

MAC THOMPSON SITE PLAN

SP# 12-21

STAFF REPORT #2

December 8, 2021

SITE: 48 Lowell Road; Tax Map 190 Lot 191-000

ZONING: Business (B)

PURPOSE OF PLAN: Redevelop the site and continue to utilize the parcel as mixed-use commercial site with a 12,000 sq. ft. building with associated site improvements, with uses to include business or professional office, retail business and personal service establishment, and eating & drinking establishment. Staff believes the primary intention of this application is to have a restaurant permitted.

PLAN UNDER REVIEW: Tax Map 190 Lot 191, MacThompson Site Plan, 48 Lowell Road, Hudson, New Hampshire 03051; prepared by Benchmark LLC, 1F Commons Drive, Suite 35, Londonderry, New Hampshire 03053; prepared for owner MacThompson Realty, Inc., 3 Marmon Drive, Nashua, New Hampshire 03060; consisting of 11 sheets with General Notes 1-32 on Sheet 3; dated August 3, 2021, and last revised on November 15, 2021.

ATTACHMENTS:

- A. The Applicant's Response to Peer Review Comments (1st Review), by Benchmark LLC, dated October 31, 2021

APPLICATION TRACKING:

- September 3, 2021 – Application received.
- October 27, 2021 – Public hearing held by the Planning Board, continued to 11/17/21.
- November 17, 2021 – Public hearing held by the Planning Board, continued to 12/08/21.
- December 8, 2021 – Public hearing scheduled.

COMMENTS & RECOMMENDS:

BACKGROUND

There are two existing commercial buildings on the lot, close to Lowell Road. One of them currently houses KG Barbershop. The other building is currently used as residential but was the power station for the trolley line at one point in time. The rest of the lot is almost entirely paved for parking/storing automobiles, except for the landscaped area on the side and rear setbacks. A driveway by the commercial buildings provides access between Lowell Road and the parking lot.

The lot has a wedge shape, with the narrower side located along the street frontage, which is existing nonconforming at 118-feet where 150-feet is required.

The Applicant is proposing to demolish the existing buildings and construct a new 2-story commercial building. Two existing underground drainage systems will remain, while a third is proposed to mitigate any increase. The existing parking lot and driveway will be redesigned to accommodate the required number of parking spaces.

STAFF COMMENTS

1. Building Layout: The applicant had indicated in the previous Board meeting that the restaurant’s kitchen will be located at the basement level of the building, serviced by a dumbwaiter. However, the Applicant’s Response dated October 31, 2021 (see **Attachment A**) and revised plan dated November 15, 2021 propose a different building layout, as follow:

First Floor

Restaurant with bar 4,500 sq. ft.
Kitchen area 1,500 sq. ft.

Second Floor

Restaurant with bar 4,000 sq. ft.
Kitchen area 1,000 sq. ft.
Office/retail 1,000 sq. ft.

New Building Total 12,000 sq. ft.

Outside Dining Area 3,000 sq. ft.

Staff strongly recommends the Applicant provide clarity and certainty on the building layout to be presented for the Board’s consideration.

2. Building Details on the Site Plan: The sectional views of the building façade and restaurant floor plan on Sheet 1 (Cover Plan) appear to show a semi-basement and an overhang structure. Both the sections and floor plan appear to be inconsistent with the building footprint on the Site Plan. The Applicant should verify the building design and illustrate these building details on the Site Plan.

3. Waiver Requested:

275-8.C.(4) – Parking Space Dimensions

Rather than 10’ x 20’ parking spaces, the Applicant is requesting the Board’s permission to install 9’x 20’ spaces, and for 7 spaces along the south side of the building, 9’ x 18’.

275-8.C.(2) – Parking Calculations/Space Requirement

275-8.C.(7)(a) – Parking Lot Interior Landscaping

275-11.1.B.(22) – Front Green Area Setback

276-11.1.B.(25) – No Parking & Travelway within Setbacks

These waiver requests primarily relate to the Applicant's attempt to provide the required number of parking spaces for parking-intensive land uses: e.g. eating and drinking establishments (with a bar) – one space per 75 sq. ft. of gross leasable area.

To maximize the parking count, the Applicant is requesting waivers from landscape requirements in setbacks and the green area front setback. And unable to fit all required parking spaces, the Applicant is requesting a waiver of 21 parking spaces (based on Staff's parking calculation).

The parking calculations/space requirement is intended to provide sufficient parking for the proposed land use while the other requirements are intended to provide sufficient buffer and screening, as well as moderating development density. The Applicant can mitigate the hardship noted in the waiver requests by reducing the size or use of the proposed commercial building and, in turn, the number of parking spaces required.

For 276-11.1.B.(25), besides seeking a waiver to allow part of the parking area to intrude upon the side setback, the Applicant is also seeking the Board's permission to allow the widening of the existing driveway (to meet the required 24' aisle width) to intrude upon the side setback.

275-8.C.(6) – Off-street Loading Space

For this waiver request, Staff suggests the Board ensure deliveries would not interfere with parking during business hours, such as requiring the Applicant to add delivery hour restrictions as a note to the plan and/or including such restrictions as a condition to the site plan approval.

ETGTD 920.3.13 & 930.4 – Minimum Stormwater Drainage Pipe Slope & Velocity

The Applicant is seeking a waiver to allow the existing and previously permitted stormwater drain line, which does not meet the Town's Engineering Technical Guideline & Typical Details (ETGTD) for stormwater drainage pipe slopes due to site constraints, to be used as part of the proposed site plan.

~~276-11.1.B.(24)(a) – Open Space~~

This waiver request is no longer necessary as the revised site plan provided the required 35% open space.

4. Green Area Buffer [§ 276-11.1.B(22)]: A 35' green area is required between the right-of-way line and any pavement, gravel, or structure.

Update: The revised plan reduced the amount of green area to be waived – from the previous 25' to now 5', out of the required 35'. The Applicant is seeking a waiver as one is still required.

5. Parking

- a. Parking Calculations [§ 275-8.C(2)]:** **Parking Calculations [§ 275-8.C(2)]:** The parking calculation in the revised plan (Note #14 on Sheet 3) appears incorrect. The first line of the calculation is a requirement and should not be counted.

The Applicant's parking calculation using the size of the kitchen staff (on the fourth line), while reasonable in determining the parking requirement for the kitchen portion of the restaurant, is inconsistent with the regulations and require a waiver. The Applicant may amend the submitted waiver request for § 275-8.C(2) to include this element but should clarify whether 5 employees per kitchen represents the largest shift, which will be a reasonable number to determine the parking spaces required.

Moreover, fractional parking spaces should be rounded up. Assuming the Board were to allow the alternative parking calculations for the kitchen area, Staff's parking calculation is as follow:

$$8,500 \text{ sq. ft. (restaurant)} * (1 \text{ space}/75 \text{ sq. ft.}) = 113.33 \text{ spaces}$$

$$2 \text{ kitchen areas} * (5 \text{ employees per kitchen during the largest shift}) * (1 \text{ space}/\text{employee during the largest shift}) = 10 \text{ spaces}$$

$$3,000 \text{ sq. ft. (outside seating)} * (1 \text{ space}/75 \text{ sq. ft.}) = 40 \text{ spaces}$$

$$\underline{1,000 \text{ sq. f.t (retail/office)} \& (1 \text{ space}/200 \text{ sq. ft.})} = \underline{5 \text{ spaces}}$$

$$\text{Total Required Parking (rounded up)} = 159 \text{ spaces}$$

The submitted plan is proposing 148 spaces with 5 required ADA spaces, which will be 21 spaces short. As noted in Staff Comment #1, the Applicant is requesting a waiver for this requirement.

Another way of arriving at the parking need of the restaurant use would be to relate it to the number of seats available for patrons.

- b. Off-street Loading Space:** One 60' x 12' loading space is required.

As noted in Staff Comment #1, the Applicant is requesting a waiver for this requirement. The submitted plan provides no loading space.

Also, the site plan was designed for vehicles with size up to a WB-50 truck as the Applicant does not expect to see bigger vehicles (WB-65 trucks) entering the site.

- c. Parking Lot Landscaping Requirements [§ 275-8.C(7)]:** As noted in Staff Comment #1, the Applicant is requesting a waiver for the interior landscaping requirement. The submitted plan provides only 6% out of the 10% required interior landscaping.

The Applicant had indicated that, despite not meeting the landscaping area requirement, the required planting will be met. Sheet 5 of the revised plan shows the

calculation of the required planting. Several outstanding issues or discrepancies with the landscape plan remain:

1. Landscape Note #2 states 41 trees were planted as part of previously approved site plan, while Shade Trees Note #1 states 36 were planted.
2. Many existing trees are identified as “to be relocated” but the plan does not identify their new location.
3. There appears to be maybe 100 1”-3” trees which are unidentified, and their canopies appear to be 3 feet wide or less, whereas the labelled trees have canopies of about 12 feet.
4. Staff has noted that in other site plans, the shrub requirement might be achieved on a drawing, but practical application is not always possible as the shrubs are too crowded. The Applicant may want to confirm that their landscape plan is achievable to prevent the need for a site plan amendment in the future.

The landscape plan should be reviewed and possibly revised to address these observations.

d. Right-of-Way along northern edge of parcel:

A 20-foot wide Right-of-Way exists along the northern side of the parcel. Staff research suggest this ROW was granted to allow travel by horse and carriage and by foot from Lowell Road to Melendy Road (formerly Pelham Road), partially by way of Able Street which terminates at the parcels rear lot line. It is believed that its purpose was to reach Melendy’s Box Shop. It is unclear if this was granted to the public or to private persons.

In response to the Peer Review comment on this issue, the Applicant states:

Many of the existing improvements were previously approved and will remain within the 20’ right of way shown on the plans. This easement is in the title to this lot and is shown on my client’s deed Page 8875 Page 2379. This document specifically states “excepting and reserving the present roadway 20 feet in width for passing and repassing of the public for their convenience”. When we completed the original survey of this property back in 2017 there was no physical indication of any “roadway” in this location and the entire area contained many large pine trees.

- 6. Note on Signage:** The Applicant is proposing to use the existing sign location and cites a 2017 variance (ZBA case #190-191.D) for the permission to locate the sign within the required 25’ setback from the property line.

The Applicant should revise General Note 17 on Sheet 3 to:

“All signs are subject to approval by the **Hudson Zoning Administrator** prior to installation thereof.”

In addition, the Applicant should verify whether any lighting will be added to the sign and include such lighting details on the Lighting Plan.

7. Other Departments – The revised plan appears to address the Engineering Department’s concerns but not the Fire Department’s. The Fire Department requires an additional fire hydrant, and code-compliant fire lane markings.

PEER REVIEW COMMENTS & APPLICANT’S RESPONSE

The Applicant provided a response (see **Attachment A**) to the previous peer review comments, which is currently under peer review.

DRAFT MOTIONS

To GRANT a waiver:

I move to grant a waiver from § 275-8:C(2), to allow fewer than required off-street parking spaces to be provided, based on the Board’s discussion, the testimony of the Applicant’s representative, and in accordance with the language included in the submitted Waiver Request Form for said waiver.

Motion by: _____ Second: _____ Carried/Failed: _____

To GRANT a waiver:

I move to grant a waiver from § 275-8:C(4), to allow for 9-foot by 20-foot and 9-foot by 18-foot parking spaces, based on the Board’s discussion, the testimony of the Applicant’s representative, and in accordance with the language included in the submitted Waiver Request Form for said waiver.

Motion by: _____ Second: _____ Carried/Failed: _____

To GRANT a waiver:

I move to grant a waiver from § 275-8:C(6), to not require a dedicated loading space, based on the Board’s discussion, the testimony of the Applicant’s representative, and in accordance with the language included in the submitted Waiver Request Form for said waiver.

Motion by: _____ Second: _____ Carried/Failed: _____

To GRANT a waiver:

I move to grant a waiver from § 275-8:C(7)(a), to allow less than 10% of the interior of a parking lot to be landscaped, based on the Board’s discussion, the testimony of the Applicant’s representative, and in accordance with the language included in the submitted Waiver Request Form for said waiver.

Motion by: _____ Second: _____ Carried/Failed: _____

To GRANT a waiver:

I move to grant a waiver from § 276-11.1(B)(22), to not require the minimum 35-foot green area along the frontage, based on the Board’s discussion, the testimony of the Applicant’s representative, and in accordance with the language included in the submitted Waiver Request Form for said waiver.

Motion by: _____ Second: _____ Carried/Failed: _____

To GRANT a waiver:

I move to grant a waiver from § 276-11.1(B)(25), to allow portions of the parking area and travelway to be located within setbacks, based on the Board’s discussion, the testimony of the Applicant’s representative, and in accordance with the language included in the submitted Waiver Request Form for said waiver.

Motion by: _____ Second: _____ Carried/Failed: _____

To GRANT a waiver:

I move to grant a waiver from ETGTD 920.3.13 & 930.4, to allow the existing and non-conforming stormwater drainage (regarding Minimum Stormwater Drainage Pipe Slope & Velocity) to be used as part of the proposed site plan, based on the Board’s discussion, the testimony of the Applicant’s representative, and in accordance with the language included in the submitted Waiver Request Form for said waiver.

Motion by: _____ Second: _____ Carried/Failed: _____

Staff recommends the Planning Board & Applicant consider these waiver requests in light of the intended use and parking required. Clarification and/or revision to the plans may eliminate the need for waivers. Staff recommends continuation of this application so the Applicant may process feedback from staff and the Planning Board.

CONTINUE the public hearing to a date certain:

I move to continue the public hearing for the site plan application for the MacThompson Site Plan at 48 Lowell Road, Tax Map 190 Lot 191-000 to date certain, _____.

Motion by: _____ Second: _____ Carried/Failed: _____

**BENCHMARK LLC
1F COMMONS DRIVE, SUITE 35
LONDONDERRY, NEW HAMPSHIRE 03053
PHONE: 603-437-5000**

October 31, 2021

**Mr Brian Goth
Town of Hudson
12 School Street
Hudson NH 03051**

**RE: TAX MAP 190 LOT 191
48 LOWELL ROAD
MACTHOMPSON SITE PLAN**

Dear Mr Goth;

Please find attached a response to your comments to Mr. Justin Thompson Dated September 21, 2021, the second part of this letter will answer the Fuss & ONiel Comments dated September 30, 2021

Per your email we offer the following,

The revised plans outline 148 parking spaces which would be the minimum they would like. They compared this project to one in Windham that they own and feel this is a the number to cover the proposed uses within this building.

On the plan we have adjusted the parking, especially the spaces near the road. This plan removes the row directly adjacent to the ROW creating more green space. A waiver will still be required in this area, the current request is looking for a 30' setback where the previous plans requested a waiver of the setback for parking to the ROW (the original waiver request asked for a 10' setback in this area).

In addition to removing the spaces out front a handful of spaces were removed at the rear of the lot which allows for this plan to comply with the 35% green space requirements.

In addition, when we were at the board on October 27th and some board members indicated reducing the parking spaces at the "pinch point" between the building and the driveway that encroaches on the side setback near the power lines. The attached plans represent a change in depth of these parking spaces to 18' in depth (a new waiver is attached) this further reduces the waiver necessary in this location.

Justin Thompson has informed us that the breakdown on the building will be as follows;

First Floor		
Eating & drinking establishment w/ bar	-	4,500 sq. ft.
Kitchen area	-	1,500 sq. ft.
Outside Dining area	-	3,000 sq. ft.
Second Floor		
Eating & drinking establishment w/ bar	-	4,000 sq. ft.
Kitchen area	-	1,000 sq. ft.
Office/retail	-	1,000 sq. ft.

In addition we have separated out the Landscaping and Lighting plans

Also changed is the line types of the abutting lots so they are shown more clearly.

The conceptual building architectural's is now shown on the cover plan.

The following outlines answers to the Fuss & ONiel letter from September 30th

Section 1 – Site Plan review

- a. My client anticipates sprinklers in the building and once the plan is approved, they will work with the fire department on a design that meets their requirements.
- b. Parking space waiver – This has been undated on the plan set
- c. The plans now incorporate the outside seating in the parking calculations.
- d. We will still be requesting the 9' wide parking space width waiver, in addition we are also now asking for a waiver for the 7 spaces along the south side of the building to be 18' deep
- e. The loading area waiver will remain.
- f. No action needed for this comment
- g. The detail of the Handicap ramps is shown on sheet 10. For this submission we added the curb ramps and signs at the handicap parking spaces.
Notation for the detectable pavers was added to the detail on sheet 10.
- h. Many of the existing improvements were previously approved and will remain within the 20' right of way shown on the plans. This easement is in the title to this lot and is shown on my client's deed Page 8875 Page 2379. This document specifically states "excepting and reserving the present roadway 20 feet in width for passing and repassing of the public for their convenience". When we completed the original survey of this property back in 2017 there was no physical indication of any "roadway" in this location and the entire area contained many large pine trees.

Section 2 – Administrative Review Codes

- a. No action necessary, the plan has locations for the property owner to sign.
- b. We have updated the photo of the sign on the plans. The old proposed sign location from the 2017 plans was on the previous submitted plans
- c. Since the existing buildings are to be razed, we did not place this info on the plans. Building A on the existing conditions plans is a 2-story building of approximately 3,000 sq. ft in size. Building B is a one-story building currently occupied by a barber. Building C is a 2-story garage type building.
- d. We have amended the plans to show one less row of parking along the right of way. A waiver was previously requested to allow a row of parking in this location but it was only 10 feet off the lot line. A waiver is still necessary but with the removal of one row the green space is now 30 feet wide.
- e. We are unaware of any pertinent highway projects proposed in this area.
- f. The previous waiver for open space is no longer required. The removal of the parking along Lowell Road and a few spaces along the back lot line brings the property into conformance with the green space regulation.
- g. We would still like to request this waiver as some of the parking spaces still fall within the side setbacks. For the proposed encroachment along the south side of the building and the side lot line along the power line easement we are now requesting a waiver to allow these 7 parking spaces to be 18' in depth. This change reduces the side encroachment of the driveway to 12 feet. This still leaves a turn around in the side setback near the transformers at the Public Service Co lot and about 32 sq. ft. of one of the parking spaces. There are 2 additional parking space encroachments we are requesting waivers for, the first one is a parking space on the south side of the lot near the power line easement, this space at its closest would be 10 feet from the lot line and have approximately a 20 sq. ft encroachment, the last area is the first parking space on the north side of the lot after your turn into the site, this space would be approximately 13 feet from the lot line and would encroach about 35 sq. ft. into the setback.

3. Driveway Review Codes

- a. No action required, driveway meets required site distance
- b. Per this comment we added an additional waiver for the driveway area within the side setback. The majority of this driveway is existing and this location ties in with the existing drainage system. The total encroachment in this area is approximately 230 sq. ft.
- c. We agree that typical WB-50 trucks can navigate the site. My client does not anticipate and larger vehicles than this and does not expect to see any WB-65 trucks to enter the site.

4. Traffic

- a. Attached is a traffic memo from TEPP LLC

5. Utility Design/Conflicts

- a. We have added a sewer cleanout to the plans. Per your recommendation we placed this at the lot line.
- b. We added the location of the existing sewer line to the existing conditions plan. To our knowledge there are two existing sewer lines. The one that will be extended ends at the existing one-story building. There is a separate service to the existing 2-story building which will be capped.
- c. Per your comment we have added a water shutoff to this line.
- d. A Sewer loading calculation is shown on sheet 10.
- e. Existing water and sewer lines are now shown
- f. Water connection details have been added to the plans. A note that the sewer tie in will conform with the local regulations has also been added to the plans.
- g. The two shut offs were located when we did the field work for the plan we do not know what they are connected or if they even are connected to anything. It is our understanding that the water shutoff towards the middle of the lot is the one we will be utilizing.
- h. We have added appropriate sewer and water details/notes to the plans
- i. There is no Brewery proposed with this plan.

6. Drainage Design/Stormwater Management

- a. Test pits have been added to the plans
- b. Language to the plans has been added
- c. Test Pit logs are enclosed
- d. We will typically utilize either haybales (or a silt sack) at existing drainage basins. Locations for this are shown on the plans
- e. Long term maintenance plans attached
- f. Notes added sheet 4
- g. A note has been added to the plans requiring a pre-con with the town engineer
- h. Plan sheet 10 has been modified per your request.
- i. Winter stabilization notes are added to the plans on sheet 9
- j. Spot grades have been added to sheet 4
- k. Existing treeline has been turned on in the drawing
- l. The design for the underground drainage is the same as the previously approved and constructed plan. Frames & grates for these systems are in open areas of pavement and would be plowed regularly. There is one new underground system where the old house is to be razed. All of the underground drainage systems were designed in a manner that they are below frost level (approx. 7 feet below finished pavement). Also, even with frozen soils there is still storage capacity below the inverts.

- m. The total disturbed area is less than 50,000 sq. ft. Much of the site is already developed and there are no major changes to the existing parking area at the rear of the site. Mainly most of the work happens from the sidewalk along the rear of the new building to Lowell Road (approx. 46,000 sq. ft.) the remaining 4,000 sq. feet is cutting open the islands in the existing parking lot.
- n. A note has been added to sheet 2 that a SWPP and an NOI will be required for this project.
- o. Most of the aggregate material to be removed for this development will be removed from the site during the excavation and preparation of the site. An area over the existing parking lot is delineated on sheet 4 for the storage of building materials during construction.
- p. Note 31, sheet 3 was added to show that the maintenance of the stormwater system is the responsibility of the property owner.
- q. The drainage manhole detail is on sheet 9. Many of the manholes are existing from the previously approved site plan from 2017. There are 3 new manholes (DMH#3, DMH#4, DMH#5) these are proposed to "divert" the existing drain line around the proposed building. As to the structures having no "sump" that is typical of drainage manholes as they are primarily utilized at angles in a pipe run. If there is some requirement in the Site Plan regulations for a sump in these Drainage Manholes please let us know and we will modify the plan accordingly.
- r. E have updated the detail to match the drainage report.
- s. The drain line that currently exists on this lot was previously permitted. The governing factor for the slope of this line is the elevation of the drainage connection to the street drainage along Lowell road. This pipe slope does not change from what was previously designed and approved. This outlet drain line handles only 25 year, or greater, storm events and the line is after the treatment system. We have a waiver request in for this.
- t. The two short lines you refer to are proposed elevation grades tie-into the existing contours in this area.
- u. CB-A's existing invert out is at elevation 145.75, the invert in @ the DMH, for the line from this basin, is elevation 145.28. The information on the plan for the other invert (which is higher) is from CB#B which is off-site. We corrected this information on the plans.
- v. No action necessary for this comment

7. ZONING

- a. As required under 334-14.A the proposed building height will be under 50 feet. The current conceptual design for the structure has the roof around 30 feet in height at 35 feet.
- b. No action necessary on this comment
- c. No action necessary on this comment
- d. There are no wetlands on-site. This is noted on sheet 3, note #3. Our Wetlands scientist stamp is on the plans.
- e. The property has a Variance from 2017 for the proposed sign location to be in the setbacks. An updated photo of the existing sign is shown on the plan set.
- f. No action necessary

8. EROSION CONTROL/WETLAND IMPACTS

- a. Erosion control locations has been added to sheet 4
- b. No action necessary

9. LANDSCAPING

- a. We have added the calculation for this to the plan set (sheet 5)
- b. We had the field crew locate the existing trees on the property. There were 41 planted as part of the original approval. The calculation for the total number of trees was added to sheet 5.
- d. Similar to b above we have added additional information along with the location of existing shrubs on the property. A calculation is also included in the notes on this sheet
- e. Landscaping is on its own sheet and a legend is also included.
- f. No action necessary for the comment on lighting
- g. No action necessary on this comment.

10. State & Local Permits

- a. No action necessary on this comment
- b. Copies of town applications are attached to this response.
- c. The only additional permitting required would be the SWPP AND NOI these will be obtained one the plans are approved.

11. Other

- a. The walls on-site are considered landscape walls and most are under 4' in height some details for this have been added to the plans.
- b. We only anticipate importing select materials. Notes have been added to the plans per section 565.1.1
- c. A dumpster pad and enclosure detail was added to sheet 9.
- d. The outside seating area will be a brick paver base. A detail for this has been added to the plans
- e. Sidewalk details have been added to the plan set.

I hope you find this response complete. Please let me know if you have any questions or need any additional information.

Sincerely,

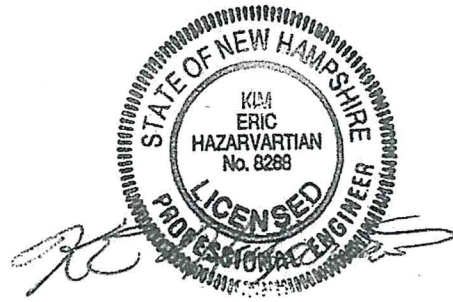


Joseph Maynard
Benchmark, LLC

MEMORANDUM

93 Stiles Road, Suite 201, Salem, New Hampshire 03079 USA
 800 Turnpike Street, Suite 300, North Andover, Massachusetts 01845 USA
 Phone (603) 212-9133 and Fax (603) 226-4108
 Email tepp@tepll.com and Web www.tepll.com

Ref: 1583
 Subject: Traffic Assessment
 48 Lowell Road
 Hudson, New Hampshire
 From: Kim Eric Hazarvartian, Ph.D., P.E., PTOE
 Principal
 Date: November 16, 2021



INTRODUCTION

TEPP LLC has prepared this traffic-assessment memorandum (TAM) regarding the proposed redevelopment at 48 Lowell Road in the Town of Hudson, New Hampshire. The project includes:

This TAM includes:

- site description
- proposed project
- roadway description
- trip generation

This TAM concludes that, based on calculated trip generation, the proposed redevelopment is not anticipated to have a significant traffic impact.

SITE DESCRIPTION

The site includes:

- one barber shop
- office floor area of about 3,000 square feet (sf)
- one driveway along the east side of Lowell Road

The site fronts on the east side of Lowell Road. Otherwise, commercial development abuts the site.

PROPOSED PROJECT

The proposed project includes:

- removing the office use
- relocating the barber shop on the site
- providing one quality restaurant and function facility
- retaining one driveway along the east side of Lowell Road

ROADWAY DESCRIPTION

Lowell Road:

- is under the jurisdiction of the Town
- is also known as New Hampshire Route 3A
- is an arterial street
- provides a connection to the central Hudson, to/from the north
- provides a connection to the Circumferential Highway and Commonwealth of Massachusetts, to/from the south
- has a curvilinear horizontal alignment
- has a relatively level vertical alignment
- has one travel lane per direction with a center two-way left-turn lane
- has a posted speed limit of 30 miles per hour
- has asphaltic-cement concrete (ACC) pavement in overall good condition
- has a sidewalk along the east side
- has utility poles, some with luminaires, on the west side
- is lined with predominantly commercial development

TRIP GENERATION

The Institute of Transportation Engineers (ITE) publishes trip-generation information in the authoritative *Trip Generation Manual*.¹ This information is based on empirical data for a variety of land uses including:

¹ ITE, *Trip Generation Manual*, 10th Edition (Washington DC, September 2017).

- quality restaurant, land use 931, based on seats²
- small office building, land use 712, based on floor area³

Table 1 shows the following calculated vehicle-trips related to the proposed redevelopment:

- weekday daily, 504 (total of in and out)
- weekday AM-street-peak hour, -1 (-3 in and 2 out)
- weekday PM-street-peak hour, 53 (38 in and 15 out)
- Saturday daily, 540 (total of in and out)
- Saturday peak hour, 46 (41 in and 29 out)

Table 1 reflects removal of the existing office

The proposed restaurant has 150 indoor seats and 125 outdoor seasonal seats. Table 1 uses averages of vehicle-trips for 150 and 275 seats to represent year-round-overall conditions.

The barber-shop relocation does not change vehicle-trips for the site. The function facility will primarily have vehicle-trips for special-events only.

CONCLUSION

ITE suggests that land developments generating at least 100 peak-hour vehicle-trips, in the busier direction, are candidates for consideration of traffic-impact analysis.⁴ The calculations show less than 100 peak-hour vehicle-trips, in the busier direction, generated by the proposed redevelopment. Therefore, the proposed redevelopment is not anticipated to have a significant area traffic impact.

² ITE, *Trip Generation Manual*, Volume 2, Data, Office (Land Uses 700-799), pages 93 to 110.

³ ITE, *Trip Generation Manual*, Volume 2, Data, Services (Land Uses 900-999), pages 68 to 94.

⁴ ITE, *Manual of Transportation Engineering Studies* (Prentice Hall: Englewood Cliffs, New Jersey, 2000), page 144.

Table 1. Calculated typical trip generation.

Time Period and Direction	Vehicle-Trips				Change due to Redevelopment ^c
	Existing Office Building ^a	Proposed Restaurant ^b		Average	
		150 Seats	275 Seats		
Weekday Daily	49	390	715	553	504
Weekday AM-Street-Peak Hour					
In	5	1	3	2	-3
<u>Out</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>3</u>	<u>2</u>
Total	6	3	6	5	-1
Weekday PM-Street-Peak Hour					
In	2	28	52	40	38
<u>Out</u>	<u>5</u>	<u>14</u>	<u>25</u>	<u>20</u>	<u>15</u>
Total	7	42	77	60	53
Saturday Daily	7	386	707	547	540
Saturday Peak Hour					
In	1	29	54	42	41
<u>Out</u>	<u>0</u>	<u>21</u>	<u>37</u>	<u>29</u>	<u>29</u>
Total	1	50	91	71	70

^aBased on ITE, *Trip Generation Manual*, small office building, land use 712, 3,000-sf floor area. Saturday daily is estimated. The office building will be removed.

^bBased on ITE, *Trip Generation Manual*, quality restaurant, land use 931. In versus out is estimated for weekday AM-street-peak hour. The proposed restaurant has 150 indoor seats and 125 outdoor seasonal seats. The average represents year-round overall conditions.

^cThe barber-shop relocation does not change vehicle-trips for the site. The function facility will primarily have vehicle-trips for special-events only.

SR #12-21 MacThompson Site Plan - Attachment A
SUBDIVISION/SITE PLAN WAIVER REQUEST FORM
Town of Hudson, New Hampshire

Name of Subdivision/Site Plan: MacThompson Site Plan

Street Address: 48 Lowell Road

I Nicholas Loring hereby request that the Planning Board waive the requirements of item 275-8.C.(6). Off Street Loading Space of the Subdivision/Site Plan Checklist in reference to a plan presented by Benchmark, LLC (name of surveyor and engineer) dated August 3, 2021 for property tax map(s) 190 and lot(s) 191 in the Town of Hudson, NH.

As the aforementioned applicant, I, herein, acknowledge that this waiver is requested in accordance with the provisions set forth in RSA 674:36, II (n), i.e. (For Subdivisions) and RSA 674:44, III (e) (For Site-Plans). Without the Planning Board granting said waiver, it would pose an unnecessary hardship upon me (the applicant), and the granting of this waiver would not be contrary to the spirit and intent of the Subdivision/Site Plan regulations.

Hardship reason(s) for granting this waiver (if additional space is needed please attach the appropriate documentation hereto):

There is no room in the front portion of the site for an off street loading space.

