

HERITAGE LANDING

SITE PLAN #09-21 & CONDITIONAL USE PERMIT #08-21

STAFF REPORT

July 28, 2021

SITE: 112 & 114 Greeley Street; Map 140 Lot 002-000 & Lot 003-000

ZONING: General (G)

PURPOSE OF PLAN: To propose a 62 and older age restricted detached condominium development at 112 and 114 Greeley Street and to request a conditional use permit for wetland and wetland buffer impacts associated with the site plan.

PLANS UNDER REVIEW: Residential Site Plan, Heritage Landing, A 62 & Older Community; prepared by Keach-Nordstrom Associates, Inc., 10 Commerce Park North, Suite 3B, Bedford, New Hampshire 03110; prepared for K&M Developers, LLC, 46 Lowell Road, Hudson, New Hampshire 03051; consisting of 30 sheets including cover sheet and notes 1-23 on Sheet 1; dated June 1, 2021, last revised July 12, 2021.

ATTACHMENTS:

- A. Peer Review of Plan Set from Fuss & O'Neill dated July 9, 2021.
- B. Peer Review of Traffic Study from Fuss & O'Neill dated July 13, 2021.
- C. Applicant's response to plan set comments dated July 15, 2021, received July 20, 2021.
- D. Traffic Impact and Access Study, prepared by TEPP, LLC, dated June 22, 2021.
- E. Conservation Commission's recommendation for CUP dated July 12, 2021.
- F. Department Comments.
- G. CAP Fee worksheet.

APPLICATION TRACKING:

- May 28, 2021 – Conditional Use Permit application received.
- June 14, 2021 – Application reviewed by the Hudson Conservation Commission.
- June 21, 2021 – Conservation Commission conducted a site walk.
- June 22, 2021 – Site Plan Application received.
- June 23, 2021 – Planning Board Meeting. Conditional Use Permit application heard and deferred to July 14, 2021.
- July 12, 2021 – Conservation Commission issued a recommendation for CUP.
- July 14, 2021 – Planning Board Meeting. Application deferred to July 28, 2021.
- July 20, 2021 – Revised plan set received.
- July 28, 2021 – Planning Board Meeting scheduled.

COMMENTS & RECOMMENDATIONS:

BACKGROUND

There is an existing residential home, a detached garage, a shed, and a driveway on Lot 2. There is an abandoned house on Lot 3. Both lots, totaling 16.931 acres, are primarily undeveloped and wooded. A wetland bisects the site from north to south.

The Applicant has submitted a lot consolidation form for the signature of the Planning Board Chair. On the resulting consolidated lot, the Applicant proposes a 47-unit detached single-family age-restricted condominium development. The existing structures and driveway will be demolished. The development will include a loop roadway with access from Greeley Street, as well as onsite improvements such as two stormwater ponds.

The proposed loop roadway will cross designated wetland and wetland buffer areas at two locations. The two proposed stormwater ponds will both intrude upon wetland buffer areas. Due to the impacts to the Wetland Conservation District caused by the proposed development necessary to use more than half of the property's buildable area, the Applicant has submitted a Conditional Use Permit application.

STAFF COMMENTS

Comments on SP# 09-21

1. See **Attachment A** for the Town's peer review comments on Zoning Ordinance and Land Use Regulation conformity. The Applicant has addressed Fuss & O'Neill's comments in **Attachment C**.
2. See **Attachment B** for the Town's peer review comments on the Traffic Study (**Attachment D**). The Applicant's consultant finds that there will be minimal impacts on traffic operations on the roadway network adjacent to the site due to low number of trips expected to be generated. Peer review has concluded that the overall conclusions reached by TEPP will remain true upon completion of their suggested revisions.
3. See **Attachment F** for comments from other Town Departments. The Applicant has addressed these comments in **Attachment C**.

Comments on CUP# 08-21

4. **Use within Wetland Conservation District (§ 334-36):** The proposed waterline extension is a conditional use permitted under § 334-36:C(2). However, such conditional use shall be located and constructed in such a way as to minimize the potential for detrimental impact to the District and may be permitted only when no viable alternative is available. Staff supports the Conservation Commission's recommendations (see #2 below).
5. **Hudson Conservation Commission Comments:** The Conservation Commission heard the application and issued a recommendation on July 12, 2021:

- a. The HCC found the proposed project complies with the Hudson Zoning Ordinance Article IX, §334-36 (C) (2) through (4), and §334-37.
- b. The HCC voted to recommend a favorable acceptance by the Planning Board for the proposed “Heritage Landing” age restricted subdivision (4-0), contingent upon ten recommended conditions (see **Attachment E** for details).

DRAFT MOTIONS

ACCEPT the site plan application (CUP application was accepted 6/23/21):

I move to accept the site plan application for Heritage Landing on 112 Greeley Street, Map 140 Lot 002-000 and 114 Greeley Street, Map 140 Lot 003-000.

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

CONTINUE the public hearing to a date certain:

I move to continue the public hearing for the site plan and conditional use permit application for Heritage Landing on 112 Greeley Street, Map 140 Lot 002-000 and 114 Greeley Street, Map 140 Lot 003-000 to date certain, _____, 2021.

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

APPROVE the site plan application:

I move to approve the conditional use permit and site plan for 112 & 114 Greeley Street; Map 140 Lot 002 & Lot 003 (or as assigned upon lot consolidation) entitled: Residential Site Plan, Heritage Landing, A 62 & Older Community; prepared by Keach-Nordstrom Associates, Inc., 10 Commerce Park North, Suite 3B, Bedford, New Hampshire 03110; prepared for K&M Developers, LLC, 46 Lowell Road, Hudson, New Hampshire 03051; consisting of 30 sheets including cover sheet and notes 1-23 on Sheet 1; dated June 1, 2021, last revised July 12, 2021; subject to, and revised per, the following stipulations:

- 1. All stipulations of approval shall be incorporated into the Notice of Decision and the Development Agreement, which shall be recorded at the HCRD, together with the Plan.
- 2. All improvements shown on the Plan shall be completed in their entirety and at the expense of the applicant or the applicant’s assigns.
- 3. A cost allocation procedure (CAP) amount of \$1,637.00 per dwelling unit shall be paid prior to the issuance of a Certificate of Occupancy for the new house lot. This includes a contribution to recreation and a contribution intended for improvement and/or maintenance of Greeley Street.

4. Prior to issuance of a certificate of occupancy for any building on the site, an L.L.S. certified "As Built" showing utilities and road layout shall be provided to the Land Use Division, confirming that the site conforms to the Planning Board approved site plan. Prior to the issuance of the certificate of occupancy for the last dwelling unit, a final L.L.S certified "As-Built" plan shall be provided to the Land Use Division, confirming that the site conforms to the Planning Board approved site plan.
5. Applicant shall provide a performance surety in accordance with §276-4 for water utilities, sewer utilities and a street light at the intersection with Greeley Street prior to Planning Board endorsement of the plan
6. The onsite drainage system shall be constructed and maintained in compliance with NHDES requirements for such systems.
7. Prior to the Planning Board endorsement of the Plan, it shall be subject to final administrative review by Town Planner and Town Engineer.
8. The applicant shall schedule a pre-construction meeting with the Town Engineer prior to applying for a building permit.
9. Construction activities involving the subject lot shall be limited to the hours between 7:00 A.M. and 7:00 P.M. No exterior construction activities shall be allowed on Sundays.
10. Blasting or ramming activities shall be limited to the hours between 9:00 A.M and 5:00 P.M, Monday through Friday. Blasting activities are prohibited on Saturday and Sunday.

Conditions Recommended by the Conservation Commission

11. Construction and restoration shall comply with Best Management Practices set forth in *New Hampshire Storm Water Manual Volume 3: Erosion and Sediment Control*.
12. During construction and restoration erosion control barriers shall be installed and maintained to the satisfaction of the Town Engineer.
13. The Town Engineer or his representative shall be allowed to inspect the boundaries of the wetland and wetland buffer areas during construction and report any finding to the applicant and the Conservation Commission for remediation.
14. The wetland buffer boundary shall be identified and marked prior to the start of construction per Hudson Zoning Ordinance, Article IX §334-35 (E).
15. "No Cut/No Disturb" signage shall be installed along the wetland buffer boundary prior to issuing Certificates of Occupancy per Hudson Zoning Ordinance, Article IX §334-35 (E.)
16. Green SnowPro Certified contractors shall be utilized for winter site maintenance.

17. Stockpiling of construction materials is not allowed in the wetland buffer areas during construction.
18. Compliance to NHDES Env-Wq 1403.04 Removal of Dead, Fallen Trees and Vegetation that need to be removed to facilitate construction within the wetland and wetland buffer areas be observed.
19. Only wood ash and/or lime shall be used as part of the slope stabilization process for all wetland buffer impacts noted as referenced in Hudson Zoning Ordinance, Article IX §334-36 (B)(2).

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



July 9, 2021

Mr. Brian Groth
Town Planner
Town of Hudson
12 School Street
Hudson, NH 03051

Re: Town of Hudson Planning Board Review
Heritage Landing Site Plan, 112 & 114 Greeley Street
Tax Map 140 Lots 2 & 3; Acct. #1350-969
Reference No. 20030249.2050

Dear Mr. Groth:

Fuss & O'Neill (F&O) has reviewed the first submission of the materials received on June 22, 2021, related to the above-referenced project. Authorization to proceed was received on June 22, 2021. A list of items reviewed is enclosed. The scope of our review is based on the Site Plan Review Codes, Stormwater Codes, Driveway Review Codes, Sewer Use Ordinance 77, Zoning Regulations, and criteria outlined in the CLD Consulting Engineers Proposal approved September 16, 2003, revised September 20, 2004, June 4, 2007, September 3, 2008, and October 2015.

We have included a copy of Fuss & O'Neill's evaluation of the checklist for your reference. We note that several items could not be verified by Fuss & O'Neill and require action by the Town.

The project appears to consist of the development of a 47 unit detached residential development for 62 and older residents. Proposed improvements to the site also include the construction of a private roadway, clubhouse, driveways, parking areas, drainage improvements, landscaping, lighting and other associated site improvements. The proposed buildings will be serviced by public water and sewer.

The following items are noted:

1. Site Plan Review Codes (HR 275)
 - a. Hudson Regulation (HR) 275-6.C. The applicant has not proposed a sidewalk along Greeley Street or the private Norman Way roadway.
 - b. HR 275-6.I. The scope of this review does not include the adequacy of any fire protection provisions for the proposed buildings. The applicant has noted that the Contractor is to verify the size of water service lines with the fire suppression engineer prior to the start of construction. Fuss & O'Neill defers to the Hudson Fire Department for review of proposed fire protection for this development, including the proposed fire hydrant layout.
 - c. HR 275-8.C.(2) and Zoning Ordinance (ZO) 334-15.A. The applicant has not provided parking calculations on the plan set. We note that each residential unit has a driveway that accommodates 2 parking spaces and 7 spaces have been provided at the clubhouse.
 - d. HR 275-9.C.(11). The applicant has provided two handicap spaces for the clubhouse on

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the plan. This adequately serves the clubhouse building on the site.

- e. HR 275-9.F. The applicant did not provide copies of any easements or deeds as part of the package received for review, and has not shown any existing or proposed easements on the plans. A Sewer Easement Plan for the sewer main extension/connection through Map 140 Lots 4 & 11 is included in the plan set.

2. Administrative Review Codes (HR 276)

- a. HR 276-7. The applicant did not list any waivers on the plan set or include any waiver requests in the package received for review.
- b. HR 276-11.1.B.(6) The owner's signature is not shown on the plan set.
- c. HR 276-11.1.B.(13). The applicant has not included details for any proposed site signage other than traffic signs. The applicant should include a note stating that, "All signs are subject to approval by the Hudson PLANNING BOARD prior to installation thereof."
- d. HR 276-11.1.B.(15). The applicant has not shown any buildings within 50 feet of the site.
- e. HR 276-11.1.B.(16). The applicant has not provided the locations of the driveways and travel ways within 200 feet of the site.
- f. HR 276-11.1.B.(20). The applicant has not included the height of any existing buildings on the plan. We note that the existing buildings on site will be demolished as part of the project.
- g. HR 276-11.1.B.(23). The applicant has not noted any pertinent highway projects on the plan set.
- h. The Wetland Scientist has not signed and stamped the Master Plan, Existing Conditions Plans, or Wetland/Wetland Buffer Impact Plan.

3. Driveway Review Codes (HR 193)

- a. HR 193.10.E. The applicant has shown sight distances of 400 feet for the proposed roadway connection to Greeley Street on the plan set. We note that a portion of the sight distance line looking southwest touches the edge of uncleared vegetation. The applicant should ensure that all vegetation removals needed to provide safe sight distances are evaluated and completed during construction.
- b. HR 193.10.I. The applicant has proposed several locations where a shared driveway connects 3 units to Norman Way. The applicant should review this layout with the Town to determine if a waiver is necessary.
- c. Engineering Technical Guideline & Typical Details (ETGTD) 515.3. The applicant has proposed a street with a horizontal curve radius of less than 150 feet. Curve C6 has a radius of only 101 feet. We note that the proposed roadway is to be private but recommend it meet Town standards for safety and access.
- d. ETGTD 515.7 The applicant has proposed a width of 28 feet wide for the Norman Way connection to Greeley Street, with the remainder of the roadway width of 24 feet. Hudson Standards require a 28 foot width for roads greater than 1,000 feet in length. The applicant should review the proposed roadway width with the Town and provide a waiver if required.

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- e. ETGTD Detail R-1. The applicant should review the need to meet the Town standard for street pavement. We note that the applicant has proposed 1 inch of wearing course and 2 inches of binder instead of the 1.5 inches of wearing course and 2.5 inches of binder required by the Hudson Standard.

4. Traffic

- a. HR 275-9.B. The applicant has provided a Traffic Impact and Access Study for this project. Our review comments for this study will be forwarded separately.

5. Utility Design/Conflicts

- a. HR 275-9.E and 276-13. The applicant has shown a proposed sewer pump station on the plan set, and noted that this is designed by others. We note that no details or calculations were provided in the review package. The applicant has also not provided any details for construction of the proposed force main.
- b. HR 275-9.E and 276-13. The applicant has shown a portion of the force main to be directly under the proposed gas main, and portions of it are shown closer than 10 feet to the water main.
- c. HR 276-13. The applicant should provide a detail for water/sewer/drain utility crossings on the plan set.
- d. HR 276-13. The applicant has shown very steep pipe slopes from SMH #111 and STR #23 into the sewer pump station. The applicant should provide pipe anchors for any slopes exceeding 15%, and also verify that flow velocities conform to the requirements of NHDES Env-Wq 704.04(i).
- e. ETGTD Section 825.2.13. The applicant has noted 'Approved Fire Hydrant' on the Hydrant Installation detail but has not noted the proposed hydrant brand or model. Hydrant models approved for use in Hudson are included in the referenced technical specification.
- f. The Town and the applicant should review and clarify who will own the maintenance of the sewer and water lines within the private street, development, and sewer connection easement area.
- g. The applicant should include a pavement patch detail in the plans for the utility connections at Greeley Street and Sutherland Drive.

6. Drainage Design/Stormwater Management (HR 275-9.A./Chapter 290)

- a. HR 275-9.A.(1). & 290.5. The applicant has proposed an increase in volume runoff at POA A in the 10-year (10% increase) and in the 25-year storm (11% increase) events. The applicant should review these increases and if these increases in volume require a waiver, or should be addressed to meet the Regulation. The applicant should also provide the 50-year Post Development HydroCAD analysis for review.
- b. HR 290-5.A.10. Due to the close proximity of the onsite wetlands, and as to avoid unwanted additional wetland impacts, the applicant should add a note stating that orange construction fence will be placed at all wetland buffers within 50-feet of proposed grading. This fence is recommended during build out, and kept up until the site is complete.

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- c. HR 290-5.A.12. & 290-9. The applicant should coordinate the maintenance requirements listed on Plan Sheet 20 of the Design Plans with the O&M Plan provided within the Stormwater Calculations. We note the O&M Plan calls for the use of level spreaders, while the plans reference a surface sand filter.
- d. HR 290-6.A.8. The applicant should add a note of the requirement to coordinate a pre-construction meeting with the Town Engineer.
- e. HR 290-6.A.9. We note similar notes listed upon the plan set, the applicant should note the “temporary stabilization within 5 days of initial disturbance” within the appropriate plan notes.
- f. HR 290-8.B.5. The applicant should coordinate with the Town for the need of a Home Owners Association (HOA) for maintenance requirements.
- g. HR 290-10.A. The applicant shall keep the Town informed of all communication with NHDES in relation to the required Alteration of Terrain and Wetlands Permits being requested to ensure NHDES comments do not alter drainage design/calculations. We note that additional items will be required for the NHDES AoT Permit, which could potentially affect the stormwater calculations and/or construction of the site. Please provide additional detail on the following items:
 - i. Alteration of Terrain administrative rule Env-Wq 1503.19(h) and statutory requirements of RSA 212-A:9, III, the NHDES adopted a rule amendment effective June 2, 2020; the requirement of a Wildlife Habitat Assessment.
 - ii. NHDES Env-1505.03 - The site may be required to meet or request a waiver from the 5-acre disturbed area limit.
 - iii. NHDES Env-1505.06(b)(1) - The site may be required to meet or request a waiver from the 1-acre winter disturbed area limit.
- h. Engineering Technical Guideline & Typical Details (ETGTD) 920.3.13. The outlet pipe of CB180 is below the listed minimum velocity of 2.0 fps. The applicant should review this velocity (and any others) and review the need for a waiver if deemed necessary.
- i. ETGTD 920.4.1. & 920.4.2. The applicant should show stockpile and equipment storage locations on the plan set.
- j. ETGTD 920.4.10. & 920.4.11. The applicant should illustrate and/or note the intended snow management measures upon the plan set.
- k. ETGTD 930.4. We note that the majority of the stormwater design utilizes pipe slopes of less than the required 2.0%. The applicant should review these pipe slopes and provide calculations showing that the drain line velocities are self-cleaning.
- l. ETGTD 930.10. We note the Town requirement of curb inlet drainage structures at all vertical sags. The applicant should review the need of curb inlet structures with the implementation of the proposed bituminous curbing.
- m. ETGTD 930.13. The applicant should add underdrains in all cut sections of the proposed roadway profile plan sheets.
- n. ETGTD 930.15. The applicant should revise the DMH detail on Plan Sheet #24 to reference the Town required DMH cover.
- o. ETGTD 930.30. The applicant should coordinate the outlet elevation of the 15” pipe between the Outlet Structure #21 detail upon Plan Sheet 25 with the HydroCAD Pond 1P.

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- p. The applicant will be required to comply with all provisions of the Town of Hudson's MS4 permit, including but not limited to annual reporting requirements, construction site stormwater runoff control, and record keeping requirements. The applicant has noted that the project has been designed to meet 2018 MS4 requirements. The applicant should update the note and ensure the design is compliant with the 2020 modifications to the MS4 permit.
- q. Please note that this review was carried out in accordance with applicable regulations and standards in place in New Hampshire at this time. Note that conditions at the site, including average weather conditions, patterns and trends, and design storm characteristics, may change in the future. In addition, future changes in federal, state or local laws, rules or regulations, or in generally accepted scientific or industry information concerning environmental, atmospheric and geotechnical conditions and developments may affect the information and conclusions set forth in this review. In no way shall Fuss & O'Neill be liable for any of these changed conditions that may impact the review, regardless of the source of or reason for such changed conditions. Other than as described herein, no other investigation or analysis has been requested by the Client or performed by Fuss & O'Neill in preparing this review.

7. Zoning (ZO 334)

- a. Zoning Ordinance (ZO) 334-14.A. The applicant has not noted the proposed building heights on the plan set. No architectural drawings or elevations for the proposed buildings were included in the review package.
- b. ZO 334-17 & 334-21. The applicant has noted that the subject parcel is located within the General (G-1) zoning district. The proposed use is permitted by the Ordinance because the site is serviced by Town water and sewer.
- c. ZO 334-33. The applicant has proposed impacts to both the wetlands and wetlands buffers. We note that these impacts will require a Conditional Use Permit from the Town and a Wetlands Permit from NHDES.
- d. ZO 334-60. The applicant has not provided any information for any proposed signs on site, except traffic and parking signage.
- e. ZO 334-71.A. The applicant has provided calculations for the density for the Housing of Older Persons. We note that the applicant has used the total lot area for the calculation and not the buildable area as the Ordinance appears to require. The applicant has noted that 98 bedrooms would be allowed but it appears that using the buildable area only 93 bedrooms would be allowed. The applicant should review these calculations.
- f. ZO 334-83 and HR 218-4.E. The applicant has noted that no portion of the site is located within a designated flood hazard area.

8. Erosion Control/Wetland Impacts

- a. The Town of Hudson should reserve the right to require any additional erosion control measures as needed. The applicant has noted this on the plans.

9. Landscaping (HR 275-8.C.(7) & 276-11.1.B.(20)) and Lighting (HR 276-11.1.B.(14))

- a. HR 276-11.1.B.(14). The applicant has shown lighting fixture locations on the plans with

Mr. Brian Groth
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details and photometric information. The applicant should review the light locations with the tree locations. It appears that some of the lights will be obscured and conflict with the proposed street trees.

10. State and Local Permits (HR 275-9.G.)

- a. HR 275-9.G. The applicant has listed several required state permits on the plan set. The applicant should add the status of the permit and also note that NHDES Wetlands Permit is required.
- b. HR 275-9.G. The applicant did not provide copies of any applicable Town, State or Federal approvals or permits in the review package.
- c. Additional local permitting may be required.

11. Other

- a. ETGTD Section 565.1.1. The applicant is reminded of Town of Hudson requirements for the importing of off-site fill materials for use in constructing this project. It is recommended that these requirements be stated on the plans for the Contractors attention.
- b. The applicant has included a retaining wall detail in the plans, with a note that the wall will be designed by others. The applicant should provide a copy of that wall design, signed and stamped by a New Hampshire registered professional engineer, to the Town for their records.
- c. The applicant should evaluate the need to extend the proposed guardrail along the steep slopes on the south side of Norman Way approximately between stations 8+50 and 7+25.

Please feel free to call if you have any questions.

Very truly yours,



**Steven W.
Reichert, PE**

Digitally signed by Steven W. Reichert,
PE
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Steven W. Reichert, P.E.

SWR:

Enclosure

cc: Town of Hudson Engineering Division – File
Keach- Nordstrom Associates, Inc. - alewis@keachnordstrom.com



July 13, 2021

Mr. Brian Groth
Town Planner
Town of Hudson
12 School Street
Hudson, NH 03051

Re: Town of Hudson Planning Board Review – Traffic Study Review
Heritage Landing Site Plan, 112 & 114 Greeley Street
Tax Map 140 Lots 2 & 3; Acct. #1350-969
Reference No. 20030249.2050

Dear Mr. Groth:

Fuss & O'Neill, Inc. has reviewed the Traffic Impact and Access Study prepared by Transportation Engineering, Planning and Policy (TEPP) for Keach-Nordstrom Associates, Inc. (KNA) dated June 22, 2021, for the proposed residential development at 112 and 114 Greeley Street in Hudson, New Hampshire. The project proposes to replace one existing single-family-detached housing units with 47 proposed senior-adult-detached housing units. Access and egress to the site will be provided via a new curb cut on the west side of Greely St. The curb cut will consist of a loop road connecting all of the proposed residential units in a circular manner.

Please note that site plan, stormwater, and other project related comments were provided under a separate letter dated July 9, 2021.

In reviewing the Traffic Impact and Access Study, the following items are noted:

4. Traffic

- a. Street functions as a collector, not an arterial, as seen in the Town of Hudson's Zoning Ordinance 334-11, Classification of Town Roads. The classification of this road should be revised in the report.
- b. In checking the 9% adjustment from the ATR data, the AADT and AM Peak hour volumes in the report seem correct when applying the adjustment to the ATR week average. However, when applying the 9% adjustment to the ATR week average for the PM peak hour (236 northbound, 179 southbound—415 total), the resulting monthly adjusted volume should be 452 vehicles, not the 447 vehicles used in the report that is also shown in Table 1. These 5 additional vehicles should not have a significant impact on the results of the report, but should be accounted for regardless. Additionally, Tables 4 and 7 of the report, as well as the traffic volume figures, should be revised to reflect these 5 additional vehicles.

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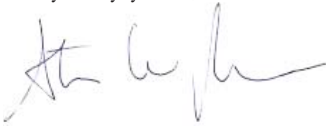
- c. The K-Factor for the weekday PM peak hour in Table 1 is not correct for the PM peak hour volume shown in the table. The K-Factor should be revised to reflect the PM peak hour volume once the 5 additional vehicles are accounted for.
- d. The report defines stopping sight and intersection sight distances, but does not provide any analysis regarding the sight distances of the proposed driveway. The report does include sight distance data for a Portland Street/Proposed Road project, which does not seem relevant to the Greeley Street project. Stopping sight data and analysis should be provided for the proposed access road to the residential development and should show that Greeley Street's geometry to either side of the proposed curb cut does not interfere with the sight triangles for cars utilizing the site's access road. As noted in our site plan review letter the southwest sight distance line shown on the plans touches the edge of uncleared vegetation, and the applicant should ensure that all vegetation removals needed to provide safe sight distances are evaluated and completed during construction.
- e. In the Background-Traffic Growth section of the report, the mentioned 11.6-percent growth would take place between 2021 and 2031 assuming a 1.0-percent annual growth rate. However the 2031 should be 2032.
- f. The values in Table 5 for the calculated vehicle-trip generation data seem correct based on ITE, Trip Generation Manual, 10th edition trip generation data for Land Use Code 251—Senior-Adult Detached Housing (47 dwelling units). However, directly below Table 5, a note states the data in the table is based ITE, Trip Generation Manual, 10th edition data for a senior-adult-detached housing land use with 103 dwelling units. This note should be revised to reflect the 47 proposed dwelling units used to calculate the data.
- g. Table 6 – Trip Distribution and Network Assignment shows 100 percent of the proposed trips being distributed to/from the South. This should be corrected to display the intended trip distribution.
- h. If basing the trip distribution of the proposed development on the existing average daily traffic volumes presented in the ATR data, approximately 50% of the trips would come to/from the northbound direction and 50% would come to/from the southbound direction. The process used to determine the intended 60%/40% trip distribution split should be clarified in the report.
- i. The methodologies used in the capacity analysis section of the report are acceptable but should be revised to include the additional 5 vehicles from the suggestion above for the sake of accuracy.

Mr. Brian Groth
July 13, 2021
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TEPP's overall conclusion is that there should be minimal impacts on traffic operations on the roadway network adjacent to the site, given the relatively low number of trips expected to be generated by the site's proposed land use (23 during the weekday morning peak hour and 27 during the weekday evening peak hour). We believe this conclusion will remain true upon the completion of the revisions suggested above.

Please feel free to call if you have any questions.

Very truly yours,



**Steven W.
Reichert, PE**

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Steven W. Reichert, P.E.

SWR:

Enclosure

cc: Town of Hudson Engineering Division – File
Keach- Nordstrom Associates, Inc. - alewis@keachnordstrom.com



July 15, 2021

Brian Groth
Town Planner
Town of Hudson
12 School Street
Hudson, New Hampshire 03051

**Subject: Response to Fuss & O'Neill Review Letter
Tax Map 140, Lots 2 & 3
KNA Project No. 20-1001-1**

Dear Mr. Groth:

Our office is in receipt of Fuss & O'Neill's review comments dated July 9, 2021. Based on the comments, we have made the required modifications to the plan set and attached a copy for final review. A response to each comment has been provided below.

1. Zoning Ordinance Review

- a. Hudson Regulation (HR) 275-6.C. The applicant has not proposed a sidewalk along Greeley Street or the private Norman Way roadway.
There are no sidewalks near the proposed project, and after discussion with the Town of Hudson no sidewalks were proposed for this project.
- b. HR 275-6.I. The scope of this review does not include the adequacy of any fire protection provisions for the proposed buildings. The applicant has noted that the Contractor is to verify the size of water service lines with the fire suppression engineer prior to the start of construction. Fuss & O'Neill defers to the Hudson Fire Department for review of proposed fire protection for this development, including the proposed fire hydrant layout.
KNA notes this and is in receipt of the Hudson Fire Department review comments. The Fire Department comments have been addressed in a later portion of this review letter.
- c. HR 275-8.C.(2) and Zoning Ordinance (ZO) 334-15.A. The applicant has not provided parking calculations on the plan set. We note that each residential unit has a driveway that accommodates 2 parking spaces and 7 spaces have been provided at the clubhouse.
Parking calculations have been added to the MASTER PLAN as note 27 on sheet 1.
- d. HR 275-9.C.(11). The applicant has provided two handicap spaces for the clubhouse on the plan. This adequately serves the clubhouse building on the site.
No further comment.
- e. HR 275-9.F. The applicant did not provide copies of any easements or deeds as

part of the package received for review, and has not shown any existing or proposed easements on the plans. A Sewer Easement Plan for the sewer main extension/connection through Map 140 Lots 4 & 11 is included in the plan set. **The existing deeds for lots 2 and 3 have been included in this submittal. A draft of the proposed sewer easement has also been included for review.**

2. Administrative Review Codes (HR 276)

- a. HR 276-7. The applicant did not list any waivers on the plan set or include any waiver requests in the package received for review.
No further comment.
- b. HR 276-11.1.B.(6) The owner's signature is not shown on the plan set.
The owner's signature will be included on the final plan set.
- c. HR 276-11.1.B.(13). The applicant has not included details for any proposed site signage other than traffic signs. The applicant should include a note stating that, "All signs are subject to approval by the Hudson PLANNING BOARD prior to installation thereof."
The note referenced above has been added to sheet a, MASTER PLAN, as note 20.
- d. HR 276-11.1.B.(15). The applicant has not shown any buildings within 50 feet of the site.
Structures, driveways, and travel ways within 200 feet of the subject property has been shown on sheet 1, the MASTER PLAN.
- e. HR 276-11.1.B.(16). The applicant has not provided the locations of the driveways and travel ways within 200 feet of the site.
Structures, driveways, and travel ways within 200 feet of the subject property has been shown on sheet 1, the MASTER PLAN.
- f. HR 276-11.1.B.(20). The applicant has not included the height of any existing buildings on the plan. We note that the existing buildings on site will be demolished as part of the project.
The height of the existing structures on site have been added to the EXISTING CONDITIONS PLAN as note 10 on sheet 2.
- g. HR 276-11.1.B.(23). The applicant has not noted any pertinent highway projects on the plan set.
A note has been added on sheet 1, MASTER PLAN, as note 25 stating that "There are no known pertinent highway projects this project".
- h. The Wetland Scientist has not signed and stamped the Master Plan, Existing Conditions Plans, or Wetland/Wetland Buffer Impact Plan.
The Wetland Scientist's stamp and signature is on the updated plan set.

3. Driveway Review Codes (HR 193)

- a. HR 193.10.E. The applicant has shown sight distances of 400 feet for the proposed roadway connection to Greeley Street on the plan set. We note that a portion of the sight distance line looking southwest touches the edge of uncleared vegetation. The applicant should ensure that all vegetation removals needed to provide safe sight distances are evaluated and completed during construction.
The existing treeline is now proposed to be cut back in this area to ensure safe sight distance.

- b. HR 193.10.I. The applicant has proposed several locations where a shared driveway connects 3 units to Norman Way. The applicant should review this layout with the Town to determine if a waiver is necessary.
The proposed development is not a subdivision, and therefore the “common drives” referenced in the comment above are extensions of the private roadway.
- c. Engineering Technical Guideline & Typical Details (ETGTD) 515.3. The applicant has proposed a street with a horizontal curve radius of less than 150 feet. Curve C6 has a radius of only 101 feet. We note that the proposed roadway is to be private but recommend it meet Town standards for safety and access.
The proposed roadway is private, and therefore the 101 ft radius is proposed to remain.
- d. ETGTD 515.7 The applicant has proposed a width of 28 feet wide for the Norman Way connection to Greeley Street, with the remainder of the roadway width of 24 feet. Hudson Standards require a 28 foot width for roads greater than 1,000 feet in length. The applicant should review the proposed roadway width with the Town and provide a waiver if required.
The proposed roadway is private and therefore the 24ft will remain the proposed roadway width.
- e. ETGTD Detail R-1. The applicant should review the need to meet the Town standard for street pavement. We note that the applicant has proposed 1 inch of wearing course and 2 inches of binder instead of the 1.5 inches of wearing course and 2.5 inches of binder required by the Hudson Standard.
The PRIVATE ROADWAY SECTION detail on sheet 23 has been updated to reference 1.5 inches of wearing course and 2.5 inches of binder course.

4. Traffic

- a. HR 275-9.B. The applicant has provided a Traffic Impact and Access Study for this project. Our review comments for this study will be forwarded separately.
Professional traffic engineer, Kim Hazarvartian of TEPP LLC will be replying to the Traffic Study review.

5. Utility Design/Conflicts

- a. HR 275-9.E and 276-13. The applicant has shown a proposed sewer pump station on the plan set, and noted that this is designed by others. We note that no details or calculations were provided in the review package. The applicant has also not provided any details for construction of the proposed force main.
The sewer pump will be designed by AAA Pump, and the design and details are forthcoming.
- b. HR 275-9.E and 276-13. The applicant has shown a portion of the force main to be directly under the proposed gas main, and portions of it are shown closer than 10 feet to the water main.
Gas and water main layout in this area has been revised so that the force main does not cross the gas and the water main is 10 feet away from the force main.
- c. HR 276-13. The applicant should provide a detail for water/sewer/drain utility crossings on the plan set.
The UTILITY SEPARATION (MAIN) DETAIL is located on sheet 26.

- d. HR 276-13. The applicant has shown very steep pipe slopes from SMH #111 and STR #23 into the sewer pump station. The applicant should provide pipe anchors for any slopes exceeding 15%, and also verify that flow velocities conform to the requirements of NHDES Env-Wq 704.04(i).
Pipe inverts have been revised for SMH#111 and STR#23. These revisions have reduced the slopes for both pipes. The pipe coming from SMH#111 now has an 8.25% slope, and the pipe from STR#34 now has a slope of 2.93%
- e. ETGTD Section 825.2.13. The applicant has noted 'Approved Fire Hydrant' on the Hydrant Installation detail but has not noted the proposed hydrant brand or model. Hydrant models approved for use in Hudson are included in the referenced technical specification.
HYDRANT INSTALLATION detail has been updated to reference a Hudson approved hydrant brand and model.
- f. The Town and the applicant should review and clarify who will own the maintenance of the sewer and water lines within the private street, development, and sewer connection easement area.
The town of Hudson will own the maintenance of the water line, while the HOA for the condominium association will own the sewer maintenance.
- g. The applicant should include a pavement patch detail in the plans for the utility connections at Greeley Street and Sutherland Drive.
A permanent pavement repair detail has been provided as a part of the construction details on sheet 23.

6. Drainage Design/Stormwater Management (HR 275-9.A./Chapter 290)

- a. HR 275-9.A.(1). & 290.5. The applicant has proposed an increase in volume runoff at POA A in the 10-year (10% increase) and in the 25-year storm (11% increase) events. The applicant should review these increases and if these increases in volume require a waiver, or should be addressed to meet the Regulation. The applicant should also provide the 50-year Post Development HydroCAD analysis for review.
**HR 275-9.A.(1). States the goal "to achieve a zero increase in runoff for both peak and volume where practicable". The soils present on this site do not make a zero increase in volume practicable. The site is almost entirely Scituate soil, which has an infiltration rate of 0.06 inches per hour. Under Env-Wq 1508.06(a)(1) infiltration into this soil is prohibited. While there is a decrease in the peak rate of runoff for every storm event, with no infiltration on the site the volume has to increase.
The 50-year Post Development HydroCAD has been included in this submittal.**
- b. HR 290-5.A.10. Due to the close proximity of the onsite wetlands, and as to avoid unwanted additional wetland impacts, the applicant should add a note stating that orange construction fence will be placed at all wetland buffers within 50-feet of proposed grading. This fence is recommended during build out, and kept up until the site is complete.
This note has been added to sheet 7 as note 7.

- c. HR 290-5.A.12. & 290-9. The applicant should coordinate the maintenance requirements listed on Plan Sheet 20 of the Design Plans with the O&M Plan provided within the Stormwater Calculations. We note the O&M Plan calls for the use of level spreaders, while the plans reference a surface sand filter.
There is a level spreader proposed at the outlet of Stormwater Pond 1 and the Surface Sand Filter is Stormwater pond 2. As such, maintenance requirements for a level spreader have been added to sheet 20 and surface sand filter maintenance requirements have been added to the O&M Plan. The updated O&M Plan has been included in this submittal.
- d. HR 290-6.A.8. The applicant should add a note of the requirement to coordinate a pre-construction meeting with the Town Engineer.
This note has been added to Sheet 1 as note 29.
- e. HR 290-6.A.9. We note similar notes listed upon the plan set, the applicant should note the “temporary stabilization within 5 days of initial disturbance” within the appropriate plan notes.
This note has been added to the EROSION CONTROL PLAN as note 11 on sheet 11.
- f. HR 290-8.B.5. The applicant should coordinate with the Town for the need of a Home Owners Association (HOA) for maintenance requirements.
A Home Owners Association is proposed for this development and will be in charge of maintenance requirements.
- g. HR 290-10.A. The applicant shall keep the Town informed of all communication with NHDES in relation to the required Alteration of Terrain and Wetlands Permits being requested to ensure NHDES comments do not alter drainage design/calculations. We note that additional items will be required for the NHDES AoT Permit, which could potentially affect the stormwater calculations and/or construction of the site. Please provide additional detail on the following items:
KNA will inform the town of communication with NHDES and any plan changes that may result from that communication.
- i. Alteration of Terrain administrative rule Env-Wq 1503.19(h) and statutory requirements of RSA 212-A:9, III, the NHDES adopted a rule amendment effective June 2, 2020; the requirement of a Wildlife Habitat Assessment.
A wildlife Habitat Assessment has been performed for this project. The report is included in this submittal.
- ii. NHDES Env-1505.03 - The site may be required to meet or request a waiver from the 5-acre disturbed area limit.
KNA will meet the requirements of NHDES Env-Wq 1505.03, should NHDES find that it is needed.
- iii. NHDES Env-1505.06(b)(1) - The site may be required to meet or request a waiver from the 1-acre winter disturbed area limit.
KNA will meet the requirements of NHDES Env-Wq 1505.06(b)(1), should NHDES find that it is needed.
- h. Engineering Technical Guideline & Typical Details (ETGTD) 920.3.13. The outlet pipe of CB180 is below the listed minimum velocity of 2.0 fps. The

applicant should review this velocity (and any others) and review the need for a waiver if deemed necessary.

KNA has attached the 2-year storm analysis to this submittal, and believes the flows to be adequate for self-cleaning.

- i. ETGTD 920.4.1. & 920.4.2. The applicant should show stockpile and equipment storage locations on the plan set.

Staging and Stockpile Area is shown in the northern corner of the property on sheet 11, EROSION CONTROL PLAN.

- j. ETGTD 920.4.10. & 920.4.11. The applicant should illustrate and/or note the intended snow management measures upon the plan set.

Proposed snow storage areas are shown on sheets 5 and 6 in the revised plan set as well as the Landscape Plans.

- k. ETGTD 930.4. We note that the majority of the stormwater design utilizes pipe slopes of less than the required 2.0%. The applicant should review these pipe slopes and provide calculations showing that the drain line velocities are self-cleaning.

All drainage pipe slopes are adequate for the self-cleaning requirement. The hydroCAD 2-year report has been included in this resubmittal to show this.

- l. ETGTD 930.10. We note the Town requirement of curb inlet drainage structures at all vertical sags. The applicant should review the need of curb inlet structures with the implementation of the proposed bituminous curbing.

Curb inlet drainage structures have been proposed for all vertical sags.

- m. ETGTD 930.13. The applicant should add underdrains in all cut sections of the proposed roadway profile plan sheets.

Underdrains have been added to areas of cut on the proposed roadway, and can be seen on sheet 7 GRADING & DRAINAGE PLAN.

- n. ETGTD 930.15. The applicant should revise the DMH detail on Plan Sheet #24 to reference the Town required DMH cover.

The DMH detail on sheet 24 has been updated to reference the Town required DMH cover.

- o. ETGTD 930.30. The applicant should coordinate the outlet elevation of the 15" pipe between the Outlet Structure #21 detail upon Plan Sheet 25 with the HydroCAD Pond 1P.

Outlet Structure #21 detail on sheet 25 has been updated to match both the plans and the HydroCAD model.

- p. The applicant will be required to comply with all provisions of the Town of Hudson's MS4 permit, including but not limited to annual reporting requirements, construction site stormwater runoff control, and record keeping requirements. The applicant has noted that the project has been designed to meet 2018 MS4 requirements. The applicant should update the note and ensure the design is compliant with the 2020 modifications to the MS4 permit.

Note 24 on sheet 1 has been updated to reference the 2020 MS4 permit.

- q. Please note that this review was carried out in accordance with applicable regulations and standards in place in New Hampshire at this time. Note that conditions at the site, including average weather conditions, patterns and trends, and design storm characteristics, may change in the future. In addition, future

changes in federal, state or local laws, rules or regulations, or in generally accepted scientific or industry information concerning environmental, atmospheric and geotechnical conditions and developments may affect the information and conclusions set forth in this review. In no way shall Fuss & O'Neill be liable for any of these changed conditions that may impact the review, regardless of the source of or reason for such changed conditions. Other than as described herein, no other investigation or analysis has been requested by the Client or performed by Fuss & O'Neill in preparing this review.
No further comment.

7. Zoning (ZO 334)

- a. Zoning Ordinance (ZO) 334-14.A. The applicant has not noted the proposed building heights on the plan set. No architectural drawings or elevations for the proposed buildings were included in the review package.
Architectural drawings have been provided in this submittal.
- b. ZO 334-17 & 334-21. The applicant has noted that the subject parcel is located within the General (G-1) zoning district. The proposed use is permitted by the Ordinance because the site is serviced by Town water and sewer.
No further comment.
- c. ZO 334-33. The applicant has proposed impacts to both the wetlands and wetlands buffers. We note that these impacts will require a Conditional Use Permit from the Town and a Wetlands Permit from NHDES.
A Conditional Use Permit has been applied for and approved by the Hudson Conservation Commission. A Wetland Permit from NHDES is pending.
- d. ZO 334-60. The applicant has not provided any information for any proposed signs on site, except traffic and parking signage.
Proposed signage has been included in this submittal.
- e. ZO 334-71.A. The applicant has provided calculations for the density for the Housing of Older Persons. We note that the applicant has used the total lot area for the calculation and not the buildable area as the Ordinance appears to require. The applicant has noted that 98 bedrooms would be allowed but it appears that using the buildable area only 93 bedrooms would be allowed. The applicant should review these calculations.
Area calculations have been revisited and numbers have been updated. Using the current buildable area, listed as note 13 on sheet 1, 46.82 homes are allowed and 47 are proposed.
- f. ZO 334-83 and HR 218-4.E. The applicant has noted that no portion of the site is located within a designated flood hazard area.
No further comment.

8. Erosion Control/Wetland Impacts

- a. The Town of Hudson should reserve the right to require any additional erosion control measures as needed. The applicant has noted this on the plans.
No further comment.

9. Landscaping (HR 275-8.C.(7) & 276-11.1.B.(20)) and Lighting (HR 276-11.1.B.(14))

- a. HR 276-11.1.B.(14). The applicant has shown lighting fixture locations on the plans with details and photometric information. The applicant should review the light locations with the tree locations. It appears that some of the lights will be obscured and conflict with the proposed street trees.

Lighting locations have been reviewed and trees and lights have been repositioned as to avoid any conflict.

10. State and Local Permits (HR 275-9.G.)

- a. HR 275-9.G. The applicant has listed several required state permits on the plan set. The applicant should add the status of the permit and also note that NHDES Wetlands Permit is required.

The status' have been added to note 14 on sheet 1.

- b. HR 275-9.G. The applicant did not provide copies of any applicable Town, State or Federal approvals or permits in the review package.

A copy of the Alteration of Terrain Report was included in the submittal.

Copies of other state and federal permits will be sent to the Town as they are applied for.

- c. Additional local permitting may be required.

Noted.

11. Other

- a. ETGTD Section 565.1.1. The applicant is reminded of Town of Hudson requirements for the importing of off-site fill materials for use in constructing this project. It is recommended that these requirements be stated on the plans for the Contractors attention.

No further comment.

- b. The applicant has included a retaining wall detail in the plans, with a note that the wall will be designed by others. The applicant should provide a copy of that wall design, signed and stamped by a New Hampshire registered professional engineer, to the Town for their records.

A note has been added to the REDI-ROCK RETAINING WALL WITH GAURDRAILL detail and as a note on the MASTER PLAN to reflect the above comment.

- c. The applicant should evaluate the need to extend the proposed guardrail along the steep slopes on the south side of Norman Way approximately between stations 8+50 and 7+25.

The proposed guardrail has been extended to station 8+50 on the southern side of Norman Way.

Hudson Fire Department Comments

1. The project shall obtain street name authorization from the Hudson Fire Department.
 - a. Three additional street names shall be submitted for the common driveways that service three dwelling units.
Three additional street names will be submitted to the Hudson Fire Department.
2. The project shall obtain site addressing from the Hudson Fire Department.
KNA will work with the Hudson Fire Department to obtain site addressing.
3. The common driveway shall have a permanent sign displaying street names.
Permanent signage will be placed in the approved locations.
4. Please make sure that the proposed snow storage area shown on the plan does not impeded parking or travel paths.
The snow storage areas are shown on sheets 5 and 6 as well as the Landscape Plan.
5. The Fire Department will require three copies of the fire hydrant layout for the full site.
Three copies of fire hydrant layout will be given to the Fire Department.
 - a. The Fire Department would request that two additional hydrants be added to the site
 - i. One shall be located on the entrance road, and one shall be installed in the area of unit 8 and 9.
Fire hydrants have been placed in both of the recommended locations and can be seen on the UTILITY PLAN, sheets 9 and 10.
 - b. The Fire Department would request that hydrant layout take into account the common driveways. Place a hydrant in the area of each of the drives.
Fire hydrants have been placed in the area of each of the drives and can be seen on the UTILITY PLANS.

Hudson Engineering Department Comments

1. Applicant shall revise sewer and water services to avoid driveways.
This design change will be included as part of the final engineering review.
2. Applicant shall add locations of sewer cleanout and water curb stops.
3. Water main layout shall be revised to avoid crossing of the drainage culverts.
The water main layout has been revised to run above the proposed drainage box culverts and can be seen on the Roadway Profile.
4. Applicant shall add three gate valves.
Three gate valves have been added to the water main in the locations shown on the attachment provided with the Engineering Department comments. The valves can be seen on the UTILITY PLANS, sheets 9 and 10.
5. Applicant shall provide a streetlight, to meet Town LED Specifications, at the proposed entrance.
A streetlight meeting Town LED Specifications will be forthcoming in a lighting plan under a separate cover.
6. Applicant shall revise sewer profile (SMH8 – Existing SMH) to eliminate the drop in the manhole.

The proposed drop has been removed and can be seen on the SEWER EASEMENT PLAN, sheet 22 of the plan set.

7. Applicant shall revise details to meet town specs.
Details called out in the Fuss and O'Neil comment letter have been revised to meet town specifications.

Hudson Assessing Department Comments

1. Lot merger should be in the name of the property owner, K & M Developers.
An updated Lot Merger form has been included in this submittal.

Respectfully,

Allison Lewis, EIT
Project Engineer
Keach Nordstrom Associates, Inc.
10 Commerce Park North, Suite 3
Bedford, NH 03110

ATTACHMENT D IS PROVIDED AS A SEPARATE HARD COPY

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TOWN OF HUDSON

Conservation Commission

William Collins, Chairman

Dave Morin, Selectmen Liaison

12 School Street • Hudson, New Hampshire 03051 • Tel: 603-886-6008 • Fax: 603-816-1291



Motion to Recommend the Conditional Use Permit Application

Date: July 12, 2021

Case: Heritage Landing, 47 unit age restricted condominium development
Hudson, New Hampshire
Map 140, Lot 2 and 3
Zone: General (G)

Description of work to be performed: The project proposes construction of two stream crossings, two storm water treatment features and other features typical to a development of this type. During the applicants initial presentation to the commission the applicant said that the project if built, will have a permanent wetland impact of 2950 square feet (approx. 0.07 acres) and permanent wetland buffer impacts of 39,000 square feet (approx. 0.9 acre).

Note: On June 21, 2021 a site walk of the property was completed by commission members along with the chairman of the planning board.

HCC Members Present for the site walk: Randy Brownrigg, Ken Dickinson, Bill Kallgren and Bill Collins PB Members Present for site walk: Tim Malley

Motion to “Recommend”

Mr. Kallgren moved to recommend acceptance by the Hudson Planning Board of the Conditional Use Permit application filed for the proposed “Heritage Landing” age restricted subdivision reference Tax Map 140, Lots 2 and 3 by representatives of K&M Developers, LLC, dated April 26, 2021. After application review, the Hudson Conservation Commission finds that the use presented by the applicant for access to the upland portion of the property and for storm water management comply with Town of Hudson Zoning Ordinance 334, Article IX- Wetland Conservation Overlay District, paragraphs 334-36(C) 2, through 4 and 334-37. This favorable acceptance is contingent upon Planning Board approval of the proposed plan and with the Conservation Commission recommendations listed below.

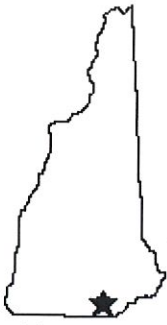
1. The commission recommends that a stipulation and or note be added to the final plan set that states “Construction and restoration shall comply with Best Management Practices set forth in New Hampshire Storm Water Manual Volume 3: Erosion and Sediment Control
2. During construction and restoration erosion control barriers shall be installed and maintained to the satisfaction of the Town Engineer.
3. The Town Engineer or his representative shall be allowed to inspect the boundaries of the wetland and wetland buffer areas during construction and report any finding to the applicant and the Conservation Commission for remediation.
4. The commission recommends that a stipulation and or note be added to the final plan set that states “The wetland buffer boundary shall be identified and marked prior to the start of construction per Hudson Zoning Ordinance, Article IX §334-35 (E.)
5. The commission recommends that a stipulation and or note be added to the final plan set that states “ No Cut/No Disturb” signage shall be installed along the wetland buffer boundary prior to issuing Certificates of Occupancy per Hudson Zoning Ordinance, Article IX §334-35 (E.)
6. The commission recommends that a stipulation and or note be added to the final plan set that states “Green SnowPro Certified contractors shall be utilized for winter site maintenance.”
7. The commission recommends that a stipulation and or note be added to the final plan set that states “Stockpiling of construction materials is not allowed in the wetland buffer areas during construction.
8. The commission recommends that a stipulation and or note be added to the final plan set that states “Compliance to NHDES Env-Wq 1403.04 Removal of Dead, Fallen Trees and Vegetation that need to be removed to facilitate construction within the wetland and wetland buffer areas be observed.
9. This motion is based on the plan(s) submitted by the applicant. It is recommended that if additional major impacts are made the plan be returned to the Conservation Commission for further review. Minimal changes to wetland and wetland buffer impacts shall be addressed by the Town Engineer
10. The commission recommends that a stipulation and or note be added to the final plan set that states “ Only wood ash and/or lime shall be used as part of the slope stabilization process for all wetland buffer impacts noted as referenced in Hudson Zoning Ordinance, Article IX §334-36 (B)(2)

Motion second Mrs. RumBaugh Motion Carried 4 / 0 / 0

William Collins

William Collins
HCC Chairman

A copy of this recommendation shall be stapled to the CUP application and forward it to the Town Planning Office for inclusion in the Planning Board Member Packets.



TOWN OF HUDSON

FIRE DEPARTMENT

39 FERRY STREET, HUDSON, NEW HAMPSHIRE 03051



Emergency 911
Business 603-886-6021
Fax 603-594-1164

Robert M. Buxton
Chief of Department

TO: Brian Groth
Town Planner

FR: Robert M. Buxton 
Fire Chief

DT: June 25, 2021

RE: Heritage Landing

The following is a list of sub-division plan concerns for this project. This review was completed utilizing plans submitted by Keach-Nordstrom Associates dated June 1, 2021.

1. The project shall obtain street name authorization from the Hudson Fire Department.
 - a. Three additional street names shall be submitted for the common driveways that service three dwelling units.
2. The project shall obtain site addressing from the Hudson Fire Department.
3. The common driveway shall have a permanent sign displaying street names.
4. Please make sure that the proposed snow storage area shown on the plan does not impede parking or travel paths.
5. The Fire Department will require three copies of the fire hydrant layout for the full site.
 - a. The Fire Department would request that two additional hydrants be added to the site.
 - i. One shall be located on the entrance road and one shall be installed in the area of unit 8 and 9.
 - b. The Fire Department would request that hydrant layout take into account the common driveways. Place a hydrant in the area of each of the drives.

****The following life safety and fire protection concerns provided are for informational purposes to the applicant and Planning Board for this project. Final determinations on these issues occur after further review of the project.**

- A. The proposed buildings may require an approved sprinkler system. The Hudson Fire Department upon review of the building plans shall conduct this review. This requirement is in accordance with the **International Building Code (IBC) and Hudson Town Code (HTC), current revision, Chapter 210, Article VI**. Any fire protection system shall be monitored by an approved fire alarm system.

- B. The fire alarm system shall be connected to the Hudson Fire Department's municipal fire alarm system or a substantially equivalent system in accordance with the **Hudson Town Code, Chapter 210**. A site plan detailing the aerial or underground layout to the municipal fire alarm connection must be provided before the utilities are completed for this project.
- C. Any required fire alarm system component must remain accessible and visible at all times.
- D. A blasting permit will be required for any blasting on the site in accordance with the **Hudson Town Code, Chapter 202**.

cc: Project Engineer
File

Dhima, Elvis

From: Dhima, Elvis
Sent: Friday, June 25, 2021 2:21 PM
To: Dubowik, Brooke; Groth, Brian
Cc: Donald Kirkland
Subject: RE: SP# 09-21 Heritage Landing Site Plan Dept Sign-off
Attachments: Gate valve layout.jpg

Brooke / Brian

Please see below

1. Applicant shall revise sewer and water services to avoid driveways.
2. Applicant shall add locations of sewer cleanouts and water curb stops
3. Water main layout shall be revised to avoid crossing of the drainage culverts
4. Applicant shall add three gate valves, per attachment
5. Applicant shall provide a street light, to meet Town LED Specifications, at the proposed entrance
6. Applicant shall revise sewer profile (SMH 8 – Existing SMH) to eliminate the drop in the manhole
7. Applicant shall revise details to meet town specs

Thanks

E

Elvis Dhima, P.E.
Town Engineer

12 School Street
Hudson, NH 03051
Phone: (603) 886-6008
Mobile: (603) 318-8286

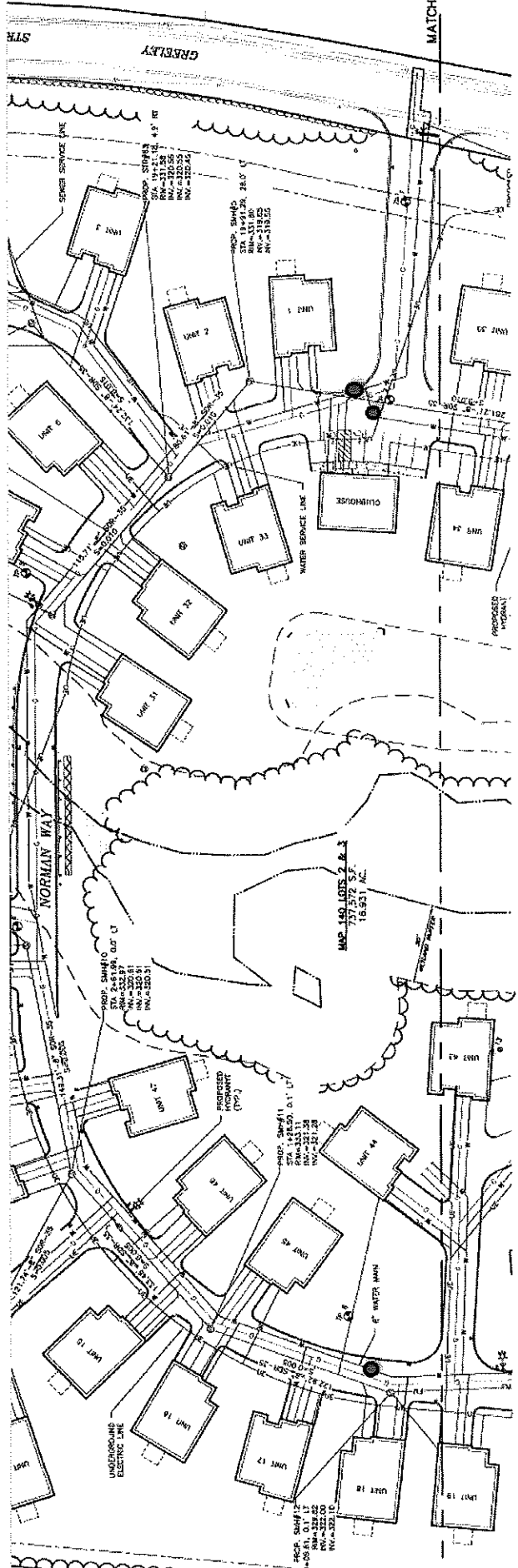


From: Dubowik, Brooke <bdubowik@hudsonnh.gov>
Sent: Thursday, June 24, 2021 11:08 AM
To: Bianchi, Dave <dbianchi@hudsonnh.gov>; Buttrick, Bruce <bbuttrick@hudsonnh.gov>; Buxton, Robert <RBuxton@hudsonnh.gov>; Caleb Chang <calebc@nashuarpc.org>; Dhima, Elvis <edhima@hudsonnh.gov>; Kirkland, Donald <dkirkland@hudsonnh.gov>; Forrence, Jess <jforrence@hudsonnh.gov>; Groth, Brian <bgroth@hudsonnh.gov>; Michaud, Jim <jmichaud@hudsonnh.gov>
Subject: SP# 09-21 Heritage Landing Site Plan Dept Sign-off

Good morning,
Attached is a sign-off for Heritage Landing @ 112-114 Greeley Street.
Please have your comments back by 7/1/21.
Thank you,

Brooke Dubowik

SEE SHEET 1 FOR NOTES
& REFERENCE PLANS



CONSTRUCTION NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE TOWN OF HANSON LATEST EDITION CONSTRUCTION STANDARDS AND DETAILS IN THE OFFICE OF A TOWN ENGINEER/ARCHITECTURAL, BEING REVIEWED AND APPROVED BY THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, AND INCORPORATED BY REFERENCE.
2. THE LOCATION OF ALL EXISTING UTILITIES, SHOWS OF RECORD, SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE LOCATION OF ALL UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE CITY AT LEAST 72 HOURS BEFORE BEGINNING.

