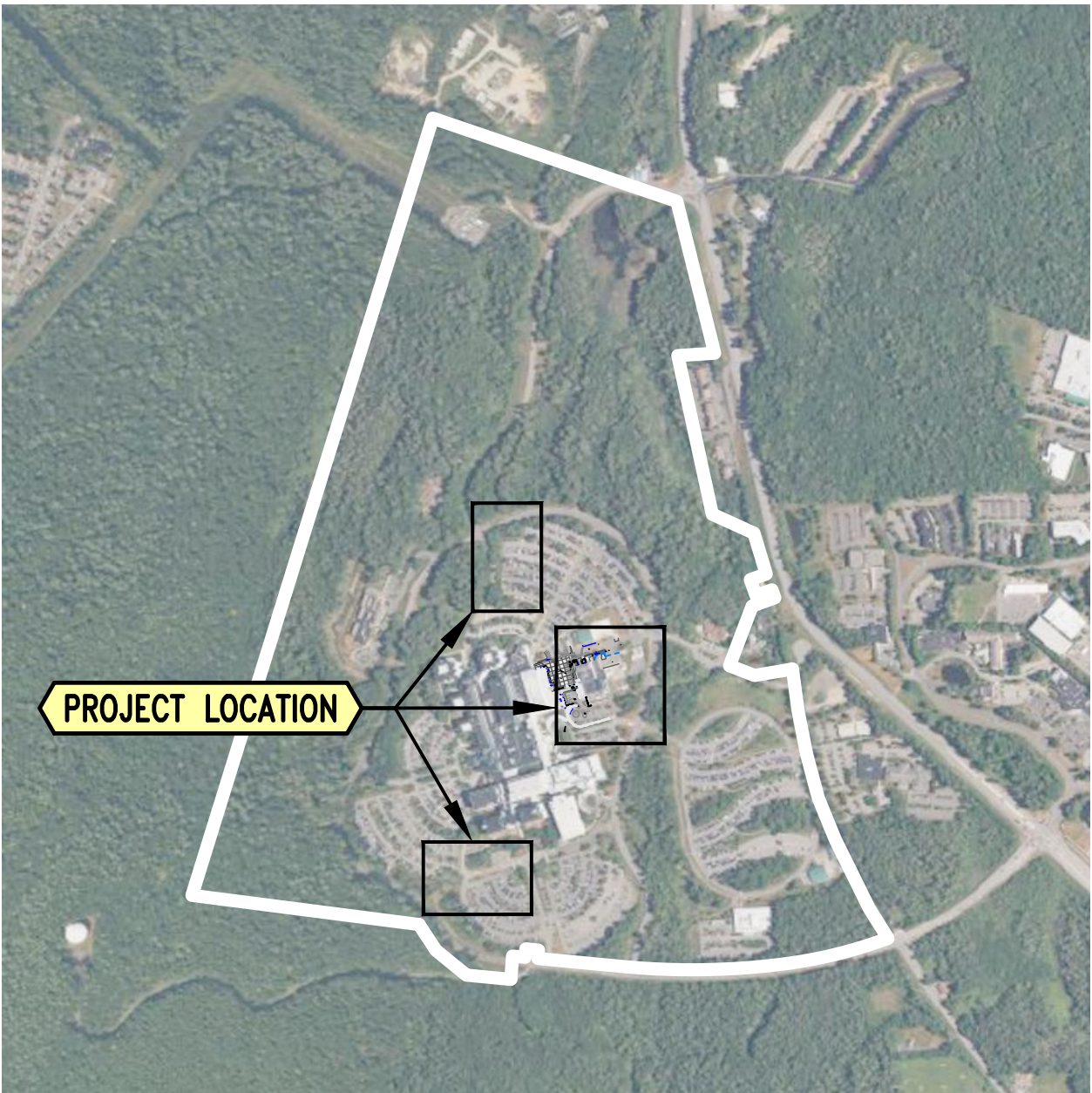
ADVANCE TRANSIT BLUE ROUTE

NO SCALE



USGS MAP

1"=1000'



LOCATION MAP

1"=1000'

ZONING CHART

	Zoning Limit	Existing	Proposed Work	Proposed Total	Notes
Zoning District		MC		MC	
Tax Map / Lot #		10 / 8		10 / 8	
Use		Medical Center		Medical Center	
Area of Lot (acres)	75,000 s.f. min.	288.6	0	288.6	1
Building Footprint (s.f.)		611,778	0	611,778	3
Building Coverage	50% max.	4.87%	0%	4.87%	
Building Gross Floor Area (s.f.)		2,324,815	0	2,324,815	
Building Height	100' max.	Varies. Up to 104'	0	Varies. Up to 104'	
Number of Stories		Varies. Up to 6	0	Varies. Up to 6	
Parking Spaces Provided		5,618	72	5,690	2
Lots 4 and 8			22		
Lot "E"			24		
Lot 2			26		
Min. Parking Spaces Required	1 space / 425 s.f.	5,470	No Change	5,470	
Max. Parking Spaces Allowed	120% of Min.	6,564	No Change	6,564	
Loading Spaces		2	0	2	
Bicycle Parking Spaces		114	0	114	
Long-Term		100	0	100	
Short-Term		14	0	14	
Impervious Area (s.f.)		2,813,615	25,326	2,838,941	3
Lots 4 and 8			8,052		
Lot "E"			8,880		
Lot 2			7,800		
CNG Facility			594		
Impervious Area (% of lot)		22.38%	0.20%	22.58%	3
Setbacks					
Front	40'	190'	NA	190'	5,6
Rear	20'	458'	NA	458'	5,6
Side	20'	53'	NA	53'	5,6
City Overlay Districts		Wetlands	NA	Wetlands	4
NHDES Shorland Jurisdiction		NA	NA	NA	

Notes:

- Area of Lot per survey of Record on file with City of Lebanon
- Number of parking spaces includes 614 spaces at Lot 9 (located in Hanover)
- Existing areas noted include the patient towers, emergency department, and OSC expansions currently under construction
- All wetlands are adjacent to site, outside areas of proposed disturbance, and are classified as Medium-Low Value in the City of Lebanon Natural Resources Inventory
- Setbacks vary due to multiple buildings being on the same parcel
- Project does not include any new buildings therefore building setbacks do not change from what currently exists

TABLE OF CONTENTS

SHEET	SHEET #	TITLE	CONSULTANT
1	C000	COVER SHEET	ENGINEERING VENTURES
2	C001	SITE LEGEND AND NOTES	ENGINEERING VENTURES
3	C002	OVERVIEW PLAN	ENGINEERING VENTURES
4	C100	OVERALL EXISTING CONDITIONS PLAN	ENGINEERING VENTURES
5	C101	EXISTING CONDITIONS – LOTS 4 AND 8	ENGINEERING VENTURES
6	C102	EXISTING CONDITIONS – LOT E	ENGINEERING VENTURES
7	C103	EXISTING CONDITIONS – LOT 2	ENGINEERING VENTURES
8	C104	EXISTING CONDITIONS – CNG FACILITY	ENGINEERING VENTURES
9	C200	OVERALL SITE PLAN	ENGINEERING VENTURES
10	C201	SITE PLAN – LOTS 4 AND 8	ENGINEERING VENTURES
11	C202	SITE PLAN – LOT E	ENGINEERING VENTURES
12	C203	SITE PLAN – LOT 2	ENGINEERING VENTURES
13	C204	SITE PLAN – CNG FACILITY	ENGINEERING VENTURES
14	C205	EPSC PLAN – LOTS 4 AND 8	ENGINEERING VENTURES
15	C206	EPSC PLAN – LOT E	ENGINEERING VENTURES
16	C207	EPSC PLAN – LOT 2	ENGINEERING VENTURES
17	C208	EPSC PLAN – CNG FACILITY	ENGINEERING VENTURES
18	C209	LANDSCAPE PLAN – LOTS 4 AND 8	ENGINEERING VENTURES
19	C210	LANDSCAPE PLAN – LOT E	ENGINEERING VENTURES
20	C211	LANDSCAPE PLAN – LOT 2	ENGINEERING VENTURES
21	C212	LANDSCAPE PLAN – CNG FACILITY	ENGINEERING VENTURES
22	C301	SITE DETAILS	ENGINEERING VENTURES
23	C302	STORMWATER DETAILS	ENGINEERING VENTURES
24	C303	EROSION PREVENTION AND SEDIMENT CONTROL DETAILS	ENGINEERING VENTURES
25	SL101	DHMC – AREAS 4 & 8 LIGHTING PLAN	TCI THOMPSON CONSULTING INC.
26	SL102	DHMC – AREA E LIGHTING PLAN	TCI THOMPSON CONSULTING INC.
27	SL103	DHMC – AREA 2 LIGHTING PLAN	TCI THOMPSON CONSULTING INC.

SUBJECT PROPERTY:

TAX MAP 10 LOT 8
ONE MEDICAL CENTER DRIVE
LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE 03756

OWNER\APPLICANT:

DARTMOUTH-HITCHCOCK MEDICAL CENTER
ONE MEDICAL CENTER DRIVE
LEBANON, NH 03756

CONSULTANTS:

CIVIL ENGINEER
ENGINEERING VENTURES, PC
NICHOLAS A. FIORE, PE
85 MECHANIC ST. SUITE B2-2
LEBANON, NH 03766

TOPOGRAPHIC SURVEY
ROCKWOOD LAND SERVICES, LLC
TIM ROCKWOOD, PLS
PO BOX 347
HARTLAND, VT 05048

Stamp	
Date	
Description	
No.	
ENGINEERING VENTURES PC 208 Flynn Avenue, Suite 2A, Burlington, VT 05401 • 802-863-6225 85 Mechanic Street, Suite E2-3, Lebanon, NH 03766 • 603-442-9333 414 Union Street, Schenectady, NY 12305 • 518-630-9614 www.engineeringventures.com	
DARTMOUTH - HITCHCOCK MEDICAL CENTER 1 MEDICAL CENTER DRIVE LEBANON, NEW HAMPSHIRE 03766	
COVER SHEET	MAIN CAMPUS PARKING EXPANSION LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE
Sheet Title:	
EV Project #	23310
Drawn By:	JWF
Checked By:	NAF
Scale:	AS NOTED
Date:	03/11/2024
C000 Page 1 of 27	

LINETYPE LEGEND

PROPOSED FEATURES	EXISTING FEATURES
100 MAJOR CONTOUR	100 MAJOR CONTOUR
98 MINOR CONTOUR	98 MINOR CONTOUR
EDGE OF RIVER	EDGE OF RIVER
EDGE OF POND	EDGE OF POND
PROPERTY LINE	PROPERTY LINE
RIGHT OF WAY	RIGHT OF WAY
SETBACK	SETBACK
EASEMENT	EASEMENT
LOC LIMIT OF CONSTRUCTION	LOC LIMIT OF CONSTRUCTION
LOD LIMIT OF DISTURBANCE	LOD LIMIT OF DISTURBANCE
SF SILT FENCE	SF SILT FENCE
DEMOLITION WORK	DEMOLITION WORK
CENTERLINE	CENTERLINE
EDGE OF PAVEMENT	EDGE OF PAVEMENT
EDGE OF GRAVEL	EDGE OF GRAVEL
EDGE OF CONCRETE	EDGE OF CONCRETE
CURB	CURB
X FENCE (BARBED WIRE)	X FENCE (BARBED WIRE)
O FENCE (CHAIN LINK)	O FENCE (CHAIN LINK)
□ FENCE (WOODEN)	□ FENCE (WOODEN)
GUARD RAIL	GUARD RAIL
TREE LINE	TREE LINE
STONE WALL	STONE WALL
S SANITARY SEWER	S SANITARY SEWER
FM SEWER FORCEMAIN	FM SEWER FORCEMAIN
SS SEWER SERVICE	SS SEWER SERVICE
SLA DISPOSAL AREA LATERAL	SLA DISPOSAL AREA LATERAL
SD STORM LINE	SD STORM LINE
UD UNDER DRAIN	UD UNDER DRAIN
FD FOUNDATION DRAIN	FD FOUNDATION DRAIN
RD ROOF DRAIN	RD ROOF DRAIN
DITCH/SWALE	DITCH/SWALE
T TELECOMM	T TELECOMM
UGT UNDERGROUND TELECOMM	UGT UNDERGROUND TELECOMM
OHT OVERHEAD TELECOMM	OHT OVERHEAD TELECOMM
E ELECTRIC LINE	E ELECTRIC LINE
UGE UNDERGROUND ELECTRIC	UGE UNDERGROUND ELECTRIC
OHE OVERHEAD ELECTRIC	OHE OVERHEAD ELECTRIC
SL ELECTRICAL SITE LIGHTING	SL ELECTRICAL SITE LIGHTING
W WATER LINE	W WATER LINE
WS WATER SERVICE	WS WATER SERVICE
GAS GAS LINE	GAS GAS LINE
CATV CABLE TV	CATV CABLE TV
UGTV UNDERGROUND CABLE TV	UGTV UNDERGROUND CABLE TV
OGTV OVERHEAD CABLE TV	OGTV OVERHEAD CABLE TV

SURVEY NOTES

- EXISTING PHYSICAL FEATURES AND TOPOGRAPHY SHOWN HERE REPRESENTS A COMPILATION OF A SURVEYS PREPARED BY ROCKWOOD LAND SERVICES, LLC AND OVERALL CAMPUS MAPPING MADE AVAILABLE BY THE OWNER. SOURCE ROCKWOOD SURVEY PLANS ARE AS FOLLOWS:

BOREWELL HANDICAP PARKING EXISTING CONDITIONS, NOVEMBER 14, 2023
 NORTH PARKING LOT EXISTING CONDITIONS, NOVEMBER 14, 2023
 SOUTHERLY PORTION OF LOT 20 EXISTING CONDITIONS, NOVEMBER 14, 2023
 MERGENCY PARKING LOT EXISTING CONDITIONS, NOVEMBER 8, 2023
- FIELD SURVEY DATA COLLECTED IN NOVEMBER 2023.
- THE HORIZONTAL AND VERTICAL DATUMS ARE DERIVED FROM GPS OBSERVATION AND TIED TO PREVIOUS ONSITE PROJECTS. THE HORIZONTAL DATUM IS NEW HAMPSHIRE'S STATE PLAN COORDINATE GRID AND THE VERTICAL DATUM IS NAVD 1988.
- UNDERGROUND UTILITY INFORMATION IS SHOWN BASED ON STRUCTURE OBSERVATION. UNABLE TO PULL COVERS, CONNECTIONS BETWEEN STRUCTURE AND DIRECTION OF UNDERGROUND PIPES ARE APPROXIMATE LOCATIONS. CATCH BASIN INVERTS MEASURED AS CLOSELY AS POSSIBLE. CULVERT SIZES ARE ESTIMATED. ALL UNDERGROUND PIPE SIZES SHOULD BE VERIFIED.
- UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES.
- EXISTING UTILITIES SHOWN ON PLANS WERE TAKEN FROM FIELD OBSERVATIONS OF VISIBLE UTILITIES AND AS-BUILT DATA PROVIDED BY THE OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING UTILITY LOCATIONS PRIOR TO COMMENCING WORK. NOTIFY ENGINEER OF ANY DISCREPANCY BETWEEN UTILITIES AS SHOWN AND AS FOUND. THE CONTRACTOR SHALL CONTACT DIG SAFE (811 or 888-344-7233) A MINIMUM OF 72 HOURS, BUT NOT INCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, PRIOR TO ANY CONSTRUCTION.

SYMBOL LEGEND

PROPOSED FEATURES	EXISTING FEATURES
BOUND	BOUND
BENCHMARK	BENCHMARK
DRILL HOLE	DRILL HOLE
SURVEY POINT	SURVEY POINT
IRON PIN	IRON PIN
TP1	TP1
B1	B1
BORING	BORING
P1	P1
PERC TEST	PERC TEST
CATCH BASIN (SQUARE)	CATCH BASIN (SQUARE)
CATCH BASIN (ROUND)	CATCH BASIN (ROUND)
HEADWALL	HEADWALL
FLARED END SECTION	FLARED END SECTION
STONE APRON	STONE APRON
DRAIN MANHOLE (DMH)	DRAIN MANHOLE (DMH)
DRAINAGE CLEAN OUT	DRAINAGE CLEAN OUT
SANITARY SEWER MANHOLE (SMH)	SANITARY SEWER MANHOLE (SMH)
SANITARY CLEAN OUT	SANITARY CLEAN OUT
HYDRANT	HYDRANT
WATER SHUTOFF	WATER SHUTOFF
TAPPING SLEEVE & VALVE	TAPPING SLEEVE & VALVE
GATE VALVE	GATE VALVE
WELL	WELL
UTILITY POLE	UTILITY POLE
GUY POLE	GUY POLE
ELECTRICAL MANHOLE	ELECTRICAL MANHOLE
BUILDING MOUNTED LIGHT	FLOOD LIGHT
LIGHT POST	LIGHT POST
TELEPHONE MANHOLE	TELEPHONE MANHOLE
NATURAL GAS MANHOLE	NATURAL GAS MANHOLE
COMMUNICATION MANHOLE	COMMUNICATION MANHOLE
BOLLARD	BOLLARD
SINGLE POLE SIGN	SINGLE POLE SIGN
DOUBLE POLE SIGN	DOUBLE POLE SIGN
SPOT ELEVATION	SPOT ELEVATION
ACCESSIBLE PARKING STALL	ACCESSIBLE PARKING STALL
DRAINAGE FLOW	DRAINAGE FLOW
DECIDUOUS TREE	DECIDUOUS TREE
CONIFEROUS TREE	CONIFEROUS TREE

GENERAL NOTES

- EXACT OBJECT LOCATIONS MAY DIFFER FROM THAT AS SHOWN, AND ADDITIONAL SUB-SURFACE AND SURFACE UTILITIES AND STRUCTURES MAY EXIST. THE CONTRACTOR IS TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK.
- UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES. EXISTING UTILITY LOCATIONS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES. ALL DISCREPANCIES SHALL BE REPORTED TO THE OWNER AND ENGINEER. SITE CONTRACTOR SHALL CALL UTILITY LOCATOR SERVICE AND UTILITY OWNERS 72 HOURS, EXCLUSIVE OF WEEKENDS AND HOLIDAYS, PRIOR TO ANY DIGGING, DRILLING, OR BLASTING:

A. DIG SAFE (TEL: #811)
 B. NON DIG SAFE MEMBER FACILITY OPERATORS IF KNOW. A LIST OF DIG SAFE MEMBERS BY STATE CAN BE FOUND ON THE DIG SAFE WEB SITE WWW.DIGSAFE.COM
 C. CITY OF LEBANON PUBLIC WORKS DEPARTMENT (TEL: 448-3112)
- THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL FROM THE ENGINEER.
- THE CONTRACTOR IS INSTRUCTED TO COOPERATE WITH ANY AND ALL OTHER CONTRACTORS PERFORMING WORK ON THIS JOB SITE DURING THE PERFORMANCE OF THIS CONTRACT.
- THE CONTRACTOR SHALL RESTORE LAWNS, DRIVEWAYS, CULVERTS, SIGNS AND OTHER PUBLIC OR PRIVATE PROPERTY DAMAGED OR REMOVED TO EXISTING CONDITIONS OR BETTER AS DETERMINED BY THE ENGINEER. ANY DAMAGED TREES, SHRUBS AND/OR HEDGES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE, UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PERMITS.
- THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING, AND INCURRING THE COST OF ALL REQUIRED PERMITS, INSPECTIONS, AND CERTIFICATES.
- THE CONTRACTOR WILL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY MONUMENTATION DISTURBED OR DESTROYED, AS JUDGED BY THE ENGINEER OR OWNER SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A NEW HAMPSHIRE STATE LICENSED LAND SURVEYOR.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS AND SPECIFICATIONS, AND COORDINATE WORK WITH ALL CONTRACTS FOR THE SITE.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT EXPLORATORY TEST PITS AS MAY BE REQUIRED TO DETERMINE UNDERGROUND CONDITIONS.
- ALL TRENCH EXCAVATION AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH THE LATEST OSHA REGULATIONS FOR CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK.
- MAINTAIN FLOW FOR ALL EXISTING UTILITIES, UNLESS NOTED OTHERWISE.
- ALL SITE FILL SHALL MEET SELECTED FILL STANDARDS UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- CONTRACTOR TO GRADE ALL AREAS ON THE SITE TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND IMPERVIOUS SURFACES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL FIELD LAYOUT. THE CONTRACTOR SHALL PROVIDE MARKED-UP AS-BUILT PLANS FOR ALL UTILITIES SHOWING CONNECTIONS, BENDS, VALVES, LENGTHS OF LINES AND INVERTS. AS-BUILT PLANS SHALL BE REVIEWED BY THE OWNER AND HIS REPRESENTATIVES BEFORE UTILITIES WILL BE ACCEPTED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION, MONITORING, MAINTENANCE AND REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURES AND TAKING PRECAUTIONARY STEPS TO AVOID ANY SEDIMENT TRANSFER TO NEIGHBORING SITES OR WATERS OF THE STATE.
- THE QUALITY OF GROUNDWATER SHALL NOT BE ADVERSELY AFFECTED BY THE PROPOSED DEVELOPMENT. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE RULES AND REGULATIONS OF THE NEW HAMPSHIRE DIVISION OF WATER SUPPLY AND POLLUTION CONTROL WITH REGARD TO GROUNDWATER.

EPA 2022 CONSTRUCTION GENERAL PERMIT

- THIS PROJECT IS SUBJECT TO AN EPA 2022 CONSTRUCTION GENERAL PERMIT (CGP) FOR STORMWATER DISCHARGES FROM THE SITE FROM START OF CONSTRUCTION THROUGH FINAL COMPLETION.
- CONTRACTOR SHALL FUNCTION AS AND MEET ALL REQUIREMENTS FOR ELIGIBILITY AS AN OPERATOR AS DEFINED BY THE CGP AND SHALL FOLLOW THESE KEY REQUIREMENTS AT A MINIMUM:

A. DEVELOP A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND KEEP IT UP TO DATE.
 B. COMPLETE AND SUBMIT A NOTICE OF INTENT (NOI) TO EPA VIA THE NPDES EREPORTING TOOL (NET).
 C. IMPLEMENT EROSION AND SEDIMENT CONTROLS AND POLLUTION PREVENTION PRACTICES THROUGHOUT THE ENTIRE CONSTRUCTION PROJECT
 D. CONDUCT REQUIRED INSPECTIONS TO VERIFY COMPLIANCE WITH PERMIT. INSPECTIONS MAY ONLY BE CONDUCTED BY A QUALIFIED PERSON WHO HAS EITHER: (1) COMPLETED THE EPA CONSTRUCTION INSPECTION COURSE AND PASSED THE EXAM, OR (2) HOLDS A CURRENT CONSTRUCTION INSPECTION CERTIFICATION OR LICENSE FROM A PROGRAM THAT COVERS THE SAME CORE MATERIAL AS EPA'S INSPECTION COURSE.
 E. CONDUCT ROUTINE MAINTENANCE AND TAKE CORRECTIVE ACTION TO FIX PROBLEMS WITH CONTROLS OR DISCHARGES.
 F. COMPLETE DOCUMENTATION OF ALL SITE INSPECTIONS, DEWATERING INSPECTIONS, AND CORRECTIVE ACTIONS.
 G. COMPLY WITH TURBIDITY MONITORING REQUIREMENTS FOR DEWATERING DISCHARGES TO SENSITIVE WATERS (IF APPLICABLE).
 H. COMPLY WITH ANY STATE, TRIBAL, OR TERRITORY-SPECIFIC REQUIREMENTS IN PART 9 OF THE PERMIT.

WILDLIFE PROTECTION NOTES

- ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES SHALL BE REPORTED IMMEDIATELY TO THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY EMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV. EMAIL SUBJECT LINE: NH824-0890, DHMC PARKING EXPANSION, WILDLIFE SPECIES OBSERVATION.
- PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHF&G IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION AS FEASIBLE;
- IN THE EVENT A THREATENED OR ENDANGERED SPECIES IS OBSERVED ON THE PROJECT SITE DURING THE TERM OF THE PERMIT, THE SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHF&G AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHF&G, IF ANY, TO ASSURE THE PROJECT DOES NOT APPRECIABLY JEOPARDIZE THE CONTINUED EXISTENCE OF THREATENED AND ENDANGERED SPECIES AS DEFINED IN FIS 1002.04
- THE NHF&G, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.

Stamp

Date					
Description					
No.					

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DARTMOUTH - HITCHCOCK
MEDICAL CENTER
1 MEDICAL CENTER DRIVE
LEBANON, NEW HAMPSHIRE 03766

SITE LEGEND AND NOTES

Sheet Title

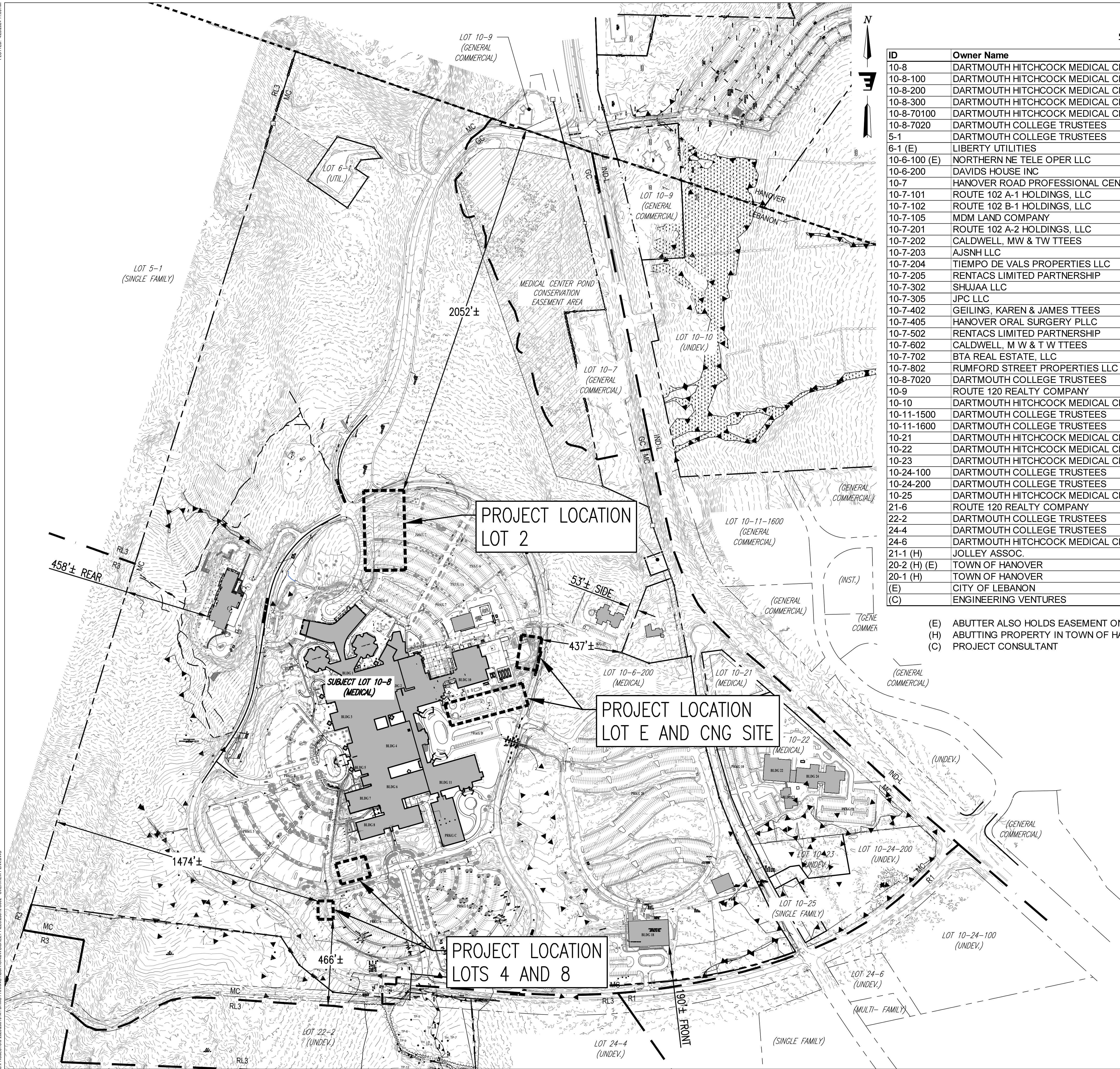
**MAIN CAMPUS
PARKING EXPANSION**

Project Title

EV Project #	23310
Drawn By:	JWF
Checked By:	NAF
Scale:	AS NOTED
Date:	03/11/2024

C001

Page 2 of 27



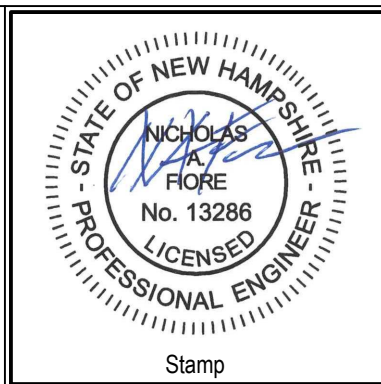
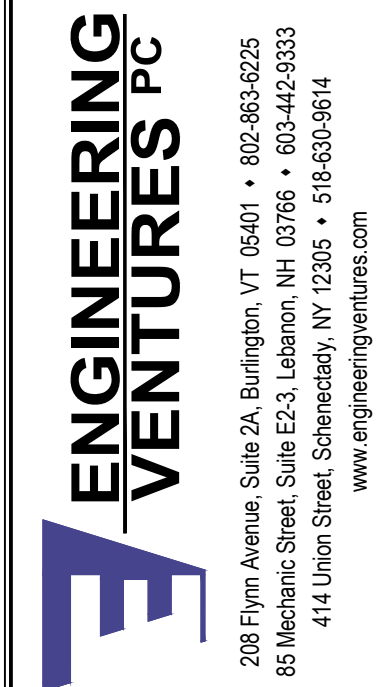
GRAPHIC SCALE

250 0 125 250 500 1,000

1 inch = 250 ft.
for sheet size 24" X 36"

ID	Owner Name	Owner Address	City	State	Zip
10-8	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-8-100	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-8-200	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-8-300	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-8-70100	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-8-7020	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
5-1	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
6-1 (E)	LIBERTY UTILITIES	15 BUTTRICK RD	LONDONDERRY	NH	03053
10-6-100 (E)	NORTHERN NE TELE OPER LLC	770 ELM ST, TAX DEPT 2ND FL	MANCHESTER	NH	03101
10-6-200	DAVIDS HOUSE INC	461 MOUNT SUPPORT RD	LEBANON	NH	03766
10-7	HANOVER ROAD PROFESSIONAL CENTER	PO BOX 682	HANOVER	NH	03755
10-7-101	ROUTE 102 A-1 HOLDINGS, LLC	1 PINE DR	HANOVER	NH	03755
10-7-102	ROUTE 102 B-1 HOLDINGS, LLC	1 PINE DR	HANOVER	NH	03755
10-7-105	MDM LAND COMPANY	1800 WEST LOOP SOUTH	HOUSTON	TX	77027
10-7-201	ROUTE 102 A-2 HOLDINGS, LLC	1 PINE DR	HANOVER	NH	03755
10-7-202	CALDWELL, MW & TW TTEES	PO BOX 176	LYME CNTR	NH	03769
10-7-203	AJSNH LLC	1046 GOOSE POND RD	CANAAN	NH	03741
10-7-204	TIEMPO DE VALS PROPERTIES LLC	216 WHITAKER RD	MERIDEN	NH	03770
10-7-205	RENTACS LIMITED PARTNERSHIP	PO BOX 177	ETNA	NH	03750
10-7-302	SHUJAA LLC	367 NH ROUTE 120, UNIT B3	LEBANON	NH	03766
10-7-305	JPC LLC	367 NH ROUTE 120, UNIT E3	LEBANON	NH	03766
10-7-402	GEILING, KAREN & JAMES TTEES	19 HOLLENBECK LN	HANOVER	NH	03755
10-7-405	HANOVER ORAL SURGERY PLLC	367 ROUTE 120, UNIT B5	LEBANON	NH	03766
10-7-502	RENTACS LIMITED PARTNERSHIP	PO BOX 177	ETNA	NH	03750
10-7-602	CALDWELL, M W & T W TTEES	PO BOX 176	LYME CNTR	NH	03769
10-7-702	BTA REAL ESTATE, LLC	PO BOX 730	LEBANON	NH	03766
10-7-802	RUMFORD STREET PROPERTIES LLC	210 RUMFORD ST	CONCORD	NH	03301
10-8-7020	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
10-9	ROUTE 120 REALTY COMPANY	PO BOX 92	HANOVER	NH	03755
10-10	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-11-1500	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
10-11-1600	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
10-21	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-22	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-23	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
10-24-100	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
10-24-200	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
10-25	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
21-6	ROUTE 120 REALTY COMPANY	PO BOX 92	HANOVER	NH	03755
22-2	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
24-4	DARTMOUTH COLLEGE TRUSTEES	PO BOX 5188	HANOVER	NH	03755
24-6	DARTMOUTH HITCHCOCK MEDICAL CENTER	ONE MEDICAL CENTER DR	LEBANON	NH	03756
21-1 (H)	JOLLEY ASSOC.	PO BOX 671	ST. ALBANS	VT	05474
20-2 (H) (E)	TOWN OF HANOVER	PO BOX 483	HANOVER	NH	03755
20-1 (H)	TOWN OF HANOVER	PO BOX 5188	HANOVER	NH	03755
(E)	CITY OF LEBANON	51 N PARK ST	LEBANON	NH	03766
(C)	ENGINEERING VENTURES	85 MECHANIC ST, STE E2-3	LEBANON	NH	03766

(E) ABUTTER ALSO HOLDS EASEMENT ON SUBJECT PROPERTY
(H) ABUTTING PROPERTY IN TOWN OF HANOVER
(C) PROJECT CONSULTANT

[illegible]

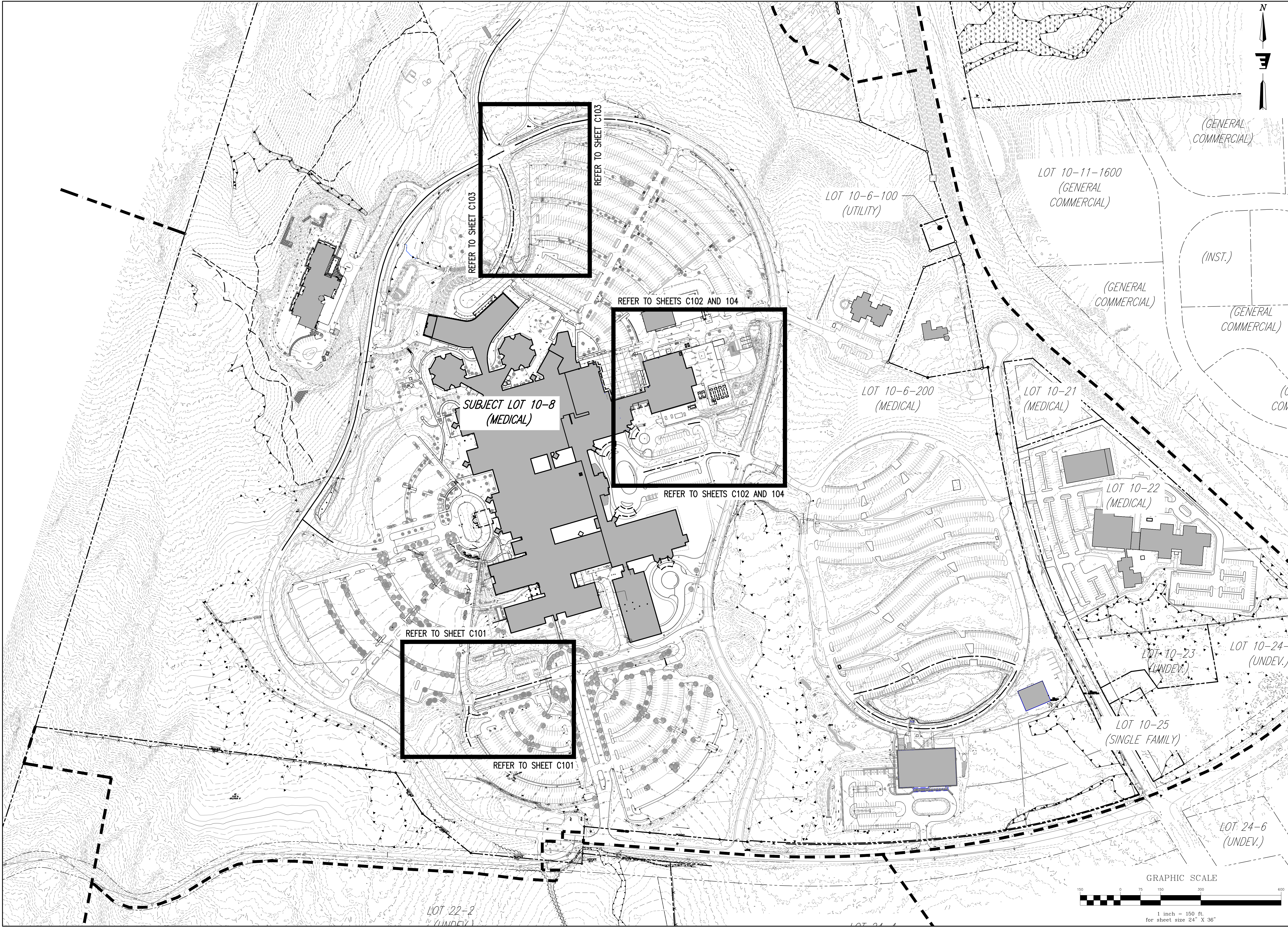
DARTMOUTH - HITCHCOCK
MEDICAL CENTER
1 MEDICAL CENTER DRIVE
LEBANON, NEW HAMPSHIRE 03766

OVERVIEW PLAN

Sheet Title:

EV Project #	23310
Drawn By:	JWF
Checked By:	NAF
Scale:	1" = 250'
Date:	03/11/2024

C002
Page 3 of 27



STATE OF NEW HAMPSHIRE

NOTAR PUBLIC

No. 13286

LICENSED

PROFESSIONAL ENGINEER

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DARTMOUTH • HITCHCOCK

MEDICAL CENTER

1 MEDICAL CENTER DRIVE

LEBANON, NEW HAMPSHIRE 03766

OVERALL EXISTING SITE LAYOUT PLAN

Sheet Title:

EV Project #

Drawn By:

Checked By:

Scale:

Date:

MAIN CAMPUS

PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

Project Title:

23310

JWF

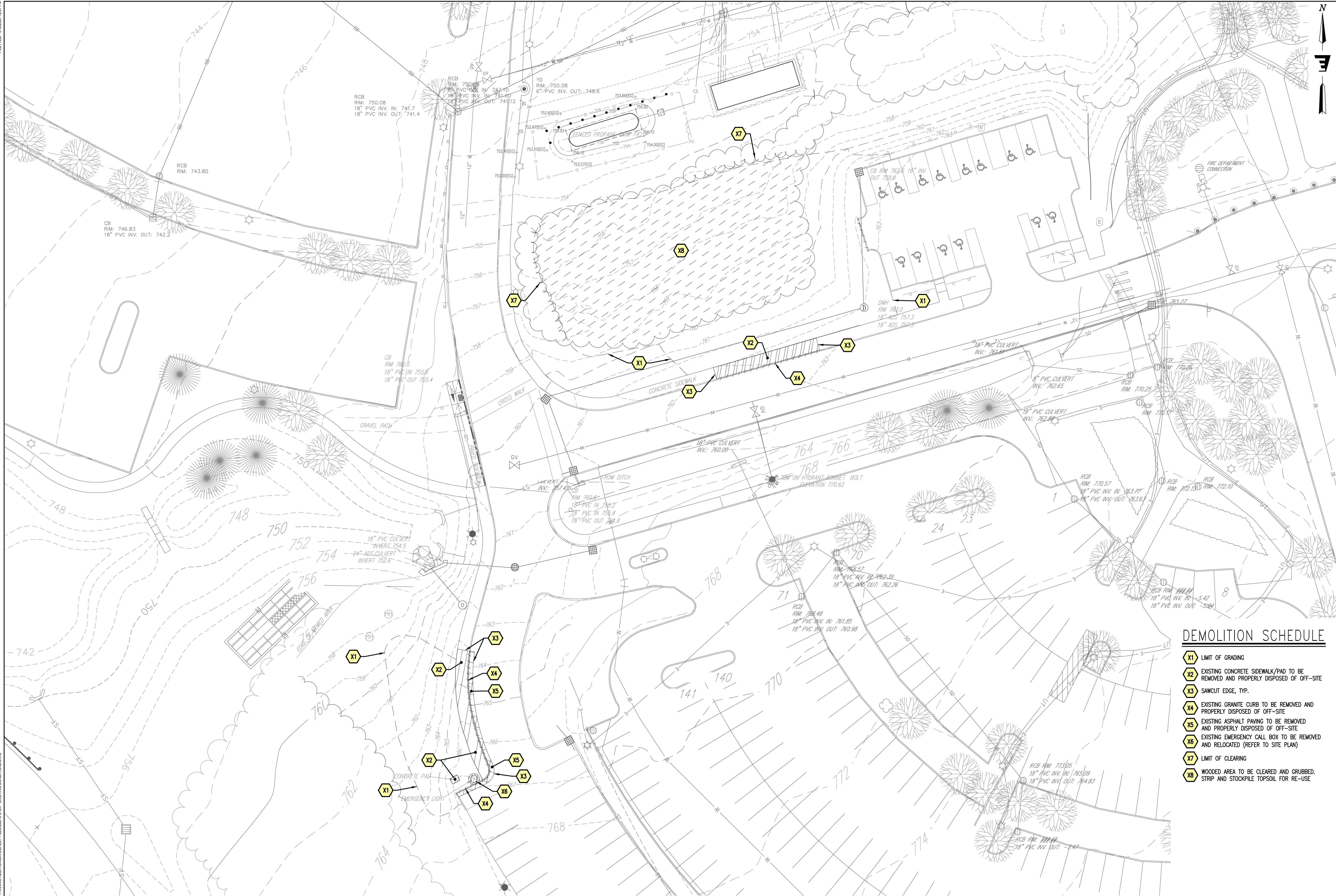
NAF

1" = 150'

03/11/2024

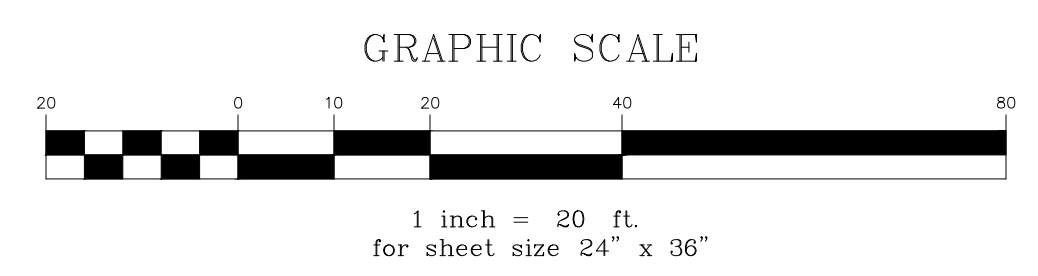
C100

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EXISTING CONDITIONS – PARKING AREAS "4" AND "8"

SCALE: 1" = 20'



EXISTING CONDITIONS AND DEMO PLAN
PARKING AREAS "4" AND "8"

Sheet Title:

MAIN CAMPUS
PARKING EXPANSION

Project Title:

EV Project # 23310

Drawn By: JWF

Checked By: NAF

Scale: 1" = 20'

Date: 03/11/2024

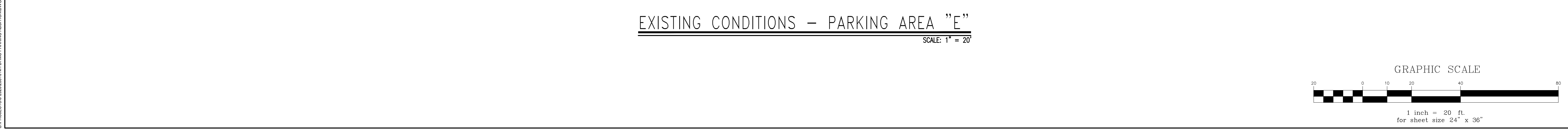
23310

JWF

NAF

1" = 20'

03/11/2024

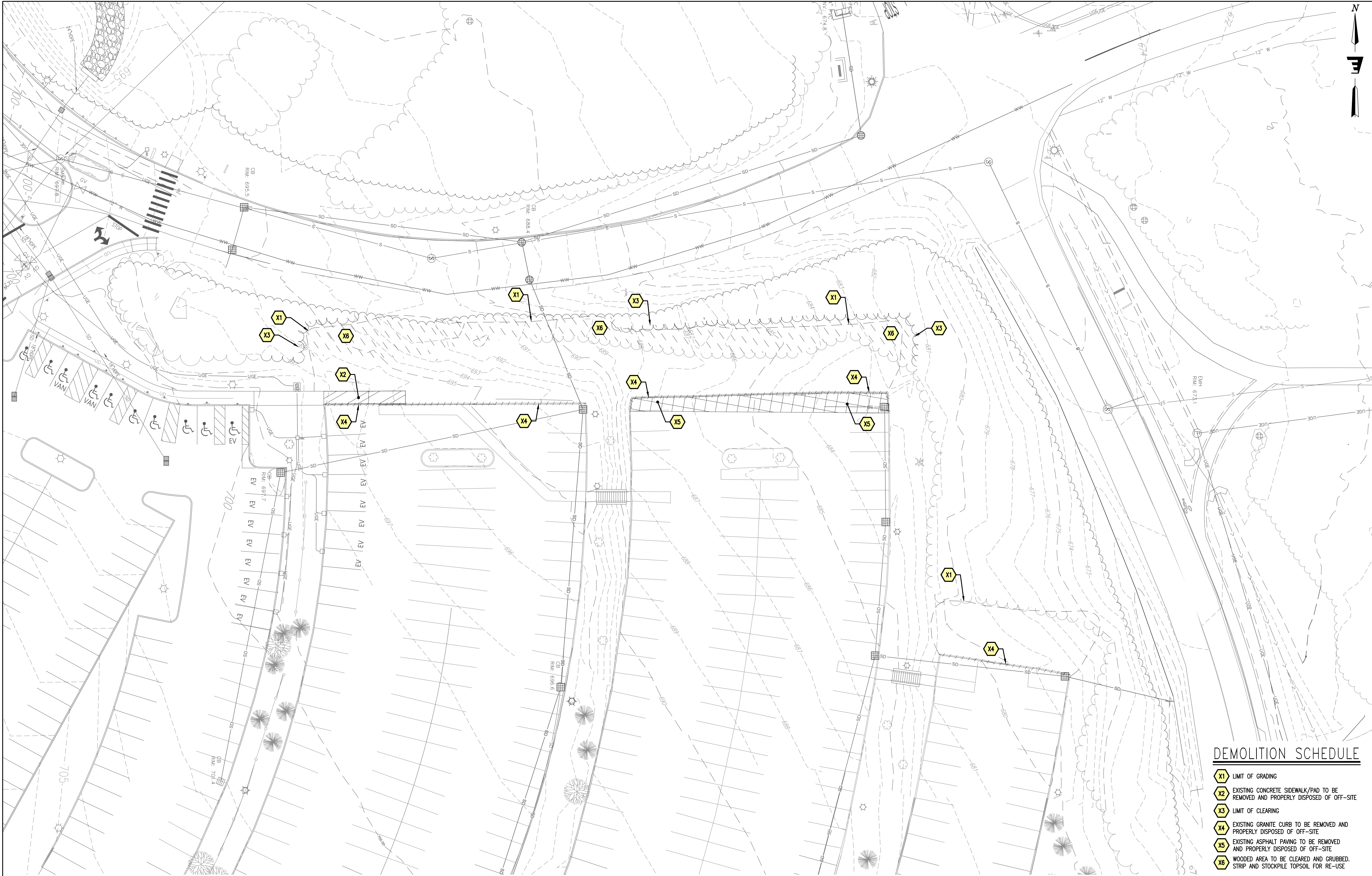


Sheet Title: EXISTING CONDITIONS PARKING AREA "E"		EV Project # 23310	
		Drawn By: JWF	
		Checked By: NAF	
Project Title: MAIN CAMPUS PARKING EXPANSION		Scale: 1" = 20'	
		Date: 03/11/2024	

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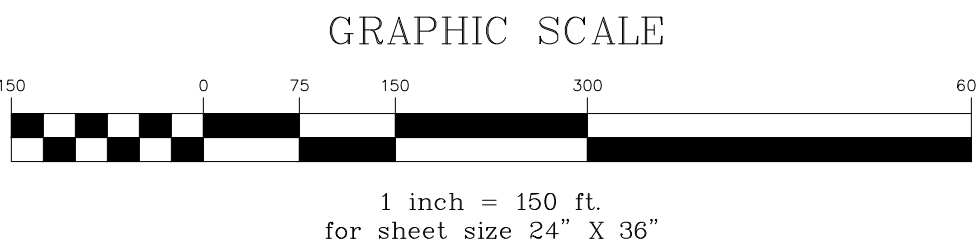
S:\PROJECTS\2022\2310 NH DMAC PARKING ADDITION\DWGSHEET FILES\2310 CIVIL EXISTING CONDITIONS.DWG
PLOTTED: 4/16/2024 12:08 PM



EXISTING CONDITIONS - PARKING AREA "2"
SCALE: 1" = 20'

DEMOLITION SCHEDULE

- X1 LIMIT OF GRADING
- X2 EXISTING CONCRETE SIDEWALK/PAD TO BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE
- X3 LIMIT OF CLEARING
- X4 EXISTING GRANITE CURB TO BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE
- X5 EXISTING ASPHALT PAVING TO BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE
- X6 WOODED AREA TO BE CLEARED AND GRUBBED. STRIP AND STOCKPILE TOPSOIL FOR RE-USE



STATE OF NEW HAMPSHIRE
NICHOLAS FIORE
No. 13286
LICENSED PROFESSIONAL ENGINEER
Stamp

Date

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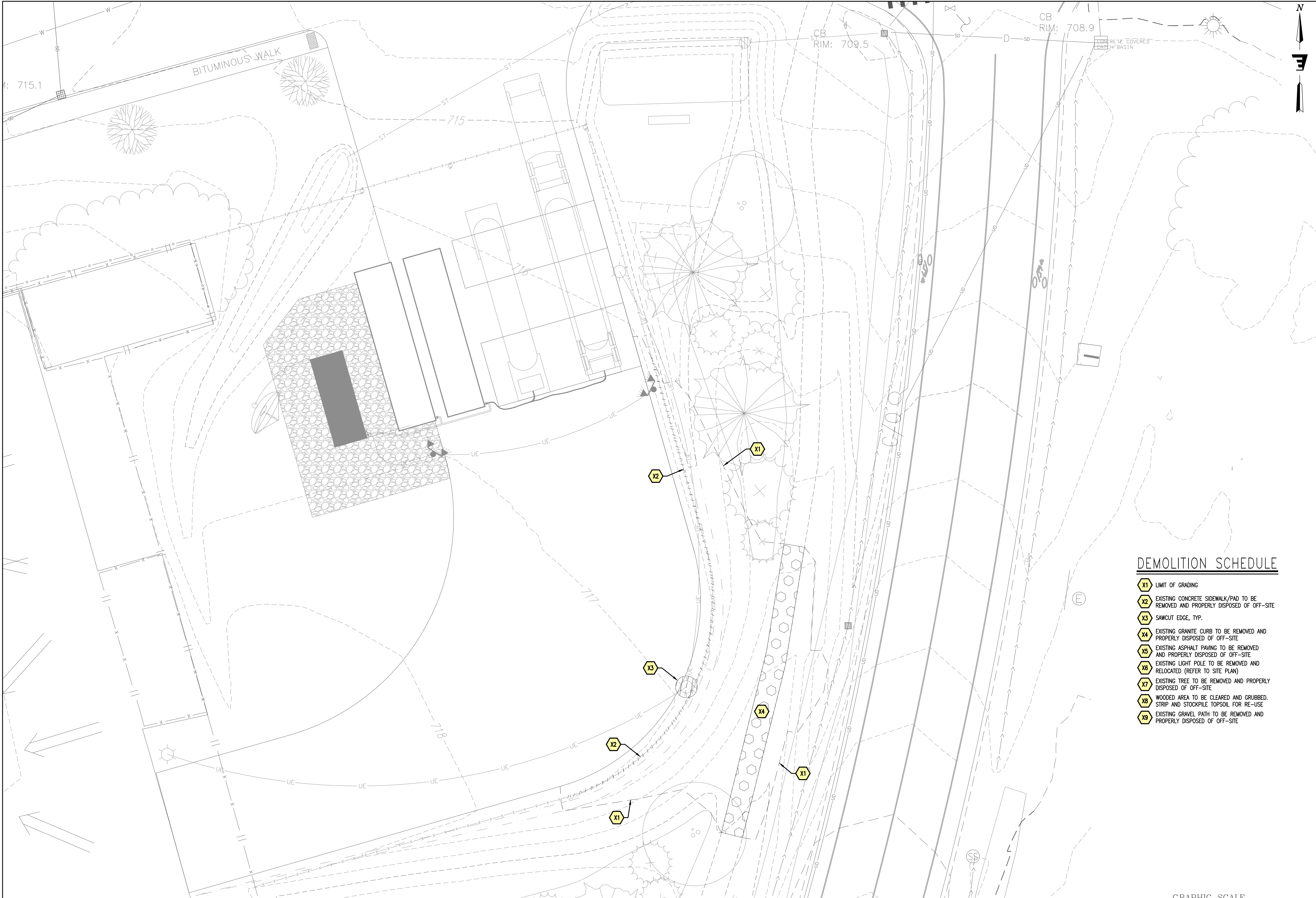
DARTMOUTH - HITCHCOCK
MEDICAL CENTER
1 MEDICAL CENTER DRIVE
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EXISTING CONDITIONS
PARKING AREA "2"
MAIN CAMPUS
PARKING EXPANSION
LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project # 23310
Drawn By: JWF
Checked By: NAF
Scale: 1" = 20'
Date: 03/11/2024

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Page 7 of 27

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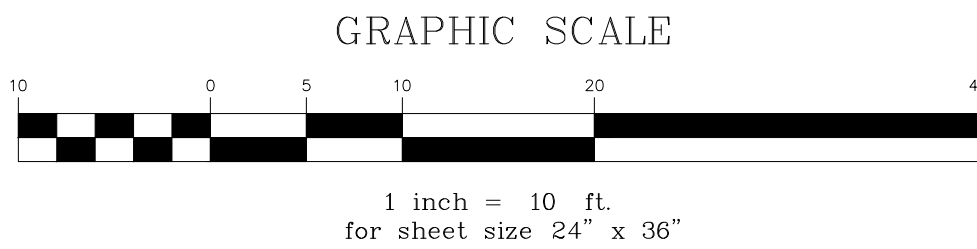


EXISTING CONDITIONS – CNG FACILITY

SCALE: 1" = 10'

DEMOLITION SCHEDULE

- X1 LIMIT OF GRADING
- X2 EXISTING CONCRETE SIDEWALK/PAD TO BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE
- X3 SAWCUT EDGE, TYP.
- X4 EXISTING GRANITE CURB TO BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE
- X5 EXISTING ASPHALT PAVING TO BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE
- X6 EXISTING LIGHT POLE TO BE REMOVED AND RELOCATED (REFER TO SITE PLAN)
- X7 EXISTING TREE TO BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE
- X8 WOODED AREA TO BE CLEARED AND GRUBBED. STRIP AND STOCKPILE TOPSOIL FOR RE-USE
- X9 EXISTING GRAVEL PATH TO BE REMOVED AND PROPERLY DISPOSED OF OFF-SITE



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EXISTING CONDITIONS
 CNG FACILITY

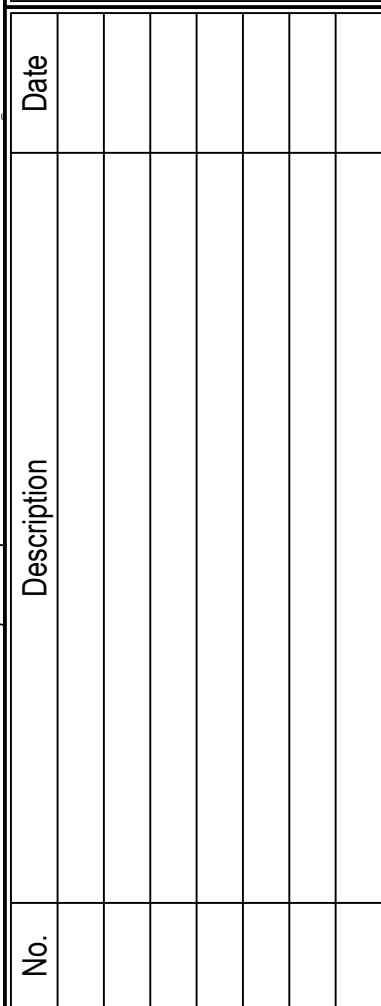
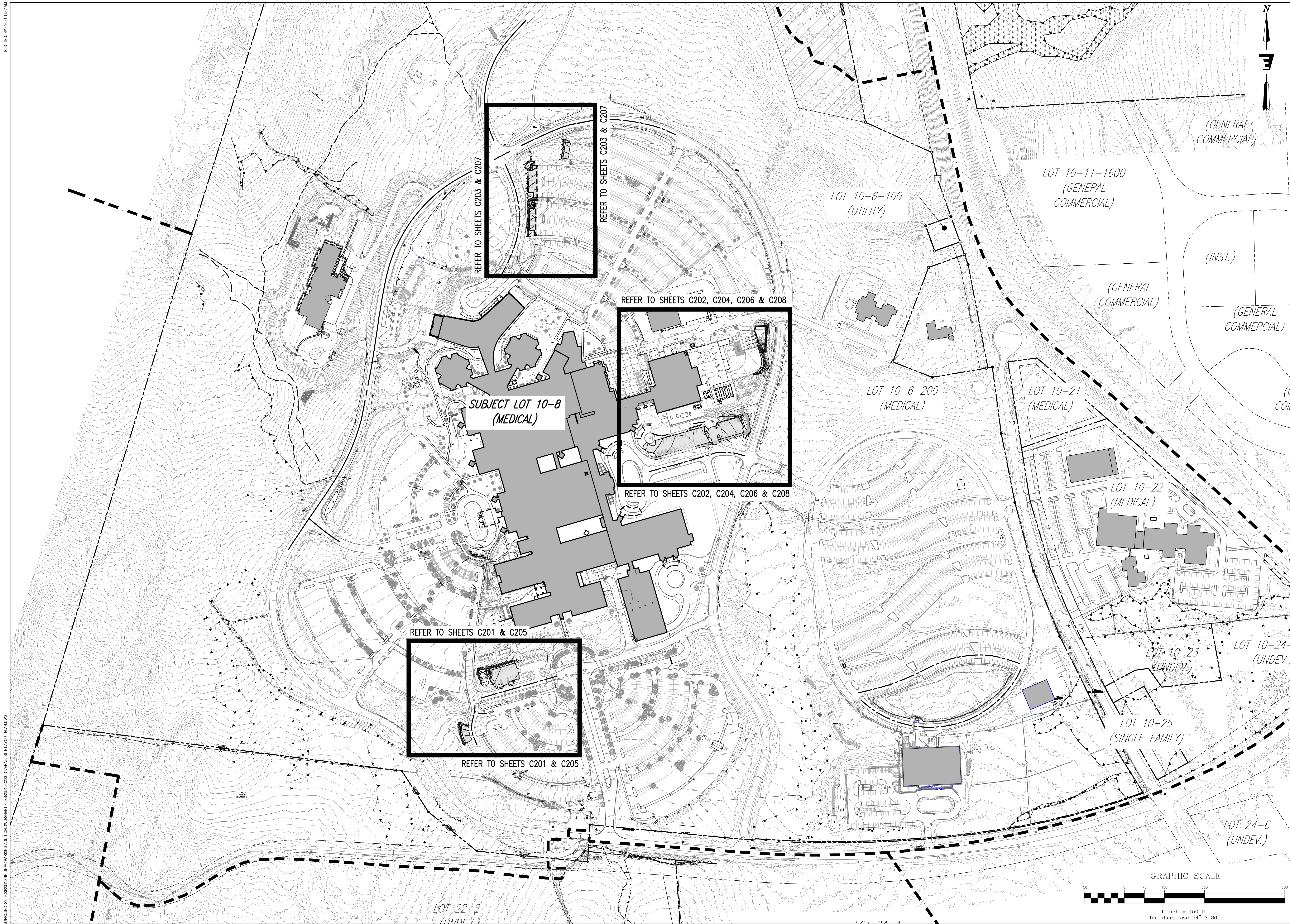
Sheet Title:

MAIN CAMPUS
 PARKING EXPANSION
 LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

Project Title:

EV Project #	23310
Drawn By:	JWF
Checked By:	NAF
Scale:	1" = 10'
Date:	03/11/2024

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 Page 8 of 27

The logo for Engineering Ventures PC features a stylized blue 'E' on the left. To its right, the words 'ENGINEERING' and 'VENTURES' are stacked vertically in a bold, sans-serif font, with 'PC' in a smaller font to the right of 'VENTURES'.

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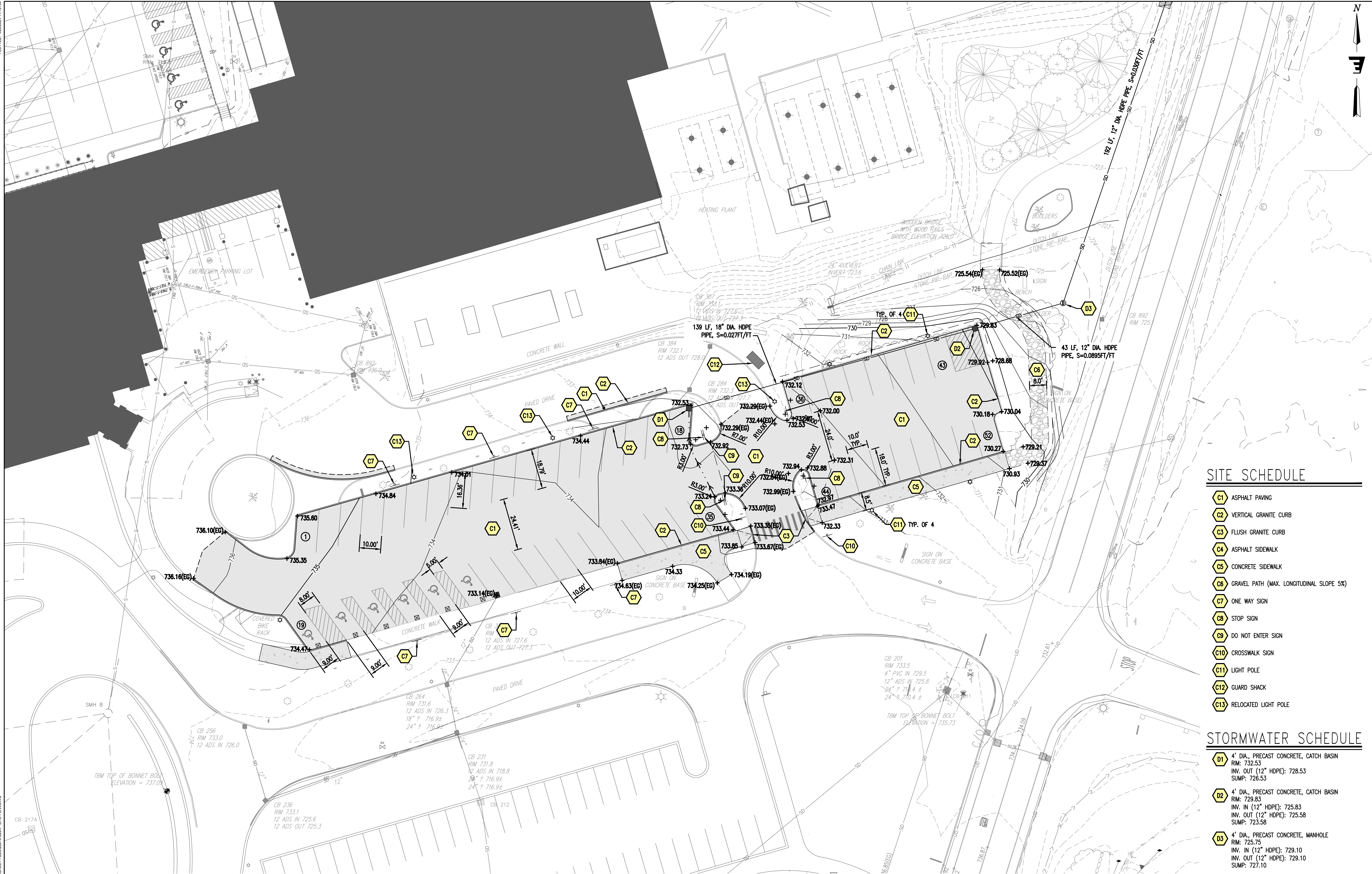
OVERALL SITE LAYOUT PLAN

**MAIN CAMPUS
PARKING EXPANSION**

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

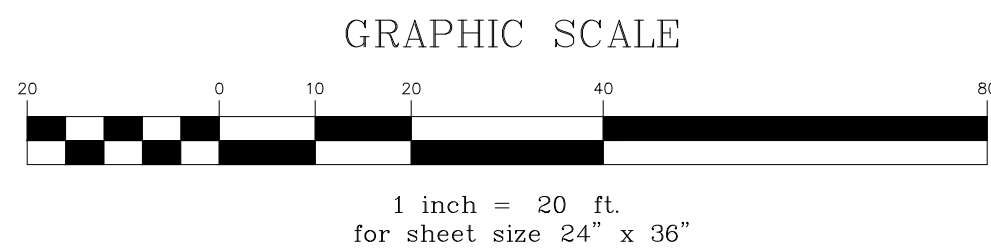
EV Project #	23310
Drawn By:	JWF
Checked By:	NAF
Scale:	1" = 150'
Date:	03/11/2024

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SITE PLAN – PARKING AREA “E”
SCALE: 1" = 20'

PARKING NOTE
PROPOSED PARKING SHOWN HERE DEPICTS 52 PARKING SPACES, OF WHICH 28 ARE EXISTING, SO THE NET GAIN IN PARKING IS 24 SPACES.



SITE SCHEDULE

- C1 ASPHALT PAVING
- C2 VERTICAL GRANITE CURB
- C3 FLUSH GRANITE CURB
- C4 ASPHALT SIDEWALK
- C5 CONCRETE SIDEWALK
- C6 GRAVEL PATH (MAX. LONGITUDINAL SLOPE 5%)
- C7 ONE WAY SIGN
- C8 STOP SIGN
- C9 DO NOT ENTER SIGN
- C10 CROSSWALK SIGN
- C11 LIGHT POLE
- C12 GUARD SHACK
- C13 RELOCATED LIGHT POLE

STORMWATER SCHEDULE

- D1 4" DIA., PRECAST CONCRETE, CATCH BASIN
RIM: 732.53
INV. OUT (12" HDPE): 728.53
SUMP: 726.53
- D2 4" DIA., PRECAST CONCRETE, CATCH BASIN
RIM: 729.83
INV. IN (12" HDPE): 725.83
INV. OUT (12" HDPE): 725.58
SUMP: 723.58
- D3 4" DIA., PRECAST CONCRETE, MANHOLE
RIM: 725.75
INV. IN (12" HDPE): 729.10
INV. OUT (12" HDPE): 729.10
SUMP: 727.10

STATE OF NEW HAMPSHIRE
NOTARIAL PUBLIC
No. 13286
LICENSED
PROFESSIONAL ENGINEER
Stamp

Date

Description

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1 MEDICAL CENTER DRIVE
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SITE PLAN - PARKING AREA "E"

MAIN CAMPUS
PARKING EXPANSION
LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

Sheet Title

EV Project # 23310
Drawn By: JWF
Checked By: NAF
Scale: 1" = 20'
Date: 03/11/2024

C202

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SITE PLAN – PARKING AREA "2"
SCALE: 1" = 20'

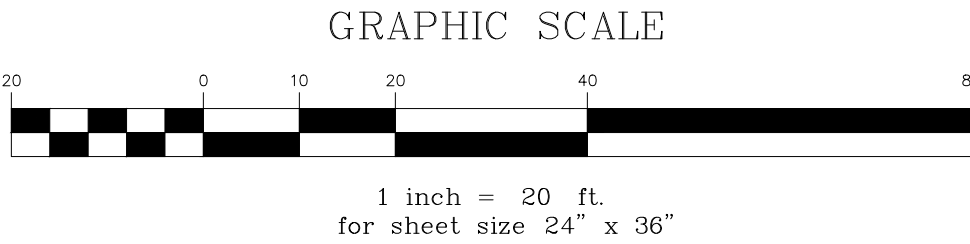
PARKING NOTE
PROPOSED PARKING SHOWN HERE DEPICTS 26 NEW PARKING SPACES AND THE RE-PAVING OF TWO EXISTING PARKING SPACES ("E1" AND "E2"), SO THE NET GAIN IN PARKING IS 26 SPACES.

SITE SCHEDULE

- C1 ASPHALT PAVING
- C2 VERTICAL GRANITE CURB
- C3 LIGHT POLE

STORMWATER SCHEDULE

- D1 2' WIDE OPENING IN CURB
ELEV.: 693.61
- D2 2' WIDE OPENING IN CURB
ELEV.: 693.34
- D3 2' WIDE OPENING IN CURB
ELEV.: 682.85
- D4 2' WIDE OPENING IN CURB
ELEV.: 681.99
- D5 SEDIMENT FOREBAY
BOTTOM ELEV.: 690.00
OVERFLOW WEIR: 691.90
TOP BERM: 692.00
- D6 RAIN GARDEN
FINISHED GRADE: 691.00
TOP OF MEDIA: 690.75
BOTTOM OF MEDIA: 688.75
BOTTOM OF PEA GRAVEL: 688.58
UNDERDRAIN INV.: 687.75
BOTTOM OF UNDERDRAIN GRAVEL: 687.75
- D7 OUTLET STRUCTURE
12" DIA., NYLOPLAST BASIN, WITH DOMED GRATE
RIM: 691.75
1" DIA. ORIFICE INV: 687.75
OUTLET INV. (12" DIA.): 683.24
- D8 6 LF OF 12" PVC PIPE, S=0.010 FT/FT
- D9 PROVIDE FITTINGS AND ADAPTERS, AS NEEDED,
TO TIE TO EXISTING PVC DRAIN LINE, INV.
ELEV.: 683.18
- D10 GRASS LINED SWALE
- D11 SEDIMENT FOREBAY
BOTTOM ELEV.: 679.50
OVERFLOW WEIR: 781.40
TOP BERM: 781.50
- D12 RAIN GARDEN
FINISHED GRADE: 680.50
TOP OF MEDIA: 680.25
BOTTOM OF MEDIA: 678.25
BOTTOM OF PEA GRAVEL: 678.08
UNDERDRAIN INV.: 677.25
BOTTOM OF UNDERDRAIN GRAVEL: 677.25
- D13 OUTLET STRUCTURE
12" DIA., NYLOPLAST BASIN, WITH DOMED GRATE
RIM: 681.33
2" DIA. ORIFICE INV: 681.00
1" DIA. ORIFICE INV: 677.25
OUTLET INV. (12" DIA.): 677.00
- D14 44 LF OF 12" PVC PIPE, S=0.045 FT/FT
- D15 FLARED END SECTION
INV. ELEV.: 675.00



STATE OF NEW HAMPSHIRE
NICHOLAS
FIGUE
No. 13286
LICENSED PROFESSIONAL ENGINEER
Stamp

No.

Date

Description

ENGINEERING
VENTURES PC

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85 Mechanic Street, Suite E2-3, Lebanon, NH 03766 • 603-442-3333
414 Union Street, Schenectady, NY 12305 • 518-630-9614
www.engineeringventures.com

DARTMOUTH - HITCHCOCK
MEDICAL CENTER
1 MEDICAL CENTER DRIVE
LEBANON, NEW HAMPSHIRE 03766

SITE PLAN - PARKING AREA "2"

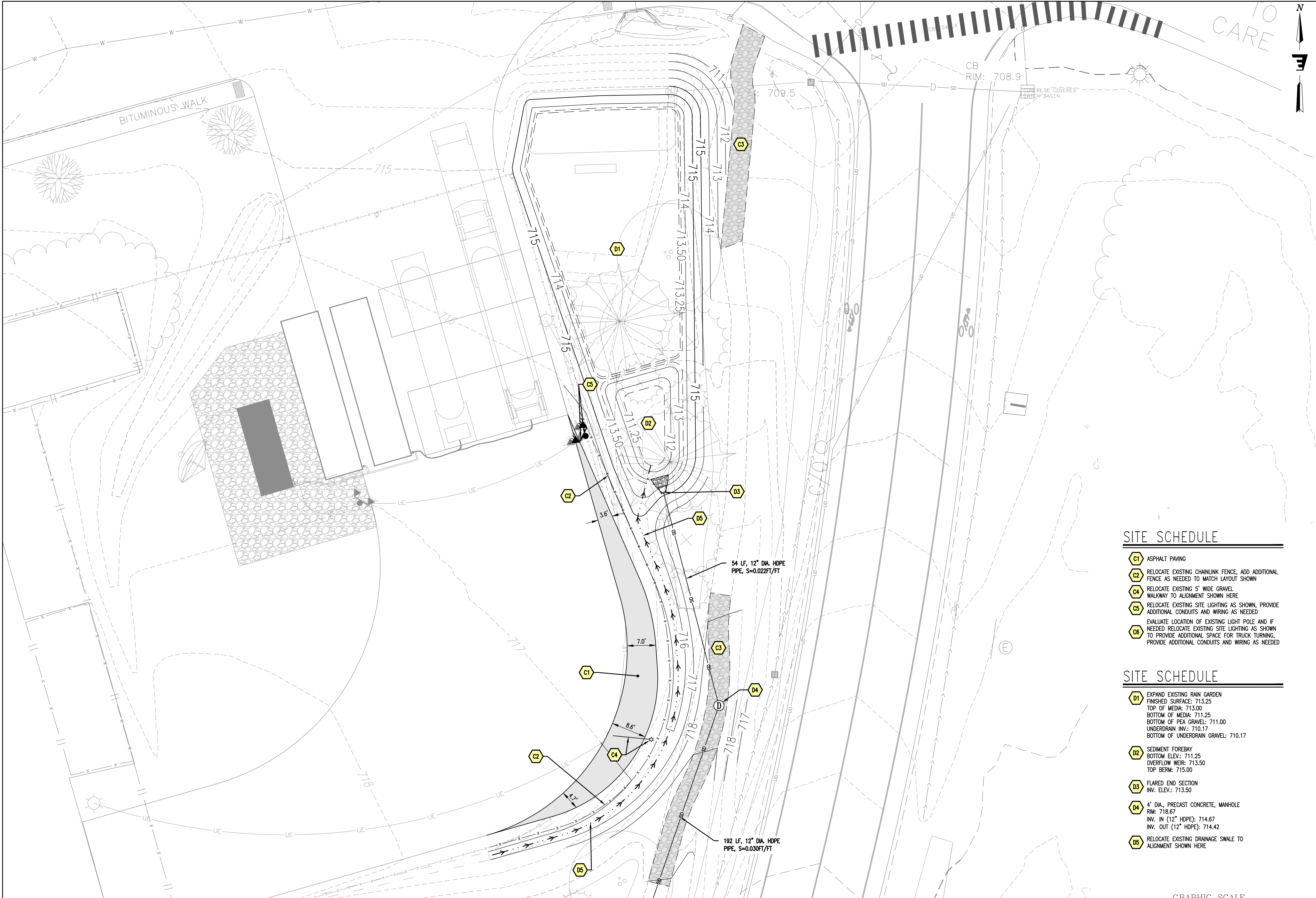
MAIN CAMPUS
PARKING EXPANSION
LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project # 23310
Drawn By: JWF
Checked By: NAF
Scale: 1" = 10'
Date: 03/11/2024

C203

Page 12 of 27

Page 50 of 282



SITE PLAN - CNG FACILITY

SCALE: 1" = 10'

SITE SCHEDULE

- C1** ASPHALT PAVING
- C2** RELOCATE EXISTING CHAINLINK FENCE, ADD ADDITIONAL FENCE AS NEEDED TO MATCH LAYOUT SHOWN
- C4** RELOCATE EXISTING 5' WIDE GRAVEL WALKWAY TO ALIGNMENT SHOWN HERE
- C5** RELOCATE EXISTING SITE LIGHTING AS SHOWN, PROVIDE ADDITIONAL CONDUITS AND WIRING AS NEEDED
- C6** EVALUATE LOCATION OF EXISTING LIGHT POLE AND IF NEEDED RELOCATE EXISTING SITE LIGHTING AS SHOWN TO PROVIDE ADDITIONAL SPACE FOR TRUCK TURNING, PROVIDE ADDITIONAL CONDUITS AND WIRING AS NEEDED

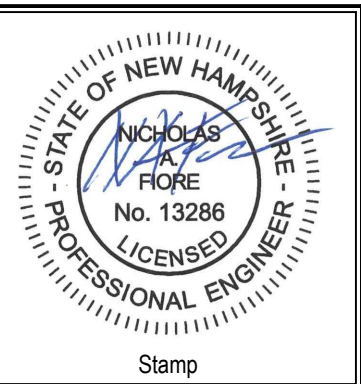
SITE SCHEDULE

- D1** EXPAND EXISTING RAIN GARDEN
FINISHED SURFACE: 713.25
TOP OF MEDIA: 713.00
BOTTOM OF MEDIA: 711.25
BOTTOM OF PEA GRAVEL: 711.00
UNDERDRAIN INV.: 710.17
BOTTOM OF UNDERDRAIN GRAVEL: 710.17
- D2** SEDIMENT FOREBAY
BOTTOM ELEV.: 711.25
OVERFLOW WEIR: 713.50
TOP BERM: 715.00
- D3** FLARED END SECTION
INV. ELEV.: 713.50
- D4** 4' DIA. PRECAST CONCRETE, MANHOLE
RIM: 718.67
INV. IN (12" HDPE): 714.67
INV. OUT (12" HDPE): 714.42
- D5** RELOCATE EXISTING DRAINAGE SWALE TO ALIGNMENT SHOWN HERE

GRAPHIC SCALE



1 inch = 10 ft.
for sheet size 24" x 36"



No.	Description	Date

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 LEBANON, NEW HAMPSHIRE 03766

SITE PLAN - CNG FACILITY

Sheet Title:

MAIN CAMPUS
 PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

Project Title:

EV Project #	23310
Drawn By:	JWF
Checked By:	NAF
Scale:	1" = 10'
Date:	03/11/2024

C204
 Page 13 of 27

EROSION CONTROL LEGEND

EROSION PREVENTION AND SEDIMENT CONTROL STRATEGY
THE FOLLOWING TECHNIQUES WILL BE UTILIZED AS PART OF A SEDIMENT AND EROSION CONTROL PROGRAM. THE SEDIMENT AND EROSION CONTROL PROGRAM WILL BE IMPLEMENTED IN STAGES. CERTAIN ITEMS FROM ONE STAGE WILL LIKELY OVERLAP OR TAKE PLACE CONCURRENTLY WITH ITEMS FROM OTHER STAGES.

TEMPORARY INLET PROTECTION — INSTALL AS INDICATED ON PLANS. STONE TO BE REMOVED AND REPLACED WITH CLEAN STONE WHEN SEDIMENT IS $\leq 1/2$ DEPTH OF STONE. REMOVE ALL SEDIMENT IF COLLECTED IN STRUCTURE AS SOON AS POSSIBLE.

PERMANENT EROSION CONTROL NETTING
THIS STRUCTURAL MEASURE IS INSTALLED IN AREAS THAT HAVE SLOPES 3:1 AND GREATER AND IN OTHER LOCATIONS INDICATED ON THIS PLAN TO STABILIZE THE SLOPE AND REDUCE THE EROSION POTENTIAL. THE NETTING IS TYPICALLY IMPREGNATED WITH GRASS SEED AND SOMETIMES STAPLED TO THE EXPOSED SOIL. THESE WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.

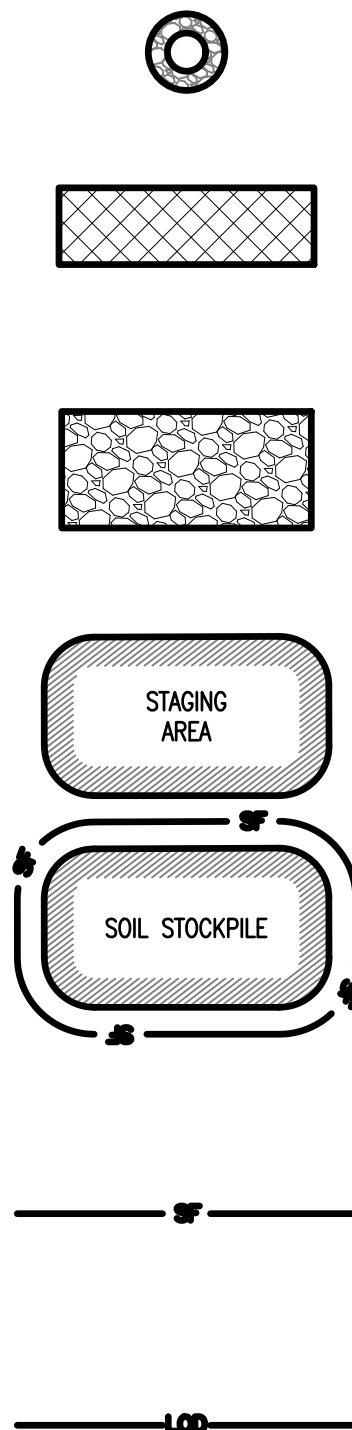
TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
THIS STRUCTURAL MEASURE IS A STABILIZED PAD OF AGGREGATE UNDERLAIN WITH FILTER FABRIC LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, SIDEWALK, OR PARKING AREA. THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY OR STREETS. THIS WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED. ONCE REMOVED, THE IMPACTED AREA SHALL BE SEEDED AND MULCHED.

TEMPORARY STAGING AND WASTE AREAS (APPROXIMATE)
THESE ARE APPROVED LOCATIONS WHERE NON-SOIL, NON-ERODIBLE MATERIALS MAY BE STORED. SOILS SHALL NOT BE STORED IN THESE AREAS.

TEMPORARY SOIL STOCKPILE AREAS (APPROXIMATE)
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THIS STRUCTURAL MEASURE IS A TEMPORARY BARRIER OF GEOTEXTILE FABRIC USED TO INTERCEPT SEDIMENT LADEN RUNOFF FROM SMALL DRAINAGE AREAS OF DISTURBED SOIL. IT IS INSTALLED ALONG THE PERIMETER OF IMPACTED AREAS AND ALONG THE BASE OF THE FILL SLOPES. ADDITIONALLY, WHEN DESIGNATED ALONG THE LIMITS OF DISTURBANCE, INSTALL CONSTRUCTION FENCE BEHIND THE SILT FENCE. SILT FENCING IS EFFECTIVE IN REDUCING STORMWATER RUNOFF VELOCITIES, ASSIST IN THE DEPOSITION OF TRANSPORTED SEDIMENT LOAD AND PREVENT EROSION OF SOILS ONTO ADJACENT AREAS. THESE WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.

LIMITS OF DISTURBANCE
THE CONTRACTOR SHALL CONTAIN ANY EARTH MOVING ACTIVITIES WITHIN THE DESIGNATED LIMITS SHOWN ON THIS PLAN. THE ENGINEER SHALL REVIEW THE SITE TO MAKE ANY ADJUSTMENTS TO ACCOUNT FOR ENVIRONMENTALLY SENSITIVE AREAS, SPECIMEN TREES AND SPECIAL AREAS OF CONCERN.



SITE PLAN – PARKING AREAS "4" AND "8"

SCALE: 1" = 20'

EROSION CONTROL SCHEDULE

- E1 LIMIT OF DISTURBANCE
- E2 INLET PROTECTION (TYP.)
- E3 SILT FENCE (TYP.)
- E4 EROSION CONTROL NETTING
- E5 STABILIZED CONSTRUCTION ENTRANCE

GRAPHIC SCALE



1 inch = 20 ft.
for sheet size 24" x 36"

STATE OF NEW HAMPSHIRE

NOTARIS PUBLICUS

FILE NO. 13286

PROFESSIONAL ENGINEER

Stamp

Date

No.

Description

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EROSION PREVENTION AND SEDIMENT CONTROL PLAN - AREAS "4" AND "8"

MAIN CAMPUS PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

Sheet Title:

EV Project #

23310

Drawn By:

JWF

Checked By:

NAF

Scale:

1" = 20'

Date:

03/11/2024

C205

Page 14 of 27

S:\PROJECTS\2022\2310 NH DMAC PARKING ADDITION\DWG\SHEET FILES\23310 C205 - EROSION PLAN.DWG

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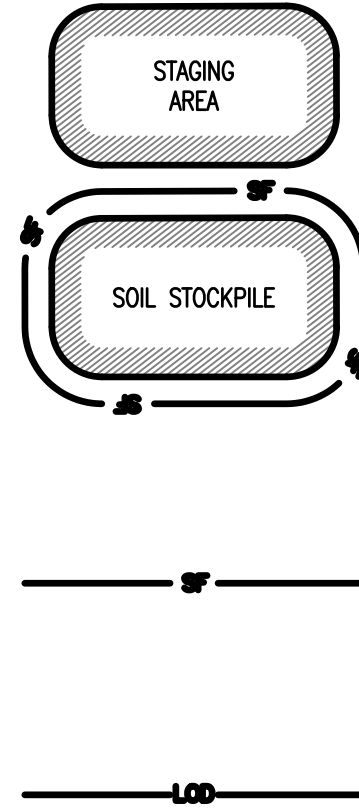
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STONE CHECK DAM
THIS STRUCTURAL MEASURE IS ALONG DITCHES/ SWALES AND IN OTHER LOCATIONS INDICATED ON THIS PLAN TO STOP STORMWATER RUNOFF AND TRAP SEDIMENT PARTICLES. THESE WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.

PERMANENT EROSION CONTROL NETTING
THIS STRUCTURAL MEASURE IS INSTALLED IN AREAS THAT HAVE SLOPES 3:1 AND GREATER AND IN OTHER LOCATIONS INDICATED ON THIS PLAN TO STABILIZE THE SLOPE AND REDUCE THE EROSION POTENTIAL. THE NETTING IS TYPICALLY IMPREGNATED WITH GRASS SEED AND SOMETIMES STAPLED TO THE EXPOSED SOIL. THESE WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.

TEMPORARY STABILIZED CONSTRUCTION ENTRANCE
THIS STRUCTURAL MEASURE IS A STABILIZED PAD OF AGGREGATE UNDERLAIN WITH FILTER FABRIC LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A DRIVEWAY, DRIVEWAY, STREET, ALLEY, SIDEWALK, OR PARKING AREA. THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY OR STREETS. THIS WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED. ONCE REMOVED, THE IMPACTED AREA SHALL BE SEEDED AND MULCHED.



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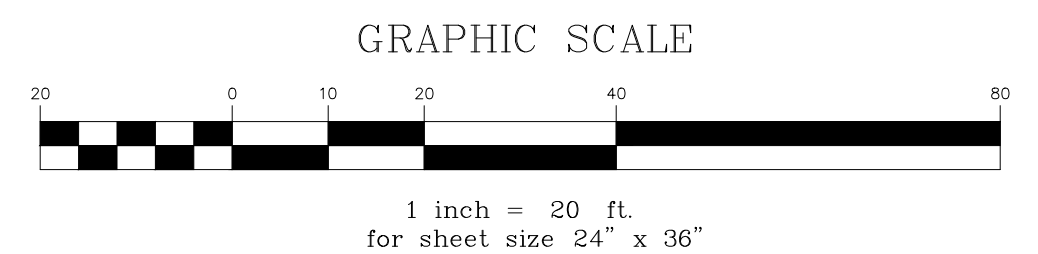
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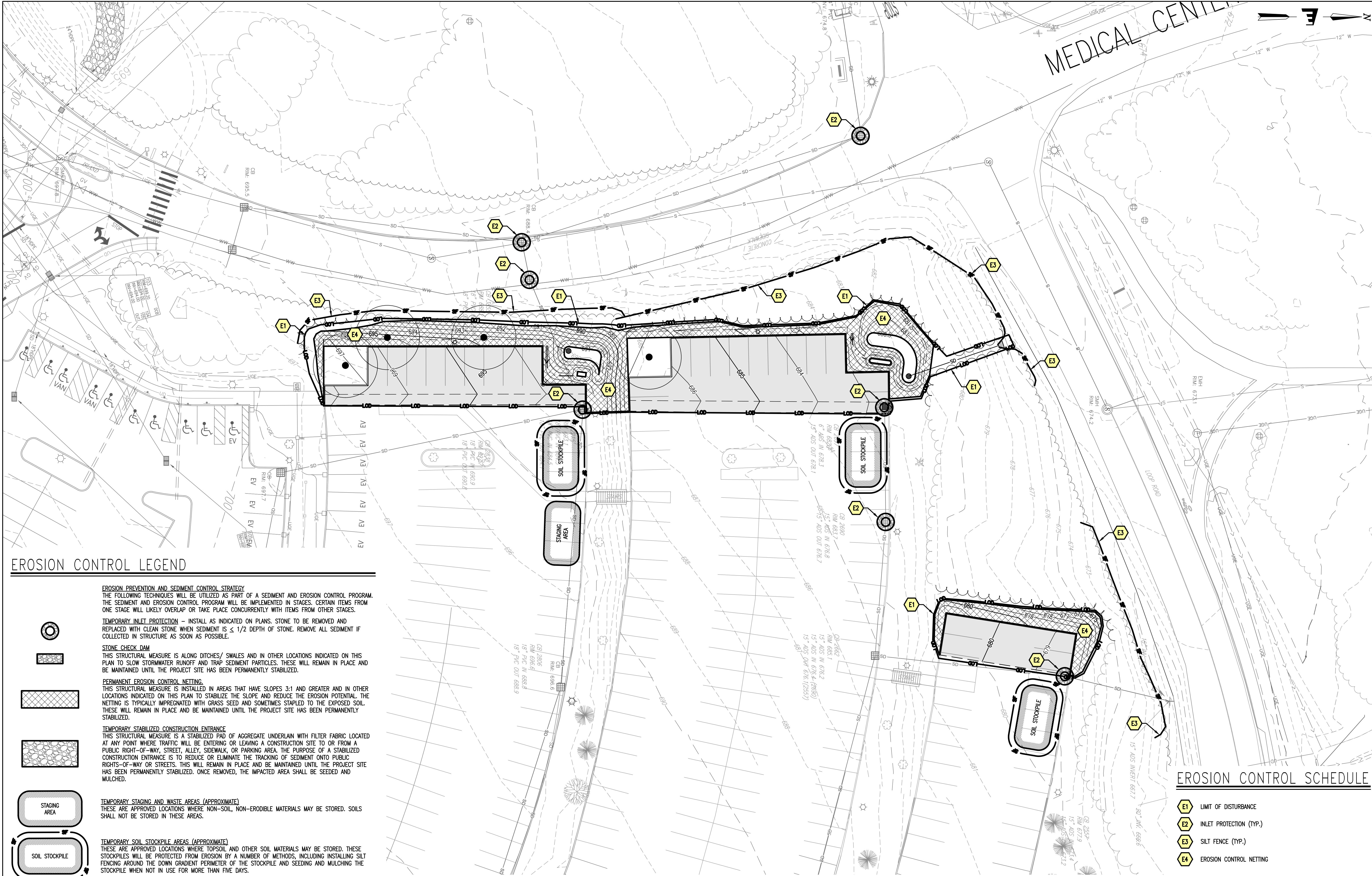
LIMITS OF DISTURBANCE
THE CONTRACTOR SHALL CONTAIN ANY EARTH MOVING ACTIVITIES WITHIN THE DESIGNATED LIMITS SHOWN ON THIS PLAN. THE ENGINEER SHALL REVIEW THE SITE TO MAKE ANY ADJUSTMENTS TO ACCOUNT FOR ENVIRONMENTALLY SENSITIVE AREAS, SPECIMEN TREES AND SPECIAL AREAS OF CONCERN.



SITE PLAN – PARKING AREA "E"

SCALE: 1" = 20'

[illegible]



SITE PLAN – PARKING AREA "2"

SCALE: 1" = 20'

EROSION CONTROL LEGEND

STONE CHECK DAM

THIS STRUCTURAL MEASURE IS ALONG DITCHES/ SWALES AND IN OTHER LOCATIONS INDICATED ON THIS PLAN TO SLOW STORMWATER RUNOFF AND TRAP SEDIMENT PARTICLES. THESE WILL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN PERMANENTLY STABILIZED.

PERMANENT EROSION CONTROL NETTING

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LIMITS OF DISTURBANCE

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EROSION CONTROL SCHEDULE

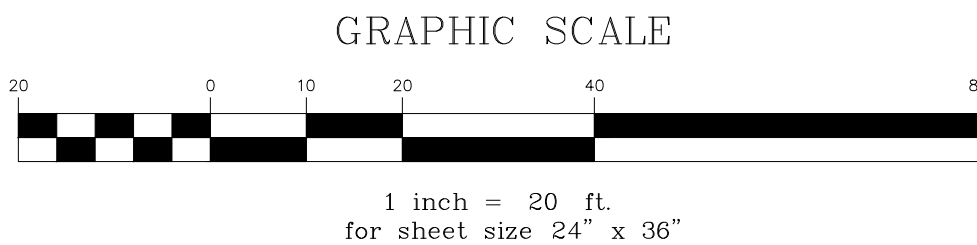
- E1

LIMIT OF DISTURBANCE
- E2

INLET PROTECTION (TYP.)
- E3

SILT FENCE (TYP.)
- E4

EROSION CONTROL NETTING



STATE OF NEW HAMPSHIRE
NICHOLAS FIOCE
No. 13286
LICENSED PROFESSIONAL ENGINEER
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No.	Description	Date

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LEBANON, NEW HAMPSHIRE 03766

EROSION PREVENTION AND SEDIMENT CONTROL PLAN - PARKING AREA "2"

MAIN CAMPUS
PARKING EXPANSION
LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

Sheet Title:

EV Project # 23310

Drawn By: JWF

Checked By: NAF

Scale: 1" = 10'

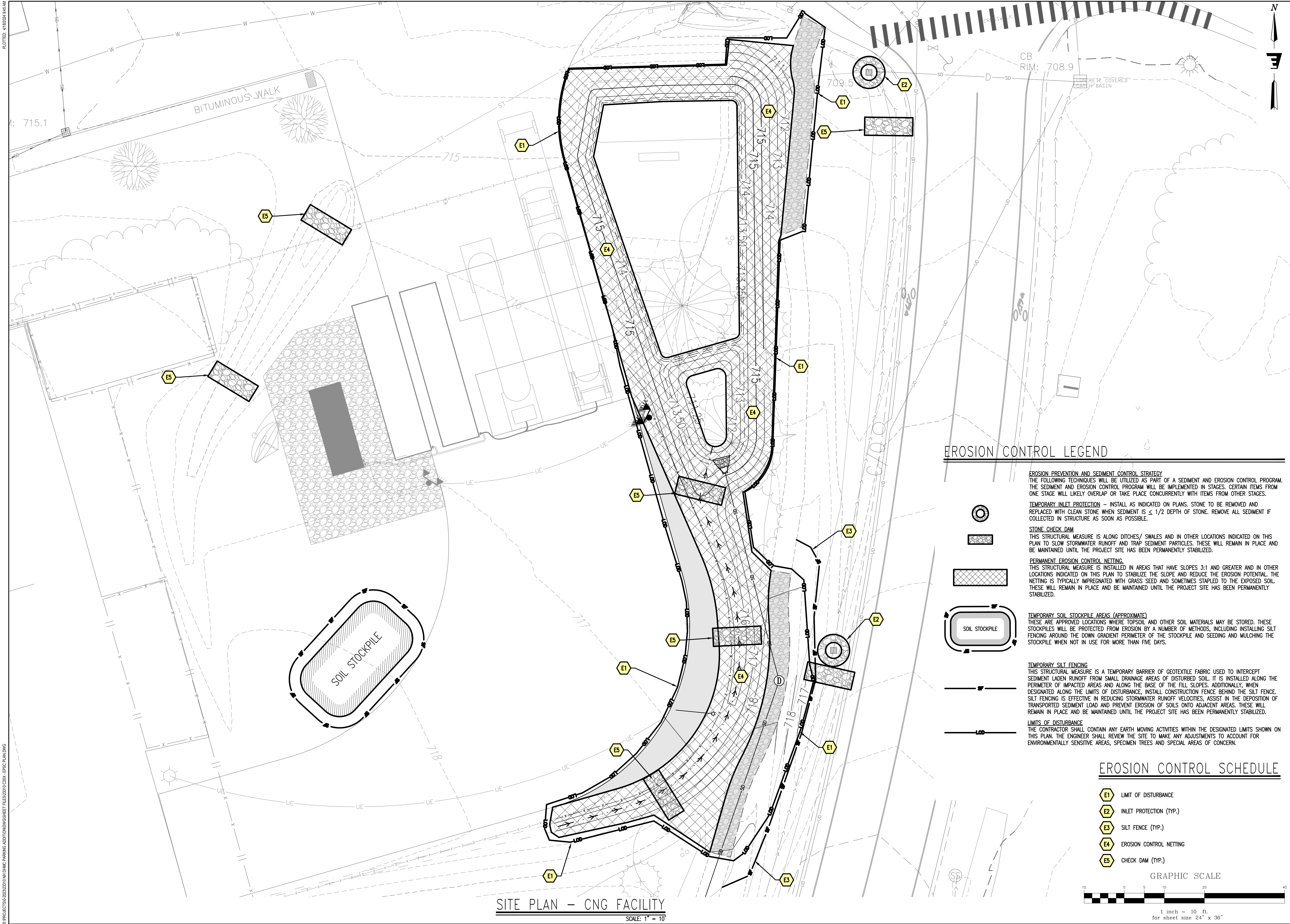
Date: 03/11/2024

C207

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PLOTTED: 4/10/2024 9:45 AM

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EROSION CONTROL LEGEND

EROSION PREVENTION AND SEDIMENT CONTROL STRATEGY
 THE FOLLOWING TECHNIQUES WILL BE UTILIZED AS PART OF A SEDIMENT AND EROSION CONTROL PROGRAM. THE SEDIMENT AND EROSION CONTROL PROGRAM WILL BE IMPLEMENTED IN STAGES. CERTAIN ITEMS FROM ONE STAGE WILL LIKELY OVERLAP OR TAKE PLACE CONCURRENTLY WITH ITEMS FROM OTHER STAGES.

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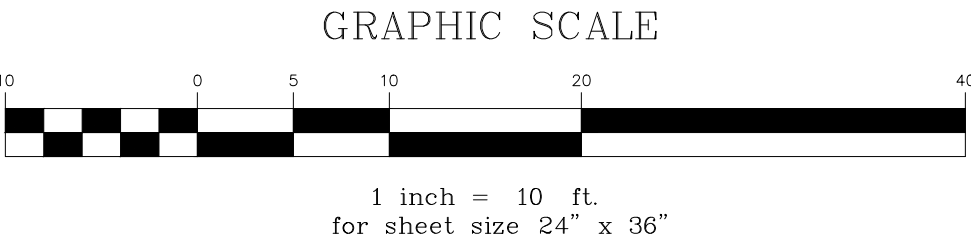
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EROSION CONTROL SCHEDULE

- E1 LIMIT OF DISTURBANCE
- E2 INLET PROTECTION (TYP.)
- E3 SILT FENCE (TYP.)
- E4 EROSION CONTROL NETTING
- E5 CHECK DAM (TYP.)



Date
 No.
 Description

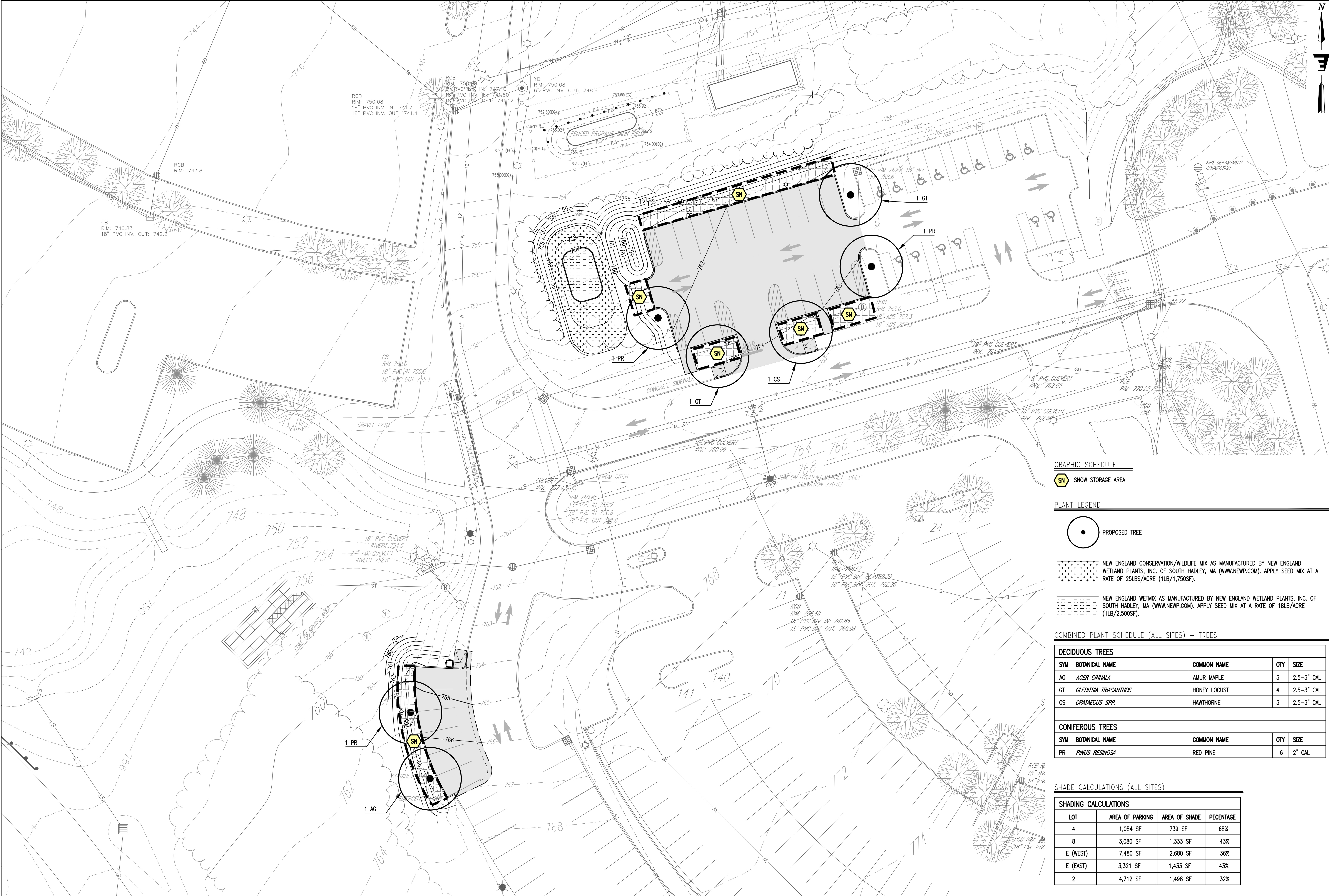
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EROSION PREVENTION AND SEDIMENT CONTROL PLAN - CNG FACILITY
 MAIN CAMPUS
 PARKING EXPANSION
 LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project # 23310
 Drawn By: JWF
 Checked By: NAF
 Scale: 1" = 10'
 Date: 03/11/2024

C208
 Page 17 of 27



SITE PLAN – PARKING AREAS "4" AND "8"

SCALE: 1" = 20'

GRAPHIC SCHEDULE

SN SNOW STORAGE AREA

PLANT LEGEND

PROPOSED TREE

NEW ENGLAND CONSERVATION/WILDLIFE MIX AS MANUFACTURED BY NEW ENGLAND WETLAND PLANTS, INC. OF SOUTH HADLEY, MA (WWW.NEWP.COM). APPLY SEED MIX AT A RATE OF 25LBS/ACRE (1LB/1,750SF).

NEW ENGLAND WETMIX AS MANUFACTURED BY NEW ENGLAND WETLAND PLANTS, INC. OF SOUTH HADLEY, MA (WWW.NEWP.COM). APPLY SEED MIX AT A RATE OF 18LB/ACRE (1LB/2,500SF).

COMBINED PLANT SCHEDULE (ALL SITES) – TREES

DECIDUOUS TREES				
SYM	BOTANICAL NAME	COMMON NAME	QTY	SIZE
AG	ACER GINNALA	AMUR MAPLE	3	2.5–3" CAL
GT	GLEDISIA TRICANTHOS	HONEY LOCUST	4	2.5–3" CAL
CS	CRATAEGUS SPP.	HAWTHORNE	3	2.5–3" CAL
CONIFEROUS TREES				
SYM	BOTANICAL NAME	COMMON NAME	QTY	SIZE
PR	PINUS RESINOSA	RED PINE	6	2" CAL

SHADE CALCULATIONS (ALL SITES)

SHADING CALCULATIONS			
LOT	AREA OF PARKING	AREA OF SHADE	PERCENTAGE
4	1,084 SF	739 SF	68%
8	3,080 SF	1,333 SF	43%
E (WEST)	7,480 SF	2,680 SF	36%
E (EAST)	3,321 SF	1,433 SF	43%
2	4,712 SF	1,498 SF	32%

GRAPHIC SCALE



1 inch = 20 ft.
for sheet size 24" x 36"

Stamp

Date

Description

No.

ENGINEERING VENTURES PC

208 Flynn Avenue, Suite 2A, Burlington, VT 05401 • 802-863-6225
85 Mechanic Street, Suite E2-3, Lebanon, NH 03766 • 603-442-9333
414 Union Street, Schenectady, NY 12305 • 518-630-9614
www.engineeringventures.com

DARTMOUTH - HITCHCOCK MEDICAL CENTER
1 MEDICAL CENTER DRIVE
LEBANON, NEW HAMPSHIRE 03766

LANDSCAPE PLAN - PARKING AREAS "4" AND "8"

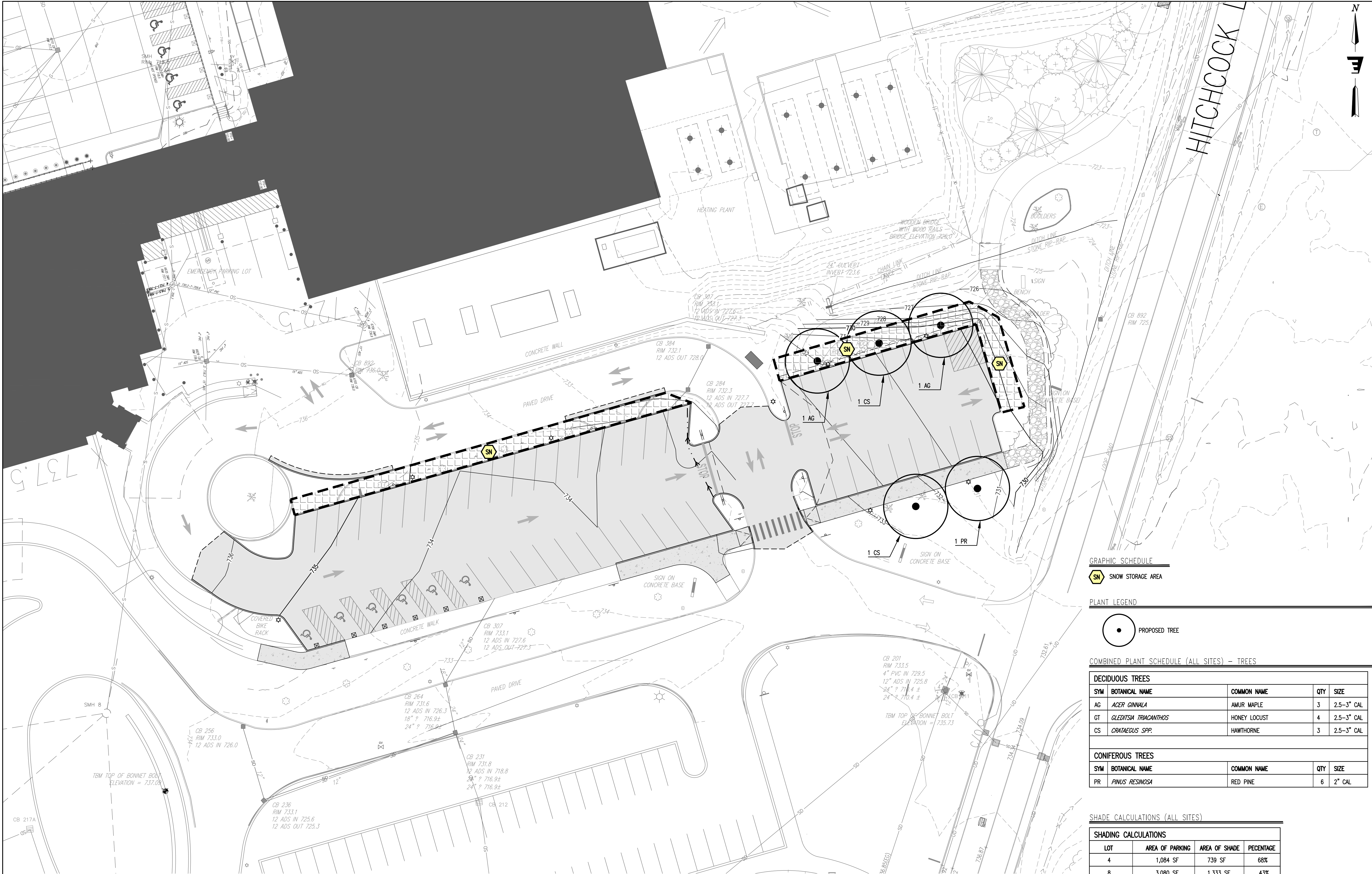
MAIN CAMPUS
PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project # 23310
Drawn By: JWF
Checked By: NAF
Scale: 1" = 20'
Date: 03/11/2024

C209

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SITE PLAN – PARKING AREA "E"
SCALE: 1" = 20'

GRAPHIC SCHEDULE

SN SNOW STORAGE AREA

PLANT LEGEND

PROPOSED TREE

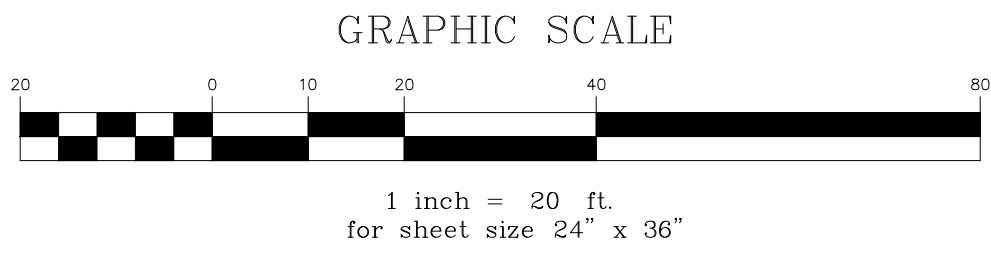
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2	4,712 SF	1,498 SF	32%



STATE OF NEW HAMPSHIRE
NICHOLAS FIORE
No. 13286
LICENSED PROFESSIONAL ENGINEER
Stamp

Date

Description

No.

