



TOWN OF EXETER, NEW HAMPSHIRE

10 FRONT STREET • EXETER, NH • 03833-3792 • (603) 778-0591 • FAX 772-4709

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PUBLIC NOTICE EXETER CONSERVATION COMMISSION

Monthly Meeting

The Exeter Conservation Commission will meet in the Nowak Room, Exeter Town Offices
at 10 Front Street, Exeter on **Tuesday, January 14th, 2020 at 7:00 P.M.**

Call to Order:

1. Introduction of Members Present
2. Public Comment

Action Items

- Wetland waiver request for proposed five lot subdivision and associated infrastructure at 100 Linden Street (Tax Map –Lot: 104-71). Planning Board Case 19-13. (*Henry Boyd, Mark West*)
- Climate Summit Workshop Takeaways (*Trevor, Don, Kristen*)
- Annual Accomplishments and 2020 Goal Setting
- Committee Reports
 - a. Property Management
 - i. Invasive Plant Removal 2019 Update
 - ii. Fire Pits in Town Forest
 - b. Trails
 - i. Volunteer Support
 - c. Outreach Events
 - i. Report on Winter Solstice Celebration Raynes Farm
 - ii. Upcoming:
 1. Open Barn Days day/time TBD,
 2. Full Moon Snowshoe Planning (Feb 8, 6:30 pm, ECC)
 - d. Tree City Subcommittee
- Approval of Minutes: December 10, 2019
- Correspondence
- Other Business
- Next Meeting: Date Scheduled (2/11/20), Submission Deadline (1/31/20)

Todd Piskovitz, Chair

Exeter Conservation Commission

Posted January 3rd, 2020 Exeter Town Office, Exeter Public Library, and Town Departments.

**TOWN OF EXETER
PLANNING DEPARTMENT MEMORANDUM**

Date: January 10, 2019
To: Conservation Commission Board Members
From: Kristen Murphy, Natural Resource Planner
Subject: January 14th Conservation Commission Meeting

1. 100 Linden St

This application was before the TRC October 9th. The Planning Board and Conservation Commission held a joint site walk on December 6th, and the application is scheduled to go before the Planning Board in late January. Your packet includes the applicant's response to TRC comments as well as their application material.

Suggested Motion for Wetland Waiver:

_____ *We reviewed this application and feel the need to **table the application to a date certain** due to insufficient information on criteria necessary for the Commission to make a recommendation to the planning board as noted below: We recommend the required information be submitted by the next meeting submission deadline of _____ to be heard at the _____ conservation commission meeting date.*

_____ *We have reviewed this application and have **no objection** to the approval of the wetland waiver as proposed.*

_____ *We have reviewed this application and recommend that the wetland waiver request be (**approved with conditions**) (**denied**) as noted below:*

2. CAW Climate Summit

For those who were unable to attend, you can find the agenda, presentations and resource list from the Dec 9th [Coastal Climate Summit](#) online. Those from the Commission who were able to attend will take a little time talking about some thoughts/key take-aways from this session at Tuesday's meeting.



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December 19, 2019

David Sharples, Town Planner
Exeter Planning Office
10 Front Street
Exeter, NH 03833

Re: Definitive Subdivision Submittal for 100 Linden Street
WAIVER REQUEST

Members of the Board,

On behalf of I S Realty Trust we request the Board's consideration for one waiver from the Site Plan Review and Subdivision Regulations for the Town of Exeter NH. The requested waiver includes:

1. Section 7.4.10 – "A High Intensity Soil Survey (HISS) of the entire site, or appropriate portion thereof. Such soil surveys shall be prepared by a certified soil scientist in accordance with the standards established by the Rockingham County Conservation District. Any cover letters or explanatory data provided by the certified soil scientist shall also be submitted."

Request – Eliminate the requirement for HISS mapping of the project lot given the fact that we are proposing to connect to the Town's sewer system and are not constructing any individual septic systems. Also, we are proposing to eliminate an existing septic system on Lot 5 to connect to the municipal sewer system.

If you have any questions or comments on the above requested waiver please feel free to contact our office at 603-778-0528.

Sincerely,

Millennium Engineering, Inc.

Christopher M. York, P.E.
Project Engineer

Massachusetts:	62 Elm Street - Salisbury – MA – 01952	Phone: 978 – 463 – 8980	Fax: 978 – 499 – 0029
Massachusetts:	10 Mulliken Way – Newburyport – MA – 01950	978 – 961 – 9931	978 – 499 – 0029
New Hampshire:	13 Hampton Road – Exeter – NH – 03833	603 – 778 – 0528	603 – 772 – 0689
	www.Mei-MA.com	www.Mei-NH.com	



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December 19, 2019

Town of Exeter Planning Department
c/o Dave Sharples, Planner
10 Front Street
Exeter, New Hampshire 03833

Re: Subdivision Review TRC Comments
PB Case #19-13
100 Linden Street Tax Map Parcel #104-71

Mr. Sharples:

We have prepared the following information to address design review comments provided at the TRC meeting on October 7th, 2019 and Underwood Engineers, Inc. dated October 28th, 2019.

This submittal includes the following:

- 6 - Full size Plan-sets
- 15 - 11x17 Plan-sets
- 2 - Stormwater Management Reports
- 15 - Cover Letter & Response to Design Review Comments
- 1 - Electronic disk containing the above documents in PDF format

Town Planner Comments

1. *Show monuments in accordance with Section 9.25 (7.15.5)*

Response: Proposed monuments are shown on the plans (see sheet 3).

2. *List of state permits required*

Response: A sewer connection permit will be required prior to construction.

3. *Bonding will be required for all onsite improvements (roadway, drainage, lighting, landscaping, etc.) and erosion and restoration control.*

Response: No response required.

4. *UEI review*

Response: See responses to UEI comments below.

5. *Provide drainage analysis*

Response: A drainage report is included with the revised submittal.

6. *Provide relevant portions of HOA docs to insure stormwater facilities and easements areas will be properly maintained*

Response: Documents will be provided as part of the subdivision approval.



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7. *Is there a sidewalk on one side of the street? It is shown in the details but not clear on plans. Identify it clearly on the plans.*

Response: The sidewalk has been labeled accordingly (see sheet 6).

8. *Provide end and start of SGC on plans.*

Response: The beginning of curbing has been labeled on the plan (see sheet 6).

9. *Provide functions and values assessment on wetlands*

Response: See responses below to Natural Resource Planner.

10. *CUP will need to meet Section 13.7 waiver criteria. Submit rationale for Planning Board meeting.*

Response: A waiver request letter is included with this submittal.

11. *Suggest two deciduous trees (min 2" caliper dbh) be planted in each front yard*

Response: Two trees have been added to each lot (see sheet 5).

12. *Street light? Ask DPW*

Response: DPW has requested we show one street light near the cul-de-sac.

13. *Show the entire sewer easement on Sheet 3 of 10. If approved, does the portion in the public ROW need to be extinguished? What responsibility will the Town have for this sewer line? This needs to all be clear moving forward.*

Response: Sheet 3 has been updated to show the entire easement. The Town will be responsible for that portion of the sewer line within the ROW once it is accepted by the Town.

Public Works Comments

1. *The long term Inspection and Maintenance manual should only include the permanent stormwater structures that the homeowner's association is responsible for maintaining.*

Response: We believe the O&M manual should include all BMPs for the project as is generally typical.

2. *The Stormwater Management Report:*

a. *The rainfall amounts used should be from the NRCC plus %15 per AoT rule Env-Wq1503.08 (l).
<http://www.nhcrhc.org/stap-report/>*

b. *The detention basin should not use the storage area below the estimated seasonal high water table (ESHWT) for volume calculation.*

Response: The rainfall amounts have been updated to include the extra 15%. The basin has been revised to not use the storage area below the ESHWT.

3. *ADD NOTE: The contractor must obtain a valid utility pipe installer's license and the job supervisor or foreman must be certified by the town prior to working on any water, sewer, or drainage pipes that are*



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in a town street or right of way, or that will connect or may be connected to a town water, sewer, or drainage system. A licensed supervisor or foreman must be present at the job site at all times during the construction of these utilities.

Response: A note has been added to the plans (see sheet 4, note 11).

Sheet 2 of 10 Existing Conditions

4. *The survey coordinate system should be NH State Plane NAD83. Add note.*

Response: A note has been added to the plan (see note 4).

5. *Label the sewer easement as existing.*

Response: The easement has been labeled as existing.

Sheet 3 of 10 Lot Layout Sheet

6. *Identify the drainage easements as being between the future landowner and the homeowner's association.*

Response: A note has been added to the plan (see note 4).

Sheet 4 of 10 Typical Roadway Sections, Notes, & Details

7. *In addition to Digsafe, add DPW (603-773-6157) to be contacted to locate water, sewer, and drainage.*

Response: The note has been added to the plan (see note 10).

8. *Provide a typical section for the road with and without a sidewalk and identify the station limits for each.*

Response: Additional roadway sections have been added to the plan.

9. *The orientation of the tel/elec conduits shown in the typical section should be horizontal to facilitate future maintenance.*

Response: The typical section has been revised accordingly.

10. *There is a gas main on the typical section, but none is shown on the plans.*

Response: There is no gas on Patricia Avenue. All references to gas have been removed from the drawings.



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11. *The curb dimensions should be a minimum of 4-inches by 12-inches.*

Response: The curb dimensions have been revised accordingly.

12. *Patricia Avenue is approximately 28 feet wide. Provide a detail of the transition to the proposed 24-foot wide extension of the road.*

Response: Existing and proposed pavement widths have been added to the plan, along with notes to extend existing edges of pavement (see sheet 6).

Sheet 5 of 10 Grading Plan

13. *Please provide a sketch showing the limits of disturbance used to determine if an Alteration of Terrain permit is required which should include all offsite improvements.*

Response: The limit of disturbance has been added to the plan (see sheet 5).

14. *Show existing treeline. Coordinate the silt fence location with the proposed treeline.*

Response: The existing treeline is shown on the plan. The silt fence has been revised to follow the proposed treeline.

15. *Label the stone trench around the houses and include them on all houses.*

Response: The stone trench has been labeled on the plans. We did not include one on Lot 3 because the soil conditions on that particular lot are not conducive to infiltration. Test pit 02-19 showed layers of silt loam beneath the topsoil and subsoil layers.

16. *Provide the homeowner's association documents and easements for the drainage system.*

Response: Documents and easement language will be provided as part of the subdivision approval.

Sheet 6 of 10 Roadway and Utility Profile

17. *Show the estimated seasonal high water table (ESHWT) elevations on the profile. The road should be designed so that the gravels are not within the ESHWT.*

Response: The ESHWT elevations have been added to the profile. Please note, no test pits were performed within the proposed roadway so water tables are approximate. Other than test pits #02-19 and #03-19, which are located further downslope and in poorly drained soils, the average ESHWT on the site is approximately 21 inches. The majority of the proposed roadway is constructed in fill, so we don't foresee any major issues



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with the gravel intercepting the ESHWT. However, we have added subdrains from station 1+25 to station 2+50 where it is most likely the gravels may intercept the ESHWT.