Reason(s) for granting this waiver, relative to not being contrary to the Spirit and Intent of the Subdivision/Site Plan regulations: (if additional space is needed please attach the appropriate documentation hereto):

The site is currently be used with a commercial use. Deliveries can be scheduled for off hour times when the parking area is less used. We feel the 24' travel isle to the east of the proposed building will provide adequate space for loading and still allow enough room for vehicles to pass.

Signed: 
Applicant or Authorized Agent

Planning Board Action:

Waiver Granted _____

Waiver Not Granted _____

SP #12-21 MacThompson Site Plan - Attachment A
SUBDIVISION/SITE PLAN WAIVER REQUEST FORM
Town of Hudson, New Hampshire

Name of Subdivision/Site Plan: MacThompson Site Plan

Street Address: 48 Lowell Road

I Nicholas Loring hereby request that the Planning Board waive the requirements of item 275-8.C.(4). Parking Space Dimensions of the Subdivision/Site Plan Checklist in reference to a plan presented by Benchmark, LLC (name of surveyor and engineer) dated August 3, 2021 for property tax map(s) 190 and lot(s) 191 in the Town of Hudson, NH.

As the aforementioned applicant, I, herein, acknowledge that this waiver is requested in accordance with the provisions set forth in RSA 674:36, II (n), i.e. (For Subdivisions) and RSA 674:44, III (e) (For Site-Plans). Without the Planning Board granting said waiver, it would pose an unnecessary hardship upon me (the applicant), and the granting of this waiver would not be contrary to the spirit and intent of the Subdivision/Site Plan regulations.

Hardship reason(s) for granting this waiver (if additional space is needed please attach the appropriate documentation hereto):

The lot shape requires additional travel isles and in order to provide the required parking a reduction in parking space is necessary to provide an adequate number of parking spaces.

Reason(s) for granting this waiver, relative to not being contrary to the Spirit and Intent of the Subdivision/Site Plan regulations: (if additional space is needed please attach the appropriate documentation hereto):

The provided 9 x 20 parking space is a typical size and will allow adequate space for parking.

Signed: Nicholas Loring
Applicant or Authorized Agent

Planning Board Action:

Waiver Granted _____

Waiver Not Granted _____

SUBDIVISION/SITE PLAN WAIVER REQUEST FORM

Town of Hudson, New Hampshire

Name of Subdivision/Site Plan: MACThompson SITE PLAN

Street Address: 48 LOWELL ROAD

I JOSEPH MAYNARD hereby request that the Planning Board waive the requirements of item 275-B.C.(4) PARKING of the Subdivision/Site Plan Checklist in reference to a plan presented by BENCH MARK LLC (name of surveyor and engineer) dated AUG 03, 2021 for property tax map(s) 190 and lot(s) 191 in the Town of Hudson, NH.

As the aforementioned applicant, I, herein, acknowledge that this waiver is requested in accordance with the provisions set forth in RSA 674:36, II (n), i.e. (For Subdivisions) and RSA 674:44, III (e) (For Site-Plans). Without the Planning Board granting said waiver, it would pose an unnecessary hardship upon me (the applicant), and the granting of this waiver would not be contrary to the spirit and intent of the Subdivision/Site Plan regulations.

Hardship reason(s) for granting this waiver (if additional space is needed please attach the appropriate documentation hereto):

THE LOTS SHAPE IS NARROW IN THE MIDDLE OF THE PROPERTY. IN ORDER TO MINIMIZE THE WAIVER FOR THE DRIVEWAY IN THE SETBACK WE WOULD LIKE TO REQUEST A WAIVER FOR 7 SPACES ALONG THIS DRIVE TO BE 18' DEEP

Reason(s) for granting this waiver, relative to not being contrary to the Spirit and Intent of the Subdivision/Site Plan regulations: (if additional space is needed please attach the appropriate documentation hereto):

TO ALLOW 7 OF THE PARKING SPACES TO BE 9' WIDE X 18' DEEP.

Signed: 

Applicant or Authorized Agent

Planning Board Action:

Waiver Granted

Waiver Not Granted

PLAN REFERENCES:
 HCRD PLAN 05402
 HCRD PLAN 13935
 HCRD PLAN 08189
 HCRD PLAN 35827
 HCRD PLAN 20323
 HCRD PLAN 18042
 HCRD PLAN 36454
 HCRD PLAN 23911
 HCRD PLAN 26722

DEED REFERENCES
 HCRD BOOK 8875 PAGE 2378
 HCRD BOOK 7957 PAGE 0474
 HCRD BOOK 4037 PAGE 170
 HCRD BOOK 7879 PAGE 3004
 HCRD BOOK 1226 PAGE 249
 HCRD BOOK 1232 PAGE 77



TAX MAP 190 LOT 2
 KENNETH E. ZIEHM, TR &
 SANDRA L. ZIEHM, TR.
 2 WINNHAVEN DR.
 HUDSON, NH 03051
 BOOK 8418/PAGE 2932

TAX MAP 190 LOT 7
 ST. MARY'S BANK
 ATTN: ACCOUNTS PAYABLE
 200 MCGREGOR ST.
 MANCHESTER, NH 03102
 BOOK 7493/PAGE 2872

TAX MAP 190 LOT 7-1
 NORTHERN N.E. TELEPHONE LLC
 CONSOLIDATED COMMUNICATIONS--NN
 770 ELM ST.
 MANCHESTER, NH 03101
 BOOK 7493/PAGE 2872

TAX MAP 190 LOT 9
 J & R BROTHERS, LLC
 49 LOWELL RD.
 HUDSON, NH 03051
 BOOK 8696/PAGE 0835

TAX MAP 190 LOT 10
 ENTERPRISE BANK AND TRUST CO.
 222 MERRIMACK ST.
 LOWELL, MA 01852
 BOOK 8206/PAGE 2884

TAX MAP 190 LOT 8
 (NO OWNER INFORMATION
 AVAILABLE FROM ASSESSOR)

TAX MAP 190 LOT 187
 MANUEL & KATHLEEN SOUSA
 18 OVERLOOK CIRCLE
 HUDSON, NH 03051
 BOOK 5928/PAGE 1842

TAX MAP 190 LOT 188
 VT LOWELL PROPERTIES, LLC
 36 LOWELL ROAD
 HUDSON, NH 03051
 BOOK 8545/PAGE 1560

TAX MAP 190 LOT 189
 KEYMAR PROPERTIES, LLC
 42 LOWELL ROAD
 HUDSON, NH 03051
 BOOK 6453/PAGE 0048

TAX MAP 190 LOT 190
 MANUEL & KATHLEEN SOUSA
 18 OVERLOOK CIRCLE
 HUDSON, NH 03051
 BOOK 4037/PAGE 0170

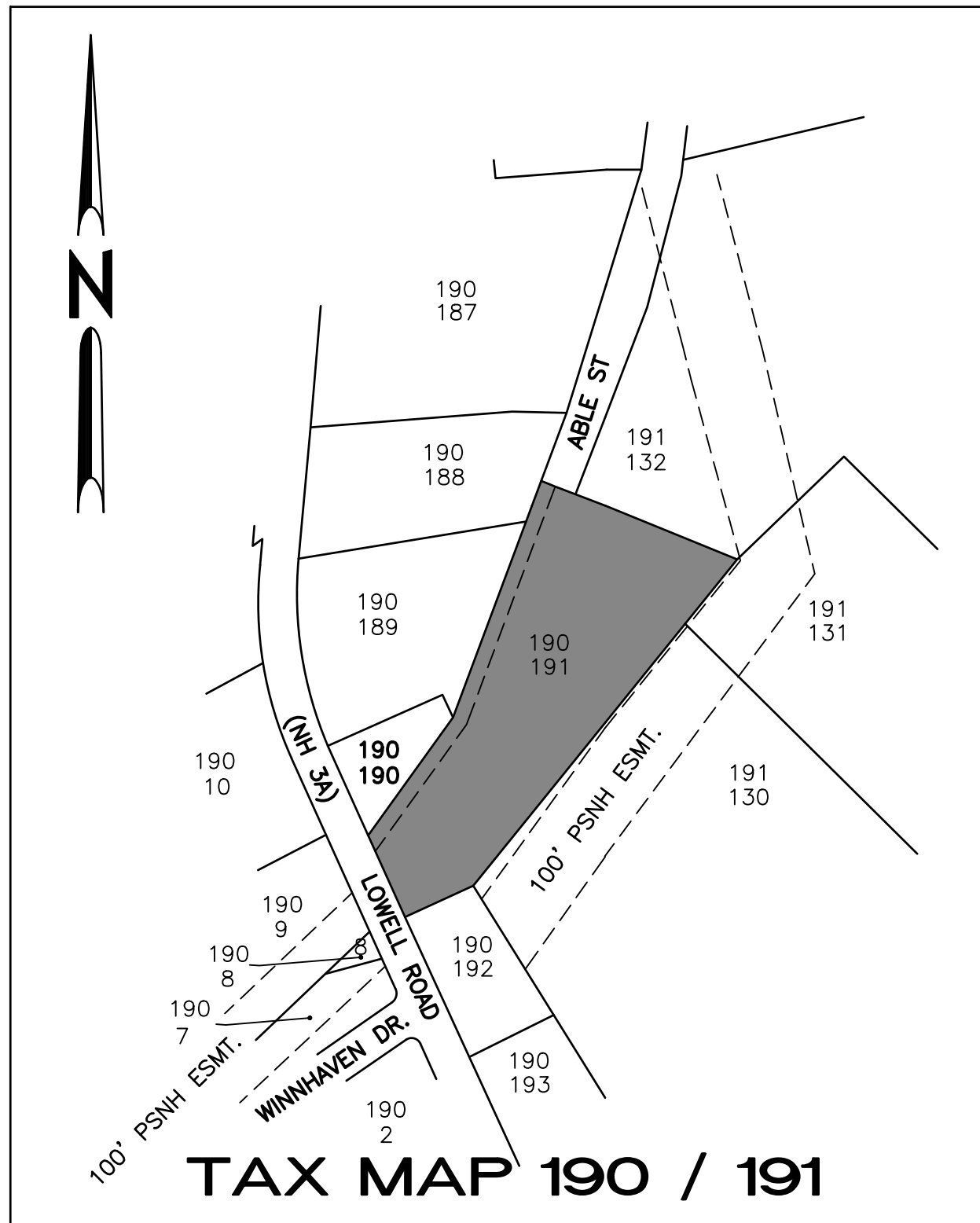
TAX MAP 190 LOT 192
 PUBLIC SERVICE OF NH
 C/O EVERSOURCE ENERGY
 PO BOX 270
 HARTFORD, CT 06141-0270
 BOOK 7979/PAGE 0292

TAX MAP 190 LOT 193
 ROBERT J. GAGNE LIFE ESTATE &
 NORMA GAGNE LIFE ESTATE
 436 OSGOOD RD.
 MILFORD, NH 03055
 BOOK 7927/PAGE 0367

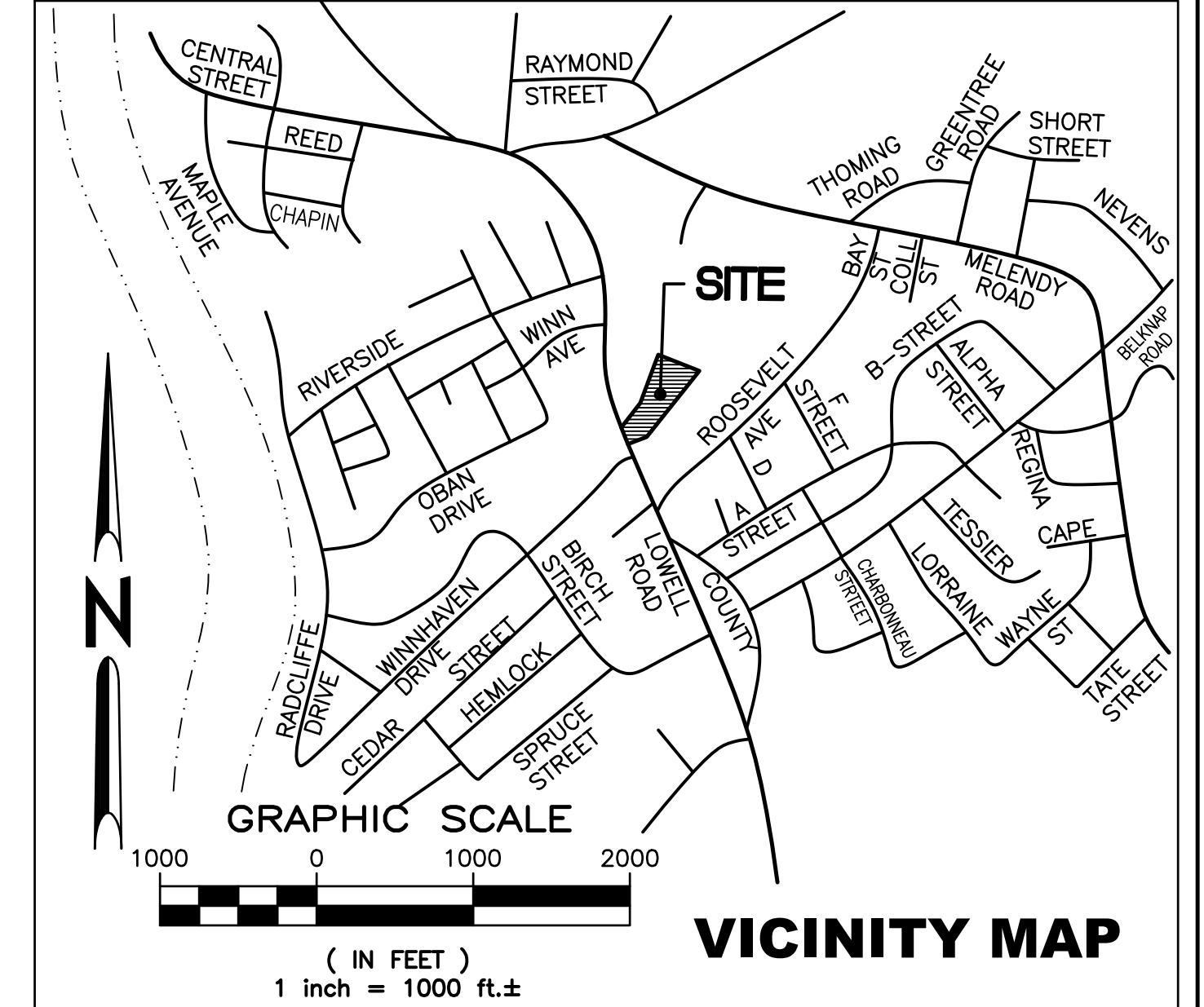
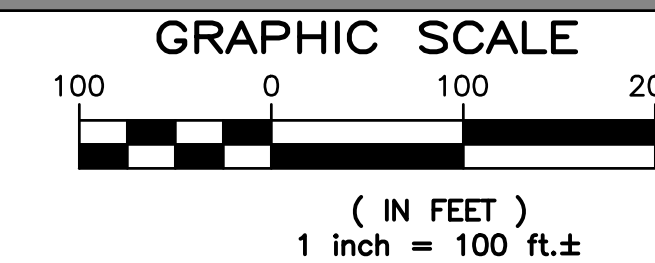
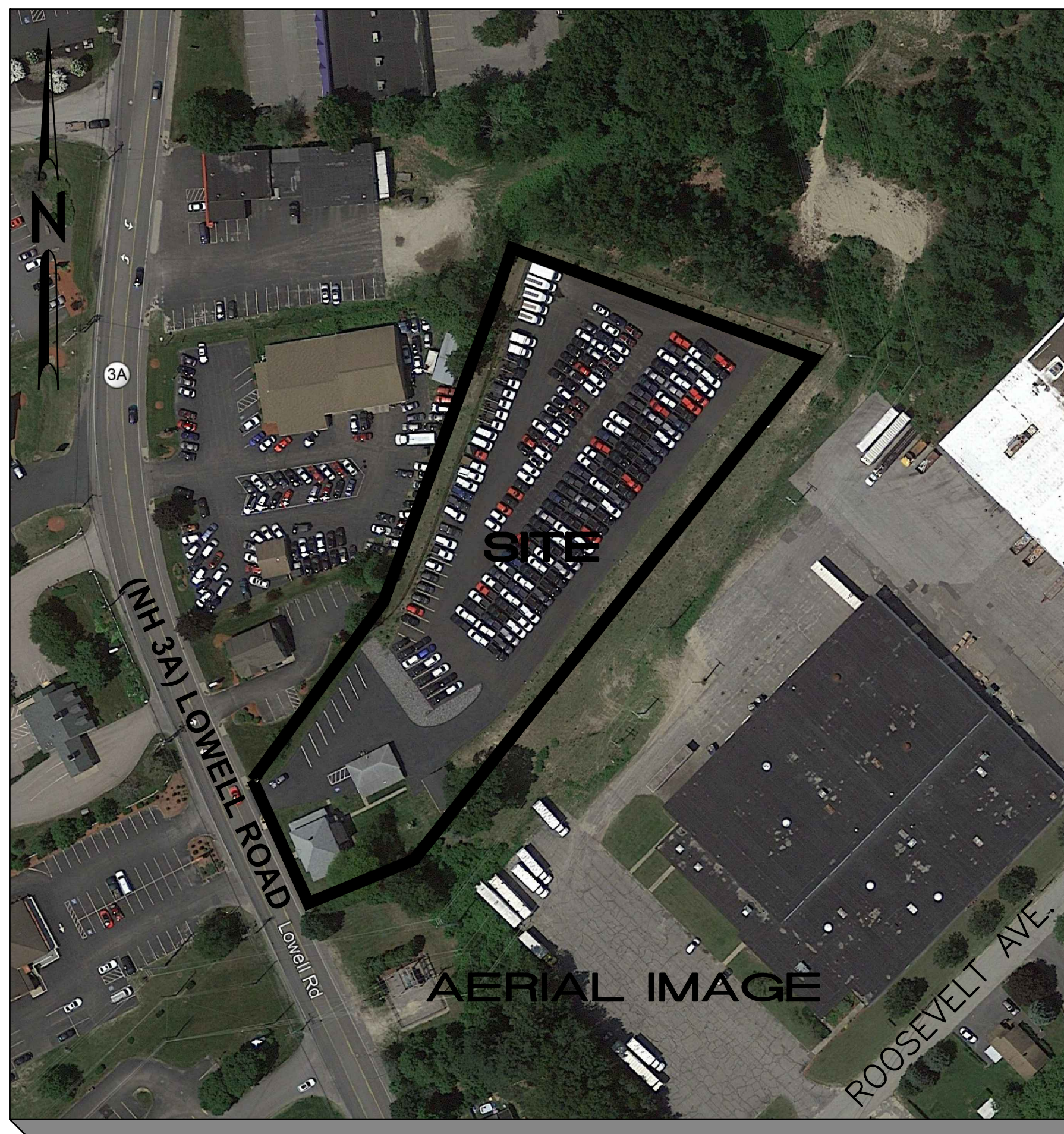
TAX MAP 191 LOT 130
 FIVE-N-ASSOCIATES
 C/O PETER NASH, TR
 91 AMHERST ST
 NASHUA, NH 03064
 BOOK 7879/PAGE 3004

TAX MAP 191 LOT 131
 MACTHOMPSON REALTY, INC.
 3 MARMON DRIVE
 NASHUA, NH 03060
 BOOK 9131/PAGE 2308

TAX MAP 191 LOT 132
 PROLYN CORP.
 5 LAWRENCE CORNER RD.
 PELHAM, NH 03076
 BOOK 5629/PAGE 262



MACTHOMPSON SITE PLAN 48 LOWELL ROAD TAX MAP 190 LOT 191 HUDSON, NEW HAMPSHIRE

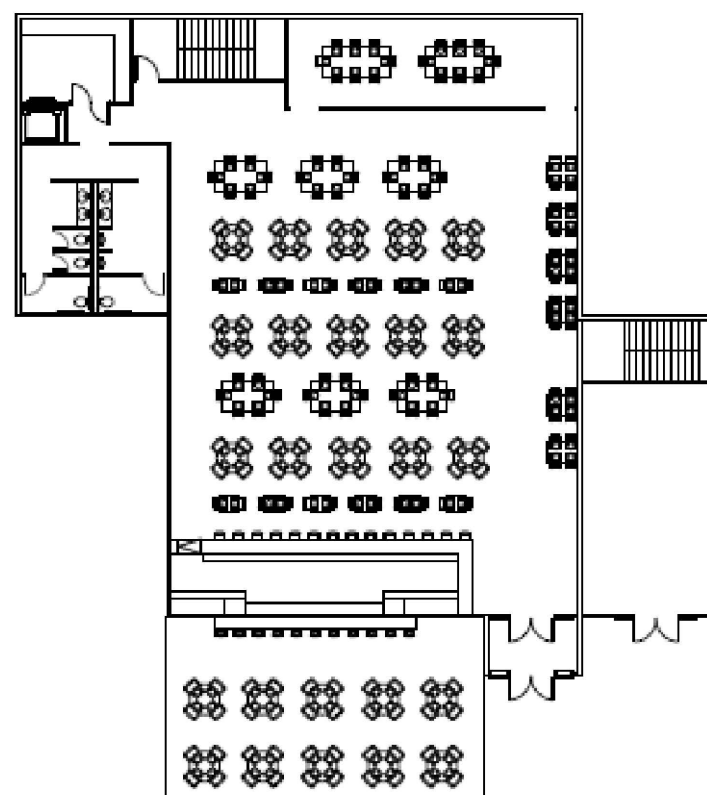


SHEET INDEX:

SHEET 1.....	COVER PLAN
SHEET 2.....	EXISTING CONDITIONS PLAN
SHEET 3.....	SITE PLAN
SHEET 4.....	GRADING, UTILITY, DRAINAGE & EROSION CONTROL PLAN
SHEET 5.....	LANDSCAPE PLAN
SHEET 6.....	LIGHTING PLAN
SHEET 7.....	CHAMBER DETAILS
SHEET 8.....	CHAMBER DETAILS
SHEET 9.....	DRAINAGE DETAIL SHEET
SHEET 10.....	CONSTRUCTION DETAIL SHEET
SHEET 11.....	SIGHT DISTANCE & DETAIL SHEET

ABBREVIATIONS:

EOG	EDGE OF GRAVEL	UP	UTILITY POLE
EOP	EDGE OF PAVEMENT	OHW	OVERHEAD WIRES
EOC	EDGE OF CONCRETE	CONC	CONCRETE
VGC	VERTICAL GRANITE CURB	EXIST	EXISTING
SWL	SOLID WHITE LINE	R.O.W.	RIGHT OF WAY
SYL	SOLID YELLOW LINE	EASMT	EASEMENT
DYCL	DOUBLE YELLOW CENTER LINE	CLF	CHAIN LINK FENCE
BIT CONC	BITUMINOUS CONCRETE	MW	MONITORING WELL
TYP	TYPICAL		



COVER PLAN
TAX MAP 190 LOT 191
MACTHOMPSON SITE PLAN
48 LOWELL ROAD
HUDSON, NEW HAMPSHIRE 03051

OWNER/ PREPARED FOR:
 MACTHOMPSON REALTY, INC.
 3 MARMON DRIVE
 NASHUA, NEW HAMPSHIRE 03060
 HCRD BOOK 8875/PAGE 2378

SCALE: AS NOTED SHEET 1 OF 11 AUGUST 3, 2021

CONSTRUCTION NOTE:
 HUDSON NH CONSTRUCTION INSPECTIONS

565.1.1 OFF-SITE FILL MATERIAL
 CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING, CONTAINING, AND DULY REMOVING ALL CONSTITUENTS OF CONCERN BROUGHT TO THE SITE BY CONTRACTOR, SUBCONTRACTORS, SUPPLIERS, OR ANYONE ELSE FOR WHOM CONTRACTOR IS RESPONSIBLE, AND FOR ANY ASSOCIATED COSTS; AND FOR THE COSTS OF REMOVING AND REMEDIATING ANY HAZARDOUS ENVIRONMENTAL CONDITION CREATED BY THE PRESENCE OF ANY SUCH CONSTITUENTS OF CONCERN.

CONTRACTOR SHALL NOT IMPORT ANY FILL OVER THE AMOUNT OF TEN CUBIC YARDS CUMULATIVE TOTAL PER SOURCE TO ANY JOB SITE IN THE TOWN OF HUDSON WITHOUT SOILS TESTING VERIFYING THE ABSENCE OF ALL CONSTITUENTS OF CONCERN, AND WITHOUT PRIOR APPROVAL BY ENGINEERING DEPARTMENT STAFF, DOCUMENTATION SUCH AS TEST REPORTS, CERTIFICATIONS AND SIEVE ANALYZES OF FILL SHALL BE PROVIDED TO THE ENGINEERING DEPARTMENT FOR APPROVAL PRIOR TO TRANSPORTING THE MATERIAL TO HUDSON.

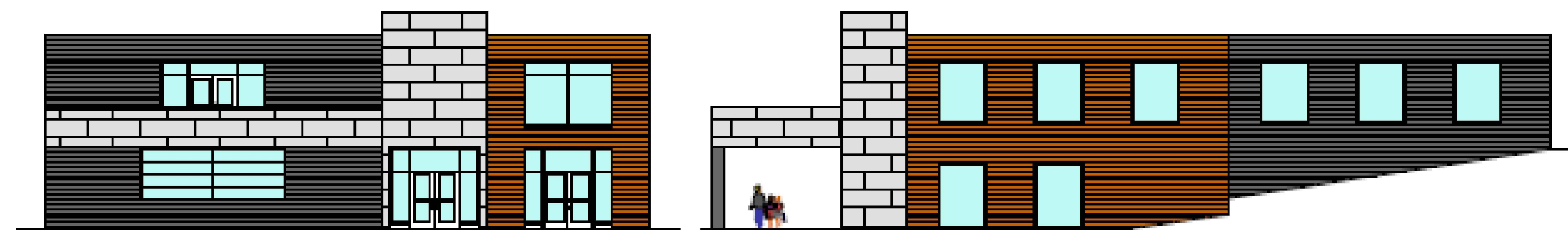
PURSUANT TO THE SITE PLAN REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL.

APPROVED BY THE HUDSON, NH PLANNING BOARD
 DATE OF MEETING: _____

SIGNATURE _____ SIGNATURE DATE _____

SIGNATURE _____ SIGNATURE DATE _____

SITE PLANS ARE VALID FOR ONE (1) YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