ENGINEERING VENTURES PC

208 Flynn Avenue, Suite 2A, Burlington, VT 05401 • 802-863-6225
85 Mechanic Street, Suite E2-3, Lebanon, NH 03766 • 603-442-9333
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DARTMOUTH - HITCHCOCK
MEDICAL CENTER
1 MEDICAL CENTER DRIVE
LEBANON, NEW HAMPSHIRE 03766

LANDSCAPE PLAN - PARKING AREA "E"

MAIN CAMPUS
PARKING EXPANSION
LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project # 23310
Drawn By: JWF
Checked By: NAF
Scale: 1" = 20'
Date: 03/11/2024

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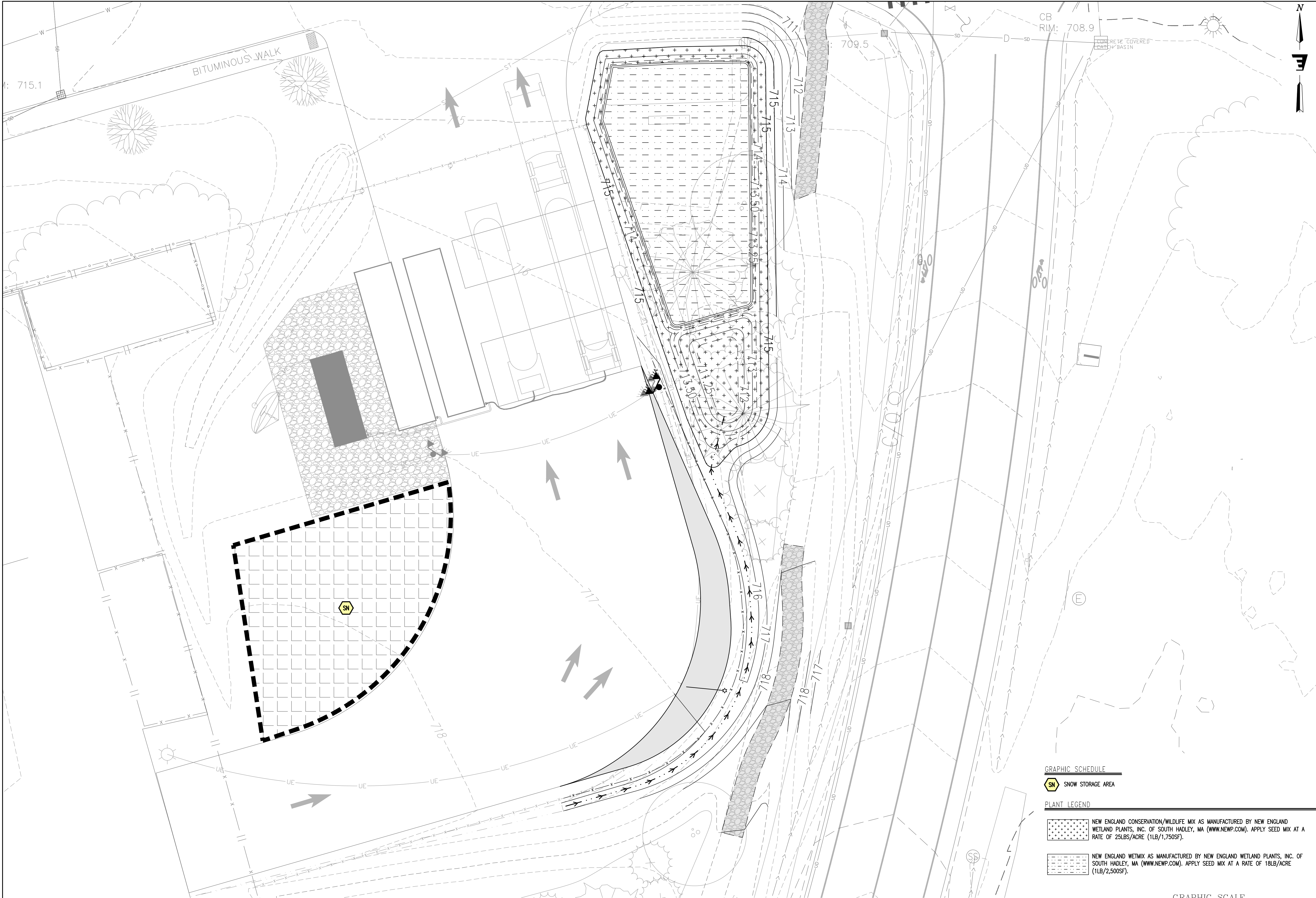


GRAPHIC SCALE

20 0 10 20 40 60



1 inch = 20 ft.
for sheet size 24" x 36"



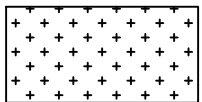
SITE PLAN - CNG FACILITY

SCALE: 1" = 10'

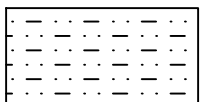
GRAPHIC SCHEDULE

SN SNOW STORAGE AREA

PLANT LEGEND



NEW ENGLAND CONSERVATION/WILDLIFE MIX AS MANUFACTURED BY NEW ENGLAND WETLAND PLANTS, INC. OF SOUTH HADLEY, MA (WWW.NEWP.COM). APPLY SEED MIX AT A RATE OF 25LBS/ACRE (1LB/1,750SF).



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GRAPHIC SCALE



1 inch = 10 ft.
for sheet size 24" x 36"

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NOTARIS
No. 13286
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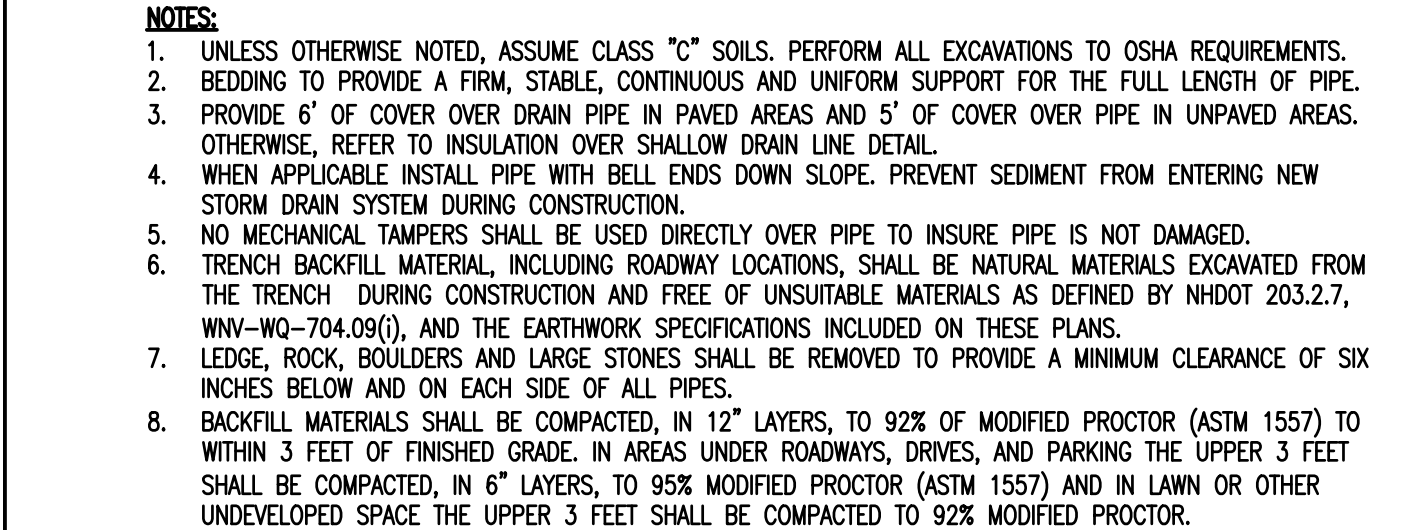
LANDSCAPE PLAN - CNG FACILITY

MAIN CAMPUS
PARKING EXPANSION
LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project # 23310
Drawn By: JWF
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Scale: 1" = 10'
Date: 03/11/2024

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HEAVY DUTY CB FRAME AND GRATE ASSEMBLY SHALL BE EAST JORDAN IRON WORKS "5520MS 5546ZPT ASSEMBLY" OR APPROVED EQUAL.

SLOPE

MORTAR

CONCRETE OR ASPHALT PAVING

SLOPE

MIN. OF 2 AND MAX. OF 6 COURSES OF RED, DENSE, GRADE MS - HARD BRICK CONFORMING TO ASTM C32-13, MORTARED 5/8" THICK ON EXTERIOR SURFACE

1'-6" MIN. 4'-0" MAX.

24"

MANHOLES LESS THAN DEEP SHALL HAVE REINFORCING CONCRETE SLAB COVER IN LIEU OF CONE SECTION

PRECAST CONCRETE MANHOLE CONE (ECCENTRIC)

36" I.D. MIN. OR AS NOTED ON PLANS

6"

6"

MORTAR ALL EXTERIOR JOINTS

PRECAST REINFORCED CONC. RISER SECTION

1'-0" MIN. 5'-0" MAX.

FLEXIBLE BITUMASTIC SEALANT, ALL JOINTS TO BE OVERLAPPING, SEALED FOR WATER TIGHTNESS USING A DOUBLE ROW OF AN ELASTOMERIC OR MASTIC-LIKE SEALANT 1 1/4" WIDTH

PIPE STUB 2'-0" MIN. TO 4'-0" MAX.

6" MIN.

OUT

IN

FLEXIBLE RUBBER BOOT (CAST IN PLACE OR FIELD INSTALLED)

2'-0" MIN. 6'-0" MAX.

2'-0" MIN. SUMP MIN.

6"

MONOLITHIC PRECAST REINFORCED CONC. BASE SECTION

12" MIN.

CRUSHED STONE BASE - ASTM C33-03, STONE SIZE #67

SUITABLE UNDISTURBED MATERIAL

#4 BARS 6" O.C. BOTH WAYS, BASE AND WALLS

INVERTS TO BE GROUTED ONLY AFTER PASSAGE OF LEAKAGE TEST

- NOTES:**
1. IF DEPTH OF MANHOLE IS 6 FT. OR LESS FROM RIM TO CENTERLINE INVERT, THEN A FLAT TOP WILL BE INSTALLED. IF DEPTH OF MANHOLE FROM RIM TO CENTERLINE INVERT IS MORE THAN 6 FT., THEN AN ECCENTRIC CONICAL TOP WILL BE INSTALLED.
 2. CATCH BASIN AND GRATE SHALL BE DESIGNED FOR H2O LOADING.

SECTION VIEW
MANHOLE

Technical drawing of a manhole section view. The drawing shows a cross-section of a manhole with a storm cover. The cover is labeled "STORM". The manhole has a 2" lettering and a 1-1/2" diameter. The cover has (2) closed pick holes. The manhole has a 32-1/4" diameter. The cover has a 32" diameter. The manhole has a 30" diameter. The cover has a 34-7/16" diameter. The manhole has a 42" diameter. The cover has a 8-1/2" diameter.

CATCH BASIN - ROUND

Technical drawing of a round catch basin section view. The drawing shows a cross-section of a catch basin with a pump warning. The warning is labeled "PUMP NO WASTE DRAINS TO WATERWAYS". The catch basin has a 26-1/4" diameter. The cover has a 26" diameter. The catch basin has a 24" diameter. The cover has a 26-3/4" diameter. The catch basin has a 35-1/2" diameter. The cover has a 1-1/8" diameter. The catch basin has a 6" diameter.

- NOTES:**
1. ALL DIMENSIONS SHOWN HERE ARE NOMINAL.
 2. COVER SHALL BE HEAVY DUTY (H-20) LOAD RATED.
 3. CATCH BASIN (ROUND) FRAME AND GRATE ASSEMBLY SHALL BE EAST JORDAN IRON WORKS "2266Z 1040M3 SET" (PRODUCT NUMBER 0211033205) OR APPROVED EQUAL.
 4. MANHOLE (MH) FRAME AND COVER ASSEMBLY SHALL BE EAST JORDAN IRON WORKS "1480A V1419 ASSEMBLY" OR APPROVED EQUAL.

EXISTING STRUCTURE

PIPE STUB
2'-0" MIN. TO
4'-0" MAX.

NON-SHRINK,
WATER TIGHT,
CEMENT/GROUT

STAINLESS STEEL
EXPANSION BAND

STAINLESS STEEL
PIPE CLAMP

INVERTS AND
WATER TIGHT
CEMENT TO BE
CONSTRUCTED
ONLY AFTER
PASSAGE OF
LEAKAGE TEST

PIPE TO MANHOLE CONNECTOR,
KOR-N-SEAL, OR APPROVED EQUAL

NOTES:

1. CORE HOLE SHALL BE SMOOTH, SYMMETRICAL, AND APPROPRIATELY SIZED FOR SEWER PIPE INSTALLATION.
2. WHEN APPLICABLE CONTRACTOR SHALL RECONSTRUCT EXISTING SHELF IN MANHOLES TO PROVIDE POSITIVE FLOW TO INVERT OUT.

MIN. OF 2 AND MAX. OF 6 COURSES OF RED, DENSE, GRADE MS - HARD BRICK CONFORMING TO ASTM C32-13, MORTARED 5/8" THICK ON EXTERIOR SURFACE

MORTAR ALL EXTERIOR JOINTS

PRECAST REINFORCED CONC. RISER SECTION

FLEXIBLE BITUMASTIC SEALANT, ALL JOINTS TO BE OVERLAPPING, SEALED FOR WATER TIGHTNESS USING A DOUBLE ROW OF AN ELASTOMERIC OR MASTIC-LIKE SEALANT 1 1/4" WIDTH

MONOLITHIC PRECAST REINFORCED CONC. BASE SECTION

#4 BARS 6" O.C. BOTH WAYS, BASE AND WALLS

MORTAR OR ASPHALT PAVING

HEAVY DUTY MH FRAME AND COVER ASSEMBLY SHALL BE EAST JORDAN IRON WORKS "1480A V1419 ASSEMBLY" OR APPROVED EQUAL.

SLOPE GRADE AWAY FROM MANHOLE IN NON-PAVED AREAS

24"

48" I.D. 60" I.D. IF DEEPER THAN 12'-0"

6"

1'-6" MIN. 4'-0" MAX.

1'-0" MIN. 5'-0" MAX.

2'-0" MIN. 6'-0" MAX.

6" MIN.

PIPE STUB 2'-0" MIN. TO 4'-0" MAX.

OUT

IN

FLEXIBLE RUBBER FOOT (CAST IN PLACE OR FIELD INSTALLED)

CRUSHED STONE BASE ASTM C33-03, STONE SIZE #67

SUITABLE UNDISTURBED MATERIAL

MH INVERTS TO BE CONSTRUCTED ONLY AFTER PASSAGE OF MH LEAKAGE TEST

- NOTES:**
1. PROVIDE SMOOTH SWEEPING TRANSITIONS BETWEEN INVERTS OF INTERSECTING PIPE.
 2. IF DEPTH OF MANHOLE IS 6 FT. OR LESS FROM RIM TO CENTERLINE INVERT, THEN A FLAT TOP WILL BE INSTALLED. IF DEPTH OF MANHOLE FROM RIM TO CENTERLINE INVERT IS MORE THAN 6 FT., THEN AN EGO CONICAL TOP WILL BE INSTALLED.
 3. INVERTS AND SHELVES SHALL BE PLACED AFTER TESTING.
 4. MANHOLE AND COVER SHALL BE DESIGNED FOR H2O LOADING.

NOTES:

1. UPGRADIENT AREAS DRAINING TO RAIN GARDEN SHALL BE FINAL STABILIZED PRIOR TO DIRECTING RUNOFF INTO THE PROPOSED RAIN GARDEN.
2. A DENSE AND VIGOROUS VEGETATIVE COVER MUST BE ESTABLISHED PRIOR TO USE.

The diagram illustrates a cross-section of a rain garden structure. From left to right, it shows a 3" loam layer, a 24" thick filter media layer, and a 2" thick pea gravel layer. A 6" perforated PVC riser is shown in the gravel layer. A PVC vertical riser outlet structure is shown in the filter media layer. A rain garden outlet riser is shown in the gravel layer. A PVC dome 'light duty' landscape drain rate and riser is shown on the right side. The diagram also shows the top of the berm, top of the stone weir, top of the rise, finished grade, top of the media, bottom of the media, bottom of the pea-gravel, and bottom of the coarse gravel. A cleanout with cast iron cover is shown in the filter media layer. A 24" thick filter media layer is shown. A 6" perforated PVC riser is shown. A PVC vertical riser outlet structure is shown. A rain garden outlet riser is shown. A PVC dome 'light duty' landscape drain rate and riser is shown. The diagram also shows the top of the berm, top of the stone weir, top of the rise, finished grade, top of the media, bottom of the media, bottom of the pea-gravel, and bottom of the coarse gravel.

3" LOAM

PLANTINGS SHALL BE CONSERVATION MIX GRASS SEED AS SPECIFIED IN DETAIL 4/C4.5

CLEANOUT WITH CAST IRON COVER

24" THICK FILTER MEDIA

PVC VERTICAL RISER OUTLET STRUCTURE

2" THICK PEA GRAVEL

6" PERFORATED, PVC

RAIN GARDEN OUTLET RISER (SEE DETAIL, THIS SHEET)

PVC DOME "LIGHT DUTY" LANDSCAPE DRAIN RATE AND RISER WHERE OCCURS PER PLAN, RIM ELEV. = (REFER TO STORMWATER SCHEDULE)

TOP OF BERM

TOP OF STONE WEIR

TOP OF RISE

FINISHED GRADE

TOP OF MEDIA

24"

BOTTOM OF MEDIA

BOTT. OF PEA-GRAVEL

10"

BOTT. OF COARSE GRAVEL

- | UNDERPANEL GRAVEL | | FILLER MEDIA | |
|--|--|---|--|
| 1. DO NOT PLACE THE BOREHOLE TEST SYSTEM INTO SERVICE UNTIL THE BMP HAS BEEN PLANTED AND THE DISPERSED AREAS HAVE BEEN FULLY STABILIZED. | | THE SOIL SHOULD BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHOULD BE MIXED OR FOUND WITHIN THE BOREHOLE. THE MEDIA SHOULD BE HARDBUT NOT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE FILLER MEDIA SHOULD BE FREE OF NOXIOUS WELDS. | |
| 2. DO NOT DISCHARGE SEDIMENT-LADEN WATER FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO THE BOREHOLE AREA DURING ANY STAGE OF CONSTRUCTION. | | THE FILTER MEDIA SHOULD BE TESTED AND SHOULD MEET THE FOLLOWING CRITERIA:
PH RANGE 5.2 - 7.0
ORGANIC MATTER 1% MAX
MAGNESIUM 35 LB/AC
PHOSPHORUS P205 75 LB/AC
POTASSIUM K2O 85 LB/AC
SOLUBLE SALT NO TEST FOR EXCEED 500 PPM | |
| 3. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF NECESSARY, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM. | | | |

PARAMETER	SPECIFICATION	MATERIAL SPECIFICATIONS		NOTES
		SIZE	GRADATION OF MATERIAL	
FLEXIBLE MEDIA [2" DEEP]	COMPONENT MATERIAL: BARK MULCH	PERCENT OF MATERIAL BY VOLUME: 20% TO 30%	SIZE NO. 200	% PASSING <5
	LOAMY COARSE SAND	70% TO 80%	10 20 60 200	85 to 100 70 to 100 15 to 40 8 to 15
PEA GRAVEL	ASTM C33-03		NO. 8 (3/8" TO #8)	
CORAL GRAVEL	ASTM C33-03		NO. 6 (3/4" TO 3/8")	

Technical drawing of a 12" DIA. DOME GRATE, TYP. assembly. The drawing shows a cross-section of the drain structure with various layers and components labeled. Key features include:

- 12" DIA. DOME GRATE, TYP.**: The top cover of the drain.
- 12" DIA. NYLOPLAST PVC DRAIN BASIN OR APPROVED EQUAL. SEE SCHEDULE BELOW FOR DIAMETER**: The main body of the drain.
- OUTLET INV. (REFER TO STORMWATER SCHEDULE)**: The vertical outlet pipe.
- OUTLET PIPE, 12" DIA. HDPE**: The bottom section of the outlet pipe.
- SUMP ELEV. (REFER TO STORMWATER SCHEDULE)**: The level of the sump.
- 18" MIN.**: Minimum height from the sump to the top of the drain basin.
- 6" MIN.**: Minimum height from the sump to the top of the outlet pipe.
- 12" MIN.**: Minimum width of the drain basin.
- 12" MIN.**: Minimum width of the outlet pipe.
- 3,500 PSI CONCRETE**: The material used for the base of the drain basin.
- Labels on the left side (from top to bottom)**:
 - RIM ELEV. (REFER TO STORMWATER SCHEDULE)**
 - ORIFICE (REFER TO STORMWATER SCHEDULE)**
 - SURFACE ELEV.**
 - CAP WITH 2" DIA. ORIFICE**
 - DRAIN INV.**
 - ROTT. ELEV.**
 - 6" DIA. PERFORATED UNDER DRAIN**

RIPRAP APRON NOTES

1. STONE SHALL BE CLASS "C" STONE FILL (N.H.D.O.T.), 1" THICK REFER TO PLAN FOR LIMITS.
2. DIMENSIONS SHALL BE DETERMINED AS FOLLOWS:
 $D1 = 2 \times \text{PIPE DIAMETER (D)} \text{ (MIN.)}$
 $D2 = 4 \times \text{PIPE DIAMETER (D)}$
 $L = 4.5 \times \text{PIPE DIAMETER (D)}$

Labels in the diagram include: STONE FILL, SEE NOTE 1.; FILTER FABRIC, MIRAFI 140N OR APPROVED EQUIVALENT; FINISHED GRADE; PIPE, SEE PLAN FOR LENGTH, SIZE AND SLOPE; PIPE FLARED END SECTION TO MATCH PIPE DIAMETER AND MATERIAL.

[illegible]

STONE MASONRY HEADWALL NOTES

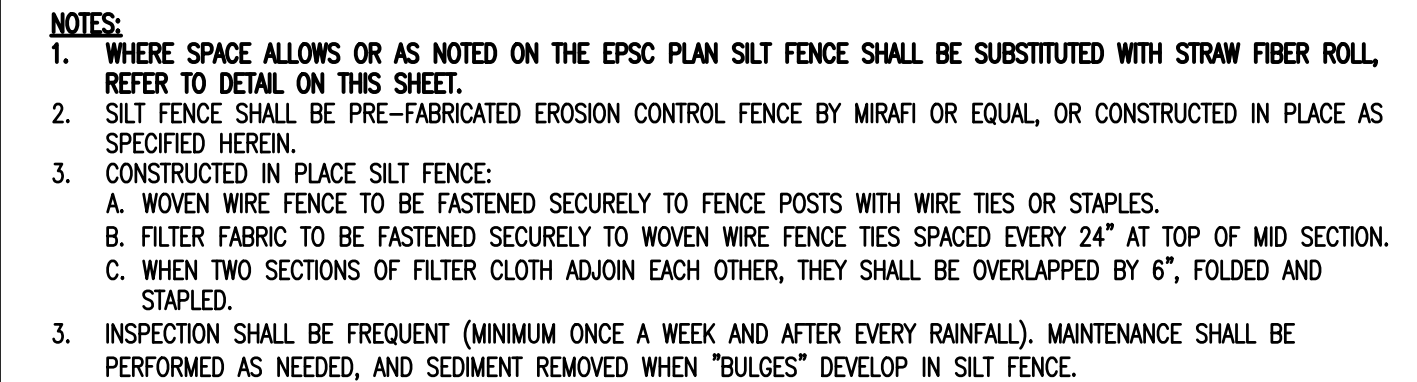
1. STONE MATERIALS TO MATCH COLOR, SHAPE SIZE AND TYPE OF ANY EXISTING HEADWALLS ON SITE.
2. MASONRY WORK TO MATCH EXISTING HEADWALLS ON SITE.

STONE MASONRY HEADWALL

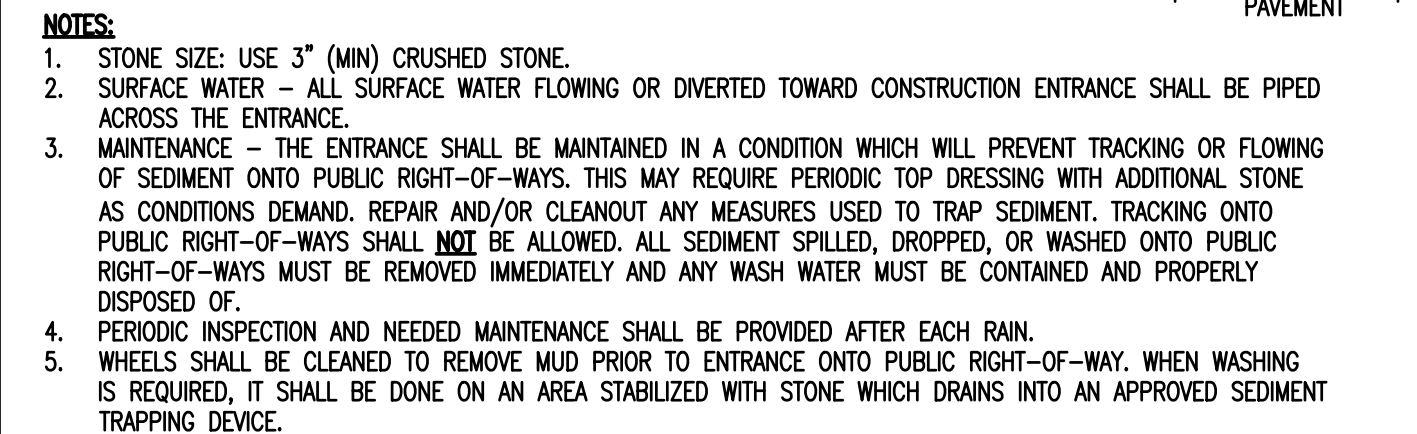
NOT TO SCALE

4

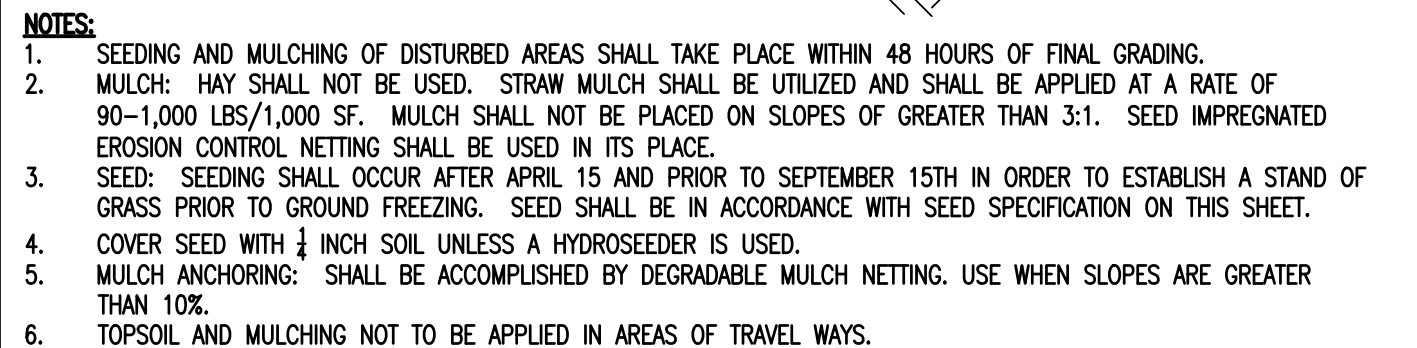
DIA. INCHES		2:1 SLOPE DIMENSIONS																	
		A		B		C		E		F		G		H		I		J	
ft	in	ft	in	ft	in	ft	in	ft	in	ft	in	ft	in	ft	in	ft	in	ft	in
12	1	2	4	1	1	1	1	1	2	1	9	0	9	3	6	3	0	3	0
14	1	2	4	1	1	1	1	1	2	1	9	0	8	3	9	3	3	1	1
15	1	6	4	1	2	0	1	6	1	9	0	8	3	9	3	3	3	0	1
18	1	9	4	1	2	0	1	9	1	10	0	8	4	1	3	7	1	3	3
25	2	3	5	1	2	2	2	4	1	11	0	7	4	6	4	0	3	6	6
30	2	9	5	1	2	3	2	11	1	11	0	6	5	0	4	6	3	10	1
36	3	3	6	1	2	5	3	17	2	0	0	6	5	6	5	0	4	14	0



NOT TO SCALE 1



NOT TO SCALE (2)



NOT TO SCALE (3)

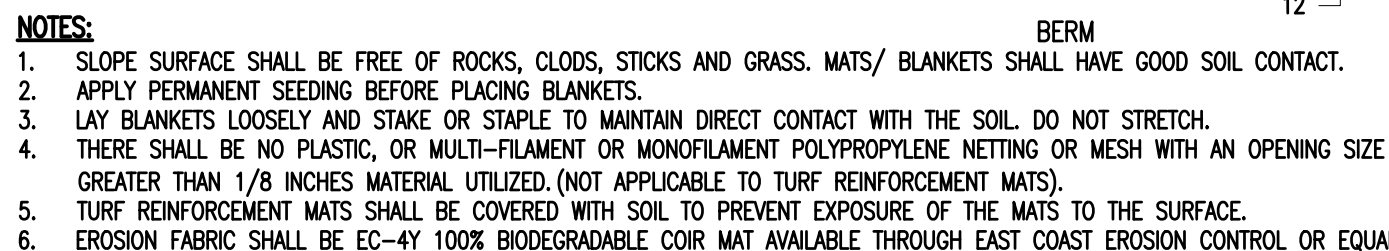
FERTILIZER- 10 LBS. PER 1000S.F.
SPRING SEEDING
FALL SEEDING

LIME- 90 LBS. PER 1000S.F.
DOLOMITIC GROUND LESTMSTONE
NOT LESS THAN 85% OF THE TOTAL
CARBONATE

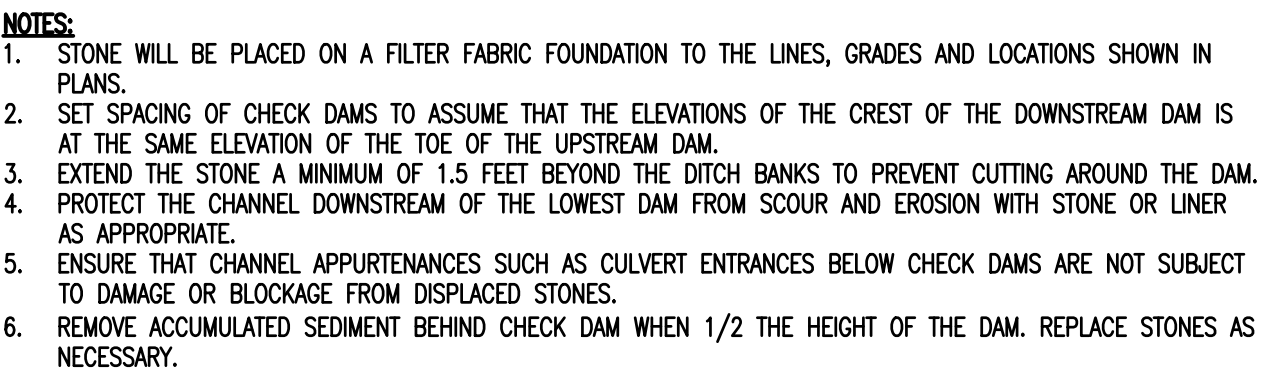
TOP SOIL
4" MINIMUM APPROVED TOPSOIL

STRAW MULCH- 2 BALES PER 1000S.F.
APPLY BINDER OR NETTING AS NEEDED

NOT TO SCALE (4)



NOT TO SCALE (6)



NOT TO SCALE (7)



1. THE "ON-SITE EROSION CONTROL PLAN COORDINATOR" SHALL BE THE GENERAL CONTRACTOR, THIS INDIVIDUAL SHALL BE PRESENT ON-SITE FROM "DAY-TO-DAY, AND SHALL BE RESPONSIBLE FOR ENSURING THAT THE EROSION CONTROL MEASURES REQUIRED BY THE EROSION CONTROL PLAN, DETAILS AND NOTES, ARE PROPERLY INSTALLED AND MAINTAINED. THE ONSITE EROSION CONTROL PLAN COORDINATOR SHALL KEEP A WRITTEN RECORD OF INSPECTIONS AND MAINTENANCE OF EROSION CONTROL FEATURES. A COPY OF THESE PLANS AND INSPECTION/MAINTENANCE RECORDS SHALL BE KEPT ON-SITE AT ALL TIMES.
2. THE SMALLEST PRACTICAL AREA OF LAND SHALL BE DISTURBED AT ANY ONE TIME DURING DEVELOPMENT. WHEN LAND IS DISTURBED, THE DISTURBANCE SHALL BE KEPT TO THE SHORTEST PRACTICAL DURATION AS APPROVED BY THE OWNER'S REP.
3. DUST SHALL BE CONTROLLED WITH WATER DISTRIBUTED BY A TRUCK MOUNTED SPRAY BAR. CALCIUM CHLORIDE (AASHTO M 144) OR SODIUM CHLORIDE (AASHTO M 143) SHALL BE USED AS DIRECTED BY THE OWNER'S REP.
4. ALL EROSION AND STORMWATER CONTROL SYSTEMS SHALL BE INSPECTED ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS OF THE OCCURRENCE OF A STORM EVENT OF 0.5" OR GREATER. NEEDED REPAIRS SHALL BE MADE IMMEDIATELY. SEDIMENT DEPOSITS SHALL BE REMOVED AS THEY ACCUMULATE AND PLACED IN AREAS WHERE FURTHER EROSION IS UNLIKELY.
5. A WRITTEN REPORT, STAMPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST, SHALL BE SUBMITTED TO THE NHDES WITHIN 24 HOURS OF EACH INSPECTION THAT:
 - A) DESCRIBES THE PROGRESS OF THE PROJECT, INCLUDING WHETHER ALL CONDITIONS OF THE PERMIT ARE BEING MET AND, IF NOT, WHICH REQUIREMENTS ARE NOT BEING MET;
 - B) IF ANY REQUIREMENTS ARE NOT BEING MET, AN EXPLANATION OF THE CORRECTIVE ACTION(S) THAT WILL BE OR ARE BEING TAKEN TO BRING THE PROJECT INTO COMPLIANCE WITH APPLICABLE REQUIREMENTS AND THE DEADLINE BY WHICH SUCH ACTIONS WILL BE COMPLETED; AND
 - C) INCLUDES PHOTOGRAPHS OF THE SITE THAT ARE REPRESENTATIVE OF THE PROJECT; AND
6. RETAIN A COPY OF THE REPORT PREPARED PURSUANT TO (5), ABOVE, ON-SITE FOR REVIEW DURING SITE INSPECTIONS BY FEDERAL, STATE, AND LOCAL OFFICIALS
7. ALL PERIMETER CONTROLS SHALL BE INSTALLED PRIOR TO EARTH MOVING OPERATIONS.
8. DETENTION BASINS AND SLOES SHALL BE INSTALLED PRIOR TO ROUGH GRADING THE SITE.
9. ALL EROSION AND SLOES SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
10. ALL ROADWAYS AND PARKING LOTS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
11. ALL CUT AND FILL SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
12. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
 - BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
 - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
 - A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
 - EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
13. APPROPRIATE SILTATION/EROSION/TURBIDITY CONTROLS SHALL BE IN PLACE PRIOR TO CONSTRUCTION, SHALL BE MAINTAINED DURING CONSTRUCTION, AND REMAIN IN PLACE UNTIL THE AREA IS STABILIZED. SILT FENCE(S) MUST BE REMOVED ONCE THE AREA IS STABILIZED.
14. DISCHARGE FROM Dewatering OF WORK AREAS SHALL BE TO SEDIMENT BASINS THAT ARE:
 - A) LOCATED IN UPLANDS;
 - B) LINED WITH HAY BALES OR OTHER ACCEPTABLE SEDIMENT TRAPPING LINERS;
 - C) SET BACK FAR AS POSSIBLE FROM WETLANDS AND SURFACE WATERS, IN ALL CASES WITH A MINIMUM OF 20 FEET OF UNDISTURBED VEGETATED BUFFER.
15. WITHIN THREE DAYS OF FINAL GRADING, ALL EXPOSED SOIL AREAS SHALL BE STABILIZED BY SEEDING AND MULCHING DURING THE GROWING SEASON, OR IF NOT WITHIN THE GROWING SEASON, BY MULCHING WITH TACK OR NETTING AND PINNING ON SLOPES STEEPER THAN 3:1.
16. WHERE CONSTRUCTION ACTIVITIES HAVE BEEN TEMPORARILY SUSPENDED WITHIN THE GROWING SEASON, ALL EXPOSED SOIL AREAS SHALL BE STABILIZED WITHIN 14 DAYS BY SEEDING AND MULCHING.
17. WHERE CONSTRUCTION ACTIVITIES HAVE BEEN TEMPORARILY SUSPENDED OUTSIDE THE GROWING SEASON, ALL EXPOSED AREAS SHALL BE STABILIZED WITHIN 14 DAYS BY MULCHING AND TACK. SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED BY MATTING AND PINNING.
18. PROPER HEADWALLS SHALL BE CONSTRUCTED WITHIN SEVEN DAYS OF CULVERT INSTALLATION.
19. CULVERT OUTLETS SHALL BE PROTECTED IN ACCORDANCE WITH THE DES BEST MANAGEMENT PRACTICES FOR URBAN STORMWATER RUNOFF MANUAL (JANUARY 1996) AND THE STORMWATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE (AUGUST 1992).
20. THE CONTRACTOR RESPONSIBLE FOR COMPLETION OF THE WORK SHALL UTILIZE TECHNIQUES DESCRIBED IN THE NEW HAMPSHIRE STORMWATER MANUAL, VOLUME 3, EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION (DECEMBER 2008).
21. ALL SOIL COVERAGE BIORETENTION SYSTEM INTO SERVICE UNTIL ALL BMPs HAVE BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
22. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM THE CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO BIORETENTION AREA DURING ANY STAGE OF CONSTRUCTION.
23. DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATIONS WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION COMPONENTS OF THE SYSTEM.

EROSION CONTROL CONSTRUCTION SEQUENCE:

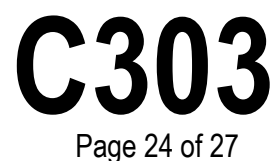
1. THE "ON-SITE EROSION CONTROL PLAN COORDINATOR" SHALL BE THE GENERAL CONTRACTOR, THIS INDIVIDUAL SHALL BE PRESENT ON SITE FROM DAY TO DAY, AND SHALL BE RESPONSIBLE FOR ENSURING THAT THE EROSION CONTROL MEASURES REQUIRED BY THE EROSION CONTROL PLAN, DETAILS AND NOTES, ARE PROPERLY INSTALLED AND MAINTAINED. THE ONSITE EROSION CONTROL PLAN COORDINATOR SHALL KEEP A WRITTEN RECORD OF INSPECTIONS AND MAINTENANCE OF EROSION CONTROL FEATURES. A COPY OF THESE PLANS AND INSPECTION/MAINTENANCE RECORDS SHALL BE KEPT ON-SITE AT ALL TIMES.
2. HOLD PRE-CONSTRUCTION CONFERENCE AT LEAST ONE WEEK PRIOR TO STARTING CONSTRUCTION, WITH THE CONTRACTOR, OWNER, AND ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING ALL EROSION CONTROL MEASURES DELINEATED ON THE PLANS AND ANY ADDITIONAL MEASURES THAT ARE NECESSARY TO MINIMIZE EROSION. THE CONTRACTOR SHALL HAVE EROSION CONTROL MATERIALS AND INSTALLATION EQUIPMENT ON SITE AT ALL TIMES.
3. IF POSSIBLE, ALL TEMPORARY EROSION CONTROL MEASURES REQUIRED FOR WORK PROPOSED DURING THE WINTER (BETWEEN OCTOBER 15 AND MAY 1), SHALL BE INSTALLED PRIOR TO OCTOBER 1.
4. PRIOR TO ANY OTHER WORK, SILT FENCES SHALL BE INSTALLED GENERALLY 10 FEET FROM THE BASE OF THE FILL SLOPES, OR AS SHOWN ON THE EROSION CONTROL PLAN. THESE SHALL REMAIN IN PLACE AND BE MAINTAINED UNTIL THE PROJECT SITE HAS BEEN STABILIZED. SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES 6 INCHES DEEP AT THE FENCE. THE SILT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A PROPER SEDIMENT BARRIER.
5. INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT.
6. INSTALL INLET PROTECTION ON EXISTING AND NEW CATCH BASINS.
7. ROUGH GRADE AND STOCKPILE TOPSOIL SURROUNDED BY SILT FENCE.
8. STABILIZE EXPOSED SLOPES AND SOILS AS SOON AS GRADED, AND MAINTAIN UNTIL ADEQUATELY VEGETATED.
9. COMPLETE FINAL GRADING OF SITE. PLACE TOPSOIL AND PERMANENTLY VEGETATE, LANDSCAPE, AND MULCH.
10. AFTER THE SITE IS APPROVED BY THE ENGINEER AS ADEQUATELY STABILIZED, REMOVE ALL TEMPORARY MEASURES AND INSTALL PERMANENT VEGETATION ON THE DISTURBED AREAS.

TEMPORARY/CONSTRUCTION EROSION CONTROL MEASURES:

1. LIMIT LENGTH OF EXPOSURE OF UNSTABILIZED SOIL TO 45 DAYS OR LESS.
2. HAY SHALL NOT BE USED.
3. DOUBLE ROW OF STRAW WATTLES SHALL BE INSTALLED ALONG THE WETLAND BOUNDARY. THESE SHALL REMAIN IN PLACE UNTIL THE PROJECT SITE HAS BEEN STABILIZED. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRAW WATTLES WHEN IT BECOMES 6 INCHES DEEP. THE PERIMETER CONTROL WILL BE PREPARED AS NECESSARY TO MAINTAIN A PROPER SEDIMENT BARRIER.
4. INSTALL STONE CHECK DAMS IN GRASS-LINED SLOPES 50 FEET ON CENTER TO PREVENT SILT FROM WASHING INTO THE DRAINAGE SYSTEM DURING CONSTRUCTION. SEDIMENT SHALL BE REMOVED FROM BEHIND THE DAMS WHEN IT BECOMES 6 INCHES DEEP. STONE CHECK DAMS SHALL BE REMOVED WHEN VEGETATION IS ESTABLISHED.
5. DROP IN PROTECTION SHALL BE PROVIDED AROUND ALL EXISTING AND PROPOSED CATCH BASINS. PROTECTION SHALL REMAIN UNTIL ALL DISTURBED AREAS ARE STABILIZED. SEDIMENT SHALL BE REMOVED FROM DROP INLET PROTECTION WHEN THE STORAGE CAPACITY HAS BEEN APPROXIMATELY 50% FILLED. GRAVEL WILL BE CLEANED OR REPLACED WHEN IT NO LONGER DRAINS PROPERLY.
6. EXCAVATED MATERIAL FROM EARTH EXCAVATION AND DITCH DIGGING SHALL BE DISPOSED OF OFFSITE OR USED FOR PROJECT FILL MATERIAL IF DETERMINED SUITABLE BY THE OWNER'S REPRESENTATIVE.
7. STOCKPILED MATERIAL (TOPSOIL, BORROW, ETC.) SHALL HAVE SLOPE SILT FENCE CONSTRUCTED AROUND THE PERIMETER. THE STOCKPILED MATERIAL SHALL BE SEEDED AND MULCHED AS SOON AS POSSIBLE TO PREVENT SOIL EROSION AND SEDIMENTATION OFF SITE. LOCATE STOCKPILES ON THE UPHILL SIDE OF DISTURBED AREAS, IF POSSIBLE. DURING WINDY CONDITIONS, STOCKPILED MATERIAL SHALL BE COVERED OR WATERED APPROPRIATELY TO PREVENT WIND EROSION.

PERMANENT EROSION CONTROL MEASURES:

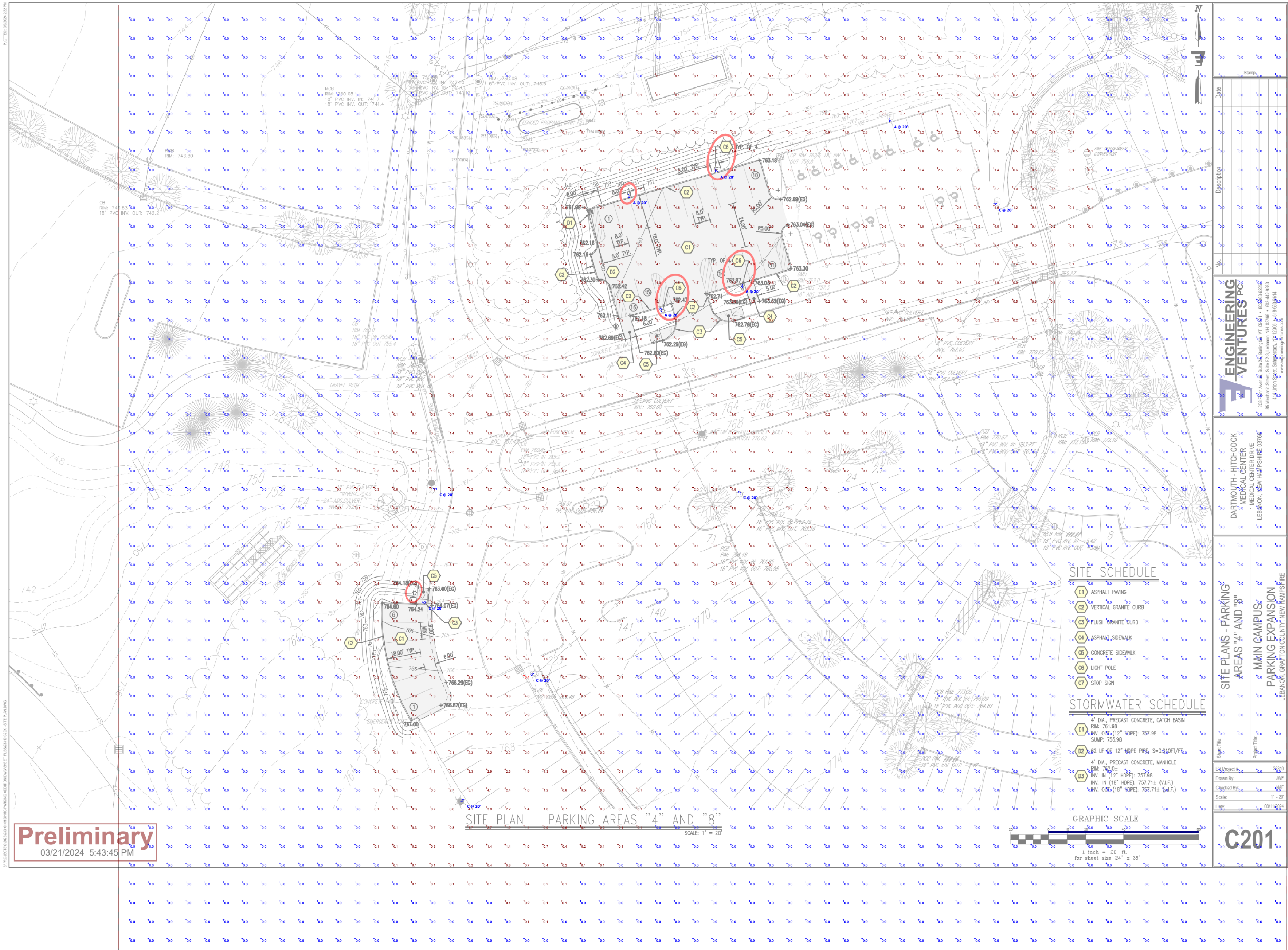
1. GRASS LINED SWALES SHALL BE TOP SOILED, SODDED AND FERTILIZED AREAS WHICH EXHIBIT SIGNS OF EROSION SHALL BE RE-SODDED IMMEDIATELY AND MAINTAINED UNTIL SOD HAS PERMANENTLY ROOTED AND IS HEALTHY.
2. WHEN EROSION IS COMPLETED IN AN AREA, IT SHALL BE IMMEDIATELY TOP SOILED, SEEDDED, FERTILIZED AND MULCHED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUED MAINTENANCE OF ALL DISTURBED AREAS, INCLUDING WATERING, UNTIL THE AREA IS INSPECTED AND ACCEPTED BY THE OWNER OR ENGINEER.
4. AFTER THE SITE IS STABILIZED, REMOVE ALL TEMPORARY MEASURES AND INSTALL PERMANENT VEGETATION ON THE DISTURBED AREAS.
5. RE-SEEDING SHALL BE DONE UNTIL ALL AREAS ARE COMPLETELY COVERED WITH A MATURE STRAND OF GRASS. AN AREA SHALL BE CONSIDERED COVERED WHEN THE ENTIRE SURFACE CONTAINS A VERGEOUS STRAND OF GRASS. AREAS THAT, IN THE OPINION OF THE ENGINEER, ARE NOT FULLY COVERED BY RE-SEEDING, RE-TOP SOILED, RE-FERTILIZED AND RE-SEEDING SHALL BE RE-SEEDING IN THE MANNER SPECIFIED PREVIOUSLY, EXERCISING CAUTION NOT TO CAUSE DAMAGE TO NEW OR EXISTING PLANT MATERIAL.



Schedule									
Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lumens per Lamp	LLF	Wattage	Notes
	A	5 4 PROPOSED 1 EXISTING	Lithonia Lighting	RSX2 LED P1 40K R3	RSX Area Fixture Size 2 P1 Lumen Package 4000K CCT Type R3 Distribution	10991	0.9	72.06	
	C	6 1 PROPOSED 5 EXISTING	Lithonia Lighting	RSX2 LED P1 40K R4	RSX Area Fixture Size 2 P1 Lumen Package 4000K CCT Type R4 Distribution	11135	0.9	72.06	

Light Level Illuminance Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #2	+	0.3 fc	5.4 fc	0.0 fc	N/A	N/A



Plan View
Scale: 1" = 20'
SCALE REDUCED: 1"=30'+/-

DISCLAIMER:
These drawings are provided for conceptual reference only and are not intended for construction purposes. The values presented are approximations derived from manufacturers' photometric in-house or independent laboratory tests, utilizing data supplied by lamp manufacturers. Contractors are advised not to use these drawings for fixture counts or installation, as they are not designed for such purposes.



Schedule									
Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lumens per Lamp	LLF	Wattage	Notes
□ □	C	12 4 PROPOSED 3 RELOCATED 5 EXISTING	Lithonia Lighting	RSX2 LED P1 40K R4	RSX Area Fixture Size 2 P1 Lumen Package 4000K CCT Type R4 Distribution	11135	0.9	72.06	

Light Level Illuminance Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	0.4 fc	6.5 fc	0.0 fc	N/A	N/A



Plan View
Scale: 1" = 20'
SCALE REDUCED: 1"=30'+/-



DHMC - Area E
REV 1
4-8-24

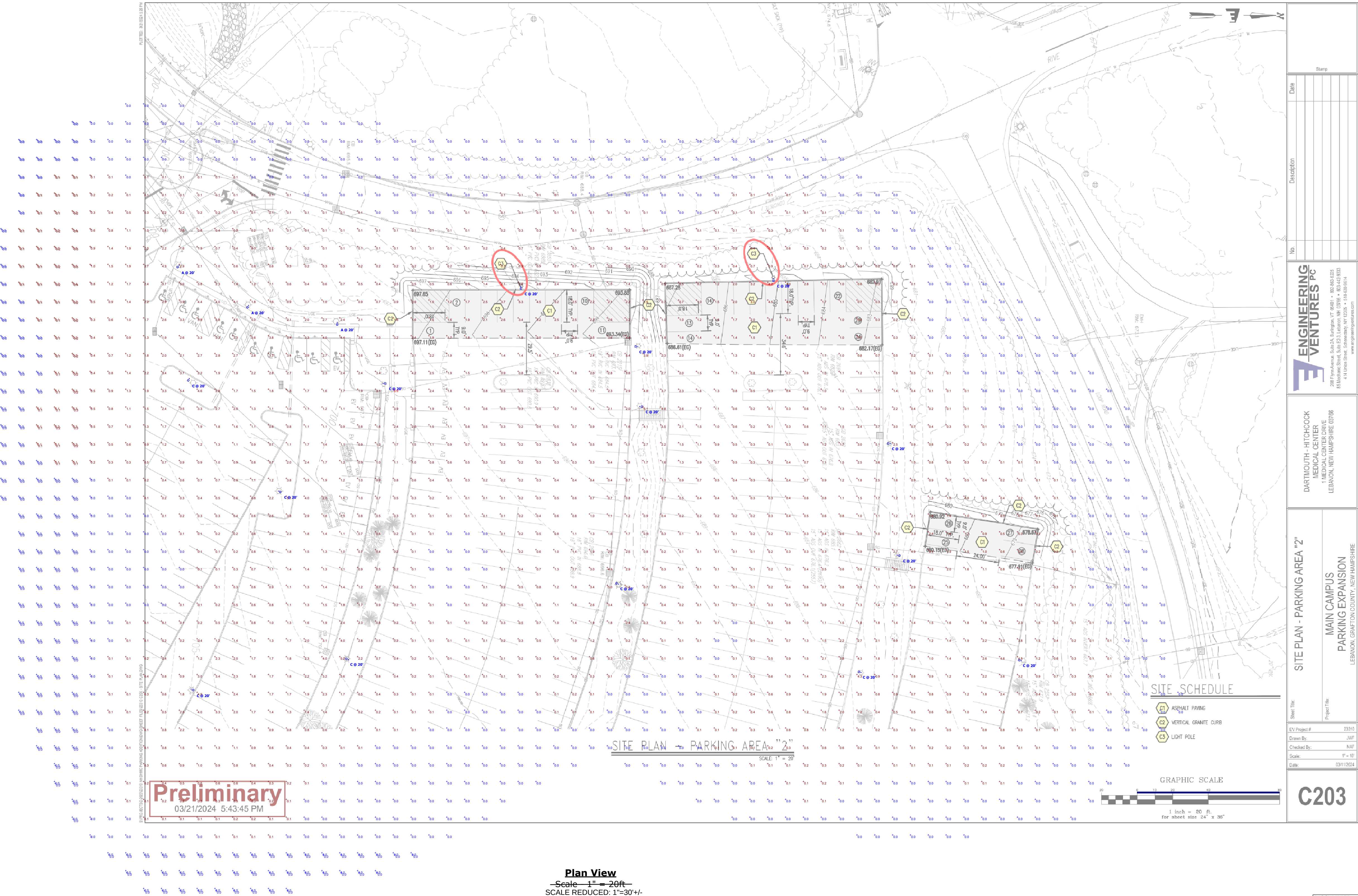
SL102

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Schedule									
Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Lumens per Lamp	LLF	Wattage	Notes
	A	3 3 EXISTING	Lithonia Lighting	RSX2 LED P1 40K R3	RSX Area Fixture Size 2 P1 Lumen Package 4000K CCT Type R3 Distribution	10991	0.9	72.06	
	C	14 2 PROPOSED 12 EXISTING	Lithonia Lighting	RSX2 LED P1 40K R4	RSX Area Fixture Size 2 P1 Lumen Package 4000K CCT Type R4 Distribution	11135	0.9	72.06	

Light Level Illuminance Statistics

Description	Symbol	Avg	Max	Max/Min	Avg/Min	Min
Calc Zone #2	+	0.7 fc	5.9 fc	N/A	N/A	0.0 fc



Plan View
Scale 1" = 20ft
SCALE REDUCED: 1"=30'+/-



DISCLAIMER:
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PARKING LOT EXPANSION
DARTMOUTH-HITCHCOCK MEDICAL CENTER
CITY OF LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

DRAINAGE ANALYSIS
APRIL 30, 2024

Prepared For:

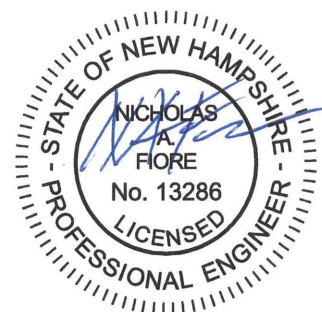
DARTMOUTH-HITCHCOCK MEDICAL CENTER
One Medical Center Drive
Lebanon, NH 03756
Tel: 603-644-3657

Prepared By:



85 Mechanic Street, Suite E2-3
Lebanon, NH 03766
Tel: 603-442-9333

EV Project # 21147



PARKING LOT EXPANSION DARTMOUTH-HITCHCOCK MEDICAL CENTER

DRAINAGE ANALYSIS

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DHMC Parking Lot Expansions

Lebanon, NH

Stormwater Narrative

EV Project # 23310

April 30, 2024

The DHMC Parking Lot Expansions project at Dartmouth-Hitchcock Medical Center (Tax Map 10 Lot 8) includes adding parking spaces to four (4) of DHMC's parking lots. Three of the lot expansions will better meet staff parking needs, and the fourth will provide needed additional parking for the hospital's emergency department. Additionally, the project includes a slight widening of the driveway in the compressed natural gas (CNG) area to better accommodate access for the delivery vehicles.

The parking revisions to each lot, the stormwater controls to be provided for each lot, and the results of the stormwater modeling are presented in the following paragraphs. Stormwater analysis was conducted using HydroCAD Version 10.20-5a to compare the existing and post-construction conditions for the 2-year, 10-year, and 50-year 24-hour storms. This program uses the TR-20 stormwater calculation method.

Lot 2

Located north of the new patient towers at the hospital's north end, Lot 2 has three tiers of parking. Tier A and B have four rows of parking. The eastern half of Tier C has four rows, and the western half has two rows. This project will expand the western edge of all three tiers with Tier A gaining 11 spaces and 2,333± square feet of impervious area, Tier B gaining 11 spaces and 2,610± square feet of impervious area, and Tier C adding 4 space and 1,185± square feet of impervious area, for a total of 26 additional spaces and 6,128± additional square feet of impervious area. These expansions are into areas that are a mix of grassed and wooded spaces.

Lot 2 Tier A

The project adds a 94± square foot rain garden at this expansion's northwest corner. This rain garden, referred to as Rain Garden 2A in the stormwater modeling reports, is sized to treat the Water Quality Volume of the runoff generated by the expansion's added asphalt. An underdrain routes treated water from the bottom of the rain garden to an existing stormwater pipe and an overflow pipe will convey excess runoff from very large storms to the same existing pipe. The existing pipe routes stormwater north along the hospital's North Entrance driveway, which then empties into a swale along Hitchcock Loop Road. The swale is routed to a stormwater detention area adjacent to Hitchcock Loop Road. The outlet control structure of the detention area was modified during the recent patient tower project to control flow.

Based on EV's experience with the soils around the DHMC campus and the Site Specific Soil Mapping completed for the patient tower project, the Rain Garden 2A design does not account for infiltration from the system. Infiltration testing will be conducted at the rain garden's location prior to installation and the design will be modified if it can be improved upon.

DHMC Parking Lot Expansions

Stormwater Narrative

April 30, 2024

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Table 1 shows the results of stormwater modeling on the outlet control structure of the existing detention area.

Table 1

Pond 3P: Existing Basin-mod	2-yr Storm		10-yr Storm		50-yr Storm	
	cfs	af	cfs	af	cfs	af
VHB Design - Existing	8.08	1.714	14.21	3.239	20.32	5.787
EV Design - Post	8.09	1.732	14.25	3.260	20.33	5.810
Δ	0.01	0.018	0.04	0.021	0.01	0.023

These results show very minor increases in the system's discharges. It is my professional opinion that these increases will be imperceptible and are attributed to the limitation of the HydroCAD software.

Lot 2 Tier B & C

The project adds a 205± square foot rain garden at this Tier B expansion's northwest corner. This rain garden, referred to as Rain Garden 2B in the stormwater modeling reports, is sized to treat the Water Quality Volume of the runoff generated by the added asphalt of both the Tier B and Tier C expansions. The Tier C expansion abuts some steeper slopes near Hitchcock Loop Road so its location is not well suited to also including a stormwater treatment area, hence over sizing Rain Garden 2B. An underdrain will collect treated water from the bottom of the rain garden and an overflow pipe will collect excess runoff from very large storms. Runoff will then be routed to a drainage swale adjacent to Hitchcock Loop Road, from which it will follow the campus's stormwater conveyances to the pond at the north end of the property.

Based on EV's experience with the soils around the DHMC campus and the Site Specific Soil Mapping completed for the patient tower project, the Rain Garden 2B design does not account for infiltration from the system. Infiltration testing will be conducted at the rain garden's location prior to installation and the design will be modified if it can be improved upon.

Table 2 shows the results of stormwater modeling at the discharge point of Rain Garden 2B.

Table 2

PR2B	2-yr Storm		10-yr Storm		50-yr Storm	
	cfs	af	cfs	af	cfs	af
Existing	0.01	0.001	0.07	0.004	0.21	0.010
Rain Garden 2B Post	0.05	0.018	0.09	0.027	0.44	0.040
Δ	0.04	0.02	0.02	0.02	0.23	0.03

As stated above, discharge from Rain Garden 2B eventually flows to the pond at the north end of the property. That pond's catchment area includes 148.5± acres of DHMC land, of which 38.7± acres are impervious. The very minor increases in runoff of clean stormwater will have imperceptible impacts on the campus's larger stormwater system.

DHMC Parking Lot Expansions

Stormwater Narrative

April 30, 2024

Page 3 of 4

Lot 4

Located south of Borwell Building and north of Lahaye Dr/Hitchcock Loop Rd, Lot 4 will receive a small addition of 6 parking spaces and 1,460± square feet of additional impervious area at its northwestern corner. The expansion is into a grasses area and will also include the relocation of a blue-light emergency call station.

The Lot 4 expansion will rely on existing stormwater controls for treatment and attenuation. Existing stormwater ponds adjacent to Lot 4 have a catchment area of approximately 9.4 acres. Approximately 3.8 acres of that is impervious. The ponds are sized such that the small alterations to their catchment area will have no discernible effect on their performance.

Table 3 shows the results of stormwater modeling at the discharge point of the existing stormwater ponds adjacent to Lot 4.

Table 3

Pond 3P: West Pond #2	2-yr Storm		10-yr Storm		50-yr Storm	
	cfs	af	cfs	af	cfs	af
EV Design - 2013	1.17	0.495	8.16	1.188	20.14	2.297
EV Design - 2024	1.17	0.496	8.17	1.189	20.15	2.298
Δ	0.00	0.001	0.01	0.001	0.01	0.001

Lot 8

Located between Lot 4 and Borwell Building, the Lot 8 expansion will replicate the existing Lot 8 footprint to the west of the existing lot. This expansion will be into a mostly wooded area and will add 16 parking spaces and 6,560± square feet of additional impervious area.

The project adds a 353± square foot rain garden at this expansion's northwest corner. This rain garden, referred to as Rain Garden 8P in the stormwater modeling reports, is sized to treat the Water Quality Volume of the runoff generated by the expansion's added asphalt. An underdrain will collect treated water from the bottom of the rain garden and an overflow pipe will collect excess runoff from very large storms. Runoff will then be discharged to woods north of the rain garden, matching existing drainage patterns.

During design efforts for previous projects in the general area of Lot 8, EV did find soils with a capacity for infiltration at a rate of 0.64 in/hr. The Lot 8 rain garden design uses a slightly more conservative rate of 0.5 in/hr. Infiltration testing will be conducted at the rain garden's location prior to installation and the design will be modified if appropriate.

Table 4 shows the results of stormwater modeling at the discharge point of Rain Garden 8P.

DHMC Parking Lot Expansions

Stormwater Narrative

April 30, 2024

Page 4 of 4

Table 4

8P	2-yr Storm		10-yr Storm		50-yr Storm	
	cfs	af	cfs	af	cfs	af
Existing	0.01	0.003	0.19	0.011	0.64	0.030
Post Construction	0.01	0.003	0.07	0.021	0.45	0.051
Δ	0.00	0.000	-0.12	0.010	-0.19	0.021

Lot E

The Emergency Department parking lot will receive two improvements. First, the existing lot will be widened by two feet, lengthened to add spaces, configured with angled parking, and made one way. The driveway will be reconfigured to remove a slip lane and reduce conflicting turning movements. Second, an additional 17-space lot will be added east of the main driveway. Additionally, the work will also add sidewalks and realign gravel walking path. In total, the parking area will expand from 28 existing spaces to 52, a 24-space gain, and add 7,865± square feet of additional impervious area.

The stormwater design for Lot E takes advantage of its proximity to the CNG facility which has a rain garden adjacent to it, referred to as Rain Garden RG1 in the stormwater modeling reports. This project will expand that rain garden from 940± square feet to 1,990± square feet. Stormwater from the eastern third of the existing Lot E and the whole of the additional parking area is routed to this expanded rain garden. The surrounding areas maintain existing drainage patterns but with smaller areas resulting in less runoff. The revised Rain Garden RG1 will also accommodate the additional runoff generated by the widening of the CNG driveway.

Table 5 shows the results of stormwater modeling at the discharge point of Rain Garden RG1.

Table 5

RG1	2-yr Storm		10-yr Storm		50-yr Storm	
	cfs	af	cfs	af	cfs	af
Exist (2013 Design)	0.19	0.073	0.91	0.130	2.51	0.221
Post 2024	0.19	0.121	0.48	0.202	2.38	0.326
Δ	0.00	0.05	-0.43	0.07	-0.13	0.11

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	New Hampshire
Location	
Longitude	72.268 degrees West
Latitude	43.673 degrees North
Elevation	0 feet
Date/Time	Mon, 23 May 2022 16:40:49 -0400

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.66	0.82	1.02	1yr	0.71	0.93	1.17	1.44	1.76	2.15	2.41	1yr	1.90	2.32	2.69	3.29	3.79	1yr
2yr	0.31	0.48	0.59	0.78	0.98	1.22	2yr	0.85	1.11	1.40	1.71	2.07	2.50	2.80	2yr	2.21	2.70	3.15	3.76	4.31	2yr
5yr	0.37	0.57	0.72	0.96	1.23	1.54	5yr	1.06	1.40	1.76	2.14	2.57	3.06	3.47	5yr	2.71	3.33	3.86	4.54	5.17	5yr
10yr	0.41	0.65	0.82	1.12	1.46	1.84	10yr	1.26	1.68	2.10	2.55	3.03	3.58	4.07	10yr	3.17	3.92	4.51	5.24	5.94	10yr
25yr	0.49	0.79	1.00	1.38	1.83	2.31	25yr	1.58	2.12	2.65	3.19	3.77	4.40	5.04	25yr	3.89	4.84	5.54	6.34	7.15	25yr
50yr	0.56	0.91	1.16	1.62	2.18	2.76	50yr	1.88	2.52	3.16	3.79	4.45	5.14	5.92	50yr	4.55	5.69	6.48	7.32	8.22	50yr
100yr	0.64	1.04	1.34	1.90	2.59	3.30	100yr	2.24	3.02	3.78	4.51	5.25	6.01	6.96	100yr	5.32	6.69	7.57	8.45	9.46	100yr
200yr	0.74	1.21	1.57	2.24	3.09	3.93	200yr	2.66	3.61	4.50	5.34	6.19	7.04	8.18	200yr	6.23	7.87	8.86	9.77	10.88	200yr
500yr	0.89	1.47	1.91	2.78	3.89	4.97	500yr	3.35	4.57	5.67	6.70	7.70	8.67	10.15	500yr	7.67	9.76	10.91	11.84	13.11	500yr

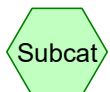
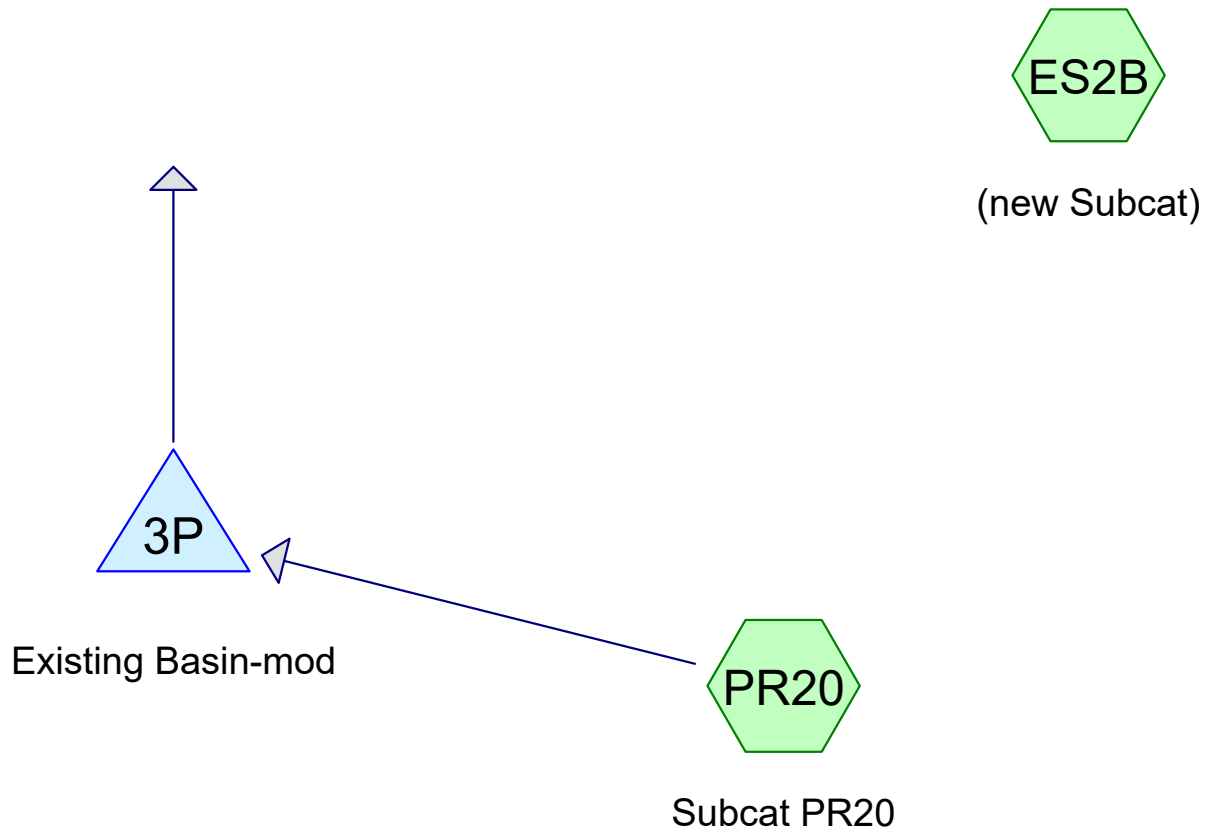
Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.24	0.37	0.45	0.61	0.75	0.83	1yr	0.65	0.81	1.00	1.19	1.58	1.97	2.23	1yr	1.75	2.15	2.49	3.01	3.55	1yr
2yr	0.30	0.46	0.57	0.77	0.94	1.11	2yr	0.82	1.08	1.24	1.61	2.06	2.45	2.75	2yr	2.17	2.65	3.08	3.70	4.23	2yr
5yr	0.34	0.52	0.65	0.89	1.14	1.32	5yr	0.98	1.30	1.49	1.90	2.42	2.92	3.28	5yr	2.58	3.15	3.66	4.30	4.92	5yr
10yr	0.38	0.58	0.72	1.00	1.30	1.51	10yr	1.12	1.47	1.69	2.16	2.70	3.32	3.75	10yr	2.94	3.60	4.16	4.82	5.53	10yr
25yr	0.43	0.66	0.82	1.17	1.54	1.78	25yr	1.33	1.74	1.98	2.52	3.13	3.96	4.48	25yr	3.50	4.31	4.93	5.59	6.43	25yr
50yr	0.48	0.72	0.90	1.30	1.75	2.03	50yr	1.51	1.98	2.22	2.85	3.52	4.51	5.13	50yr	3.99	4.93	5.61	6.24	7.21	50yr
100yr	0.53	0.80	1.01	1.45	1.99	2.29	100yr	1.72	2.24	2.49	3.19	3.96	5.15	5.86	100yr	4.56	5.63	6.38	6.97	8.08	100yr
200yr	0.59	0.89	1.12	1.63	2.27	2.60	200yr	1.96	2.54	2.79	3.60	4.49	5.88	6.70	200yr	5.20	6.44	7.29	7.79	9.06	200yr
500yr	0.68	1.01	1.30	1.89	2.69	3.05	500yr	2.32	2.99	3.21	4.19	5.27	7.02	8.02	500yr	6.21	7.71	8.69	9.01	10.54	500yr

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.29	0.44	0.54	0.73	0.90	1.03	1yr	0.77	1.01	1.19	1.51	1.88	2.29	2.60	1yr	2.03	2.50	2.86	3.49	3.99	1yr
2yr	0.32	0.49	0.61	0.82	1.01	1.19	2yr	0.87	1.17	1.36	1.73	2.17	2.56	2.87	2yr	2.26	2.76	3.22	3.86	4.40	2yr
5yr	0.40	0.62	0.76	1.05	1.33	1.57	5yr	1.15	1.53	1.73	2.16	2.70	3.22	3.65	5yr	2.85	3.51	4.06	4.76	5.42	5yr
10yr	0.48	0.74	0.92	1.28	1.65	1.95	10yr	1.43	1.91	2.14	2.60	3.20	3.85	4.39	10yr	3.41	4.22	4.86	5.61	6.36	10yr
25yr	0.62	0.94	1.16	1.66	2.19	2.62	25yr	1.89	2.57	2.86	3.33	4.01	4.87	5.62	25yr	4.31	5.40	6.14	6.97	7.86	25yr
50yr	0.74	1.13	1.40	2.01	2.71	3.28	50yr	2.34	3.21	3.56	4.00	4.76	5.81	6.76	50yr	5.15	6.50	7.34	8.23	9.25	50yr
100yr	0.90	1.35	1.70	2.45	3.36	4.11	100yr	2.90	4.02	4.45	4.82	5.67	6.95	8.17	100yr	6.15	7.85	8.77	9.74	10.88	100yr
200yr	1.08	1.63	2.07	2.99	4.17	5.16	200yr	3.60	5.04	5.57	5.82	6.74	8.30	9.84	200yr	7.34	9.46	10.51	11.52	12.81	200yr
500yr	1.40	2.09	2.69	3.91	5.56	6.99	500yr	4.79	6.83	7.51	7.44	8.44	10.51	12.62	500yr	9.31	12.14	13.32	14.41	15.91	500yr

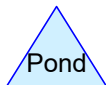
Lot 2 Drainage Analysis



Subcat



Reach



Pond



Link

Routing Diagram for 23310_Lot 2 VHB Design
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23310_Lot 2 VHB Design

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Printed 4/30/2024

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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.451	61	>75% Grass cover, Good, HSG B (ES2B, PR20)
0.019	74	>75% Grass cover, Good, HSG C (PR20)
1.432	98	Paved parking, HSG B (PR20)
0.385	98	Paved parking, HSG C (PR20)
0.062	55	Woods, Good, HSG B (ES2B, PR20)
2.348	90	TOTAL AREA

23310_Lot 2 VHB Design

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
1.944	HSG B	ES2B, PR20
0.404	HSG C	PR20
0.000	HSG D	
0.000	Other	
2.348		TOTAL AREA

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Lot 2 - Existing
Type II 24-hr 2 yr Rainfall=2.50"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentES2B: (new Subcat)

Runoff Area=4,242 sf 0.00% Impervious Runoff Depth=0.13"
Tc=5.0 min CN=58 Runoff=0.01 cfs 0.001 af

SubcatchmentPR20: Subcat PR20

Runoff Area=2.251 ac 80.72% Impervious Runoff Depth=1.61"
Tc=6.0 min CN=91 Runoff=6.10 cfs 0.302 af

Pond 3P: Existing Basin-mod

Peak Elev=668.74' Storage=19,500 cf Inflow=33.80 cfs 1.714 af
Outflow=8.08 cfs 1.714 af

Total Runoff Area = 2.348 ac Runoff Volume = 0.303 af Average Runoff Depth = 1.55"
22.63% Pervious = 0.531 ac 77.37% Impervious = 1.817 ac

23310_Lot 2 VHB Design

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Lot 2 - Existing
Type II 24-hr 10 yr Rainfall=3.58"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentES2B: (new Subcat)

Runoff Area=4,242 sf 0.00% Impervious Runoff Depth=0.48"
Tc=5.0 min CN=58 Runoff=0.07 cfs 0.004 af

SubcatchmentPR20: Subcat PR20

Runoff Area=2.251 ac 80.72% Impervious Runoff Depth=2.62"
Tc=6.0 min CN=91 Runoff=9.67 cfs 0.491 af

Pond 3P: Existing Basin-mod

Peak Elev=670.01' Storage=42,294 cf Inflow=61.11 cfs 3.239 af
Outflow=14.21 cfs 3.239 af

Total Runoff Area = 2.348 ac Runoff Volume = 0.495 af Average Runoff Depth = 2.53"
22.63% Pervious = 0.531 ac 77.37% Impervious = 1.817 ac

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Lot 2 - Existing
Type II 24-hr 50 yr Rainfall=5.14"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentES2B: (new Subcat)

Runoff Area=4,242 sf 0.00% Impervious Runoff Depth=1.25"
Tc=5.0 min CN=58 Runoff=0.21 cfs 0.010 af

SubcatchmentPR20: Subcat PR20

Runoff Area=2.251 ac 80.72% Impervious Runoff Depth=4.12"
Tc=6.0 min CN=91 Runoff=14.80 cfs 0.772 af

Pond 3P: Existing Basin-mod

Peak Elev=671.51' Storage=81,395 cf Inflow=104.27 cfs 5.787 af
Outflow=20.32 cfs 5.787 af

Total Runoff Area = 2.348 ac Runoff Volume = 0.783 af Average Runoff Depth = 4.00"
22.63% Pervious = 0.531 ac 77.37% Impervious = 1.817 ac

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Lot 2 - Existing

Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment ES2B: (new Subcat)

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.07 cfs @ 11.99 hrs, Volume= 0.004 af, Depth= 0.48"

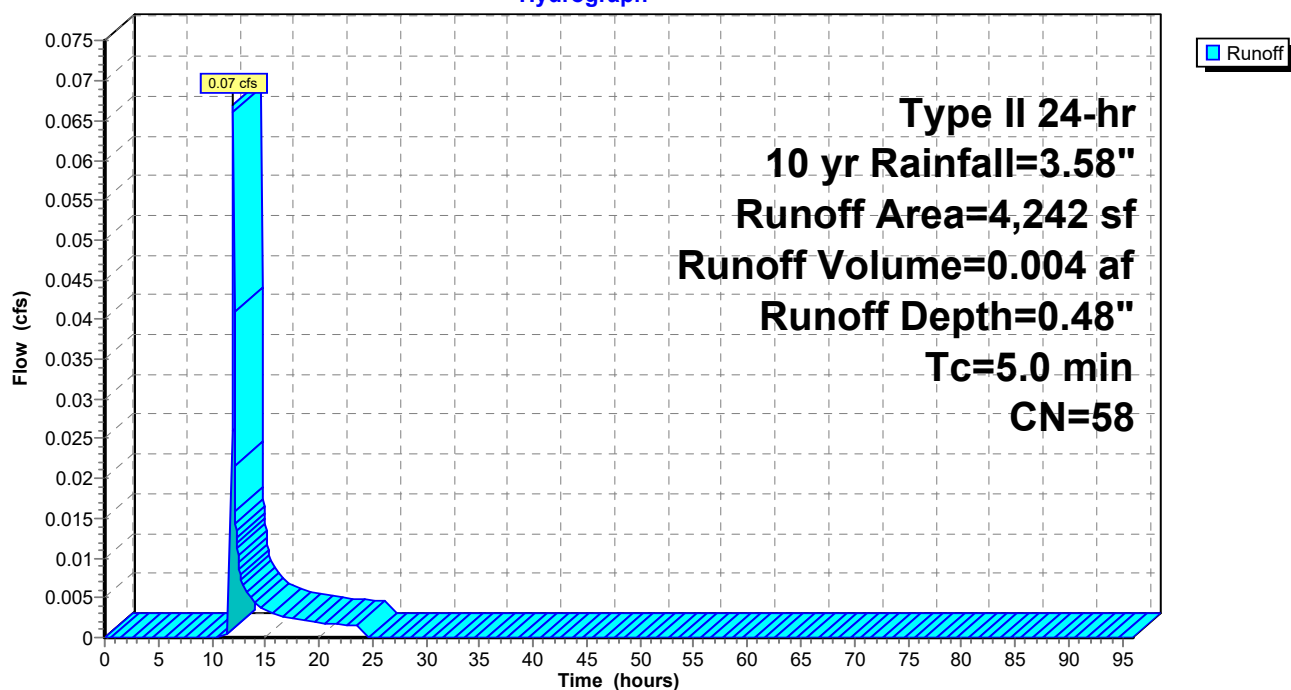
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, $dt=0.05$ hrs
Type II 24-hr 10 yr Rainfall=3.58"

Area (sf)	CN	Description
2,121	55	Woods, Good, HSG B
2,121	61	>75% Grass cover, Good, HSG B
4,242	58	Weighted Average
4,242		100.00% Pervious Area

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

Subcatchment ES2B: (new Subcat)

Hydrograph



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Lot 2 - Existing
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PR20: Subcat PR20

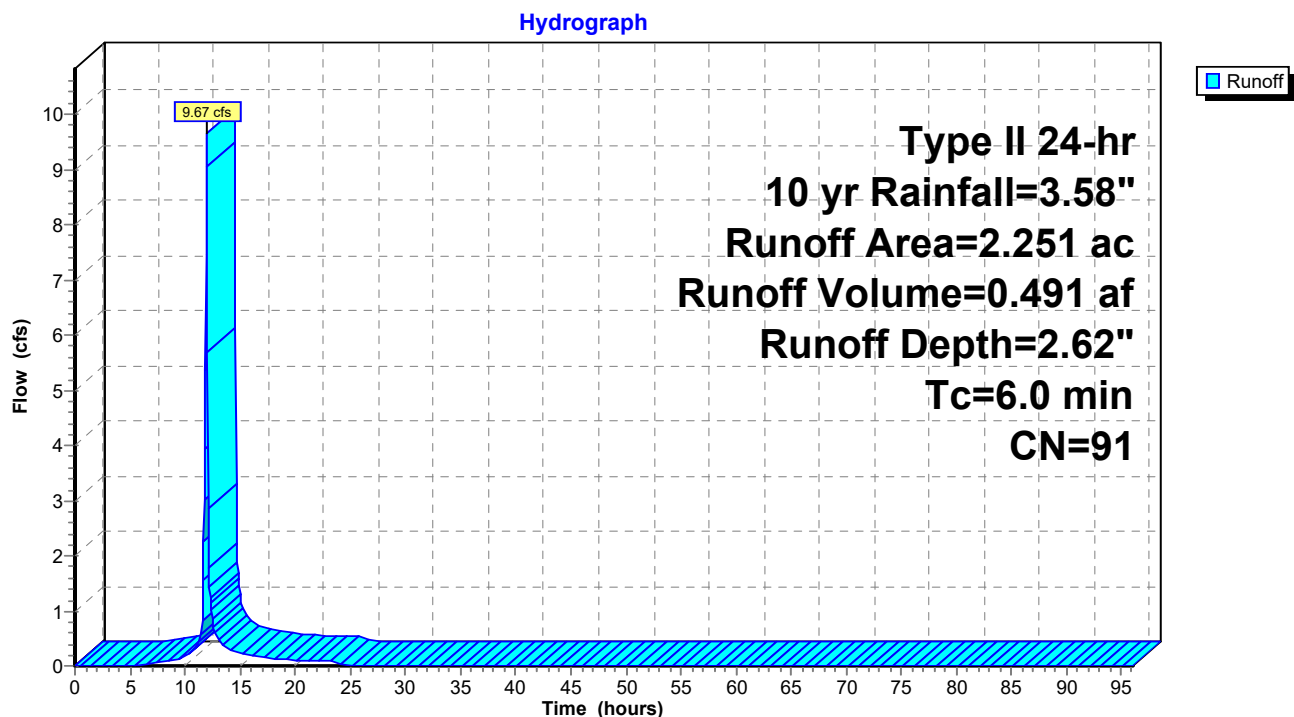
Runoff = 9.67 cfs @ 11.97 hrs, Volume= 0.491 af, Depth= 2.62"
Routed to Pond 3P : Existing Basin-mod

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 yr Rainfall=3.58"

Area (ac)	CN	Description
0.402	61	>75% Grass cover, Good, HSG B
0.019	74	>75% Grass cover, Good, HSG C
1.432	98	Paved parking, HSG B
0.385	98	Paved parking, HSG C
0.013	55	Woods, Good, HSG B
2.251	91	Weighted Average
0.434		19.28% Pervious Area
1.817		80.72% Impervious Area

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

Subcatchment PR20: Subcat PR20



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Lot 2 - Existing
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond 3P: Existing Basin-mod

Inflow Area = 22.802 ac, 53.29% Impervious, Inflow Depth = 1.70" for 10 yr event
 Inflow = 61.11 cfs @ 11.98 hrs, Volume= 3.239 af
 Outflow = 14.21 cfs @ 12.17 hrs, Volume= 3.239 af, Atten= 77%, Lag= 11.4 min
 Primary = 14.21 cfs @ 12.17 hrs, Volume= 3.239 af
 Routed to Link 1L : Stormwater Management Area Outlet

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Peak Elev= 670.01' @ 12.17 hrs Surf.Area= 20,787 sf Storage= 42,294 cf

Plug-Flow detention time= 26.9 min calculated for 3.237 af (100% of inflow)
 Center-of-Mass det. time= 26.9 min (852.2 - 825.3)

Volume	Invert	Avail.Storage	Storage Description		
#1	665.10'	140,263 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
665.10	10	15.0	0	0	10
666.00	75	111.0	34	34	974
668.00	12,597	701.0	9,096	9,130	39,107
670.00	20,735	845.0	32,996	42,125	56,890
672.00	35,435	1,425.0	55,517	97,643	161,686
672.16	37,810	1,212.0	5,859	103,501	206,384
673.00	50,000	2,000.0	36,761	140,263	407,804

Device	Routing	Invert	Outlet Devices
#1	Primary	663.90'	24.0" Round Culvert L= 98.4' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 663.90' / 654.20' S= 0.0986 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#2	Device 1	665.12'	15.0" Round Culvert L= 12.6' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 665.12' / 663.95' S= 0.0929 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 1	669.50'	1.0" x 8.0" Horiz. Existing Overflow X 12.00 columns X 2 rows C= 0.600 in 24.0" Grate (42% open area) Limited to weir flow at low heads
#4	Device 2	665.12'	11.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 2	666.50'	48.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#6	Device 2	667.50'	2.1" x 4.1" Horiz. Orifice/Grate X 8.00 columns X 4 rows C= 0.600 Limited to weir flow at low heads
#7	Primary	672.15'	18.0' long x 30.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

23310_Lot 2 VHB Design

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Lot 2 - Existing
Type II 24-hr 10 yr Rainfall=3.58"

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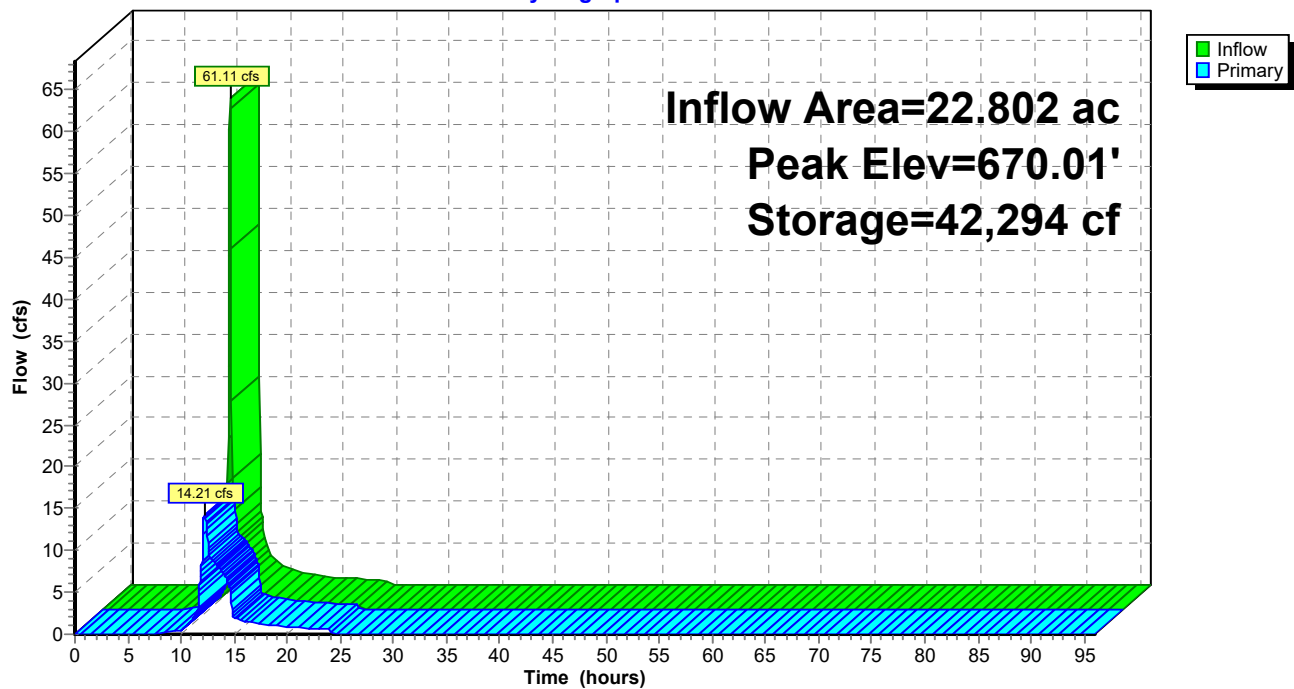
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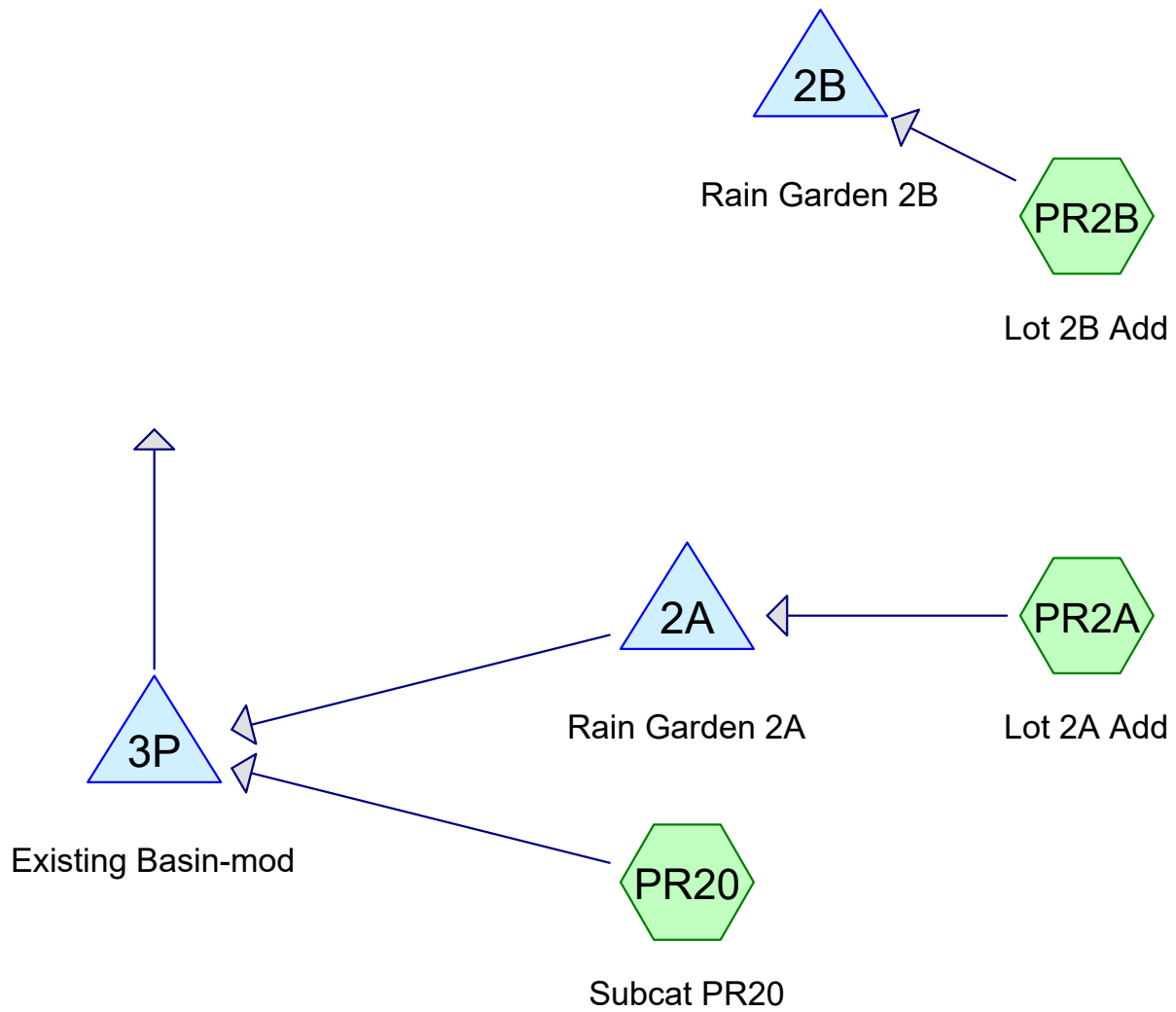
Primary OutFlow Max=14.17 cfs @ 12.17 hrs HW=670.00' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 14.17 cfs of 46.59 cfs potential flow)
- 2=Culvert (Inlet Controls 9.62 cfs @ 7.84 fps)
- 4=Orifice/Grate (Passes < 6.68 cfs potential flow)
- 5=Orifice/Grate (Passes < 11.72 cfs potential flow)
- 6=Orifice/Grate (Passes < 14.57 cfs potential flow)
- 3=Existing Overflow (Orifice Controls 4.54 cfs @ 3.41 fps)
- 7=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 3P: Existing Basin-mod

Hydrograph





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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.355	61	>75% Grass cover, Good, HSG B (PR20)
0.019	74	>75% Grass cover, Good, HSG C (PR20)
1.576	98	Paved parking, HSG B (PR20, PR2A, PR2B)
0.385	98	Paved parking, HSG C (PR20)
0.013	55	Woods, Good, HSG B (PR20)
2.348	92	TOTAL AREA

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
1.944	HSG B	PR20, PR2A, PR2B
0.404	HSG C	PR20
0.000	HSG D	
0.000	Other	
2.348		TOTAL AREA

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Lot 2 - Post
Type II 24-hr 2 yr Rainfall=2.50"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPR20: Subcat PR20 Runoff Area=2.204 ac 82.44% Impervious Runoff Depth=1.69"
Tc=6.0 min CN=92 Runoff=6.23 cfs 0.311 af

SubcatchmentPR2A: Lot 2A Add Runoff Area=0.047 ac 100.00% Impervious Runoff Depth=2.27"
Tc=5.0 min CN=98 Runoff=0.17 cfs 0.009 af

SubcatchmentPR2B: Lot 2B Add Runoff Area=0.097 ac 100.00% Impervious Runoff Depth=2.27"
Tc=5.0 min CN=98 Runoff=0.34 cfs 0.018 af

Pond 2A: Rain Garden 2A Peak Elev=691.29' Storage=90 cf Inflow=0.17 cfs 0.009 af
Outflow=0.05 cfs 0.009 af

Pond 2B: Rain Garden 2B Peak Elev=680.96' Storage=255 cf Inflow=0.34 cfs 0.018 af
Outflow=0.05 cfs 0.018 af

Pond 3P: Existing Basin-mod Peak Elev=668.76' Storage=19,695 cf Inflow=33.96 cfs 1.732 af
Outflow=8.09 cfs 1.732 af

Total Runoff Area = 2.348 ac Runoff Volume = 0.338 af Average Runoff Depth = 1.73"
16.48% Pervious = 0.387 ac 83.52% Impervious = 1.961 ac

23310_Lot 2 VHB Design-EV Post

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Lot 2 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPR20: Subcat PR20 Runoff Area=2.204 ac 82.44% Impervious Runoff Depth=2.71"
Tc=6.0 min CN=92 Runoff=9.72 cfs 0.498 af

SubcatchmentPR2A: Lot 2A Add Runoff Area=0.047 ac 100.00% Impervious Runoff Depth=3.35"
Tc=5.0 min CN=98 Runoff=0.24 cfs 0.013 af

SubcatchmentPR2B: Lot 2B Add Runoff Area=0.097 ac 100.00% Impervious Runoff Depth=3.35"
Tc=5.0 min CN=98 Runoff=0.50 cfs 0.027 af

Pond 2A: Rain Garden 2A Peak Elev=691.65' Storage=155 cf Inflow=0.24 cfs 0.013 af
Outflow=0.05 cfs 0.013 af

Pond 2B: Rain Garden 2B Peak Elev=681.24' Storage=389 cf Inflow=0.50 cfs 0.027 af
Outflow=0.09 cfs 0.027 af

Pond 3P: Existing Basin-mod Peak Elev=670.01' Storage=42,432 cf Inflow=61.19 cfs 3.260 af
Outflow=14.25 cfs 3.260 af

Total Runoff Area = 2.348 ac Runoff Volume = 0.539 af Average Runoff Depth = 2.75"
16.48% Pervious = 0.387 ac 83.52% Impervious = 1.961 ac

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Lot 2 - Post
Type II 24-hr 50 yr Rainfall=5.14"

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Time span=0.00-96.00 hrs, dt=0.05 hrs, 1921 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPR20: Subcat PR20 Runoff Area=2.204 ac 82.44% Impervious Runoff Depth=4.23"
Tc=6.0 min CN=92 Runoff=14.72 cfs 0.776 af

SubcatchmentPR2A: Lot 2A Add Runoff Area=0.047 ac 100.00% Impervious Runoff Depth=4.90"
Tc=5.0 min CN=98 Runoff=0.35 cfs 0.019 af

SubcatchmentPR2B: Lot 2B Add Runoff Area=0.097 ac 100.00% Impervious Runoff Depth=4.90"
Tc=5.0 min CN=98 Runoff=0.72 cfs 0.040 af

Pond 2A: Rain Garden 2A Peak Elev=691.83' Storage=198 cf Inflow=0.35 cfs 0.019 af
Outflow=0.25 cfs 0.019 af

Pond 2B: Rain Garden 2B Peak Elev=681.43' Storage=499 cf Inflow=0.72 cfs 0.040 af
Outflow=0.44 cfs 0.040 af

Pond 3P: Existing Basin-mod Peak Elev=671.52' Storage=81,547 cf Inflow=104.36 cfs 5.810 af
Outflow=20.33 cfs 5.810 af

Total Runoff Area = 2.348 ac Runoff Volume = 0.835 af Average Runoff Depth = 4.27"
16.48% Pervious = 0.387 ac 83.52% Impervious = 1.961 ac

23310_Lot 2 VHB Design-EV Post

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Lot 2 - Post

Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PR20: Subcat PR20

Runoff = 9.72 cfs @ 11.96 hrs, Volume= 0.498 af, Depth= 2.71"
Routed to Pond 3P : Existing Basin-mod

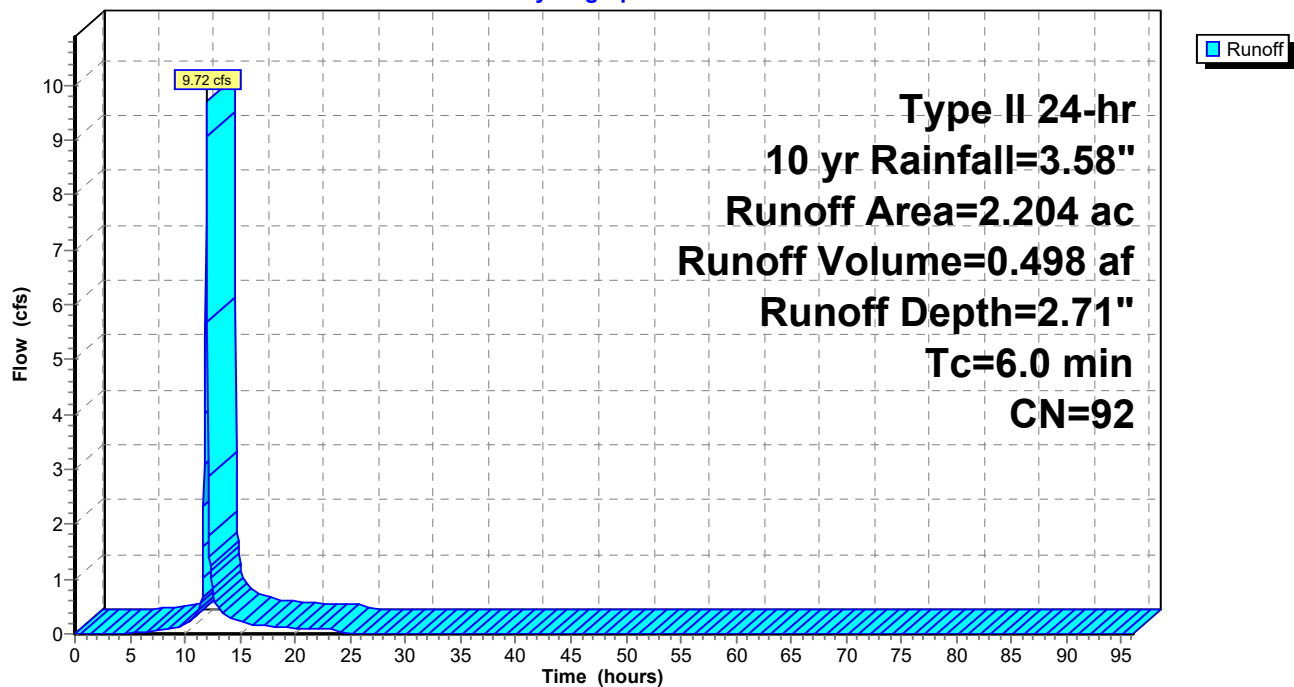
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 yr Rainfall=3.58"

Area (ac)	CN	Description
0.355	61	>75% Grass cover, Good, HSG B
0.019	74	>75% Grass cover, Good, HSG C
1.432	98	Paved parking, HSG B
0.385	98	Paved parking, HSG C
0.013	55	Woods, Good, HSG B
2.204	92	Weighted Average
0.387		17.56% Pervious Area
1.817		82.44% Impervious Area

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

Subcatchment PR20: Subcat PR20

Hydrograph



23310_Lot 2 VHB Design-EV Post

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Lot 2 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PR2A: Lot 2A Add

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.24 cfs @ 11.95 hrs, Volume= 0.013 af, Depth= 3.35"
Routed to Pond 2A : Rain Garden 2A

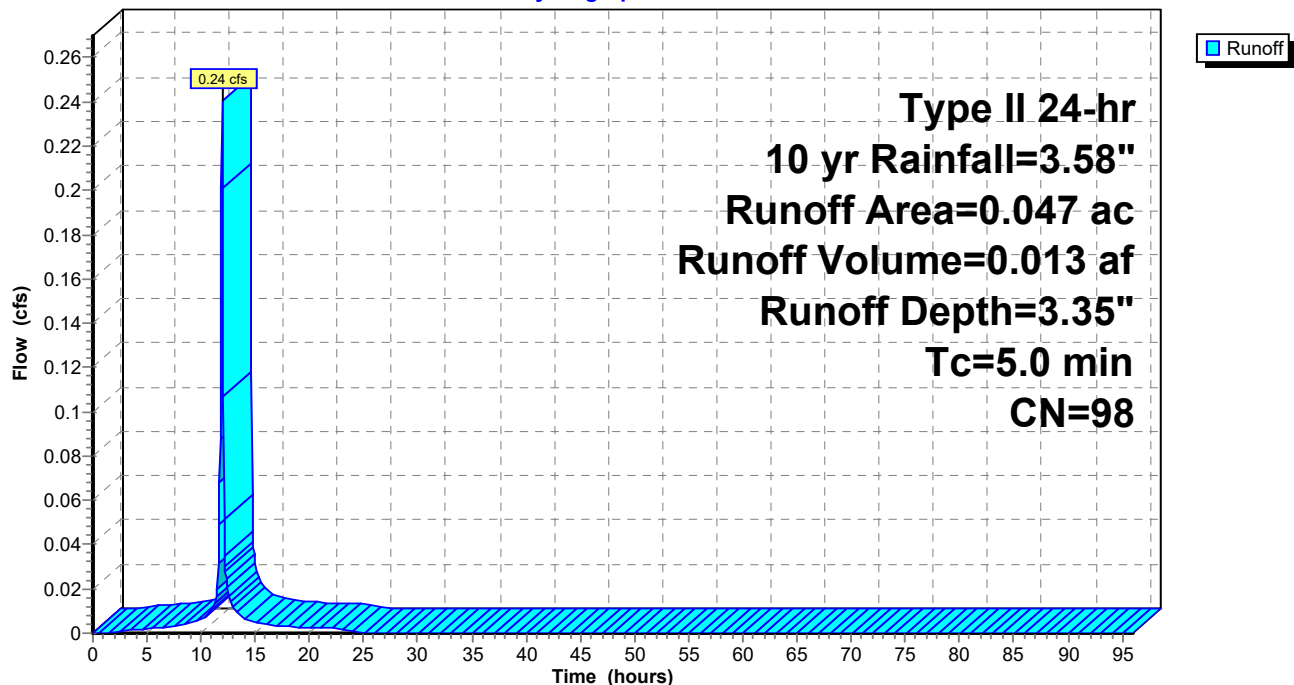
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, $dt=0.05$ hrs
Type II 24-hr 10 yr Rainfall=3.58"

Area (ac)	CN	Description
0.047	98	Paved parking, HSG B
0.047		100.00% Impervious Area

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

Subcatchment PR2A: Lot 2A Add

Hydrograph



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Lot 2 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PR2B: Lot 2B Add

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.50 cfs @ 11.95 hrs, Volume= 0.027 af, Depth= 3.35"
Routed to Pond 2B : Rain Garden 2B