18. *Provide a street light near the cul-de-sac.*

Response: A street light has been added at the cul-de-sac.

19. *A sidewalk along 1 Patricia Avenue should be provided to connect to the existing sidewalk system.*

Response: A note has been added to the plan to connect the proposed sidewalk to the existing sidewalk system.

20. *The "proposed street sign" is not needed in the location shown if the street name will remain Patricia Avenue. The "No Outlet" sign should be at the intersection with Thelma Drive. Remove "Dead End" sign note.*

Response: The proposed "No outlet" sign has been moved to the intersection with Thelma Drive. The proposed street sign has been removed.

21. *Maintain separation between underground utilities for future maintenance. There are several shown too close together.*

Response: Other than where the water and sewer mains cross, we maintain the required separation between the utilities.

22. *Water:*

- a. *Show the hydrant and valve for the water main on Patricia Ave.*
- b. *The main should not go around the cul-de-sac. Continue the main from Station 2+50 straight to Sta 4+50 with a hydrant at the end.*

Response: The water main layout has been revised accordingly.

23. *Sewer:*

- a. *The services for lots 3 through 5 should not be connected to the private sewer easement adjacent to Lot 4. The sewer layout that was approved for 98 Linden Street did not include services outside of the proposed ROW for this subdivision. An additional manhole will be needed near Sta 4+50.*
- b. *Show sewer as existing for sections that have already been installed.*

Response: A proposed manhole has been added at station 4+37. The services for lots 3-5 connect to this new proposed sewer line. The sewer is now shown as existing for the sections that have been built.



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24. *Show the location of the proposed transformer and telephone pedestal, which should be outside of the ROW. Coordinate with Unitil for drop pole location. Gas and electric layouts approved by Unitil are required for the final plans.*

Response: Approximate locations of the drop pole, transformers and hand holes have been added to the plan (see sheet 6). We understand that final locations of the electric layout will be provided by Unitil.

Sheet 7 of 10 Drainage Details

25. *The 0.5-inch orifices shown for the outlet structure are too small and will clog frequently.*

Response: The orifices have been changed from (2) 0.5" orifices to (1) 1" orifice.

Details

26. *The typical trench patch detail should note that the trench patch shall match existing pavement depths.*

Response: The detail has been revised accordingly.

27. *Sewer Details: Add a sewer manhole detail based on Env-Wq 700 requirements; provide a cleanout for each service.*

Response: A sewer manhole detail has been added to the plans. A cleanout is shown for each service (see sheet 6).

28. *Water details: specify that all valves shall open left; specify Buffalo Box cover; yellow hydrants, 3 types allowed are Mueller Centurion, Kennedy K-81D, or Clow Medallion.*

Response: The water details have been revised accordingly.

Fire Department Comments

1. *Adequate turning radius is provided to accommodate the ladder truck (see attached).*

Response: Refer to attached plan showing the fire truck turning template.

2. *Fire hydrants be provided along the road, as required.*

Response: A fire hydrant is proposed at the intersection with Patricia Avenue and at the cul-de-sac of the proposed road.

Natural Resource Planner Comments

Wetland waiver 9.9.3:



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- 1. Items 1 and 2: Mark West's report summarizes 7 of the 12 functions included in the highway method for wetland B and C. Though I recognize some categories may not be addressed because their absence is obvious (fish/shellfish habitat, recreation, etc), the report also omits uniqueness/heritage and Threatened & Endangered (T&E) species/habitat. Given uniqueness includes the role of the wetland in the ecological system of the region, it is important this feature be addressed in order to meet Item 1 in the waiver criteria, specifically the function of these wetlands in the greater hydrological landscape. It is also important to understand whether these wetlands support habitat for any T&E species. Lastly, the assessment of wildlife habitat does state vernal pools are not present, we would benefit from more details as to how this conclusion was made given the survey season (October 2018). The report does a good job of proposing supplemental planting to offset the loss of vegetation within the buffer areas but the report would benefit from more detail correlating the choice of proposed plantings to their role in mitigating the functions lost. It is noted seeding is not proposed for the buffer impact areas. The report would benefit from details as to why this is not important for stabilization between plantings. Finally, it is unclear how the plantings correlate to the restoration plans. They differ in number of plants and there is no key to identify which species correlate to which symbol. A full size plan would help in this regard and including utilities would also be helpful to ensure there are no conflicts between the proposed plantings and any utilities.*

Response: Mark West is currently responding to this item.

- 2. Item 3: Applicant should provide justification. Current response does not address why the road needs to be here and cannot be moved outside of the buffer. It is important to include what requirements dictate why the location of the road is where you have designed it.*

Response: Mark West is currently responding to this item.

- 3. Item 4 and 5: Only addresses buffer impacts of the road. For the road I reiterate comments on Item 3 above. Regarding buffer impacts from the drainage structure, this should address why the design can not be modified (narrow up the width and lengthen the structure) so less of the structure impacts the buffer. See comments on Sheet 5 below.*

Response: Mark West is currently responding to this item.

- 4. Item 6 – Given the need identified at the Oct 3 TRC to redesign the stormwater structure so that it complies with design standards, we did not recommend presenting to the Conservation Commission during the October meeting since buffer impacts change is likely. The next Conservation Commission meeting is 11/12 with a submission deadline of 11/1. I suggest in addition to missing info and documents that the applicant's submission also include suggested site walk days/time. Given the early sunset time by the next meeting date, 8-ish am will likely gets the most attendees.*

Response: Mark West is currently responding to this item.



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5. *Item 7 – See comments for waiver criteria Item 1 and 2 above. Also given the physical overlap with the required restoration area for 98 Linden St and this project, there should be some discussion on how to coordinate these to achieve the greatest restoration benefit.*

Response: Mark West is currently responding to this item.

6. *Note: Planning Board will require response to Site and Sub reg 13.7 Waivers.*

Response: A waiver request letter is included with this submittal.

Plan Comments

7. *Sheet 2: Please add wetland scientist stamp, date of survey, and note including which manuals the delineations were done in accordance with. Please add existing tree line. Add significant trees (see Dave Sharples for revised criteria as these standards were recently amended). Should include list of waivers required: add wetland waiver to this.*

Response: The final submittal of the plans will include the wetland scientist stamp and date of delineation on the Existing Conditions plan. The existing treeline is shown on the plan.

8. *Sheet 5: Appears you need a waiver for grading within 5 feet of property lines. I have a concern about the amount of standing water in stormwater design. The pool in the basin is 32' deep with the main basin designed at 44'. With the water table in that location of 44' based on test pit data that is a significant amount of standing water. I understand from UEI's TRC comments the submitted design would not meet design standards so I defer to their comments for criteria. Additionally, I do note that the deep end pool in this design holding 5+ feet of water seems like it may also be a safety concern. Standing water, esp. given recent concerns about EEE will likely not be favored by homeowners. I re-emphasize DPW's comment during the TRC meeting that there should be some description of how the 95k site disturbance was calculated to ensure this includes all required areas given how close that number is to the AOT permit threshold.*

Response: The basin grading has been revised to stay outside the 5' property line buffer. The stormwater basin is designed per the NH Stormwater Manual. The limit of disturbance has been added to the plan (see sheet 5).

9. *Sheet 6: I cannot find street lighting on utility plan. Lighting must be dark sky compliant and cone of illumination should be mapped to show no overspill onto abutting property.*

Response: Per DPW, we have shown one street light near the cul-de-sac.

10. *Sheet 7: Seeding should include a native seed mix especially around wetland buffers. This sheet should include the proposed restoration plantings (see comments on restoration under waiver criteria Item 1 above). Detention basin design states fertilizer applied if soil test indicates need—fertilizer is prohibited within the wetland conservation overlay district. HOA docs should include fertilizer use is prohibited*



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within wetland buffer areas in order to ensure all homeowners are informed. Given proximity of development to wetland buffers, I believe wetland buffer disks are warranted around all buffers to deter encroachment.

Response: Mark West is currently responding to this item.

Underwood Engineers Comments

Cover Sheet (Sheet 1 of 10)

1. **Permits:** *The Applicant should clarify how the project's total area of disturbance is calculated. An Alteration of Terrain Permit is required for projects disturbing areas greater than or equal to 100,000 sf.*

Response: The limit of disturbance has been added to the plan (see sheet 5).

Existing Conditions (Sheet 2 of 10)

2. **Wetland Scientist:** *The Existing Conditions Plan should be stamped by a wetland scientist certified in the State of New Hampshire.*

Response: The final submittal of the plans will include the wetland scientist stamp on the Existing Conditions plan.

3. **Notes 2 and 3:** *Notes 2 and 3 are identical and one of them should be removed from the plans.*

Response: Note 3 has been removed.

Typical Roadway Sections, Notes, & Details (Sheet 4 of 10)

4. **Typical Roadway Cross-Section:** *The following comments pertain to the Typical Roadway Cross-Section detail:*
 - **Gas Utility:** *The cross-section detail shows a gas main as part of the cross-section and a gas main is identified in Note 7. There is no gas main shown on the site plan. Coordination between the site plans and details is needed.*
 - **Underground Utilities:** *The underground utilities (fire alarm, cable, telephone, and electric) are shown to be installed vertically within the same trench. UE recommends horizontal separation between the utilities to facilitate utility repair/maintenance.*

Response: There is no gas on Patricia Avenue. All references to gas have been removed from the drawings. Note 7 has been removed. The detail has been revised to show the utilities installed with horizontal separation.

Grading Plan (Sheet 5 of 10)

5. **Drain Inverts:** *Drain inverts should be added to the grading plan to facilitate review.*

Response: An invert table has been added to the plan (see sheet 5).

6. **Detention Pond:** *The following comments pertain to the Detention Pond shown on the Grading Plan:*



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- **WQV:** The Applicant should provide Water Quality Volume (WQV) calculations for the detention basin.
- **ESHWT:** The estimated seasonal highwater table (El. = 44.5') is above the base elevation of the detention pond (El. = 44.0'). The detention pond should have no standing water between storms with the exception of the micropool. The base elevation should be raised higher than the ESHWT.
- **Sediment Forebay:** The spillway elevation for the sediment forebay is noted at 46.0'. The invert for the 12" drain pipe discharging to the forebay is at 45.0'. This will cause the drain system to surcharge past DMHB. The spillway elevation should be modified to be below the outlet elevation of the proposed drainage system.
- **Micropool Access:** The detention pond should be graded to provide maintenance access to the micropool.

Response: Refer to the attached BMP worksheet in the Stormwater Report, Appendix E for the WQV calculations. The basin bottom has been raised above the ESHWT. The inlet into the sediment forebay has been raised from 45.0 to 45.7. The HydroCAD calculations show the drain system will not be adversely affected by the invert elevation into the forebay. Access to the micropool is provided via the 8-foot wide berm.