- PROPOSED OVERHEAD UTILITIES
- PROPOSED UNDERGROUND UTILITIES
- PROPOSED GAS LINE
- PROPOSED WATER LINE
- PROPOSED SEWER LINE
- PROPOSED DRAINAGE LINE
- PROPOSED FLOODPLAIN
- PROPOSED EDCI OF FLOODPLAIN
- PROPOSED VERTICAL BRANCHED CURB

- FOUND FOUND
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SITE PLAN APPLICATION

Date of Application: 6/17/2021 Tax Map #: 140 Lot #: 2 & 3
Site Address: 112 & 114 Greeley Street
Name of Project: Heritage Landing
Zoning District: General (G) General SP#: 09-21
(For Town Use Only)
Z.B.A. Action: _____

PROPERTY OWNER:

DEVELOPER:

Name: K&M Developers, LLC
Address: 46 Lowell Road
Address: Hudson, NH 03051
Telephone # 603-880-7799
Email: msousa@sousarealty.com

PROJECT ENGINEER:

SURVEYOR:

Name: Keach-Nordstrom Associates Inc.
Address: 10 Commerce Park North
Address: Suite 3, Bedford, NH 03110
Telephone # 603-627-2881
Email: alewis@keachnordstrom.com

Keach-Nordstrom Associates Inc.
10 Commerce Park North
Suite 3, Bedford, NH 03110
603-627-2881
chickey@keachnordstrom.com

PURPOSE OF PLAN:

The purpose of this application and plan set is to propose a 62 and older age restricted detached condominium development at 112 and 114 Greeley Street.

Construction will involve a private loop road, utilities, and other site improvements.

(For Town Use Only)

Routing Date: 6/24/21 Deadline Date: 7/1/21 Meeting Date: 7/14/21

I have no comments I have comments (attach to form)

Jm Title: Chief Assessor Date: 6-24-21
(Initials)

Department: _____

Zoning: ___ Engineering: ___ Assessor: ___ Police: ___ Fire: ___ DPW: ___ Consultant: ___

& Lot merger s/b in the name of the property owner, K & M Developers LLC



TOWN OF HUDSON

Planning Board

Timothy Malley, Chairman



12 School Street • Hudson, New Hampshire 03051 • Tel: 603-886-6008 • Fax: 603-594-1142

CAP FEE WORKSHEET - 2021

Date: 07-21-21 Zone # 1 Map/Lot: 140/002 & 003
3112 & 114 Greeley St.

Project Name: Heritage Landing

Proposed ITE Use #1: Senior Housing 62+ Community

Proposed Building Area (square footage): N/A S.F.

CAP FEES: (ONE CHECK NEEDED)

1.	(Bank 09) 2070-701	Traffic Improvements	\$ <u>737.00</u>
2.	(Bank 09) 2050-182	Recreation	\$ <u>400.00</u>
3.	Greeley St. Improvements		\$ <u>500.00</u>
Total CAP Fee			\$ <u>1,637.00</u>

Check should be made payable to the Town of Hudson.

Thank you,

Brooke Dubowik
Administrative Aide



June 21, 2021

Subject: **Heritage Landing**
Map 140; Lots 2 & 3
112-114 Greeley Street, Hudson NH
KNA Project No. 20-1001-1

PROJECT NARRATIVE

This application proposes to construct Heritage Landing, an age restricted (62+) residential development. There will be 47-units and a new clubhouse proposed for construction over two phases. The project includes 2,080-lf of new private roadway to service the development, including two wetland crossings over a wetland that bisects the property. The impacts are necessary for the productive use of uplands in the rear of the parcel and the Applicant is seeking a Conditional Use Permit for the impacts, along with a State Wetlands Permit from the New Hampshire Department of Environmental Services. An Alteration of Terrain Permit is also required as this project will disturb over 100,000-sf of land during construction.

Each unit will be limited to 2 bedrooms and will be serviced by new water, sewer, gas and electric utilities. The sewer improvements include a privately maintained pump station that will work in tandem with a partial gravity system that connects through an adjacent development onto Sutherland Drive. The other utilities will all be from Greeley Street and constructed underground, per the Town's requirements. Other site improvements include landscaping, lighting and a full stormwater management system, including provisions for erosion controls during construction.

The project also proposes a voluntary merger of the two parent parcels, which are located at 112 & 114 Greeley Street. The property is located in the General zoning district and referenced on Hudson's Tax Map 140 as Lots 2 & 3. The consolidated parcel will be 16.931-acres (737,572-sf). The site is currently developed with only a single family home but otherwise is undeveloped. It is our professional opinion that, given the scale and type of the proposed development, an increase in age restricted housing will not adversely impact the Town's roads, schools, or other infrastructure now or over a longer period of time.

Civil Engineering

Land Surveying

Landscape Architecture

10 Commerce Park North, Suite 3B

Bedford, NH 03110

Phone (603) 627-2881

Fax (603) 627-2915

SITE PLAN APPLICATION

Date of Application: 6/17/2021 Tax Map #: 140 Lot #: 2 & 3

Site Address: 112 & 114 Greeley Street

Name of Project: Heritage Landing

Zoning District: General (G) General SP#: _____
(For Town Use Only)

Z.B.A. Action: _____

PROPERTY OWNER:

DEVELOPER:

Name: K&M Developers, LLC

Address: 46 Lowell Road

Address: Hudson, NH 03051

Telephone # 603-880-7799

Email: msousa@sousarealty.com

PROJECT ENGINEER:

SURVEYOR:

Name: Keach-Nordstrom Associates Inc.

Keach-Nordstrom Associates Inc.

Address: 10 Commerce Park North

10 Commerce Park North

Address: Suite 3, Bedford, NH 03110

Suite 3, Bedford, NH 03110

Telephone # 603-627-2881

603-627-2881

Email: alewis@keachnordstrom.com

chickey@keachnordstrom.com

PURPOSE OF PLAN:

The purpose of this application and plan set is to propose a 62 and older age restricted detached condominium development at 112 and 114 Greeley Street.

Construction will involve a private loop road, utilities, and other site improvements.

(For Town Use Only)

Routing Date: _____ Deadline Date: _____ Meeting Date: _____

_____ I have no comments _____ I have comments (attach to form)

(Initials) Title: _____ Date: _____

Department:

Zoning: ___ Engineering: ___ Assessor: ___ Police: ___ Fire: ___ DPW: ___ Consultant: ___

SITE DATA SHEET

PLAN NAME: Heritage Landing

PLAN TYPE: SITE PLAN

LEGAL DESCRIPTION: MAP 140 LOT 2&3

DATE: _____

Location by Street: 112 & 114 Greeley Street

Zoning: General (G)

Proposed Land Use: Age restricted condominium development

Existing Use: Residential

Surrounding Land Use(s): Residential

Number of Lots Occupied: 2

Existing Area Covered by Building: 3,629 SF

Existing Buildings to be removed: 3,629 SF

Proposed Area Covered by Building: 95,685 SF

Open Space Proposed: 74%

Open Space Required: 40%

Total Area: S.F.: 737,572 Acres: 16.931

Area in Wetland: 40,050 SF Area Steep Slopes: 0 SF

Required Lot Size: 43,560

Existing Frontage: 749.22 FT

Required Frontage: 150 FT

Building Setbacks:	<u>Required*</u>	<u>Proposed</u>
Front:	<u>50 FT</u>	<u>58.57 FT</u>
Side:	<u>15 FT</u>	<u>16.64 FT</u>
Rear:	<u>15 FT</u>	<u>28.43 FT</u>

SITE DATA SHEET
(Continued)

Flood Zone Reference: Map 33011C016D

Width of Driveways: 28 FT

Number of Curb Cuts: 1

Proposed Parking Spaces: _____

Required Parking Spaces: _____

Basis of Required Parking (Use): _____

Dates/Case #/Description/Stipulations
of ZBA, Conservation Commission,
NH Wetlands Board Actions:
(Attach stipulations on separate sheet) _____

Waiver Requests

<i>Town Code Reference:</i>	<i>Regulation Description:</i>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

(For Town Use Only)

Data Sheets Checked By: _____ Date: _____

SITE PLAN APPLICATION AUTHORIZATION

I hereby apply for *Site Plan* Review and acknowledge I will comply with all of the Ordinances of the Town of Hudson, New Hampshire State Laws, as well as any stipulations of the Planning Board, in development and construction of this project. I understand that if any of the items listed under the *Site Plan* specifications or application form are incomplete, the application will be considered rejected.

Pursuant to RSA 674:1-IV, the owner(s) by the filing of this application as indicated above, hereby given permission for any member of the Hudson Planning Board, the Town Planner, the Town Engineer, and such agents or employees of the Town or other persons as the Planning Board may authorize, to enter upon the property which is the subject of this application at all reasonable times for the purpose of such examinations, surveys, tests and inspections as may be appropriate. The owner(s) release(s) any claim to or right he/she (they) may now or hereafter possess against any of the above individuals as a result of any examinations, surveys, tests and/or inspections conducted on his/her (their) property in connection with this applications.

Signature of Owner: Manuel D. Sousa Date: 6/9/21

Print Name of Owner: Manuel D Sousa

- ❖ If other than an individual, indicate name of organization and its principal owner, partners, or corporate officers.

Signature of Developer: Manuel D Sousa Date: 6/17/21

Print Name of Developer: Manuel D Sousa

- ❖ The developer/individual in charge must have control over all project work and be available to the Code Enforcement Officer/Building Inspector during the construction phase of the project. The individual in charge of the project must notify the Code Enforcement Officer/Building Inspector within two (2) working days of any change.

Owner Affidavit

I, Manuel Sousa, authorized representative of K & M Developers, LLC and owner of the properties referenced on Tax Map 140 as Lots 2 & 3, located at 112 & 114 Greeley Street, Hudson, New Hampshire, hereby verify that I have authorized Keach-Nordstrom Associates, Inc. to submit on my behalf, any and all applicable State and local permit applications as they pertain to improvements on said property.

Additionally, I authorize Keach-Nordstrom Associates, Inc. to aid in the representation of these applications throughout the approval process.

Signature of Owner:

Manuel D. Sousa

Printed Name of Owner:

Manuel D. Sousa

Address of Owner:

46 Lowell Road

Hudson, NH 03051

Date:

6/17/21

LOT MERGER APPLICATION FOR TAX ASSESSMENT AND LAND USE PURPOSES

TOWN OF HUDSON, NEW HAMPSHIRE

The undersigned, Manuel Sousa (type or print name here)
is / are the owner(s) of lots or parcels shown on the Town Tax Maps as follows:

Tax Map 140 Lot 2
Tax Map 140 Lot 3
Tax Map _____ Lot _____

The undersigned requests that the Town of Hudson Planning Board combine the above described parcels or lots into one parcel or one lot to be known as, Tax Map 140, Lot 2 for tax assessment, and land use purposes.

The undersigned acknowledges and agrees that the merged lots or parcels shall be shown as a single lot or single parcel on the Town Tax map and shall be one lot or one parcel for land use purposes. The Town of Hudson will assess the merged lots or merged parcels as a single lot or a single parcel.

If at any time the undersigned, or its heirs, legatees, successors and assigns of the undersigned wish to subdivide the merged lot or merged parcel, subdivision approval must be obtained from the Town of Hudson Planning Board under the Town of Hudson Subdivision of Land Regulations.

The undersigned agrees that the approval of this application shall be filed at the expense of the undersigned in the Hillsborough County Registry of Deeds.

Dated this 17 day of JUNE, 2021.

Manuel J. Sousa (SIGN HERE) _____ (SIGN HERE)
LANDOWNER LANDOWNER

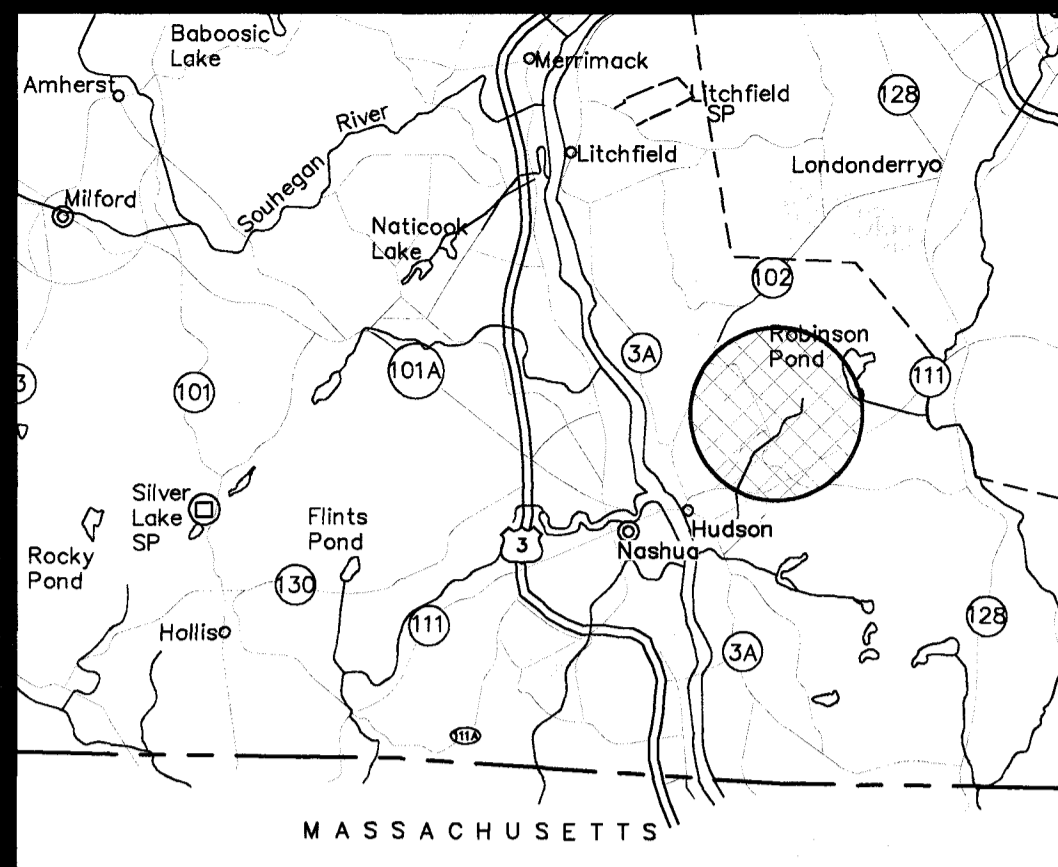
Manuel J. Sousa
(TYPE OR PRINT NAME) _____
(TYPE OR PRINT NAME)

This application for the merger of lots for tax assessment and land use purposes is approved by action of the Town of Hudson Planning Board. This application shall be recorded in the Hillsborough County Registry of Deeds.

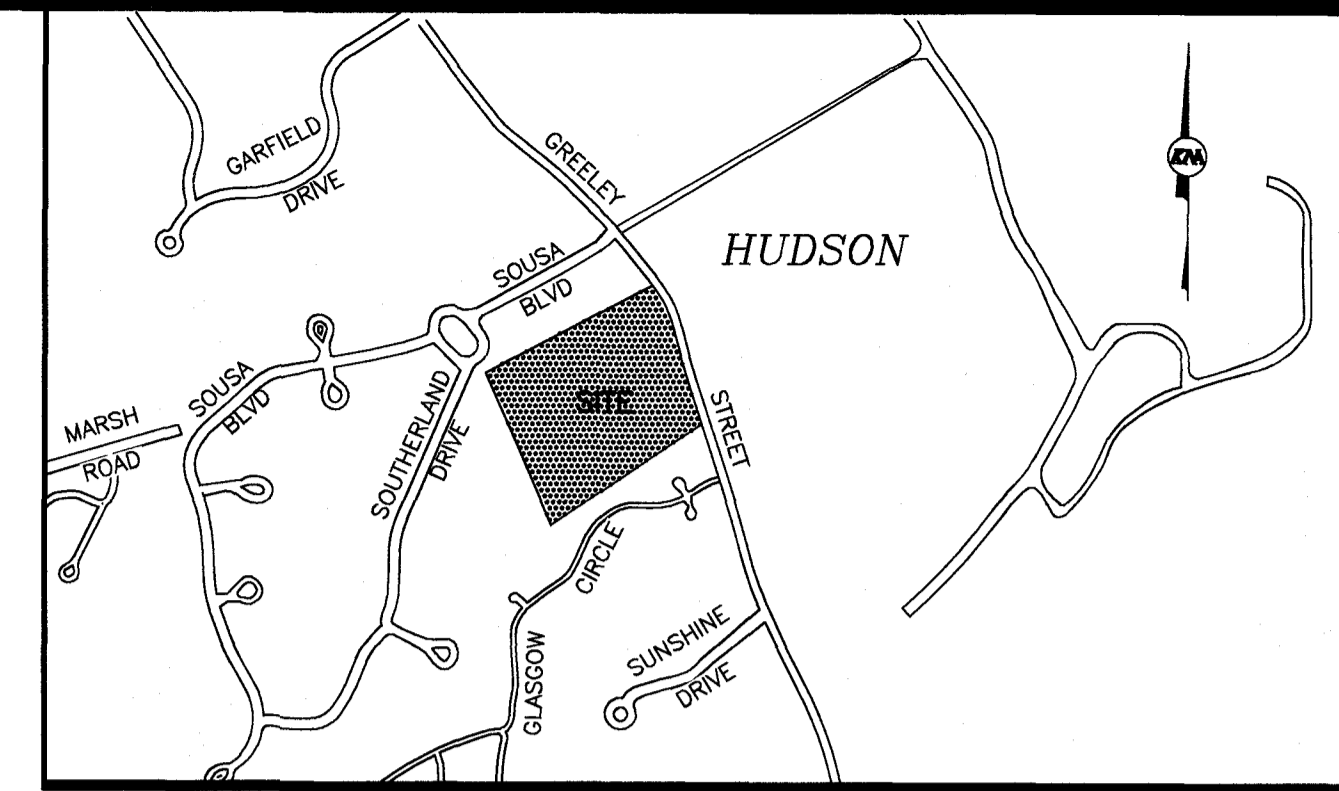
Dated this _____ day of _____, 20____.

(SIGN HERE)
CHAIRPERSON
HUDSON PLANNING BOARD

(TYPE OR PRINT NAME)



VICINITY PLAN
NOT TO SCALE



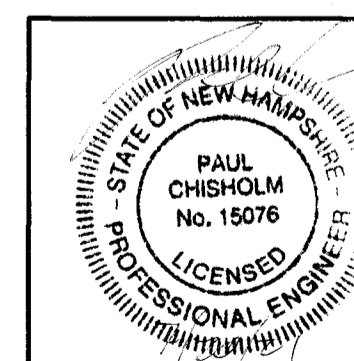
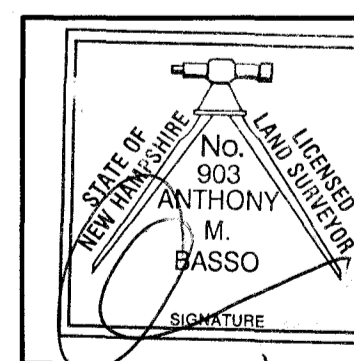
VICINITY PLAN
SCALE: 1" = 1,000±

RESIDENTIAL SITE PLAN HERITAGE LANDING

A 62 & OLDER COMMUNITY MAP 140; LOTS 2 & 3 112 AND 114 GREELEY STREET HUDSON, NEW HAMPSHIRE

OWNER/APPLICANT:
K & M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, NH 03051
603-880-7799

PREPARED BY:
KEACH-NORDSTROM ASSOCIATES, INC.
10 COMMERCE PARK NORTH, SUITE 3B
BEDFORD, NEW HAMPSHIRE 03110
(603) 627-2881



KMA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

JUNE 1, 2021

LAST REVISED: JULY 12, 2021

PROJECT NO. 20-1001-1

SHEET TITLE

SHEET No.

MASTER PLAN	1
EXISTING CONDITIONS PLAN	2-3
REMOVALS PLAN	4
RESIDENTIAL SITE LAYOUT PLAN	5-6
GRADING & DRAINAGE PLAN	7-8
UTILITY PLAN	9-10
EROSION CONTROL PLAN	11-12
ROADWAY PROFILE	13-14
LANDSCAPING PLAN	15-16
LIGHTING PLAN	17-18
SIGHT DISTANCE PLAN	19
STORMWATER BMP PLAN	20
WETLAND/WETLAND BUFFER IMPACT PLAN	21
SEWER EASEMENT PLAN	22
CONSTRUCTION DETAILS	23-28
TEST PIT LOGS	29

LEGEND

- GB-F GRANITE BOUND FOUND
- IPIN-F IRON PIN FOUND
- ⊙ DH-F DRILL HOLE FOUND
- ⊙ IPP-F IRON PIPE FOUND
- ▲ RRS-F RAILROAD SPIKE FOUND
- ⊙ UTILITY POLE SIGN
- LIGHT
- ABUTTER LINE
- PROPERTY LINE
- STREAM
- WETLAND
- SWALE
- OHU OVERHEAD UTILITIES
- EDP EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- 10' CONTOUR
- 2' CONTOUR
- STONEWALL
- SCS SOIL LINE
- BUILDING SETBACK
- EASEMENT
- PROPOSED SIGN
- PROPOSED SEWER MANHOLE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED PROPERTY LINE
- PROPOSED CHAIN LINK FENCE
- PROPOSED GUARDRAIL
- OHU PROPOSED OVERHEAD UTILITIES
- UGU PROPOSED UNDERGROUND UTILITIES
- G PROPOSED GAS LINE
- W PROPOSED WATER LINE
- S PROPOSED SEWER LINE
- PROPOSED DRAINAGE LINE
- PROPOSED TREELINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB
- PROPOSED 2' CONTOUR
- PROPOSED SWALE
- PROPOSED RETAINING WALL
- PROPOSED STONEWALL
- EASEMENT

REFERENCE PLANS:

- "PLAN OF LAND IN HUDSON, N.H." SCALE: 1"=200'. DATED: 1967. PREPARED BY: DAVID M. HAMILTON. H.C.R.D. PLAN #3605
- "SURVEY OF OLD ORIGINAL LAND SUBDIVISION, A & W SAND & GRAVEL CORP." SCALE: 1"=200'. DATED: DECEMBER 15, 1972. PREPARED BY: ROLAND F. THERRIEN. H.C.R.D. PLAN #14653
- "CONSOLIDATION & SUBDIVISION PLAN, HIGHLAND ACRES." SCALE: 1"=100'. DATED: JUNE, 1977. PREPARED BY: A.E. MAYNARD CIVIL ENGINEER. H.C.R.D. PLAN #10317
- "POND VIEW ESTATES LOT LINE RELOCATION & CONSOLIDATION PLAN." SCALE: 1"=100'. DATED: FEBRUARY 26, 1996. PREPARED BY: HAYNER/SWANSON, INC. H.C.R.D. PLAN #28726



NOTES (CONTINUED):

- STATE PERMITS REQUIRED:
 - ACT PERMIT
 - SEWER CONNECTION PERMIT
 - WETLANDS PERMIT
- CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE HOURS BETWEEN 7:00 AM AND 7:00 PM, MONDAY THROUGH SATURDAY. CONSTRUCTION ACTIVITIES SHALL BE PROHIBITED ON SUNDAYS.
- IF LOT DEVELOPMENT INVOLVES BLASTING AND/OR RAMMING OF BEDROCK MATERIALS, SAID ACTIVITIES SHALL BE LIMITED TO THE HOURS BETWEEN 7:00 AM AND 5:00 PM MONDAY THROUGH FRIDAY ONLY. SAID BLASTING/RAMMING ACTIVITIES ARE PROHIBITED ON SATURDAY AND SUNDAY.
- THE ROAD NAME SHALL BE POSTED AT THE BEGINNING OF THE ROAD FOR CERTIFICATION OF OCCUPANCY SIGN BY THE HUDSON FIRE DEPARTMENT.
- OPEN SPACE:
 - REQUIRED = 40%
 - PROVIDED = 74%
- BUILDING COVERAGE:
 - REQUIRED = 20%
 - PROVIDED:
 - TOTAL BUILDING COVERAGE SF = 95,685 SF
 - TOTAL BUILDING COVERAGE = 13%
- ALL SITE IDENTIFICATION SIGNS ARE SUBJECT TO APPROVAL BY THE HUDSON PLANNING BOARD PRIOR TO INSTALLATION THERE OF AND SHALL BE INSTALLED IN ACCORDANCE WITH ARTICLE XII OF THE HUDSON ZONING ORDINANCE.
- AFTER THE ISSUANCE OF THE FOUNDATION PERMIT FOR EACH OF THE STRUCTURES INCLUDED IN THIS SITE PLAN AND PRIOR TO THE FOUNDATION "AS-BUILT" PLANS ON A TRANSPARENT AND TO THE SAME SCALE AS THE APPROVED SITE PLAN. EACH FOUNDATION "AS-BUILT" PLAN SHALL INCLUDE ALL STRUCTURAL DIMENSIONS AND LOT LINE SETBACK MEASUREMENTS TO THE FOUNDATION AND BE STAMPED BY A LICENSE LAND SURVEYOR. ANY DISCREPANCY BETWEEN THE APPROVED SITE PLAN AND FOUNDATION "AS-BUILT" PLAN SHALL BE DOCUMENTED BY THE APPLICANT AND BE PART OF THE FOUNDATION "AS-BUILT" SUBMISSION.
- PRIOR TO THE ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY, A L.L.S. CERTIFIED "AS-BUILT" SITE PLAN SHALL BE PROVIDED TO THE TOWN OF HUDSON COMMUNITY DEVELOPMENT DEPARTMENT, CONFIRMING THAT THE SITE CONFORMS WITH THE RECORD SITE PLAN.
- THE PROPOSED PROJECT HAS BEEN DESIGNED TO MEET THE 2018, 2019 & 2020 MS4 REQUIREMENTS.
- THERE ARE NO KNOWN PERTINENT HIGHWAY PROJECTS NEAR THIS PROJECT.
- PRIOR TO ISSUANCE OF A BUILDING PERMIT A PROFESSIONAL STRUCTURAL ENGINEER SHALL SUBMIT SIGNED AND STAMPED PLANS FOR THE PROPOSED RETAINING WALLS.
- PARKING CALCULATIONS:
 - PARKING REQUIRED = 2 SPACES/UNIT X 47 UNITS = 94 SPACES
 - TOTAL PARKING PROVIDED = 4 SPACES PER UNIT (2 IN GARAGE, 2 OUTSIDE) = 188 SPACES
 - CLUBHOUSE = 7 SPACES
 - = 195 SPACES
- ALL PROPOSED CONDOMINIUMS WILL BE ONE-STORY WITH AN APPROXIMATE BUILDING HEIGHT OF 15 FEET.
- CONTRACTOR SHALL COORDINATE PRE-CONSTRUCTION MEETING WITH TOWN ENGINEER BEFORE BEGINNING CONSTRUCTION ACTIVITIES.

NPDES NOTE

THIS PROJECT DISTURBS IN EXCESS OF 1-ACRE OF LAND. THEREFORE IT WILL BE REQUIRED TO OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE AS ISSUED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE OWNER/DEVELOPER AND "OPERATOR" (GENERAL CONTRACTOR) SHALL EACH BE REQUIRED TO PREPARE AND SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA PRIOR TO THE START OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE PREPARATION AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEETING THE REQUIREMENTS OF THE CURRENT CONSTRUCTION GENERAL PERMIT.

UTILITY NOTE

THE UNDERGROUND UTILITIES DEPICTED HEREON HAVE BEEN DRAWN FROM FIELD SURVEY INFORMATION AND OR PLOTTED FROM EXISTING DRAWINGS. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES DEPICTED COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHER, KEACH-NORDSTROM ASSOCIATES, INC. DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. KEACH-NORDSTROM ASSOCIATES, INC. HAS NOT PHYSICALLY LOCATED THE UNDERGROUND PORTIONS OF THE UTILITIES.

WETLAND SCIENTIST'S CERTIFICATION:

JOSHUA BRIEN, CERTIFIED WETLAND SCIENTIST #256 OF KEACH-NORDSTROM ASSOCIATES, INC. OF BEDFORD, NH PERFORMED THE DELINEATION OF JURISDICTIONAL WETLANDS IN OCTOBER OF 2020 USING THE TECHNICAL CRITERIA IN THE CORPUS OF ENGINEERS WETLAND DELINEATION MANUAL (TECHNICAL REPORT Y-87-1, JANUARY 1987).

CERTIFICATION:

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION. FURTHER, THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY MADE ON THE GROUND BY THIS OFFICE DURING OCTOBER OF 2020. SAID SURVEY HAS AN ERROR OF CLOSURE BETTER THAN ONE PART IN TEN THOUSAND (1:10,000).

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM DATE OF APPROVAL

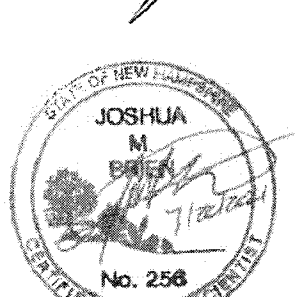
APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING: _____

SIGNATURE DATE: _____

SIGNATURE DATE: _____

SITE PLANS ARE VALID FOR TWO YEARS 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.



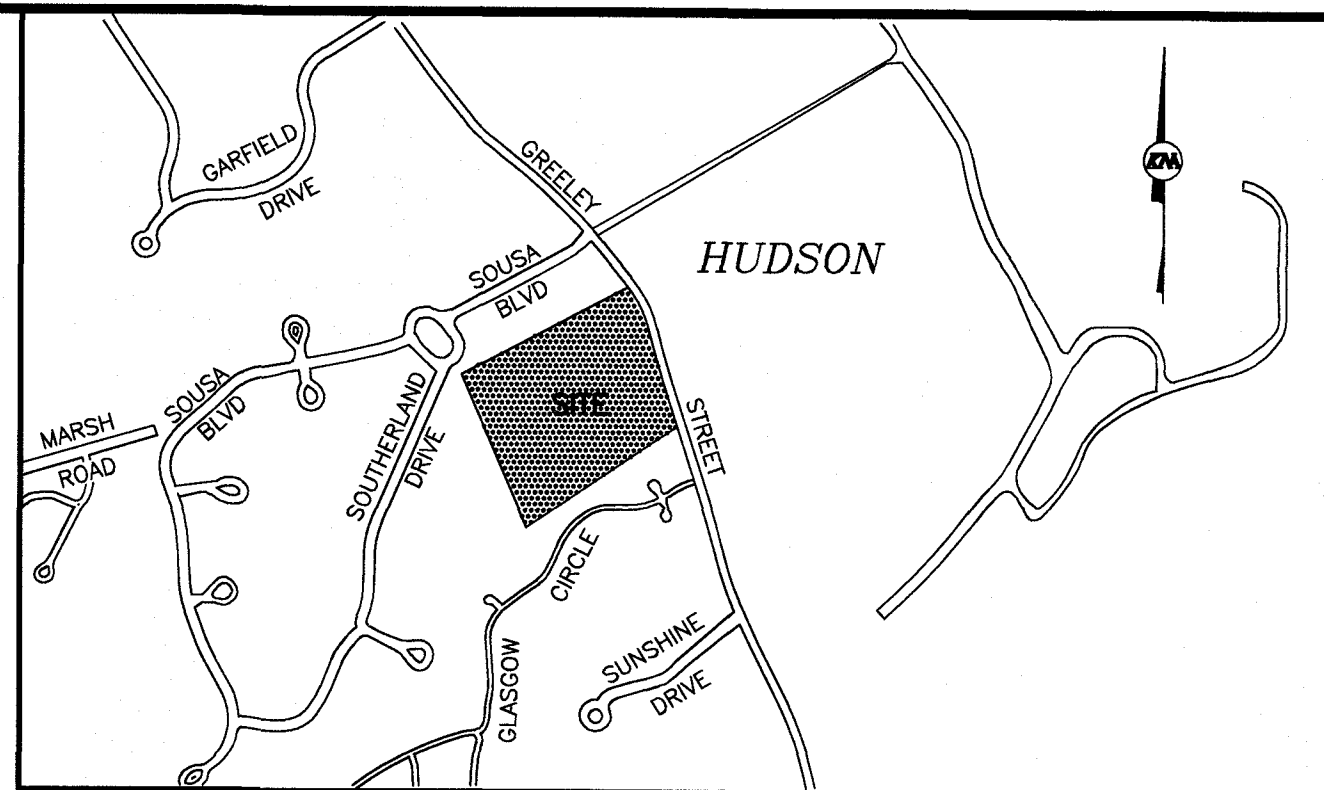
CERTIFIED WETLAND SCIENTIST DATE: _____

LICENSED LAND SURVEYOR DATE: 7/20/21

OWNER OF MAP 140 LOTS 2 & 3

SIGNATURE: _____

DATE: 7/21/21



VICINITY MAP
SCALE: 1" = 1,000'

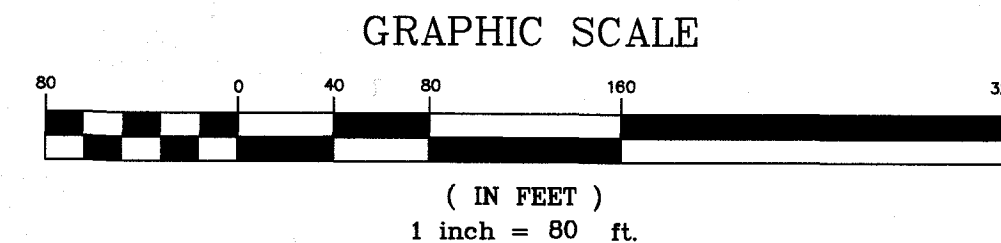
NOTES:

- THE PURPOSE OF THIS PLAN IS TO CONSOLIDATE LOTS 2 & 3 AND DEPICT AN OVERVIEW OF A PROPOSED 62 AND OLDER HOUSING DEVELOPMENT ON ASSESSORS MAP 140 LOTS 2 & 3 AT 112 & 114 GREELEY STREET IN HUDSON, NEW HAMPSHIRE, AS SHOWN HEREON AND NO OTHER PURPOSE.
- EXISTING AREA OF PARCELS IS, LOT 2: 418,552 SF, OR 9.608 ACRES. LOT 3: 319,020 SF, OR 7.323 ACRES.
- OWNER OF RECORD: K&M DEVELOPERS, LLC 46 LOWELL ROAD HUDSON, N.H. 03051
- THE SUBJECT PARCELS ARE SITUATED ENTIRELY WITHIN THE GENERAL (G) ZONING DISTRICT AND ARE SUBJECT TO THE FOLLOWING DIMENSIONAL REQUIREMENTS:
 - FRONT SETBACK 50 FT
 - SIDE SETBACK 15 FT
 - REAR SETBACK 15 FT
 - MIN. FRONTAGE 150 FT
 - MIN. LOT SIZE 43,560 SF
- PROPOSED USE: AGE RESTRICTED 62 AND OLDER HOUSING.
- SUBJECT PARCEL WILL BE SERVICED BY MUNICIPAL WATER AND SEWER. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A FIELD SURVEY PERFORMED BY THIS OFFICE IN OCTOBER OF 2020.
- HORIZONTAL DATUM IS NAD83. VERTICAL DATUM IS NAVD88 FROM GPS SURVEY METHODS.
- EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR THE TOWN OF HUDSON, NEW HAMPSHIRE, HILLSBOROUGH COUNTY, MAP NUMBER 33011C0516D, PANEL NUMBER 516 OF 701, EFFECTIVE DATE: SEPTEMBER 25, 2009 INDICATES THAT NO PORTION OF THE SUBJECT PARCEL IS LOCATED WITHIN A DESIGNATED FLOOD HAZARD AREA.
- THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE OWNER OR CONTRACTOR SHALL CONTACT DIG SAFE AT 811.
- EASEMENTS, RIGHTS AND RESTRICTIONS SHOWN OR IDENTIFIED HEREON ARE THOSE FOUND DURING RESEARCH AT THE HILLSBOROUGH COUNTY REGISTRY OF DEEDS. OTHER EASEMENTS, RIGHTS AND RESTRICTIONS MAY EXIST WHICH A TITLE EXAMINATION OF THE SUBJECT PREMISES MAY DETERMINE.
- PROPER EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED (I.E. HAY BALES, SILT FENCES, ETC.) PRIOR TO CLEARING AND EXCAVATION. THE CONTROLS SHALL BE MAINTAINED IN GOOD WORKING ORDER UNTIL COMPLETION OF CONSTRUCTION. THE TOWN OF HUDSON RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES DURING CONSTRUCTION, IF NECESSARY.
- WETLAND DELINEATION WAS PERFORMED BY JOSHUA BRIEN, CERTIFIED WETLAND SCIENTIST #256 IN OCTOBER OF 2020.
- ALLOWABLE DENSITY:

TOTAL LOT AREA	WETLAND AREA	AREA >25% SLOPE	BUILDABLE AREA	FRONTAGE
737,572 SF OR 16.931 AC	35,316 SF OR 0.811 AC	0 SF OR 0 AC	702,256 SF OR 16.122 AC	434.78 FT

MAXIMUM DENSITY OF HOMES = 1 BEDROOM/7,500 SF OF BUILDABLE LAND = 702,256SF/7,500SF = 93.63 BEDROOMS/2 BEDROOMS PER HOME = 46.82 HOMES

PROPOSED DENSITY OF HOMES = 47 HOMES (2 BEDROOMS EACH)



**MASTER PLAN
HERITAGE LANDING**

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:

K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051

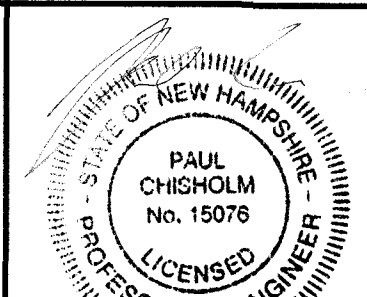


Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2861

REVISIONS

No.	DATE	DESCRIPTION	BY
1	7/12/21	REVISED PER TOWN COMMENTS	ACL

DATE: JUNE 1, 2021 SCALE: 1"=80'
PROJECT NO: 20-1001-1 SHEET 1 OF 29



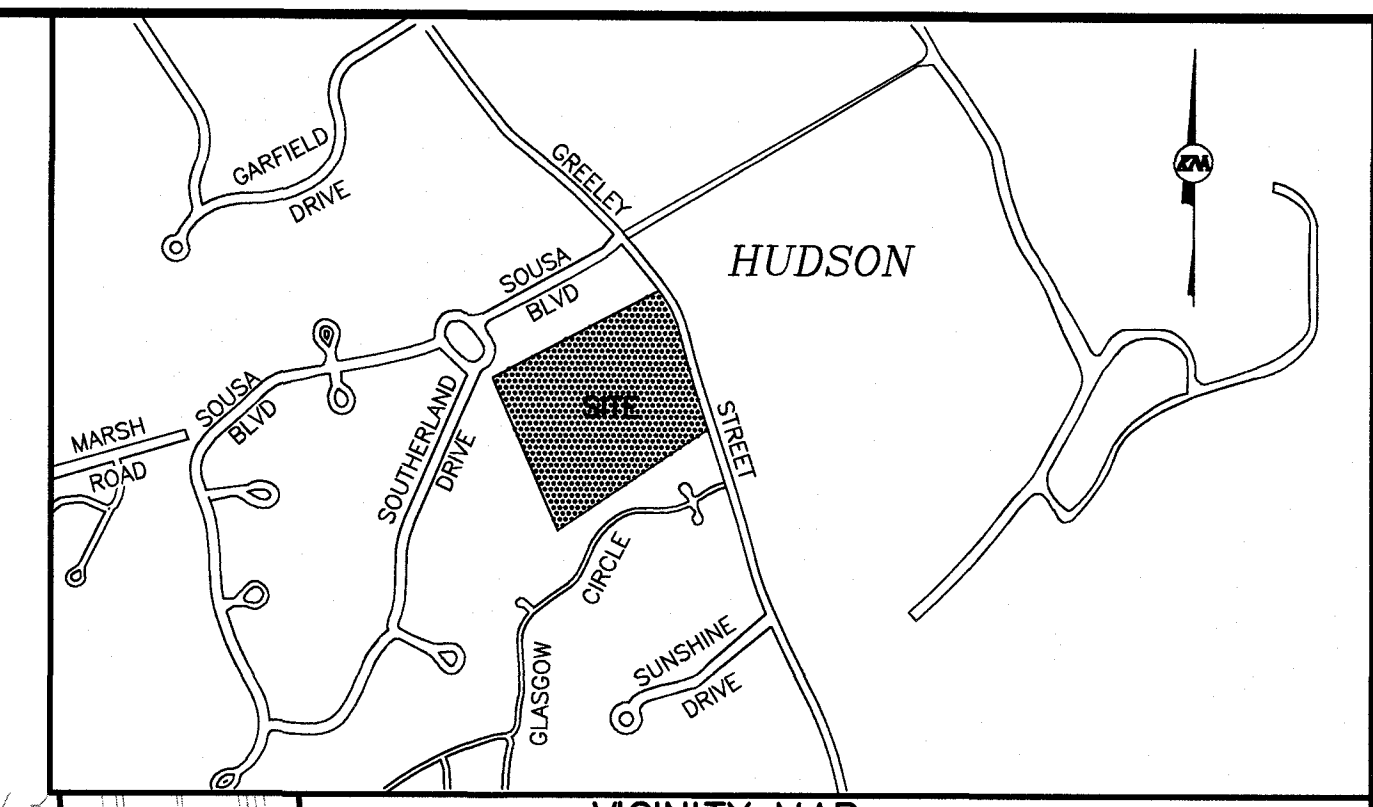
LEGEND

SB-F	STONE BOUND FOUND	CHU	OVERHEAD UTILITIES
I PP-F	IRON PIPE FOUND	G	GAS LINE
IP-F	IRON PIN FOUND	W	WATER LINE
DH-F	DRILL HOLE FOUND	TREELINE	TREELINE
BENCHMARK	BENCHMARK	EOP	EDGE OF PAVEMENT
UTILITY POLE	UTILITY POLE	10' CONTOUR	10' CONTOUR
ABUTTER LINE	ABUTTER LINE	2' CONTOUR	2' CONTOUR
PROPERTY LINE	PROPERTY LINE	STONEWALL	STONEWALL
WETLAND	WETLAND	SCS SOIL LINE	SCS SOIL LINE
WETLAND BUFFER	WETLAND BUFFER	SSSM SOIL LINE	SSSM SOIL LINE
		SETBACK	SETBACK

SCS SOILS LEGEND

CaB	CANTON FINE SANDY LOAM 0 TO 8 PERCENT SLOPES
CmC	CANTON FINE SANDY LOAM 8 TO 15 PERCENT SLOPES, VERY STONY
CmD	CANTON FINE SANDY LOAM 15 TO 25 PERCENT SLOPES, VERY STONY
MoB	MONTAUK FINE SANDY LOAM 3 TO 8 PERCENT SLOPES

SOURCE: USDA-SCS WEB SOIL SURVEY
HILLSBOROUGH COUNTY



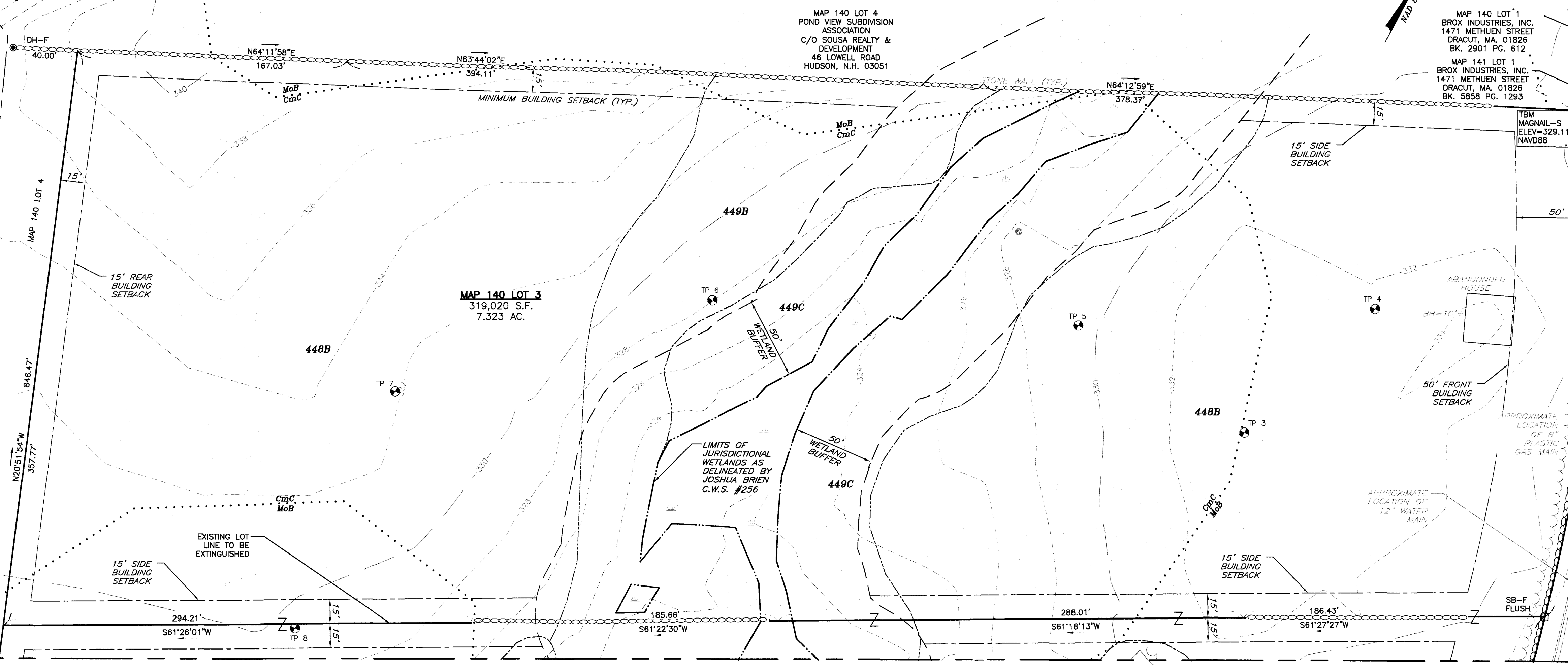
VICINITY MAP
SCALE: 1" = 1,000'

NOTES:

- THE PURPOSE OF THIS PLAN IS TO DEPICT THE EXISTING CONDITIONS ON ASSESSORS MAP 140 LOTS 2 & 3 AT 112 & 114 GREELEY STREET IN HUDSON, NEW HAMPSHIRE AS SHOWN HEREON AND NO OTHER PURPOSE.
- EXISTING AREA OF PARCELS IS, LOT 2: 418,552 SF, OR 9.608 ACRES. LOT 3: 319,020 SF, OR 7.323 ACRES.
- OWNER OF RECORD:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051
- THE SUBJECT PARCELS ARE SITUATED ENTIRELY WITHIN THE GENERAL (G) ZONING DISTRICT AND ARE SUBJECT TO THE FOLLOWING DIMENSIONAL REQUIREMENTS:
MINIMUM LOT AREA: 43,560 SQ.FT.
MINIMUM LOT FRONTAGE: 150 FT
MINIMUM BUILDING SETBACKS:
- FRONT: 50 FT
- SIDE: 15 FT
- REAR: 15 FT
- BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED ON A FIELD SURVEY PERFORMED BY THIS OFFICE IN OCTOBER OF 2020.
- HORIZONTAL DATUM IS NAD83. VERTICAL DATUM IS NAVD88 FROM GPS SURVEY METHODS.
- EXAMINATION OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR THE TOWN OF HUDSON, NEW HAMPSHIRE, HILLSBOROUGH COUNTY, MAP NUMBER 33011C0516D, PANEL NUMBER 816 OF 701, EFFECTIVE DATE: SEPTEMBER 25, 2009 INDICATES THAT NO PORTION OF THE SUBJECT PARCEL IS LOCATED WITHIN A DESIGNATED FLOOD HAZARD AREA.
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- HEIGHT OF EXISTING 2-STORY BUILDING: 25± FT
HEIGHT OF EXISTING 1-STORY BUILDINGS: 10± FT

REFERENCE PLANS:

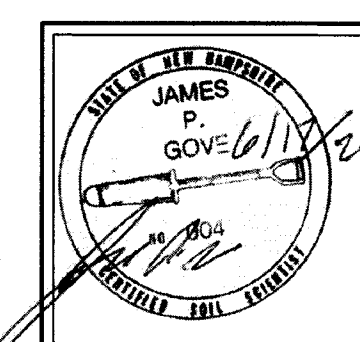
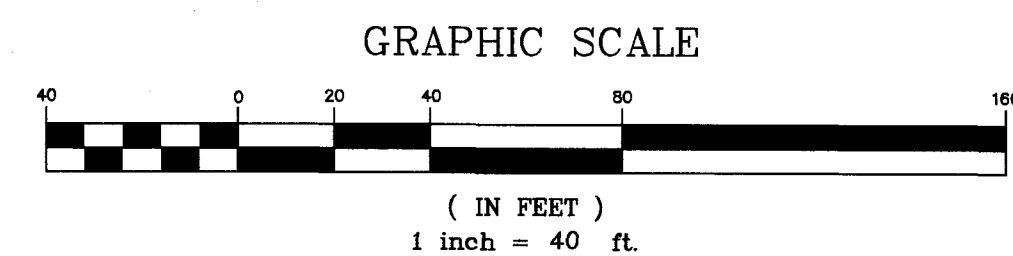
- "PLAN OF LAND IN HUDSON, N.H." SCALE: 1"=200'. DATED: 1967. PREPARED BY: DAVID M. HAMILTON. H.C.R.D. PLAN #3605
- "SURVEY OF OLD ORIGINAL LAND SUBDIVISION, A & W SAND & GRAVEL CORP." SCALE 1"=200'. DATED: DECEMBER 15, 1972. PREPARED BY: ROLAND P. THERRIEN. H.C.R.D. PLAN #14653
- "CONSOLIDATION & SUBDIVISION PLAN, HIGHLAND ACRES." SCALE: 1"=100'. DATED: JUNE, 1977. PREPARED BY: A.E. MAYNARD CIVIL ENGINEER H.C.R.D. PLAN #10317
- "POND VIEW ESTATES LOT LINE RELOCATION & CONSOLIDATION PLAN." SCALE: 1"=100'. DATED: FEBRUARY 26, 1996. PREPARED BY: HAYNER/SWANSON, INC. H.C.R.D. PLAN #28726



SITE SPECIFIC SOIL MAP UNIT KEY

SYMBOL	MAP UNIT	SLOPE CLASS	DRAINAGE CLASS
229B	UDORTMENTS, SMOOTH	0-8%	
448B	SCITUATE	0-8%	MODERATELY WELL
448C	SCITUATE	8-15%	MODERATELY WELL
449B	SCITUATE, VERY STONY	0-8%	MODERATELY WELL
449C	SCITUATE, VERY STONY	8-15%	MODERATELY WELL
657B	RIDGEBURY, VERY STONY	0-8%	MODERATELY WELL

THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOILS SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, PRODUCED BY A CERTIFIED SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE. THERE IS A NARRATIVE REPORT THAT ACCOMPANIES THIS MAP AND MAP KEY, JAMES P. GOVE, CSS #004 OF GOVE ENVIRONMENTAL SERVICES INC. PERFORMED THE SOIL MAPPING IN JANUARY 15 OF 2021.



THE SITE-SPECIFIC SOIL MAPPING WAS PERFORMED IN DECEMBER 2009 BY JAMES GOVE, CERTIFIED SOIL SCIENTIST #4, OF GOVE ENVIRONMENTAL SERVICES INC. IN EXETER, NEW HAMPSHIRE. THIS MAPPING WAS PERFORMED ACCORDING TO THE STANDARDS OF THE "SITE-SPECIFIC SOIL MAPPING STANDARDS OF NEW HAMPSHIRE AND VERMONT," VERSION 4.0, FEBRUARY 2011, PUBLISHED BY THE SOCIETY OF SOIL SCIENTISTS OF NORTHERN NEW ENGLAND, SPECIAL PUBLICATION NO. 3.

EXISTING CONDITIONS PLAN

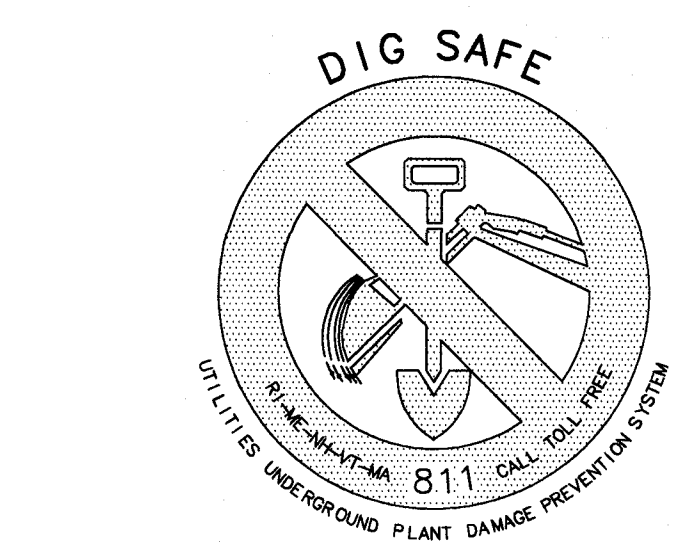
HERITAGE LANDING

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051
BK. 9411 PG. 2460



10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881



PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL EXPIRES TWO YEARS FROM DATE OF APPROVAL

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

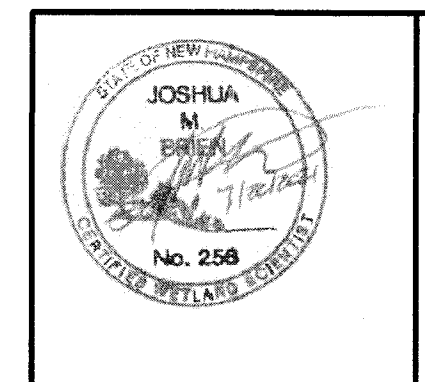
SIGNATURE: _____ DATE: _____

SIGNATURE: _____ DATE: _____

SITE PLANS ARE VALID FOR TWO YEARS 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.

UTILITY NOTE

THE UNDERGROUND UTILITIES DEPICTED HEREON HAVE BEEN DRAWN FROM FIELD SURVEY INFORMATION AND OR PLOTTED FROM EXISTING DRAWINGS. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES DEPICTED COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHER, KEACH-NORDSTROM ASSOCIATES, INC. DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. KEACH-NORDSTROM ASSOCIATES, INC. HAS NOT PHYSICALLY LOCATED THE UNDERGROUND PORTIONS OF THE UTILITIES.



WETLAND SCIENTIST'S CERTIFICATION:

JOSHUA BRIEN, CERTIFIED WETLAND SCIENTIST #256 OF KEACH-NORDSTROM ASSOCIATES, INC. OF BEDFORD, NH PERFORMED THE DELINEATION OF JURISDICTIONAL WETLANDS IN OCTOBER OF 2020 USING THE TECHNICAL CRITERIA IN THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (TECHNICAL REPORT Y-87-1, JANUARY 1987).