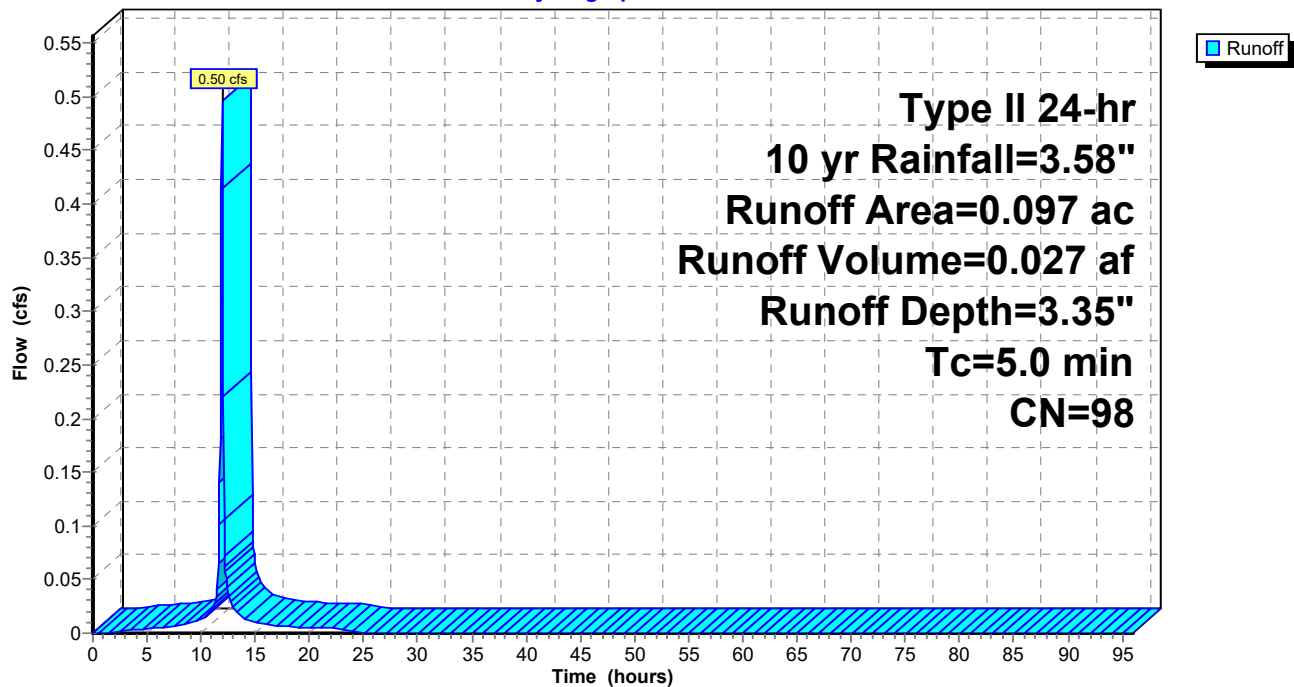
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-96.00 hrs, $dt=0.05$ hrs
Type II 24-hr 10 yr Rainfall=3.58"

Area (ac)	CN	Description
0.097	98	Paved parking, HSG B
0.097		100.00% Impervious Area

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

Subcatchment PR2B: Lot 2B Add

Hydrograph



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Lot 2 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond 2A: Rain Garden 2A

[44] Hint: Outlet device #2 is below defined storage

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=103)

Inflow Area = 0.047 ac, 100.00% Impervious, Inflow Depth = 3.35" for 10 yr event
Inflow = 0.24 cfs @ 11.95 hrs, Volume= 0.013 af
Outflow = 0.05 cfs @ 12.12 hrs, Volume= 0.013 af, Atten= 79%, Lag= 9.9 min
Primary = 0.05 cfs @ 12.12 hrs, Volume= 0.013 af
Routed to Pond 3P : Existing Basin-mod

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs

Peak Elev= 691.65' @ 12.12 hrs Surf.Area= 215 sf Storage= 155 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)

Center-of-Mass det. time= 16.3 min (765.5 - 749.2)

Volume	Invert	Avail.Storage	Storage Description	
#1	689.00'	243 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
689.00	93	0.0	0	0
691.00	93	30.0	56	56
691.50	184	100.0	69	125
692.00	289	100.0	118	243

Device	Routing	Invert	Outlet Devices
#1	Primary	683.50'	12.0" Round Culvert L= 4.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 683.50' / 683.20' S= 0.0652 ' S= 0.0652 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Device 1	688.00'	1.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	691.75'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.05 cfs @ 12.12 hrs HW=691.65' TW=669.97' (Dynamic Tailwater)

- 1=Culvert (Passes 0.05 cfs of 10.46 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.05 cfs @ 9.14 fps)
- 3=Orifice/Grate (Controls 0.00 cfs)

23310_Lot 2 VHB Design-EV Post

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Lot 2 - Post

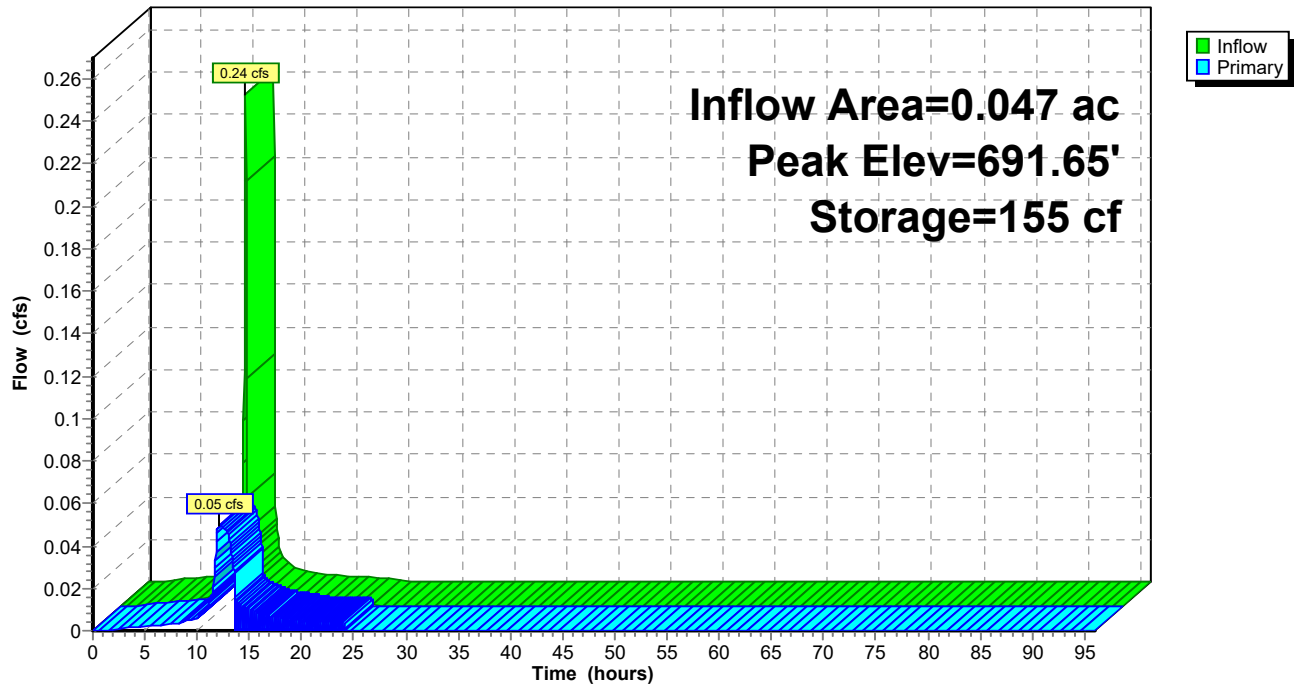
Type II 24-hr 10 yr Rainfall=3.58"

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Pond 2A: Rain Garden 2A

Hydrograph



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Lot 2 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond 2B: Rain Garden 2B

[44] Hint: Outlet device #2 is below defined storage

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=82)

Inflow Area = 0.097 ac, 100.00% Impervious, Inflow Depth = 3.35" for 10 yr event
Inflow = 0.50 cfs @ 11.95 hrs, Volume= 0.027 af
Outflow = 0.09 cfs @ 12.12 hrs, Volume= 0.027 af, Atten= 81%, Lag= 10.4 min
Primary = 0.09 cfs @ 12.12 hrs, Volume= 0.027 af
Routed to nonexistent node POI-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
Peak Elev= 681.24' @ 12.12 hrs Surf.Area= 538 sf Storage= 389 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 38.3 min (787.5 - 749.2)

Volume	Invert	Avail.Storage	Storage Description			
#1	678.50'	545 cf	Custom Stage Data (Irregular) Listed below (Recalc)			
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
678.50	203	77.2	0.0	0	0	203
680.50	203	77.2	30.0	122	122	357
681.00	414	93.1	100.0	151	273	577
681.50	686	111.8	100.0	272	545	886

Device	Routing	Invert	Outlet Devices	
#1	Primary	677.32'	12.0" Round Culvert L= 43.5' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 677.32' / 676.00' S= 0.0303 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf	
#2	Device 1	677.42'	1.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads	
#3	Device 1	681.00'	2.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads	
#4	Device 1	681.33'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads	

Primary OutFlow Max=0.09 cfs @ 12.12 hrs HW=681.24' (Free Discharge)

- ↑ **1=Culvert** (Passes 0.09 cfs of 6.99 cfs potential flow)
- ↑ **2=Orifice/Grate** (Orifice Controls 0.05 cfs @ 9.36 fps)
- ↑ **3=Orifice/Grate** (Orifice Controls 0.04 cfs @ 1.91 fps)
- ↑ **4=Orifice/Grate** (Controls 0.00 cfs)

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Lot 2 - Post

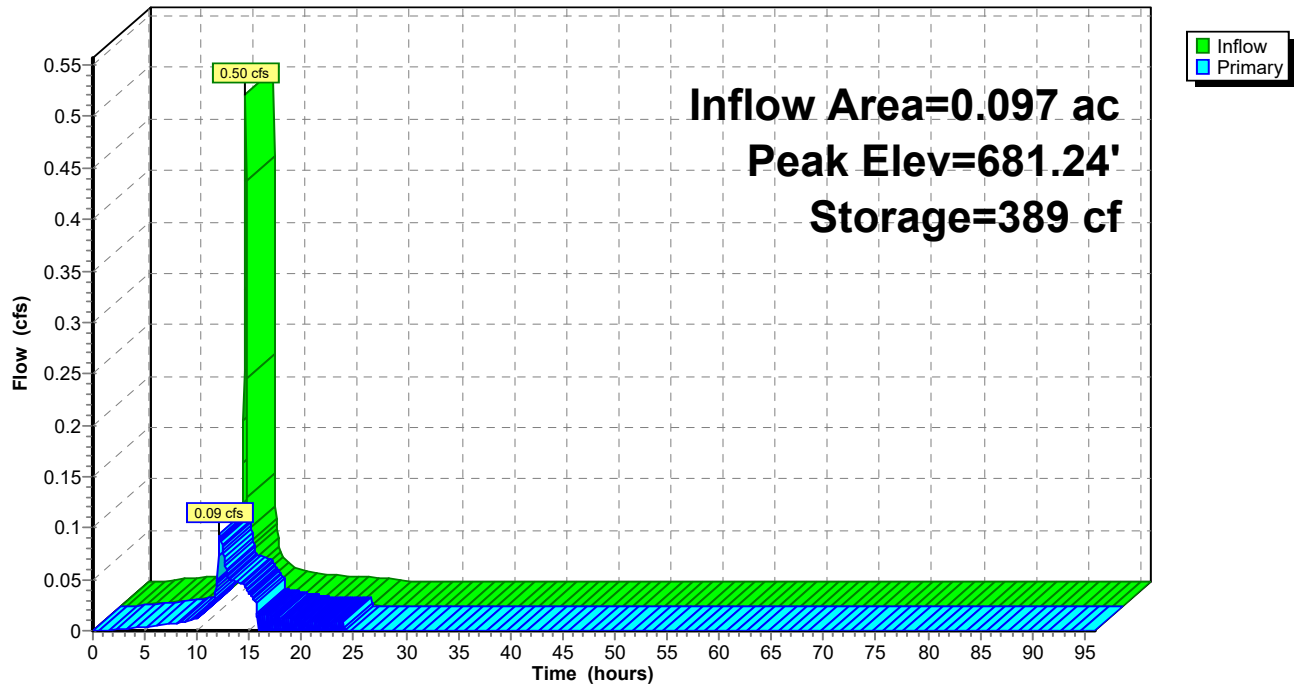
Type II 24-hr 10 yr Rainfall=3.58"

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Pond 2B: Rain Garden 2B

Hydrograph



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Lot 2 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond 3P: Existing Basin-mod

Inflow Area = 22.802 ac, 53.50% Impervious, Inflow Depth = 1.72" for 10 yr event
 Inflow = 61.19 cfs @ 11.98 hrs, Volume= 3.260 af
 Outflow = 14.25 cfs @ 12.17 hrs, Volume= 3.260 af, Atten= 77%, Lag= 11.4 min
 Primary = 14.25 cfs @ 12.17 hrs, Volume= 3.260 af
 Routed to Link 1L : Stormwater Management Area Outlet

Routing by Dyn-Stor-Ind method, Time Span= 0.00-96.00 hrs, dt= 0.05 hrs
 Peak Elev= 670.01' @ 12.17 hrs Surf.Area= 20,829 sf Storage= 42,432 cf

Plug-Flow detention time= 28.0 min calculated for 3.260 af (100% of inflow)
 Center-of-Mass det. time= 26.9 min (851.2 - 824.3)

Volume	Invert	Avail.Storage	Storage Description		
#1	665.10'	140,263 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
665.10	10	15.0	0	0	10
666.00	75	111.0	34	34	974
668.00	12,597	701.0	9,096	9,130	39,107
670.00	20,735	845.0	32,996	42,125	56,890
672.00	35,435	1,425.0	55,517	97,643	161,686
672.16	37,810	1,212.0	5,859	103,501	206,384
673.00	50,000	2,000.0	36,761	140,263	407,804

Device	Routing	Invert	Outlet Devices
#1	Primary	663.90'	24.0" Round Culvert L= 98.4' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 663.90' / 654.20' S= 0.0986 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf
#2	Device 1	665.12'	15.0" Round Culvert L= 12.6' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 665.12' / 663.95' S= 0.0929 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 1	669.50'	1.0" x 8.0" Horiz. Existing Overflow X 12.00 columns X 2 rows C= 0.600 in 24.0" Grate (42% open area) Limited to weir flow at low heads
#4	Device 2	665.12'	11.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Device 2	666.50'	48.0" W x 4.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#6	Device 2	667.50'	2.1" x 4.1" Horiz. Orifice/Grate X 8.00 columns X 4 rows C= 0.600 Limited to weir flow at low heads
#7	Primary	672.15'	18.0' long x 30.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

23310_Lot 2 VHB Design-EV Post

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Lot 2 - Post

Type II 24-hr 10 yr Rainfall=3.58"

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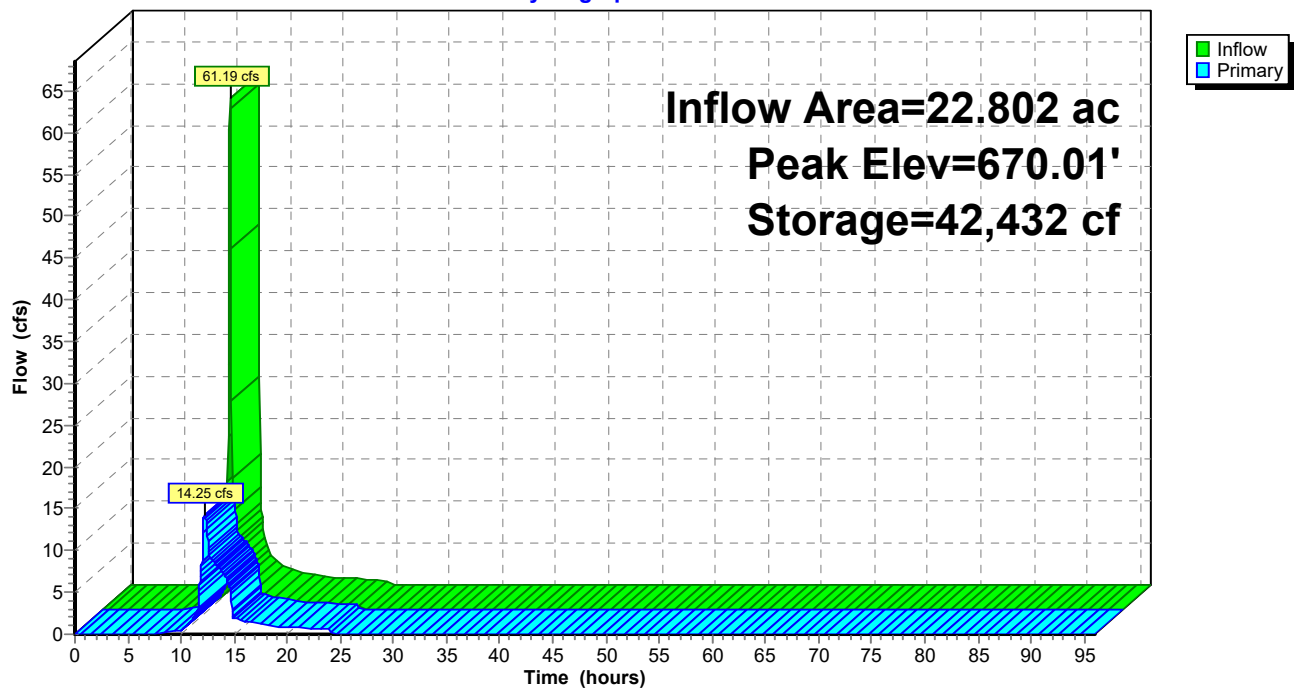
Page 25

Primary OutFlow Max=14.20 cfs @ 12.17 hrs HW=670.01' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 14.20 cfs of 46.62 cfs potential flow)
- 2=Culvert (Inlet Controls 9.63 cfs @ 7.85 fps)
- 4=Orifice/Grate (Passes < 6.69 cfs potential flow)
- 5=Orifice/Grate (Passes < 11.73 cfs potential flow)
- 6=Orifice/Grate (Passes < 14.59 cfs potential flow)
- 3=Existing Overflow (Orifice Controls 4.57 cfs @ 3.43 fps)
- 7=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 3P: Existing Basin-mod

Hydrograph



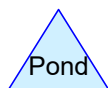
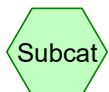
Lot 4 Drainage Analysis



West Pond #2



Lot 4



Routing Diagram for 23310_Lots 4 & 8 Existing
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23310_Lots 4 & 8 Existing

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Page 2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.963	74	Grass, Good, HSG C (PS5)
3.162	98	Paved parking (PS5)
0.081	70	Woods, Good, HSG C (PS5)
4.206	92	TOTAL AREA

23310_Lots 4 & 8 Existing

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Page 3

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
1.044	HSG C	PS5
0.000	HSG D	
3.162	Other	PS5
4.206		TOTAL AREA

23310_Lots 4 & 8 Existing

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Lot 4 - Existing
Type II 24-hr 2 yr Rainfall=2.50"
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Page 4

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS5: Lot 4

Runoff Area=183,229 sf 75.18% Impervious Runoff Depth=1.69"
Tc=10.0 min CN=92 Runoff=10.72 cfs 0.593 af

Pond 3P: West Pond #2

Peak Elev=740.94' Storage=14,211 cf Inflow=6.03 cfs 0.708 af
Outflow=1.17 cfs 0.495 af

Total Runoff Area = 4.206 ac Runoff Volume = 0.593 af Average Runoff Depth = 1.69"
24.82% Pervious = 1.044 ac 75.18% Impervious = 3.162 ac

23310_Lots 4 & 8 Existing

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Lot 4 - Existing

Type II 24-hr 10 yr Rainfall=3.58"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

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

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS5: Lot 4

Runoff Area=183,229 sf 75.18% Impervious Runoff Depth=2.71"

Tc=10.0 min CN=92 Runoff=16.76 cfs 0.951 af

Pond 3P: West Pond #2

Peak Elev=741.48' Storage=17,982 cf Inflow=12.05 cfs 1.404 af

Outflow=8.16 cfs 1.188 af

Total Runoff Area = 4.206 ac Runoff Volume = 0.951 af Average Runoff Depth = 2.71"

24.82% Pervious = 1.044 ac 75.18% Impervious = 3.162 ac

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Lot 4 - Existing

Type II 24-hr 50 yr Rainfall=5.14"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

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

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS5: Lot 4

Runoff Area=183,229 sf 75.18% Impervious Runoff Depth=4.23"

Tc=10.0 min CN=92 Runoff=25.42 cfs 1.481 af

Pond 3P: West Pond #2

Peak Elev=742.12' Storage=22,862 cf Inflow=31.98 cfs 2.514 af

Outflow=20.14 cfs 2.297 af

Total Runoff Area = 4.206 ac Runoff Volume = 1.481 af Average Runoff Depth = 4.23"

24.82% Pervious = 1.044 ac 75.18% Impervious = 3.162 ac

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Lot 4 - Existing

Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PS5: Lot 4

Runoff = 16.76 cfs @ 12.01 hrs, Volume= 0.951 af, Depth= 2.71"
Routed to Pond 47P : Upper Pond

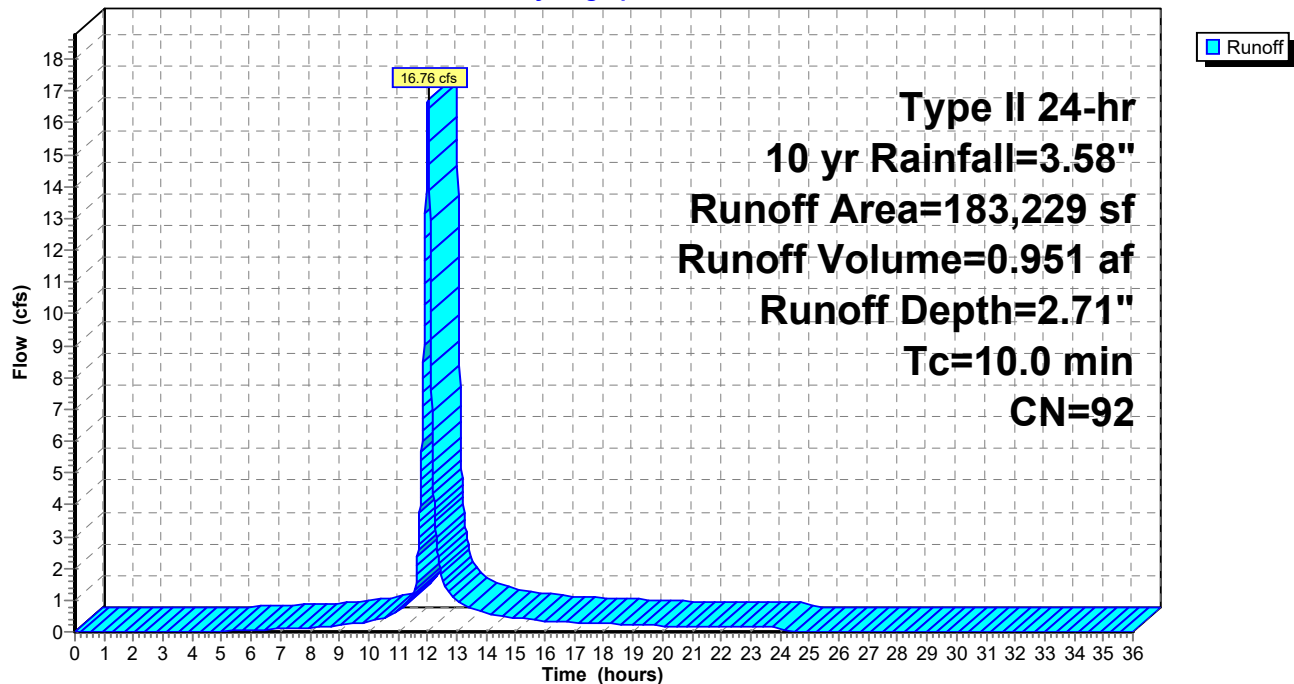
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 yr Rainfall=3.58"

	Area (sf)	CN	Description
	3,517	70	Woods, Good, HSG C
*	41,961	74	Grass, Good, HSG C
*	137,751	98	Paved parking
	183,229	92	Weighted Average
	45,478		24.82% Pervious Area
	137,751		75.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Matching pond design Tc

Subcatchment PS5: Lot 4

Hydrograph



23310_Lots 4 & 8 Existing

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Lot 4 - Existing
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond 3P: West Pond #2

3P design is as it appears in Pathways Consulting's HydroCAD model titled "10001.DHMC Loop Rd Proposed", dated 2/8/2007, provided to EV by DHMC.

Outlet control modified to provide extended detention. 4" orifices reduced to 1.3" orifices and invert of wier raised from 740.00 to 740.36 reducing weir oriface from 24" x 48" to 19.68" x 48".

Inflow Area = 9.378 ac, 40.94% Impervious, Inflow Depth = 1.80" for 10 yr event
Inflow = 12.05 cfs @ 12.19 hrs, Volume= 1.404 af
Outflow = 8.16 cfs @ 12.56 hrs, Volume= 1.188 af, Atten= 32%, Lag= 22.6 min
Primary = 8.16 cfs @ 12.56 hrs, Volume= 1.188 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 741.48' @ 12.56 hrs Surf.Area= 7,285 sf Storage= 17,982 cf

Plug-Flow detention time= 193.6 min calculated for 1.188 af (85% of inflow)
Center-of-Mass det. time= 119.2 min (990.9 - 871.7)

Volume	Invert	Avail.Storage	Storage Description
#1	737.00'	30,690 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
737.00	1,331	0	0
738.00	1,837	1,584	1,584
739.00	3,503	2,670	4,254
740.00	5,278	4,391	8,645
741.00	6,680	5,979	14,624
742.00	7,937	7,309	21,932
743.00	9,579	8,758	30,690

Device	Routing	Invert	Outlet Devices
#1	Primary	739.00'	24.0" Round Culvert L= 230.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 739.00' / 736.75' S= 0.0098 ' S= 0.0098 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	739.00'	1.3" Vert. Orifice/Grate X 2.00 C= 0.600 Limited to weir flow at low heads
#3	Device 1	740.75'	48.0" W x 15.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=8.16 cfs @ 12.56 hrs HW=741.48' (Free Discharge)

1=Culvert (Passes 8.16 cfs of 18.41 cfs potential flow)
2=Orifice/Grate (Orifice Controls 0.14 cfs @ 7.50 fps)
3=Orifice/Grate (Orifice Controls 8.03 cfs @ 2.74 fps)

23310_Lots 4 & 8 Existing

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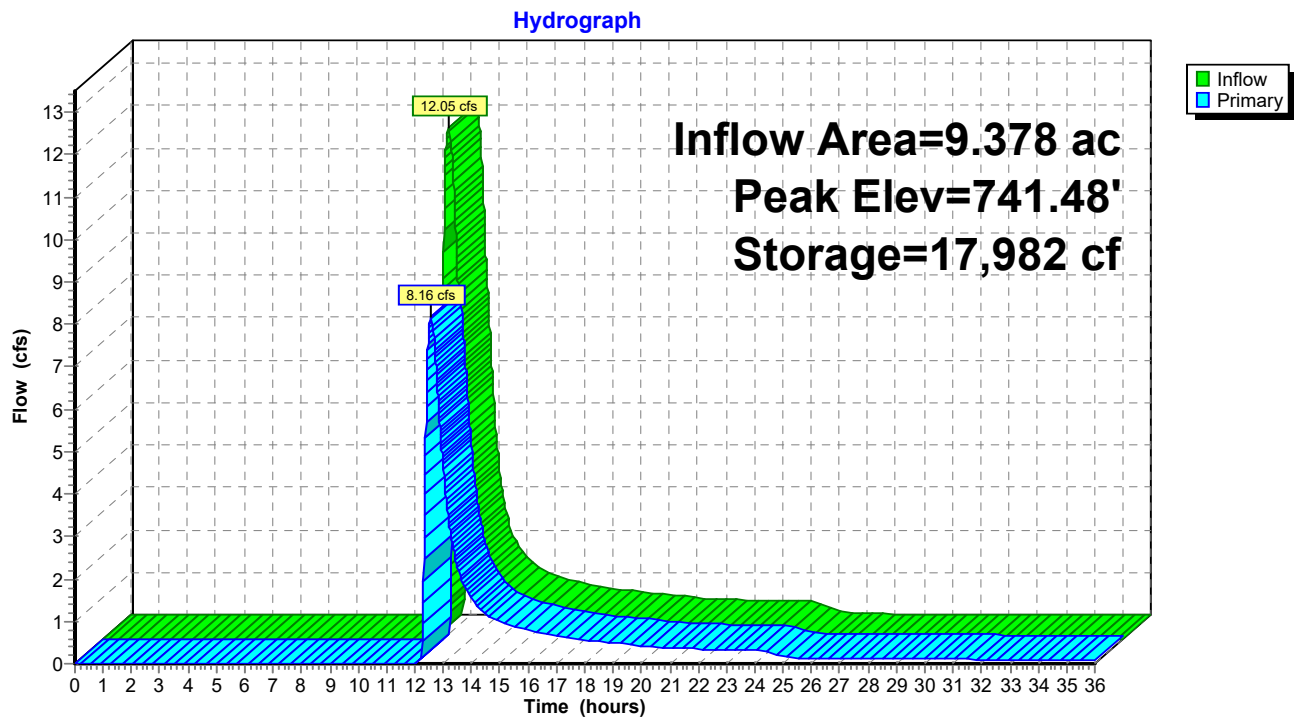
Lot 4 - Existing

Type II 24-hr 10 yr Rainfall=3.58"

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Pond 3P: West Pond #2



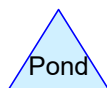
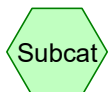


West Pond #2



PS5

Lot 4



Routing Diagram for 23310_Lots 4 & 8 Post 2024
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23310_Lots 4 & 8 Post 2024

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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.940	74	Grass, Good, HSG C (PS5)
3.188	98	Paved parking (PS5)
0.081	70	Woods, Good, HSG C (PS5)
4.209	92	TOTAL AREA

23310_Lots 4 & 8 Post 2024

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
1.021	HSG C	PS5
0.000	HSG D	
3.188	Other	PS5
4.209		TOTAL AREA

23310_Lots 4 & 8 Post 2024

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Lot 4 - Post
Type II 24-hr 2 yr Rainfall=2.50"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS5: Lot 4

Runoff Area=183,357 sf 75.74% Impervious Runoff Depth=1.69"
Tc=10.0 min CN=92 Runoff=10.73 cfs 0.594 af

Pond 3P: West Pond #2

Peak Elev=740.94' Storage=14,213 cf Inflow=6.03 cfs 0.709 af
Outflow=1.17 cfs 0.496 af

Total Runoff Area = 4.209 ac Runoff Volume = 0.594 af Average Runoff Depth = 1.69"
24.26% Pervious = 1.021 ac 75.74% Impervious = 3.188 ac

23310_Lots 4 & 8 Post 2024

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Lot 4 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS5: Lot 4

Runoff Area=183,357 sf 75.74% Impervious Runoff Depth=2.71"
Tc=10.0 min CN=92 Runoff=16.77 cfs 0.952 af

Pond 3P: West Pond #2

Peak Elev=741.48' Storage=17,985 cf Inflow=12.05 cfs 1.404 af
Outflow=8.17 cfs 1.189 af

Total Runoff Area = 4.209 ac Runoff Volume = 0.952 af Average Runoff Depth = 2.71"
24.26% Pervious = 1.021 ac 75.74% Impervious = 3.188 ac

23310_Lots 4 & 8 Post 2024

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Lot 4 - Post
Type II 24-hr 50 yr Rainfall=5.14"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS5: Lot 4

Runoff Area=183,357 sf 75.74% Impervious Runoff Depth=4.23"
Tc=10.0 min CN=92 Runoff=25.44 cfs 1.482 af

Pond 3P: West Pond #2

Peak Elev=742.12' Storage=22,867 cf Inflow=32.00 cfs 2.515 af
Outflow=20.15 cfs 2.298 af

Total Runoff Area = 4.209 ac Runoff Volume = 1.482 af Average Runoff Depth = 4.23"
24.26% Pervious = 1.021 ac 75.74% Impervious = 3.188 ac

23310_Lots 4 & 8 Post 2024

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Lot 4 - Post

Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PS5: Lot 4

Runoff = 16.77 cfs @ 12.01 hrs, Volume= 0.952 af, Depth= 2.71"
Routed to Pond 47P : Upper Pond

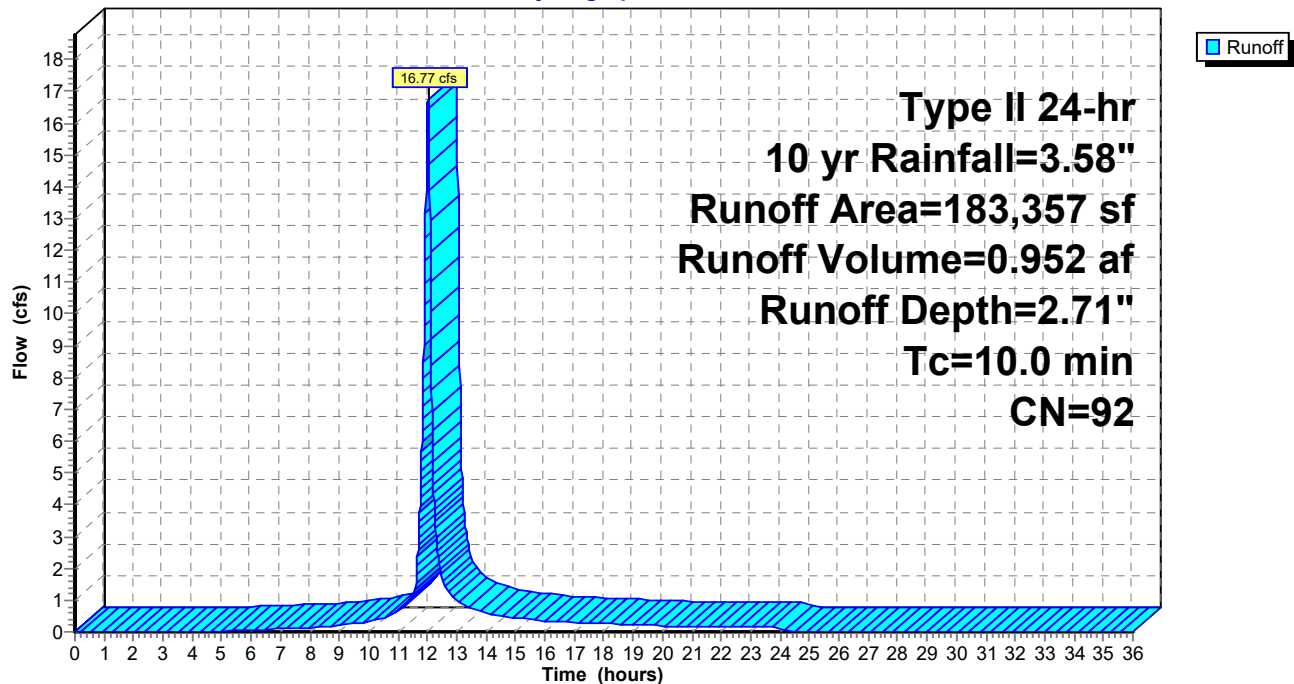
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 yr Rainfall=3.58"

	Area (sf)	CN	Description
	3,517	70	Woods, Good, HSG C
*	40,960	74	Grass, Good, HSG C
*	138,880	98	Paved parking
	183,357	92	Weighted Average
	44,477		24.26% Pervious Area
	138,880		75.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					Direct Entry, Matching pond design Tc

Subcatchment PS5: Lot 4

Hydrograph



23310_Lots 4 & 8 Post 2024

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Lot 4 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond 3P: West Pond #2

3P design is as it appears in Pathways Consulting's HydroCAD model titled "10001.DHMC Loop Rd Proposed", dated 2/8/2007, provided to EV by DHMC.

Outlet control modified to provide extended detention. 4" orifices reduced to 1.3" orifices and invert of wier raised from 740.00 to 740.36 reducing weir oriface from 24" x 48" to 19.68" x 48".

Inflow Area = 9.378 ac, 41.22% Impervious, Inflow Depth = 1.80" for 10 yr event
 Inflow = 12.05 cfs @ 12.19 hrs, Volume= 1.404 af
 Outflow = 8.17 cfs @ 12.56 hrs, Volume= 1.189 af, Atten= 32%, Lag= 22.5 min
 Primary = 8.17 cfs @ 12.56 hrs, Volume= 1.189 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 741.48' @ 12.56 hrs Surf.Area= 7,285 sf Storage= 17,985 cf

Plug-Flow detention time= 193.5 min calculated for 1.189 af (85% of inflow)
 Center-of-Mass det. time= 119.2 min (990.8 - 871.7)

Volume	Invert	Avail.Storage	Storage Description
#1	737.00'	30,690 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
737.00	1,331	0	0
738.00	1,837	1,584	1,584
739.00	3,503	2,670	4,254
740.00	5,278	4,391	8,645
741.00	6,680	5,979	14,624
742.00	7,937	7,309	21,932
743.00	9,579	8,758	30,690

Device	Routing	Invert	Outlet Devices
#1	Primary	739.00'	24.0" Round Culvert L= 230.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 739.00' / 736.75' S= 0.0098 ' S= 0.0098 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	739.00'	1.3" Vert. Orifice/Grate X 2.00 C= 0.600 Limited to weir flow at low heads
#3	Device 1	740.75'	48.0" W x 15.0" H Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=8.17 cfs @ 12.56 hrs HW=741.48' (Free Discharge)

↑ **1=Culvert** (Passes 8.17 cfs of 18.41 cfs potential flow)
 ↑ **2=Orifice/Grate** (Orifice Controls 0.14 cfs @ 7.50 fps)
 ↑ **3=Orifice/Grate** (Orifice Controls 8.03 cfs @ 2.75 fps)

23310_Lots 4 & 8 Post 2024

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Lot 4 - Post

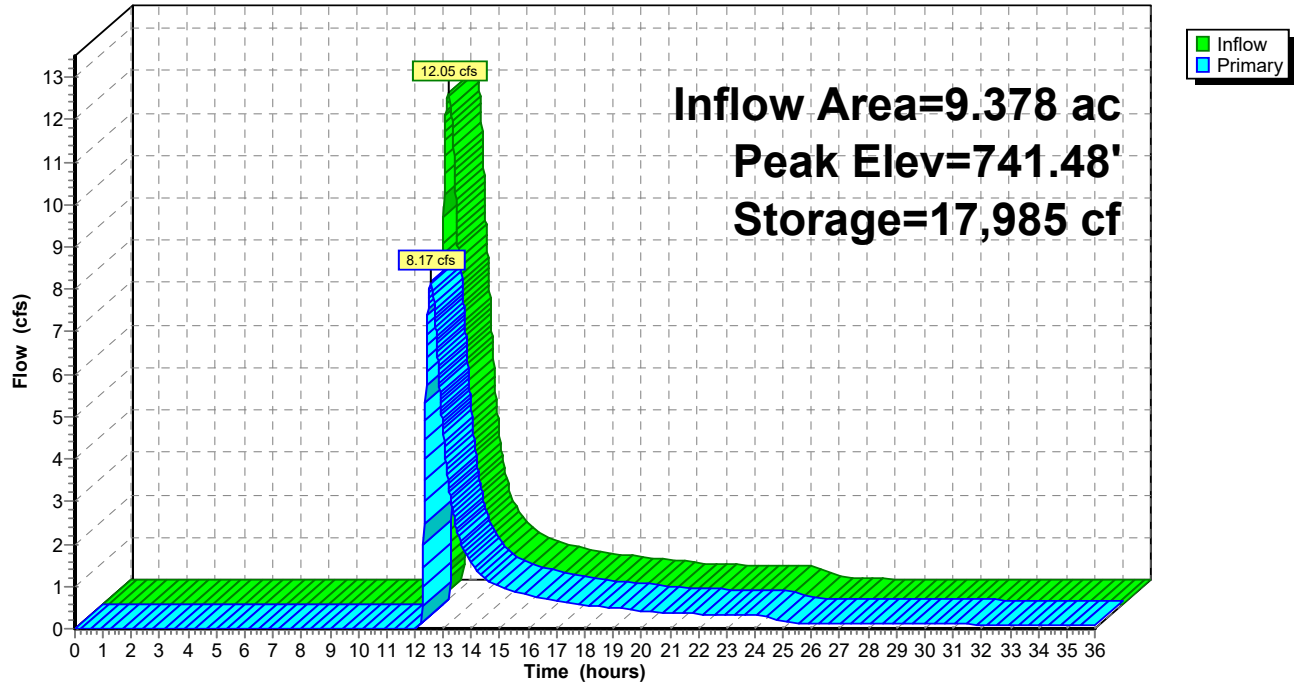
Type II 24-hr 10 yr Rainfall=3.58"

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Pond 3P: West Pond #2

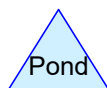
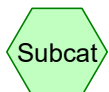
Hydrograph



Lot 8 Drainage Analysis



(new Subcat)



Routing Diagram for 23310_Lots 4 & 8 Existing
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23310_Lots 4 & 8 Existing

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Page 2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.110	61	>75% Grass cover, Good, HSG B (ES8)
0.199	55	Woods, Good, HSG B (ES8)
0.309	57	TOTAL AREA

23310_Lots 4 & 8 Existing

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Page 3

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	ES8
0.309	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
0.309		TOTAL AREA

23310_Lots 4 & 8 Existing

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Lot 8 - Existing
Type II 24-hr 2 yr Rainfall=2.50"

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Page 4

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

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

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentES8: (new Subcat)

Runoff Area=13,460 sf 0.00% Impervious Runoff Depth=0.12"

Tc=5.0 min CN=57 Runoff=0.01 cfs 0.003 af

Total Runoff Area = 0.309 ac Runoff Volume = 0.003 af Average Runoff Depth = 0.12"
100.00% Pervious = 0.309 ac 0.00% Impervious = 0.000 ac

23310_Lots 4 & 8 Existing

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Lot 8 - Existing

Type II 24-hr 10 yr Rainfall=3.58"

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Page 5

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

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

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentES8: (new Subcat)

Runoff Area=13,460 sf 0.00% Impervious Runoff Depth=0.45"

Tc=5.0 min CN=57 Runoff=0.19 cfs 0.011 af

Total Runoff Area = 0.309 ac Runoff Volume = 0.011 af Average Runoff Depth = 0.45"
100.00% Pervious = 0.309 ac 0.00% Impervious = 0.000 ac

23310_Lots 4 & 8 Existing

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Lot 8 - Existing

Type II 24-hr 50 yr Rainfall=5.14"

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Page 6

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

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

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentES8: (new Subcat)

Runoff Area=13,460 sf 0.00% Impervious Runoff Depth=1.18"

Tc=5.0 min CN=57 Runoff=0.64 cfs 0.030 af

Total Runoff Area = 0.309 ac Runoff Volume = 0.030 af Average Runoff Depth = 1.18"

100.00% Pervious = 0.309 ac 0.00% Impervious = 0.000 ac

23310_Lots 4 & 8 Existing

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Lot 8 - Existing

Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment ES8: (new Subcat)

Runoff = 0.19 cfs @ 11.99 hrs, Volume= 0.011 af, Depth= 0.45"

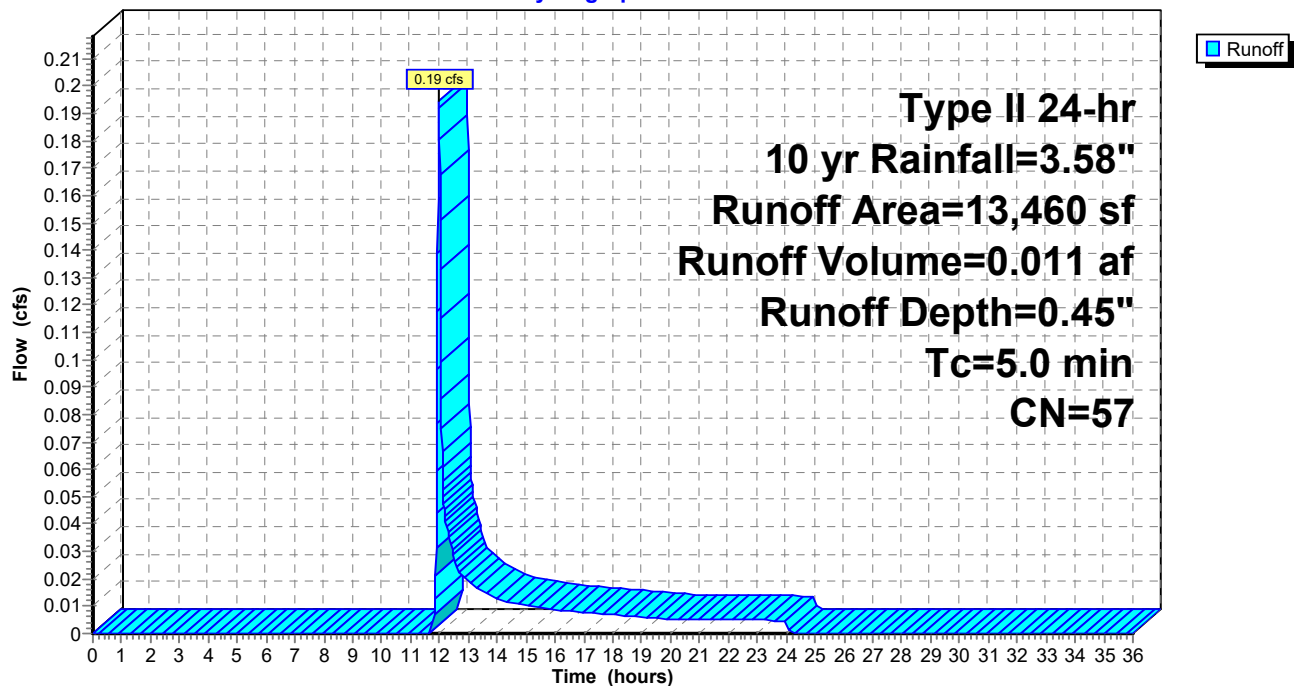
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 yr Rainfall=3.58"

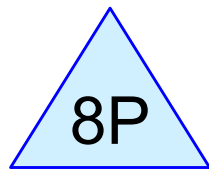
Area (sf)	CN	Description
8,650	55	Woods, Good, HSG B
4,810	61	>75% Grass cover, Good, HSG B
13,460	57	Weighted Average
13,460		100.00% Pervious Area

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

Subcatchment ES8: (new Subcat)

Hydrograph

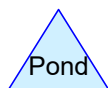
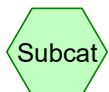




Rain Garden 8P



Lot 8 Add



Routing Diagram for 23310_Lots 4 & 8 Post 2024
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23310_Lots 4 & 8 Post 2024

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Page 2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.163	61	>75% Grass cover, Good, HSG B (PS8)
0.146	98	Paved parking, HSG B (PS8)
0.309	78	TOTAL AREA

23310_Lots 4 & 8 Post 2024

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Page 3

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.309	HSG B	PS8
0.000	HSG C	
0.000	HSG D	
0.000	Other	
0.309		TOTAL AREA

23310_Lots 4 & 8 Post 2024

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Lot 8 - Post
Type II 24-hr 2 yr Rainfall=2.50"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS8: Lot 8 Add

Runoff Area=13,460 sf 47.23% Impervious Runoff Depth=0.79"
Tc=5.0 min CN=78 Runoff=0.45 cfs 0.020 af

Pond 8P: Rain Garden 8P

Peak Elev=759.64' Storage=487 cf Inflow=0.45 cfs 0.020 af
Discarded=0.01 cfs 0.012 af Primary=0.01 cfs 0.003 af Outflow=0.02 cfs 0.015 af

Total Runoff Area = 0.309 ac Runoff Volume = 0.020 af Average Runoff Depth = 0.79"
52.77% Pervious = 0.163 ac 47.23% Impervious = 0.146 ac

23310_Lots 4 & 8 Post 2024

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Lot 8 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS8: Lot 8 Add

Runoff Area=13,460 sf 47.23% Impervious Runoff Depth=1.56"
Tc=5.0 min CN=78 Runoff=0.90 cfs 0.040 af

Pond 8P: Rain Garden 8P

Peak Elev=760.05' Storage=784 cf Inflow=0.90 cfs 0.040 af
Discarded=0.01 cfs 0.014 af Primary=0.07 cfs 0.021 af Outflow=0.08 cfs 0.035 af

Total Runoff Area = 0.309 ac Runoff Volume = 0.040 af Average Runoff Depth = 1.56"
52.77% Pervious = 0.163 ac 47.23% Impervious = 0.146 ac

23310_Lots 4 & 8 Post 2024

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Lot 8 - Post

Type II 24-hr 50 yr Rainfall=5.14"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

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

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

SubcatchmentPS8: Lot 8 Add

Runoff Area=13,460 sf 47.23% Impervious Runoff Depth=2.83"

Tc=5.0 min CN=78 Runoff=1.61 cfs 0.073 af

Pond 8P: Rain Garden 8P

Peak Elev=760.60' Storage=1,381 cf Inflow=1.61 cfs 0.073 af

Discarded=0.02 cfs 0.016 af Primary=0.45 cfs 0.051 af Outflow=0.47 cfs 0.067 af

Total Runoff Area = 0.309 ac Runoff Volume = 0.073 af Average Runoff Depth = 2.83"

52.77% Pervious = 0.163 ac 47.23% Impervious = 0.146 ac

23310_Lots 4 & 8 Post 2024

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Lot 8 - Post

Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PS8: Lot 8 Add

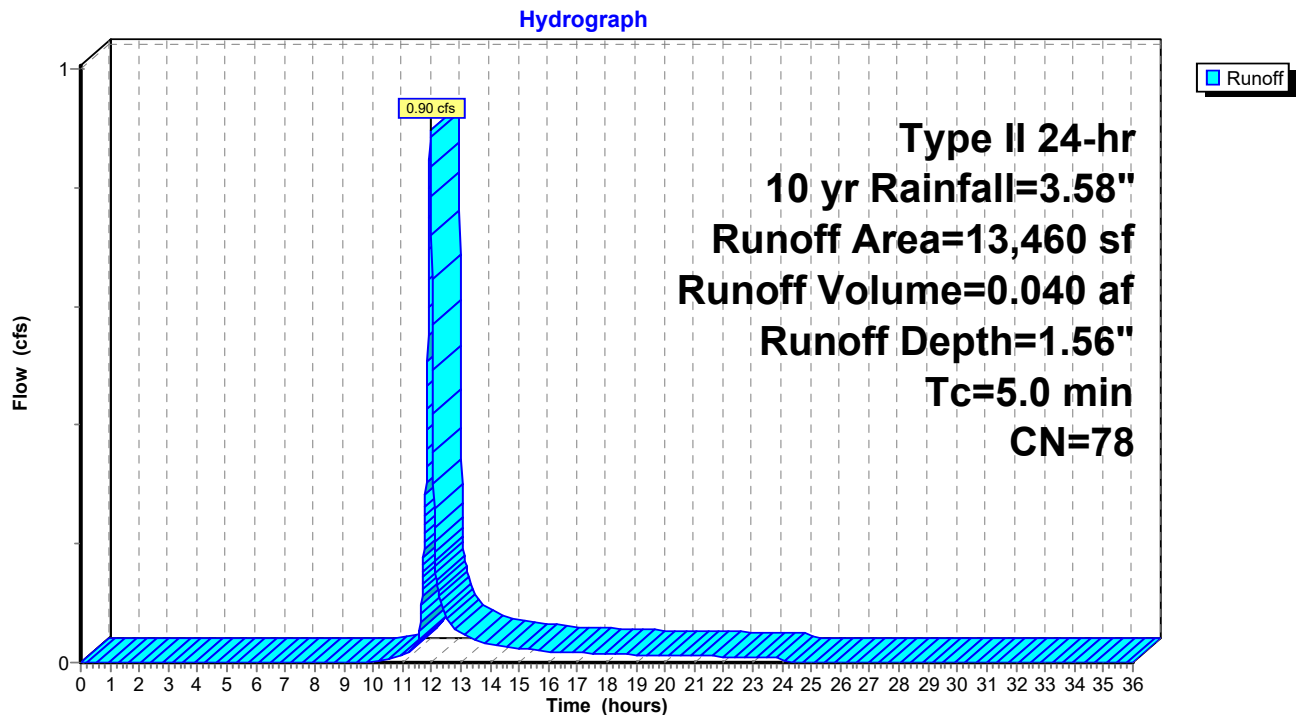
Runoff = 0.90 cfs @ 11.96 hrs, Volume= 0.040 af, Depth= 1.56"
Routed to Pond 8P : Rain Garden 8P

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 yr Rainfall=3.58"

Area (sf)	CN	Description
7,103	61	>75% Grass cover, Good, HSG B
6,357	98	Paved parking, HSG B
13,460	78	Weighted Average
7,103		52.77% Pervious Area
6,357		47.23% Impervious Area

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

Subcatchment PS8: Lot 8 Add



23310_Lots 4 & 8 Post 2024

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Lot 8 - Post
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond 8P: Rain Garden 8P

Inflow Area = 0.309 ac, 47.23% Impervious, Inflow Depth = 1.56" for 10 yr event
Inflow = 0.90 cfs @ 11.96 hrs, Volume= 0.040 af
Outflow = 0.08 cfs @ 12.48 hrs, Volume= 0.035 af, Atten= 91%, Lag= 30.8 min
Discarded = 0.01 cfs @ 12.48 hrs, Volume= 0.014 af
Primary = 0.07 cfs @ 12.48 hrs, Volume= 0.021 af
Routed to nonexistent node POI-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Peak Elev= 760.05' @ 12.48 hrs Surf.Area= 871 sf Storage= 784 cf

Plug-Flow detention time= 281.3 min calculated for 0.035 af (86% of inflow)
Center-of-Mass det. time= 216.3 min (1,055.3 - 839.0)

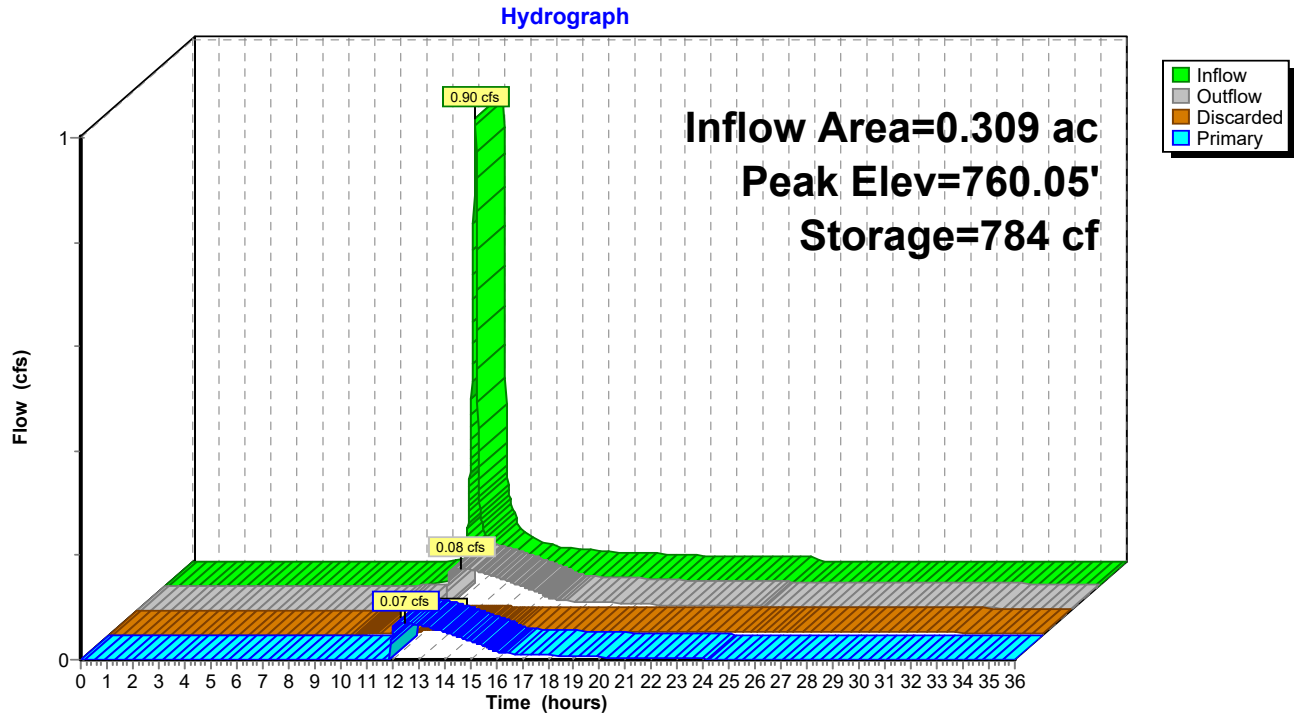
Volume	Invert	Avail.Storage	Storage Description	
#1	757.00'	1,945 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
757.00	353	0.0	0	0
759.00	353	30.0	212	212
759.50	467	100.0	205	417
761.00	1,570	100.0	1,528	1,945

Device	Routing	Invert	Outlet Devices
#1	Discarded	757.00'	0.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 734.50'
#2	Primary	755.50'	18.0" Round Culvert L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 755.50' / 755.00' S= 0.0417 ' S= 0.0417 ' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#3	Device 2	759.60'	2.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 2	760.50'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

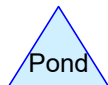
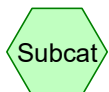
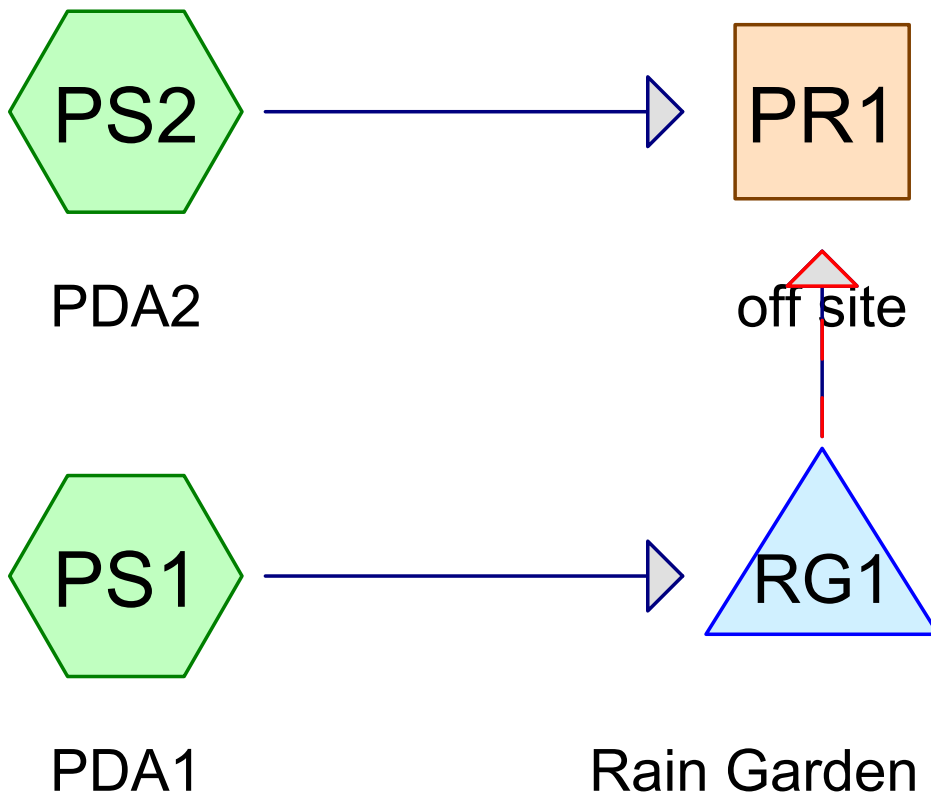
Discarded OutFlow Max=0.01 cfs @ 12.48 hrs HW=760.05' (Free Discharge)
↑ **1=Exfiltration** (Controls 0.01 cfs)

Primary OutFlow Max=0.07 cfs @ 12.48 hrs HW=760.05' (Free Discharge)
↑ **2=Culvert** (Passes 0.07 cfs of 16.58 cfs potential flow)
↑ **3=Orifice/Grate** (Orifice Controls 0.07 cfs @ 3.23 fps)
↑ **4=Orifice/Grate** (Controls 0.00 cfs)

Pond 8P: Rain Garden 8P



Lot E/CNG Drainage Analysis



Routing Diagram for 12280_CNG Pro 13.05.03
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12280_CNG Pro 13.05.03

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Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.616	74	>75% Grass cover, Good, HSG C (PS1, PS2)
0.300	98	Driveway, HSG C (PS1, PS2)
0.069	98	Gravel Walkway, HSG C (PS1, PS2)
0.014	98	Path, HSG C (PS2)
0.018	98	Unconnected roofs, HSG C (PS1, PS2)
1.017	83	TOTAL AREA

12280_CNG Pro 13.05.03

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
1.017	HSG C	PS1, PS2
0.000	HSG D	
0.000	Other	
1.017		TOTAL AREA

12280_CNG Pro 13.05.03

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Lot E - Existing
Type II 24-hr 2 yr Rainfall=2.50"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentPS1: PDA1

Runoff Area=34,005 sf 42.58% Impervious Runoff Depth=1.12"
Flow Length=316' Tc=11.4 min CN=84 Runoff=1.28 cfs 0.073 af

SubcatchmentPS2: PDA2

Runoff Area=10,296 sf 29.21% Impervious Runoff Depth=0.94"
Flow Length=262' Tc=5.3 min CN=81 Runoff=0.41 cfs 0.019 af

Reach PR1: off site

Inflow=0.53 cfs 0.091 af
Outflow=0.53 cfs 0.091 af

Pond RG1: Rain Garden RG1

Peak Elev=713.53' Storage=1,202 cf Inflow=1.28 cfs 0.073 af
Primary=0.19 cfs 0.073 af Secondary=0.00 cfs 0.000 af Outflow=0.19 cfs 0.073 af

Total Runoff Area = 1.017 ac Runoff Volume = 0.091 af Average Runoff Depth = 1.08"
60.52% Pervious = 0.616 ac 39.48% Impervious = 0.401 ac

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Lot E - Existing
Type II 24-hr 10 yr Rainfall=3.58"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentPS1: PDA1

Runoff Area=34,005 sf 42.58% Impervious Runoff Depth=2.01"
Flow Length=316' Tc=11.4 min CN=84 Runoff=2.29 cfs 0.130 af

SubcatchmentPS2: PDA2

Runoff Area=10,296 sf 29.21% Impervious Runoff Depth=1.77"
Flow Length=262' Tc=5.3 min CN=81 Runoff=0.77 cfs 0.035 af

Reach PR1: off site

Inflow=1.02 cfs 0.165 af
Outflow=1.02 cfs 0.165 af

Pond RG1: Rain Garden RG1

Peak Elev=714.13' Storage=1,986 cf Inflow=2.29 cfs 0.130 af
Primary=0.91 cfs 0.130 af Secondary=0.00 cfs 0.000 af Outflow=0.91 cfs 0.130 af

Total Runoff Area = 1.017 ac Runoff Volume = 0.165 af Average Runoff Depth = 1.95"
60.52% Pervious = 0.616 ac 39.48% Impervious = 0.401 ac

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Lot E - Existing
Type II 24-hr 50 yr Rainfall=5.14"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

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

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

SubcatchmentPS1: PDA1Runoff Area=34,005 sf 42.58% Impervious Runoff Depth=3.40"
Flow Length=316' Tc=11.4 min CN=84 Runoff=3.82 cfs 0.221 af**SubcatchmentPS2: PDA2**Runoff Area=10,296 sf 29.21% Impervious Runoff Depth=3.11"
Flow Length=262' Tc=5.3 min CN=81 Runoff=1.32 cfs 0.061 af**Reach PR1: off site**Inflow=2.96 cfs 0.282 af
Outflow=2.96 cfs 0.282 af**Pond RG1: Rain Garden RG1**Peak Elev=714.52' Storage=2,638 cf Inflow=3.82 cfs 0.221 af
Primary=2.51 cfs 0.221 af Secondary=0.00 cfs 0.000 af Outflow=2.51 cfs 0.221 af**Total Runoff Area = 1.017 ac Runoff Volume = 0.282 af Average Runoff Depth = 3.33"**
60.52% Pervious = 0.616 ac 39.48% Impervious = 0.401 ac

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Lot E - Existing
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PS1: PDA1

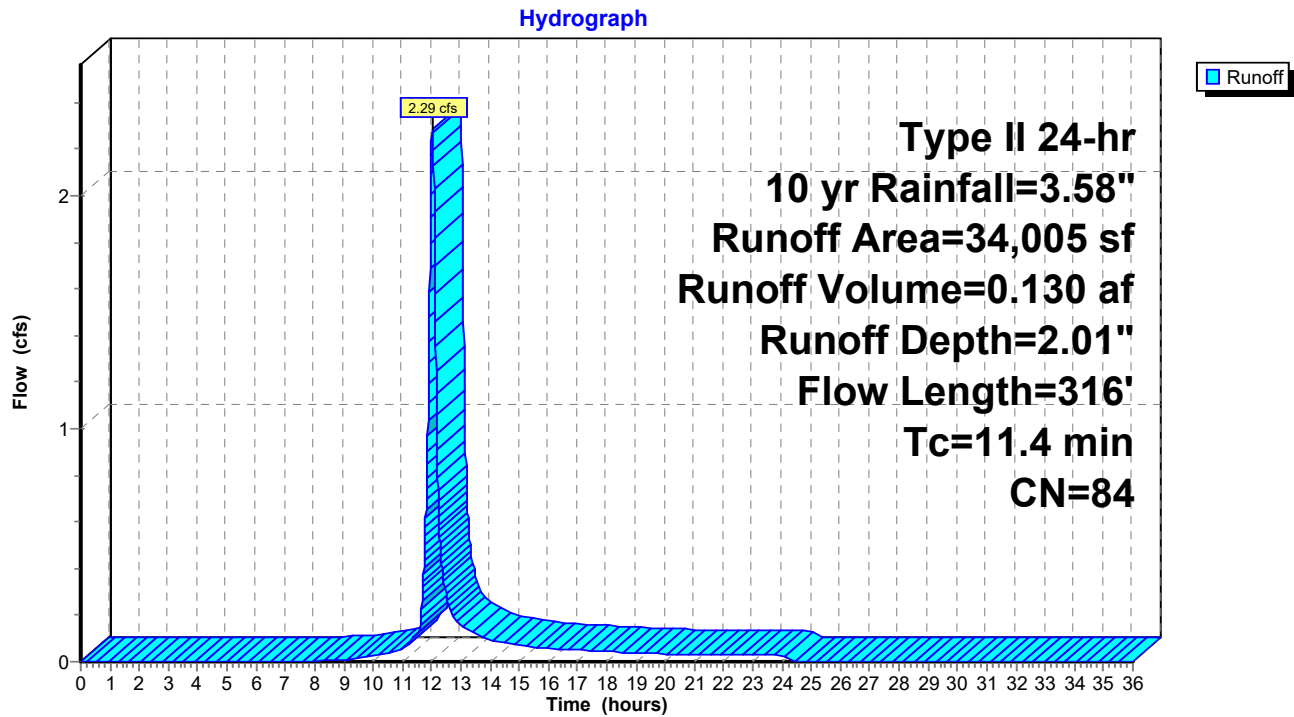
Runoff = 2.29 cfs @ 12.03 hrs, Volume= 0.130 af, Depth= 2.01"
 Routed to Pond RG1 : Rain Garden RG1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10 yr Rainfall=3.58"

Area (sf)	CN	Description
19,524	74	>75% Grass cover, Good, HSG C
754	98	Unconnected roofs, HSG C
* 2,856	98	Gravel Walkway, HSG C
* 10,871	98	Driveway, HSG C
34,005	84	Weighted Average
19,524		57.42% Pervious Area
14,481		42.58% Impervious Area
754		5.21% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.4	100	0.0225	0.16		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"
0.6	65	0.0731	1.89		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.4	151	0.0331	6.42	32.08	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=1.00' Z= 3.0 '/' Top.W=8.00' n= 0.030
11.4	316	Total			

Subcatchment PS1: PDA1



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Lot E - Existing
Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PS2: PDA2

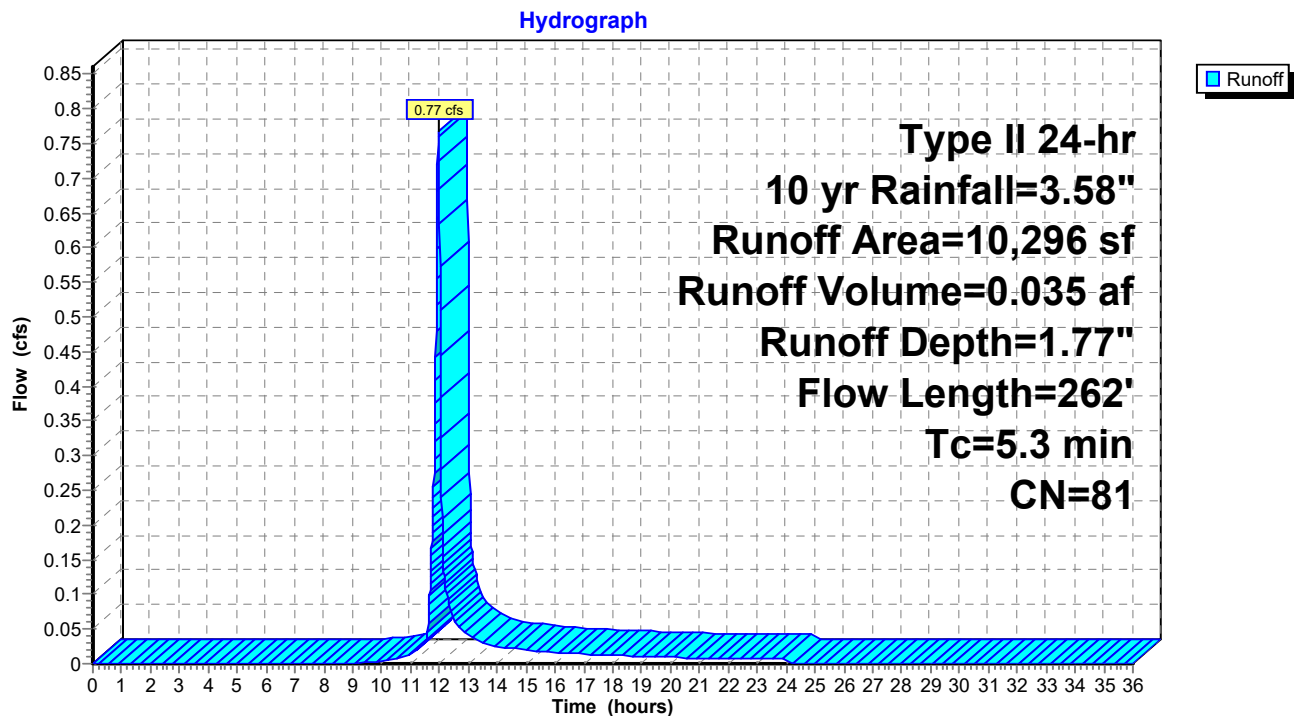
Runoff = 0.77 cfs @ 11.97 hrs, Volume= 0.035 af, Depth= 1.77"
 Routed to Reach PR1 : off site

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10 yr Rainfall=3.58"

Area (sf)	CN	Description
7,289	74	>75% Grass cover, Good, HSG C
* 150	98	Gravel Walkway, HSG C
* 2,202	98	Driveway, HSG C
* 609	98	Path, HSG C
46	98	Unconnected roofs, HSG C
10,296	81	Weighted Average
7,289		70.79% Pervious Area
3,007		29.21% Impervious Area
46		1.53% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	59	0.0508	0.20		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"
0.3	102	0.0294	6.05	30.23	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=1.00' Z= 3.0 '/' Top.W=8.00' n= 0.030
0.1	72	0.0278	8.19	6.44	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.0	29	0.1034	10.57	52.86	Trap/Vee/Rect Channel Flow, Bot.W=1.00' D=1.00' Z= 4.0 '/' Top.W=9.00' n= 0.030
5.3	262	Total			

Subcatchment PS2: PDA2



Summary for Reach PR1: off site

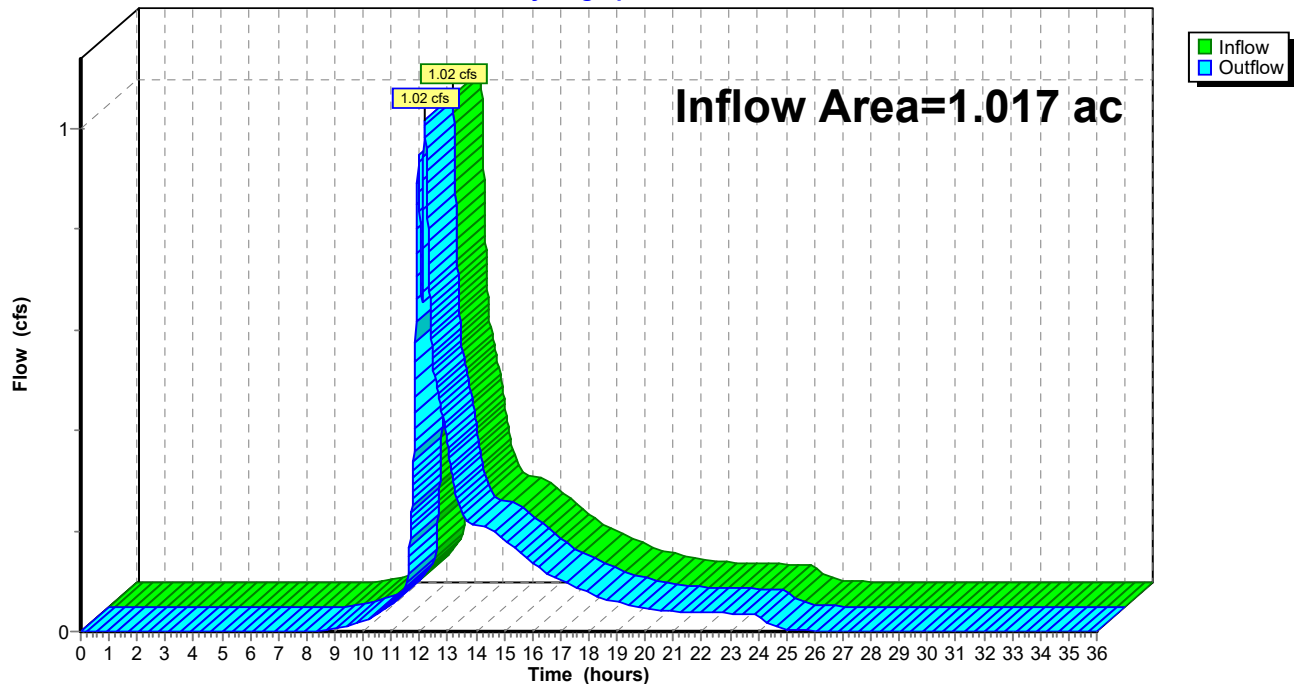
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.017 ac, 39.48% Impervious, Inflow Depth = 1.95" for 10 yr event
Inflow = 1.02 cfs @ 12.19 hrs, Volume= 0.165 af
Outflow = 1.02 cfs @ 12.19 hrs, Volume= 0.165 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach PR1: off site

Hydrograph



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Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Pond RG1: Rain Garden RG1

[42] Hint: Gap in defined storage above volume #1 at 711.24'

[92] Warning: Device #4 is above defined storage

Inflow Area = 0.781 ac, 42.58% Impervious, Inflow Depth = 2.01" for 10 yr event
 Inflow = 2.29 cfs @ 12.03 hrs, Volume= 0.130 af
 Outflow = 0.91 cfs @ 12.19 hrs, Volume= 0.130 af, Atten= 60%, Lag= 9.6 min
 Primary = 0.91 cfs @ 12.19 hrs, Volume= 0.130 af
 Routed to Reach PR1 : off site
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Reach PR1 : off site

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 714.13' @ 12.19 hrs Surf.Area= 3,195 sf Storage= 1,986 cf

Plug-Flow detention time= 60.3 min calculated for 0.130 af (100% of inflow)
 Center-of-Mass det. time= 60.3 min (886.7 - 826.4)

Volume	Invert	Avail.Storage	Storage Description
#1	710.17'	347 cf	Pea Stone (Prismatic) Listed below (Recalc) 867 cf Overall x 40.0% Voids
#2	711.25'	510 cf	Filter Media (Prismatic) Listed below (Recalc) 1,698 cf Overall x 30.0% Voids
#3	713.00'	613 cf	Forebay (Prismatic) Listed below (Recalc)
#4	713.25'	2,733 cf	Pond (Prismatic) Listed below (Recalc)
		4,202 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
710.17	795	0	0
711.24	825	867	867

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
711.25	825	0	0
713.24	882	1,698	1,698

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
713.00	113	0	0
714.00	317	215	215
714.75	743	398	613

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
713.25	882	0	0
714.00	1,063	729	729
715.00	1,330	1,197	1,926
715.50	1,898	807	2,733

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Lot E - Existing

Type II 24-hr 10 yr Rainfall=3.58"

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Device	Routing	Invert	Outlet Devices
#1	Primary	710.17'	2.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	713.50'	
#3	Primary	714.00'	10.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	715.50'	
			10.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

Primary OutFlow Max=0.90 cfs @ 12.19 hrs HW=714.13' (Free Discharge)

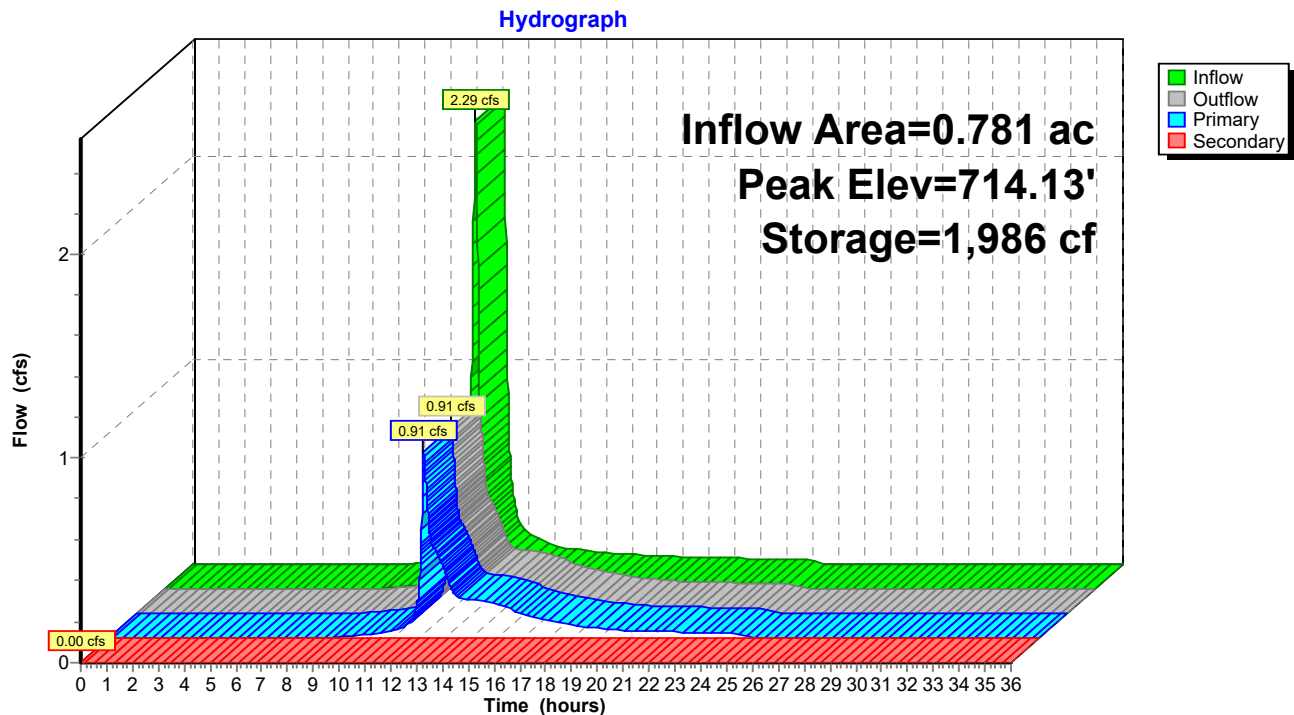
1=Orifice/Grate (Orifice Controls 0.21 cfs @ 9.48 fps)

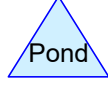
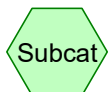
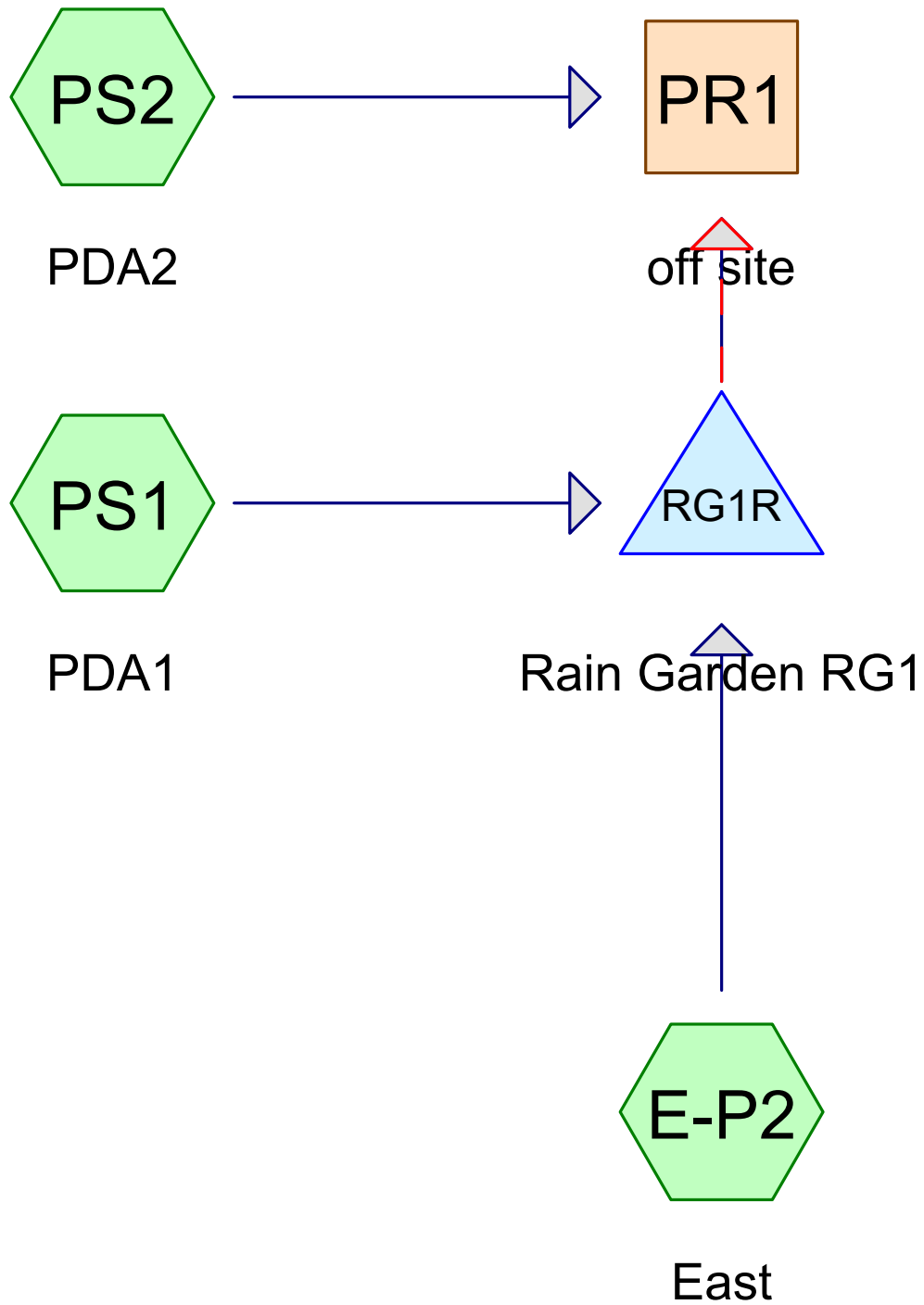
2=Orifice/Grate (Orifice Controls 0.29 cfs @ 3.45 fps)

3=Orifice/Grate (Weir Controls 0.40 cfs @ 1.18 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=710.17' (Free Discharge)

4=Sharp-Crested Rectangular Weir(Controls 0.00 cfs)

Pond RG1: Rain Garden RG1



Routing Diagram for 12280_CNG Pro - Plus ED
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.619	74	>75% Grass cover, Good, HSG C (E-P2, PS1, PS2)
0.314	98	Driveway, HSG C (PS1, PS2)
0.069	98	Gravel Walkway, HSG C (PS1, PS2)
0.014	98	Path, HSG C (PS2)
0.243	98	Paved parking, HSG C (E-P2)
0.018	98	Unconnected roofs, HSG C (PS1, PS2)
1.277	86	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
1.277	HSG C	E-P2, PS1, PS2
0.000	HSG D	
0.000	Other	
1.277		TOTAL AREA

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Lot E - Post

Type II 24-hr 2 yr Rainfall=2.50"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

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

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

SubcatchmentE-P2: East

Runoff Area=10,751 sf 98.60% Impervious Runoff Depth=2.27"

Tc=5.0 min CN=98 Runoff=0.89 cfs 0.047 af

SubcatchmentPS1: PDA1

Runoff Area=34,599 sf 43.57% Impervious Runoff Depth=1.12"

Flow Length=316' Tc=11.4 min CN=84 Runoff=1.30 cfs 0.074 af

SubcatchmentPS2: PDA2

Runoff Area=10,296 sf 29.21% Impervious Runoff Depth=0.94"

Flow Length=262' Tc=5.3 min CN=81 Runoff=0.41 cfs 0.019 af

Reach PR1: off site

Inflow=0.56 cfs 0.139 af

Outflow=0.56 cfs 0.139 af

Pond RG1R: Rain Garden RG1

Peak Elev=713.42' Storage=2,082 cf Inflow=1.96 cfs 0.121 af

Primary=0.19 cfs 0.121 af Secondary=0.00 cfs 0.000 af Outflow=0.19 cfs 0.121 af

Total Runoff Area = 1.277 ac Runoff Volume = 0.139 af Average Runoff Depth = 1.31"
48.46% Pervious = 0.619 ac 51.54% Impervious = 0.658 ac

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Lot E - Post

Type II 24-hr 10 yr Rainfall=3.58"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

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

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

SubcatchmentE-P2: East

Runoff Area=10,751 sf 98.60% Impervious Runoff Depth=3.35"

Tc=5.0 min CN=98 Runoff=1.29 cfs 0.069 af

SubcatchmentPS1: PDA1

Runoff Area=34,599 sf 43.57% Impervious Runoff Depth=2.01"

Flow Length=316' Tc=11.4 min CN=84 Runoff=2.33 cfs 0.133 af

SubcatchmentPS2: PDA2

Runoff Area=10,296 sf 29.21% Impervious Runoff Depth=1.77"

Flow Length=262' Tc=5.3 min CN=81 Runoff=0.77 cfs 0.035 af

Reach PR1: off site

Inflow=0.95 cfs 0.236 af

Outflow=0.95 cfs 0.236 af

Pond RG1R: Rain Garden RG1

Peak Elev=714.01' Storage=3,539 cf Inflow=3.29 cfs 0.202 af

Primary=0.48 cfs 0.202 af Secondary=0.00 cfs 0.000 af Outflow=0.48 cfs 0.202 af

Total Runoff Area = 1.277 ac Runoff Volume = 0.236 af Average Runoff Depth = 2.22"
48.46% Pervious = 0.619 ac 51.54% Impervious = 0.658 ac

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Lot E - Post
Type II 24-hr 50 yr Rainfall=5.14"

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Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

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

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

SubcatchmentE-P2: EastRunoff Area=10,751 sf 98.60% Impervious Runoff Depth=4.90"
Tc=5.0 min CN=98 Runoff=1.86 cfs 0.101 af**SubcatchmentPS1: PDA1**Runoff Area=34,599 sf 43.57% Impervious Runoff Depth=3.40"
Flow Length=316' Tc=11.4 min CN=84 Runoff=3.89 cfs 0.225 af**SubcatchmentPS2: PDA2**Runoff Area=10,296 sf 29.21% Impervious Runoff Depth=3.11"
Flow Length=262' Tc=5.3 min CN=81 Runoff=1.32 cfs 0.061 af**Reach PR1: off site**Inflow=2.70 cfs 0.387 af
Outflow=2.70 cfs 0.387 af**Pond RG1R: Rain Garden RG1**Peak Elev=714.46' Storage=4,815 cf Inflow=5.28 cfs 0.326 af
Primary=2.38 cfs 0.326 af Secondary=0.00 cfs 0.000 af Outflow=2.38 cfs 0.326 af**Total Runoff Area = 1.277 ac Runoff Volume = 0.387 af Average Runoff Depth = 3.64"**
48.46% Pervious = 0.619 ac 51.54% Impervious = 0.658 ac

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Lot E - Post

Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment E-P2: East

Runoff = 1.29 cfs @ 11.96 hrs, Volume= 0.069 af, Depth= 3.35"
Routed to Pond RG1R : Rain Garden RG1

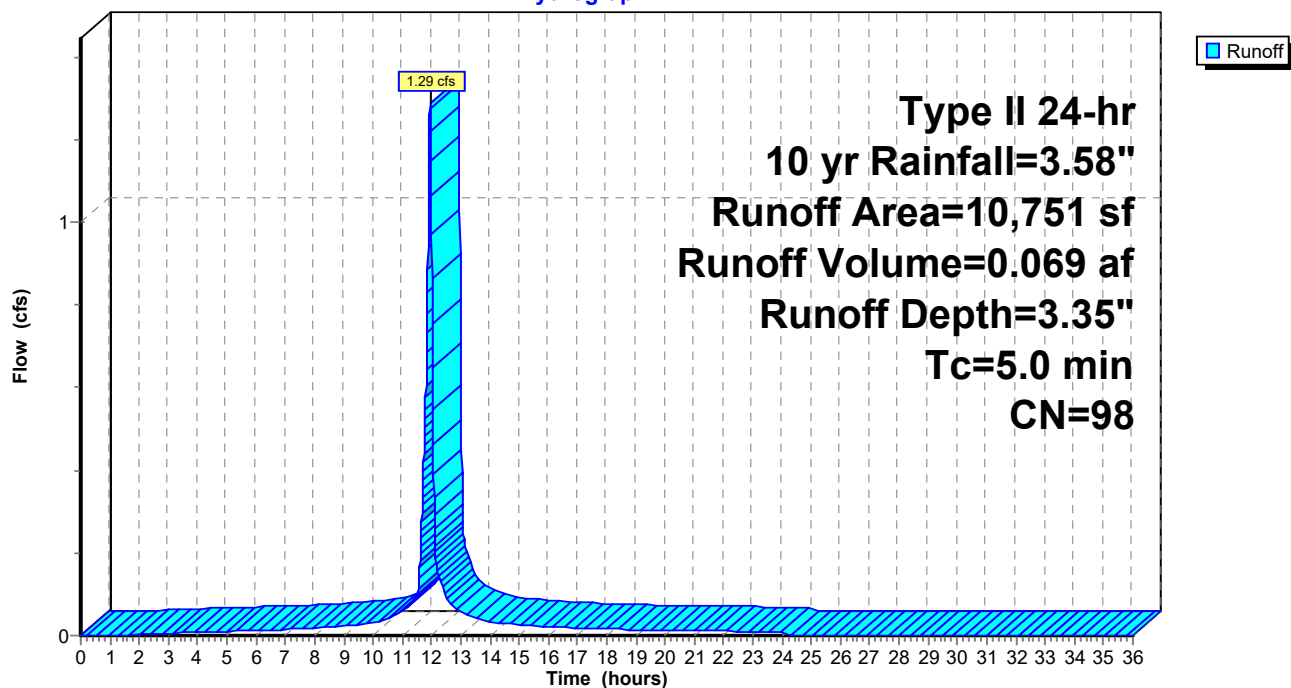
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type II 24-hr 10 yr Rainfall=3.58"

Area (sf)	CN	Description
151	74	>75% Grass cover, Good, HSG C
10,600	98	Paved parking, HSG C
10,751	98	Weighted Average
151		1.40% Pervious Area
10,600		98.60% Impervious Area

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

Subcatchment E-P2: East

Hydrograph



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Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PS1: PDA1

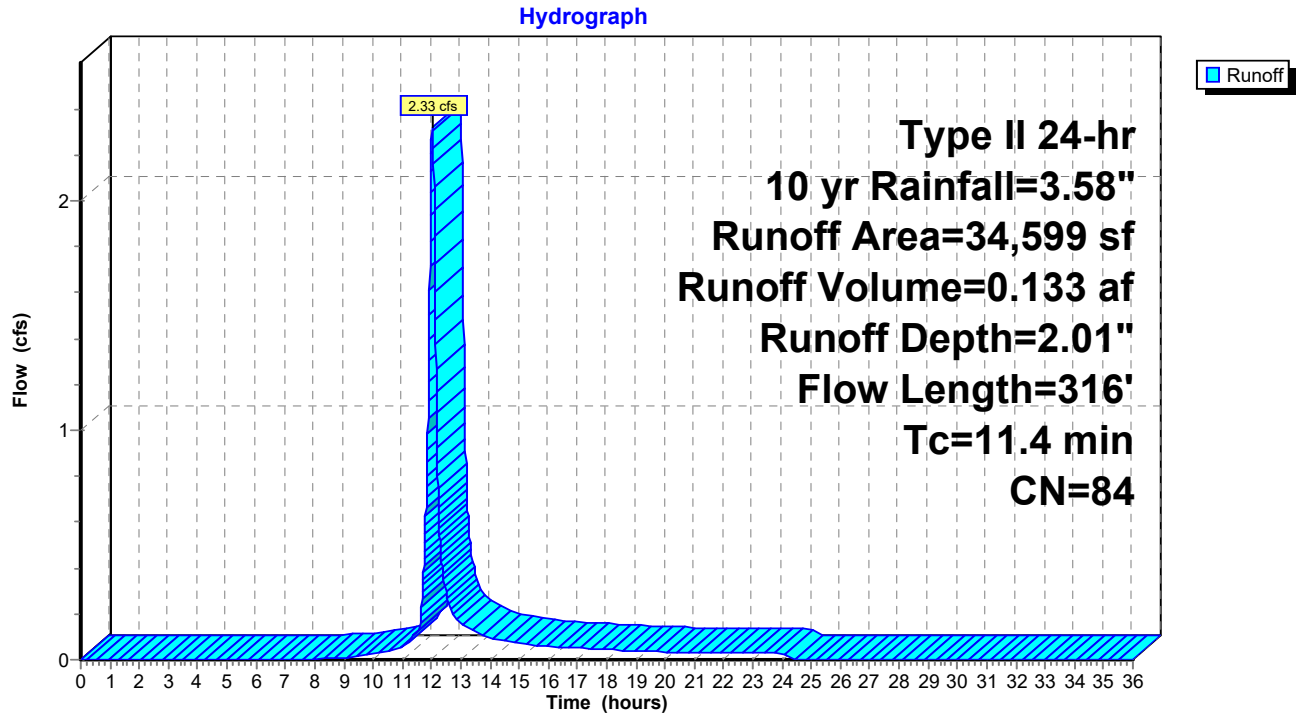
Runoff = 2.33 cfs @ 12.03 hrs, Volume= 0.133 af, Depth= 2.01"
 Routed to Pond RG1R : Rain Garden RG1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10 yr Rainfall=3.58"

Area (sf)	CN	Description
19,524	74	>75% Grass cover, Good, HSG C
754	98	Unconnected roofs, HSG C
* 2,856	98	Gravel Walkway, HSG C
* 11,465	98	Driveway, HSG C
34,599	84	Weighted Average
19,524		56.43% Pervious Area
15,075		43.57% Impervious Area
754		5.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.4	100	0.0225	0.16		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"
0.6	65	0.0731	1.89		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.4	151	0.0331	6.42	32.08	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=1.00' Z= 3.0 '/' Top.W=8.00' n= 0.030
11.4	316	Total			

Subcatchment PS1: PDA1



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Type II 24-hr 10 yr Rainfall=3.58"

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Summary for Subcatchment PS2: PDA2

Runoff = 0.77 cfs @ 11.97 hrs, Volume= 0.035 af, Depth= 1.77"
 Routed to Reach PR1 : off site

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type II 24-hr 10 yr Rainfall=3.58"

Area (sf)	CN	Description
7,289	74	>75% Grass cover, Good, HSG C
* 150	98	Gravel Walkway, HSG C
* 2,202	98	Driveway, HSG C
* 609	98	Path, HSG C
46	98	Unconnected roofs, HSG C
10,296	81	Weighted Average
7,289		70.79% Pervious Area
3,007		29.21% Impervious Area
46		1.53% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.9	59	0.0508	0.20		Sheet Flow, Grass: Short n= 0.150 P2= 2.60"
0.3	102	0.0294	6.05	30.23	Trap/Vee/Rect Channel Flow, Bot.W=2.00' D=1.00' Z= 3.0 '/' Top.W=8.00' n= 0.030
0.1	72	0.0278	8.19	6.44	Pipe Channel, 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012
0.0	29	0.1034	10.57	52.86	Trap/Vee/Rect Channel Flow, Bot.W=1.00' D=1.00' Z= 4.0 '/' Top.W=9.00' n= 0.030
5.3	262	Total			

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Lot E - Post

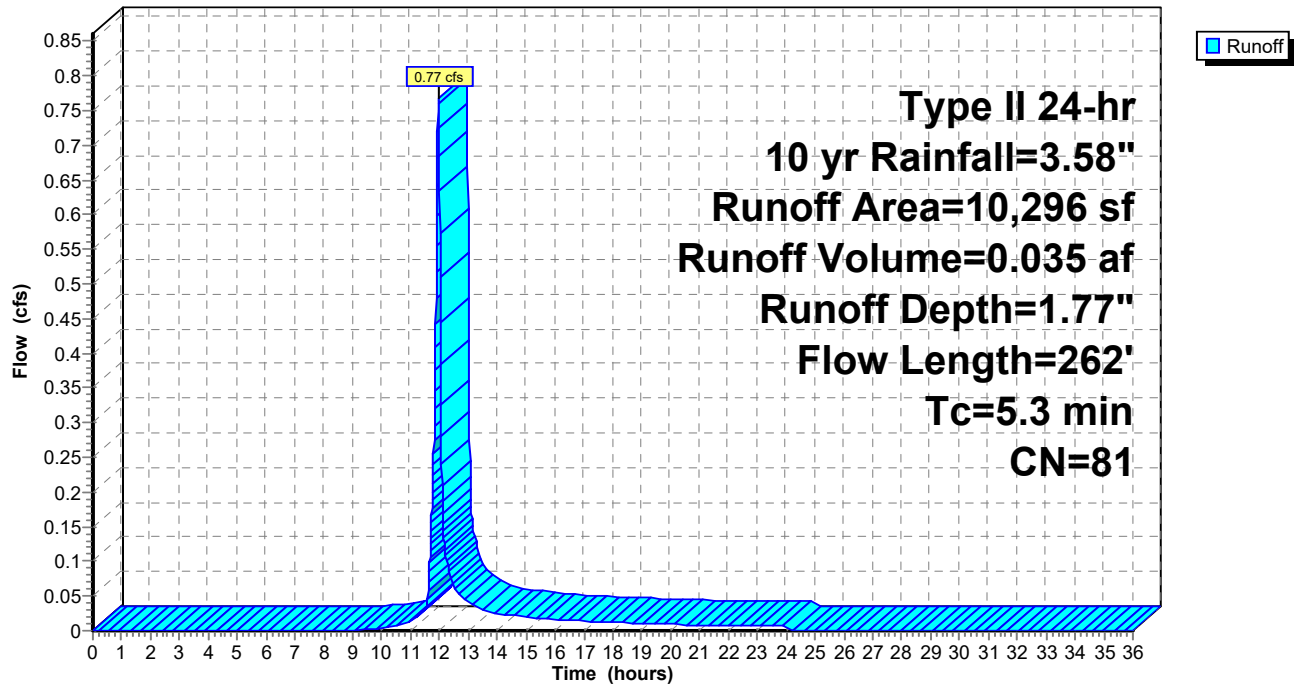
Type II 24-hr 10 yr Rainfall=3.58"

Printed 4/30/2024

Page 24

Subcatchment PS2: PDA2

Hydrograph

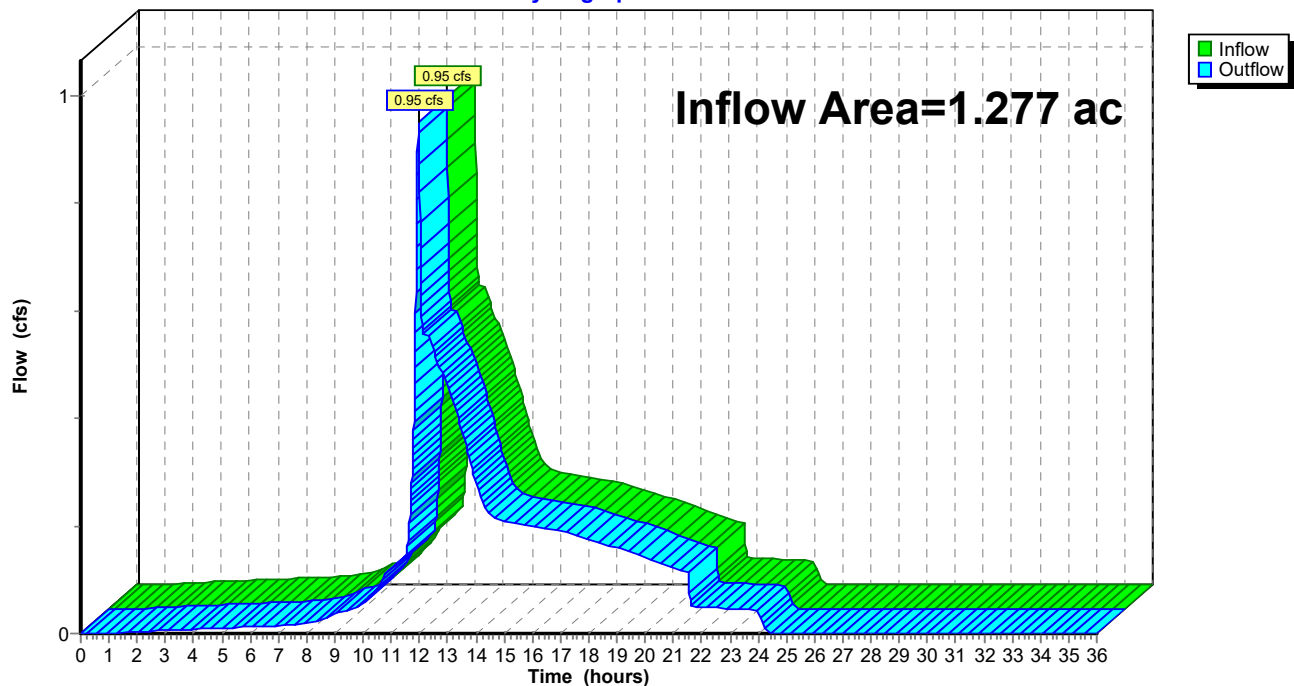


Summary for Reach PR1: off site

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.277 ac, 51.54% Impervious, Inflow Depth = 2.22" for 10 yr event
Inflow = 0.95 cfs @ 11.97 hrs, Volume= 0.236 af
Outflow = 0.95 cfs @ 11.97 hrs, Volume= 0.236 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Reach PR1: off site**Hydrograph**

12280_CNG Pro - Plus ED

Prepared by Engineering Ventures, Inc

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Lot E - Post
Type II 24-hr 10 yr Rainfall=3.58"

Printed 4/30/2024

Page 26

Summary for Pond RG1R: Rain Garden RG1

[44] Hint: Outlet device #1 is below defined storage

[92] Warning: Device #4 is above defined storage

Inflow Area = 1.041 ac, 56.62% Impervious, Inflow Depth = 2.32" for 10 yr event
 Inflow = 3.29 cfs @ 11.99 hrs, Volume= 0.202 af
 Outflow = 0.48 cfs @ 12.40 hrs, Volume= 0.202 af, Atten= 85%, Lag= 24.3 min
 Primary = 0.48 cfs @ 12.40 hrs, Volume= 0.202 af
 Routed to Reach PR1 : off site
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Reach PR1 : off site

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 714.01' @ 12.40 hrs Surf.Area= 3,140 sf Storage= 3,539 cf

Plug-Flow detention time= 108.7 min calculated for 0.201 af (100% of inflow)
 Center-of-Mass det. time= 108.7 min (908.7 - 800.0)

Volume	Invert	Avail.Storage	Storage Description
#1	711.24'	7,583 cf	Rain Garden (Prismatic) Listed below (Recalc)
#2	711.25'	655 cf	Forebay (Prismatic) Listed below (Recalc)
		8,238 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
711.24	1,806	0.0	0	0
711.25	1,806	30.0	5	5
713.24	1,895	30.0	1,105	1,110
713.25	1,895	100.0	19	1,129
714.00	2,682	100.0	1,716	2,845
715.00	3,331	100.0	3,007	5,852
715.50	3,593	100.0	1,731	7,583

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
711.25	140	0	0
713.25	408	548	548
713.50	449	107	655

Device	Routing	Invert	Outlet Devices
#1	Primary	710.17'	2.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#2	Primary	713.50'	2.8" Vert. Orifice/Grate X 2.00 C= 0.600 Limited to weir flow at low heads
#3	Primary	714.00'	10.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	715.50'	10.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s)

12280_CNG Pro - Plus ED

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Lot E - Post

Type II 24-hr 10 yr Rainfall=3.58"

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Page 27

Primary OutFlow Max=0.48 cfs @ 12.40 hrs HW=714.01' (Free Discharge)

1=Orifice/Grate (Orifice Controls 0.20 cfs @ 9.34 fps)

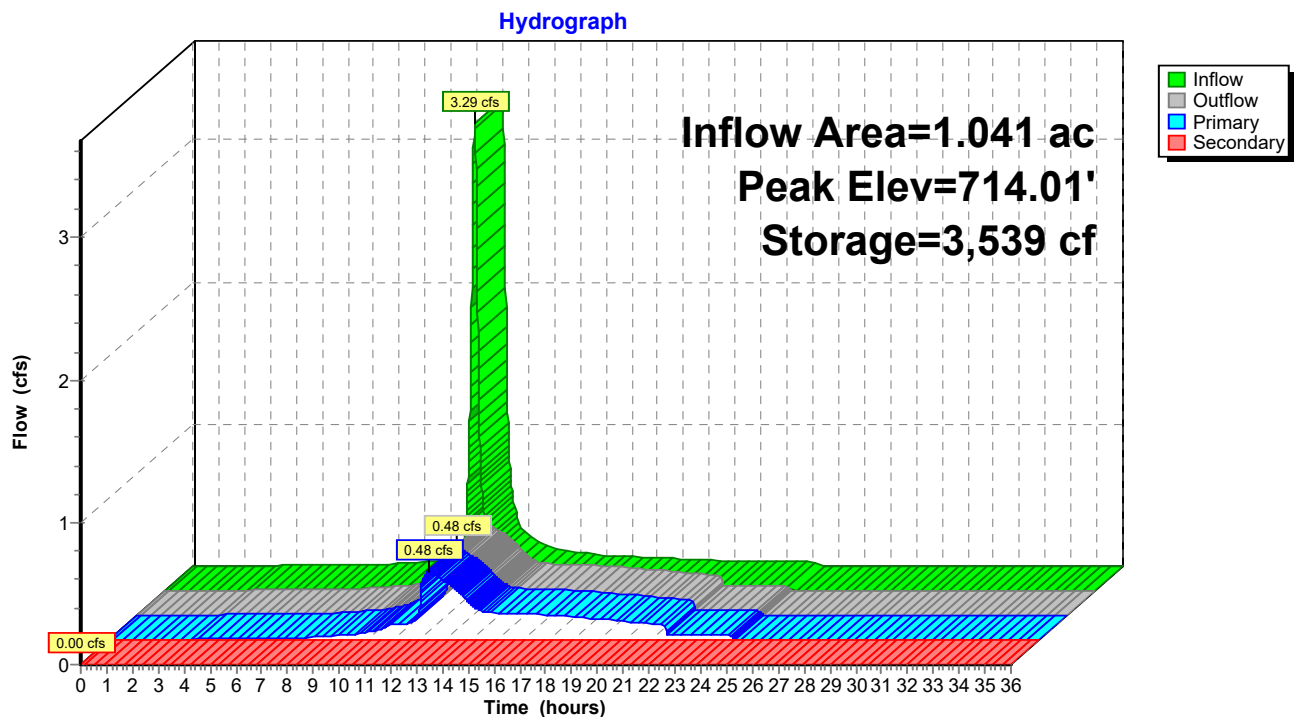
2=Orifice/Grate (Orifice Controls 0.26 cfs @ 3.04 fps)

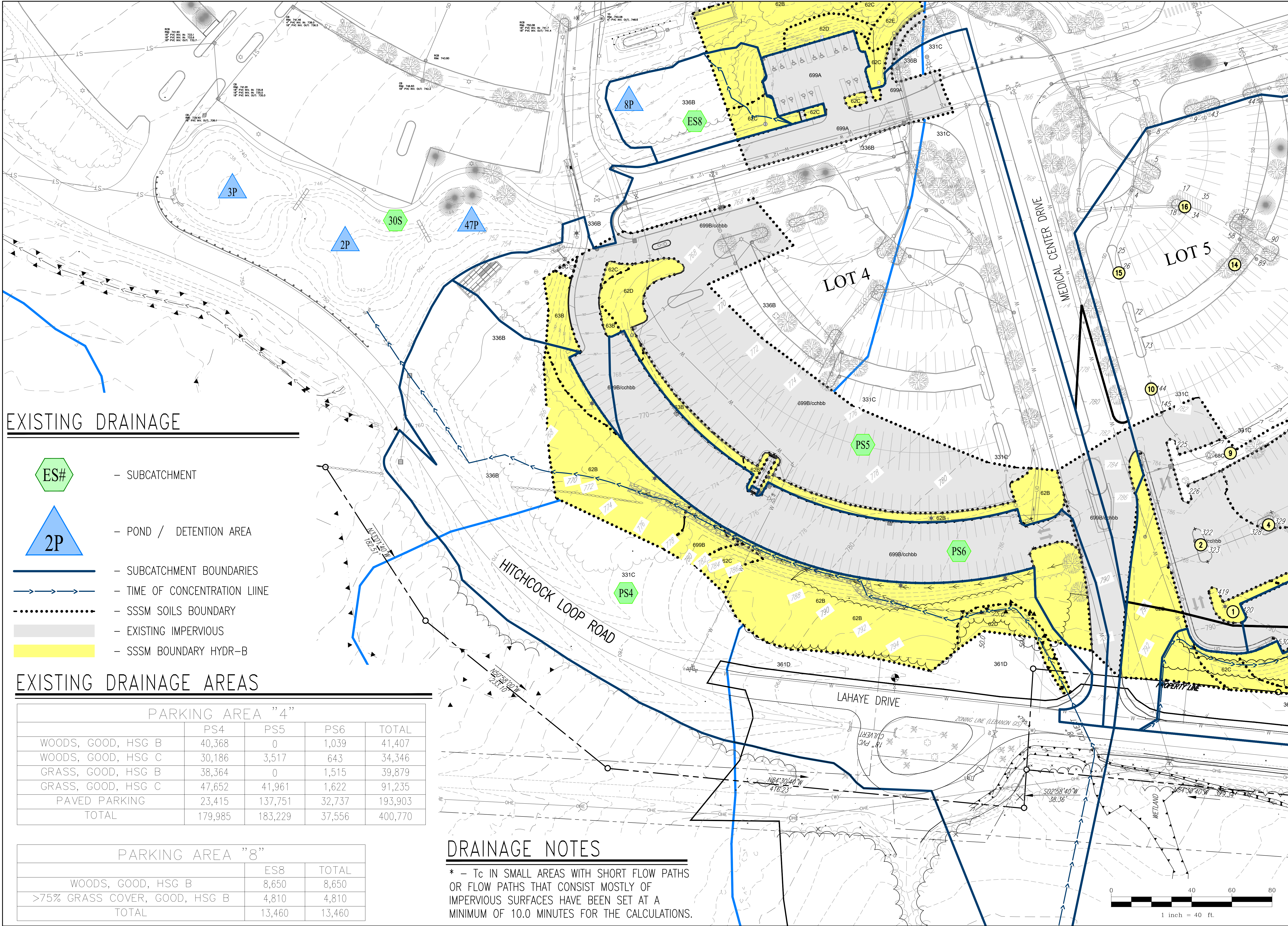
3=Orifice/Grate (Weir Controls 0.01 cfs @ 0.39 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=711.24' (Free Discharge)

4=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Pond RG1R: Rain Garden RG1





EXISTING DRAINAGE

- ES#** - SUBCATCHMENT
- 2P** - POND / DETENTION AREA
- Solid blue line - SUBCATCHMENT BOUNDARIES
- Blue line with arrows - TIME OF CONCENTRATION LINE
- Dotted line - SSSM SOILS BOUNDARY
- Grey fill - EXISTING IMPERVIOUS
- Yellow fill - SSSM BOUNDARY HYDR-B

EXISTING DRAINAGE AREAS

PARKING AREA "4"				
	PS4	PS5	PS6	TOTAL
WOODS, GOOD, HSG B	40,368	0	1,039	41,407
WOODS, GOOD, HSG C	30,186	3,517	643	34,346
GRASS, GOOD, HSG B	38,364	0	1,515	39,879
GRASS, GOOD, HSG C	47,652	41,961	1,622	91,235
PAVED PARKING	23,415	137,751	32,737	193,903
TOTAL	179,985	183,229	37,556	400,770

PARKING AREA "8"		
	ES8	TOTAL
WOODS, GOOD, HSG B	8,650	8,650
>75% GRASS COVER, GOOD, HSG B	4,810	4,810
TOTAL	13,460	13,460

DRAINAGE NOTES

* - T_c IN SMALL AREAS WITH SHORT FLOW PATHS OR FLOW PATHS THAT CONSIST MOSTLY OF IMPERVIOUS SURFACES HAVE BEEN SET AT A MINIMUM OF 10.0 MINUTES FOR THE CALCULATIONS.