7. **Edge of Property Grading:** The Applicant shows grading within 5' of the edge of property line near the detention pond which is against Town regulations. Modifications to the grading or a waiver is necessary.

Response: The grading has been revised to tie into the existing contours outside of the 5' property line buffer.

Roadway and Utilities Profile (Sheet 6 of 10)

8. **Road Sub-base:** The site's water table ranges in elevation from 49.5' to 44.0'. The road profile shows that the sub-base would be installed within or in close proximity the high-water table which would destabilize the roadway overtime. The applicant should provide details/information on how they plan to stabilize roadway (e.g. underdrains, matting, raised grading, etc.) before the Town can accept the road.

Response: Per DPW's request, the ESHWT elevations have been added to the profile. Please note, no test pits were performed within the proposed roadway so water tables are approximate. Other than test pits #02-19 and #03-19, which are located further downslope and in poorly drained soils, the average ESHWT on the site is approximately 21 inches. The majority of the proposed roadway is constructed in fill, so we don't foresee any major issues with the gravel intercepting the ESHWT. However, we have added subdrains from station 1+25 to station 2+50 where it is most likely the gravels may intercept the ESHWT.

9. **Fire Hydrants:** The proposed fire hydrant at STA 2+71 should be installed near a high point in the proposed road. A second hydrant should be installed at the end of the proposed Town road and Patricia Avenue. Coordination with the Town Fire Department on hydrant spacing is needed.

Response: The fire hydrant at station 2+71 has been moved to a higher spot in the cul-de-sac. An additional hydrant has been added closer to the intersection with Patricia Avenue (see sheet 6).



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10. Existing Sewer: *The sewer shown on the plans appears to be proposed with its bold line weight. The sewer has already been built and should be identified as an existing utility. The proposed sewer services should be shown bold and the method of connecting to the existing sewer main should be identified.*

Response: The sewer has been revised to depict it as existing. Proposed sewer services are shown in bold and a sewer service detail is shown on sheet 9.

11. Underground Utilities: *Each utility should be shown on the Utilities Sheet to avoid installation conflicts during construction. See Comment 3 above.*

Response: The plan has been revised to show an underground utilities line, which encompasses electric, telephone, and cable.

12. Water Main Alignment: *The proposed water main is shown wrapping around the cul-de-sac. A cleaner installation would be to install the water main directly through the island to avoid unnecessary bends and to reduce the length of water main.*

Response: The water main alignment has been revised accordingly (see sheet 6).

13. Water Valve: *A water valve is needed at the connection of the proposed water main and the existing water main on Patricia Ave.*

Response: A valve has been added to the plan (see sheet 6).

14. Private Sewer: *The Town maintained sewer begins at SMH 2 and on to Patricia Ave. The sewer along Lot 4 to the neighboring property is to remain a private sewer line. It is recommended that the proposed lots connect to the Town owned sewer and not a privately-owned sewer line.*

Response: As recommended by Public Works, a proposed manhole has been added at station 4+37. The services for lots 3-5 connect to this new proposed sewer line.

Sewer and Water Crossing: *The water and sewer crossings should be shown on the profile to confirm an installation conflict won't occur.*

Response: The water/sewer crossing at station 0+80 has been added to the profile. In addition, sewer stub locations have been added to the profile.

15. Street Lighting: *Proposed street lighting should be shown on the Roadway and Utilities Profile Sheet. Proposed lighting shall be dark sky compliant.*

Response: Per the Exeter Public Works, we have added a street light at the cul-de-sac.

16. Proposed Landscaping: *A proposed landscaping plan should be provided with this submittal. If landscaping is proposed within the cul-de-sac island, they should be low brush with shallow root systems to avoid future maintenance issues with the utilities located in the island.*



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Response: Per the Town Planner, we have added 2 deciduous trees in front of each lot.

Drainage Details (Sheet 7 of 10)

17. Detention Basin Profile View and Outlet Structure Detail: *The following comments pertain to the Detention Basin Detail and the Outlet Structure Detail:*

- *Coordination with the proposed detention basin design and the State's Design criteria for a Micropool Extended Detention Pond (New Hampshire Stormwater Manual) is needed.*
- *The "Flood" elevations should be renamed to Storm elevations (i.e. 10 Year Storm, 50 Year Storm, etc.).*
- *Maintenance Note 2 should be clarified (i.e. fire protection).*
- *The sizing calculations for the inlet for the Outlet Structure ((2) 0.5" Orifices) should be provided. They appear to be too small.*
- *The proposed inlet elevations of the Outlet Structure is shown to be below the ESHWT. With this design, the outlet structure would remain partially submerged and continuously discharge groundwater offsite to the neighboring property. The inlet elevations should be set above the ESHWT in order avoid the continuous drainage offsite.*
- *Clarification is needed on why the 10-year storm elevation (44.4') is below the ESHWT (44.5').*
- *It is understood that the Outlet Structure detail is not drawn to scale, however it should be drawn proportionally to avoid confusion during construction.*

Response: The Micropool Extended Detention Pond is designed per the NH Stormwater Manual (refer to the attached BMP worksheet in the Stormwater Report, Appendix E). The "flood" elevations have been renamed to "storm" elevations. Maintenance note 2 has been removed. It was an outdated note. The orifices have been changed from (2) 0.5" orifices to (1) 1" orifice. The inlet elevations of the outlet structure have been revised to be above the ESHWT. The 10-year storm elevation is now higher than the ESHWT. The outlet structure detail has been revised accordingly.

18. Sediment Forebay Detail: *The detail includes a note of "10% of WQV" which is associated with the design volume of the micropool per the NHDES Stormwater Manual. This should be removed from the Sediment Forebay detail.*

Response: Per the NHDES Stormwater Manual, the sediment forebay volume also should be sized to 10% of the WQV.

19. Stone Gradation Table: *The Stone Gradation Table does not provide a range of stone sizes. This should be corrected on the next submittal.*

Response: The flowrate out of the detention basin is so small, the stone size is zero (see riprap apron calcs, Appendix D). I have updated the plan to show one detail for the riprap apron, encompassing both the inlet and outlet pipes for the basin.

Utility Details (Sheet 9 of 10)

20. Typical Fire Hydrant Installation: *The detail should state that the fire hydrant shall be Yellow.*

Response: The detail has been revised accordingly.

Stormwater Management Report



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21. Snow Storage: *The Report states that snow shall be stored in the locations shown on the site plan. No locations are identified on the site plan. Coordination between the Report and the Site Plans is needed.*

Response: A snow storage location has been added to the plan (see sheet 5).

22. Stone Drip Strips: *Stone Drip Strip information is provided in the Post Construction BMPs. These should be identified on the Site Plans.*

Response: The stone strips have been labeled accordingly (see sheet 5).

23. Drainage Analysis: *The following comments pertain to the provided Drainage Analysis:*
• *The Applicant shall confirm that the precipitation estimates are from the Extreme Precipitation Stats (<http://precip.eas.cornell.edu/>).*

Response: The precipitation values are from the Extreme Precipitation Stats (see Stormwater Report).

24. PTAP Database: *The Applicant is requested to enter project related stormwater tracking information contained in the site plan application documents using the Great Bay Pollution Tracking and Accounting Program (PTAP) database (www.unh.edu/unhsc/ptapp).*

Response: We're currently working on this.

We trust the above response to comments provides the necessary information to advance the technical review portion of the Site Plan process. If you have any questions or comments on the above information please feel free to contact our office at 603-778-0528.

Sincerely,

Millennium Engineering, Inc.

Christopher M. York, P.E.
Project Engineer



MILLENNIUM ENGINEERING, INC.
Land Surveyors and Civil Engineers

January 9, 2020

Town of Exeter Planning Department
c/o Dave Sharples, Planner
10 Front Street
Exeter, New Hampshire 03833

Re: Subdivision Review TRC Comments
PB Case #19-13
100 Linden Street Tax Map Parcel #104-71

Mr. Sharples:

We have prepared the following information to address design review comments provided by the Natural Resource Planner at the TRC meeting on October 7th, 2019.

Natural Resource Planner Comments

Wetland waiver 9.9.3:

- Items 1 and 2: Mark West's report summarizes 7 of the 12 functions included in the highway method for wetland B and C. Though I recognize some categories may not be addressed because their absence is obvious (fish/shellfish habitat, recreation, etc), the report also omits uniqueness/heritage and Threatened & Endangered (T&E) species/habitat. Given uniqueness includes the role of the wetland in the ecological system of the region, it is important this feature be addressed in order to meet Item 1 in the waiver criteria, specifically the function of these wetlands in the greater hydrological landscape. It is also important to understand whether these wetlands support habitat for any T&E species. Lastly, the assessment of wildlife habitat does state vernal pools are not present, we would benefit from more details as to how this conclusion was made given the survey season (October 2018). The report does a good job of proposing supplemental planting to offset the loss of vegetation within the buffer areas but the report would benefit from more detail correlating the choice of proposed plantings to their role in mitigating the functions lost. It is noted seeding is not proposed for the buffer impact areas. The report would benefit from details as to why this is not important for stabilization between plantings. Finally, it is unclear how the plantings correlate to the restoration plans. They differ in number of plants and there is no key to identify which species correlate to which symbol. A full size plan would help in this regard and including utilities would also be helpful to ensure there are no conflicts between the proposed plantings and any utilities.*

Response: **A. Uniqueness/Heritage.** This value considers the effectiveness of the wetland or its associated waterbodies to provide certain special values. These may include archaeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location. These functions are clearly valuable wetland attributes relative to aspects of public health, recreation, and habitat diversity.



MILLENNIUM ENGINEERING, INC.
Land Surveyors and Civil Engineers

Only 5 of the 31 qualifiers are present in this wetland so it does not provide Uniqueness/Heritage. I have attached the Wetland Evaluation results.

B. Threatened & Endangered (T&E) species/habitat and vernal pools. The two wetlands on site are both forested wetlands that do not provide rare species habitat as they are typical forested wetlands. The determination of vernal pools is based on the observation of potential seasonal flooding depths in both forested wetlands. Wetland C appears to hold less than 12 inches of water during spring based on water staining of the surface leaves. This determination is based on many years of experience evaluating vernal pools, but the only definitive determination requires a site inspection completed between March and June. The significant development project constructed to the west of this wetland which includes a very large detention basin further reduces the likelihood of a functioning vernal pool in Wetland C. Wetland B is a seepage sloping wetland that does not seasonally flood therefore it is not a vernal pool.

C. Buffer Restoration Planting plans. Millennium Engineering has prepared a separate Buffer Zone plan and all planting details have been added to this plan. The trees and shrubs chosen include white pine to provide a visual habitat buffer, sweet pepper bush a shrub species with nectar flowers that spreads through rhizomes and arrowwood and blueberry which provide fruit for wildlife species. A wildlife seed mix has also been added to the buffer restoration planting areas.