CERTIFIED WETLAND SCIENTIST DATE: _____

CERTIFICATION:

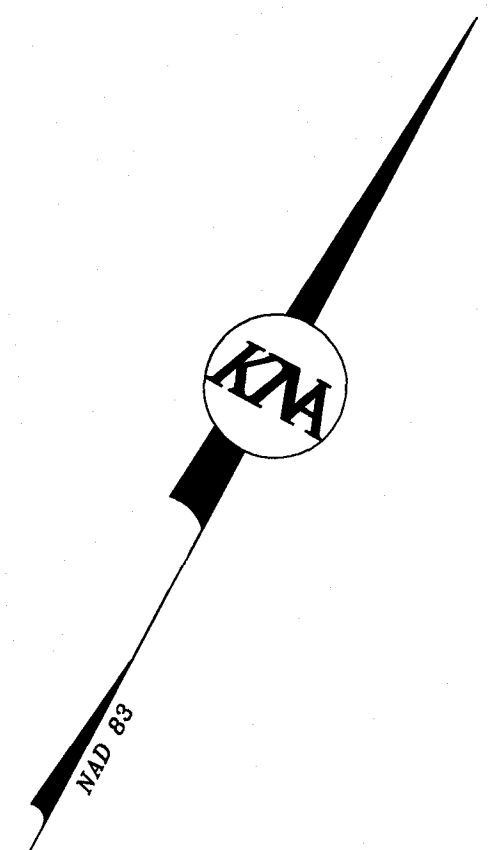
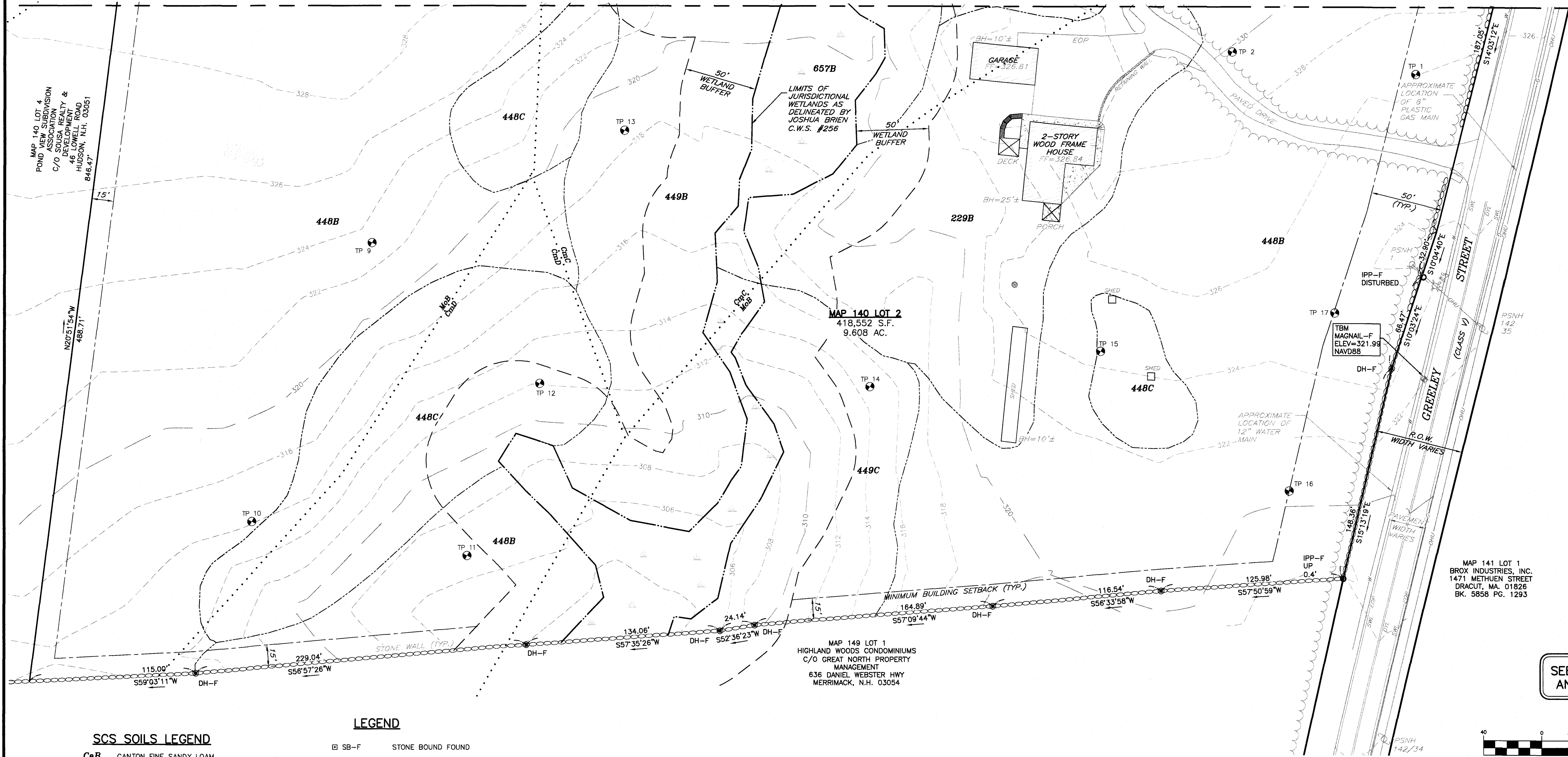
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION. FURTHER, THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY MADE ON THE GROUND BY THIS OFFICE DURING OCTOBER OF 2020. SAID SURVEY HAS AN ERROR OF CLOSURE BETTER THAN ONE PART IN TEN THOUSAND (1:10,000).

LICENSED LAND SURVEYOR DATE: 7/20/21

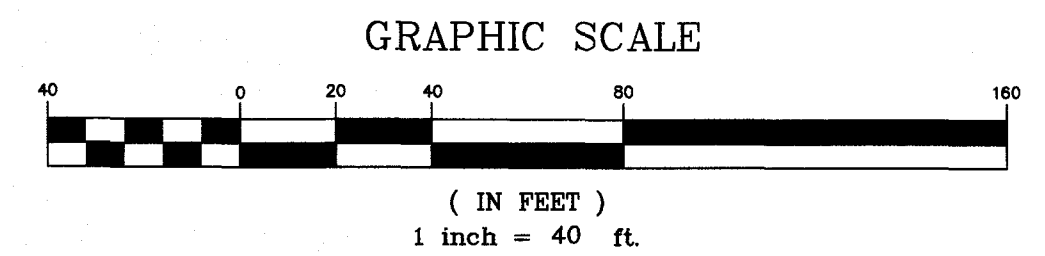
REVISIONS			
No.	DATE	DESCRIPTION	BY

DATE: JUNE 1, 2021 SCALE: 1" = 40'
PROJECT NO: 20-1001-1 SHEET 2 OF 23

MATCH TO SHEET 2



SEE SHEET 1 FOR NOTES AND REFERENCE PLANS



SCS SOILS LEGEND

- CaB** CANTON FINE SANDY LOAM
0 TO 8 PERCENT SLOPES
 - CmC** CANTON FINE SANDY LOAM
8 TO 15 PERCENT SLOPES, VERY STONY
 - CmD** CANTON FINE SANDY LOAM
15 TO 25 PERCENT SLOPES, VERY STONY
 - MoB** MONTAUK FINE SANDY LOAM
3 TO 8 PERCENT SLOPES
- SOURCE: USDA-SCS WEB SOIL SURVEY
HILLSBOROUGH COUNTY

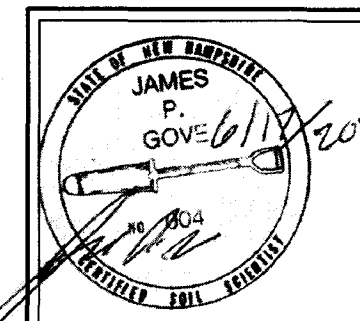
LEGEND

- SB-F STONE BOUND FOUND
- IPP-F IRON PIPE FOUND
- IP-F IRON PIN FOUND
- DH-F DRILL HOLE FOUND
- BENCHMARK
- UTILITY POLE
- WATER VALVE
- HYDRANT
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- WETLAND BUFFER
- OVERHEAD UTILITIES
- GAS LINE
- WATER LINE
- TREELINE
- EDGE OF PAVEMENT
- 10' CONTOUR
- 2' CONTOUR
- STONEWALL
- SCS SOIL LINE
- SSSM SOIL LINE
- SETBACK

SITE SPECIFIC SOIL MAP UNIT KEY

SYMBOL	MAP UNIT	SLOPE CLASS	DRAINAGE CLASS
229B	UDORTMENTS, SMOOTH	0-8%	
448B	SCITUATE	0-8%	MODERATELY WELL
448C	SCITUATE	8-15%	WELL
449B	SCITUATE, VERY STONY	0-8%	WELL
449C	SCITUATE, VERY STONY	8-15%	WELL
657B	RIDGEBURY, VERY STONY	0-8%	WELL

THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOILS SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, PRODUCED BY A CERTIFIED SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE. THERE IS A NARRATIVE REPORT THAT ACCOMPANIES THIS MAP AND MAP KEY. JAMES P. GOVE, CSS #004 OF GOVE ENVIRONMENTAL SERVICES INC. PERFORMED THE SOIL MAPPING IN JANUARY 15 OF 2021.



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EXISTING CONDITIONS PLAN

HERITAGE LANDING

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051
BK. 9411 PG. 2460



10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

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

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

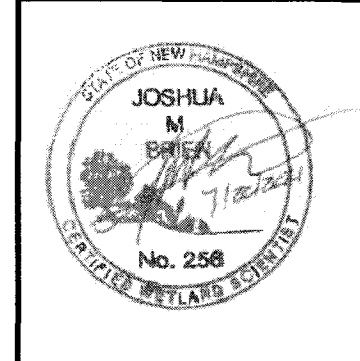
SIGNATURE DATE: _____

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UTILITY NOTE

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CERTIFIED WETLAND SCIENTIST

DATE

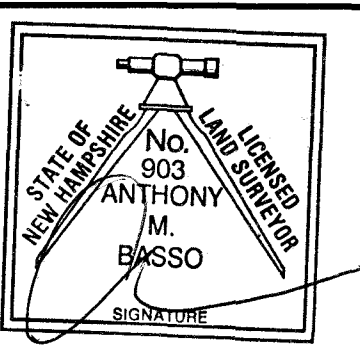
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LICENSED LAND SURVEYOR

7/20/21

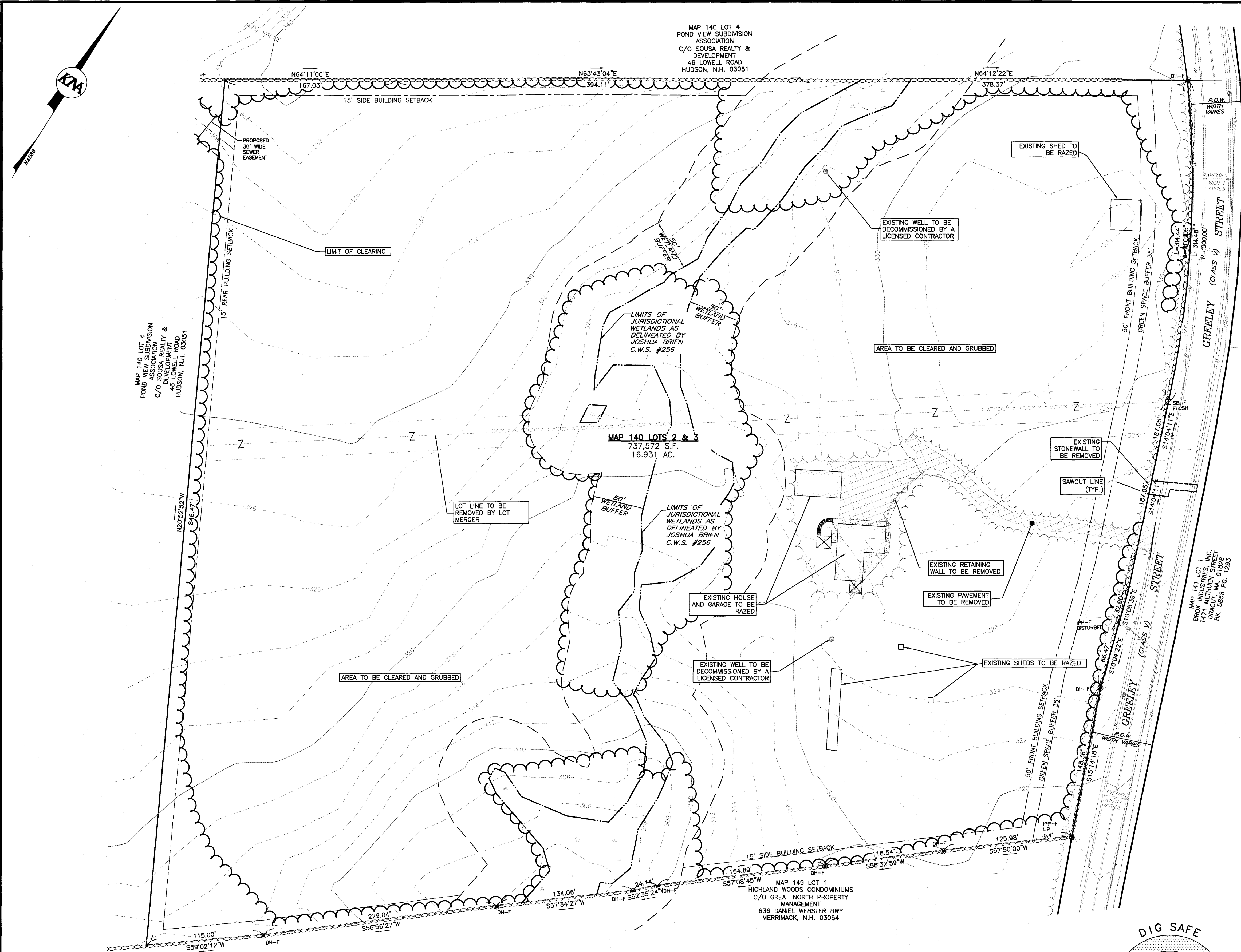
DATE



REVISIONS

No.	DATE	DESCRIPTION	BY

DATE: JUNE 1, 2021 SCALE: 1" = 40'
PROJECT NO: 20-1001-1 SHEET 3 OF 23

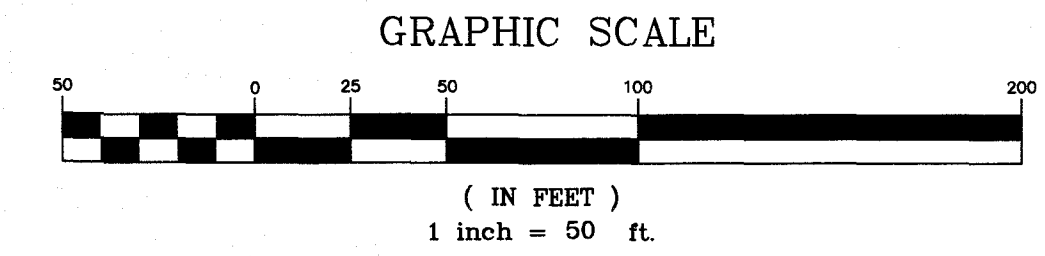


REMOVALS/DEMOLITION NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW EXISTING FEATURES ON SITE TO BE REMOVED, SALVAGED OR REPLACED.
2. ALL STUMPS, ROOTS, BRANCHES, BRUSH, WOODS AND OTHER PERISHABLE MATERIAL RESULTING FROM THE CLEARING AND GRUBBING OPERATIONS SHALL BE DISPOSED OF BY AN APPROVED METHOD.
3. ITEMS TO BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH THE TOWN OF HUDSON REQUIREMENTS, UNLESS OTHERWISE SHOWN HEREON OR DIRECTED BY OWNER.
4. ALL EXISTING PAVEMENT AND GRAVEL WITHIN THE CROSS HATCHED AREA IS TO BE REMOVED DURING THE DEMOLITION PHASE OF THE PROJECT. EXCESS MATERIAL FROM THESE AREAS SHALL BE APPROPRIATELY DISPOSED OF OFFSITE BY AN APPROVED METHOD.
5. THE CONTRACTOR SHALL CONTROL ALL DUST GENERATED DURING THE REMOVAL PHASE AND CONSTRUCTION PHASE SO THAT NO DUST LEAVES THE SITE.
6. ANY MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE RESET BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR AT THE SITE CONTRACTORS EXPENSE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG SAFE" AT 811 AT LEAST 72 HOURS BEFORE DIGGING.
8. DEBRIS REMOVED FROM THE SITE SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
9. WELLS SHALL BE DECOMMISSIONED BY A LICENSED WATER WELL CONTRACTOR IN ACCORDANCE WITH We-604 OR ANY OTHER LOCAL, STATE OR FEDERAL REGULATIONS.
10. EXISTING WELLS TO BE DECOMMISSIONED BY A LICENSED CONTRACTOR.

LEGEND

- GB-F GRANITE BOUND FOUND
- IRP-F IRON PIN FOUND
- ⊙ DH-F DRILL HOLE FOUND
- ⊙ IPP-F IRON PIPE FOUND
- ▲ RRS-F RAILROAD SPIKE FOUND
- UTILITY POLE
- LIGHT
- GAS VALVE
- WATER VALVE
- HYDRANT
- WELL
- SEWER MANHOLE
- DRAINAGE MANHOLE
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- ODU OVERHEAD UTILITIES
- G GAS LINE
- W WATER LINE
- S SEWER LINE
- TREELINE
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- EDGE OF GRAVEL
- 10' CONTOUR
- 2' CONTOUR
- STONEWALL
- SCS SOIL LINE
- BUILDING SETBACK
- EASEMENT
- LIMIT OF CLEARING
- SAWCUT LINE
- PAVEMENT TO BE REMOVED



**REMOVALS PLAN
HERITAGE LANDING**

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:

K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051

K&M KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

REVISIONS

No.	DATE	DESCRIPTION	BY
1	7/12/21	REVISED PER TOWN COMMENTS	ACL

DATE: JUNE 1, 2021 SCALE: 1"=50'
PROJECT NO: 20-1001-1 SHEET 4 OF 29

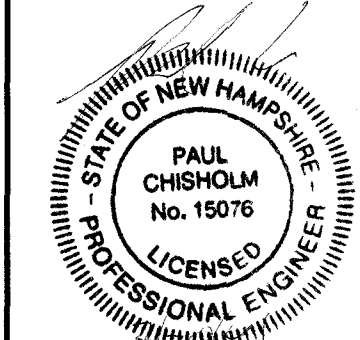
PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM DATE OF APPROVAL.

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

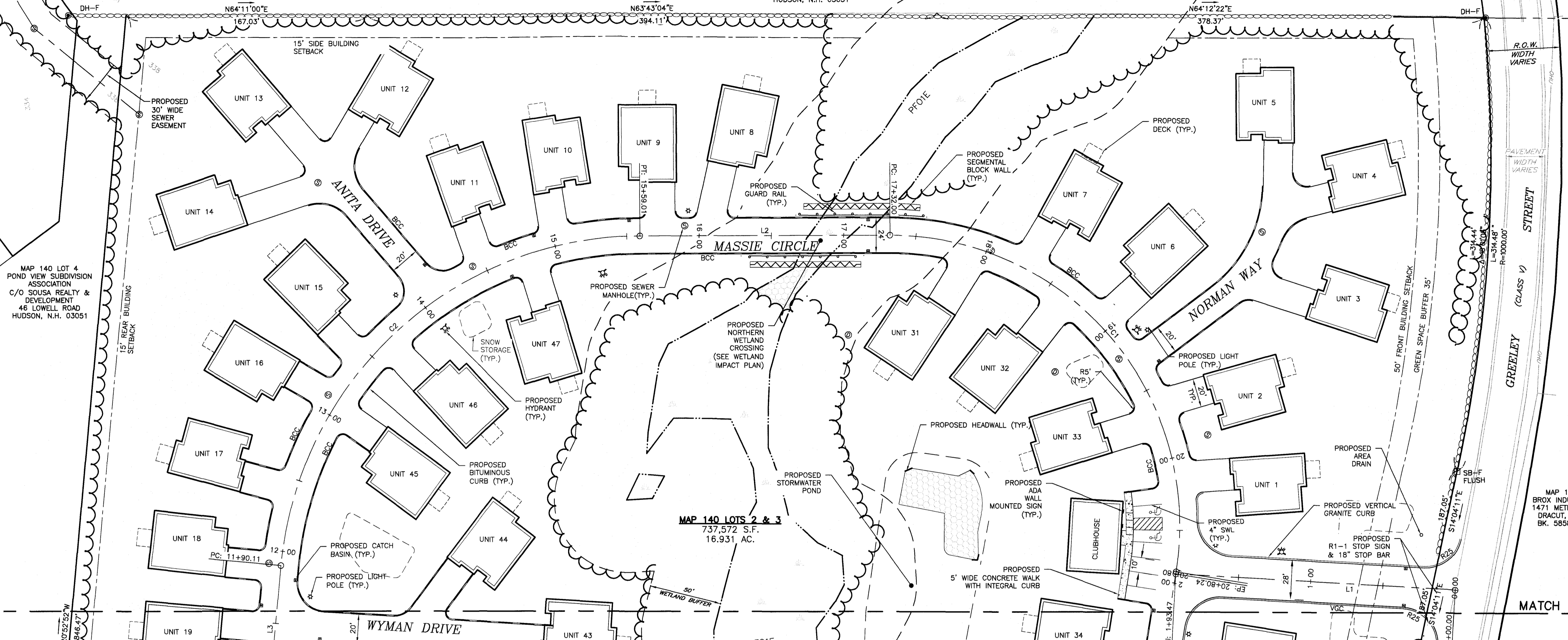
SIGNATURE DATE: _____

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MAP 140 LOT 4
POND VIEW SUBDIVISION ASSOCIATION
C/O SOUSA REALTY & DEVELOPMENT
46 LOWELL ROAD
HUDSON, N.H. 03051



MAP 140 LOT 4
POND VIEW SUBDIVISION ASSOCIATION
C/O SOUSA REALTY & DEVELOPMENT
46 LOWELL ROAD
HUDSON, N.H. 03051

MAP 141 LOT 1
BROX INDUSTRIES, INC.
1471 METHUEN STREET
DRACUT, MA. 01826
BK. 5858 PG. 1293

MATCH TO SHEET 6

SEE SHEET 1 FOR NOTES & REFERENCE PLANS

LEGEND

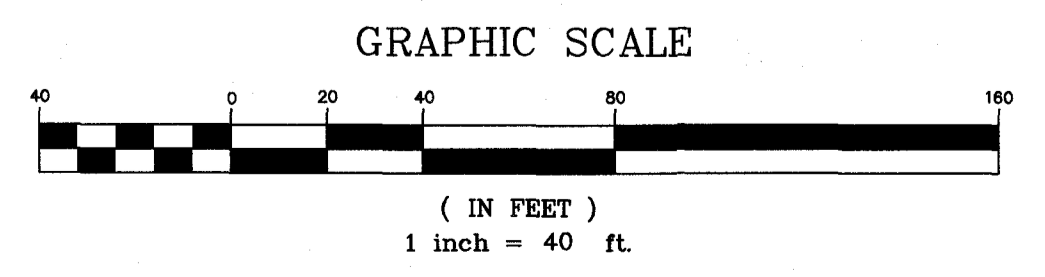
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- IPIN-F IRON PIN FOUND
- DH-F DRILL HOLE FOUND
- IPP-F IRON PIPE FOUND
- RRS-F RAILROAD SPIKE FOUND
- UTILITY POLE SIGN
- ABUTTER LINE
- PROPERTY LINE
- STREAM
- WETLAND
- SWALE
- OVERHEAD UTILITIES
- EDGE OF PAVEMENT
- VERTICAL GRANITE CURB
- 10' CONTOUR
- 2' CONTOUR
- STONEWALL
- SCS SOIL LINE
- BUILDING SETBACK
- EASEMENT
- PROPOSED SIGN
- PROPOSED LIGHT
- PROPOSED SEWER MANHOLE
- PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED PROPERTY LINE
- PROPOSED CHAIN LINK FENCE
- PROPOSED GUARDRAIL
- OHU PROPOSED OVERHEAD UTILITIES
- UGU PROPOSED UNDERGROUND UTILITIES
- G PROPOSED GAS LINE
- W PROPOSED WATER LINE
- S PROPOSED SEWER LINE
- PROPOSED DRAINAGE LINE
- PROPOSED TREELINE
- PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB
- PROPOSED BITUMINOUS CURB
- PROPOSED 2' CONTOUR
- PROPOSED SWALE
- PROPOSED RETAINING WALL
- PROPOSED STONEWALL EASEMENT
- RIPRAP

LINE TABLE: CENTERLINE

LINE #	LENGTH	DIRECTION
L1	193.469	S67° 05' 50.95"W
L2	172.990	N63° 46' 28.16"E
L3	88.379	N20° 48' 49.84"W
L4	21.788	S55° 48' 24.67"W
L5	33.649	S73° 27' 07.36"W
L6	163.287	S16° 53' 08.67"E
L7	1.488	S16° 46' 45.70"E
L8	49.588	S56° 48' 26.76"W

Curve Table: Alignments

CURVE #	RADIUS	LENGTH	ANGLE
C1	200.00	346.75	S66° 33' 26.10"E
C2	250.53	368.90	N21° 28' 49.16"E
C3	150.18	270.52	N72° 30' 12.59"W
C4	509.08	153.96	S64° 37' 46.02"W
C5	300.00	87.15	S65° 07' 47.06"W
C6	101.47	128.32	S19° 57' 39.05"W



RESIDENTIAL SITE LAYOUT PLAN
HERITAGE LANDING
MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051

KMA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 827-2881

REVISIONS

No.	DATE	DESCRIPTION	BY
1	7/12/21	REVISED PER TOWN COMMENTS	ACL

DATE: JUNE 1, 2021 SCALE: 1"=40'
PROJECT NO: 20-1001-1 SHEET 5 OF 29

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM DATE OF APPROVAL

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

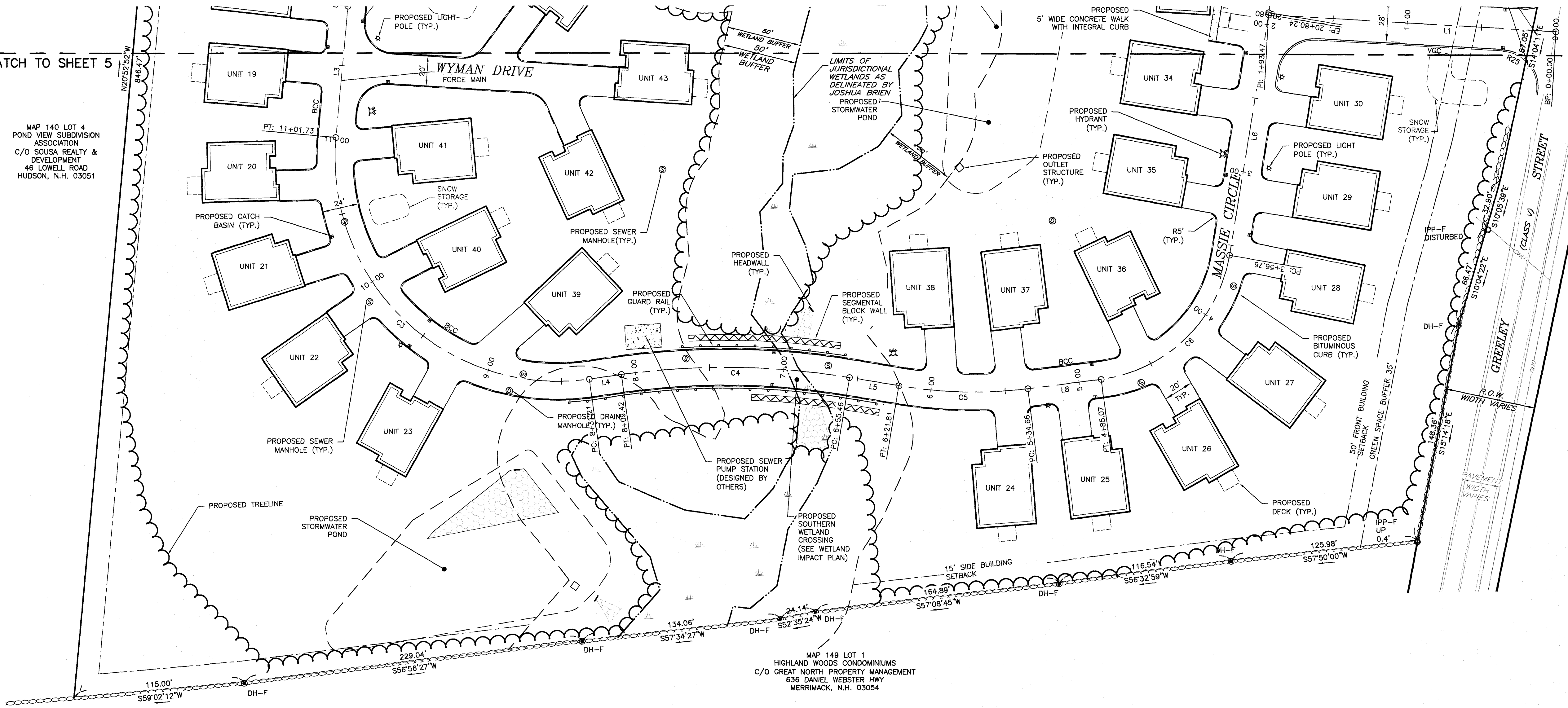
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MATCH TO SHEET 5

MAP 140 LOT 4
POND VIEW SUBDIVISION
ASSOCIATION
C/O SOUSA REALTY &
DEVELOPMENT
48 LOWELL ROAD
HUDSON, N.H. 03051



MAP 141 LOT 1
BROX INDUSTRIES, INC.
1471 METHUEN STREET
DRACUT, MA. 01826
BK. 5858 PG. 1293

SEE SHEET 1 FOR NOTES
& REFERENCE PLANS

LEGEND

- GB-F GRANITE BOUND FOUND
- IPIN-F IRON PIN FOUND
- DH-F DRILL HOLE FOUND
- IPP-F IRON PIPE FOUND
- RRS-F RAILROAD SPIKE FOUND
- U-P UTILITY POLE
- SIGN SIGN
- ABUTTER LINE ABUTTER LINE
- PROPERTY LINE PROPERTY LINE
- STREAM STREAM
- WETLAND WETLAND
- SWALE SWALE
- OHU OVERHEAD UTILITIES
- EDGE OF PAVEMENT EDGE OF PAVEMENT
- VERTICAL GRANITE CURB VERTICAL GRANITE CURB
- 10' CONTOUR 10' CONTOUR
- 2' CONTOUR 2' CONTOUR
- STONEWALL STONEWALL
- SCS SOIL LINE SCS SOIL LINE
- EASEMENT EASEMENT
- PROPOSED SIGN PROPOSED SIGN
- PROPOSED LIGHT PROPOSED LIGHT
- PROPOSED DRAINAGE MANHOLE PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN PROPOSED CATCH BASIN
- PROPOSED PROPERTY LINE PROPOSED PROPERTY LINE
- PROPOSED CHAIN LINK FENCE PROPOSED CHAIN LINK FENCE
- PROPOSED GUARDRAIL PROPOSED GUARDRAIL
- OHU OVERHEAD UTILITIES
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- G-G PROPOSED GAS LINE
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- PROPOSED SWALE PROPOSED SWALE
- PROPOSED RETAINING WALL PROPOSED RETAINING WALL
- PROPOSED STONEWALL PROPOSED STONEWALL
- EASEMENT EASEMENT

MAP 149 LOT 1
HIGHLAND WOODS CONDOMINIUMS
C/O GREAT NORTH PROPERTY MANAGEMENT
636 DANIEL WEBSTER HWY
MERRIMACK, N.H. 03054

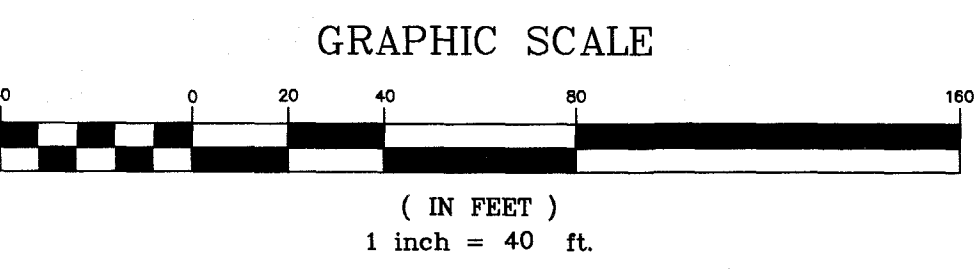
RESIDENTIAL SITE LAYOUT PLAN

HERITAGE LANDING

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
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46 LOWELL ROAD
HUDSON, N.H. 03051

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10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881



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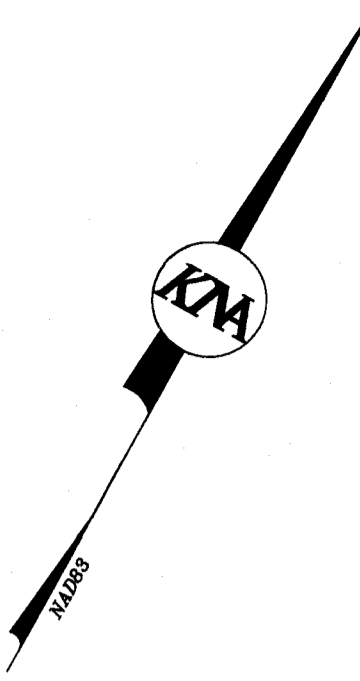
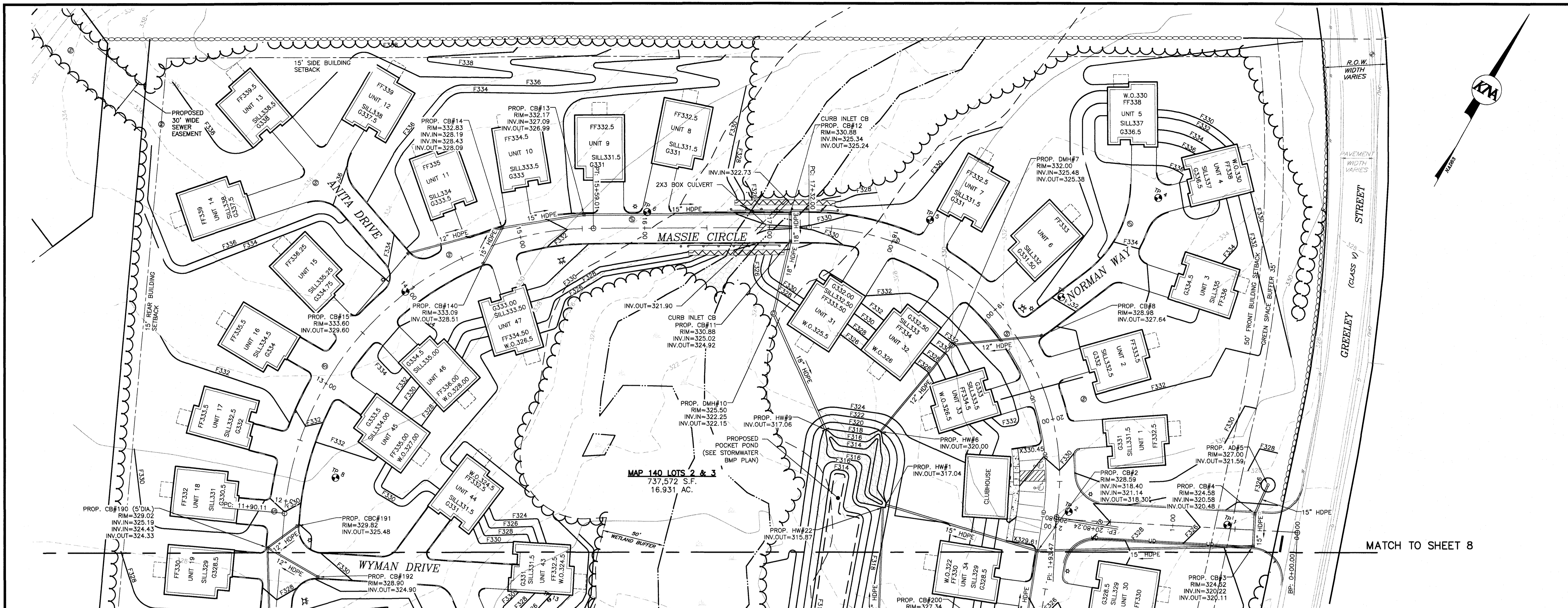
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DATE: JUNE 1, 2021 SCALE: 1"=40'
PROJECT NO: 20-1001-1 SHEET 6 OF 29



MATCH TO SHEET 8

LEGEND

● GB-F	GRANITE BOUND FOUND	— OHU	PROPOSED OVERHEAD UTILITIES
● IPIN-F	IRON PIN FOUND	— UGU	PROPOSED UNDERGROUND UTILITIES
● DH-F	DRILL HOLE FOUND	— G	PROPOSED GAS LINE
● IPP-F	IRON PIPE FOUND	— W	PROPOSED WATER LINE
▲ RRS-F	RAILROAD SPIKE FOUND	— S	PROPOSED SEWER LINE
⊕	UTILITY POLE	—	PROPOSED DRAINAGE LINE
+	SIGN	—	PROPOSED TREELINE
⊙	LIGHT	—	PROPOSED EDGE OF PAVEMENT
---	ABUTTER LINE	—	PROPOSED VERTICAL GRANITE CURB
---	PROPERTY LINE	—	PROPOSED 2' CONTOUR
---	STREAM	—	PROPOSED SWALE
---	WETLAND	—	PROPOSED RETAINING WALL
---	SWALE	—	PROPOSED STONEWALL
---	OVERHEAD UTILITIES	—	EASEMENT
---	EDGE OF PAVEMENT	—	
---	VERTICAL GRANITE CURB	—	
---	10' CONTOUR	—	
---	2' CONTOUR	—	
---	STONEWALL	—	
---	SCS SOIL LINE	—	
---	BUILDING SETBACK	—	
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---	PROPOSED SIGN	—	
---	PROPOSED LIGHT	—	
---	PROPOSED SEWER MANHOLE	—	
---	PROPOSED DRAINAGE MANHOLE	—	
---	PROPOSED CATCH BASIN	—	
---	PROPOSED PROPERTY LINE	—	
---	PROPOSED CHAIN LINK FENCE	—	
---	PROPOSED GUARDRAIL	—	

SITE SPECIFIC SOIL MAP UNIT KEY

SYMBOL	MAP UNIT	SLOPE CLASS	DRAINAGE CLASS
229B	UDORTHENTS, SMOOTH	0-8%	
448B	SCITUATE	0-8%	MODERATELY WELL
448C	SCITUATE	8-15%	MODERATELY WELL
449B	SCITUATE, VERY STONY	0-8%	MODERATELY WELL
449C	SCITUATE, VERY STONY	8-15%	MODERATELY WELL
657B	RIDGEBURY, VERY STONY	0-8%	VERY POOR

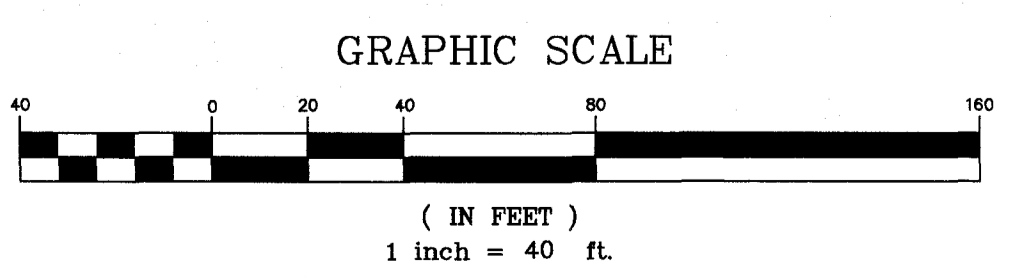
UTILITY NOTE
 THE UNDERGROUND UTILITIES DEPICTED HEREON HAVE BEEN DRAWN FROM FIELD SURVEY INFORMATION AND/OR PLOTTED FROM EXISTING DRAWINGS. KEACH-NORDSTROM ASSOCIATES, INC. MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES DEPICTED COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHER, KEACH-NORDSTROM ASSOCIATES, INC. DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE. KEACH-NORDSTROM ASSOCIATES, INC. HAS NOT PHYSICALLY LOCATED THE UNDERGROUND PORTIONS OF THE UTILITIES.

NPDES NOTE

THIS PROJECT DISTURBS IN EXCESS OF 1-ACRE OF LAND. THEREFORE IT WILL BE REQUIRED TO OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE AS ISSUED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE OWNER/DEVELOPER AND "OPERATOR" (GENERAL CONTRACTOR) SHALL EACH BE REQUIRED TO PREPARE AND SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA PRIOR TO THE START OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE PREPARATION AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEETING THE REQUIREMENTS OF THE CURRENT CONSTRUCTION GENERAL PERMIT.

CONSTRUCTION NOTES:

- THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED GRADING, DRAINAGE, AND UTILITY SYSTEMS FOR THIS SITE.
- ALL WORK SHALL CONFORM TO THE APPLICABLE REGULATIONS AND STANDARDS OF THE TOWN OF HUDSON, AND SHALL BE BUILT IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. ALL WORK PERFORMED IN THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, APPROVED AND ADOPTED 2016 ARE HEREBY INCORPORATED BY REFERENCE.
- CONSTRUCTION SHALL CONFORM TO THE TYPICAL SECTIONS AND DETAILS SHOWN ON THE PLANS, AND SHALL MEET THE REQUIREMENTS AND SPECIFICATIONS FOR ROAD CONSTRUCTION, PUBLIC WORKS DEPARTMENT, HUDSON, NEW HAMPSHIRE. ALL DRAINAGE PIPES SHOWN SHALL BE HDPE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS. PRIOR TO THE START OF ANY CONSTRUCTION THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION, AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG SAFE" AT 811 AT LEAST 72 HOURS BEFORE DIGGING.
- ALL DRAINAGE PIPE SHALL BE INSTALLED FOLLOWING MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- THE WATER, SANITARY SEWER, AND ELECTRICAL UTILITIES SHOWN HERE SHALL BE COORDINATED WITH THE FINAL BUILDING PLANS PRIOR TO CONSTRUCTION. THE DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES.
- GRANGE CONSTRUCTION FENCE WILL BE PLACED AT ALL WETLAND BUFFERS WITHIN 50' OF GRADING. THE CONSTRUCTION FENCE WILL REMAIN IN PLACE UNTIL SITE IS COMPLETE.
- A PRE-CONSTRUCTION MEETING WITH THE TOWN ENGINEER WILL BE REQUIRED BEFORE CONSTRUCTION IS STARTED.
- PLANS TO COMPLY WITH THE TOWN OF HUDSON'S MS4 PERMIT.
- ALL PROPOSED CONDOMINIUMS WILL BE ONE-STORY WITH AN APPROXIMATE BUILDING HEIGHT OF 15 FEET.



SEE SHEET 1 FOR NOTES & REFERENCE PLANS

LOAM & SEED ALL DISTURBED AREAS (TYP.)

GRADING & DRAINAGE PLAN

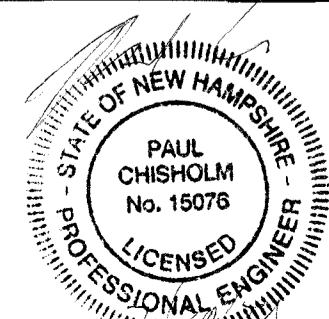
HERITAGE LANDING

MAP 140 LOTS 2 & 3
 112 & 114 GREELEY STREET
 HUDSON, NEW HAMPSHIRE
 HILLSBOROUGH COUNTY

OWNER/APPLICANT:
 K&M DEVELOPERS, LLC
 46 LOWELL ROAD
 HUDSON, N.H. 03051

K&M KEACH-NORDSTROM ASSOCIATES, INC.

Civil Engineering Land Surveying Landscape Architecture
 10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881



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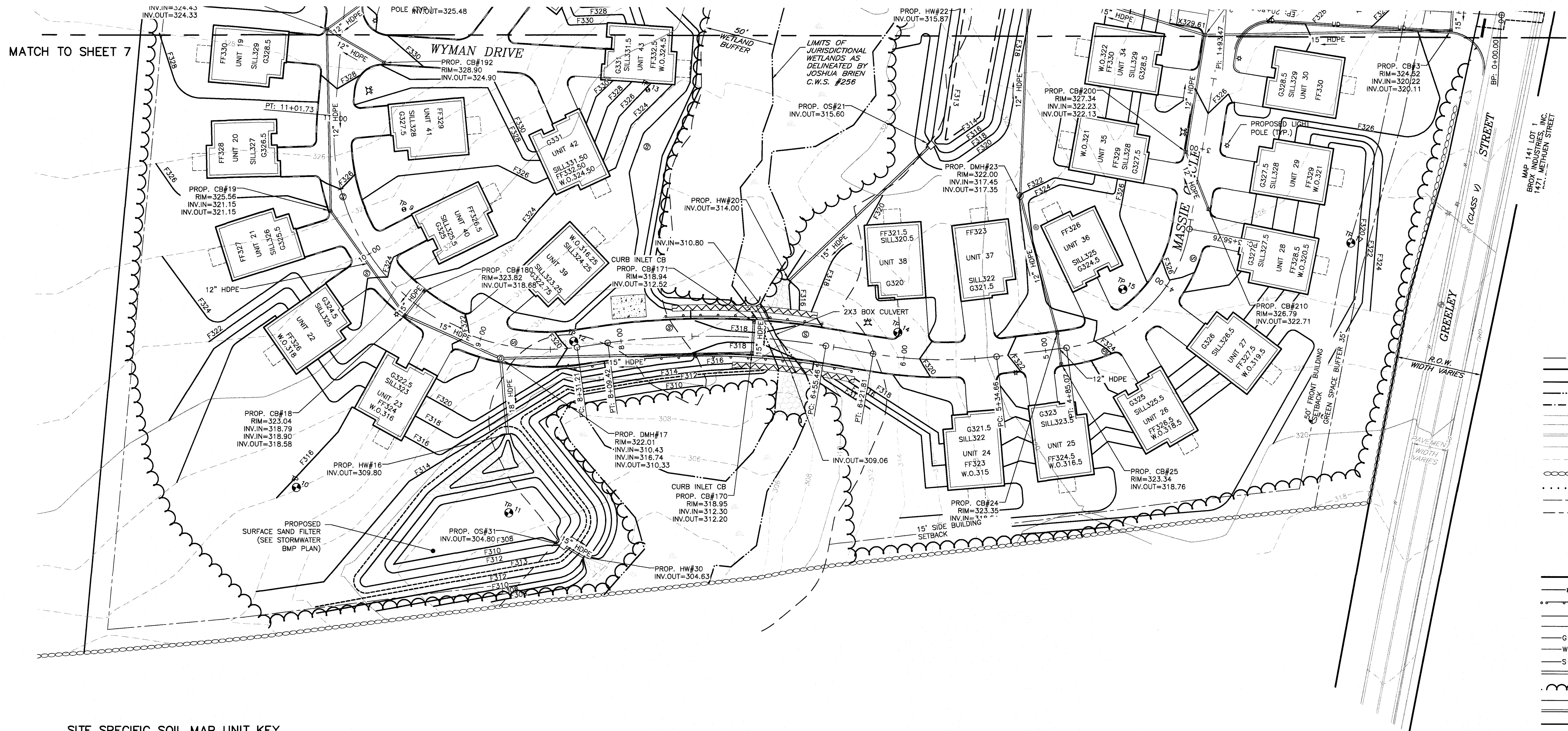
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SEE SHEET 1 FOR NOTES & REFERENCE PLANS

LEGEND

■ GB-F	GRANITE BOUND FOUND
● IPIN-F	IRON PIN FOUND
⊙ DH-F	DRILL HOLE FOUND
⊙ IPP-F	IRON PIPE FOUND
▲ RRS-F	RAILROAD SPIKE FOUND
⊙	UTILITY POLE
⊙	SIGN
*	LIGHT
---	ABUTTER LINE
---	PROPERTY LINE
---	STREAM
---	WETLAND
---	SWALE
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---	PROPOSED STONEWALL
---	EASEMENT

SITE SPECIFIC SOIL MAP UNIT KEY

SYMBOL	MAP UNIT	SLOPE CLASS	DRAINAGE CLASS
229B	UDORTHERTS, SMOOTH	0-8%	
448B	SCITUATE	0-8%	MODERATELY WELL
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657B	RIDGEBURY, VERY STONY	0-8%	VERY POOR

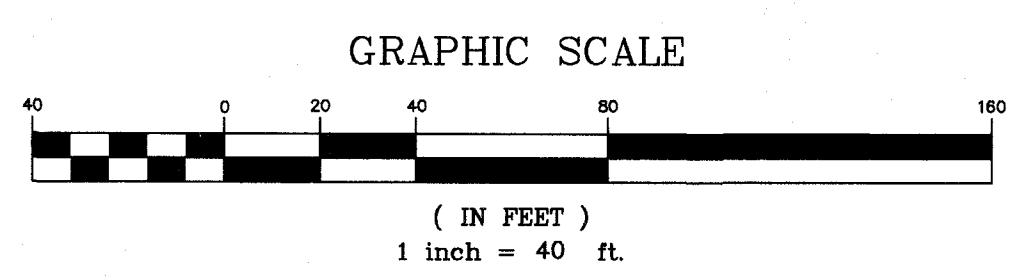
THIS MAP PRODUCT IS WITHIN THE TECHNICAL STANDARDS OF THE NATIONAL COOPERATIVE SOILS SURVEY. IT IS A SPECIAL PURPOSE PRODUCT, PRODUCED BY A CERTIFIED SOIL SCIENTIST, AND IS NOT A PRODUCT OF THE USDA NATURAL RESOURCE CONSERVATION SERVICE. THERE IS A NARRATIVE REPORT THAT ACCOMPANIES THIS MAP AND MAP KEY. JAMES P. GOVE, CSS #004 OF GOVE ENVIRONMENTAL SERVICES INC. PERFORMED THE SOIL MAPPING IN JANUARY 15 OF 2021.

LOAM & SEED ALL DISTURBED AREAS (TYP.)

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GRADING & DRAINAGE PLAN
HERITAGE LANDING
 MAP 140 LOTS 2 & 3
 112 & 114 GREELEY STREET
 HUDSON, NEW HAMPSHIRE
 HILLSBOROUGH COUNTY

OWNER/APPLICANT:
 K&M DEVELOPERS, LLC
 46 LOWELL ROAD
 HUDSON, N.H. 03051

K&M KEACH-NORDSTROM ASSOCIATES, INC.
 Civil Engineering Land Surveying Landscape Architecture
 10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2861

REVISIONS

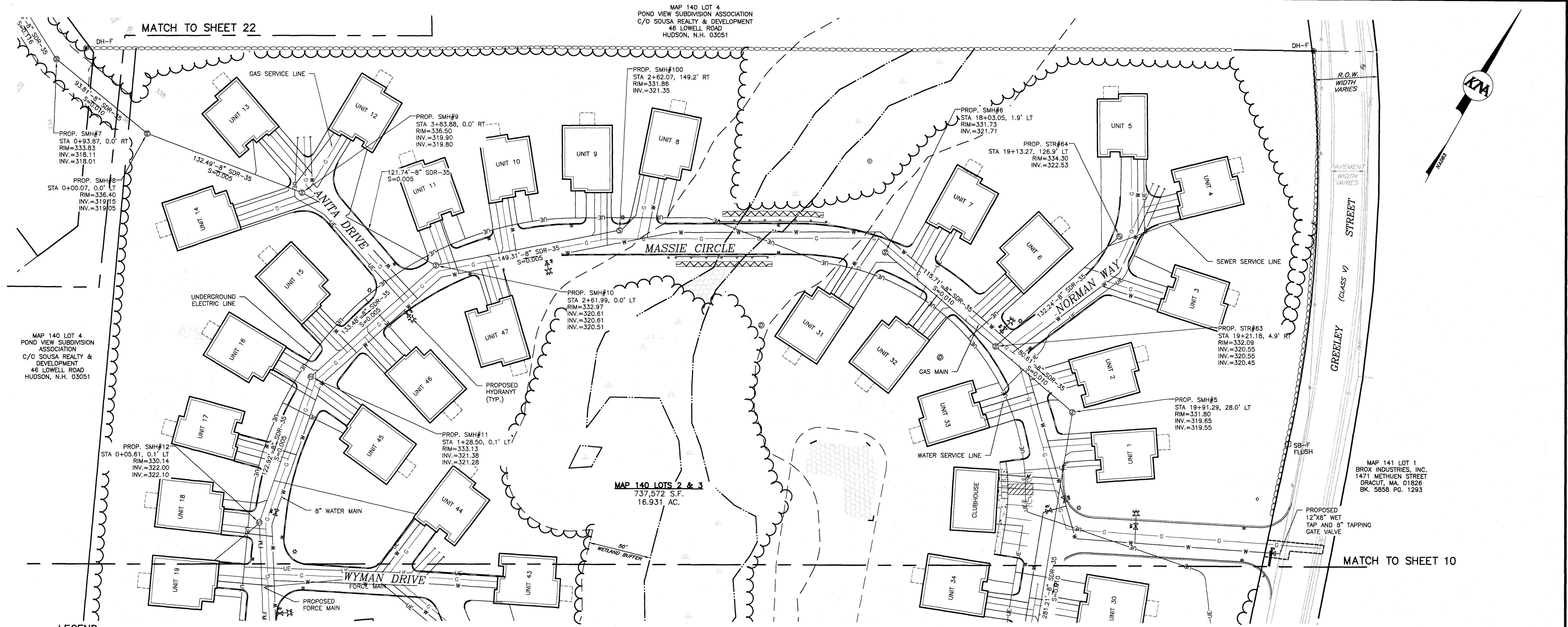
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MAP 140 LOT 4
POND VIEW SUBDIVISION ASSOCIATION
C/O SOUSA REALTY & DEVELOPMENT
46 LOWELL ROAD
HUDSON, N.H. 03051

MATCH TO SHEET 22

DH-F



MAP 141 LOT 1
BROX INDUSTRIES, INC.
1471 METHUEN STREET
DRACUT, MA. 01826
BK. 5858 PG. 1293

MATCH TO SHEET 10

MAP 140 LOT 4
POND VIEW SUBDIVISION
ASSOCIATION
C/O SOUSA REALTY &
DEVELOPMENT
46 LOWELL ROAD
HUDSON, N.H. 03051

MAP 140 LOTS 2 & 3
737,572 S.F.
16.931 AC.

LEGEND

- GB-F GRANITE BOUND FOUND
- IPIN-F IRON PIN FOUND
- DH-F DRILL HOLE FOUND
- IPP-F IRON PIPE FOUND
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- VG PROPOSED VERTICAL GRANITE CURB
- SW PROPOSED SWALE
- RW PROPOSED RETAINING WALL
- STW PROPOSED STONEWALL
- E PROPOSED EASEMENT

CONSTRUCTION NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED UTILITY SYSTEMS FOR THIS SITE.
2. ALL WORK SHALL CONFORM TO THE TOWN OF HUDSON, LATEST EDITION, CONSTRUCTION STANDARDS AND DETAILS. IN THE ABSENCE OF A TOWN STANDARD/SPECIFICATION, WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS PUBLISHED BY THE STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION, ARE HEREBY INCORPORATED BY REFERENCE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION, AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING "DIG SAFE" AT 811 AT LEAST 72 HOURS BEFORE DIGGING.
4. ALL DISTURBED AREAS NOT TO BE PAVED SHALL BE LOADED AND SEEDED.
5. ALL PIPES SHALL BE INSTALLED FOLLOWING MANUFACTURER'S INSTALLATION INSTRUCTIONS.
6. CONTRACTOR TO VERIFY SIZE OF WATER AND GAS SERVICE LINES WITH MECHANICAL CONTRACTOR/FIRE SUPPRESSION ENGINEER PRIOR TO THE START OF CONSTRUCTION.
7. PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO ORDERING ANY WATER SYSTEM/SERVICE PARTS, THE PROPOSED SIZE OF THE VARIOUS WATER SERVICES SHALL BE CONFIRMED BY THE PROJECT FIRE SUPPRESSION ENGINEER. ANY ADJUSTMENTS TO THE DESIGN MUST BE APPROVED BY THE TOWN OF HUDSON.
8. FINAL LAYOUT OF UNDERGROUND UTILITIES TO BE APPROVED BY LOCAL PROVIDER PRIOR TO CONSTRUCTION.
9. CONTRACTOR IS RESPONSIBLE FOR SIZING WATER SERVICES AND/OR VERIFYING EXISTING WATER SERVICES ARE ADEQUATE FOR THE PROPOSED BUILDING.
10. PRIOR TO CONSTRUCTION, THE SITE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ELECTRICIAN FOR THE EXACT LOCATION, LAYOUT, CONDUIT SIZE AND CIRCUITS ASSOCIATED WITH THE SITE LIGHTING, EMERGENCY GATE AND COMPACTOR.