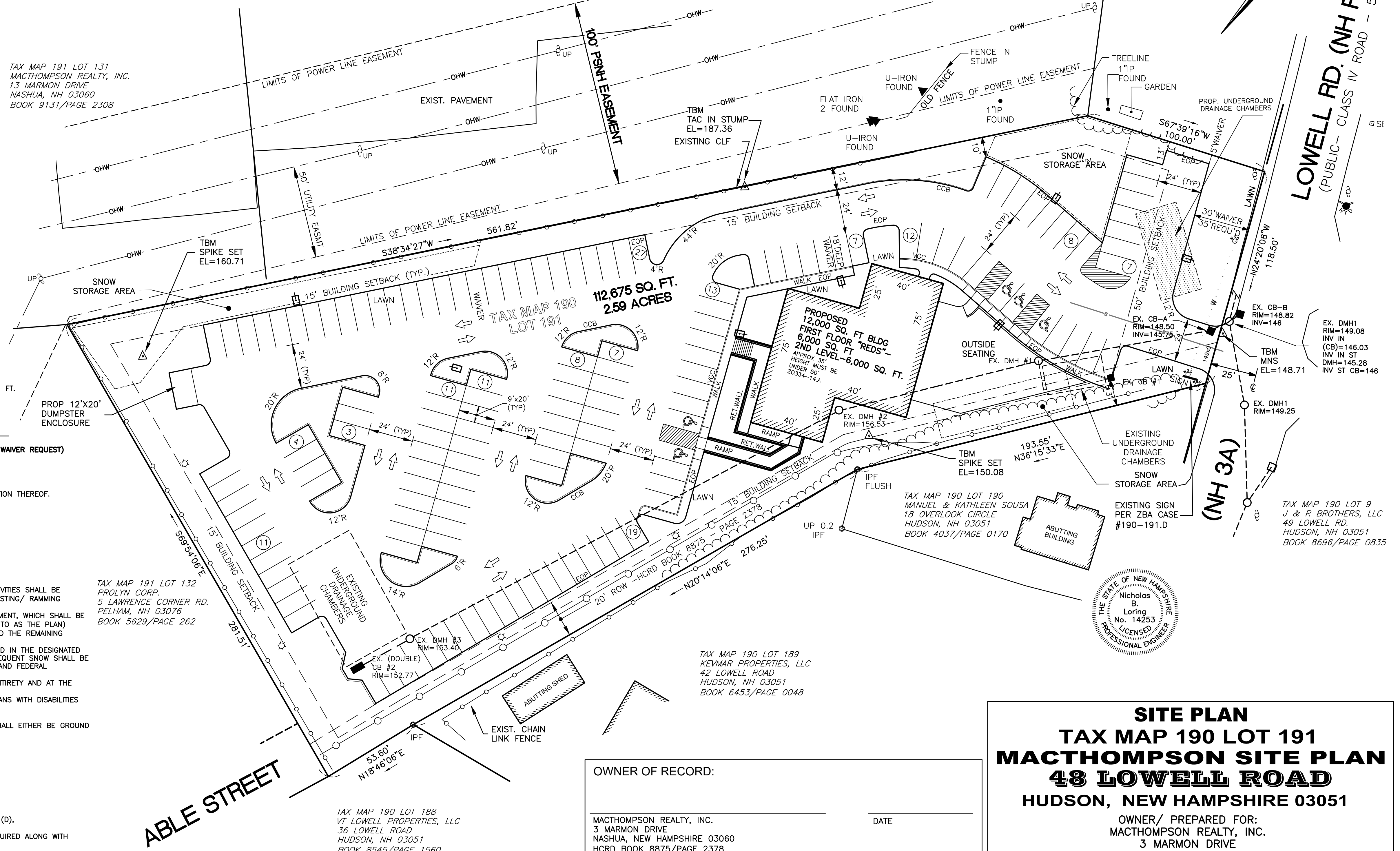


F.O./TOWN COMMENTS	11/15/2021
PLANNING COMMENTS 9/21/21	09/23/2021
REVISIONS	DATE

- GENERAL NOTES:**
- THE PURPOSE OF THIS PLAN IS:**
 - TO RE-DEVELOP TAX MAP 190 LOT 191 AS A MULTI USE COMMERCIAL SITE PER TOWN OF HUDSON ZONING ORDINANCE SECTION 334-10 B. USES SHALL INCLUDE:
 - BUSINESS OR PROFESSIONAL OFFICE
 - RETAIL BUSINESS AND PERSONAL SERVICE ESTABLISHMENT
 - EATING & DRINKING ESTABLISHMENT
 - TO SHOW THE 12,000 SQ.FT. BUILDING WITH ASSOCIATED SITE IMPROVEMENTS.
 - PARCEL ID: TAX MAP 190 LOT 191
 - PARCEL AREA = 112,675 S.F. = 2.59 ACRES
 - PARCEL ZONE: "B" BUSINESS
 - BOUNDARY SURVEY COMPLETED BY:
 - RANGWAY LAND SURVEY AND DESIGN
 - 252 DANIEL PLUMMER ROAD, GOFFSTOWN, NH 03045
 - PHONE: (603) 624-1602
 - NO WETLANDS ENCOUNTERED ON SITE. WETLAND INFORMATION PROVIDED BY:
 - PAUL W. ZARNOWSKI C.W.S.#40, RANGWAY LAND SURVEY AND DESIGN
 - 252 DANIEL PLUMMER ROAD, GOFFSTOWN, NEW HAMPSHIRE 03045
 - TOPOGRAPHIC INFORMATION IS BASED ON THE ACTUAL TOPOGRAPHIC AND LOCATION SURVEY BY BENCHMARK ENGINEERING, INC. IN JULY 2016. VERTICAL DATUM NVD 29 FROM GPS SURVEY. HORIZONTAL DATUM NAD 83 FROM GPS SURVEY.
 - PREDOMINANT SCS SOILS GROUP ON THIS LOT IS WdB WINDSOR LOAMY SAND AS SHOWN ON THE SCS SOILS MAP FOR THE TOWN OF HUDSON, NEW HAMPSHIRE.
 - THIS PROPERTY IS LOCATED OUTSIDE OF THE ESTABLISHED 100-YEAR FLOOD HAZARD ZONE AS SHOWN ON THE FEDERAL FLOOD INSURANCE MAPS (F.I.R.M.) FOR HUDSON, NH, COMMUNITY PANEL #330092-0518D (EFFECTIVE SEPTEMBER 25, 2009).
 - LOCATIONS OF UTILITIES WERE COMPILED FROM THE FIELD SURVEY AND INFORMATION OF RECORD. THESE LOCATIONS ARE APPROXIMATE ONLY. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CALL DIG-SAFE AT 1 888 344-7233.
 - MINIMUM REQUIREMENTS: LOT AREA = 30,000 SQ. FT.
BUILDING SETBACKS: FRONT = 50'
SIDE/REAR = 15'
 - MINIMUM FRONTAGE: 150' REQUIRED (118' EXISTING)
 - EXISTING USE:
 - BUILDINGS A & B: BUSINESS OR PROFESSIONAL OFFICE, GENERAL RETAIL & MOTOR VEHICLE SALES AND RENTAL = 4,400 SQ. FT.
 - BUILDING-C: STORAGE = 1,800 SQ. FT.
 - PROPOSED USES:
 - BUSINESS OR PROFESSIONAL OFFICE = 4,500 SQ. FT.
 - RETAIL BUSINESS AND PERSONAL SERVICE ESTABLISHMENT & EATING & DRINKING ESTABLISHMENT W/ BAR = 1,500 SQ. FT.
 - KITCHEN AREA (FIRST FLOOR) = 3,000 SQ. FT.
 - OUTSIDE SEATING AREA (FIRST FLOOR) = 4,000 SQ. FT.
 - RETAIL BUSINESS AND PERSONAL SERVICE ESTABLISHMENT & EATING & DRINKING ESTABLISHMENT W/ BAR = 1,000 SQ. FT.
 - KITCHEN AREA (2ND FLOOR) = 1,000 SQ. FT.
 - OFFICE/RETAIL (2ND FLOOR) = 1,000 SQ. FT.
 - (PER TOWN OF HUDSON ZONING ORDINANCE: SECTION 334-10 B MULTIPLE COMMERCIAL USES AND ACTIVITIES DEVELOPED AS PART OF A SINGLE SITE PLAN ARE CONSIDERED A SINGLE PRINCIPAL USE.)
 - PARKING REQUIREMENTS:
 - EATING & DRINKING ESTABLISHMENT W/ BAR = 1 SPACE/75 SQ. FT.
 - 8,500 SQ. FT. (REST)* 1 SPACE/75 SQ. FT. = 113 SPACES
 - 3,000 SQ. FT. (OUTSIDE SEATING)* 1 SPACE/75 SQ. FT. = 40 SPACES
 - KITCHEN STAFF (5 EMPLOYEES PER KITCHEN) = 10 SPACES
 - RETAIL/OFFICE (1,000 SQ. FT. - 1 SPACE/200 SQ. FT.) = 5 SPACES
 - (USE WITH HIGHER PARKING REQUIREMENT USED) = 169 SPACES
 - TOTAL REQUIRED PARKING = 148 SPACES (SEE WAWER REQUEST)
 - (5 ADA PARKING SPACES PROVIDED PER ADA REGULATIONS)
 - OPEN SPACE CALCULATIONS (35% REQUIRED): 39,500 SQ. FT. +/- OPEN SPACE/112,675 SQ. FT. = 35.0% PROVIDED
 - THE BUILDING IS SERVICED BY MUNICIPAL WATER AND MUNICIPAL SEWER.
 - ALL SIGNS ARE SUBJECT TO APPROVAL BY THE HUDSON PLANNING BOARD PRIOR TO INSTALLATION THEREOF.
 - PLANNING BOARD WAIVERS:
 - 275-B.C.(2) PARKING CALCULATIONS
 - 275-B.C.(4) PARKING SPACE DIMENSIONS
 - 275-B.C.(6) OFF STREET LOADING SPACE
 - 275-B.C.(7)(g) INTERIOR LANDSCAPING
 - 276-11.1.(B)(22) FRONT/SIDE GREEN AREA SETBACK
 - 276-11.1.(B)(25) PARKING AND TRAVELWAY SETBACK
 - ETGD 920.3.13 & 930.4 MINIMUM STORMWATER DRAINAGE PIPE SLOPE & VELOCITY
 - NOISE FROM THE PROPOSED ACTIVITIES WITHIN THE SITE SHALL MEET THE MINIMUM STANDARDS AS SET BY THE TOWN OF HUDSON, NH SECTION 249
 - IF LOT DEVELOPMENT INVOLVES BLASTING AND/OR RAMMING OF BEDROCK MATERIALS, SAID ACTIVITIES SHALL BE LIMITED TO THE HOURS OF 7:00 AM AND 5:00 PM MONDAY THROUGH FRIDAY ONLY. SAID BLASTING/RAMMING ACTIVITIES SHALL BE PROHIBITED ON WEEKENDS.
 - ALL STIPULATIONS OF THE APPROVAL SHALL BE INCORPORATED INTO THE DEVELOPMENT AGREEMENT, WHICH SHALL BE RECORDED AT THE HCRD, TOGETHER WITH THE SITE PLAN-OF-RECORD (HEREAFTER REFERRED TO AS THE PLAN)
 - SHEET 3 OF 10 SHALL BE RECORDED AT THE HILLSBOROUGH COUNTY DEPARTMENT OF DEEDS AND THE REMAINING SHEETS SHALL BE ON FILE AT THE TOWN OF HUDSON PLANNING DEPARTMENT.
 - PLOWED SNOW FROM THE FACILITIES, DRIVEWAY, WALKWAYS AND PARKING LOT SHALL BE STORED IN THE DESIGNATED AREAS SHOWN IN THIS PLAN SET. WHEN THE SNOW STORAGE AREAS ARE AT CAPACITY, SUBSEQUENT SNOW SHALL BE HAULED OFF SITE AND DISPOSED OF PROPERLY AND IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
 - ALL IMPROVEMENTS SHOWN ON THE SITE PLAN OF RECORD SHALL BE COMPLETED IN THEIR ENTIRETY AND AT THE EXPENSE OF THE APPLICANT.
 - SITE IMPROVEMENTS SHOWN ON THE PLAN SET SHALL CONFORM WITH TITLE III OF THE AMERICANS WITH DISABILITIES ACT WITH REGARD TO DIMENSION AND GRADE.
 - INTENDED HOURS OF OPERATION: NO RESTRICTIONS ARE PROPOSED WITH THIS PLAN.
 - NATURAL WOOD AND STUMP WASTE GENERATED FOR THE CONSTRUCTION OF THIS SITE PLAN SHALL EITHER BE GROUND UP AND RE-USED ON-SITE FOR EROSION CONTROL OR DISPOSED OF OFF-SITE.
 - PRIOR VARIANCES:
 - CASE 190-191 (DEFERRED FROM 10-26-2017)
 - A) A VARIANCE TO ALLOW A NON-PERMITTED USE; HZO ARTICLE V §334-21 TABLE OF PERMITTED PRINCIPLE USES. - DENIED
 - B) A SPECIAL EXCEPTION TO ALLOW REDUCTION OF REQUIREMENTS FOR MIXED USES; HZO ARTICLE VI §334-26 A, REDUCTION OF REQUIREMENTS FOR MIXED AND DUAL USES. DENIED
 - C) A VARIANCE TO ALLOW MIXED OR DUAL USE; HZO ARTICLE III §334-10 MIXED OR DUAL USE ON A LOT. DENIED
 - D) A VARIANCE TO ALLOW A SIGN WITHIN SETBACKS; HZO ARTICLE XII §334-60 (C) & (D), GENERAL REQUIREMENTS. GRANTED
 - DUE TO THE DISTURBANCE OF APPROXIMATELY 50,000 SQ. FT OF AREA A SWPP WILL BE REQUIRED ALONG WITH THE FILING OF AN NOI (NOTICE OF INTENT).

- GENERAL NOTES:**
- CONTINUED
 - THERE IS NOT ANTICIPATED TO BE ANY STOCKPILING OF AGGREGATE MATERIAL ON SITE. THE MAJORITY OF THE MATERIALS TO BE GENERATED ON-SITE ARE TO BE REMOVED AS THE LOT IS DEVELOPED. AN AREA IS DELINEATED ON THE GRADING & UTILITY PLAN FOR STORAGE OF BUILDING MATERIALS DURING CONSTRUCTION.
 - THE RESPONSIBILITY FOR MAINTENANCE OF THE STORMWATER SYSTEM IS THE SOLE RESPONSIBILITY OF THE OWNER OF THIS PROPERTY.
 - SEWER TIE IN CONNECTION SHALL MEET THE TOWN OF HUDSON ENGINEERING REQUIREMENTS.

- TAX MAP 191 LOT 131**
FIVE-N-ASSOCIATES
C/O PETER NASH, TR
91 AMHERST ST
NASHUA, NH 03064
BOOK 7879/PAGE 3004
- TAX MAP 190 LOT 189**
KEVMAR PROPERTIES, LLC
42 LOWELL ROAD
HUDSON, NH 03051
BOOK 6453/PAGE 0048
- TAX MAP 190 LOT 188**
VT. LOWELL PROPERTIES, LLC
36 LOWELL ROAD
HUDSON, NH 03051
BOOK 8545/PAGE 1560
- TAX MAP 190 LOT 192**
PUBLIC SERVICE OF NH
C/O EVERSOURCE ENERGY
PO BOX 270
HARTFORD, CT 06141-0270
BOOK 7979/PAGE 0292
- TAX MAP 190 LOT 9**
J & R BROTHERS, LLC
49 LOWELL RD.
HUDSON, NH 03051
BOOK 8696/PAGE 0835



PURSUANT TO THE SITE PLAN REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL.

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

SIGNATURE _____ SIGNATURE DATE _____

SIGNATURE _____ SIGNATURE DATE _____

SITE PLANS ARE VALID FOR ONE (1) YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

PAUL W. ZARNOWSKI
 No. 040
 LICENSED WETLAND SURVEYOR

GRAPHIC SCALE
 30 0 30 60
 (IN FEET)
 1 inch = 30 ft.

OWNER OF RECORD:

MACTHOMPSON REALTY, INC.
 3 MARMON DRIVE
 NASHUA, NEW HAMPSHIRE 03060
 HCRD BOOK 8875/PAGE 2378

DATE _____

I HEREBY CERTIFY THAT THE WORK PERFORMED IN THE PREPARATION OF THIS PLAN HAS AN ERROR OF CLOSURE OF 1:10,000 OR BETTER.

RANGWAY LAND SURVEYING & DESIGN, INC. DATE _____
 BY: PAUL W. ZARNOWSKI LLS.

SITE PLAN
TAX MAP 190 LOT 191
MACTHOMPSON SITE PLAN
48 LOWELL ROAD
HUDSON, NEW HAMPSHIRE 03051

OWNER/ PREPARED FOR:
MACTHOMPSON REALTY, INC.
3 MARMON DRIVE
NASHUA, NEW HAMPSHIRE 03060
HCRD BOOK 8875/PAGE 2378

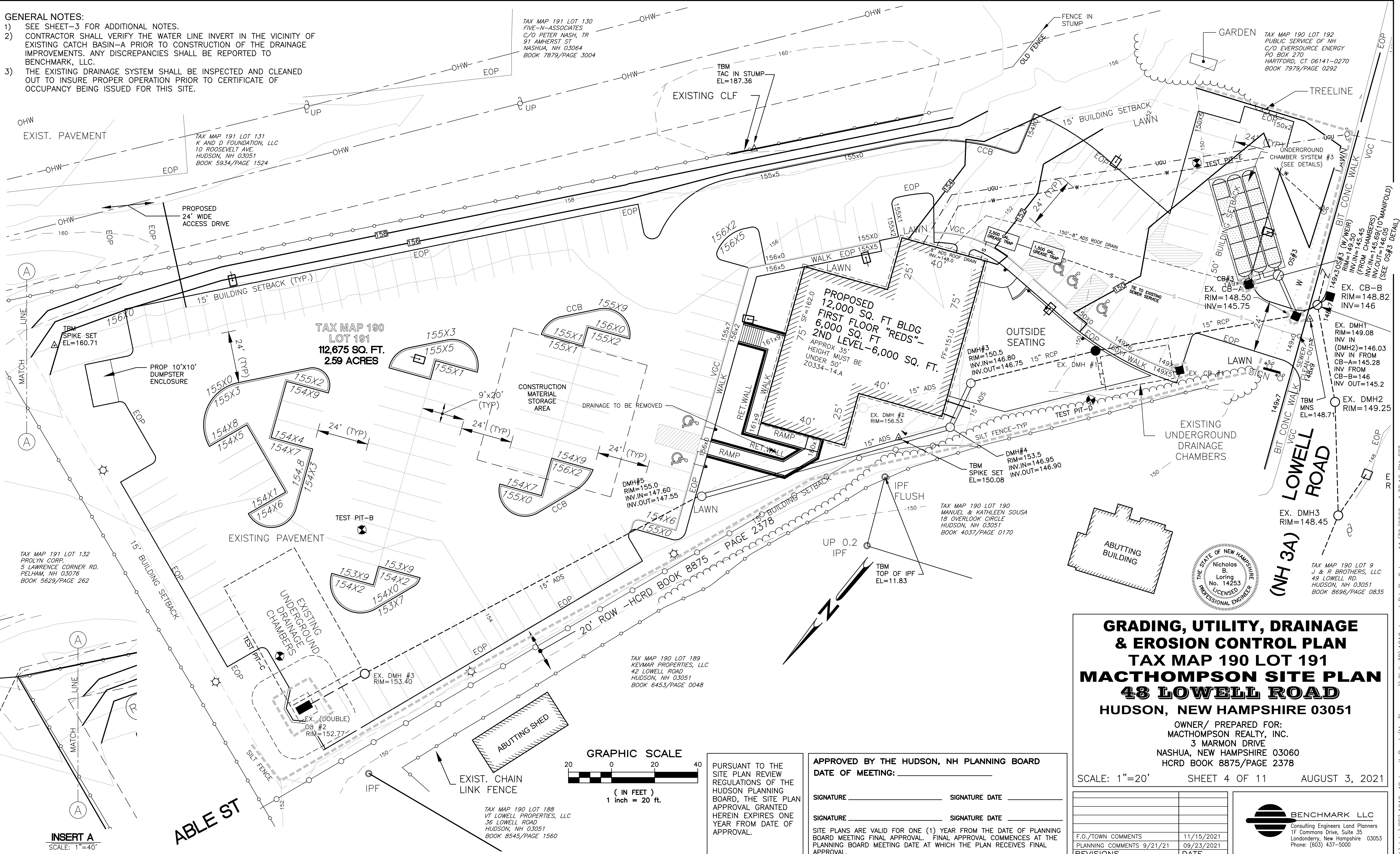
SCALE: 1"=30' SHEET 3 OF 11 AUGUST 3, 2021

BENCHMARK LLC
 Consulting Engineers Land Planners
 1F Commons Drive, Suite 35
 Londonderry, New Hampshire 03053
 Phone: (603) 437-5000

F.O./TOWN COMMENTS	11/15/2021
PLANNING COMMENTS 9/21/21	09/23/2021
REVISIONS	DATE

GENERAL NOTES:

- 1) SEE SHEET-3 FOR ADDITIONAL NOTES.
- 2) CONTRACTOR SHALL VERIFY THE WATER LINE INVERT IN THE VICINITY OF EXISTING CATCH BASIN-A PRIOR TO CONSTRUCTION OF THE DRAINAGE IMPROVEMENTS. ANY DISCREPANCIES SHALL BE REPORTED TO BENCHMARK, LLC.
- 3) THE EXISTING DRAINAGE SYSTEM SHALL BE INSPECTED AND CLEANED OUT TO INSURE PROPER OPERATION PRIOR TO CERTIFICATE OF OCCUPANCY BEING ISSUED FOR THIS SITE.



TAX MAP 191 LOT 132
PROLYN CORP.
5 LAWRENCE CORNER RD.
PELHAM, NH 03076
BOOK 5629/PAGE 262

TAX MAP 191 LOT 131
K AND D FOUNDATION, LLC
10 ROOSEVELT AVE.
HUDSON, NH 03051
BOOK 5934/PAGE 1524

TAX MAP 190
LOT 191
112,675 SQ. FT.
2.59 ACRES

TAX MAP 191 LOT 130
FIVE-N-ASSOCIATES
C/O PETER NASH, TR
91 AMHERST ST
NASHUA, NH 03064
BOOK 7879/PAGE 3004

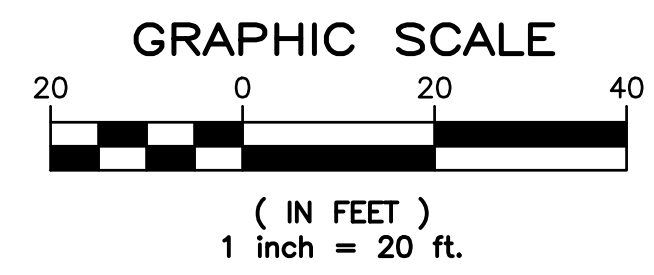
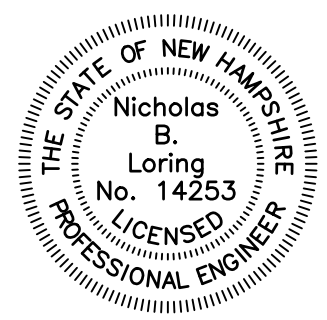
TAX MAP 190 LOT 190
MANUEL & KATHLEEN SOUSA
18 OVERLOOK CIRCLE
HUDSON, NH 03051
BOOK 4037/PAGE 0170

TAX MAP 190 LOT 189
KEVMAR PROPERTIES, LLC
42 LOWELL ROAD
HUDSON, NH 03051
BOOK 6453/PAGE 0048

TAX MAP 190 LOT 188
VT LOWELL PROPERTIES, LLC
36 LOWELL ROAD
HUDSON, NH 03051
BOOK 8545/PAGE 1560

TAX MAP 190 LOT 192
PUBLIC SERVICE OF NH
C/O EVERSOURCE ENERGY
PO BOX 270
HARTFORD, CT 06141-0270
BOOK 7979/PAGE 0292

TAX MAP 190 LOT 9
J & R BROTHERS, LLC
49 LOWELL RD.
HUDSON, NH 03051
BOOK 8696/PAGE 0835



PURSUANT TO THE SITE PLAN REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL.

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

SIGNATURE _____ SIGNATURE DATE _____
SIGNATURE _____ SIGNATURE DATE _____

SITE PLANS ARE VALID FOR ONE (1) YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

GRADING, UTILITY, DRAINAGE & EROSION CONTROL PLAN
TAX MAP 190 LOT 191
MACTHOMPSON SITE PLAN
48 LOWELL ROAD
HUDSON, NEW HAMPSHIRE 03051

OWNER/ PREPARED FOR:
MACTHOMPSON REALTY, INC.
3 MARMON DRIVE
NASHUA, NEW HAMPSHIRE 03060
HCRD BOOK 8875/PAGE 2378

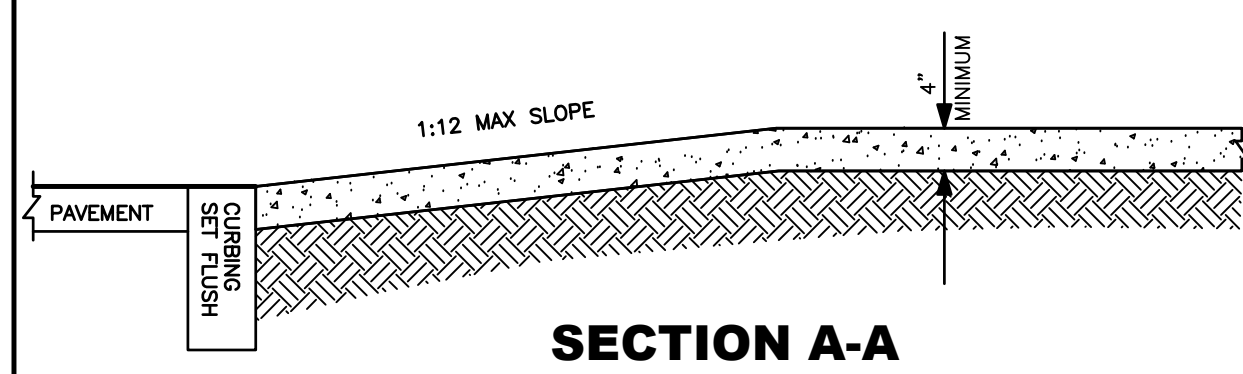
SCALE: 1"=20' SHEET 4 OF 11 AUGUST 3, 2021

F.O./TOWN COMMENTS	11/15/2021
PLANNING COMMENTS 9/21/21	09/23/2021
REVISIONS	DATE

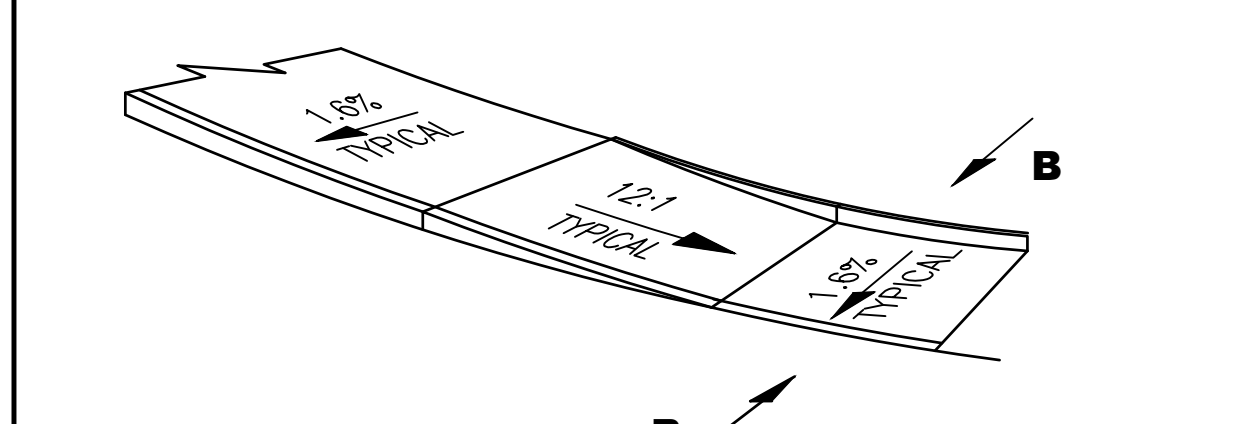
INSERT A
SCALE: 1"=40'

LANDSCAPE NOTES:

- INTERIOR PARKING LOT LANDSCAPING
TOTAL ISLANDS IN PARKING AREA = 3,951 SQ. FT.
TOTAL PARKING AREA = 64,250 SQ. FT.
6% (SEE WAIVER) REQUIRED
10% REQUIRED
- TOTAL EXISTING PLANTED TREES FROM PREVIOUSLY APPROVED SITE PLAN SP 275-8 STATE THAT ONE SHADE TREE SHOULD BE PLANTED FOR EVERY 1,600 SQ. FT. PAVEMENT = 41 TREES REQUIRED
64,250 SQ. FT. PAVEMENT = 40.15 TREES REQUIRED
- TOTAL EXISTING SHRUBS PLANTED FROM PREVIOUSLY APPROVED SITE PLAN = 106
TOTAL SHRUBS REQUIRED 1/200 OR 1.6/PARKING SPACE = 321.3
64,250 SQ. FT PAVEMENT/200 = 321.3
OR
1.6 PER PARKING SPACE * 148 SPACE PROPOSED = 236.8
TOTAL EXISTING (106) + ADDITIONAL 216 SHRUBS PROPOSED = 322



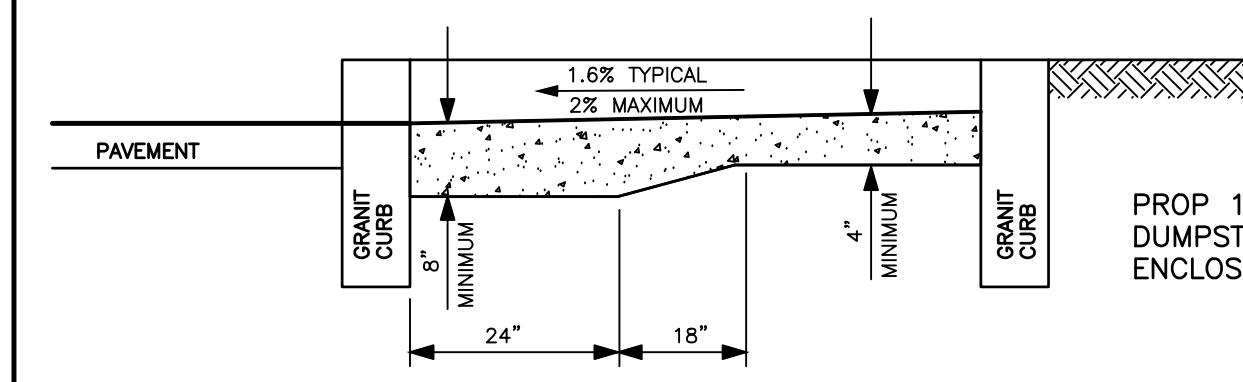
SECTION A-A



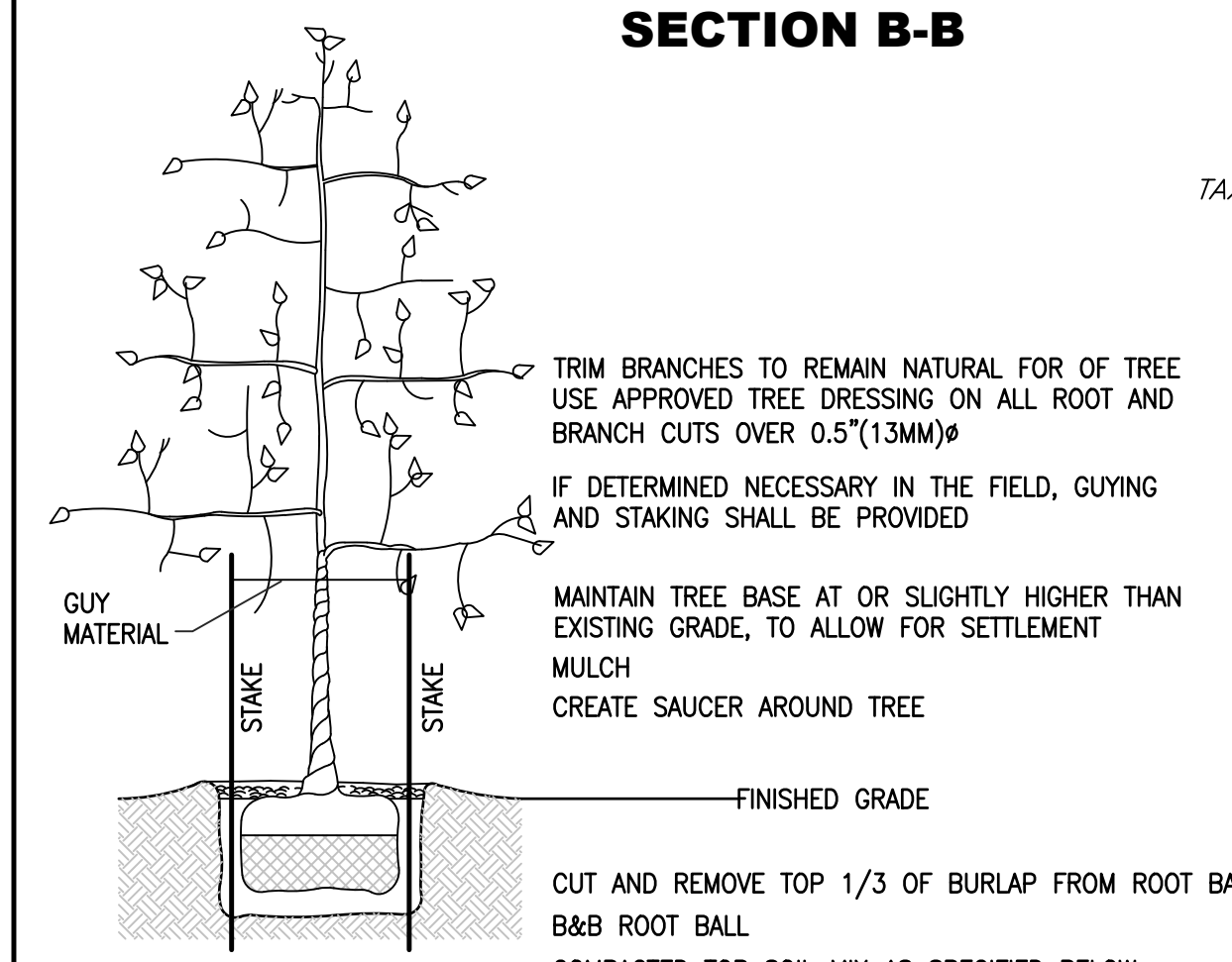
PARALLEL CURB RAMP DETAIL

GENERAL NOTES

- THE MAXIMUM RUNNING SLOPE OF ANY SIDEWALK CURB RAMP IS 12:1. THE MAXIMUM CROSS SLOPE IS 2%. THE SLOPE OF THE LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.
- TRANSITIONS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. ROADWAY SHOULDER SLOPES ADJOINING SIDEWALK CURB RAMP SHALL BE A MAXIMUM OF 5% (FULL WIDTH) FOR A DISTANCE OF 2 FEET FROM THE ROADWAY CURBLINE.
- INTERCEPT DRAINAGE ALONG THE CURB RAMP OR LANDINGS. CATCH BASINS, MANHOLES, ETC SHALL NOT BE LOCATED IN OR AT BASE OF SIDEWALK CURB RAMP OR LANDINGS. THE BOTTOM OF THE SIDEWALK CURB RAMP OR LANDING, EXCLUSIVE OF THE FLATED SIDES, SHALL BE WHOLLY CONTAINED WITHIN THE SIDEWALK CROSSWALK MARKINGS.
- THE SURFACE OF PERPENDICULAR SIDEWALK CURB RAMP OR THE LANDING OF A PARALLEL SIDEWALK CURB RAMP SHALL CONTRAST VISUALLY WITH THE ADJOINING SIDEWALK SURFACES, EITHER ASPHALT/LIGHT COLORED CONCRETE OR LIGHT COLORED CONCRETE/DARK-STAINED CONCRETE. THE CONCRETE SURFACES SHALL BE SLIP RESISTANT.