2. *Item 3: Applicant should provide justification. Current response does not address why the road needs to be here and cannot be moved outside of the buffer. It is important to include what requirements dictate why the location of the road is where you have designed it.*

Response: The road enters the site at a fixed location at the end of Patricia Avenue and has minimum turning radii restrictions to meet. It then must turn back to reach the location of a cul-de-sac which must be located where it is shown in order for the lots to obtain their required 100' of frontage.

3. *Item 4 and 5: Only addresses buffer impacts of the road. For the road I reiterate comments on Item 3 above. Regarding buffer impacts from the drainage structure, this should address why the design can not be modified (narrow up the width and lengthen the structure) so less of the structure impacts the buffer. See comments on Sheet 5 below.*

Response: The detention basin must be located in a lower elevation portion of the site to allow for flow from the roadway. The basin has been modified to meet the town's stormwater standards and has been moved a few feet back from the adjacent wetland.

4. *Item 6 – Given the need identified at the Oct 3 TRC to redesign the stormwater structure so that it complies with design standards, we did not recommend presenting to the Conservation Commission during the October meeting since buffer impacts change is likely. The next Conservation Commission meeting is 11/12 with a submission deadline of 11/1. I suggest in addition to missing info and documents that the applicant's submission also include suggested site walk days/time. Given the early sunset time by the next meeting date, 8-ish am will likely get the most attendees.*

Response: No response required.



MILLENNIUM ENGINEERING, INC.
Land Surveyors and Civil Engineers

5. *Item 7 – See comments for waiver criteria Item 1 and 2 above. Also given the physical overlap with the required restoration area for 98 Linden St and this project, there should be some discussion on how to coordinate these to achieve the greatest restoration benefit.*

Response: The applicant will coordinate with Kristen Murphy regarding any final adjustments needed to address the previous buffer restoration work.

6. *Note: Planning Board will require response to Site and Sub reg 13.7 Waivers.*

Response: A waiver request letter was included with the previous submittal to the Board.

Plan Comments

7. *Sheet 2: Please add wetland scientist stamp, date of survey, and note including which manuals the delineations were done in accordance with. Please add existing tree line. Add significant trees (see Dave Sharples for revised criteria as these standards were recently amended). Should include list of waivers required: add wetland waiver to this.*

Response: The final submittal of the plans will include the wetland scientist stamp and date of delineation on the Existing Conditions plan. The existing treeline is shown on the plan. Waivers have been added to the cover sheet (see sheet 1).

8. *Sheet 5: Appears you need a waiver for grading within 5 feet of property lines. I have a concern about the amount of standing water in stormwater design. The pool in the basin is 32' deep with the main basin designed at 44'. With the water table in that location of 44' based on test pit data that is a significant amount of standing water. I understand from UEI's TRC comments the submitted design would not meet design standards so I defer to their comments for criteria. Additionally, I do note that the deep end pool in this design holding 5+ feet of water seems like it may also be a safety concern. Standing water, esp. given recent concerns about EEE will likely not be favored by homeowners. I re-emphasize DPWs comment during the TRC meeting that there should be some description of how the 95k site disturbance was calculated to ensure this includes all required areas given how close that number is to the AOT permit threshold.*

Response: The basin grading has been revised to stay outside the 5øproperty line buffer. The stormwater basin is designed per the NH Stormwater Manual. The limit of disturbance has been added to the plan (see sheet 5).

9. *Sheet 6: I cannot find street lighting on utility plan. Lighting must be dark sky compliant and cone of illumination should be mapped to show no overspill onto abutting property.*

Response: Per DPW, we have shown one street light near the cul-de-sac, which will be dark sky compliant and meet all Town requirements.



MILLENNIUM ENGINEERING, INC.
Land Surveyors and Civil Engineers

10. Sheet 7: Seeding should include a native seed mix especially around wetland buffers. This sheet should include the proposed restoration plantings (see comments on restoration under waiver criteria Item 1 above). Detention basin design states fertilizer applied if soil test indicates need—fertilizer is prohibited within the wetland conservation overlay district. HOA docs should include fertilizer use is prohibited within wetland buffer areas in order to ensure all homeowners are informed. Given proximity of development to wetland buffers, I believe wetland buffer disks are warranted around all buffers to deter encroachment.

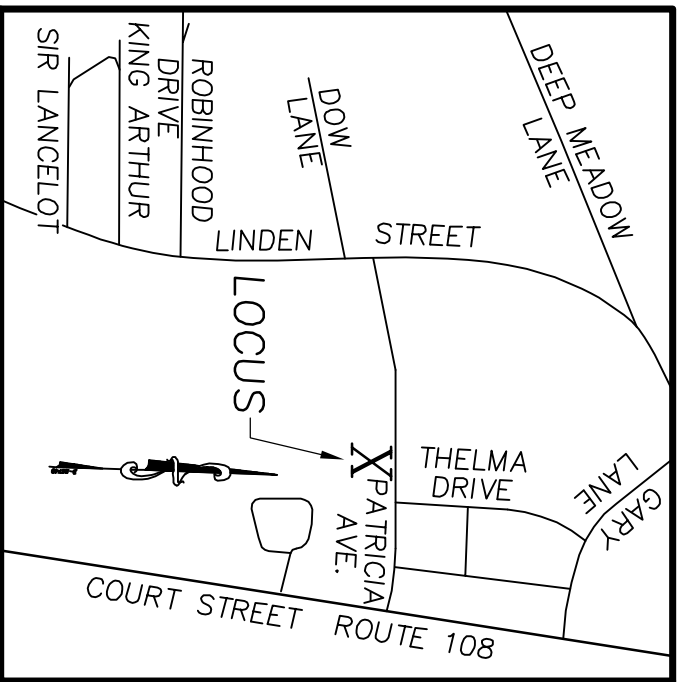
Response: See above response to comment #1, above. Also, any reference to fertilizer has been removed from the plans.

We trust the above response to comments provides the necessary information to advance the technical review portion of the Site Plan process. If you have any questions or comments on the above information please feel free to contact our office at 603-778-0528.

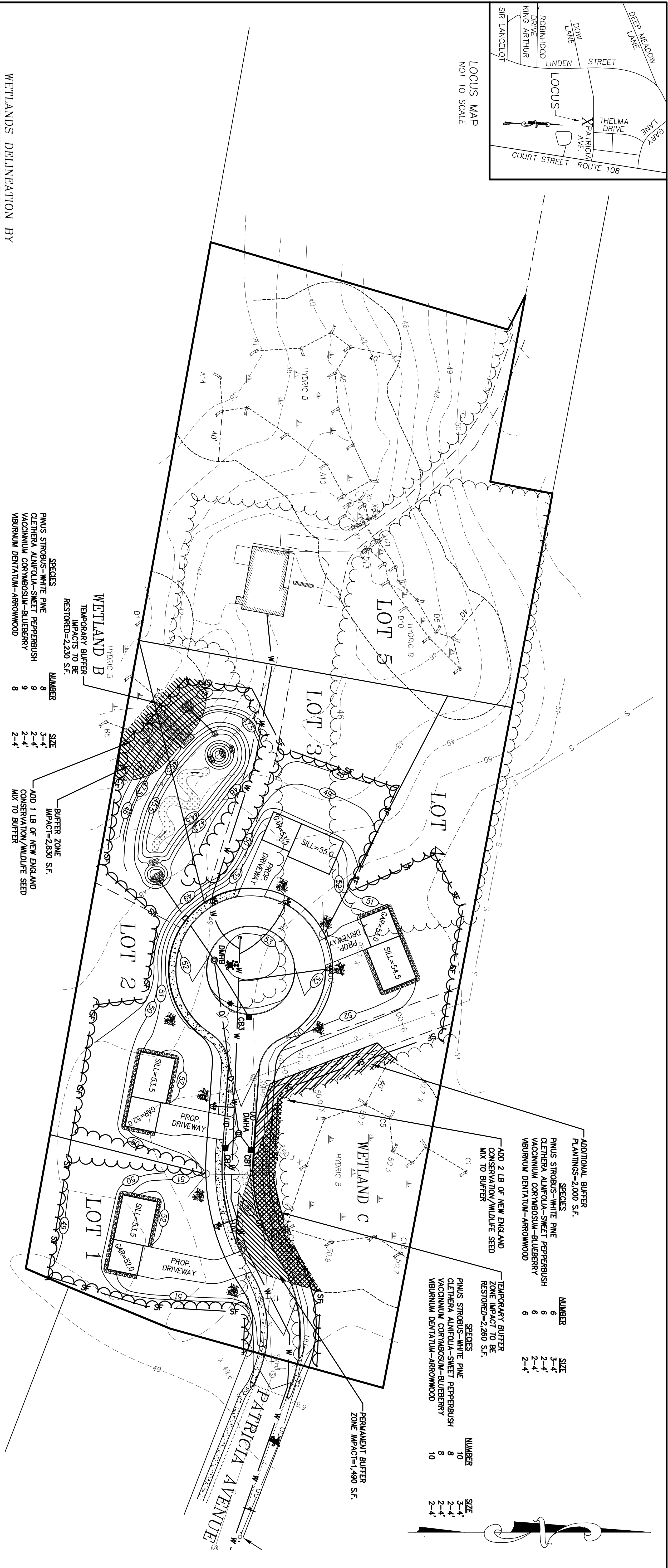
Sincerely,

Millennium Engineering, Inc.

Christopher M. York, P.E.
Project Engineer



LOCUS MAP
NOT TO SCALE



WETLANDS DELINEATION BY
WEST ENVIRONMENTAL
48 STEVENS HILL ROAD
NOTTINGHAM, NH 03290
AS REQUIRED BY THE DES WETLANDS BUREAU.

LEGEND	
	EXST. CONTOUR
	PROP. CONTOUR
	PROP. SILTATION BARRIER
	PROP. TREELINE
	PROP. DRAIN LINE
	PROP. BIT. CONC. SIDEWALK
	EXST. CATCH BASIN
	EXST. UTILITY POLE
	WETLANDS
	EXST. TEST PIT
	PROP. CATCH BASIN
	PROP. SPOT GRADE
	PROP. OUTLET STRUCTURE
	PROP. STREET TREE

SPECIES	NUMBERS	SIZE
PNUS STROBUS--WHITE PINE	8	3-4'
OLETHERA ALNIFOLIA--SWEET PEPPERBUSH	9	2-4'
VACCINIUM CORYMBOSUM--BLUEBERRY	9	2-4'
VIBURNUM DENTATUM--ARROWWOOD	8	2-4'

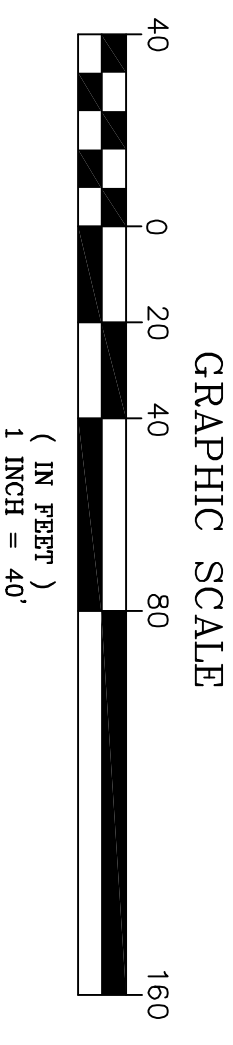
WETLAND B
HYDRIC B
TEMPORARY BUFFER
IMPACTS TO BE RESTORED=2,230 S.F.