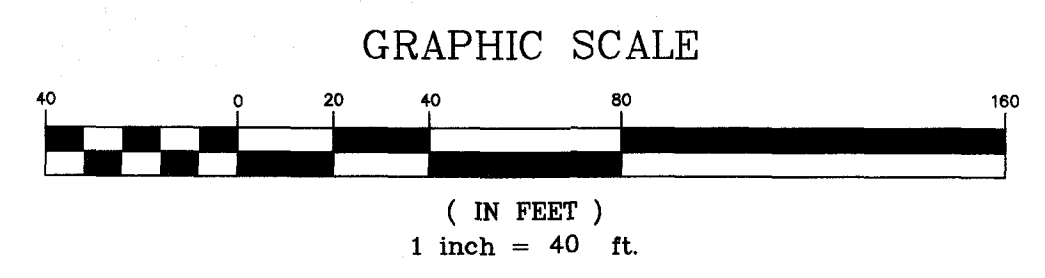
SEE SHEET 1 FOR NOTES & REFERENCE PLANS

**UTILITY PLAN
HERITAGE LANDING**

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
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SIGNATURE DATE: _____

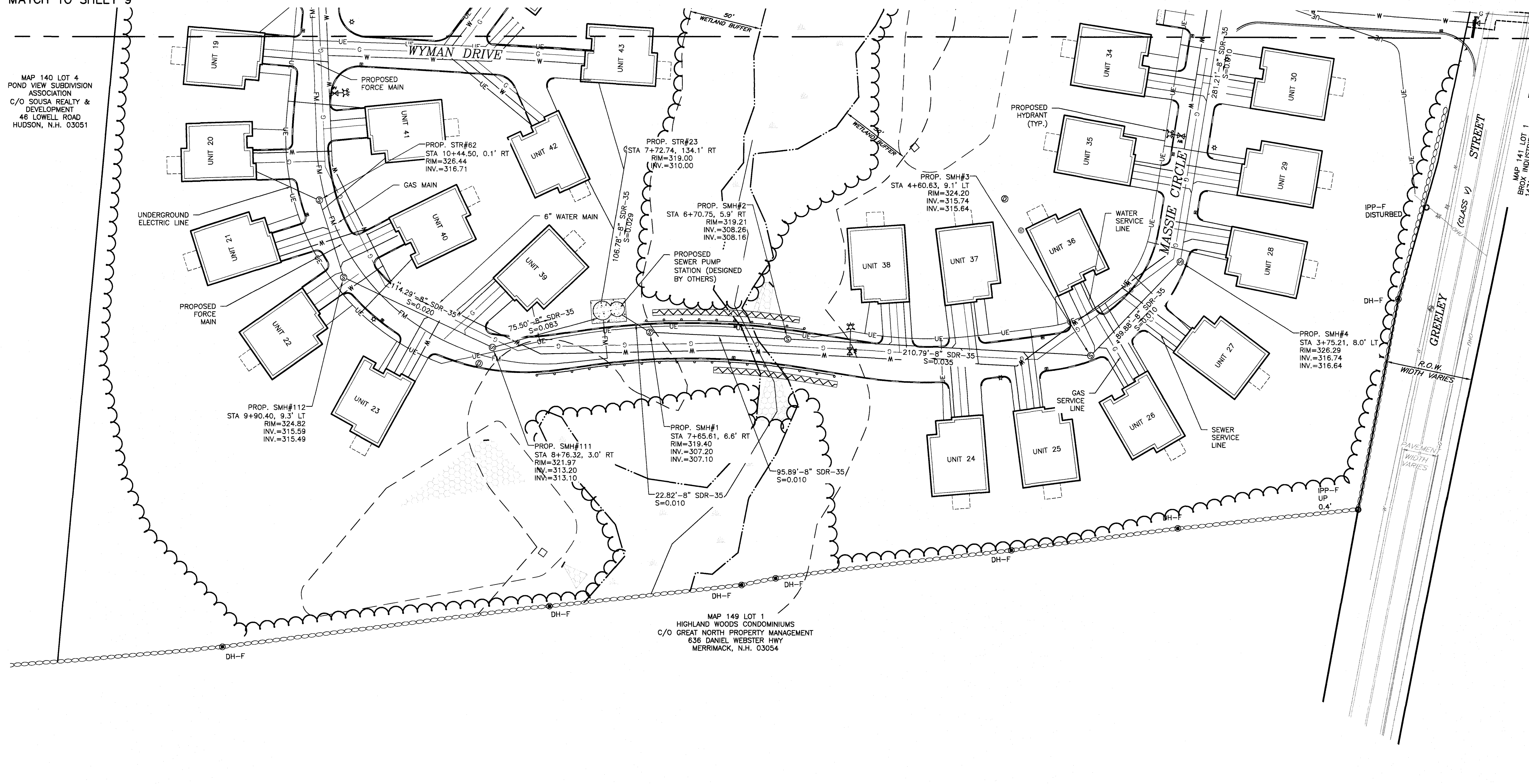
SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

REVISIONS			
No.	DATE	DESCRIPTION	BY
1	7/12/21	REVISED PER TOWN COMMENTS	ACL

DATE: JUNE 1, 2021 SCALE: 1"=40'
PROJECT NO: 20-1001-1 SHEET 9 OF 29

MATCH TO SHEET 9

MAP 140 LOT 4
POND VIEW SUBDIVISION
ASSOCIATION
C/O SOUSA REALTY &
DEVELOPMENT
46 LOWELL ROAD
HUDSON, N.H. 03051



MAP 141 LOT 1
BROX INDUSTRIES, INC.
1471 METHUEN STREET
DRACUT, MA. 01826
BK. 5858 PG. 1293

SEE SHEET 1 FOR NOTES
& REFERENCE PLANS

LEGEND

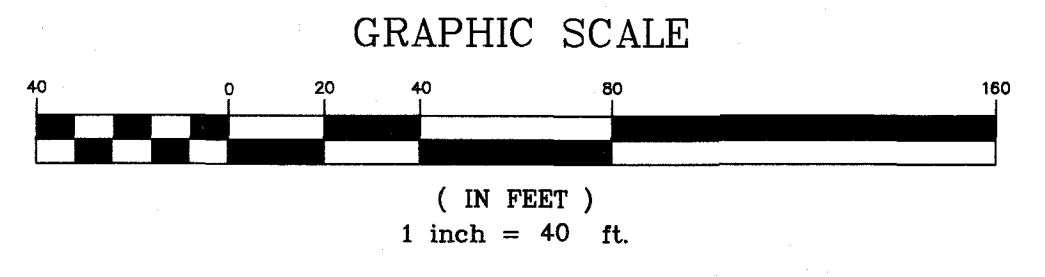
- GB-F GRANITE BOUND FOUND
- IPIN-F IRON PIN FOUND
- DH-F DRILL HOLE FOUND
- IPP-F IRON PIPE FOUND
- RRS-F RAILROAD SPIKE FOUND
- UPL UTILITY POLE
- SIGN SIGN
- LIGHT LIGHT
- ABUTTER LINE ABUTTER LINE
- PROPERTY LINE PROPERTY LINE
- STREAM STREAM
- WETLAND WETLAND
- SWALE SWALE
- OHU OVERHEAD UTILITIES
- EDGE OF PAVEMENT EDGE OF PAVEMENT
- VERTICAL GRANITE CURB VERTICAL GRANITE CURB
- 10' CONTOUR 10' CONTOUR
- 2' CONTOUR 2' CONTOUR
- STONEWALL STONEWALL
- SCS SOIL LINE SCS SOIL LINE
- BUILDING SETBACK BUILDING SETBACK
- EASEMENT EASEMENT
- PROPOSED SIGN PROPOSED SIGN
- PROPOSED LIGHT PROPOSED LIGHT
- PROPOSED SEWER MANHOLE PROPOSED SEWER MANHOLE
- PROPOSED DRAINAGE MANHOLE PROPOSED DRAINAGE MANHOLE
- PROPOSED CATCH BASIN PROPOSED CATCH BASIN
- PROPOSED PROPERTY LINE PROPOSED PROPERTY LINE
- PROPOSED CHAIN LINK FENCE PROPOSED CHAIN LINK FENCE
- PROPOSED GUARDRAIL PROPOSED GUARDRAIL
- OHU PROPOSED OVERHEAD UTILITIES
- UGU PROPOSED UNDERGROUND UTILITIES
- G-G PROPOSED GAS LINE
- W-W PROPOSED WATER LINE
- S-S PROPOSED SEWER LINE
- PROPOSED DRAINAGE LINE PROPOSED DRAINAGE LINE
- PROPOSED TREELINE PROPOSED TREELINE
- PROPOSED EDGE OF PAVEMENT PROPOSED EDGE OF PAVEMENT
- PROPOSED VERTICAL GRANITE CURB PROPOSED VERTICAL GRANITE CURB
- PROPOSED 2' CONTOUR PROPOSED 2' CONTOUR
- PROPOSED SWALE PROPOSED SWALE
- PROPOSED RETAINING WALL PROPOSED RETAINING WALL
- PROPOSED STONEWALL PROPOSED STONEWALL
- EASEMENT EASEMENT

MAP 149 LOT 1
HIGHLAND WOODS CONDOMINIUMS
C/O GREAT NORTH PROPERTY MANAGEMENT
636 DANIEL WEBSTER HWY
MERRIMACK, N.H. 03054

UTILITY PLAN
HERITAGE LANDING
MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051

K&M KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881



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

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

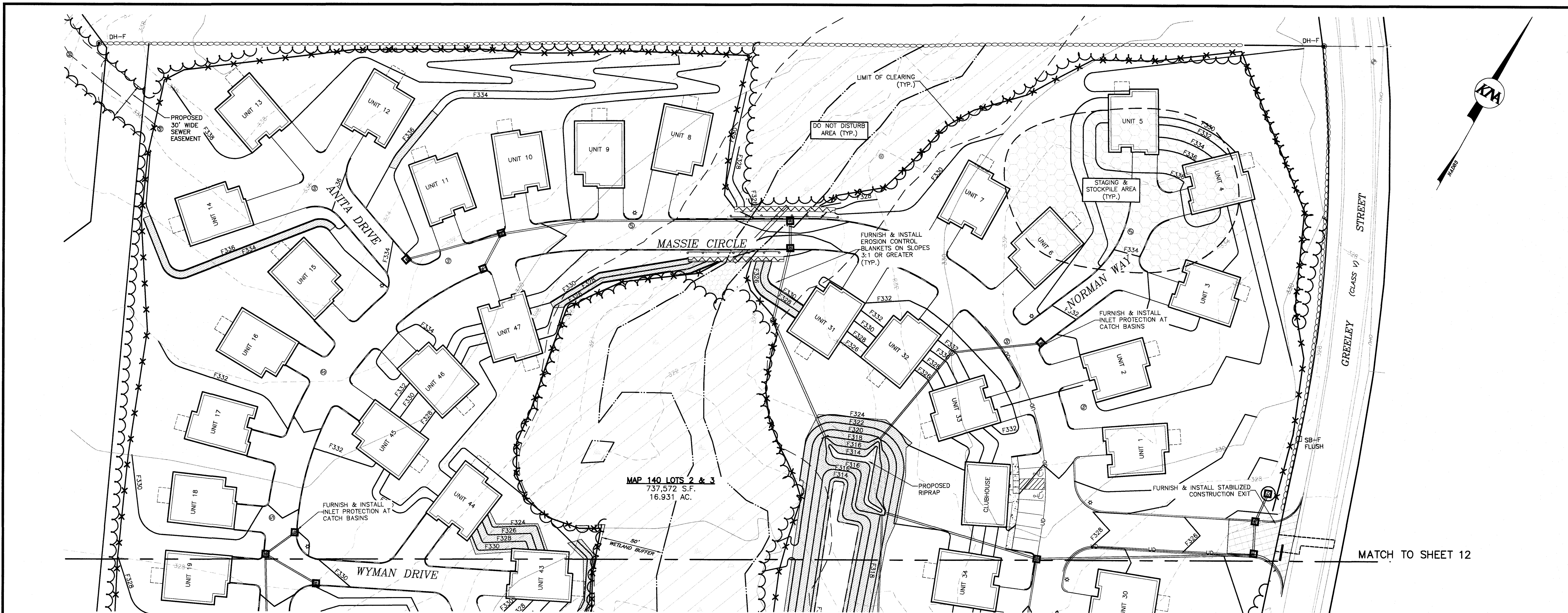
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DATE: JUNE 1, 2021 SCALE: 1"=40'
PROJECT NO: 20-1001-1 SHEET 10 OF 29



LEGEND

<ul style="list-style-type: none"> ⊙ GB-F GRANITE BOUND FOUND ⊙ IPIN-F IRON PIN FOUND ⊙ DH-F DRILL HOLE FOUND ⊙ IPP-F IRON PIPE FOUND ⊙ RRS-F RAILROAD SPIKE FOUND ⊙ UTILITY POLE SIGN ⊙ LIGHT --- ABUTTER LINE --- PROPERTY LINE --- STREAM --- WETLAND --- SWALE --- OHU OVERHEAD UTILITIES --- EDGE OF PAVEMENT --- VERTICAL GRANITE CURB --- 10' CONTOUR --- 2' CONTOUR --- STONEWALL --- SCS SOIL LINE --- BUILDING SETBACK --- EASEMENT ⊙ PROPOSED SIGN ⊙ PROPOSED LIGHT ⊙ PROPOSED SEWER MANHOLE ⊙ PROPOSED DRAINAGE MANHOLE ⊙ PROPOSED CATCH BASIN ⊙ PROPOSED PROPERTY LINE ⊙ PROPOSED CHAIN LINK FENCE ⊙ PROPOSED GUARDRAIL 	<ul style="list-style-type: none"> --- OHU PROPOSED OVERHEAD UTILITIES --- UGU PROPOSED UNDERGROUND UTILITIES --- G PROPOSED GAS LINE --- W PROPOSED WATER LINE --- S PROPOSED SEWER LINE --- PROPOSED DRAINAGE LINE --- PROPOSED TREELINE --- PROPOSED EDGE OF PAVEMENT --- PROPOSED VERTICAL GRANITE CURB --- PROPOSED 2' CONTOUR --- PROPOSED SWALE --- PROPOSED RETAINING WALL --- PROPOSED STONEWALL --- EASEMENT
---	--

EROSION & SEDIMENT CONTROL LEGEND

	PERMANENT OUTLET PROTECTION APRON (RIP RAP)
	TEMPORARY INLET PROTECTION AT ALL CATCH BASINS
	PERIMETER CONTROLS
	LIMITS OF CLEARING
	STABILIZED CONSTRUCTION EXIT
	NON DISTURBANCE AREA
	STAGING AND STOCKPILE AREA
	EROSION CONTROL BLANKETS

EROSION CONTROL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE REQUIRED ONSITE TEMPORARY CONSTRUCTION EROSION CONTROL MEASURES AS WELL AS THE PERMANENT EROSION CONTROL MEASURES.
2. ALL MEASURES IN THE PLAN SHALL MEET AS A MINIMUM THE BEST MANAGEMENT PRACTICES SET FORTH IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUAL TITLED "EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION," DATED DECEMBER 2010, AS AMENDED FROM TIME TO TIME.
3. WHENEVER PRACTICAL, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED OR SUPPLEMENTED. THE STRIPPING OF VEGETATION, WHEN NECESSARY, SHALL BE DONE IN A MANNER THAT MINIMIZES SOIL EROSION.
4. APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE.
5. THE AREA OF DISTURBANCE SHALL BE KEPT TO A MINIMUM. DISTURBED AREAS REMAINING IDLE FOR MORE THAN 30 DAYS SHALL BE STABILIZED.
6. MEASURES SHALL BE TAKEN TO CONTROL EROSION WITHIN THE PROJECT AREA. SEDIMENT IN RUNOFF WATER SHALL BE TRAPPED AND RETAINED WITHIN THE PROJECT AREA USING APPROVED MEASURES. WETLAND AREAS AND SURFACE WATERS SHALL BE PROTECTED FROM SEDIMENT.
7. OFFSITE SURFACE WATER AND RUNOFF FROM UNDISTURBED AREAS SHALL BE DIVERTED AWAY FROM DISTURBED AREAS WHERE FEASIBLE OR CARRIED NON-EROSIVELY THROUGH THE PROJECT AREA. INTEGRITY OF DOWNSTREAM DRAINAGE SYSTEMS SHALL BE MAINTAINED.
8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCTIONING CONDITION UNTIL FINAL SITE STABILIZATION IS ACCOMPLISHED.
9. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS UNLESS CONDITIONS DICTATE OTHERWISE.
10. THE TOWN OF HUDSON SHALL RESERVE THE RIGHT TO REQUIRE FURTHER EROSION CONTROL PRACTICES DURING CONSTRUCTION SHOULD THEY FIND IT NECESSARY.
11. TEMPORARY STABILIZATION SHALL BE PUT IN PLACE WITHIN 5 DAYS OF INITIAL DISTURBANCE.

SEE SHEET 1 FOR NOTES & REFERENCE PLANS

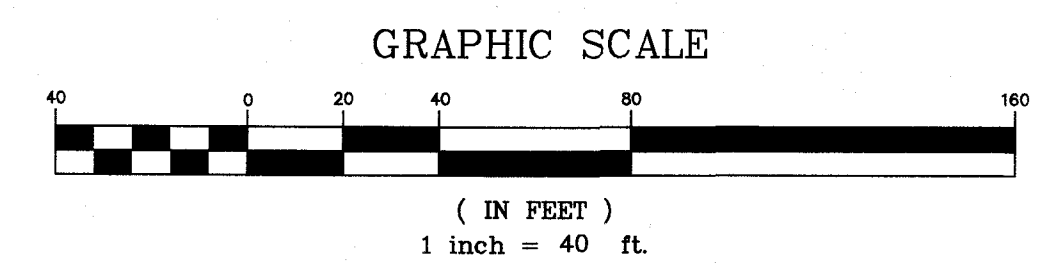
LOAM & SEED ALL DISTURBED AREAS (TYP.)

EROSION CONTROL PLAN
HERITAGE LANDING

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051

K&M KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881



NPDES NOTE

THIS PROJECT DISTURBS IN EXCESS OF 1-ACRE OF LAND. THEREFORE IT WILL BE REQUIRED TO OBTAIN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT COVERAGE AS ISSUED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA). THE OWNER/DEVELOPER AND "OPERATOR" (GENERAL CONTRACTOR) SHALL EACH BE REQUIRED TO PREPARE AND SUBMIT A NOTICE OF INTENT (NOI) TO THE EPA PRIOR TO THE START OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE PREPARATION AND IMPLEMENTATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MEETING THE REQUIREMENTS OF THE CURRENT CONSTRUCTION GENERAL PERMIT.

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

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DATE: JUNE 1, 2021 SCALE: 1"=40'
PROJECT NO: 20-1001-1 SHEET 11 OF 29

MATCH TO SHEET 11

SEE SHEET 1 FOR NOTES & REFERENCE PLANS

LEGEND

⊠ GB-F	GRANITE BOUND FOUND
⊙ IPIN-F	IRON PIN FOUND
⊙ DH-F	DRILL HOLE FOUND
⊙ IPP-F	IRON PIPE FOUND
⊙ RRS-F	RAILROAD SPIKE FOUND
⊙	UTILITY POLE
⊙	SIGN
⊙	LIGHT
---	ABUTTER LINE
---	PROPERTY LINE
---	STREAM
---	WETLAND
---	SWALE
---	OVERHEAD UTILITIES
---	EDGE OF PAVEMENT
---	VERTICAL GRANITE CURB
---	10' CONTOUR
---	2' CONTOUR
---	STONEWALL
---	SCS SOIL LINE
---	BUILDING SETBACK
---	EASEMENT
---	PROPOSED SIGN
---	PROPOSED LIGHT
---	PROPOSED SEWER MANHOLE
---	PROPOSED DRAINAGE MANHOLE
---	PROPOSED CATCH BASIN
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---	PROPOSED GUARDRAIL
---	PROPOSED OVERHEAD UTILITIES
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---	PROPOSED GAS LINE
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---	PROPOSED RETAINING WALL
---	PROPOSED STONEWALL
---	EASEMENT



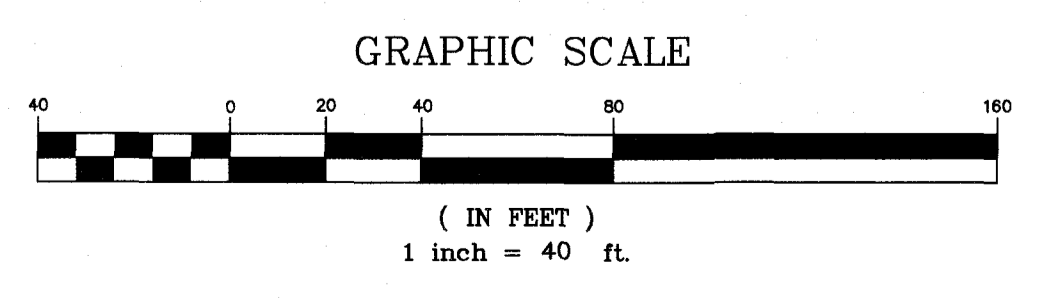
LOAM & SEED ALL DISTURBED AREAS (TYP.)

SEE SHEET 11 FOR EROSION CONTROL NOTES & LEGEND

EROSION CONTROL PLAN
HERITAGE LANDING
 MAP 140 LOTS 2 & 3
 112 & 114 GREELEY STREET
 HUDSON, NEW HAMPSHIRE
 HILLSBOROUGH COUNTY

OWNER/APPLICANT:
 K&M DEVELOPERS, LLC
 46 LOWELL ROAD
 HUDSON, N.H. 03051

KMA KEACH-NORDSTROM ASSOCIATES, INC.
 Civil Engineering Land Surveying Landscape Architecture
 10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881



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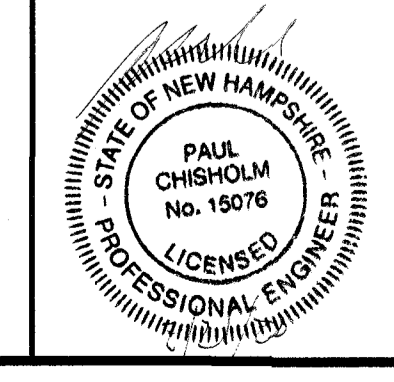
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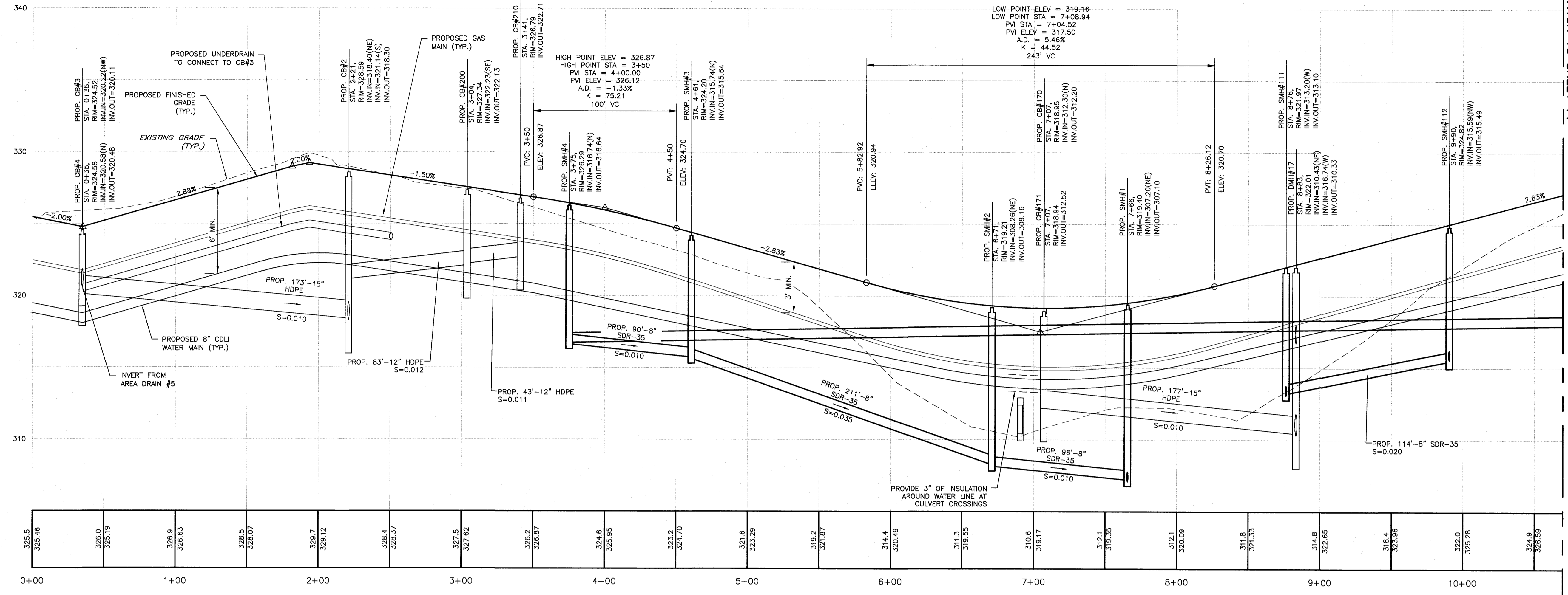
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REVISIONS

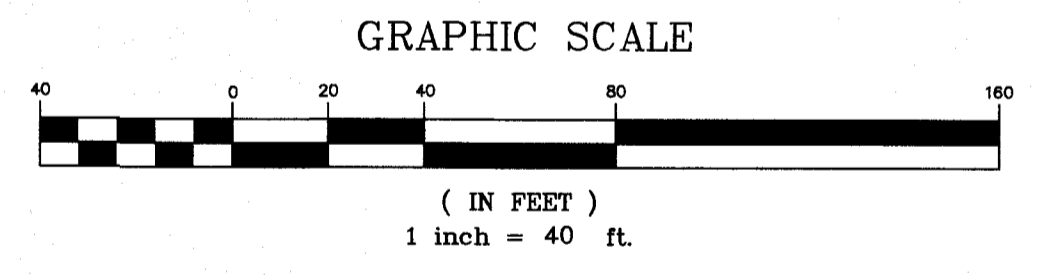
No.	DATE	DESCRIPTION	BY
1	7/12/21	REVISED PER TOWN COMMENTS	ACL

DATE: JUNE 1, 2021 SCALE: 1"=40'
 PROJECT NO: 20-1001-1 SHEET 12 OF 29





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



PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM DATE OF APPROVAL

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ROADWAY PROFILE
HERITAGE LANDING
 MAP 140 LOTS 2 & 3
 112 & 114 GREELEY STREET
 HUDSON, NEW HAMPSHIRE
 HILLSBOROUGH COUNTY

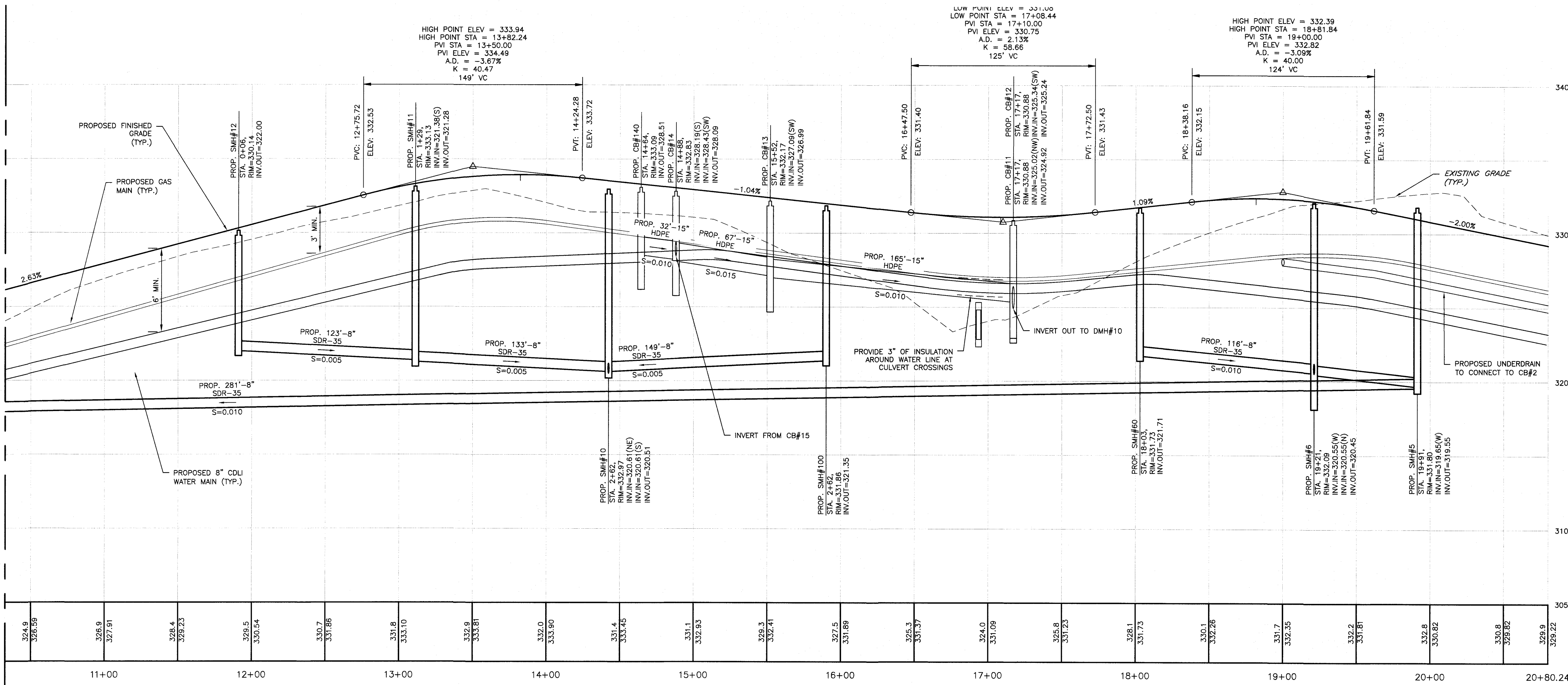
OWNER/APPLICANT:
 K&M DEVELOPERS, LLC
 45 LOWELL ROAD
 HUDSON, N.H. 03051

KM KEACH-NORDSTROM ASSOCIATES, INC.
 Civil Engineering Land Surveying Landscape Architecture
 10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2861

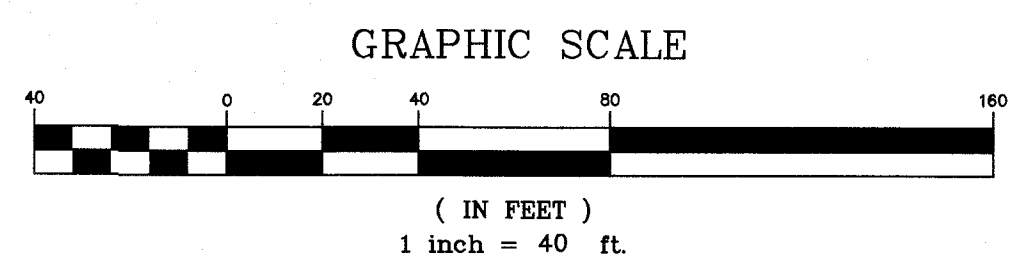
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DATE: JUNE 1, 2021 SCALE: 1"=40'
 PROJECT NO: 20-1001-1 SHEET 13 OF 29

MATCH TO SHEET 13



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



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ROADWAY PROFILE
HERITAGE LANDING
 MAP 140 LOTS 2 & 3
 112 & 114 GREELEY STREET
 HUDSON, NEW HAMPSHIRE
 HILLSBOROUGH COUNTY

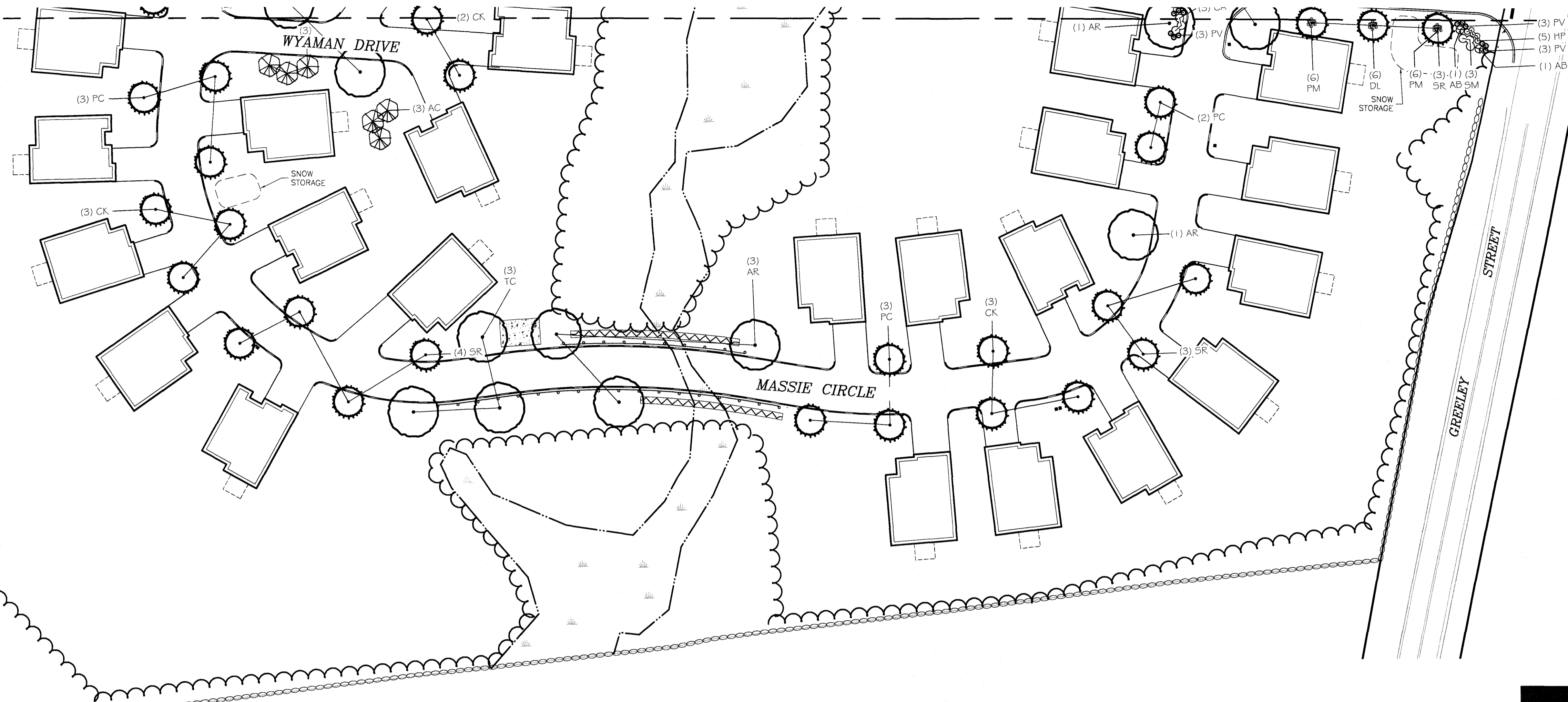
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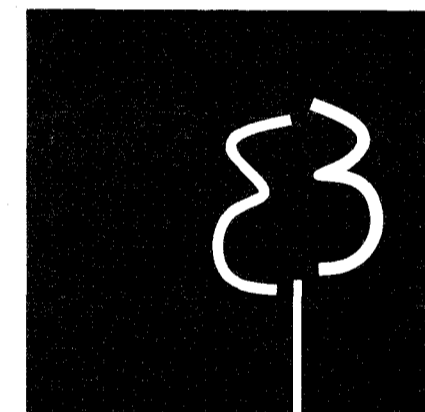
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DATE: JUNE 1, 2021
 PROJECT NO: 20-1001-1
 SCALE: 1"=40'
 SHEET 14 OF 29

MATCH TO SHEET 15



SEE SHEET 15 FOR LANDSCAPE NOTES & LEGEND



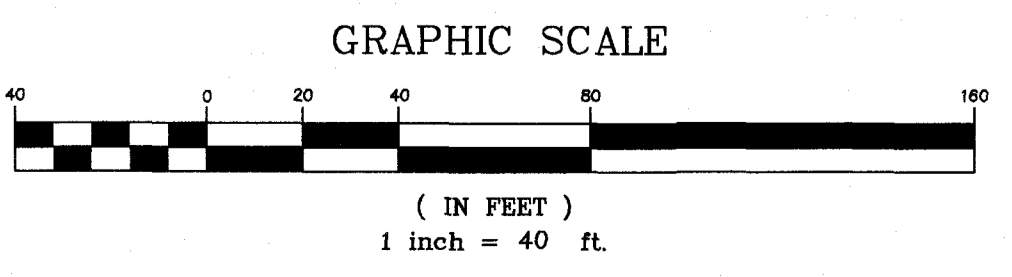
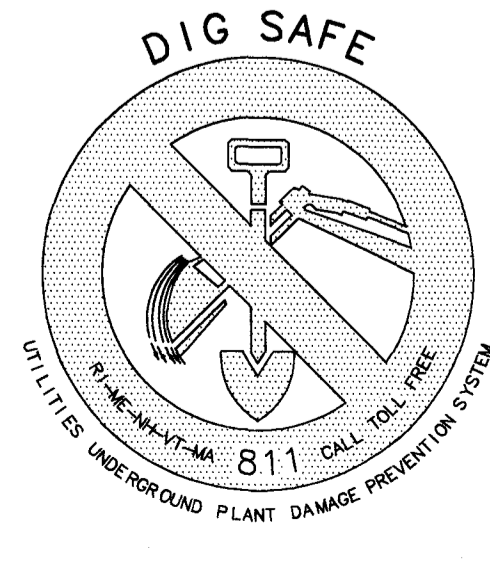
terrain
planning & design llc

311 kast hill road
hopkinton nh 03229
603. 746. 3512
terrainplanning.com

LANDSCAPING PLAN
HERITAGE LANDING
MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

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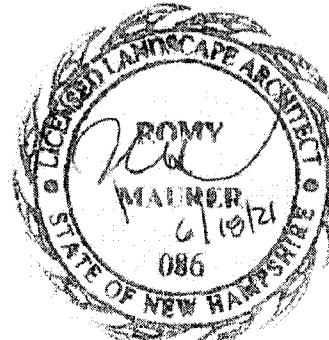
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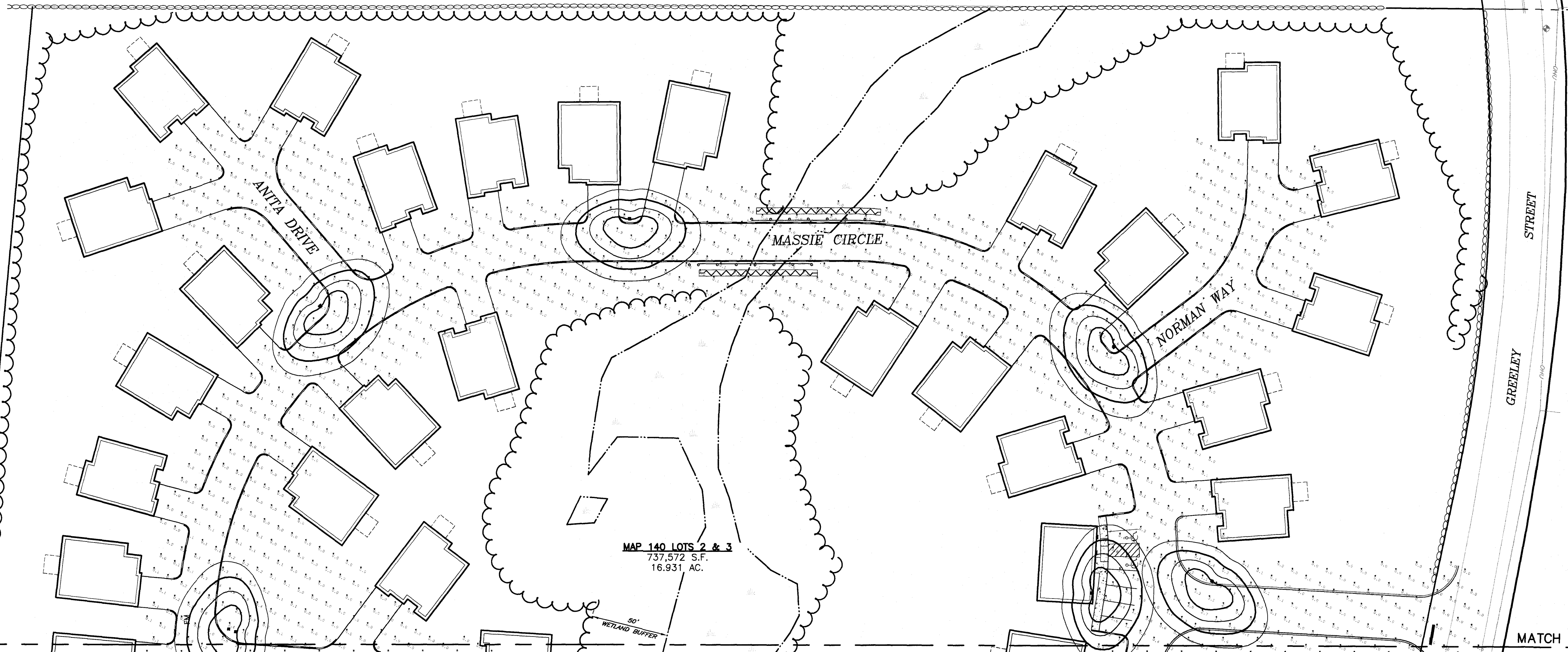
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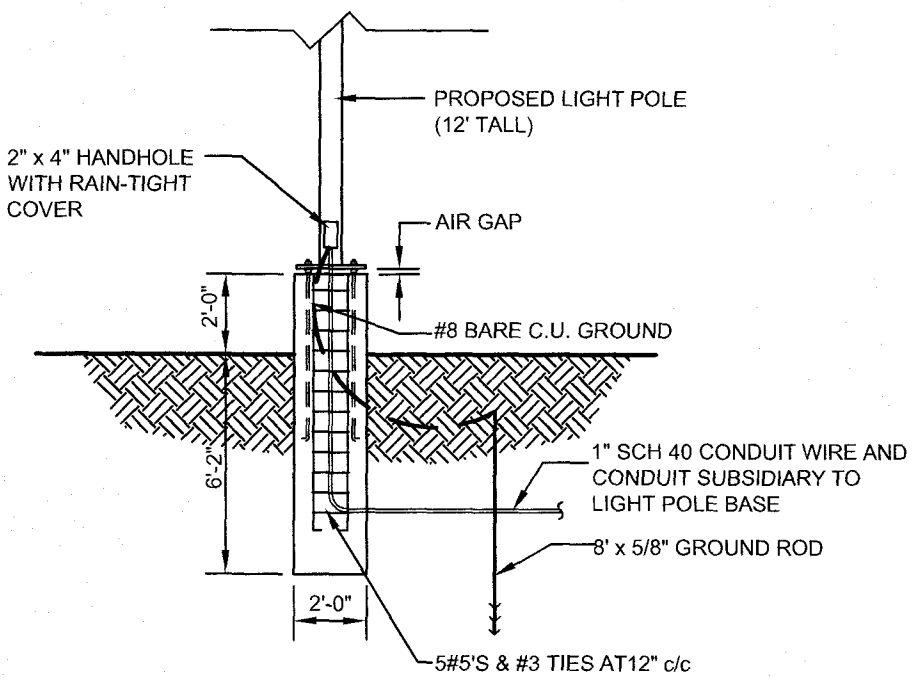


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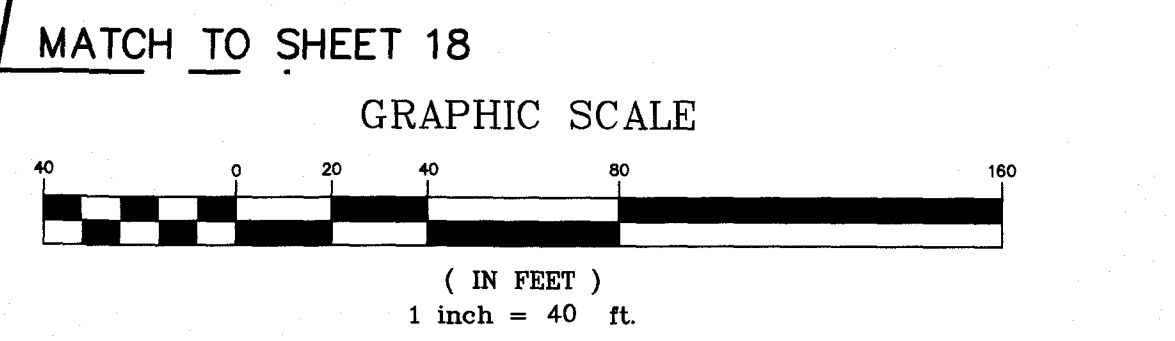
DATE: JUNE 1, 2021 SCALE: 1"=40'
PROJECT NO: 20-1001-1 SHEET 16 OF 29



- LIGHTING NOTES:**
- ALL LIGHTING FIXTURES AND POLES SHALL MATCH PREVIOUS PROJECT PHASE(S) EXISTING LIGHTING IN COLOR, SHAPE AND DESIGN TO THE MAXIMUM EXTENT PRACTICABLE.
 - SEE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION REGARDING LIGHT INSTALLATION AND WIRING REQUIREMENTS.
 - ALL PROPOSED LIGHTING SHALL MEET IES FULL CUT-OFF CLASSIFICATION.
 - ALL LIGHTING MUST COMPLY WITH THE TOWN OF HUDSON'S SUBDIVISION/SITE PLAN REGULATIONS.
 - ALL FINAL SITE LIGHTING AND CONDUIT LAYOUT SHALL BE COORDINATED WITH LOCAL UTILITY PROVIDER.
 - LIGHT POLES SHOULD BE PLACED 4' FROM EDGE OF PAVEMENT WHEREVER POSSIBLE.
 - UTILITY CONTACT INFORMATION:
PSNH
(800) 362-7764
PSDESK@PSNH.COM
DERRY WORK CENTER
16A STREET



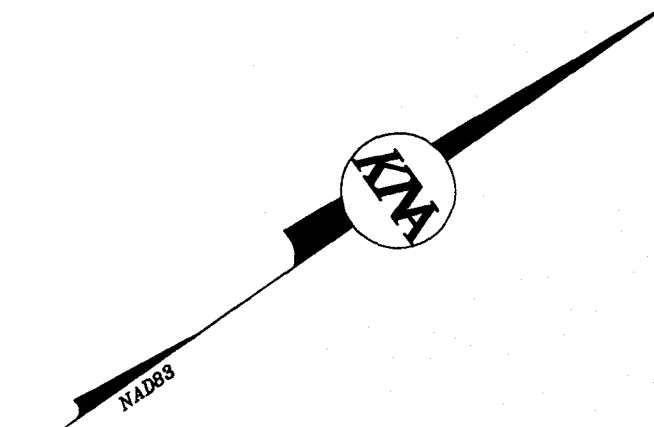
CONCRETE LIGHT POLE BASE DETAIL
NOT TO SCALE
(MARCH 2008)



Luminaire Schedule

Symbol	Qty	Label	Arrangement	Description
9	P3	SINGLE	UTLD-PA1-70-740-U-SL3-FP/ BWR-12-8-2-RT5-BK (12' POLE)	

StatArea 1
ROADWAY - EXCLUDES ENTRANCE
Illuminance (Fc)
Average = 0.39
Maximum = 4.2
Minimum = 0.0
Avg/Min Ratio = N.A.
Max/Min Ratio = N.A.



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ORDERING INFORMATION
SAMPLE NUMBER: ASP0000000000

Base Type	Mounting Height (Feet)	Shaft Size at Base (Inches)	Wall Thickness (Inches)	Shaft Type	Luminaire	Color	Options (Add as Suffix)
ASP	10-12 12-12 14-12 16-12 18-12	4-1/2 4-1/2 4-1/2 4-1/2 4-1/2	3/16-250 3/16-250 3/16-250 3/16-250 3/16-250	RS-Flange SF-Flange Fluted	AP-100 B3-100 B3-100 B3-100 B3-100	Black Black Black Black Black	Q-Projection for Conduits C-Flange E-Flange F-Flange G-Flange H-Flange I-Flange J-Flange K-Flange L-Flange M-Flange N-Flange O-Flange P-Flange Q-Flange R-Flange S-Flange T-Flange U-Flange V-Flange W-Flange X-Flange Y-Flange Z-Flange

NOTES: 1. Provides 1" taper on 1" shafts or no taper on 1" shafts depending on size of Base. Color and Pole are accessories. See individual product specifications for additional information.

BASE HEIGHT: 12'
BOLT CIRCLE: 12"

ORDERING INFORMATION
SAMPLE NUMBER: BWR0000000000

Base Type	Mounting Height (Feet)	Shaft Size at Base (Inches)	Wall Thickness (Inches)	Shaft Type	Luminaire	Color	Options (Add as Suffix)
BWR	10-12 12-12 14-12 16-12 18-12 20-12 22-12 24-12	4-1/2 4-1/2 4-1/2 4-1/2 4-1/2 4-1/2 4-1/2	3/16-250 3/16-250 3/16-250 3/16-250 3/16-250 3/16-250 3/16-250	RS-Flange SF-Flange Fluted	AP-100 B3-100 B3-100 B3-100 B3-100 B3-100 B3-100	Black Black Black Black Black Black Black	Q-Projection for Conduits C-Flange E-Flange F-Flange G-Flange H-Flange I-Flange J-Flange K-Flange L-Flange M-Flange N-Flange O-Flange P-Flange Q-Flange R-Flange S-Flange T-Flange U-Flange V-Flange W-Flange X-Flange Y-Flange Z-Flange

NOTES: 1. Pole tops 12" x 12" x 1/2" gal. steel.

BASE HEIGHT: 12'
BOLT CIRCLE: 12"

ORDERING INFORMATION
SAMPLE NUMBER: CHI0000000000

Base Type	Mounting Height (Feet)	Shaft Size at Base (Inches)	Wall Thickness (Inches)	Shaft Type	Luminaire	Color	Options (Add as Suffix)
CHI	10-12 12-12 14-12 16-12 18-12	4-1/2 4-1/2 4-1/2 4-1/2 4-1/2	3/16-250 3/16-250 3/16-250 3/16-250 3/16-250	RS-Flange SF-Flange Fluted	AP-100 B3-100 B3-100 B3-100 B3-100	Black Black Black Black Black	Q-Projection for Conduits C-Flange E-Flange F-Flange G-Flange H-Flange I-Flange J-Flange K-Flange L-Flange M-Flange N-Flange O-Flange P-Flange Q-Flange R-Flange S-Flange T-Flange U-Flange V-Flange W-Flange X-Flange Y-Flange Z-Flange

NOTES: 1. 1" shaft size available in 10', 12' and 14' mounting heights. 1" shaft size available in 16', 18', 20', 22' and 24' mounting heights. 1" shaft size available in 10', 12' and 14' mounting heights. 1" shaft size available in 16', 18', 20', 22' and 24' mounting heights. See individual product specifications for additional information.

BASE HEIGHT: 12'
BOLT CIRCLE: 12"

ORDERING INFORMATION
SAMPLE NUMBER: CPR0000000000

Base Type	Mounting Height (Feet)	Shaft Size at Base (Inches)	Wall Thickness (Inches)	Shaft Type	Luminaire	Color	Options (Add as Suffix)
CPR	10-12 12-12 14-12	4-1/2 4-1/2 4-1/2	3/16-250 3/16-250 3/16-250	RS-Flange SF-Flange Fluted	AP-100 B3-100 B3-100	Black Black Black	Q-Projection for Conduits C-Flange E-Flange F-Flange G-Flange H-Flange I-Flange J-Flange K-Flange L-Flange M-Flange N-Flange O-Flange P-Flange Q-Flange R-Flange S-Flange T-Flange U-Flange V-Flange W-Flange X-Flange Y-Flange Z-Flange

NOTES: 1. Provides 1" taper on 1" shafts or no taper on 1" shafts depending on size of Base. Color and Pole are accessories. See individual product specifications for additional information.

BASE HEIGHT: 12'
BOLT CIRCLE: 12"

Decorative Poles

Streetworks
UTLD Traditionaire
Decorative Post Top Luminaire

Typical Applications
Outdoor - Parking Lots - Walkways - Roadways - Building Areas

Product Certifications
UL 1449/MOV surge protection available
3G vibration rated

Quick Facts
• Replaces up to 250W equivalent HID
• Asymmetric & Symmetric distributions
• 0-10V dimming driver standard
• UL 1449/MOV surge protection available
• 3G vibration rated

Dimensional Details
UTLD - Tall Cupola
Optional Bird Cone

LIGHTING PLAN
HERITAGE LANDING
MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051

K&M KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

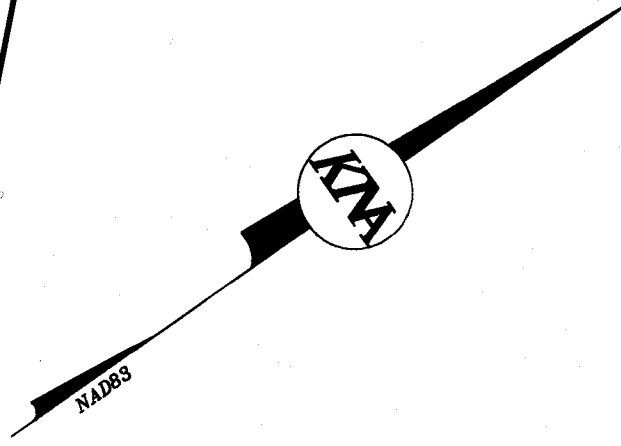
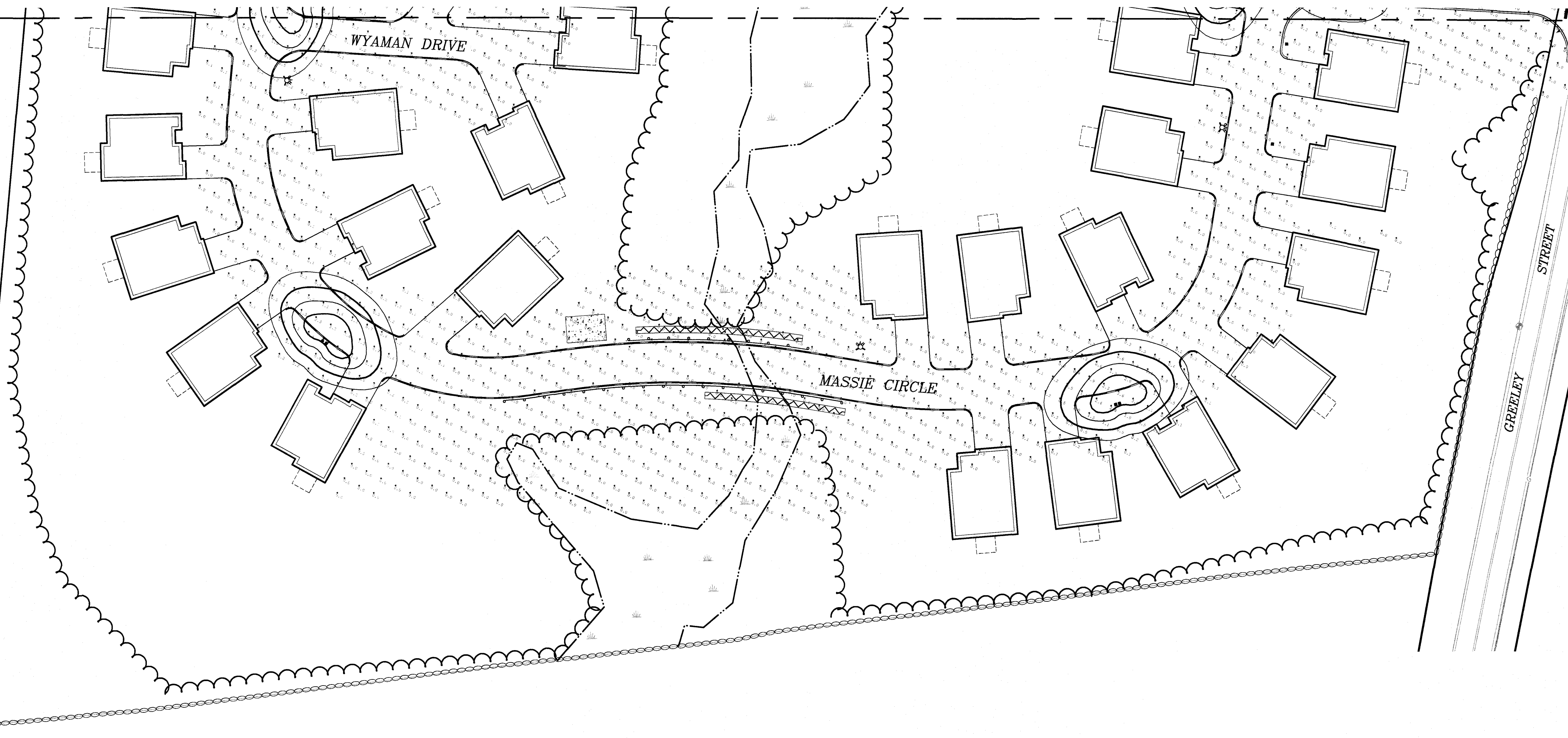
REVISIONS

No.	DATE	DESCRIPTION	BY
1	7/12/21	REVISED PER TOWN COMMENTS	ACL

DATE: JUNE 1, 2021 SCALE: 1"=40'
PROJECT NO: 20-1001-1 SHEET 17 OF 29

PAUL CHISHOLM
No. 15076
LICENSED PROFESSIONAL ENGINEER

MATCH TO SHEET 17



SEE SHEET 17 FOR
LIGHTING NOTES & DETAILS

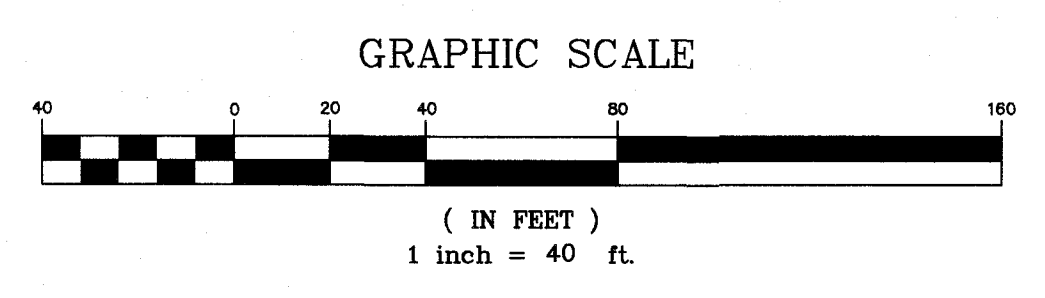
PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM DATE OF APPROVAL.

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

SIGNATURE DATE: _____

SIGNATURE DATE: _____

SITE PLANS ARE VALID FOR TWO YEARS 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.