Stamp

Date

No.

Description

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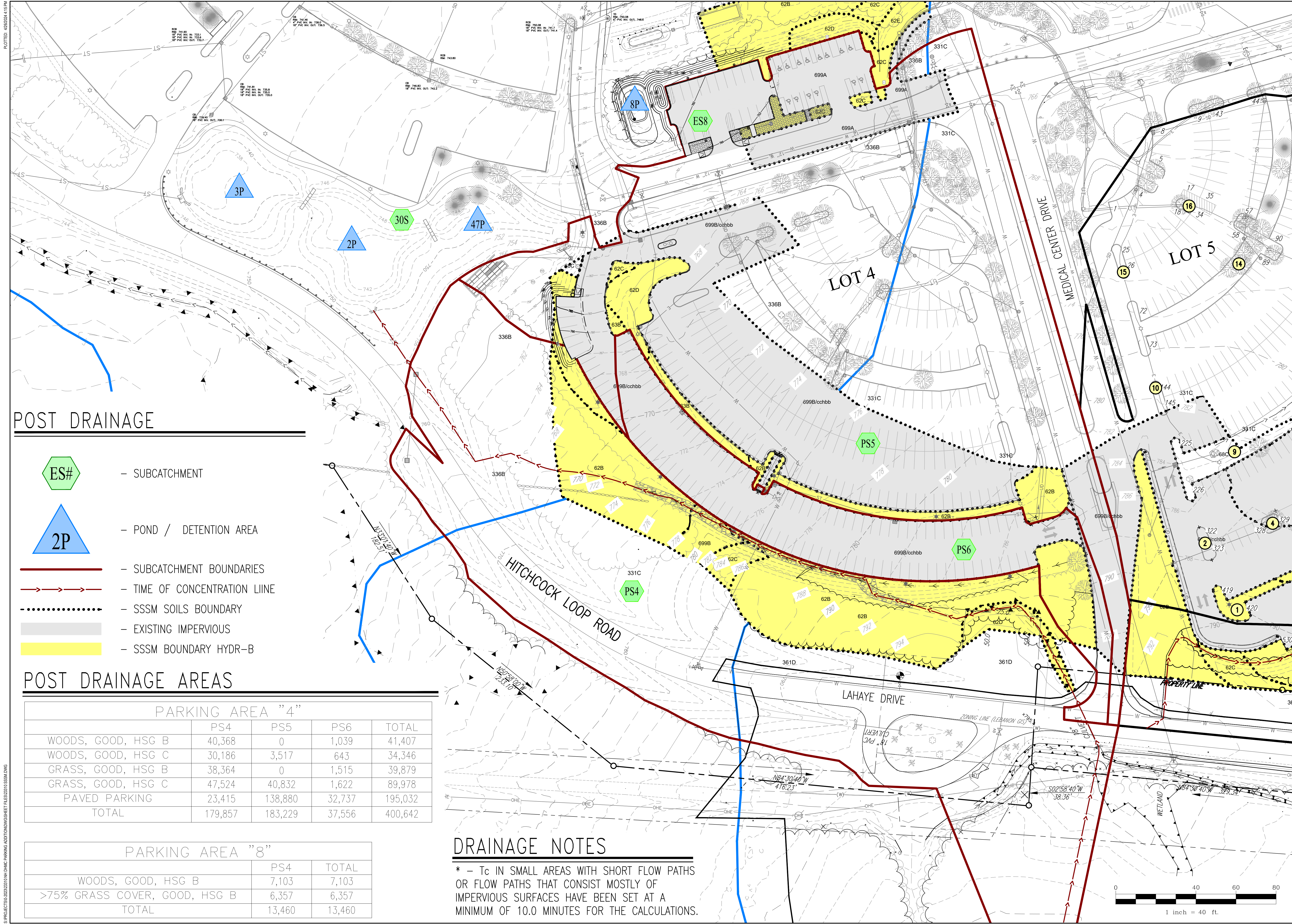
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1 MEDICAL CENTER DRIVE
LEBANON, NEW HAMPSHIRE 03766

EXISTING DRAINAGE
PARKING AREAS "4" AND "8"
MAIN CAMPUS
PARKING EXPANSION
LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project # 23310
Drawn By: JWF
Checked By: NAF
Scale: 1" = 40'
Date: 04/29/2024

D1.1



POST DRAINAGE

- ES#

— SUBCATCHMENT

2P

— POND / DETENTION AREA

— SUBCATCHMENT BOUNDARIES

— TIME OF CONCENTRATION LINE

— SSSM SOILS BOUNDARY

— EXISTING IMPERVIOUS

— SSSM BOUNDARY HYDR-B

POST DRAINAGE AREAS

PARKING AREA "4"				
	PS4	PS5	PS6	TOTAL
WOODS, GOOD, HSG B	40,368	0	1,039	41,407
WOODS, GOOD, HSG C	30,186	3,517	643	34,346
GRASS, GOOD, HSG B	38,364	0	1,515	39,879
GRASS, GOOD, HSG C	47,524	40,832	1,622	89,978
PAVED PARKING	23,415	138,880	32,737	195,032
TOTAL	179,857	183,229	37,556	400,642

PARKING AREA "8"		
	PS4	TOTAL
WOODS, GOOD, HSG B	7,103	7,103
>75% GRASS COVER, GOOD, HSG B	6,357	6,357
TOTAL	13,460	13,460

DRAINAGE NOTES

* - T_c IN SMALL AREAS WITH SHORT FLOW PATHS OR FLOW PATHS THAT CONSIST MOSTLY OF IMPERVIOUS SURFACES HAVE BEEN SET AT A MINIMUM OF 10.0 MINUTES FOR THE CALCULATIONS.

Stamp

Date

No.

Description

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POST DRAINAGE PARKING AREAS "4" AND "8"

MAIN CAMPUS PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project #

23310

Drawn By:

JWF

Checked By:

NAF

Scale:

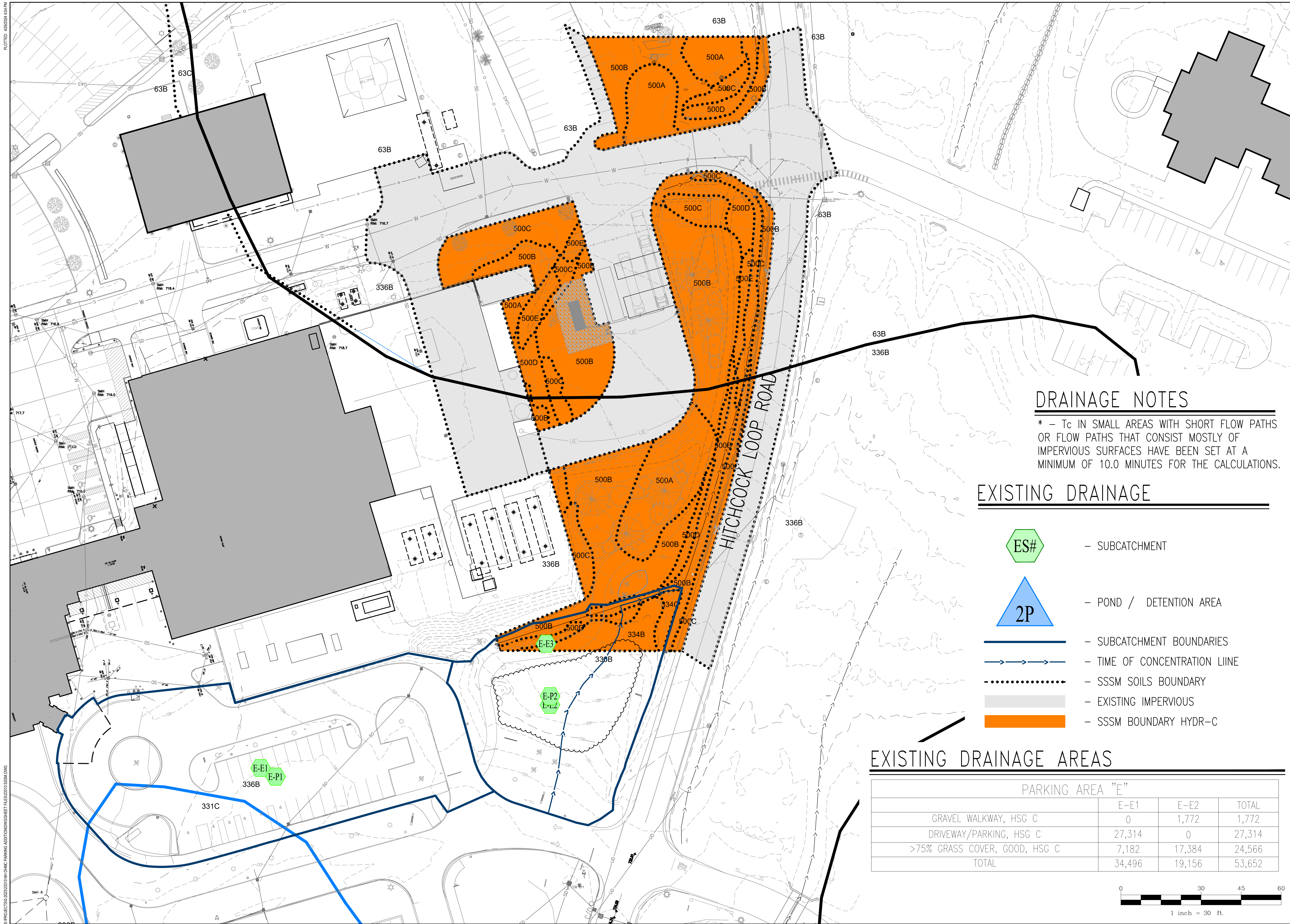
1" = 40'

Date:

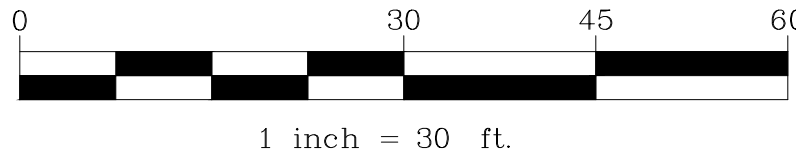
04/29/2024

Sheet Title

D1.2



PARKING AREA "E"			
	E-E1	E-E2	TOTAL
GRAVEL WALKWAY, HSG C	0	1,772	1,772
DRIVEWAY/PARKING, HSG C	27,314	0	27,314
>75% GRASS COVER, GOOD, HSG C	7,182	17,384	24,566
TOTAL	34,496	19,156	53,652



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DRAINAGE NOTES

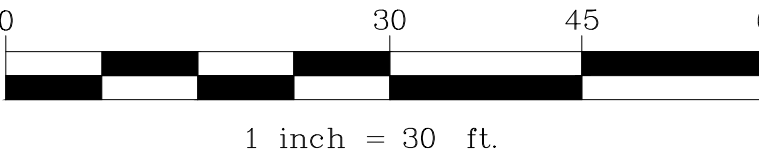
* - Tc IN SMALL AREAS WITH SHORT FLOW PATHS OR FLOW PATHS THAT CONSIST MOSTLY OF IMPERVIOUS SURFACES HAVE BEEN SET AT A MINIMUM OF 10.0 MINUTES FOR THE CALCULATIONS.

POST DRAINAGE

- ES# - SUBCATCHMENT
- 2P - POND / DETENTION AREA
- SUBCATCHMENT BOUNDARIES
- TIME OF CONCENTRATION LINE
- SSSM SOILS BOUNDARY
- EXISTING IMPERVIOUS
- SSSM BOUNDARY HYDR-C

EXISTING DRAINAGE AREAS

PARKING AREA "E"				
	E-P1	E-P2	E-E3	TOTAL
GRAVEL WALKWAY, HSG C	0	0	974	974
DRIVEWAY/PARKING, HSG C	25,377	10,600	0	35,977
>75% GRASS COVER, GOOD, HSG C	5,255	150	11,296	16,701
TOTAL	30,632	10,750	12,270	53,652



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POST DRAINAGE

PARKING AREA "E" AND CNG SITE

MAIN CAMPUS

PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project #

23310

Drawn By:

JWF

Checked By:

NAF

Scale:

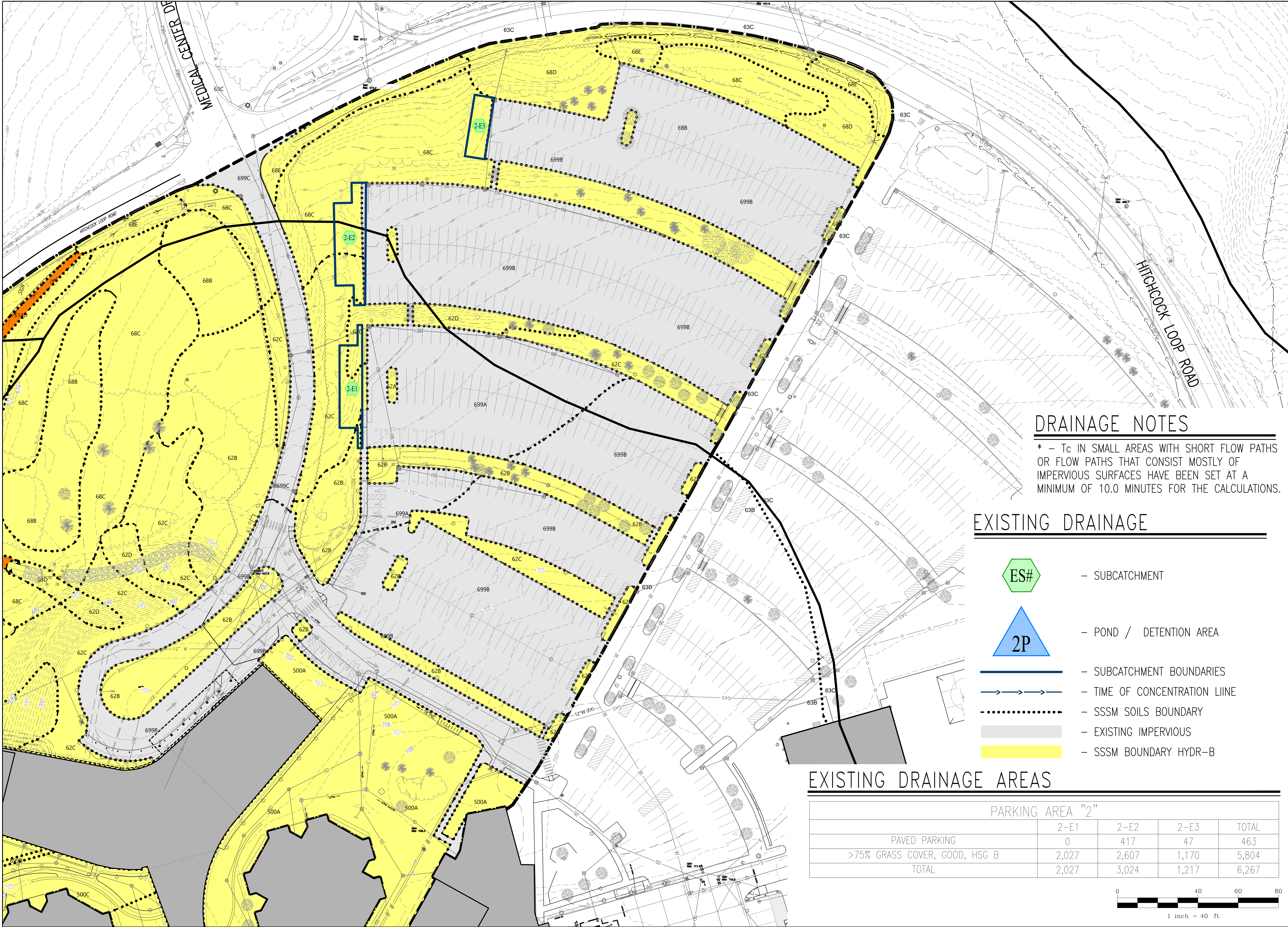
1" = 30'

Date:

04/29/2024

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Page 166 of 282



DRAINAGE NOTES

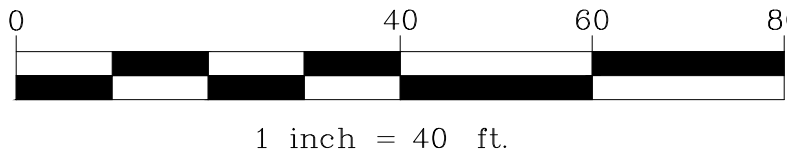
* - T_c IN SMALL AREAS WITH SHORT FLOW PATHS OR FLOW PATHS THAT CONSIST MOSTLY OF IMPERVIOUS SURFACES HAVE BEEN SET AT A MINIMUM OF 10.0 MINUTES FOR THE CALCULATIONS.

EXISTING DRAINAGE

- ES# - SUBCATCHMENT
- 2P - POND / DETENTION AREA
- SUBCATCHMENT BOUNDARIES
- TIME OF CONCENTRATION LIINE
- SSSM SOILS BOUNDARY
- EXISTING IMPERVIOUS
- SSSM BOUNDARY HYDR-B

EXISTING DRAINAGE AREAS

PARKING AREA "2"				
	2-E1	2-E2	2-E3	TOTAL
PAVED PARKING	0	417	47	463
>75% GRASS COVER, GOOD, HSG B	2,027	2,607	1,170	5,804
TOTAL	2,027	3,024	1,217	6,267



Stamp

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Description

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EXISTING DRAINAGE PARKING AREA "2"

MAIN CAMPUS PARKING EXPANSION

LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE

EV Project #

23310

Drawn By:

JWF

Checked By:

NAF

Scale:

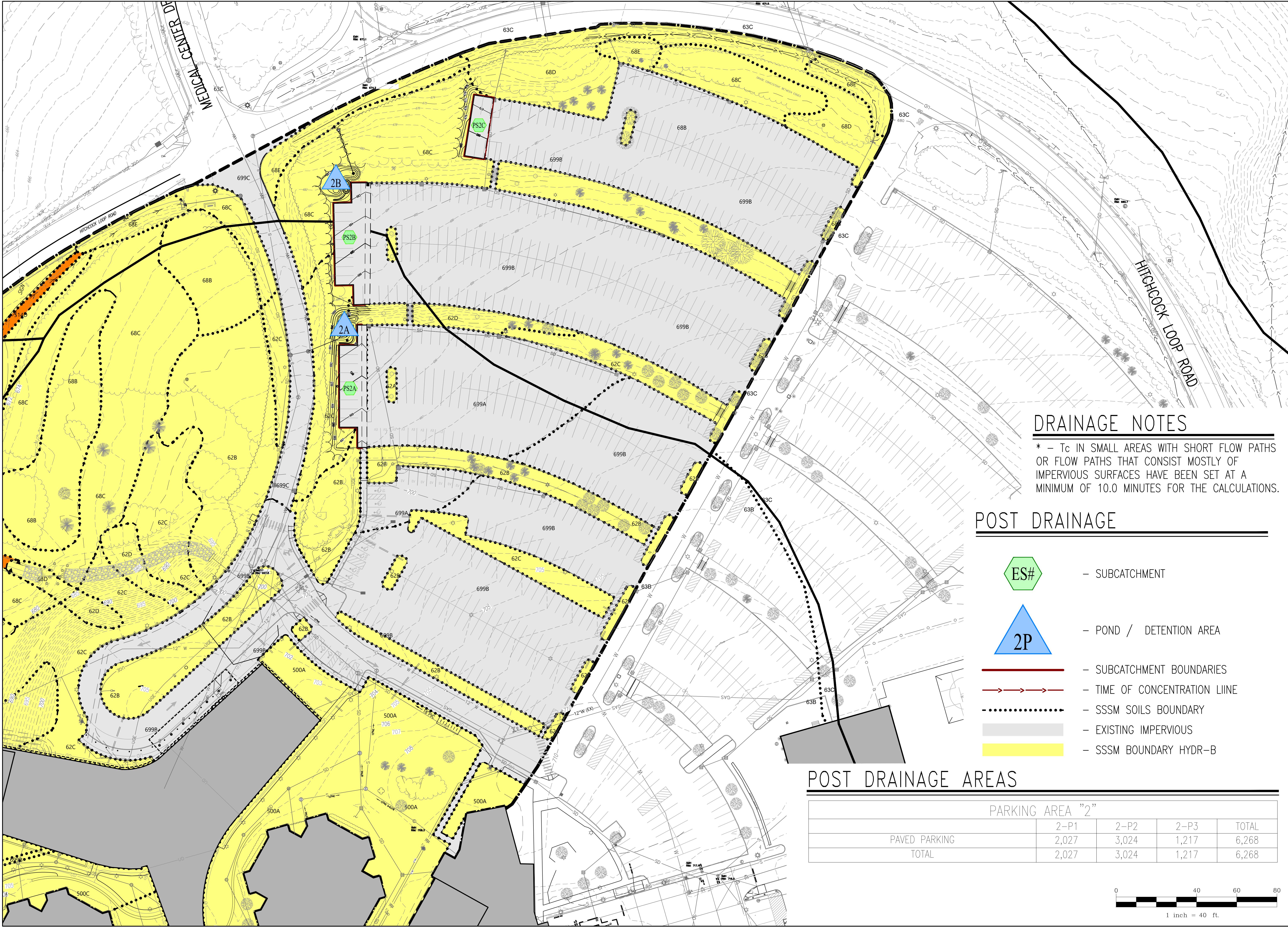
1" = 40'

Date:

04/29/2024

D3.1

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CITY OF LEBANON ~ PLANNING & DEVELOPMENT

PLANNING BOARD

June 10, 2024 Meeting

Staff Memorandum – PB2024-18-SPA

APPLICATION INFORMATION

Agenda Item:

3.B

Application ID:

PB2024-18-SPA

Application Type:

Amendment to site plan approved for a proposed restaurant with a drive through (Starbucks)

Property Location & Tax Map:

12 Centerra Parkway (Tax Map 10, Lots 11, Plot 100)

Property Owner/Applicant:

CP Centerra LLC

Zoning District:

Light Industrial (IND-L)

Future Land Use Map:

Mixed Use

Property Size:

+/-10.74 (per City Assessor's records)

Overlay Districts:

- Wetlands Conservation District

Staff Attachments:

- January 23, 2022 Notice of Action for PB2022-45-SPR (4 pages)

LEGAL NOTICE

CP Centerra LLC, 12 Centerra Parkway (Tax Map 10, Lots 11, Plot 100), zoned IND-L: Pursuant to Section 9.1 of the Site Plan Review Regulations, applicant requests a modification to a previously approved site plan (PB2022-45-SPR) for a restaurant with a drive through together with associated site improvements. Applicant proposes changes to the site circulation, parking, landscaping, and utilities. PB2024-18-SPA

PLANS AND APPLICATION MATERIALS

- ▶ Application form (1 page)
- ▶ Letter from Jeffrey Goodrich, PE, of Pathways Consulting, LLC dated April 10, 2024 (project description; 3 pages)
- ▶ Certified Notification List (1 page)
- ▶ Fee Schedule (1 page)
- ▶ Plan set title, "Centerra Marketplace 'Starbucks'" prepared by Pathways Consulting, LLC, dated October 10, 2022, last revised April 4, 2024 (17 sheets)

COMPLETENESS REVIEW

In order to accept jurisdiction and commence review of the applicant's proposal, the Planning Board must first determine that the application is complete. See NH RSA 676:4, I(c)(1) and Section 4.7.C.2 ("Initial Completeness Determination") of the Site Plan Review Regulations. The Planning and Development Department has reviewed the application for compliance with the Site Plan Review Regulations and recommends that the Board find that the application is complete enough to accept jurisdiction and to commence review.

BACKGROUND

The subject property is a +/-10.74 acre parcel located in the office sector of the Centerra Planned Business Park, and is currently improved with a 55,825 sq. ft. multi-tenant commercial building and a 5,630 sq. ft. building containing a restaurant use. On January 23, 2022, the Planning Board granted site plan approval to construct a third building: a 2,273 sq. ft. restaurant (Starbucks) with a drive-through facility and associated site improvements. Construction is expected to commence imminently.

APPLICATION OVERVIEW

The applicant is requesting several modifications to the approved site plan as outlined in the attached letter from Jeffrey Goodrich of Pathways Consulting. Note that Mr. Goodrich's letter was prepared in anticipation that the changes could be approved administratively per Section 9.2 of the Site Plan Review Regulations. However, upon review, staff determined that the changes are significant enough to require Planning Board review under Section 9.1 of the Regulations, particularly given that the changes principally relate to site circulation which was the subject of extensive conversation during the public hearing for the original site plan application.

STAFF COMMENTS**PLANNING**

The applicant's request is a modification to an approved site plan pursuant to Section 9.1 of the Site Plan Review Regulations, as follows:

Section 9.1 – Modifications to an Approved Site Plan

Once a plan has received approval from the Board and prior to the issuance of a Certificate of Occupancy, no modification shall take place unless the modification of the plan has been approved by the Board, except as provided by Section 9.2 ("Minor Alternations to an Approved Site Plan") below. [...]

Modifications shall normally be treated by the Board as a new plan application, which will require notification of abutting property owners, a public hearing, staff review, and formal Board action. [...]

Note that Section 9.2 allows "minor alterations" to an approved plan that do not constitute a "material change" (Section 9.2.A also requires that the alterations are "necessitated by unforeseen or unanticipated circumstances"). Section 9.2.B.1 provides that a change shall be deemed a minor alteration only if, "it is relatively minor, in light of the overall scope of the proposal."

The proposed changes are significant enough that staff was unable to conclude the Section 9.2.B.1 criteria has been met to allow review as a "minor alteration". Consequently, the applicant was advised to apply to the Planning Board for an amendment to the site plan per Section 9.1.

CITY ASSESSOR

No comment provided.

BUILDING INSPECTOR

No comment provided.

ENGINEERING/PUBLIC WORKS

No comment at this time.

FIRE DEPARTMENT

The Lebanon Fire Department has reviewed this application and has no fire code related concerns regarding the proposal.

POLICE DEPARTMENT

No comment provided.

OTHER COMMENTS

The Lebanon Tree Advisory Board has reviewed the application and provides the following comments:

1. "We would suggest a substitution for the Hemlock (*Tsuga canadensis*) for the dumpster screening due to the large mature size of hemlock and the increasing presence of the hemlock wooly adelgid pest that could require regular chemical treatments. Red cedar (*Juniperus virginiana*) would be a potential substitute."
2. "Lebanon is looking to increase species diversity of trees and avoid overplanting of a certain genus or species that can result in severe losses, such as Dutch Elm Disease. Given the localized prevalence of the Acer genus (genus), the developer is encouraged to replace Acer 'Autumn Glory' with another genus or mix of species."
3. "There is a tree in one of the parking islands that appears to have very little planting area for potential soil rooting. The developer should be reminded that trees that die are required to be kept in perpetuity per the approved site plan."

STAFF RECOMMENDATIONS

If the Planning Board moves to approve this request, then based on the information reviewed by City staff, the Planning and Development Department recommends that the Planning Board approve the application with the conditions noted below:

1. This approval shall automatically expire and be considered void upon failure to meet any of the conditions of approval set forth herein within the timeframes specified.
2. The applicant shall satisfy and comply with the Planning Board Notice of Action for PB2022-45-SPR, dated January 23, 2023, and all conditions of approval thereof except as may be superseded by the conditions herein.

Attachments

cc: Kerry McCormack, Crosspoint Associates, Inc.
Jeff Goodrich, PC, Pathways Consulting LLC
File

CITY OF LEBANON APPLICATION FOR

SPECIAL EXCEPTION	☐	☒	SITE PLAN REVIEW
VARIANCE	☐	☐	SUBDIVISION
MOTION FOR REHEARING	☐	☐	LOT LINE ADJUSTMENT
APPEAL OF AN ADMIN. DECISION	☐	☐	OTHER ()

PROPERTY OWNER (APPLICANT):

NAME: CP Centerra LLC TEL.#: 781-913-8680

MAILING ADDRESS: Crosspoint Associates, Inc., 188 Needham Street, Suite 255, Newton, MA, 02646

E-MAIL ADDRESS: kmccormack@crosspointassociates.com

CO-APPLICANT, AGENT, OR LESSEE:

NAME: Pathways Consulting, LLC TEL.#: (603) 448-2200

MAILING ADDRESS: 240 Mechanic Street, Suite 100, Lebanon, New Hampshire 03766

E-MAIL ADDRESS: jeff.goodrich@pathwaysconsult.com

PROJECT LOCATION:

TAX MAP #: 10 LOT#: 11 PLOT #: 100 ZONE: Light Industrial (IND-L)

STREET ADDRESS OF PROJECT: 12 Centerra Parkway

IS THIS PROPERTY LOCATED IN THE: **WETLANDS** ☐ YES ☒ NO **HISTORIC DISTRICT** ☐ YES ☒ NO

FLOOD PLAIN ☐ YES ☒ NO

SCOPE OF PROJECT:

The project consists of the construction of a Starbucks at Centerra Marketplace with a drive-thru and associated site improvements.

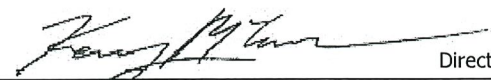
TYPE OF OCCUPANCY:

EXISTING ☐ VACANT ☐ ONE FAMILY ☐ TWO FAMILY ☐ MULTI-FAMILY ☒ COMMERCIAL ☐ INDUSTRIAL

PROPOSED ☐ VACANT ☐ ONE FAMILY ☐ TWO FAMILY ☐ MULTI-FAMILY ☒ COMMERCIAL ☐ INDUSTRIAL

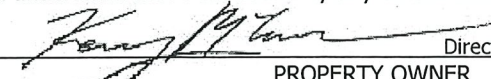
IF USE IS **COMMERCIAL** OR **INDUSTRIAL**, PLEASE NOTE **SPECIFIC** USE: Restaurant with Drive-Thru

SIGNATURE BLOCK:

 Director of Development, Crosspoint Associates DATE: 4/10/2024

PROPERTY OWNER

NOTE: IF, AS OWNER, YOU WISH TO DESIGNATE AN AGENT TO ACT ON YOUR BEHALF, PLEASE READ THE FOLLOWING AND SIGN BELOW: I hereby designate the person listed above as my agent for the purpose of procuring the necessary local permits for the proposed work as described herein. Representations made by my agent may be accepted as though made by me personally, and I understand that I am bound by any official decision made on the basis of such representation.

 Director of Development, Crosspoint Associates DATE: 4/10/2024

PROPERTY OWNER

DATE RECEIVED	FILE # (MAP/LOT)	APPLICATION #	
4-10-2024	10-11-100	PB2024-	18-SPA

PATHWAYS CONSULTING, LLC

Planning • Civil & Environmental Engineering • Surveying • Construction Assistance
240 Mechanic Street • Suite 100
Lebanon, New Hampshire 03766
(603) 448-2200 • Fax: (603) 448-1221

April 10, 2024

Tim Corwin, AICP, Senior Planner
City of Lebanon
51 North Park Street
Lebanon, New Hampshire 03766

RE: APPLICATION FOR STARBUCKS SITE PLAN REVIEW AMENDMENT, 12
CENTERRA PARKWAY, LEBANON, NEW HAMPSHIRE (Project No. 13005)

Dear Tim:

On behalf of CP Centerra, LLC, we are submitting amended site plans and application materials for Starbucks as referenced following the January 23, 2023 Notice of Action (NOA) for PB2022-45-SPR in order to seek Planning Board Approval if needed. Following our interaction with staff, we have modified application materials in accordance with Section 3.1 of the Site Plan Review (SPR) Regulations including the following based on the assumption that all other elements of the project pursuant to the NOA are unchanged:

1. This cover letter.
2. Application for SPR.
3. Waiver Requests (same as previously submitted and approved).
4. An Abutters List.
5. A Technical Checklist (same as previously submitted and approved).
6. Revised site plans including delivery of one full-size plan set.

As we have discussed with you and Brian Vincent, our client is proceeding with the Building Permit application with the limited revisions that were conditioned in the NOA in order to stay ahead of the construction season. If the Planning Board review is required and the Board agrees with the limited changes included in this request for an amendment, the amended plans will replace existing plans. Given our client's concern about losing time to begin construction of this project, we appreciate both staff and Planning Board input.

With staff guidance, we understand that site plan amendments may be approved administratively as a minor alteration to the approved plan set based on Section 9.2.A of the SPR Regulations. Additionally, administrative approval is possible if the proposed alterations are either "necessitated by unforeseen or unanticipated circumstances," or the alterations constitute a "deviation from the plan which was constructed or installed as a result of a good-faith error, rather than negligence." Even though the access and parking modifications we propose are very small, we have compiled this request for Planning Board review given the subjective nature of "necessitated by unforeseen or unanticipated circumstances." In the context of Section 9.2.A of the SPR Regulations, we offer the following with "bubbled" plan changes as requested:

Cover Sheet – We modified the cover sheet to reflect the conditions of the current NOA to eliminate reference to Orange Theory, show building heights, and a revision date.

Sheet 1 – This plan shows nominal changes to parking and access as a result of post-permitting construction and design review, which was unforeseen and unanticipated. We would like to note that we believe these changes are in keeping with staff recommendations at the time of the Planning Board review for the NOA.

Sheet 2 – Following the NOA, a great deal of effort related to utility exploration revealed that the existing electrical service is in a different location, which is unforeseen and unanticipated.

Sheet 3 – Modifications to this plan led us to include a typical note for the removal and salvaging of existing lights was unforeseen and unanticipated in the preparation of plans for the NOA.

Sheet 4 – This sheet reflects the same context as Sheet 1.

Sheet 5 – Like Sheet 2, revisions on this sheet show new water service and electrical services based on unforeseen and unanticipated existing utility conditions. We have also added erosion control measures pursuant to NOA conditions.

Sheet 6 – This sheet reflects nominal landscape modifications in the same context as Sheet 1.

Sheet 7 – Like Sheet 6, this sheet reflects nominal landscape modifications in the same context as Sheet 1.

Sheet 8 – Our client has tasked the project architect to provide the dumpster enclosure detail during the Building Permit process, which was both unforeseen and unanticipated when we prepared plans in support of the NOA.

We look forward to further discussing this project with staff review and presenting the amended plan to the Planning Board on May 13 as needed. Please do not hesitate to contact us if you have any questions.

Sincerely,

PATHWAYS CONSULTING, LLC



Jeffrey S. Goodrich, P.E.
President

JSG:meb

Enclosures

cc: Kerry McCormack w/enclosures

CERTIFIED NOTIFICATION LIST

THE CITY OF LEBANON IS REQUIRED UNDER NH RSA 672:3 TO NOTIFY THE FOLLOWING PERSONS OF PUBLIC HEARINGS BEFORE THE PLANNING BOARD: ALL ABUTTERS; THE APPLICANT; PROPERTY OWNER; HOLDER OF CONSERVATION, PRESERVATION, OR AGRICULTURAL PRESERVATION RESTRICTION(S); AND EVERY ENGINEER, ARCHITECT, LAND SURVEYOR, OR SOIL SCIENTIST WHOSE PROFESSIONAL SEAL APPEARS ON ANY PLAT SUBMITTED TO THE BOARD.

PLEASE PROVIDE NAMES & MAILING ADDRESSES FOR ALL PERSONS LISTED ABOVE.

MAP & LOT NUMBER: 10-11-100	MAP & LOT NUMBER:
PROPERTY OWNER: Centerra Marketplace, LLC 188 Needham St., Suite 255 Newton MA 02464	ENGINEER AND AGENT: Pathways Consulting LLC 240 Mechanic Street, Suite 100 Lebanon NH 03766
MAP & LOT NUMBER: 10-11-1500	MAP & LOT NUMBER: 10-11-700
ABUTTER/OTHER: Dartmouth College Trustees PO Box 5188 Hanover NH 03755	ABUTTER/OTHER: Woodrow Fitness LLC 19 Morgan Drive Lebanon, NH 03766
MAP & LOT NUMBER: 10-11-1000	MAP & LOT NUMBER: 10-11-1302
ABUTTER/OTHER: TSS Morgan Drive LLC 19 Morgan Drive Lebanon NH 03766	ABUTTER/OTHER: MHH Lebanon Holdings LLC 50 South Steele Street, #200 Denver, CO 80206
MAP & LOT NUMBER: 10-11-1400	MAP & LOT NUMBER: 10-11-1300
ABUTTER/OTHER: CPS Centerra LLC 188 Needham Street, Suite 255 Newton, MA 02464	ABUTTER/OTHER: Exchange at Centerra LLC PO Box 929 Hanover, NH 03755
MAP & LOT NUMBER: 10-11-400	MAP & LOT NUMBER: 10-11-300
ABUTTER/OTHER: State of New Hampshire 25 Capitol Street Concord, NH 03301	ABUTTER/OTHER: R1 Lebanon 2014 LLC PO Box 4519 White River Junction VT 05001
MAP & LOT NUMBER: _____	MAP & LOT NUMBER: _____
ABUTTER/OTHER:	ABUTTER/OTHER:

(9/17/04)

SITE PLAN REVIEW		
TOTAL DUE AT TIME OF FILING		\$
**Engineering Review fees will also be required. See note on page 2.		

SITE PLAN REVIEW AMENDMENT (WITH STRUCTURAL CHANGES)		
		TOTALS
FILING FEE	\$250.00	\$250.00
SQUARE FOOTAGE	\$75.00 per 1,000 sq. ft. (gross floor area)	
ADVERTISING FEE	\$100.00	\$100.00
NOTIFICATION FEE (see note below)	\$5.00 + Current USPS rate per certified notice (see below) X _____ notices	\$5.00 \$ _____ (abutter certified)
TOTAL DUE AT TIME OF FILING		\$
**Engineering Review fees may also be required. See note below.		

OTHER		
-SITE PLAN REVIEW AMENDMENT (WITH NO STRUCTURAL CHANGES) -EXTENSION REQUESTS -CONDITIONAL USE PERMITS		
		TOTALS
FILING FEE	\$250.00	\$250.00
ADVERTISING FEE	\$100.00	\$100.00
NOTIFICATION FEE (see note below)	\$5.00 + Current USPS rate per certified notice (see below) x 10 notices \$5.04	\$5.00 \$50.40 (abutter certified)
TOTAL DUE AT TIME OF FILING		\$ \$405.40
**Engineering Review fees may also be required. See note below.		

MINOR SITE PLAN REVIEW		
		TOTALS
FILING FEE	\$150.00	\$150.00
NOTIFICATION FEE (see note below)	Current USPS rate per certified notice (see below) X _____ notices	\$ _____ (abutter certified)
TOTAL DUE		\$

ENGINEERING REVIEW FEES:

After an application to the Planning Board is submitted and the filing fees identified above have been paid, the Planning & Development Department will determine the scope of required engineering review and will obtain an estimated cost from the reviewing engineer. A cost estimate of the review fees will usually be generated within two (2) – three (3) business days. Once conveyed to the applicant, the estimated review fees shall be paid by the applicant within five (5) business days, and an escrow account shall be established by the Planning & Development Department. No plans will be reviewed unless and until the review fee estimate is paid, if required.

Please note that escrow fees are only an estimate of what services will cost and actual costs of review may be less or more than the amount initially estimated. Any unused portion of the escrow will be returned to the applicant at the end of the approval process if such a surplus remains. Additionally, in the event the escrow amount does not cover the full cost of services the Applicant shall pay any remaining costs as a condition of approval. See also Section 4.7 of the Site Plan Review Regulations and Section 7.7 of the Subdivision Regulations.

NOTIFICATION FEE: CURRENT FEE as of January 2024 is \$5.04 per certified notice

THE CERTIFIED NOTIFICATION FEE IN ALL SECTIONS ABOVE INCLUDES THE FOLLOWING: ALL ABUTTERS, THE APPLICANT, PROPERTY OWNER, HOLDER OF CONSERVATION, PRESERVATION, OR AGRICULTURAL PRESERVATION RESTRICTION(S); AND EVERY ENGINEER, ARCHITECT, LAND SURVEYOR OR SOIL SCIENTIST WHOSE PROFESSIONAL SEAL APPEARS ON ANY PLAT SUBMITTED TO THE BOARD AND ANY OTHER PERSONS REQUIRED BY RSA 676:4, I(d).

SITE PLAN FOR CENTERRA MARKETPLACE "STARBUCKS"

CENTERRA PARKWAY - CITY OF LEBANON GRAFTON COUNTY - NEW HAMPSHIRE OCTOBER 10, 2022

SITE INFORMATION

TAX MAP & LOT NUMBER: MAP 10 LOT 11-100
ZONING DISTRICT: INDUSTRIAL LIGHT (IND-L)
AREA OF LOT: 10.74 ACRES (467,834± SQ. FT.)
EXISTING USE:

SNAX: RESTAURANT
COOP: RETAIL
NH LIQUOR STORE: RETAIL
VACANT:
DHMC PHARMACY: RETAIL

PROPOSED USE: STARBUCKS: RESTAURANT

GROSS AREA OF BUILDINGS: EXISTING ADDITIONAL TOTAL
(COOP BUILDING: 53,825 SQ. FT.) STARBUCKS: 2,273 SQ. FT. 61,728 SQ. FT.
(SNAX BUILDING: 5,630 SQ. FT.)

EXISTING PARKING: 338 SPACES (WITH ROOM FOR 39 MORE)

PARKING REQUIRED: SNAX: RESTAURANT (221 SEATS) (0.33 SPACE/SEAT): 72.93
COOP: RETAIL (37,894 SF) (1 SPACE/200 SF): 189.47
NH LIQUOR STORE: RETAIL (6,583 SF) (1 SPACE/200 SF): 32.92
VACANT SPACE: PERSONAL SERVICE (4,162 SF) (1 SPACE/250 SF): 16.65
DHMC PHARMACY: RETAIL (5,799 SF) (1 SPACE/200 SF): 29.00
STARBUCKS: RESTAURANT (52 SEATS) (0.33 SPACE/SEAT): 17.16
TOTAL PARKING REQUIRED: 358.12 SPACES

PARKING PROVIDED: 304 SPACES (SEE PARKING ANALYSIS)
ZONING ORDINANCE 602.7.A REQUIRES 358.12 SPACES
ZONING ORDINANCE 602.7.B REQUIRES 126 SPACES
ZONING ORDINANCE 607.2 REQUIRES 250.68 SPACES
NOTE: A CONDITIONAL USE PERMIT IS REQUESTED TO MODIFY REQUIRED PARKING.

BICYCLE SPACES PROVIDED: 7

NUMBER OF STORIES: 1 STORY (COOP, SNAX, NH LIQUOR STORE, VACANT SPACE,
DHMC PHARMACY, & STARBUCKS)

LOADING SPACES: AS SHOWN

BUILDING HEIGHTS:	REQUIRED	EXISTING COOP	EXISTING SNAX	PROPOSED STARBUCKS
	55'	39'-8"	27'-4"	25'-0"

BUILDING SETBACKS:	REQUIRED	EXISTING	PROPOSED STARBUCKS
FRONT:	40'	109.1'	50.2'
SIDE:	20'	0'	NA
REAR:	20'	19.3'	313.7±'

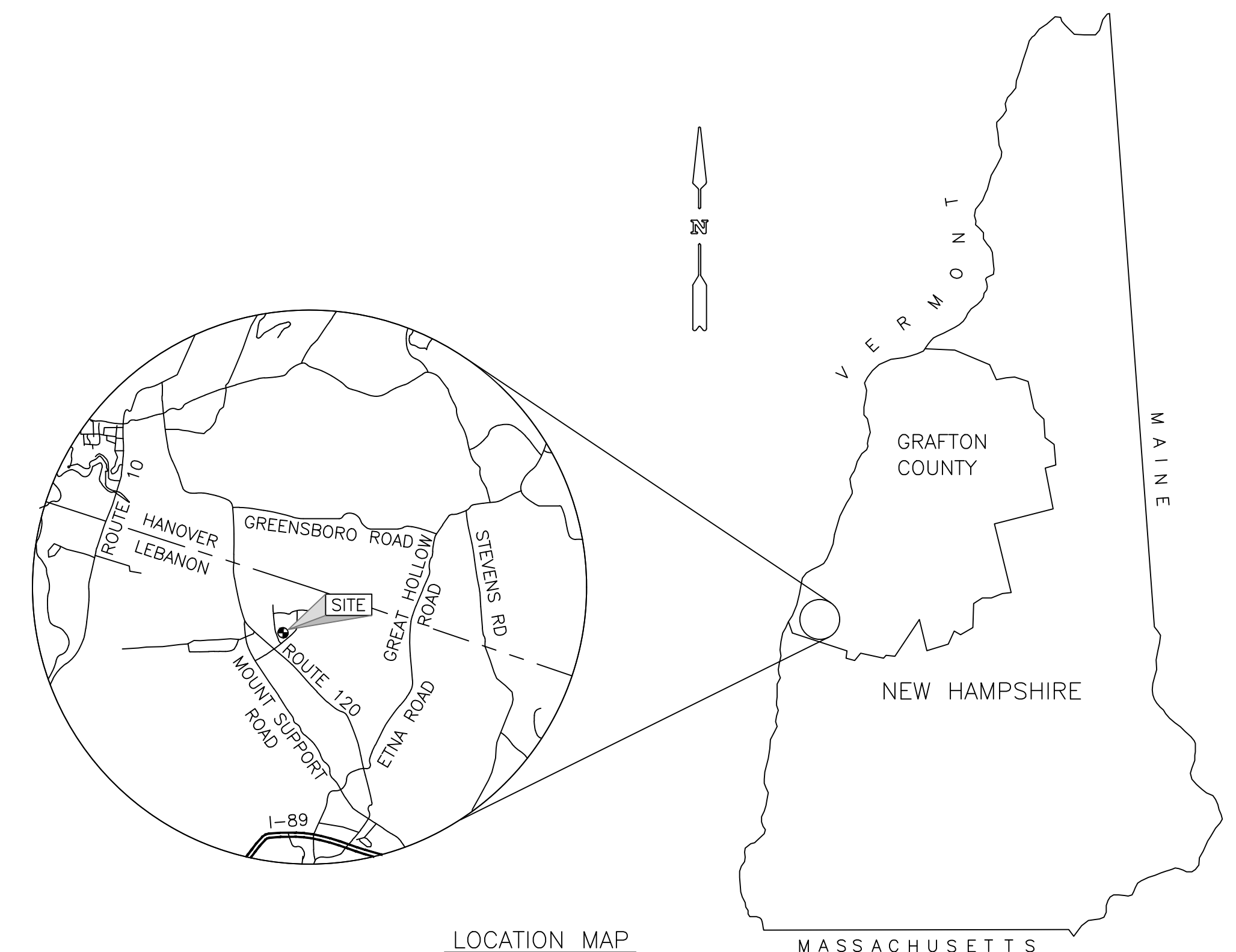
LOT COVERAGE (BUILDING):	ALLOWED	EXISTING	PROPOSED
	30%	59,455 SQ. FT. (12.7%)	61,728 SQ. FT. (13.2%)

IMPERVIOUS AREA:	EXISTING	PROPOSED
	261,960± SQ. FT. (56.0%)	263,680± SQ. FT. (56.4%)

THE SITE IS NOT WITHIN THE WETLANDS CONSERVATION DISTRICT, FLOOD PLAIN DISTRICT,
AND THE SHORELAND WATER QUALITY PROTECTION JURISDICTION.

TABLE OF CONTENTS

		COVER, INDEX OF SHEETS & LOCATION MAP
SHEET	1 OF 16	OVERALL SITE PLAN
SHEET	2 OF 16	EXISTING CONDITIONS
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SHEET	4 OF 16	LAYOUT PLAN
SHEET	5 OF 16	GRADING, DRAINAGE & UTILITY PLAN
SHEET	6 OF 16	LANDSCAPE PLAN
SHEET	7 OF 16	PERIMETER LANDSCAPING & PARKING LOT SHADING
SHEET	8 OF 16	SITE DETAILS
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SHEET	13 OF 16	EROSION CONTROL NOTES
SHEET	14 OF 16	LIGHTING PLAN
SHEET	15 OF 16	FASCADE ELEVATIONS
SHEET	16 OF 16	FASCADE ELEVATIONS



LOCATION MAP

REVISED: 04/04/24 SITE PLAN REVIEW RESUBMISSION

REVISED 11/28/22 STAFF REVIEW COMMENTS

ARCHITECTS

HFA

3 HAYWARD STREET, SUITE E-1
FRANKLIN, MASSACHUETTS 02038

CIVIL ENGINEER

PATHWAYS CONSULTING, LLC

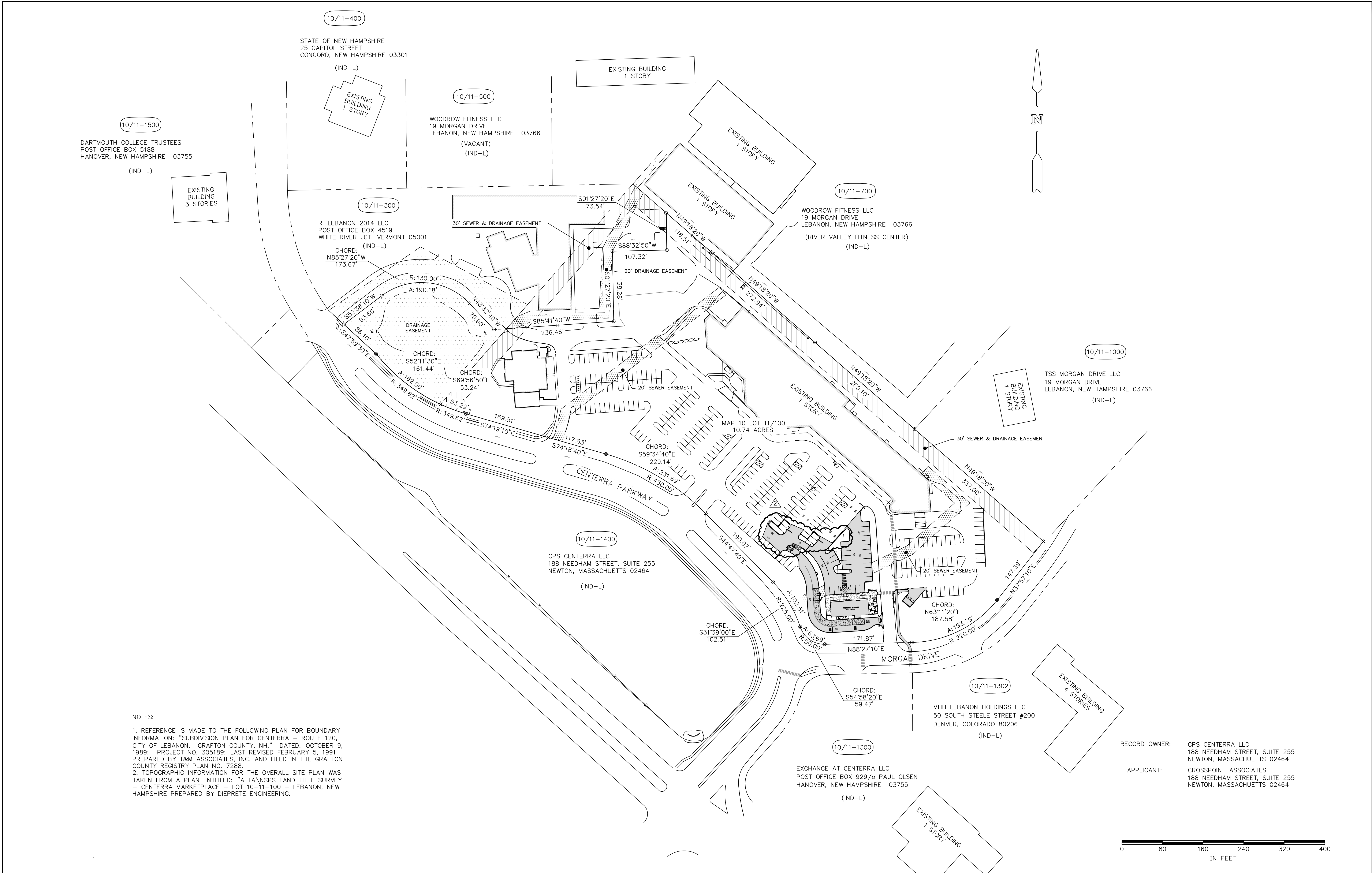
240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

RECORD OWNER:

CENTERRA MARKETPLACE, INC.
C/O CROSSPOINT ASSOCIATES
188 NEEDHAM STREET, SUITE 255
NEWTON MASSACHUSETTS 02464

APPLICANT:

CROSSPOINT ASSOCIATES
188 NEEDHAM STREET, SUITE 255
NEWTON MASSACHUSETTS 02464



NOTES:

1. REFERENCE IS MADE TO THE FOLLOWING PLAN FOR BOUNDARY INFORMATION: "SUBDIVISION PLAN FOR CENTERRA - ROUTE 120, CITY OF LEBANON, GRAFTON COUNTY, NH." DATED: OCTOBER 9, 1989; PROJECT NO. 305189; LAST REVISED FEBRUARY 5, 1991 PREPARED BY T&M ASSOCIATES, INC. AND FILED IN THE GRAFTON COUNTY REGISTRY PLAN NO. 7288.

2. TOPOGRAPHIC INFORMATION FOR THE OVERALL SITE PLAN WAS TAKEN FROM A PLAN ENTITLED: "ALTA INSPECTION LAND TITLE SURVEY CENTERRA MARKETPLACE - LOT 10-11-100 - LEBANON, NEW HAMPSHIRE PREPARED BY DIEPRETE ENGINEERING.

2	04/04/24	SITE PLAN RESUBMISSION			
1	11/28/22	STAFF REVIEW COMMENTS	PAB	PAB	JSG
REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY

OVERALL SITE PLAN FOR

CENTERRA MARKETPLACE - STARBUCKS

CENTERRA PARKWAY - LEBANON, NEW HAMPSHIRE

PATHWAYS CONSULTING, LLC

240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

SCALE: 1"=80'

DESIGNED BY: ANS

DRAWN BY: PAB

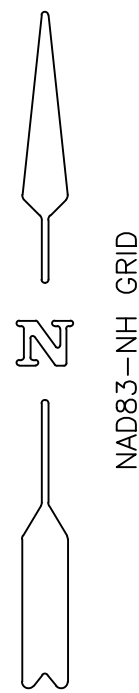
CHECKED BY: JSG

DATE: 02/07/24

PROJ. NO. 13005

1

SHEET 1 OF 16



CB #19
RIM: 790.6±
INV. 786.25±

NEW: 713 SQ. FT.
OLD: 649 SQ. FT.

NEW: 610 SQ. FT.
OLD: 338 SQ. FT.

CB #14
RIM: 799.1±
N INV: 795.1±
E INV: 794.1±
S INV: 794.0±

CB #15
RIM: 795.4±
N INV: 790.85±
S INV: 790.7±

CB #18
RIM: 791.7±
NW INV: 785.5
S INV: 785.2

CB #17
RIM: 790.2±
NW INV: 783.35±
E INV: 783.4±
W INV: 783.2

CB #20
RIM: 783.5±
15" E INV: 778.6±

CB RIM: 780.4±
INV: 774.2±

CB RIM: 780.6±

CB #16
RIM: 792.1±
W INV: 785.25±
N INV: 785.4±

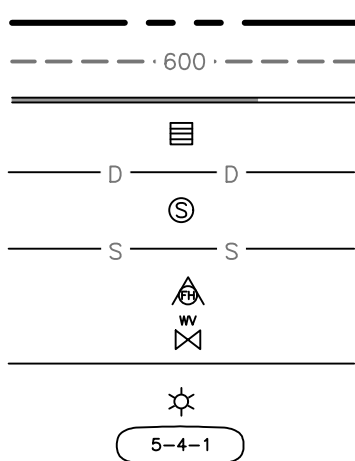
CB RIM: 793.6±

CB RIM: 793.6±

LEGEND—EXISTING:

IRON PIPE/CAPPED REBAR
RIGHT-OF-WAY LINE
EXISTING CONTOUR
CURB
CATCH BASIN
STORMWATER PIPE
SANITARY MANHOLE
SANITARY PIPE
FIRE HYDRANT
WATER GATE VALVE
WATER LINE
LIGHT POLE
TAX MAP—LOT NUMBER

● AS NOTED



GENERAL SURVEY NOTES:

1. HORIZONTAL DATUM: NH STATE PLANE GRID NAD83 (SURVEY FEET) FROM GPS OBSERVATION.
2. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAV88) FROM GPS OBSERVATION.
3. UNDERGROUND UTILITIES ARE APPROXIMATE AND NOT WARRANTED TO BE EXACT OR COMPLETE AND ARE TO BE FIELD VERIFIED PRIOR TO ANY EXCAVATION OR SITE MODIFICATIONS.
4. PATHWAYS CONSULTING, LLC COLLECTED DATA FOR THIS PLAN IN AUGUST, 2022.

RECORD OWNER:
MAP 10, LOT 11—100
DEED REFERENCE:

CP CENTERRA LLC
188 NEEDHAM ST, STE 255
NEWTON MA 02464
BOOK 4253, PAGE 78



EXISTING CONDITIONS PLAN FOR
CENTERRA MARKETPLACE - STARBUCKS
CENTERRA PARKWAY — CITY OF LEBANON — GRAFTON COUNTY — NH

PATHWAYS CONSULTING, LLC

240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

SCALE: A.S.

DESIGNED BY: PAB

DRAWN BY: PAB

CHECKED BY: JSG

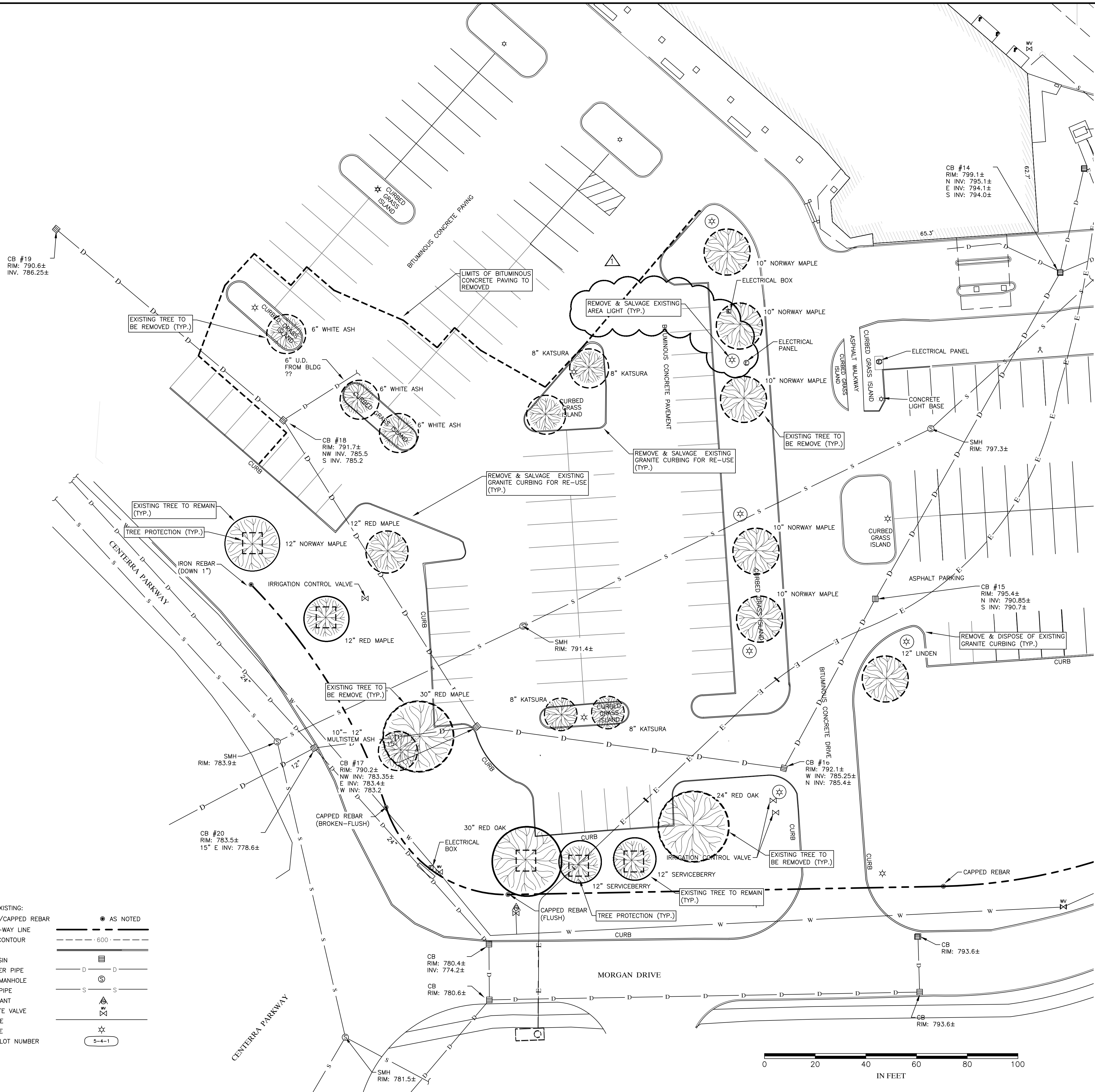
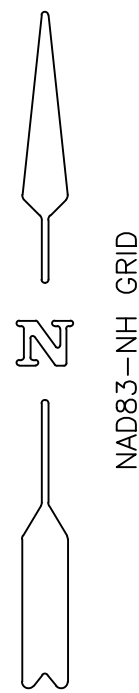
DATE: 10/10/22

PROJ. NO. 13005

2

SHEET 2 OF 16

REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY
2	04/04/24	SITE PLAN REVIEW RESUBMISSION	PAB	PAB	JSG
1	11/28/22	STAFF REVIEW COMMENTS	PAB	PAB	JSG



- GENERAL SURVEY NOTES:
1. HORIZONTAL DATUM: NH STATE PLANE GRID NAD83 (SURVEY FEET) FROM GPS OBSERVATION.
 2. VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAV88) FROM GPS OBSERVATION.
 3. UNDERGROUND UTILITIES ARE APPROXIMATE AND NOT WARRANTED TO BE EXACT OR COMPLETE AND ARE TO BE FIELD VERIFIED PRIOR TO ANY EXCAVATION OR SITE MODIFICATIONS.
 4. PATHWAYS CONSULTING, LLC COLLECTED DATA FOR THIS PLAN IN AUGUST, 2022.

RECORD OWNER: CP CENTERRA LLC
MAP 10, LOT 11-100
188 NEEDHAM ST, STE 255
NEWTON MA 02464
DEED REFERENCE: BOOK 4253, PAGE 78

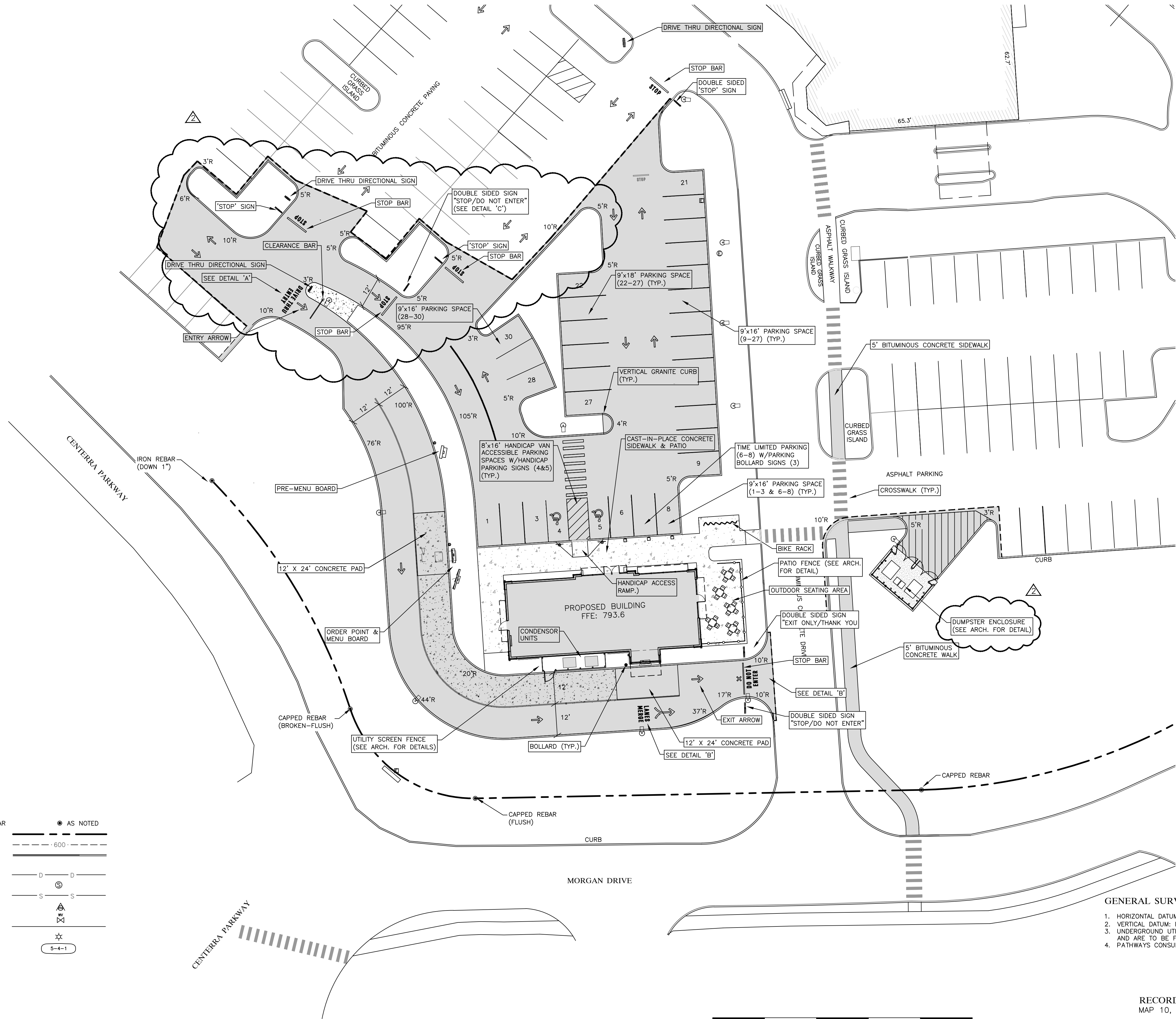
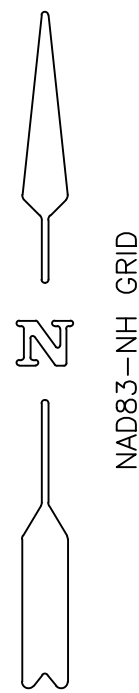
DEMOLITION PLAN FOR
CENTERRA MARKETPLACE - STARBUCKS
CENTERRA PARKWAY - CITY OF LEBANON - GRAFTON COUNTY - NH

PATHWAYS CONSULTING, LLC
240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

SCALE: A.S.
DESIGNED BY: PAB
DRAWN BY: PAB
CHECKED BY: JSG
DATE: 10/10/22
PROJ. NO. 13005

SHEET 3 OF 16

1	04/04/24	SITE PLAN REVIEW RESUBMISSION	PAB	PAB	JSG
REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY



LEGEND-EXISTING:	
IRON PIPE/CAPPED REBAR	● AS NOTED
RIGHT-OF-WAY LINE	— 600' —
EXISTING CONTOUR	— 600' —
CURB	— 600' —
CATCH BASIN	D D
STORMWATER PIPE	⊙
SANITARY MANHOLE	S S
SANITARY PIPE	S S
FIRE HYDRANT	⚡
WATER GATE VALVE	⚡
WATER LINE	⚡
LIGHT POLE	⚡
TAX MAP-LOT NUMBER	5-4-1

- GENERAL SURVEY NOTES:
- HORIZONTAL DATUM: NH STATE PLANE GRID NAD83 (SURVEY FEET) FROM GPS OBSERVATION.
 - VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAV88) FROM GPS OBSERVATION.
 - UNDERGROUND UTILITIES ARE APPROXIMATE AND NOT WARRANTED TO BE EXACT OR COMPLETE AND ARE TO BE FIELD VERIFIED PRIOR TO ANY EXCAVATION OR SITE MODIFICATIONS.
 - PATHWAYS CONSULTING, LLC COLLECTED DATA FOR THIS PLAN IN AUGUST, 2022.

RECORD OWNER: CP CENTERRA LLC
MAP 10, LOT 11-100
188 NEEDHAM ST, STE 255
NEWTON MA 02464
BOOK 4253, PAGE 78

LAYOUT PLAN FOR
CENTERRA MARKETPLACE - STARBUCKS
CENTERRA PARKWAY - CITY OF LEBANON - GRAFTON COUNTY - NH

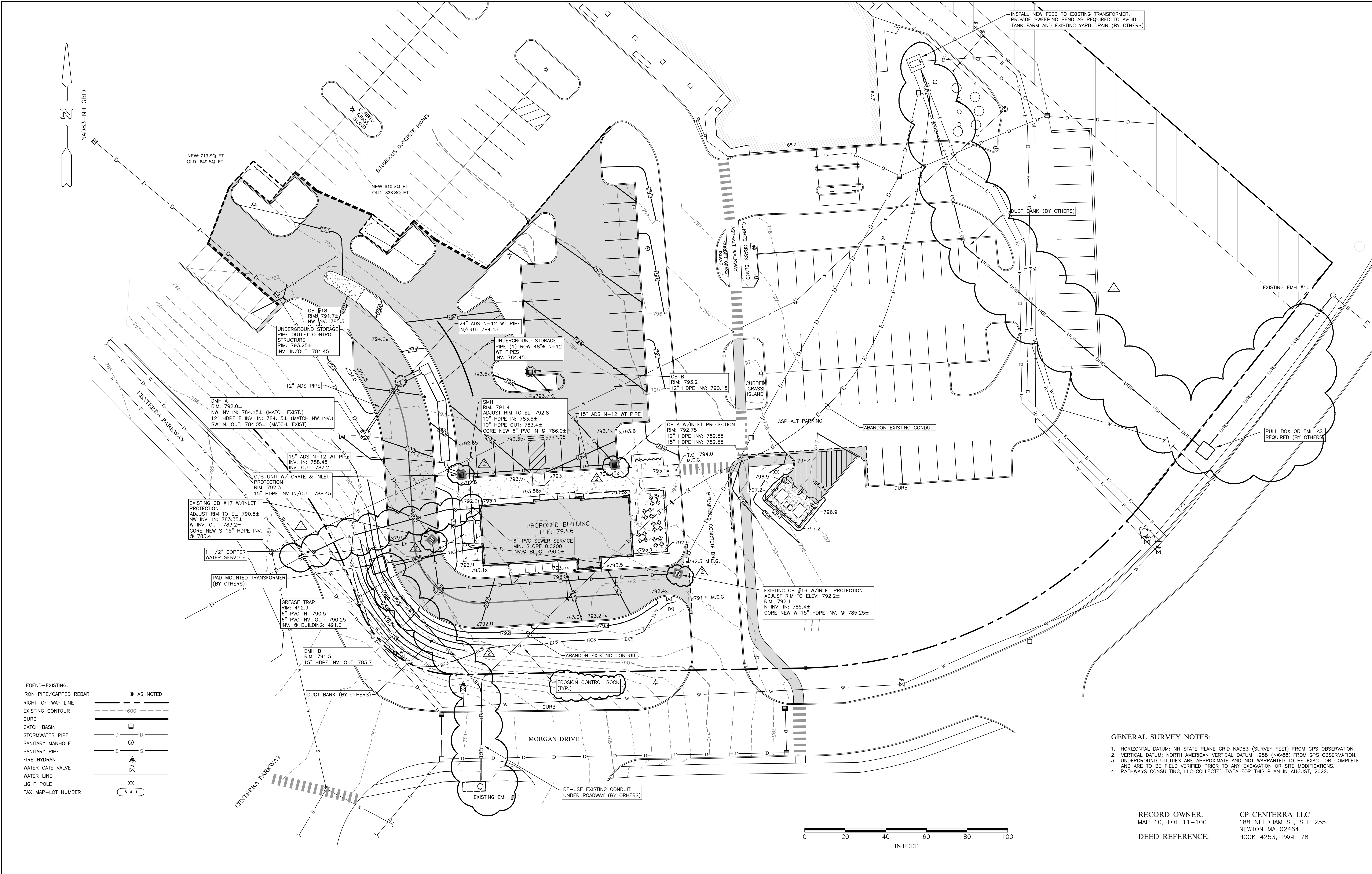
PATHWAYS CONSULTING, LLC
240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

SCALE: A.S.
DESIGNED BY: PAB
DRAWN BY: PAB
CHECKED BY: JSG
DATE: 10/10/22
PROJ. NO. 13005

4

SHEET 4 OF 16

REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY
2	04/04/24	SITE PLAN REVIEW RESUBMISSION	PAB	ANS	JSG
1	11/28/22	STAFF REVIEW COMMENTS	PAB	PAB	JSG



2	04/04/24	SITE PLAN REVIEW RESUBMISSION	PAB		
1	11/28/22	STAFF REVIEW COMMENTS	PAB	PAB	JSG
REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY

GRADING, DRAINAGE & UTILITY PLAN FFOR

CENTERRA MARKETPLACE - STARBUCKS

CENTERRA PARKWAY – CITY OF LEBANON – GRAFTON COUNTY – NH

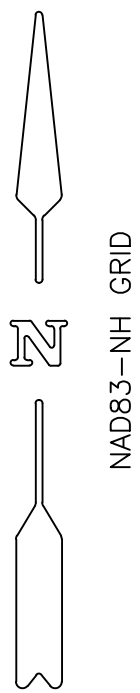
PATHWAYS CONSULTING, LLC

240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

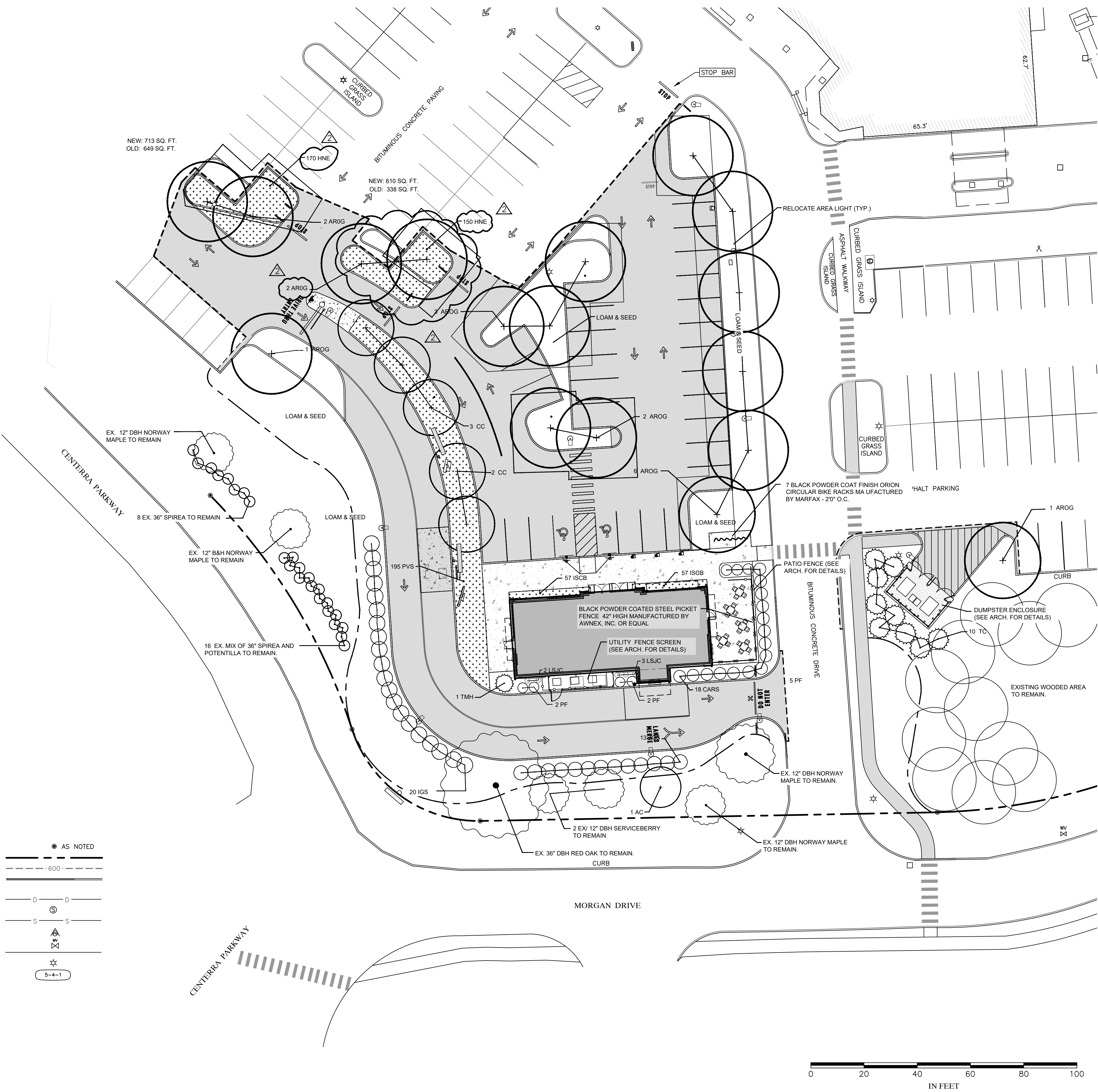
SCALE: A.S.
DESIGNED BY: PAB
DRAWN BY: PAB
CHECKED BY: JSG
DATE: 10/10/22
PROJ. NO. 13005

5

SHEET 5 OF 16



- LEGEND-EXISTING:
- IRON PIPE/CAPPED REBAR
 - RIGHT-OF-WAY LINE
 - EXISTING CONTOUR
 - CURB
 - CATCH BASIN
 - STORMWATER PIPE
 - SANITARY MANHOLE
 - SANITARY PIPE
 - FIRE HYDRANT
 - WATER GATE VALVE
 - WATER LINE
 - LIGHT POLE
 - TAX MAP-LOT NUMBER
- AS NOTED
- 600'
- D D
- S S
- 5-4-1



Plant List						
Key	Qty.	Botanical Name	Common Name	Size	Root	Comment
Trees						
AC	1	Ampelopsis canadensis	Scrubberry	2 1/2" - 3" cal.	B&B	specimen
AROG	16	Acer rubrum 'October Glory'	Red Maple	2 1/2" - 3" cal.	B&B	matched
CC	5	Carpinus edulis	American Hornbeam	6' - 10' high	B&B	multi-stem
TC	10	Tsuga canadensis	Canada Hemlock	6' - 8' high	B&B	unsheared
Shrubs						
CARS	18	Clethra alnifolia 'Ruby Spice'	Summersweet	24" - 36" high	B&B	heavy
IGS	33	Ilex glabra 'Shamrock'	Inkberry	24" - 30" high	B&B	5' - 0" OC
PF	4	Pieris floribunda	Mountain Andromeda	24" - 30" high	B&B	5' - 0" OC
TMH	1	Taxus media 'Hicksii'	Upright Yew	4' - 5' high	B&B	
Perennials, Grasses, and Vines						
HNE	320	Hemerocallis 'Night Embers'	Daylily	#2	Cont.	24" O.C.
ISCB	114	Iris sibirica 'Cassini's Brother'	Siberian Iris	#2	Cont.	19" O.C.
LSJC	5	Lonicera sempervirens 'John Clayton'	Trumpet Honeysuckle	#2	Cont.	
PVS	195	Panicum virgatum 'Shenandoah'	Switch Grass	#3	Cont.	30" O.C.

REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY
2	04/04/24	SITE PLAN REVIEW RESUBMISSION	PAB	JSG	JSG
1	11/28/22	STAFF REVIEW COMMENTS	PAB	PAB	JSG

LANDSCAPING PLAN FOR

CENTERRA MARKETPLACE - STARBUCKS

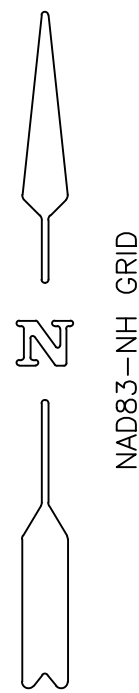
CENTERRA PARKWAY - CITY OF LEBANON - GRAFTON COUNTY - NH

PATHWAYS CONSULTING, LLC

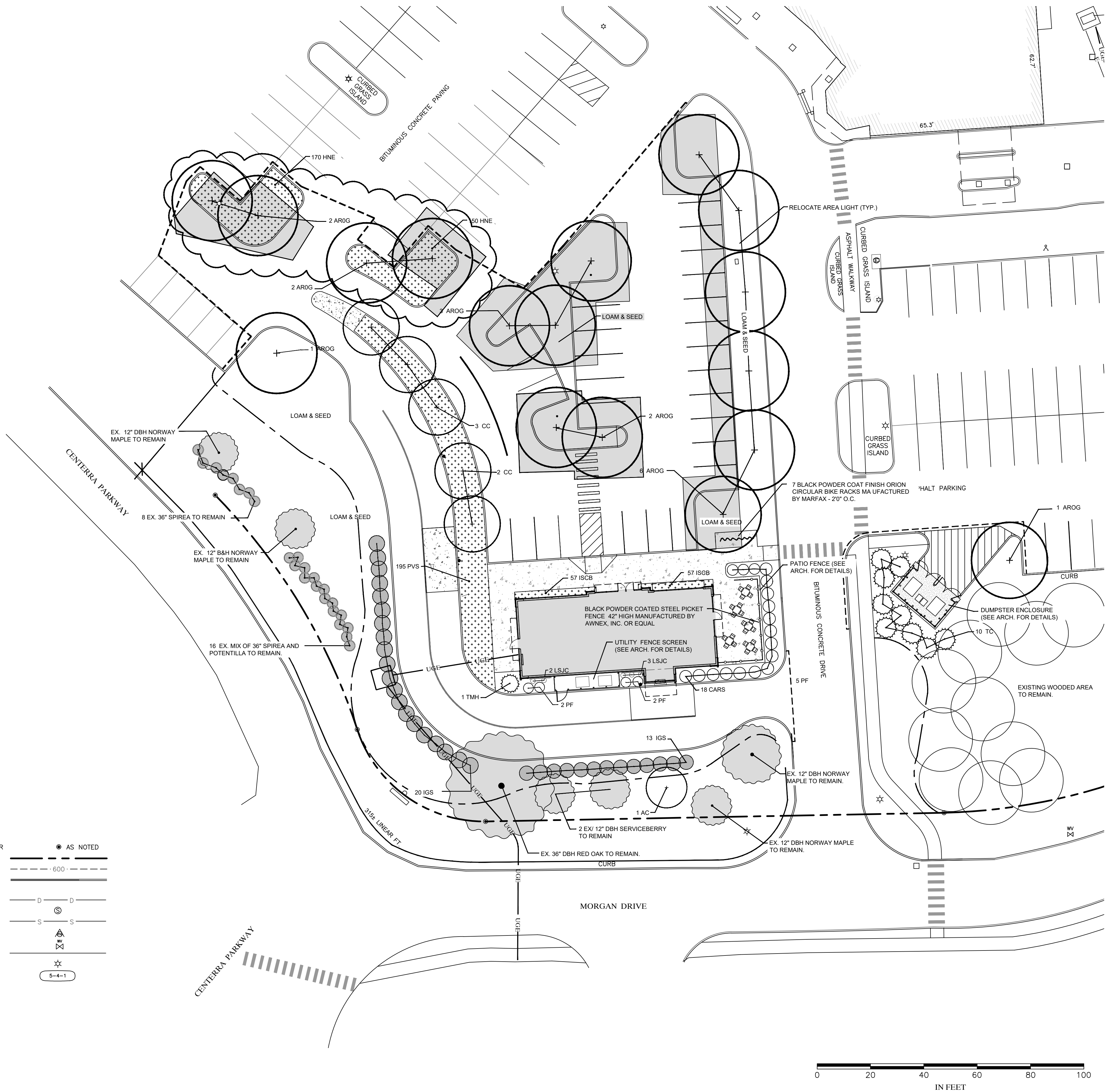
240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

SCALE: A.S.
DESIGNED BY: ANS
DRAWN BY: PAB
CHECKED BY: JSG
DATE: 10/10/22
PROJ. NO. 13005

6
SHEET 6 OF 16



- LEGEND-EXISTING:
- IRON PIPE/CAPPED REBAR
 - RIGHT-OF-WAY LINE
 - EXISTING CONTOUR
 - CURB
 - CATCH BASIN
 - STORMWATER PIPE
 - SANITARY MANHOLE
 - SANITARY PIPE
 - FIRE HYDRANT
 - WATER GATE VALVE
 - WATER LINE
 - LIGHT POLE
 - TAX MAP-LOT NUMBER
- AS NOTED
- 600'
- D D
- S S
- 5-4-1



PERIMETER LANDSCAPING CALCULATIONS

TREES REQUIRED:
 $315 \times 15' = 4,725 \text{ SF}$ (1 TREE/600 SF) = 8 TREES REQUIRED

SHRUBS REQUIRED:
 $315 \text{ LF} \times 15' = 4,725 \text{ SF}$ (5 SHRUBS/600 SF) = 40 SHRUBS REQUIRED

TREES PROVIDED: 8 TREES PROVIDED (7 EXISTING/1 NEW)

SHRUBS PROVIDED: 57 SHRUBS (24 EXISTING/33 NEW)

PARKING AREA SHADING CALCULATIONS

RECONFIGURED PARKING AREA: 15,964 SQ. FT.
SHADING REQUIREMENT: 0.3 (30%) X 16,300 SQ. FT. = 4,789 SQ. FT.
SHADING PROVIDED: 7,010 SQ. FT. (44%)

PERIMETER LANDSCAPING & PARKING LOT SHADING PLAN FOR
CENTERRA MARKETPLACE - STARBUCKS

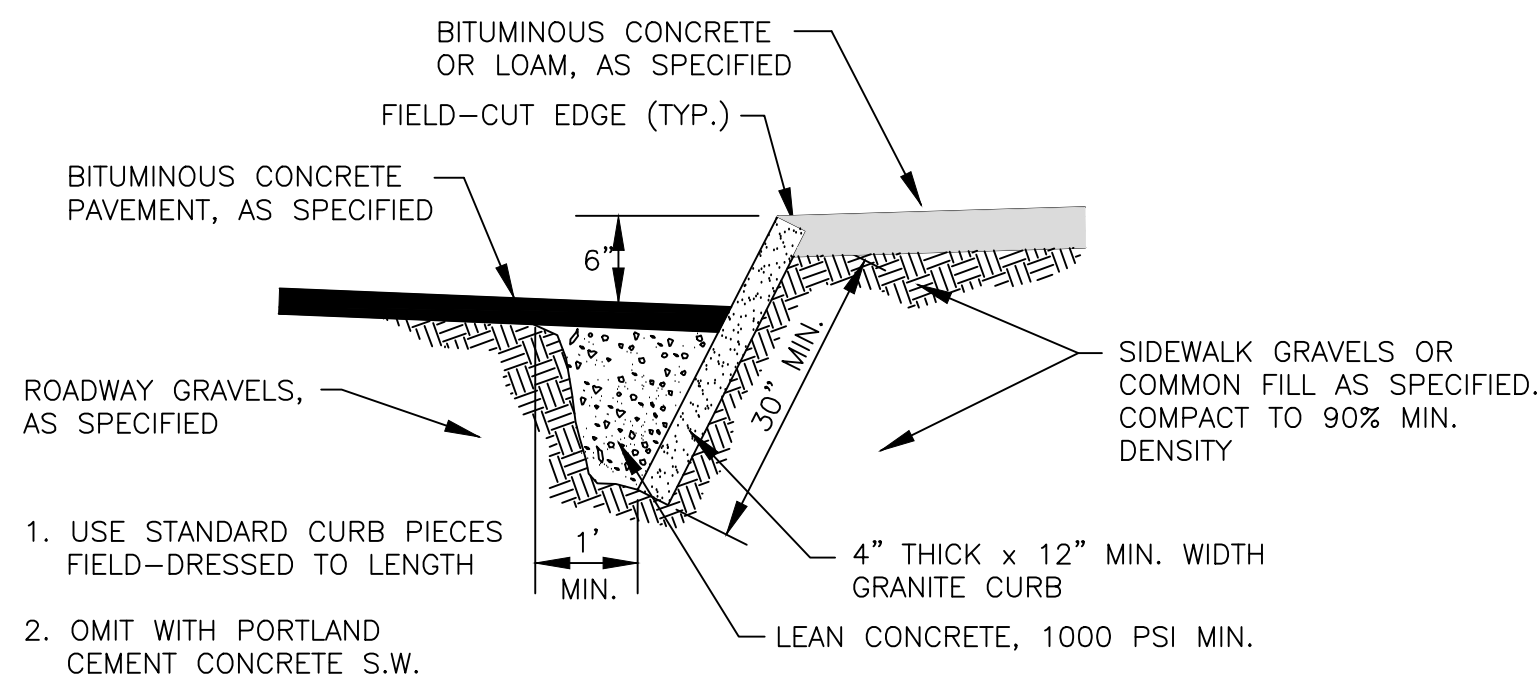
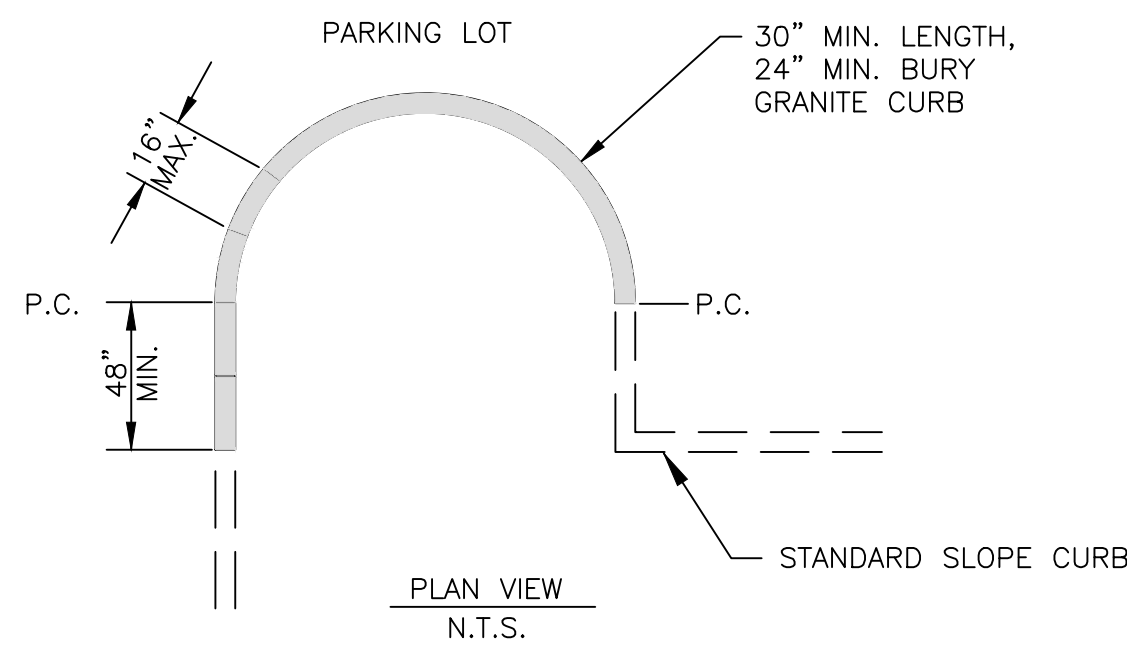
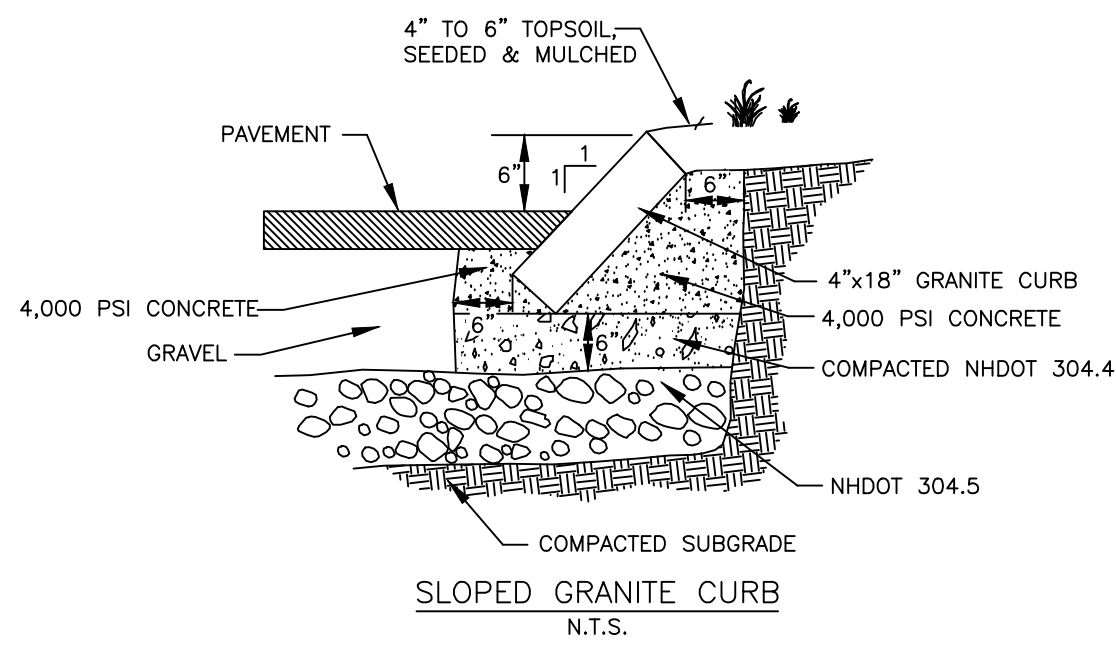
CENTERRA PARKWAY - CITY OF LEBANON - GRAFTON COUNTY - NH

PATHWAYS CONSULTING, LLC

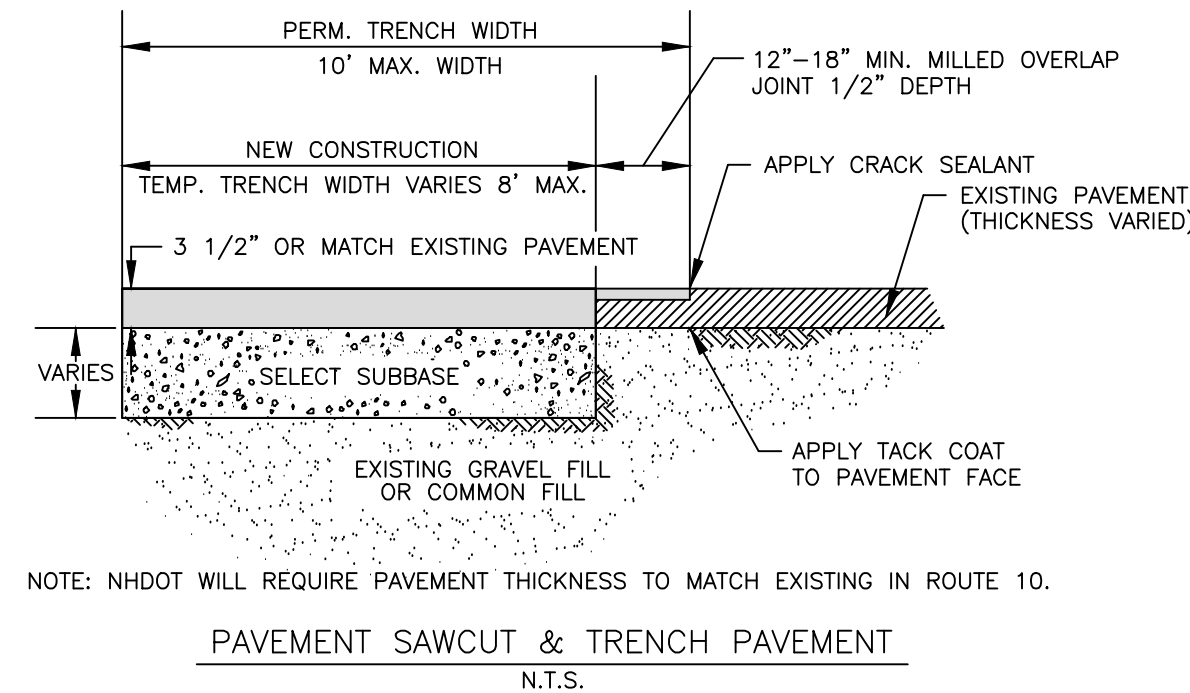
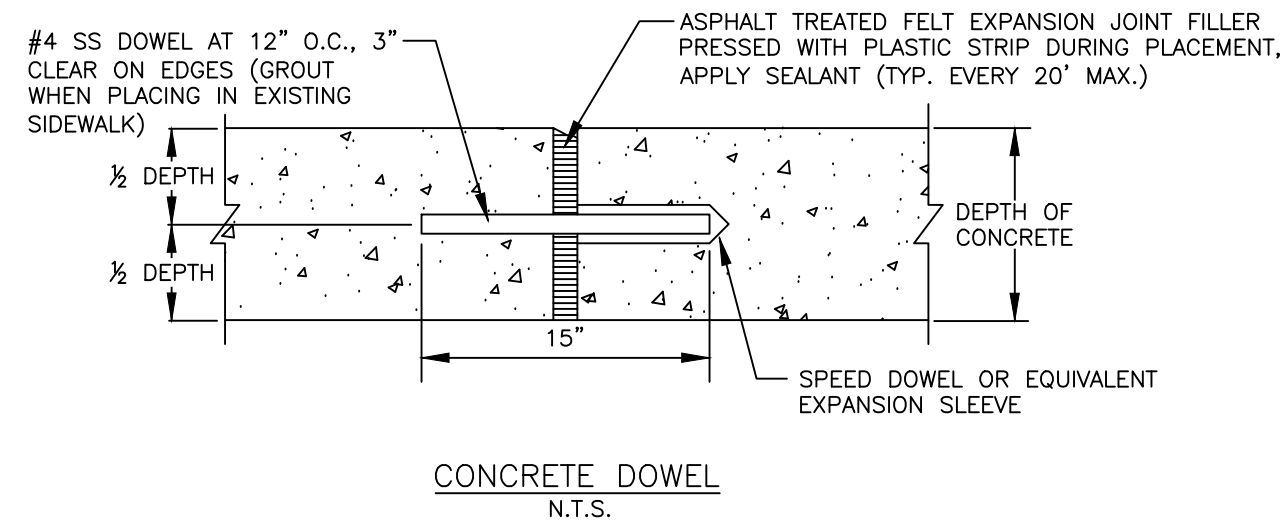
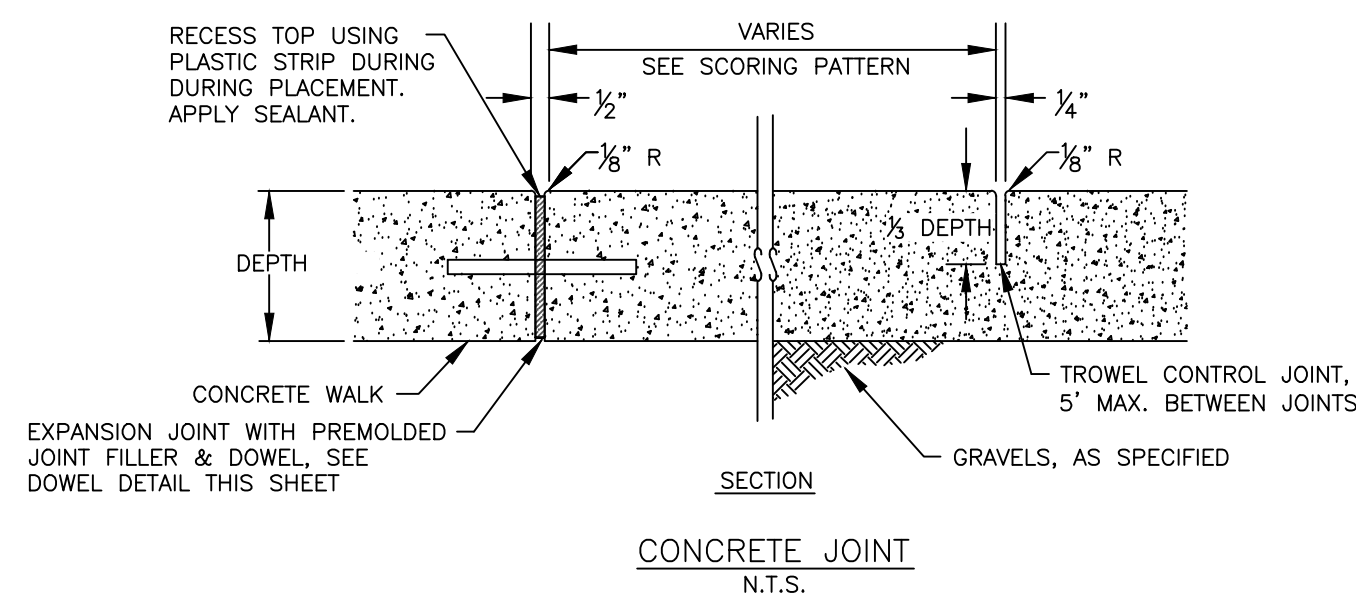
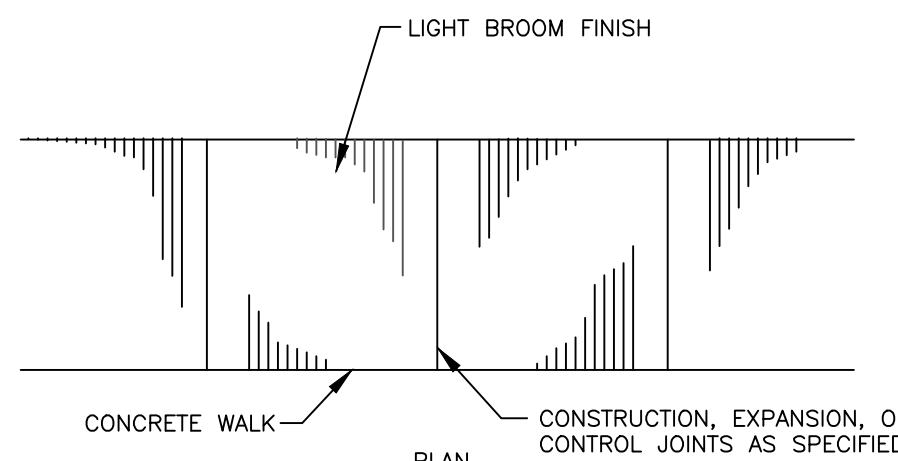
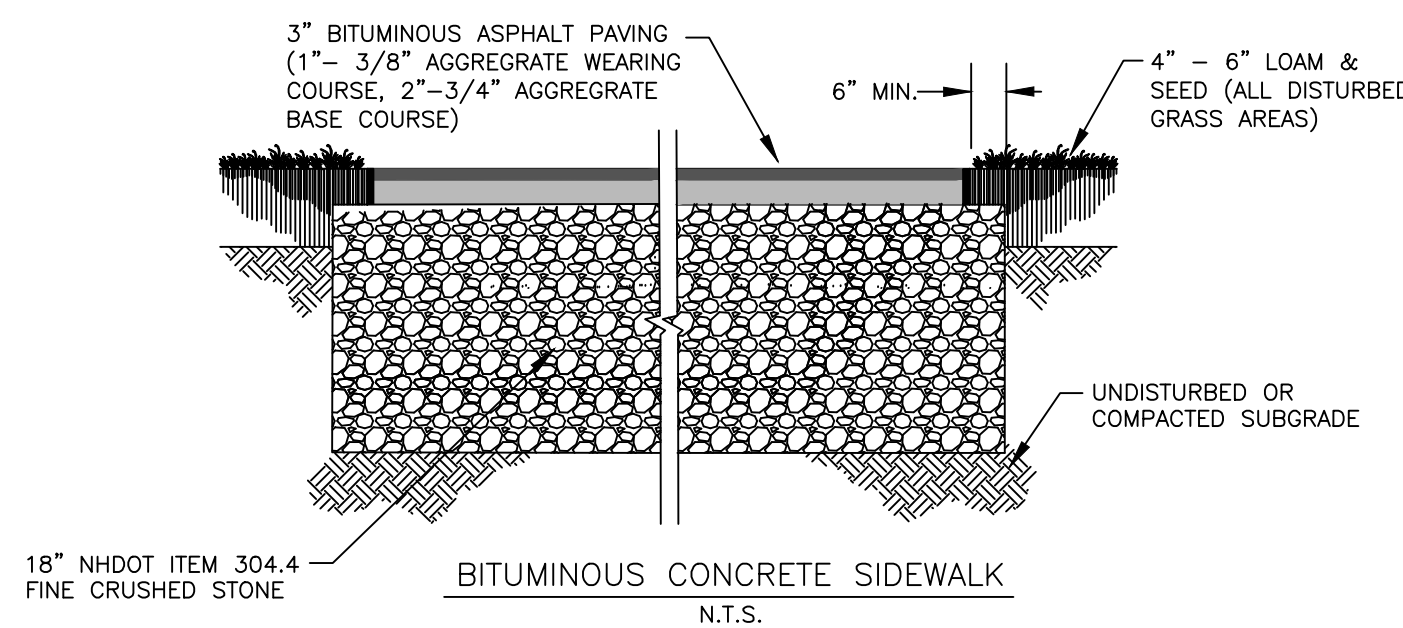
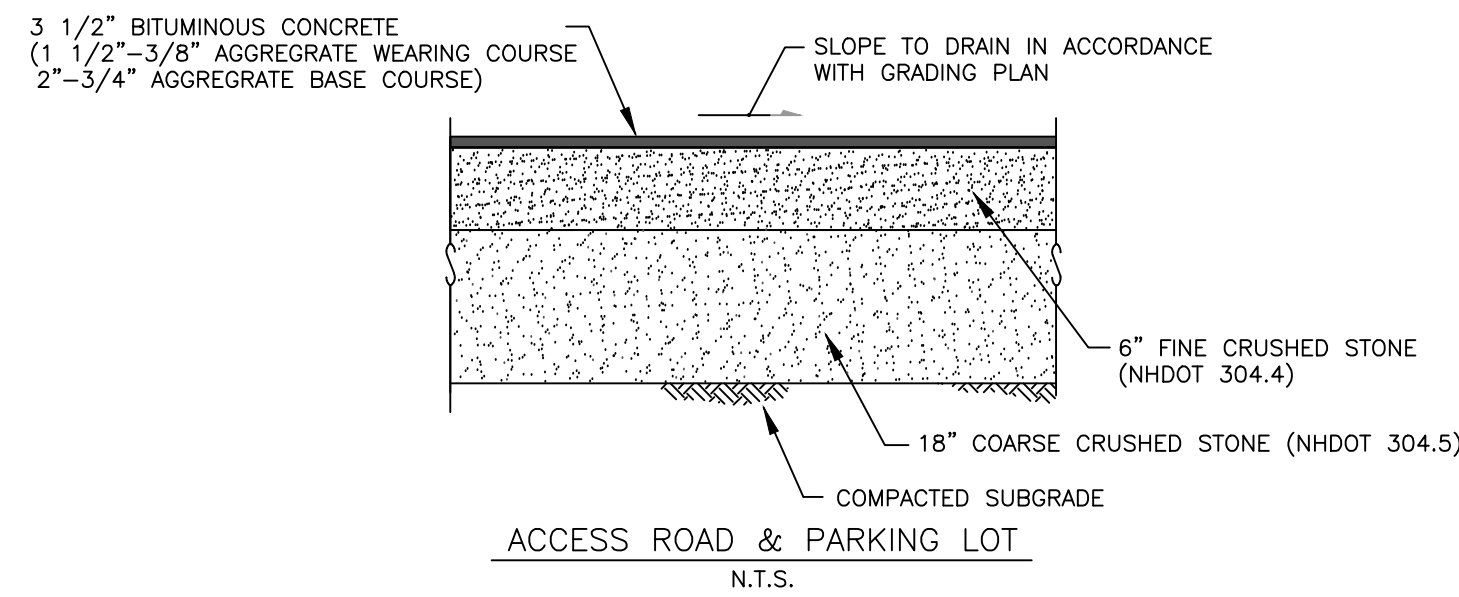
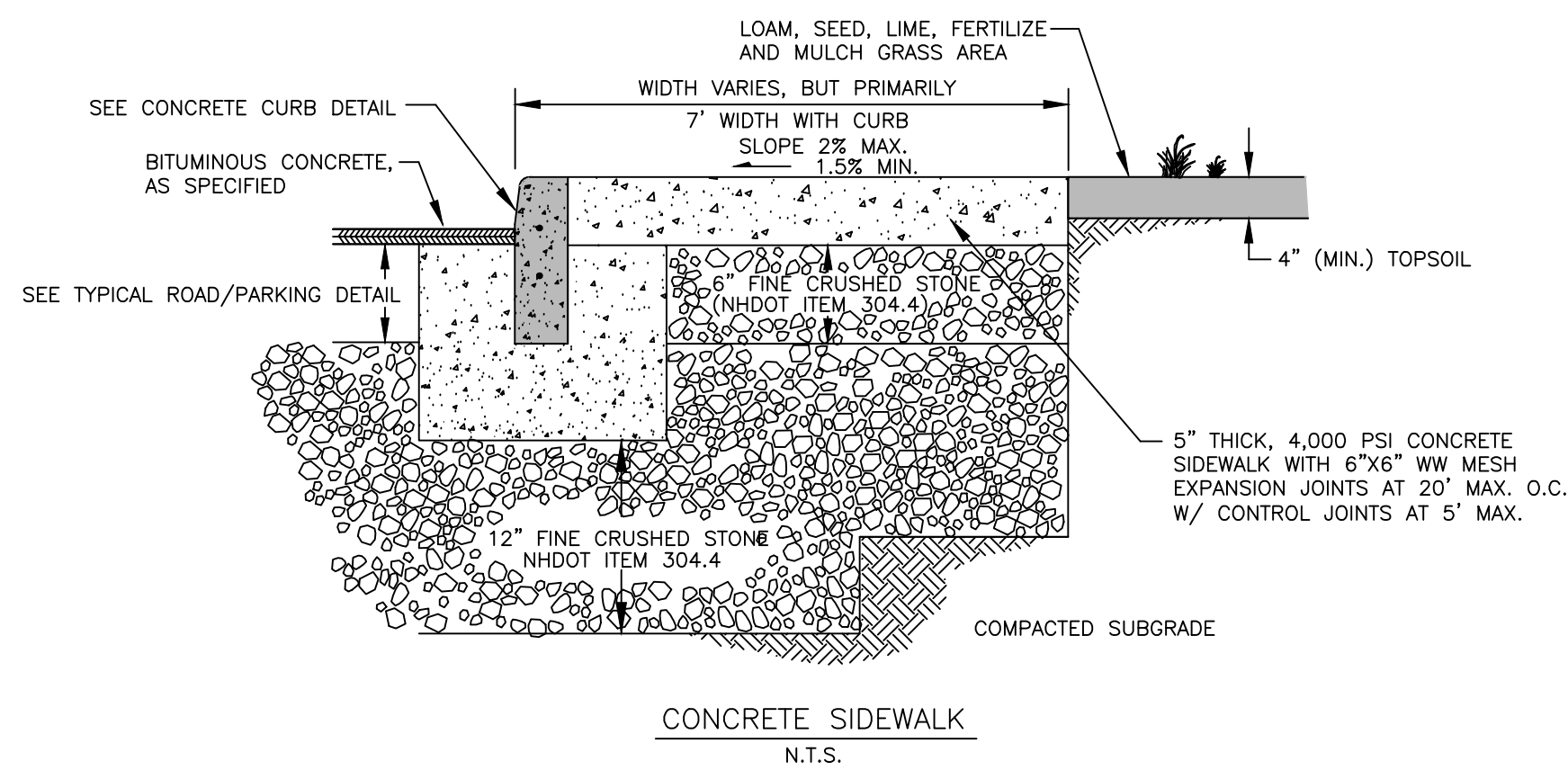
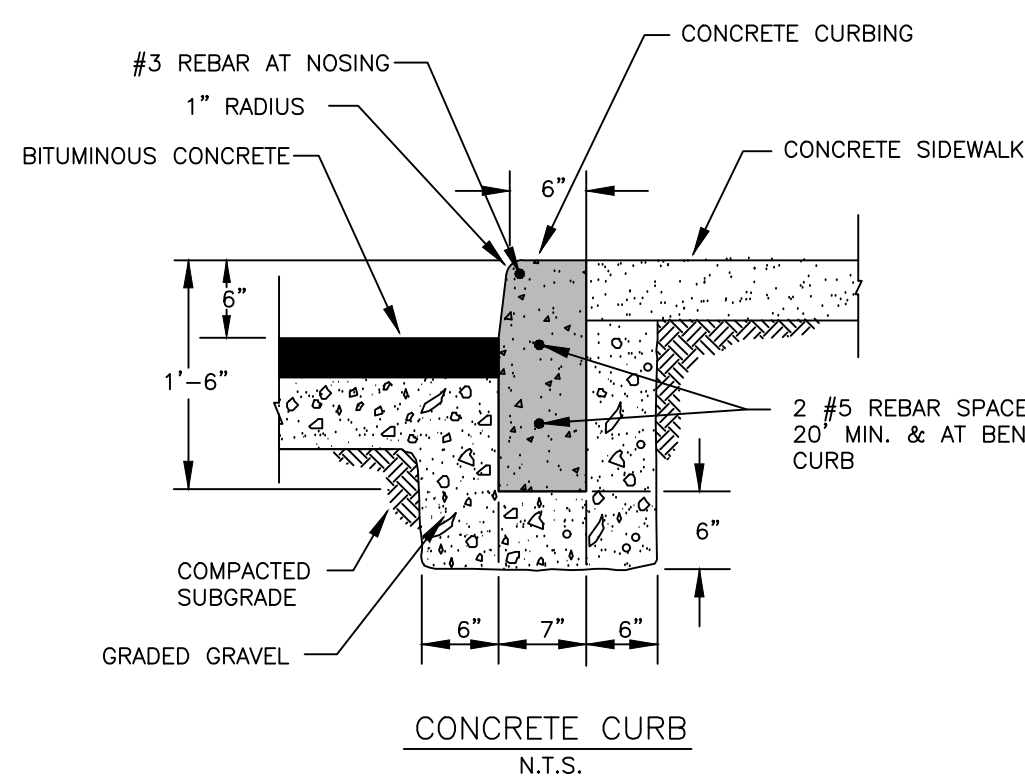
240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

SCALE: A.S.
DESIGNED BY: ANS
DRAWN BY: PAB
CHECKED BY: JSG
DATE: 10/10/22
PROJ. NO. 13005

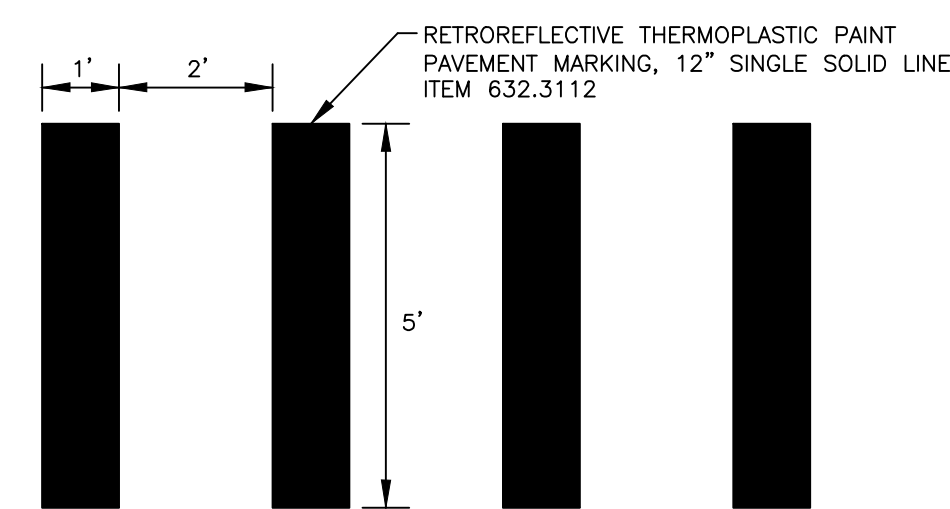
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SHEET 7 OF 16



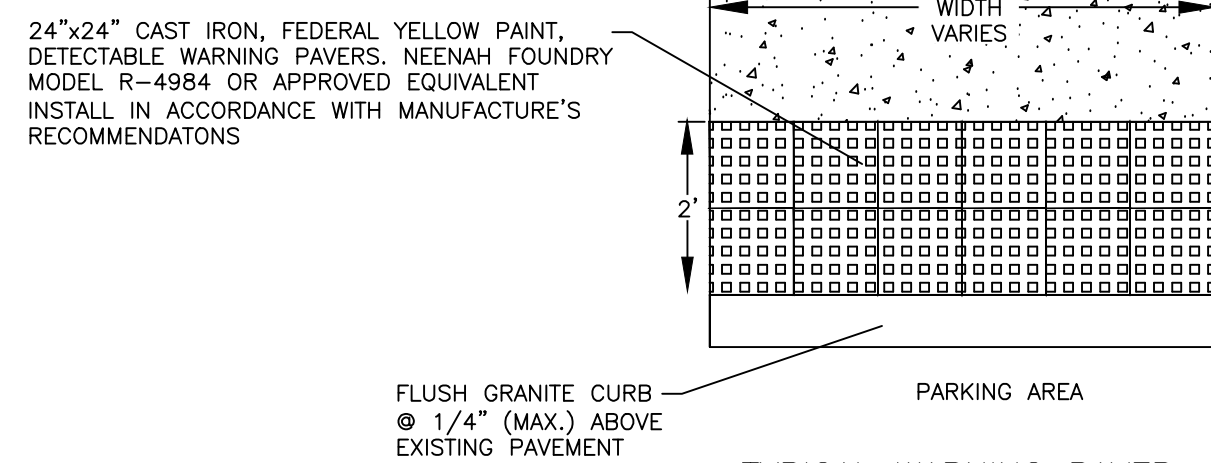
SLOPE GRANITE CURB — RADIUS
N.T.S.