SPECIES	NUMBERS	SIZE
PNUS STROBUS--WHITE PINE	8	3-4'
OLETHERA ALNIFOLIA--SWEET PEPPERBUSH	9	2-4'
VACCINIUM CORYMBOSUM--BLUEBERRY	9	2-4'
VIBURNUM DENTATUM--ARROWWOOD	8	2-4'

WETLAND C
HYDRIC B
TEMPORARY BUFFER
IMPACT=2,280 S.F.

SPECIES	NUMBERS	SIZE
PNUS STROBUS--WHITE PINE	6	3-4'
OLETHERA ALNIFOLIA--SWEET PEPPERBUSH	6	2-4'
VACCINIUM CORYMBOSUM--BLUEBERRY	6	2-4'
VIBURNUM DENTATUM--ARROWWOOD	6	2-4'

PERMANENT BUFFER
ZONE IMPACT=1,490 S.F.



NO.	DATE	DESCRIPTION	BY

CONDITIONAL USE PERMIT

PLAT OF LAND
IN
EXETER, NH

SHOWING
BUFFER ZONE IMPACTS/RESTORATION
100 LINDEN STREET AND PATRICIA AVENUE

RECORD OWNER
I S REALTY TRUST
3 VINTAGE DRIVE EXETER, NH 03833

MILLENNIUM ENGINEERING INC.
ENGINEERS AND LAND SURVEYORS
P.O. BOX 745 - 13 HAMPTON ROAD EXETER, NH 03833
PHONE: (603) 778-0528 FAX: (603) 772-0689

SCALE: 1"=40'
DATE: JAN. 9, 2020 DESG. BY: C.M.Y. PROJECIT: E182237
CHKD. BY: E.W.B. SHEET: 1 OF 1



48 Stevens Hill Road, Nottingham, NH 03290
603-734-4298 ♦ mark@westenv.net

Kristen Murphy
Natural Resource Planner
Town of Exeter
10 Front Street,
Exeter, NH 03833

October 3, 2019

RE: Proposed Subdivision 100 Linden Street, Exeter, NH
SUBJ: Conditional Use Permit Application – Wetlands Assessment

Dear Kristen:

West Environmental, Inc. (WEI) submits this letter in support of the Conditional Use Permit Application for the above referenced project. It includes information on the wetland delineation, wetland functions, wetland buffer impacts and wetland mitigation. WEI flagged the wetland boundary in October of 2018 at the request of the landowner. The wetlands were delineated according to the following standards:

- *US Army Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 (January 1987).*
- *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (October 2009).*
- *Field Indicators for Identifying Hydric Soils in New England Version 4*
- *National List of Plant Species That Occur in Wetlands: Northeast (Region 1). U.S. Fish and Wildlife Service. 2013*
- *Code of Administrative Rules. Wetlands Board, State of New Hampshire (Current).*

We evaluated soil probes and plant communities to determine the edge of wetland. There are three wetlands on the property. Wetland A is within the proposed Lot 5 in the western portion of the property where an existing house will remain. This wetland has no impacts and is not associated with the Conditional Use Permit. Wetland B is in the southwest corner of the site along the southern property boundary adjacent the proposed detention basin. This wetland is and is the northern edge of a sloping red maple hemlock swamp with poorly drained soils which extends south off site. Wetland C is in the northeast corner of the site and is a pit and mound forested wetlands with poorly drained soils. There are large white pine, red oak, and white oak growing on small upland islands in this wetland.

Photo documentation of the wetlands and the proposed development and buffer impact areas are attached.

Wetland Function

The wetlands were evaluated utilizing a wetland assessment methodology developed by the US Army Corps of Engineers New England Divisions Highway Methodology Workbook Supplement as a guide. This evaluation is based on the physical characteristics of the wetland through field inspections. This assessment evaluated the following wetland functions:

Groundwater Recharge/Discharge – This function includes the ability of a wetland to provide recharge of surface water into the ground and/or discharge groundwater into surface waters.

Wetland B has indicators of wetland discharge down slope of the site. Wetland C has very shallow water in spring within the pits and therefore does not recharge significant water into the ground.

Flood-flow Alteration – This function considers the effectiveness of the wetland in reducing flood damage by attenuation of floodwaters for prolonged periods following precipitation events.

Wetland B is sloping and does not hold water for flood storage. Wetland C hold small pockets of water but has many small island of uplands and therefore provides limited flood storage.

Sediment/Toxicant/Pathogen Retention – The presence of this function reduces or prevents degradation of water quality because the wetland acts as a trap for sediments, toxicants or pathogens.

Wetland B is sloping and therefore does not provide sediment trapping as water moves through the system. Wetland C has many small depressions that hold water and provides some sediment trapping.

Nutrient Removal/Retention Transformation – This function relates to the effectiveness of the wetland to prevent adverse effects of excess nutrients entering surface waters or aquifers.

Wetland B is limited in this function due to its slope. Wetland C provides minor nutrient attenuation function as it holds some water during spring and rain events.

Production Export – This function relates to the effectiveness of the wetland to produce food or usable products for human or other living organisms.

This function is provided to a small degree by the fruit bearing shrubs within both wetlands.

Sediment/Shoreline Stabilization – This function relates to the effectiveness of a wetland to stabilize stream banks and shorelines against erosion.

This function is not present in either wetland as they are not associated with streams.

Wildlife Habitat – This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with the wetland and the wetland edge (includes resident and migratory species).

Both wetlands provide minor wildlife habitat function, but this is limited due to lack of aquatic habitat, vernal pools and their relatively small size. Habitat for forest dwelling species is present.

WEI worked with Millennium Engineering to prepared wetland buffer impact and mitigation detail sheets attached. The goal is to restore buffers closest to the wetland to protect wetland functions.

Wetland B has 3,280 SF of 40-foot buffer zone impacts for a stormwater detention basin. The outside slope of the basin closest to the wetland will have 1,950 SF of buffer plantings.

Wetland B - Temporary Buffer Impacts to be Restored 1,950 SF

Species	Number	Size
<i>Pinus strobus</i> White Pine	7	3-4'
<i>Clethera Alnifolia</i> Sweet Pepperbush	8	2-4'
<i>Vaccinium corymbosum</i> Blueberry	8	2-4'
<i>Viburnum dentatum</i> Arrow wood	7	2-4'

Wetland C has 1,490 SF of permanent impact to the outer portion of the 40-foot buffer zone. 2,260 SF of the inner 40-foot buffer zone to Wetland C will be restored. An addition 2,000 SF of 40-50-foot buffer to Wetland C will also be planted.

Wetland C - Temporary Buffer Impacts to be Restored 2,260

Species	Number	Size
<i>Pinus strobus</i> White Pine	10	3-4'
<i>Clethera Alnifolia</i> Sweet Pepperbush	8	2-4'
<i>Vaccinium corymbosum</i> Blueberry	8	2-4'
<i>Viburnum dentatum</i> Arrow wood	10	2-4'

Wetland C – Additional Wetland Buffer Plantings 2,000

<i>Pinus strobus</i> White Pine	6	3-4'
<i>Clethera Alnifolia</i> Sweet Pepperbush	6	2-4'
<i>Vaccinium corymbosum</i> Blueberry	6	2-4'
<i>Viburnum dentatum</i> Arrow wood	6	2-4'

The limited functions of the two wetlands have minor impact to a small portion of their overall 40-foot buffers. These impacts will be mitigated by buffer restoration plantings.

This completes our report to support the Condition Use Permit Application for impacts within the 40-foot setback to wetlands.

Please call our office if you have any questions.

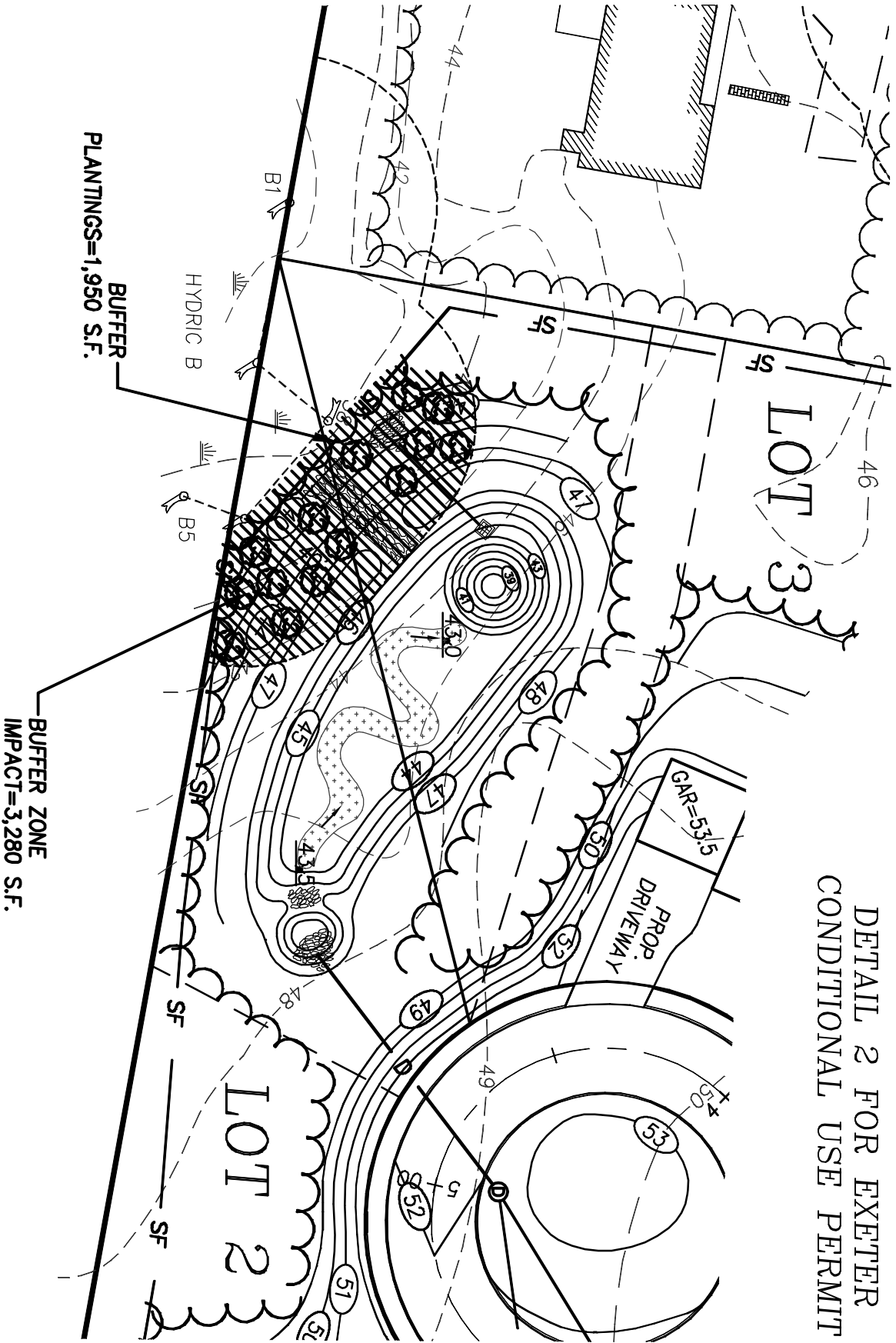
Sincerely,



Mark C. West
NH Certified Wetland Scientist # 10

Cc: Sandy Winter

DETAIL 2 FOR EXETER
CONDITIONAL USE PERMIT



PLANTINGS=1,950 S.F.