LIGHTING PLAN
HERITAGE LANDING

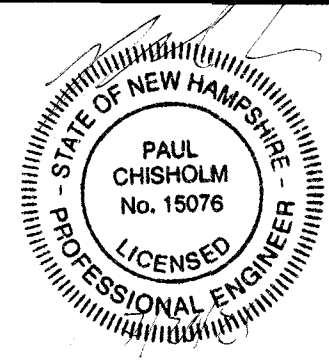
MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

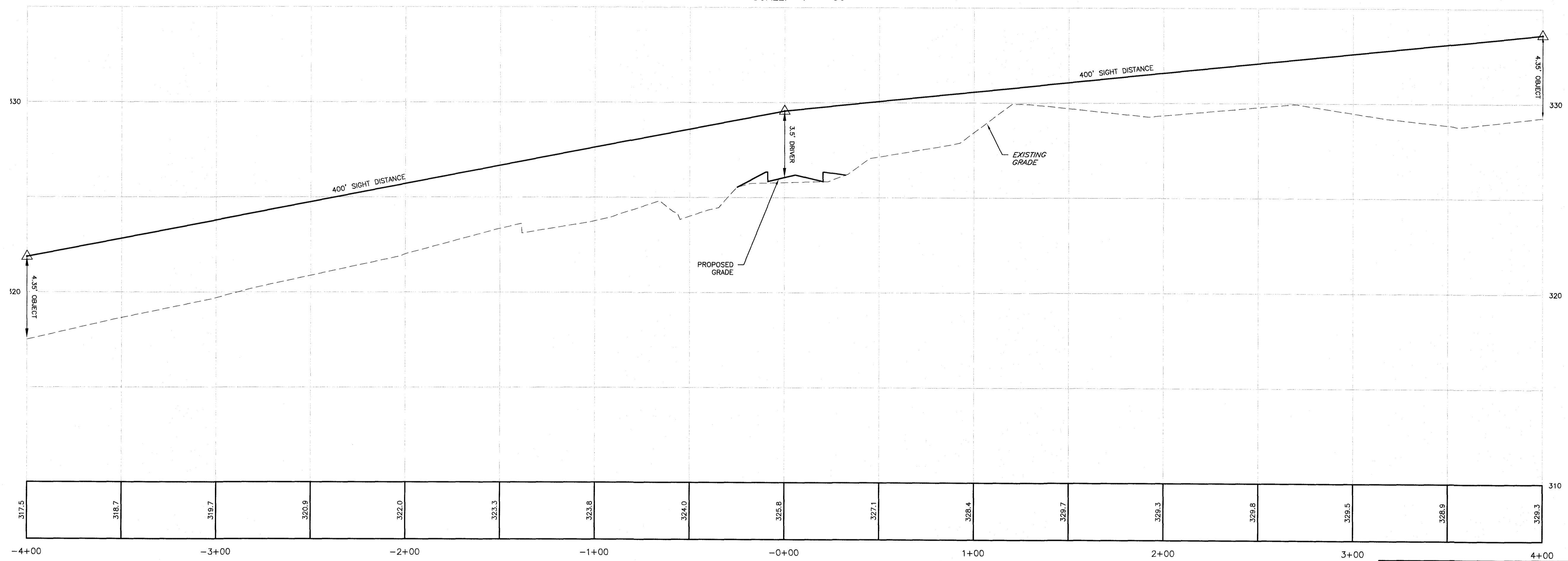
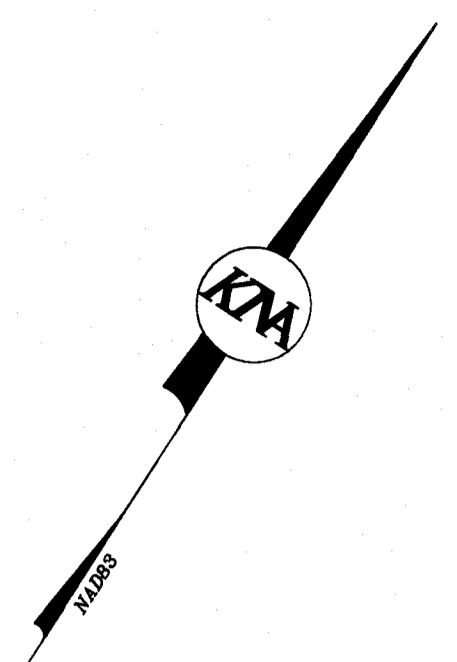
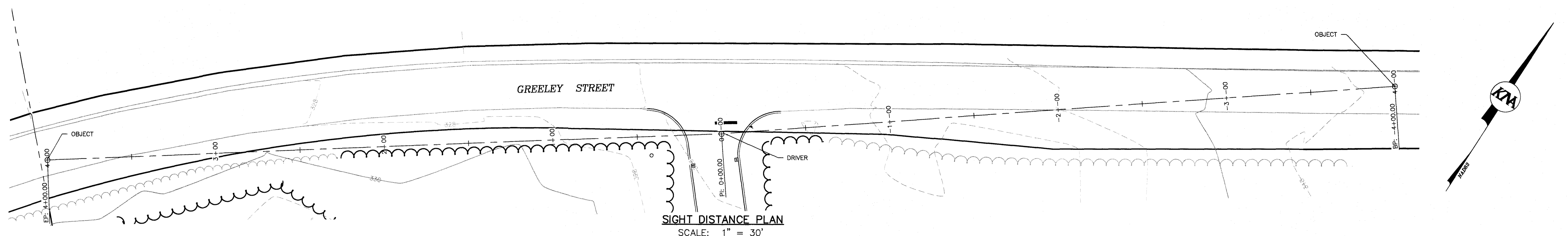
OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051

KMA KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

REVISIONS			
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DATE: JUNE 1, 2021 SCALE: 1"=40'
PROJECT NO: 20-1001-1 SHEET 18 OF 29

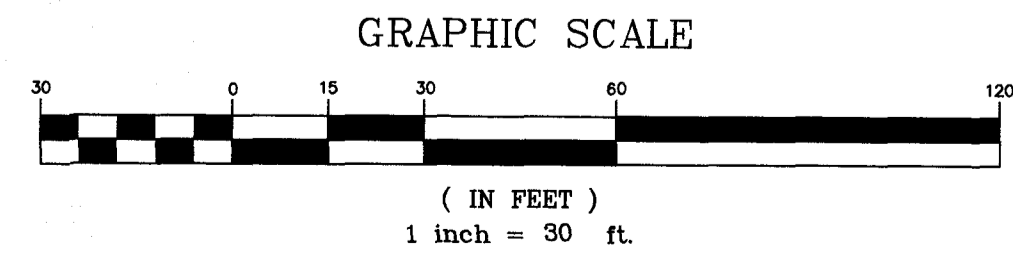




SIGHT DISTANCE PROFILE
 SCALE: 1" = 30'(HORIZ.)
 1" = 3'(VERT.)

GENERAL NOTES:

1. THE PURPOSE OF THIS PLAN IS TO SHOW THE SIGHT DISTANCE FOR THE INTERSECTION BETWEEN THE PROPOSED ROADWAY AND GREELEY STREET.
2. THE SPEED LIMIT ON GREELEY STREET IS 30 MPH.

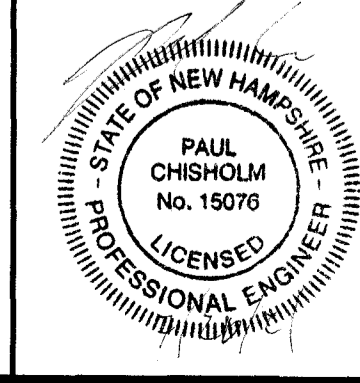


SIGHT DISTANCE PLAN
HERITAGE LANDING

MAP 140 LOTS 2 & 3
 112 & 114 GREELEY STREET
 HUDSON, NEW HAMPSHIRE
 HILLSBOROUGH COUNTY

OWNER/APPLICANT:
 K&M DEVELOPERS, LLC
 46 LOWELL ROAD
 HUDSON, N.H. 03051

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 Civil Engineering Land Surveying Landscape Architecture
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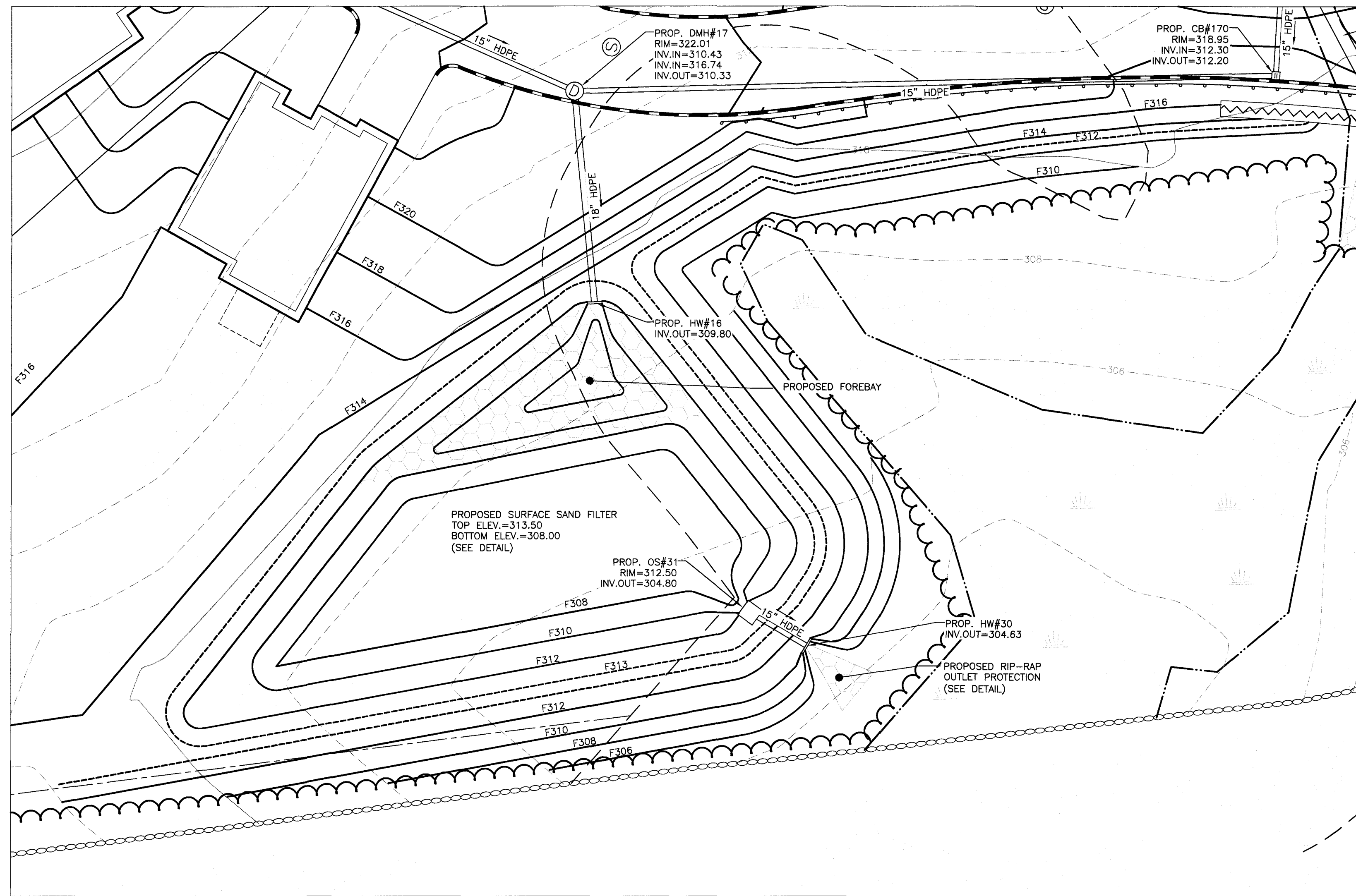
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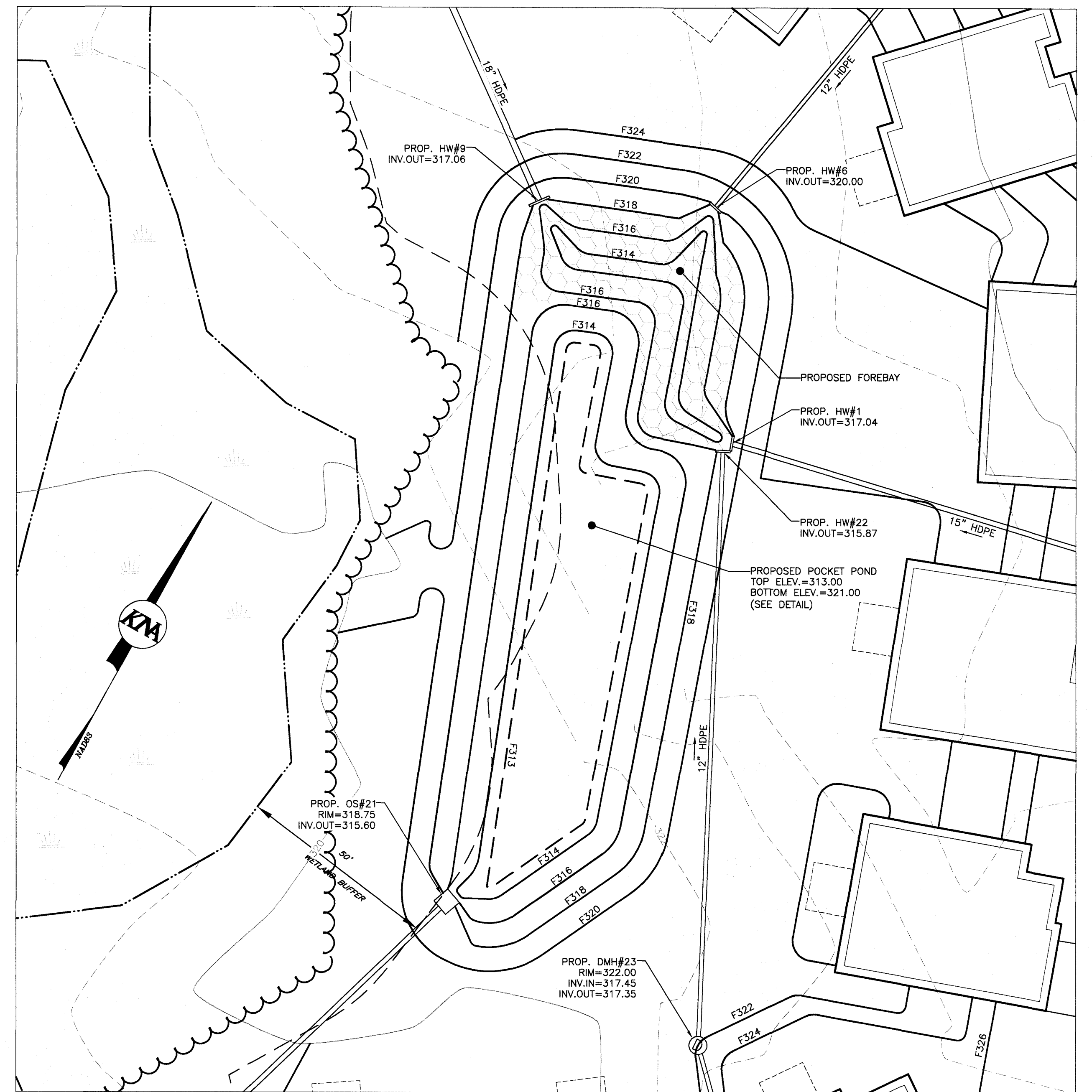
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SURFACE SAND FILTER DETAIL
SCALE: 1" = 20'



POCKET POND DETAIL
SCALE: 1" = 20'

LEGEND

□ GB-F	GRANITE BOUND FOUND	— OHU —	PROPOSED OVERHEAD UTILITIES
● IPIN-F	IRON PIN FOUND	— UGU —	PROPOSED UNDERGROUND UTILITIES
⊙ DH-F	DRILL HOLE FOUND	— G —	PROPOSED GAS LINE
⊙ IPP-F	IRON PIPE FOUND	— W —	PROPOSED WATER LINE
⊙ RRS-F	RAILROAD SPIKE FOUND	— S —	PROPOSED SEWER LINE
⊙	UTILITY POLE	—	PROPOSED DRAINAGE LINE
+	SIGN	—	PROPOSED TREE LINE
⊙*	LIGHT	—	PROPOSED EDGE OF PAVEMENT
—	ABUTTER LINE	—	PROPOSED VERTICAL GRANITE CURB
—	PROPERTY LINE	—	PROPOSED 2' CONTOUR
—	STREAM	—	PROPOSED SWALE
—	WETLAND	—	PROPOSED RETAINING WALL
—	SWALE	—	PROPOSED STONE WALL
— OHU —	OVERHEAD UTILITIES	—	EASEMENT
—	EDGE OF PAVEMENT	—	
—	VERTICAL GRANITE CURB	—	
—	10' CONTOUR	—	
—	2' CONTOUR	—	
—	STONE WALL	—	
—	SCS SOIL LINE	—	
—	BUILDING SETBACK	—	
—	EASEMENT	—	
+	PROPOSED SIGN	—	
⊙*	PROPOSED LIGHT	—	
⊙	PROPOSED SEWER MANHOLE	—	
⊙	PROPOSED DRAINAGE MANHOLE	—	
⊙	PROPOSED CATCH BASIN	—	
—	PROPOSED PROPERTY LINE	—	
—	PROPOSED CHAIN LINK FENCE	—	
—	PROPOSED GUARDRAIL	—	

MAINTENANCE REQUIREMENTS:

- SEDIMENT FOREBAYS:**
- INSPECT AT LEAST ANNUALLY;
 - CONDUCT PERIODIC MOWING OF EMBANKMENTS (GENERALLY TWO TIMES PER YEAR) TO CONTROL GROWTH OF WOODY VEGETATION ON EMBANKMENTS;
 - REMOVE DEBRIS FROM OUTLET STRUCTURES AT LEAST ONCE ANNUALLY;
 - REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT BASED ON INSPECTION;
 - INSTALL AND MAINTAIN A STAFF GAGE OR OTHER MEASURING DEVICE, TO INDICATE DEPTH OF SEDIMENT ACCUMULATION AND LEVEL AT WHICH CLEAN-OUT IS REQUIRED.
- POCKET POND:**
- SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EVENT EXCEEDING 2.5 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS WARRANTED BY SUCH INSPECTION.
 - SYSTEM EMBANKMENTS SHOULD BE MOWED PERIODICALLY TO MAINTAIN GRASS COVER AND ANY OTHER VEGETATION FOUND ON THE EMBANKMENT SHOULD BE REMOVED AT EACH INSPECTION.
 - TRASH AND DEBRIS FOUND WITHIN THE POND OR IN THE OUTLET STRUCTURE SHOULD BE REMOVED AT EACH INSPECTION.
 - REMOVAL OF ACCUMULATED SEDIMENT.
 - INSPECTION AND REPAIR OF EMBANKMENTS, INLET AND OUTLET STRUCTURES, AND APPURTENANCES.
- SURFACE SAND FILTER:**
- SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EVENT EXCEEDING 2.5 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS WARRANTED BY SUCH INSPECTION.
 - PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.
 - TRASH AND DEBRIS SHOULD BE REMOVED AT EACH INSPECTION.
 - MANUFACTURED FILTER MEDIA SHOULD BE REPLACED PERIODICALLY PER MANUFACTURERS SPECIFICATIONS.
 - AT LEAST ONCE ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAWDOWN TIME. IF A FILTRATION SYSTEM DOES NOT DRAIN WITHIN 72 HOURS FOLLOWING A RAINFALL EVENT, THEN A QUALIFIED PROFESSIONAL SHOULD ACCESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE FILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER.
- LEVEL SPREADERS:**
- SYSTEMS SHOULD BE INSPECTED AT LEAST ANNUALLY WITH MAINTENANCE OR REHABILITATION CONDUCTED AS WARRANTED BY SUCH INSPECTION.
 - REMOVE DEBRIS AND ACCUMULATED SEDIMENT WHEN EXCEEDS 25% OF SPREADER DEPTH. DISPOSAL OF SEDIMENT TO BE DONE PROPERLY.
 - REPAIR ERODED AREAS; REMOVE INVASIVE SPECIES AND DEAD VEGETATION.
 - PERFORM PERIODIC MOWING.
 - SNOW SHOULD NOT BE STORED WITHIN OR DOWN-SLOPE OF THE LEVEL SPREADER.
 - REPAIR ANY EROSION AND RE-GRADE WAS WARRANTED BY INSPECTION.
 - RECONSTRUCT THE SPREADER IF DOWN-SLOPE CHANNELIZATION INDICATES THAT THE SPREADER IS NOT LEVEL OR THAT DISCHARGE HAS BECOME CONCENTRATED, AND CORRECTIONS CANNOT BE MADE THROUGH MINOR RE-GRADEING.

CONSTRUCTION PRACTICE REQUIREMENTS:

- STORMWATER PONDS, INFILTRATION BASINS, AND SWALES MUST BE INSTALLED BEFORE ROUGH GRADING TO SITE.
- RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BMPs ARE STABILIZED.
- STORMWATER PONDS, INFILTRATION BASINS, AND SWALES MUST BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
- DO NOT TRAFFIC EXPOSED SOIL SURFACE WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATION WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE INFILTRATION SYSTEM.
- AFTER THE INFILTRATION SYSTEM AREA IS EXCAVATED TO THE FINAL DESIGN ELEVATION, THE FLOOR SHOULD BE DEEPLY TILL WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG.
- DO NOT PLACE INFILTRATION SYSTEMS INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
- AN IMPERVIOUS LINER SHALL BE REQUIRED FOR THE POCKET POND UNLESS DETERMINED OTHERWISE BY THE DESIGN ENGINEER DURING CONSTRUCTION WHEN THE POND IS AT SUBGRADE, AND IS EITHER MORE THAN 5 FEET BELOW SEASONAL HIGH WATER TABLE AND/OR IN COMPLETE LEDGE.

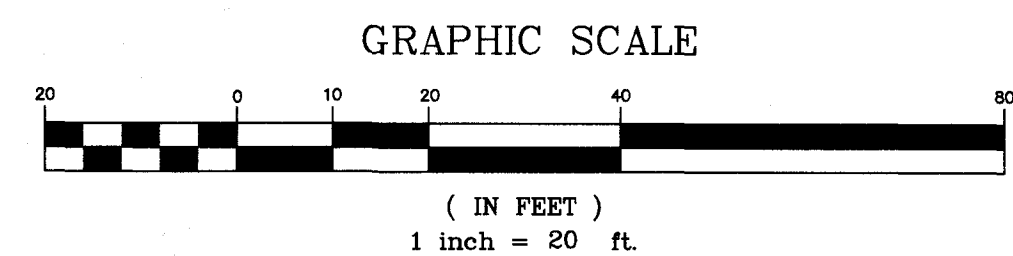
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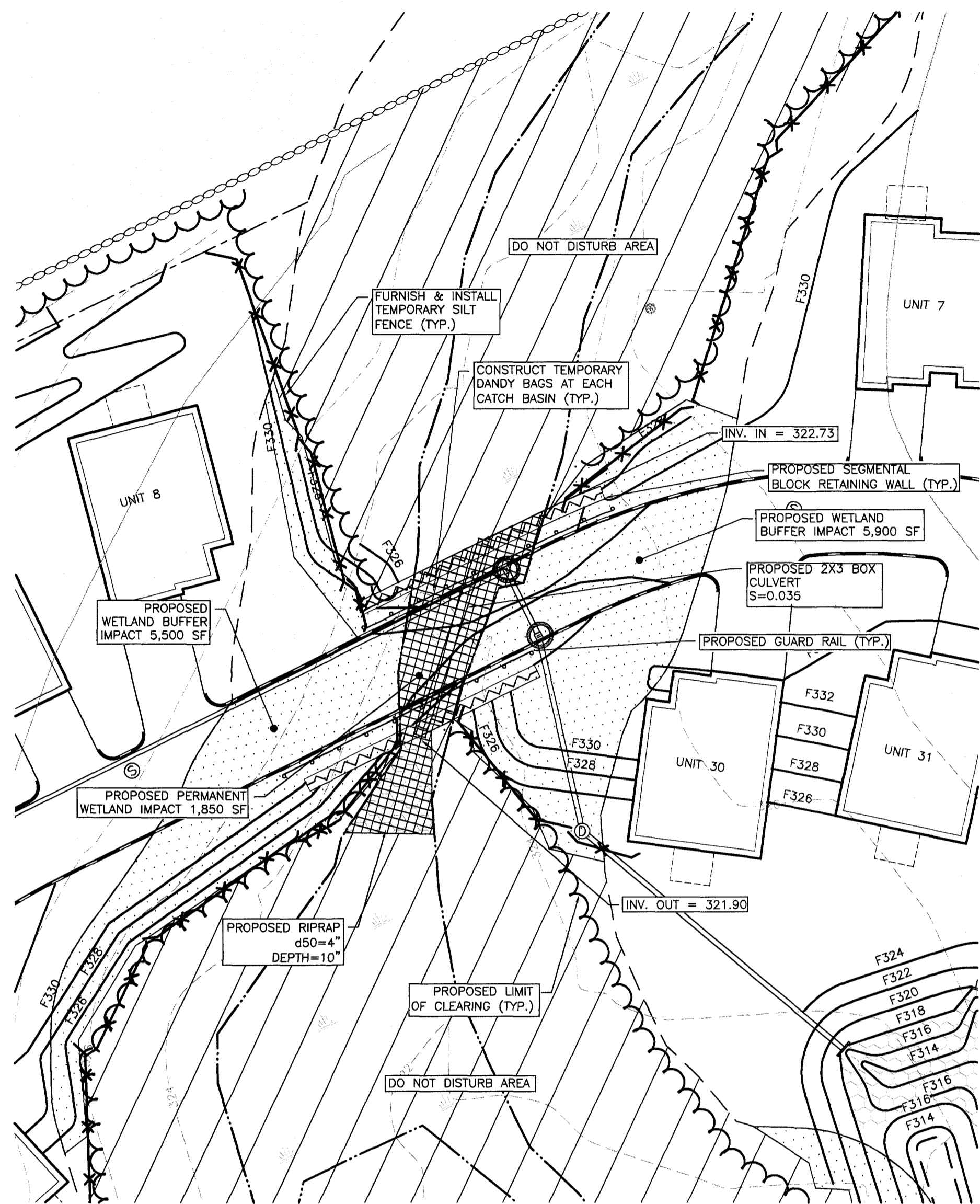
STORMWATER BMP PLAN
HERITAGE LANDING
MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051

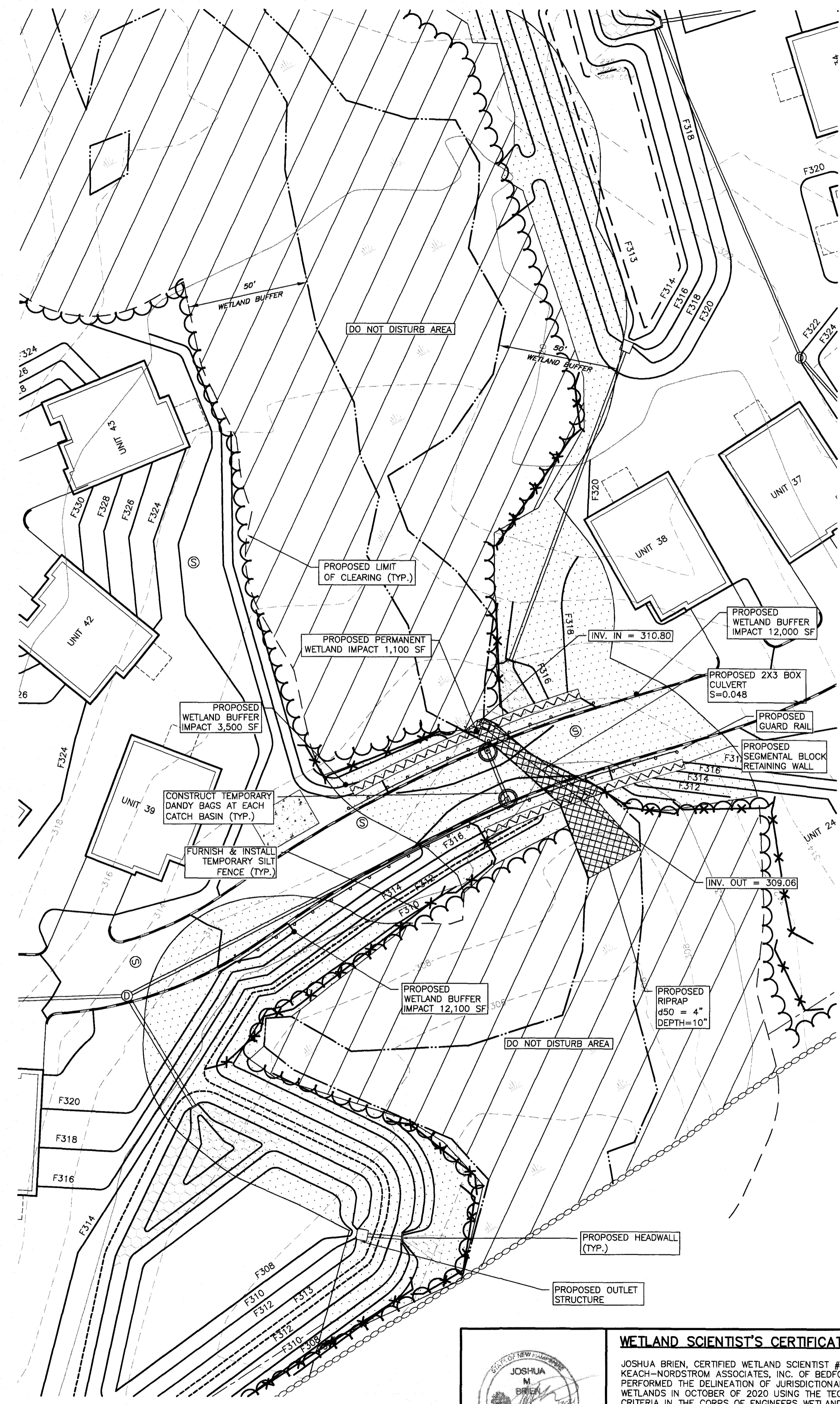
K&M KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

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DATE: JUNE 1, 2021 SCALE: 1"=20'
PROJECT NO: 20-1001-1 SHEET 20 OF 29



NORTHERN ROADWAY CROSSING
SCALE: 1" = 30'



SOUTHERN ROADWAY CROSSING
SCALE: 1" = 30'

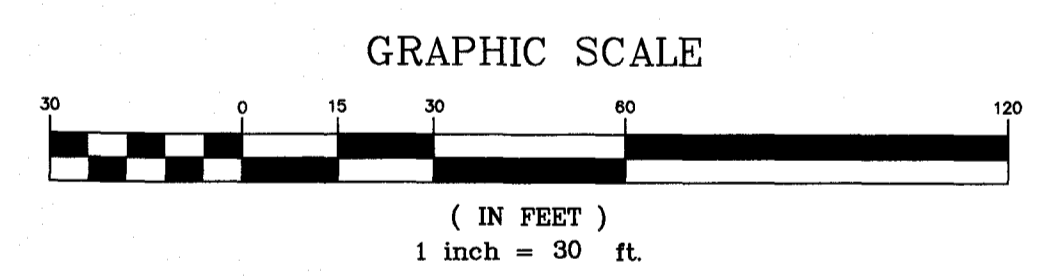
- NOTES:**
1. THE PURPOSE OF THIS PLAN IS TO DEPICT THE PERMANENT WETLAND AND WETLAND BUFFER IMPACTS ASSOCIATED WITH THE CONSTRUCTION OF TWO ROADWAY WETLAND CROSSINGS AND TWO STORMWATER PONDS.
 2. WETLAND MAPPING PERFORMED BY JOSHUA BRIEN CWS#256 IN OCTOBER OF 2020.
 3. TOTAL PERMANENT WETLAND IMPACT = 2,950 SF
TOTAL WETLAND BUFFER IMPACT = 39,000 SF
 4. PROPER EROSION AND SEDIMENT CONTROL SHALL BE INSTALLED (I.E. SILT FENCE, HAY BALES, ETC.) PRIOR TO COMMENCING EXCAVATION EFFORTS. THE CONTROLS SHALL BE MAINTAINED IN GOOD WORKING ORDER UNTIL COMPLETION OF CONSTRUCTION. THE TOWN OF HUDSON RESERVES THE RIGHT TO REQUIRE ADDITIONAL EROSION CONTROL MEASURES DURING CONSTRUCTION, IF NECESSARY.
 5. TEMPORARY EROSION CONTROLS SHALL BE REMOVED UPON FINAL STABILIZATION OF DISTURBED AREAS.
 6. THE CONTRIBUTING WATERSHED AREA FOR THE ON-SITE WETLAND IS 12.8 ACRES.



MAD 83

LEGEND

- SB-F STONE BOUND FOUND
- IPP-F IRON PIPE FOUND
- IP-F IRON PIN FOUND
- DH-F DRILL HOLE FOUND
- BENCHMARK
- UTILITY POLE
- WATER VALVE
- HYDRANT
- ABUTTER LINE
- PROPERTY LINE
- WETLAND
- WETLAND BUFFER
- OVERHEAD UTILITIES
- GAS LINE
- WATER LINE
- TREELINE
- EDGE OF PAVEMENT
- 10' CONTOUR
- 2' CONTOUR
- STONEWALL
- SCS SOIL LINE
- SSSM SOIL LINE
- SETBACK
- WETLAND BUFFER IMPACT
- PERMANENT WETLAND IMPACT



EROSION & SEDIMENT CONTROL LEGEND

- PERMANENT OUTLET PROTECTION APRON (RIP RAP)
- DANDY BAGS
- SILT FENCE
- LIMITS OF CLEARING
- NON DISTURBANCE AREA

LOAM & SEED ALL DISTURBED AREAS (TYP.)

FURNISH & INSTALL EROSION CONTROL BLANKETS ON ALL SLOPES 3:1 OR STEEPER (TYP.)

FOR CONSERVATION COMMISSION ONLY (NOT FOR CONSTRUCTION)



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

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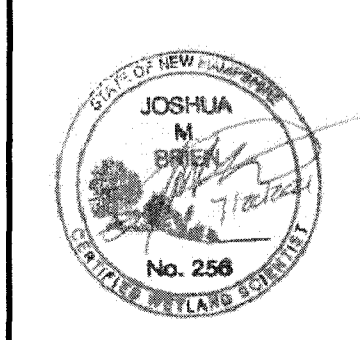
WETLAND/WETLAND BUFFER IMPACT PLAN

HERITAGE LANDING

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051
BK. 9411 PG. 2460

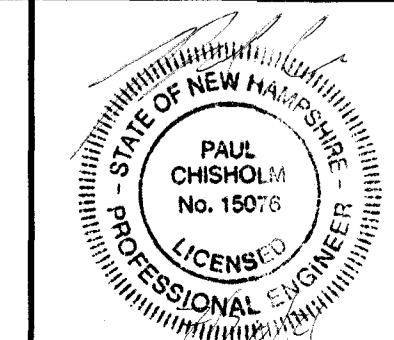
K&M KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881



WETLAND SCIENTIST'S CERTIFICATION:

JOSHUA BRIEN, CERTIFIED WETLAND SCIENTIST #256 OF KEACH-NORDSTROM ASSOCIATES, INC. OF BEDFORD, NH PERFORMED THE DELINEATION OF JURISDICTIONAL WETLANDS IN OCTOBER OF 2020 USING THE TECHNICAL CRITERIA IN THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (TECHNICAL REPORT Y-87-1, JANUARY 1987).

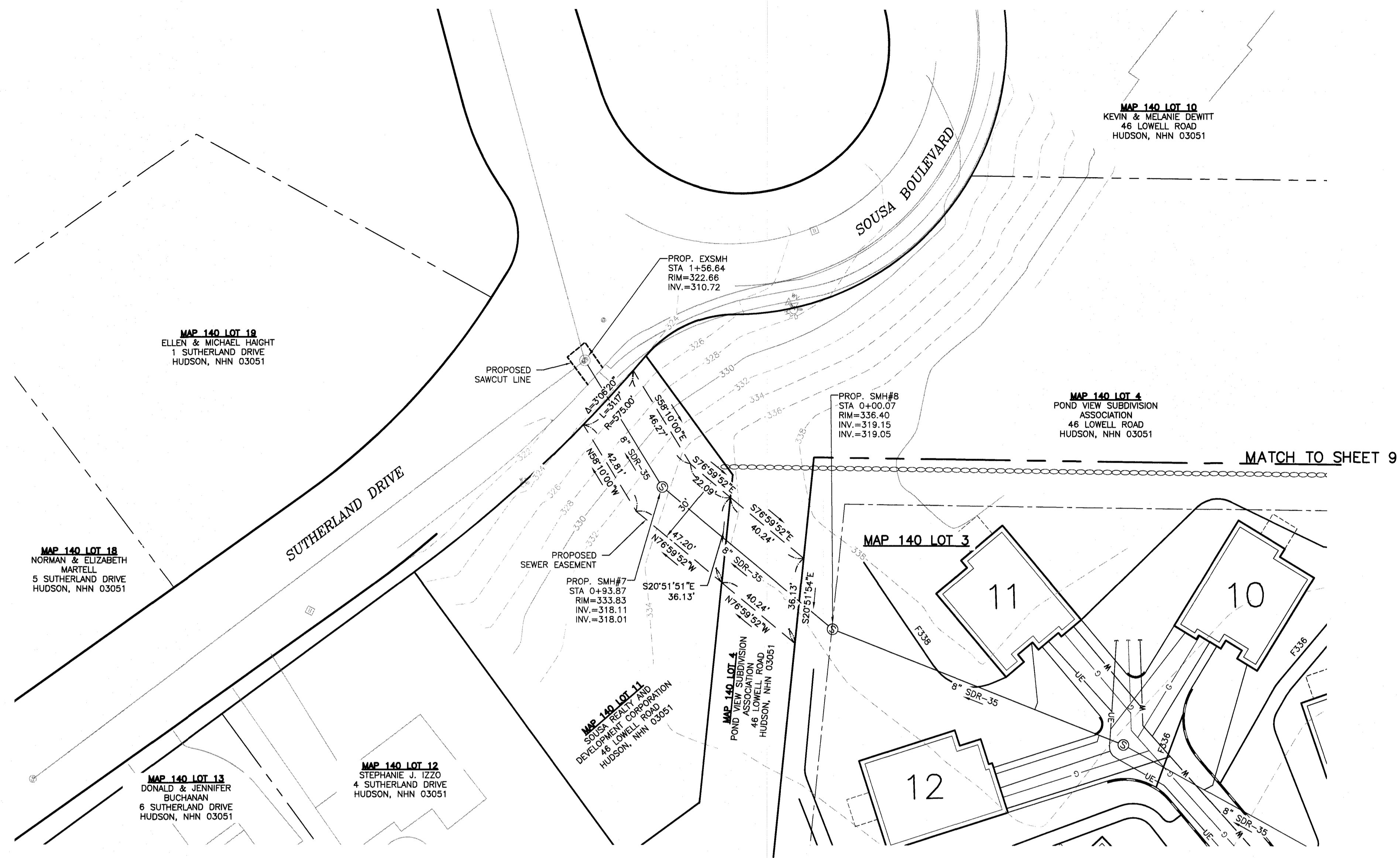
CERTIFIED WETLAND SCIENTIST _____ DATE _____



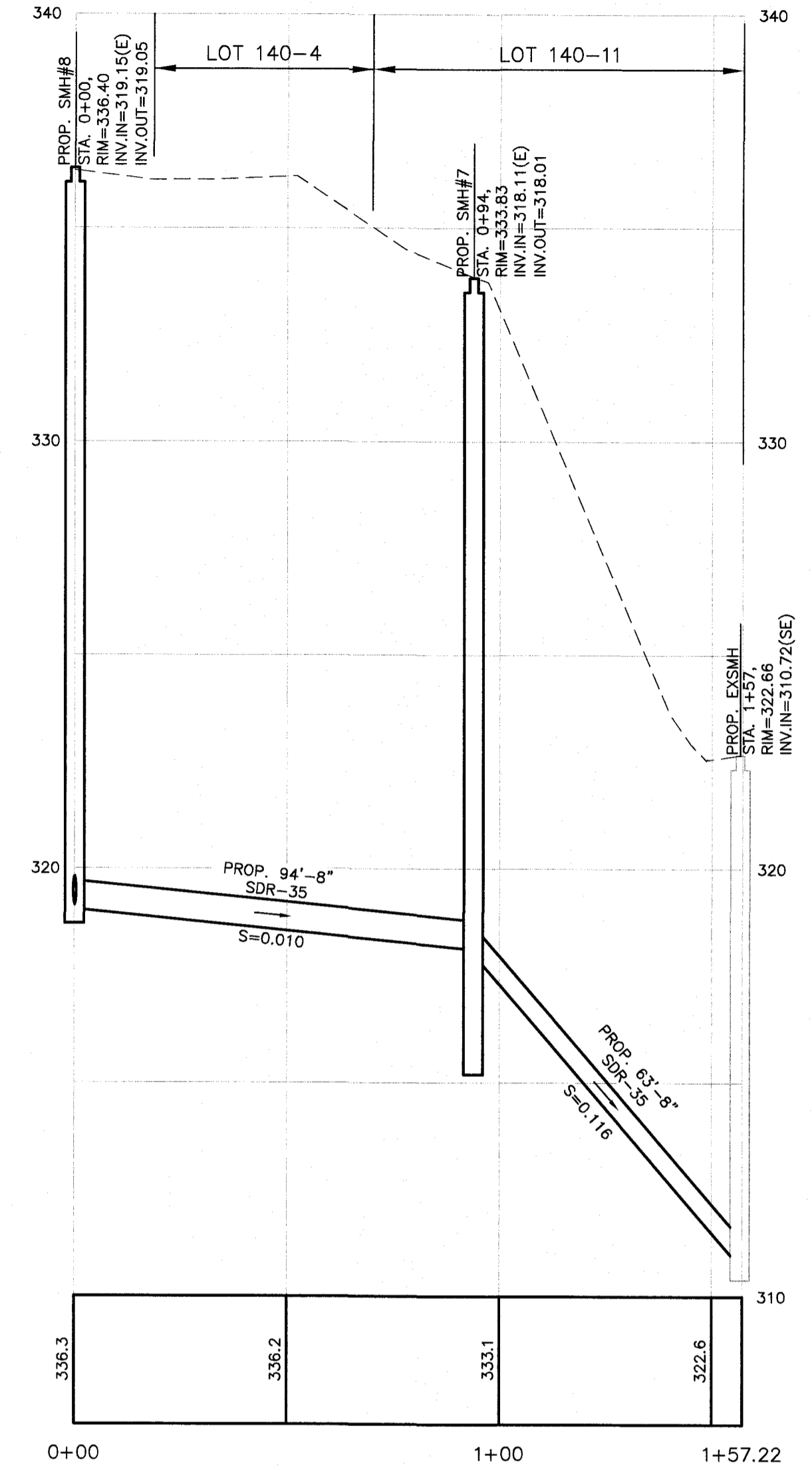
REVISIONS

No.	DATE	DESCRIPTION	BY
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DATE: JUNE 1, 2021 SCALE: 1" = 30'
PROJECT NO: 20-1001-1 SHEET 21 OF 29



SEWER EASEMENT PLAN
SCALE: 1" = 30'



SEWER PROFILE
SCALE: 1" = 30'(HORIZ.)
1" = 3'(VERT.)

LEGEND

- | | | | |
|--|--------------------|--|--------------------------------|
| | UTILITY POLE | | 10' CONTOUR |
| | STREET LIGHT | | 2' CONTOUR |
| | SIGN | | STONEWALL |
| | LIGHT POLE | | SETBACK |
| | HYDRANT | | EASEMENT |
| | WATER SHUT OFF | | PROPOSED WATER LINE |
| | SEWER MANHOLE | | PROPOSED SEWER LINE |
| | DRAINAGE MANHOLE | | PROPOSED DRAINAGE LINE |
| | CATCH BASIN | | PROPOSED TREELINE |
| | ABUTTER LINE | | PROPOSED EDGE OF PAVEMENT |
| | PROPERTY LINE | | PROPOSED VERTICAL GRANITE CURB |
| | OVERHEAD UTILITIES | | PROPOSED 2' CONTOUR |
| | GAS LINE | | PROPOSED SWALE |
| | WATER LINE | | PROPOSED RETAINING WALL |
| | SEWER LINE | | PROPOSED STONEWALL |
| | DRAINAGE LINE | | EASEMENT |
| | TREELINE | | |
| | EDGE OF PAVEMENT | | |

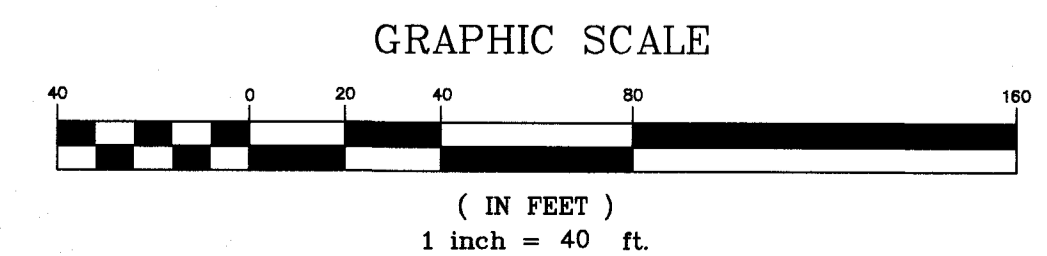
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SIGNATURE DATE: _____

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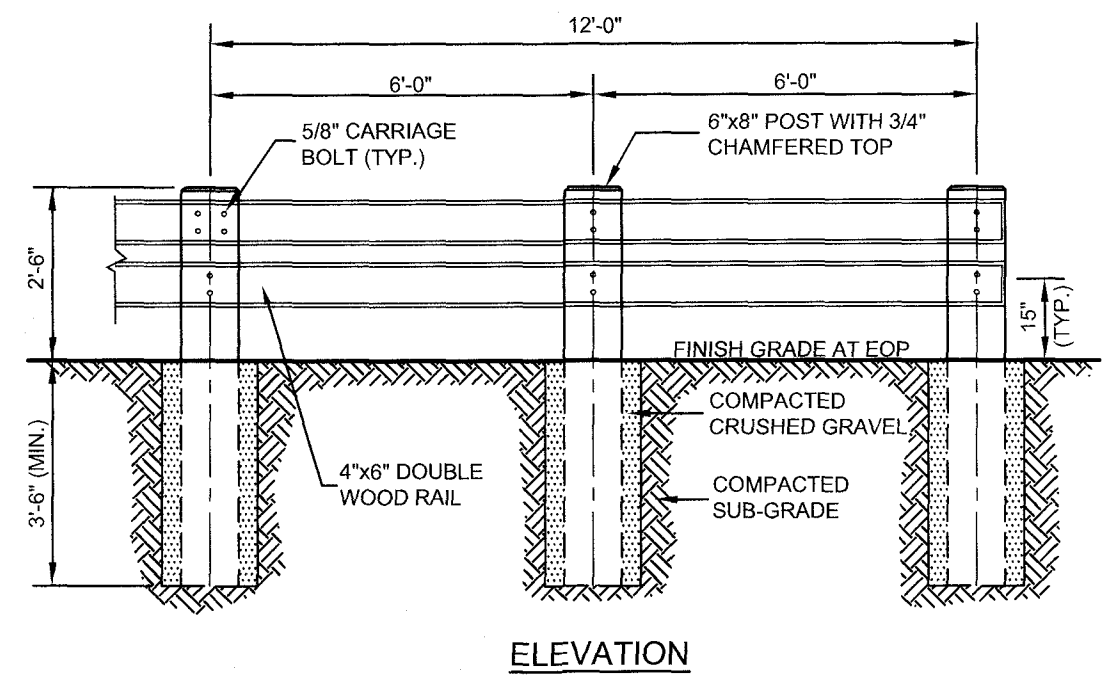
SEWER EASEMENT PLAN
HERITAGE LANDING
MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051

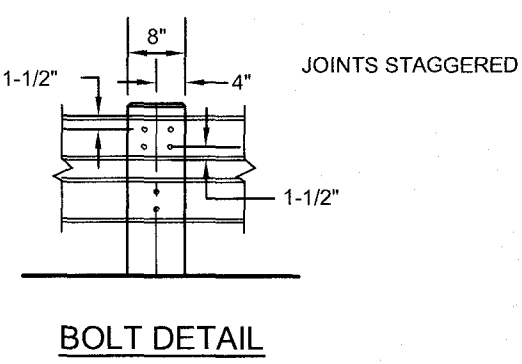
K&M KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2861

REVISIONS			
No.	DATE	DESCRIPTION	BY
1	7/12/21	REVISED PER TOWN COMMENTS	ACL

DATE: JUNE 1, 2021 SCALE: 1"=30'
PROJECT NO: 20-1001-1 SHEET 22 OF 29



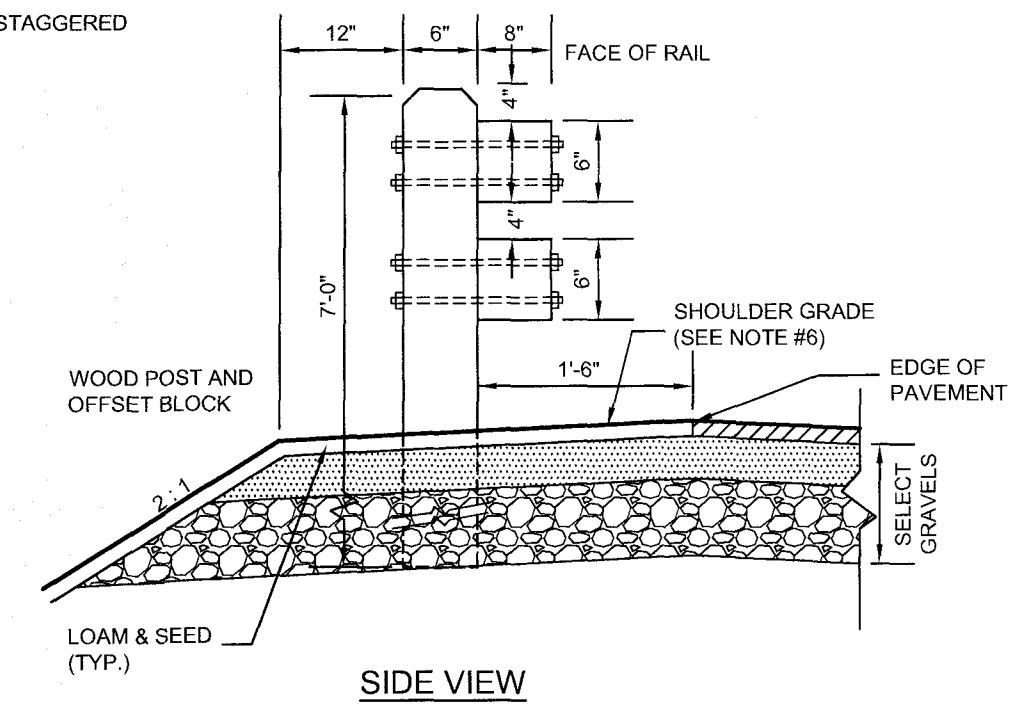
ELEVATION



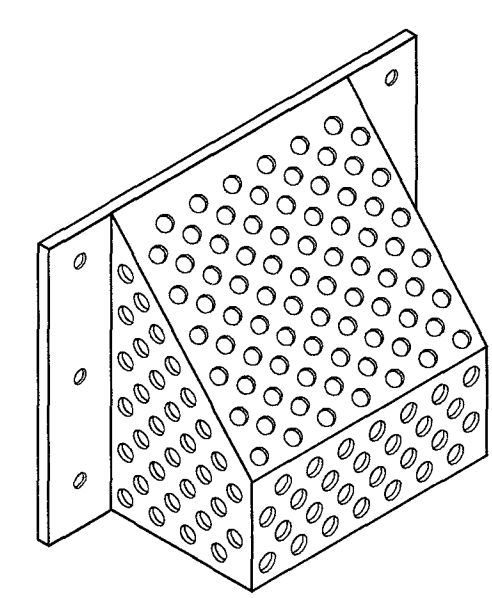
BOLT DETAIL

- NOTES:**
1. ALL TIMBERS SHALL BE PRESSURE TREATED.
 2. PAY LIMIT = PER LINEAR FOOT INCLUDING END SECTION.
 3. ALL HARDWARE SHALL BE HOT DIPPED GALVANIZED.

WOOD BEAM GUARDRAIL
NOT TO SCALE
(AUGUST 2011)



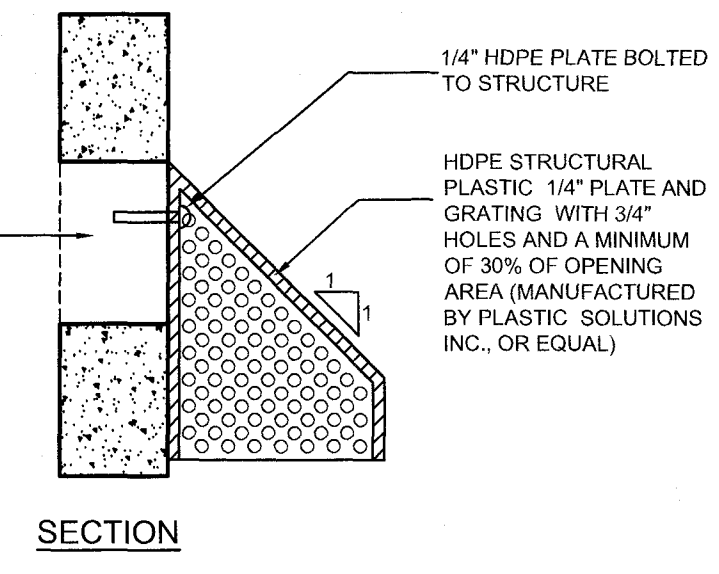
SIDE VIEW



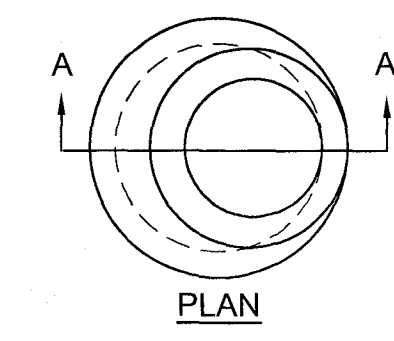
ISOMETRIC

TRASH RACK DETAIL
NOT TO SCALE

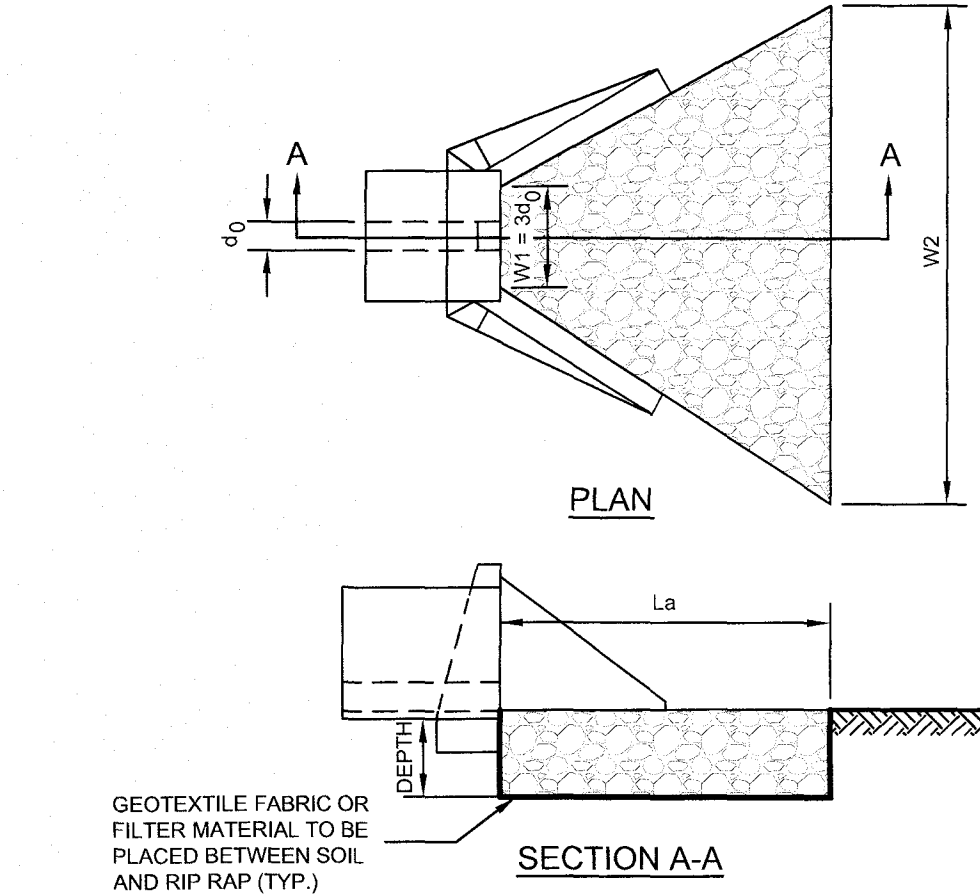
- NOTES:**
1. ALL SECTIONS SHALL BE CONCRETE CLASS AA(4000 PSI). CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCH PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
 2. THE TONGUE OR GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCH PER LINEAR FOOT.
 3. RISER OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
 4. EXCAVATION PER FOOT OF DEPTH = 1.368 C.Y.