SECTION B-B



DECIDUOUS TREE DETAIL

- SPECIFICATIONS:**
- TOPSOIL MIX, SEE SPEC.
 - DO NOT DAMAGE MAIN ROOTS OR DESTROY ROOT BALL WHEN INSTALLING TREE STAKE.
 - WATER THOROUGHLY AFTER INSTALLATION.
 - REMOVE TREE RINGS AND STAKES TWO YEARS AFTER INSTALLATIONS
 - PROVIDED DRAINAGE FOR PLANTING PIT IN IMPERMEABLE SOIL.

PURSUANT TO THE SITE PLAN REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL.

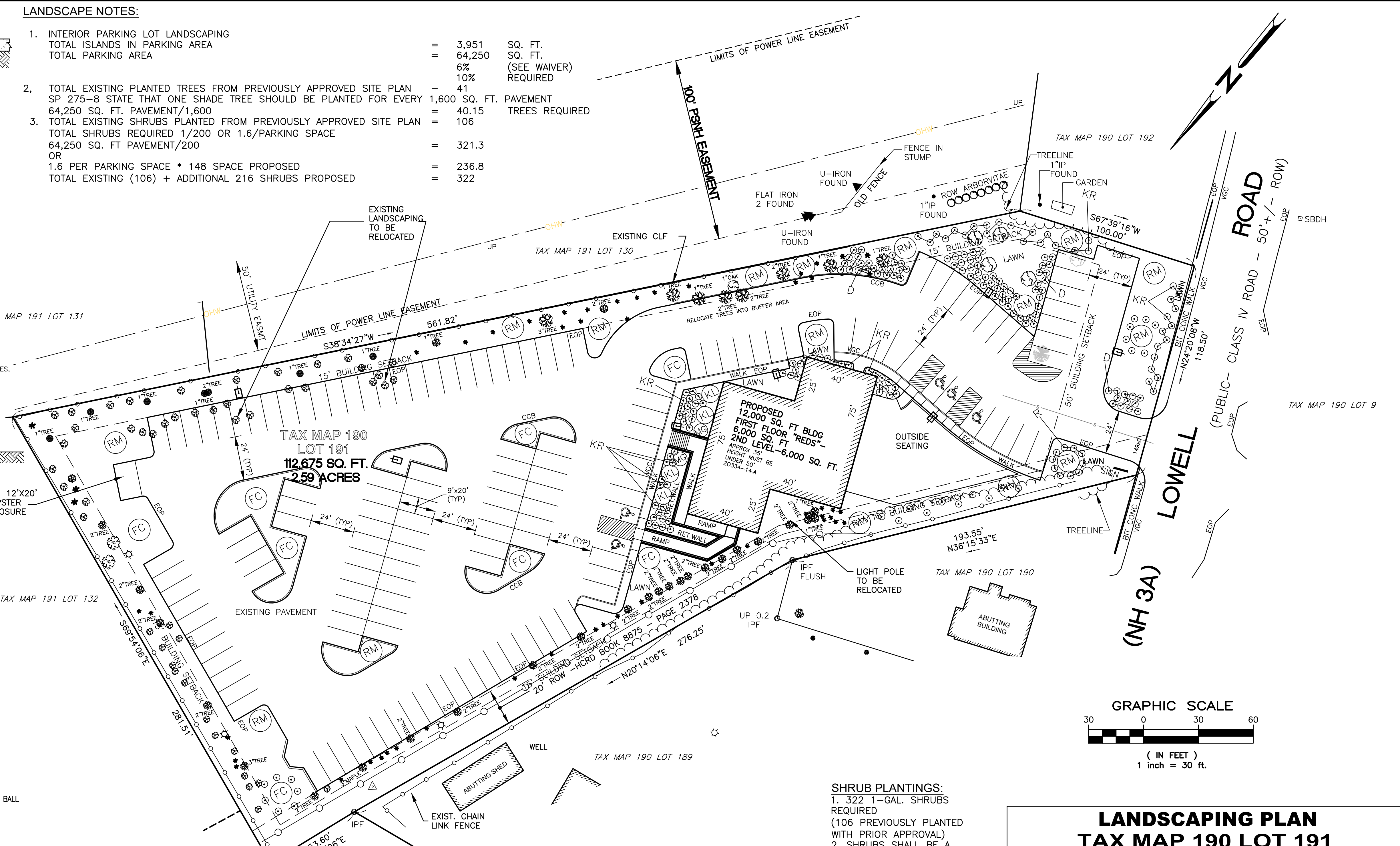
APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING _____

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LANDSCAPING PLAN
TAX MAP 190 LOT 191
MACTHOMPSON SITE PLAN
48 LOWELL ROAD
HUDSON, NEW HAMPSHIRE 03051

OWNER/ PREPARED FOR:
 MACTHOMPSON REALTY, INC.
 3 MARMON DRIVE
 NASHUA, NEW HAMPSHIRE 03060
 HCRD BOOK 8875/PAGE 2378

SCALE: 1"=30' SHEET 5 OF 11 AUGUST 3, 2021

SHRUB PLANTINGS:
 1. 322 1-GAL. SHRUBS REQUIRED WITH PRIOR APPROVAL)
 2. SHRUBS SHALL BE A VARIED MIX OF THE FOLLOWING TREE TYPES:
 A) JUNIPER
 B) RHODODENDRON
 C) AZALEA
 D) LILAC
 E) ROSASHARON
 F) DAYLILLY
 G) KNOCKOUT ROSE
 H) KOREAN LILAC
 I) MAIDEN GRASS
 J) NINEBARK
 K) PANICLE HYDRANGEA
 L) ROSE

SHADE TREES (TYP):
 1. 40 SHADE TREES REQUIRED (36 PLANTED WITH PRIOR APPROVAL)
 2. SHADE TREES SHALL BE A VARIED MIX OF THE FOLLOWING TREE TYPES:
 A) RED MAPLE
 B) RED OAK
 C) FLOWERING PEAR
 D) JAPANESE YEW
 E) FLOWERING CHERRY

PLANTING
 BALLED AND BURLAP SHRUB

TOP OF ROOT BALL SHALL BE LEVEL WITH FINISHED GRADE
 FORM SAUCER WITH 3" CONTINUOUS RIM
 BACKFILL MIXTURE: 3:1 TOPSOIL ORGANIC HUMUS
 BOTTOM LAYER OF BACKFILL SHALL BE LIGHTLY TAMPED AND SETTLED WITH WATER PRIOR TO PLACEMENT OF PLANT

PRUNE TO REMOVE DEAD OR BROKEN BRANCHES
 MULCH 2" MIN. AWAY FROM TRUNK OF PLANT
 2"-3" SHREDDED HARDWOOD BARK
 CUT & REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL. NON-DEGRADABLE BURLAP SHALL BE REMOVED OR ROLLED UNDER BALL AFTER PLACEMENT OF PLANT
 PROVIDE DRAINAGE IN PLANTING PIT AS NECESSARY

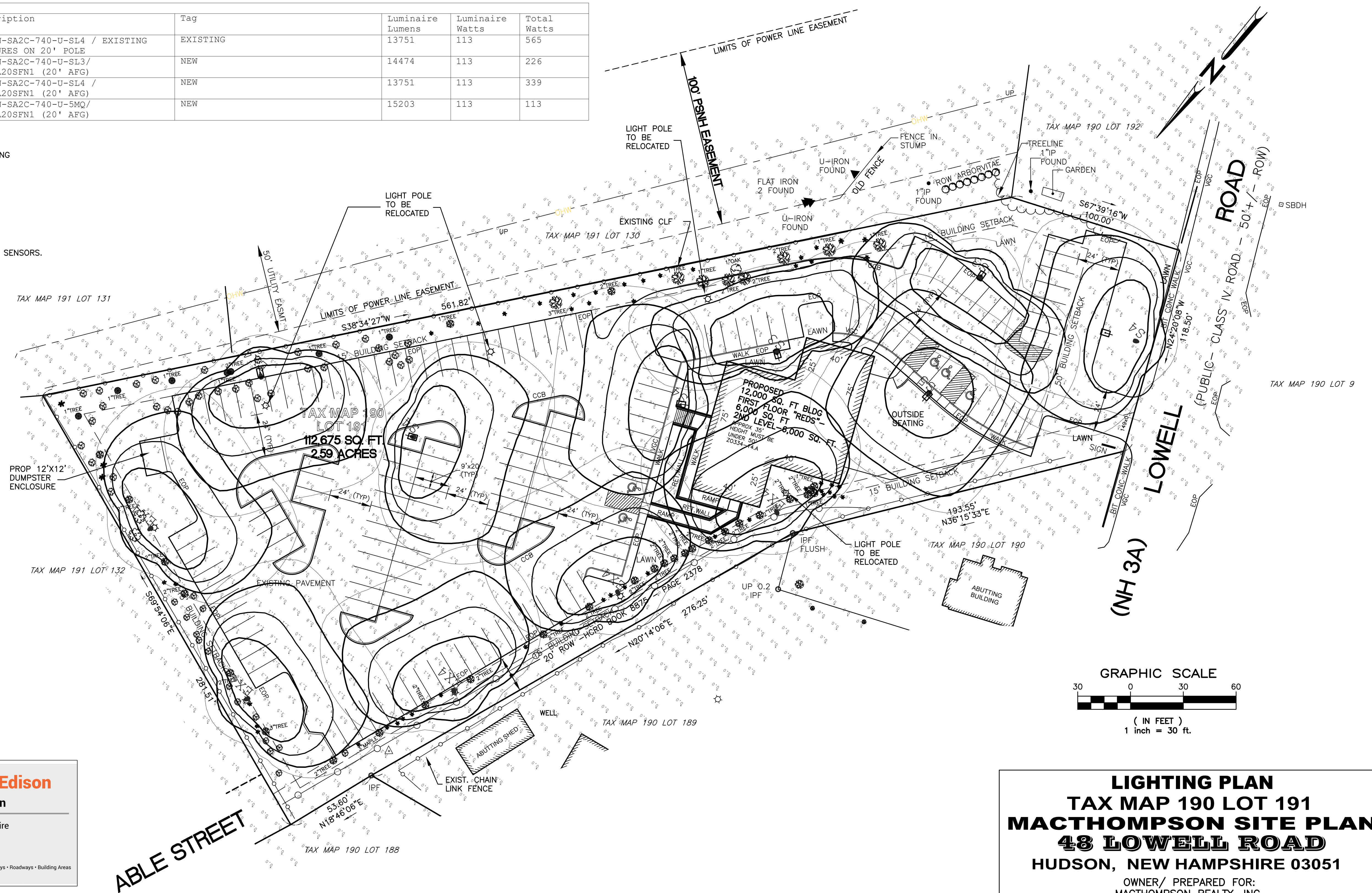
ALL PLANT MATERIAL SHALL HAVE A MINIMUM WINTER HARDINESS FOR ZONE 5B AS DETERMINED BY THE AMERICAN STANDARDS FOR NURSERY STOCK.
 OWNER RESERVES THE RIGHT TO SUBSTITUTE PLANTING BASED ON AVAILABLE NURSERY STOCK

BENCHMARK LLC
 Consulting Engineers Land Planners
 1F Commons Drive, Suite 35
 Londonderry, New Hampshire 03053
 Phone: (603) 437-5000

F.O./TOWN COMMENTS	11/15/2021
PLANNING COMMENTS	09/23/2021
REVISIONS	DATE

Symbol	Qty	Label	Arrangement	Description	Tag	Luminaire Lumens	Luminaire Watts	Total Watts
	5	EX4	Single	GLEON-SA2C-740-U-SL4 / EXISTING FIXTURES ON 20' POLE	EXISTING	13751	113	565
	2	S3	Single	GLEON-SA2C-740-U-SL3/SSS4A20SFN1 (20' AFG)	NEW	14474	113	226
	3	S4	Single	GLEON-SA2C-740-U-SL4 / SSS4A20SFN1 (20' AFG)	NEW	13751	113	339
	1	S5	Single	GLEON-SA2C-740-U-5MQ/SSS4A20SFN1 (20' AFG)	NEW	15203	113	113

- LIGHTING NOTES:**
- ALL LIGHTING SHALL CONFORM TO THE TOWN OF HUDSON ZONING ORDINANCE AND SITE PLAN REGULATIONS.
 - ALL LIGHTING TO BE DARK SKY COMPLIANT.
 - LIGHTING PROVIDED BY:
CHARRON INC.
40 LONDONDERRY TURNPIKE, SUITE 1
HOOKSETT, NH 03106
PHONE (603) 624-4827
 - LIGHT FIXTURES MAY BE SUBSTITUTED WITH AN EQUIVALENT TYPE OF FIXTURE PROVIDING THE FOOT CANDLES REMAIN THE SAME AS THE EXAMPLES SHOWN
 - ALL LIGHTS WILL BE EQUIPPED WITH DUSK TO DAWN PHOTOCELL SENSORS. LIGHTING WILL BE UTILIZED FROM DUSK TO DAWN.



SSS SQUARE STRAIGHT STEEL

LIGHT POST DETAIL



"S" LIGHT FIXTURE

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McGraw-Edison

GLEON Galleon

Area / Site Luminaire

Typical Applications

Outdoor • Parking Lots • Walkways • Roadways • Building Areas

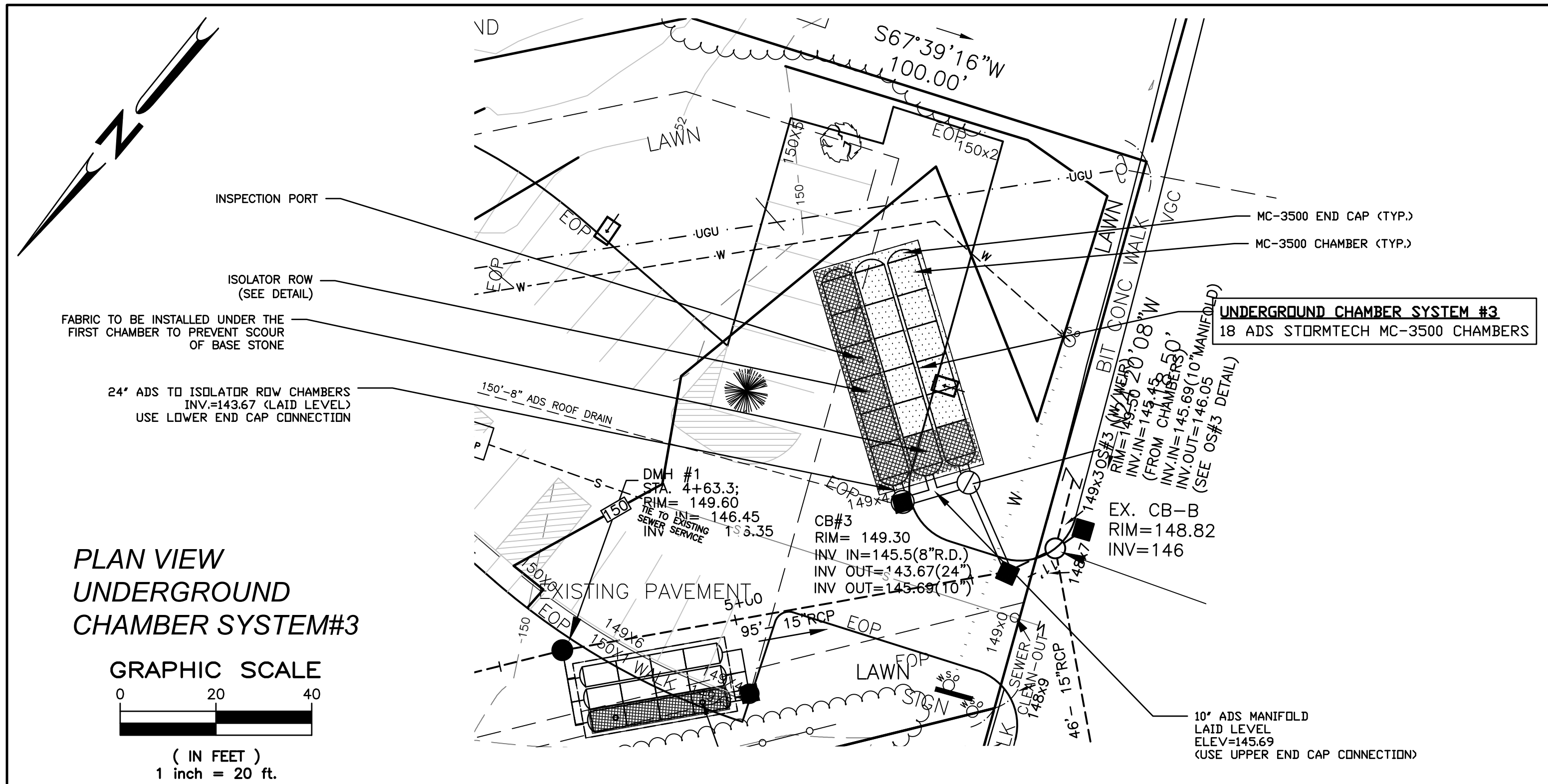
LIGHTING PLAN
TAX MAP 190 LOT 191
MACTHOMPSON SITE PLAN
48 LOWELL ROAD
HUDSON, NEW HAMPSHIRE 03051

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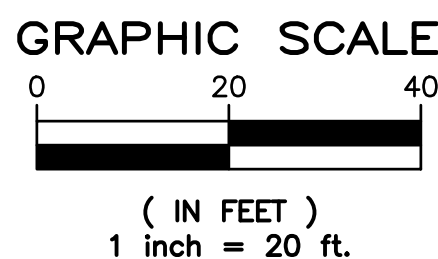
SCALE: 1"=30' SHEET 6 OF 11 AUGUST 3, 2021

F.O./TOWN COMMENTS	DATE

BENCHMARK LLC
Consulting Engineers Land Planners
1F Commons Drive, Suite 35
Londonderry, New Hampshire 03053
Phone: (603) 437-5000



**PLAN VIEW
UNDERGROUND
CHAMBER SYSTEM#3**



MC-3500 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-3500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

- STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM SPACING BETWEEN THE CHAMBER ROWS.
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

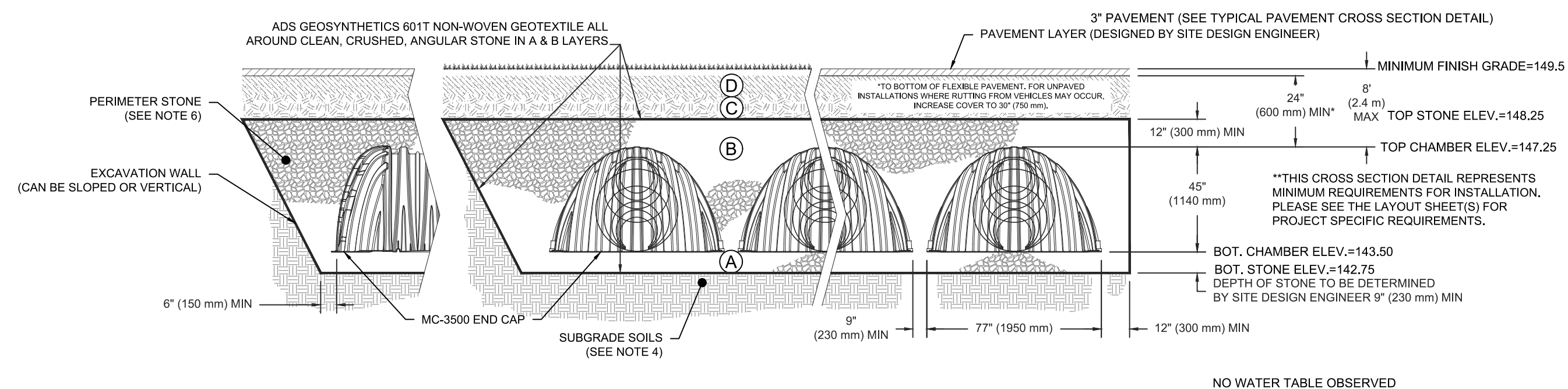
NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER Tired LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
 - FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.
 - USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.
- CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS, PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ³ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ³ 3, 4	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ³ 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) MAX LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
 - WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR SPECIAL LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
 - ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

NOMINAL CHAMBER SPECIFICATIONS
SIZE (W X H X INSTALLED LENGTH)
CHAMBER STORAGE
MINIMUM INSTALLED STORAGE*
WEIGHT

77.0" X 45.0" X 86.0" (1956 mm X 1143 mm X 2184 mm)
109.9 CUBIC FEET (3.11 m³)
175.0 CUBIC FEET (4.96 m³)
134 lbs. (60.8 kg)

NOMINAL END CAP SPECIFICATIONS
SIZE (W X H X INSTALLED LENGTH)
END CAP STORAGE
MINIMUM INSTALLED STORAGE*
WEIGHT

75.0" X 45.0" X 22.2" (1905 mm X 1143 mm X 564 mm)
0.42 CUBIC FEET (0.42 m³)
45.1 CUBIC FEET (1.28 m³)
49 lbs. (22.2 kg)

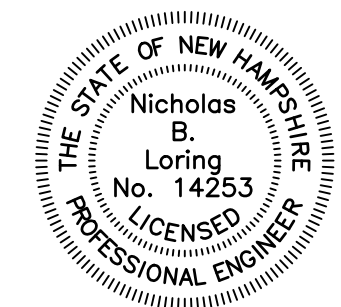
*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" (152 mm) STONE BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

PARTIAL CUT HOLES AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
PARTIAL CUT HOLES AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"
END CAPS WITH A WELDED CROWN PLATE END WITH "C"

PART #	STUB	B	C
MC3500IEPP06T	6" (150 mm)	33.21" (844 mm)	—
MC3500IEPP06B	—	—	0.66" (17 mm)
MC3500IEPP08T	8" (200 mm)	31.16" (791 mm)	—
MC3500IEPP08B	—	—	0.81" (21 mm)
MC3500IEPP10T	10" (250 mm)	29.04" (738 mm)	—
MC3500IEPP10B	—	—	0.93" (24 mm)
MC3500IEPP12T	12" (300 mm)	26.36" (670 mm)	—
MC3500IEPP12B	—	—	1.35" (34 mm)
MC3500IEPP15T	15" (375 mm)	23.39" (594 mm)	—
MC3500IEPP15B	—	—	1.50" (38 mm)
MC3500IEPP18T	18" (450 mm)	20.03" (509 mm)	—
MC3500IEPP18W	—	—	1.77" (45 mm)
MC3500IEPP24T	24" (600 mm)	14.48" (368 mm)	—
MC3500IEPP24W	—	—	2.06" (52 mm)
MC3500IEPP24BW	—	—	2.75" (70 mm)
MC3500IEPP30B	30" (750 mm)	—	—

NOTE: ALL DIMENSIONS ARE NOMINAL.

ADVANCED DRAINAGE SYSTEMS, INC.



**DRAINAGE DETAIL SHEET
TAX MAP 190 LOT 191
MACHTHOMPSON SITE PLAN
48 LOWELL ROAD
HUDSON, NEW HAMPSHIRE 03051**

OWNER/ PREPARED FOR:
MACHTHOMPSON REALTY, INC.
3 MARMON DRIVE
NASHUA, NEW HAMPSHIRE 03060
HCRD BOOK 8875/PAGE 2378

SCALE: AS NOTED SHEET 7 OF 11 AUGUST 3, 2021

F.O./TOWN COMMENTS	DATE

ON-SITE DRAINAGE OPERATIONS AND MAINTENANCE SCHEDULE

CATCH BASIN - MAINTENANCE PROCEDURES:

- STEP 1) INSPECT CATCH BASIN UPSTREAM SEMIANNUALLY FOR SEDIMENT
- STEP 2) REMOVE GRATES AND COVERS
- STEP 3) SKIM OFF OILS AND FLOATABLES.
- STEP 4) MEASURE THE DEPTH OF SEDIMENT
- STEP 5) IF SEDIMENT IS AT A DEPTH GREATER THAN 6" PROCEED TO STEP 6, IF NOT PROCEED TO STEP 7
- STEP 6) VACUUM OR MANUALLY REMOVE SEDIMENT
- STEP 7) REPLACE GRATES OR COVERS
- STEP 8) RECORD OBSERVATION, DEPTH & DATE AND SCHEDULE NEXT INSPECTION.

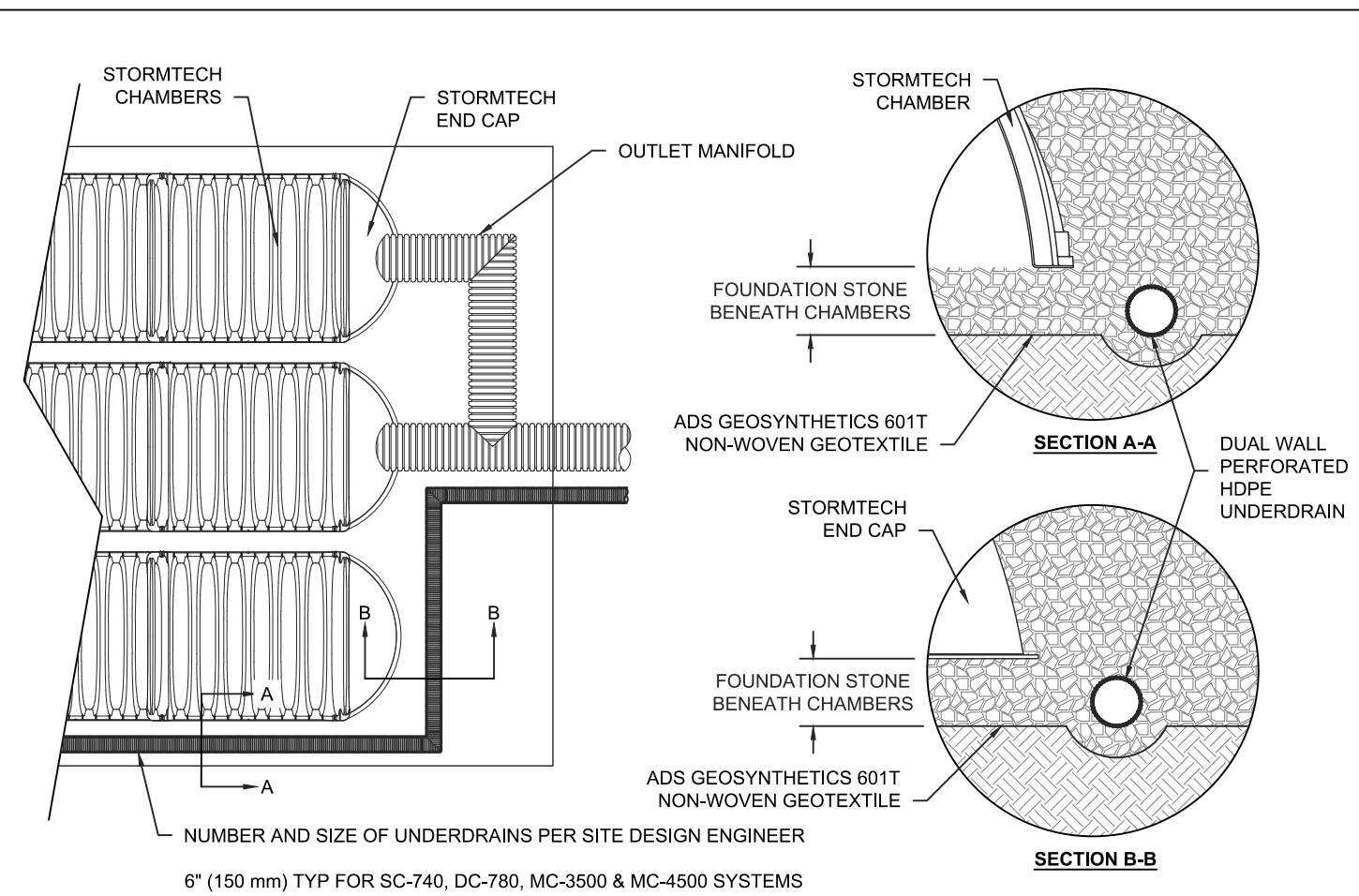
OUTLET STRUCTURE MAINTENANCE PROCEDURES:

- STEP 1) INSPECT OUTLET STRUCTURE ON A SEMIANNUAL BASIS
- STEP 2) INSPECTION FORMS INCLUDED IN THE LONG TERM INSPECTION AND MAINTENANCE MANUAL FOR THIS SITE.
- STEP 3) INSPECT SLOTTED WEIRS. IF SEDIMENT OR DEBRIS IS CLOGGING WEIR ORIFICES GO TO STEP 3, OTHERWISE GO TO STEP 5.
- STEP 4) REMOVE ALL TRASH, DEBRIS AND SEDIMENT OUTSIDE THE OUTLET STRUCTURE MANUALLY OR USING LOW IMPACT EQUIPMENT.
- STEP 5) REMOVE GRATES OR COVERS
- STEP 6) VACUUM OR MANUALLY REMOVE TRASH, SEDIMENT OR DEBRIS
- STEP 7) VACUUM OILS AND FLOATABLES
- STEP 8) REPLACE GRATES AND COVERS
- STEP 9) RECORD OBSERVATION AND DEPTH OF SEDIMENT, PROTECTION BAR MAINTENANCE AND SCHEDULE NEXT INSPECTION.