BUFFER ZONE
IMPACT=3,280 S.F.

HYDRIC B

B1

B5

GAR=53.5

PROP.
DRIVEWAY

LOT 3

LOT 2

SF

SF

SF

SF

47

48

49

50

51

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51

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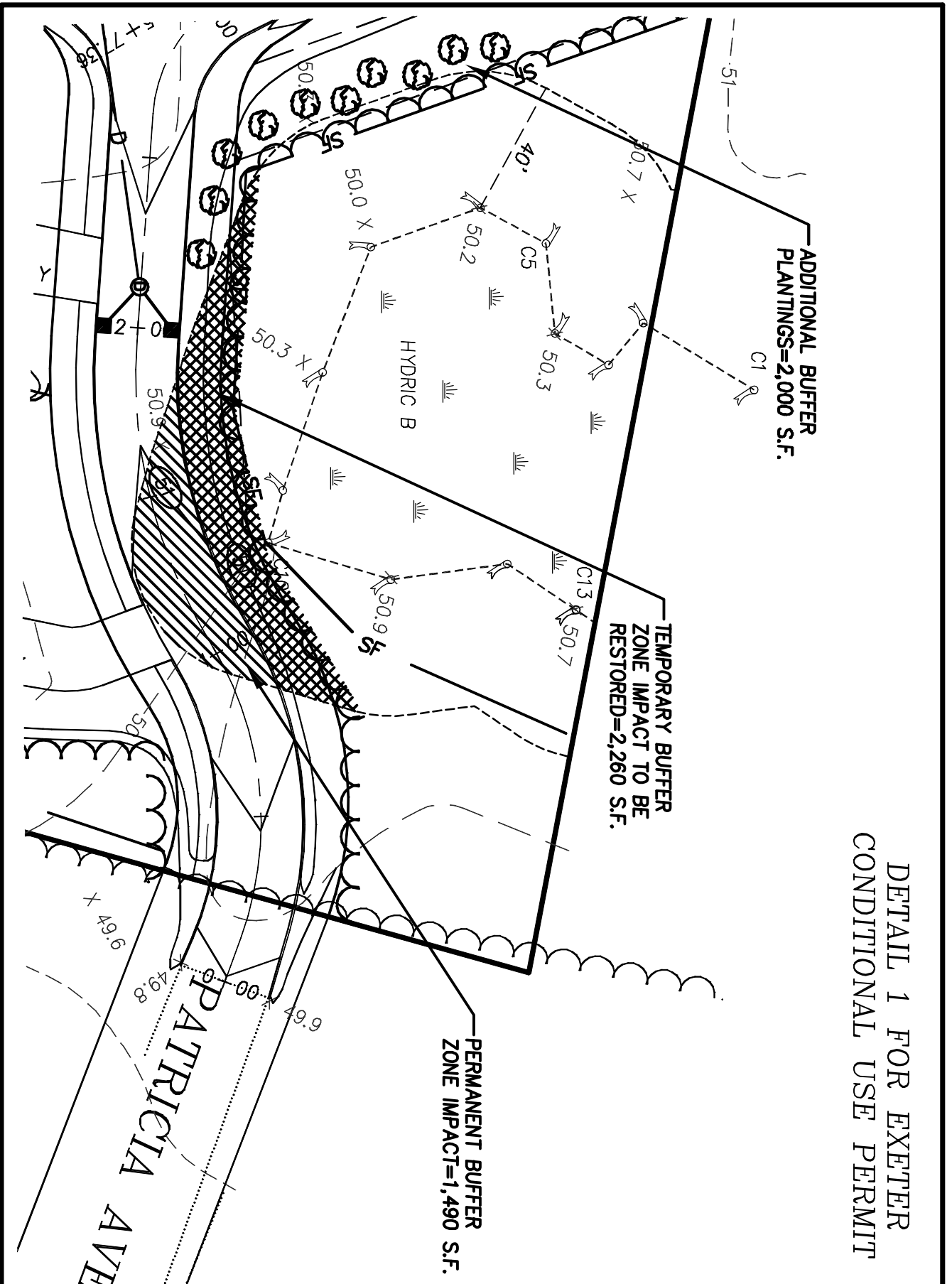
42

DETAIL 1 FOR EXETER
CONDITIONAL USE PERMIT

ADDITIONAL BUFFER
PLANTINGS=2,000 S.F.

TEMPORARY BUFFER
ZONE IMPACT TO BE
RESTORED=2,260 S.F.

PERMANENT BUFFER
ZONE IMPACT=1,490 S.F.

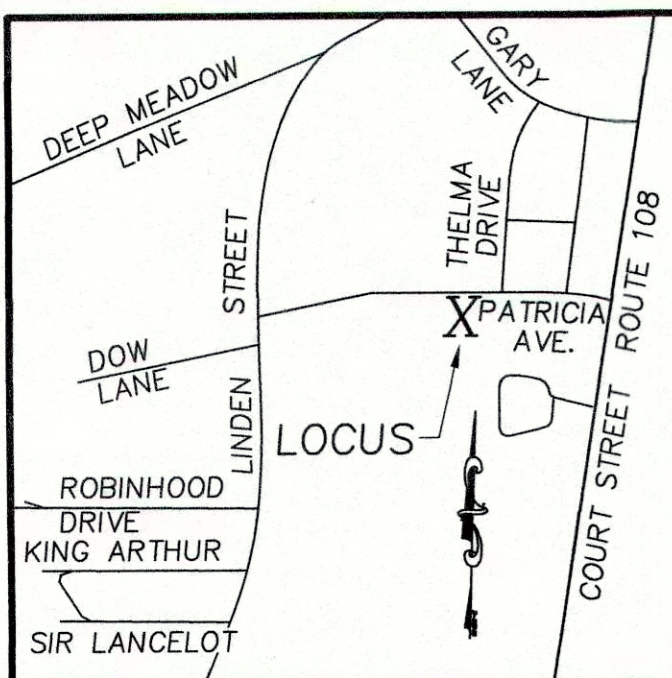


SUBDIVISION PLAN

AT 100 LINDEN STREET

IN EXETER, NH

DECEMBER 2019



LOCUS MAP
NOT TO SCALE

(104/71)
RECORD OWNER

I S REALTY TRUST
C/O S. MITCHELL WINTER, TRUSTEE
3 VINTAGE DRIVE
EXETER, NH 03833
BK. 5961 PG. 2005
243,255 S.F.
5.58 ACRES
AREA PRIOR TO SUBDIVISION

ZONING DISTRICT
R-2 RESIDENTIAL
MINIMUM REQUIREMENTS

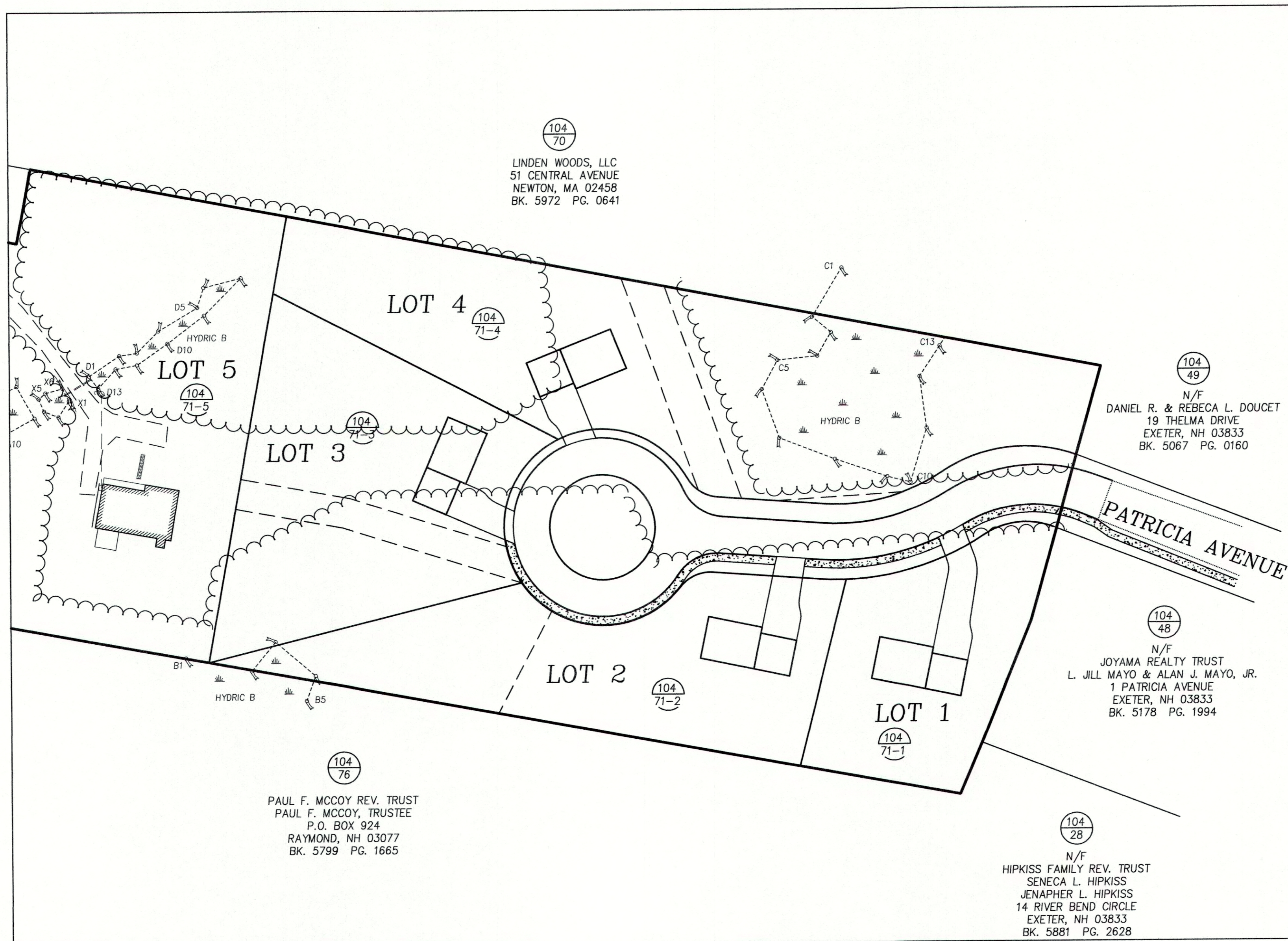
AREA (NO SEWER)	1 ACRE
AREA (SEWER)	15,000 S.F.
LOT WIDTH	100'
LOT DEPTH	100'