SECTION



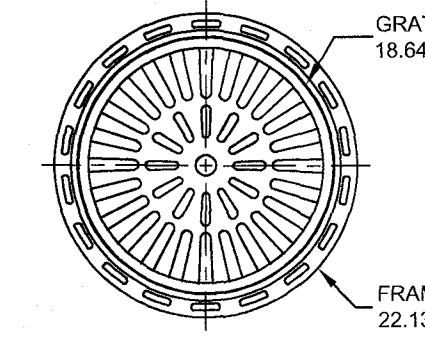
PLAN



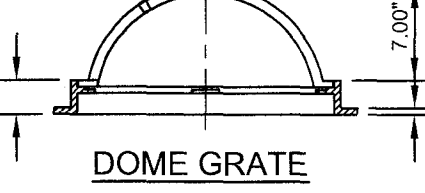
SECTION A-A

PIPE OUTLET TO FLAT AREA WITH NO DEFINED CHANNEL
NOT TO SCALE

LOCATION	La	W1	W2	d50	DEPTH
N. PIPE	30'	9'	21'	4"	10"
S. PIPE	35'	9'	23'	4"	10"
HW#31	15'	10'	10'	4"	10"
HW#14	30'	10'	10'	4"	10"
HW#16	31'	4'	4'	4"	10"

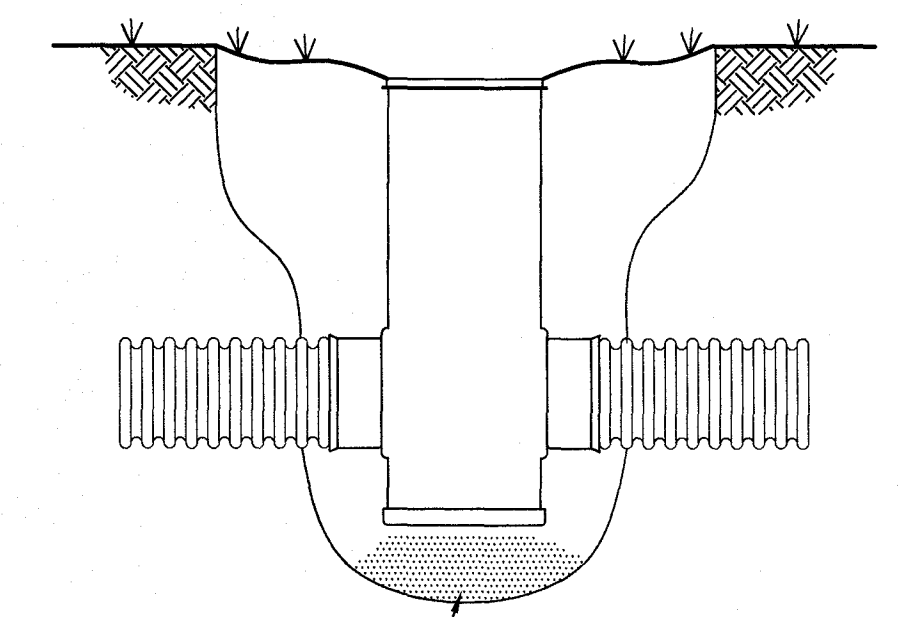


GRATE Ø 18.64"



DOME GRATE

NYLOPLAST NEW STYLE 18" AREA DRAIN GRATE
NOT TO SCALE



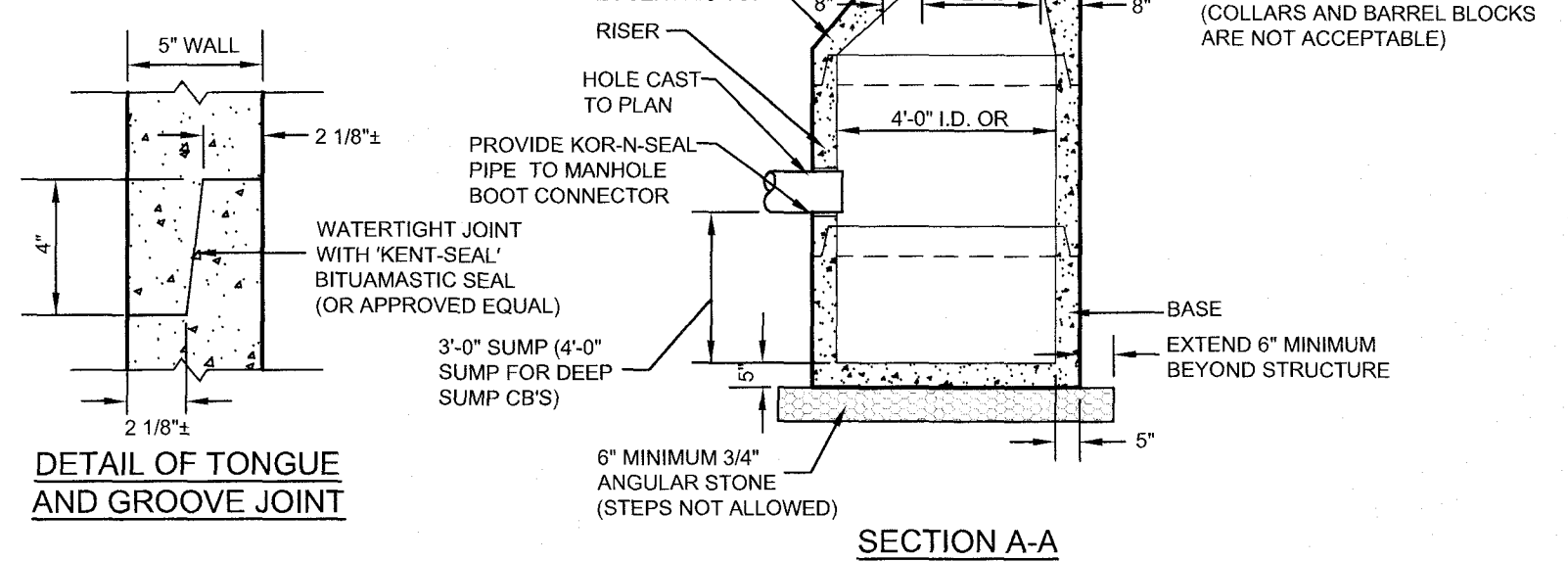
WATERWAY OPENING 2.55 SQ. FT.

PLAN VIEW (SINGLE GRATE)

SECTION A - A

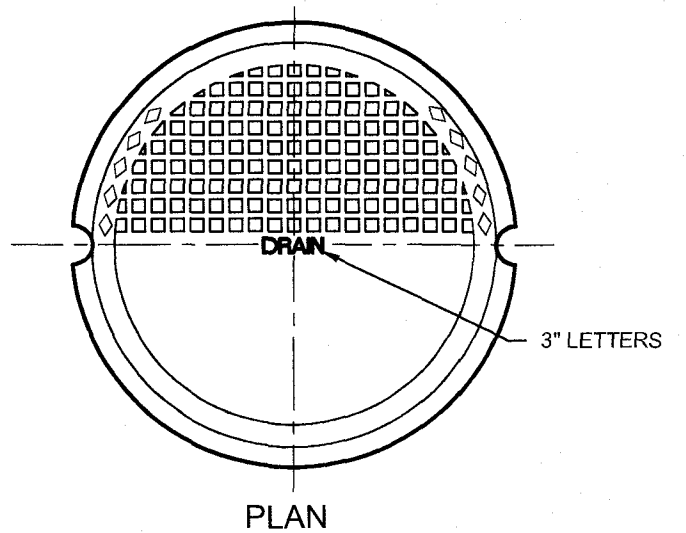
18" AREA DRAIN BASIN
NON-TRAFFIC INSTALLATION
NOT TO SCALE
(MARCH 2008)

BACKFILL MATERIAL SHALL BE CRUSHED STONE OR GRAVEL MATERIAL MEETING CLASS 1 OR 2 AS SPECIFIED IN ASTM D2321. BACKFILL MATERIAL SHALL BE PLACED UNIFORMLY IN 12" LIFTS AND COMPACTED TO 90 - 95% DENSITY.

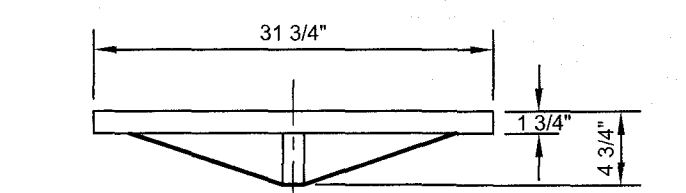


DETAIL OF TONGUE AND GROOVE JOINT

PRECAST REINFORCED CATCH BASIN
NOT TO SCALE
(MARCH 2008)



PLAN



SECTION

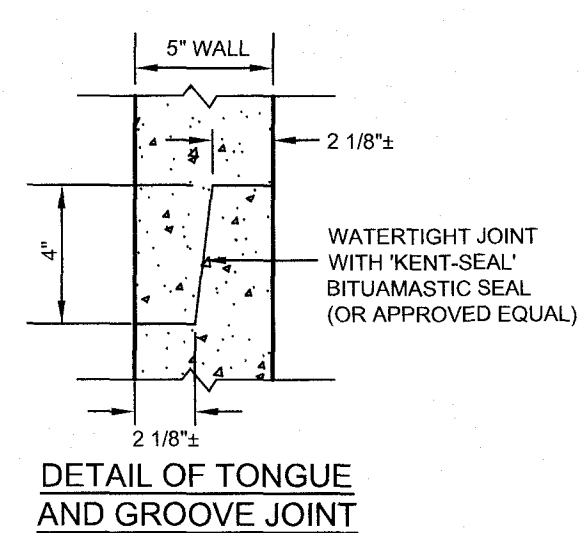
COVER TO COMPLY WITH TOWN OF HUDSON SPECIFICATIONS

- NOTES:**
1. NEW HAMPSHIRE MAINTAINS A CLEAR OPENING DESIGNATION OF 30" FOR ITS MANHOLE CASTINGS.

- FEATURES:**
- 3" LETTERING
 - COVERS AVAILABLE PLAIN OR MARKED SEWER, DRAIN OR WATER
 - NONROCKING COVER
 - DIAMOND SURFACE DESIGN

- SPECIFICATIONS:**
- FULLY MACHINED FRAME AND COVER
 - H-20 LOAD RATED
 - GRAY CAST IRON MEETS ASTM A48 CLASS 30

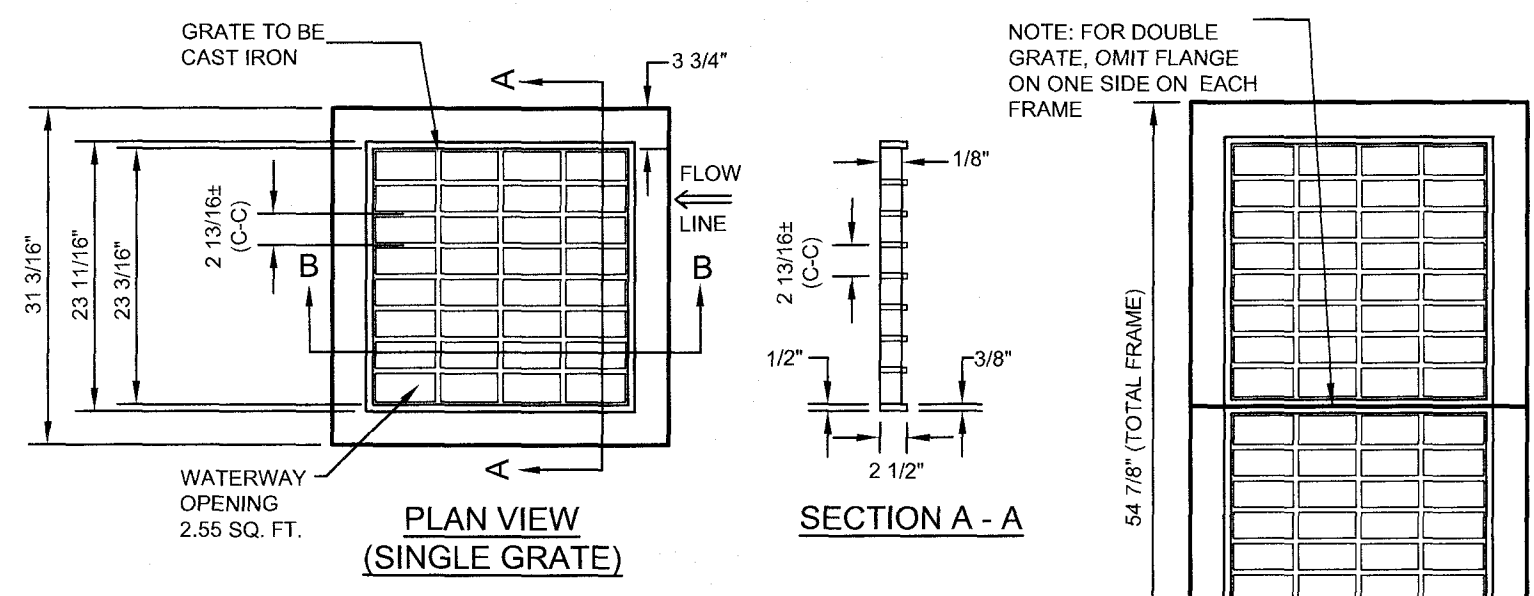
DRAIN MANHOLE FRAME AND COVER DETAIL
NOT TO SCALE
(MARCH 2008)



DETAIL OF TONGUE AND GROOVE JOINT

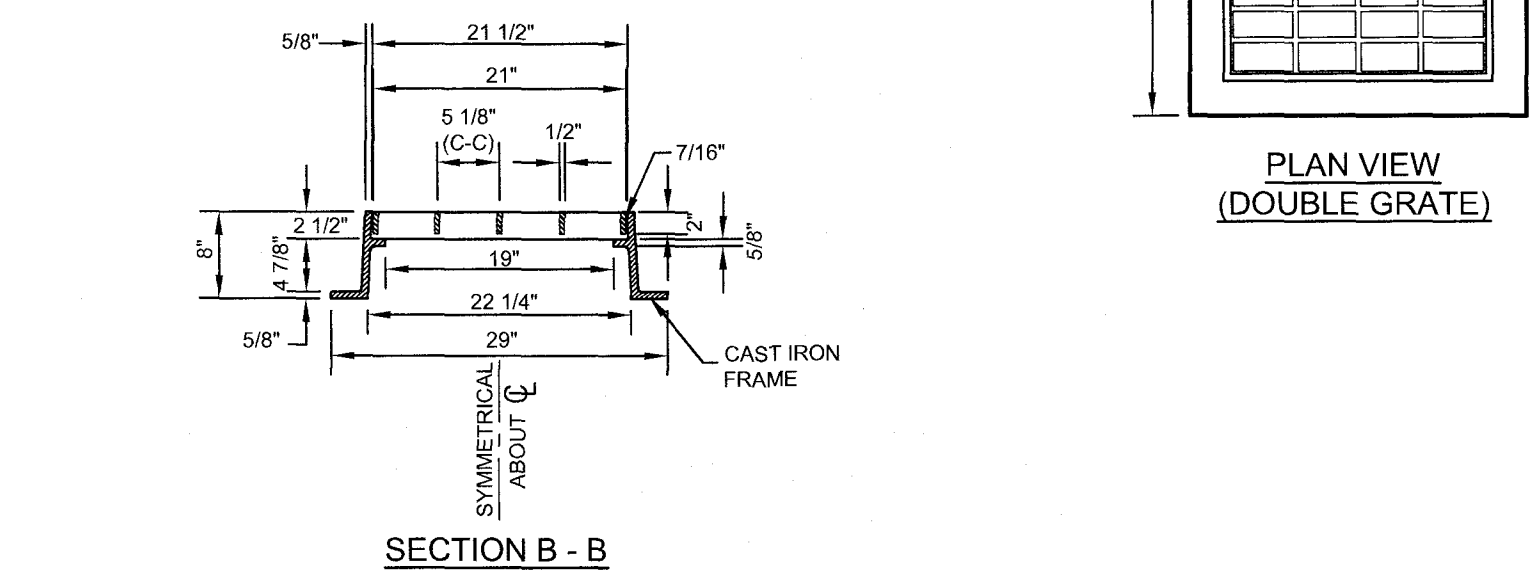
- NOTES:**
1. STEPS ARE NOT ALLOWED.
 2. ALL SECTIONS SHALL BE CONCRETE CLASS AA (4,000 PSI). CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER L.F. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER OF THE WALL.
 3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER L.F.
 4. MATERIALS AND CONSTRUCTION TO NHDOT STANDARDS.

PRECAST REINFORCED DRAIN MANHOLE DETAIL
NOT TO SCALE
(MARCH 2008)



PLAN VIEW (SINGLE GRATE)

SECTION A - A



PLAN VIEW (DOUBLE GRATE)

SECTION B - B

TYPE B FRAME & GRATE DETAIL
NOT TO SCALE
(MARCH 2008)

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM DATE OF APPROVAL

APPROVED BY THE HUDSON, NH PLANNING BOARD

DATE OF MEETING: _____

SIGNATURE DATE: _____

SIGNATURE DATE: _____

SITE PLANS ARE VALID FOR TWO YEARS 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 SPECIFICATIONS:

1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC AND RIP RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIP RAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.

MAINTENANCE:

THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR RAIN EVENT. IF THE RIP RAP HAS BEEN DISPLACED, UNDERMINED, OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

TABLE 7-24 - RECOMMENDED RIP RAP GRADATION RANGES

PERCENT OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE
100%	1.5 TO 2.0 d50
85%	1.3 TO 1.8 d50
50%	1.0 TO 1.5 d50
15%	0.3 TO 0.5 d50

CONSTRUCTION DETAILS
HERITAGE LANDING
MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

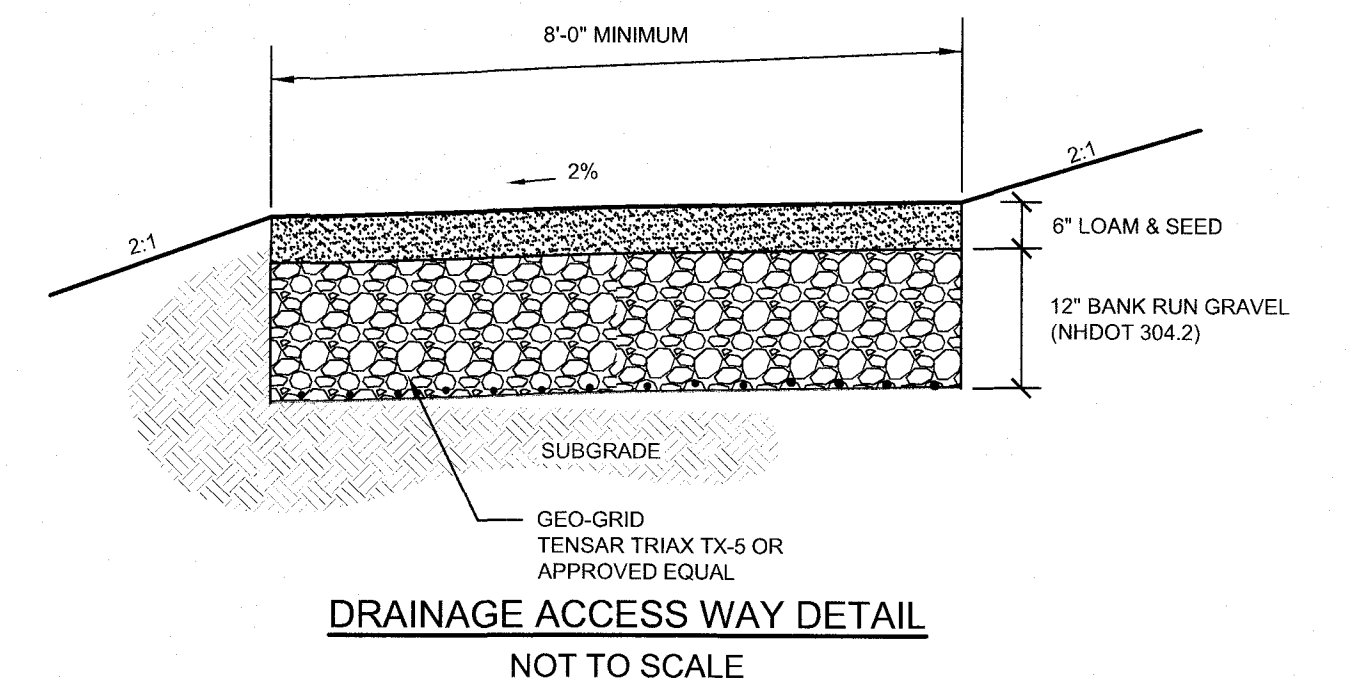
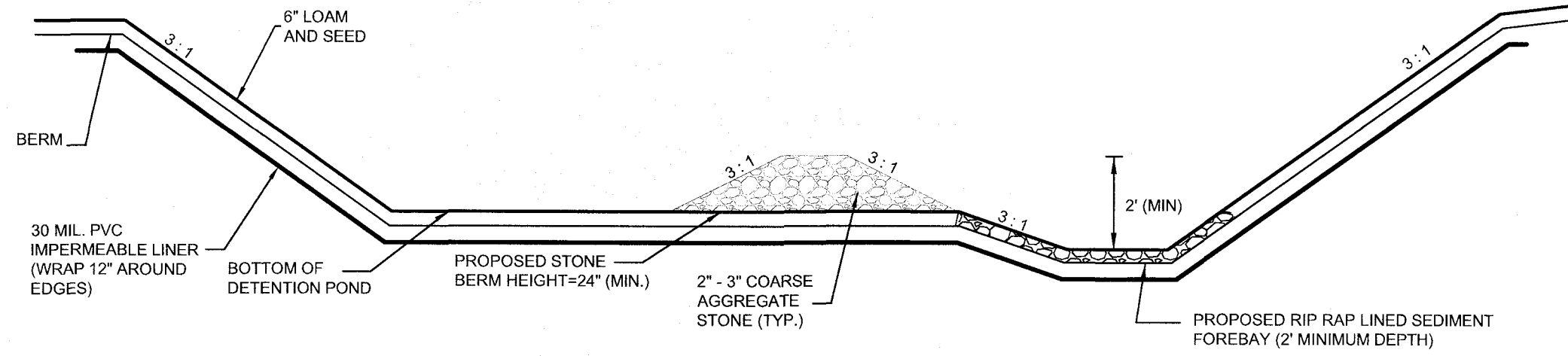
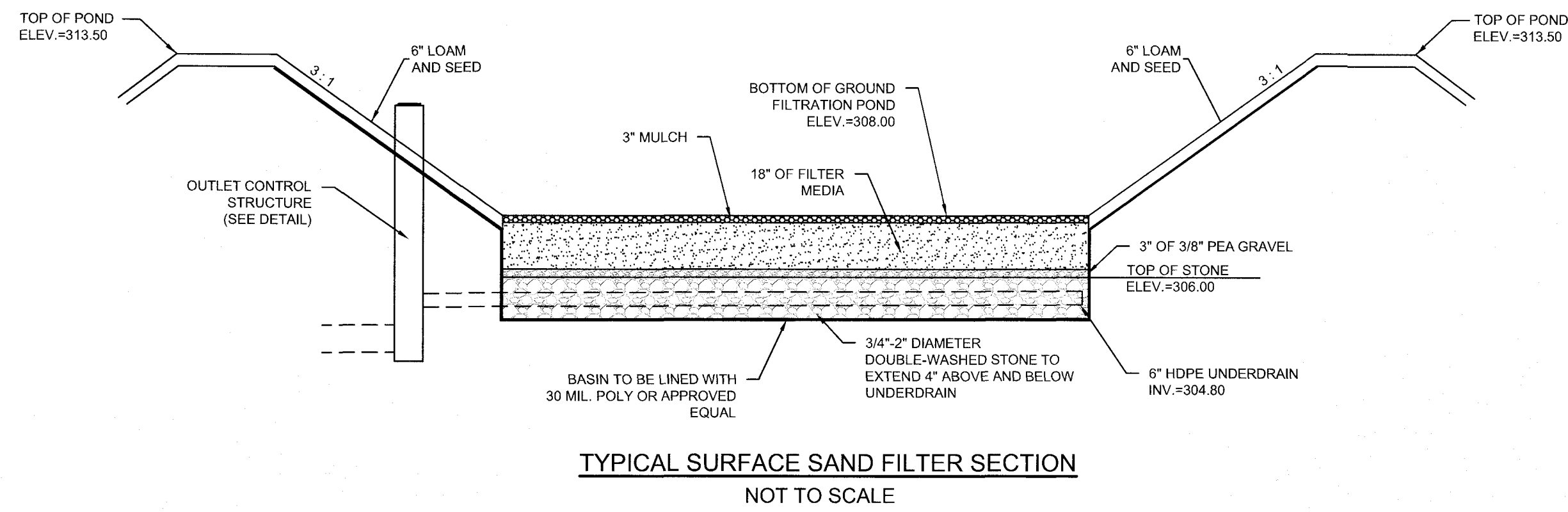
OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051

K&A KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

REVISIONS

No.	DATE	DESCRIPTION	BY
1	7/12/21	REVISED PER TOWN COMMENTS	ACL

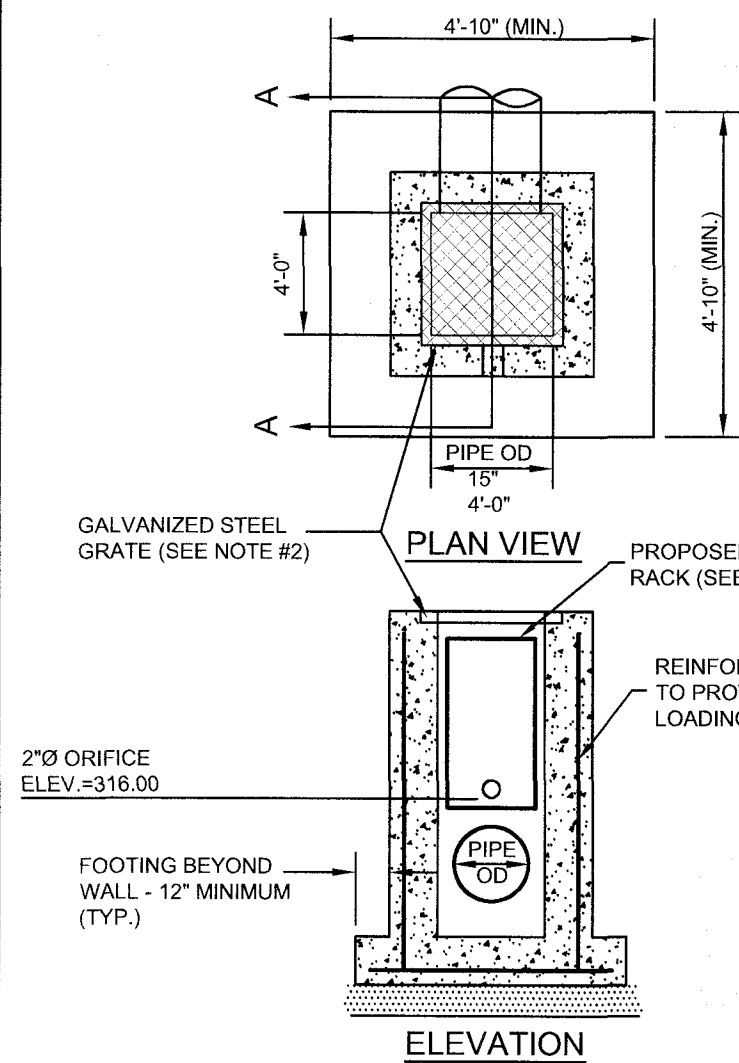
DATE: JUNE 1, 2021 SCALE: AS SHOWN
PROJECT NO: 20-1001-1 SHEET 24 OF 29



- NOTES**
1. ALL CEMENT CONCRETE TO BE 4,000 PSI MINIMUM.
 2. GALVANIZED STEEL GRATE SHALL BE BOLTED TO TOP OF STRUCTURE.
 3. ALL OPENINGS CAST IN AS REQUIRED.
 4. PRECAST REINFORCED CONCRETE STRUCTURE TO MEET ASTM C-478 DESIGNATION AND H-20 LOADING.

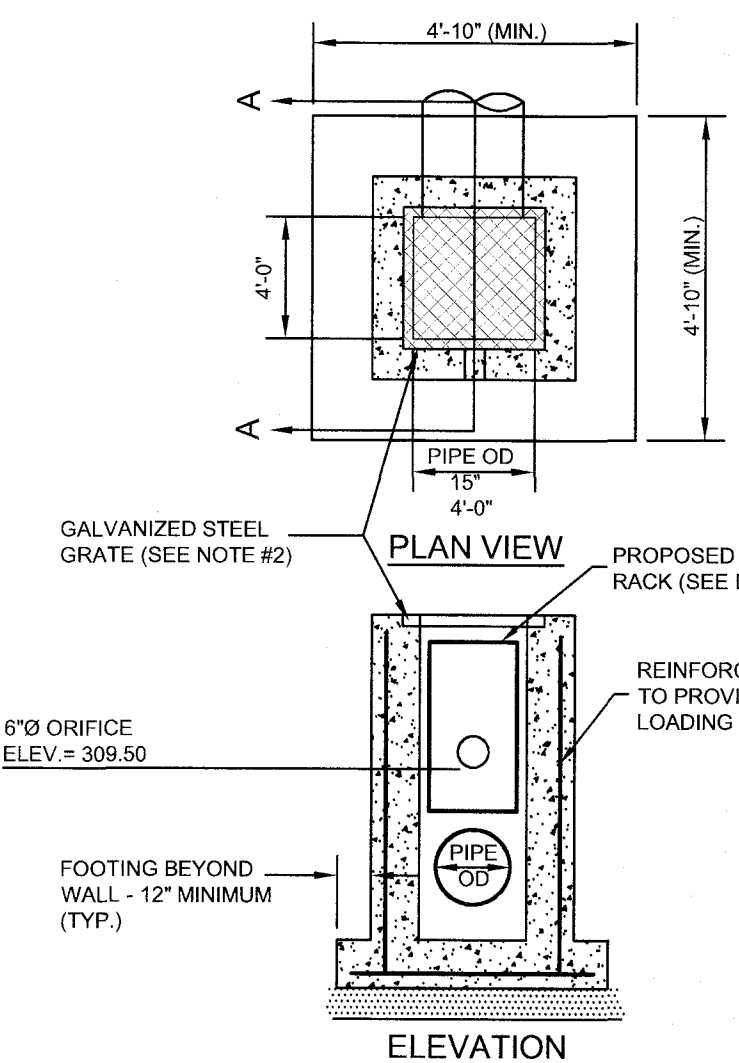
TYPICAL POCKET POND SECTION - WITH FOREBAY
NOT TO SCALE

DRAINAGE ACCESS WAY DETAIL
NOT TO SCALE



OUTLET STRUCTURE #21
NOT TO SCALE

- NOTES**
1. ALL CEMENT CONCRETE TO BE 4,000 PSI MINIMUM.
 2. GALVANIZED STEEL GRATE SHALL BE BOLTED TO TOP OF STRUCTURE.
 3. ALL OPENINGS CAST IN AS REQUIRED.
 4. PRECAST REINFORCED CONCRETE STRUCTURE TO MEET ASTM C-478 DESIGNATION AND H-20 LOADING.

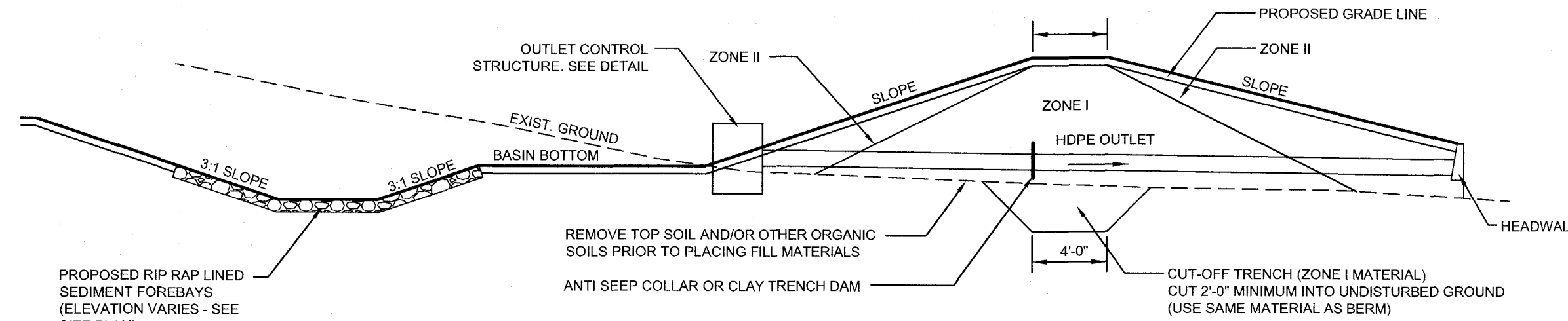


OUTLET STRUCTURE #31
NOT TO SCALE

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

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

SITE PLANS ARE VALID FOR TWO YEARS 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.



STORMWATER PONDS CONSTRUCTION SEQUENCE

1. CONTRACTOR TO NOTIFY DIG-SAFE 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. CUT AND CLEAR TREES AND BRUSH FROM CONSTRUCTION AREAS TO THE EXTENT NECESSARY. ALL BRANCHES, TOPS AND BRUSH TO BE PROPERLY DISPOSED OF BY CONTRACTOR.
3. PRIOR TO GRUBBING OF CLEARED AREAS, ALL SILTATION BARRIERS DESIGNED FOR USE AS TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED AS CALLED FOR ON PROJECT PLANS.
4. COMPLETE GRUBBING OPERATIONS. ALL STUMPS AND SIMILAR DEBRIS SHALL BE PROPERLY DISPOSED OF BY CONTRACTOR. ORGANIC MATERIAL SUITABLE FOR USE AS TOPSOIL SHALL BE STOCKPILED IN UPLAND AREAS. ALL STOCKPILES SHALL BE SEEDDED WITH WINTER RYE AND, IF NECESSARY, SURROUNDED WITH HAY BALES IN ORDER TO PREVENT LOSS DUE TO EROSION.
5. CONSTRUCT TEMPORARY CULVERTS AS NECESSARY TO FACILITATE CONSTRUCTION ACTIVITIES. ALL SUCH CROSSINGS SHALL BE PROTECTED WITH HAY BALE BARRIERS TO LIMIT EROSION.
6. CONSTRUCT CUT-OFF TRENCH (PART OF ZONE I).
7. CONSTRUCT OUTLET AND OVERFLOW STRUCTURE, CULVERT, ANTI SEEP COLLARS, HEADWALL, AND RIP RAP OUTLET PROTECTION AS SHOWN ON PLANS.
8. CONSTRUCT ZONE I PORTION OF EARTH EMBANKMENT.
9. CONSTRUCT ZONE II PORTION OF EARTH EMBANKMENT.
10. APPLY TOPSOIL TO SLOPES AND OTHER AREAS DISTURBED BY CONSTRUCTION. TOPSOIL USED MAY BE NATIVE ORGANIC MATERIAL SCREENED SO AS TO BE FREE OF ROOTS, BRANCHES, STONES, AND OTHER DELETERIOUS MATERIALS. TOPSOIL SHALL BE APPLIED SO AS TO PROVIDE A MINIMUM OF A 4-INCH COMPACTED THICKNESS. UPON COMPLETION OF TOPSOILING, FINISHED SECTIONS ARE TO BE LIMED, SEEDDED AND MULCHED. CONSTRUCTION PERSONNEL SHALL INSPECT COMPLETED SECTIONS OF WORK ON A REGULAR BASIS AND REMEDY ANY PROBLEM AREAS UNTIL A HEALTHY STAND OF GRASS HAS BECOME ESTABLISHED.
11. MAINTAIN, REPAIR, AND REPLACE AS NECESSARY TEMPORARY EROSION CONTROL MEASURES UNTIL SUCH TIME AS THE ENTIRE CONSTRUCTION AREA HAS BEEN STABILIZED (A MINIMUM OF ONE WINTER SHALL HAVE PASSED).
12. AFTER STABILIZATION, REMOVE AND SUITABLY DISPOSE OF TEMPORARY EROSION CONTROL MEASURES.
13. MONITOR CONSTRUCTION ACTIVITIES TO INSURE CONSTRUCTION ACTIVITIES ARE BEING PERFORMED IN SUCH A WAY AS NOT TO ENDANGER THE INTEGRITY OF EARTH EMBANKMENTS, STORMWATER CONTROL STRUCTURE, CULVERT AND RIP RAP OUTLET PROTECTION.

MATERIAL TYPE/SPECIFICATIONS

ZONE I
WELL GRADED MIXTURE OF GRAVEL, SAND, SILT OR CLAY WITH MAX. 6-INCH SIZE STONE AND GEADATION AS INDICATED BELOW. PLACE IN MAX. 12-INCH THICK LIFTS TO 95% OF MAX. DRY DENSITY IN ACCORDANCE WITH ASTM D1557. SCARIFY SURFACE PRIOR TO PLACING SUBSEQUENT LIFT. IN ADDITION, REMOVE ORGANIC SOILS.

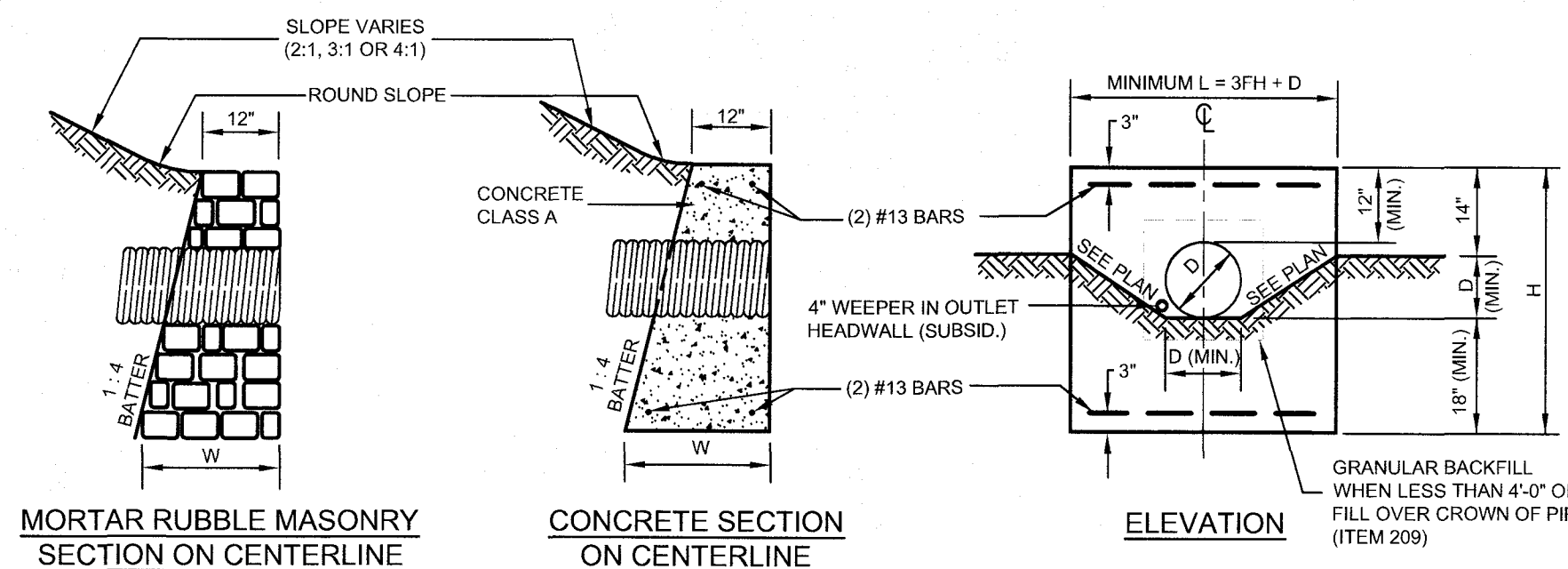
SIEVE SIZE	PERCENT BY WEIGHT PASSING
6-INCH	100
NO. 4	50 TO 100
NO. 40	30 TO 70
NO. 200	20 TO 40

ZONE II
DRAINAGE LAYER: PLACE IN MAX. 12-INCH THICK LIFTS TO 95% OF MAX. DRY DENSITY IN ACCORDANCE WITH ASTM D1557.

SIEVE SIZE	PERCENT BY WEIGHT PASSING
1-INCH	100
NO. 4	70-100
NO. 200	0-12 (IN SAND PORTION ONLY)

TYPICAL POND SECTION
NOT TO SCALE

STORM DRAINAGE TRENCH DETAIL
NOT TO SCALE
(MARCH 2008)



NOTE:

DIMENSIONS SHOWN ARE TO PAYMENT LINES. MORTAR RUBBLE MASONRY TO BE STEPPED OUTSIDE PAYMENT LINES ON SLOPING FACES.

DIAMETER D (INCH)	AREA OF PIPE (SF)	MASONRY PER FOOT OF WALL (CU. YD.)	MASONRY PER HOLE (CU. FT.)	MASONRY PER STANDARD HEADER (CU. YD.)	STEEL PER STANDARD HEADER (LB)	LENGTH OF BARS	PIPE EXC. 1\"/> <th colspan="10">L\"/> </th>	L\"/>									
								HEADER EXC. 1\"/> <th>ITEM 209 PER LINEAR FOOT</th> <th>HEADER LENGTH L</th> <th>HEADER HEIGHT H</th> <th>FILL HEIGHT FH</th> <th>WIDTH AT BOTTOM OF HEADER W</th> <th>MASONRY IN CORNER FRUSTRUM (CU. YD.)</th> <th>HEADER EXC. PER HEADER 1\"/> </th>	ITEM 209 PER LINEAR FOOT	HEADER LENGTH L	HEADER HEIGHT H	FILL HEIGHT FH	WIDTH AT BOTTOM OF HEADER W	MASONRY IN CORNER FRUSTRUM (CU. YD.)	HEADER EXC. PER HEADER 1\"/>		
15"	1.23	0.202	1.73	0.85	11	3'-10"	0.120	0.947	0.35	4'-6"	3'-9"	1'-1"	1'-11 1/4"	0.31	1.232		
18"	1.77	0.222	2.52	1.13	14	5'-2"	0.130	1.111	0.39	5'-6"	4'-0"	1'-4"	2'-0"	0.35	1.405		
30"	4.91	0.301	7.67	2.58	25	9'-2"	0.185	1.810	0.65	9'-6"	5'-0"	2'-4"	2'-3"	0.51	2.164		

NOTE: STEEL QUANTITIES ARE FOR CONCRETE HEADWALLS ONLY.

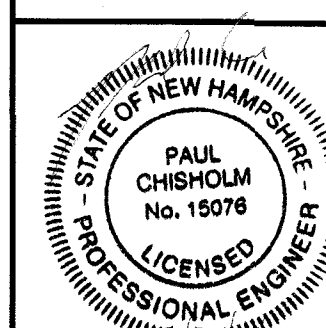
CONCRETE HEADWALLS
NOT TO SCALE

CONSTRUCTION DETAILS
HERITAGE LANDING

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

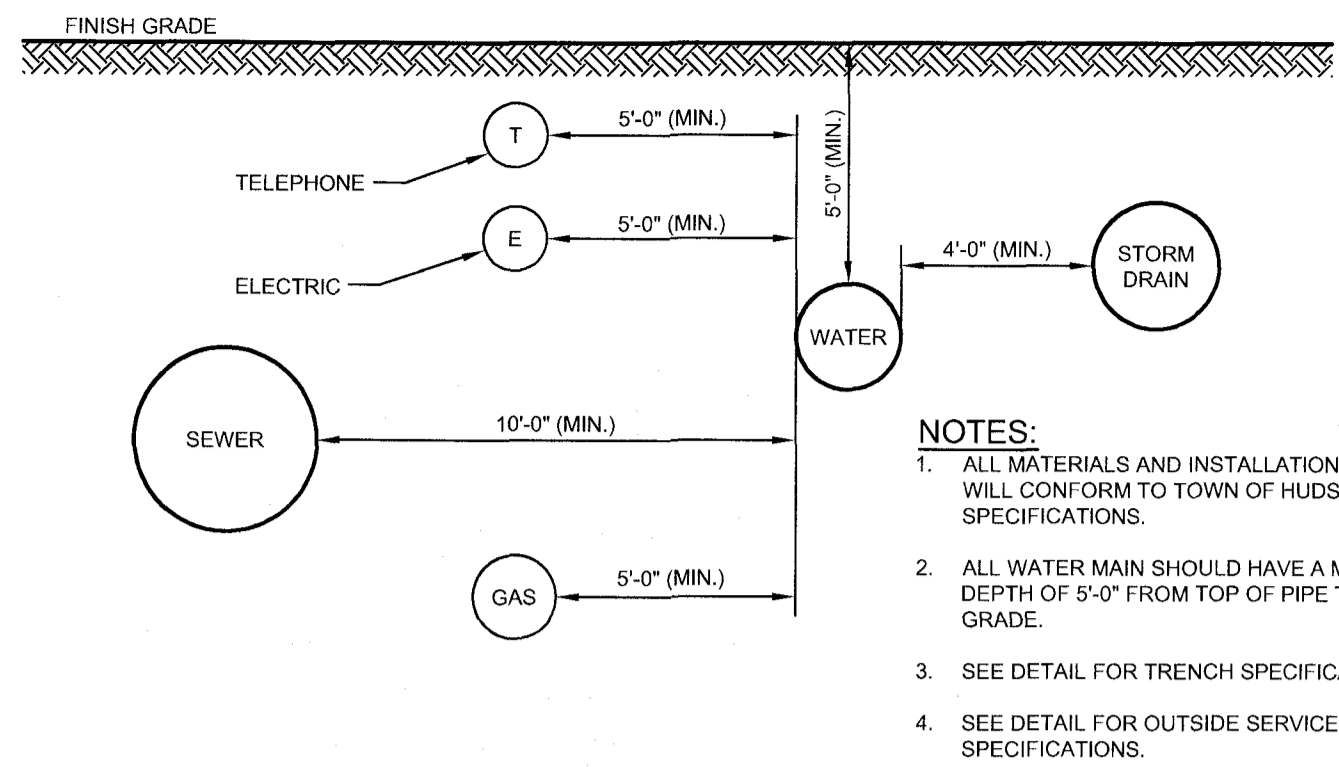
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45 LOWELL ROAD
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K&M KEACH-NORDSTROM ASSOCIATES, INC.
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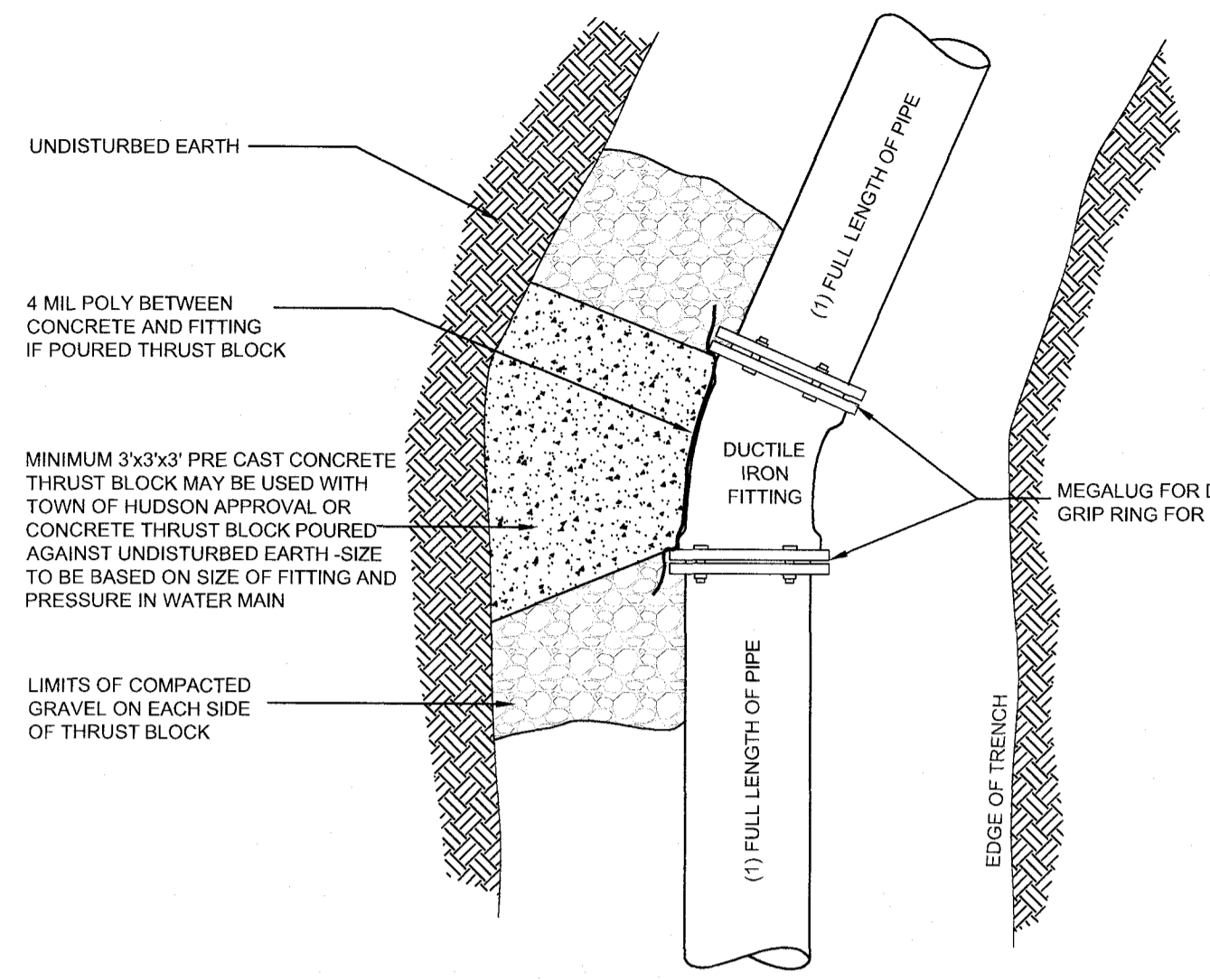
REVISIONS			
No.	DATE	DESCRIPTION	BY
1	7/12/21	REVISED PER TOWN COMMENTS	ACL

DATE: JUNE 1, 2021 SCALE: AS SHOWN
PROJECT NO: 20-1001-1 SHEET 25 OF 29



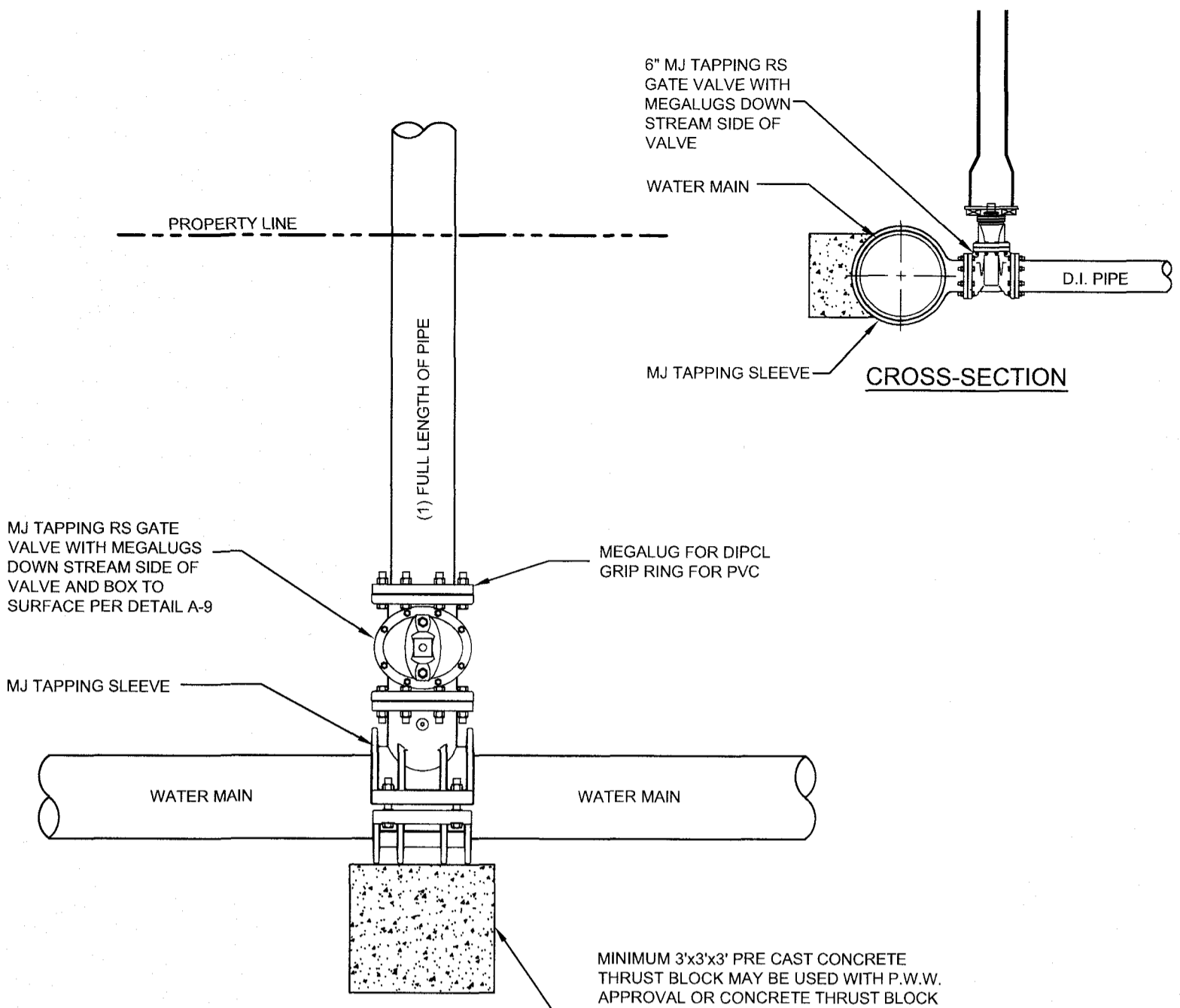
UTILITY SEPARATION (MAIN) DETAIL
(A-01)
NOT TO SCALE
(MARCH 2008)

- NOTES:**
1. ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO TOWN OF HUDSON TECHNICAL SPECIFICATIONS.
 2. ALL WATER MAIN SHOULD HAVE A MINIMUM DEPTH OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.
 3. SEE DETAIL FOR TRENCH SPECIFICATIONS.
 4. SEE DETAIL FOR OUTSIDE SERVICE ENTRANCE SPECIFICATIONS.



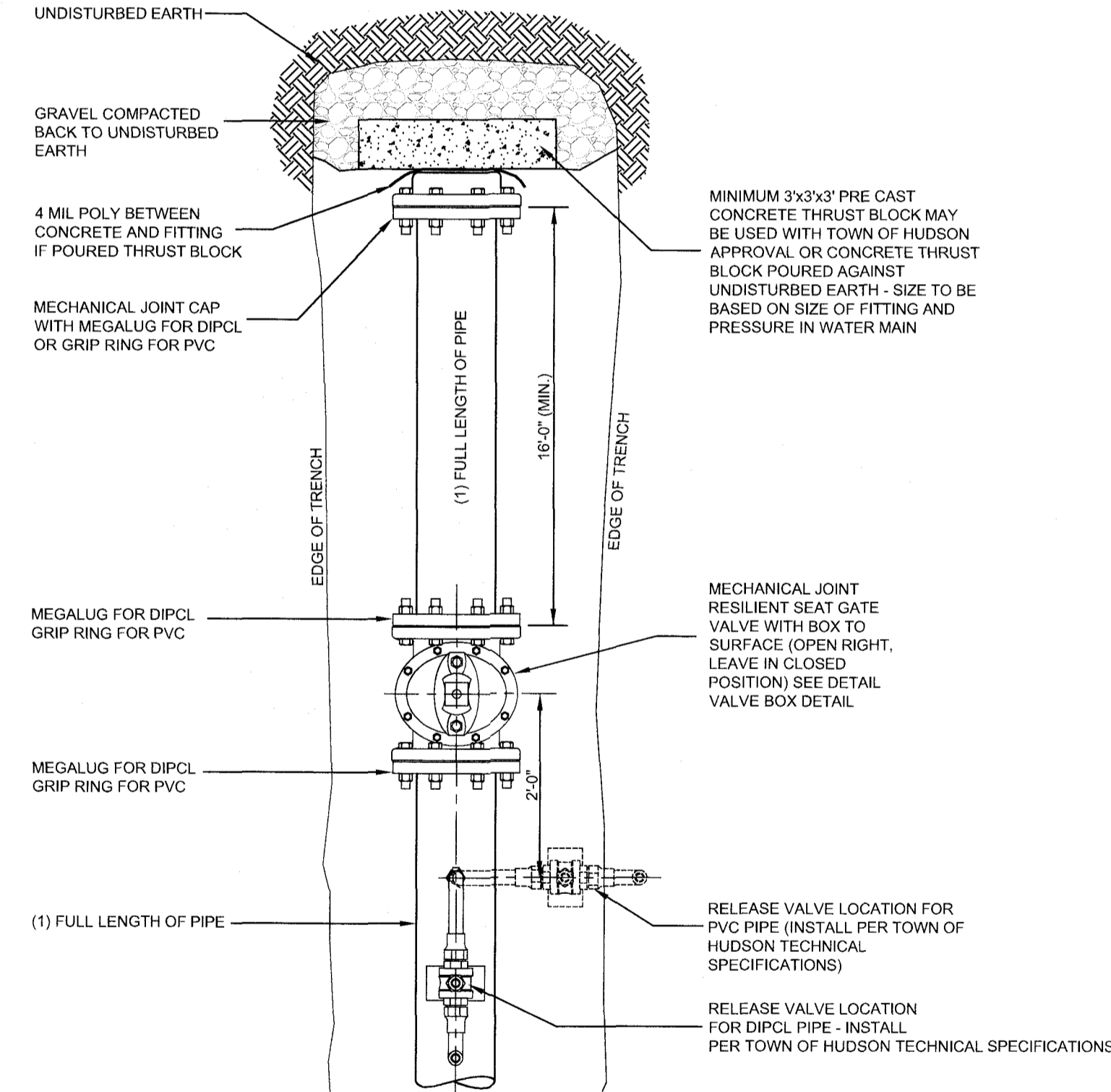
- NOTES:**
1. ALL MATERIAL AND INSTALLATION PROCEDURES WILL CONFORM TO TOWN OF HUDSON TECHNICAL SPECIFICATIONS.
 2. ALL PIPE SHOULD HAVE A MINIMUM DEPTHS OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.
 3. 3/4" Ø S.S. RODS SHALL BE USED IN CONJUNCTION WITH REQUIRED S.S. NUTS. RODS ARE TO BE ATTACHED TO FITTINGS WITH EITHER STAR BOLTS OR DUC LUGS. 10" FITTING OR SMALLER = (2) 3/4" Ø S.S. RODS & ASSOCIATED HARDWARE. 12" FITTING OR LARGER = (4) 3/4" Ø S.S. RODS & ASSOCIATED HARDWARE.
 4. MIN 3'x3'x3' PRE CAST CONCRETE THRUST BLOCK MAY BE USED WITH TOWN OF HUDSON APPROVAL OR CONCRETE THRUST BLOCK POURED AGAINST UNDISTURBED EARTH - SIZE TO BE BASED ON SIZE OF FITTING AND PRESSURE IN WATER MAIN.