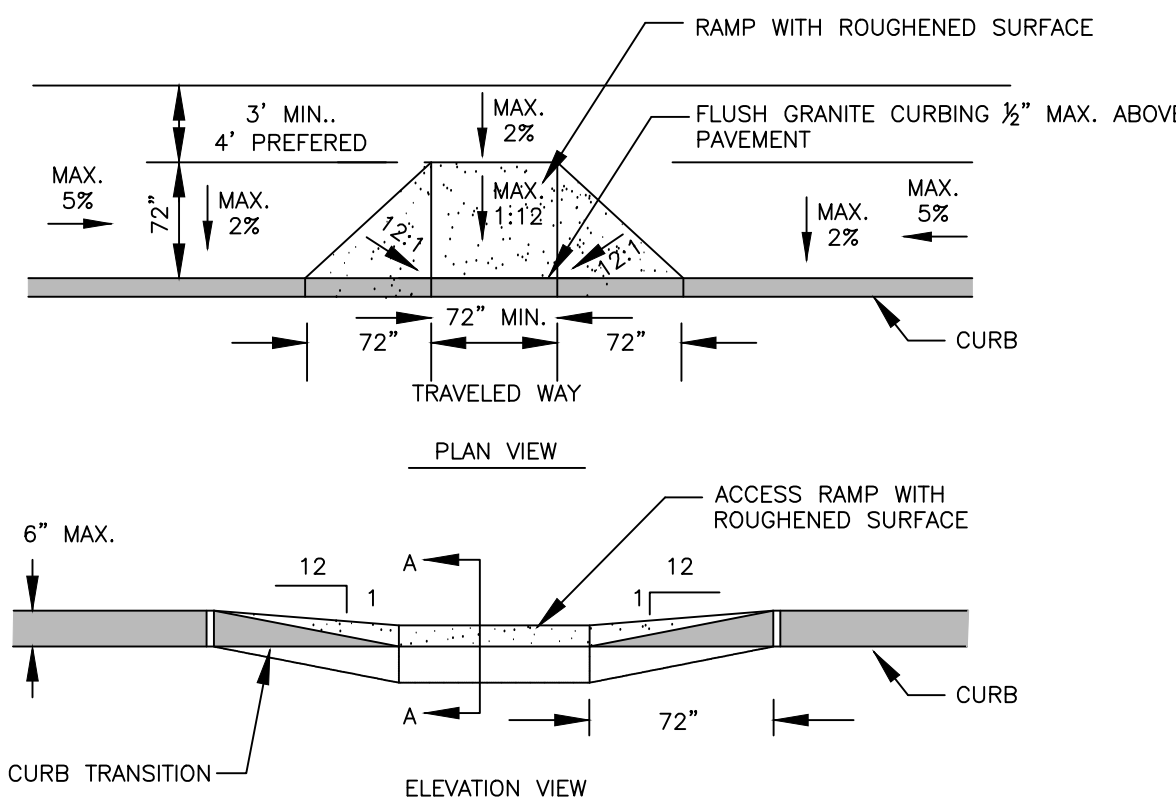
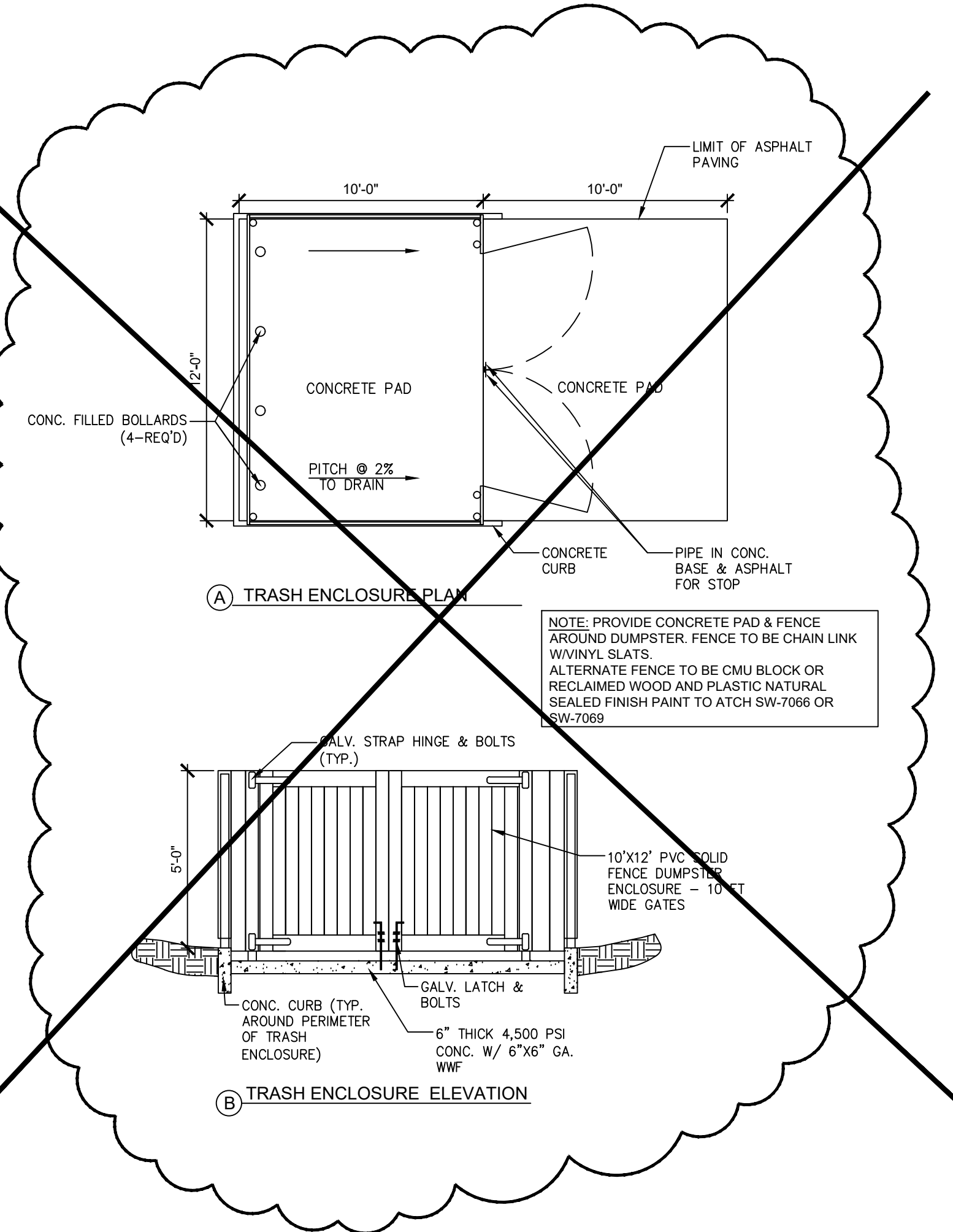
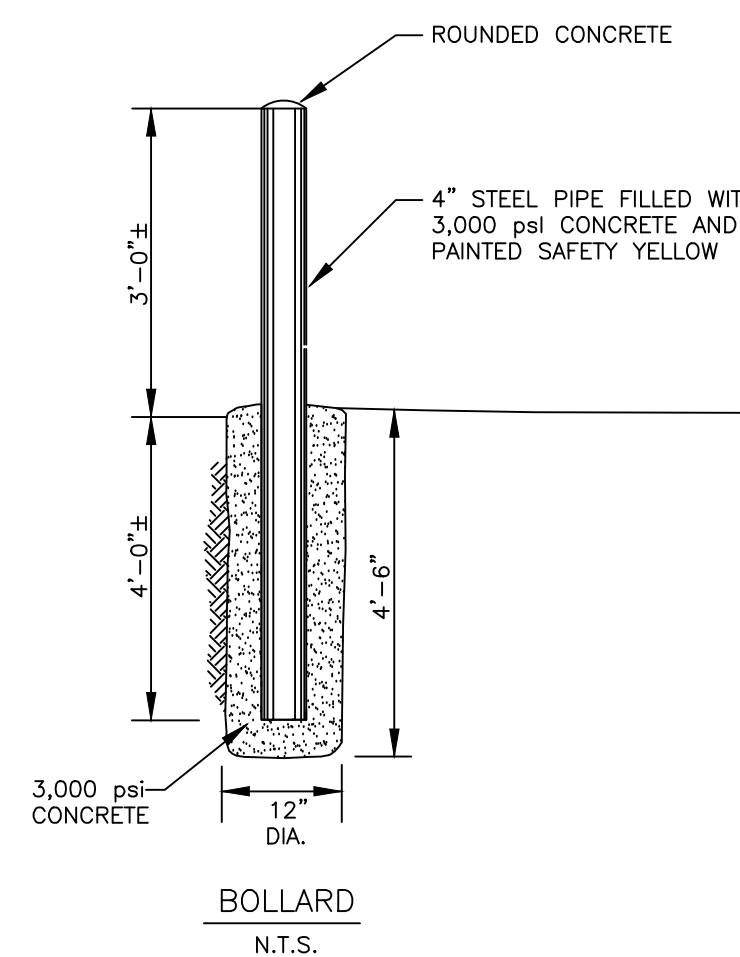
NOTE: NHDOT WILL REQUIRE PAVEMENT THICKNESS TO MATCH EXISTING IN ROUTE 10.



NOTES:
1. DETAIL CAN BE FIELD MODIFIED TO ELIMINATE A MARKING DIRECTLY IN A WHEEL PATH.



TYPICAL WARNING PAVER



NOTE:
1. ANY PORTION OF AN ACCESSIBLE SIDEWALK GREATER THAN 1:20 OR 5% (INCLUDING CURB RAMPS) IS CONSIDERED A RAMP, AND SHALL COMPLY WITH HANDRAIL AND ADA GRADE REQUIREMENTS.
2. MAXIMUM RAMP SLOPE = 1:12 OR 8.33%.
3. MAXIMUM CROSS GRADE FOR ACCESSIBLE SIDEWALK (INCLUDING RAMPS AND LANDINGS) = 1:50 OR 2%.
4. MAXIMUM GRADE FOR ACCESSIBLE SIDEWALK IN DIRECTION OF TRAVEL = 1:20 OR 5% (EXCLUDING RAMPS AND LANDINGS)

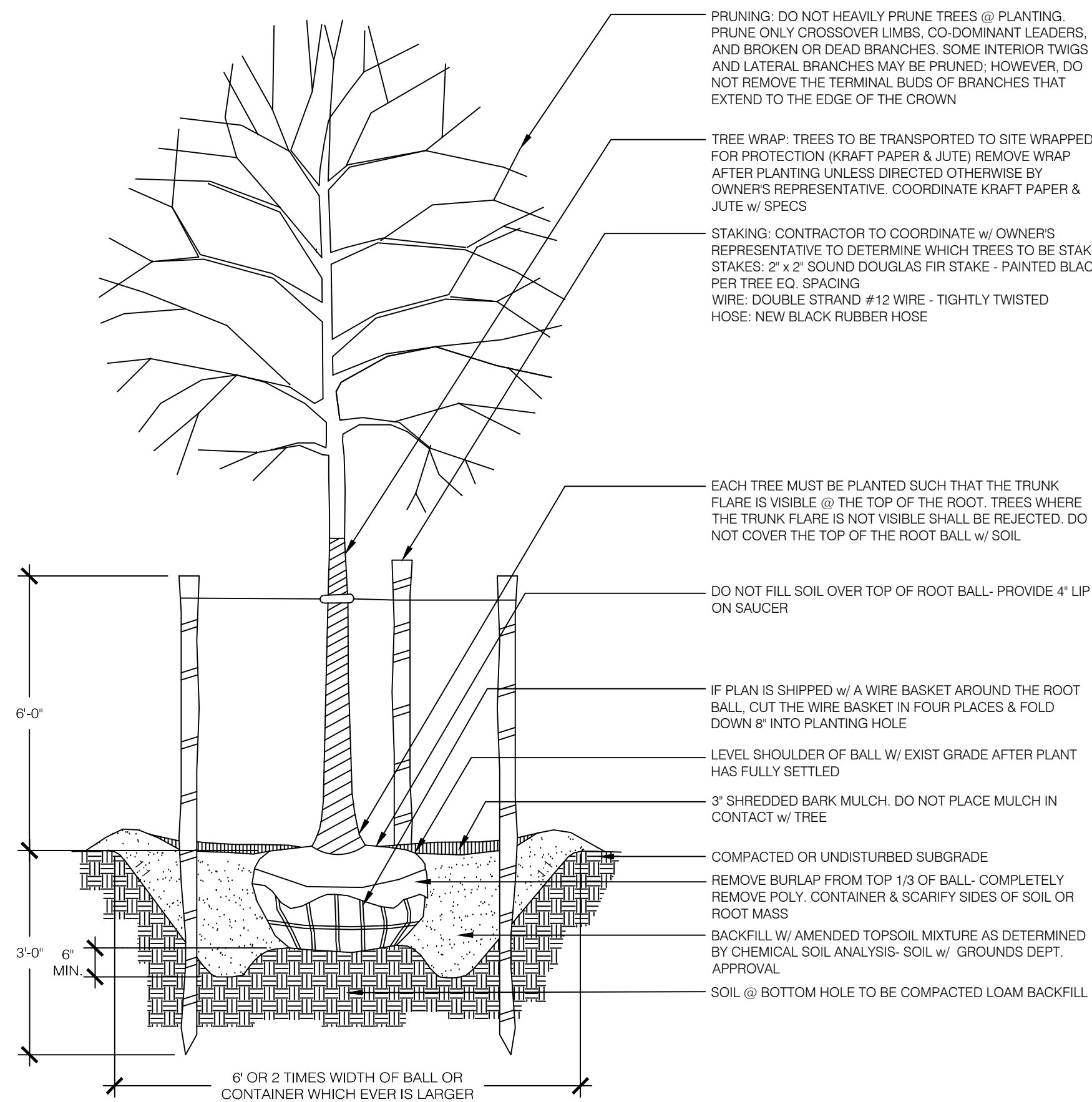
HANDICAP ACCESS RAMP — PEDESTRIAN
N.T.S.

REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY
2	04/04/24	SITE PLAN REVIEW RESUBMISSION	PAB	PAB	JSG
1	11/28/22	STAFF REVIEW COMMENTS	PAB	PAB	JSG

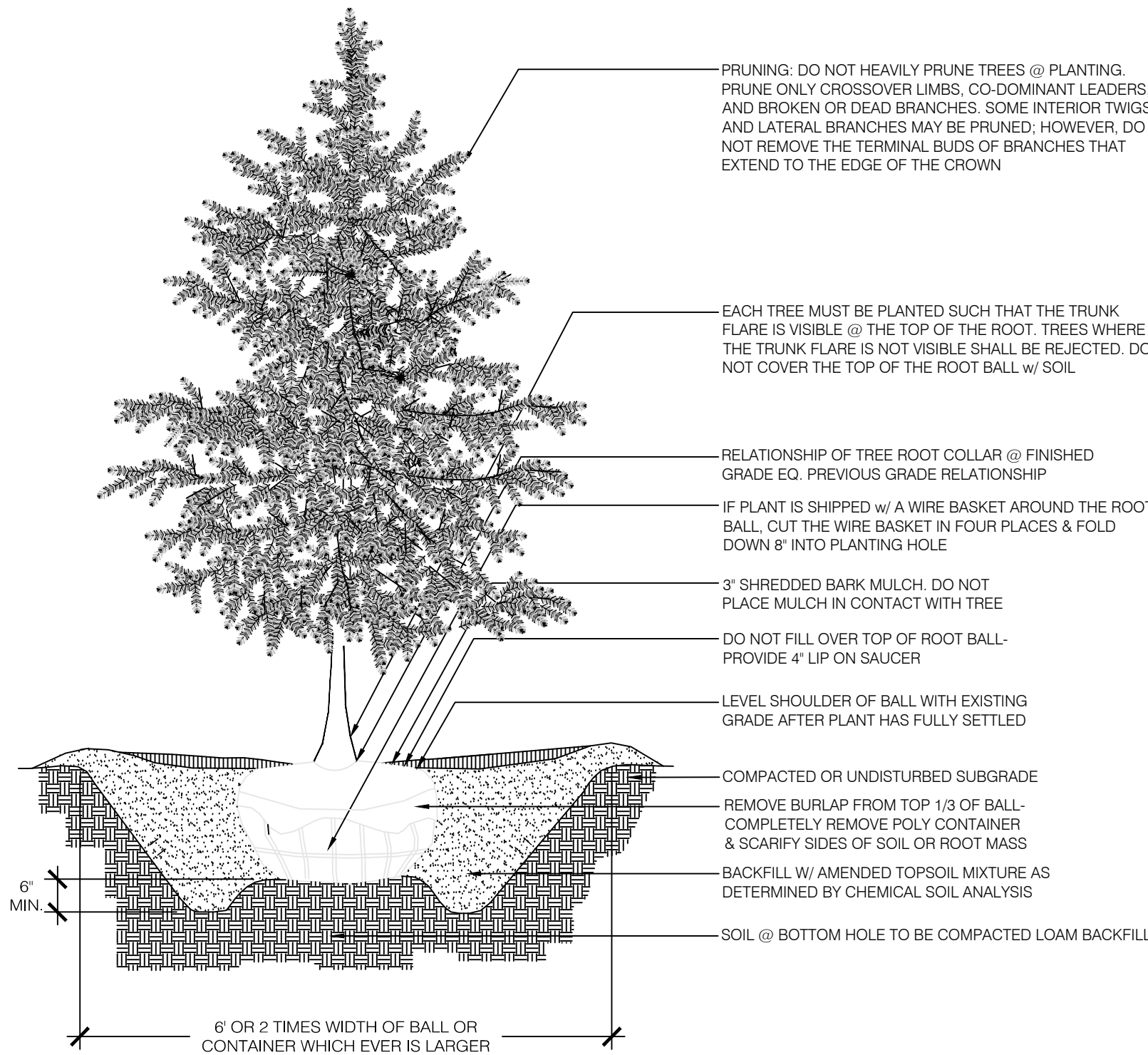
SITE DETAILS FOR
CENTERRA MARKETPLACE - STARBUCKS
CENTERRA PARKWAY — CITY OF LEBANON — GRAFTON COUNTY — NEW HAMPSHIRE

PATHWAYS CONSULTING, LLC
240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
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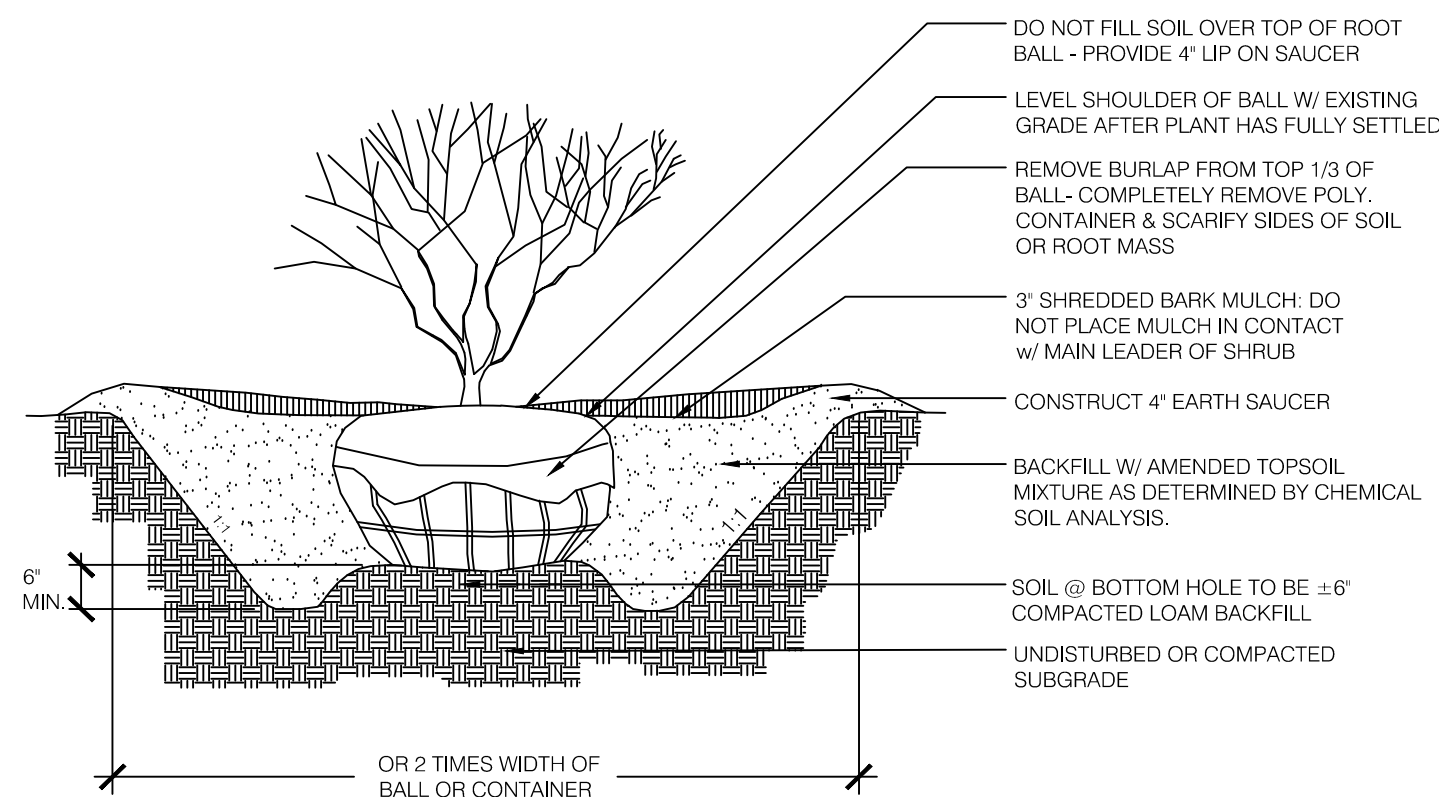
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DESIGNED BY: PAB
DRAWN BY: PAB
CHECKED BY: JSG
DATE: 10/10/22
PROJ. NO. 13005



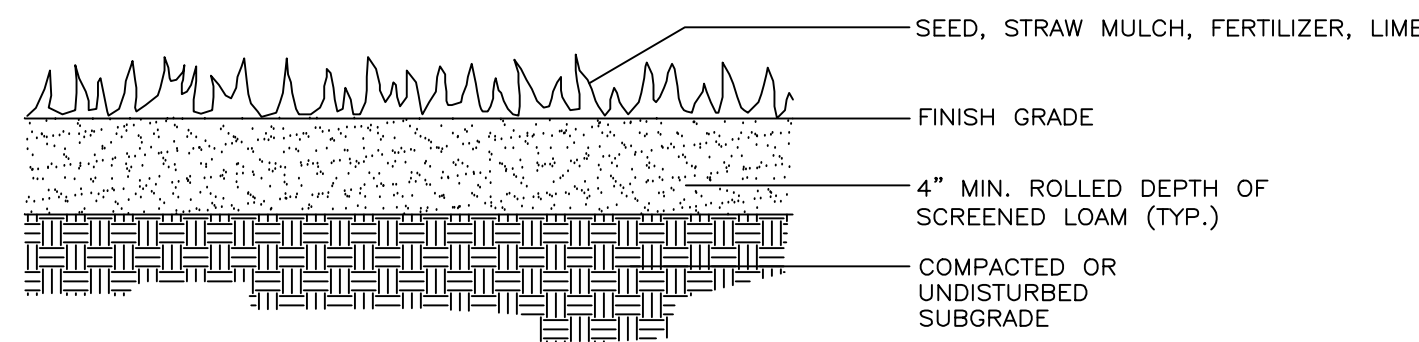
TYPICAL DECIDUOUS TREE PLANTING DETAILS
SCALE: N.T.S.



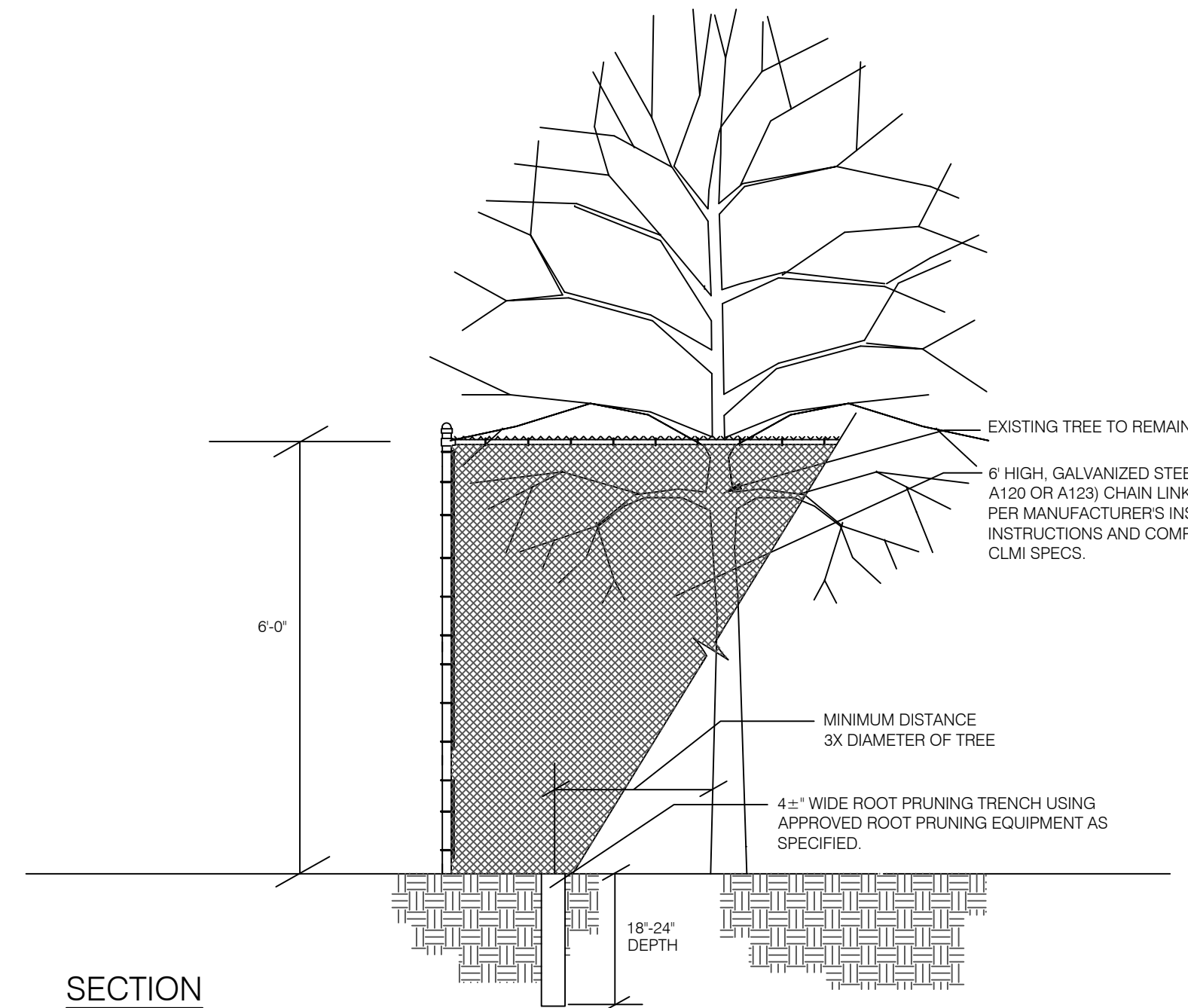
TYPICAL EVERGREEN TREE PLANTING
SCALE: N.T.S.



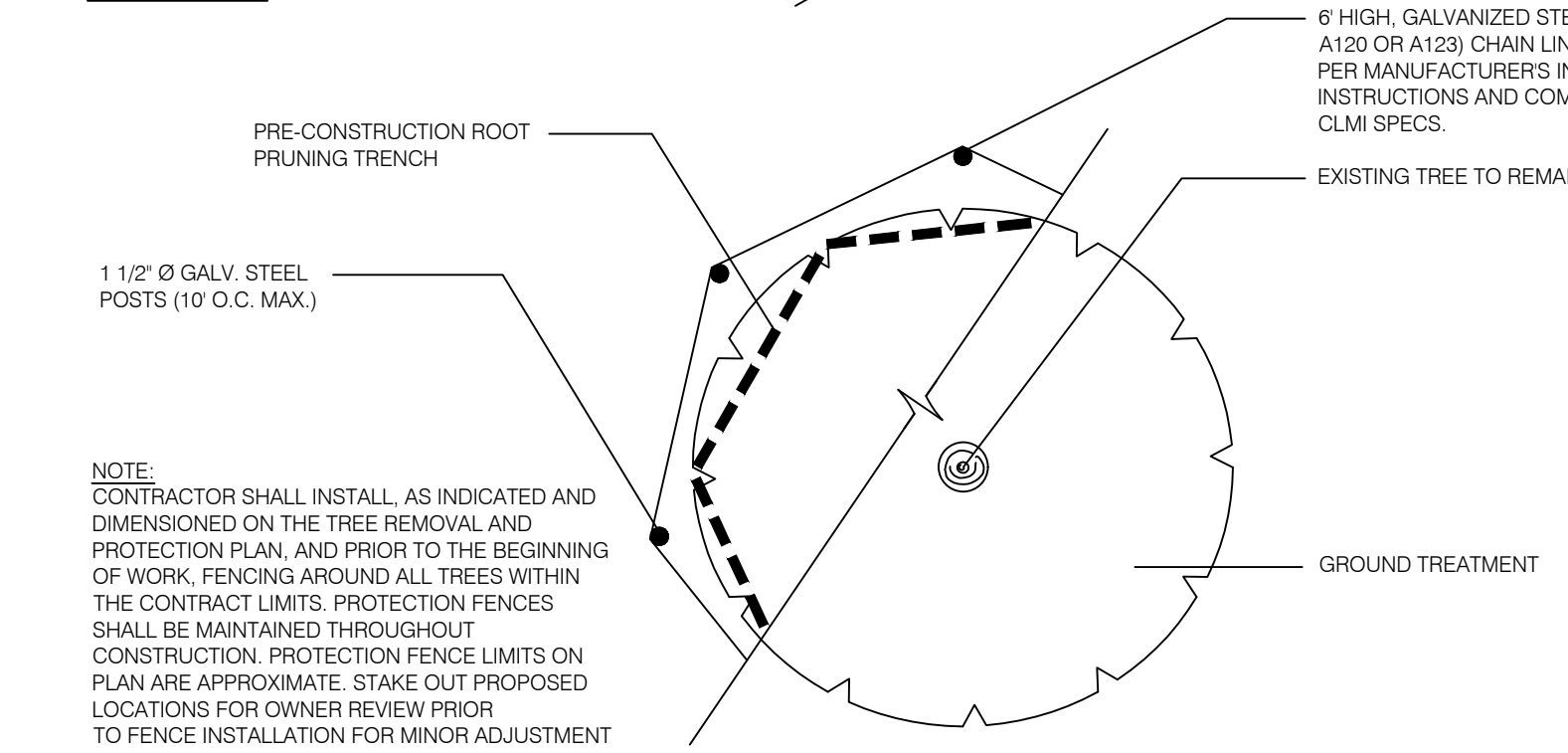
TYPICAL SHRUB PLANTING DETAIL
SCALE: N.T.S.



TYPICAL LOAM AND SEED DETAIL
N.T.S.



SECTION



PLAN

PROTECTION FENCING FOR INDIVIDUAL TREE AND SMALL TREE GROUPINGS
SCALE: 1/4\"/>

PLANTING NOTES:

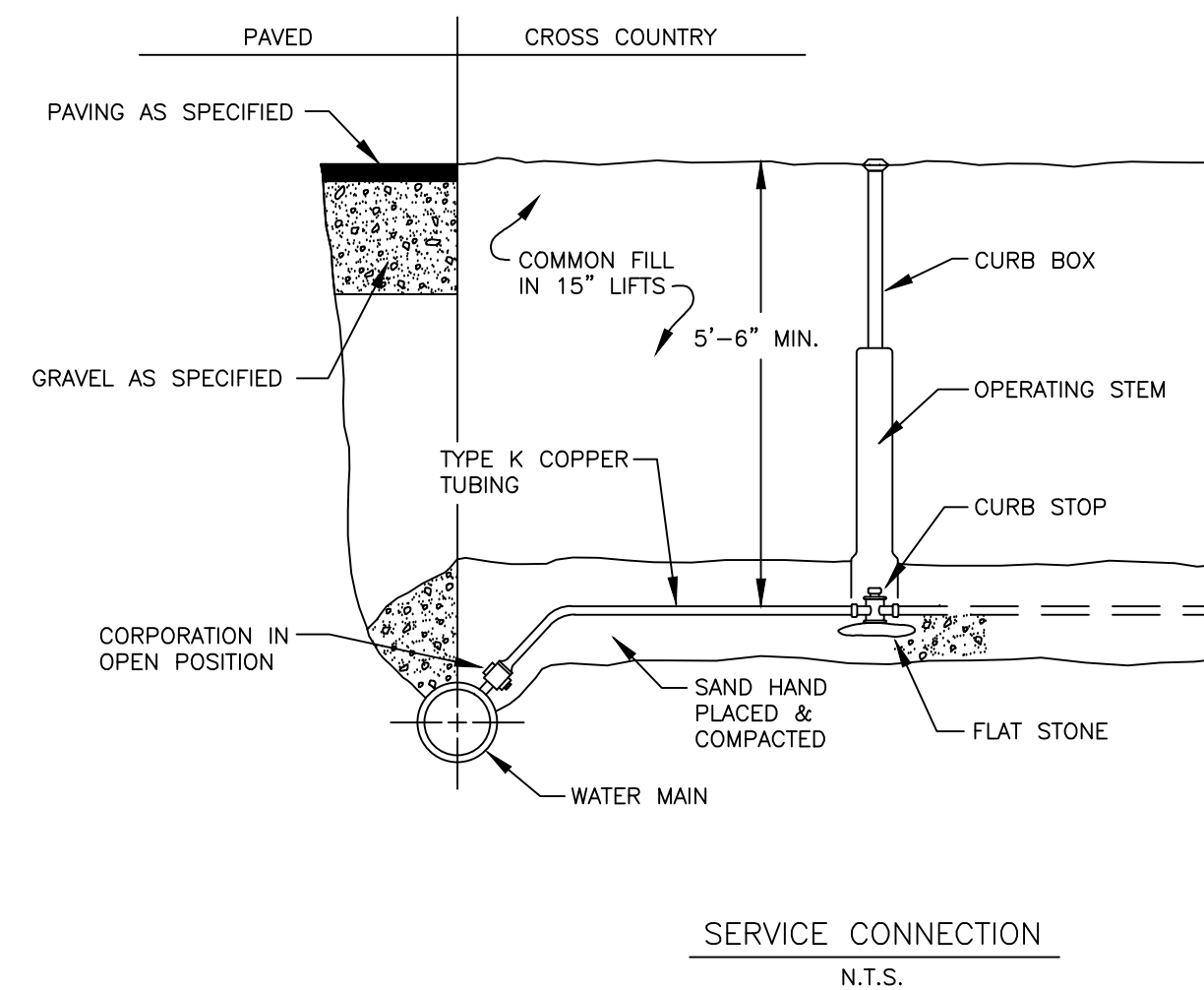
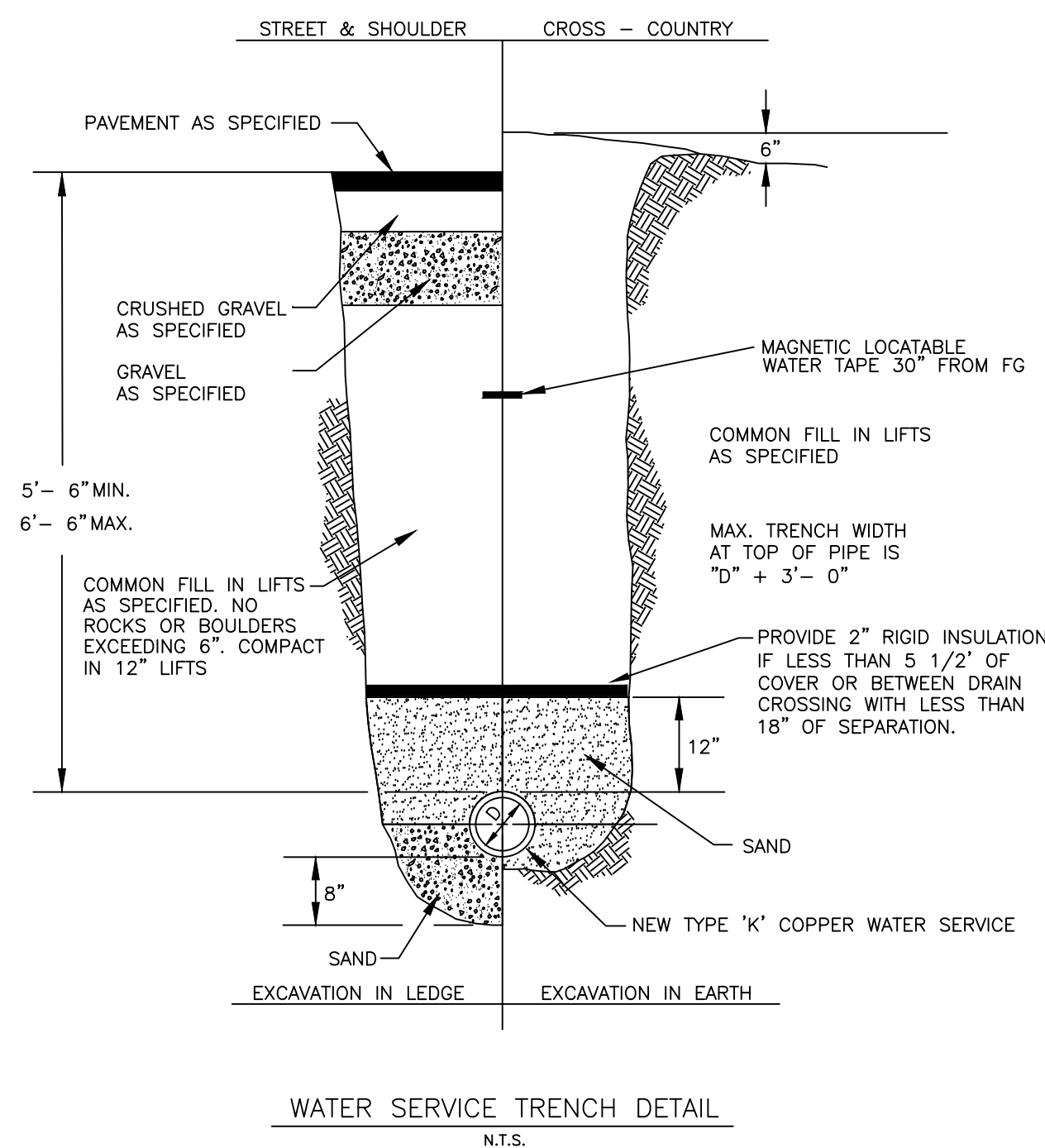
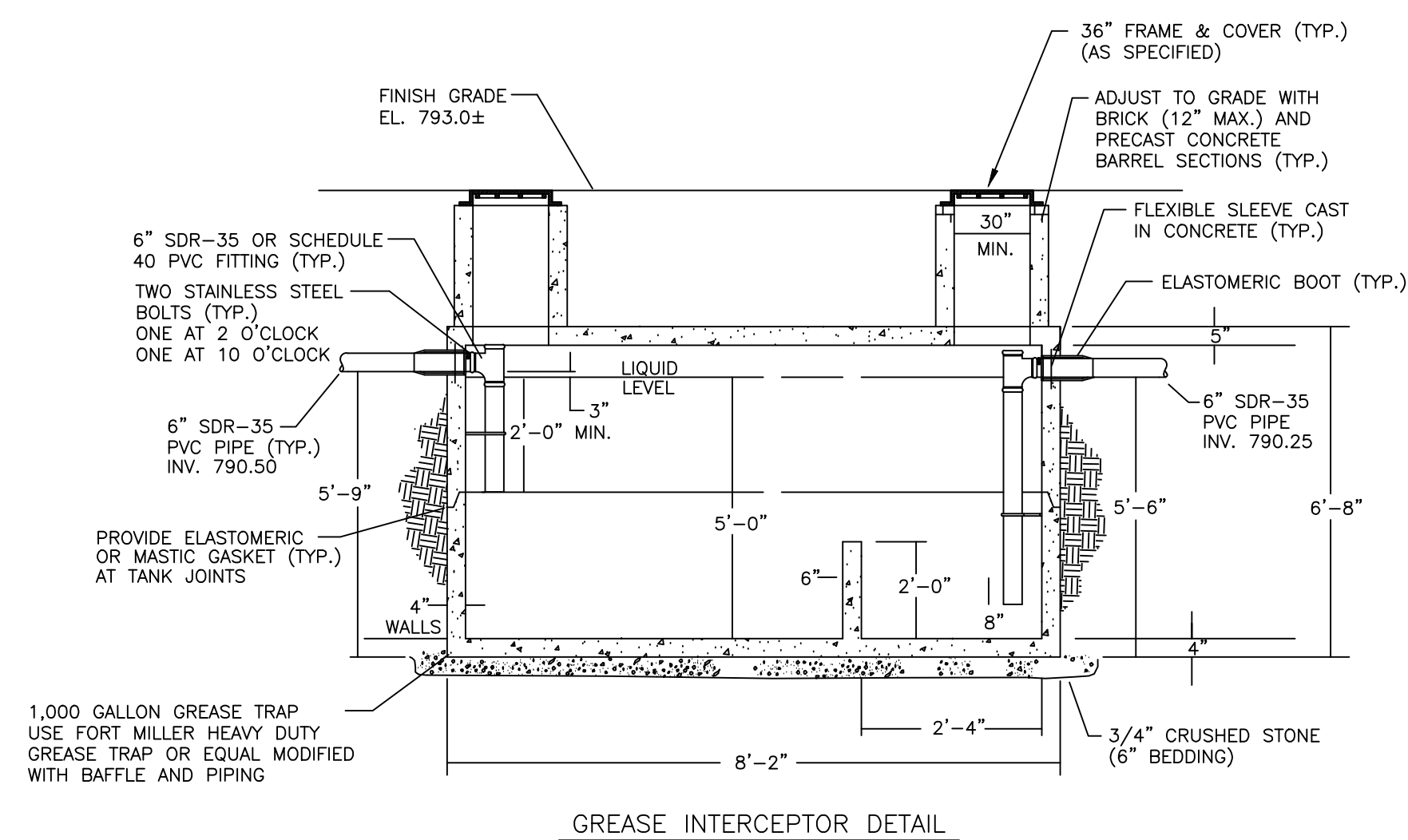
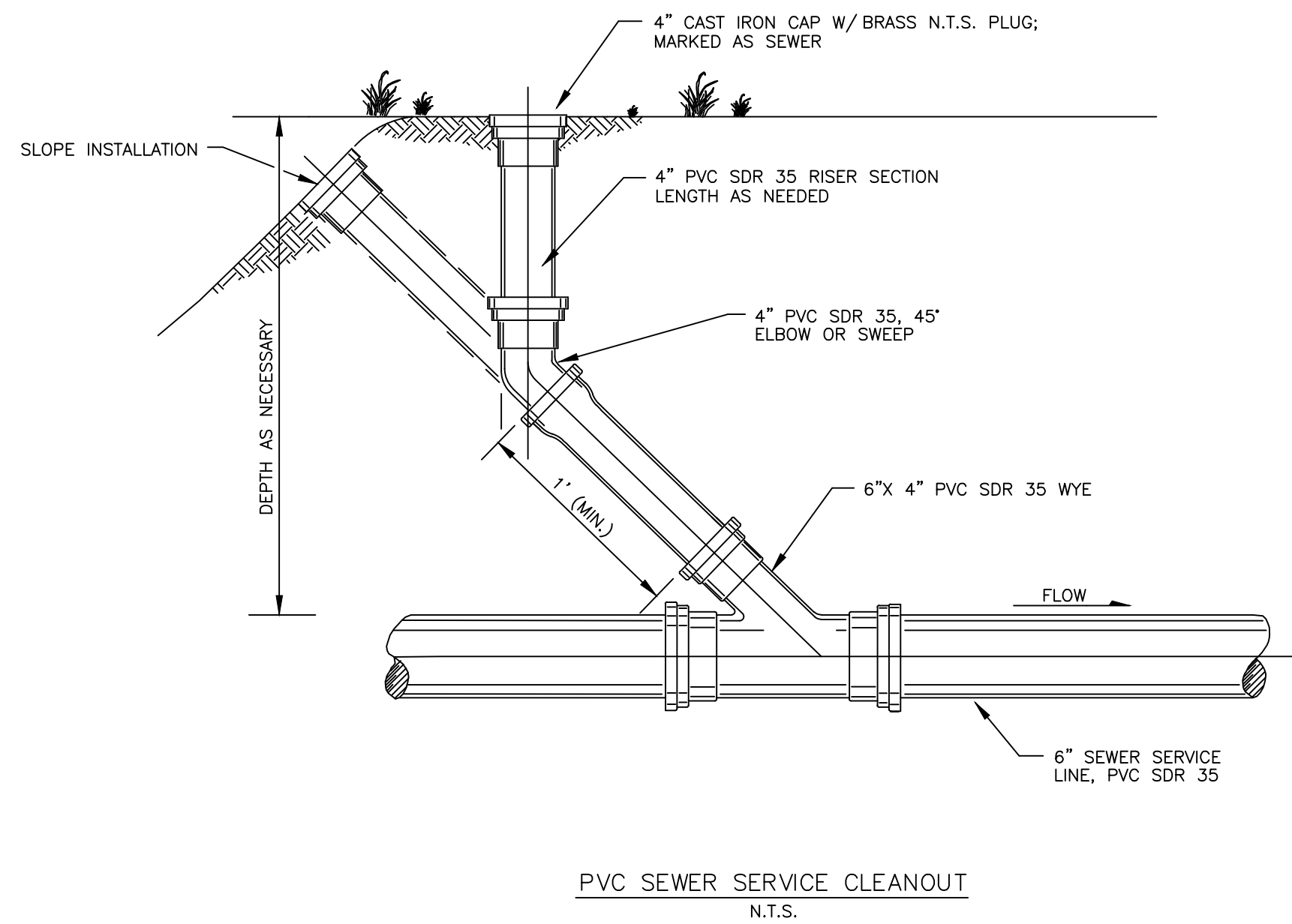
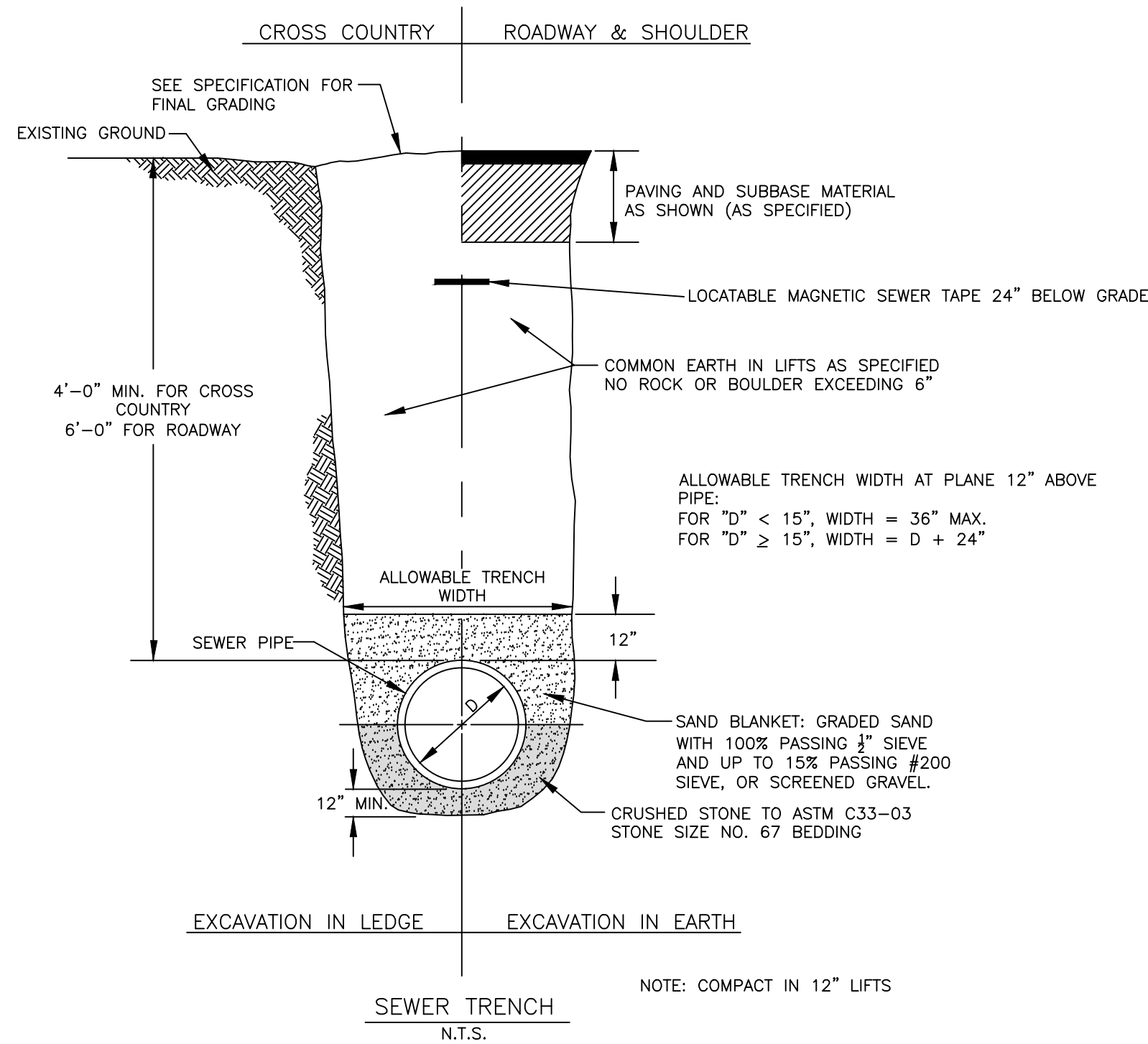
1. The Contractor shall review the written specifications for tree and shrub planting, groundcover & plants and seeding prior to submitting bid. No extraneous requirements have been included in the Specifications and Drawings. The Contractor shall also become familiar with existing and proposed site conditions prior to submitting bid.
2. The Contractor shall coordinate this work with other contractors performing work on the site.
3. The Contractor shall verify all grades, dimensions, and existing conditions and report any discrepancies to the Landscape Architect.
4. The Contractor shall locate and verify all existing and newly installed underground utilities prior to any lawn work or tree and shrub planting and shall immediately report any conflicts to the Landscape Architect.
5. The Contractor shall supply all plant material in quantities sufficient to complete the planting shown on the drawings. Quantities in Plant Schedule are for reference only.
6. All plant material shall conform to guidelines established by the "American Standards for Nursery Stock" published by the American Association of Nurserymen, latest edition (ANSI Z66.1).
7. No plant or cultivar substitutions will be acceptable.
8. Plant material shall be inspected by Owner's Representative for acceptance prior to planting.
9. Locations of new plant material shall be staked or set out by Contractor and approved and faced by the Landscape Architect prior to planting.
10. Refer to Planting Details and Specifications for information relating to planting pit dimensions and extent and composition of backfill material.
11. The trees shall bear the same relationship to tree pit finish grade as to the original grade prior to digging.
12. The Contractor shall remove all plastic materials from around the root balls of the plants after positioning in the plant pits. Remove burlap, rope, and wire from around the trunks sufficiently so that no burlap, rope, or wire will be exposed after backfilling.
13. Contractor shall exercise extreme care in working in areas of existing trees. Existing plants to remain and be protected which are injured or destroyed during construction shall be replaced by Contractor with plants of equal size and species at no cost to the Owner.
14. All areas that have been disturbed by construction activity and not paved or occupied by site structures, etc., shall be topsoiled and seeded / reconditioned as specified.
15. The trees and shrubs shall be watered by the contractor twice during the first 24 hours of planting.
16. The plants shall be maintained by the contractor during the warranty period.

1	11/28/22	STAFF REVIEW COMMENTS	PAB	PAB	JSG
REVISION NO.	DATE	DESCRIPTION	MADE BY	CHECKED BY	APPROVED BY

LANDSCAPE DETAILS FOR
CENTERRA MARKETPLACE - STARBUCKS
CENTERRA PARKWAY — CITY OF LEBANON — GRAFTON COUNTY — NEW HAMPSHIRE

PATHWAYS CONSULTING, LLC
240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

SCALE: N.T.S.
DESIGNED BY: PAB
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DATE: 10/10/22
PROJ. NO. 13005



WATER & SEWER DETAILS FOR

CENTERRA MARKETPLACE - STARBUCKS

CENTERRA PARKWAY - CITY OF LEBANON - GRAFTON COUNTY - NEW HAMPSHIRE

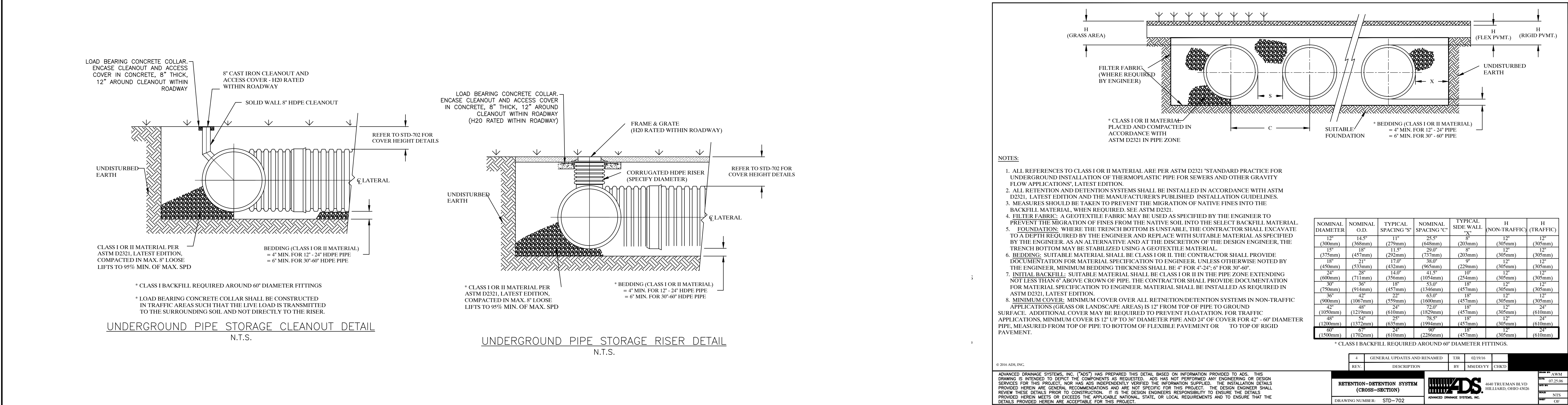
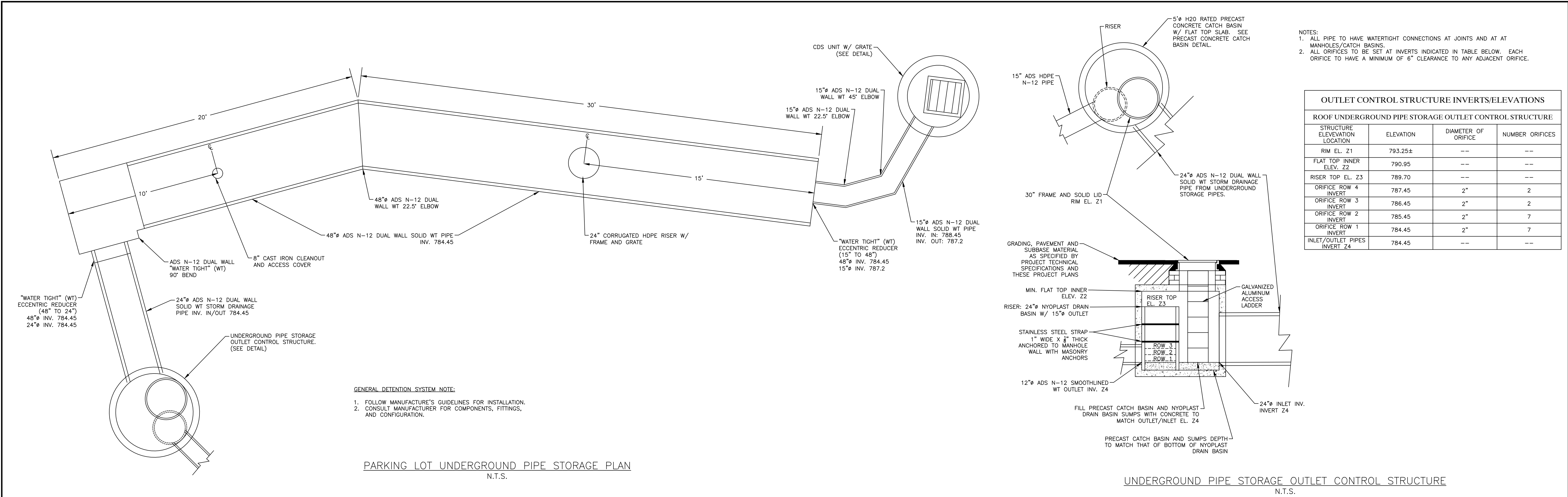
PATHWAYS CONSULTING, LLC

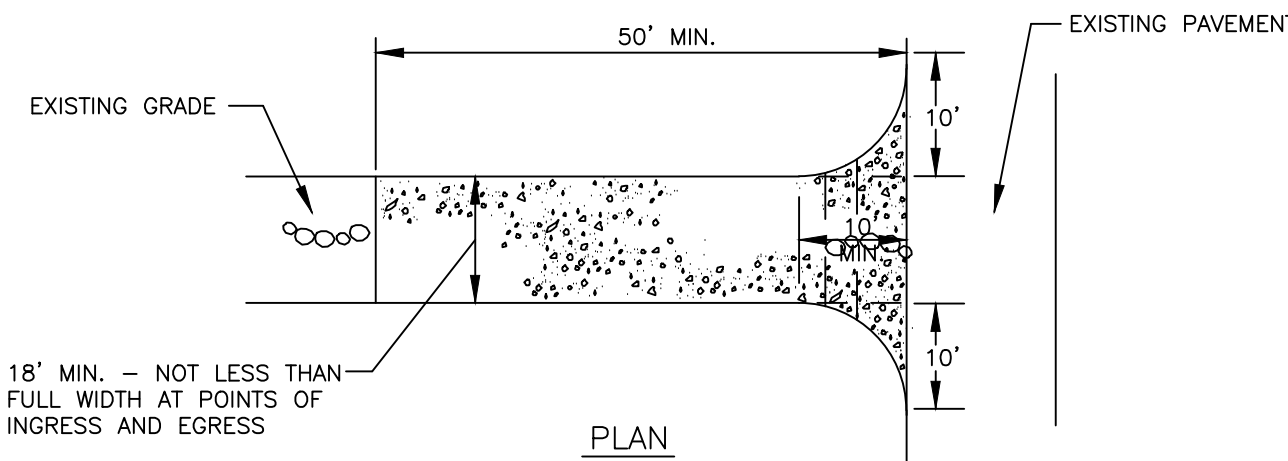
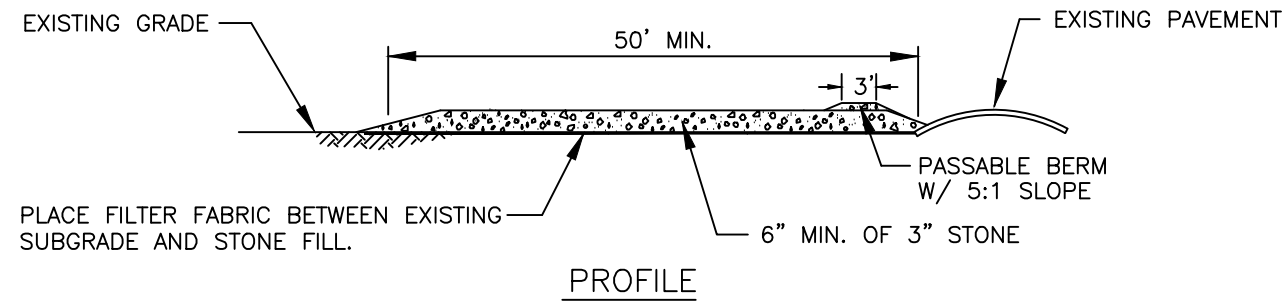
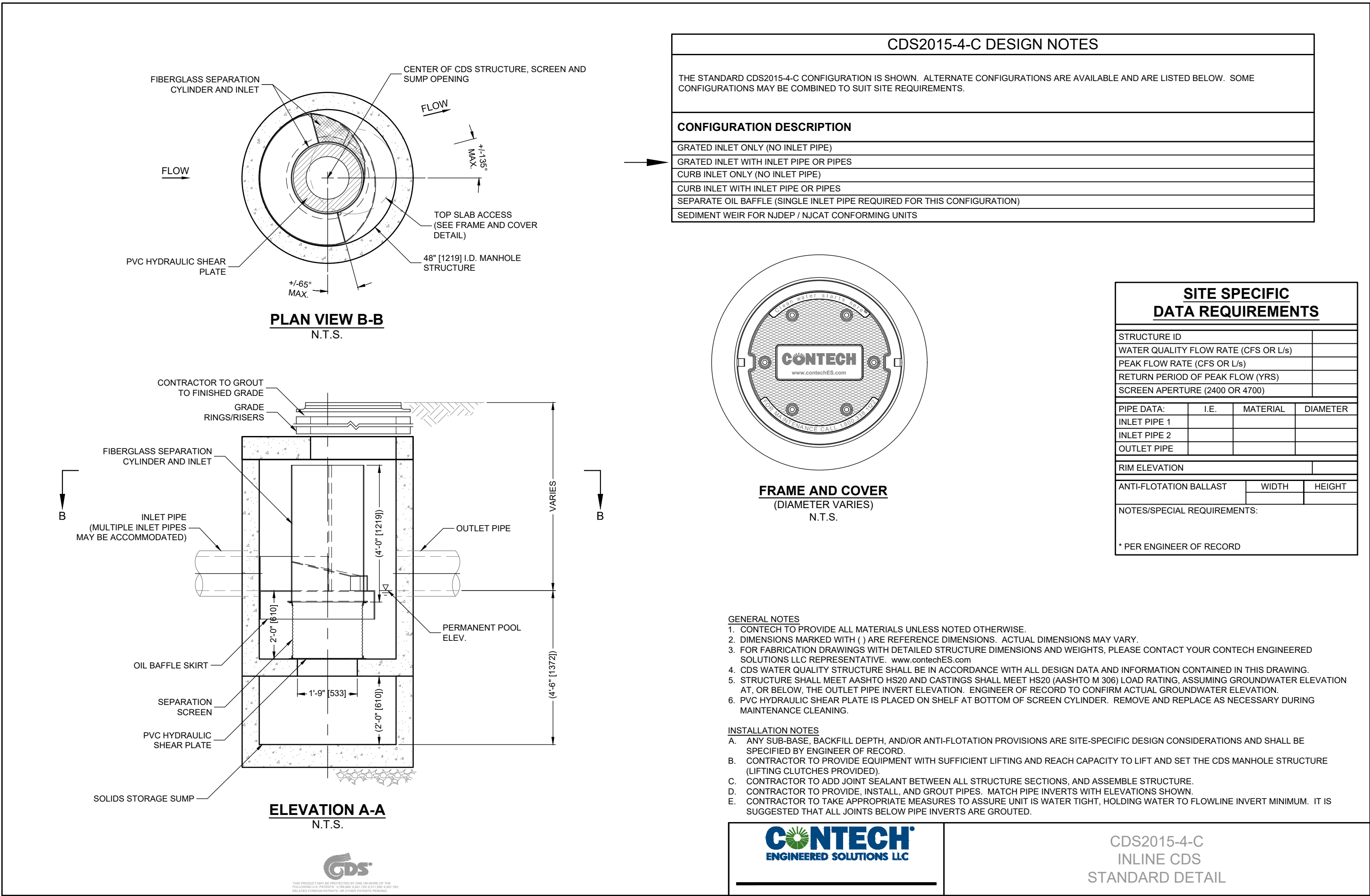
240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

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DATE: 10/10/22
PROJ. NO. 13005

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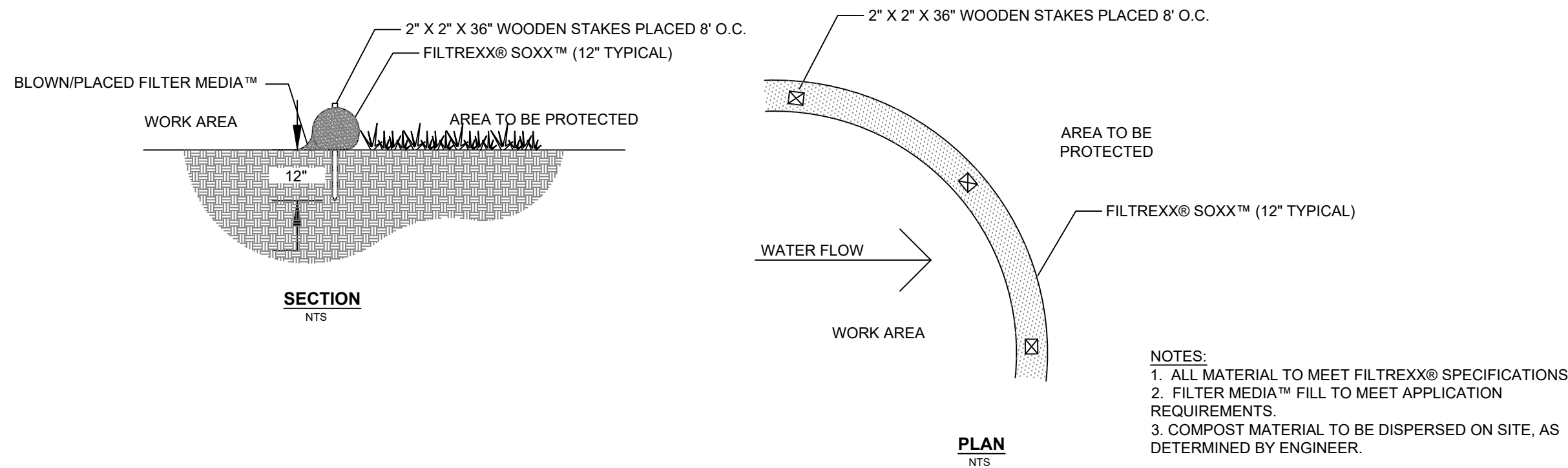
SHEET 10 of 16



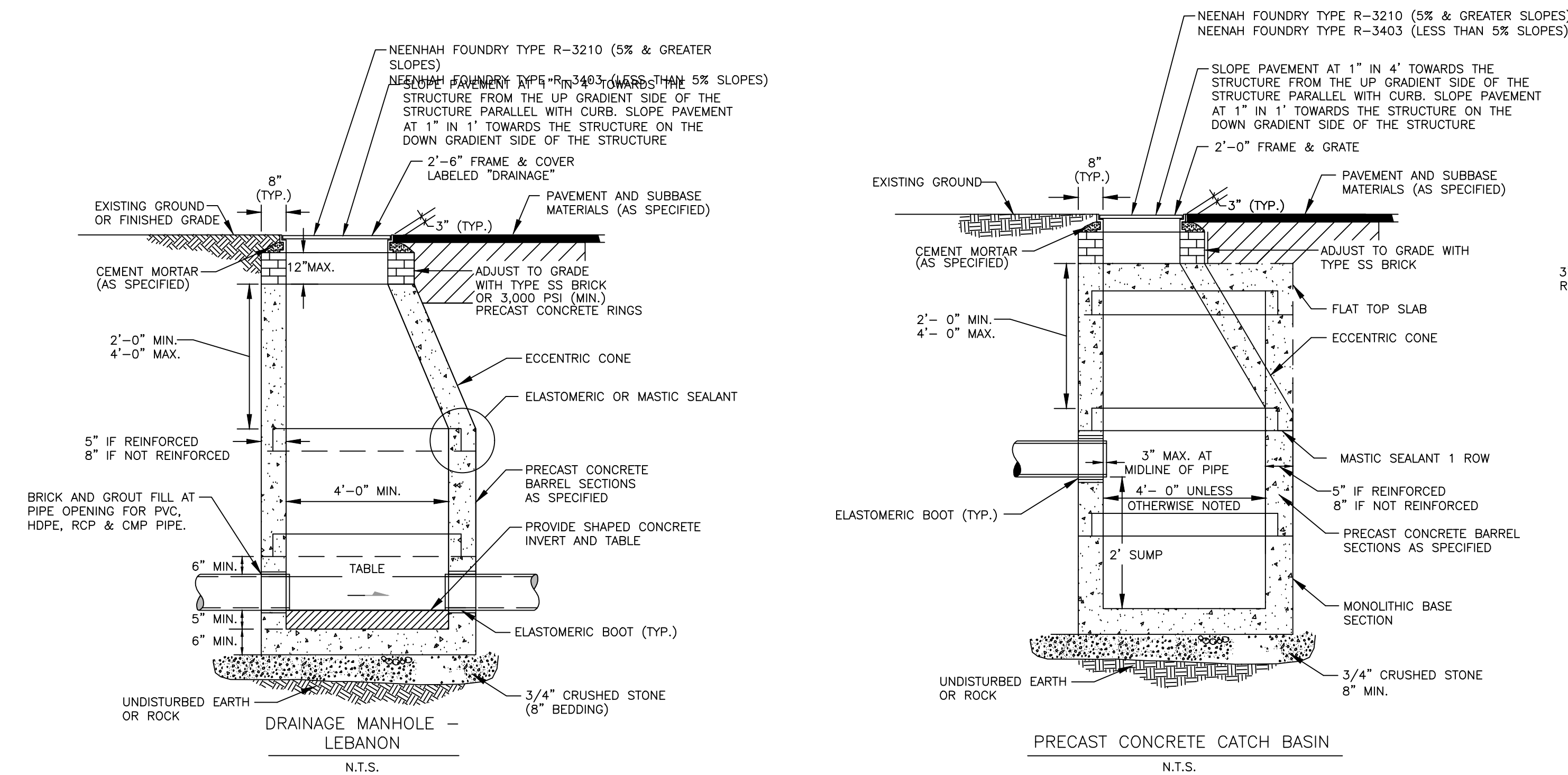
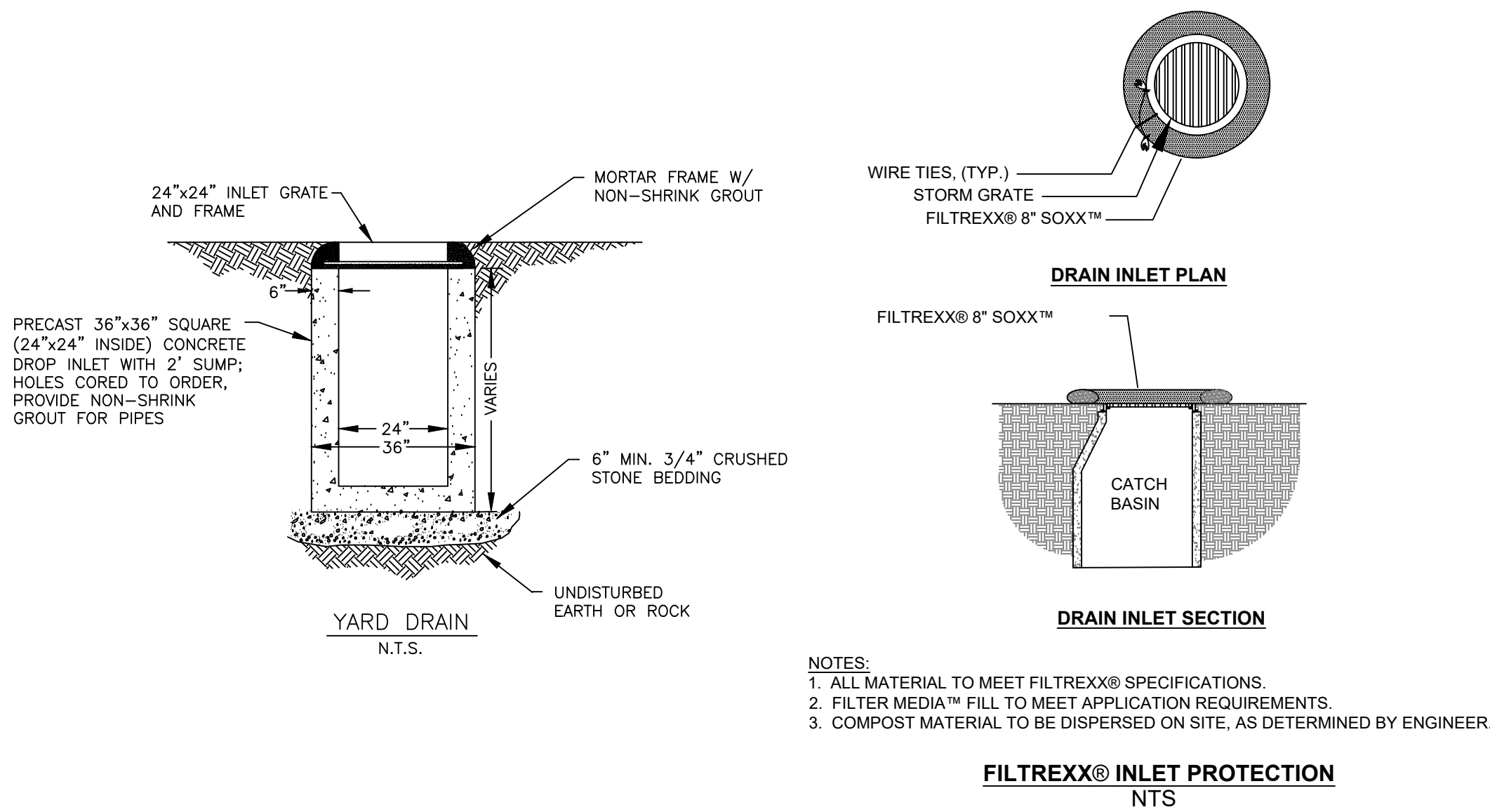


- NOTES:
- 1.) MAINTAIN ENTRANCE TO PREVENT TRACKING OF SEDIMENT INTO PUBLIC R.O.W.; REDUCE TRACKING OF SILTS ONTO PUBLIC R.O.W. BY CLEANING OR TOP DRESSING STONE FILL.
 - 2.) PROVIDE SEPARATE WHEEL CLEANING AREA WITH SUITABLE SEDIMENTATION BASIN, AS NEEDED.

STABILIZED CONSTRUCTION ENTRANCE
N.T.S.



FILTREXX® SEDIMENT CONTROL
NTS



DRAINAGE & EROSION CONTROL DETAILS

CENTERRA MARKETPLACE - STARBUCKS

CENTERRA PARKWAY - CITY OF LEBANON - GRAFTON COUNTY - NEW HAMPSHIRE

PATHWAYS CONSULTING, LLC

240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

SCALE: N.T.S.

DESIGNED BY: PAB

DRAWN BY: PAB

CHECKED BY: JSG

DATE: 10/10/22

PROJ. NO. 13005

12

SHEET 12 OF 16

EROSION CONTROL SPECIFICATIONS

1. SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN ACCORDANCE WITH "NEW HAMPSHIRE STORMWATER MANAGEMENT", VOLUMES 1, 2, & 3, DECEMBER 2008 (OR LATEST EDITION). THE CONTRACTOR SHALL HAVE REFERENCE TO THESE PUBLICATIONS.
2. IMMEDIATE ATTENTION TO EROSION CONTROL PRACTICES DRAMATICALLY IMPROVES SOIL AND MOISTURE CONSERVATION AND REDUCES NEGATIVE IMPACTS ON WATER QUALITY. THE CONTRACTOR SHALL GIVE PRIORITY TO THE TIMELY INSTALLATION OF BOTH TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES.
3. THE EROSION AND SEDIMENT CONTROL PRACTICES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIRED FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE PRACTICES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS.
4. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THE PLANS SHALL BE CLEARLY FLAGGED BY SURVEY TAPE OR FENCING, IF REQUIRED, PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED FOR THE DURATION OF CONSTRUCTION.
5. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT SHALL NOT EXCEED 5 ACRES AT ANY ONE TIME BEFORE STABILIZATION. A CONSTRUCTION SEQUENCE HAS BEEN DEVELOPED TO FACILITATE INSTALLATION OF EROSION CONTROL MEASURES AND THE COMPLETION OF GRADING, SEEDING, AND LANDSCAPING AS SOON AS POSSIBLE WITHIN A DISTURBED AREA.
6. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES, SUCH AS CONSTRUCTED WHEEL WASH SYSTEMS OR WASH PADS, MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN AND TRACK OUT TO ROAD RIGHT OF WAY DOES NOT OCCUR FOR THE DURATION OF THE PROJECT.
7. EARTH STOCKPILES SHALL BE SEEDED AND MULCHED AND HAVE A SILT FENCE INSTALLED ON THE DOWNSLOPE SIDE. NO STOCKPILES ARE ALLOWED ON PAVED SURFACES.
8. INSTALL EROSION CONTROL MEASURES AS SHOWN. CLEAN ACCUMULATED SEDIMENT AS NECESSARY. LEAVE IN PLACE UNTIL DISTURBED AREAS HAVE BEEN ADEQUATELY STABILIZED. DISTURBED AREAS RESULTING FROM SILT FENCE REMOVAL SHALL BE PERMANENTLY SEED.
9. CUT AND FILL SLOPES CALL FOR INTENSIVE EROSION CONTROL MEASURES. INSTALL MULCH NETTING AS SHOWN ON ALL SLOPES 3:1 (1 RISE ON 3 RUN) AND STEEPER. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF THEIR CONSTRUCTION.
10. ALL DISTURBED AREAS SHALL HAVE TOPSOIL SPREAD (4" MINIMUM) AND BE LIMED, FERTILIZED, TILLED, SEEDDED (WITH ANCHORED NETTING IF REQUIRED) WITHIN 72 HOURS OF FINAL GRADING. ALL ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE. WHEN PERMANENT SEEDING CANNOT BE INSTALLED BY SEPTEMBER 15, TEMPORARY SEEDING AND MULCHING OF ALL DISTURBED AREAS SHALL BE INSTALLED IMMEDIATELY AND MAINTAINED IN THAT CONDITION UNTIL PERMANENT MEASURES CAN BE INSTALLED IN THE FOLLOWING PLANTING SEASON.
11. TEMPORARY STABILIZATION OF DISTURBED AREAS:

SEED BED PREPARATION:	TILL THREE INCHES DEEP MIXING IN FERTILIZER. APPLY 2 TONS/ACRE (100#/1,000 SQ. FT.)		
FERTILIZE:	UNIFORMLY APPLY NOT LESS THAN 300#/ACRE (7#/1,000 SQ. FT.) OF 10-20-20 OR EQUIVALENT.		
SEEDING:	SELECT APPROPRIATE SEEDING MIXTURE FROM TABLE 1 BELOW. SPREAD SEED UNIFORMLY. FIRM SOIL BY ROLLING OR PACKING; IF NOT FEASIBLE, THEN RAKE LIGHTLY TO COVER SEEDS.		
MULCHING:	MULCH ALL DISTURBED AREAS WITH 1-½ TO 2 TONS OF HAY OR STRAW PER ACRE (70-90#/1,000 SQ. FT.). USE STRAW MULCH ON ALL SLOPES 3:1 OR STEEPER AND ON SLOPES SUBJECT TO WASH OR WIND BLOWN CONDITIONS. JUTE OR OTHER BIODEGRADABLE NETTING, STAKING AND STAPLING MAY BE REQUIRED.		

TABLE 1
PLANT SELECTION AND SEEDING RATES

SPECIES	PER ACRE	PER 1,000 SQ.FT.	REMARKS
WINTER RYE	2 BU OR 112 LBS.	2.5 LBS.	BEST FOR FALL SEEDING. SEED AUGUST 15 TO SEPTEMBER 15 FOR BEST COVER. SEED TO DEPTH OF ONE INCH.
OATS	2 1/2 BU OR 80 LBS.	2 LBS.	BEST FOR SPRING SEEDINGS. LATER THAN MAY 15 FOR SUMMER PROTECTION. SEED TO DEPTH OF ONE INCH.
ANNUAL RYE	40 LBS.	1 LB.	GROWS QUICKLY, BUT IS OF SHORT GRASS DURATION. USE WHERE APPEARANCES ARE IMPORTANT. COVER SEED WITH NO MORE THAN 1/4 INCH OF SOIL. WITH MULCH, SEEDING MAY BE DONE THROUGHOUT GROWING SEASON. OTHERWISE SEED EARLY SPRING OR BETWEEN AUGUST 15 & SEPTEMBER 15.

12. PERMANENT STABILIZATION OF DISTURBED AREAS:

SEED BED PREPARATION:	TOPSOIL (SANDY LOAM, LOAM, OR SILT LOAM), FRIABLE, FREE OF STUMPS, WOOD, AND ROOTS. STONES MORE THAN 1-½ INCHES IN DIAMETER OR LENGTH SHALL BE PLACED OVER ALL DISTURBED AREAS IN A 4" (MINIMUM) THICK LAYER. TOPSOIL SHALL BE FREE OF HERBICIDES AND TOXIC MATERIALS. TILL THREE INCHES DEEP, MIXING IN THE FERTILIZER AND LIME.		
FERTILIZE:	UNIFORMLY APPLY NOT LESS THAN 500#/ACRE (12#/1,000 SQ. FT.) OF 10-20-20 OR EQUIVALENT.		
SEEDING:	SPREAD SEED UNIFORMLY. FIRM SOIL BY ROLLING OR PACKING; IF NOT FEASIBLE, THEN RAKE LIGHTLY TO COVER SEEDS.		
MULCHING:	MULCH ALL DISTURBED AREAS WITH 1-½ TO 2 TONS OF HAY OR STRAW PER ACRE (70-90#/1,000 SQ. FT.). USE STRAW MULCH ON PERMANENT SEEDING OF LAWNS. USE HAY MULCH FOR SLOPES AND PERIMETER. ANCHOR ON ALL SLOPES 3:1 OR STEEPER AND ON SLOPES SUBJECT TO WASH OR WIND BLOWN CONDITIONS. JUTE OR OTHER BIODEGRADABLE NETTING, STAKING AND STAPLING MAY BE REQUIRED.		

13. MAINTENANCE: DURING THE CONSTRUCTION PERIOD UNTIL SUCH TIME AS LONG TERM VEGETATION IS ESTABLISHED.
- A. DISTURBED AREAS WILL BE FERTILIZED AND RESEEDED.
- B. CATCH BASINS WILL BE CHECKED AND CLEANED AS NECESSARY. ALL DRAINAGE AND DRAINS TO BE CLEANED ONCE VEGETATION IS ESTABLISHED.
- C. DRAINAGE AND GRASS TREATMENT SWALES SHALL BE CHECKED FREQUENTLY AND CLEANED AS REQUIRED.
- D. THE SILT FENCES AND EROSION CONTROL SOCKS WILL BE CHECKED ON A REGULAR BASIS AND REPAIRED AS NECESSARY TO CORRECT ANY DAMAGE, DETERIORATION, AND SHORT CIRCUITING.
- E. THE BOTTOM OF SEDIMENT BASINS SHALL BE PERIODICALLY CLEANED, WITH THE SEDIMENT REMOVED TO A SECURE LOCATION.
14. SITE VISITS: THE ENGINEER SHALL BE CONTACTED ON A REGULAR BASIS TO OBSERVE THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL PRACTICES. REFER TO CONSTRUCTION SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. EROSION CONTROL PRACTICES SHALL BE IN STRICT ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
15. ALL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPs SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
16. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROLS WEEKLY AND AFTER EVERY 0.5" RAINFALL. ALL DAMAGED SILT FENCES SHALL BE REPAIRED. SEDIMENT DEPOSITS SHALL BE REMOVED AS NECESSARY.
17. STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY CEASED.
18. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
- A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
- B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
- C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
- D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

WINTER CONSTRUCTION NOTES

FOR SITE WORK CONSTRUCTION BETWEEN OCTOBER 15TH AND MAY 15 THE CONTRACTOR SHALL FOLLOW WINTER CONSTRUCTION EROSION PROTECTION METHODS AS DESCRIBED BELOW:

1. CHECK ALL PERIMETER EROSION CONTROL MEASURES AND COMPLETE ANY REQUIRED MAINTENANCE AND REPAIR BEFORE THE GROUND FREEZES.
2. PUT IN PLACE ANY ADDITIONALLY NECESSARY EROSION CONTROL MEASURES; DIVERSION DIKES, HAY BALES, SILT FENCE, SEDIMENT TRAPS AND/OR BASINS, ETC. TO PROTECT DOWNSTREAM WATER QUALITY FROM ANTICIPATED WINTER WORK PRIOR TO GROUND FREEZING.
3. THE AREA OF EXPOSED, UNSTABILIZED SOIL SHOULD BE LIMITED TO ONE ACRE. GENERALLY, THE EXPOSED AREA SHOULD BE LIMITED TO ONLY THOSE AREAS IN WHICH WORK WILL OCCUR DURING THE FOLLOWING 15 DAYS AND SHOULD BE PROTECTED AGAINST EROSION BY THE METHODS DESCRIBED IN THIS SECTION PRIOR TO ANY SNOW, RAINFALL, THAW OR SPRING MELT EVENT. SUBJECT TO APPLICABLE REGULATIONS, THE ALLOWABLE AREA OF EXPOSED SOIL MAY BE INCREASED IF ACTIVITIES ARE CONDUCTED ACCORDING TO A WINTER CONSTRUCTION PLAN DEVELOPED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF NEW HAMPSHIRE OR A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL AS CERTIFIED BY THE CSPESC COUNCIL OF ENVIROCERT INTERNATIONAL, INC.
4. SUBSEQUENT WORK AREAS SHOULD NOT BE EXPOSED UNTIL THE PREVIOUSLY EXPOSED WORK ARE HAS BEEN FULLY STABILIZED
5. STABILIZATION AS FOLLOWS SHOULD BE COMPLETED WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS:
- ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHOULD BE SEEDDED AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE SECURED WITH ANCHORED NETTING, OR 2 INCHES OF EROSION CONTROL MIX.
 - ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF GREATER THAN 15% WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHOULD BE SEEDDED AND COVERED WITH A PROPERLY INSTALLED AND ANCHORED EROSION CONTROL BLANKET OR WITH A MINIMUM 4 INCH THICKNESS OF EROSION CONTROL MIX, UNLESS OTHERWISE SPECIFIED BY THE MANUFACTURER. NOTE THAT COMPOST BLANKETS SHOULD NOT EXCEED 2 INCHES IN THICKNESS OR THEY MAY OVERHEAT.
6. INSTALLATION OF ANCHORED HAY MULCH OR EROSION CONTROL MIX SHOULD NOT OCCUR OVER SNOW OF GREATER THAN ONE INCH IN DEPTH.
7. ALL MULCH APPLIED DURING WINTER SHOULD BE ANCHORED (E.G., BY NETTING, TRACKING, WOOD CELLULOSE FIBER).
8. STOCKPILES OF SOIL MATERIALS SHOULD BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR-INCH LAYER OF EROSION CONTROL MIX. MULCHING SHOULD BE DONE WITHIN 24 HOURS OF STOCKING, AND RE-ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL. NO SOIL STOCKPILE SHOULD BE PLACED (EVEN COVERED WITH MULCH) WITHIN 100 FEET FROM ANY WETLAND OR OTHER WATER RESOURCE AREA.
9. FROZEN MATERIALS (E.G., FROST LAYER THAT IS REMOVED DURING WINTER CONSTRUCTION), SHOULD BE STOCKPILED SEPARATELY AND IN A LOCATION THAT IS AWAY FROM ANY AREA NEEDING TO BE PROTECTED. STOCKPILES OF FROZEN MATERIAL CAN MELT IN THE SPRING AND BECOME UNWORKABLE AND DIFFICULT TO TRANSPORT DUE TO THE HIGH MOISTURE CONTENT IN THE SOIL.
10. INSTALLATION OF EROSION CONTROL BLANKETS SHOULD NOT OCCUR OVER SNOW OF GREATER THAN ONE INCH IN DEPTH OR ON FROZEN GROUND.
11. ALL GRASS-LINED DITCHES AND CHANNELS SHOULD BE CONSTRUCTED AND STABILIZED BY SEPTEMBER 1. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHOULD BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS, AS DETERMINED BY A QUALIFIED PROFESSIONAL ENGINEER OR A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL AS CERTIFIED BY THE CSPESC COUNCIL OF ENVIROCERT INTERNATIONAL, INC. IF A STONE LINING IS NECESSARY, THE CONTRACTOR MAY NEED TO RE-GRADE THE DITCH AS REQUIRED TO PROVIDE ADEQUATE CROSS-SECTION AFTER ALLOWING FOR PLACEMENT OF THE STONE.
12. AFTER OCTOBER 15TH, INCOMPLETE ROAD OR PARKING AREAS WHERE ACTIVE CONSTRUCTION OF THE ROAD OR PARKING AREAS HAS STOPPED FOR THE WINTER SEASON SHOULD BE PROTECTED WITH A MINIMUM 3 INCH LAYER OF SAND AND GRAVEL WITH A GRADATION SUCH THAT LESS THAN 12% OF THE SAND PORTION, OR MATERIAL PASSING THE NUMBER 4 SIEVE, BY WEIGHT, PASSES THE NUMBER 200 SIEVE.
13. SEDIMENT BARRIERS THAT ARE INSTALLED DURING FROZEN CONDITIONS SHOULD CONSIST OF COMPOST SOCKS, EROSION CONTROL MIX BERMS, OR CONTINUOUS CONTAINED BERMS. SILT FENCES SHOULD NOT BE INSTALLED WHEN FROZEN CONDITIONS PREVENT PROPER EMBEDMENT OF THESE BARRIERS.
14. INSPECT THE EROSION AND SEDIMENT CONTROL MEASURES MORE FREQUENTLY THAN IS SPECIFIED IN THE EROSION CONTROL INSPECTION, MONITORING, AND MAINTENANCE SPECIFICATIONS FOUND ON THIS SHEET DURING THE WINTER AND SPRING THAW MONTHS TO PREVENT FAILURE AND/OR OVERLOADING.
15. BEFORE PREDICTED THAWS AND/OR HEAVY RAIN EVENTS CHECK ALL MEASURES TO ENSURE THAT THEY WILL BE ABLE TO HANDLE POTENTIALLY HEAVY AND INTENSE RUNOFF AND SEDIMENTATION.
16. CONTRACTOR SHALL BE PREPARED TO INSTALL A SECOND LINE OF DEFENSE IF PROBLEMS WITH IN-PLACE EROSION CONTROL MEASURES OCCUR DURING WINTER THAW AND SPRING RAIN EVENTS.
17. AS EARLY AS PRACTICAL AT THE BEGINNING OF THE NEXT GROWING SEASON, CONTRACTOR SHALL STABILIZE COMPLETED AREAS WITH PERMANENT VEGETATIVE CONTROLS AS SPECIFIED ON THESE DRAWINGS.

EROSION CONTROL CONSTRUCTION SEQUENCE

1. PRE-CONSTRUCTION MEETING.
2. INSTALL CATCH BASIN PROTECTION IF REQUIRED.
3. GRADE AND INSTALL CONSTRUCTION ENTRANCE(S).
4. INSTALL PERIMETER CONTROLS (SILT FENCE, EROSION SOCKS, CONSTRUCTION FENCE, ETC.) PRIOR TO EARTH MOVING OPERATIONS.
5. GRADE AND STABILIZE CONSTRUCTION ROADS.
6. CONSTRUCT SURFACE WATER CONTROLS (INTERCEPTOR DIKES, PIPE SLOPE DRAINS, ETC.), IF REQUIRED, SIMULTANEOUSLY WITH CLEARING AND GRADING FOR PROJECT DEVELOPMENT.
7. LAND CLEARING AND GRADING. SITE PREPARATION INCLUDING CUTTING AND FILLING, BARRIERS, DIVERSIONS, DRAINS, CULVERTS, AND SURFACE ROUGHENING.
8. SURFACE STABILIZATION, TEMPORARY AND PERMANENT SEEDING, MULCHING, SODDING, RIPRAP.
9. BUILDING CONSTRUCTION. BUILDINGS, DRAIN SYSTEMS, UTILITIES, AND PAVING.
10. LANDSCAPING AND FINAL STABILIZATION. TOPSOILING, TREES AND SHRUBS, PERMANENT SEEDING, MULCHING, SODDING, RIPRAP.
11. UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS MUST BE STABILIZED.
12. CONTINUOUSLY INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
13. REMOVE TRAPPED SEDIMENTS FROM EROSION AND SEDIMENT CONTROL MEASURES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPROVED DRAWINGS, SPECIFICATIONS, AND ANY ISSUED ADDENDA.
2. THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING PRIOR TO PROCEEDING WITH WORK.
3. WRITTEN DIMENSION SHALL HAVE PRECEDENCE OVER SCALED DIMENSION. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS. IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWINGS AND SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE FLOWS THROUGH THE SITE THROUGHOUT CONSTRUCTION.
5. ALL STRUCTURES, PIPELINES, AND UTILITY POLES LOCATED ADJACENT TO THE TRENCHING OR EXCAVATION WORK SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL WORK IS BACKFILLED. DAMAGE TO ANY SUCH STRUCTURE CAUSED BY, OR RESULTING FROM, THE CONTRACTORS OPERATIONS SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION, OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE OWNER.
6. THE CONTRACTOR SHALL INSTALL AND MAINTAIN PERMANENT AND TEMPORARY TRAFFIC CONTROL DEVICES AS NECESSARY AND IN A MANNER CONSISTENT WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) FOR CONSTRUCTION ENTERING AND EXITING THE SITE, AND FOR WORK WITHIN THE MUNICIPAL RIGHT-OF-WAY. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING TRAFFIC FLOW DURING ALL PHASES IMPACTED BY CONSTRUCTION. THE LEBANON POLICE DEPARTMENT (448-1212) AND FIRE DEPARTMENT (448-8810) ARE TO BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF WORK IMPACTING THE FLOW OF TRAFFIC.
7. OPEN TRENCHES IN THE ROADWAY MUST BE BACKFILLED AT THE END OF EACH WORKDAY, UNLESS PERMISSION TO COVER THEM IS PROVIDED BY THE CITY OF LEBANON.
8. CONTRACTOR SHALL MITIGATE FUGITIVE DUST TO A TOLERABLE LIMIT. WATERING AND DAILY SWEEPING SHALL BE COMPLETED BY THE CONTRACTOR. CONTRACTOR SHALL NOT TRACK OR SPILL EARTH AND DEBRIS ON PUBLIC STREETS OR ADJACENT PAVED SURFACES OUTSIDE OF THE PROJECT AREA. STREETS OPENED TO THE PUBLIC SHALL BE KEPT FREE OF DEBRIS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS PREPARED BY PATHWAYS CONSULTING, LLC. DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS, OR OWNERS REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SURVEYOR OR ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), LOCAL REGULATIONS, AND/OR THE BOARD OF LABOR. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT AREA AND ALL EXISTING CONDITIONS SURROUNDING IT THEREON.
10. THE ENGINEER SHALL BE NOTIFIED PRIOR TO CONSTRUCTION IF THERE ARE ANY DISCREPANCIES IN PLANS OR EXISTING DATA. CONSTRUCTION SHALL NOT PROCEED WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.
11. THE ENGINEER WILL PROVIDE THE CONTRACTOR WITH EXISTING CONTROL POINTS TO ESTABLISH THE CONSTRUCTION BASELINE. THE POINTS TO BE PROVIDED ARE INCLUDED WITH THESE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND REESTABLISHING THESE POINTS FOR THE DURATION OF THE PROJECT. CONTROL POINT AND BENCHMARK ACCURACY WAS CONFIRMED AT THE TIME OF THE SURVEY AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF THESE POINTS PRIOR TO USING THEM FOR CONSTRUCTION OR RECORDING RECORD INFORMATION. IF THE CONTRACTOR FINDS ANY POINT PROVIDED TO BE INACCURATE, THE CONTRACTOR MUST NOTIFY THE ENGINEER IMMEDIATELY IN WRITING. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR LAYOUT OF THE WORK AT THE PROJECT SITE.
12. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR WORK COMPLETED BY THE CONTRACTOR.
13. THE CONTRACTOR MUST PROVIDE PROPER INSTRUMENTATION TO RECORD ACCURATE COORDINATES AS WELL AS ELEVATIONS WITHIN 0.01' FOR ALL NEW INFRASTRUCTURE. THIS SHALL INCLUDE DRAINAGE AND SEWER PIPE INVERTS AT STRUCTURES AND RIM ELEVATION, FITTINGS, CHANGES IN DIRECTION, AND ELEVATION, WATER VALVES, FITTINGS, SERVICE TAPS, CONNECTIONS TO EXISTING MAINS, AND ALL CHANGES IN DIRECTION. THE CITY OF LEBANON REQUIRES ALL RECORDS TO BE SUBMITTED IN PDF AND AUTOCAD FORMAT AT FINAL COMPLETION OF THE PROJECT.
14. THE CONTRACTOR MUST COMPLETE AND SUBMIT AN EXCAVATION PERMIT WITH THE CITY OF LEBANON FOR WORK WITHIN THE RIGHT OF WAY PRIOR TO THE START OF CONSTRUCTION. THE PERMIT WILL REQUIRE A BOND WITH THE CITY, A TRAFFIC CONTROL PLAN, AND EMERGENCY CONTACT INFORMATION.
15. UTILITY INFORMATION SHOWN HEREON WAS OBTAINED FROM THE BEST AVAILABLE SOURCE AND MAY OR MAY NOT BE EITHER ACCURATE OR COMPLETE. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY UTILITY, PUBLIC OR PRIVATE, SHOWN OR NOT SHOWN HEREON. CONTRACTOR SHALL CONNECT OR RECONNECT ALL UTILITIES TO THE NEAREST SOURCE THROUGH COORDINATION WITH THE UTILITY OWNER. EXPLORATORY EXCAVATION SHALL BE REQUIRED TO VERIFY LOCATION AND SIZE OF UTILITIES AND APPURTENANCES.
16. THE CONTRACTOR SHALL NOT DISTURB ANY EXISTING UTILITY SERVICE (PRIVATE OR PUBLIC WITHOUT WRITTEN AUTHORIZATION FROM THE OWNER. THE CONTRACTOR SHALL PLAN AHEAD AND NOTIFY UTILITY OWNERS 72 HOURS IN ADVANCE OF PLANNED WORK.
17. THE ENGINEER SHALL BE NOTIFIED OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION AGREED TO BY THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG-SAFE" (886-DIG-SAFE) AT LEAST ONE WEEK PRIOR TO PLANNED EXCAVATION. DIG-SAFE WILL NOT MARK PRIVATE UTILITIES, IN WHICH CASE A PRIVATE LOCATING COMPANY IS RECOMMENDED TO BE UTILIZED BY THE CONTRACTOR TO MARK ON-SITE PRIVATE UTILITIES.
18. ALL SEWER WORK ON THIS PROJECT MUST BE IN ACCORDANCE WITH CITY OF LEBANON STANDARDS. THE TAPPING SADDLE INTENDED FOR USE WITH THE SERVICE CONNECTION MUST BE APPROVED BY THE CITY ONE WEEK PRIOR TO THE INTENDED INTERCONNECTION. SEWER SERVICE LINES SHALL BE TESTED IN ACCORDANCE WITH CITY OF LEBANON STANDARDS. CONTRACTOR SHALL COORDINATE WITH THE CITY OF LEBANON OR THEIR THIRD PARTY AGENT TO ARRANGE OBSERVATION OF TESTING.
19. ALL WATER SERVICE WORK ON THIS PROJECT MUST BE IN ACCORDANCE WITH CITY OF LEBANON STANDARDS. MINIMUM BURY DEPTH ON WATER SERVICE IS 5.5 FEET FROM FINISH GRADE. WATER SERVICE TESTING/DISINFECTION/FLUSHING/SAMPLING SHALL BE IN ACCORDANCE WITH CITY OF LEBANON AND AWWA STANDARDS. CONTRACTOR SHALL COORDINATE WITH THE CITY OF LEBANON OR THEIR THIRD PARTY AGENT TO ARRANGE OBSERVATION OF TESTING.
20. CONTAMINATED SOILS AND GROUNDWATER MAY BE PRESENT ON-SITE. THE CONTRACTOR SHALL COORDINATE PROPER MANAGEMENT OF ANY CONTAMINATED MATERIALS DURING EXCAVATION WORK WITH THE PROJECT OWNER. ANY AND ALL HANDLING OF CONTAMINATED SOILS SHALL BE IN ACCORDANCE WITH RHDES RULES/PERMITS AND OSHA STANDARDS. THE CONTRACTOR AND OWNER SHALL COORDINATE ALL EXCAVATION WORK WITH THE EXISTING SITE ENVIRONMENTAL MANAGER PRIOR TO AND DURING CONSTRUCTION. MONITORING WELLS EXIST ON THE SITE. DISTURBANCES/REMOVAL/WORK AROUND THESE WELLS MUST ALSO BE COORDINATED PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR CANNOT IMPACT THESE WELLS WITHOUT PROPER COORDINATION.
21. ALL SOIL/AGGREGATE MATERIALS REFERENCED IN THESE DRAWINGS MUST BE IN ACCORDANCE WITH NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION UNLESS AMENDED BY THE ENGINEER IN DISTRIBUTED PROJECT SPECIFICATIONS.