BUILDING SETBACKS

FRONT	25'
SIDE	15'
REAR	25'
HYDRIC B SOILS	40'

BUILDING COVERAGE

MAXIMUM	25%
OPEN SPACE	
MINIMUM	40%

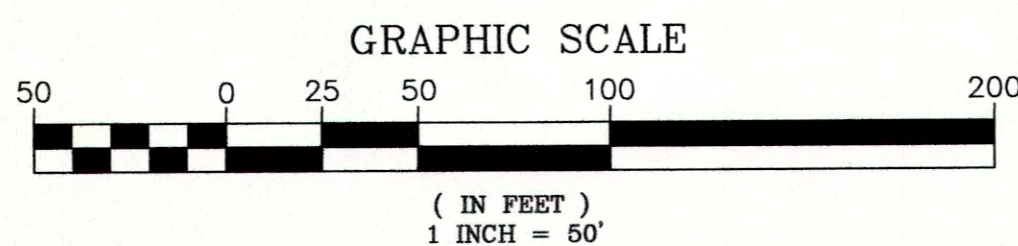


PLAN INDEX

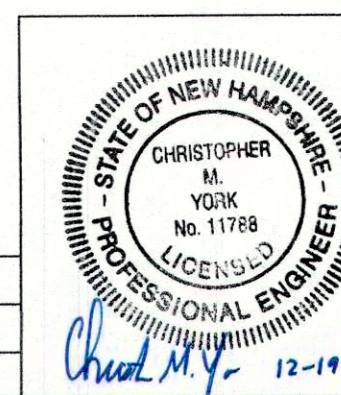
SHEET NO.	TITLE
1	COVER SHEET
2	EXISTING CONDITIONS PLAN
3	LOT LAYOUT PLAN
4	TYPICAL SECTIONS/LEGEND/GENERAL NOTES
5	GRADING PLAN
6	UTILITY PLAN & PROFILE
7	DRAINAGE DETAILS
8	DRAINAGE DETAILS
9	UTILITY DETAILS
10	EROSION CONTROL DETAILS



SECTION	REGULATION	WAIVER REQUESTED
7.4.10	HISS MAPPING	NO HISS MAPPING PROVIDED.



NO.	DATE	DESCRIPTION	BY
2	11/9/19	ADDRESS TRC COMMENTS	C.M.Y.
1	9/10/19	UPDATE RECORD OWNER	C.M.Y.



TOWN OF EXETER PLANNING BOARD

CHAIRMAN _____ DATE _____

COVER SHEET

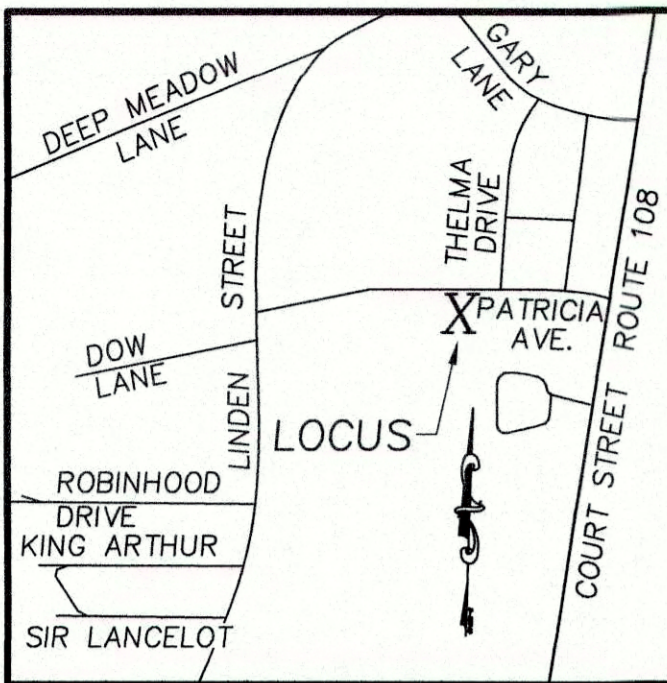
PLAT OF LAND
IN
EXETER, NH

SHOWING
A SUBDIVISION AT
100 LINDEN STREET AND PATRICIA AVENUE

RECORD OWNER
I S REALTY TRUST
3 VINTAGE DRIVE EXETER, NH 03833

MILLENNIUM ENGINEERING INC.
ENGINEERS AND LAND SURVEYORS
P.O. BOX 745 13 HAMPTON ROAD EXETER, NH 03833
PHONE: (603) 778-0528 FAX: (603) 772-0689

SCALE: 1"=50'	DESG. BY: C.M.Y.	PROJECT: E182237
DATE: AUG. 1, 2019	CHKD. BY: E.W.B.	SHEET: 1 OF 10



NOTES:

- 1) THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
- 2) THIS PARCEL DOES NOT LIE WITHIN A FLOOD ZONE. SEE F.I.R.M. COMMUNITY PANEL 330130 0404 E EFFECTIVE DATE MAY 17, 2005.
- 3) ELEVATIONS SHOWN HEREON ARE BASED ON THE N.A.V.D. 88.
- 4) SURVEY COORDINATES SHALL BE ON NH STATE PLANE NAD83.

TOWN OF EXETER
PLANNING BOARD APPROVAL

CHAIRMAN _____ DATE _____

PLAN REFERENCES

- 1) "SUBDIVISION OF LAND FOR NELSON J. MORRISSETTE IN EXETER, NH" SCALE: 1"=50' DATE: AUG. 1976 BY: PARKER SURVEY ASSOC, INC. D-6229
- 2) "LOT LINE ADJUSTMENT PLAN FOR PAUL MORRISSETTE 100 LINDEN STREET EXETER, NH" SCALE: 1"=50' DATE: APRIL 2001 BY: LITTLE RIVER SURVEY COMPANY. D-29070
- 3) "PLAN OF LAND IN EXETER, NH SHOWING A PROPOSED SEWER EASEMENT AT 100 LINDEN STREET AND PATRICIA AVENUE RECORD OWNER I.S. WINTER REALTY TRUST 3 VINTAGE DRIVE EXETER, NH" SCALE: 1"=50' DATE: APRIL 26, 2019 BY: MILLENNIUM ENGINEERING, INC.. D-41465

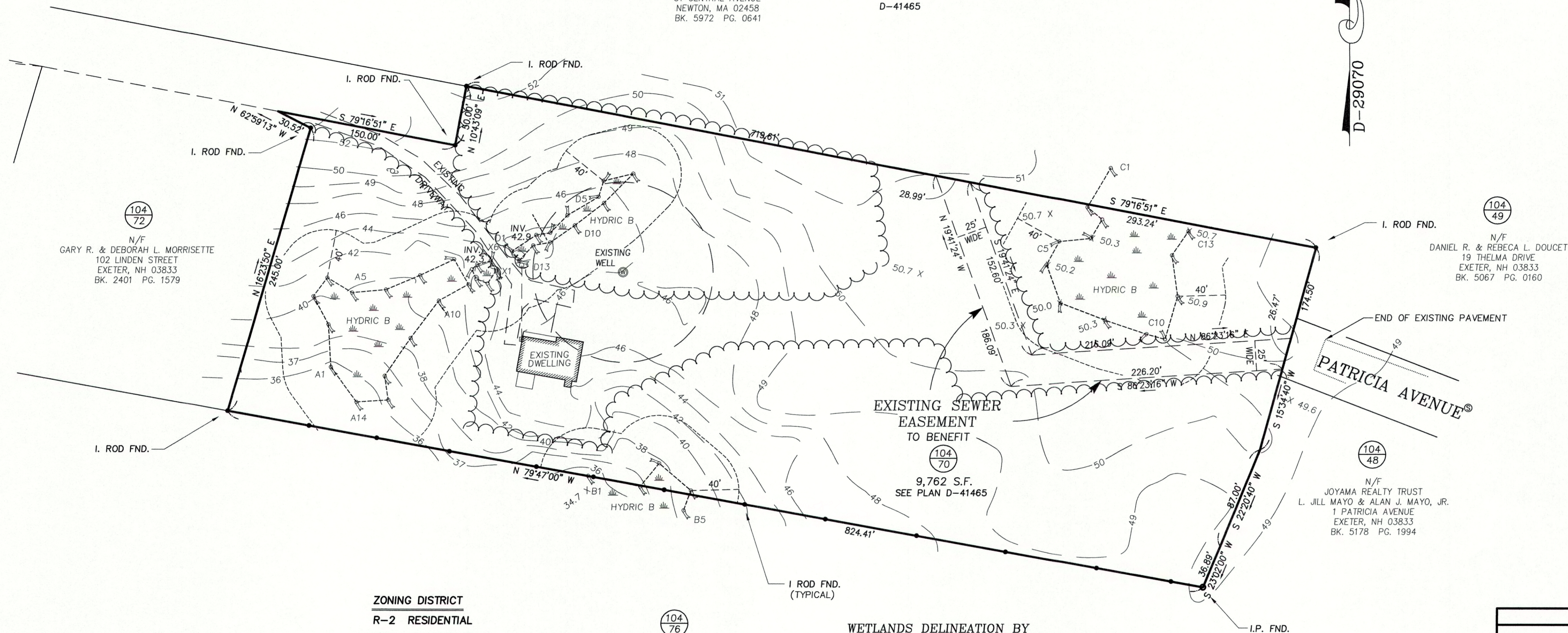
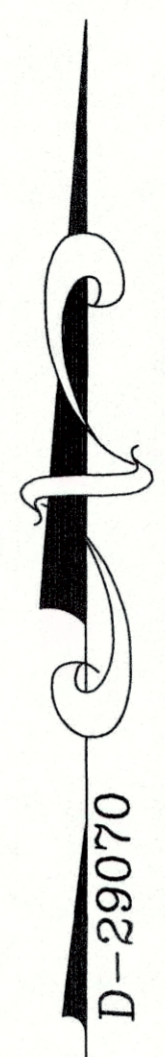
(104/71)
RECORD OWNER

I S REALTY TRUST
C/O S. MITCHELL WINTER, TRUSTEE
3 VINTAGE DRIVE
EXETER, NH 03833
BK. 5961 PG. 2005

243,255 S.F.
5.58 ACRES
AREA PRIOR TO SUBDIVISION

LOCUS MAP
NOT TO SCALE

(104/70)
LINDEN WOODS, LLC
51 CENTRAL AVENUE
NEWTON, MA 02458
BK. 5972 PG. 0641



I CERTIFY:
THAT THIS ACTUAL SURVEY WAS MADE ON THE GROUND BETWEEN DECEMBER OF 2018 AND MARCH OF 2019.
THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTER OF DEEDS.
THAT THIS SURVEY CONFORMS TO THE REQUIREMENTS FOR ACCURACY FOR N.H. URBAN SURVEY.