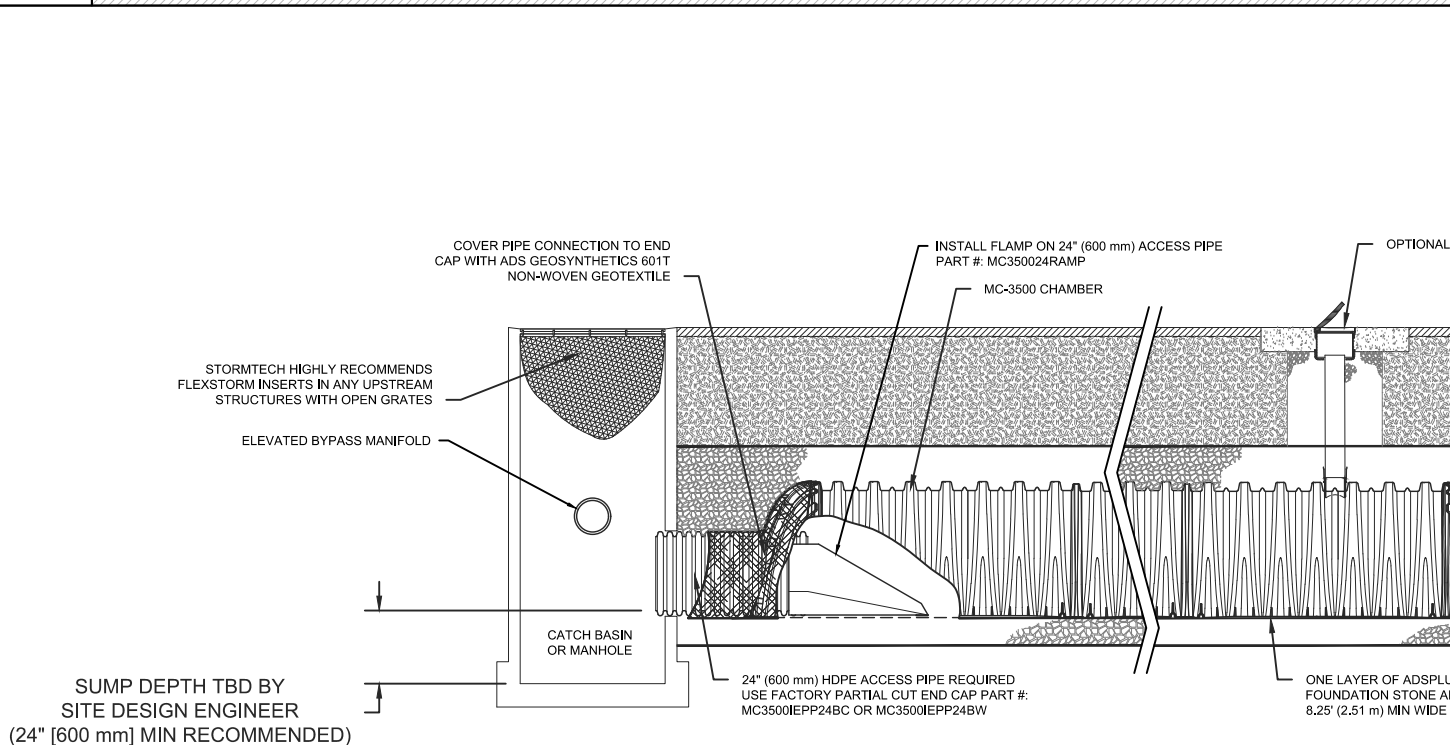
SEE ISOLATOR ROW INSPECTION NOTES TO LEFT

INSPECTION & MAINTENANCE LOGS

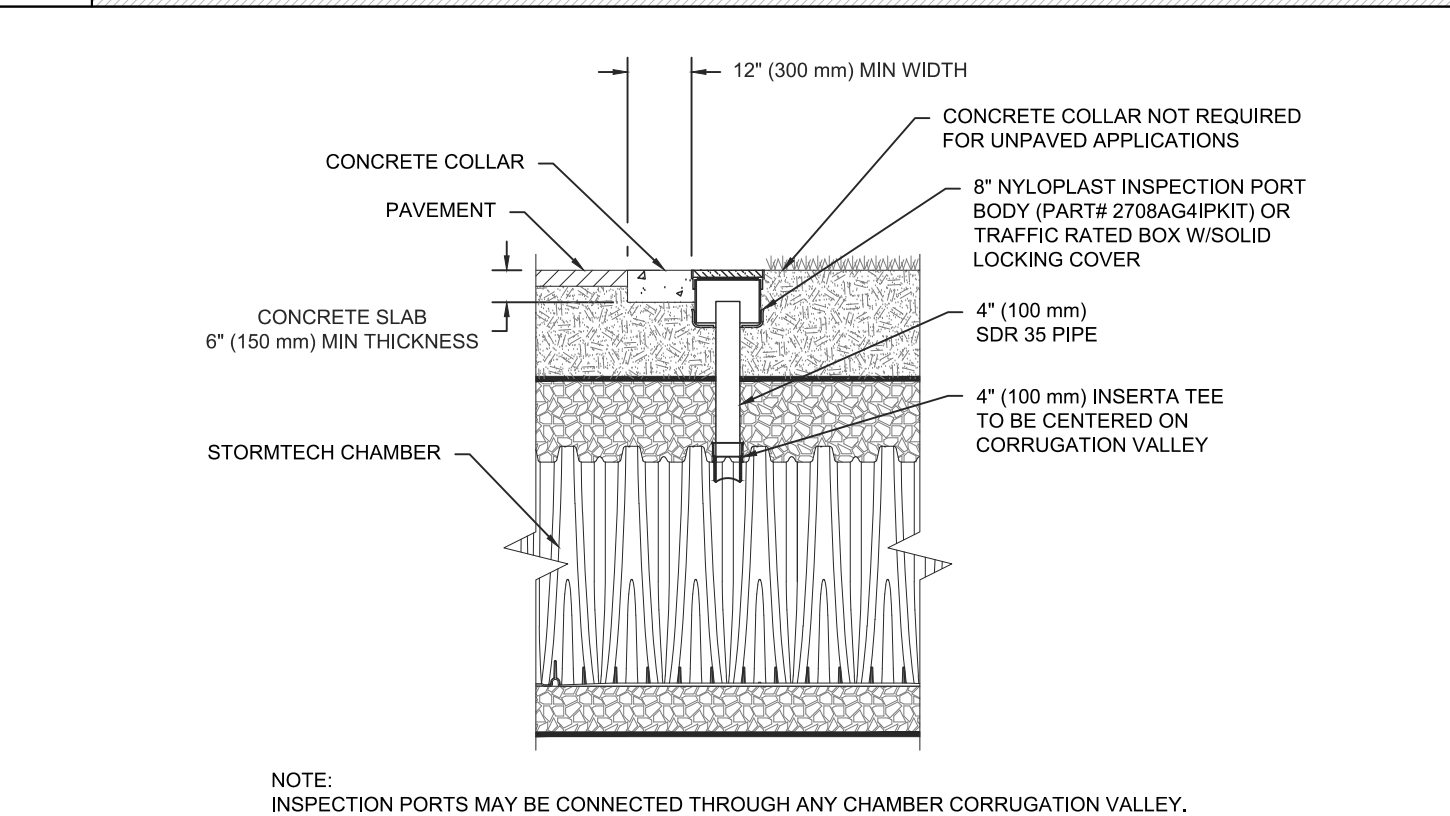
STORM WATER INSPECTION & MAINTENANCE REPORTS (SEE INSPECTION & MAINTENANCE MANUAL BY BENCHMARK, LLC) SUMMARIZING ALL OF THE ABOVE SHALL BE KEPT ON FILE BY THE OWNER AND PROVIDED TO THE TOWN UPON REQUEST.



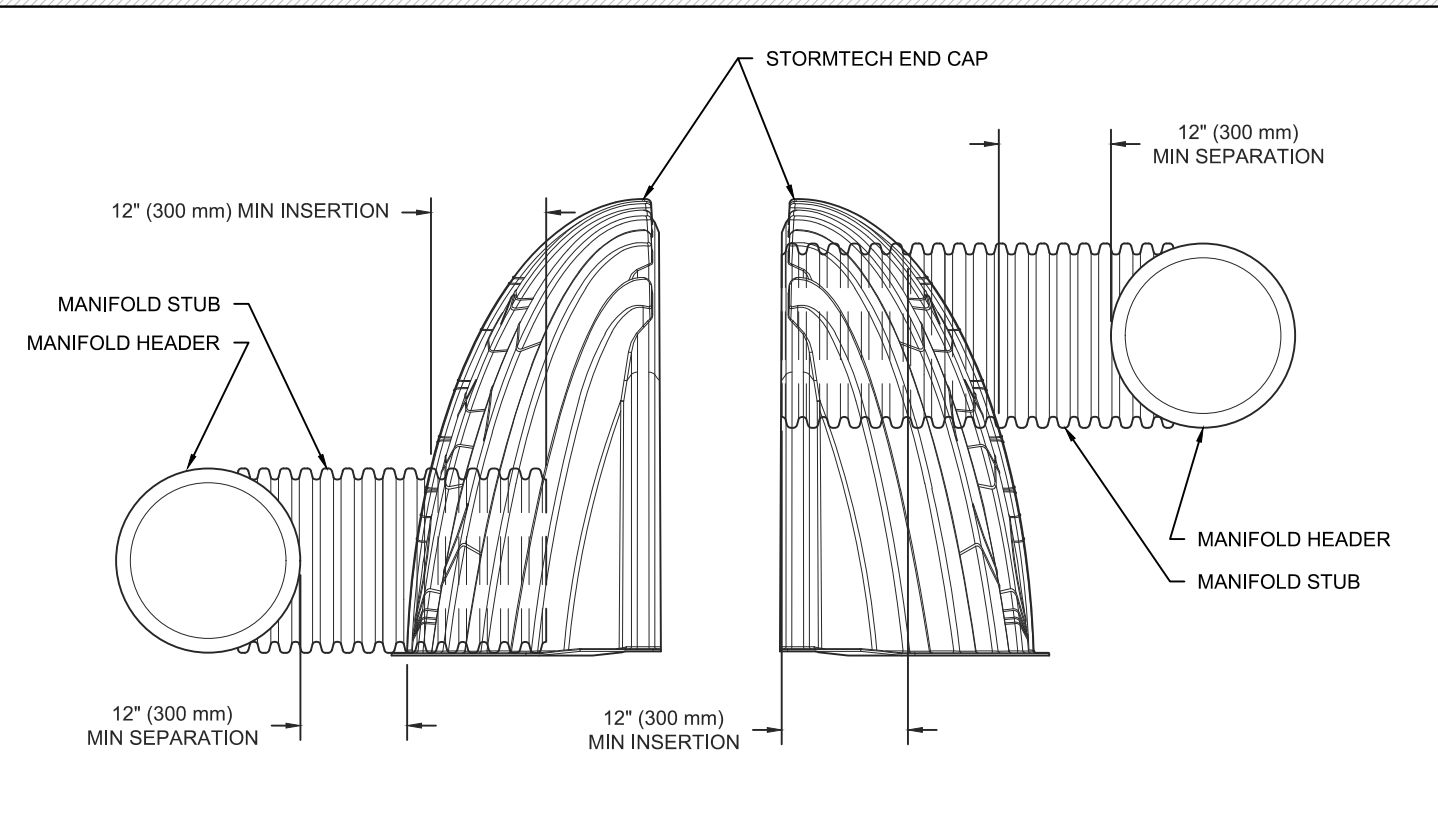
5 UNDERDRAIN DETAIL



3 MC-3500 ISOLATOR ROW PLUS DETAIL



4 4" PVC INSPECTION PORT DETAIL (MC SERIES CHAMBER)



7 MC-SERIES END CAP INSERTION DETAIL

INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
 - A. INSPECTION PORTS (IF PRESENT)
 - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
 - B. ALL ISOLATOR PLUS ROWS
 - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
 - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
 - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
 - A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
 - B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
 - C. VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS, RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

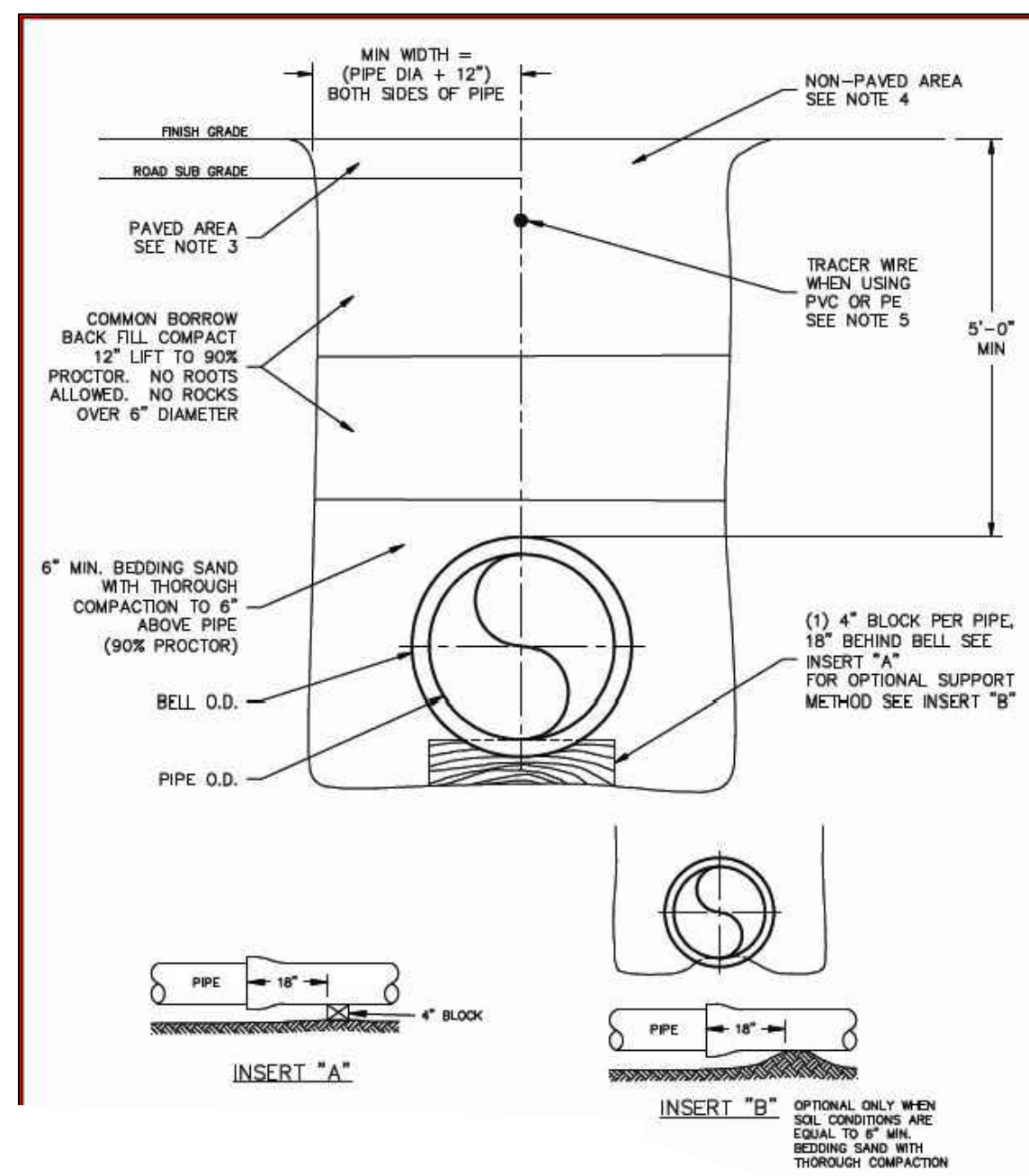
NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

MC-3500 STANDARD DETAILS

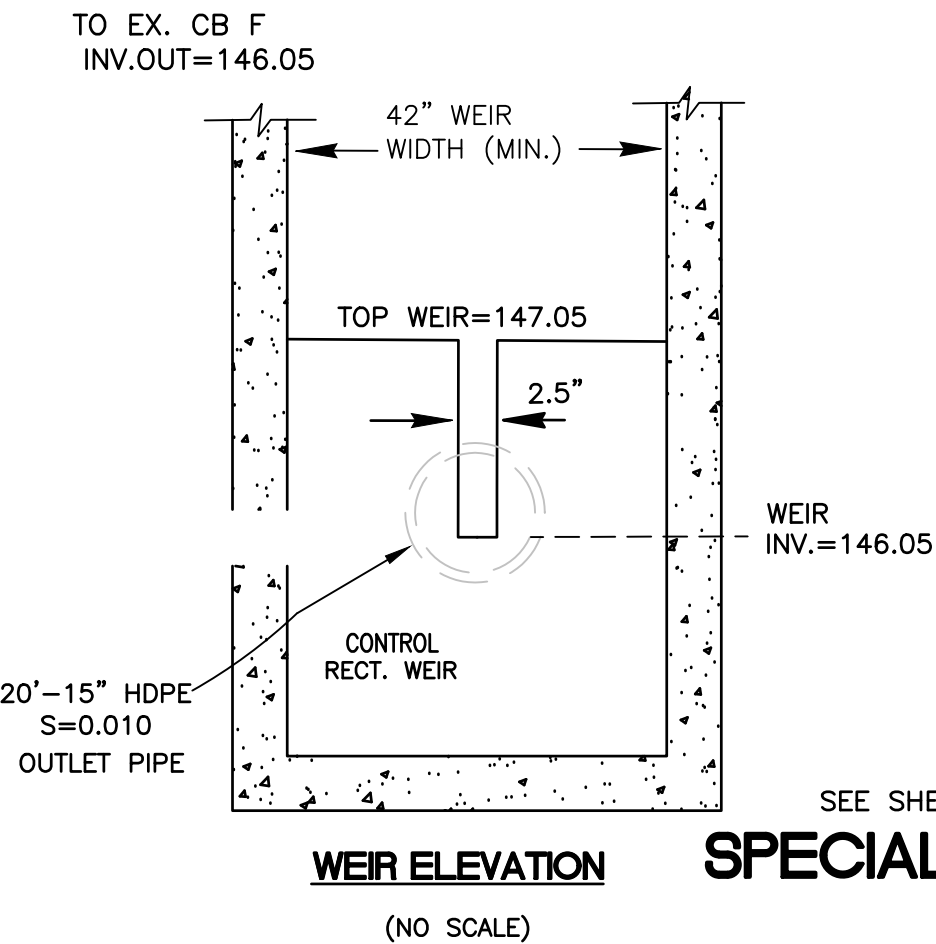
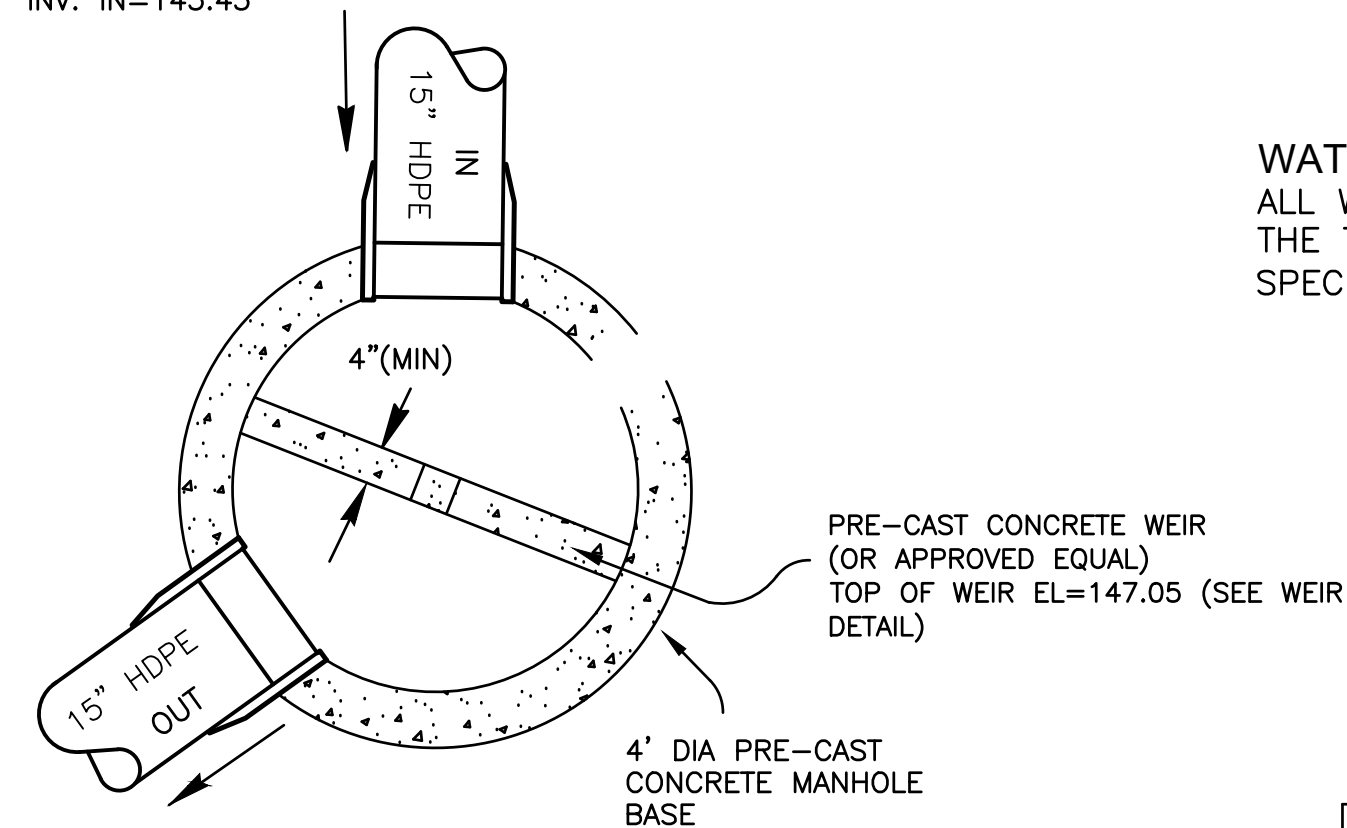


4640 TRUJMAN BLVD
HILLIARD, OH 43026

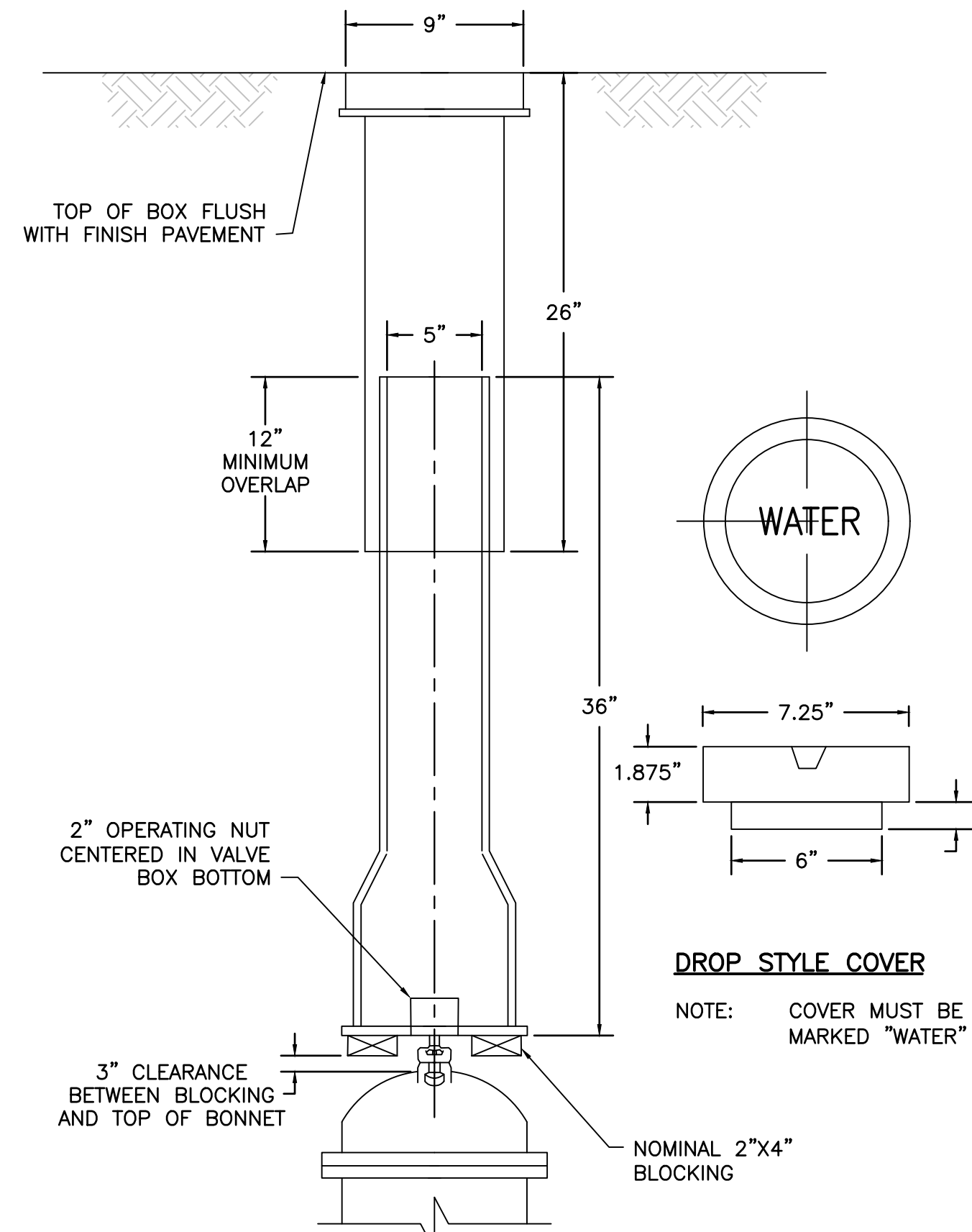


- NOTES:
1. WILL CONFORM TO THE TOWN
 2. FEET FROM THE TOP OF PIPE
 3. ALL TYPE ARE TO BE IN CAL JURISDICTION IN PAVED AREAS.
 4. REQUIREMENTS FOR GRAVEL, LOAM AND/OR SEED ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING JURISDICTION IN NON-PAVED AREAS
 5. 10 GAUGE TRACER WIRE AS MANUFACTURED BY BMS, DIVISION OF ALBLE STAR COP, AVON MASS OR EQUIVALENT

FROM CHAMBER SYSTEM #3
INV. IN=145.45



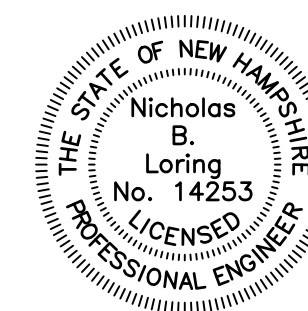
WEIR ELEVATION SPECIAL O.S.#3 DETAIL (NO SCALE)



- NOTES:**
1. ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO PENNSYLVANIA WATERWORKS TECHNICAL SPECIFICATIONS.
 2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.

TYPICAL VALVE BOX DETAIL (NO SCALE)

WATER CONSTRUCTION NOTES:
ALL WATER LINE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF HUDSON WATER DEPARTMENT TECHNICAL SPECIFICATIONS FOR MAIN, HYDRANT AND SERVICE INSTALLATIONS"



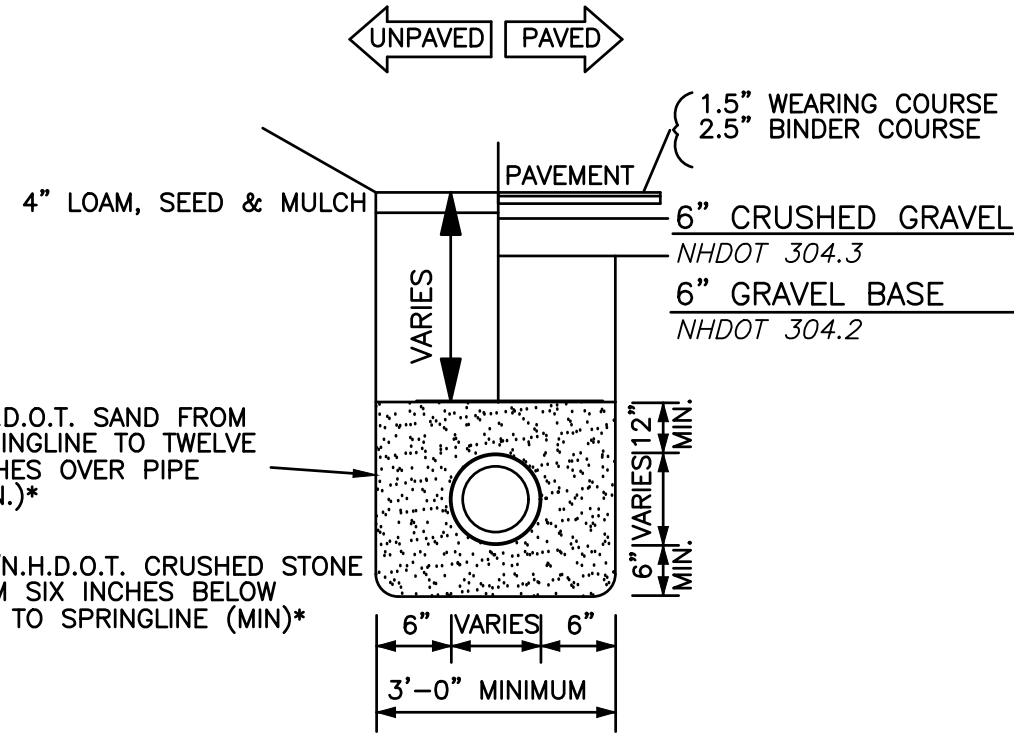
DRAINAGE DETAIL SHEET
TAX MAP 190 LOT 191
MACTHOMPSON SITE PLAN
48 LOWELL ROAD
HUDSON, NEW HAMPSHIRE 03051

OWNER/ PREPARED FOR:
MACTHOMPSON REALTY, INC.
3 MARMON DRIVE
NASHUA, NEW HAMPSHIRE 03060
HCRD BOOK 8875/PAGE 2378

SCALE: AS NOTED SHEET 8 OF 11 AUGUST 3, 2021

F.O./TOWN COMMENTS	11/15/2021
PLANNING COMMENTS	9/21/21 09/23/2021
REVISIONS	DATE

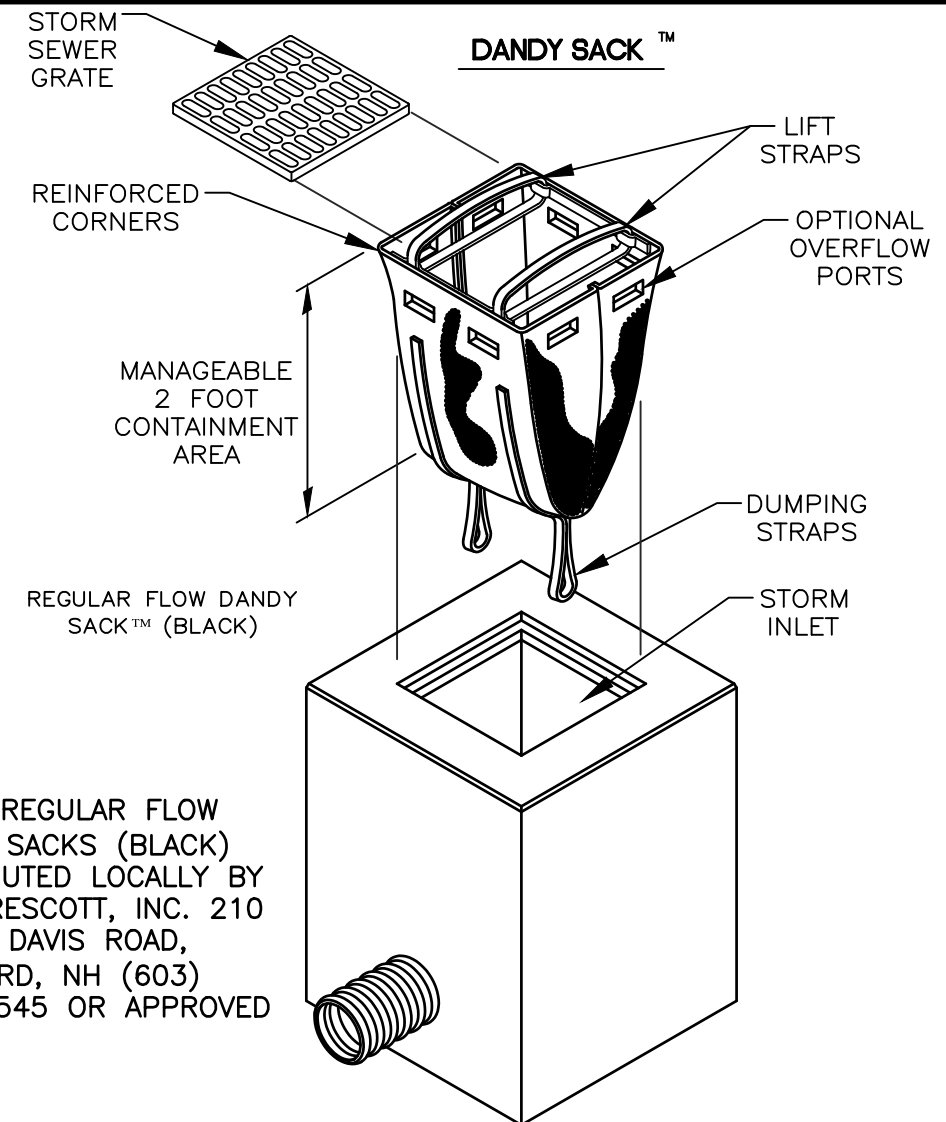




TYPICAL DRAIN TRENCH DETAIL
(NO SCALE)

SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOPSOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX INCHES IN THE LARGEST DIMENSION, OR ANY MATERIAL WHICH, AS DETERMINED BY THE TOWN OF HUDSON TOWN ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION. SUITABLE MATERIAL SHALL BE PLACED IN 12\"/>

IN CROSS-COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE TOWN OF HUDSON TOWN ENGINEER MAY PERMIT THE USE OF TOPSOIL, LOAM OR PEAT, IF SATISFIED THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE STRUCTURES FOR MAINTENANCE AND RECONSTRUCTION (WHEN NECESSARY) WILL BE PRESERVED. SUITABLE MATERIAL SHALL BE PLACED IN 18\"/>



DETAIL OF INLET SEDIMENT CONTROL DEVICE
(NOT TO SCALE)

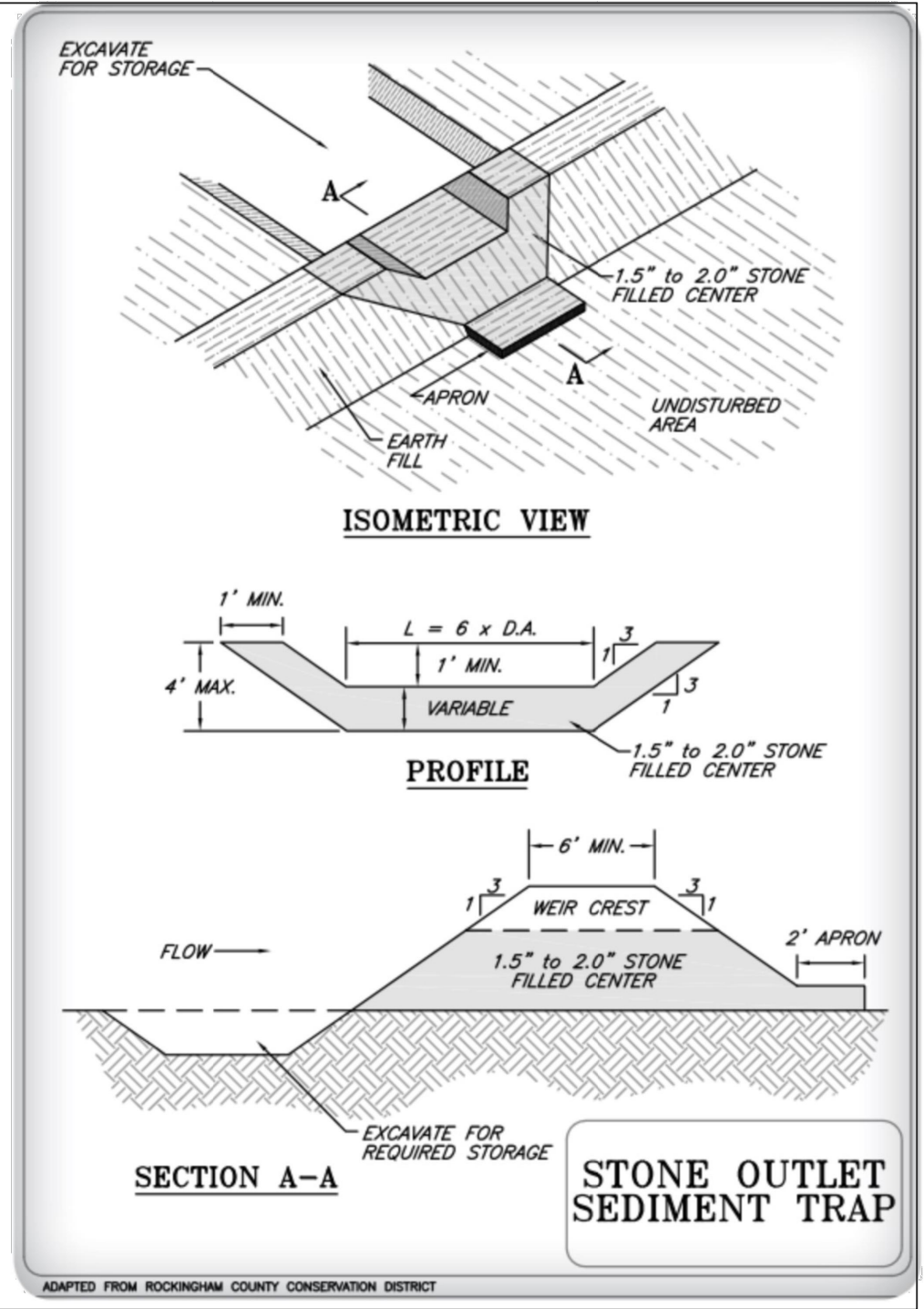
GENERAL CONSTRUCTION NOTES:

FUGITIVE DUST GENERATED ON SITE SHALL BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000.
 Env-Wq 1504.06(k) THIS PROJECT SHALL MEET THE REQUIREMENTS AND INTENT OF RSA 430:51-57 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.

Env-Wq 1505.03 **MAXIMUM OPEN AREA ALLOWED:**
 (A) ALL AREAS OF UNSTABILIZED SOIL SHALL BE TEMPORARILY STABILIZED AS SOON AS PRACTICAL BUT IN ALL CASES WITHIN 45 DAYS OF INITIAL DISTURBANCE, UNLESS A SHORTER TIME IS SPECIFIED BY LOCAL AUTHORITIES. THE CONSTRUCTION SEQUENCE APPROVED AS PART OF THE ISSUED PERMIT, OR AN INDEPENDENT MONITOR; AND PERMANENTLY STABILIZED AS SOON AS PRACTICABLE BUT IN ALL CASES WITHIN 3 DAYS OF FINAL GRADING.
 (B) THE AREA OF UNSTABILIZED SOILS IS APPROXIMATELY 50,000 SQ. FT.

Env-Wq 1505.06 **COLD WEATHER SITE STABILIZATION:**
 (A) TO ADEQUATELY PROTECT WATER QUALITY DURING COLD WEATHER AND DURING SPRING RUNOFF, THE ADDITIONAL STABILIZATION TECHNIQUES SPECIFIED BELOW SHALL BE EMPLOYED DURING THE PERIOD FROM OCTOBER 15 THROUGH MAY 1.
 (B) SUBJECT TO (C), BELOW, THE AREA OF EXPOSED, UNSTABILIZED SOILS SHALL BE:
 (1) LIMITED TO APPROXIMATELY ONE ACRE; AND
 (2) PROTECTED AGAINST EROSION BY THE METHODS DESCRIBED IN THIS SECTION PRIOR TO ANY THAW OR SPRING MELT EVENT.
 (C) THE ALLOWED AREA OF EXPOSED SOIL MAY BE INCREASED IF A WINTER CONSTRUCTION PLAN IS DEVELOPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST AND SUBMITTED TO THE DEPARTMENT FOR APPROVAL AS A REQUEST TO WAIVE THE ONE-ACRE LIMIT.
 (D) SUBJECT TO (F) AND (G), BELOW, ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF LESS THAN 15% THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR THAT ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDED AND COVERED WITH 3 TO 4 TONS OF HAY OR STRAW MULCH PER ACRE AND SECURED WITH ANCHORED NETTING OR TACKIFIER, OR 2 INCHES OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(b). (SEE BELOW)
 (E) SUBJECT TO (F) AND (G), BELOW, ALL PROPOSED VEGETATED AREAS HAVING A SLOPE OF 15% OR GREATER THAT DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR THAT ARE DISTURBED AFTER OCTOBER 15, SHALL BE SEEDED AND COVERED WITH A PROPERLY INSTALLED AND ANCHORED EROSION CONTROL BLANKET OR WITH A LEAST 4 INCHES OF EROSION CONTROL MIX MEETING THE CRITERIA OF ENV-WQ 1506.05(b). (SEE BELOW)
 (F) ANCHORED HAY MULCH OR EROSION CONTROL MIX THAT MEETS THE CRITERIA OF ENV-WQ 1506.05(b) SHALL NOT BE INSTALLED OVER SNOW OF GREATER THAN ONE (1) INCH IN DEPTH.
 (G) EROSION CONTROL BLANKETS SHALL NOT BE INSTALLED OVER SNOW GREATER THAN ONE (1) INCH IN DEPTH OR ON FROZEN GROUND.
 (H) ALL PROPOSED STABILIZATION IN ACCORDANCE WITH (D) OR (E), ABOVE, SHALL BE COMPLETED WITHIN A DAY OF ESTABLISHING THE GRADE THAT IS FINAL OR THAT OTHERWISE WILL EXIST FOR MORE THAN 5 DAYS.
 (I) ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS, AS DETERMINED BY THE OWNER'S ENGINEERING CONSULTANT.
 (J) AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING AREAS WHERE ACTIVE CONSTRUCTION OF THE ROAD OR PARKING AREA HAS STOPPED FOR THE WINTER SEASON SHALL BE PROTECTED WITH A MINIMUM 3 INCH LAYER OF BASE COURSE GRAVELS MEETING THE GRADATION REQUIREMENTS OF NHDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, 2016, TABLE 304-1, ITEM NO. 304.1, 304.2, OR 304.3.

Env-Wq 1506.05 (b): **EROSION CONTROL MIX SHALL:**
 1. HAVE AN ORGANIC PORTION BETWEEN 25% AND 65%, DRY WEIGHT BASIS THAT IS:
 a. FIBROUS AND ELONGATED SUCH AS FROM SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR EQUIVALENT MANUFACTURED PRODUCTS; AND
 b. NOT COMPRISED OF WOOD CHIPS, BARK CHIPS, GROUND CONTROL DEBRIS, OR REPROCESSED WOOD PRODUCTS;
 2. NOT CONTAIN SILTS, CLAYS, OR FINE SANDS;
 3. HAVE A PARTICLE SIZE BY WEIGHT OF 100% PASSING A 3-INCH SCREEN, 90% TO 100% PASSING A 1-INCH SCREEN, 70% TO 100% PASSING A 0.75-INCH SCREEN, AND 30% TO 75% PASSING A 0.25-INCH SCREEN; AND
 4. HAVE A pH BETWEEN 5.0 AND 8.0.



SEDIMENT TRAP DETAIL
(NO SCALE)

- CONSTRUCTION SPECIFICATIONS**
- MINIMUM STONE SIZE FOR WEIR AND APRON SHALL BE 1 1/2 INCH CRUSHED STONE
 - SEE PLAN VIEW FOR SIZING REQUIREMENTS
 - THE TRAP SHALL BE CLEANED WHEN 50% OF THE ORIGINAL VOLUME IS FILLED
 - MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED

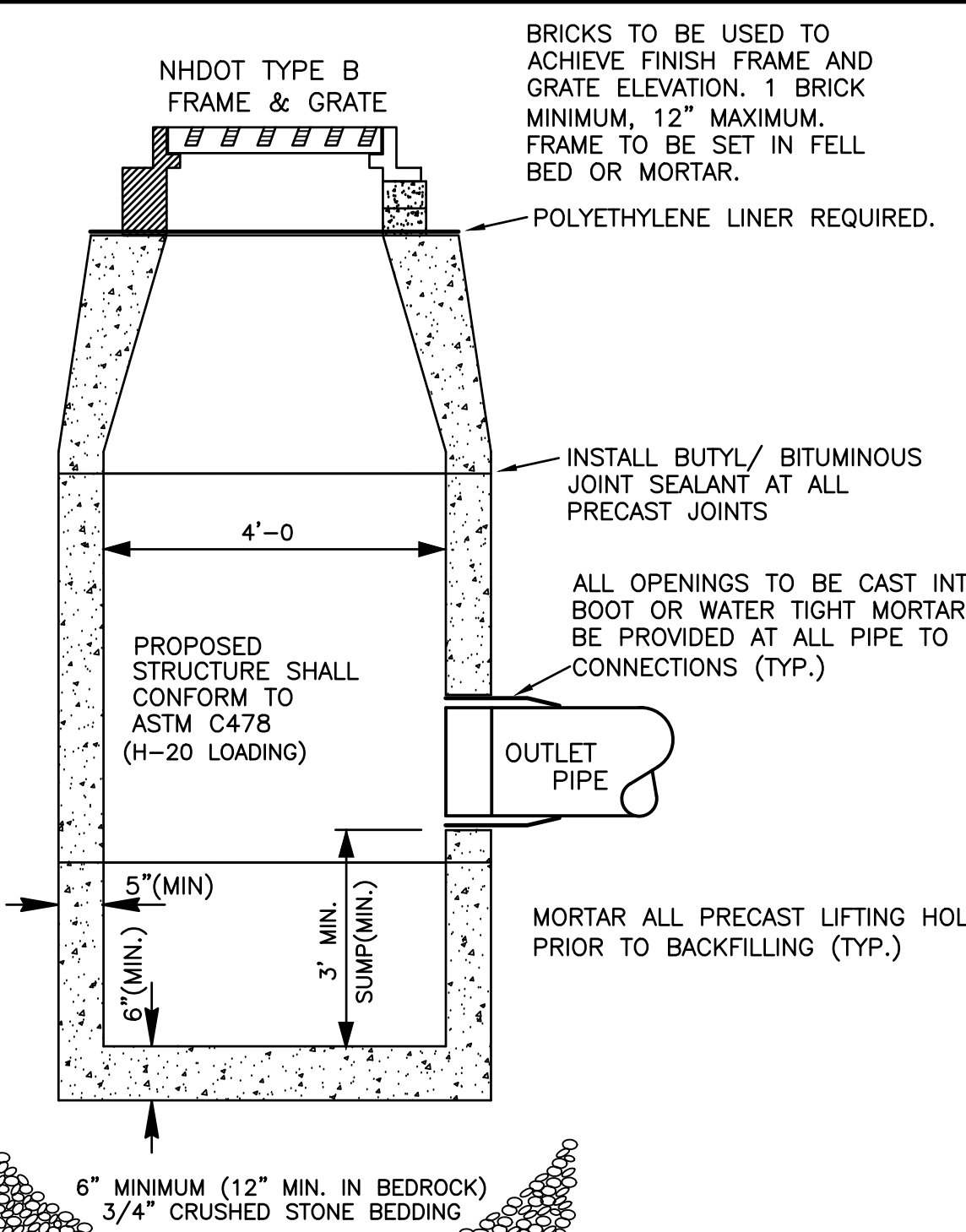
APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING: _____

SIGNATURE _____ SIGNATURE DATE _____

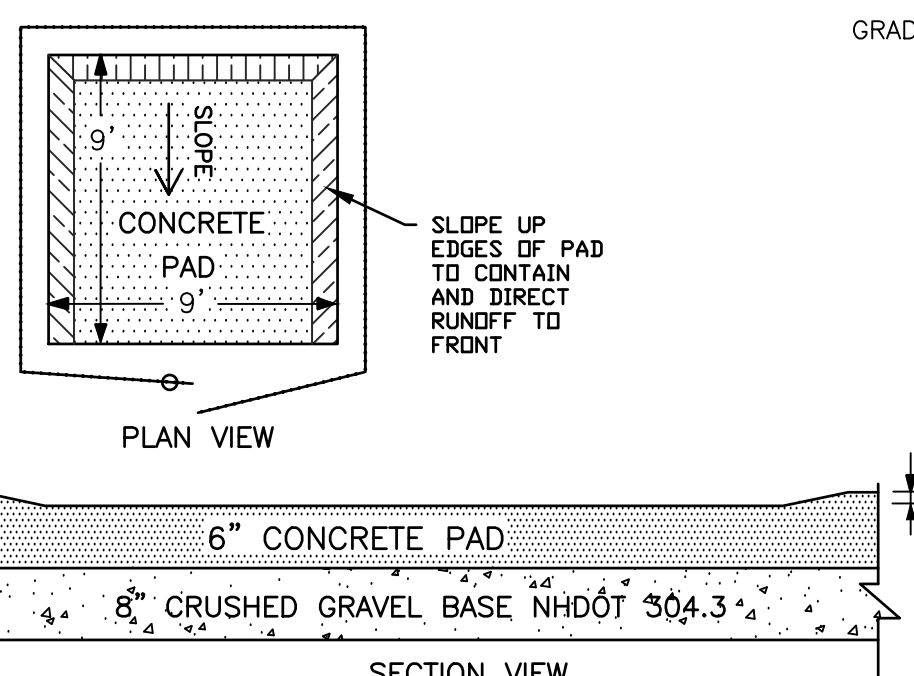
SIGNATURE _____ SIGNATURE DATE _____

SITE PLANS ARE VALID FOR ONE (1) YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

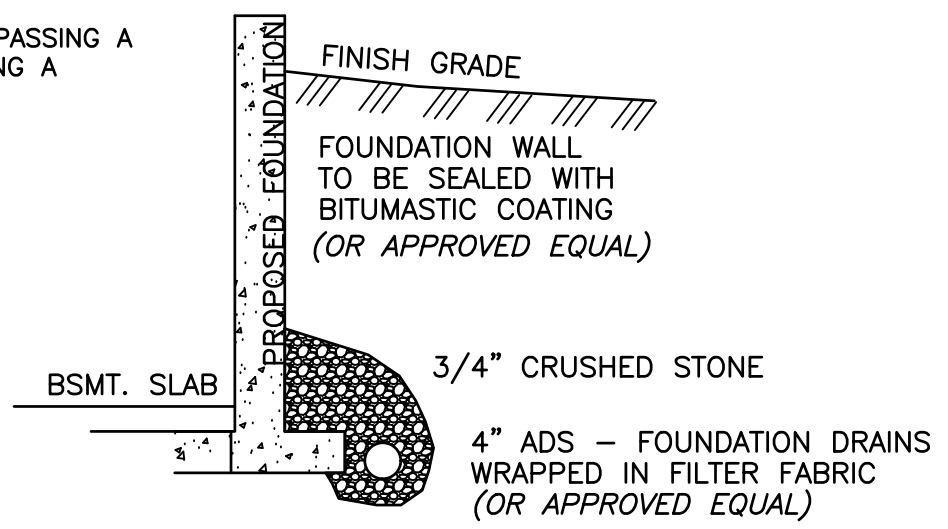


CATCH BASIN DETAIL
(NO SCALE)

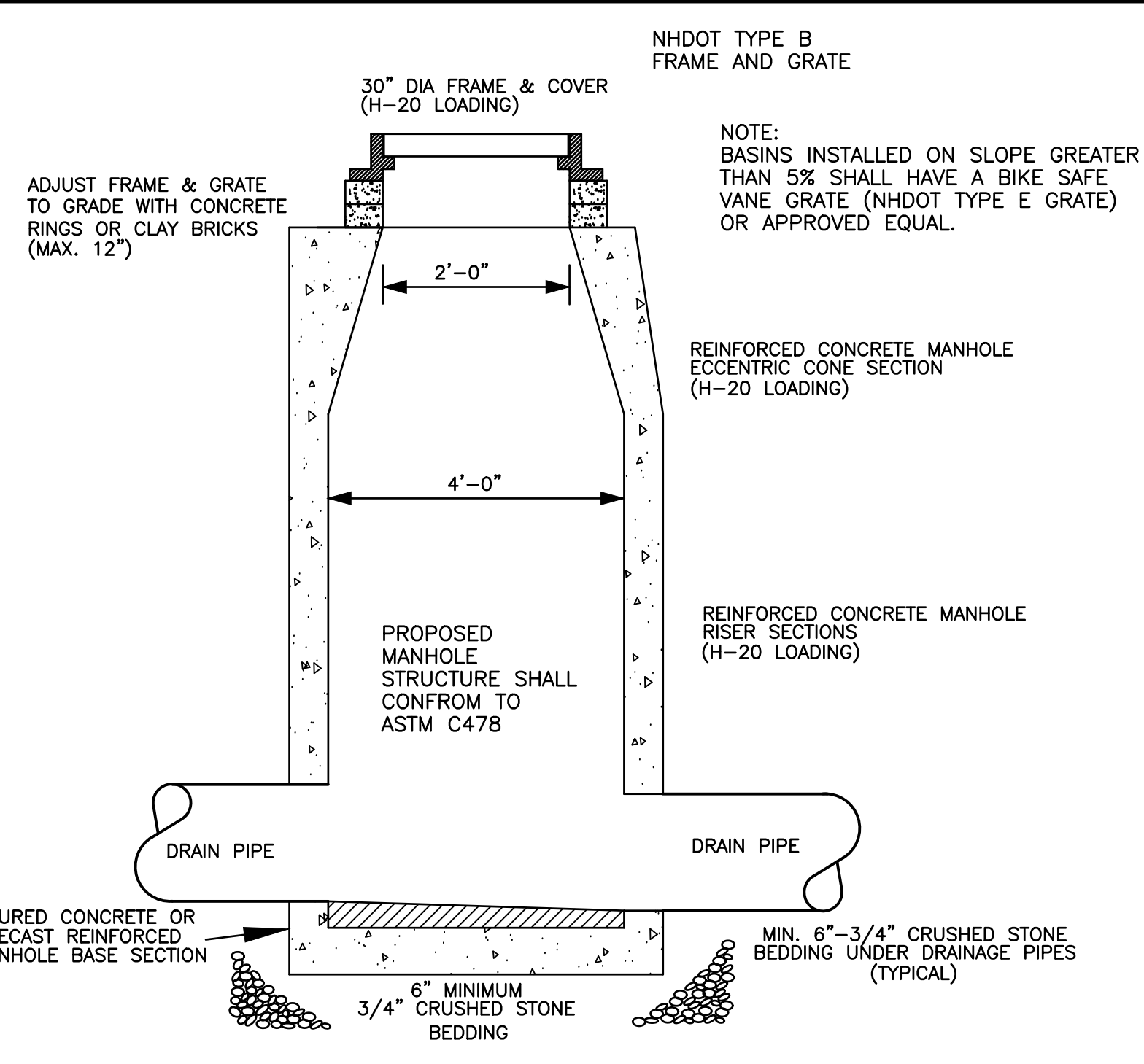
POLYETHYLENE LINER NOTES:
 ALL CATCH BASINS TO BE OUTFITTED WITH A POLYETHYLENE LINER DOWNSPOUT. POLYETHYLENE LINER (NHDOT ITEM 604.0007) SHALL BE FABRICATED AT THE SHOP. DOWNSPOUT SHALL BE EXTRUSION FILLET WELDED TO THE POLYETHYLENE SHEET. PLACE A CONTINUOUS BEAD OF AN APPROVED SILICONE SEALANT BETWEEN THE FRAME AND POLYETHYLENE SHEET.
 PLACE CLASS AA CONCRETE TO 2\"/>



CONCRETE DUMPSTER PAD DETAIL
(NO SCALE)



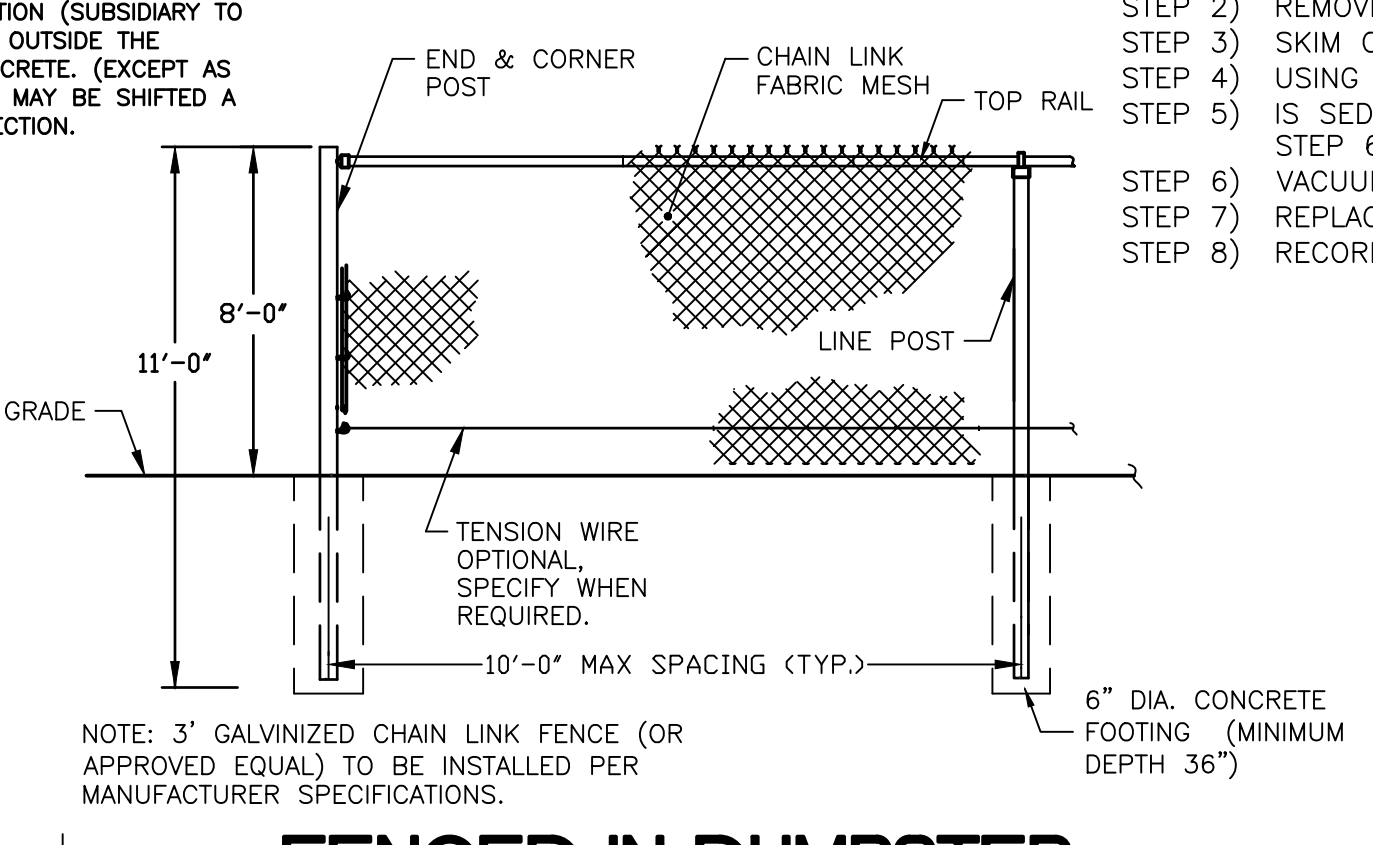
TYPICAL FOUNDATION DRAIN TRENCH DETAIL
(NOT TO SCALE)



DRAINAGE MANHOLE DETAIL
(NO SCALE)

ON-SITE DRAINAGE OPERATIONS AND MAINTENANCE SCHEDULE

- CATCH BASIN - MAINTENANCE PROCEDURES:
- INSPECT CATCH BASIN UPSTREAM SEMIANNUALLY FOR SEDIMENT
 - REMOVE GRATES AND COVERS
 - SKIM OFF OILS AND FLOATABLES.
 - USING A STADIA ROD, MEASURE THE DEPTH OF SEDIMENT
 - IF SEDIMENT IS AT A DEPTH GREATER THAN 6\"/>



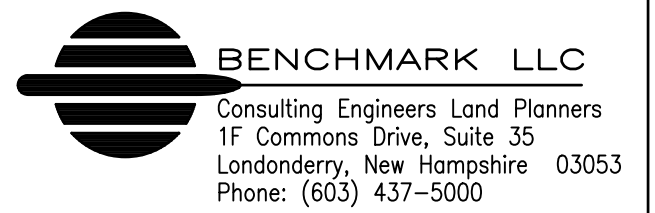
FENCED IN DUMPSTER ENCLOSURE
(NO SCALE)

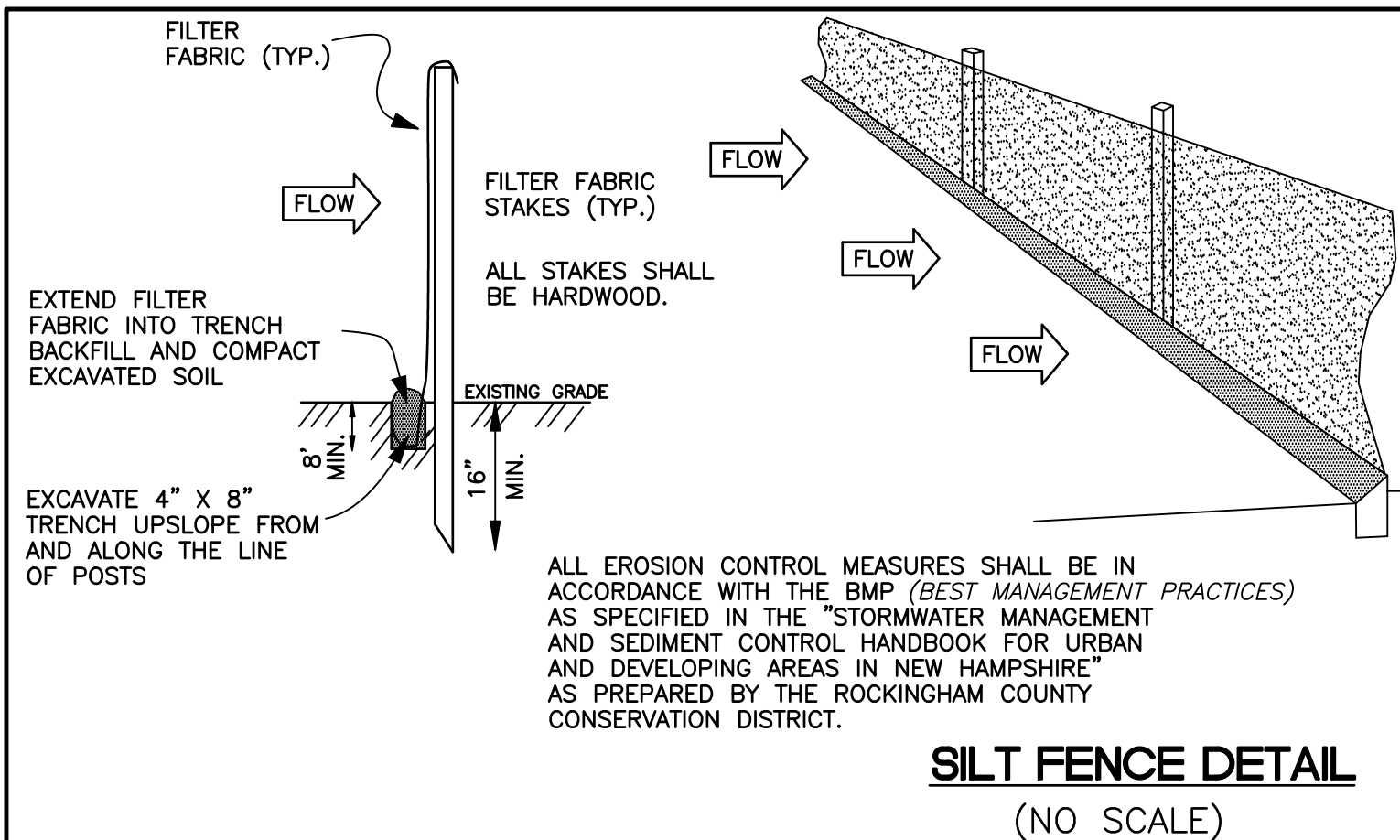
DRAINAGE DETAIL SHEET
TAX MAP 190 LOT 191
MACTHOMPSON SITE PLAN
48 LOWELL ROAD
HUDSON, NEW HAMPSHIRE 03051

OWNER/ PREPARED FOR:
 MACTHOMPSON REALTY, INC.
 3 MARMON DRIVE
 NASHUA, NEW HAMPSHIRE 03060
 HCRD BOOK 8875/PAGE 2378

SCALE: AS NOTED SHEET 9 OF 11 AUGUST 3, 2021

F.O./TOWN COMMENTS	11/15/2021
PLANNING COMMENTS	9/23/2021
REVISIONS	DATE





SILT FENCE MAINTENANCE

1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
4. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

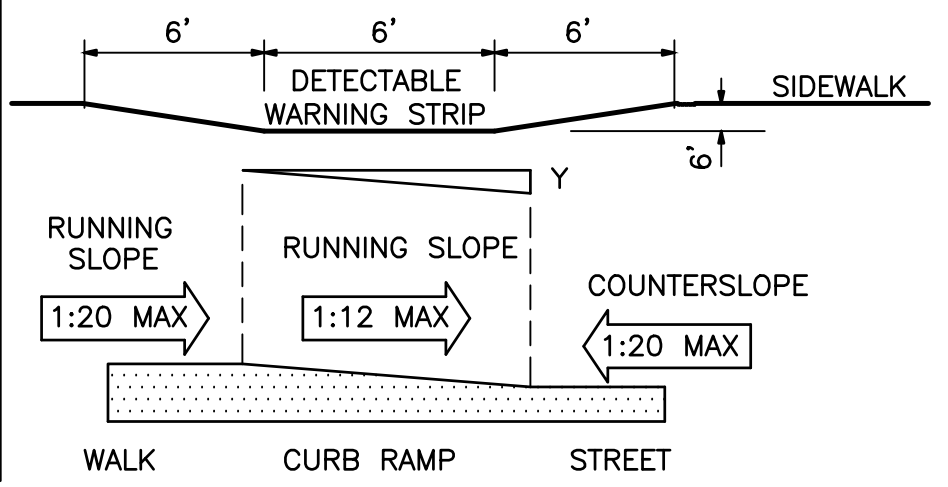
CONSTRUCTION SPECIFICATIONS

1. THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.
2. THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
3. WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
4. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MIDSIDE AND BOTTOM.
5. WHEN 2 SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED.
6. FENCE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG AND DRIVEN A MINIMUM OF 16 INCHES INTO THE GROUND. THE MAXIMUM SPACING BETWEEN STAKES SHALL BE 10 FEET. WOOD POSTS SHALL BE OF SOUND QUALITY HARDWOOD AND SHALL HAVE A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES.
7. MAINTENANCE SHALL BE PERFORMED AS NEEDED TO PREVENT BULGES IN THE SILT FENCE DUE TO DEPOSITION OF SEDIMENT.