EROSION CONTROL NOTES FOR

CENTERRA MARKETPLACE - STARBUCKS

CENTERRA PARKWAY — CITY OF LEBANON — GRAFTON COUNTY — NEW HAMPSHIRE

PATHWAYS CONSULTING, LLC

240 MECHANIC STREET, SUITE 100
LEBANON, NEW HAMPSHIRE 03766
(603) 448-2200

SCALE: N.T.S.

DESIGNED BY: PAB

DRAWN BY: PAB

CHECKED BY: JSG

DATE: 10/10/22

PROJ. NO. 13005

SHEET 13 OF 16

13

SITE PHOTOMETRIC CALCULATIONS	
<u>PARKING LOT AREA:</u>	
AVERAGE: 3.17FC	AVERAGE / MIN: 3.20
<u>PATIO AREA:</u>	
AVERAGE: 9.78FC	AVERAGE / MIN: 3.43
<u>DRIVE THRU:</u>	
AVERAGE: 5.68FC	AVERAGE / MIN: 6.18
<u>SIDEWALK:</u>	
AVERAGE: 7.08FC	AVERAGE / MIN: 8.00
<u>DUMPSTER AREA:</u>	
AVERAGE: 3.59FC	AVERAGE / MIN: 1.38

LIGHT FIXTURE SCHEDULE - SITE				
TYPE MARK	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LAMP TYPE
E	N/A	N/A	EXISTING SITE LIGHT TO REMAIN IN PLACE	LED
RE	N/A	N/A	RELOCATED EXISTING SITE LIGHT	LED
S3	LITHONIA	RSX2-LED-P3-30K-R3	LED AREA LIGHT WITH TYPE 3 DISTRIBUTION HEAD MOUNTED ON 20 POLE.	LED
S5	LITHONIA	RSX2-LED-P5-30K-R5	LED AREA LIGHT WITH TYPE 5 DISTRIBUTION HEAD MOUNTED ON 20 POLE.	LED
WS2-2	LITHONIA	WS2-LED-P2-30K-VW-MVOL-DBLXD	BUILDING MOUNTED WALL PACK. MOUNTED AT 12.5 FEET.	LED

PARKING LOT LIGHTING SHALL BE AUTOMATIC SCHEDULED ON/OFF, PHOTOCCELL OVERRIDE OFF, MANUAL OVERRIDE AT PANEL.



1 ELECTRICAL SITE PHOTOMETRICS

SHEET 14 OF 16

LEBANON, NH

JOB NUMBER: 40-22-000003

ISSUE BLOCK

CHECKED BY: JACM

DRAWN BY: JPF

DOCUMENT DATE: 11/24/2022

NOT FOR CONSTRUCTION

SITE
PHOTOMETRIC
PLAN

SHEET:

ES100



**STARBUCKS COFFEE
COMPANY**
2401 UTAH AVENUE SOUTH
SEATTLE, WASHINGTON 98134
(206) 318-1575

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STARBUCKS TEMPLATE VERSION i2021.04.23



45 WEST 21st STREET, SUITE 403
NEW YORK, NY 10010
212.904.0432

IN ASSOCIATION WITH THE ARCHITECT:

R H SWEERS II, PROPRIETOR
RH SWEERS ARCHITECT
 RHS@SWEERSARCH.COM

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DISCLAIM ANY RESPONSIBILITY FOR THE EXISTING BUILDING
CONSTRUCTION ELEMENTS, SITE CONDITIONS AND ANY DOCUMENTS
WHICH DO NOT BEAR MY

PROJECT NAME:
CENTERRA
MARKETPLACE, NH

PROJECT ADDRESS:
CENTERRA, MARKETPLACE,
LEBANON, NH

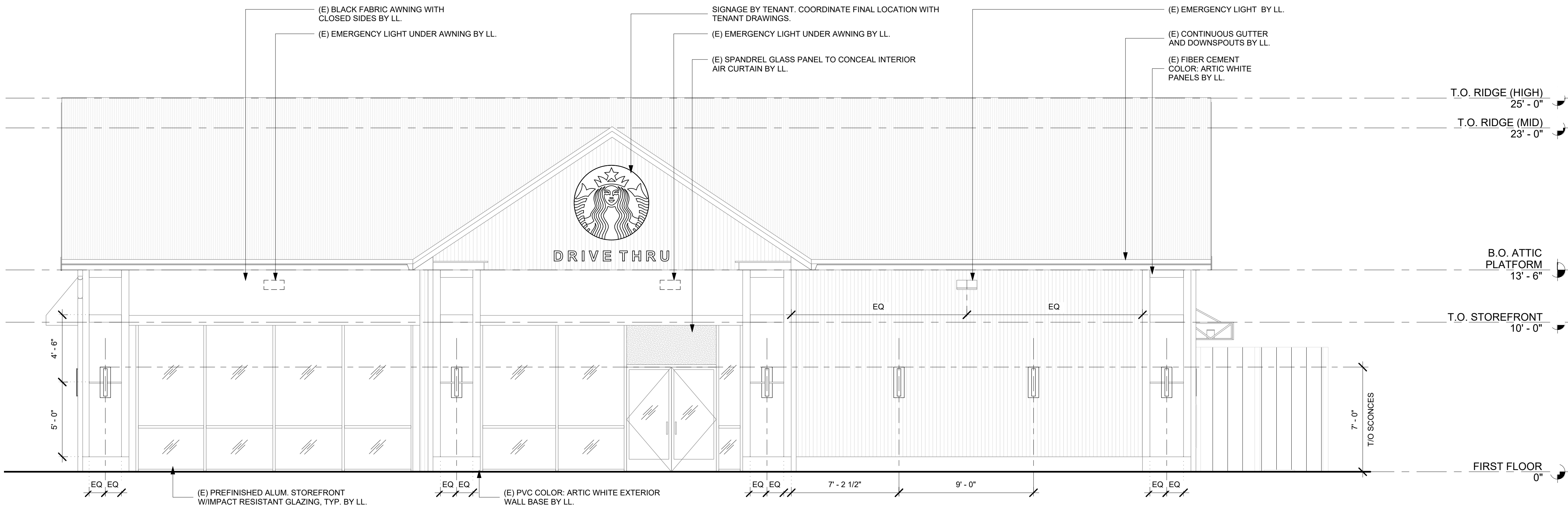
STORE #: 77915
PROJECT #: 94878-001
ISSUE DATE: 02-09-2024
STORE DESIGNER: ALEKSANDAR
SPASOJEVIC
ENGINEER OF RECORD: KLH ENGINEE

Revision Schedule			
Rev	Date	By	Description

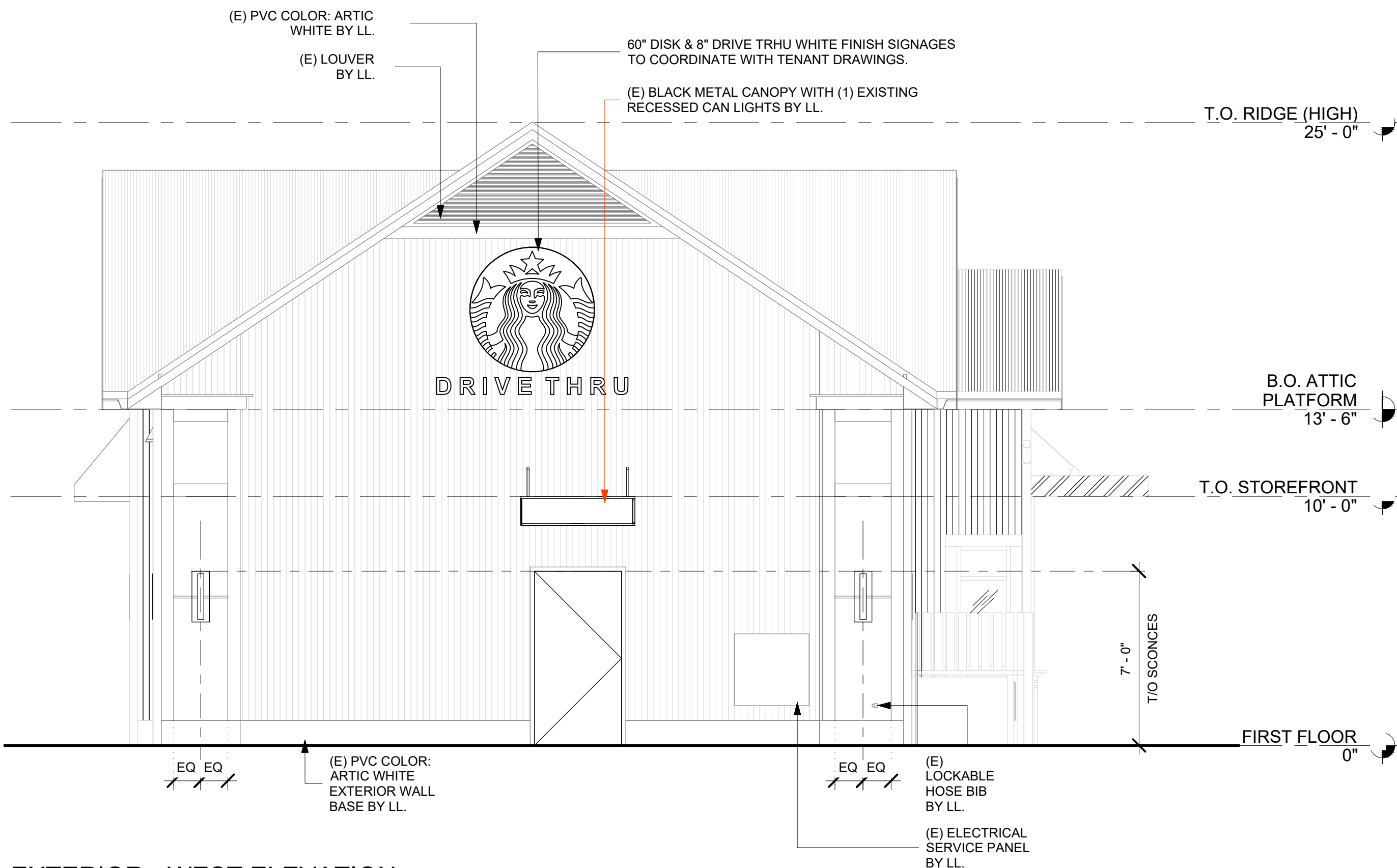
SHEET TITLE:
**SURVEY BUILDING
ELEVATIONS**
SCALE: AS SHOWN

SHEET NUMBER:
SSR-02

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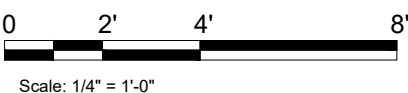
1 EXTERIOR - NORTH ELEVATION
Scale: 1/4" = 1'-0"

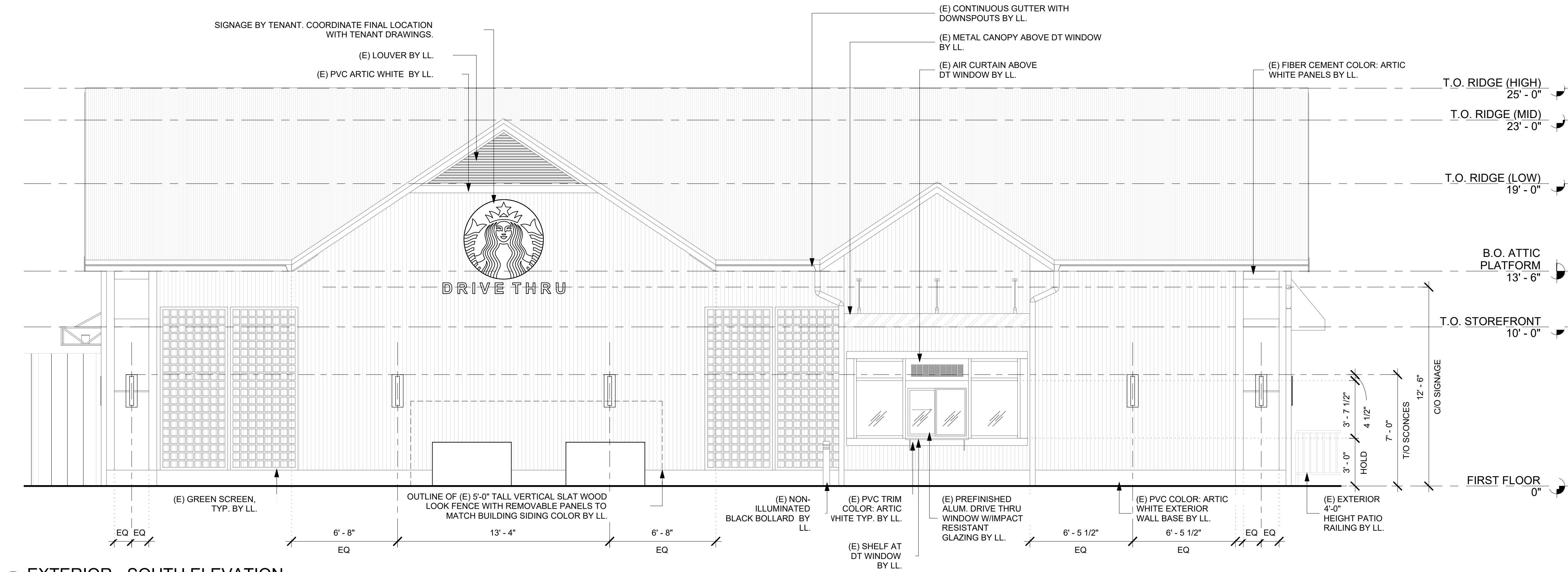


2 EXTERIOR - WEST ELEVATION
Scale: 1/4" = 1'-0"

LEGEND

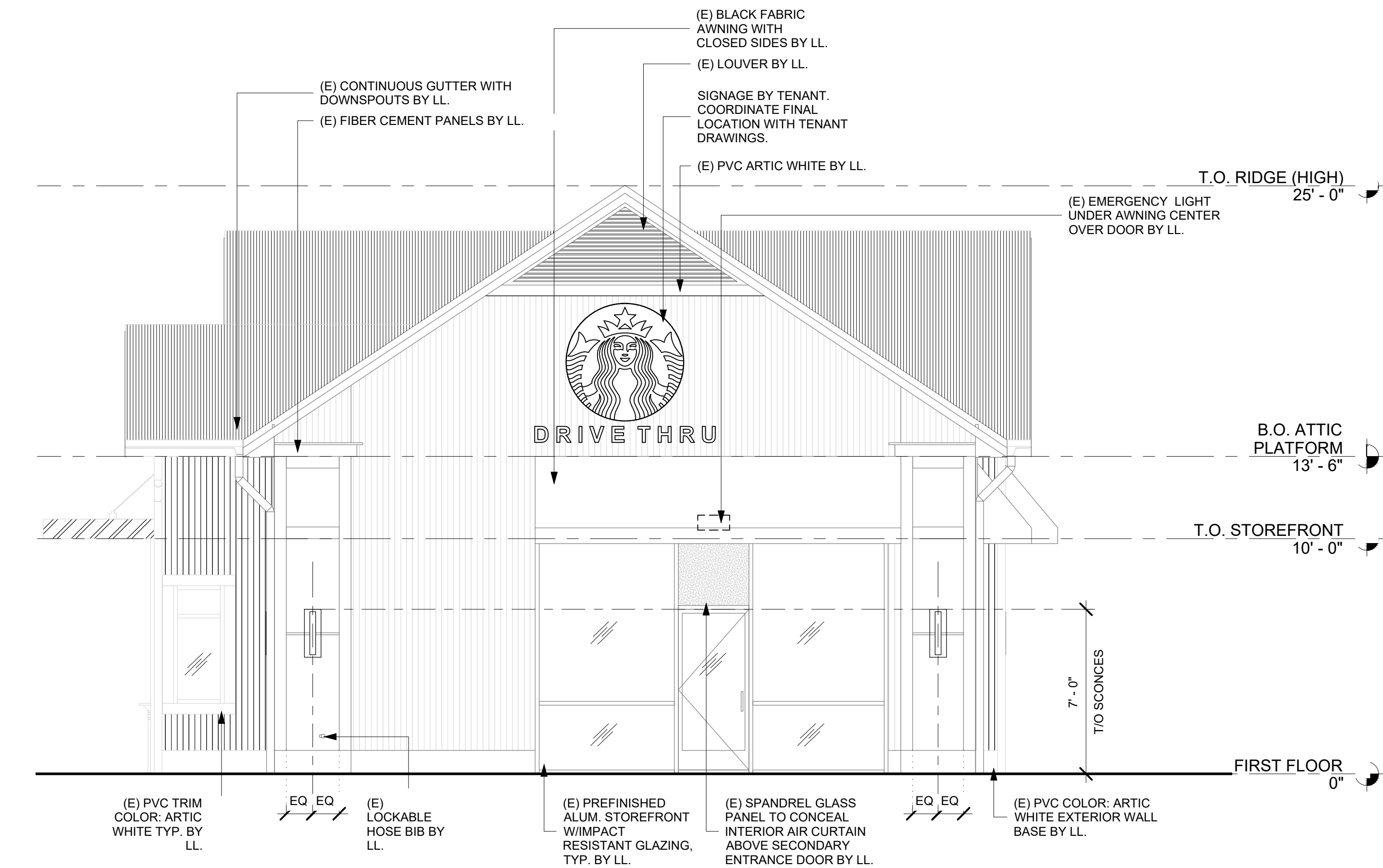
-  WOOD SIDING,
COLOR: ARTIC WHITE
-  METALLIC-COATED STEEL ZINC-COATED ROOF
-  METAL CANOPY, TO MATCH RAL #7021 MATTE
BLACK.





1 EXTERIOR - SOUTH ELEVATION

Scale: 1/4" = 1'-0"

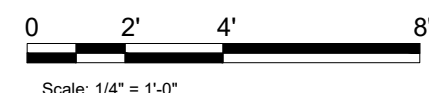


2 EXTERIOR - EAST ELEVATION

Scale: 1/4" = 1'-0"

LEGEND

- WOOD SIDING, COLOR: ARTIC WHITE
- METALIC-COATED STEEL ZINC-COATED ROOF.
- METAL CANOPY, TO MATCH RAL #7021 MATTE BLACK.



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PROJECT NAME:
CENTERRA
MARKETPLACE, NH

PROJECT ADDRESS:
CENTERRA, MARKETPLACE,
LEBANON, NH

STORE #: 77915
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ISSUE DATE: 02-09-2024
STORE DESIGNER: ALEKSANDAR SPASOJEVIC
ENGINEER OF RECORD: KLH ENGINEER

Revision Schedule

Rev	Date	By	Description

SHEET TITLE:
SURVEY BUILDING
ELEVATIONS
SCALE: AS SHOWN

SHEET NUMBER:

SSR-03



CITY OF LEBANON ~ PLANNING & DEVELOPMENT

PLANNING BOARD

June 10, 2024 Meeting

Staff Memorandum – PB2024-21-GOV

APPLICATION INFORMATION

Agenda Item: 3.C

Application ID#:
PB2024-21-GOV

Application Type:
Governmental Use Site Plan
Review (advisory only)

Property Location:
12 South Park Street (Tax Map
91, Lot 253)

Property Owner/Applicant:
City of Lebanon

Existing Improvements & Use:
City of Lebanon Fire Station #1

Proposed Improvements:
New City of Lebanon fire station
and associated site
improvements

Property Size:
+/-0.84 acres (36,527.4 sq. ft.)

Future Land Use Map:
Public Institution

Zoning District:
Lebanon Downtown (LD)

Overlay Districts:
None

LEGAL NOTICE

City of Lebanon, 12 South Park Street (Tax Map 91, Lot 253), zoned LD: Site plan review for a proposed +/- 24,796 sq. ft. municipal fire station to replace the existing facility, together with associated site improvements. PB2024-21-GOV

NOTE: This application will be reviewed as a Governmental Land Use pursuant to NH RSA 674:54).

APPLICATION MATERIALS

- ▶ Application form
- ▶ Letter dated May 13, 2024, from David Fenstermacher, PE, of VHB (project description; 2 pages)
- ▶ Certified Notification List
- ▶ Plan set titled, "Lebanon Fire Station," prepared by VHB, dated May 13, 2024, VHB Project: 52635.00 (15 sheets)

COMPLETENESS REVIEW

This application is being reviewed in accordance with New Hampshire RSA 674:54, Governmental Land Uses. As such, there is no completeness review for this project. In addition, any comments on the proposal by the Planning Board and City staff are considered non-binding on the applicant.

APPLICATION OVERVIEW

The subject property is owned by the City of Lebanon and is currently improved with the City of Lebanon Fire Station #1, a 14,480 sq. ft. municipal facility constructed in 1954. As described in the attached letter from David Fenstermacher, PE, the City proposes to demolish the existing fire station and construct a new three story, four bay, fire department facility with twenty parking spaces and utility infrastructure. Associated site work including improved sidewalks, concrete apron, and stormwater and utility upgrades are also proposed to support the use. Construction of the new Fire Station #1 is expected to take approximately 18 months.

The proposed replacement fire station and related site improvements constitute a "major change" as defined in Article II of the Site Plan Review Regulations. Therefore, the project would ordinarily require site plan review from the Planning Board per Section 3.1.D. However, because the proposed fire station will be owned and operated by the City of Lebanon,

the project qualifies as a Governmental Land Use pursuant RSA 674:54 and, therefore, is not subject to the Site Plan Review Regulations. Nevertheless, the Planning Board is permitted to conduct a public hearing on the project, as set forth in NH RSA 674:54, II:

The [...] city [...] shall give written notification to the [...] planning board [...] of a municipality of any proposed governmental use of property within its jurisdiction, which constitutes a substantial change in use or a substantial new use. Written notification shall contain plans, specifications, explanations of proposed changes available at the time, a statement of the governmental nature of the use as set forth in paragraph I, and a proposed construction schedule. Such notification shall be provided at least 60 days prior to the beginning of construction. Either the governing body or planning board of the municipality may conduct a public hearing relative to the proposed governmental use. A representative of the governmental entity which provided notice shall be available to present the plans, specifications, and construction schedule, and to provide explanations. The governing body or planning board may issue nonbinding written comments relative to conformity or nonconformity of the proposal with normally applicable land use regulations to the sponsor of the governmental use within 30 days after the hearing.

Although the Planning Board's review and comments (if any) are advisory only, note that all improvements/structures will need to comply with all other applicable rules and regulations including but not limited to the Building Code.

Figure 1. Bird's Eye View of Property (looking south)



Cc (via e-mail): Dave Fenstermacher, PE, VHB
Shaun Mulholland, City Manager
Jim Wheatley, Fire Chief

**CITY OF LEBANON
APPLICATION FOR**

SPECIAL EXCEPTION ☐	☒ SITE PLAN REVIEW
VARIANCE ☐	☐ SUBDIVISION
MOTION FOR REHEARING ☐	☐ LOT LINE ADJUSTMENT
APPEAL OF AN ADMIN. DECISION ☐	☐ CONDITIONAL USE PERMIT

☐ OTHER _____

PROPERTY OWNER (APPLICANT):

NAME: City of Lebanon, c/o Shaun Mulholland TEL.#: 603-448-4220

MAILING ADDRESS: 51 North Park Street, Lebanon, NH 03766

E-MAIL ADDRESS: shaun.mulholland@lebanonnh.gov

CO-APPLICANT, AGENT, OR LESSEE:

NAME: VHB, c/o David Fenstermacher, PE TEL.#: 603-448-4220

MAILING ADDRESS: 2 Bedford Farms Drive - Suite 200, Bedford, NH 03110

E-MAIL ADDRESS: dfenstermacher@vhb.com

PROJECT LOCATION:

TAX MAP #: 91 LOT#: 253 PLOT #: N/A ZONE: LD - Lebanon Downtown

STREET ADDRESS OF PROJECT: 12 S Park St, Lebanon, NH 03766

IS THIS PROPERTY LOCATED IN THE: **WETLANDS** ☐ YES ☒ NO **HISTORIC DISTRICT** ☒ YES ☐ NO
FLOOD PLAIN ☐ YES ☒ NO

SCOPE OF PROJECT:

The project consists of the demolition of the existing FD Station #1 and replacing the building with a new three story, four bay, FD facility as indicated in the plans.

TYPE OF OCCUPANCY:

EXISTING ☐ VACANT ☐ ONE FAMILY ☐ TWO FAMILY ☐ MULTI-FAMILY ☐ COMMERCIAL ☒ INDUSTRIAL
PROPOSED ☐ VACANT ☐ ONE FAMILY ☐ TWO FAMILY ☐ MULTI-FAMILY ☐ COMMERCIAL ☒ INDUSTRIAL
IF USE IS **COMMERCIAL** OR **INDUSTRIAL**, PLEASE NOTE **SPECIFIC**
USE: Fire Station

SIGNATURE BLOCK:

FOR PLANNING BOARD APPLICATIONS ONLY: I, the undersigned, hereby submit this application on the date noted below with the knowledge and understanding that the Planning Board shall determine if the submitted application is complete according to its regulations at its next regularly scheduled meeting on _____, 20____, unless I personally request, in writing, that the Board delay its determination of completeness to a later date.

PROPERTY OWNER: Shaun Mulholland DATE: _____
Shaun Mulholland (May 13, 2024 16:53 EDT)

NOTE: IF, AS OWNER, YOU WISH TO DESIGNATE AN AGENT TO ACT ON YOUR BEHALF, PLEASE READ THE FOLLOWING AND SIGN BELOW: I hereby designate the person listed above as my agent for the purpose of procuring the necessary local permits for the proposed work as described herein. Representations made by my agent may be accepted as though made by me personally, and I understand that I am bound by any official decision made on the basis of such representation.

PROPERTY OWNER: Shaun Mulholland DATE: _____
Shaun Mulholland (May 13, 2024 16:53 EDT)

DATE RECEIVED	FILE # (MAP/LOT)	APPLICATION #	FEE - \$ AMOUNT	DATE PAID	VOUCHER #
5/13/2024	91-253	PB2024-21-GOV			

May 13, 2024

Ref: 52635.00

Mr. Timothy Corwin
Deputy Planning and Development Director
51 North Park Street
5th Floor
Lebanon, NH

Re: Lebanon Fire Station
Site Plan Application
Map 91 Lot 253

Mr. Corwin,

On behalf of our applicant, VHB has prepared the following request for the Site Plan Application of the Lebanon Fire Station project at 12 South Park Street. In support of the requested Site Plan Application, please find the attached items:

- Site Plan Application (signature from City required as owner)
- Abutter's List
- Site Plans (7 - 11" x 17")

Development Program

The project consists of the demolition of the existing fire station and reconstruction of new three story, four bay, fire department facility with twenty parking spaces and utility infrastructure. Associated site work including improved sidewalks, concrete apron, and stormwater and utility upgrades constructed to support the use.

Stormwater Handling and Treatment

The proposed project will result in no increase in permanent impervious area. The stormwater management plan, which consists of a subsurface detention basin, has been designed to mitigate the projects impacts to peak stormwater runoff and meet the City of Lebanon's requirements for stormwater treatment and erosion control. Calculations and other supporting data can be provided if requested.

Mr. Timothy Corwin

Ref: 52635.00

May 13, 2024

Page 2



Utilities

The project will utilize existing utility infrastructure that existing connections within Church Street, consisting of water, sewer, power, and stormwater. The project will also include the installation of a propane tank and generator.

Erosion Control Measures

During construction of the proposed project, the contractor shall be responsible for the installation and maintenance of temporary sedimentation and erosion control measures to prevent off-site tracking and waterborne loss of earth sediment and debris. The specific measures proposed as a part of the project plan are shown on the Sedimentation and Erosion Control Plan and the Erosion Control Details included in the Site Plan Package.

Sincerely,

Vanasse Hangen Brustlin, Inc.

A handwritten signature in blue ink, appearing to read "DF", is positioned above the printed name of the signatory.

David Fenstermacher, PE

Project Manager

dfenstermacher@vhb.com

CERTIFIED NOTIFICATION LIST

THE CITY OF LEBANON IS REQUIRED UNDER NH RSA 672:3 TO NOTIFY THE FOLLOWING PERSONS OF PUBLIC HEARINGS BEFORE THE PLANNING BOARD: ALL ABUTTERS; THE APPLICANT; PROPERTY OWNER; HOLDER OF CONSERVATION, PRESERVATION, OR AGRICULTURAL PRESERVATION RESTRICTION(S); AND EVERY ENGINEER, ARCHITECT, LAND SURVEYOR, OR SOIL SCIENTIST WHOSE PROFESSIONAL SEAL APPEARS ON ANY PLAT SUBMITTED TO THE BOARD.

PLEASE PROVIDE NAMES & MAILING ADDRESSES FOR ALL PERSONS LISTED ABOVE.

MAP & LOT NUMBER: <u>91-253</u>	MAP & LOT NUMBER: _____
PROPERTY OWNER: City of Lebanon 51 N Park St Lebanon, NH 03766 C/O: Shaun Mulholland	APPLICANT: Same as Owner
MAP & LOT NUMBER: _____	MAP & LOT NUMBER: _____
ABUTTER/ <u>OTHER:</u> Engineer David Fenstermacher, PE VHB 2 Bedford Farms Dr - Suite 200 Bedford, NH 03110	ABUTTER/ <u>OTHER:</u> Architect John Adams, LEED AP Lavallee Brensinger Architects 155 Dow Street, Suite 400 Manchester, NH 03101
MAP & LOT NUMBER: _____	MAP & LOT NUMBER: _____
ABUTTER/ <u>OTHER:</u> Surveyor Mike Hammer, LLS, PLS VHB 2 Bedford Farms Dr - Suite 200 Bedford, NH 03110	ABUTTER/ <u>OTHER:</u> REARCH Construction Management 88 Technology Park Way, Suite 2 South Burlington, VT 05403
MAP & LOT NUMBER: <u>91-232</u>	MAP & LOT NUMBER: <u>91-249</u>
ABUTTER/OTHER: 20 West Park, LLC 20 W Park St - Suite 1 Lebanon, NH 03766	ABUTTER/OTHER: First Congregational Church 10 S Park St Lebanon, NH 03766
MAP & LOT NUMBER: <u>91-252</u>	MAP & LOT NUMBER: <u>91-254</u>
ABUTTER/OTHER: Headrest, INC. 14 Church St Lebanon, NH 03766	ABUTTER/OTHER: RECREO, LLC 77 Bank St Lebanon, NH 03766
MAP & LOT NUMBER: <u>91-255</u>	MAP & LOT NUMBER: <u>91-230, 91-237, 91-253, 92-11</u>
ABUTTER/OTHER: Water Street Mill, LLC 10 Water St Lebanon, NH 03766	ABUTTER/OTHER: City of Lebanon 51 N Park St Lebanon, NH 03766

Site Plans

Issued for	Permitting
Date Issued	May 13, 2024
Latest Issue	May 13, 2024

Lebanon Fire Station

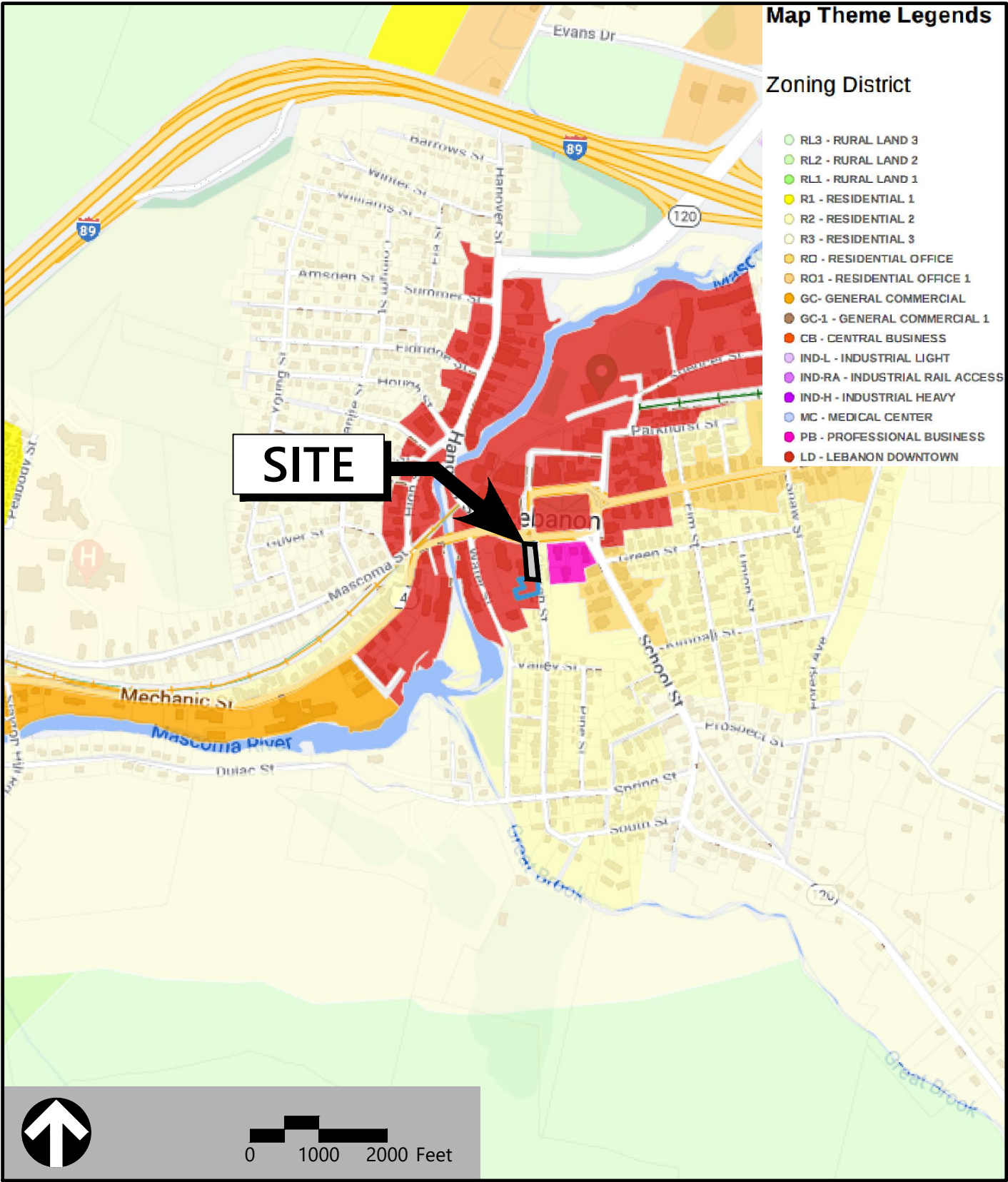
12 South Park Street
Grafton County
Lebanon, New Hampshire 03766

Owner/Applicant

City of Lebanon
51 North Park Street
Lebanon, NH 03766

**Assessor's Map: 91
Lot: 253**

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Sheet Index		
No.	Drawing Title	Latest Issue
C1.00	Legend and General Notes	May 13, 2024
C2.00	Layout and Materials Plan	May 13, 2024
C3.00	Grading and Drainage Plan	May 13, 2024
C4.00	Utility Plan	May 13, 2024
C5.00	Erosion Control Plan	May 13, 2024
C6.01	Site Details 1	May 13, 2024
C6.02	Site Details 2	May 13, 2024
C6.03	Site Details 3	May 13, 2024
C6.04	Site Details 4	May 13, 2024
C7.00	Vehicle Turning Movement	May 13, 2024

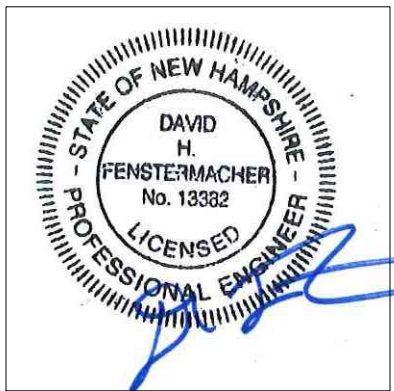
Reference Drawings		
No.	Drawing Title	Latest Issue
Sv-1	Existing Conditions Plan of Land	February 1, 2024
A2.01	Exterior Perspectives	May 1, 2024
A2.02	Exterior Elevations	May 1, 2024
A2.03	Exterior Elevations	May 1, 2024

Zoning Summary Chart		
Zoning District: LD		Lebanon Downtown
Overlay District:		Historic Area
Tax Map & Lot Number: 91-253		
Zoning Regulation Requirements	Required*	Provided
MINIMUM LOT AREA	3,000.0 SF	36,527.4 SF
FRONTAGE	40.0 Feet	66.0 Feet
FRONT YARD SETBACK	0 Feet	0 Feet
SIDE YARD SETBACK	0 Feet	0 Feet
REAR YARD SETBACK	10 Feet	137 Feet
MAXIMUM BUILDING HEIGHT	55 Feet	50 Feet
MAXIMUM BUILDING COVERAGE	N/A	33.6 %
BUILDING COVERAGE	N/A	12,260 SF
GROSS FLOOR AREA	N/A	24,796 SF
	FIRST FLOOR	--
		12,260 SF
	SECOND FLOOR	--
		6,275 SF
	THIRD FLOOR	--
		5,610 SF
	FOURTH FLOOR	--
		651 SF
IMPERVIOUS COVERAGE	N/A	71.7 %
USE	N/A	FIRE STATION

* Zoning regulation requirements as specified in the City of Lebanon, New Hampshire Zoning Ordinance last amended February 7, 2024, for Zone LD - Lebanon Downtown

* Zoning regulation requirements as specified in the City of Lebanon, New Hampshire Zoning Ordinance last amended February 7, 2024, for Zone LD - Lebanon Downtown

Parking Summary Chart				
Description	Size		Spaces	
	Required	Provided	Required	Provided
STANDARD SPACES	9 x 18	9 x 18	19	19
STANDARD ACCESSIBLE SPACES *	8 x 18	8 x 18	0	0
VAN ACCESSIBLE SPACES	8 x 18	8 x 18	1	1
TOTAL SPACES			20	20
* ADA/STATE/LOCAL REQUIREMENTS				
Parking Requirements:				
OTHER COMMERCIAL	12,260 SF	x 1 SPACE / 600 SF	=	20 SPACES
TOTAL PARKING REQUIRED				= 20 SPACES



vhb.com

2 Bedford Farms Drive
Suite 200
Bedford, NH 03110
603.391.3900

Civil Engineer

David Fenstermacher, PE
VHB
2 Bedford Farms Drive
Suite 200
Bedford, NH 03110
603.391.3900

Survey

Mike Hammer, LLS, PLS
VHB
2 Bedford Farms Drive
Suite 200
Bedford, NH 03110
603.391.3900

Architect

John Adams, LEED AP
Lavallee Brensinger Architects
155 Dow Street
Suite 400
Manchester, NH 03101
603.483.2151

Legend

Exist.	Prop.		Exist.	Prop.	
		PROPERTY LINE			CONCRETE
		PROJECT LIMIT LINE			HEAVY DUTY PAVEMENT
		RIGHT-OF-WAY/PROPERTY LINE			BUILDINGS
		EASEMENT			RIPRAP
		BUILDING SETBACK			CONSTRUCTION EXIT
		PARKING SETBACK			
		BASELINE			
		CONSTRUCTION LAYOUT			
		ZONING LINE			
		TOWN LINE			
		LIMIT OF DISTURBANCE			
		WETLAND LINE WITH FLAG			
		FLOODPLAIN			
		BORDERING LAND SUBJECT TO FLOODING			
		WETLAND BUFFER ZONE			
		NO DISTURB ZONE			
		200' RIVERFRONT AREA			
		GRAVEL ROAD			
		EDGE OF PAVEMENT			
		BITUMINOUS BERM			
		BITUMINOUS CURB			
		CONCRETE CURB			
		CURB AND GUTTER			
		EXTRUDED CONCRETE CURB			
		MONOLITHIC CONCRETE CURB			
		PRECAST CONC. CURB			
		SLOPED GRAN. EDGING			
		VERT. GRAN. CURB			
		LIMIT OF CURB TYPE			
		SAWCUT			
		BUILDING			
		BUILDING ENTRANCE			
		LOADING DOCK			
		BOLLARD			
		DUMPSTER PAD			
		SIGN			
		DOUBLE SIGN			
		STEEL GUARDRAIL			
		WOOD GUARDRAIL			
		PATH			
		TREE LINE			
		WIRE FENCE			
		FENCE			
		STOCKADE FENCE			
		STONE WALL			
		RETAINING WALL			
		STREAM / POND / WATER COURSE			
		DETENTION BASIN			
		HAY BALES			
		SILT FENCE			
		SILT SOCK / STRAW WATTLE			
		MINOR CONTOUR			
		MAJOR CONTOUR			
		PARKING COUNT			
		COMPACT PARKING STALLS			
		DOUBLE YELLOW LINE			
		STOP LINE			
		CROSSWALK			
		ACCESSIBLE CURB RAMP			
		ACCESSIBLE PARKING			
		VAN-ACCESSIBLE PARKING			
		MATCHLINE			

Abbreviations

General	
ABAN	ABANDON
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJUST
APPROX	APPROXIMATE
BIT	BITUMINOUS
BS	BOTTOM OF SLOPE
BWLL	BROKEN WHITE LANE LINE
CONC	CONCRETE
DYCL	DOUBLE YELLOW CENTER LINE
EL	ELEVATION
ELEV	ELEVATION
EX	EXISTING
FDN	FOUNDATION
FFE	FIRST FLOOR ELEVATION
GRAN	GRANITE
GTD	GRADE TO DRAIN
LA	LANDSCAPE AREA
LOD	LIMIT OF DISTURBANCE
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PERF	PERFORATED
PROP	PROPOSED
REM	REMOVE
RET	RETAIN
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
SWEL	SOLID WHITE EDGE LINE
SWLL	SOLID WHITE LANE LINE
TS	TOP OF SLOPE
TYP	TYPICAL
Utility	
CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
DCB	DOUBLE CATCH BASIN
DMH	DRAIN MANHOLE
CIP	CAST IRON PIPE
COND	CONDUIT
DIP	DUCTILE IRON PIPE
FES	FLARED END SECTION
FM	FORCE MAIN
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
GI	GUTTER INLET
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HW	HEADWALL
HYD	HYDRANT
INV	INVERT ELEVATION
I=	INVERT ELEVATION
LP	LIGHT POLE
MES	METAL END SECTION
PIV	POST INDICATOR VALVE
PWW	PAVED WATER WAY
PVC	POLYVINYLCHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R=	RIM ELEVATION
RIM=	RIM ELEVATION
SMH	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UG	UNDERGROUND
UP	UTILITY POLE

Notes

- General**
- CONTRACTOR SHALL NOTIFY "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE EXCAVATING.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
 - ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).
 - AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE 6 INCHES LOAM AND SEED.
 - WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, THE SITE CONTRACTOR SHALL PERFORM EARTHWORK OPERATIONS REQUIRED UP TO SUBGRADE ELEVATIONS.
 - WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS. WORK WITHIN STATE RIGHTS-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE STATE HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
 - UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
 - TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
 - IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
 - CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
 - DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
 - CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF-SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.
 - THIS PROJECT DISTURBS MORE THAN ONE ACRE OF LAND AND FALLS WITHIN THE NPDES CONSTRUCTION GENERAL PERMIT (CGP) PROGRAM AND EPA JURISDICTION. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.

Utilities

- Layout and Materials**
- DIMENSIONS ARE FROM THE FACE OF CURB, FACE OF BUILDING, FACE OF WALL, AND CENTER LINE OF PAVEMENT MARKINGS, UNLESS OTHERWISE NOTED.
 - CURB RADII ARE 3 FEET UNLESS OTHERWISE NOTED.
 - CURBING SHALL BE VERTICAL GRANITE CURB (VGC) WITHIN THE SITE UNLESS OTHERWISE INDICATED ON THE PLANS.
 - SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND DETAILS CONTIGUOUS TO THE BUILDING, INCLUDING SIDEWALKS, RAMPS, BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, COMPACTOR PAD, LOADING DOCKS, BOLLARDS, ETC.
 - PROPOSED BOUNDS AND ANY EXISTING PROPERTY LINE MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE SET OR RESET BY A LICENSED LAND SURVEYOR (LLS).
 - PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS AT INTERFACE WITH PROPOSED PAVEMENTS, AND EXISTING GROUND ELEVATIONS ADJACENT TO DRAINAGE OUTLETS TO ASSURE PROPER TRANSITIONS BETWEEN EXISTING AND PROPOSED FACILITIES.
- Demolition**
- CONTRACTOR SHALL REMOVE AND DISPOSE OF EXISTING MANMADE SURFACE FEATURES WITHIN THE LIMIT OF WORK INCLUDING BUILDINGS, STRUCTURES, PAVEMENTS, SLABS, CURBING, FENCES, UTILITY POLES, SIGNS, ETC. UNLESS INDICATED OTHERWISE ON THE DRAWINGS. REMOVE AND DISPOSE OF EXISTING UTILITIES, FOUNDATIONS AND UNSUITABLE MATERIAL BENEATH AND FOR A DISTANCE OF 10 FEET BEYOND THE PROPOSED BUILDING FOOTPRINT INCLUDING EXTERIOR COLUMNS.
 - EXISTING UTILITIES SHALL BE TERMINATED, UNLESS OTHERWISE NOTED, IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. THE CONTRACTOR SHALL COORDINATE UTILITY SERVICE DISCONNECTS WITH THE UTILITY REPRESENTATIVES.
 - CONTRACTOR SHALL DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND STATUTES.
 - THE DEMOLITION LIMITS DEPICTED IN THE PLANS IS INTENDED TO AID THE CONTRACTOR DURING THE BIDDING AND CONSTRUCTION PROCESS AND IS NOT INTENDED TO DEPICT EACH AND EVERY ELEMENT OF DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE DETAILED SCOPE OF DEMOLITION BEFORE SUBMITTING ITS BID/PROPOSAL TO PERFORM THE WORK AND SHALL MAKE NO CLAIMS AND SEEK NO ADDITIONAL COMPENSATION FOR CHANGED CONDITIONS OR UNFORESEEN OR LATENT SITE CONDITIONS RELATED TO ANY CONDITIONS DISCOVERED DURING EXECUTION OF THE WORK.
 - UNLESS OTHERWISE SPECIFICALLY PROVIDED ON THE PLANS OR IN THE SPECIFICATIONS, THE ENGINEER HAS NOT PREPARED THE DESIGNS FOR AND SHALL HAVE NO RESPONSIBILITY FOR THE PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF HAZARDOUS MATERIALS, TOXIC WASTES OR POLLUTANTS AT THE PROJECT SITE. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR ANY CLAIMS OF LOSS, DAMAGE, EXPENSE, DELAY, INJURY OR DEATH ARISING FROM THE PRESENCE OF HAZARDOUS MATERIAL AND CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ANY CLAIMS MADE IN CONNECTION THEREWITH. HOWEVER, THE ENGINEER SHALL HAVE NO ADMINISTRATIVE OBLIGATIONS OF ANY TYPE WITH REGARD TO ANY CONTRACTOR AMENDMENT INVOLVING THE ISSUES OF PRESENCE, DISCOVERY, REMOVAL, ABATEMENT OR DISPOSAL OF ASBESTOS OR OTHER HAZARDOUS MATERIALS.
- Erosion Control**
- PRIOR TO STARTING ANY OTHER WORK ON THE SITE, THE CONTRACTOR SHALL NOTIFY APPROPRIATE AGENCIES AND SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND AS IDENTIFIED IN FEDERAL, STATE, AND LOCAL APPROVAL DOCUMENTS PERTAINING TO THIS PROJECT.
 - CONTRACTOR SHALL INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A WEEKLY BASIS (MINIMUM) OR AS REQUIRED PER THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL ADDRESS DEFICIENCIES AND MAINTENANCE ITEMS WITHIN TWENTY-FOUR HOURS OF INSPECTION. CONTRACTOR SHALL PROPERLY DISPOSE OF SEDIMENT SUCH THAT IT DOES NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
 - CONTRACTOR SHALL BE FULLY RESPONSIBLE TO CONTROL CONSTRUCTION SUCH THAT SEDIMENTATION SHALL NOT AFFECT REGULATORY PROTECTED AREAS, WHETHER SUCH SEDIMENTATION IS CAUSED BY WATER, WIND, OR DIRECT DEPOSIT.
 - CONTRACTOR SHALL PERFORM CONSTRUCTION SEQUENCING SUCH THAT EARTH MATERIALS ARE EXPOSED FOR A MINIMUM OF TIME BEFORE THEY ARE COVERED, SEEDED, OR OTHERWISE STABILIZED TO PREVENT EROSION.
 - UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, CONTRACTOR SHALL REMOVE AND DISPOSE OF EROSION CONTROL MEASURES AND CLEAN SEDIMENT AND DEBRIS FROM ENTIRE DRAINAGE AND SEWER SYSTEMS.
- Existing Conditions Information**
- BASE PLAN: THE PROPERTY LINES SHOWN WERE DETERMINED BY AN ACTUAL FIELD SURVEY CONDUCTED BY VHB, [AND FROM DEEDS AND PLANS OF RECORD]. THE TOPOGRAPHY AND PHYSICAL FEATURES ARE BASED ON AN ACTUAL FIELD SURVEY PERFORMED ON THE GROUND BY VHB, DURING JANUARY AND FEBRUARY 2024.
 - TOPOGRAPHY: ELEVATIONS ARE BASED ON NAVD OF 1988.
 - GEOTECHNICAL DATA INCLUDING TEST PIT AND BORING LOCATIONS AND ELEVATIONS WERE OBTAINED FROM S.W. COLE.
- Document Use**
- THESE PLANS AND CORRESPONDING CADD DOCUMENTS ARE INSTRUMENTS OF PROFESSIONAL SERVICE, AND SHALL NOT BE USED, IN WHOLE OR IN PART, FOR ANY PURPOSE OTHER THAN FOR WHICH IT WAS CREATED WITHOUT THE EXPRESSED, WRITTEN CONSENT OF VHB. ANY UNAUTHORIZED USE, REUSE, MODIFICATION OR ALTERATION, INCLUDING AUTOMATED CONVERSION OF THIS DOCUMENT SHALL BE AT THE USER'S SOLE RISK WITHOUT LIABILITY OR LEGAL EXPOSURE TO VHB.
 - CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
 - SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
- General**
- CONTRACTOR SHALL NOTIFY "DIG-SAFE" (1-888-344-7233) AT LEAST 72 HOURS BEFORE EXCAVATING.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
 - ACCESSIBLE ROUTES, PARKING SPACES, RAMPS, SIDEWALKS AND WALKWAYS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE FEDERAL AMERICANS WITH DISABILITIES ACT AND WITH STATE AND LOCAL LAWS AND REGULATIONS (WHICHEVER ARE MORE STRINGENT).
 - AREAS DISTURBED DURING CONSTRUCTION AND NOT RESTORED WITH IMPERVIOUS SURFACES (BUILDINGS, PAVEMENTS, WALKS, ETC.) SHALL RECEIVE 6 INCHES LOAM AND SEED.
 - WITHIN THE LIMITS OF THE BUILDING FOOTPRINT, THE SITE CONTRACTOR SHALL PERFORM EARTHWORK OPERATIONS REQUIRED UP TO SUBGRADE ELEVATIONS.
 - WORK WITHIN THE LOCAL RIGHTS-OF-WAY SHALL CONFORM TO LOCAL MUNICIPAL STANDARDS. WORK WITHIN STATE RIGHTS-OF-WAY SHALL CONFORM TO THE LATEST EDITION OF THE STATE HIGHWAY DEPARTMENTS STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
 - UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS, IN THE SPECIFICATIONS, AND IN THE CONTRACT DOCUMENTS. DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, AND FIRE HYDRANTS, WITHOUT APPROPRIATE PERMITS.
 - TRAFFIC SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
 - AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
 - IN THE EVENT THAT SUSPECTED CONTAMINATED SOIL, GROUNDWATER, AND OTHER MEDIA ARE ENCOUNTERED DURING EXCAVATION AND CONSTRUCTION ACTIVITIES BASED ON VISUAL, OLFACTORY, OR OTHER EVIDENCE, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.
 - CONTRACTOR SHALL PREVENT DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE AND SHALL BE RESPONSIBLE FOR CLEANUP, REPAIRS AND CORRECTIVE ACTION IF SUCH OCCURS.
 - DAMAGE RESULTING FROM CONSTRUCTION LOADS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
 - CONTRACTOR SHALL CONTROL STORMWATER RUNOFF DURING CONSTRUCTION TO PREVENT ADVERSE IMPACTS TO OFF-SITE AREAS, AND SHALL BE RESPONSIBLE TO REPAIR RESULTING DAMAGES, IF ANY, AT NO COST TO OWNER.
 - THIS PROJECT DISTURBS MORE THAN ONE ACRE OF LAND AND FALLS WITHIN THE NPDES CONSTRUCTION GENERAL PERMIT (CGP) PROGRAM AND EPA JURISDICTION. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL STOP WORK IN THE VICINITY OF THE SUSPECT MATERIAL TO AVOID FURTHER SPREADING OF THE MATERIAL, AND SHALL NOTIFY THE OWNER IMMEDIATELY SO THAT THE APPROPRIATE TESTING AND SUBSEQUENT ACTION CAN BE TAKEN.



2 Bedford Farms Drive
Suite 200
Bedford, NH 03110
603.391.3900

Lebanon Fire Station

12 South Park Street
Lebanon, New Hampshire 03766

No.	Revision	Date	Appvd.

Designed by	SJF	Checked by	DHF
Issued for		Date	

Permitting May 13, 2024

Not Approved for Construction

Legend and General Notes

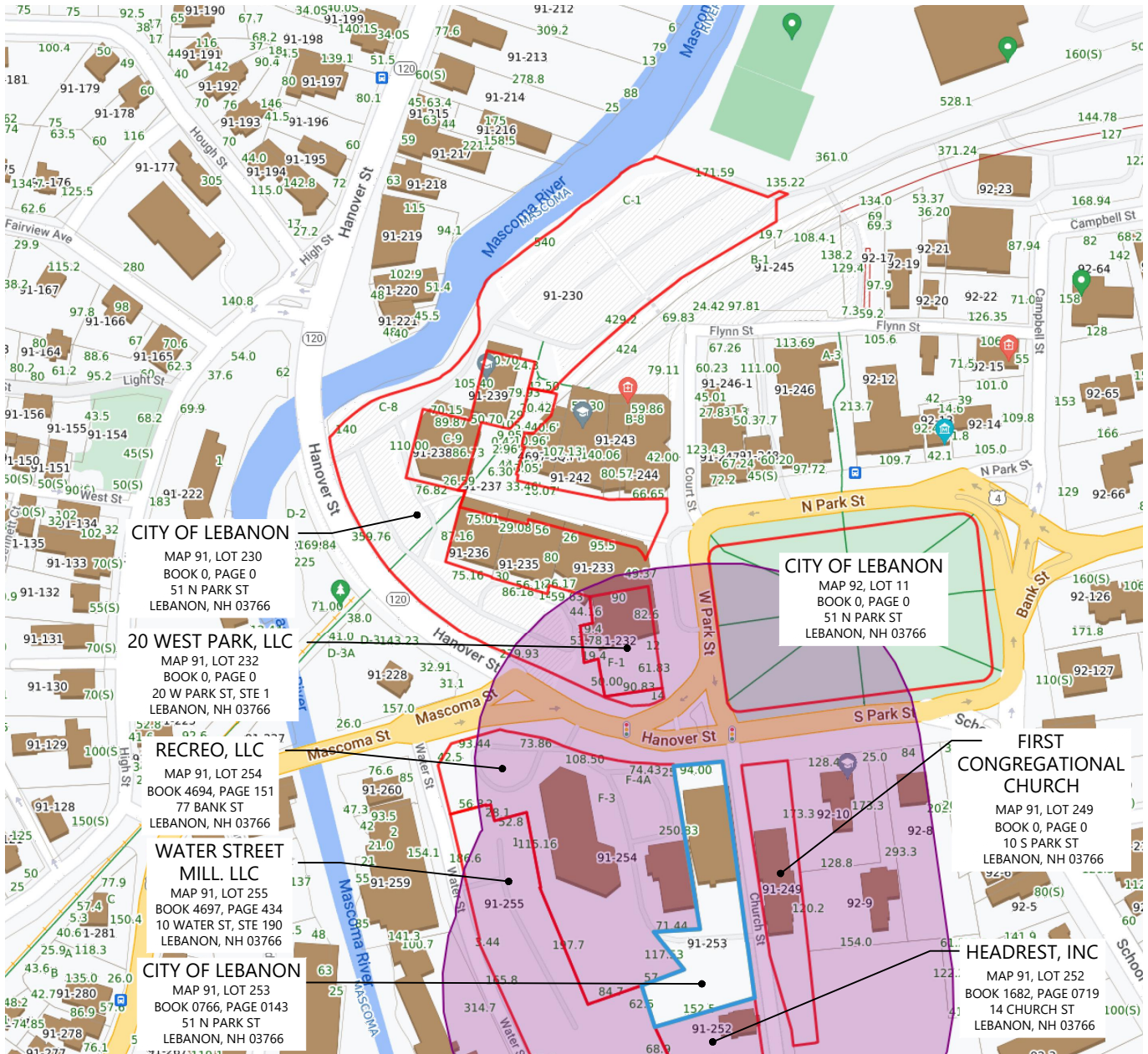
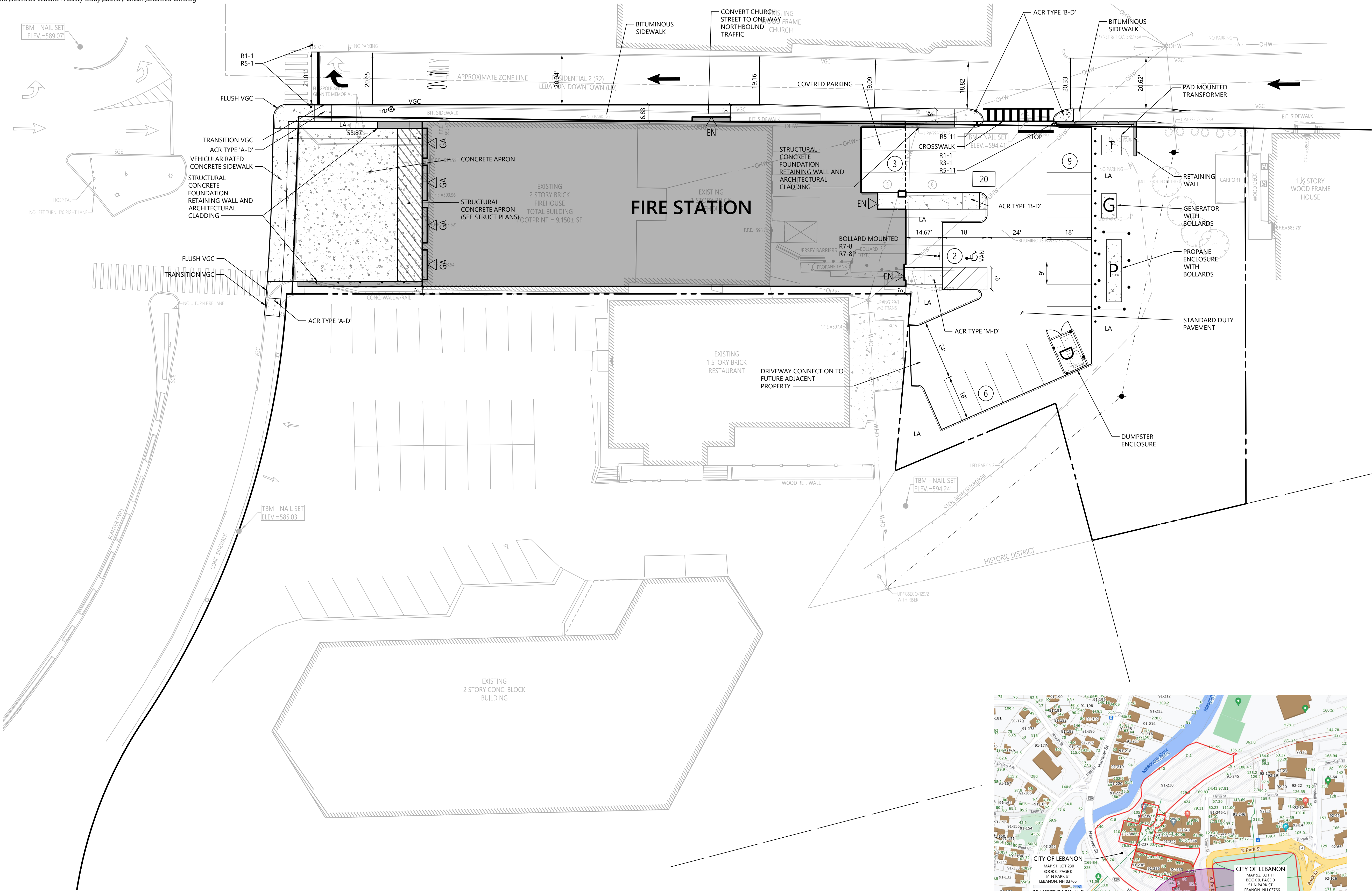
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C1.00

Sheet 1 of 10

Project Number 52635.00



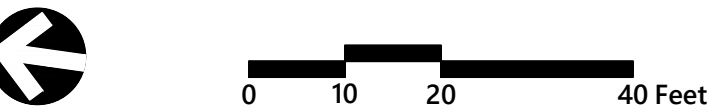
Abutters Map
1" = 240'

vhb

2 Bedford Farms Drive
Suite 200
Bedford, NH 03110
603.391.3900

Sign Summary

M.U.T.C.D. Number	Specification Width	Specification Height	Desc.
R1-1	30"	30"	STOP
R3-1	30"	30"	NO PARKING
R5-1	30"	30"	DO NOT ENTER
R5-11	30"	24"	AUTHORIZED VEHICLES ONLY
R7-8	12"	18"	RESERVED PARKING
R7-8P	12"	6"	VAN ACCESSIBLE



Lebanon Fire Station

12 South Park Street
Lebanon, New Hampshire 03766

No.	Revision	Date	Apprv.

Designed by	SJF	Checked by	DHF
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Issued for		Date	May 13, 2024
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Permitting

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Drawing Title

Layout and Materials Plan

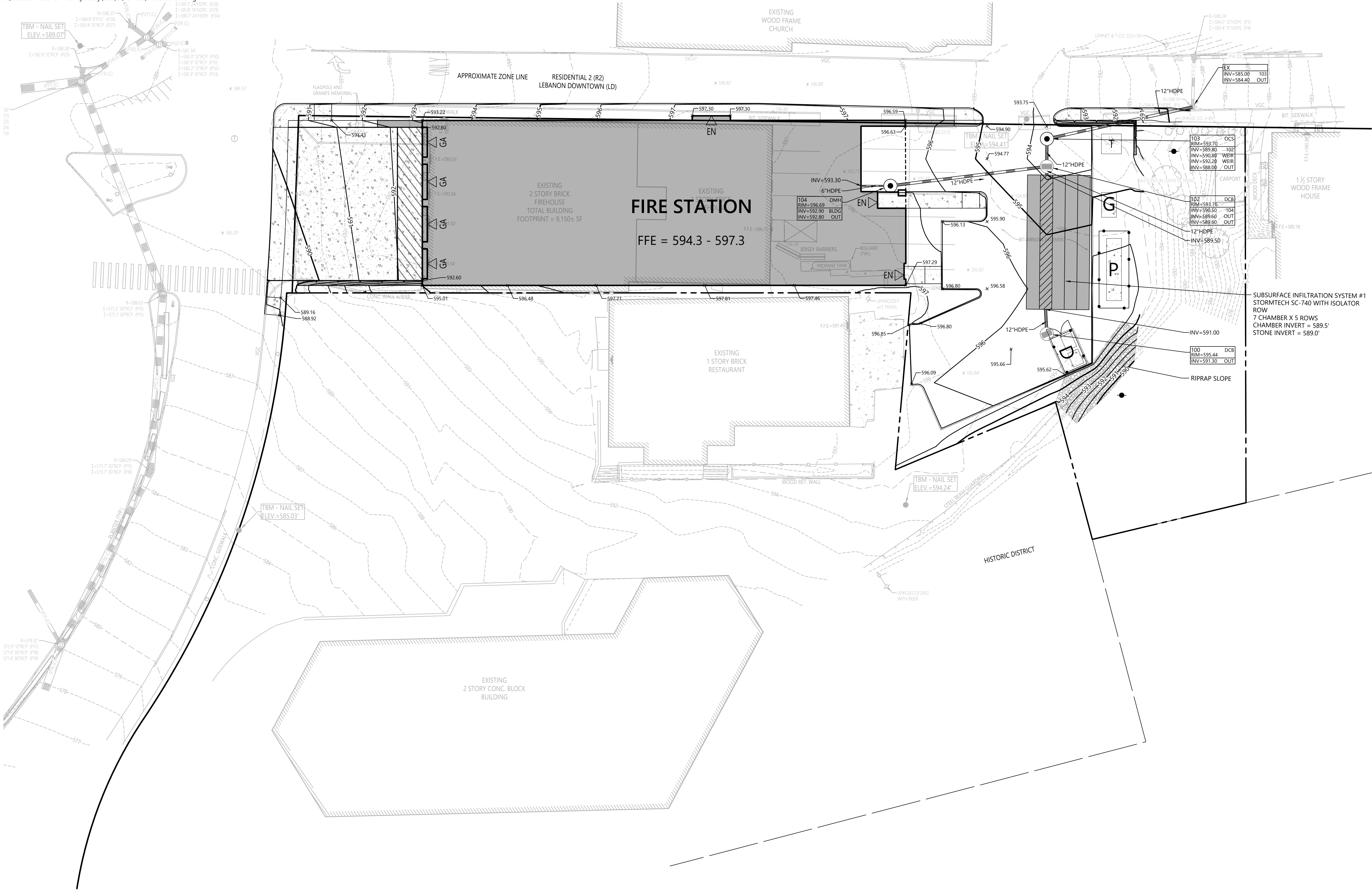
Drawing Number

C2.00

Sheet 2 of 10

Project Number
52635.00

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2 Bedford Farms Drive
Suite 200
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Lebanon Fire Station
12 South Park Street
Lebanon, New Hampshire 03766

No.	Revision	Date	Appvd.

Designed by	SJF	Checked by	DHF
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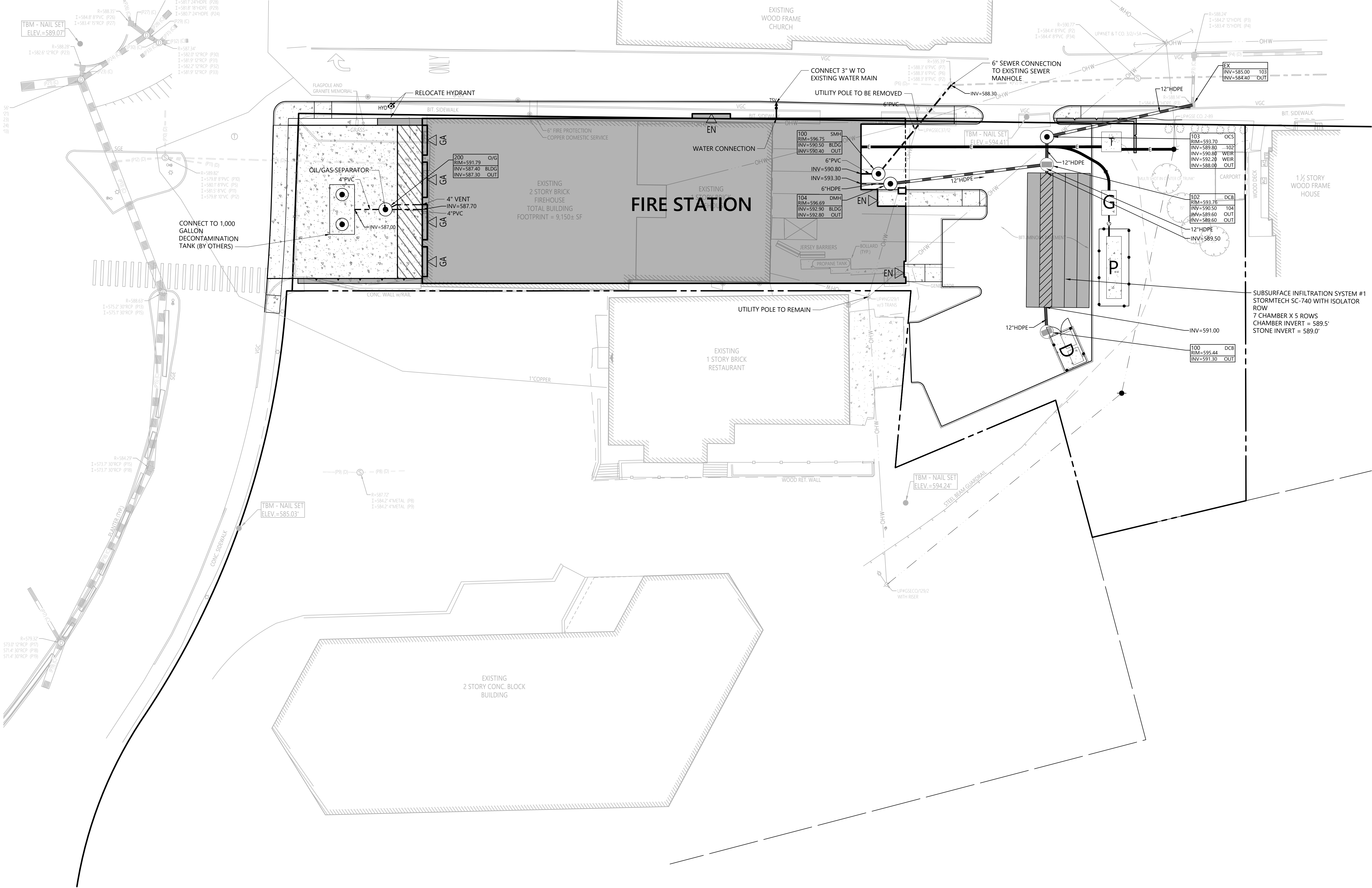
Grading and Drainage Plan



C3.00

Sheet 3 of 10

Project Number 52635.00



Lebanon Fire Station
12 South Park Street
Lebanon, New Hampshire 03766

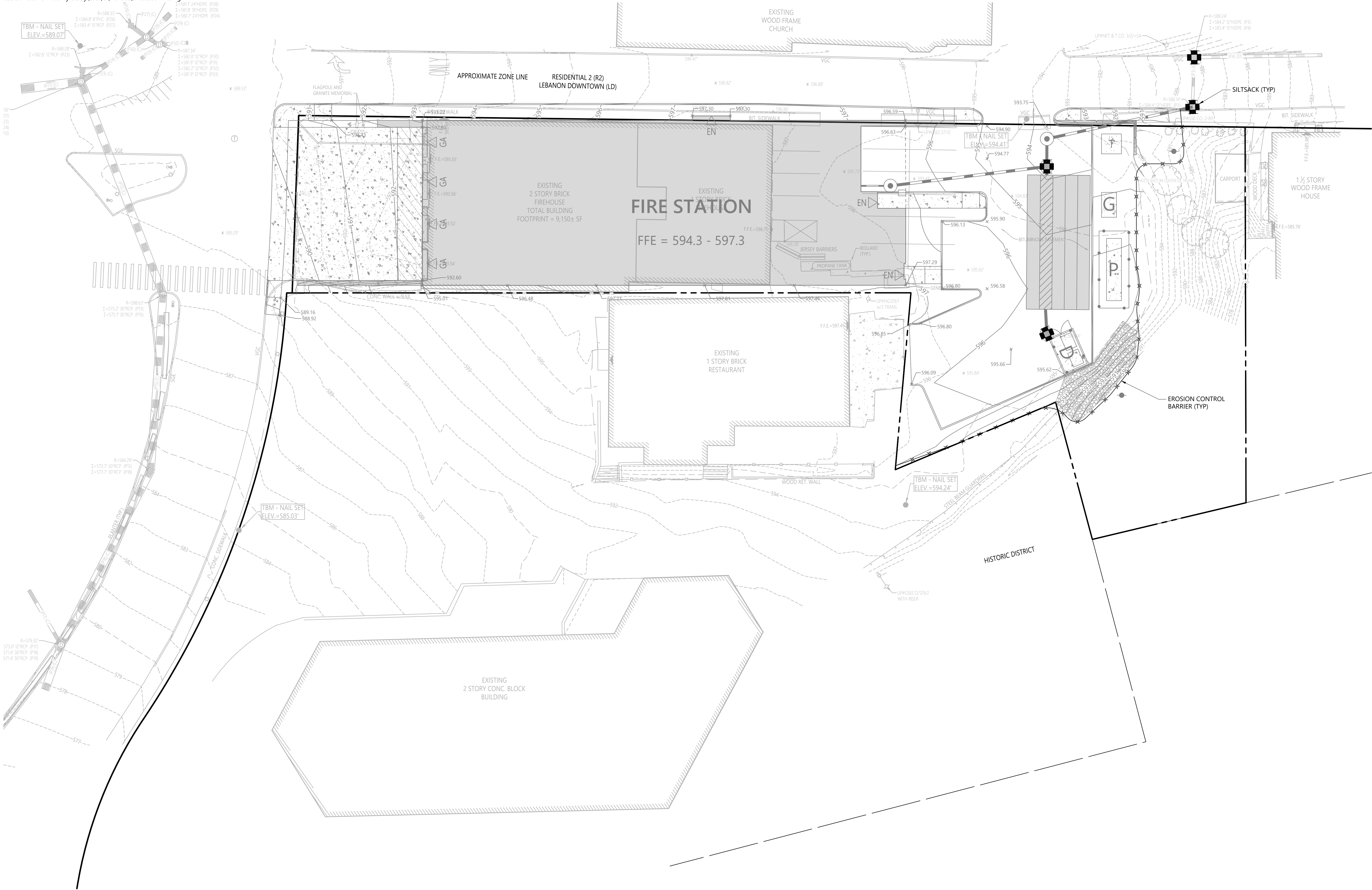
No.	Revision	Date	Appvd.

Designed by	SJF	Checked by	DHF
Issued for		Date	May 13, 2024

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Drawing Title
Utility Plan





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Lebanon Fire Station
12 South Park Street
Lebanon, New Hampshire 03766

No.	Revision	Date	Appvd.

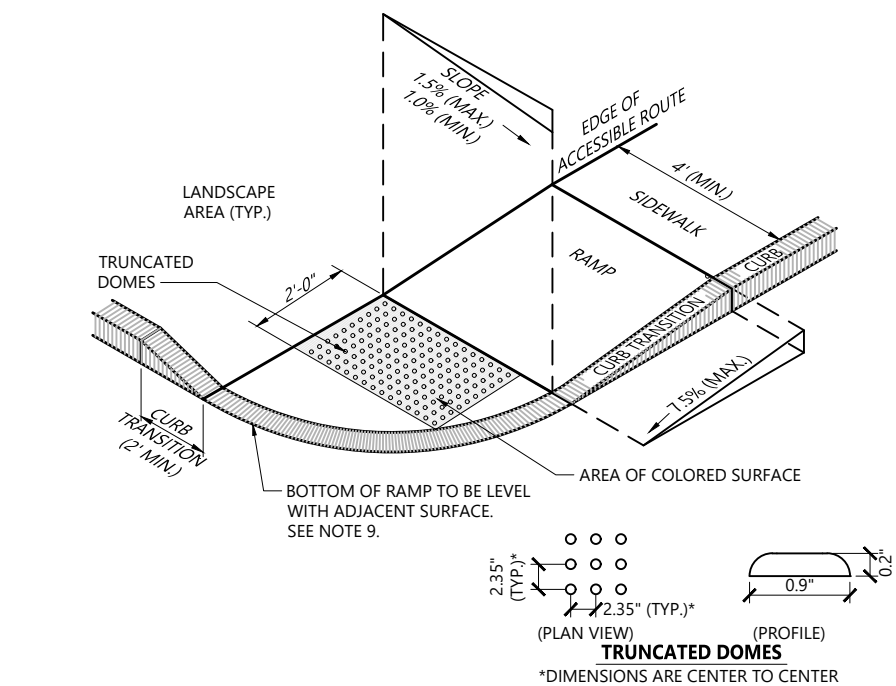
Designed by	SJF	Checked by	DHF
Issued for		Date	May 13, 2024

Permitting

Not Approved for Construction
Drawing Title
Erosion Control Plan

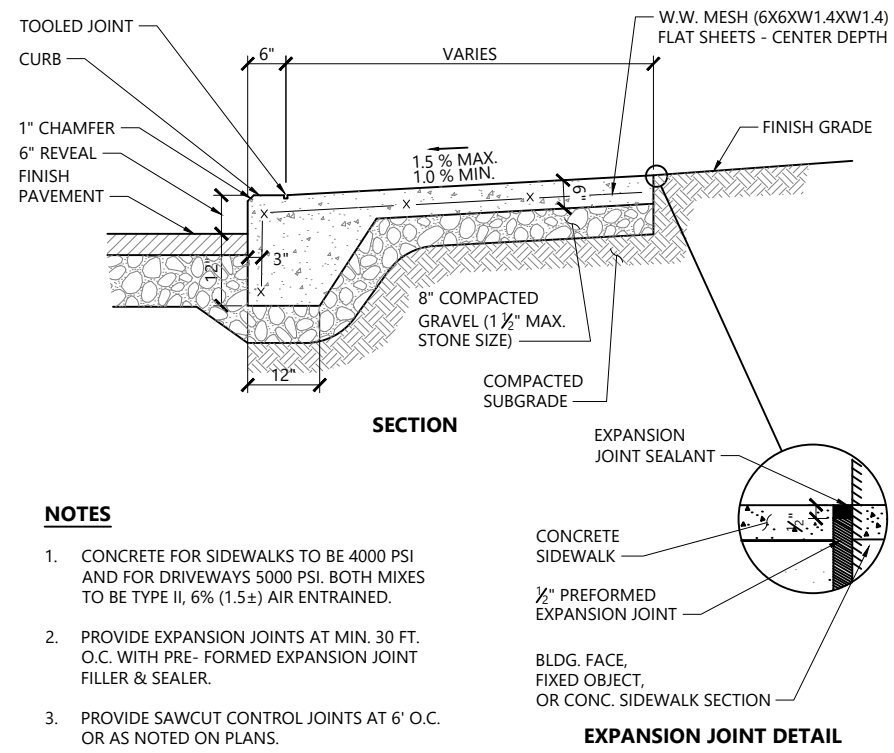
Drawing Number
C5.00
Sheet 3 of 10
Project Number
52635.00





- NOTES:**
1. THE MAXIMUM ALLOWABLE SIDEWALK AND CURB RAMP CROSS SLOPES SHALL BE 1% (1 IN/100').
 2. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%.
 3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE AT CURB RAMPS SHALL BE 7.5%.
 4. A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ANY PERMANENT OBSTACLE IN ANY PERMANENT OBSTACLE IN ANY PERMANENT OBSTACLE (E.G., SIGN, ETC.).
 5. CURB TREATMENT VARIES. SEE PLANS FOR CURB TYPE.
 6. RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
 7. SEE TYPE SIDEWALK SLAB FORM FOR RAMP CONSTRUCTION.
 8. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBWAY & 5' x 5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
 9. ELIMINATE CURBING AT RAMP WHERE IT ABUTS ROADWAY, EXCEPT WHERE VERTICAL CURBING IS INDICATED ON DRAWING.
 10. DETECTABLE WARNING SHALL CONTRAST VISUALLY WITH ADJACING SURFACES.
 11. DETECTABLE WARNING SHALL BE INSTALLED PERPENDICULAR TO THE ACCESSIBLE ROUTE.
 12. CONTRACTOR TO SUBMIT R.F.I. FOR THIS TYPE OF ACCESSIBLE CURB RAMP FOR APEX ROADWAY.

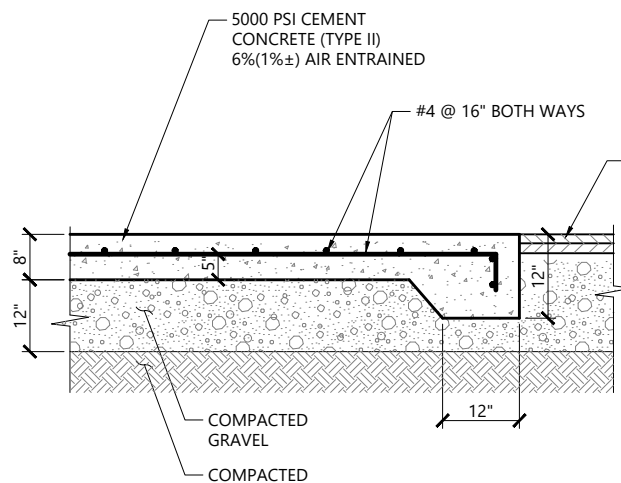
Accessible Curb Ramp (ACR) - Type 'B-D'		12/20
N.T.S.	Source: VHB	LD_501



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[illegible]

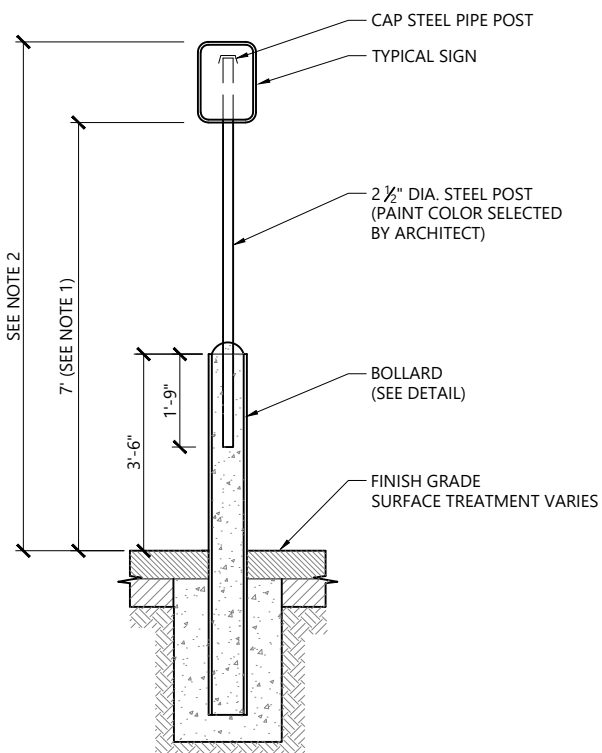
Vertical Granite Curb (VGC)		3/20
N.T.S.	Source: VHB	LD_402



-
- NOTES**
1. CONCRETE FOR SIDEWALKS TO BE 4000 PSI AND FOR DRIVEWAYS 5000 PSI. BOTH MIXES TO BE TYPE II, 6% (1.5) AIR ENTRAINED.
 2. PROVIDE EXPANSION JOINTS AT MIN. 30 FT. O.C. WITH PRE-FORMED EXPANSION JOINT FILLER & SEALER.
 3. PROVIDE SAWCUT CONTROL JOINTS AT 6' O.C. OR AS NOTED ON PLANS.

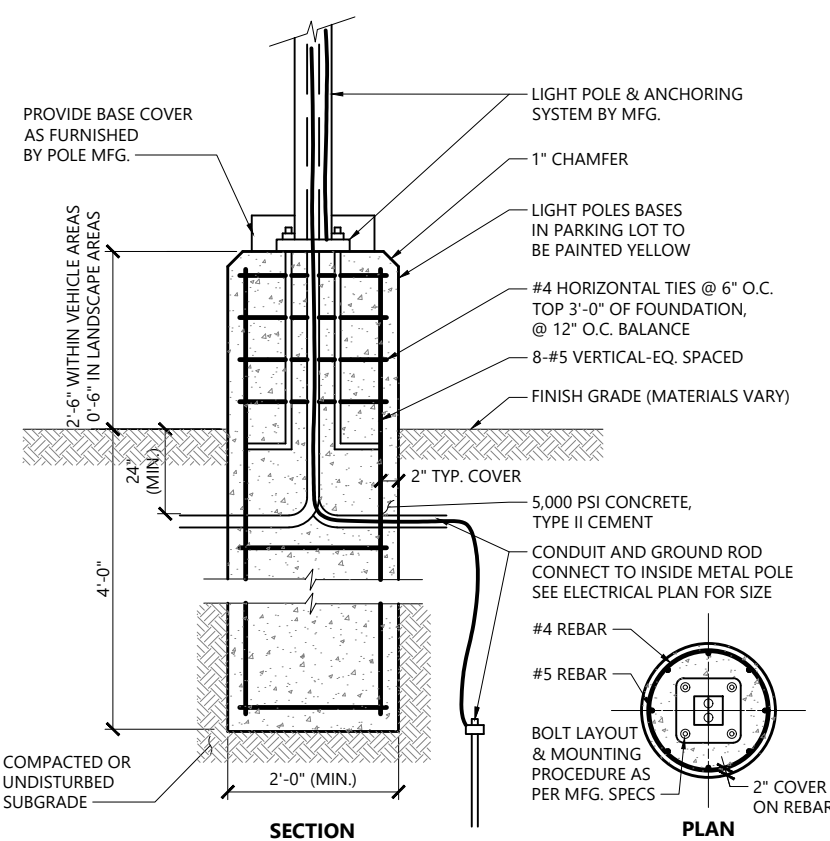
- ## NOTES
1. CONCRETE FOR SIDEWALKS TO BE 4000 PSI AND FOR DRIVEWAYS 5000 PSI. BOTH MIXES TO BE TYPE II, 6% (1.5%) AIR ENTRAINED.
 2. PROVIDE EXPANSION JOINTS AT MIN. 30 FT. O.C. WITH PRE-FORMED EXPANSION JOINT FILLER & SEALER.
 3. PROVIDE SAWCUT CONTROL JOINTS AT 6' O.C. OR AS NOTED ON PLANS.
 4. PROVIDE BROOM FINISH IN DIRECTION PERPENDICULAR TO CURB.
 5. ALL EXPOSED CONCRETE SURFACES SHALL BE SEALED WITH A SILANE-SILOXANE PRODUCT.

Concrete Apron		1/20
N.T.S.	Source: VHB	LD_711



1. THIS DIMENSION SHALL BE A MINIMUM OF 5' FOR ACCESSIBLE SIGNAGE.
2. THIS DIMENSION SHALL BE A MAXIMUM OF 8' FOR ACCESSIBLE SIGNAGE

Bollard Mounted Sign		2/20
N.T.S.	Source: VHB	LD_703



- Light Pole Foundation Detail (Up to 15' Pole)** 5/23
 N.T.S. Source: VHB LD_310A

Light Pole Foundation Detail (Up to 15' Pole) 5/23
 N.T.S. Source: VHB LD_310A

No.	Revision	Date	Appvd.

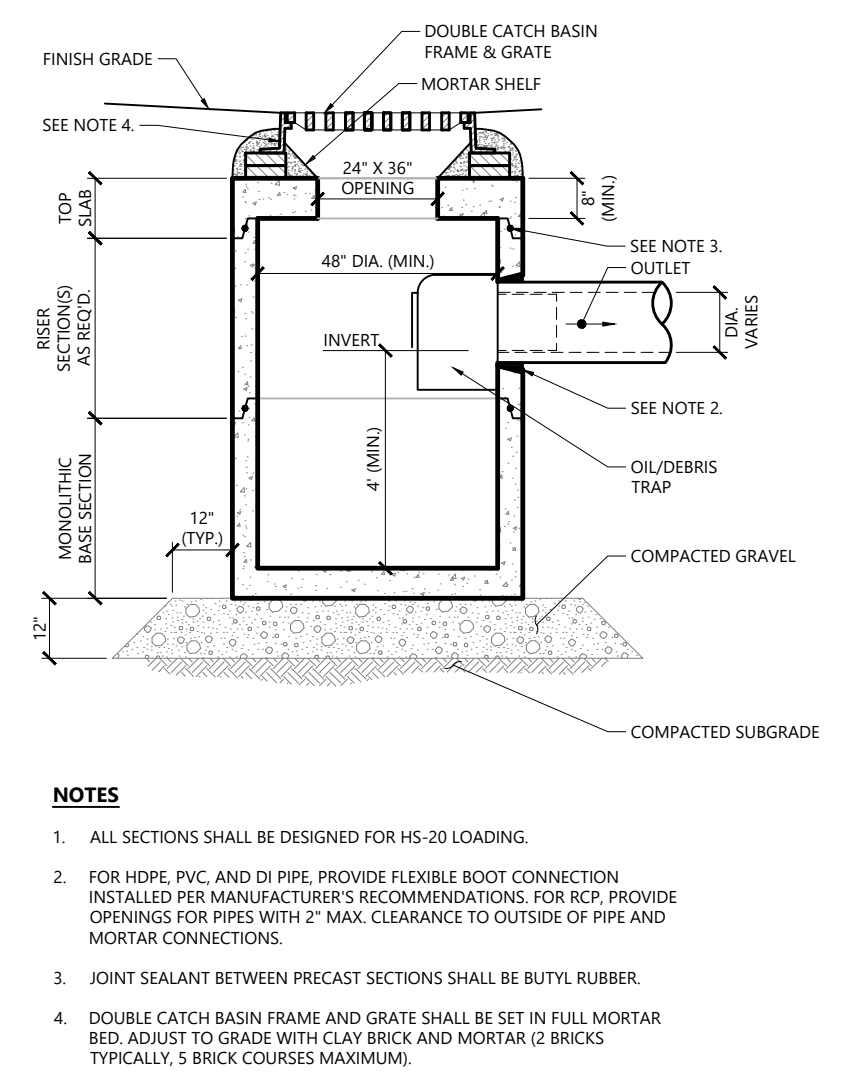
Not Approved for Construction



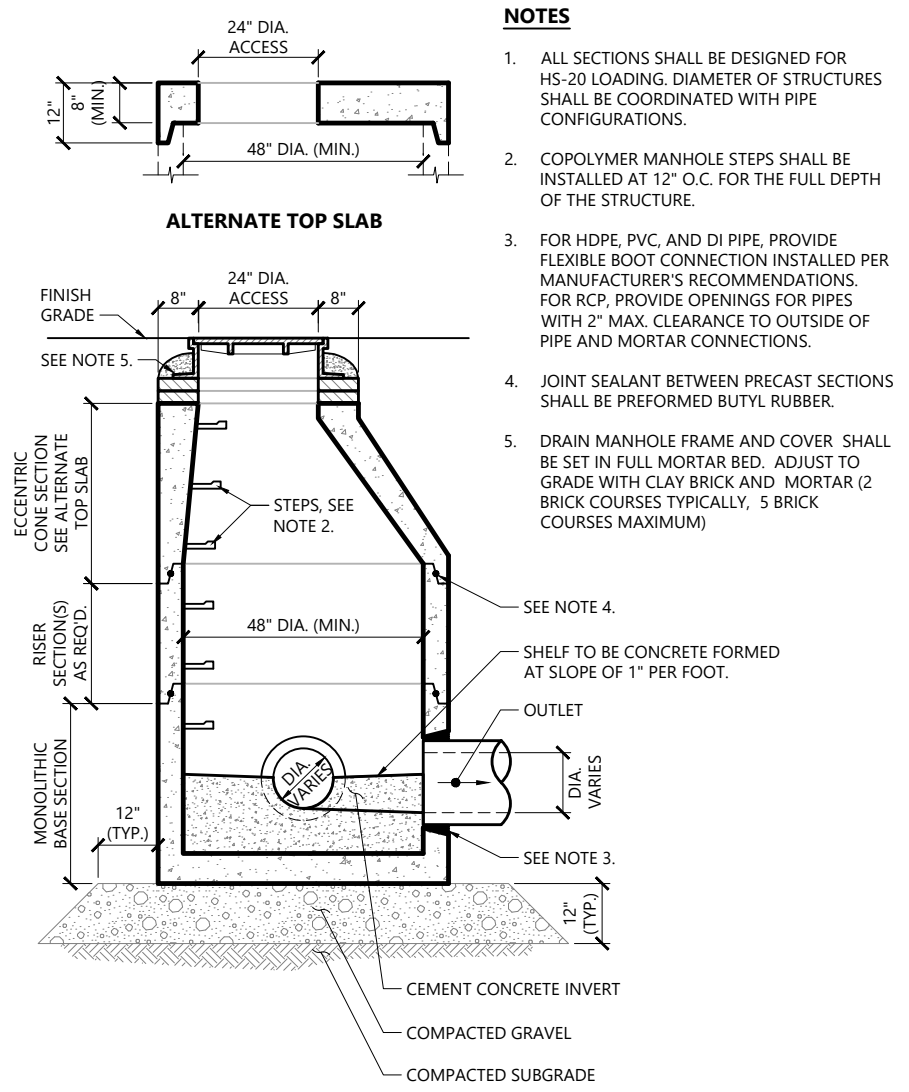
Drawing Number C6.01

Sheet of 6 10

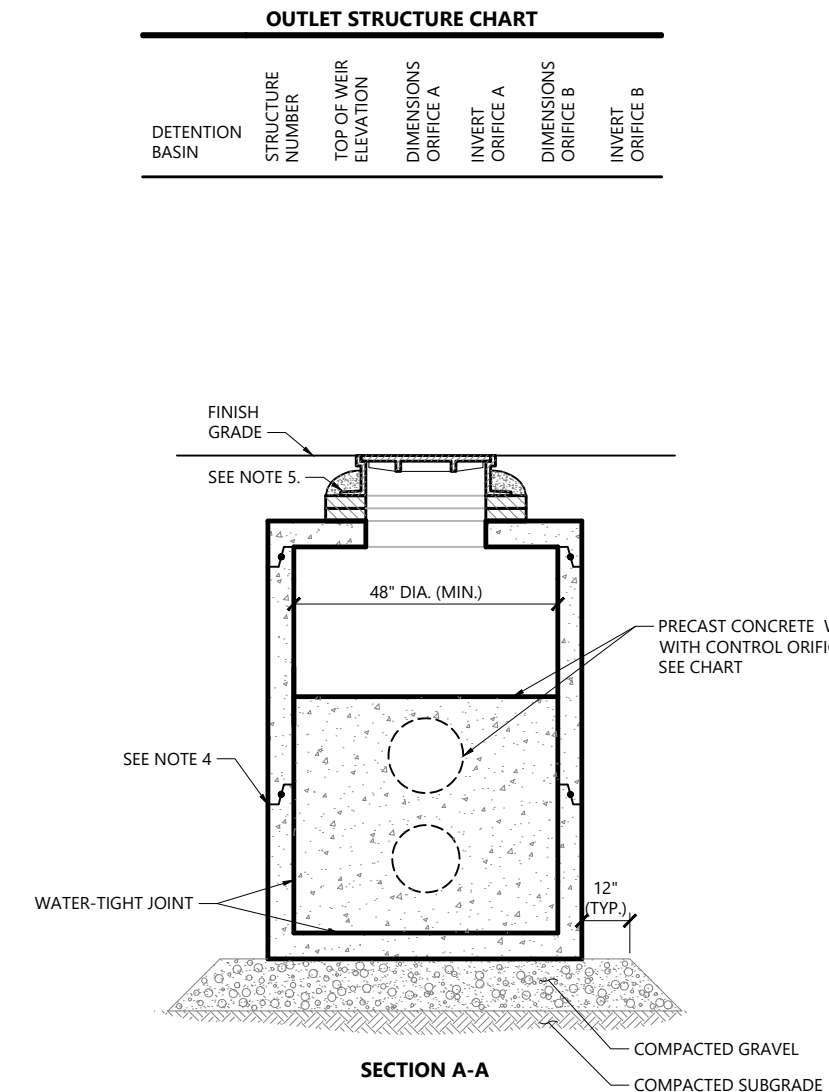
Project Number
 52635-00



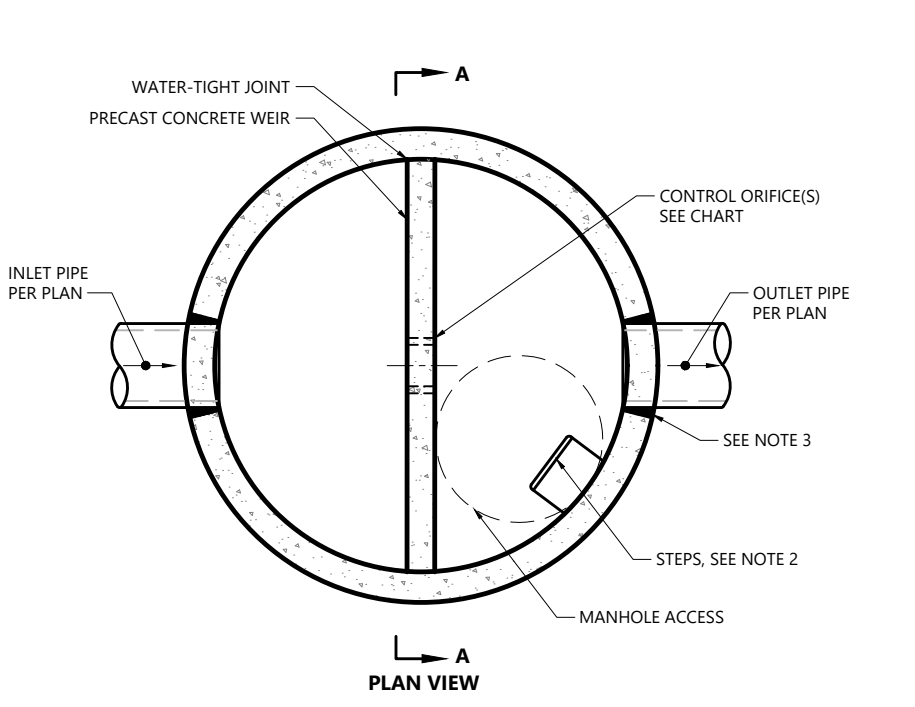
Double Grate Catch Basin (DCB) with Oil/Debris Trap 11/19
N.T.S. Source: VHB LD_103



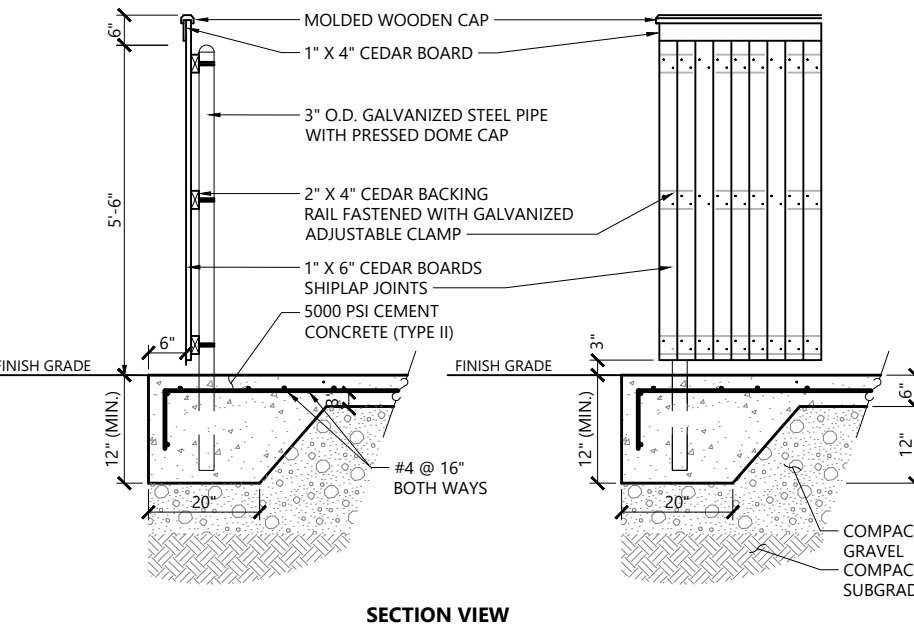
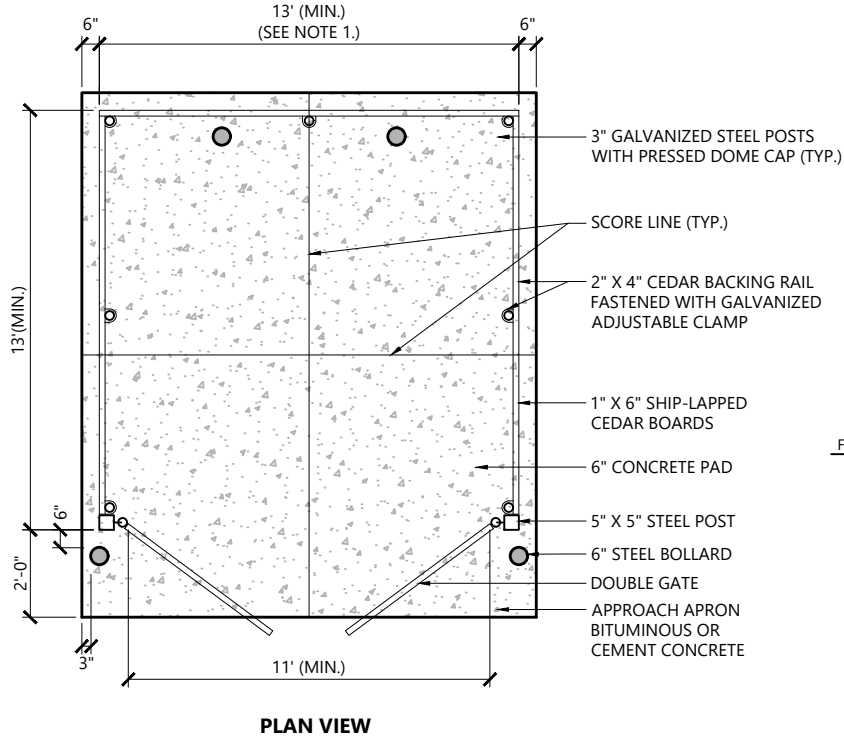
Drain Manhole (DMH) 11/19
N.T.S. Source: VHB LD_115



Outlet Control Structure with Weir (OCS) 3/20
N.T.S. Source: VHB LD_162A

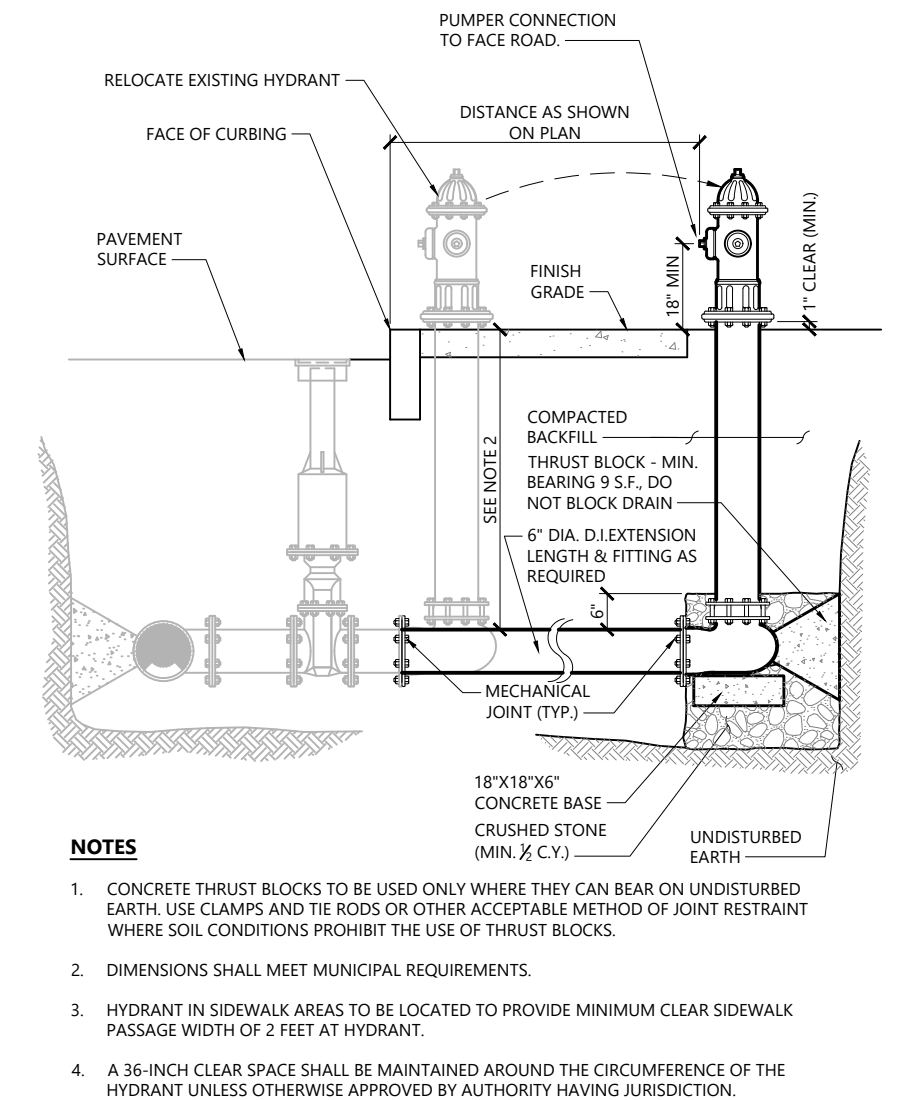


- NOTES**
1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING. DIAMETER OF STRUCTURES SHALL BE COORDINATED WITH PIPE CONFIGURATIONS.
 2. COPOLYMER MANHOLE STEPS SHALL BE INSTALLED AT 12" O.C. FOR THE FULL DEPTH OF THE STRUCTURE.
 3. FOR HDPE, PVC, AND DI PIPE, PROVIDE FLEXIBLE BOOT CONNECTION INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. FOR RCP, PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE AND MORTAR CONNECTIONS.
 4. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PERFORMED BUTYL RUBBER.
 5. DRAIN MANHOLE FRAME AND COVER SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

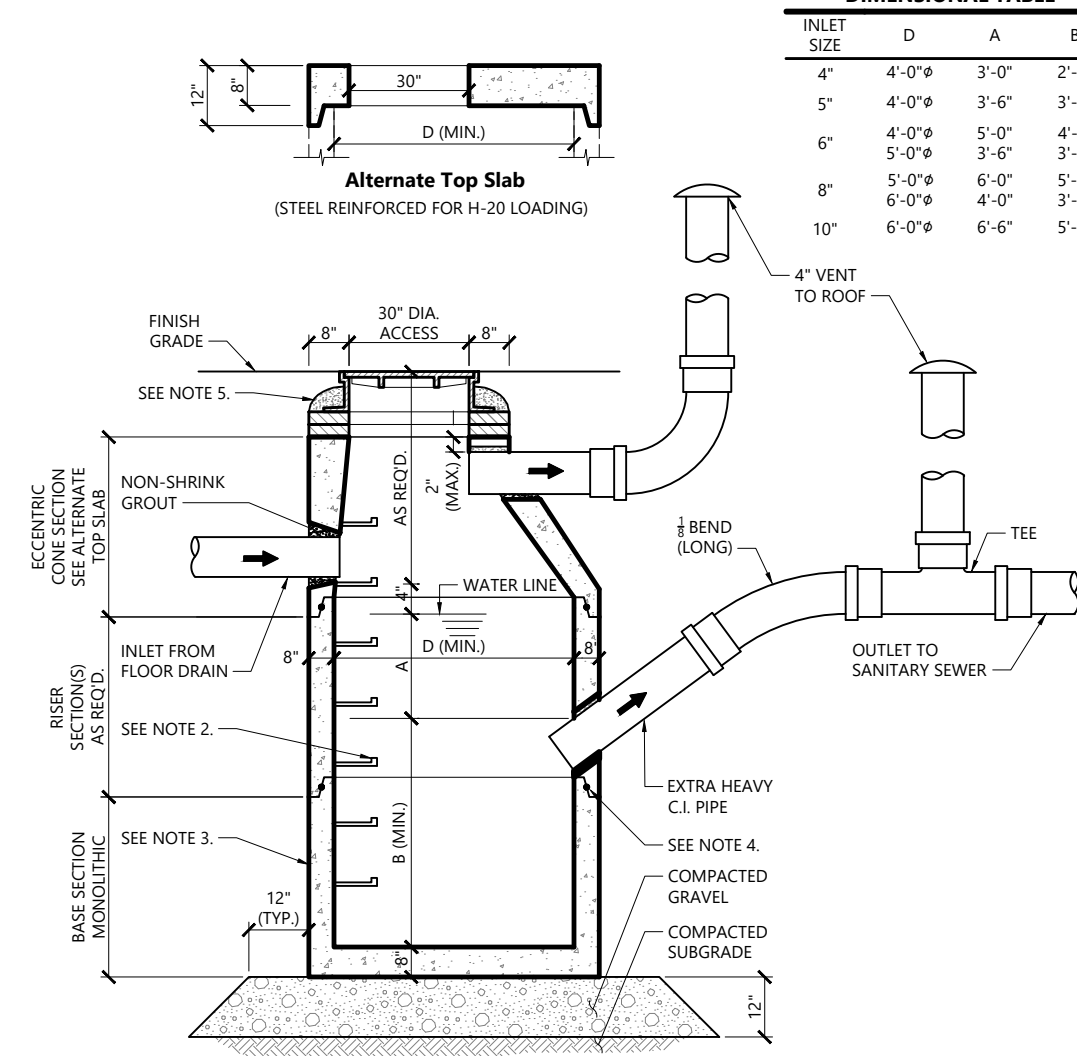


- NOTES**
1. DUMPSTER PAD DIMENSIONS SHOWN AS MINIMUM. REFER TO PLAN FOR ACTUAL DIMENSION.
 2. PAD DESIGNED FOR 6 YARD DUMPSTER.