THRUST BLOCK BEHIND FITTINGS INSTALLATION
(A-07)
NOT TO SCALE
(MARCH 2008)



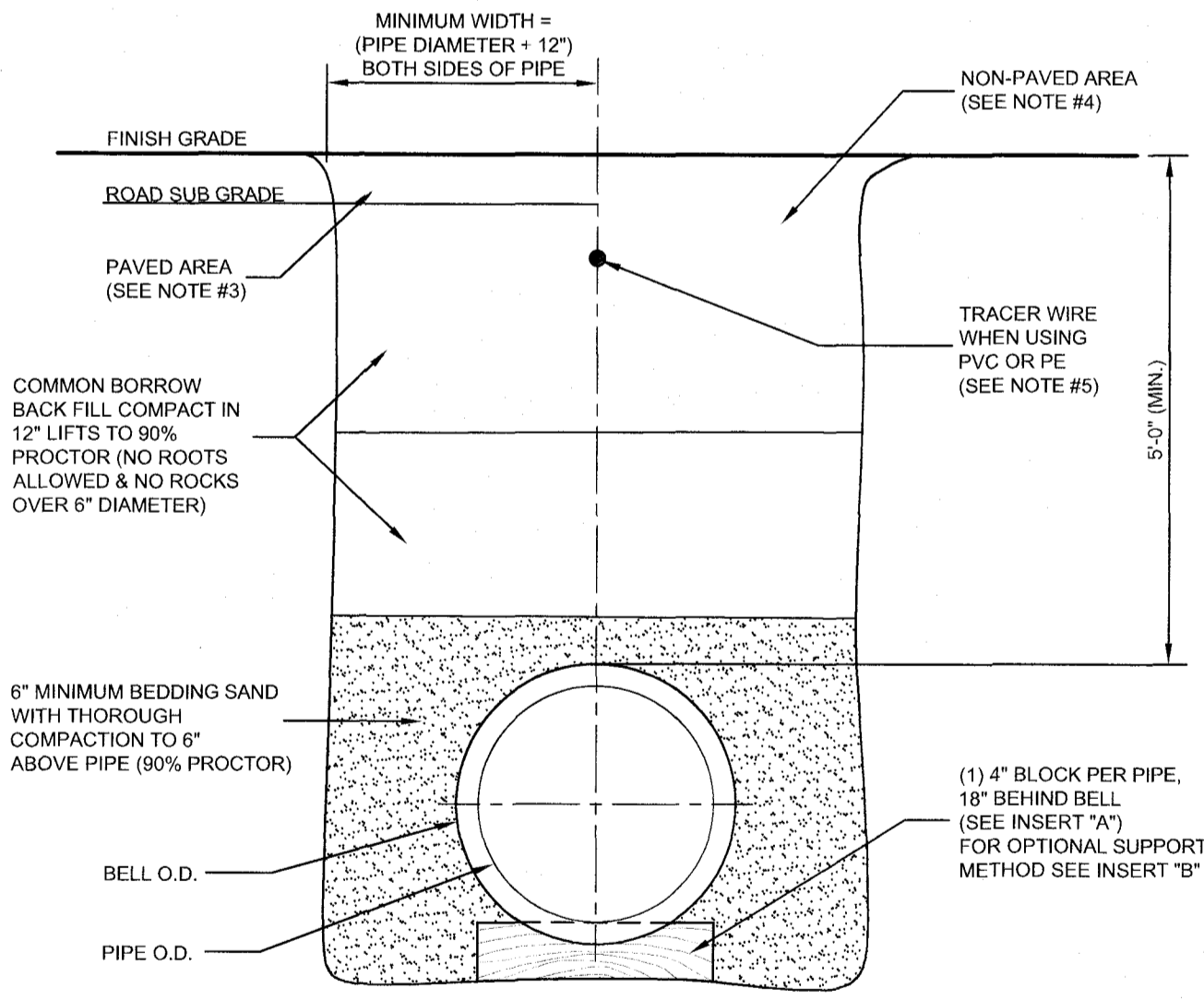
- NOTES:**
1. ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO TOWN OF HUDSON TECHNICAL SPECIFICATIONS.
 2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.

LARGE SERVICE AND/OR TAPPING SLEEVE DETAIL
(A-21)
NOT TO SCALE
(MARCH 2008)



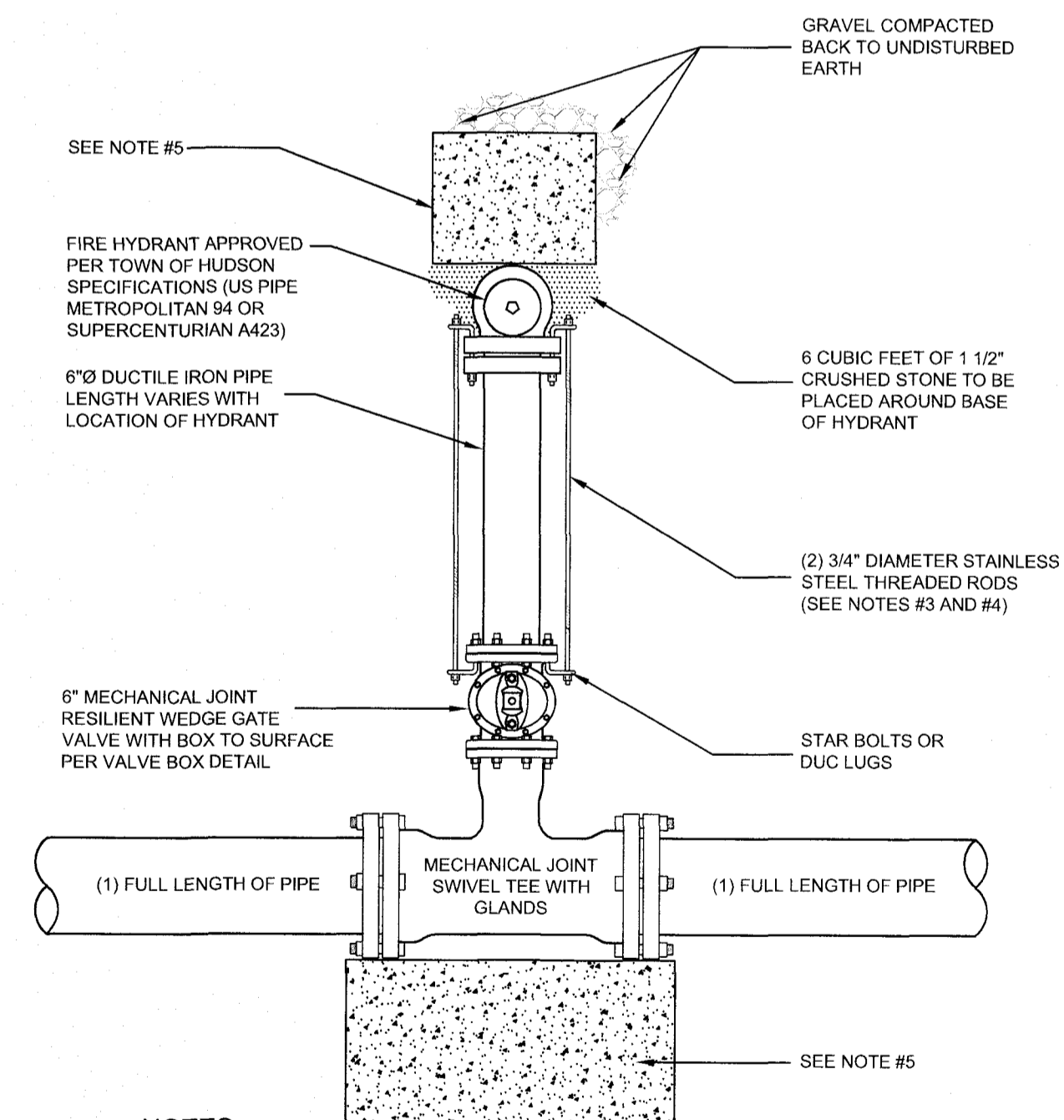
- NOTES:**
1. ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO TOWN OF HUDSON TECHNICAL SPECIFICATIONS.
 2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.

END OF MAIN INSTALLATION
(A-08)
NOT TO SCALE
(MARCH 2008)



- NOTES:**
1. ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO TOWN OF HUDSON TECHNICAL SPECIFICATIONS.
 2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.
 3. REQUIREMENTS FOR SUBBASE AND BASE MATERIAL TYPE ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN PAVED AREAS.
 4. REQUIREMENTS FOR GRAVEL, LOAM AND/OR SEED ARE TO BE IN ACCORDANCE WITH LOCAL AUTHORITY HAVING LOCAL JURISDICTION IN NON-PAVED AREAS.
 5. 10 GAUGE TRACER WIRE AS MANUFACTURED BY BMS, DIVISION OF ALBESTAR CORP., AVON, MA OR EQUIVALENT.

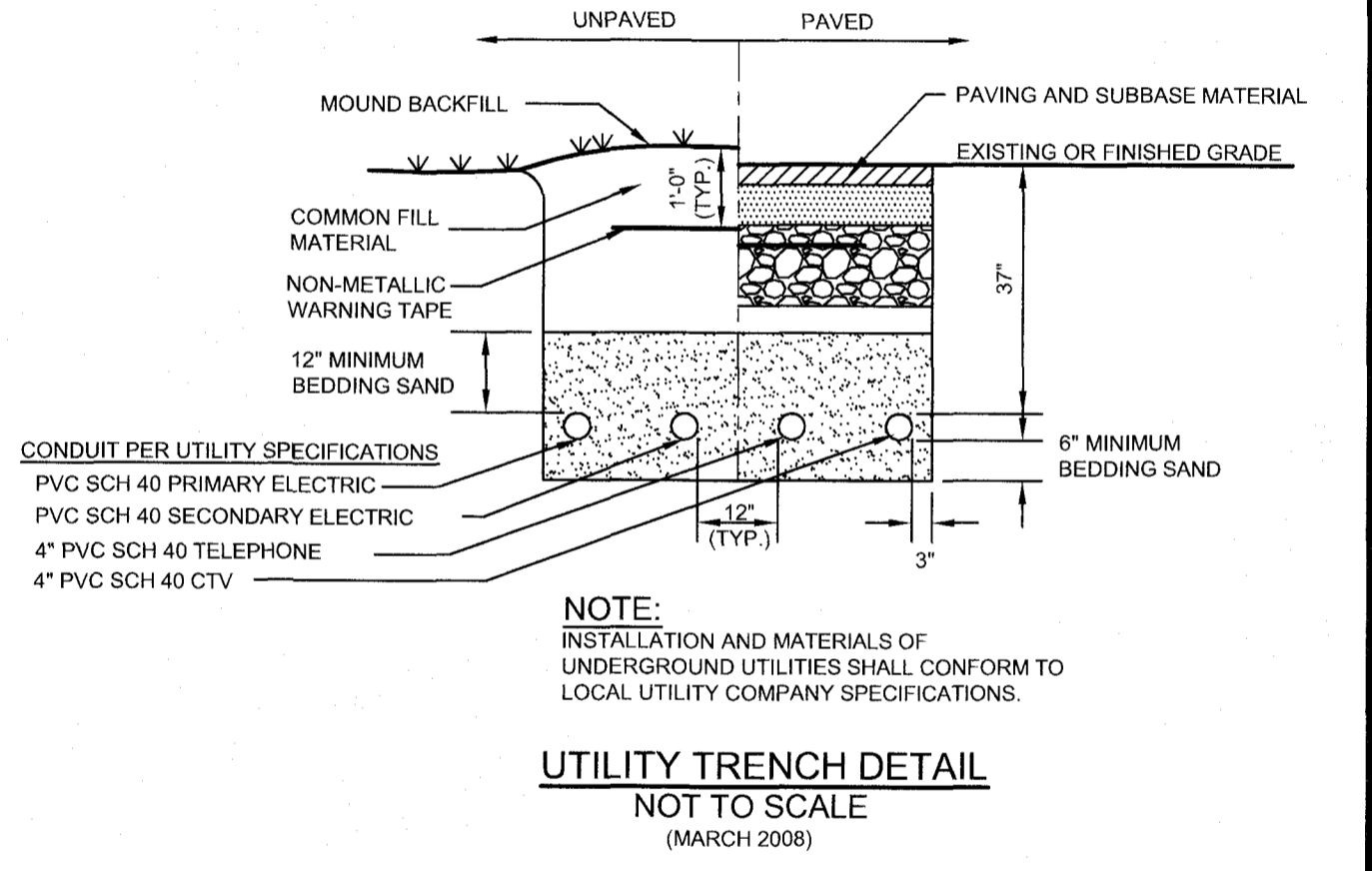
TRENCH DETAIL
(A-02)
NOT TO SCALE
(MARCH 2008)



- NOTES:**
1. ALL MATERIAL AND INSTALLATION PROCEDURES WILL CONFORM TO THE TOWN OF HUDSON TECHNICAL SPECIFICATIONS.
 2. ALL PIPE SHOULD HAVE A MINIMUM DEPTHS OF 5'-0" FROM TOP OF PIPE TO FINISH GRADE.
 3. 3/4" Ø S.S. RODS SHALL BE USED IN CONJUNCTION WITH REQUIRED S.S. NUTS. RODS ARE TO BE ATTACHED TO FITTINGS WITH EITHER STAR BOLTS OR DUC LUGS. 10" FITTING OR SMALLER = (2) 3/4" Ø S.S. RODS & ASSOCIATED HARDWARE. 12" FITTING OR LARGER = (4) 3/4" Ø S.S. RODS & ASSOCIATED HARDWARE.
 4. WHEN DISTANCE FROM WATER MAIN TO HYDRANT IS MORE THAN 10'-0" SUBSTITUTE MEGALUGS (OR GRIP RINGS) IN LIEU OF THREADED RODS.
 5. MINIMUM 3'x3'x3' PRE CAST CONCRETE THRUST BLOCK MAY BE USED WITH TOWN OF HUDSON APPROVAL OR CONCRETE THRUST BLOCK POURED AGAINST UNDISTURBED EARTH - SIZE TO BE BASED ON SIZE OF FITTING AND PRESSURE IN WATER MAIN. SEE THRUST BLOCK BEHIND FITTINGS DETAIL.

HYDRANT INSTALLATION
(A-10)
NOT TO SCALE
(MARCH 2008)

- CONSTRUCTION NOTES:**
1. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. IN THE EVENT THAT A DISCREPANCY FROM THE INFORMATION SHOWN ON THESE PLANS IS FOUND, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO RESOLVE THE SITUATION.
 2. PRIOR TO CONSTRUCTION, CONTACT DIG SAFE CENTER, TOLL FREE 811. NEW HAMPSHIRE STATE LAW REQUIRES NOTIFICATION AT LEAST THREE BUSINESS DAYS BEFORE DIGGING OPERATIONS START. IF AN EMERGENCY, CALL IMMEDIATELY.
 3. ALL WORKMANSHIP AND MATERIALS INCORPORATED INTO THE CONSTRUCTION OF ROADS AND DRAINAGE SHOWN HEREON SHALL CONFORM WITH THE STANDARDS OF THE TOWN OF HUDSON ENGINEERING DEPARTMENT AND THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AS PUBLISHED AND AMENDED BY THE N.H.D.O.T.
 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROL DEVICES, AS SHOWN IN THESE PLANS, THROUGHOUT THE DURATION OF THE PROJECT IN ACCORDANCE WITH APPLICABLE NHDES STANDARDS. THE EROSION CONTROL MEASURES PROVIDED SHALL BE CONSIDERED AS A MINIMUM STANDARD. CONTRACTOR SHALL IMPLEMENT ANY AND ALL ADDITIONAL MEASURES AS FIELD CONDITIONS DICTATE OR AS REQUIRED BY LOCAL OR STATE GUIDELINES. ALL EROSION CONTROL SHALL BE MAINTAINED AND/OR REPLACED IF DAMAGED.
 5. THE CONTRACTOR SHALL STABILIZE ALL DITCHES, SWALES AND PONDS PRIOR TO DIRECTING STORM WATER RUN-OFF TO THEM.
 6. SILT SOXX TO BE CONSTRUCTED AS IDENTIFIED ON THIS PLAN. SILT SOXX BARRIERS TO BE CHECKED WEEKLY AND/OR AFTER LARGE STORM EVENTS. ALL SILT MATERIAL TO BE REMOVED FROM THE SITE AS ORDERED. DISPOSAL OF SUCH MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS AND GUIDELINES AS APPLICABLE OR AS DIRECTED.
 7. SLOPE STABILIZATION METHODS SHALL BE PROVIDED IN ACCORDANCE WITH THE NHDES SITE SPECIFIC PERMIT OR AS FIELD CONDITIONS DICTATE. SLOPE STABILIZATION SHALL BE PROVIDED ON ALL SLOPES 3:1 AND GREATER AS A MINIMUM STANDARD. PROVIDE SLOPE STABILIZATION ON SLOPES LESS THAN 3:1 IF WARRANTED, AS FIELD CONDITIONS DICTATE.
 8. THE DRAINAGE DESIGN AND EROSION CONTROL MEASURES AS PROPOSED MEET ALL TOWN AND STATE REQUIREMENTS AND BEST MANAGEMENT PRACTICES AS PROMULGATED BY THE NHDES.
 9. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
 10. TOPSOIL SHALL BE REMOVED FOR ITS TOTAL DEPTH WITHIN THE LIMITS OF GRADING, UNLESS OTHERWISE DIRECTED. THE TOPSOIL SHALL BE STOCKPILED AND USED IN ITS ENTIRETY. STOCKPILE SOIL IN ACCORDANCE WITH NHDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (CURRENT EDITION).
 11. UNSUITABLE MATERIAL, ROOTS, AND STUMPS WITHIN THE LIMITS OF WORK SHALL BE REMOVED FROM THE SITE AS ORDERED. DISPOSAL OF SUCH MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS AND GUIDELINES AS APPLICABLE OR AS DIRECTED.
 12. THE SUBGRADE SHALL BE SCARIFIED TO ASSURE THAT ALL BOULDERS AND COBBLES OVER 6" ARE REMOVED PRIOR TO SHAPE, GRADE, AND COMPACTION ACTIVITIES.
 13. ALL WORKMANSHIP AND MATERIALS INCORPORATED INTO THE CONSTRUCTION OF ELECTRIC LINES SHALL CONFORM WITH THE STANDARDS OF THE OWNING UTILITY COMPANY.
 14. ALL WORKMANSHIP AND MATERIALS INCORPORATED INTO THE CONSTRUCTION OF TELEPHONE LINES SHALL CONFORM WITH THE STANDARDS OF THE OWNING TELEPHONE COMPANY.
 15. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND WITHIN THE CONSTRUCTION AREA. THE PROTECTION OR RELOCATION OF UTILITIES IS THE ULTIMATE RESPONSIBILITY OF THE CONTRACTOR.
 16. THE CONTRACTOR SHALL COORDINATE MATERIALS AND INSTALLATION SPECIFICATIONS WITH THE INDIVIDUAL UTILITY AGENCIES/COMPANIES AND ARRANGE FOR ALL INSPECTIONS.
 17. UTILITY STUB CONNECTIONS SHOWN TO PROPOSED LOTS ARE APPROXIMATE AND INTENDED TO ILLUSTRATE FEASIBILITY OF CONSTRUCTING CONNECTIONS. THE CONTRACTOR SHALL PROVIDE SERVICE STUBS AS DIRECTED BY THE OWNING UTILITY COMPANY AND LOCAL AUTHORITY.
 18. CONTRACTOR SHALL COORDINATE WITH PHONE, CABLE, AND ELECTRIC COMPANIES FOR POTENTIAL NEED OF INDIVIDUAL SECTORS AT EACH LOT SERVICE CONNECTION.
 19. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT ALL TIMES.
 20. THE CONTRACTOR SHALL VERIFY TBM ELEVATIONS PRIOR TO CONSTRUCTION.

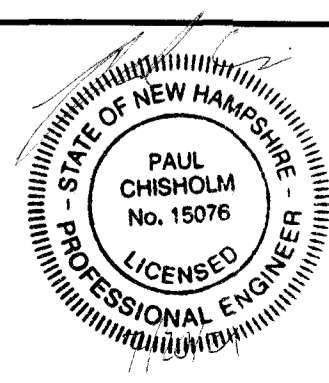


UTILITY TRENCH DETAIL
NOT TO SCALE
(MARCH 2008)

CONSTRUCTION DETAILS
HERITAGE LANDING
MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051

KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881



REVISIONS			
No.	DATE	DESCRIPTION	BY
1	7/12/21	REVISED PER TOWN COMMENTS	ACL

DATE: JUNE 1, 2021 SCALE: AS SHOWN
PROJECT NO: 20-1001-1 SHEET 26 OF 29

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM DATE OF APPROVAL

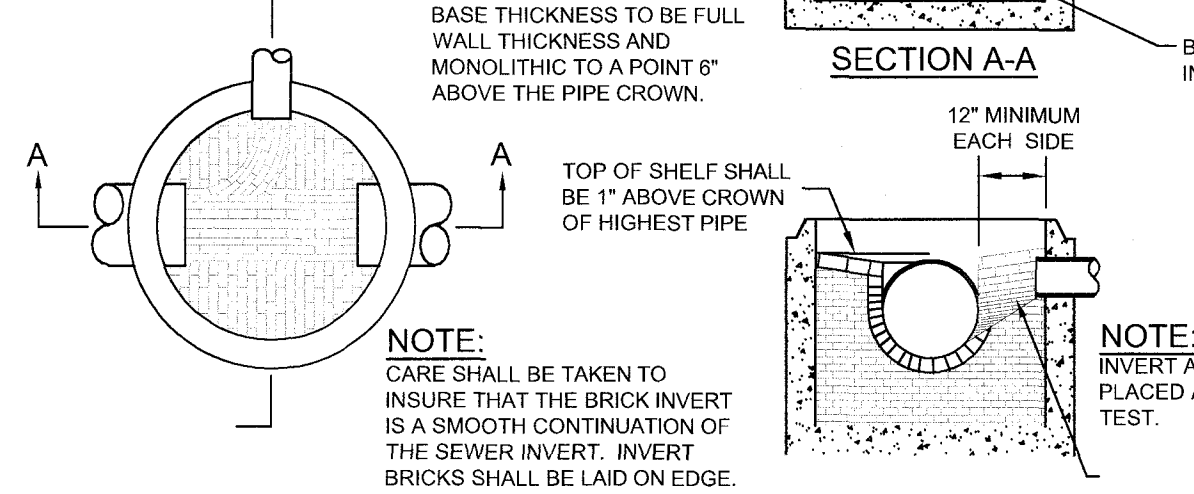
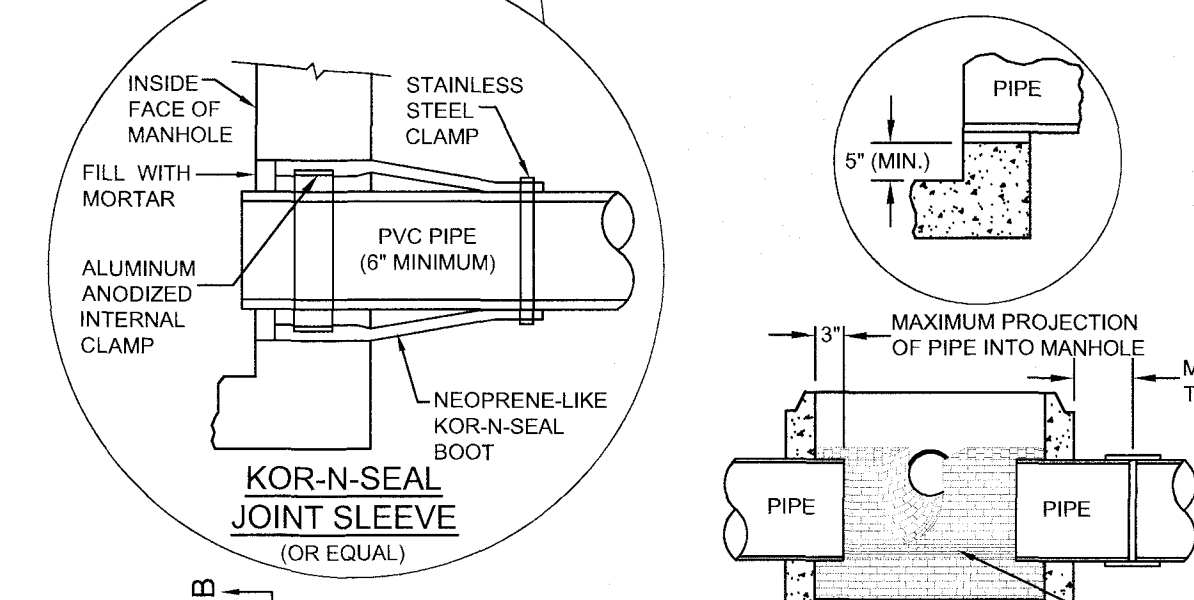
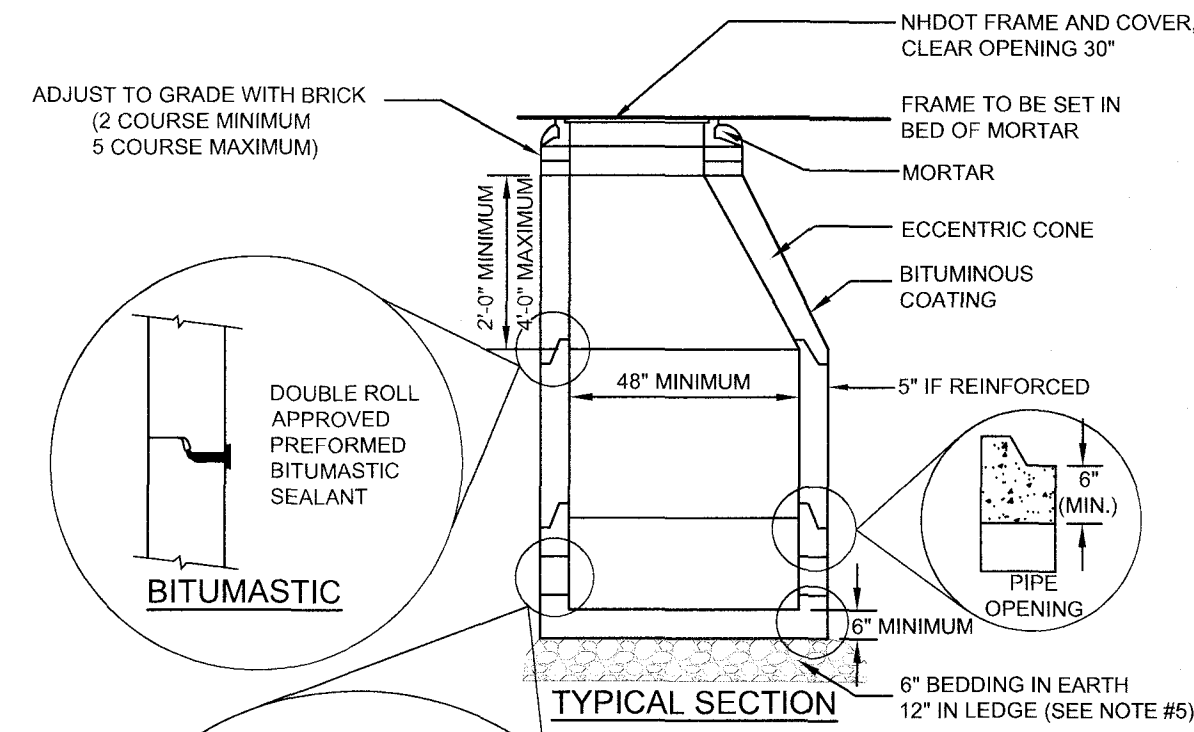
APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

SIGNATURE DATE: _____

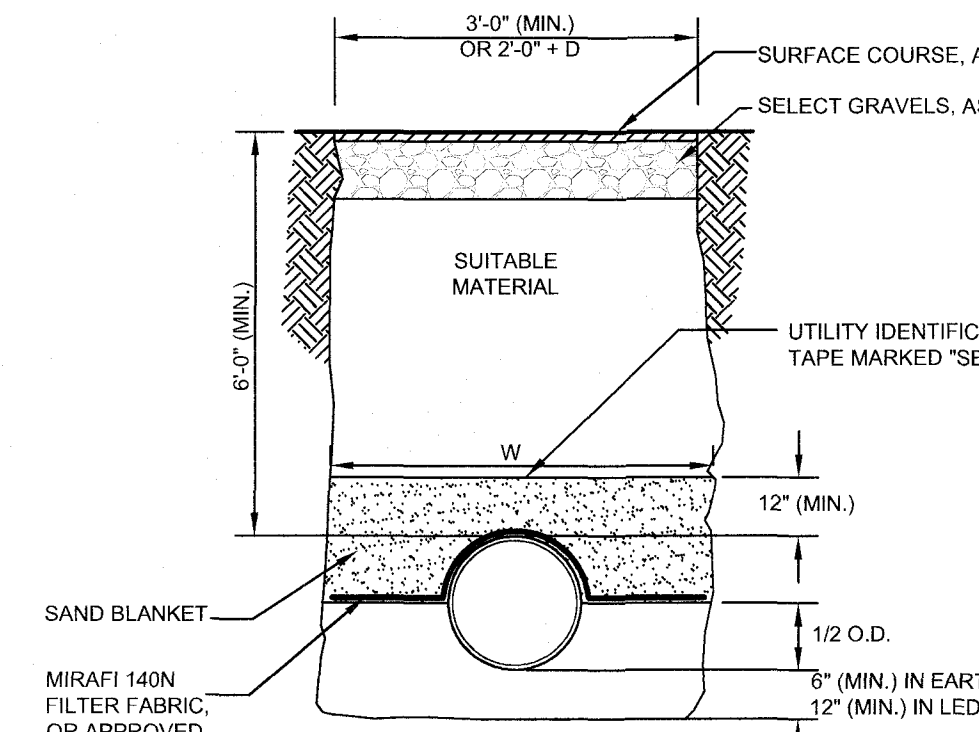
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SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

NOTES: (NHDES ENV WQ700 - 2015)

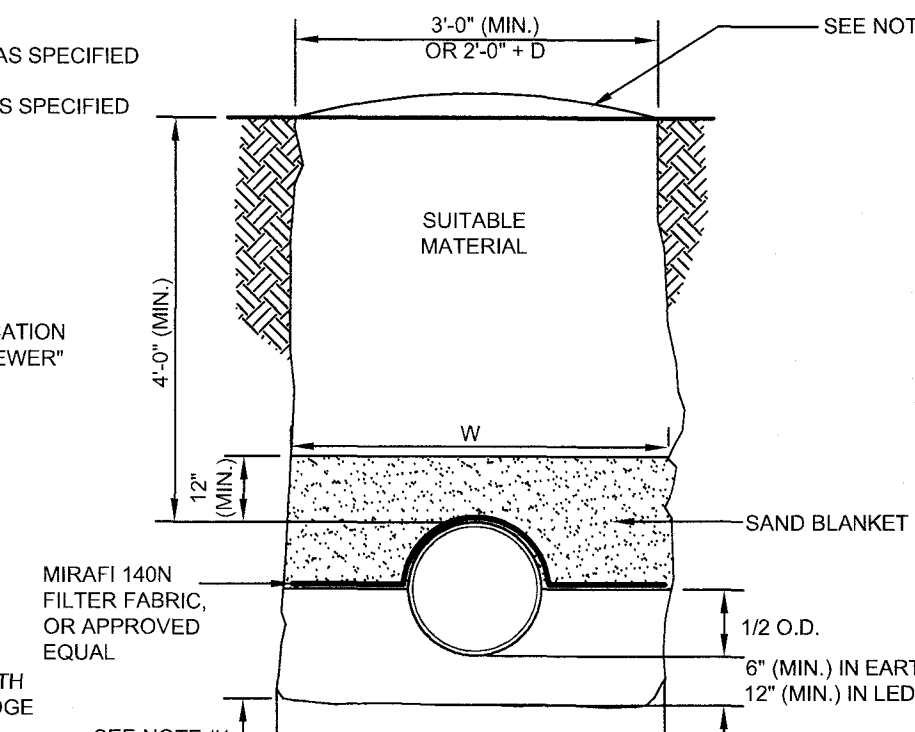
- ALL COMPONENT PARTS OF MANHOLE STRUCTURES SHALL HAVE THE STRENGTH, LEAK RESISTANCE AND SPACE NECESSARY FOR THE INTENDED SERVICE.
- MANHOLE STRUCTURES SHALL HAVE A LIFE EXPECTANCY IN EXCESS OF 25 YEARS.
- MANHOLE STRUCTURES SHALL BE DESIGNED TO WITHSTAND H-20 LOADING AND SHALL NOT LEAK IN EXCESS OF ONE GPD PER VERTICAL FOOT OF MANHOLE FOR THE LIFE OF THE STRUCTURE.
- BARRELS, CONCRETE GRADE RINGS AND CONE SECTIONS SHALL BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE AND SHALL CONFORM TO ASTM C478.
- BEDDING: CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33 100% PASSING 1" INCH SCREEN
90% PASSING 3/4" INCH SCREEN
20-55% PASSING 3/8" INCH SCREEN
0-10% PASSING #4 SIEVE
0-5% PASSING #8 SIEVE
- WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, CRUSHED STONE 1/2" TO 1-1/2" INCH SHALL BE USED. BASE SECTIONS SHALL BE OF MONOLITHIC CONSTRUCTION TO A POINT AT LEAST 6" ABOVE THE CROWN OF THE INCOMING PIPE.
- HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF AN OVERLAPPING TYPE, SEALED FOR WATER-TIGHTNESS USING A DOUBLE ROW OF AN ELASTOMERIC OR MASTIC-LIKE SEALANT.
- PIPE TO MANHOLE JOINTS SHALL BE AS FOLLOWS:
 - ELASTOMERIC RUBBER SLEEVE WITH WATERTIGHT JOINTS AT THE MANHOLE OPENING AND PIPE SURFACES;
 - CAST INTO THE WALL OR SECURED WITH STAINLESS STEEL CLAMPS;
 - ELASTOMERIC SEALING RING CAST IN THE MANHOLE OPENING WITH SEAL FORMED ON THE SURFACE OF THE PIPE BY COMPRESSION OF THE RING; AND
 - NON-SHRINK GROUTED JOINTS WHERE WATERTIGHT BONDING TO THE MANHOLE AND PIPE CAN BE OBTAINED.
- MANHOLE CONE SECTIONS SHALL BE ECCENTRIC IN SHAPE.
- ALL PRECAST SECTIONS AND BASES SHALL HAVE THE DATE OF MANUFACTURE AND THE NAME OR TRADEMARK OF THE MANUFACTURER IMPRESSED OR INDELIBLY MARKED ON THE INSIDE WALL.
- ALL PRECAST SECTIONS AND BASES SHALL BE COATED ON THE EXTERIOR WITH A BITUMINOUS DAMP-PROOFING COATING.
- MANHOLES SHALL HAVE A BRICK PAVED SHELF AND INVERT CONSTRUCTED TO CONFORM TO THE SIZE OF PIPE AND FLOW. AT CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CURVES OF THE LONGEST RADIUS POSSIBLE TANGENT TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY. INVERTS AND SHELVES SHALL BE PLACED AFTER TESTING.
- MATERIALS OF CONSTRUCTION FOR MANHOLES SHALL BE AS FOLLOWS:
 - CONCRETE FOR PRECAST BASES OR GRADE RINGS SHALL CONFORM TO THE REQUIREMENTS FOR CLASS AA CONCRETE IN THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION";
 - THE MANHOLE FRAME AND COVER SHALL PROVIDE A 30-INCH DIAMETER CLEAR OPENING;
 - THE MANHOLE COVER SHALL HAVE THE WORD "SEWER" IN 3-INCH LETTERS CAST INTO THE TOP SURFACE;
 - THE CASTINGS SHALL BE OF EVEN-GRAINED CAST IRON, SMOOTH AND FREE FROM SCALE, LUMPS, BLISTERS, SAND HOLES AND DEFECTS;
 - CONTACT SURFACES OF COVERS AND FRAMES SHALL BE MACHINED AT THE FOUNDRY TO PREVENT ROCKING OF COVERS IN ANY ORIENTATION;
 - CASTINGS SHALL BE EQUAL TO CLASS 30, BE CERTIFIED BY THEIR MANUFACTURER(S) AS CONFORMING TO ASTM A484M;
 - BRICK MASONRY FOR SHELF, INVERT AND GRADE ADJUSTMENT SHALL BE CERTIFIED BY THEIR MANUFACTURER(S) AS CONFORMING TO ASTM C32, CLAY OR SHALE, FOR GRADE SS HARD BRICK;
 - MORTAR SHALL BE COMPOSED OF TYPE II PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRATED LIME ADDITION;
 - PROPORTIONS IN MORTAR OF PARTS BY VOLUMES SHALL BE:
 - 4.5 PARTS SAND AND 1.5 PARTS CEMENT, OR
 - 4.5 PARTS SAND, ONE PART CEMENT AND 0.5 PARTS HYDRATED LIME;
 - CEMENT SHALL BE TYPE I PORTLAND CEMENT CONFORMING TO ASTM C150/C150M;
 - HYDRATED LIME SHALL BE TYPE S CONFORMING TO THE ASTM C207 "STANDARD SPECIFICATIONS FOR HYDRATED LIME FOR MASONRY PURPOSES";
 - SAND SHALL CONSIST OF INERT NATURAL SAND CONFORMING TO THE ASTM C33 "STANDARD SPECIFICATIONS FOR CONCRETE, FINE AGGREGATES";
 - CONCRETE FOR DROP SUPPORTS SHALL CONFORM TO THE REQUIREMENT FOR CLASS AAA CONCRETE OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION";
 - SUBJECT TO (Q) BELOW, A FLEXIBLE PIPE JOINT SHALL BE PROVIDED WITHIN THE FOLLOWING DISTANCES FROM ANY MANHOLE CONNECTION:
 - WITHIN 48-INCHES FOR REINFORCED CONCRETE (RC) PIPE; AND
 - WITHIN 60-INCHES FOR PVC PIPE LARGER THAN 15-INCH DIAMETER;
 - NO FLEXIBLE JOINT SHALL BE REQUIRED FOR D.I. PIPE OR FOR PVC PIPE UP THROUGH 15-INCH DIAMETER; AND
 - WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED IN LIEU OF A CONE SECTION, PROVIDED THE SLAB HAS AN ECCENTRIC ENTRANCE OPENING AND IS CAPABLE OF SUPPORTING H-20 LOADS.
- MANHOLE TESTING:
 - MANHOLES SHALL BE TESTED FOR LEAKAGE USING A VACUUM TEST.
 - THE MANHOLE VACUUM TEST SHALL CONFORM TO THE FOLLOWING:
 - THE INITIAL VACUUM GAUGE TEST PRESSURE SHALL BE 10 INCHES Hg; AND
 - THE MINIMUM ACCEPTABLE TEST HOLD TIME FOR A 1-INCH Hg PRESSURE DROP TO 9 INCH Hg SHALL BE:
 - NOT LESS THAN 2 MINUTES FOR MANHOLES LESS THAN 10 FEET DEEP IN DEPTH;
 - NOT LESS THAN 2.5 MINUTES FOR MANHOLES 10 TO 15 FEET DEEP; AND
 - NOT LESS THAN 3 MINUTES FOR MANHOLES MORE THAN 15 FEET DEEP.
 - THE MANHOLE SHALL BE REPAIRED AND RETESTED IF THE TEST HOLD TIMES FAIL TO ACHIEVE THE ACCEPTANCE LIMITS SPECIFIED IN (B) ABOVE.
 - FOLLOWING COMPLETION OF THE LEAKAGE TEST, THE FRAME AND COVER SHALL BE PLACED ON THE TOP OF THE MANHOLE OR SOME OTHER MEANS USED TO PREVENT ACCIDENTAL ENTRY BY UNAUTHORIZED PERSONS, CHILDREN OR ANIMALS UNTIL THE CONTRACTOR IS READY TO MAKE FINAL ADJUSTMENTS TO GRADE.



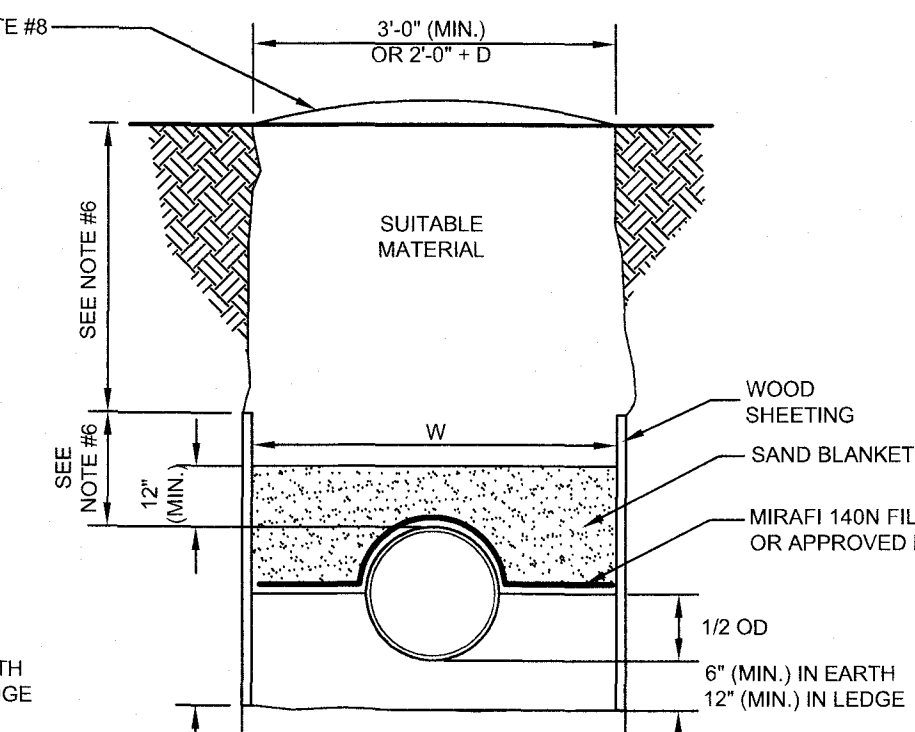
SANITARY SEWER MANHOLE
NOT TO SCALE



FOR CONSTRUCTION IN ROADS, ROAD SHOULDER AND WALKWAYS
NOTE: MINIMUM BEDDING DEPTH AND MAXIMUM PAYMENT DEPTH FOR LEDGE EXCAVATION: 1/4 O.D. (6" MIN.)



CROSS COUNTRY EARTH CONSTRUCTION

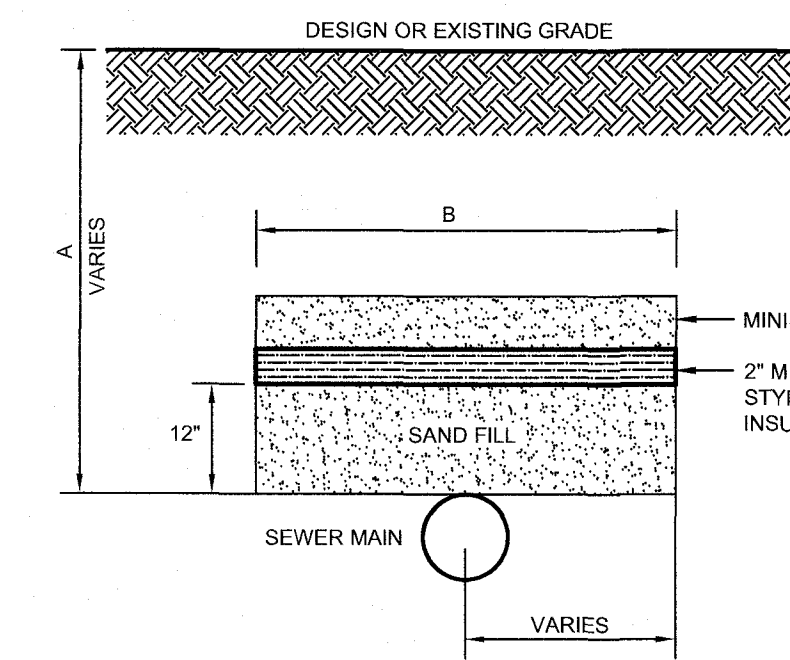


CROSS COUNTRY EARTH CONSTRUCTION WITH SHEETING

SANITARY SEWER & FORCEMAIN TRENCH DETAIL
NOT TO SCALE (MARCH 2008)

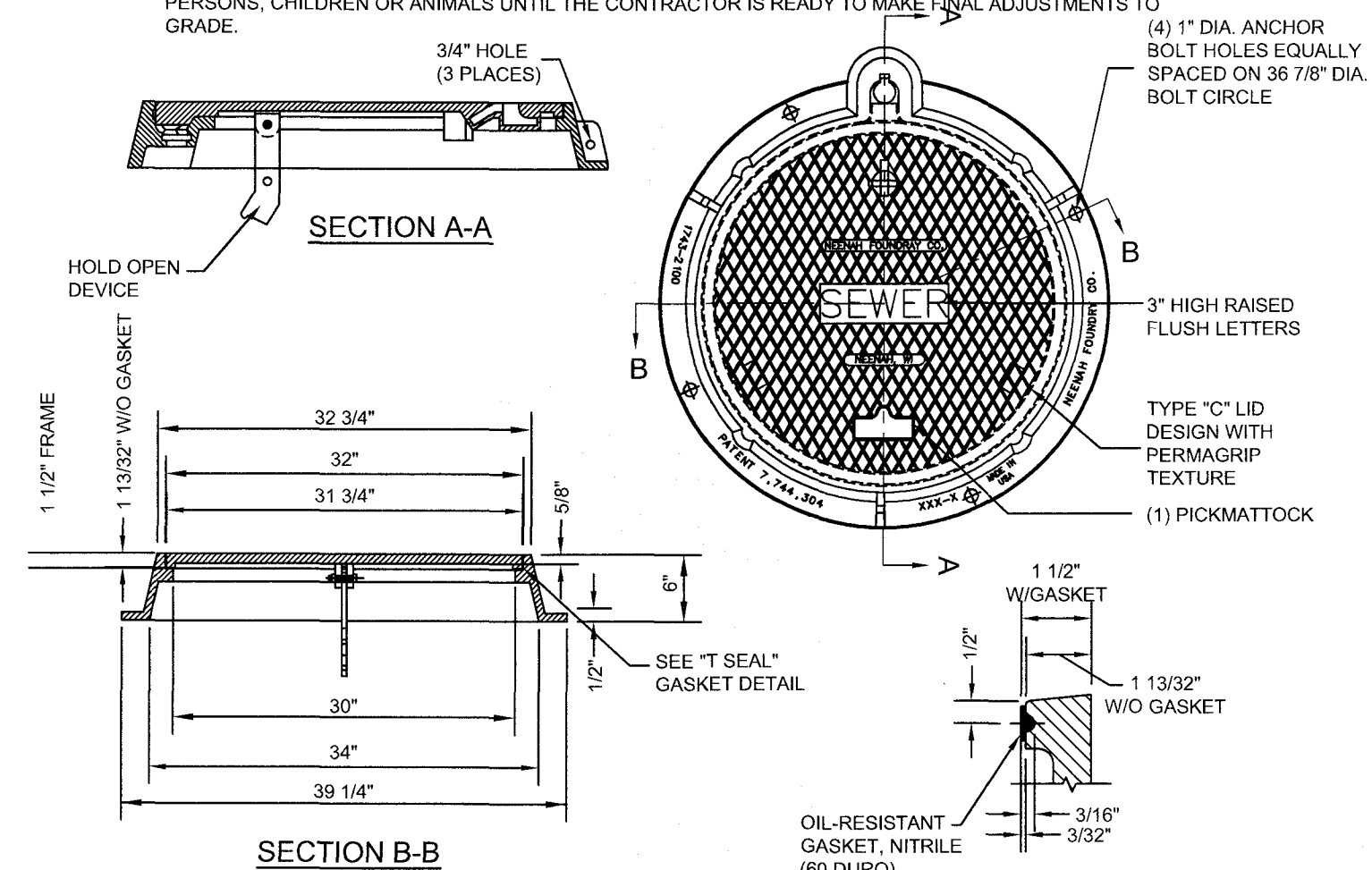
NOTES:

- ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE. REFILL WITH BEDDING MATERIAL. ALSO SEE NOTE #7.
- BEDDING: CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING ASTM C33-03 STONE SIZE NO. 67.
- 100% PASSING 1" INCH SCREEN
90 - 100% PASSING 3/4 INCH SCREEN
20 - 55% PASSING 3/8 INCH SCREEN
0 - 10% PASSING #4 SIEVE
0 - 5% PASSING #8 SIEVE
- WHERE ORDERED BY THE ENGINEER TO STABILIZE THE TRENCH BASE, GRADED CRUSHED STONE 1/2 INCH TO 1-1/2 INCHES SHALL BE USED.
- SAND BLANKET: GRADED CLEAN SAND FREE FROM ORGANIC MATTER, SO THAT 100% PASSES A 1/2 INCH SIEVE AND NOT MORE THAN 15% WILL PASS A # 200 SIEVE. BLANKET MAY BE OMITTED FOR CAST IRON, DUCTILE IRON AND REINFORCED CONCRETE PIPE PROVIDED, HOWEVER, THAT NO STONE LARGER THAN 2 INCHES IS IN CONTACT WITH THE PIPE.
- MIRAFI 140 N FILTER FABRIC, OR APPROVED EQUAL, SHALL BE INSTALLED ABOVE PIPE.



SEWER MAIN INSULATION DETAIL
NOT TO SCALE

- W = MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES. FOR PIPES GREATER THAN 15 INCHES NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE O.D. W SHALL ALSO BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.
- FOR CROSS COUNTRY CONSTRUCTION, BACKFILL OR FILL SHALL BE MOUND TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
- NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES DESIGN STANDARDS REQUIRE 10 FEET OF SEPARATION BETWEEN WATER AND SEWER. HOWEVER, SHOULD CONSTRUCTION REVEAL OR EXPOSE A WATERLINE (MAIN OR SERVICE) RUNNING APPROXIMATELY PARALLEL, AND LESS THAN 10 FEET HORIZONTALLY FROM THE PROPOSED SEWER INSTALLATION AND WHERE IT IS NOT PRACTICAL TO RELOCATE THE SEWER, A DEVIATION MAY BE GRANTED PROVIDED THAT THE SEWER IS CONSTRUCTED IN ACCORDANCE WITH THE FORCE MAIN CONSTRUCTION REQUIREMENT SPECIFIED BELOW:
 - FORCEMAINS SHALL BE CONSTRUCTED FROM DUCTILE IRON, HIGH DENSITY POLYETHYLENE, OR PVC PER ENV-WQ 704.06(a).
 - PVC SHALL CONFORM TO ASTM D2241-05 OR ASTM D1785-05 HDPE SHALL CONFORM TO ASTM D3035-03a.
 - IT SHALL BE CORROSION PROTECTED IN CORROSIVE ENVIRONMENTS.
- WHERE WATER LINES AND SEWER LINES CROSS, THEY SHOULD CROSS AS PERPENDICULAR AS POSSIBLE AND THE WATER MAIN SHALL CROSS AT LEAST 18" INCHES ABOVE THE SEWER. FURTHER, THE SEWER JOINTS SHALL BE LOCATED AT LEAST 6 FEET HORIZONTALLY FROM THE WATER MAIN.
- ALL SEWERS AT 8 PERCENT SLOPE, OR GREATER, SHALL HAVE IMPERVIOUS TRENCH DAMS CONSTRUCTED EVERY 300 FEET.
- UNLESS OTHERWISE NOTED, ALL GRANULAR MATERIAL SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO 95% OF THE MODIFIED PROCTOR TEST.
- WHERE WATER MAINS CROSS UNDER SEWER MAINS, BOTH THE SEWER AND WATER MAINS SHALL BE PRESSURE RATED PIPE PER ENV-WQ 704.06 AND TESTED PER AWWA C600-05 AT 1.5 TIMES DESIGN PRESSURE OR 100 PSI, WHICHEVER IS GREATER, WITH NO JOINTS WITHIN 9 FEET OF THE CROSSING POINT AND 18" MINIMUM VERTICAL SEPARATION.
- GRAVITY PIPE SEWER TESTING:
 - ALL NEW GRAVITY SEWERS SHALL BE TESTED FOR WATER TIGHTNESS BY THE USE OF LOW-PRESSURE AIR TESTS.
 - LOW-PRESSURE AIR TESTING SHALL BE IN CONFORMANCE WITH:
 - ASTM F1417-92(2005) "STANDARD TEST METHOD FOR INSTALLATION ACCEPTANCE OF PLASTIC GRAVITY SEWER LINES USING LOW-PRESSURE AIR;" OR
 - UNBELL PVC PIPE ASSOCIATION UNI-6-6, "LOW-PRESSURE AIR TESTING OF INSTALLED SEWER PIPE" (1998).
 - ALL NEW GRAVITY SEWERS SHALL BE CLEANED AND VISUALLY INSPECTED AND SHALL BE TRUE TO LINE AND GRADE FOLLOWING INSTALLATION AND PRIOR TO USE.
 - ALL PLASTIC SEWER PIPE SHALL BE DEFLECTION TESTED NOT LESS THAN 30 DAYS FOLLOWING INSTALLATION.
 - THE MAXIMUM ALLOWABLE DEFLECTION OF FLEXIBLE SEWER PIPE SHALL BE 7-1/2 PERCENT OF AVERAGE INSIDE DIAMETER.