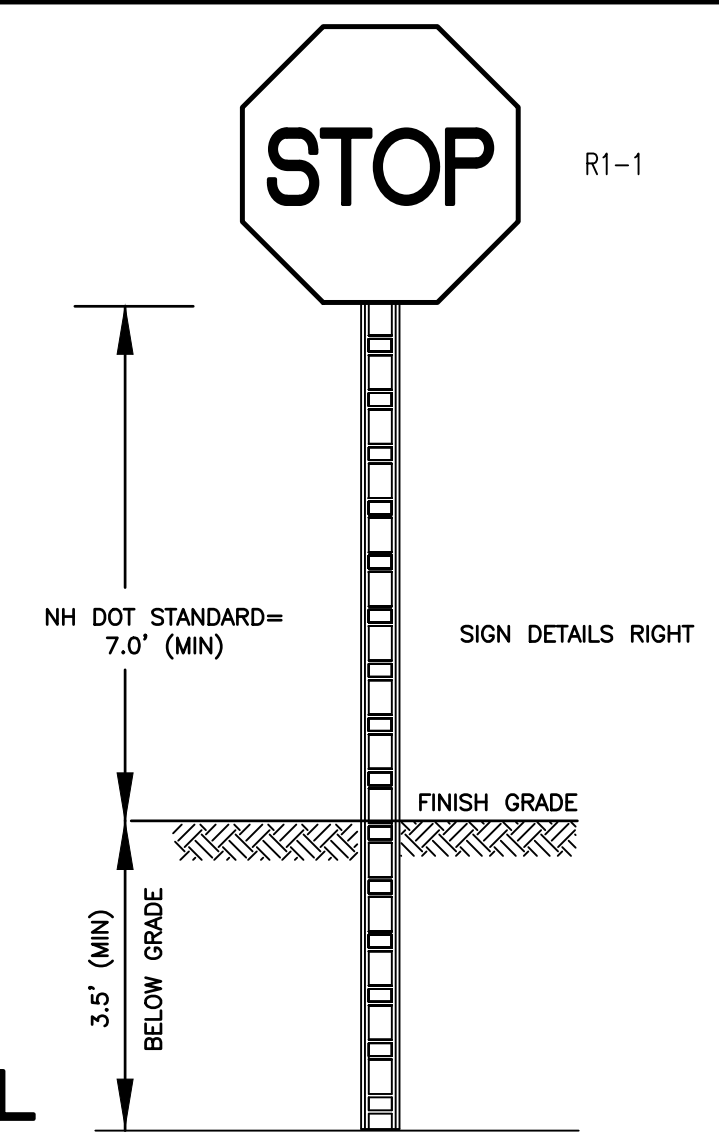
SIDEWALK NOTES:

SIDEWALK ALONG PROPOSED ROADWAYS SHALL TIP DOWN AT THE PROPOSED DRIVEWAYS AND INTERSECTIONS. TAPERS AND CONSTRUCTION METHODS FOR "TIP-DOWNS" SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICANS WITH DISABILITIES ACT (ADA) AND ANY ADDITIONAL REQUIREMENTS OF THE TOWN OF HUDSON, NEW HAMPSHIRE.

ADA CURB RAMP TO COMPLY WITH THE CURRENT STANDARDS PER THE AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN (HTTP://WWW.ADA.GOV)

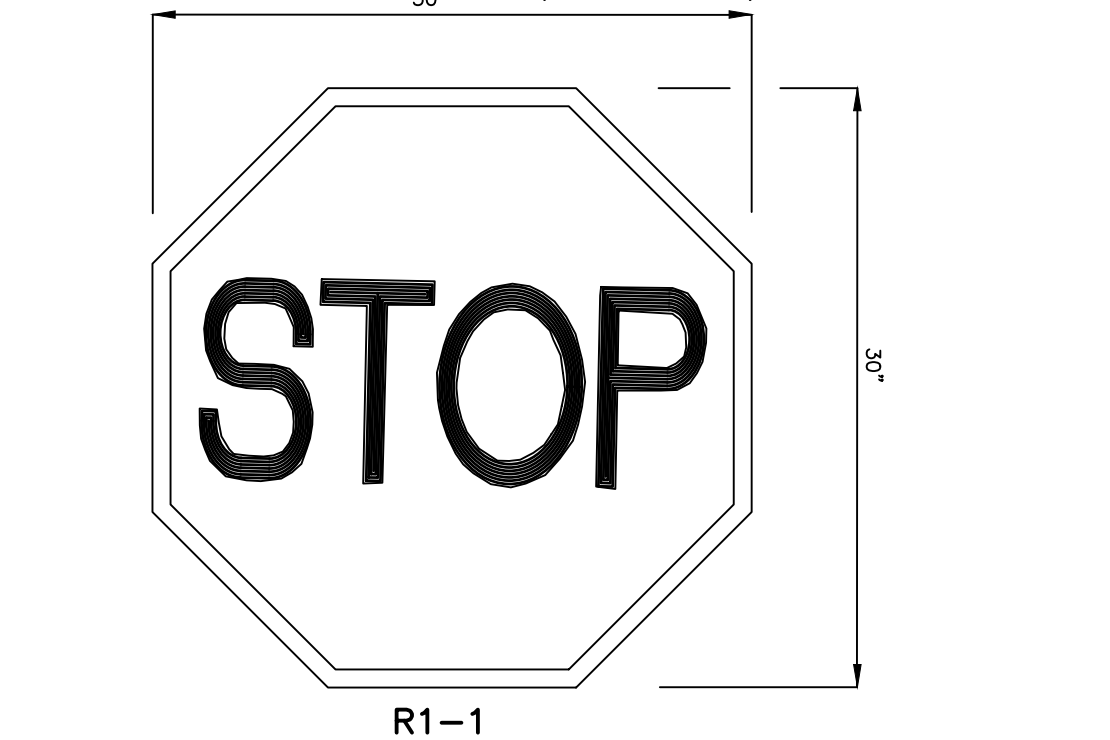


- NOTE:
 (1) SLOPE = Y/X, WHERE X IS A LEVEL PLANE
 (2) COUNTERSLOPE SHALL NOT EXCEED 1:20



INSTALL MUTCD R1-1 STOP SIGN AT SITE DRIVEWAY

COLORS:
 LEGEND WHITE (RETROREFLECTIVE)
 BACKGROUND 30" RED (RETROREFLECTIVE)

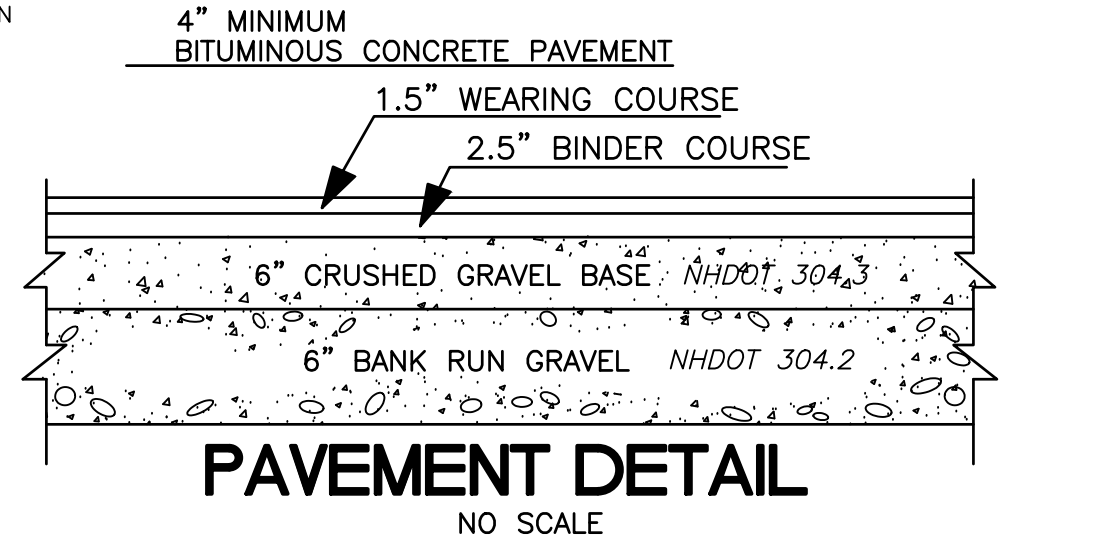


TRAFFIC SIGNS:
 ALL TRAFFIC SIGNS & PAVEMENT MARKINGS SHALL BE PER "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), LATEST EDITION.

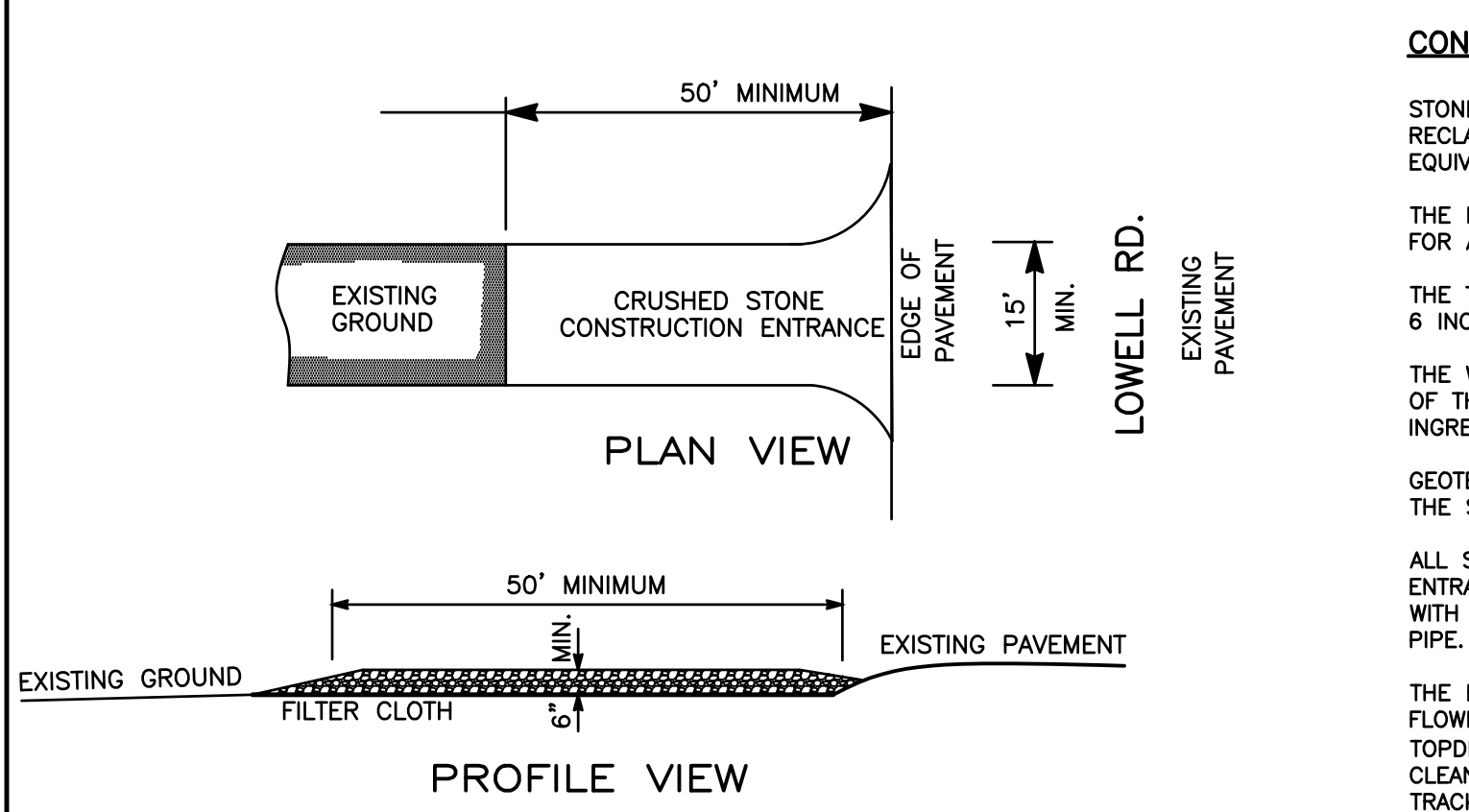
STOP SIGN DETAILS

1. HOLES SHALL BE 3/8" DIA. C-C FULL LENGTH
2. STEEL SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-6791 (GRADE 1070-1080)
3. FINISH SHALL BE PAINTED WITH 2 COATS OF APPROVED MEDIUM GREEN, BAKED ON OR AIR DRIED, PAINT OF WEATHER RESISTANT QUALITY. ALL FABRICATION SHALL BE COMPLETE BEFORE PAINTING.

TYPICAL SIGN DETAIL (NO SCALE)



SEWER LOADING CALCULATION:
 300 SEATS X 40 GPD / SEAT = 12,000 GPD
 15 EMPLOYEES X 20 GPD / EMPLOYEE = 300 GPD
 TOTAL SEWER LOADING = 12,300 GPD



CONSTRUCTION SPECIFICATIONS

STONE FOR A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 1 3/4 INCH STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.

THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50 FEET, EXCEPT FOR A SINGLE RESIDENTIAL LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY.

THE THICKNESS OF THE STONE FOR THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6 INCHES.

THE WIDTH OF THE CONSTRUCTION ENTRANCE SHALL NOT BE LESS THAN THE FULL WIDTH OF THE ENTRANCE WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICH EVER IS GREATER.

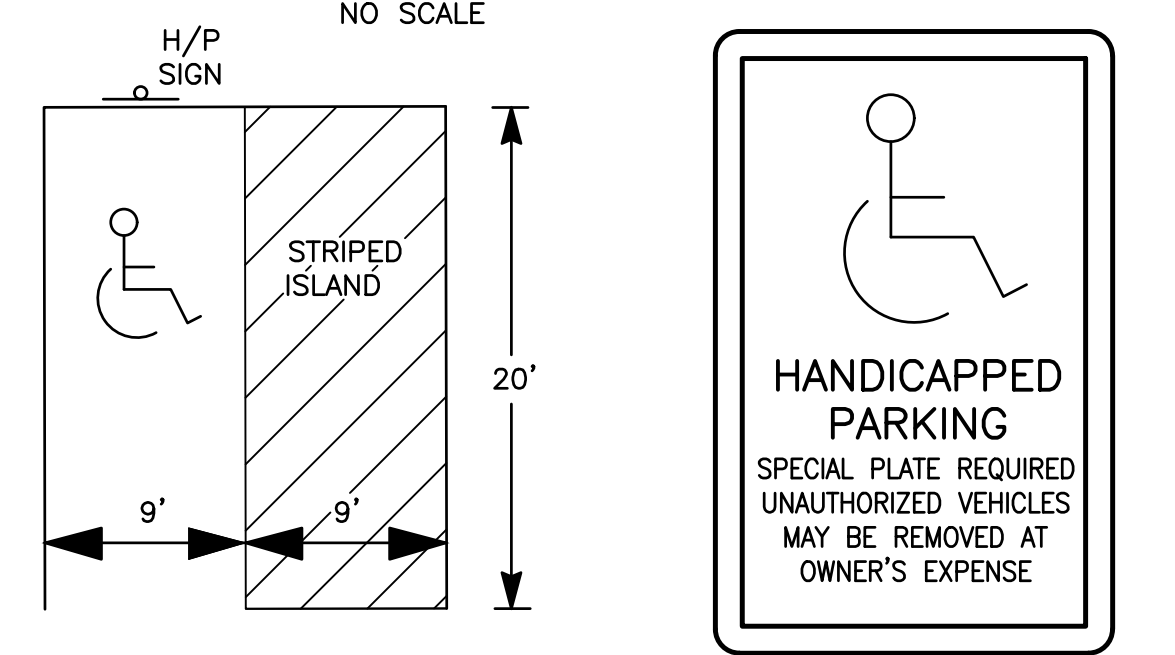
GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER CLOTH IS NOT REQUIRED FOR A SINGLE FAMILY RESIDENTIAL LOT.

ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARDS THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.

THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, WASHED, OR TRACKED ONTO PUBLIC RIGHT OF WAY MUST BE REMOVED PROMPTLY.

WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

HANDICAP PARKING DETAIL (NO SCALE)



HANDICAP PARKING DETAIL (NO SCALE)



HANDICAP PARKING SIGN (NO SCALE)

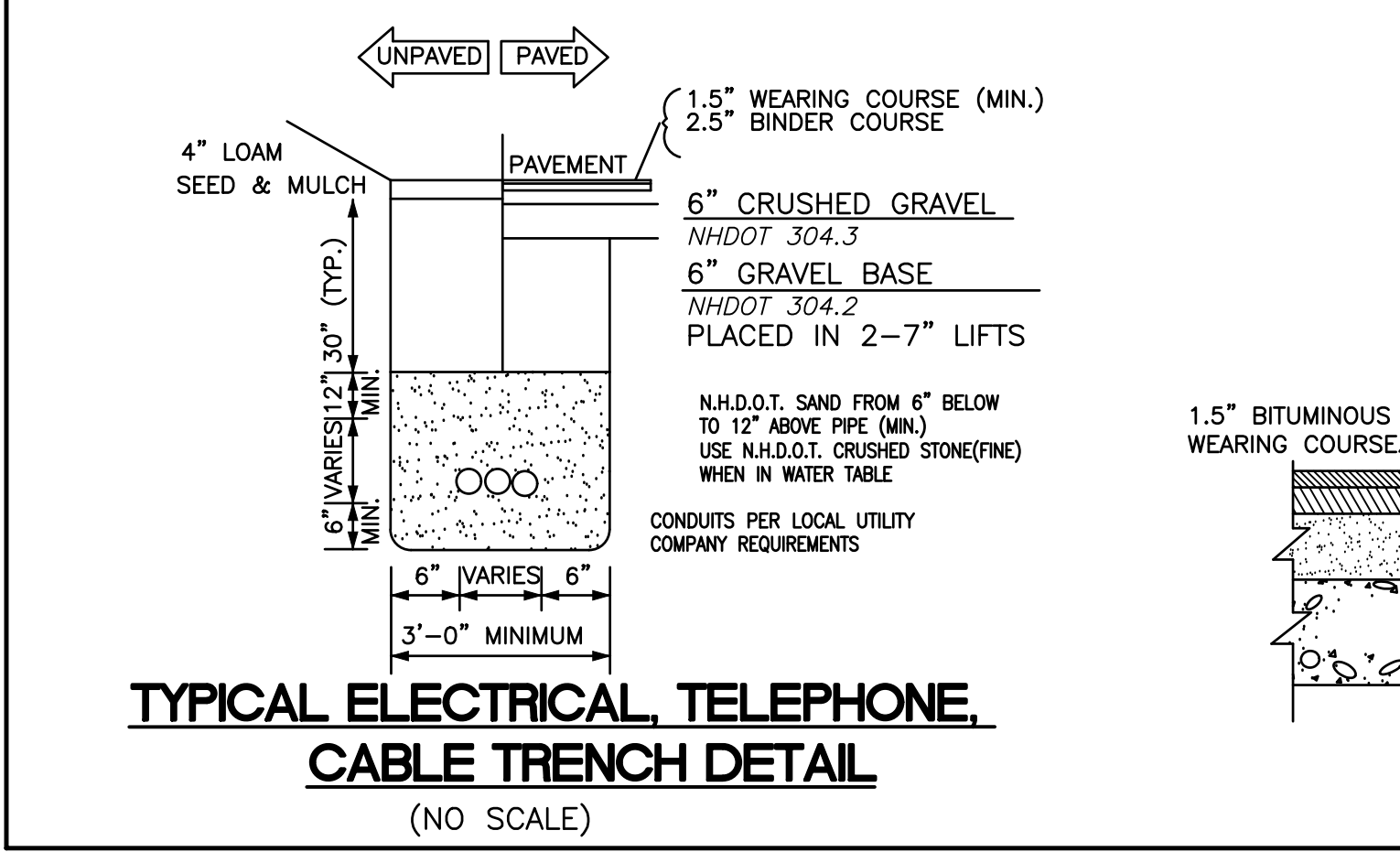
(SIGNS TO BE MUTCD R7-8 & R7-8P AND TO BE MOUNTED AT A MINIMUM OF 60" IN HEIGHT)

STABILIZED CONSTRUCTION ENTRANCE

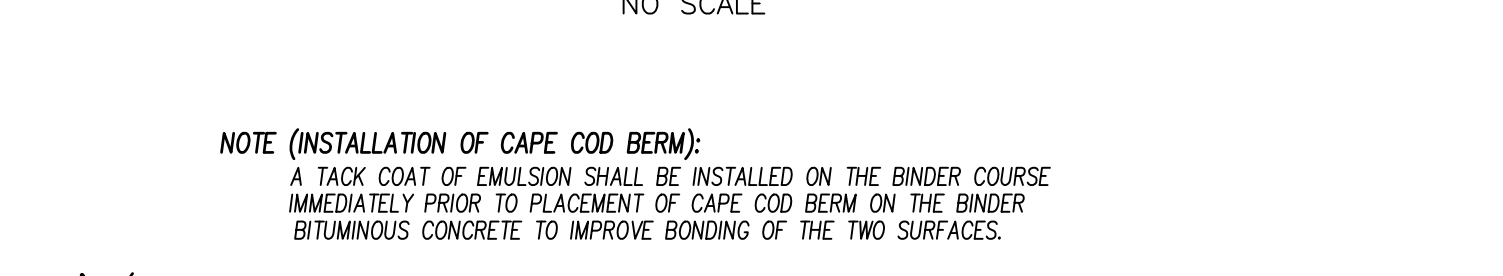
TO BE CONSTRUCTED AT THE START OF THE NEW DRIVEWAY BEHIND BUILDING B (NO SCALE)

CONSTRUCTION SEQUENCE:

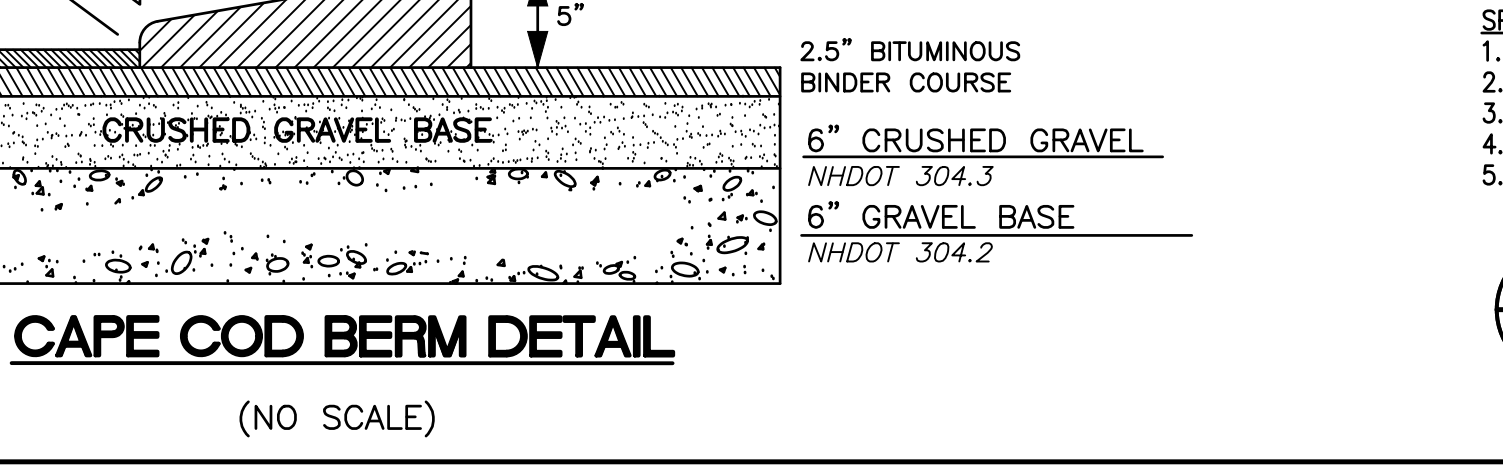
1. CUT AND CLEAR TREES.
2. INSTALL EROSION CONTROL MEASURES (PRIOR TO STUMPING).
3. STUMP AND GRUB ALL CLEARED AREAS.
4. STRIP AND STOCKPILE LOAM
5. CONSTRUCT UNDERGROUND STORMWATER CHAMBERS SYSTEMS AND STORM SEWER SYSTEM AS SHOWN ON PLANS.
6. INSTALL TEMPORARY EROSION AND SILTATION CONTROL MEASURES TO PROTECT STORMWATER CHAMBER SYSTEMS FROM SILTATION DURING CONSTRUCTION.
7. PROTECT CATCH BASINS FROM SILTATION BY CONSTRUCTING TEMPORARY STORM DRAINAGE INLET PROTECTION AROUND ALL CATCH BASINS (SEE DETAILS)
8. EXCAVATE AND INSTALL BUILDING FOUNDATION.
9. CUT AND FILL PARKING LOT TO SUBGRADE.
10. INSTALL UNDERGROUND UTILITIES WITHIN PARKING LOT AND TO BUILDING
11. ALL AREAS OUTSIDE PROPOSED PAVEMENT TO BE LOAM AND SEED.
12. INSTALL SELECT MATERIALS (BANK RUN & PROCESSED GRAVEL) WITHIN PARKING LOT
13. PAVE PARKING LOT TO BINDER
14. AS EARLY AS PRACTICAL, LOAM, FERTILIZE, SEED AND MULCH ALL DISTURBED AREAS, EXCEPT UNDER THE PROPOSED PAVEMENT (MIN. 4" LOAM)
15. STEEP SLOPES SHALL BE HYDROSEEDED. USE OF EROSION CONTROL MATS IS HIGHLY RECOMMENDED.
16. EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY AND AFTER EVERY 0.5" RAINFALL.
17. WEEKLY OR AS NEEDED, MAINTAIN AND/OR REPAIR EROSION CONTROL MEASURES: FILL, REPAIR, LOAM & SEED ANY ERODED EMBANKMENTS.
18. EARTH PILES SHALL BE STABILIZED TO PREVENT EROSION BY SEEDING AND/OR MULCHING.
19. CONSTRUCTION ACCESS TO THE SITE SHALL BE FROM LOWELL ROAD.
20. APPROXIMATE AREA TO BE DISTURBED FOR PARKING LOT CONSTRUCTION AND DRAINAGE IMPROVEMENTS = 0.8 ACRES.