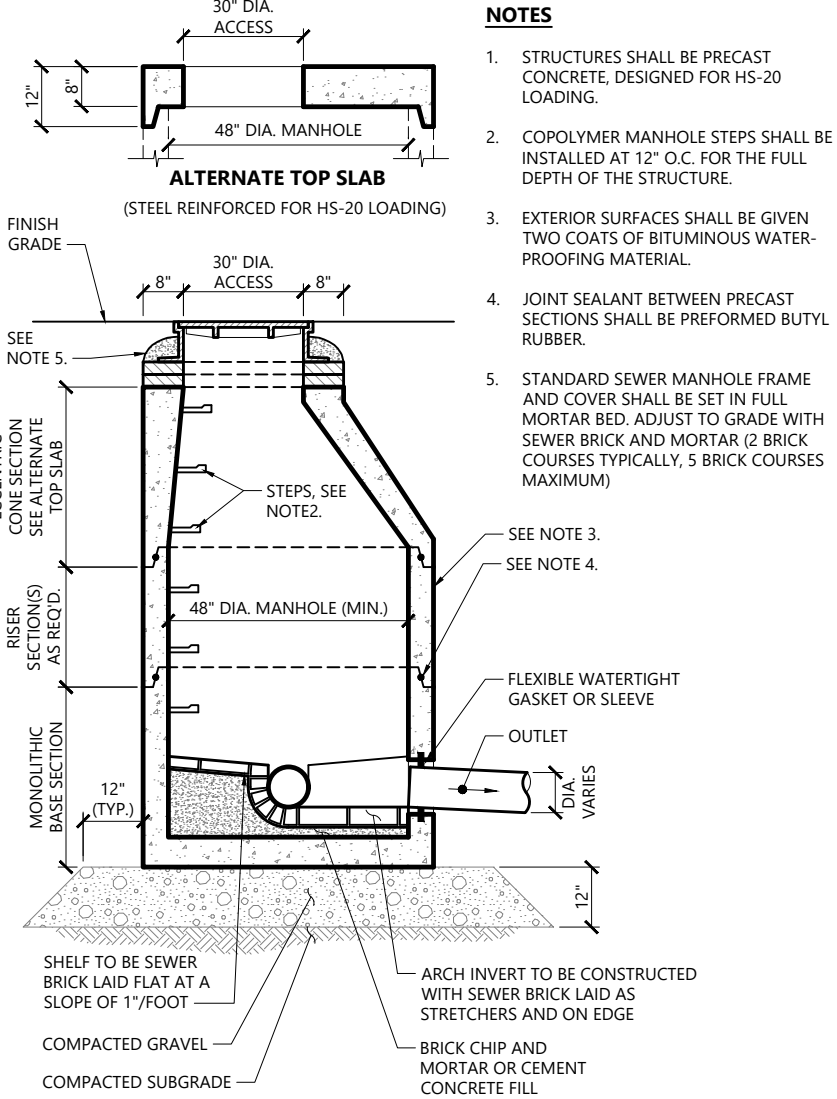
Dumpster Pad w/ Enclosure 1/20
N.T.S. Source: VHB LD_713



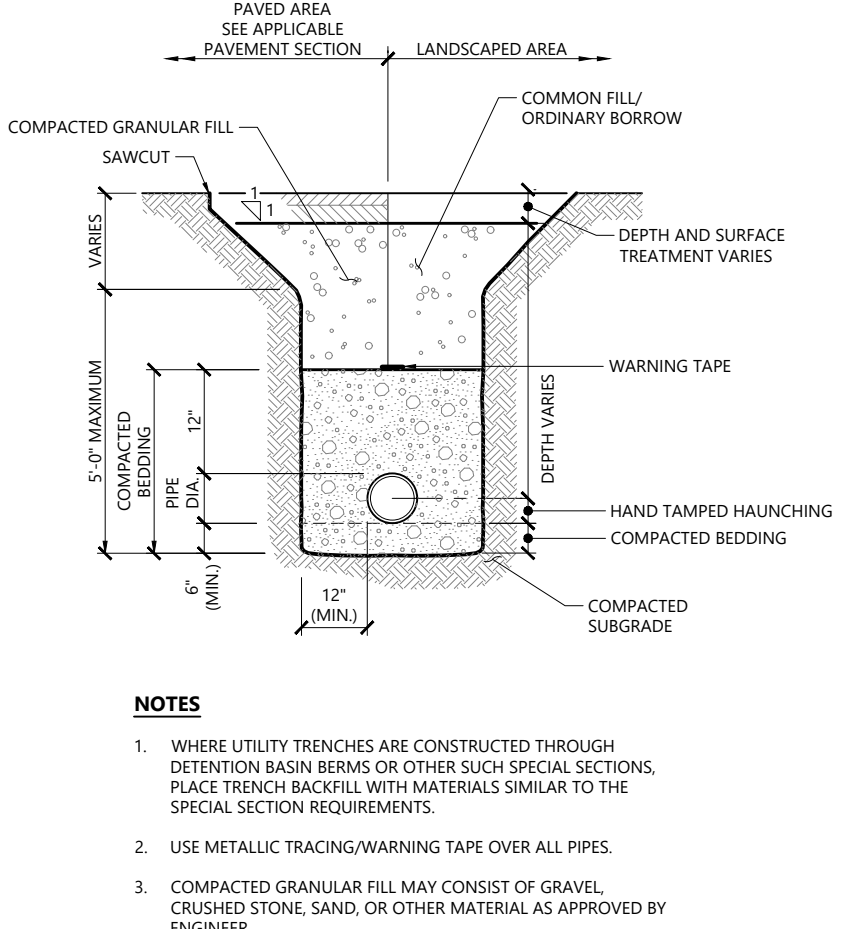
Hydrant Relocation Detail 3/20
N.T.S. Source: VHB LD_251



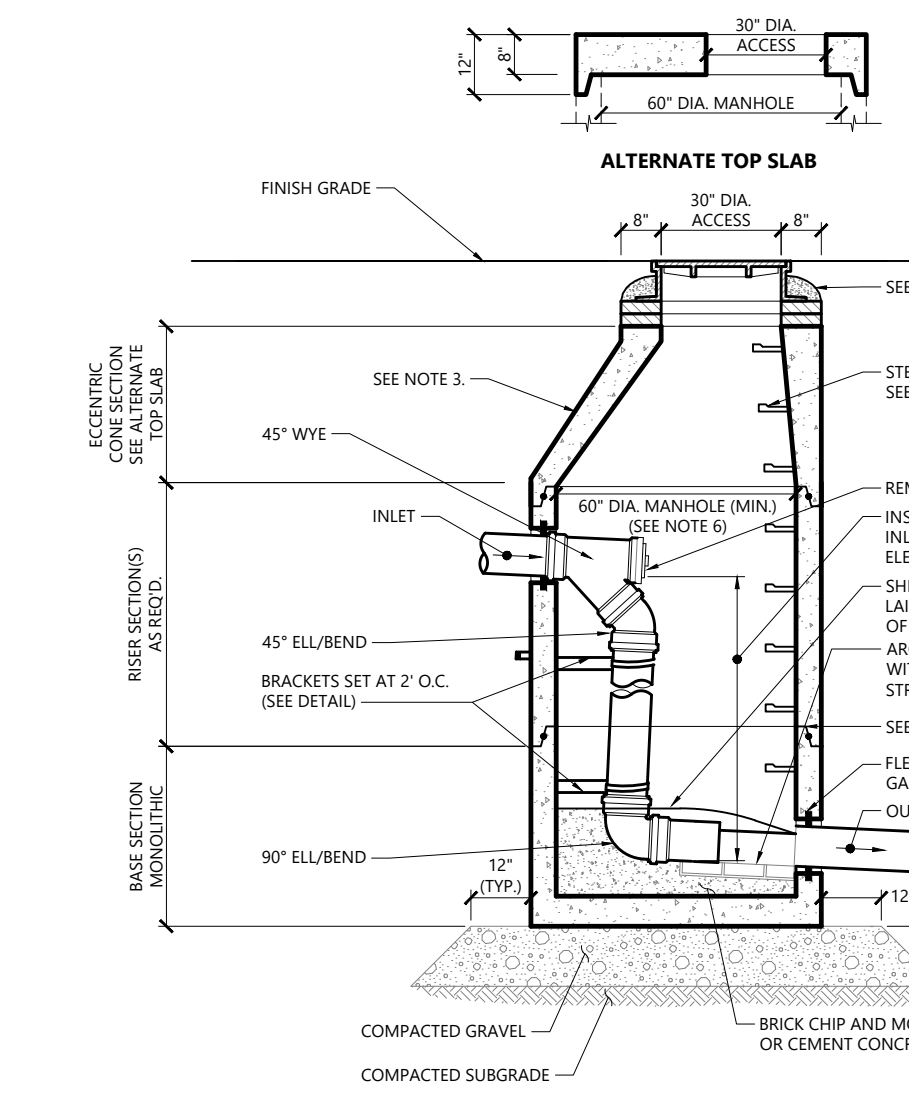
Oil And Gasoline Separator 10/20
N.T.S. Source: VHB LD_228



Sanitary Sewer Manhole (SMH) 1/16
N.T.S. Source: VHB LD_200



Utility Trench 11/19
N.T.S. Source: VHB LD_300



Interior Drop Sewer Manhole (SMH) 1/16
N.T.S. Source: VHB LD_205

Lebanon Fire Station

12 South Park Street
Lebanon, New Hampshire 03766

No.	Revision	Date	Appr'd

Designed by	SJF	Checked by	DHF
Issued for		Date	May 13, 2024

Not Approved for Construction

Drawing Title

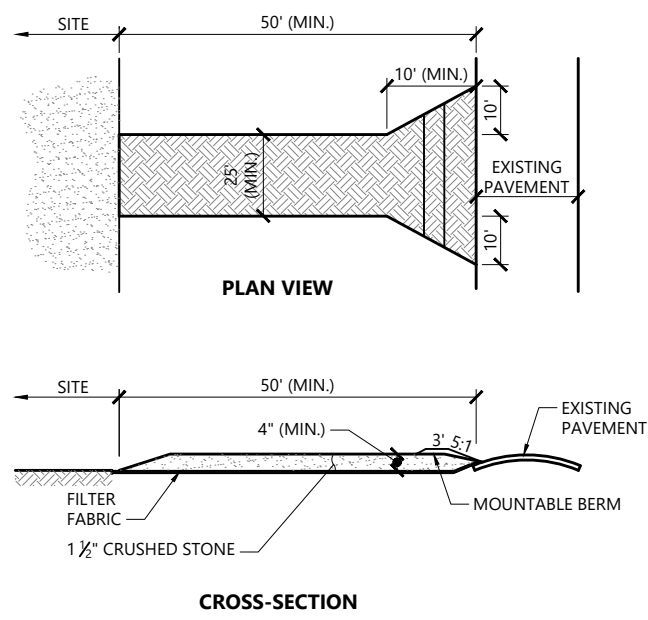
Site Details 2

Drawing Number

STATE OF NEW HAMPSHIRE
DAVID H. FENSTERMACHER
No. 13362
LICENSED PROFESSIONAL ENGINEER

Sheet 7 of 10

Project Number
52635.00

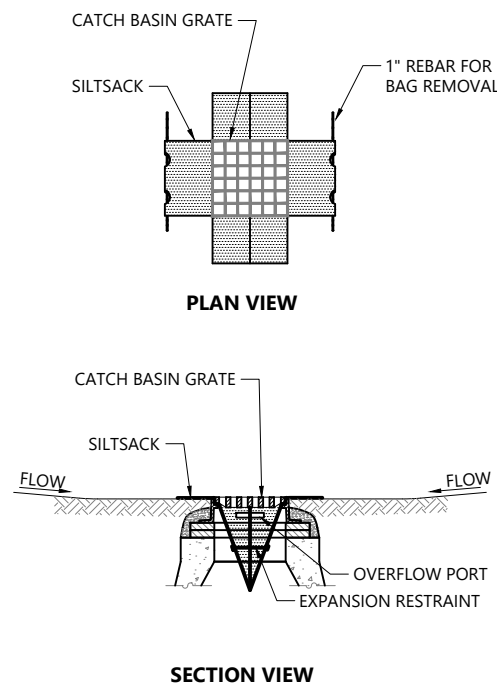


NOTES

- EXIT WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
- THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.
- STABILIZED CONSTRUCTION EXIT SHALL BE REMOVED PRIOR TO FINAL FINISH MATERIALS BEING INSTALLED.

Stabilized Construction Exit
N.T.S. Source: VHB

1/16
LD_682

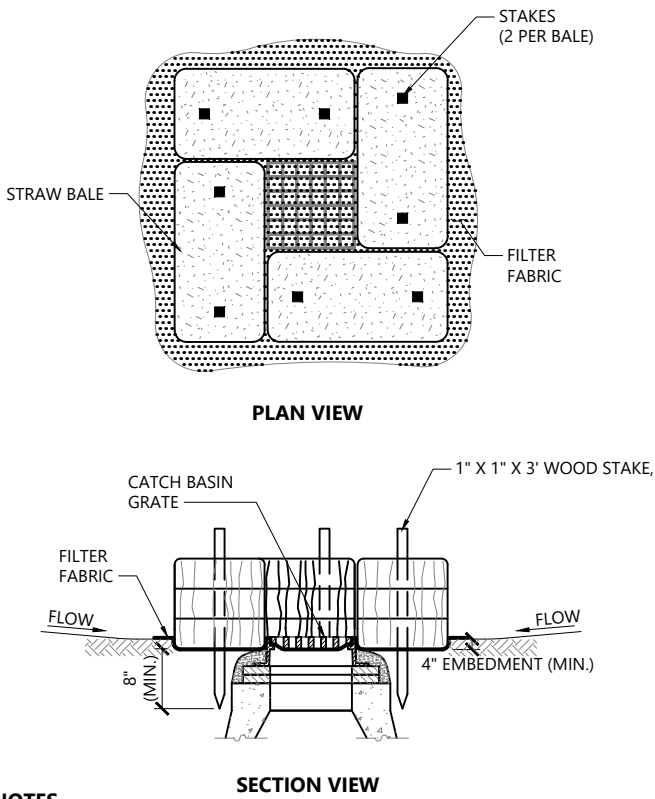


NOTES

- INSTALL SILTSACK IN ALL CATCH BASINS WHERE INDICATED ON THE PLAN BEFORE COMMENCING WORK OR IN PAVED AREAS AFTER BINDER COURSE IS PLACED AND STRAW BALES HAVE BEEN REMOVED.
- GRATE TO BE PLACED OVER SILTSACK.
- SILTSACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED. MAINTAIN UNTIL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED.

Siltsack Sediment Trap
N.T.S. Source: VHB

1/20
LD_674

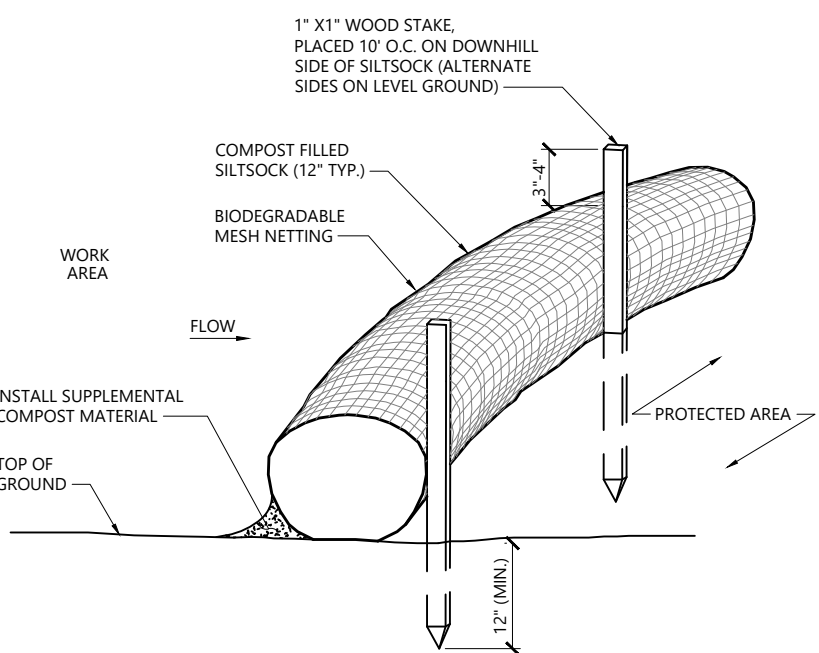


NOTES

- ENCLOSE STRUCTURE WITH STRAW BALES IMMEDIATELY AFTER CATCH BASIN CONSTRUCTION. MAINTAIN UNTIL PAVING BINDER COURSE IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
- IF GRATE IS AGAINST EXISTING CURB THEN BALES ARE TO BE PLACED AROUND THREE SIDES OF GRATE ONLY.
- GRATE TO BE PLACED OVER FILTER FABRIC.
- BALES SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

Catch Basin Sediment Trap
N.T.S. Source: VHB

1/16
LD_673

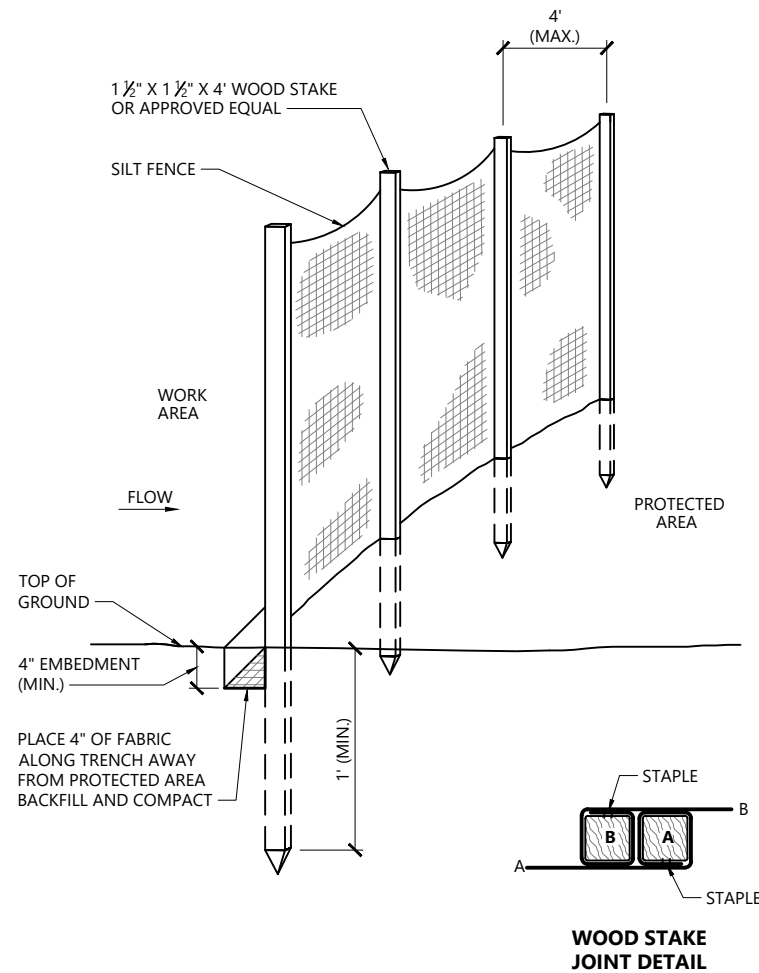


NOTES

- SILTSOCK SHALL BE FILTREXX SILTSOCK, OR APPROVED EQUAL.
- SILTSOCKS SHALL OVERLAP A MINIMUM OF 12 INCHES.
- SILTSOCK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.
- UPON SITE STABILIZATION, COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.
- IF NON BIODEGRADABLE NETTING IS USED THE NETTING SHALL BE COLLECTED AND DISPOSED OF OFFSITE.

Siltsack - Erosion Control Barrier
N.T.S. Source: VHB

10/20
LD_658



Silt Fence Barrier
N.T.S. Source: VHB

1/16
LD_650

Lebanon Fire Station
12 South Park Street
Lebanon, New Hampshire 03766

No.	Revision	Date	Apprd.

Designed by	SJF	Checked by	DHF
Issued for		Date	May 13, 2024

Permitting

Not Approved for Construction

Site Details 3

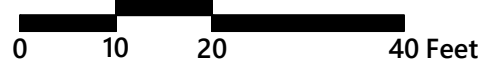
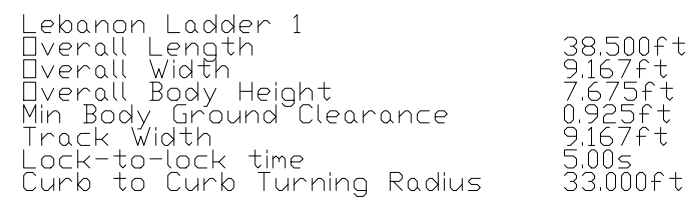
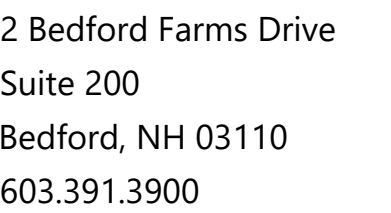
Drawing Number

C6.04

Sheet 9 of 10

Project Number
52635.00





12 South Park Street
Lebanon, New Hampshire 03766

Designed by	Checked by
SJF	DHF

May 13, 2024

Vehicle Turning Movement



Project Number
52635.00



2 Bedford Farms Drive
Suite 200
Bedford, NH 03110
603.391.3900

Legend

- ① DRAIN MANHOLE
- ② CATCH BASIN
- ③ SEWER MANHOLE
- ④ ELECTRIC MANHOLE
- ⑤ TELEPHONE MANHOLE
- ⑥ MANHOLE
- ⑦ HAND HOLE
- ⑧ WATER GATE
- ⑨ FIRE HYDRANT
- ⑩ GAS GATE
- ⑪ BOLLARD w/LIGHT
- ⑫ STREET SIGN
- ⑬ LIGHT POLE
- ⑭ UTILITY POLE
- ⑮ GUY POLE
- ⑯ GUY WIRE
- ⑰ MONITORING WELL
- ⑱ FLOOD LIGHT
- ⑲ WELL
- ⑳ MARSH
- ① F.F.E. = 45.27'
- ② FINISHED FLOOR ELEVATION
- ③ DOUBLE YELLOW LINE
- ④ DASHED WHITE LINE
- ⑤ SINGLE YELLOW LINE
- ⑥ EDGE OF PAVEMENT
- ⑦ VERTICAL GRANITE CURB
- ⑧ SLOPED GRANITE EDGE
- ⑨ GUARDRAIL
- ⑩ CHAIN LINK FENCE
- ⑪ DRAINAGE LINE w/PIPE NUMBER & ASCS SUE LEVEL CLASSIFICATION
- ⑫ SEWER LINE w/PIPE NUMBER & ASCS SUE LEVEL CLASSIFICATION
- ⑬ OVERHEAD WIRE
- ⑭ UNDERGROUND ELECTRIC
- ⑮ TELEPHONE LINE
- ⑯ GAS LINE
- ⑰ WATER LINE
- ⑱ STONE WALL
- ⑲ TREE LINE

Lebanon Fire Station

12 South Park Street
Lebanon, Grafton County, N.H.

No.	Revision	Date	Apprd.

Designed by	Checked by
Issued for	Date

February 1, 2024

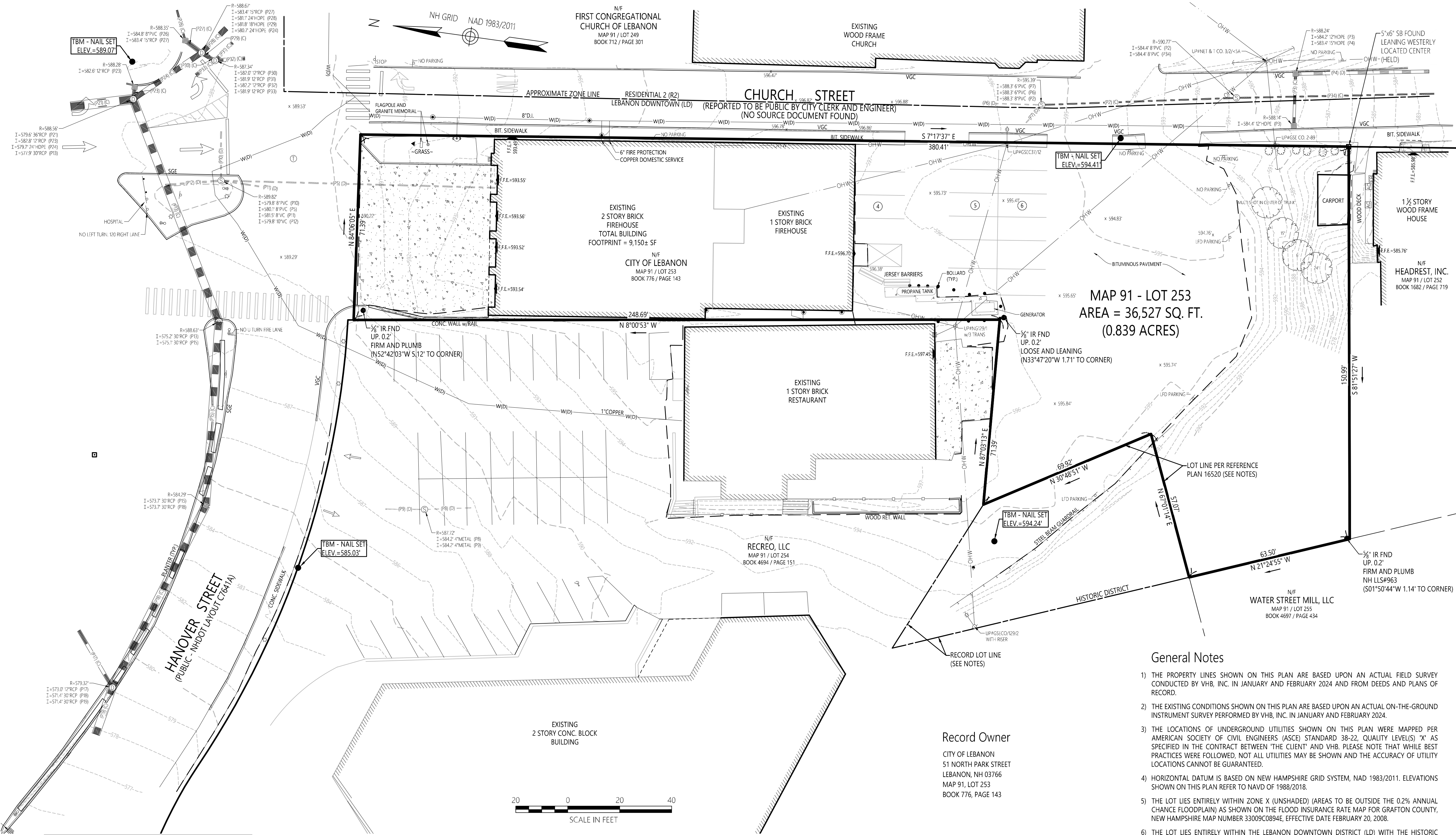


Drawing Number

Sv-1

Sheet 1 of 1

Project Number
52635.00



General Notes

- THE PROPERTY LINES SHOWN ON THIS PLAN ARE BASED UPON AN ACTUAL FIELD SURVEY CONDUCTED BY VHB, INC. IN JANUARY AND FEBRUARY 2024 AND FROM DEEDS AND PLANS OF RECORD.
- THE EXISTING CONDITIONS SHOWN ON THIS PLAN ARE BASED UPON AN ACTUAL ON-THE-GROUND INSTRUMENT SURVEY PERFORMED BY VHB, INC. IN JANUARY AND FEBRUARY 2024.
- THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THIS PLAN WERE MAPPED PER AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD 38-22, QUALITY LEVEL(S) "X" AS SPECIFIED IN THE CONTRACT BETWEEN THE CLIENT AND VHB. PLEASE NOTE THAT WHILE BEST PRACTICES WERE FOLLOWED, NOT ALL UTILITIES MAY BE SHOWN AND THE ACCURACY OF UTILITY LOCATIONS CANNOT BE GUARANTEED.
- HORIZONTAL DATUM IS BASED ON NEW HAMPSHIRE GRID SYSTEM, NAD 1983/2011. ELEVATIONS SHOWN ON THIS PLAN REFER TO NAVD OF 1988/2018.
- THE LOT LIES ENTIRELY WITHIN ZONE X (UNSHADED) (AREAS TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) AS SHOWN ON THE FLOOD INSURANCE RATE MAP FOR GRAFTON COUNTY, NEW HAMPSHIRE MAP NUMBER 33009C0894E, EFFECTIVE DATE FEBRUARY 20, 2008.
- THE LOT LIES ENTIRELY WITHIN THE LEBANON DOWNTOWN DISTRICT (LD) WITH THE HISTORIC DISTRICT OVERLAY AS SHOWN ON THE "OFFICIAL ZONING MAP OF THE CITY OF LEBANON, NH", DATED JUNE 1, 2020. DIMENSIONAL REQUIREMENTS FOR A (LD) AT THE TIME OF THIS SURVEY ARE:

REQUIRED

MINIMUM LOT AREA	3,000 S.F.
MINIMUM FRONTAGE	40 FEET
MINIMUM FRONT YARD SETBACK	NONE*
MINIMUM SIDE YARD SETBACK	NONE*
MINIMUM REAR YARD SETBACK	10 FEET*
MAXIMUM BUILDING HEIGHT	55 FEET

* SETBACK REQUIREMENTS MAY VARY PER SECTION 307.7 OF ZONING ORDINANCE

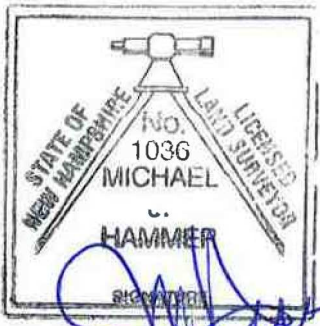
- THE TREE SYMBOL OUTLINE SHOWN ON THIS PLAN DOES NOT REPRESENT THE ACTUAL TREE CANOPY.
- REFERENCE PLAN 16520 DEPICTS A LOT LINE ADJUSTMENT BETWEEN MAP 91, LOT 253 AND MAP 91, LOT 254. NO DEED TRANSFERRING TITLE WAS FOUND RECORDED AT THE GRAFTON COUNTY REGISTRY OF DEEDS
- THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE EXAMINATION. ACCORDINGLY ALL TITLE MATTERS AND ENCUMBRANCES MAY NOT BE SHOWN.

Record Owner

CITY OF LEBANON
51 NORTH PARK STREET
LEBANON, NH 03766
MAP 91, LOT 253
BOOK 776, PAGE 143

Survey Endorsement

TO THE BEST OF PROFESSIONAL KNOWLEDGE, INFORMATION, AND BELIEF, THIS SURVEY WAS PREPARED, FROM PLANS AND DEEDS OF RECORD, WAS MADE FROM A FIELD SURVEY SUPERVISED BY ME, AND IN ORDINARY STANDARD OF CARE EXERCISED IN A STANDARD PROPERTY SURVEY OUTLINED IN NH LSA 503.

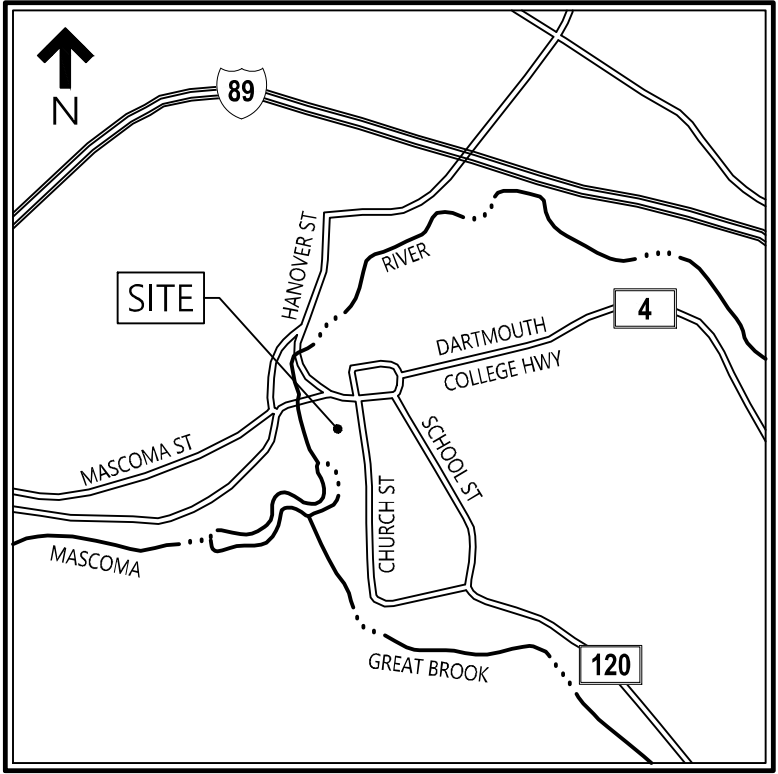


DATE _____ LICENSED LAND SURVEYOR

Plan References

- PLANS RECORDED AT THE GCRD AS:

- "BOUNDARY SURVEY BENTON HILL CORPORATION, LEBANON, N.H." DATED AUGUST 14, 1970, PREPARED BY K.A. LECALIR ASSOC., INC. C.E. RECORDED AS GCRD PLAN #1-1-29.
- "PLAN OF LAND BELONGING TO DANIELS TRANS. CO. INC., LEBANON N.H." DATED SEPT 19, 1969 PREPARED BY LEON P. DAVIS, RECORDED AS GCRD PLAN #1104-66
- "CONDOMINIUM SITE PLAN FOR UPPER VALLEY HABITAT FOR HUMANITY, INC., 20, 22, 24 & 26 CHURCH STREET - LEBANON, NEW HAMPSHIRE" DATED 24, 1994, PREPARED BY T&M ASSOCIATES, INC., RECORDED AS GCRG PLAN #8484
- "PLAN SHOWING BOUNDARY LINE ADJUSTMENT BETWEEN PROPERTIES OF RECREO, LLC 77 BANK STREET, LEBANON, NH 03766, TAX MAP 91 LOT 254, AND CITY OF LEBANON TAX MAP 91 LOT 253, 2 MASCOMA STREET, GRAFTON COUNTY, LEBANON, NEW HAMPSHIRE" DATED FEBRUARY 10, 2022, REVISED THROUGH 3-29-22, PREPARED BY DIBERNARDO ASSOCIATES, LLC, RECORDED AS GCRD PLAN #16520
- "SURVEY FOR WATER STREET RENTAL, L.L.C., WATER STREET AND VALLEY STREET, CITY OF LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE" DATED 6/18/98, PREPARED BY HATHORN SURVEYS, INC., RECORDED AS GCRD PLAN #10093.
- "LEBANON BUSINESS DISTRICT PROJECT - N.H. 14, CITY OF LEBANON, GRAFTON COUNTY, NEW HAMPSHIRE, BOUNDARY & DISPOSITION PLAT" DATED JAN 25, 1971, PREPARED BY K.A. LECLAIR ASSOC. INC. RECORDED AS GCRD PLAN P314PL13.
- "PLAN OF LAND IN LEBANON, N.H." DATED SEPT. 1943 RECORDED AS GCRD PLAN #848-65.



Locus Map
(NOT TO SCALE)

C:\Users\knox\AppData\Local\Temp\151044-001\Lebanon Fire Station V2 - Brooks DeYoung\A5E\Ext

9/12/2024 3:44:06 PM



E1 EXTERIOR PERSPECTIVE FROM THE CORNER CHURCH STREET - FRONT
A2.01 1 1/2" = 1'-0"



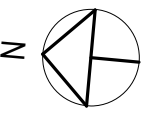
J1 EXTERIOR PERSPECTIVE FROM CHURCH STREET - REAR
A2.01 1 1/2" = 1'-0"

City of Lebanon

**PUBLIC SAFETY
BUILDING - FIRE
DEPARTMENT**

12 South Park Street
Lebanon, NH 03766

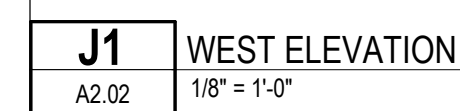
NO.	DESCRIPTION	DATE



CONTENT: EXTERIOR PERSPECTIVES	
DRAWN BY:	JEA III
PROJECT NO:	19-044-01
DATE:	05/01/2024
REVISED:	
SCALE:	1 1/2" = 1'-0"
A2.01	
Project Phase BID PACKAGE #1	
COPYRIGHT © 2024 BY LAVALLEE BRENSINGER PLLC. ALL RIGHTS RESERVED. NO REPRODUCTION WITHOUT PERMISSION.	

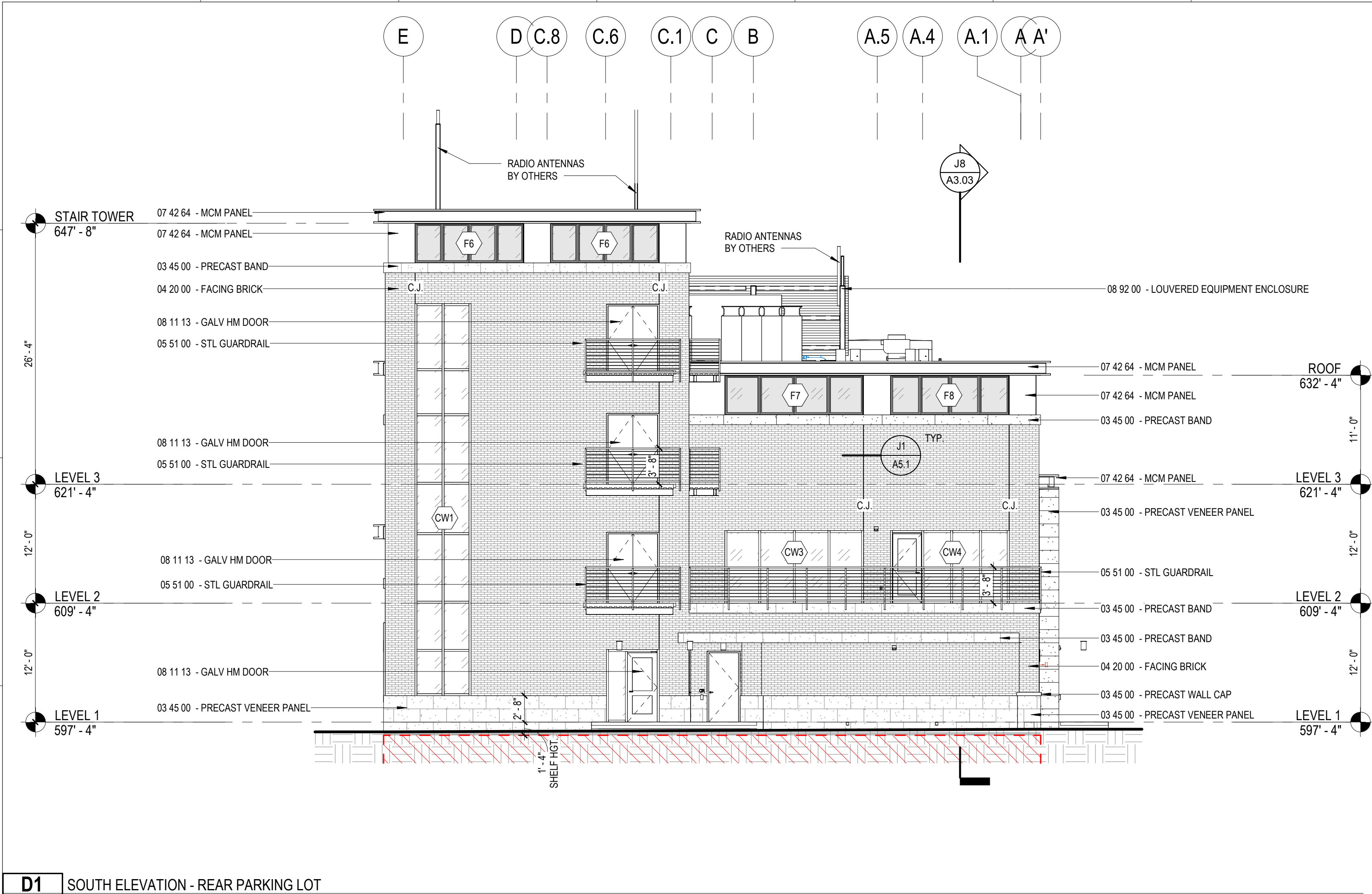


12 South Park Street
Lebanon, NH 03766

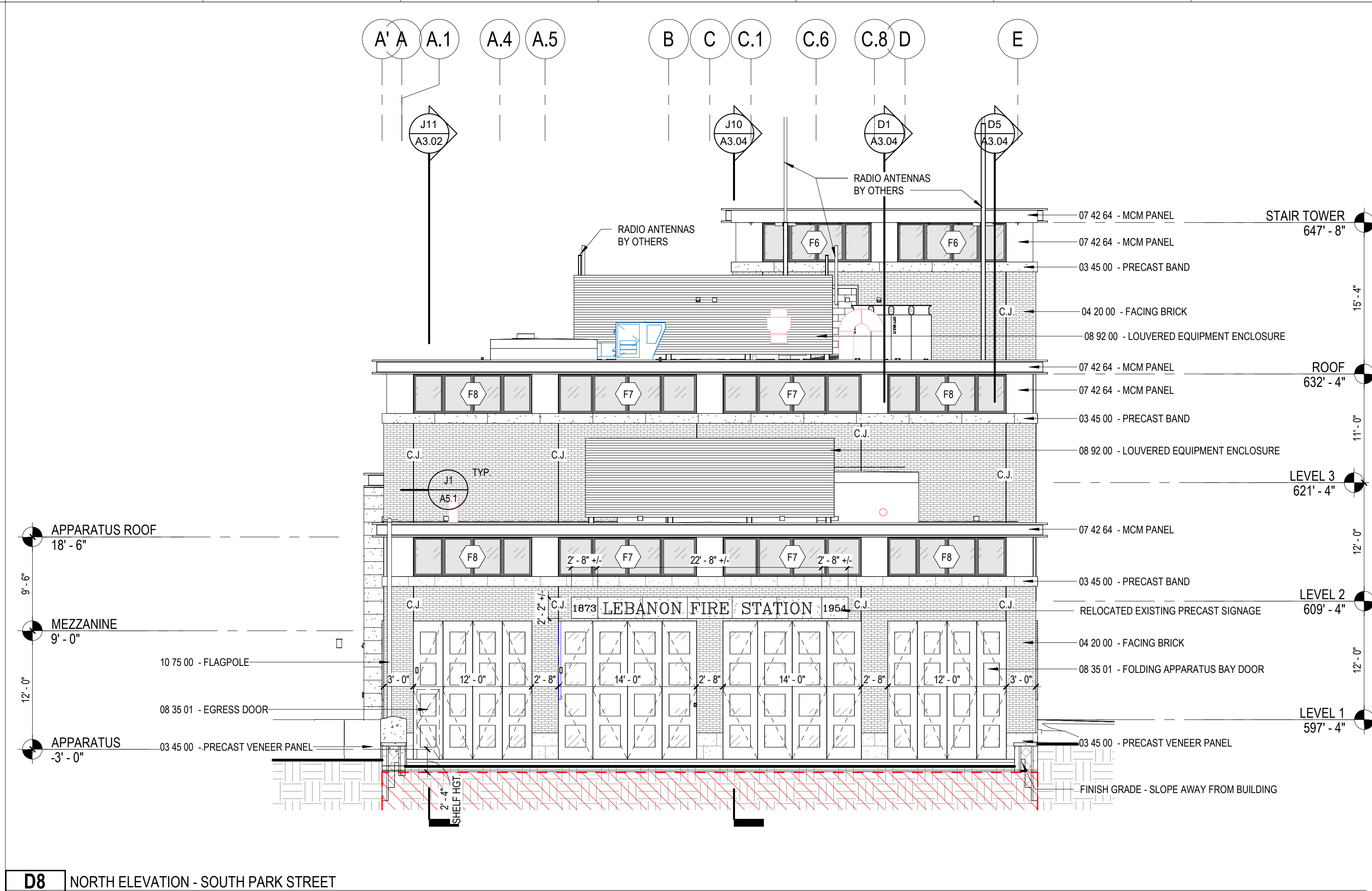


CONTENT:	
EXTERIOR ELEVATIONS	
DRAWN BY:	DRS
PROJECT NO:	19-044-01
DATE:	05/01/2024
REVISED:	
SCALE:	1/8" = 1'-0"
A2.02	
Project Phase	
BID PACKAGE #1	
COPYRIGHT © 2024 BY L'AVALLEE RECHENSINGER PLLC. ALL RIGHTS RESERVED. NO REPRODUCTION WITHOUT PERMISSION.	

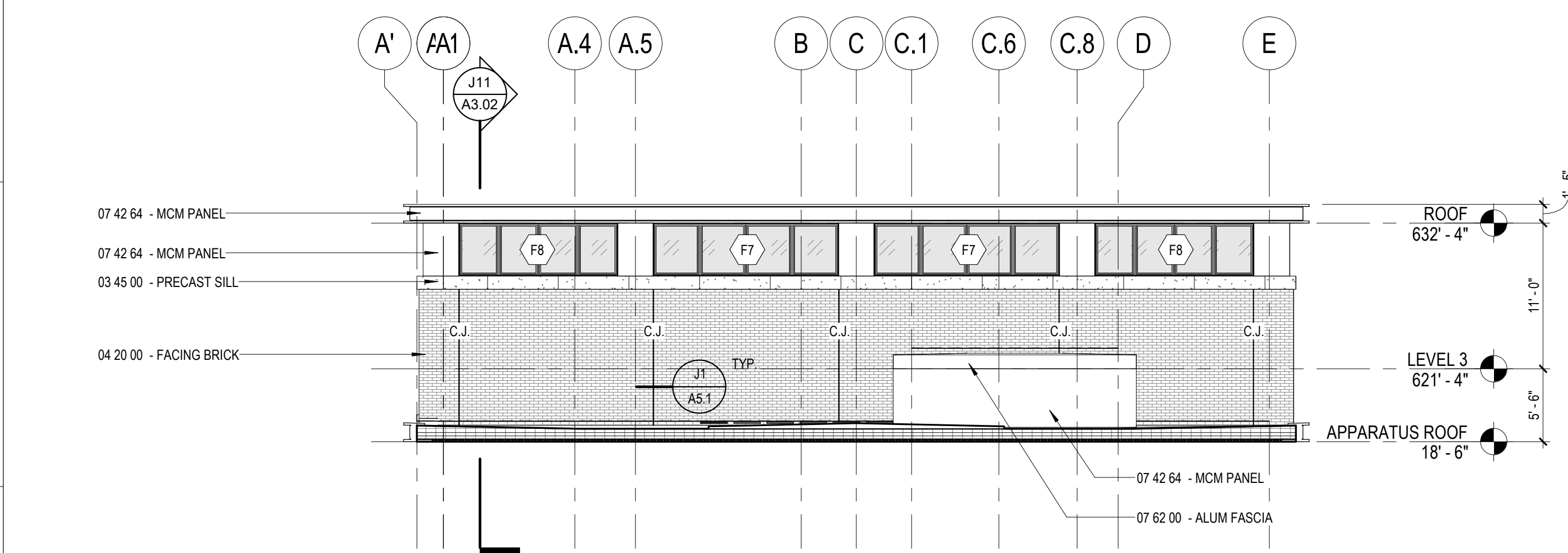
**NOT FOR CONSTRUCTION -
ESTIMATING PURPOSES ONLY**



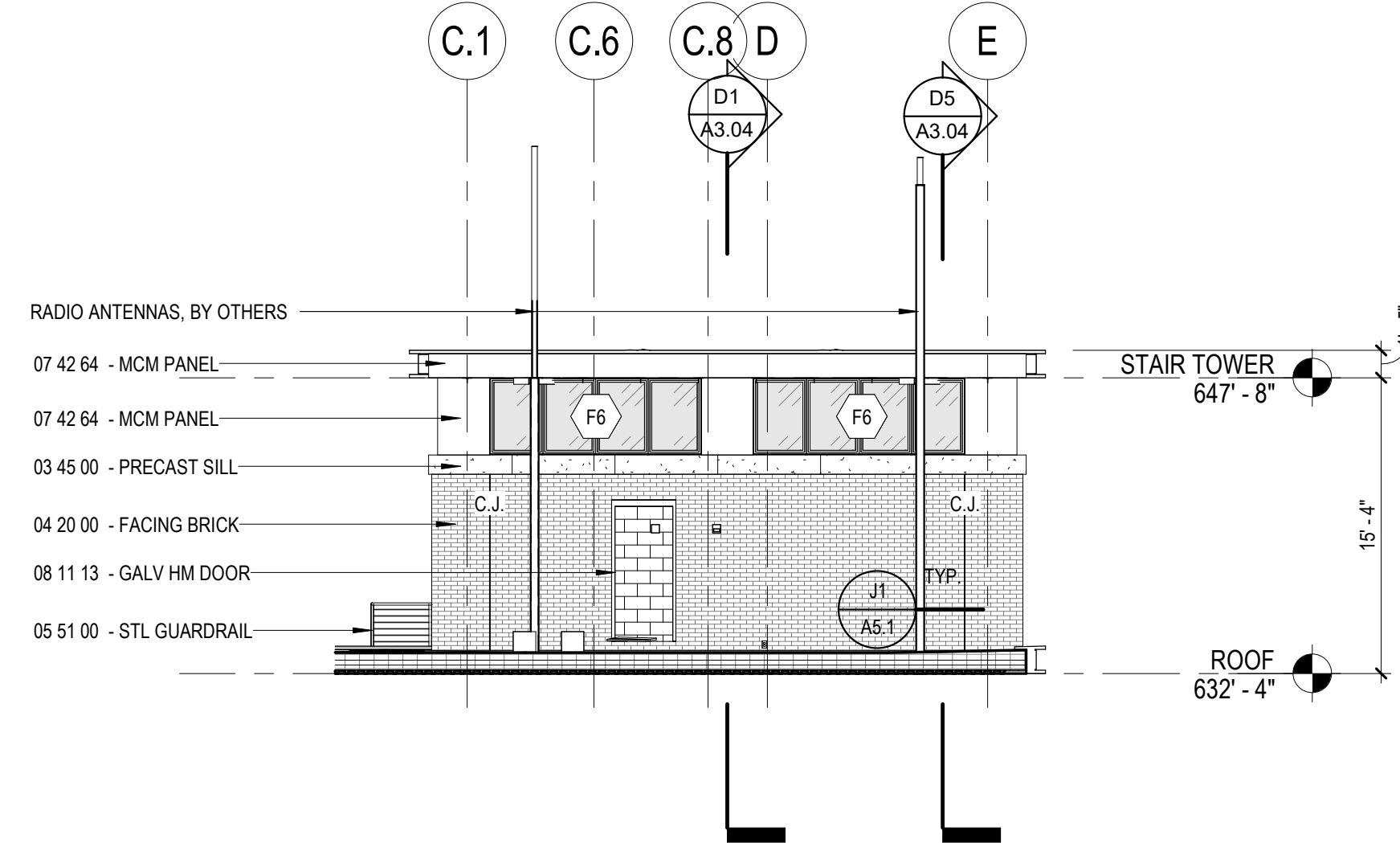
D1 SOUTH ELEVATION - REAR PARKING LOT
A2.03 1/8" = 1'-0"



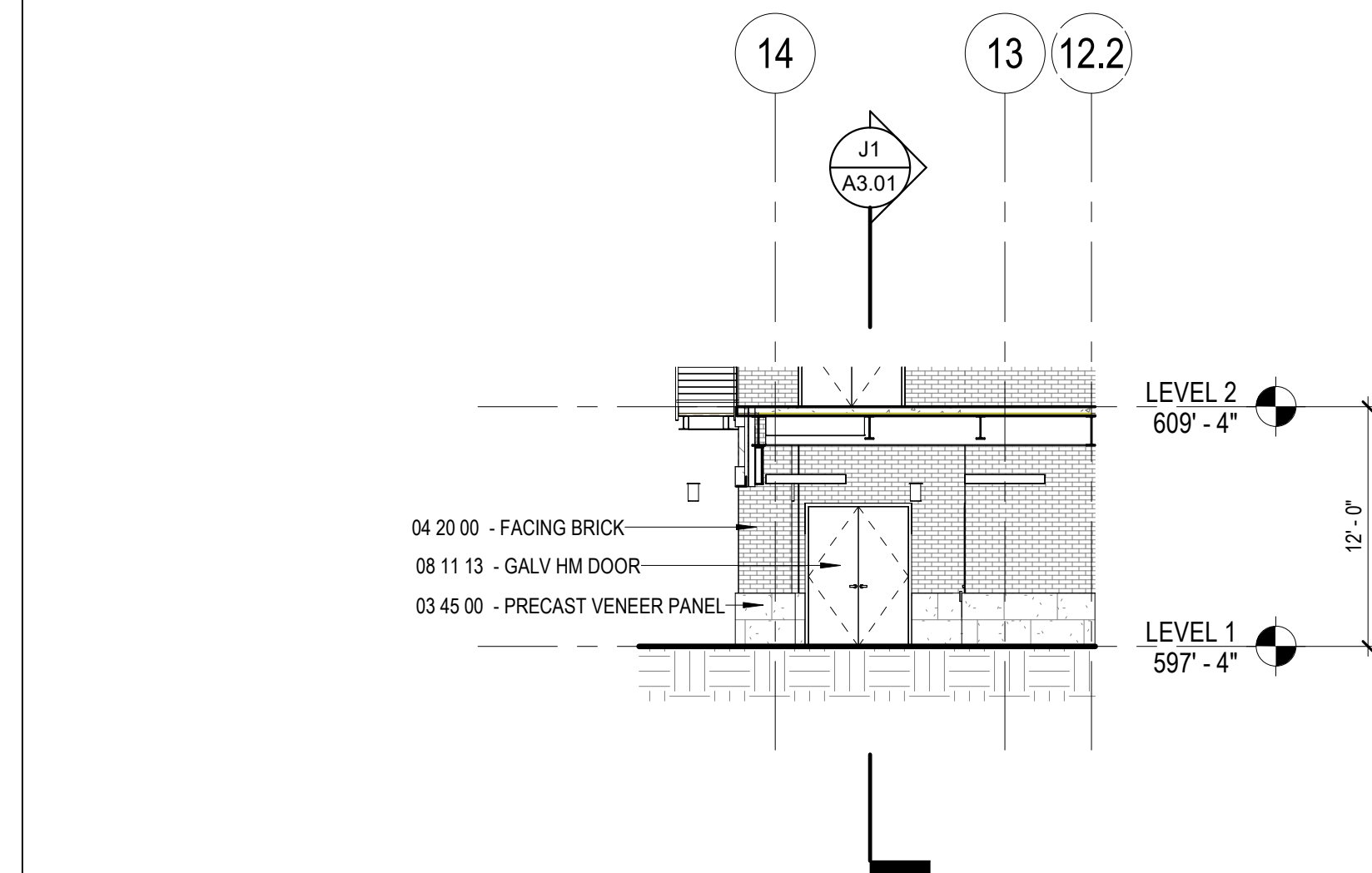
D8 NORTH ELEVATION - SOUTH PARK STREET
A2.03 1/8" = 1'-0"



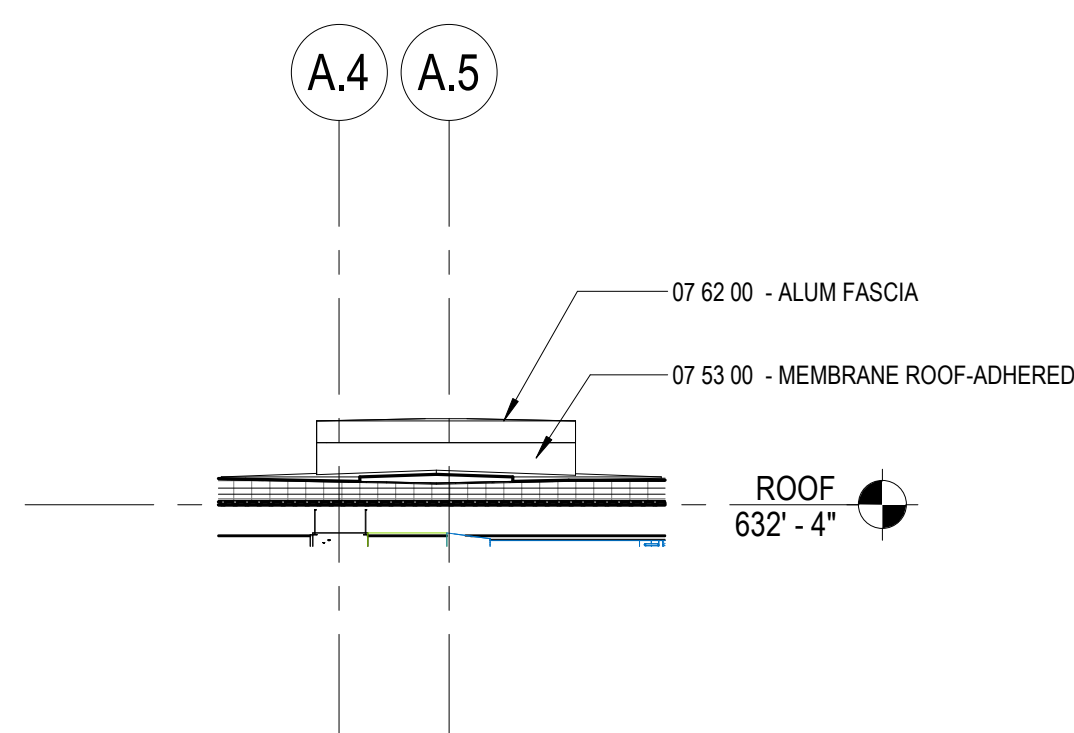
G1 PARTIAL NORTH ELEVATION
A2.03 1/8" = 1'-0"



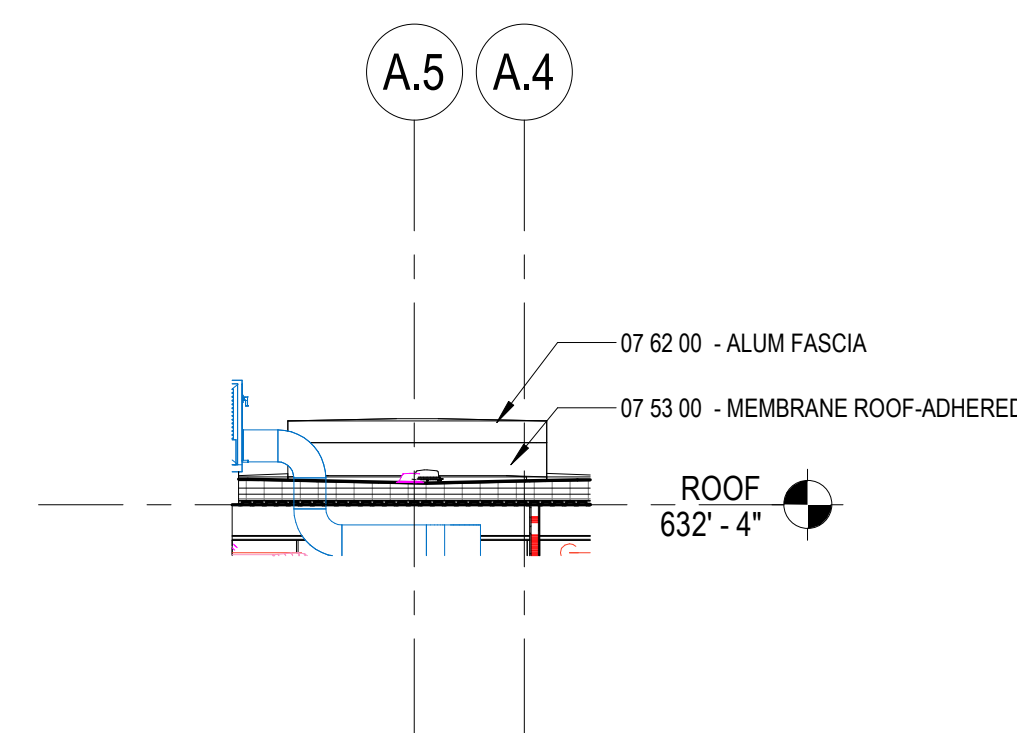
G7 PARTIAL NORTH ELEVATION - STAIR TOWER
A2.03 1/8" = 1'-0"



G11 PARTIAL EAST ELEVATION - UNDER DECK
A2.03 1/8" = 1'-0"



J1 Elevation 7 - a
A2.03 1/8" = 1'-0"



J5 Elevation 7 - a
A2.03 1/8" = 1'-0"

NOT FOR CONSTRUCTION -
ESTIMATING PURPOSES ONLY

City of Lebanon

**PUBLIC SAFETY
BUILDING - FIRE
DEPARTMENT**

12 South Park Street
Lebanon, NH 03766

NO.	DESCRIPTION	DATE

CONTENT: EXTERIOR ELEVATIONS	
DRAWN BY:	DRS
PROJECT NO:	19-044-01
DATE:	05/01/2024
REVISED:	
SCALE:	1/8" = 1'-0"
A2.03	
Project Phase	
BID PACKAGE #1	
COPYRIGHT © 2024 BY LAVALLEE BRENSINGER PLLC. ALL RIGHTS RESERVED. NO REPRODUCTION WITHOUT PERMISSION.	

FOR ADDITIONAL INFORMATION, REFER TO PROJECT MANUAL.

SPECIAL EXCEPTION	☐	☐	SITE PLAN REVIEW
VARIANCE	☐	☐	SUBDIVISION
MOTION FOR REHEARING	☐	☐	LOT LINE ADJUSTMENT
APPEAL OF AN ADMIN. DECISION	☐	☒	CONDITIONAL USE PERMIT

☐ OTHER _____

PROPERTY OWNER (APPLICANT):

NAME: XYZ Dairy, LLCTEL. #: 603-676-7800

MAILING ADDRESS: 57 Main Street, W. Lebanon, NH 03755

E-MAIL ADDRESS: info@lymeproperties.com

CO-APPLICANT, AGENT, OR LESSEE:

NAME: Chet Clem, Lyme PropertiesTEL. #: 603-676-7106

MAILING ADDRESS: 57 Main Street, W. Lebanon, NH 03755

E-MAIL ADDRESS: chet@lymeproperties.com

PROJECT LOCATION:

TAX MAP #: 58LOT #: 18PLOT #:ZONE: R3

STREET ADDRESS OF PROJECT: 0 Beyerle Street, West Lebanon, NH 03784

IS THIS PROPERTY LOCATED IN THE:WETLANDS☐ YES☒ NOHISTORIC DISTRICT☐ YES☒ NO
FLOOD PLAIN☐ YES☒ NO

SCOPE OF PROJECT:

Conditional Use Permit for Cottage Development under Lebanon Zoning Ordinance Section 509

TYPE OF OCCUPANCY:

EXISTING☒ VACANT☐ ONE FAMILY☐ TWO FAMILY☐ MULTI-FAMILY☐ COMMERCIAL☐ INDUSTRIAL
PROPOSED☐ VACANT☐ ONE FAMILY☐ TWO FAMILY☒ MULTI-FAMILY☐ COMMERCIAL☐ INDUSTRIAL
IF USE IS COMMERCIAL OR INDUSTRIAL, PLEASE NOTE SPECIFIC
USE: _____

SIGNATURE BLOCK:

FOR PLANNING BOARD APPLICATIONS ONLY: I, the undersigned, hereby submit this application on the date noted below with the knowledge and understanding that the Planning Board shall determine if the submitted application is complete according to its regulations at its next regularly scheduled meeting on June 10, 2024, unless I personally request, in writing, that the Board delay its determination of completeness to a later date.
PROPERTY OWNER: David ClemDATE: 3/10/2024
NOTE: IF, AS OWNER, YOU WISH TO DESIGNATE AN AGENT TO ACT ON YOUR BEHALF, PLEASE READ THE FOLLOWING AND SIGN BELOW: I hereby designate the person listed above as my agent for the purpose of procuring the necessary local permits for the proposed work as described herein. Representations made by my agent may be accepted as though made by me personally, and I understand that I am bound by any official decision made on the basis of such representation.
PROPERTY OWNER: David ClemDATE: 3/10/2024

DATE RECEIVED	FILE # (MAP/LOT)	APPLICATION #	FEE - \$ AMOUNT	DATE PAID	VOUCHER #
5/13/2024	58-18	PB2024-23-CUP			



City of Lebanon, New Hampshire

APPLICATION FOR CONDITIONAL USE PERMIT SUPPORT STATEMENT

Office Use Only

Date Received:

Application No.:

I. APPLICATION CHECKLIST

- [Application form](#)
- [Public Hearing Notification List](#)
- [Filing fee](#)
- *This form, including written responses to the Section 302.4.D requirements, outlined below*
- *A site plan*
- *Optional: photos and any other materials in support of your application*

II. PROJECT DESCRIPTION

I (we) hereby request a Conditional Use Permit as provided for in [Article V, Section 509](#), of the Lebanon Zoning Ordinance.

Please describe your proposed project with as much detail as possible. You can respond in the space provided below or on a separate sheet of paper.

Crafts Cottage Court is a proposed 16-unit Cottage Development on Lebanon Parcel 58-18 (0 Beyerle Street), a 1.3 acre parcel accessed off of Crafts Avenue.

The Court is proposed under the [Section 509: Cottage Development](#) zoning amendment that was approved by Lebanon voters on March 14, 2023.

An illustrative Site Plan (attached) has been prepared for this Conditional Use Permit by R. John Anderson, based upon a parcel plan completed by Paton Land Survey on March 18, 2021. John has specific experience with Cottage Courts, having designed and built a number of them. John is an outspoken proponent of Missing Middle Housing and a member of the Congress for New Urbanism.

The court will be accessed via a driveway easement from Crafts Avenue to be granted by Parcel 58-19 (51 Crafts Avenue).

Of note, Parcel 58-19 utilizes its portion of the platted but unaccepted "Beyerle Street" corridor. Parcel 58-18 utilizes its portions of the platted but unaccepted "Beyerle Street" and "Lincoln Avenue" corridor.

According to "A Hard Road to Travel" NHMA's Handbook on New Hampshire Law of Local Highways, Streets and Trails" by H. Bernard Waugh (1997), "it is well settled that abutters are presumed to own title to the center of a street or way."

Additional optional materials may be submitted ahead of the Planning Board review meeting.

III. CONDITIONAL USE PERMIT CRITERIA

In order to obtain a Conditional Use Permit, you must demonstrate to the Planning Board that the proposal satisfies the applicable criteria set forth in Sections A and B below. You must address each criteria in the space provided or on a separate sheet of paper.

A. Specific Criteria

The Conditional Use Permit is authorized by Article V, Section 509 of the Zoning Ordinance which requires the applicant to demonstrate that *(please address any criteria set forth in the Zoning Ordinance that specifically apply to your proposed use or project*

B. General Criteria per Section 302.4.D

A conditional use permit shall be granted only if the Planning Board determines that the proposal conforms to all of the following standards:

1. The site is suitable for the proposal. This includes:
 - a. Adequate vehicular and pedestrian access for the intended use.

Access is via a the property owner's portion of the platted (but unaccepted and subsequently abandoned) Beyerle Street, as shown on the 1892 Beyerle subdivision and subsequent maps. This aligns with the neighborhood street grid, and existing intersection. Pedestrian access linking to the sidewalk on Crafts Avenue will be provided.

- b. The availability of adequate public services to serve the intended use including emergency services, pedestrian facilities, safe access, and other municipal services.

Crafts Avenue is presently serviced by the City of Lebanon, and this development will benefit from the same services as existing residences in the neighborhood which are adequate to serve the project.

- c. The absence of environmental constraints (floodplain, steep slope, etc.) proposed to be impacted by the intended use.

The parcel does not have any wetlands or steep slopes, and is outside of the FEMA floodplain and the Lebanon Riverbank Protection District. The parcel falls within the 250-foot NH DES Shoreland Protection Zone where this type of development is regulated.



- d. The availability of appropriate utilities to serve the intended use including water, sewage disposal, stormwater treatment, electricity, and similar utilities.

This project takes advantage of the modern Sewer and Water lines installed in Crafts Avenue in 2018, which were upsized by the City of Lebanon to ensure capacity for future development.

Stormwater treatment will be handled on-site, taking advantage of the sandy riparian soils and utilizing Low Impact Development and Stormwater Management techniques from the NH DES <https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/wmb-17.pdf>

Electrical service will be coordinated with Liberty Utilities, but existing service is believed to have sufficient capacity.

2. External impacts: The external impacts of the proposed use on abutting properties and the neighborhood shall be commensurate with the impacts of adjacent existing uses or other uses permitted in the zoning district. This shall include, but not be limited to, water runoff, drainage, traffic, noise, odors, vibrations, dust, fumes, hours of operation, and exterior lighting and glare. In addition, the location, nature, design, and height of the structure and its appurtenances, its scale with reference to its surroundings, and the nature and intensity of the use, shall not have an adverse effect on the surrounding environment nor discourage the appropriate and orderly development and use of land and buildings in the neighborhood. The proportion of the site proposed to be occupied by impervious surfaces shall be minimized to the extent necessary to preclude unreasonable risk of runoff, erosion, sedimentation, and other potentially adverse on- site or off-site effects.

This residential development is commensurate with the impacts of adjacent existing residential uses in the R-3 Zoning District, and the clustering of smaller units is the intention of the **Section 509 Cottage Development** ordinance.

Water runoff and drainage will be addressed on-site and meet NH DES requirements.

Traffic and noise should be commensurate to comparable residential housing, and smaller units help reduce the parking demand and traffic generation. The project is located 0.2 miles (4 minute walk) from the existing Advance Transit stop on North Main Street and a 4-line transit hub has been proposed at the River Park project.

Upon completion, noise, odors, vibrations, dust, fumes, and hours of operation should be no different than expected in a residential neighborhood. Best practices will be utilized during construction to minimize impacts on the existing neighborhood. Exterior lighting will be designed according to best practices to limit any impact on surrounding properties.

The underlying R-3 zoning (Section 310) allows for up to 35' in height. The Cottage Development (Section 509) further restricts the height to 24'. The majority of cottages will be well below this height; the tallest are the two "Garden Duplexes" which fall below the 24' threshold.

The parcel is 10-20 feet lower topographically than the existing residences on Crafts Avenue, further mitigating concerns about height and scale.

The access drive and parking area has been designed in accordance with 2018 International Fire Code Section D103.1, incorporating a 120' "Hammerhead" for Fire Apparatus access within the parking area. This minimizes impervious surface, while meeting life-safety and parking requirements.

3. Character of the site development: The proposed layout and design of the site shall not be incompatible with the established character of the neighborhood and shall mitigate any external impacts on abutters, the neighborhood, and nearby public ways and infrastructure. This shall include, but not be limited to, the relationship of the building(s) to the street, the amount, location, and screening of off-street parking, the treatment of yards and setbacks, the buffering of adjacent properties, and provisions for vehicular and pedestrian access to and within the site.

The history of the Crafts Avenue neighborhood has been well-documented by the Lebanon Heritage Commission, and has undergone multiple rounds of development since the 1892 subdivision by George Beyerle which converted the farmland for residential development to meet the growing housing needs in West Lebanon in the late 19th century. Of note, Crafts Avenue is “possibly the first intentional suburban development in Lebanon.”

<https://lebanonnh.gov/1200/Crafts-Avenue-Historic-District>

The Crafts Avenue neighborhood was analyzed as a potential historic district by the Lebanon Heritage Commission in 2013, but it was never deemed a historic district. The project is located on a parcel that falls outside of the historic area.

The cottage designs incorporated into the proposal reflect an architectural vernacular that is appropriate to the region, and reflect the architectural variety and character currently found on Crafts Avenue.

The cottages have been sited to the West of the property, providing relief from existing neighboring homes on Crafts Avenue.

The access drive utilizes part of the platted (but unaccepted) westerly extension of Beyerle Street, where there is an existing 3-way intersection with Stop signs in all directions.

Parking has been sited on the Eastern side of the parcel, where it is centralized to prioritize the pedestrian-orientation of the Cottage Court. There are 21 total parking spaces (17 surface spots and four (4) garage spots in the two Garden Duplexes) for a 1.3 Parking ratio.

The parking has been intentionally sited where the greatest impact is on 51 Crafts Avenue, which has common ownership with the development.

Centralized trash collection has also been located away from existing neighbors and the Cottage area, and is screened in along the shared boundary with 51 Crafts Avenue.

4. Character of the buildings and structures: The design of any new buildings or structures and the modification of existing buildings or structures on the site shall not be incompatible with the established character of the neighborhood. This shall include, but not be limited to, the scale, height, and massing of the building or structure, the roof line, locations of access, and visual compatibility with the area.

As mentioned herein: the cottage designs incorporated into the proposal reflect an architectural vernacular that is appropriate to the region, and specifically to reflect the architectural variety and character currently found on Crafts Avenue. All units are below the height limitations, and the massing is further mitigated by the ~10-20’ drop in topography from Crafts Avenue

5. Preservation of natural, cultural, historic, and scenic resources: The proposed use and layout of the site, including all related development activities, shall to the greatest extent practicable preserve identified natural, cultural, historic, and scenic resources on the site and shall not degrade such identified resources on abutting properties. This shall include, but not be limited to, identified wetlands, floodplains, significant wildlife habitat and documented wildlife corridors, stonewalls, mature tree lines, identified historic buildings or sites, scenic views, and viewsheds.

There are no wetlands on the parcel, it is outside of the floodplain, and does not impact significant wildlife habitat or the City of Lebanon’s wildlife corridors:

(<https://lebanonnh.gov/853/Lebanons-Wildlife-Corridors>).

There are no stonewalls or mature tree lines impacted.

As referenced in Section 3 above, the parcel is located outside of the “Crafts Avenue Historic

District” that was studied by the Lebanon Heritage Commission.

Access path(s) have been included to connect to future/proposed pedestrian trails along the Connecticut River. This aligns with the “Lincoln Avenue” corridor that has been proposed as a Greenway route by Lyme Properties and XYZ Dairy, LLC in 2008 and 2021.



May 31, 2024

Tim Corwin
Deputy Director of Planning

Nathan Reichert
Director of Planning

City of Lebanon
51 N Park Street
Lebanon, NH 03766

Re: 0 Beyerle St_PB2024-23-CUP_Staff Comments

Tim,

I am responding to your May 24, 2024 email regarding the Conditional Use Permit Lyme Properties applied for on May 13, 2024 on behalf of XYZ Dairy, LLC at 0 Beyerle Street, West Lebanon, NH.

I am responding via letter to include specific, visual references as appropriate to answer your questions. I have included this Memo in the 5/31/24 packet as a resource for the Planning Board. Your questions/comments are included in **blue** and our responses in **black**. Conflicts between relevant ordinances have been flagged in **red**. Where applicable, items that are deferred to the Site Plan Regulations Review are highlighted in gray.

I strongly disagree with the assertion that "a substantial amount of additional information is needed in order for staff to make a recommendation to the Planning Board at their June 10th meeting that the application is complete enough for the Board to accept jurisdiction and commence review." I have outlined my reasons herein.

The May 13, 2024 application met the requirements of the Conditional Use Permit Process as outlined in Section 302.4 of the Zoning Ordinance, and addressed each of the submission requirements listed on the "City of Lebanon, New Hampshire Application For Conditional Use Permit Support Statement" form provided by the Planning & Development Department on the City's website at:
<https://lebanonnh.gov/1380/Conditional-Use-Permit>

We reference and respect the City's rules and regulations as written, and make our investment decisions accordingly. It is unreasonable to change the City's requirements on-the-fly, the repercussions of which are unduly borne by the property owner.

I will caution the Planning Department that this project cannot be unduly delayed or cost-burdened with addressing issues in the ordinance or preferences of the Planning Staff outside of the written ordinances as approved legislatively. The margins on a project like this in today's economic climate



are very thin to begin with. Undue delay, additional bureaucratic burdens, and the resultant costs will make the project unfeasible, as transpired with the Bequal project on 215-217 N. Main (ZB2021-08-AAD, ZB2021-12-AAD, ZBA-2021-13-AAD).

That runs counter to the intent of the City Council's actions, and procedural uncertainty and permitting challenges have been well-documented in reports such as *Keys to the Valley* as barriers to addressing the ongoing housing crisis.

We have conceptualized and proposed this project in response to the City Council's Housing Policy of July 2, 2022 and the resultant ordinance that passed on March 14, 2023. This type of Missing Middle housing is a crucial part of the solution to the ongoing housing crisis.

As referenced and discussed in our meeting on May 21, 2024, additional information and materials—in support of the project but outside the formal CUP application requirements—have been prepared and are included in the Updated Application for May 31, 2024. All plans have been adapted, where applicable, to the feedback received in the 5/21/24 meeting and 5/24/24 letter.

This project is designed by R. John Anderson, a nationally known expert in Cottage Court and Missing Middle homes. John just finishing presenting on Cottage Courts at *CNU 32 Cincinnati – Congress for the New Urbanism* alongside Ross Chapin, the Architect whose work the Lebanon Planning Department referenced in the development of the Section 509 Cottage Development Ordinance. Lyme hired John specifically for this project given the depth of his experience, and his knowledge of the qualitative and quantitative aspects of a successful Cottage development.

We also see great benefit in John's expertise helping identify and inform where the Cottage ordinance conflicts with the underlying ordinance(s), and hope it assists in the evolution of the relevant codes to facilitate more Missing Middle housing in Lebanon.

We look forward to initiating the CUP review at the Planning Board on June 10, 2024, and hope the review and approval of the CUP permit can be achieved expeditiously so we can release the Site Plan and associated work for completion and filing for Site Plan Review.

Sincerely,

Chet Clem
Lyme Properties

Cc:
Lebanon Planning Board
Crafts Avenue Neighborhood list-serv



Chet,

Thank you for meeting with me and Nate on Tuesday to discuss your cottage development proposal for 0 Beyerle Street (Tax Map 58, Lot 18). We are very excited about the concept of a cottage development on this lot and look forward to working with you to get this accomplished. The purpose of this e-mail is to summarize the questions/issues we discussed at our meeting in addition to our general staff comments that we did not have time to address at Tuesday's meeting.

In order for the Planning Board to hear an application, they must first determine that the application is complete enough to accept jurisdiction. For the reasons set forth below, a substantial amount of additional information is needed in order for staff to make a recommendation to the Planning Board at their June 10th meeting that the application is complete enough for the Board to accept jurisdiction and commence review.

Depending on your responses, it's possible that relief in one form or another from one or more of the applicable Zoning Ordinance requirements may be required prior to submitted an application to the Planning Board.

I do not see anything in the Ordinance that would prevent the Conditional Use Permit from being reviewed ahead of, or simultaneously with, any other required Zoning Approval applications.

I do not believe our Updated Application will require any relief, and a Site Plan Application will follow if/when the CUP is approved.

If I am missing anything, please direct me to the relevant ordinance(s).

Additionally, the Beyerle project will be the first development to utilize the Section 509 Cottage Development regulations and we may find that the regulations require adjustment/clarification/tweaking.

At the Planning Staff Review meeting on 5/21/24, both parties anticipated that being the first Cottage Court proposed under Section 509 would highlight issues/conflicts between the new Missing Middle typology and certain underlying/vestigial zoning ordinances. Your 5/24/24 memo included 25 issues.

In working with John on this project we have called-out in **red** where conflicts arose– as is to be expected when an untested ordinance meets issues on the ground. Where appropriate, I have explained our assumptions and the logic behind our interpretations and proposed solutions.

For example, it was our assumption that a CUP application would be submitted at the same time as the Site Plan application, but that is not specifically required as the regulations are currently written. We may need to clarify Section 509 accordingly. I mention this example in particular because most of the comments/questions below would be addressed had the CUP application been submitted with a complete Site Plan application.

The simultaneous submission of the Conditional Use Permit ("CUP") Site Plan Review ("SPR") may be



the assumption or preference of the Staff, but that is not how the rules are written nor is it the intent of the CUP.

Section 302.4.H.1 of the Zoning Ordinance establishes that the Site Plan Application process must occur "within two (2) years of the date of the **conditional use** approval." That specifically establishes that the SPRR can follow the CUP and is not required to be submitted simultaneously.

I believe that approach is intentional. The CUP is a logical initial step, both procedurally for the Planning Board and financially for the Applicant. The CUP asks the question of whether the proposed use is appropriate for the parcel in question, allowing the property owner to receive feedback from the Board, Staff, and Public.

It is predominantly a qualitative review, and one which can be accomplished with a lower burden than the significantly more expensive Site Plan preparation, application, and review. The Staff and Board retain the ability to address any areas of uncertainty as Conditions of Approval of the CUP, which can be addressed during SPRR.

We will continue the CUP process in accordance with Section 302.4 of the Zoning Ordinance. Where applicable, I have highlighted in gray items that will be addressed during Site Plan Review. We anticipate the Site Plan will be "substantially similar" to the CUP.

Rather than pursuing a Conditional Use Permit now, the materials you've submitted lend themselves to a conceptual review with the Planning Board which we would strongly recommend you consider undertaking at this time. We believe both you, the Board, the public, and staff would benefit tremendously from that sort of conceptual discussion prior to committing to a specific design and preparing the detailed plans and materials that will be required for the Planning Board's review.

The Conditional Use Permit provides the same opportunity for constructive discussion between the Applicant, the Board, the Public, and the staff about the Cottage Court we have proposed on this parcel in accordance with Section 509.

The CUP process, as opposed to the CR process, results in a necessary Approval for the project and a property right that justifies additional investment in the Site Plan. There is little value to the Applicant to incur the burden of Conceptual Review, especially the additional time that would require.

We appreciate the educational component inherent in being the first Applicant, and have prepared considerable additional material in support of that, but the primary focus of our business is achieving requisite approvals expeditiously so this project can move forward.

Should you wish to continue with the CUP application at this time, please address staff's comments below and send digital copies of all revised plans and materials by the end of the day on Friday, May 31st (this is to ensure that we have enough time to review and prepare the agenda packet for the June 10th Planning Board meeting), as follows:



- Revised plans and materials can be uploaded to the City's extranet [HERE](#).
 - Additionally, we will need hard copies of the application materials as well. *Crystal – can you please clarify what we need and how many, etc?*

1. When resubmitting in response to staff's comments, please **submit all materials that you would like included as part of your application and presented to the Planning Board.**

- For tracking purposes and clarity, please provide a cover letter or transmittal memo with your resubmission identifying each document that is included with the submission. Again, only those materials included with your resubmission will be provided to the Planning Board.

From our discussion on 5/21/24 I'm aware of ongoing changes in the Planning Department's application and submission processes. I would respectfully suggest that the Applicant's schedule also be considered and accommodated during these revisions.

As we have raised numerous times previously, it would be beneficial and constructive to receive the resultant Staff Memorandum and Staff Recommendations with ample time to review prior to the relevant hearing. Receiving it the weekend prior to, or even the day-of, a hearing deprives the Property Owner/Applicant of time to review and respond as necessary. We have experienced the resultant costly delays, and they are avoidable.

[We are available to meet with you at your convenience to answer any questions that you may have or to discuss strategies/options/alternatives for any issues/concerns that you may have. Please let us know.](#) -Tim



STAFF COMMENTS (PB2024-23-CUP) [March 24, 2024]

Please provide a written response to each comment.

1. The property boundaries as shown on the illustrative site plan ("ISP") do not match the property boundaries shown on the 3/18/21 boundary line adjustment plat ("BLA Plat") that you've referenced on page 1 of the CUP Support Statement ("CUPSS"). Of particular concern/confusion is that the ISP shows the property as having frontage on Crafts Avenue whereas the property is land-locked as shown on the BLA Plat.

The discrepancy between the ISP and the 3/18/21 BLA Plat are addressed in Item 8 herein.

The Updated Application shows our intent to make a Lot Line Adjustment ("LLA") transferring square footage from Parcel 58-19 (51 Crafts Avenue) to Parcel 58-20 (0 Beyerle Street), creating a "flag lot" to achieve the necessary frontage on Crafts Avenue and provide access to the Cottage Development.

The LLA will be prepared by the project's Civil Engineer in due course and filed alongside the Site Plan.

This approach requires demolishing the existing structure on Parcel 58-19. At the 5/21/24 meeting we discussed the resultant setback issues created by not utilizing a Driveway Easement.

A demolition permit for 58-19 will be submitted alongside the LLA and SP. That Application will replace Building Permit #2022-0529, which was issued 40 days late by the Planning & Development department causing that project not to proceed. We never received a response to our Request for Extension on June 19, 2023.

Initial interior demolition was already conducted under Permit #2022-0086 in preparation for work applied for under Permit #2022-0529

2. Pursuant to RSA 674:41, I(a), in order to issue a building permit, the lot requires frontage on a class V road or better. An easement across the adjacent property is not sufficient to provide the required frontage/access. (see RSA 674:41, III). Without frontage on Crafts Avenue, the lot is presently unbuildable. Note that there are other options for providing frontage/access, but it does not appear that any of these other options apply (see RSA 674:41, I(b)-(e)).

No longer an issue. The proposed Lot Line Adjustment remedies the frontage/access issue.

3. The ISP appears to depict the constructed driveway as overlapping a property line, whereas Section 5.C of the City of Lebanon Driveway Regulations requires a 5 ft. setback from the lot line, unless waived by the Planning Board as part of site plan review.



No longer an issue. The Lot Line Adjustment and Demolition Permit remedy this.

4. It is staff's understanding that the use of the driveway will be shared with the one-family dwelling at 51 Crafts Avenue. It is staff's view that shared driveways must be approved by the Planning Board through Site Plan Review and not through a Conditional Use Permit absent Site Plan Review.

The shared driveway (if applicable) will be addressed by the Site Plan Application and Lot Line Adjustment.

5. The driveway easement metes and bounds should be identified on the plat and a copy of the proposed driveway easement agreement should be submitted as part of the application.

To be addressed during the Site Plan Application.

6. In order to verify compliance with the CUP general and specific criteria, a scaled site plan with metes and bounds is required identifying setbacks and compliance with all applicable R-3 District and Cottage Development dimensional requirements (see Sections 310.3 and 509, respectively of the Zoning Ordinance ("ZO")). By contrast, the ISP – while helpful in concept as a potential supplemental exhibit – is only an approximate illustration and can not be accurately measured.

The Illustrative Site Plan is drawn to scale, as are the supporting documents provided in the Updated Application.

- a. The project's compliance with all required setbacks and other dimensional requirements should be clearly identified on the plat. For example, it is not clear whether parking spaces 10-16 are setback 20 ft. from the front lot line as required by Sections 201.7 and 509.6.F.3 of the ZO.

Sheets S-1.2 to S-4.1 address the questions related to Section 310.3 and 509.

The Lot Line Adjustment addresses the parking area in the northeast corner of the parcel, ensuring a 20' setback from the front lot line. There is a potential **conflict** between the 20' Front Yard Setback of Section 310.3, and Section 509.6.D which requires all cottages to face onto the common courtyard.

Pushing the development eastward to reflect the 20' front yard setback has reduced the common space considerably, see the contrast between the 3/13/24 and 3/31/24 site plans.

7. In order to verify compliance with the CUP general and specific criteria (Sections 302.4.D and 509, respectively), architectural renderings will need to be submitted with the application (for



example, without such renderings, it is not possible to verify compliance with Section 509.6.E.1 which requires that the highest point of the roof of a cottage shall not exceed 24 ft).

Architectural Renderings are not listed as a requirement of the Conditional Use Permit ordinance.

Regardless, Sheet S-5 should provide sufficient information for CUP review. We are able to provide these only because we are utilizing existing Cottage plans and illustrative renderings from Liberty House Plans (www.libertyhouseplans.com).

The Site Plan and Building Permit processes are both checkpoints for compliance with height restrictions in Section 509.6.E.1.

8. The CUPSS indicates that the property is 1.3 acres which is consistent with the 1.33 acres identified on the BLA Plat. However, as shown on the ISP, the development encroaches at least halfway into what's identified as the "Abandoned Right of Way for Lincoln Avenue".

- a. Assuming that the Lincoln Ave Right-of-Way has been abandoned, then a current survey of the property (as required to be submitted pursuant to Section 5.1.E of the Site Plan Review Regulations ("SPRR")) should identify the new property line (the center line of Lincoln Avenue?) and adjust the acreage of the property accordingly.

You may recall the matter of "Paper Streets" within the original Crafts Avenue subdivision was addressed with great consternation and expense to my father in 2020-2021 when my parents lived at 55 Crafts Avenue/0 Beyerle Street. The Planning Department erroneously determined that a fence had been erected in violation of the so-called Beyerle right-of-way, which set off months of conflicting determinations and costs to XYZ.

On December 20, 2020 we received a determination from David Brooks that the City did retain rights to so-called Greenway Ave., Lincoln Ave., Beyerle St., and Chandler St.. This conflicted with title and deed research that had been completed in 2017 and did not comport with previous communications from the Planning Department related to Building Permits issued for that same property.

This represented a significant and material change to XYZ's property rights, and XYZ chose to pursue a Lot Line Adjustment and subdivision that reflected the change-of-course on the ROW. This was included in XYZ's application for Conceptual Review (PB02021-05-CON) of a proposed major subdivision on February 8, 2021. On the day of our Conceptual Review Application, the City reversed course again, determining that the City held no rights to the Paper Streets in question.



The 3/18/21 Boundary Line Adjustment Plat had already been contracted by XYZ prior to the City's change of course, which resulted in the discrepancy between plans you've identified here.

There is no encroachment, as referenced in the original application of 3/13/2024 New Hampshire case law has established that the abutting property owner owns to the middle line of an abandoned ROW. The City's GIS has already reflected a similar lot-line change between Parcel 58-17 and 58-19 where the 40' Beyerle ROW formerly existed.

The Site Plan and Lot Line Adjustment will affirm this.

- b. Assuming the property extends to the center of the former Lincoln Ave Right-of-Way, it appears from the ISP that Building 5 sits at or across the property boundary in violation of the 20 ft. rear yard setback (see Section 310.3).

This has been fixed by reducing the space between Building 5 and Building 4, and the elimination of the deck overlooking the Connecticut River.

- c. Assuming the property extends to the center of the former Lincoln Ave Right-of-Way, it appears from the ISP that trees are proposed to be planted at or across the property boundary whereas a minimum of 8 ft. from the lot line is required per Section 6.2.B of the SPRR.

The trees in the ISP are intended to be shown 8 ft. from the western property boundary respecting Section 6.2.B.

This will be confirmed during the Site Plan Review process where landscaping plans are required for approval.

9. The CUPSS states that 17 surface parking spaces are provided but the ISP shows only 16.

My scrivener's error. 16 surface spaces is correct, fixed in the Updated Application.

10. Whether a total of 20 or 21 spaces are proposed, it appears that a minimum of 32 parking spaces are required per Section 607 of the ZO (requiring 2.0 spaces per each one-family/two-family detached and attached unit).

Clearly this is a **conflict** between best practices, the intent of the Section 509 Cottage Development ordinance, and the City's underlying zoning.

32 parking spaces would result in a significantly diminished built environment and a reduction of the common space that is central to the Cottage Court concept.



We believe the 20 spots as proposed (1 per unit, 4 additional spaces) would be sufficient to meet the market requirements of this development. Any additional parking mandated by the City represents an additional cost and a reduction in open space, a detriment to the project.

A 2.0 parking requirement runs contrary to the intent and qualitative requirements of the Cottage Development Zoning Ordinance. There are well-documented efforts across the country to reduce or eliminate antiquated and empirically disproven parking requirements such as those in Section 607:

"Abolish Parking Minimums. Yes, All of Them" American Institute for Economic Research
<https://www.aier.org/article/abolish-parking-minimums-yes-all-of-them/>

Why Parking Reform? For climate action, housing affordability, and safer streets.
<https://parkingreform.org>

End Parking Mandates & Subsidies
<https://www.strongtowns.org/parking>

We have added an additional 4 surface spots to the Site Plan in the Updated Application, while balancing the desire for on-site storage and snow removal, for 16 surface parking spots and 8 garage spots = a total of 24 spots. 1.5 spaces per unit is consistent with the purpose of Section 509, and is the same parking ratio required for multifamily projects in Lebanon.

We are advancing a schematic plan illustrating what 32 parking spots would look like and anticipate including it in the presentation on June 10, 2024. I would urge the Planning Department to further revise their parking minimum requirements in accordance with the growing body of knowledge around the costs and detriments of too much parking.

11. Building 5 and the paved area between Buildings 1 and 16 and perhaps some of the other smaller, unidentified structures at the northeast corner of the lot all appear to encroach into the minimum required 15 ft. perimeter landscape buffer required by Section 6.2.B of the SPRR.

a. Moreover, there are no trees proposed for the northeast and northwest corners of the lot nor are there any trees proposed along the length of the eastern lot line from the southeast corner of the lot north to the proposed driveway. The lack of trees here is inconsistent with the requirements of Section 6.2.B.

There is a discrepancy between the 5' setback for a driveway, the 8' landscaping setback, and the 15 ft. perimeter landscape buffer (Section 6.2.B.1). That comes into question as it relates to the driveway and where the hammerhead/parking area abuts adjacent parcels.

Additional landscaping has been added to the Illustrative Site Plan. Landscaping is to be addressed at Site Plan Review.



12. At least with respect to spaces 6-16, the parking area does not appear to comply with the shading requirements of Section 6.2.E.1, although it is not possible to verify with certainty without a scaled plat and the additional landscaping information required by Section 5.1.E.16 and Section 6.2 of the SPRR.

Surface parking areas are shaded.

Landscaping/shading is to be addressed during Site Plan Review.

13. In general, it is not possible to confirm that the landscaping shown on the ISP complies with the landscaping design requirements of Section 6.2 of the SPRR. Verifying compliance is important because the plat that the Board approves in connection with the CUP will need to be substantially similar to the site plan that will need to be approved pursuant to the SPRR.

There is no landscaping design requirement for the CUP.

Landscaping is to be addressed during Site Plan Review.

14. Section III.A ("Specific Criteria") of the CUPSS form requires that the applicant address the specific criteria applicable to the proposed project. Here, the specific criteria for cottage developments are set forth in Section 509 of the Zoning Ordinance. Please provide a written response to each of the criteria set forth in Section 509.

These written responses to each criteria set forth in Section 509 were already included in the original Application for Conditional Use Permit Support Statement submitted on March 13, 2024.

15. The materials submitted with the application include the 5-page CUPSS and the one-sheet ISP. Between these, it is not possible for staff or the Board to verify compliance with most of the Section 509 criteria, including but not limited to:

a. The max. permitted building coverage (509.5)

Sheet S-3

b. Interior minimum setback requirements (509.6.C)

Sheet S-2

c. Minimum open space requirements (509.6.D)

Sheet S-1.3

d. Max height requirements (509.6.E.1)

Sheet S-5

e. Front porch and entry requirements (509.6.E.2)



Those are visible on the ISP, and additional information can be found on Sheet 5.

- f. Parking and screening requirements (509.6.F.1, 2, and 3)
Sheet S-4.1

16. Based on the materials submitted, it is not possible to verify that the residential buildings are in fact “cottages” as that term is defined in Appendix A of the ZO, pasted here for quick reference:

COTTAGE: A detached one-family dwelling unit with a maximum gross living area of one thousand, five hundred square feet (1,500 sq. ft.) and a maximum footprint of one thousand square feet (1,000 sq. ft.). Spaces with a ceiling height of six feet or less measured to the exterior walls, such as in a second-floor area under the slope of the roof, shall be excluded when calculating the total floor area of a cottage. [...]

Sheets S-1, S-5

17. The ISP does not satisfy the following requirement of Section 509: “For each detached cottage, the site plan approved by the Planning Board shall delineate a building site for each detached cottage of no less than 1,500 sq. ft.” Section 509.6.A.

Sheet S-3

18. The site plan and application materials need to demonstrate compliance with the electric vehicle (EV) requirements of Section 607.8.C.1 of the ZO, pasted below for quick reference:

One- and Two-Family Dwellings. All new **one-** and **two-family dwellings** shall provide at least one (1) **EV-ready** space per **dwelling unit**.

Surface spaces 1-7 and 16, along with garage spaces 8-15, provide 1 EV-Ready space/unit.

19. The CUPSS refers to Lot 58-19 (see page 1) which should be clearly identified on the ISP.

Lot Numbers have been added to all parcels seen in the ISP.

20. Page 1 of the CUPSS includes the following statement: “Additional optional materials may be submitted ahead of the Planning Board review meeting.” Please note that the revised submission must be submitted as a single package on or before the end of the day on May 31st. Any materials submitted after May 31st – unless specifically requested by staff – will not be provided to the Planning Board (but of course the applicant can present any such materials to the Board at the meeting).

The additional materials referenced during our Staff Review meeting on 5/21/24 and included in the 5/31/24 packet should be sufficient to answer many of the questions herein.



21. Page 2 of the CUPSS indicates that “Pedestrian access linking to the sidewalk on Crafts Avenue will be provided”. Please show the sidewalk on the site plan.

- a. Please note that if the sidewalk is proposed to be located on an adjoining property pursuant to an easement, this may be in violation of Section 215 of the ZO which provides that accessory uses must be located on the same lot as the respective primary use (with the exception of shared driveways in certain instances).

The 5’ sidewalk is shown on the north side of the driveway, Sheets S-1.5 and S.2.

22. It is not clear how the Planning Board can evaluate the project’s compliance with many of the general CUP criteria set forth in Section 302.4.D of the ZO without a complete Site Plan Review application. For example, it is not clear how the Planning Board can analyze the adequacy of stormwater treatment (see Section 302.4.D.1.d) without a stormwater management plan and drainage calculations prepared in accordance with Section 6.6 of the SPRR and reviewed by the City Engineer.

A stormwater management plan and drainage calculations are not a requirement of the Conditional Use Permit per Section 302.4.

Section 302.4.D.1.d simply asks:

d. The availability of appropriate utilities to serve the intended use including water, sewage disposal, stormwater treatment, electricity, and similar utilities.

Water, sewer, electricity and similar utilities are known to be available on Crafts Avenue. Stormwater will be dealt with on-site.

The specific details of these plans will be included in submissions for Site Plan Review.

23. Mere assertion and/or pledges of future compliance is not sufficient to demonstrate compliance with the general CUP criteria of Section 302.4.D.1-5.

- a. For example, in partial response to 302.4.D.2, the CUPSS includes the following statement on page 3: “Water runoff and drainage will be addressed on-site and meet NH DES requirements.” Assertions such as these must be substantiated by sufficient evidence, i.e. a stormwater management plan and drainage calculations prepared in accordance with Section 6.6 of the SPRR and reviewed by the City Engineer. This concern underscores the importance of submitting a CUP application together with a complete Site Plan application rather than pursuing a CUP application separately. The information needed to demonstrate compliance with the CUP criteria is substantially similar to the information required for a site plan application.

The CUP and SP are not “substantially similar” when you are the one paying for the work.



XYZ has received a proposal from the Civil Engineer for this project, which budgets an additional \$13,100 to advance the Schematic Site Plan to the 30% Design Development. That does not include any additional revisions, the Lot Line Adjustment, nor the costs of filing relevant permits etc.

This underscores the purpose of the Conditional Use Permit process being addressed prior to the Site Plan Regulations Review.

The Site Plan will address these issues, in accordance with the Lebanon Zoning Ordinance as addressed previously herein.

Should the Staff/Board find it necessary, conditions of approval on the Conditional Use Permit to be met during the Site Plan Review can be added to the CUP.

b. A sample of other examples of unverifiable assertions/promises of future compliance contained within the CUPSS include:

i. In response to 302.4.D.2:

1. "Exterior lighting will be designed according to best practices to limit any impact on surrounding properties."

The Site Plan will address these issues.

2. "The majority of cottages will be well below this height; the tallest are the two "Garden Duplexes" which fall below the 24' threshold."

Sheet S-5.

3. "The parcel is 10-20 feet lower topographically than the existing residences on Crafts Avenue, further mitigating concerns about height and scale."

This can be verified by referencing the City's GIS from which this topographic information was sourced and is readily apparent upon a site visit.

ii. In response to 302.4.D.3: "The cottage designs incorporated into the proposal reflect an architectural vernacular that is appropriate to the region, and reflect the architectural variety and character currently found on Crafts Avenue."

Sheet S-5. Multiple styles reflective the existing Crafts Avenue homes as documented by the City of Lebanon Heritage Commission <https://lebanonnh.gov/1200/Crafts-Avenue-Historic-District>



1. In response to 302.4.D.4: “the cottage designs incorporated into the proposal reflect an architectural vernacular that is appropriate to the region, and specifically to reflect the architectural variety and character currently found on Crafts Avenue. All units are below the height limitations, and the massing is further mitigated by the ~10-20’ drop in topography from Crafts Avenue.”

Sheet S-5. Multiple styles reflective the existing Crafts Avenue homes as documented by the City of Lebanon Heritage Commission <https://lebanonnh.gov/1200/Crafts-Avenue-Historic-District>

24. Section 302.4.D.3 requires the screening of off-street parking; however, no vegetation at all is proposed between the parking area at the northeastern corner of the lot and abutting properties.

Additional landscaping has been added to the Illustrative Site Plan.

Landscaping will be addressed at Site Plan Review.

25. Page 4 of the CUPSS includes the following statement: “Centralized trash collection has also been located away from existing neighbors and the Cottage area, and is screened in along the shared boundary with 51 Crafts Avenue.” The proposed “centralized trash collection” is not identified on the ISP, nor is it clear from the ISP how such “centralized trash collection” is proposed to be screened. Such screening is also required by Section 6.2.B of the SPRR.

The centralized trash area is shown as “T” with a screened/landscaped enclosure on ISP.

Landscaping and screening will be addressed at Site Plan Review.



Summary Notes:

- 16 Units on a 1.33 Acre Site. Zoned R-3.
- Site Area exceeds the R-3 min. of 40,000 SF.
- Building Footprints total 16,032 (17% of Site.)
- 12 Detached Cottages
- 4 duplex units over garages. (25% attached units)
- 10' - 12' Minimum separation between cottages.
- All porches are at least 96 SF with a min. depth of 8'
- All front porches face onto the Common Open Space.
- Single story cottages are 18'-22' in height, depending upon the roof pitch.
- Two story duplex over garage buildings are 23' in height with a 4:12 roof pitch, just under the maximum of 24'.
- Parking areas are screened from the common open space and from adjoining properties with landscaping.
- Driveway conforms to the 120' Hammerhead Fire Access Way shown in the fire code.
- Each building has a delineated building site in excess of the min. 1,500 SF.
- The 13,4200 SF Common Open Space exceeds the min. 6,400 (400 SF x 16 units).
- Detached Cottages 1, 5, 8, 9, 10, 11, and 12 are one bedroom/1 bath units of 504 or 640 SF.
- The remaining detached cottages are 888 SF 2 bedroom/2bath units.
- The 4 duplex units over the garages are 624 SF 1 bedroom/1 bath units.
- 16 Surface parking spaces are provided with another 8 parking spaces in the ground floor garages of the duplex buildings for a total of 24 spaces. 24 spaces is 1.5 spaces

Crafts Avenue Cottages

Lebanon, NH

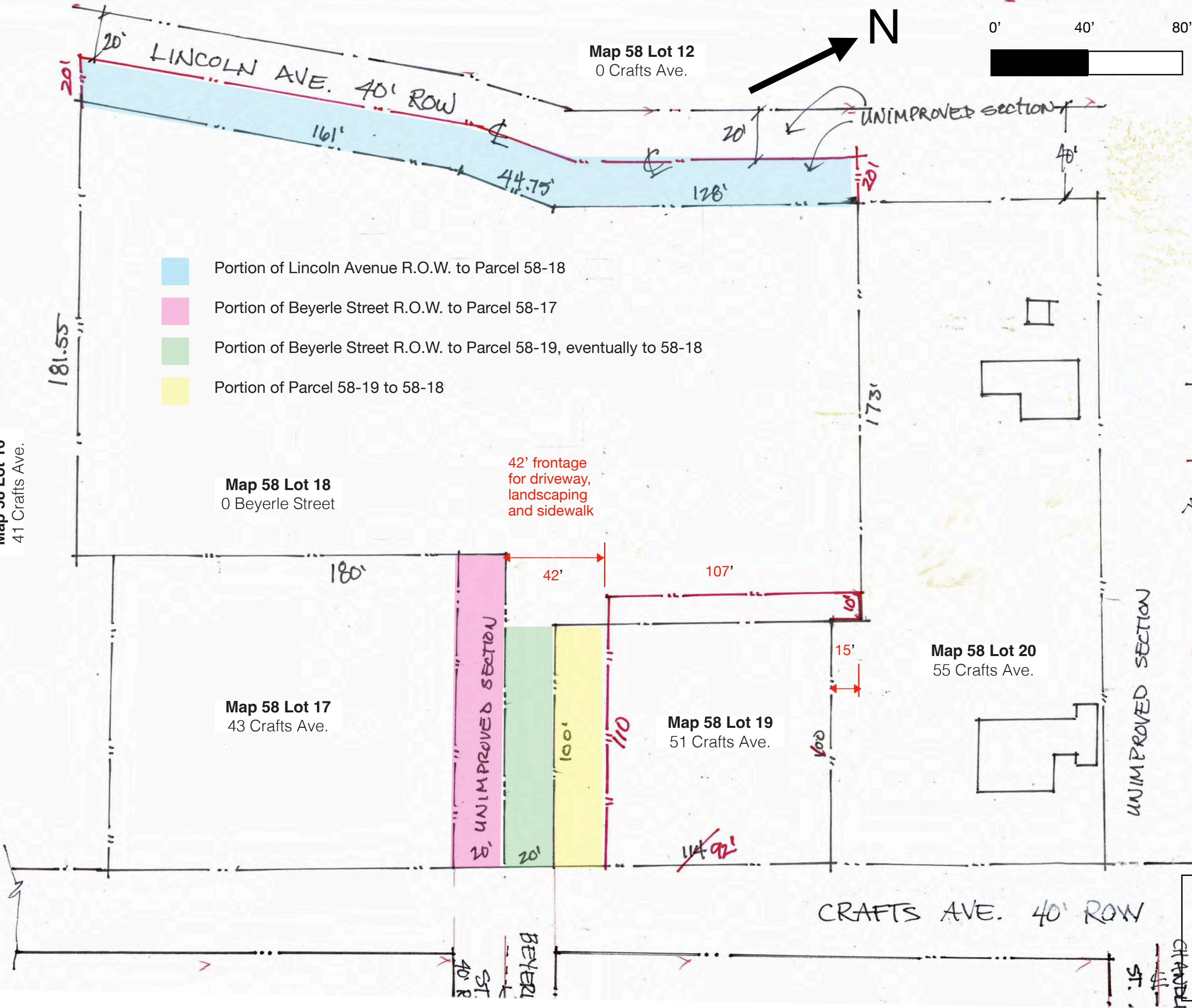
Prepared for Lyme Properties

Prepared by R. John Anderson Urban Design

May 31, 2024

Illustrative Site Plan

Sheet S - 1



• The Lot Line Adjustment on the West side of the subject parcel incorporates half of the unimproved section of the Lincoln Avenue ROW. This 20' addition to the subject parcel will serve as the required 20' Rear Yard required in the underlying R-3 zoning.