- NOTES:**
- SPECIFICATIONS:
 - MEETS H-20 LOADING REQUIREMENTS
 - COMPONENT #: FRAME 1743-2100, LID 1743-5317
 - MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B
 - FINISH: NO PAINT
 - WEIGHT: FRAME 149#, LID 162#

SEWER MANHOLE FRAME AND LID DETAIL

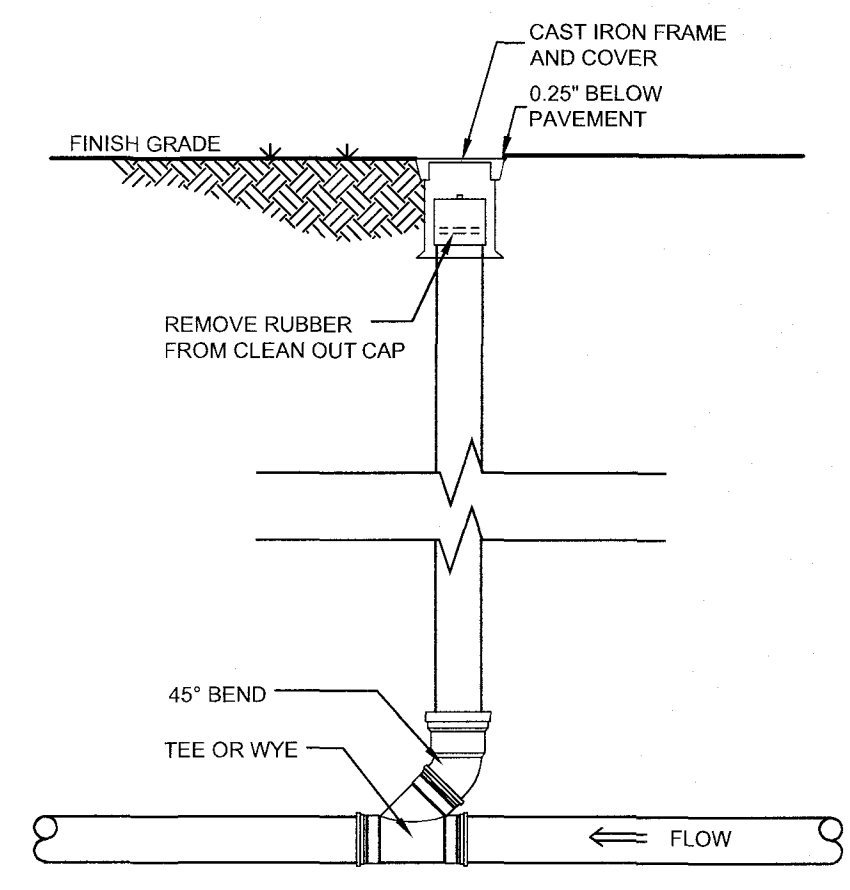
PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEARS FROM THE DATE OF APPROVAL

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

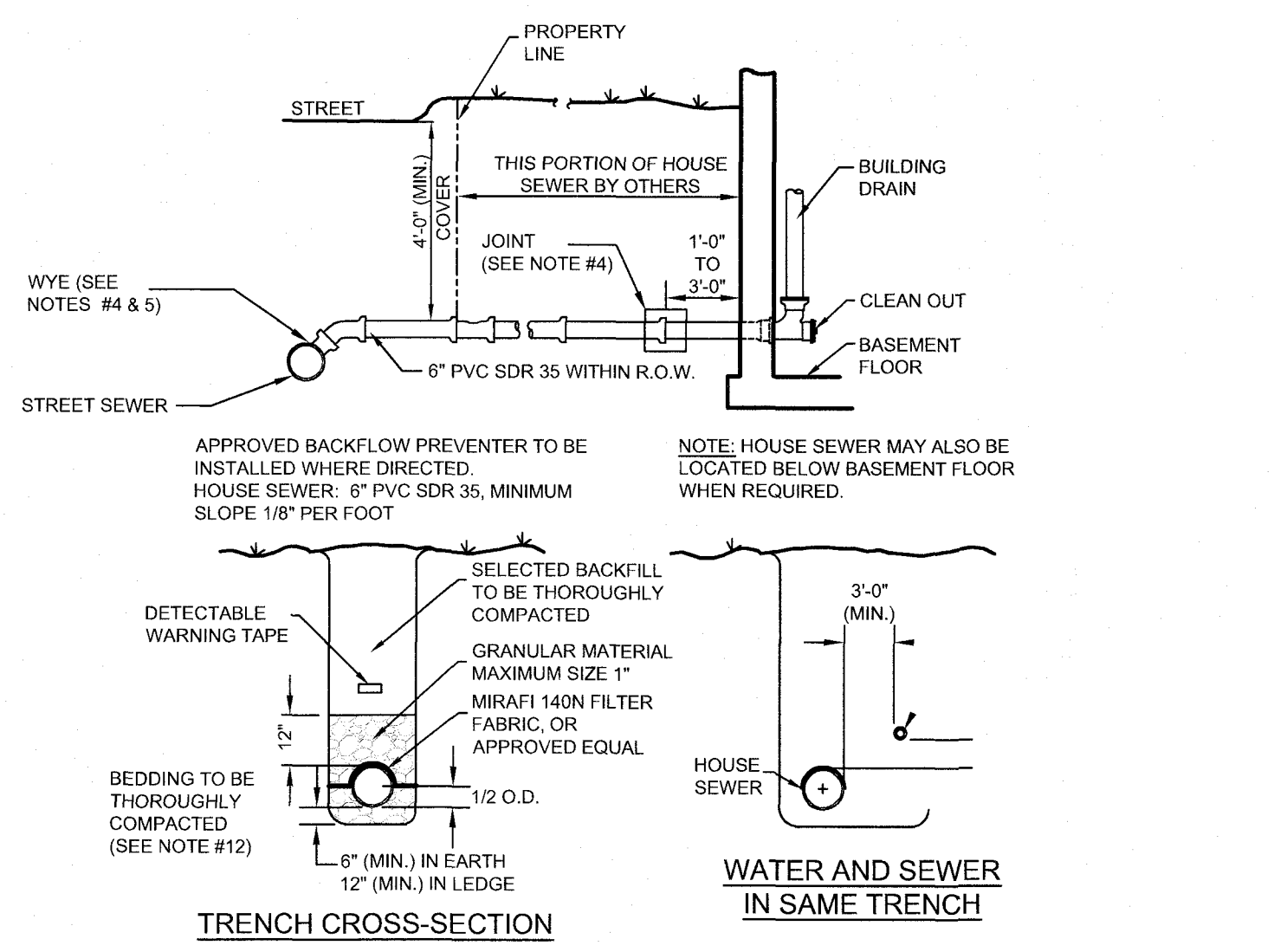
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SIGNATURE DATE: _____

SITE PLANS ARE VALID FOR TWO YEARS 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.



CLEANOUTS ON SERVICE LATERALS (4" OR 6")
NOT TO SCALE (MARCH 2008)



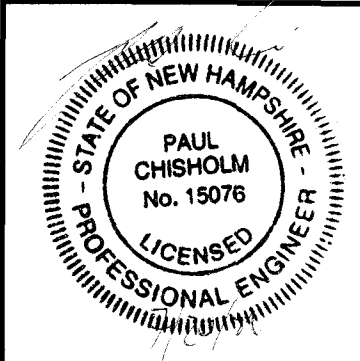
SANITARY SEWER SERVICE DETAIL
NOT TO SCALE

CONSTRUCTION DETAILS
HERITAGE LANDING

MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
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OWNER/APPLICANT:
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REVISIONS			
No.	DATE	DESCRIPTION	BY
1	7/12/21	REVISED PER TOWN COMMENTS	ACL

DATE: JUNE 1, 2021 SCALE: AS SHOWN
PROJECT NO: 20-1001-1 SHEET 27 OF 29

TURF ESTABLISHMENT SCHEDULE

PURPOSE:
TO ESTABLISH AND MAINTAIN PERMANENT AND TEMPORARY TURF AREAS, RESTORE GROWTH TO EXISTING TURF AREAS DISTURBED DURING CONSTRUCTION AND CONTROL SOIL EROSION.

PREPARATION AND EXECUTION:

- RAKE THE SUBGRADE OF ALL AREAS TO BE LOAMED AND SEEDED TO REMOVE RUBBISH, STICKS, ROOTS AND STONES LARGER THAN 1 INCH.
- PLACE LOAM OVER AREAS TO BE SEEDED AND SPREAD.
- A FINE GRADE SURFACE AND SUPPLEMENT WITH SUITABLE LOAM WHERE NEEDED TO CREATE A UNIFORM SLOPE ACCORDING TO THE FINISH GRADES INDICATED. TOP AND BOTTOM OF SLOPES SHALL BE ROUNDED. NO LOAM SHALL BE SPREAD IF THE SUBGRADE IS EXCESSIVELY WET OR FROZEN.
- IF THE pH OF THE SOIL NEEDS TO BE RAISED, APPLY LIME EVENLY OVER LOAM SURFACE AND THOROUGHLY INCORPORATE LIME INTO THE LOAM BY HEAVY RAKING TO AT LEAST ONE-HALF THE DEPTH OF THE LOAM.
- APPLY FERTILIZER AND MIX WITH THE UPPER 2 INCHES OF LOAM.
- DETERMINE APPROPRIATE MIXTURE FOR AREA TO BE SEEDED BASED ON EXAMINATION OF PROJECT PLANS. UNIFORMLY SPREAD THE SEED BY BROADCASTING OR HYDROSEEDING. IF BROADCASTING, LIGHTLY RAKE INTO THE PREPARED SURFACE AND ROLL. IF HYDROSEEDING, USE 4 TIMES THE RECOMMENDED RATE OF INOCULANT. AFTER SEED IS SPREAD, WATER THOROUGHLY WITH A FINE SPRAY.
- SEEDING AND INITIAL FERTILIZING SHALL BE DONE BETWEEN APRIL 1 AND JUNE 1 OR BETWEEN AUGUST 1 AND OCTOBER 14, OR AS PERMITTED. SEEDING SHALL NOT BE DONE DURING WINDY WEATHER OR WHEN THE GROUND IS FROZEN, EXCESSIVELY WET OR OTHERWISE UNTILLABLE.
- WITHIN 24 HOURS AFTER SEEDING OPERATION, UNIFORMLY MULCH THE AREA WITH STRAW. ANCHOR MULCH ON ALL SLOPES EXCEEDING 3:1 USING MULCH NETTING INSTALLED IN ACCORDANCE WITH THE MANUFACTURER.
- PROTECT AND PREVENT AGAINST WASHOUTS, ANY WASHOUTS WHICH OCCUR SHALL BE PROMPTLY REGRADED AND RESEEDED.
- WHEN IT IS IMPRACTICAL TO ESTABLISH PERMANENT GROWTH ON DISTURBED EARTH BY OCTOBER 14, A TEMPORARY SEED MIXTURE SHALL BE USED. WHEN TEMPORARY SEEDING CANNOT ESTABLISH VISIBLE GROWTH, THE DISTURBED AREA SHALL BE COVERED WITH SIX INCHES OF MULCH FOR THE WINTER.

MAINTENANCE:

ALL SEEDED AREAS SHALL BE KEPT WATERED AND IN GOOD CONDITION. RESEED AS NECESSARY TO ESTABLISH HEALTHY UNIFORM GROWTH OVER THE ENTIRE SEEDED AREA. MAINTAIN SEEDED AREAS IN AN APPROVED CONDITION UNTIL FINAL ACCEPTANCE. MAINTENANCE SHALL INCLUDE REPAIRS FOR DAMAGE CAUSED BY EROSION.

APPLICATION RATES:

- LOAM SHALL BE APPLIED AT A MINIMUM COMPACTED THICKNESS OF 4 INCHES.
- LIME SHALL BE USED WHEN NECESSARY TO RAISE THE pH OF THE SOIL AND APPLIED AT ONE OF THE FOLLOWING RATES:

EXISTING SOIL Ph	TONS/ACRE	POUNDS/CUBIC YARD
4.0 - 4.4	3	1.2
4.5 - 4.9	2	0.8
5.0 - 5.4	1	0.4

FERTILIZER SHALL BE APPLIED AT THE FOLLOWING RATE:

INITIAL APPLICATION	POUNDS/1,000 SF	MEASUREMENT FACTOR
10-10-10	20.0	1.0
15-15-15	13.4	1.5
19-19-19	10.5	1.9

REFERTILIZATION	POUNDS/1,000 SF	MEASUREMENT FACTOR
10-3-6	20.0	1.0
12-2-8	16.7	1.2
12-4-8	16.7	1.2

MULCH SHALL BE APPLIED AT A RATE OF 13 CUBIC YARDS PER 1,000 S.F. OF LANDSCAPE BED.

MATERIALS:

- LOAM SHALL CONSIST OF LOOSE, FRAGILE TOPSOIL WITH NO ADMIXTURE OF REFUSE OR MATERIAL TOXIC TO PLANT GROWTH. LOAM SHALL BE FREE OF VIABLE PARTS OF PROHIBITED INVASIVE PLANTS AND BE GENERALLY FREE OF STONES, LUMPS, STUMPS AND SIMILAR OBJECTS LARGER THAN 2 INCHES IN GREATEST DIAMETER, SUBSOIL, ROOTS AND WEEDS. THE MINIMUM AND MAXIMUM pH VALUE SHALL BE FROM 5.5 TO 7.6.
- LIME SHALL BE A CALCIUM OR DOLOMITIC GROUND AGRICULTURAL LIMESTONE CONTAINING NOT LESS THAN 95% OF EITHER CALCIUM OR MAGNESIUM CARBONATE, OR BOTH. IT SHALL CONFORM TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS AND SHALL COMPLY WITH ALL STATE AND FEDERAL RULES AND REGULATIONS.
- FERTILIZER SHALL BE STANDARD COMMERCIAL GRADE FERTILIZER CONFORMING TO ALL STATE AND FEDERAL RULES AND REGULATIONS AND TO THE STANDARDS OF THE ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS. EXCEPT AS PERMITTED, THE ANALYSIS RATIO SHALL BE 1:1:1 FOR INITIAL APPLICATION AND 3:1:2 FOR REFERTILIZATION APPLICATION.
- GRASS SEED SHALL MEET THE REQUIREMENTS OF THE NEW HAMPSHIRE AGRICULTURAL AND VEGETABLE SEED LAWS AND SHALL INCLUDE NO "PRIMARY NOXIOUS WEED SEEDS."
- SEED MIXTURE FOR LAWN AREAS SHALL CONSIST OF THE FOLLOWING:

KIND OF SEED	MINIMUM PURITY (%)	MINIMUM GERMINATION (%)	POUNDS/ACRE (TOTAL 120 POUNDS)
CREeping RED FESCUE	96	85	40
PERENNIAL RYEGRASS	98	90	50
REDTOP	95	80	25
ALSIKE CLOVER	97	90	5
BIRDSFOOT TREFOIL	98	80	5
LANCE-LEAVED COREOPSIS	95	80	4
OXEYE DAISY	95	80	3
BLACKEYED SUSAN	95	80	4
WILD LUPINE	95	80	4

SEED MIXTURE FOR SLOPE AREAS SHALL CONSIST OF THE FOLLOWING:

KIND OF SEED	MINIMUM PURITY (%)	MINIMUM GERMINATION (%)	POUNDS/ACRE (TOTAL 95 POUNDS)
CREeping RED FESCUE	96	85	35
PERENNIAL RYEGRASS	98	90	30
REDTOP	95	80	5
ALSIKE CLOVER	97	90	5
BIRDSFOOT TREFOIL	98	80	5
LANCE-LEAVED COREOPSIS	95	80	4
OXEYE DAISY	95	80	3
BLACKEYED SUSAN	95	80	4
WILD LUPINE	95	80	4

WINTER CONSTRUCTION NOTES:

- ALL PROPOSED POST-DEVELOPMENT VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 4:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE PLACEMENT OF EROSION CONTROL BLANKETS AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
- ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
- AFTER OCTOBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3, OR, IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON, BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT.
- AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
 - BASE COURSE GRAVELS ARE INSTALLED IN AREAS TO BE PAVED.
 - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
 - A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED; OR
 - EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

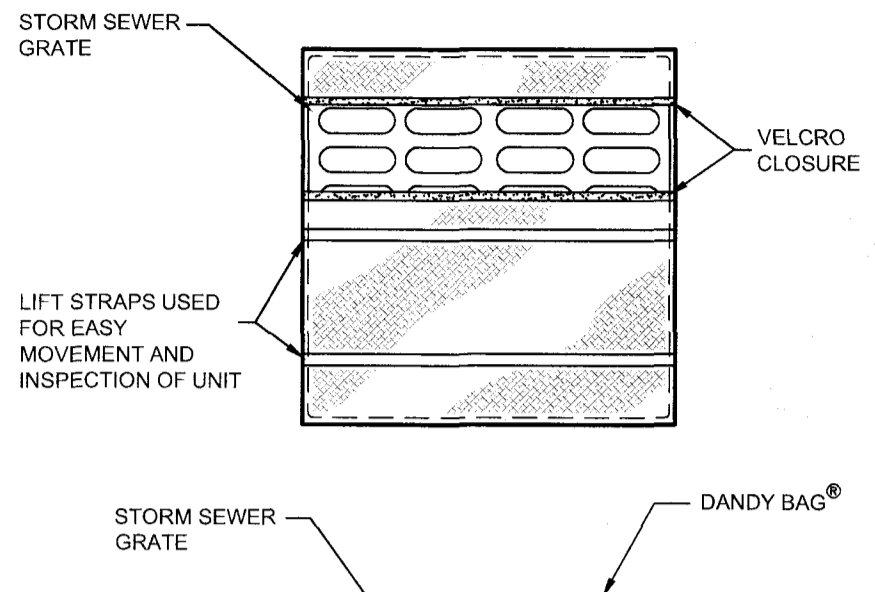
APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING: _____

SIGNATURE DATE: _____

SIGNATURE DATE: _____

SITE PLANS ARE VALID FOR TWO YEARS 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.

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



HI-FLOW DANDY BAG® (SAFETY ORANGE)

MECHANICAL PROPERTIES	TEST METHOD	UNITS	MARV
GRAB TENSILE STRENGTH	ASTM D 4632	kN (lbs)	1.62 (365) x 0.89 (200)
GRAB TENSILE ELONGATION	ASTM D 4632	%	24 x 10
PUNCTURE STRENGTH	ASTM D 4833	kN (lbs)	0.40 (90)
MULLEN BURST STRENGTH	ASTM D 3786	kPa (psi)	3097 (450)
TRAPEZOID TEAR STRENGTH	ASTM D 4533	kN (lbs)	0.51 (115) x 0.33 (75)
UV RESISTANCE	ASTM D 4355	%	90
APPARENT OPENING SIZE	ASTM D 4751	Mm (US Std Sieve)	0.425 (40)
FLOW RATE	ASTM D 4491	1/min/m ² (gal/min/ft ²)	5907 (145)
PERMITTIVITY	ASTM D 4491	Sec ⁻¹	2.1

DANDY BAG®
NOT TO SCALE
(APRIL 2010)

- TEMPORARY SEEDING MIXTURE SHALL BE APPLIED AT A RATE OF 2 POUNDS PER 1,000 SF AND SHALL BE AN APPROVED CONSERVATION MIX OR CONSIST OF THE FOLLOWING:
 - 15% BLACKWELL OR SHELTER SWITCHGRASS
 - 30% NIAGRA OR KAW BIG BLUESTEM
 - 30% CAMPER OR BLAZE LITTLESTEM
 - 15% NE-27 OR BLAZE SAND LOVEGRASS
 - 10% VIKING BIRDSFOOT TREFOIL

- SEED MIXTURE FOR STORMWATER MANAGEMENT AREAS, INCLUDING DETENTION BASINS AND VEGETATED TREATMENT SWALES, SHALL BE APPLIED AT A RATE OF 70 POUNDS PER ACRE OR 1.6 POUNDS PER 1,000 SF, AND SHALL CONSIST OF THE FOLLOWING:
 - 25% CREEPING RED FESCUE
 - 15% SWITCH GRASS
 - 15% FOX SEDGE
 - 15% CREEPING BENTGRASS
 - 10% FLATPEA
 - 20% WILDFLOWER VARIETY
- STRAW USED FOR MULCH SHALL CONSIST OF MOWED AND PROPERLY CURED GRASS OR LEGUME MOWINGS, FREE FROM WEEDS, TWIGS, DEBRIS, INVASIVE SPECIES OR OTHER DELETERIOUS MATERIAL AND ROT OR MOLD.

SOD SPECIFICATIONS:

- SOD SHALL BE PROVIDED WITH A STRONG ROOT SYSTEM, NOT LESS THAN TWO YEARS OLD AND SHALL BE FREE OF ANY UNDESIRABLE NATIVE GRASSES OR WEEDS.
- SOD SHALL BE MACHINE CUT TO A THICKNESS NOT LESS THAN 3/4", EXCLUDING THATCH, AND SHALL BE CAPABLE OF VIGOROUS GROWTH WHEN PLANTED.
- SOD PADS SHALL BE OF UNIFORM SIZE AND COMPOSED OF AT LEAST TWO LOCAL GRASS VARIETIES.
- LAY SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS, DO NOT OVERLAP. STAGGER STRIPS TO OFFSET JOINTS IN ADJACENT COURSES. TAMP SOD TO ENSURE CONTACT WITH WITH SOIL.
- WATER WITHIN ONE HOUR OF PLANTING WITH A FINE SPRAY.

MAINTENANCE:

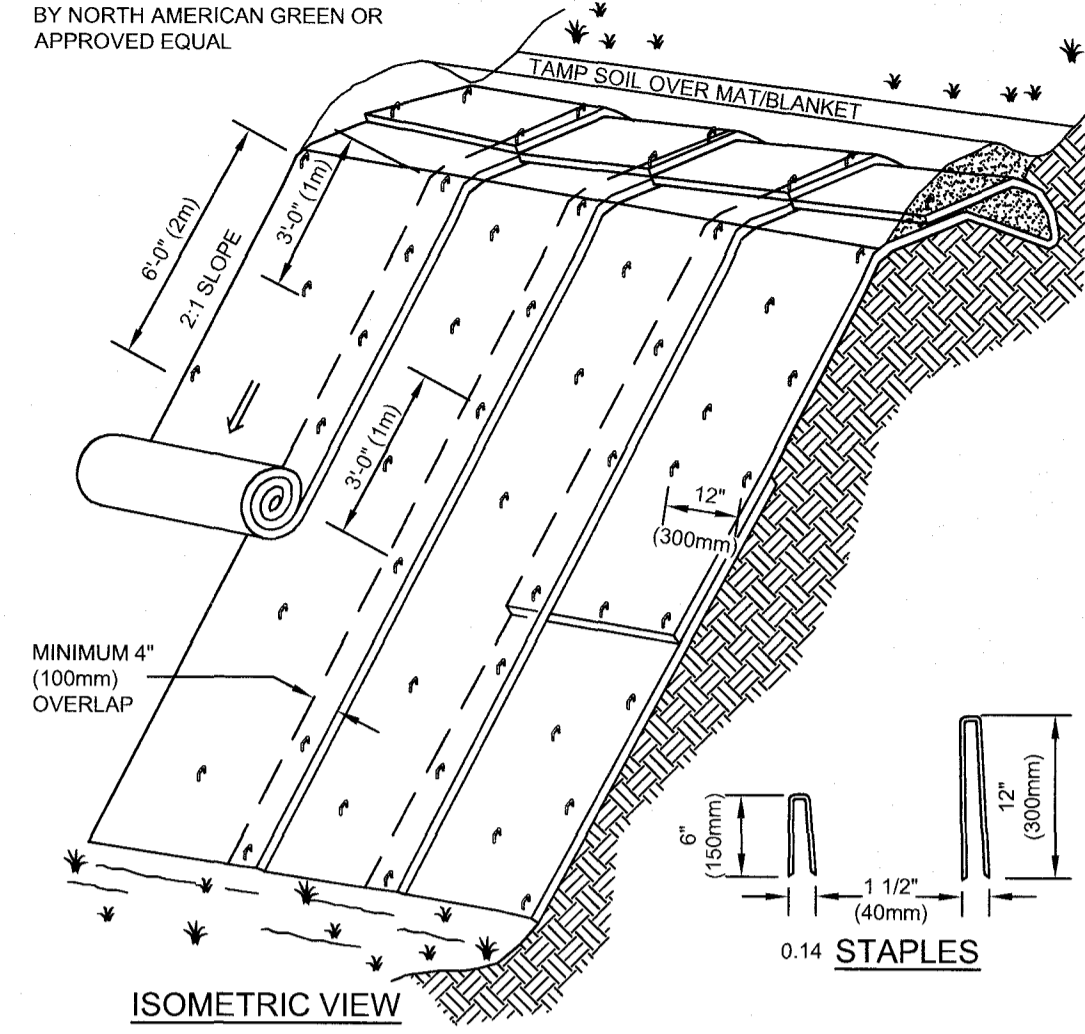
MUD AND SOIL PARTICLES WILL EVENTUALLY CLOG THE VOIDS IN THE CRUSHED STONE AND THE EFFECTIVENESS OF THE CRUSHED STONE PAD WILL NOT BE SATISFACTORY. WHEN THIS OCCURS, THE PAD SHOULD BE TOPRESSED WITH NEW CRUSHED STONE OR COMPLETE REPLACEMENT OF THE PAD MAY BE NECESSARY WHEN THE PAD BECOMES COMPLETELY CLOGGED.

IF WASHING FACILITIES ARE USED, THE SEDIMENT TRAPS SHOULD BE CLEANED OUT AS OFTEN AS NECESSARY TO ASSURE THAT ADEQUATE TRAPPING EFFICIENCY AND STORAGE VOLUME IS AVAILABLE. VEGETATIVE FILTER STRIPS SHOULD BE MAINTAINED TO INSURE A VIGOROUS STAND OF VEGETATION AT ALL TIMES.

CONSTRUCTION SPECIFICATIONS:

- STONE FOR A STABILIZED CONSTRUCTION EXIT SHALL BE 1 TO 2 INCH STONE, RECLAIMED STONE OR RECYCLED CONCRETE EQUIVALENT.
- THE LENGTH OF THE STABILIZED EXIT 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 EXIT SHALL NOT BE LESS THAN 6 INCHES.
- THE WIDTH OF THE EXIT SHALL NOT BE LESS THAN THE FULL WIDTH OF THE AREA WHERE INGRESS OR EGRESS OCCURS OR 10 FEET, WHICHEVER IS GREATER.
- GEOTEXTILE FILTER CLOTH SHALL BE LAYERED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE. FILTER CLOTH IS NOT REQUIRED FOR A SINGLE FAMILY LOT OR DUPLEX.
- ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION EXIT SHALL BE PIPED BENEATH THE EXIT. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
- THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOPPRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF 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.

MATS/BLANKETS SHOULD BE INSTALLED VERTICALLY DOWN SLOPE AND SHALL BE DOUBLE NET STRAW BLANKETS BY NORTH AMERICAN GREEN OR APPROVED EQUAL

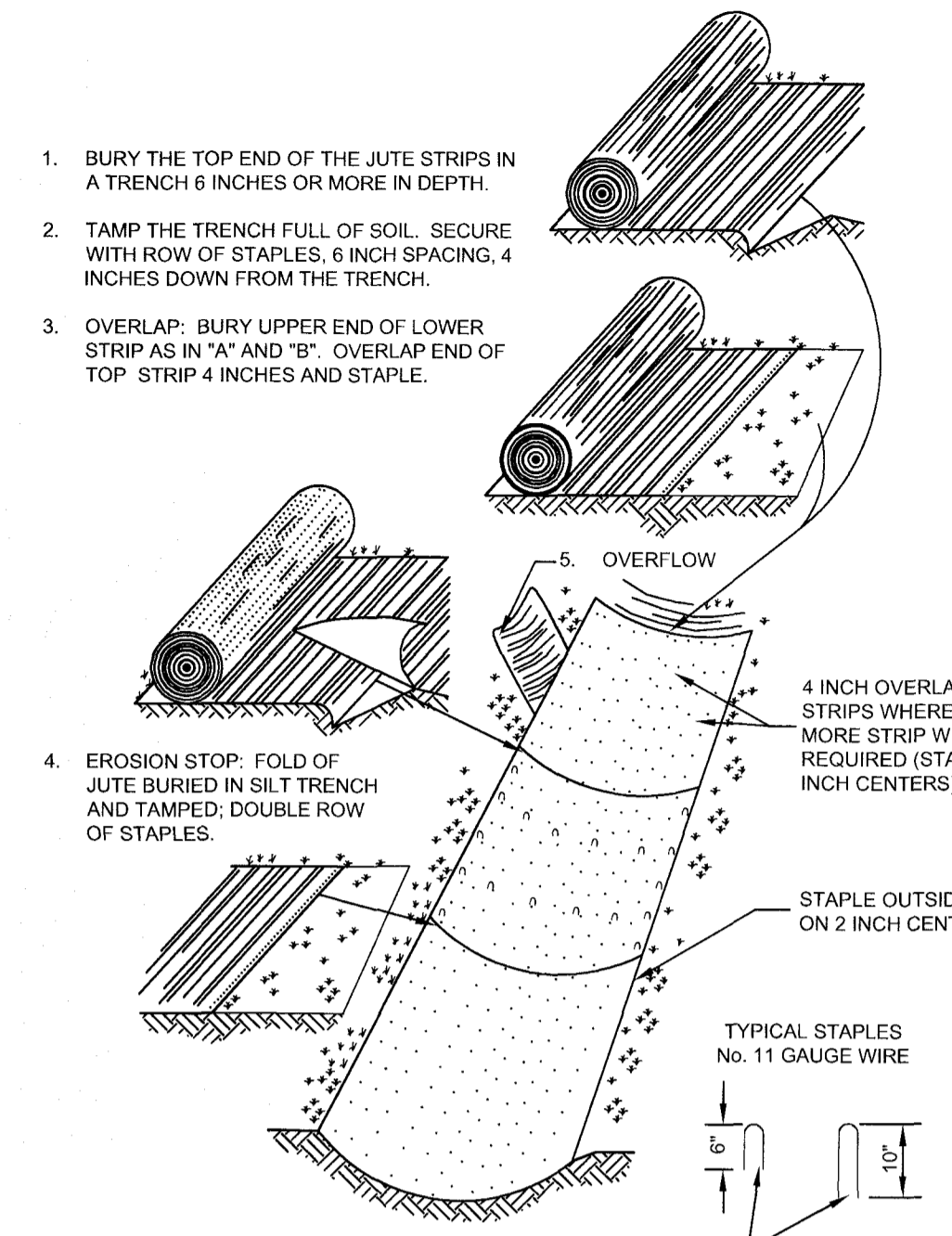


NOTES:

- SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
- APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
- LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

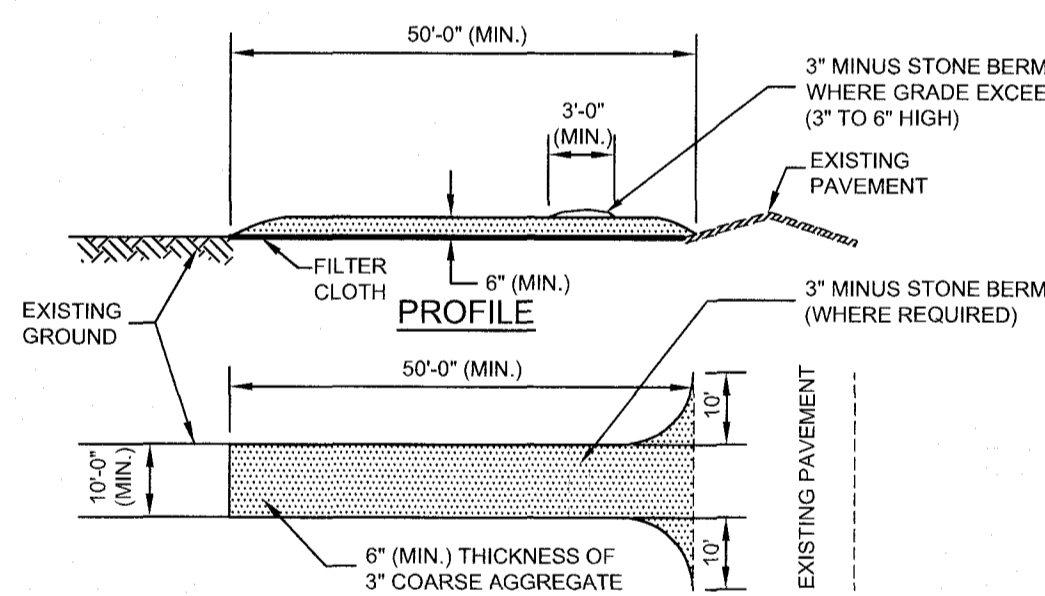
EROSION CONTROL BLANKETS - SLOPE INSTALLATION

NOT TO SCALE
(AUGUST 2011)



EROSION CONTROL BLANKETS - SWALE INSTALLATION

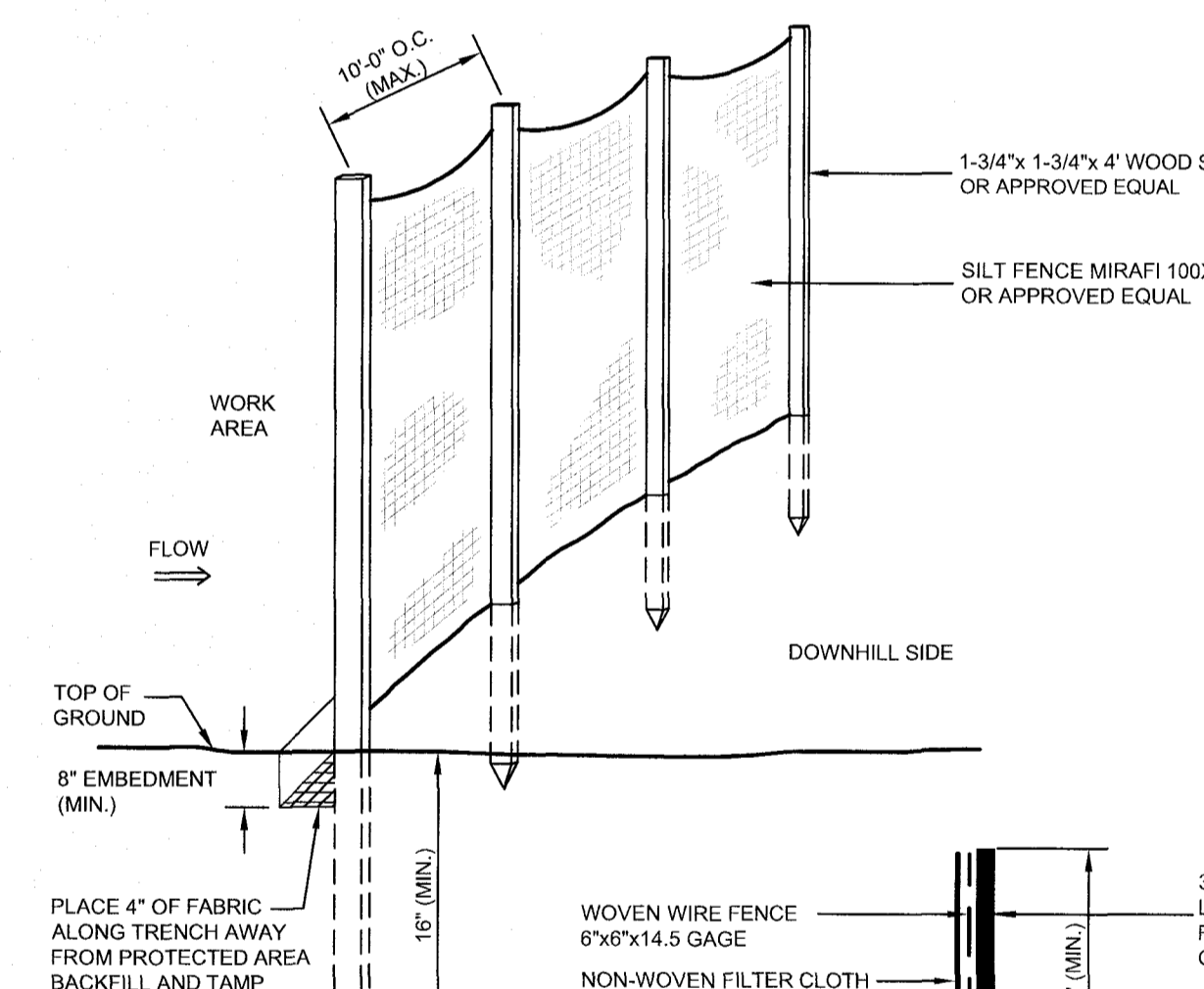
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PLAN VIEW

STABILIZED CONSTRUCTION EXIT DETAIL

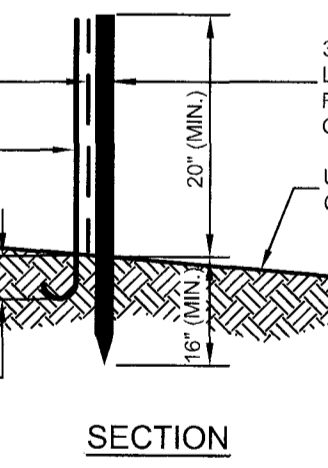
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(APRIL 2018)



PERSPECTIVE VIEW

SILT FENCE DETAIL

NOT TO SCALE



SECTION

CONSTRUCTION SPECIFICATIONS:

- THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.
- THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 8 INCHES INTO THE GROUND AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
- WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIE OR STAPLES WHERE NOTED OR AS DIRECTED BY DESIGN ENGINEER.
- FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MIDSECTION AND BOTTOM.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED.
- FENCE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG AND DRIVEN A MINIMUM OF 16 INCHES INTO THE GROUND. WOOD POSTS SHALL BE OF SOUND QUALITY HARDWOOD AND SHALL HAVE A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

MAINTENANCE:

- 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.
- IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
- 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.
- 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 SEQUENCE

- CONTRACTOR TO NOTIFY DIG-SAFE 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- PRIOR TO GRUBBING OF CLEARED AREAS, ALL SILTATION BARRIERS DESIGNED FOR USE AS TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED AS CALLED FOR ON PROJECT PLANS. INSTALL STABILIZED CONSTRUCTION EXIT AT LOCATION OF CONSTRUCTION ACCESS AT LOCATION OF INTERSECTION WITH EXISTING PAVEMENT.
- CUT AND CLEAR TREES AND BRUSH FROM CONSTRUCTION AREAS TO THE EXTENT NECESSARY. ALL BRANCHES, TOPS AND BRUSH TO BE PROPERLY DISPOSED OF BY CONTRACTOR. THIS PROJECT IS MANAGED TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.
- COMPLETE GRUBBING OPERATIONS UNDER THE ROADWAY AND SLOPE SECTIONS. ALL STUMPS AND SIMILAR DEBRIS SHALL BE PROPERLY DISPOSED OF BY CONTRACTOR. ORGANIC MATERIAL SUITABLE FOR USE AS TOPSOIL SHALL BE STOCKPILED IN UPLAND AREAS. ALL STOCKPILES SHALL BE SEEDED WITH WINTER RYE AND, IF NECESSARY, SURROUNDED WITH HAY BALES IN ORDER TO PREVENT LOSS DUE TO EROSION.
- CONSTRUCT TEMPORARY CULVERTS AS NECESSARY TO FACILITATE CONSTRUCTION ACTIVITIES. ALL SUCH CROSSINGS SHALL BE PROTECTED WITH HAY BALE BARRIERS TO LIMIT EROSION. RUNOFF MUST BE DIRECTED TO TEMPORARY PRACTICES UNTIL STORMWATER BEST MANAGEMENT PRACTICES ARE STABILIZED.
- DO NOT DIRECT RUNOFF TO TREATMENT SWALES UNTIL THE SWALES AND ALL CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
- STABILIZE ALL DITCHLINES PRIOR TO DIRECTING FLOW INTO THEM, CONSTRUCT DRAINAGE SYSTEM, SEWER AND OTHER SUBSURFACE UTILITIES.
- PONDS/SWALES MUST BE INSTALLED BEFORE ROUGH GRADING OF THE SITE.
- COMMENCE CONSTRUCTION OF ROADWAY, PERFORM EXCAVATION ACTIVITIES REQUIRED TO ACHIEVE SUBGRADE ELEVATION. ALL EXCAVATED EMBANKMENTS, DITCHES, SWALES AND ROADWAY CROSS CULVERTS SHALL BE INSTALLED AND STABILIZED. ALL SWALES AND DITCHLINES SHALL BE PROTECTED FROM EROSION BY IMPLEMENTATION OF HAY BALE SILTATION FENCES AS SHOWN ON PROJECT PLANS. DIVERT STORMWATER RUNOFF THROUGH THE USE OF TEMPORARY CULVERTS, OR OTHER MEANS NECESSARY PRIOR TO THE COMPLETION OF A FUNCTIONAL STORM DRAINAGE SYSTEM. SLOPES AND EMBANKMENTS SHALL BE STABILIZED BY TRACKING AND TEMPORARY SEEDING WITH WINTER RYE PRIOR TO TURF ESTABLISHMENT. ALL DITCHES AND SWALES SHALL BE STABILIZED PRIOR TO HAVING RUNOFF DIRECTED TO THEM. COMPLETE CONSTRUCTION OF ROADWAY EMBANKMENTS BY ADDING APPROPRIATE BASE MATERIALS GRADED TO PROPER ELEVATION.
- APPLY TOPSOIL TO ROADWAY SLOPES AND OTHER AREAS DISTURBED BY CONSTRUCTION. TOPSOIL USED MAY BE NATIVE ORGANIC MATERIAL SCREENED SO AS TO BE FREE OF ROOTS, BRANCHES, STONES AND OTHER DELETERIOUS MATERIALS. TOPSOIL SHALL BE APPLIED SO AS TO PROVIDE A MINIMUM OF A 4-INCH COMPACTED THICKNESS. UPON COMPLETION OF TOPSOILING, FINISHED SECTIONS ARE TO BE LIMED, SEEDED AND MULCHED. CONSTRUCTION PERSONNEL SHALL INSPECT COMPLETED SECTIONS OF WORK ON A REGULAR BASIS AND REMEDY ANY PROBLEM AREAS UNTIL A HEALTHY STAND OF GRASS HAS BECOME ESTABLISHED.
- PERFORM FINE GRADING OF ROADWAY BASE MATERIALS.
- MAINTAIN, REPAIR AND REPLACE AS NECESSARY TEMPORARY EROSION CONTROL MEASURES UNTIL SUCH TIME AS THE ENTIRE CONSTRUCTION AREA HAS BEEN STABILIZED (A MINIMUM OF ONE WINTER SHALL HAVE PASSED).
- AFTER STABILIZATION, REMOVE AND SUITABLY DISPOSE OF TEMPORARY EROSION CONTROL MEASURES.
- MONITOR CONSTRUCTION ACTIVITIES ON INDIVIDUAL LOTS TO INSURE CONSTRUCTION ACTIVITIES ARE BEING PERFORMED IN SUCH A WAY AS NOT TO ENDANGER THE INTEGRITY OF ROADWAY EMBANKMENTS, STORMWATER SYSTEMS AND UTILITIES. ALL DRIVEWAYS ACROSS DITCHLINES SHALL HAVE CULVERTS INSTALLED IN ACCORDANCE WITH LOCAL REQUIREMENTS.
- LOT DISTURBANCE, OTHER THAN THAT SHOWN ON THE APPROVED PLANS, SHALL NOT COMMENCE UNTIL AFTER THE ROADWAY HAS THE BASE COURSE TO DESIGN ELEVATION AND THE ASSOCIATED DRAINAGE IS COMPLETE AND STABLE.
- PRIOR TO CONSTRUCTION A STORMWATER PROTECTION PLAN SHALL BE PREPARED PER FEDERAL REGULATIONS.
- SINCE THIS SITE WILL DISTURB MORE THAN 5 ACRES AT ONE TIME WEEKLY INSPECTION SHALL OCCUR, AS WELL AS DURING ANY RAIN EVENT IN WHICH 0.5 INCH OF PRECIPITATION OR MORE FALLS WITHIN A 24 HOUR PERIOD, PROVIDED THAT IF THE MONITOR IS UNABLE TO BE PRESENT DURING SUCH A STORM, THE MONITOR SHALL INSPECT THE SITE WITHIN 24 HOURS OF THE RAIN EVENT.
- A REPORT FOR EACH INSPECTION SHALL BE STAMPED BY A QUALIFIED ENGINEER OR A CPESC SPECIALIST AND SUBMITTED WITHIN 48 HOURS OF EACH INSPECTION.

EROSION CONTROL NOTES:

- EXPOSED EARTHWORK SHALL BE CONFINED TO AS LIMITED AN AREA AS IS PRACTICAL AT ANY GIVEN TIME THROUGHOUT THE CONSTRUCTION SEQUENCE. AT NO TIME SHALL MORE THAN FIVE (5) ACRES OF SITE AREA BE IN AN UNSTABLE CONDITION. NO GIVEN AREA OF THE SITE SHALL BE LEFT IN AN UNSTABILIZED CONDITION FOR A PERIOD OF TIME EXCEEDING THIRTY (30) CALENDAR DAYS.
- TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH PROJECT PLANS. IN ADDITION, SIMILAR MEASURES SHALL BE INSTALLED WHERE AND WHEN THE FIELD CONDITION, OR FIELD OPERATION OF THE INDIVIDUAL SITE CONTRACTOR, MAY WARRANT. ALL TEMPORARY EROSION CONTROL MEASURES USED SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER 0.25" OF RAINFALL OR MORE. THEY SHALL BE CLEANED AND MAINTAINED AND OTHERWISE KEPT IN AN EFFECTIVE OPERATING MANNER THROUGHOUT THE CONSTRUCTION PERIOD.
- ALL DISTURBED AREAS DESIGNATED TO BE TURF, SHALL RECEIVE A MINIMUM APPLICATION OF 4 INCHES OF LOAM (COMPACTED THICKNESS) PRIOR TO FINAL SEEDING AND MULCHING.
- ALL SWALES AND DITCHLINES SHALL BE PERIODICALLY CLEANED OF DEPOSITED SEDIMENT SO AS TO MAINTAIN AN EFFECTIVE GRADE AND CROSS SECTION. ALL SWALES AND DITCHLINES SHALL BE FULLY STABILIZED PRIOR TO HAVING STORMWATER DIRECTED TOWARDS THEM.
- IN THE EVENT THAT, DURING CONSTRUCTION OF ANY PORTION OF THIS PROJECT, A WINTER SHUTDOWN IS NECESSARY, THE CONTRACTOR SHALL STABILIZE ALL INCOMPLETE WORK AND PROVIDE FOR SUITABLE METHODS OF DIVERTING RUNOFF IN ORDER TO ELIMINATE SHEET FLOW ACROSS FROZEN SURFACES.
- AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
 - BASE COURSE GRAVELS ARE INSTALLED IN AREAS TO BE PAVED.
 - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
 - A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED; OR
 - EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- DUST SHALL BE CONTROLLED BY THE USE OF WATER AS NECESSARY THROUGHOUT THE CONSTRUCTION PERIOD, IN ACCORDANCE WITH ENR-A-1003.
- IN NO WAY ARE THESE TEMPORARY EROSION CONTROL MEASURES INDICATED ON THESE PLANS TO BE CONSIDERED ALL INCLUSIVE. THE CONTRACTOR SHALL USE JUDGEMENT IN INSTALLING SUPPLEMENTARY EROSION CONTROL MEASURES WHERE AND WHEN SPECIFIC SITE CONDITIONS AND/OR CONSTRUCTION METHODOLOGIES MAY WARRANT.
- AREAS HAVING FINISH GRADE SLOPES OF 3:1 OR STEEPER, SHALL BE STABILIZED WITH JUTE MATTING WHEN AND IF FIELD CONDITIONS WARRANT, OR IF SO ORDERED. JUTE MATTING INSTALLED TO CONFORM WITH THE RECOMMENDED BEST MANAGEMENT PRACTICE OUTLINED IN VOLUME 3 OF THE NEW HAMPSHIRE STORMWATER MANUAL. EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION SHALL BE COMPLETED PRIOR TO ANY EARTH MOVING ACTIVITIES THAT WILL INFLUENCE STORMWATER RUNOFF.
- ALL ROADWAYS AND PARKING AREAS SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- ALL CUT AND FILL SLOPES SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

CONSTRUCTION DETAILS HERITAGE LANDING

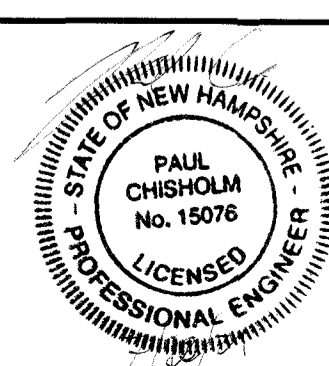
MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:

K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051

KM KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture

10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881



REVISIONS

No.	DATE	DESCRIPTION	BY
1	7/12/21	REVISED PER TOWN COMMENTS	ACL

DATE: JUNE 1, 2021 SCALE: AS SHOWN
PROJECT NO: 20-1001-1 SHEET 28 OF 29

TP #1
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE:
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 25"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/3 LOAM WEAK GRANULAR, VF
2"	A1	10YR 4/2 LOAM WEAK GRANULAR, VF
4"	A2	10 YR 4/4 SANDY LOAM WEAK GRANULAR, FRIABLE
7"	Bhs	10 YR 5/4 FINE SANDY LOAM WSBK, FRIABLE
18"	Bt	2.5 Y 6/4 FINE SANDY LOAM WSBK, FRIABLE ROCKS & STONES
25"	C1	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
37"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
63"	LEDGE N/A	

TP #2
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE:
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 28"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/3 LOAM WEAK GRANULAR, VF
2"	A1	10YR 4/2 LOAM WEAK GRANULAR, VF
4"	A2	10 YR 4/4 SANDY LOAM WEAK GRANULAR, FRIABLE
7"	Bhs1	10 YR 5/4 FINE SANDY LOAM WSBK, FRIABLE
20"	Bhs2	10YR 5/6 FINE SANDY LOAM WSBK, FRIABLE ROCKS & STONES
28"	C1	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
41"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
65"	LEDGE N/A	

TP #3
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE:
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 26"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/3 LOAM WEAK GRANULAR, VF
2"	A1	10YR 4/2 LOAM WEAK GRANULAR, VF
4"	A2	10 YR 4/4 SANDY LOAM WEAK GRANULAR, FRIABLE
14"	Bhs	10YR 5/6 FINE SANDY LOAM WSBK, FRIABLE ROCKS & STONES
26"	Bt	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
39"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
65"	LEDGE N/A	

TP #4
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE: 8 MIN./INCH
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 27"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/3 LOAM WEAK GRANULAR, VF
2"	A1	10YR 4/2 LOAM WEAK GRANULAR, VF
5"	A2	10 YR 4/4 SANDY LOAM WEAK GRANULAR, FRIABLE
9"	Bhs1	10 YR 5/4 FINE SANDY LOAM WSBK, FRIABLE
17"	Bhs2	10YR 5/6 FINE SANDY LOAM WSBK, FRIABLE ROCKS & STONES
27"	C1	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
45"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
75"	LEDGE N/A	

TP #5
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE: 2 MIN./INCH
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 25"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/3 LOAM WEAK GRANULAR, VF
3"	A1	10YR 4/2 LOAM WEAK GRANULAR, VF
6"	A2	10 YR 4/4 SANDY LOAM WEAK GRANULAR, FRIABLE
11"	Bhs1	10 YR 5/4 FINE SANDY LOAM WSBK, FRIABLE
21"	Bhs2	10YR 5/6 FINE SANDY LOAM WSBK, FRIABLE ROCKS & STONES
25"	C1	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
40"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
75"	LEDGE N/A	

TP #6
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE: 3 MIN./INCH
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 30"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/3 LOAM WEAK GRANULAR, VF
2"	A1	10YR 4/2 LOAM WEAK GRANULAR, VF
4"	A2	10 YR 4/4 SANDY LOAM WEAK GRANULAR, FRIABLE
11"	Bhs1	10 YR 5/4 FINE SANDY LOAM WSBK, FRIABLE
20"	Bhs2	10YR 5/6 FINE SANDY LOAM WSBK, FRIABLE ROCKS & STONES
30"	C1	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
44"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
76"	LEDGE N/A	

TP #7
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE: 8 MIN./INCH
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 24"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/2 LOAM WEAK GRANULAR, VF
2"	A1	10YR 3/4 LOAM WEAK GRANULAR, VF
5"	A2	10 YR 4/4 SANDY LOAM WEAK GRANULAR, FRIABLE
12"	Bhs	10 YR 5/6 FINE SANDY LOAM WSBK, FRIABLE
19"	Bt	2.5Y 5/4 LOAMY FINE SAND WSBK, FRIABLE ROCKS & STONES
24"	C1	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
39"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
63"	LEDGE N/A	

TP #8
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE:
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 36"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/2 LOAM WEAK GRANULAR, VF
2"	A1	10YR 3/4 LOAM WEAK GRANULAR, VF
5"	A2	10 YR 4/4 SANDY LOAM WEAK GRANULAR, FRIABLE
12"	Bhs	10 YR 5/6 FINE SANDY LOAM WSBK, FRIABLE
19"	Bt	2.5Y 5/4 LOAMY FINE SAND WSBK, FRIABLE ROCKS & STONES
24"	C1	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
39"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
63"	LEDGE N/A	

TP #9
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE:
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 29"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/2 LOAM WEAK GRANULAR, VF
1"	A1	10YR 3/4 LOAM WEAK GRANULAR, VF
4"	A2	10 YR 4/4 SANDY LOAM WEAK GRANULAR, FRIABLE
10"	Bhs	10 YR 5/6 FINE SANDY LOAM WSBK, FRIABLE
23"	Bt	2.5Y 5/4 LOAMY FINE SAND WSBK, FRIABLE ROCKS & STONES
29"	C1	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
43"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
63"	LEDGE N/A	

TP #10
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE:
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 29"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/3 LOAM WEAK GRANULAR, VF
1"	A1	10YR 4/2 LOAM WEAK GRANULAR, VF
4"	A2	10 YR 4/4 SANDY LOAM WEAK GRANULAR, FRIABLE
11"	Bhs1	10 YR 5/4 FINE SANDY LOAM WSBK, FRIABLE
21"	Bhs2	10YR 5/6 FINE SANDY LOAM WSBK, FRIABLE ROCKS & STONES
29"	C1	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
44"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
70"	LEDGE N/A	

TP #11
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE:
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 21"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/2 LOAM WEAK GRANULAR, VF
1"	A1	10YR 3/4 LOAM WEAK GRANULAR, VF
3"	A2	10 YR 4/4 SANDY LOAM WEAK GRANULAR, FRIABLE
10"	Bhs	10 YR 5/6 FINE SANDY LOAM WSBK, FRIABLE
17"	Bt	2.5Y 5/4 LOAMY FINE SAND WSBK, FRIABLE ROCKS & STONES
21"	C1	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
44"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
68"	LEDGE N/A	

TP #12
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE: 8 MIN./INCH
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 24"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/2 LOAM WEAK GRANULAR, VF
2"	A1	10YR 3/4 LOAM WEAK GRANULAR, VF
5"	A2	10 YR 4/4 SANDY LOAM WEAK GRANULAR, FRIABLE
12"	Bhs	10 YR 5/6 FINE SANDY LOAM WSBK, FRIABLE
19"	Bt	2.5Y 5/4 LOAMY FINE SAND WSBK, FRIABLE ROCKS & STONES
24"	C1	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
39"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
63"	LEDGE N/A	

TP #13
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE:
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 24"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/2 LOAM WEAK GRANULAR, VF
2"	A1	10YR 3/4 LOAM WEAK GRANULAR, VF
5"	A2	10 YR 4/4 SANDY LOAM WEAK GRANULAR, FRIABLE
12"	Bhs	10 YR 5/6 FINE SANDY LOAM WSBK, FRIABLE
19"	Bt	2.5Y 5/4 LOAMY FINE SAND WSBK, FRIABLE ROCKS & STONES
24"	C1	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
39"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
63"	LEDGE N/A	

TP #14
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE: 2 MIN./INCH
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 30"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/2 LOAM WEAK GRANULAR, VF
3"	A1	10YR 4/3 LOAM WEAK GRANULAR, VF
11"	A2	10 YR 4/6 SANDY LOAM WEAK GRANULAR, FRIABLE
21"	Bhs	10YR 5/6 FINE SANDY LOAM WSBK, FRIABLE ROCKS & STONES
30"	Bt	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
47"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
68"	LEDGE N/A	

TP #15
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE: 8 MIN./INCH
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 24"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/2 LOAM WEAK GRANULAR, VF
2"	A1	10YR 4/3 LOAM WEAK GRANULAR, VF
4"	A2	10 YR 5/6 SANDY LOAM WEAK GRANULAR, FRIABLE
17"	Bhs	10YR 5/6 FINE SANDY LOAM WSBK, FRIABLE ROCKS & STONES
24"	Bt	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
43"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
60"	LEDGE N/A	

TP #16
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE:
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 30"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/2 LOAM WEAK GRANULAR, VF
2"	A1	10YR 3/4 LOAM WEAK GRANULAR, VF
4"	A2	10 YR 4/4 SANDY LOAM WEAK GRANULAR, FRIABLE
8"	Bhs	10 YR 5/6 FINE SANDY LOAM WSBK, FRIABLE
19"	Bt	2.5Y 5/4 LOAMY FINE SAND WSBK, FRIABLE ROCKS & STONES
30"	C1	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
43"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
62"	LEDGE N/A	

TP #17
LOGGED BY JMB
PERC TEST @ N/A
12-15-2020
PERC RATE:
IMPERVIOUS LAYER: N/A
SEASONAL WATER: 24"

DEPTH	HORIZON	IMPERVIOUS LAYER: N/A
0"	Oa	10YR 3/3 LOAM WEAK GRANULAR, VF
2"	A1	10YR 4/2 LOAM WEAK GRANULAR, VF
4"	A2	10 YR 4/4 SANDY LOAM WEAK GRANULAR, FRIABLE
7"	Bhs	10 YR 5/4 FINE SANDY LOAM WSBK, FRIABLE
18"	Bt	2.5 Y 6/4 FINE SANDY LOAM WSBK, FRIABLE ROCKS & STONES
24"	C1	2.5Y 4/4 LOAMY FINE SAND WSBK, FRIABLE REDOX PRESENT
37"	C2	2.5Y 6/3 LOAMY SAND WSBK, FRIABLE REDOX PRESENT
63"	LEDGE N/A	

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

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

SIGNATURE DATE: _____

SIGNATURE DATE: _____
SITE PLANS ARE VALID FOR TWO YEARS 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.

TEST PIT LOGS
HERITAGE LANDING
MAP 140 LOTS 2 & 3
112 & 114 GREELEY STREET
HUDSON, NEW HAMPSHIRE
HILLSBOROUGH COUNTY

OWNER/APPLICANT:
K&M DEVELOPERS, LLC
46 LOWELL ROAD
HUDSON, N.H. 03051

KM KEACH-NORDSTROM ASSOCIATES, INC.
Civil Engineering Land Surveying Landscape Architecture
10 Commerce Park North, Suite 3B, Bedford, NH 03110 Phone (603) 627-2881

REVISIONS

No.	DATE	DESCRIPTION	BY
1	7/12/21	REVISED PER TOWN COMMENTS	ACL

DATE: JUNE 1, 2021 **SCALE:** AS SHOWN
PROJECT NO: 20-1001-1 **SHEET:** 29 OF 29

PAUL CHISHOLM
No. 15076
PROFESSIONAL ENGINEER