CONCRETE WALKS/PATIO PAVERS (NO SCALE)



NOTES
 1. DESIGN, MATERIAL AND CONSTRUCTION GUIDELINES TO FOLLOW ICPI GUIDE SPECIFICATIONS
 2. PAVER SURFACES SLOPE: MAX 1%
 3. SOIL SUBGRADE MAXIMUM SLOPE 12%
 4. CAST IN PLACE CONCRETE CURBS CAN BE USED WITHOUT PAVERS ON TOP. IN SUCH CASES, CURBS SHOULD BE LEVEL WITH CONCRETE PAVER FIELD



- SPECIFICATIONS:**
1. TOPSOIL MIX, SEE SPEC.
 2. DO NOT DAMAGE MAIN ROOTS OR DESTROY ROOT BALL WHEN INSTALLING TREE STAKE.
 3. WATER THOROUGHLY AFTER INSTALLATION.
 4. REMOVE TREE RINGS AND STAKES TWO YEARS AFTER INSTALLATIONS
 5. PROVIDED DRAINAGE FOR PLANTING PIT IN IMPERMEABLE SOIL.

DECIDUOUS TREE DETAIL



PURSUANT TO THE SITE PLAN REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL.

APPROVED BY THE HUDSON, NH PLANNING BOARD
 DATE OF MEETING: _____

SIGNATURE _____ SIGNATURE DATE _____

SIGNATURE _____ SIGNATURE DATE _____

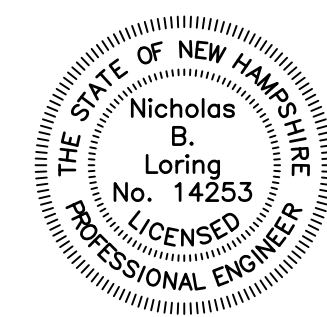
SITE PLANS ARE VALID FOR ONE (1) YEAR FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

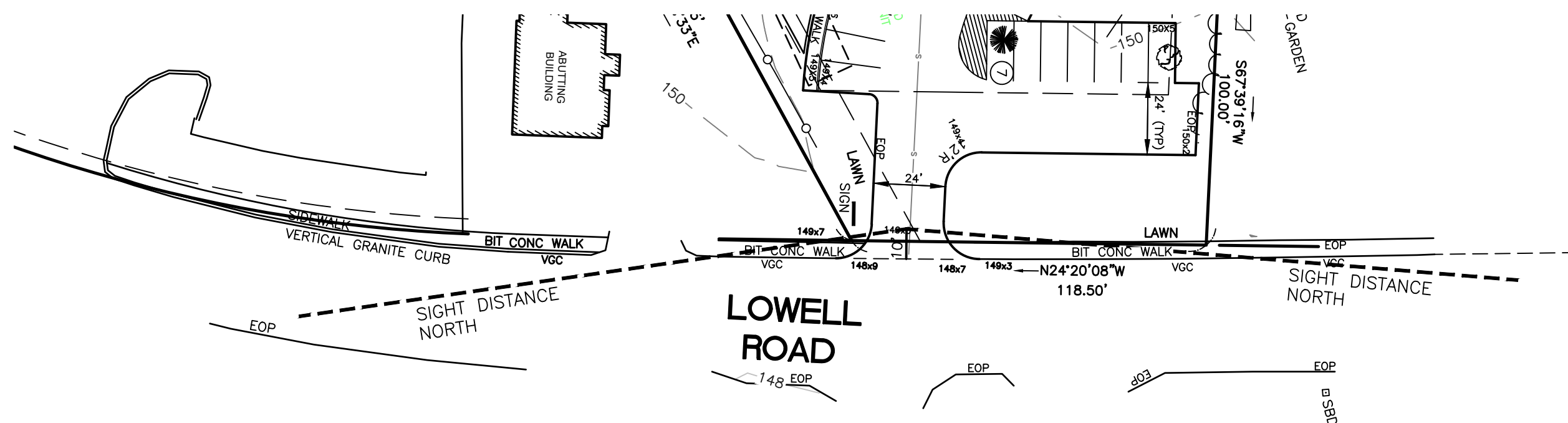
CONSTRUCTION DETAIL SHEET
TAX MAP 190 LOT 191
MACTHOMPSON SITE PLAN
48 LOWELL ROAD
HUDSON, NEW HAMPSHIRE 03051

OWNER/ PREPARED FOR:
 MACTHOMPSON REALTY, INC.
 3 MARMON DRIVE
 NASHUA, NEW HAMPSHIRE 03060
 HCRD BOOK 8875/PAGE 2378

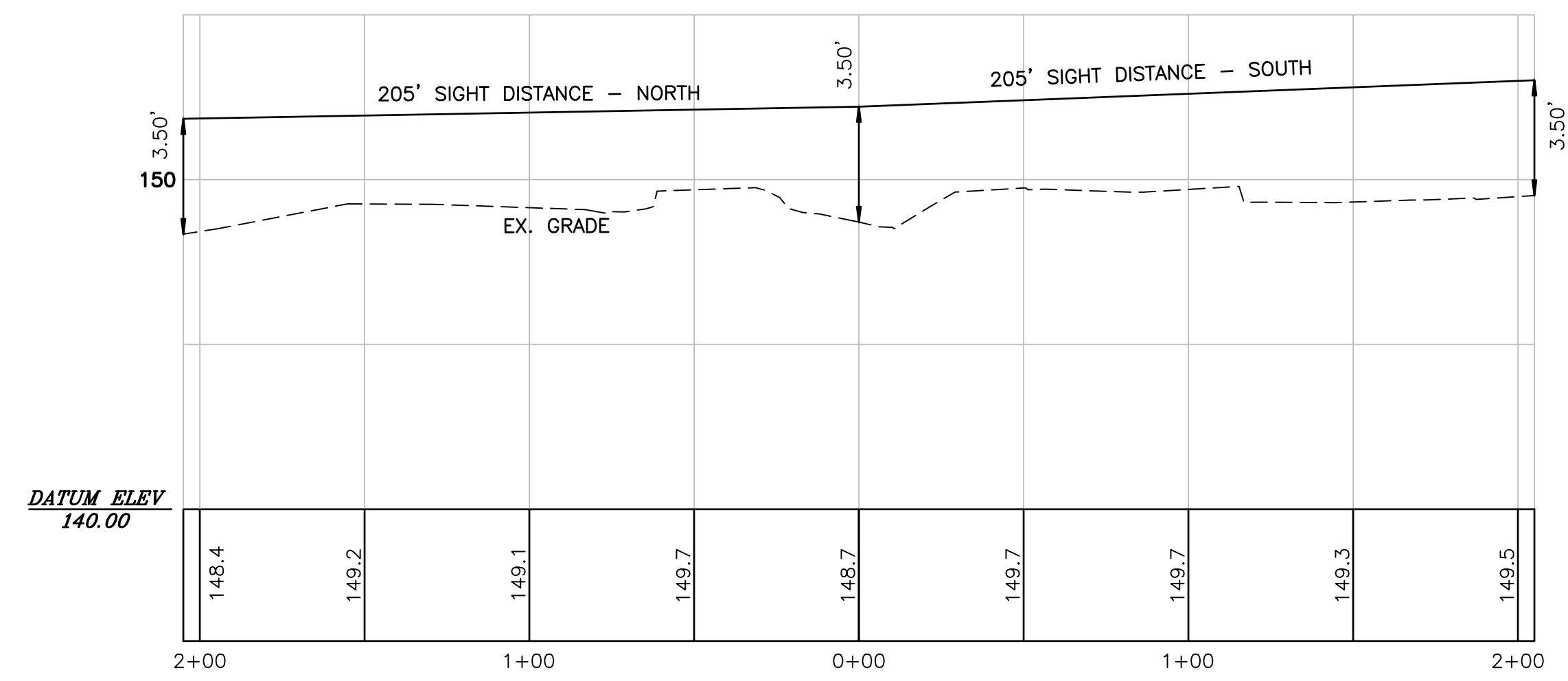
SCALE: AS NOTED SHEET 10 OF 11 AUGUST 3, 2021

F.O./TOWN COMMENTS	11/15/2021
PLANNING COMMENTS	9/21/21 09/23/2021
REVISIONS	DATE

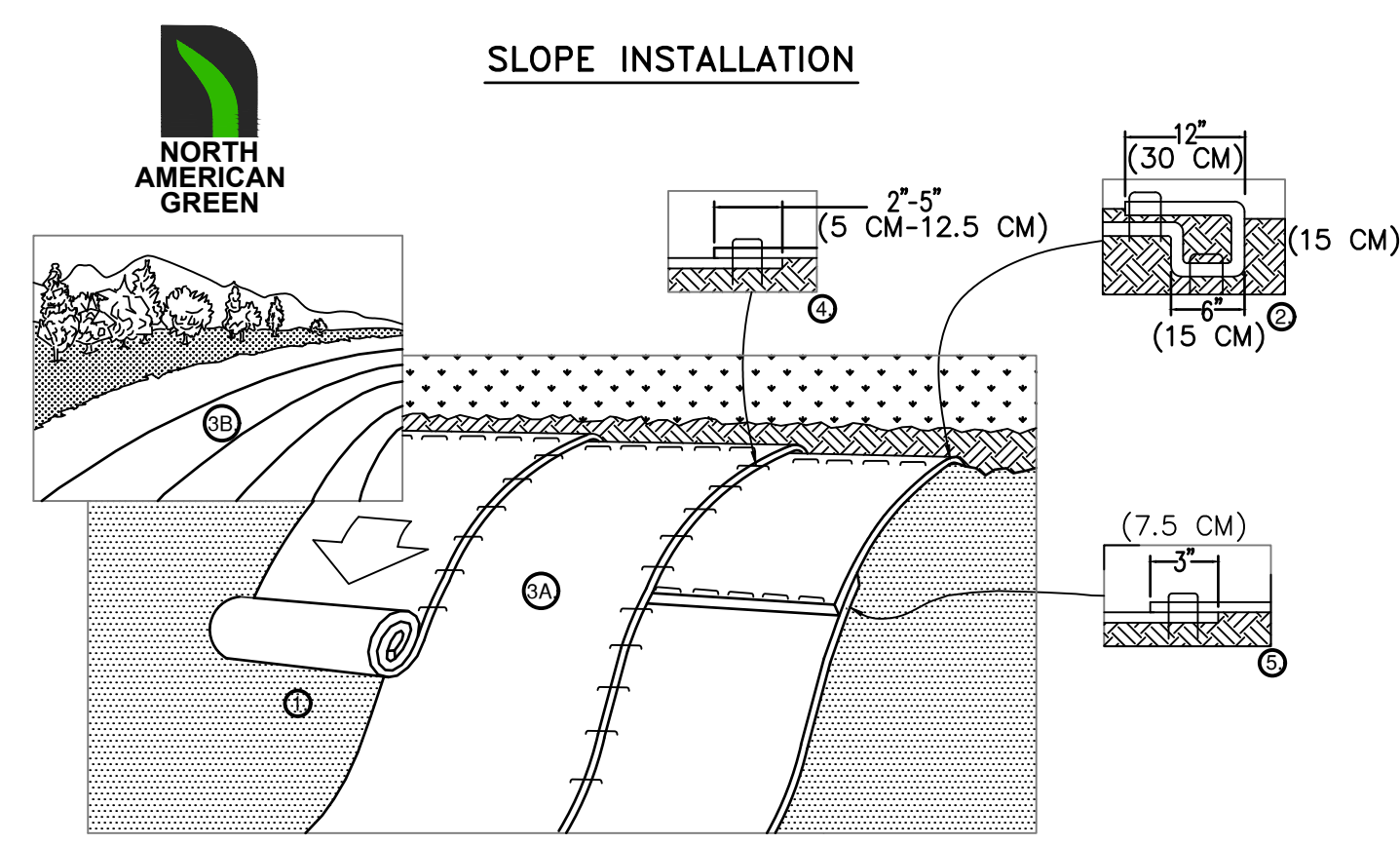
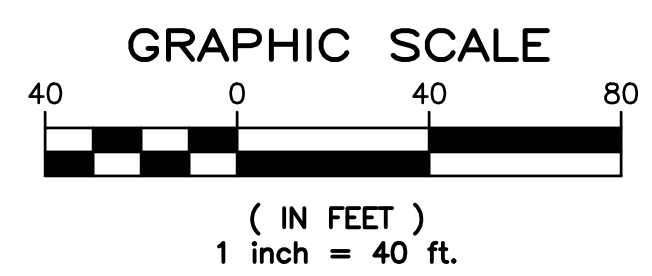




SIGHT DISTANCE PLAN
SCALE: 1"=40'

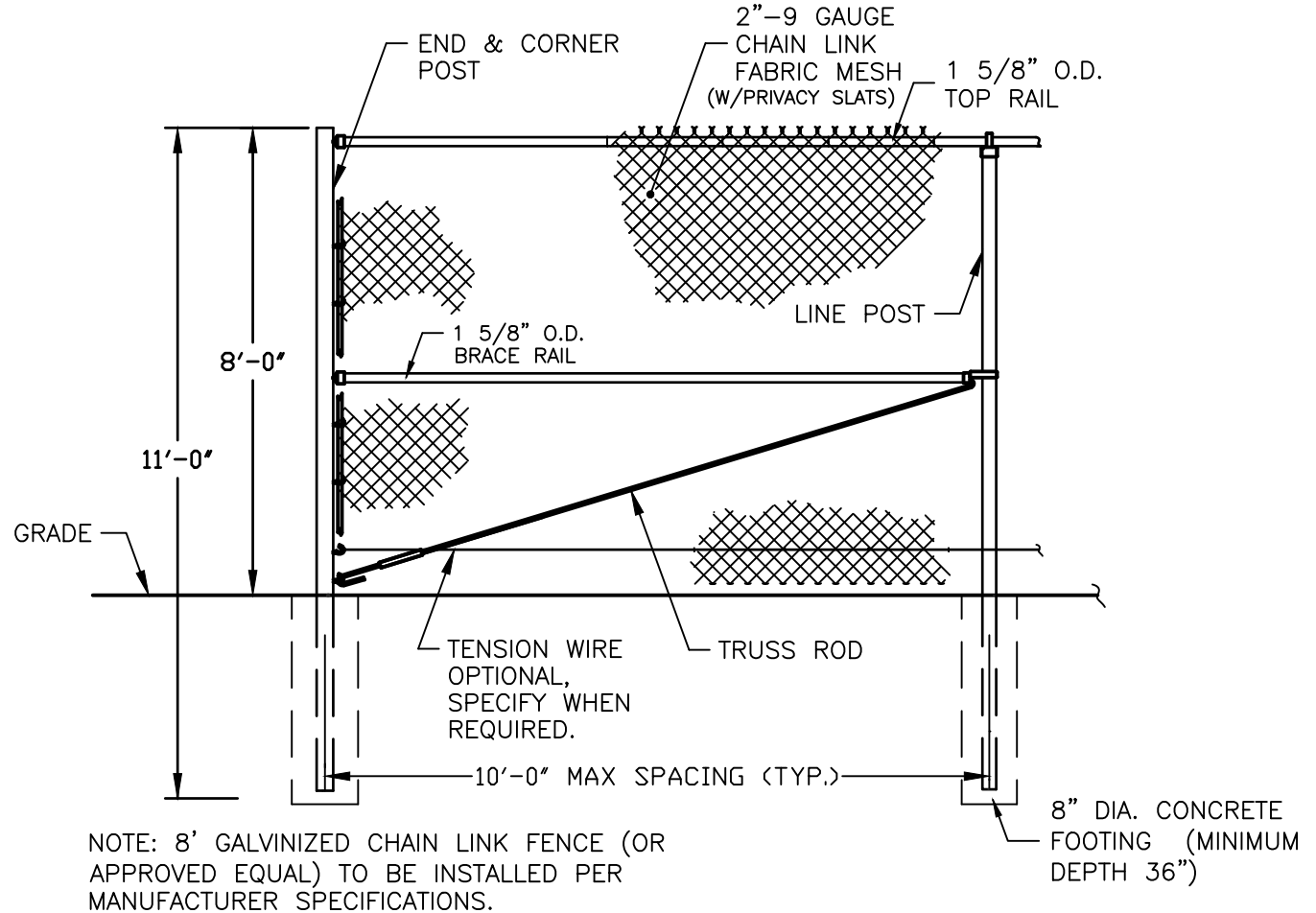


SIGHT DISTANCE PROFILE
SCALE: 1"=40' (HORIZ.)
1"=4' (VERT.)



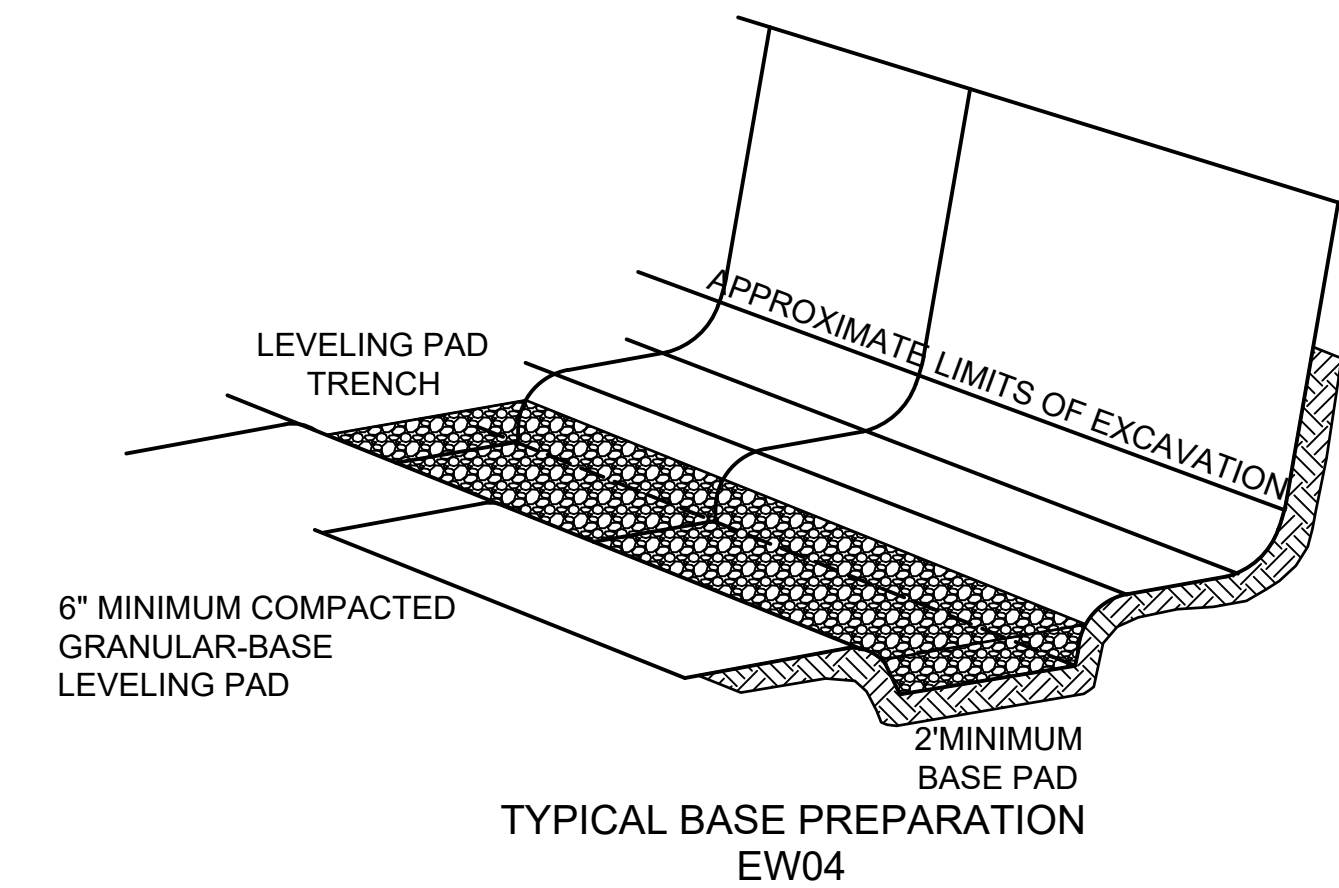
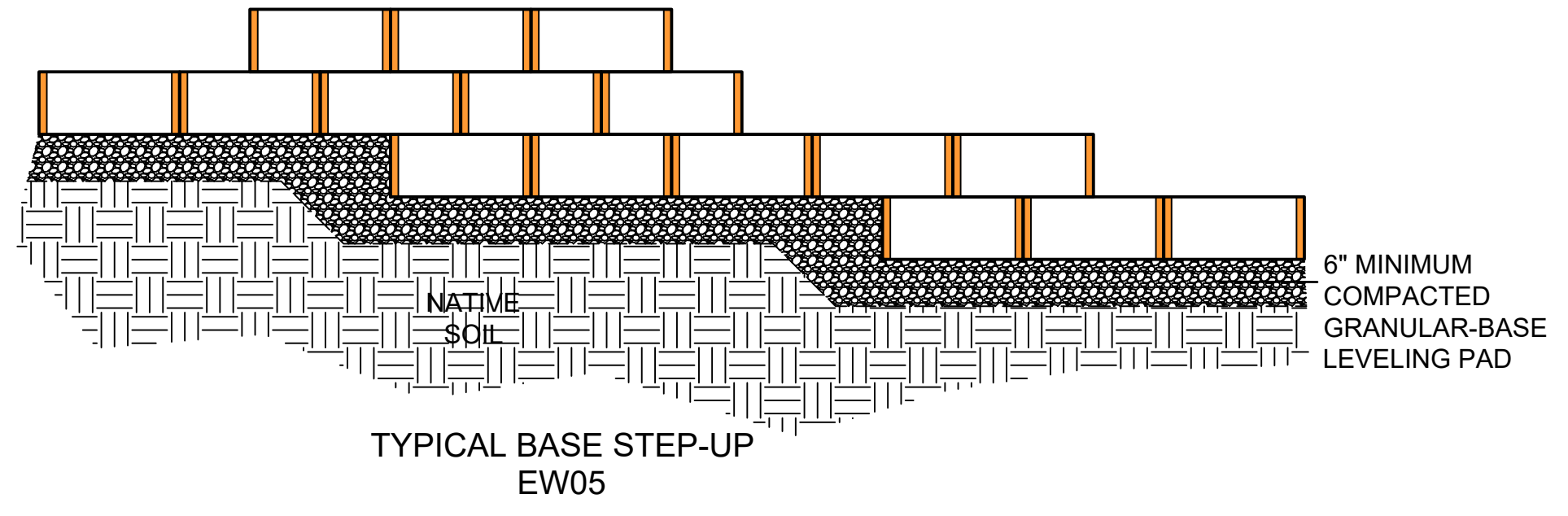
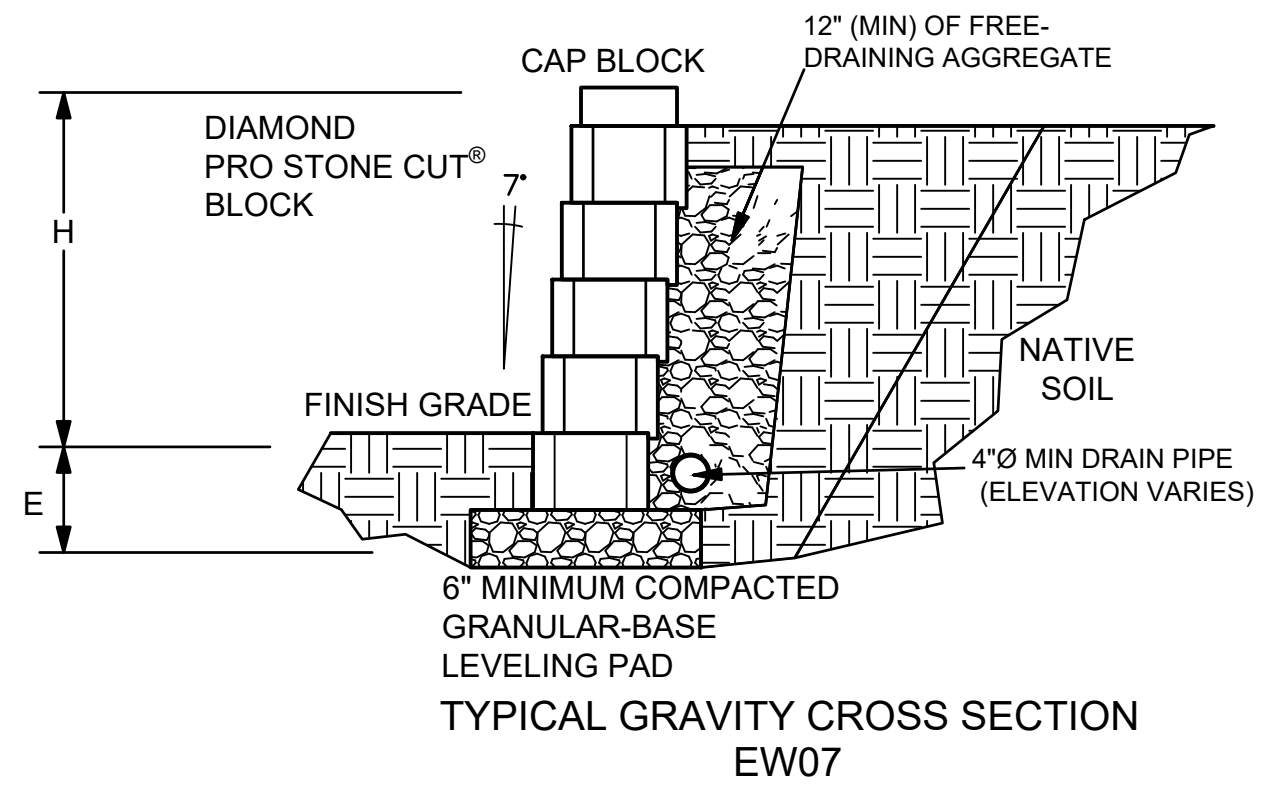
- PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
- BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE BLANKET.
- ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON BLANKET TYPE.
- CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE BLANKET WIDTH. NOTE: *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
- USE B60 MAT 40 EROSION CONTROL BLANKET (OR APPROVED EQUAL) BY US CONSTRUCTION FABRICS, LLC 8 LEDGE ROAD PO BOX 505 WINDHAM, NH 03087 PHONE: (603) 893-5480

EROSION CONTROL BLANKET
(NO SCALE)



NOTE: 8' GALVANIZED CHAIN LINK FENCE (OR APPROVED EQUAL) TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS.

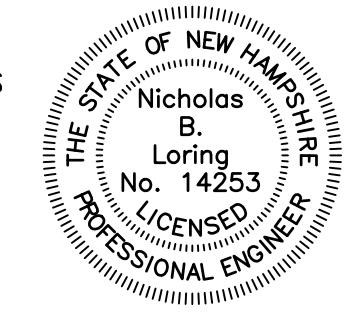
CHAIN LINK FENCE DETAIL
(NO SCALE)
USE AS PRIVACY FENCE AROUND DUMPSTER



WALL DETAILS AND CONSTRUCTION SPECIFICATIONS PROVIDED BY ANCHOR WALL SYSTEMS 5909 BAKER ROAD, SUITE 550 MINNETONKA MN 55345 [HTTPS://WWW.ANCHORWALL.COM](https://www.anchorwall.com) 877-295-5415

I HEREBY CERTIFY THAT THE DRIVEWAY ALL SEASON SAFE SIGHT DISTANCE, FOR A 30 MPH SPEED LIMIT, REQUIRED BY AASHTO STANDARDS WILL BE ACHIEVED UPON COMPLETION OF THE IMPROVEMENTS PROPOSED WITH THESE PLANS.

NICHOLAS B. LORING, PE DATE _____ BENCHMARK ENGINEERING, INC.



- EROSION CONTROL & TURF ESTABLISHMENT NOTES:**
- NO MORE THAN 5 ACRES MAY BE DISTURBED AND LEFT UNSTABILIZED AT ANY ONE TIME.
 - ALL DISTURBED AREAS SHALL BE FULLY STABILIZED WITHIN 30 DAYS.
 - DISTURBED AREAS ANTICIPATED TO BE LEFT ON SITE IN EXCESS OF 30 DAYS SHALL BE TEMPORARILY STABILIZED BY LOAMING, SEEDING AND MULCHING WITHIN 5 DAYS OF THE INITIAL DISTURBANCE.
 - UPON COMPLETION OF FINISH GRADING, ALL DISTURBED AREAS SHALL BE LOAMED, FERTILIZED AND SEEDED WITHIN 72 HOURS.
 - ALL STEEP SLOPES SHALL BE HYDROSEEDDED. USE OF EROSION CONTROL MATS IS HIGHLY RECOMMENDED.
 - STABILIZATION SHALL BE ACCOMPLISHED BY LOAMING, FERTILIZING, SEEDING AND MULCHING ALL DISTURBED AREAS (OTHER THAN UNDER THE PAVEMENT)
 - AS FOLLOWS:
 - LOAM - SCREENED LOAM WITH A MINIMUM DEPTH OF 4".
 - LIME AND FERTILIZER SHALL BE APPLIED PRIOR TO, OR AT THE TIME OF, PERMANENT SEEDING AND INCORPORATED INTO THE SOIL AT THE FOLLOWING RATES:

LIMESTONE (AGRICULTURAL)	3,000 LBS/ ACRE
COMMERCIAL TURF STARTER FERTILIZER (10-18-10)	150 LBS/ ACRE
SUCH AS "GREEN GOLD RENEW" (FOR ESTABLISHMENT ONLY)	
 - SEED SELECTION (OR EQUIVALENT) & SEEDING RATES:

TEMPORARY :	ANNUAL RYE GRASS	50 LBS/ ACRE
PERMANENT:	"ROCKINGHAM SOIL CONSERVATION MIX"	150 LBS/ ACRE

 CONTAINING:

ANNUAL RYE GRASS	35%
CREeping RED FESCUE	25%
TALL FESCUE	15%
PERENNIAL RYE GRASS	12%
KENTUCKY BLUE GRASS	10%
WHITE CLOVER (LEGUME)	3%
 - MULCHING SHALL BE APPLIED (FROM MAY TO SEPTEMBER ONLY) AT THE RATE OF 1 1/2 - 2 TONS/ ACRE.
 - THE RECOMMENDED GRASS MIXTURES AND FERTILIZERS SPECIFIED HEREIN ARE AVAILABLE AT BLUE SEAL FEEDS, NASHUA, NH (603 883- 9531).
 - EARTH PILES SHALL BE STABILIZED TO PREVENT EROSION BY SEEDING & MULCHING.



SIGN DETAIL
(NO SCALE)

NOTE: SEE SHEET-3 FOR ACTUAL SIGN LOCATION

PURSUANT TO THE SITE PLAN REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES ONE YEAR FROM DATE OF APPROVAL.

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

SIGNATURE _____ SIGNATURE DATE _____

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SIGHT DISTANCE & DETAIL SHEET
TAX MAP 190 LOT 191
MACTHOMPSON SITE PLAN
48 LOWELL ROAD
HUDSON, NEW HAMPSHIRE 03051

OWNER/ PREPARED FOR:
MACTHOMPSON REALTY, INC.
3 MARMON DRIVE
NASHUA, NEW HAMPSHIRE 03060
HCRD BOOK 8875/PAGE 2378

SCALE: AS NOTED SHEET 11 OF 11 AUGUST 3, 2021

PLANNING COMMENTS	9/21/21	9/23/21
REVISIONS		DATE