• The Lot Line Adjustment on the East Side of the subject parcel reconfigures the lot at 51 Crafts Avenue to allow for 42' of frontage onto Crafts Avenue to accommodate the fire access of 26' of pavement (27' Back of curb to back of curb) with a landscape buffer of 5' on the South and a 5' landscape strip on the North side and a 5' sidewalk along the new property line for 51 Crafts Ave.

— = Original Property Lines
— = Proposed Lot Line adjustments.

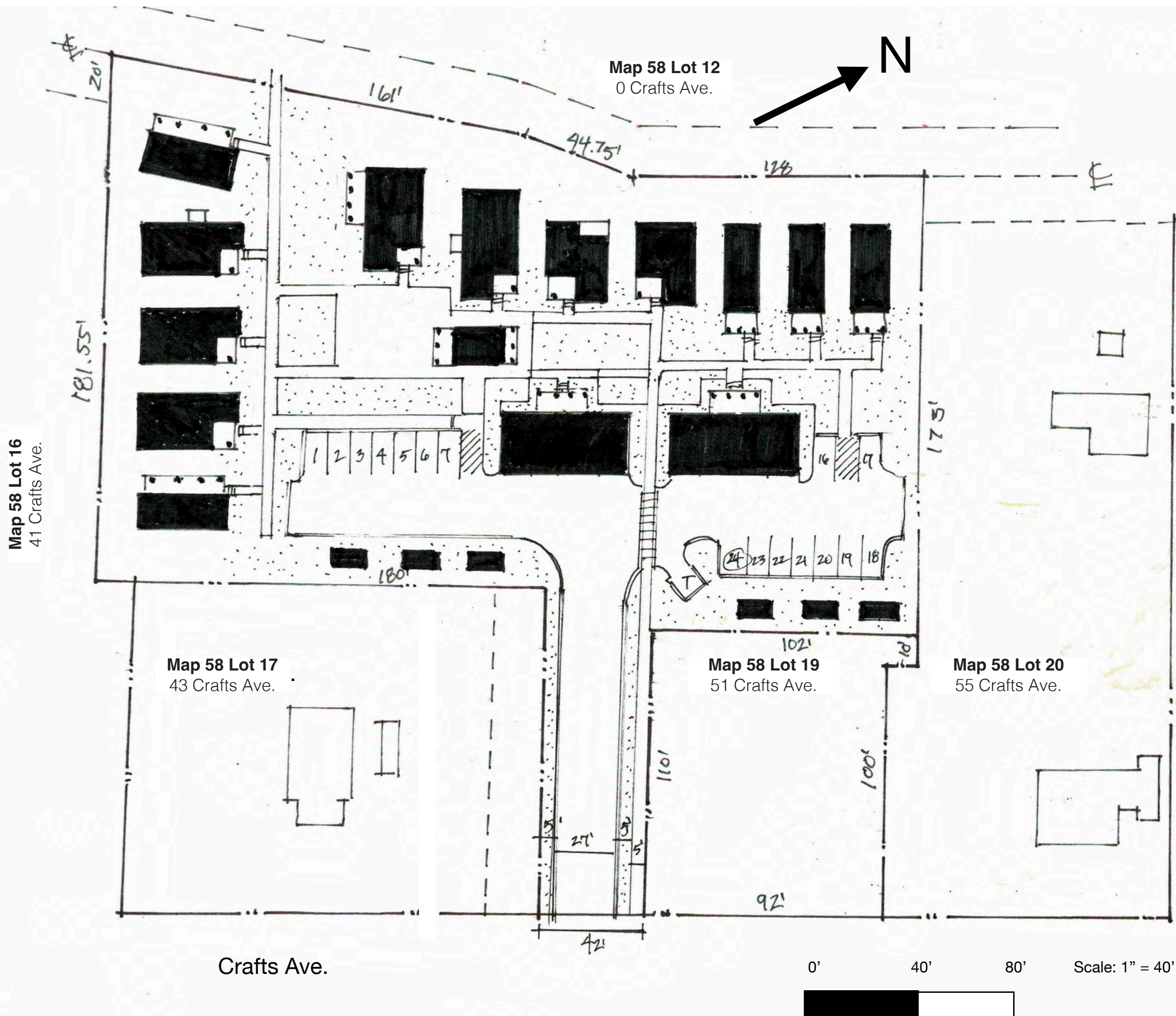
• The reconfigured parcel for 51 Crafts Avenue is 10,270 SF, exceeding the R-1 Class 1 minimum lot area of 10,000 SF.

Crafts Avenue Cottages
Lebanon, NH
Prepared for Lyme Properties

Prepared by R. John Anderson Urban Design
May 31, 2024

Proposed Lot Line Adjustment

Sheet S - 1.2



- Front Set back along Craft Avenue is 20'
- Side Set Back is 15'
- Rear Set Back along the Lincoln Avenue Right of Way is 20'
- The distance between cottages is 10' - 12'.
- The parking to the North of the Driveway is set back 20' from the property line abutting 51 Crafts Ave.
- 8 x 16 Storage units are set back 5' from the property line abutting 51 Crafts Ave. Each of these Accessory Buildings are 128 SF per Section 201 YARD REQUIREMENTS, accessory structures less than 130 SF may occupy yards required by the section and sized in the underlying R-3 zoning. 5' set back from the property line complies with the building code.
- The 5' between the accessory structures and the property line abutting 51 Crafts Avenue will be occupied with the 5' minimum landscape screening of the parking spaces.
- The 42' wide driveway area contains, from left to right:
 - 5' Required Driveway Landscape Buffer.
 - 27' of driveway paved section measured from the back of curb to the back of curb with 26' from face of curb to face of curb per the Fire Code for Fire Access.
 - 5' landscape strip with trees.
 - 5' Sidewalk leading from Crafts Ave. to a cross walk across the driveway and is aligned with the entry to the courtyard..

Crafts Avenue Cottages Lebanon, NH

Prepared for Lyme Properties

Prepared by R. John Anderson Urban Design
May 31, 2024

Figure Ground Plan Sheet S - 2

0' 40' 80' Scale: 1" = 40'

N

Map 58 Lot 12
0 Crafts Ave.

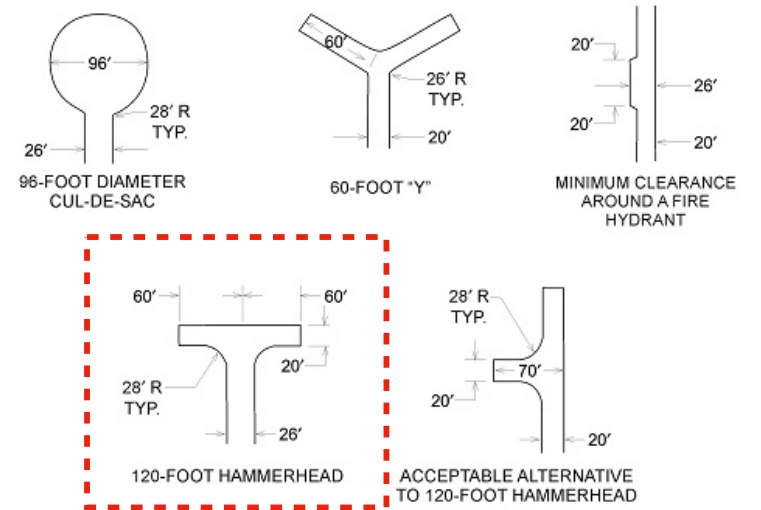
R-3 Zone Setbacks

Minimum Yard

Class	Front	Side	Rear
1	20'	15'	20'

- The building footprints total 16,032 SF (17% of the site)
- All the Designated Building Sites are larger than the minimum requirement of 1,500 SF.
- The distance between cottages is 10' - 12'.

The driveway complies with the fire code dimensions for the 120 Foot Hammerhead shown below:



From Appendix D - Fire Apparatus Roads
(from the Model International Fire Code)

Crafts Avenue Cottages

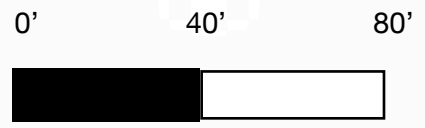
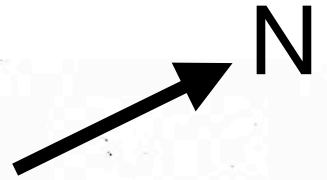
Lebanon, NH

Prepared for Lyme Properties

Prepared by R. John Anderson Urban Design
May 31, 2024

Delineated Building Sites for
Each Cottage

Sheet S - 3



Scale: 1" = 40'

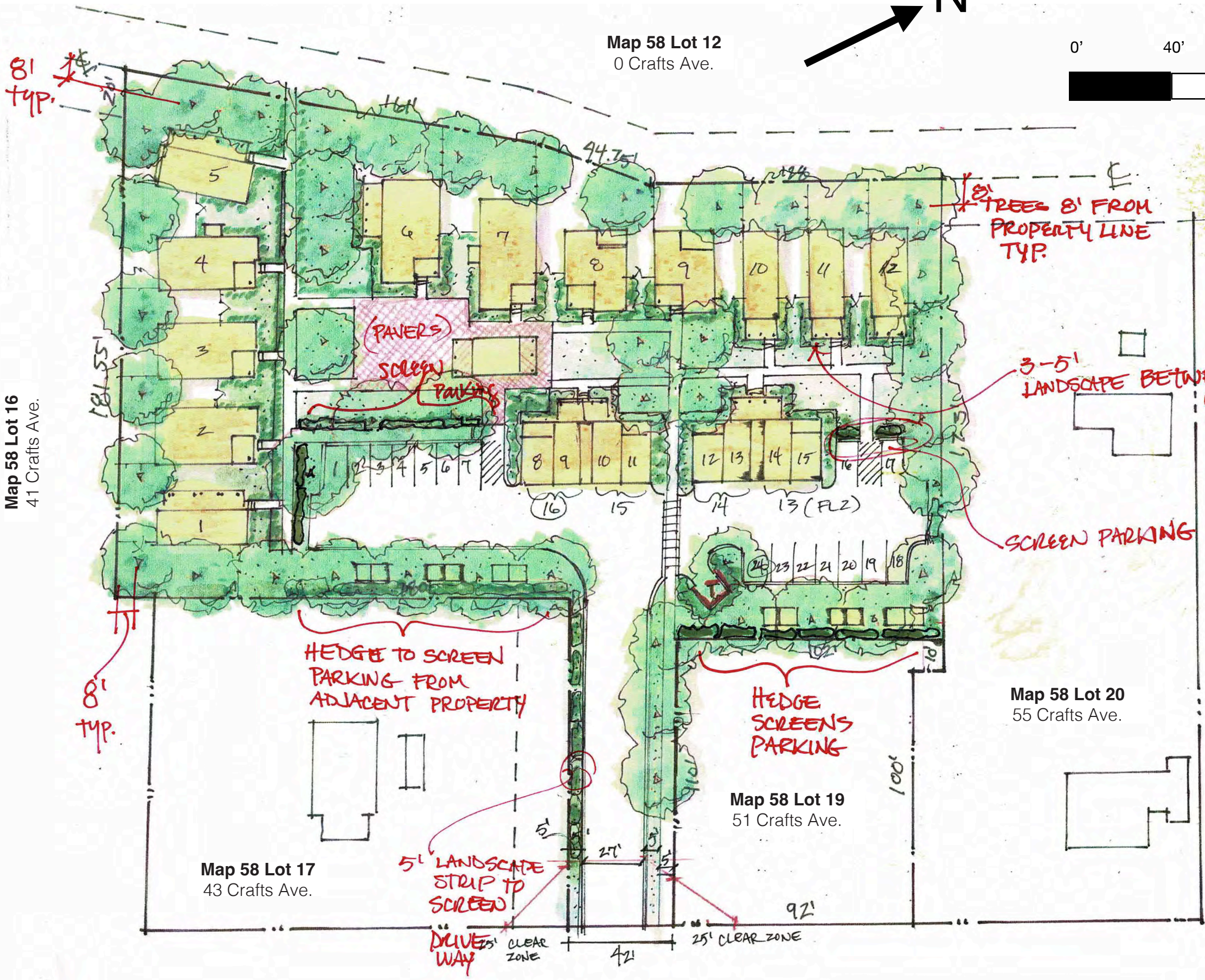
Map 58 Lot 16
41 Crafts Ave.

Map 58 Lot 12
0 Crafts Ave.

Map 58 Lot 20
55 Crafts Ave.

Map 58 Lot 19
51 Crafts Ave.

Map 58 Lot 17
43 Crafts Ave.



Crafts Avenue Cottages
Lebanon, NH
Prepared for Lyme Properties

Prepared by R. John Anderson Urban Design
May 31, 2024

Landscape Notes
Sheet S - 4.1

Loganberry Cottages

Units: 2, 3, 4, 6, 7, 8, 9

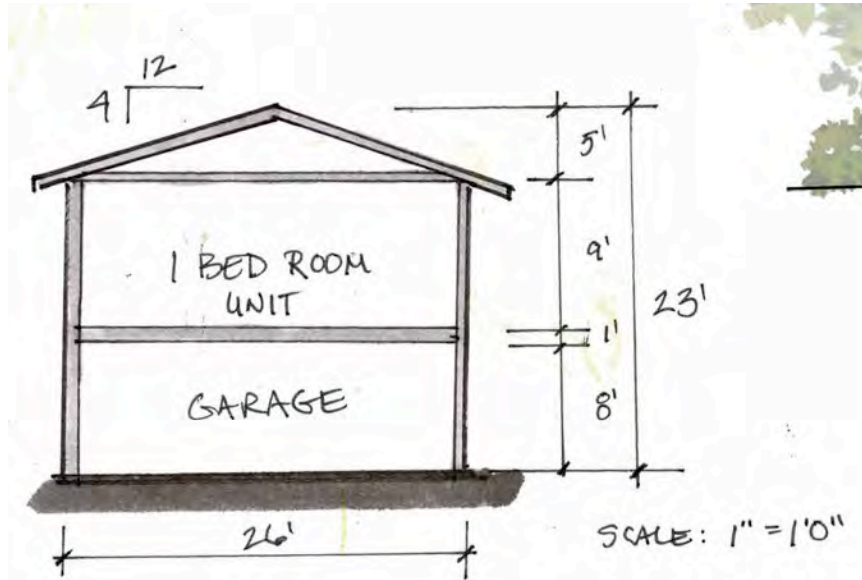


Garden Duplex

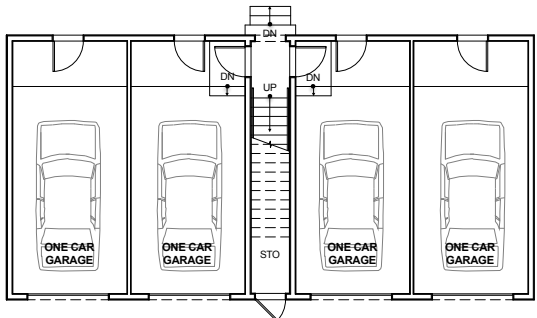
Units: 13, 14, 15, 16



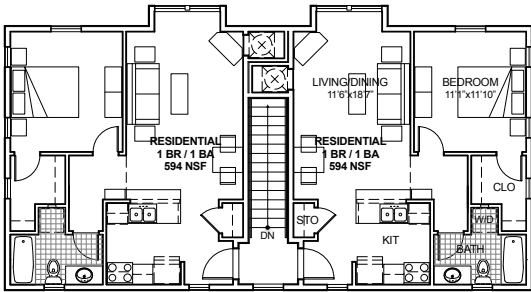
DUPLEX OVER 4 GARAGES



Section; Duplex over 4 Garages Building
52' x 26' Height = 23'



FIRST FLOOR



SECOND FLOOR

Flora Cottage

Units: 1, 5, 10, 11, 12

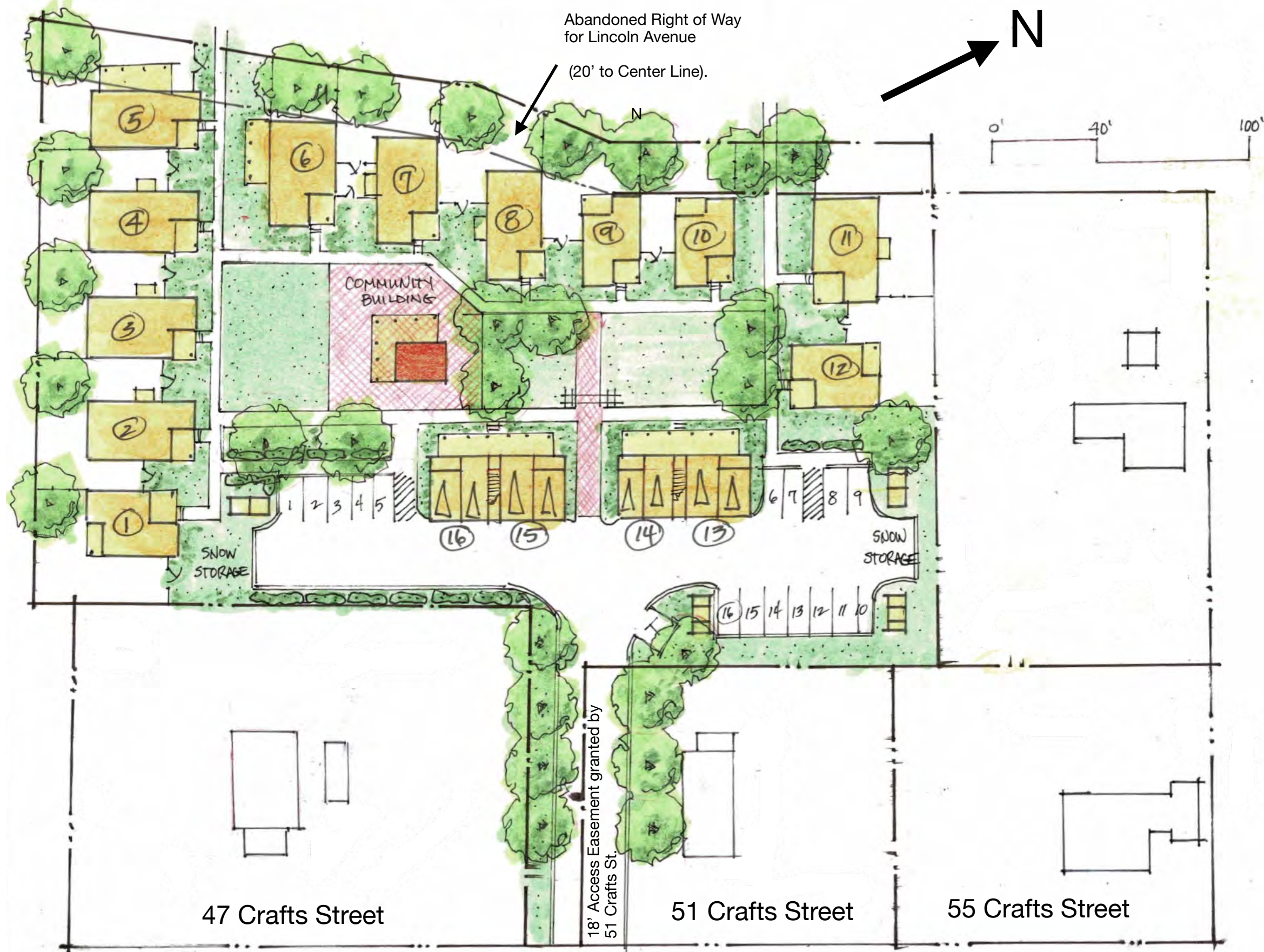


Crafts Avenue Cottages

Lebanon, NH
Prepared for Lyme Properties

Prepared by R. John Anderson Urban Design
May 31, 2024

Supplemental Material
Sheet S - 5



Illustrative Site Plan
Sheet S - 1

DRAFT

**LEBANON PLANNING BOARD
COUNCIL CHAMBERS, CITY HALL
OR REMOTE VIA MICROSOFT TEAMS
LEBANONNH.GOV/LIVE
MONDAY, APRIL 15, 2024, 7:00 PM**

MEMBERS PRESENT: Andrew Faunce (Chair), Richard Ford Burley (Vice Chair), Jeremy Rutter, Patrick Kennelly, Brandon Hill, Kathie Romano, Karen Zook (City Council Rep)

MEMBERS ABSENT: None

STAFF PRESENT: Tim Corwin (Deputy Planning Director), Nate Reichert (Director of Planning & Development/Zoning Admin), Brian Vincent (City Engineer)

1. CALL TO ORDER

Chair Faunce called the meeting to order at 7:01pm.

Mr. Corwin reviewed the City's meeting in-person and REMOTE attendance policies and procedures.

Mr. Rutter joined the meeting at 7:03pm.

2. NOTICE OF REGIONAL IMPACT

Chair Faunce said this would be postponed to the next meeting.

3. PUBLIC HEARING ITEMS

A. Liberty Utilities - Request for scheduled vegetation management for the safety and reliability of the electric distribution system on Poverty Lane, a designated scenic road. PB2024-11-SCR

Ms. Heather Green, certified arborist, of Liberty Utilities and Mr. Richard Clark, utility forester, of ECI Environmental Consultants, were present on behalf of the applicant.

Ms. Green said, every 4-5 years, Liberty Utilities cuts vegetation near and around its power lines as part of its vegetation management process. She said customers whose trees may be cut are notified by a mailer and a door hanger. She said homeowner consent is required to do the work.

1 She said the Public Utilities Commission (PUC) requires the following space be maintained
2 around primary conductors:

- 3 • 15 feet above
- 4 • 8 feet to the side
- 5 • 10 feet below

6
7 She said the current project is to flat cut or brush cut (mowing flat to the ground) the vegetation
8 in the space identified along the scenic road of Poverty Lane. She said she and Mr. Clark drove
9 along the route and noted three failed trees and some saplings that should be removed as well.
10 She said the tree removal was not in the original proposal, so that work can be held until the next
11 cycle for vegetation management.

12
13 Ms. Green explained the Liberty Utilities' process for situations when consent is not given by
14 homeowners to cut vegetation on their property.

15
16 Chair Faunce opened the public hearing and invited public comment.

17 Chair Faunce closed the public hearing.

18
19 *A MOTION was made by Jeremy Rutter that the Lebanon Planning Board, pursuant to NH*
20 *RSA 231:158, approves the request of Liberty Utilities (PB2024-11-SCR) to perform scheduled*
21 *vegetation management for the safety and reliability of the electric distribution system on*
22 *Poverty Lane, a designated scenic road, as described in application materials dated February*
23 *26, 2024, prepared by Heather Green, ISA Certified Arborist for Liberty Utilities.*

24
25 *The motion was seconded by Kathie Romano.*

26
27 **The MOTION was approved (7-0).*

28
29
30 **B. Edwards Properties, LLC, 135 Heater Road (Tax Map 78, Lot 41), zoned IND-**
31 **L: Request for a Conditional Use Permit pursuant to Article III, Section 303.2 and**
32 **302.4 of the Zoning Ordinance for a proposed office use. PB2024-02-CUP –**
33 **Continued from March 18, 2024**
34

35 Mr. Dan Nash (Advanced Geomatics & Design), Ms. Amy Stebbins and Mr. Ben Stebbins
36 (Aslan Maintenance), and Attorney Barry Schuster were present on behalf of the applicant.

37
38 Mr. Nash said the application materials that were included in the agenda packet for this meeting
39 address the outstanding questions and deficiencies that were identified at the last meeting.

40
41 He confirmed that the project is to convert a two-family dwelling into a two-bedroom apartment
42 and an office with accessory warehouse space in the garage. He said the septic system is
43 designed to accommodate a two-bedroom apartment. Ms. Romano said the application materials
44 show a septic tank behind the deck and a tank on the east side of the property. She said it was
45 unclear which photos were of the existing design and which ones were of the proposed design.
46 Mr. Nash said the existing septic tanks (wherever located on the property) will be removed.

Mr. Corwin confirmed that the wetlands issue is not part of this conditional use permit and is more relevant during the site plan review. Mr. Ford Burley suggested that a condition be added to the Conditional Use permit that it should be updated to match the outcome of the site plan review.

Mr. Nash said an ADA lift will be located at the back of the building in the enclosed porch area. He said the design for the lift has not been completed yet and will be reviewed during the Building Permit process.

Chair Faunce opened the public hearing and invited public comment.

Chair Faunce closed the public hearing.

Mr. Nash confirmed that the existing water service should be adequate, but they will not know what the water needs will be until the building permit work is done.

A MOTION was made by Richard Ford Burley that, on January 8, 2024, March 18, 2024, and April 15, 2024, at duly-noticed meetings of the Lebanon Planning Board, there appeared representatives of property owner Edwards Properties, LLC, regarding 135 Heater Road (Tax Map 78, Lot 41), zoned IND-L, regarding a requested Conditional Use Permit pursuant to §303.2 of the Zoning Ordinance for a proposed office use. PB2024-02-CUP

I. FINDINGS OF FACT

Based on testimony given, application materials presented, and supporting documents submitted, the Planning Board makes the following findings of fact:

- 1. The property is located within the IND-L District on the south side of Heater Road, and abuts the Hypertherm facility to the rear. The property is currently improved with a two (2)-story, two-family dwelling constructed in 1950 (per the City's Assessing records). The two-family dwelling is not an allowed use in the IND-L District and, therefore, is considered "legal non-conforming".***
- 2. The applicant proposes to convert the existing two-family dwelling to a mixed-use building containing (i) a dwelling unit and (ii) an office use with accessory warehouse space in the basement and attached garage. Site improvements include a proposed parking lot to the rear.***
- 3. "Office," which is allowed in the IND-L District by Conditional Use Permit from the Planning Board. Per Section 302.4.B of the Zoning Ordinance, the Planning Board may grant a Conditional Use Permit if it finds that the proposal meets the Enhanced Performance Standards set forth in Section 302.4.D.***
- 4. The applicant has submitted testimony addressing the Section 302.4.D criteria in an application received by the Planning and Development Department on December 4, 2023, as well as in supplemental written materials provided by the applicant.***

II. CONCLUSIONS OF LAW

As a result of the above findings of fact and based on testimony given, application materials presented, and supporting documents submitted, the Planning Board concludes the following with respect to the Enhanced Performance Standards set forth in §302.4.D of the Zoning Ordinance:

- 1. The site is suitable for the proposal. (§302.4.D.1)*
- 2. The external impacts of the proposed use on abutting properties and the neighborhood is commensurate with the impacts of adjacent existing uses or other uses permitted in the zoning district. (§302.4.D.2)*
- 3. The proposed layout and design of the site is not incompatible with the established character of the neighborhood and shall mitigate any external impacts on abutters, the neighborhood, and nearby public ways and infrastructure. (§302.4.D.3)*
- 4. The criteria set forth in Section 302.4.D.4 relates to new building construction and, since no new building construction is proposed, is inapplicable to the subject application.*
- 5. The proposed use and layout of the site, including all related development activities, does to the greatest extent practicable preserve identified natural, cultural, historic, and scenic resources on the site and shall not degrade such identified resources on abutting properties. (§302.4.D.5)*

III. DECISION

Now therefore be it resolved, the Planning Board, on this 15th day of April, 2024, hereby grants the request of Edwards Properties, LLC, for a Conditional Use Permit per Section 303.2 of the Zoning Ordinance to convert a portion of the existing building at 135 Heater Road (Tax Map 78, Lot 41) to an office use as set forth above and per testimony, plans, and materials submitted, and per the following conditions:

- 1. No outdoor storage is permitted other than 2 trailers which are required to be parked in the proposed rear parking lot.*
- 2. Impact fees calculated pursuant to Section 213 of the Zoning Ordinance shall be assessed prior to the issuance of a building permit and shall be paid prior to the issuance of a Certificate of Occupancy.*
- 3. The Conditional Use Permit is contingent on approval of the site plan application of Edwards Properties, LLC, for 135 Heater Road (Tax Map 78, Lot 41), PB2024-14-SPR, currently pending before the Board. If the site plan is approved, all conditions of approval for application PB2024-14-SPR are incorporated herein and shall be considered conditions of approval for the requested Conditional Use Permit.*

- 1
2 **4. If the site plan for application PB2024-14-SPR is approved, the site plan provided as a**
3 **part of this conditional use permit application will be updated through the approved**
4 **site plan.**

5
6 **The motion was seconded by Brandon Hill.**

7
8 ***The MOTION was approved (7-0).**
9

10
11 **C. Edwards Properties, LLC, 135 Heater Road (Tax Map 78, Lot 41), zoned IND-L: In**
12 **conjunction with a pending Conditional Use Permit application (PB2024-02-CUP),**
13 **applicant requests Site Plan Review for a conversion of the existing two-family**
14 **dwelling to a mixed-use building for a proposed office use and a dwelling unit,**
15 **together with associated site improvements including additional parking spaces and**
16 **a handicap ramp. PB2024-14-SPR**
17

18 Mr. Corwin stated that Staff recommends that the application is complete enough for the
19 Planning Board to accept jurisdiction and commence review.
20

21 Chair Faunce stated that the application materials dated March 28 supersedes the earlier
22 materials dated March 7.
23

24 **A MOTION by Kathie Romano that the application of Edwards Properties, LLC, 135 Heater**
25 **Road (Tax Map 78, Lot 41), zoned IND-L: In conjunction with a pending Conditional Use**
26 **Permit application (PB2024-02-CUP), applicant requests Site Plan Review for a conversion of**
27 **the existing two-family dwelling to a mixed-use building for a proposed office use and a**
28 **dwelling unit, together with associated site improvements including additional parking spaces**
29 **and a handicap ramp is complete enough for the Planning Board to accept jurisdiction and**
30 **commence review. The motion was seconded by Richard Ford Burley.**
31

32 Mr. Nash stated that the application materials include a letter written by Mr. Peter Spear that
33 states there are no jurisdictional wetlands on the property.
34

35 The group went through each part of the site plan and discussed them in detail:
36

37 C1 (Parking area):

- 38 • 24-foot aisle is located between the end of the parking spaces and the curbing
39 • The aisle begins where the driveway ends
40 • Total width of parking lot is 42 feet
41 • A 9-foot area of pervious pavers will provide drainage - curbing holds in the water so it can
42 be absorbed by the pavers
43 • 8-foot privacy fence is represented by a dashed line on the site plan
44 • Equipment vehicles will be parked in parking spaces 8 and 9 when not used on job sites
45 • ADA lift will be located on the Heater Road side of the building
46

1 Mr. Rutter said it would be helpful to have two maps to compare the existing site plan and the
2 proposed site plan.

3
4 The group discussed whether a number of trees would be removed from the site and if they
5 would be replaced. Mr. Ford Burley stated that the site plan is not just a picture of what the
6 applicant plans to do, it also provides a plan for what the site will continue to look like after the
7 project is finished. Ms. Romano said the removal and replacement of trees could be made a
8 condition of approval. Mr. Corwin confirmed that he and Mr. Vincent will visit the site when the
9 project is completed and ensure the number of trees on the site matches what's in the site plan.

10
11 The group discussed the parking area drainage plan involving the pavers and suggested the
12 maintenance of this feature could be made a condition of approval.

13
14 C3 (Stormwater plan):

15 Mr. Vincent said he reviewed the stormwater management plan and he is comfortable with the
16 design.

17
18 L1 (Landscaping)

- 19 • No defined set-back for fence
- 20 • 8-foot set-back from property line for trees
- 21 • The site has public water

22
23 Mr. Rutter asked if the parking lot could be moved further to the east to allow more space
24 between the west edge of the parking lot and the property line for trees to be planted. Mr. Nash
25 said there is limited space between the garage and the property line.

26
27 L2 (Lighting)

28 Light at back of property has falloff that exceeds the recommended 1 to 4 ratio

29 Light at back of property is angled down more than 45 degrees

30
31 The group discussed whether the proposed lighting is adequate and whether the lighting could be
32 motion activated. Mr. Nash discussed the uniformity of the lighting, noting that it is difficult to
33 achieve uniformity in a small space. Ms. Stebbins said the parking lot is used mostly by
34 employees during daylight hours, so lighting is not critical to employee safety. Mr. Ford Burley
35 suggested that small bollard lights could be added along the front edges of the parking spaces.
36 Mr. Nash said another motion-activated light fixture could be added above the cars to provide
37 illumination.

38
39 Chair Faunce opened the public hearing and invited public comment.

40
41 The group went through the waiver requests and discussed them in detail.

42
43 Mr. Corwin confirmed that the plan's wall-mounted building light fixture triggered the
44 requirement to show the building elevations. He also said a 15-foot perimeter landscape buffer is
45 required on the side, back and front of the property. The group agreed that the additional lighting

for the parking area (suggested earlier in the discussion) could eliminate the need for the parking area lighting waiver.

A MOTION was made by Richard Ford Burley that, for the application of Edwards Properties, LLC, PB2024-14-SPR, the Lebanon Planning Board approves waivers from the following sections of the Site Plan Review Regulations:

- ***5.1.E.13 – requiring building elevations depicting proposed lighting fixtures***
- ***6.2.B.1 – requiring a 15 ft. wide perimeter landscaping buffer***
- ***6.2.B.10 – requiring trees at 40 ft. intervals along property frontage***
- ***6.7.C.1 – parking area lighting requirements (average horizontal illuminance and uniformity ratio)***
- ***6.2.B.6 – requiring an additional 5 ft. of perimeter landscaping along the side of the property adjoining the neighboring residential use, together with an opaque screen***

The motion was seconded by Kathie Romano.

****The MOTION was approved (7-0).***

Chair Faunce closed the public hearing.

A MOTION was made by Richard Ford Burley that the Lebanon Planning Board approves the Site Plan Review application of Edwards Properties, LLC, regarding 135 Heater Road (Tax Map 78, Lot 41), zoned IND-L, PB2024-14-SPR, for a conversion of the existing two-family dwelling to a mixed-use building for a proposed office use and a dwelling unit, together with associated site improvements including additional parking spaces, as shown on a plan set titled set titled, “99 Heater Road,” prepared by Advanced Geomatics and Design, dated January 30, 2024, last revised March 28, 2024 (11 sheets), including any and all submissions and testimony provided for and during the public hearing.

In support of its decision, the Board finds that the applicant has submitted plans, testimony, technical data, information, reports, and studies that together satisfactorily demonstrate compliance with the applicable requirements of the Site Plan Review Regulations, except as may reasonably be addressed through the imposition of certain conditions of approval, set forth below, and except as may have been waived pursuant to Section 7.1.

This approval is subject to the following conditions:

General Conditions

- 1. It shall be the applicant’s responsibility to be familiar with and aware of these conditions of approval, and it shall be the applicant’s responsibility to satisfy these conditions of approval and to satisfy them within the relevant timeframes outlined below.***

- 1 2. *The development is subject to the Site Plan Review Regulations adopted May 13, 1991,*
2 *last revised January 23, 2023, and the Zoning Ordinance adopted January 16, 2013,*
3 *last amended February 7, 2024, which are the regulations in effect at the time the*
4 *application was submitted.*
5
- 6 3. *A building permit must be applied for and issued within two (2) years of the date of this*
7 *approval (4.10.A), subject to an extension if applied for by the applicant and if*
8 *approved by the Planning Board per Section 4.10.B.*
9
- 10 4. *“Active and substantial development,” as defined in Section 8.4.A.1 of the Site Plan*
11 *Review Regulations, shall be achieved within two (2) years of the date of this approval*
12 *(8.4.A.2), subject to an extension if applied for by the applicant and if approved by the*
13 *Planning Board per Section 8.4.A.3. If active and substantial development is not*
14 *achieved within two (2) years of the date of the Planning Board’s approval, the*
15 *development shall be subject to any changes in the City’s land use regulations.*
16
- 17 5. *“Substantial completion,” as defined in Section 8.4.B.1 of the Site Plan Review*
18 *Regulations, shall be achieved within five (5) years of the date of this approval. If*
19 *substantial completion is not achieved within five (5) years of the date of the Planning*
20 *Board’s approval, the development shall be subject to any changes in the City’s land*
21 *use regulations.*
22
- 23 6. *All required landscape plantings shall meet the minimum size requirements for such*
24 *plantings set forth in Section 6.2.B of the Site Plan Review Regulations at the time of*
25 *installation.*
26
- 27 7. *The applicant shall implement and maintain NHDES Site Specific Best Management*
28 *Practices before, during, and after construction.*
29
- 30 8. *Edge-of-disturbance fencing shall be installed and maintained before and during any*
31 *site work, to be verified by the City Engineer or City’s third-party inspector on site.*
32
- 33 9. *The property owner is responsible for the maintenance and operation of the*
34 *stormwater management system in accordance with the O&M plan, and such*
35 *responsibility shall run with the land. (Section 6.6.H.2.b of the Site Plan Review*
36 *Regulations).*
37

38 *Conditions to be Satisfied Prior to Application for a Building Permit and Prior to the Start of*
39 *Any Construction Activities*

1 **10. Within 30 days of the Planning Board's approval, the applicant shall make the**
2 **following revisions to the plan set to the satisfaction of the Planning and Development**
3 **Department:**

4 a) *Add a note that the property does not contain wetlands and reference the March*
5 *7, 2024 letter from Peter Spear.*

6 b) *On the Cover Sheet:*

7 i. *Update title of plan set and property address information on cover sheet*
8 *to 135 Heater Road.*

9 ii. *In the "Zoning Comparison" table on the cover sheet:*

10 1. *clarify that 9 parking spaces are proposed including two spaces*
11 *for the outdoor storage of two trailers for the office use.*

12 2. *add a footnote that the office use is permitted pursuant to a*
13 *Conditional Use Permit approved on April 15, 2024 (PB2024-02-*
14 *CUP)*

15 3. *provide description of plan revisions made pursuant to the*
16 *Planning Board's approval (5.1.E.4.d).*

17 c) *On Sheet 5 (C-1):*

18 i. *add a note identifying how trash pickup will be handled.*

19 ii. *provide a legend identifying various symbology.*

20 iii. *identify proposed uses of the existing building (staff note: instead of "ex.*
21 *Garage" and "ex house" which would be more appropriate for an*
22 *existing conditions plan, not a site plan that is intended to depict future*
23 *conditions).*

24 d) *On Sheet 8 (L-1), remove Landscape Note #10 which is duplicative of Note #9.*

25 e) *On Sheet 9 (L-2), clearly identify the color correlated temperature (CCT) and*
26 *wattage of the proposed building-mounted light fixture.*

27 f) *Make such alteration to Sheets 5 (C-1) and 8 (L-1) as necessary to depict only*
28 *the proposed conditions after the completion of the proposed work and provide*
29 *equally detailed plans of the same size and scale depicting only the existing*
30 *conditions prior to the proposed work.*

31 g) *On Sheet 9 (L-2), add a second light fixture on the eastern edge of the parking*
32 *lot to improve lighting conditions and show the revised lighting levels.*
33

34 **11. Once approved by staff pursuant to Condition of Approval #10, the applicant shall**
35 **provide the Planning and Development Department with a digital copy of the final**
36 **revised plan set saved in a PDF-A format for archival purposes.**
37

38 **12. The applicant shall schedule and hold a pre-building permit application meeting with**
39 **the Planning and Development Department, City Building Inspectors, City**
40 **Engineer/Department of Public Works, and Fire Department, in order to help**
41 **streamline the building permit review process and to review applicable code**
42 **requirements.**
43

13. The applicant shall obtain approval from the City Council or the City Manager's office for any additional water and/or sewer flows in accordance with the applicable Chapter 136 and 182 of the City Code.

14. All engineering review fees shall be paid in full as required by Section 4.7.E.1 of the Site Plan Review Regulations. (Staff note: applicant can request an invoice from the Department of Public Works).

Conditions to be Satisfied Prior to the Issuance of a Building Permit

15. The development shall be subject to City of Lebanon Impact Fees, pursuant to Section 213 of the Zoning Ordinance. The Impact Fee shall be calculated at the time of Building Permit issuance based on the Impact Fee Schedule adopted on October 12, 2021. In accordance with RSA 674:39, the approved site plan shall be exempt from any future changes in impact fees and methodology for five years from the date of approval; however, any building permits which are issued after the end of that five-year period shall be fully subject to whatever impact fees and methodology are in effect at the time of building permit issuance.

16. All water and sewer fees shall be paid as set forth in City Code Chapter 68.

17. Prior to the start of any construction activities on the property, the applicant shall obtain or update (if appropriate) any required State approvals.

Conditions to be Satisfied Prior to the Issuance of a Certificate of Occupancy

18. The impact fee calculated pursuant to Condition of Approval #15 shall be paid.

19. All improvements depicted on the plan shall be completed and shall be constructed as depicted on the approved plan, including any modifications to the plan as may be approved by the Planning Board in accordance with the Site Plan Review Regulations.

The motion was seconded by Jeremy Rutter.

*The MOTION was approved (7-0).

D. Seale Properties, LLC, 50 Maple Street (Tax Map 73, Lot 65), zoned R-3: Request for approval of a proposed two (2)-lot Minor Subdivision. PB2024-13-MIN

Mr. Ian MacKenzie, Vermont civil engineer, and Mr. Perry Seale, managing member of Seale Properties, were present on behalf of the applicant.

1
2 Mr. Corwin stated that Staff recommends that the application is complete enough for the
3 Planning Board to accept jurisdiction and commence review.

4
5 ***A MOTION by Patrick Kennelly that the application of Seale Properties, LLC for a proposed***
6 ***two (2)-lot Minor Subdivision of 50 Maple Street (Tax Map 73, Lot 6) PB2024-13-MIN is***
7 ***complete enough for the Planning Board to accept jurisdiction and commence review.***

8
9 ***The motion was seconded by Brandon Hill.***

10
11 ****The MOTION was approved (7-0).***

12
13 Mr. MacKenzie gave an overview of the project. He said a shared driveway will provide right of
14 way for a single-family residence and the existing multi-family structure. He said he may sell the
15 properties to his children. The group discussed the trend in the City toward pattern zoning as an
16 alternative housing solution.

17
18 Ms. Romano asked about the size of the parking lot and whether it meets the 10,000 square feet
19 requirement for subdivisions in the R3 district. She also asked if there is a limit to the number of
20 properties that can be accessed from a common driveway.

21
22 Mr. Corwin explained that the property includes a two-family structure that is allowed by special
23 exception. He said the new dwelling could not be built as a two-family dwelling because, in the
24 R3 district, a two-family dwelling is only permitted by conversion. He said the owner could
25 build the one-family structure, obtain a Certificate of Occupancy, and then apply to the Zoning
26 Board of Adjustments for a special exception to convert the single-family dwelling to a two-
27 family dwelling.

28
29 Mr. MacKenzie said he added space around the driveway to achieve the required five-foot set-
30 back from the property line. The group discussed the frontage and width of the lot.

31
32 Ms. Romano asked if the owner of the single-family property would need approval if he
33 eventually wants to install a private driveway. Mr. Corwin said the subdivision plat would have
34 to be amended to make a change like that.

35
36 Mr. Vincent asked how the back lot will access water and sewer. Mr. MacKenzie said he worked
37 with Rick Brown of the DPW to determine how the water and sewer lines will run from Maple
38 Street to the new lot.

39
40 Chair Faunce opened the public hearing and invited public comment.

41
42 Ms. Bonnie Barber (Dana Street) asked how many trees will be retained on the property border.
43 She said there is one very tall, beautiful oak tree that she was curious about in particular. Mr.
44 MacKenzie said he is looking to retain the oak tree in question.

45
46 Chair Faunce closed the public hearing.

1
2 ***A MOTION was made by Patrick Kennelly that the Lebanon Planning Board approves the***
3 ***application of Seale Properties, LLC, for a proposed two (2)-lot Minor Subdivision of 50***
4 ***Maple Street (Tax Map 73, Lot 65), PB2024-13-MIN, as shown on a plat titled “Minor***
5 ***Subdivision Plat for Seale Properties, LLC,” prepared by Rockwood Land Services, LLC,***
6 ***dated March 15, 2024, last revised April 5, 2024, Project No: 1661, including any and all***
7 ***supplemental submissions and testimony provided during the public hearing.***

8 ***In support of its decision, the Board finds that the applicant has submitted plans, testimony,***
9 ***and technical data prepared by a licensed land surveyor that together satisfactorily***
10 ***demonstrate compliance with the applicable requirements of the Subdivision Regulations***
11 ***except as may reasonably be addressed through the imposition of certain conditions of***
12 ***approval, set forth below.***

13 ***This approval is subject to the following conditions:***

14 **Conditions to be Satisfied Prior to the Signing and Recording of the Plat**

- 15 ***1. The applicant shall provide a revised plat depicting the following changes to the***
16 ***satisfaction of the Planning and Development Department:***
17 ***a. Add addresses to Lot 1 (50 Maple Street) and to Lot 2 (48 Maple Street).***
18 ***b. Shift the surveyor’s stamp and signature to uncover obscured text underneath.***
19 ***c. Provide the date and description of the plat revisions. (9.5.A.1)***
20
21 ***2. The applicant shall provide a digital record drawing of the revised plat (Cad .dwg***
22 ***format using NH State Plane Coordinate system or an alternative approved by the***
23 ***City’s GIS Coordinator).***
24

25 **General Conditions**

- 26 ***3. This approval shall be considered void unless all conditions precedent have been met,***
27 ***and the plat has been recorded in the Registry of Deeds, within two (2) years from the***
28 ***date of the Notice of Action (Section 7.12.B). The plat shall be recorded in accordance***
29 ***with Planning & Development Department procedures. The Warranty Deeds submitted***
30 ***with the application materials shall be executed and submitted together with the plat***
31 ***for contemporaneous recording by the Planning & Development Department.***
32
33 ***4. Future development on the new lots shall be subject to City of Lebanon Impact Fees,***
34 ***pursuant to Section 213 of the Zoning Ordinance. The Impact Fee shall be calculated***
35 ***at the time of Building Permit issuance based on the Impact Fee Schedule adopted on***
36 ***October 12, 2021, and such fees shall be due and payable at the time of issuance of a***
37 ***Certificate of Occupancy. In accordance with RSA 674:39, development shall be***
38 ***exempt from any future changes in impact fees and methodology for five years from***
39 ***the date of approval; however, any building permits which are issued after the end of***

that five-year period shall be fully subject to whatever impact fees and methodology are in effect at the time of building permit issuance.

- 5. All future construction shall substantially conform with and shall be subject to the requirements and specifications of the recorded plat (Section 7.9.A.2).**

The motion was seconded by Jeremy Rutter.

**The MOTION was approved (7-0).*

A MOTION was made by Patrick Kennelly that the Lebanon Planning Board authorizes the Chair to sign the Minor Subdivision plat of Seale Properties, LLC, PB2024-13-MIN, titled “Minor Subdivision Plat for Seale Properties, LLC,” prepared by Rockwood Land Services, LLC, dated March 15, 2024, last revised April 5, 2024, Project No: 1661, and as further revised per the Planning Board’s conditions of approval.

The motion was seconded by Richard Ford Burley.

**The MOTION was approved (7-0).*

4. OTHER BUSINESS

5. APPROVAL OF MINUTES

March 18, 2024

Amendments: Page 3, Line 23: Insert “a” before “Conditional Use permit”
 Page 3, Line 28: Remove “Parking tot”
 Page 4, Line 19: Change “construction is completed.” to “new fire station has been completed.”
 Page 4, Line 29: Edit to read: “He said that once the buildings have been taken down, the spaces they occupied will”
 Page 4, Lines 5-20: Remove map image
 Page 5, Line 14: Change “Aidmab” to “Adimab”

A MOTION was made by Kathie Romano to approve the Planning Board Minutes of March 18, 2024, as amended. The motion was seconded by Patrick Kennelly.

**The MOTION was approved (6-0; Mr. Ford Burley abstained from the vote).*

March 26, 2024

Amendments: Heading of Minutes: Change “March 26” to “March 25”
 Page 2, Line 8: Insert “a” after “has”
 Page 2, Line 11: Insert “said” after “Mr. Mayberry”
 Page 2, Line 16: Change “license care” to “licensed care”
 Page 2, Line 30: Insert “those of” before “neighboring towns”
 Page 2, Line 37: Change “the criteria is” to “the criteria are”

Page 3, Line 33: Change “are” to “cost”

Page 3, Lines 34-35: Change “of” to “about”

A MOTION was made by Kathie Romano to approve the Planning Board Minutes of March 26, 2024, as amended. The motion was seconded by Patrick Kennelly.

**The MOTION was approved (6-0; Mr. Ford Burley abstained from the vote).*

6. ADJOURNMENT

A MOTION was made by Jeremy Rutter to adjourn the meeting at 9:08pm. The motion was seconded by Richard Ford Burley.

**The MOTION was approved (7-0).*

The meeting was adjourned at 9:08pm.

Respectfully submitted,

Paula Roux

Recording Secretary

DRAFT

**LEBANON PLANNING BOARD
COUNCIL CHAMBERS, CITY HALL
OR REMOTE VIA MICROSOFT TEAMS
LEBANONNH.GOV/LIVE
MONDAY, APRIL 22, 2024, 6:30 PM**

MEMBERS PRESENT: Andrew Faunce (Chair), Richard Ford Burley (Vice Chair), Jeremy Rutter, Patrick Kennelly, Brandon Hill, Kathie Romano, Karen Zook (City Council Rep)

MEMBERS ABSENT: None

STAFF PRESENT: Tim Corwin (Deputy Planning Director), Nate Reichert (Director of Planning & Development/Zoning Admin), Catheryn Hembree (Associate Planner)

1. CALL TO ORDER

Chair Faunce called the meeting to order at 6:31pm.

Mr. Corwin reviewed the City's meeting in-person and REMOTE attendance policies and procedures.

2. NOTICE OF REGIONAL IMPACT

The following applications were received by the Planning and Development Department on or before April 8, 2024:

- **The Notch Climbing Real Estate, LLC & Chaloux Properties, LLC, 33 & 25 Labombard Road (Tax Map 51, Lot 15, and Tax Map 64, Lot 25), zoned IND-L: Request for approval of a Boundary Line Adjustment. PB2024-17-BLA**
- **CP Centerra LLC, 12 Centerra Parkway (Tax Map 10, Lot 11, Plot 100), zoned IND-L: Pursuant to Section 9.1 of the Site Plan Review Regulations, applicant requests a modification to a previously approved site plan (PB2022-45-SPR) for a restaurant with a drive through together with associated site improvements. Applicant proposes changes to the site circulation, parking, landscaping, and utilities. PB2024-18-SPA**

Mr. Corwin said staff recommends the applications do not have the potential for regional impact.

A MOTION was made by Richard Ford Burley that the applications of The Notch Climbing Real Estate, LLC & Chaloux Properties, LLC, 33 & 25 Labombard Road (Tax Map 51, Lot 15, and Tax Map 64, Lot 25), zoned IND-L, and CP Centerra LLC, 12 Centerra Parkway (Tax

1 **Map 10, Lot 11, Plot 100), zoned IND-L do not have the potential for regional impact. The**
2 **motion was seconded by Patrick Kennelly.**

3
4 ***The MOTION was approved (7-0).**

5
6 **3. STUDY ITEMS**

7
8 **A. Review and Comment for the Proposed Zoning Amendment for Section 214**
9 **(Governmental Uses) of the Zoning Ordinance**

10
11 Mr. Corwin said Section 214 (Governmental Uses) of the zoning ordinance currently states that
12 governmental use projects are (by default) subject to the zoning ordinance unless exempted by
13 the City Council. He said some recent public works projects that have a general benefit to the
14 City have had impacts on adjacent properties that triggered review by the Zoning Board of
15 Adjustments under the City's wetlands regulations. He said the additional review/approval
16 process creates delays and additional costs, particularly when the City Public Works employees
17 are not aware that the review is needed and must get the wetlands permit after work has started.
18 He said the Planning Department also had to get a wetlands permit for an Airport expansion
19 project that was well underway, which he said added more than \$16,000 to that project.

20
21 He said the proposed zoning amendment would exempt Public Works projects that are for the
22 public good from compliance with the City's zoning ordinance. He said these projects would still
23 require state wetland approval and all other state and local regulations if the zoning ordinance is
24 changed.

25
26 The group discussed the differences between the City's and the state's wetlands regulations. Mr.
27 Corwin said the City requires a 150-buffer to be maintained for all wetlands areas and the state
28 does not. He noted that wetlands impacts identified on projects are reviewed by the Conservation
29 Commission. He said the City Council can vote to grant an exemption of the zoning ordinance
30 for these projects. Chair Faunce said that Lebanon and Nashua are the only New Hampshire
31 cities that require local ZBA review. Mr. Corwin noted that public improvement projects provide
32 ample chances for public hearing through public hearings.

33
34 The group discussed how detrimental this additional level of review might be to Public Works
35 projects. Mr. Ford Burley asked, if the Board decides in favor of amending the zoning ordinance,
36 if that decision could be revisited in 24 months, so the impact of the decision could be assessed.
37 Mr. Corwin said that could be included in the Board's recommendation to the City Council.

38
39 **A MOTION was made by Richard Ford Burley that the Planning Board authorizes the**
40 **Planning Board's City Council Representative to convey that, in the Planning Board's**
41 **discussion of the proposed Zoning Amendment [to Section 214 (Governmental Uses)], the**
42 **Members expressed concerns over the potential impact of removing a step in the regulatory**
43 **review process, and suggested that, if the City Council were to pass the proposed amendment,**
44 **it should revisit the language of Section 214 in no more than two years' time, taking into**
45 **account any new data that arises. The motion was seconded by Jeremy Rutter.**



Roll Call Vote:**Voting in Favor –Mr. Faunce, Mr. Ford Burley, Mr. Hill, Mr. Kennelly, Mr. Rutter****Voting Against – Ms. Romano****Abstaining from the Vote: Ms. Zook*****The MOTION was approved (5-1, with Ms. Zook abstaining).****B. Master Plan Discussion**

Ms. Hembree gave an overview of the current Master Plan update process, and the group reviewed the outline and update timeframes of the Master Plan Chapters. She said the plan is to update a small number of chapters each year and to do a complete rewrite of the Master Plan in 2030. She said the following chapters are under review this year:

- Natural Resources (by the Conservation Commission)
- Energy (by the Lebanon Energy Advisory Committee)
- Economic Development (by the Lebanon Economic Development Committee)

She said each committee can decide how it solicits public input; for example, she said LEAC plans to have a kiosk at the Lebanon Farmers Market to encourage the public to provide input.

The group discussed the importance of the Housing and Land Use Chapters at length, and whether those chapters/sections should be reviewed sooner and before other chapters. Ms. Hembree noted that, since the Housing Chapter will need a complete overhaul, the Planning Department has already begun contacting consultants to help in that effort. Mr. Ford Burley said the Land Use Chapter review needs to start much earlier than 2029. Chair Faunce said Land Use review should be ongoing and the Master Plan should be an interactive, living document. He noted that the public's ability to access and comment on the Master Plan has been a challenge. Mr. Reichert said the City needs to encourage increased and consistent public engagement in the Master Plan process. Mr. Rutter asked if the Board could receive status/updates on the huge housing projects that have been approved by the City Council in recent years.

The group discussed the upcoming Route 120 Corridor Study. Ms. Hembree said there is a Route 120 Corridor Study meeting on April 24 at 5:00pm at DHMC in Auditorium E (3rd Floor), which will include a public charrette.

C. Discussion and Set Public Hearing: Impact Fees

Mr. Corwin provided the following to the Board members:

- Red line comparison of 2024 supportable Impact Fee rates compared with existing Impact Fee rates (adopted in October 2021)
- Impact Fee schedules for 2018, 2016, and 2010
- Community comparison of Impact Fee rates (assembled by consultant Bruce Mayberry) including Thedford, Dover, Newmarket, Rochester, and Salem

1 Chair Faunce reminded Board members that their decision affects either the people developing
2 property, who will pay the full and fair impact fee, or taxpayers, who will pay instead down the
3 road. He said, in the current climate of rising tax rates for residents, he proposes that the former
4 is a more favorable result than the latter. Mr. Kennelly said raising development fees will
5 probably cause developers to increase rates for renters and owners.

6
7 Mr. Hill said he thought these fees may not be high enough to meet the increased costs due to
8 inflation. Mr. Ford Burley said he believed consultant Bruce Mayberry did his best to calculate a
9 good, justifiable set of Impact Fees and the Board's options are either accept them or try to
10 calculate a lower amount, which is not favorable. Mr. Corwin confirmed that the fees, which are
11 assessed on new developments in the City, go to the departments identified and not to the general
12 fund for the City. Ms. Zook explained the fees are assessed based on the anticipated use of City
13 services.

14
15 ***A MOTION was made by Richard Ford Burley that the Planning Board sets the Public***
16 ***Hearing to discuss the Impact Fees for May 28, 2024, at 6:30pm. The motion was seconded by***
17 ***Kathie Romano.***

18
19 ****The MOTION was approved (7-0).***

20
21 The group realized that there would not be enough members to achieve a quorum for that date
22 and time.

23
24 ***A MOTION was made by Richard Ford Burley that the Planning Board sets the Public***
25 ***Hearing to discuss the Impact Fees for May 20, 2024, at 7:00pm. The motion was seconded by***
26 ***Patrick Kennelly.***

27
28 ****The MOTION was approved (7-0).***

29 30 **4. COMMITTEE REPORTS**

31
32 ***A MOTION was made by Kathie Romano that Chair Faunce of the Planning Board appoints***
33 ***Mr. Patrick Kennelly as the Planning Board Representative for the Lebanon Energy Advisory***
34 ***Committee. The motion was seconded by Richard Ford Burley.***

35
36 ****The MOTION was approved (6-0, with Mr. Kennelly abstaining).***

37
38 Ms. Romano noted that the Mascoma Advisory Committee no longer has members and no longer
39 meets. She said it is an important committee and should be reinstated.

40 Mr. Ford Burley suggested that members of subcommittees could come to a Planning Board
41 meeting and talk about their committees. Mr. Corwin said other committees that do not have
42 Planning Board representatives are the Pedestrian & Bike Committee and the Regional Planning
43 Committee.

1 **5. OTHER BUSINESS**

2 Mr. Corwin said the Planning Department received a site plan application for 7 Lucent Drive
3 several weeks ago that is ready to come before the Board on May 13. He said the applicants
4 have submitted a waiver request for a paved parking lot and suggested a site visit prior to the
5 meeting so the Board members can understand the reasons for the waiver request. The group
6 agreed to conduct a site visit on May 6, 2024, at 5:30pm at 7 Lucent Drive.

7
8 **6. APPROVAL OF MINUTES**

9 None

10
11 **7. ADJOURNMENT**

12
13 *A MOTION was made by Richard Ford Burley to adjourn the meeting at 9:05pm. The motion*
14 *was seconded by Jeremy Rutter.*

15
16 **The MOTION was approved (7-0).*

17
18 The meeting was adjourned at 9:05pm.

19
20 Respectfully submitted,

21 Paula Roux

22 Recording Secretary

DRAFT

**LEBANON PLANNING BOARD
MEETING ROOM ONE, CITY HALL
OR REMOTE VIA MICROSOFT TEAMS
LEBANONNH.GOV/LIVE
MONDAY, APRIL 29, 2024, 6:30 PM**

MEMBERS PRESENT: Andrew Faunce (Chair), Jeremy Rutter, Patrick Kennelly, Brandon Hill, Kathie Romano

MEMBERS ABSENT: Richard Ford Burley (Vice Chair), Karen Zook (City Council Rep)

STAFF PRESENT: Tim Corwin (Deputy Planning Director), Nate Reichert (Director of Planning & Development/Zoning Admin), Erica Douglas (Solid Waste Manager)

1. CALL TO ORDER

Chair Faunce called the meeting to order at 6:31pm.

Mr. Corwin reviewed the City's meeting in-person and REMOTE attendance policies and procedures.

Chair Faunce said the group would discuss Agenda Item 3.A. first, which is out of the order of the agenda for this meeting.

3. OTHER BUSINESS

A. Public Hearing Determination Per RSA 674:54 - City of Lebanon Landfill Gas to Energy Project

Mr. Corwin explained that the Planning Board can decide whether to have a public hearing for Government Use projects. He said this project had undergone an extensive public review process in 2020. He said the project has not changed since 2020. Solid Waste Manager Erica Douglas said the City Council held a public hearing on this project recently because the Council reviewed a request for additional funding. She said the project has been publicized in the Valley News and on local TV stations as well.

Ms. Douglas gave an overview of the project, which involves the conversion of methane gas currently burned at the Landfill into power to be used by the City.

The Board Members decided to decline to hold a public hearing for this project.

2. STUDY ITEMS

A. Rules of Procedure Discussion

The group reviewed the current Rules of Procedure information, which was provided in the agenda packet for the meeting. Mr. Corwin asked the group to discuss items that may be unclear, incomplete, or irrelevant.

The following items were discussed:

Item 2.2 Alternate

Members – Mr. Rutter asked why an alternate would not be appointed in the absence of the ex-officio member of the

2.2 ALTERNATE MEMBERS. Alternate members of the Board shall be appointed by the City Council, by majority vote, upon nomination by the City Manager. Alternate members shall join the regular members in all presentations, public hearings, and discussions except that such alternates may not vote on any proposal or motion before the Board unless so directed by the Chair. In the absence of any regular member, except the ex-officio member of the City Council, the Chair shall appoint an alternate member to fill such vacancy. Said alternate shall then act as a regular member.

City Council. Mr. Corwin explained that there are three (possible) Board Member alternates that would be appointed for an absent Board Member, and one alternate City Council Representative that would be appointed for the City Council Representative. He noted that there are some inconsistencies between the current make-up of the Lebanon Planning Board (per City Code) and what the statute provides. He said he is going to review the issue with the City's legal counsel.

Item 2.4 Attendance – The group discussed whether non-attendance includes remote attendance, given that remote attendees do not “count” toward a quorum and can only vote on motions if a quorum is present in person.

2.4 ATTENDANCE. A Board member may be excused for non-attendance of a meeting or hearing for valid reasons if he or she notifies the Chair or Clerk prior to the meeting or hearing. Any Board member may leave the Board chambers for pressing business while in regular session after notice to the Chair.

The group discussed how many unexcused absences should be allowed, and whether members can be removed prior to the end of their term if they are consistently absent from meetings. Mr. Corwin said most boards have a rule that members can be removed if they have three consecutive unexcused absences from meetings. He said a request like this would be made to the City Council by the City Manager.

Item 2.5 Training – Mr.

Corwin said this should be “Planning and Development Director” not “Planning and Zoning Director.”

2.5 TRAINING. All newly-appointed Board members shall attend one (1) orientation meeting with the Planning and Zoning Director, prior to sitting as a member of the Board, unless waived or extended by the Chair at the request of the Planning and Zoning Director.

Item 3.2 Duties of the Chair

The group discussed the meaning of the third paragraph and whether it should be removed. They discussed the difference between roll call votes and straw polls. The group agreed to leave the paragraph in because it may be beneficial to record how the Board voted for applicants, and residents. The group agreed that the language of the final paragraph could be revised.

3.2 DUTIES OF THE CHAIR. The Chair shall call the meeting together, preside over all meetings and hearings of the Board, put all questions to a vote, maintain order, decide all questions of order and procedure, subject to these rules, and shall appoint any committees found necessary to carry out the business of the Board.

The Chair may present to the Board such matters as in the Chair's judgment require attention.

At the request of any Board member, the Chair shall direct that the yeas and nays be taken and entered on the record on any question before the Board.

When the Board has no established rule of parliamentary practice, the Chair shall be guided as nearly as may be by Robert's Rules of Order, which may be simplified by the Chair as deemed necessary and appropriate. In the event of a challenge by a Board member of any modification of Robert's Rules by the Chair, Robert's Rules shall prevail.

The Chair shall exercise a general supervision over the business, papers, and property of the Board and shall execute all formal documents on behalf of the Board.

Item 3.4 Clerk – Mr. Corwin suggested that the word “Clerk” be changed to “Staff.”

The Recording Secretary confirmed that draft minutes must be provided to the City within five business days. The group suggested that “144 hours” should be changed to “120 business hours.”

3.4 CLERK. With the approval of the City Manager, the Director of Planning & Zoning, through the Department of Planning & Zoning, shall function as the Clerk for the Board. The Clerk shall administer official correspondence, subject to these rules and at the direction of the Board; shall issue the proper forms, compile all information, maps, and records for the Board's review; shall send all notices required by law; shall keep the minutes of all Board actions and proceedings; shall prepare reports and perform other duties as directed by the Chair; and, shall keep records of its examinations and other official actions.

The Clerk shall direct the recording secretary to take complete and accurate minutes, to tape record all meetings, to prepare in writing the official minutes of all meetings; to show the vote of each regular member upon every question, or if absent, disqualified, or failing to vote so indicate; to include in the minutes the names and addresses of all witnesses, a summary of the facts on which the decision is based and the decision rendered; and to deliver to the Clerk within 144 hours the completed document for submission to the Board for acceptance.

The Clerk, in consultation with the Chair, shall prepare the agenda for each meeting, provide all supportive documentation, and deliver said materials to each Board member no later than the Thursday preceding any scheduled Monday meeting. The Clerk shall

The group discussed the completeness of applicants' materials and how important it is that applicants provide all materials to be reviewed by the Board. A suggestion was made to add “Staff should have agenda packets to the Board Members by the Thursday before the meeting” to this item, and, if the full materials are not provided, the application will be postponed until the following meeting.

Ms. Romano noted that the Board rarely (if ever) goes against the staff's recommendation that an application is complete and ready for review, but many times, applicants do not provide all the information they need, and the application discussion is continued at the next (or even more) meeting(s). Mr. Reichert suggested the Board could approve the established calendar and filing deadlines for applicants for the year at the annual meeting.

Item 4.5 Place of Meeting – Mr. Corwin suggested that site visits, which are mentioned in Item 4.5, should have a

separate section, which should elucidate how site visits should be conducted, how are questions handled, whether the public can participate, etc.

4.5 PLACE OF MEETING. Meetings of the Board shall normally be held at City Hall, in the City of Lebanon, or at some other public place in the City of Lebanon, or at the site of a proposed project for the express purpose of inspecting said site as part of the review for a proposed project.

Item 4.6 Open Meetings -

Mr. Corwin said this Item should mention RSA 91:A.

4.6 OPEN MEETINGS. All meetings of the Board and its committees shall be open to the public except as stipulated by State Law.

Items 5.4 Presentations During Public Hearings -

The group discussed the idea that perhaps a member of the Staff

5.4 PRESENTATIONS DURING PUBLIC HEARINGS. The Chair shall request that before the start of each Public Hearing a representative of the proposal give a brief presentation of the request before the Board. The brief presentation shall be adequate so as to inform all abutters and members of the public as to the nature of the project in order that they may comment on the proposed project.

could provide the Board with the initial overview/presentation of the application. Chair Faunce said this would provide clarity for the Board and Mr. Reichert said it would help provide focus on pertinent issues. The group discussed whether Staff could provide a recommendation on whether the Board should approve the application. Mr. Hill said he felt it is better for the applications to be presented in a neutral way initially and the Board can ask questions to determine Staff opinion.

Item 5.5 Permission to Address the Board –

The group suggested the language could be reworded to indicate it should not be required to submit subject matter prior to the meeting for review during Open Discussion, but the Chair could require prior submittal, if desired.

5.5 PERMISSION REQUIRED TO ADDRESS THE BOARD. Persons other than members of the Board shall not be permitted to address the Board except by consent of the Chair. Anyone wishing to address the Board during Open Discussion should indicate their intent and subject matter to the Chair prior to the meeting. A time limit of 3 minutes shall normally be in effect. The speaker shall not enter into any debate with anyone present and shall speak only to the subject matter indicated. A group may have one person act as its spokesperson and shall follow the same rules.

Items 6.1-6.2

Mr. Corwin suggested that, if the Board is happy with how votes are currently handled, the rule should be rewritten to match how it is currently being done.

6.1 MOTION TO BE STATED BY THE CHAIR. When a motion is made and seconded, it shall be stated by the Chair before debate. At the request of the Chair or any member of the Board, the motion shall be in writing. A motion may not be withdrawn or amended by the mover without the consent of the second.

6.2 MAJORITY VOTE REQUIRED. Determinations on any matter before the Board shall require the concurrence of a majority of the regular members present.

The group agreed that Item 6.2 is unclear and confusing and should be rewritten. Mr. Corwin said if a quorum is five members, then at least five in-person members need to be present. In that case, he said three members would be considered the majority.

Item 6.4 Conflicts of Interest –

Mr. Reichert said this item should include references from the City's ethics training (which was provided by the City Manager) regarding how it should handle conflicts of interest.

6.4 CONFLICT OF INTEREST or PREJUDGEMENT. In accordance with RSA 673:14, no Board member shall participate in deciding or shall sit upon the hearing of any question if that member has a direct personal or pecuniary interest in the outcome which differs from the interests of other citizens, or if that member would be disqualified for any cause to act as a juror upon the trial of the same matter in any action at law.

Item 6.6 Extension of Time -

Mr. Reichert suggested this item needs to be rewritten to better reflect the Planning Board's current procedures regarding extensions of time for deliberation on applications.

6.6 EXTENSION OF TIME. Any three Board members may request an extension of time before voting on any proposal before the Board. If such an extension is requested, the Board shall schedule a special meeting not more than two weeks from the date of the request to take action on the proposal or otherwise such special meeting may be scheduled for a date agreeable by all requestors. There shall be no new business placed on the agenda of any special meeting scheduled under this section.

Item 7.2 Definition of Committee -

Mr. Reichert suggested this definition should match the description of the function of committee discussed earlier in the document.

7.2 DEFINITION OF COMMITTEE. A group of Board members delegated by the Chair to perform a function.

Item 7.5 Committee Chair –

The group agreed to rewrite this item.

7.5 COMMITTEE CHAIR. The first Board member named on the Committee shall be the Chair thereof.

Item 8.3 Activities Between Meetings-

The group discussed instances where this might happen. Ms. Romano noted that members would be required to present research they have done outside of the meeting. Mr. Reichert said, if a board member attains evidence or information that may affect the judgment on the application, they are required to disclose it and enter that into the record. Mr. Hill said there should be general guidelines added to clarify what kind of information should be disclosed.

8.3 ACTIVITIES BETWEEN MEETINGS OF INDIVIDUAL MEMBERS. Individual Board members may, between meetings, prepare drafts of motions or other potential Board actions. They may also research or investigate general or specific factual issues. However, if the research pertains to a case, the Board member shall, at the public hearing, report all findings to the Board, and parties to the case shall be given a meaningful opportunity to respond.

Item 8.4 Distributions -

The group discussed how to communicate via email outside of meetings. Mr. Hill explained how he is handling conveying information to the Conservation Commission members for a Trail Maintenance project that he is working on. He said no discussion about his reports has been generated between committee members or himself. Mr. Reichert said it is probably a better practice to communicate this kind of information via the Planning Department Staff, and the group agreed that should be added to the language of this Item.

8.4 DISTRIBUTIONS. A Distribution may be made to any number of Board members, so long as it does not become an Exchange. Whenever a Board member makes a Distribution concerning a pending or future case and it involves a quorum of the Board (counting all senders and recipients):

- A. A copy shall be forwarded to the Director of Planning & Zoning, who shall determine, under RSA 91-A or other applicable law, whether the Distribution is subject to public disclosure and shall place the copy in the appropriate file;
- B. The Board member making the Distribution shall report on it, and its contents, at the public hearing on the case unless the information is exempt from disclosure under RSA 91-A; and,
- C. Parties to the case shall be given a meaningful opportunity to respond to the information in the Distribution.

Item 8.5 Exchanges –

The group discussed whether a quorum is based on the number of meeting members present, or the total number of Board Members. Mr. Corwin said the quorum is five members for the Planning Board.

8.5 EXCHANGES. Exchanges involving a quorum or more of the Board or of any Planning Board Committee are prohibited. Such Exchanges shall be considered deliberations and shall occur only at meetings noticed in accordance with RSA 91-A. An Exchange pertaining to any activity allowed under Subsection 8.3 is permitted if the number of Board or Committee members involved is less than a quorum; however:

- A. Each Board member involved shall be responsible for preventing the number of members involved from reaching a quorum;
- B. Information discussed in, or generated by, an Exchange between Board members shall not be subject to further Distribution; and
- C. No Exchange shall include any vote or straw vote, or any Ex Parte Communication.

1 The group discussed the importance of engaging more residents to serve on committees to ensure
2 enough members are available at each meeting to achieve a quorum. Ms. Romano suggested an
3 article in the Valley News to encourage participation.
4

5 The group discussed at length whether discussions can be had between Board members outside a
6 meeting. Mr. Rutter and Ms. Romano said they have been chastised in the past if they discussed
7 anything about an application after a meeting when a quorum was not present. Mr. Corwin said
8 that rule will stand but there could be more details added to the rules regarding the type of
9 discussion that can be had. He said an application can be discussed if it is closed.
10

11 **Rules of Decorum -**

12 The group discussed situations where staff or Board members have been verbally attacked by
13 applicants/residents during the deliberation of an application, which should never be allowed.
14 Mr. Reichert asked the Board members to speak to anyone who launches a verbal attack in a
15 meeting to curtail that behavior immediately.
16
17

18 **3. APPROVAL OF MINUTES**

19 None
20

21 **4. ADJOURNMENT**

22

23 *A MOTION was made by Brandon Hill to adjourn the meeting at 9:26pm. The motion was*
24 *seconded by Jeremy Rutter.*
25

26 **The MOTION was approved (5-0).*
27

28 The meeting was adjourned at 9:26pm.
29

30 Respectfully submitted,
31 Paula Roux
32 Recording Secretary

DRAFT

**LEBANON PLANNING BOARD
SPECIAL MEETING – SITE WALK
MONDAY, MAY 6, 2024
7 LUCENT DRIVE, LEBANON, NH
5:00 PM**

MEMBERS PRESENT: Andrew Faunce (Chair), Richard Ford Burley (Vice Chair), Karen Zook (Council Representative), Kathie Romano, Patrick Kennelly, Brandon Hill

MEMBERS ABSENT: Jeremy Rutter

STAFF PRESENT: Tim Corwin (Deputy Director of Planning & Development)

1. CALL TO ORDER:

Chair Faunce called the meeting to order at 5:00 pm. The meeting convened within the front parking area of 7 Lucent Drive.

2. SITE WALK

- A. Adimab, LLC, 7 Lucent Drive (Tax Map 10, Lot 11, Plot 2600), zoned IND-L:** Pursuant to Section 9.1 of the Site Plan Review Regulations, applicant requests a modification to a previously approved Site Plan (PB2020-14-SPR) to change the parking lot surface material, to reduce the tree shading required, and to amend the approved landscaping and lighting plans. PB2024-10-SPA

Jason Yehle of Adimab, Christopher Smith, AIA, and Sylvia Richards, AIA, were present on behalf of the applicant. No one from the public was in attendance. Mr. Yehle explained that Adimab's current application is to amend a site plan that was approved by the Planning Board in 2020, that the project is nearly complete, and that a Temporary Certificate of Occupancy has been issued. Mr. Yehle further explained that the applicant's requested amendments include minor changes to the site layout, landscaping and lighting, as well as a waiver request to leave the parking area that was approved in connection with the building addition as a hard-pack gravel surface in lieu of pavement.

Mr. Yehle led the Board through the building addition to the second story in order to observe the newly constructed parking lot from an oblique perspective, and then outside to the parking lot where the Board asked questions relating to parking lot maintenance, drainage, and shading. Mr. Yehle then led the Board back to the front parking lot where the meeting commenced.

3. ADJOURNMENT:

*A MOTION by Mr. Ford Burley to adjourn the meeting.
Seconded by Ms. Romano.*

**The Motion was approved (6-0)*

The meeting was adjourned at 5:30 pm.

Respectfully submitted,
Tim Corwin
Deputy Director of Planning & Development

DRAFT

**LEBANON PLANNING BOARD
COUNCIL CHAMBERS, CITY HALL
OR REMOTE VIA MICROSOFT TEAMS
LEBANONNH.GOV/LIVE
MONDAY, MAY 20, 2024, 7:00 PM**

MEMBERS PRESENT: Andrew Faunce (Chair), Richard Ford Burley (Vice Chair),
Jeremy Rutter (REMOTE), Patrick Kennelly, Brandon Hill, Kathie
Romano

MEMBERS ABSENT: Karen Zook (City Council Rep)

STAFF PRESENT: Tim Corwin (Deputy Planning Director)

1. CALL TO ORDER

Chair Faunce called the meeting to order at 7:05pm.

Mr. Corwin reviewed the City's meeting in-person and REMOTE attendance policies and procedures.

2. NOTICE OF REGIONAL IMPACT

The following applications were received by the Planning and Development Department on or before, May 13, 2024:

- **City of Lebanon, 12 South Park Street (Tax Map 91, Lot 253), zoned LD: Site plan review for a proposed +/- 24,796 sq. ft. municipal fire station to replace the existing facility, together with associated site improvements. PB2024-21-GOV**
- **Brickyard One Nominee Trust, 174 Hanover Street Ext (Tax Map 48, Lot 4), 0 Hanover Street Ext (Tax Map 48, Lot 2), 0 Hanover Street Ext (Tax Map 48, Lot 1), and 238 Hanover Street (Tax Map 63, Lot 1), zoned R-1, R-O-1 & R-3: Site plan review for a proposed 474-unit multi-family residential development totaling +/- 731,600 sq. ft. in size, consisting of 11 buildings together with parking, utilities, landscaping, access, and other related site improvements. PB2024-22-SPR**
- **XYZ Dairy, LLC, 0 Beyerle Street (Tax Map 58, Lot 18), zoned R-3: Request for a Conditional Use Permit pursuant to Section 310.2 and 309 of the Zoning Ordinance for a proposed cottage development with 16 dwelling units and a community building, together related site improvements. PB2024-23-CUP**

Mr. Corwin said staff recommends that the applications for **City of Lebanon, 12 South Park Street (Tax Map 91, Lot 253), zoned LD and XYZ Dairy, LLC, 0 Beyerle Street (Tax Map 58, Lot 18), zoned R-3** do not have the potential for regional impact.

He said that the staff recommends that the application for **Brickyard One Nominee Trust, 174 Hanover Street Ext (Tax Map 48, Lot 4), 0 Hanover Street Ext (Tax Map 48, Lot 2), 0 Hanover Street Ext (Tax Map 48, Lot 1), and 238 Hanover Street (Tax Map 63, Lot 1), zoned R-1, R-O-1 & R-3** does have the potential for regional impact. He said Staff recommends the Upper Valley Lake Sunapee Regional Planning Commission be treated as an abutter to this site, pursuant to the state statues regarding notice of regional impact. He said the Board should decide if it considers the Town of Hanover as an abutter also.

A MOTION was made by Kathie Romano that the applications of the City of Lebanon, 12 South Park Street (Tax Map 91, Lot 253), zoned LD and XYZ Dairy, LLC, 0 Beyerle Street (Tax Map 58, Lot 18), zoned R-3 do not have the potential for regional impact. The motion was seconded by Richard Ford Burley.

At 7:11pm Chair Faunce recognized that Mr. Rutter was attending remotely because he is recuperating from knee surgery.

Roll Call Vote:

Voting For: Mr. Hill, Mr. Kennelly, Mr. Faunce, Mr. Ford Burley, Ms. Romano, Mr. Rutter

Voting Against – None

***The MOTION was approved (6-0).**

A MOTION was made by Richard Ford Burley that the application of Brickyard One Nominee Trust, 174 Hanover Street Ext (Tax Map 48, Lot 4), 0 Hanover Street Ext (Tax Map 48, Lot 2), 0 Hanover Street Ext (Tax Map 48, Lot 1), and 238 Hanover Street (Tax Map 63, Lot 1), zoned R-1, R-O-1 & R-3 does have the potential for regional impact and the Upper Valley Lake Sunapee Regional Planning Commission and the Town of Hanover will be notified as abutters. The motion was seconded by Brandon Hill.

Roll Call Vote:

Voting in Favor – Mr. Hill, Mr. Kennelly, Mr. Faunce, Mr. Ford Burley, Ms. Romano, Mr. Rutter

Voting Against – None

***The MOTION was approved (6-0).**

3. PUBLIC HEARING ITEMS

- A. Impact Fee Schedule Update 2024-** The Lebanon Planning Board, pursuant to Section 213.5.C of the Zoning Ordinance, will be conducting a Public Hearing for the purpose of taking public input and considering adoption of the “City of Lebanon Impact Fee Update 2024” report dated January 15, 2024, and a revised Impact Fee Schedule for collecting fees associated with development in the City.

1 Mr. Corwin said he provided the Board with an Impact Fee Schedule 2024 report, which was
2 included in the agenda materials for this meeting. He noted that the Board had reviewed the
3 materials previously and the purpose of tonight's meeting was to entertain public comment on
4 the proposed Impact Fee schedule.

5
6 Chair Faunce opened the public hearing and invited public comment.

7 Chair Faunce closed the public hearing.
8

9 ***A MOTION was made by Richard Ford Burley that the Lebanon Planning Board approves***
10 ***the "City of Lebanon Impact Fee Update 2022; Basis for School, Recreation, Police and Fire***
11 ***Department Impact Fees" report, dated January 15, 2024, prepared by Bruce Mayberry of***
12 ***BCM Planning, LLC, and the "Lebanon Impact Fee Schedule - 2024" presented at the public***
13 ***hearing on May 20, 2024, for collection of impact fees associated with development in the City,***
14 ***pursuant to Section 213.5 of the Lebanon Zoning Ordinance. The new impact fee schedule***
15 ***shall become effective immediately upon approval. The Motion was seconded by Brandon Hill.***

16 ***Roll Call Vote:***

17 ***Voting For: Mr. Hill, Mr. Kennelly, Mr. Faunce, Mr. Ford Burley, Ms. Romano, Mr. Rutter***

18 ***Voting Against – None***

19 ****The MOTION was approved (6-0).***

20 **B. Dartmouth Hitchcock Medical Center, 1 Medical Center Drive (Tax Map 10, Lot 8),**
21 **zoned MC: Applicant requests a Site Plan amendment to expand and reconfigure**
22 **four existing parking lots and to widen a driveway, together with associated site**
23 **improvements. PB2024-12-SPA**
24

25 Mr. Hill recused himself from this discussion, stating that he is employed by the applicant,
26 Dartmouth Hitchcock Medical Center.
27

28 Mr. Corwin stated that, because there are only four Board members present in person, there is no
29 quorum which is needed to vote on this item. He stated he would contact City Council
30 Representative Karen Zook to see if she can attend in order to achieve a quorum.
31

32 At 7:20pm, Chair Faunce called for a five-minute break.

33 At 7:25pm, the meeting resumed.
34

35 Mr. Corwin said he did not reach Ms. Zook. The applicant agreed to remain present at the
36 meeting, in case Ms. Zook becomes available and can participate in the discussion and vote on
37 this item before the end of the meeting.
38

39 **C. Adimab, LLC, 7 Lucent Drive (Tax Map 10, Lot 11, Plot 2600), zoned IND-L:**
40 **Pursuant to Section 9.1 of the Site Plan Review Regulations, applicant requests a**
41 **modification to a previously approved Site Plan (PB2020-14-SPR) to change the**
42 **parking lot surface material, to reduce the tree shading required, and to amend the**
43 **approved landscaping and lighting plans. PB2024-10-SPA**
44

1 Mr. Christopher Smith (Adimab Design Team), Mr. Jason Yehe (Adimab Facilities), and Ms.
2 Silvia Richards (Adimab Design Team) were present on behalf of the applicant.

3
4 Mr. Corwin stated that Staff recommends that the application is complete enough for the
5 Planning Board to accept jurisdiction and commence review. He noted there is a landscape island
6 requirement (per Section 6.2.B.3) in the parking lot which has not been addressed by the
7 applicant. He said the applicant can either meet the requirement or request a waiver of the
8 requirement. He said Staff recommends that the Board ask the applicant how they will address
9 the requirement.

10
11 Mr. Smith provided a hard copy of a plan that includes the parking lot landscape island that
12 meets the requirement, so he said they would not be requesting a waiver.

13
14 ***A MOTION by Richard Ford Burley that the application of Adimab, LLC for 7 Lucent Drive***
15 ***(Tax Map 10, Lot 11, Plot 2600), PB2024-10-SPA, is complete enough for the Planning Board***
16 ***to accept jurisdiction and commence review. The motion was seconded by Brandon Hill.***

17
18 ***Roll Call Vote:***

19 ***Voting For: Mr. Hill, Mr. Kennelly, Mr. Faunce, Mr. Ford Burley, Ms. Romano, Mr. Rutter***

20 ***Voting Against – None***

21 ****The MOTION was approved (6-0).***

22 Mr. Corwin gave an overview of the history of the project. He said the remaining required site
23 improvements are landscaping improvements, lighting, and paving of the parking lot. He said the
24 applicant is requesting that the parking lot be left as hard pack gravel surface instead of paved.
25 He said the Board can approve alternative parking designs (per Section 6.5.E.5 of the Site Plan
26 Review Regulations) without the applicant having to apply for a waiver of the paved parking lot
27 requirement.

28
29 He said, per the zoning ordinance, a parking space must be striped for it to meet the definition of
30 an on-site parking space and to count towards the minimum parking spaces required.

31
32 Mr. Corwin noted that a site visit was held on May 6, 2024.

33
34 Mr. Smith gave an overview of the exterior changes related to lighting, landscaping, the addition
35 of remote water hoses, and relocation of an exterior staircase that were recommended by City
36 Staff. He said they plan to add five EV chargers to the parking lot. He said they are asking that
37 the parking lot remain unpaved because it is more in keeping with the green design of the
38 facility. Mr. Smith said the applicant will commit to maintaining painted spaces on the gravel
39 surface.

40
41 The group had a lengthy discussion about exactly how many parking spaces are required to be
42 striped and the possible methods to stripe an unpaved parking lot. Mr. Corwin said parking
43 spaces that exceed the required number of spaces (per the zoning ordinance) do not need to be
44 striped. He said he would find out how many parking spaces are required to be striped under the
45 zoning ordinance and that can be added as a condition of approval. Mr. Corwin said, according

1 to the approved plan, the total number of on-site parking spaces is less than what is required, and
2 the applicant is providing the balance of required spaces on a leased, off-site lot.

3
4 Mr. Corwin said, if the Planning Board does not have a preference as to how the striping is
5 accomplished, it can leave exactly how the striping is done as an open condition of approval to
6 be resolved with staff.

7
8 Several Board members stated they support the use of alternate parking surfaces, and that the
9 method of striping could be handled administratively. Mr. Rutter noted the material proposed for
10 the alternative surface is crushed local bedrock, and he would like to encourage this kind of
11 approach whenever possible for future projects. Mr. Corwin suggested that the Board be very
12 clear in that the paving requirement is being waived in this specific case and it is not general
13 reasoning that can be applied to any project application.

14
15 Mr. Corwin said the Tree Advisory Board reviewed this application and sent an email dated May
16 10, 2024 (included in the agenda materials for this meeting) suggesting that the applicant include
17 River Birch trees. Ms. Richards said they will be planning some low growing shrubs in the center
18 island to hold it in place instead of River Birch trees.

19
20 Chair Faunce opened the public hearing and invited public comment.

21
22 ***A MOTION was made by Richard Ford Burley that the Lebanon Planning Board approves***
23 ***the application of Adimab, LLC, PB2024-10-SPA, for a modification pursuant to Section 9.1***
24 ***of the Site Plan Review Regulations to a previously approved Site Plan (PB2020-14-SPR) to***
25 ***change the parking lot surface material and to amend the approved landscaping and lighting***
26 ***plans as set forth on certain revised plan sheets submitted with the application, and including***
27 ***any and all submissions and testimony provided for and during the public hearing.***

28
29 ***In support of its decision, the Board finds that:***

30
31 ***1. The project's aesthetic is clearly predetermined as a low-carbon-footprint project, and the***
32 ***applicant has clearly demonstrated through plans, testimony, technical data, information,***
33 ***reports, and studies that reason for the requested change in materials is to further the***
34 ***aesthetic of a lower carbon footprint.***

35
36 ***2. Section 6.5.E.5 of the Site Plan Review Regulations provides that: "Alternative parking***
37 ***designs may be considered as recommended by the Reviewing Engineer. The Board may***
38 ***modify the requirements contained herein when it is appropriate to use a substitute for***
39 ***paving because of water quality, drainage, and/or aesthetic considerations, so long as the***
40 ***safety of pedestrian and vehicular traffic is assured."***

41
42 ***This approval is subject to the following conditions:***

43
44 ***A. General Conditions***

1. *This approval shall automatically expire and be considered void upon failure to meet any of the conditions of approval set forth herein within the timeframes specified.*
2. *The applicant shall satisfy and comply with the Planning Board Notice of Action for PB2020-14-SPR, dated June 22, 2020, and all conditions of approval thereof except as may be superseded by the conditions herein. The plan set identified in the June 20, 2020 Notice of Action shall remain in force except as modified pursuant to this approval.*
3. *Substantial completion of the project shall be achieved by no later than June 22, 2025 (Section 8.4.B.2). Substantial completion shall be deemed to have occurred when all improvements specified in the Site Plan approval have been constructed or installed by the applicant and inspected and approved by the City Engineer (Section 8.4.B.1).*

B. Conditions to be Satisfied Prior to the Issuance of a Final Certificate of Occupancy

1. *Within 30 days of the Planning Board's approval, the applicant shall update the plan sheets as follows to the satisfaction of the Planning & Development Department:*
 - a. *Add a plan note to the Geometric Plan that all minimum required parking spaces shall be marked as required by the Zoning Ordinance and shall identify the means by which the parking spaces shall be marked;*
 - b. *Revise the landscaping plan to demonstrate compliance with the requirements of Section 6.2.E.3;**and shall provide the Planning and Development Department with a digital copy of the revised plan sheets saved in a PDF-A format for archival purposes.*
2. *Within 30 days of the Planning Board's approval, the applicant shall submit a revised Stormwater Operations and Maintenance Plan for review and approval by the City Engineer.*

The Motion was seconded by Brandon Hill.

Roll Call Vote:

Voting For: Mr. Hill, Mr. Kennelly, Mr. Faunce, Mr. Ford Burley, Ms. Romano, Mr. Rutter

Voting Against – None

****The MOTION was approved (6-0).***

D. The Notch Climbing Real Estate, LLC & Chaloux Properties, LLC, 33 & 25 Labombard Road (Tax Map 51, Lot 15, and Tax Map 64, Lot 25, zoned IND-L: . PB2024-17-BLA

Mr. Corwin stated that Staff recommends that the application is complete enough for the Planning Board to accept jurisdiction and commence review.

A MOTION was made by Richard Ford Burley that the Lebanon Planning Board finds the application of The Notch Climbing Real Estate, LLC & Chaloux Properties, LLC, for a proposed boundary line adjustment between 33 & 25 Labombard Road (Tax Map 51, Lot 15,

1 *and Tax Map 64, Lot 25), PB2024-17-BLA is complete enough for the Planning Board to*
2 *accept jurisdiction and commence review. The Motion was seconded by Patrick Kennelly.*

3
4 ***Roll Call Vote:***

5 ***Voting For: Mr. Hill, Mr. Kennelly, Mr. Faunce, Mr. Ford Burley, Ms. Romano, Mr. Rutter***

6 ***Voting Against – None***

7 ****The MOTION was approved (6-0).***

8 Mr. Corwin said an application for a boundary line adjustment between 25 and 33 Labombard
9 Road had been submitted in 2022 for a climbing wall gym, which needed to be recorded within
10 two years. He said the plat was recorded, but the applicant did not realize it was not signed by
11 the Planning Board chair, which is required. He said, as a result, the boundary line adjustment
12 approval expired in February 2024. He said the applicants are resubmitting the boundary line
13 adjustment request

14
15 Mr. Noah Lynd and Mr. Josh Garrison were present on behalf of Notch Climbing Real Estate
16 LLC. Mr. Jay Campion was present as the owner of the abutting property.

17
18 Chair Faunce opened the public hearing and invited public comment.

19 Chair Faunce closed the public hearing.

20
21 ***A MOTION was made by Richard Ford Burley that the Lebanon Planning Board approves***
22 ***the application of The Notch Climbing Real Estate, LLC & Chaloux Properties, LLC, for a***
23 ***proposed boundary line adjustment between 33 & 25 Labombard Road (Tax Map 51, Lot 15,***
24 ***and Tax Map 64, Lot 25), PB2024-17-BLA, as shown on a plat titled “Boundary Line***
25 ***Adjustment Plat, Lands of Chaloux Properties, LLC,” prepared by Latitudes Land Surveying,***
26 ***dated January 20, 2022, Project #2210, including any and all supplemental submissions and***
27 ***testimony provided during the public hearing, subject to the following conditions:***

28
29 ***A. General Conditions***

30
31 ***1. This approval shall be considered void unless all conditions precedent are met and the***
32 ***plat is recorded in the Registry of Deeds within two (2) years from the date of the***
33 ***Notice of Action (Section 7.12.B). The plat shall be recorded by the Planning &***
34 ***Development Department in accordance with Planning & Development Department***
35 ***recording procedures.***

36
37 ***2. This approval shall automatically expire and be considered void upon failure to meet***
38 ***any of the conditions of approval set forth herein within the timeframes specified.***

39
40 ***B. Conditions to be Satisfied Prior to the Signing and Recording of the Plat***

41
42 ***1. Within 20 days of the issuance of the Notice of Action, the applicant shall provide a***
43 ***revised plat depicting the following changes to the satisfaction of the Planning &***
44 ***Development Department:***

- a. *Update the name of the property owner of Tax Map 51, Lot 15 to “The Notch Climbing Real Estate, LLC,” and update plat throughout as needed including but not limited to the deed reference for Tax Map 51, Lot 15 and Note 1.*
 - b. *Correct misspelling of “public” in Note 8.*
 - c. *Retitle the plat to include the names of the owners of both lots. (8.2.A.8)*
 - d. *Provide the date and description of the plat revisions. (8.2.A.1)*
2. *Within 20 days of the issuance of the Notice of Action, the applicant shall provide to the City draft copies of the deeds of the land transfer for review to ensure the transfer will be completed properly for Assessing and recording purposes.*
3. *Within 45 days of the issuance of the Notice of Action, the applicant shall provide a digital record drawing of the revised plat (Cad .dwg format using NH State Plane Coordinate system or an alternative approved by the City’s GIS Coordinator).*
4. *Within 45 days of the issuance of the Notice of Action, the applicant shall submit two (2) mylars of the approved plat and applicable recording fees to the Planning & Development Department in accordance with Planning & Development Department recording procedures. (8.1.D & 7.11)*
5. *Within 45 days of the issuance of the Notice of Action, the applicant shall submit the executed deeds of the land transfer together with applicable recording fees to the Planning & Development Department to be recorded contemporaneously with the plat.*

The Motion was seconded by Brandon Hill.

Roll Call Vote:

Voting For: Mr. Hill, Mr. Kennelly, Mr. Faunce, Mr. Ford Burley, Ms. Romano, Mr. Rutter

Voting Against – None

****The MOTION was approved (6-0).***

A MOTION was made by Richard Ford Burley moved that the Lebanon Planning Board authorizes the Chair to sign the plat of The Notch Climbing Real Estate, LLC & Chaloux Properties, LLC, PB2024-17-BLA, titled “Boundary Line Adjustment Plat, Lands of Chaloux Properties, LLC,” prepared by Latitudes Land Surveying, dated January 20, 2022, Project #2210, and as further revised per the Planning Board’s conditions of approval. The Motion was seconded by Patrick Kennelly.

Roll Call Vote:

Voting For: Mr. Hill, Mr. Kennelly, Mr. Faunce, Mr. Ford Burley, Ms. Romano, Mr. Rutter

Voting Against – None

****The MOTION was approved (6-0).***

[At 8:25pm, Chair Faunce noted that the applicant for Agenda Item 3.B. (Dartmouth Hitchcock Medical Center) had decided to leave the meeting.]

4. STUDY ITEMS**A. Review and Comment - A Joint Statement by the City of Lebanon Planning Board and the City of Lebanon Diversity, Equity, and Inclusion Commission on Community Housing Solutions**

Mr. Ford Burley said City Manager Shaun Mulholland asked the Planning Board and DEI to collaborate and draft a joint statement recommending to the City Council that it form a task force to address the housing shortage in the City. He read the following draft joint statement, which he said is being provided to both groups for feedback. He said a final draft, which will incorporate any feedback received, will be brought back to both committees for approval at a future meeting.

Mr. Ford Burley shared the following draft statement:

A Joint Statement by the City of Lebanon Planning Board and the City of Lebanon Diversity, Equity, and Inclusion Commission on Community Housing Solutions

WHEREAS the City of Lebanon, as elsewhere in the country, is facing a severe shortage of affordable housing, especially but not limited to workforce housing; and

WHEREAS the shortage of housing has powerful equity implications for the present and future residents of the City; and WHEREAS rapid expansion of housing stock has and will have implications for the sustainability, longevity, and resilience of the City; and

WHEREAS informed decision making and transparency are integral to the democratic process of charting a course for the future of the City; and

WHEREAS the Lebanon City Council has demonstrated a laudable willingness to address the housing crisis to the fullest extent possible, in considering and taking actions to create the needed changes in a timely manner; now, therefore

BE IT RESOLVED that the City of Lebanon Planning Board and DEI Commission, having jointly drafted this resolution and having agreed upon its language and the priorities it sets out, recommend that the Lebanon City Council work with representatives from the DEI Commission and Planning Board to create a task force on community housing solutions, with the stated goals of producing a report and, based upon the findings of that report, recommending drafted changes to (i) the Housing chapter of the City of Lebanon Master Plan and (ii) the Neighborhood and Housing functional area of the City of Lebanon Strategic Plan no later than 1 July 2026 at which time it will be dissolved unless other action is taken. The task force shall be named the Lebanon Housing Task Force.

BE IT FURTHER RESOLVED that the City of Lebanon Planning Board and DEI Commission recommend that said report should include, but not be limited to: the identification and quantification of the drivers affecting Lebanon's current housing shortage; the gathering and interpretation of housing and population data for the City, including housing ownership rates, housing type, demographics, and quality of life considerations like accessibility to transit, communal resources, and green spaces; the forecasting of future

1 *housing and related needs of the City according to the same; an analysis of current and*
 2 *potential equity issues in Lebanon's housing supply; an analysis of the implications for the*
 3 *City and its current residents on other changes created by rapid population growth; the*
 4 *potential for regional partnerships as a part of the solution to what is a regional issue; and*
 5 *potential solutions for City Council implementation, including estimated costs. Also included*
 6 *in the conclusion of the report should be a judgement on whether, if Page 255 of 311*
 7 *DRAFT2 – Joint Statement on Housing Friday, May 10, 2024 feasible, the City of Lebanon*
 8 *would be best served by the creation of a standing Housing Commission, pursuant to NH RSA*
 9 *674:44-I.*

10
 11 *BE IT FURTHER RESOLVED that the City of Lebanon Planning Board and DEI*
 12 *Commission recommend that the City Council, in the formation of this task force, should work*
 13 *with representatives of the Planning Board and DEI Commission to invite various community*
 14 *stakeholders to join or take part in the work. The task force should consist of 11 members: the*
 15 *City Manager or designee; a representative of the Upper Valley/Lake Sunapee Regional*
 16 *Planning Commission; a representative of Advance Transit; a representative designated by the*
 17 *Lebanon School Board; a representative from Dartmouth Health; a member of the Lebanon*
 18 *Planning Board; a member of the Lebanon DEI Commission; a member of the Lebanon*
 19 *Conservation Commission; a representative of the Lebanon Housing Authority; a member*
 20 *representing a business in the City; and a resident of the City who shall be appointed by the*
 21 *City Council. If members from these bodies cannot be found, others representing similar*
 22 *perspectives may be considered. The Lebanon Housing Task Force (LHTF) would be a public*
 23 *body and would need to comply with the provisions of RSA 91-A, related state statutes, City*
 24 *Charter, City Code and applicable policies. Members of the LHTF would serve until the task*
 25 *force is dissolved and without compensation other than reimbursement for allowable*
 26 *expenses.*

27
 28 *BE IT FURTHER RESOLVED that the Task Force should meaningfully engage the public*
 29 *through such means deemed feasible and appropriate by the Task Force, such as public*
 30 *hearings, listening sessions, surveys, and/or other means.*

31
 32 *Signed this (X) Day of (X) at Lebanon, New Hampshire,*

33
 34 *Andrew Faunce,*
 35 *Chair, Lebanon Planning Board*

36
 37 *Alisha Robinson,*
 38 *Chair, Lebanon Diversity, Equity and Inclusion Commission*

39
 40 Mr. Ford Burley said the goals of the task force would be to create a

- 41 • report with detailed housing data
- 42 • a revised Housing Chapter of the Master Plan (based on the report)

43
 44 He said the task force will include 11 members from City, School, and other local administrative
 45 Boards, Commissions, and groups. He said the anticipated completion date would be July 1,
 46 2026.

1 Mr. Corwin confirmed that the intent is to hire a consultant for this project. The group also
2 discussed how the project should include surrounding towns, because their public services (or
3 lack thereof) may impact housing and employment in the City of Lebanon.

4
5 Chair Faunce opened the public hearing and invited public comment.
6 Chair Faunce closed the public hearing.

7
8 Mr. Ford Burley asked Board members to provide him feedback via email.

9
10 Chair Faunce suggested that the group discuss Item 6A next, which is out of the order of the
11 agenda for this meeting.

12 13 **B. Rules of Procedure Discussion**

14 Chair Faunce said this would be discussed at a future meeting.

15 16 **5. COMMITTEE REPORTS**

17 Chair Faunce said this would be discussed at a future meeting.

18 19 **6. OTHER BUSINESS**

20 **A. Choice Storage, LLC, 0 Etna Road, (Tax Map 26, Lot 17), zoned IND-L,** 21 **RL3: Conceptual review per Section 7.3 of the Subdivision Regulations, Section 4.3** 22 **of the Site Plan Regulations and Section 501.1.D of the Zoning Ordinance of a** 23 **proposed Planned Business Park. PB2024-20-CON**

24
25 Mr. Corwin explained that the purpose of a conceptual review is to give helpful feedback to
26 applicants as they further develop their plans.

27
28 Mr. Jay Campion was present as the applicant. He shared a video that gave an overview of the
29 planned business park project he is proposing. He said, in addition to office space, the project
30 would include residential housing and land which would be deeded to the City for recreational
31 fields.

32
33 The group discussed the project concept at length. Mr. Campion said, by presenting the project
34 as a planned business park, it allows for changes of use that are more appropriate for the IND-L
35 zone. He said, for example, he said he would like to add a restaurant to the project, but a
36 restaurant is not a permitted use in the IND-L zone. He said if the restaurant were part of the
37 planned business park, however, it would be a permitted use. He said, given that that direction
38 the City is going with the Route 120 Study, there will be an increase in density of residential
39 properties in the Route 120 area. He said the residential properties will include all categories –
40 rentals and ownership. He said, once the land is deeded to the City, it may use it for whatever it
41 wants and could not guarantee it would be used for recreational use.

42
43 Mr. Ford Burley said there is no way the proposal could be approved by the Board as presented.
44 He said there needs to be more quantitative data, such what percentage of the units will be
45 commercial and what will be dwelling, or what the density per acre of dwelling units will be. He
46 said it was not an unnecessary hardship for the applicant to submit a full set of plans in this case.

1 He said it was not necessary to have the areas rezoned in order to make the plans more detailed
2 than what was submitted. Chair Faunce said the Board will need more assurance of what the
3 housing will look like.

4
5 Mr. Ford Burley said he'd like to see the full engineering for the Alteration of Terrain permit.
6 Mr. Champion said the AOT permit has been submitted to the Board. Mr. Corwin said when a
7 formal application is submitted, the AOT is irrelevant to the application. He said it would be
8 made a condition of approval. He said it cannot be relied upon for this conceptual discussion.

9
10 Mr. Champion said Phase I of the plan is the qualifying of the divided lots. Phase II would
11 designate the number of acres dedicated to residential areas. He noted that the planning would be
12 a joint venture with the City, which includes paying for the infrastructure for the City's land and
13 the infrastructure needed for the first phase of the residential development.

14
15 The group discussed how TIF funds would be used for this project, and how taxes are assessed in
16 TIF districts.

17
18 The group discussed other large, phased development projects that have been proposed in the
19 past that have never come to fruition. Mr. Corwin said this project is very difficult to do as the
20 applicant wants to do it, from a regulatory standpoint. He explained planned business parks
21 should include a master plan. He said this plan calls for four lots that are subdivided that have no
22 relationship to the final product. Chair Faunce said he'd like to see a site plan to provide more
23 details for Phase I of the project.

24
25 ***A MOTION was made by Richard Ford Burley to extend the meeting to 10:00pm. The Motion***
26 ***was seconded by Brandon Hill.***

27 ***Roll Call Vote:***

28 ***Voting For: Mr. Hill, Mr. Kennelly, Mr. Faunce, Mr. Ford Burley, Ms. Romano, Mr. Rutter***

29 ***Voting Against – None***

30 ****The MOTION was approved (6-0).***

31 Mr. Corwin noted that contractor's yard is an included permitted use in the IND-L zone, but not
32 in a planned business park. Mr. Champion said he will have to change the use of the four divided
33 lots to permitted uses. Mr. Corwin said permitted uses in those lots would be whatever is
34 permitted in the sectors in which they are located.

35
36 The group discussed the proximity of the recreational lots to the Route 120 wildlife corridors.
37 Ms. Romano noted that it might be unsafe for children to be close to wildlife in those areas. Mr.
38 Corwin said they expect there will be zoning ordinance amendments that will come out of the
39 Route 120 Corridor Study. He said that may be a good opportunity to consider rezoning of this
40 area in relation to this project. He said the Route 120 Corridor Study would wrap up by the end
41 of July 2024.

42
43 Ms. Romano noted she was happy to see the land would be deeded to the City for recreational
44 use, but there would be no restrictions on that use to ensure it would be used for recreational use.

Mr. Ford Burley said he really liked the proposed idea, but he has serious concerns about it. Mr. Hill noted that the role of the Board is to protect the City from development that is not in the best interests of the City. He said there are often concessions that ensure that applicants keep to the plans on course and do not make changes that will negatively impact the City. He asked if the waivers requests are the best way to achieve this negotiation, or if there is another way to ensure that the City is not left exposed if a change happens with the project development, or if the owner sells the project, etc.

Mr. Champion said his sense is that the Board would like to see this project happen, if it can happen. He said he would work with Mr. Corwin to polish Phase I to meet the requirements of the zoning ordinance.

7. APPROVAL OF MINUTES

A. April 15, 2024

B. April 22, 2024

C. April 29, 2024

D. May 6, 2024 Site Walk

Chair Faunce said this would be discussed at a future meeting.

8. ADJOURNMENT

A MOTION was made by Brandon Hill to adjourn the meeting at 10:00pm. The motion was seconded by Patrick Kennelly.

Roll Call Vote:

Voting For: Mr. Hill, Mr. Kennelly, Mr. Faunce, Mr. Ford Burley, Ms. Romano, Mr. Rutter

Voting Against – None

**The MOTION was approved (6-0).*

The meeting was adjourned at 10:00pm.

Respectfully submitted,
Paula Roux
Recording Secretary