LICENSED LAND SURVEYOR _____ DATE _____

(104/72)
N/F
GARY R. & DEBORAH L. MORRISSETTE
102 LINDEN STREET
EXETER, NH 03833
BK. 2401 PG. 1579

(104/49)
N/F
DANIEL R. & REBECA L. DOUCET
19 THELMA DRIVE
EXETER, NH 03833
BK. 5067 PG. 0160

(104/48)
N/F
JOYAMA REALTY TRUST
L. JILL MAYO & ALAN J. MAYO, JR.
1 PATRICIA AVENUE
EXETER, NH 03833
BK. 5178 PG. 1994

(104/28)
N/F
HIPKISS FAMILY REV. TRUST
SENECA L. HIPKISS
JENAPHER L. HIPKISS
14 RIVER BEND CIRCLE
EXETER, NH 03833
BK. 5881 PG. 2628

(104/76)
PAUL F. MCCOY REV. TRUST
PAUL F. MCCOY, TRUSTEE
P.O. BOX 924
RAYMOND, NH 03077
BK. 5799 PG. 1665

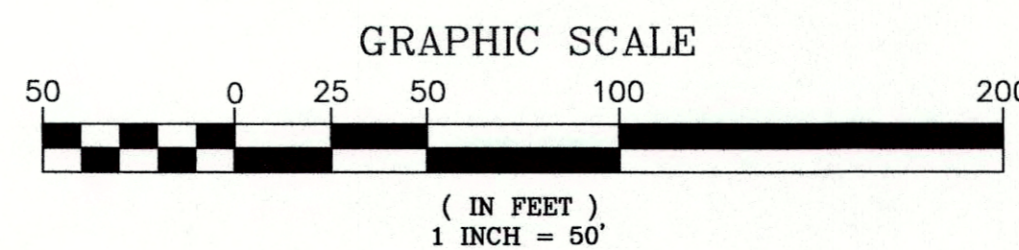
WETLANDS DELINEATION BY
WEST ENVIRONMENTAL
48 STEVENS HILL ROAD
NOTTINGHAM, NH 03290
AS REQUIRED BY THE DES WETLANDS BUREAU.

ZONING DISTRICT
R-2 RESIDENTIAL
MINIMUM REQUIREMENTS

AREA (NO SEWER)	1 ACRE
AREA (SEWER)	15,000 S.F.
LOT WIDTH	100'
LOT DEPTH	100'
BUILDING SETBACKS	
FRONT	25'
SIDE	15'
REAR	25'
HYDRIC B SOILS	40'
BUILDING COVERAGE	
MAXIMUM	25%
OPEN SPACE	40%
MINIMUM	

LEGEND

- I.P. IRON PIPE
- I ROD IRON ROD
- FND. FOUND
- (0/00) ASSESSORS MAP AND PARCEL
- WET FLAG WETLANDS
- ⊙ SEWER MANHOLE



PLANNING BOARD CASE NUMBER 19-XX

EXISTING CONDITIONS

PLAT OF LAND
IN
EXETER, NH

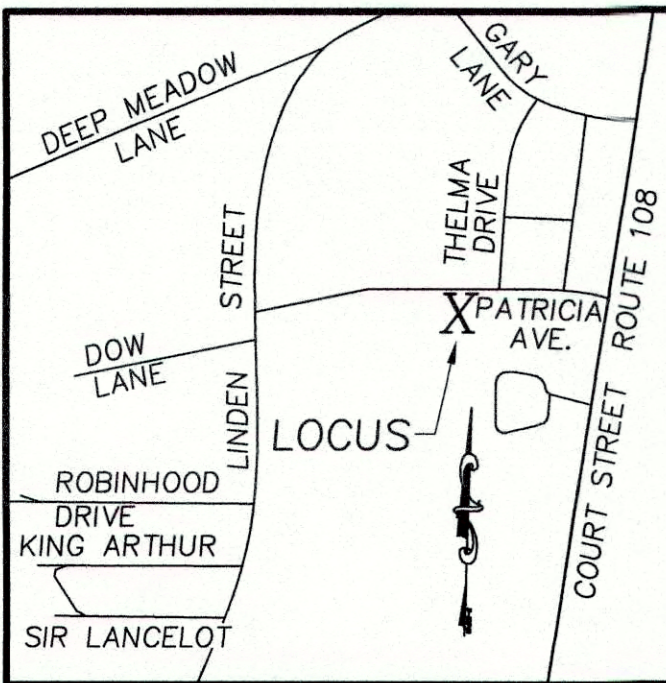
SHOWING
A SUBDIVISION AT
100 LINDEN STREET AND PATRICIA AVENUE

RECORD OWNER
I S REALTY TRUST
3 VINTAGE DRIVE EXETER, NH 03833

MILLENNIUM ENGINEERING INC.
ENGINEERS AND LAND SURVEYORS
P.O. BOX 745 13 HAMPTON ROAD EXETER, NH 03833
PHONE: (603) 778-0528 FAX: (603) 772-0689

2	12/19/19	ADDRESS TRC COMMENTS	H.H.B.
1	9/10/19	UPDATE RECORD OWNER	H.H.B.
NO.	DATE	DESCRIPTION	BY

SCALE: 1"=50' CALC. BY: H.H.B. PROJECT: E182237
DATE: AUG. 1, 2019 CHKD. BY: R.S.G. SHEET: 2 OF 10



NOTES:

- 1) THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT VISIBLE USES OF THE LAND; HOWEVER, THIS DOES NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
- 2) THIS PARCEL DOES NOT LIE WITHIN A FLOOD ZONE. SEE F.I.R.M. COMMUNITY PANEL 330130 0404 E EFFECTIVE DATE MAY 17, 2005.
- 3) THE LANDOWNER IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL WETLANDS REGULATIONS, INCLUDING ANY PERMITTING AND SETBACK REQUIREMENTS REQUIRED UNDER THESE REGULATIONS.
- 4) THE PROPOSED DRAINAGE EASEMENT ON LOTS 2 & 3 IS TO BENEFIT THE HOMEOWNER'S ASSOCIATION.

TOWN OF EXETER PLANNING BOARD

CHAIRMAN _____ DATE _____

PLAN REFERENCES

"LOT LINE ADJUSTMENT PLAN FOR PAUL MORRISSETTE 100 LINDEN STREET EXETER, NH" SCALE: 1"=50' DATE: APRIL 2001 BY: LITTLE RIVER SURVEY COMPANY. D-29070

"SUBDIVISION OF LAND FOR NELSON J. MORRISSETTE IN EXETER, NH" SCALE: 1"=50' DATE: AUG. 1976 BY: PARKER SURVEY ASSOC, INC. D-6229

"PLAN OF LAND IN EXETER, NH SHOWING A PROPOSED SEWER EASEMENT AT 100 LINDEN STREET AND PATRICIA AVENUE RECORD OWNER I.S. WINTER REALTY TRUST 3 VINTAGE DRIVE EXETER, NH" SCALE: 1"=50' DATE: APRIL 26, 2019 BY: MILLENNIUM ENGINEERING, INC. D-41465

ZONING DISTRICT

R-2 RESIDENTIAL

MINIMUM REQUIREMENTS

AREA (NO SEWER) 1 ACRE
 AREA (SEWER) 15,000 S.F.
 LOT WIDTH 100'
 LOT DEPTH 100'

BUILDING SETBACKS

FRONT 25'
 SIDE 15'
 REAR 25'
 HYDRIC B SOILS 40'

BUILDING COVERAGE

MAXIMUM 25%
 OPEN SPACE
 MINIMUM 40%

RECORD OWNER

I S REALTY TRUST
 C/O S. MITCHELL WINTER, TRUSTEE
 3 VINTAGE DRIVE
 EXETER, NH 03833
 BK. 5961 PG. 2005
 243,255 S.F.
 5.58 ACRES
 AREA PRIOR TO SUBDIVISION

THE CERTIFICATIONS SHOWN HEREON ARE INTENDED TO MEET REGISTRY OF DEEDS REQUIREMENTS AND ARE NOT A CERTIFICATION TO TITLE OR OWNERSHIP OF PROPERTY SHOWN. OWNERS OF ADJOINING PROPERTIES ARE ACCORDING TO CURRENT TOWN/CITY ASSESSORS' RECORDS.

I CERTIFY:

THAT THIS ACTUAL SURVEY WAS MADE ON THE GROUND BETWEEN DECEMBER OF 2018 AND MARCH OF 2019.

THAT THIS PLAN CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTER OF DEEDS.

THAT THIS SURVEY CONFORMS TO THE REQUIREMENTS FOR ACCURACY FOR N.H. URBAN SURVEY.

LICENSED LAND SURVEYOR _____ DATE _____

PLANNING BOARD CASE NUMBER 19-XX

LOT LAYOUT SHEET

PLAT OF LAND
 IN
EXETER, NH

SHOWING
A SUBDIVISION AT
100 LINDEN STREET AND PATRICIA AVENUE

PREPARED FOR
I S REALTY TRUST
 3 VINTAGE DRIVE EXETER, NH 03833

MILLENNIUM ENGINEERING INC.
 ENGINEERS AND LAND SURVEYORS
 P.O. BOX 745 13 HAMPTON ROAD EXETER, NH 03833
 PHONE: (603) 778-0528 FAX: (603) 772-0689

WETLANDS DELINEATION BY
WEST ENVIRONMENTAL
48 STEVENS HILL ROAD
NOTTINGHAM, NH 03290
 AS REQUIRED BY THE DES WETLANDS BUREAU.

NO.	DATE	DESCRIPTION	BY
2	12/19/19	ADD SEWER ESMT DETAIL	H.H.B.
1	9/10/19	UPDATE RECORD OWNER	H.H.B.

SCALE: 1"=50'	CALC. BY: H.H.B.	PROJECT: E182237
DATE: AUG. 1, 2019	CHKD. BY: R.S.G.	SHEET: 3 OF 10

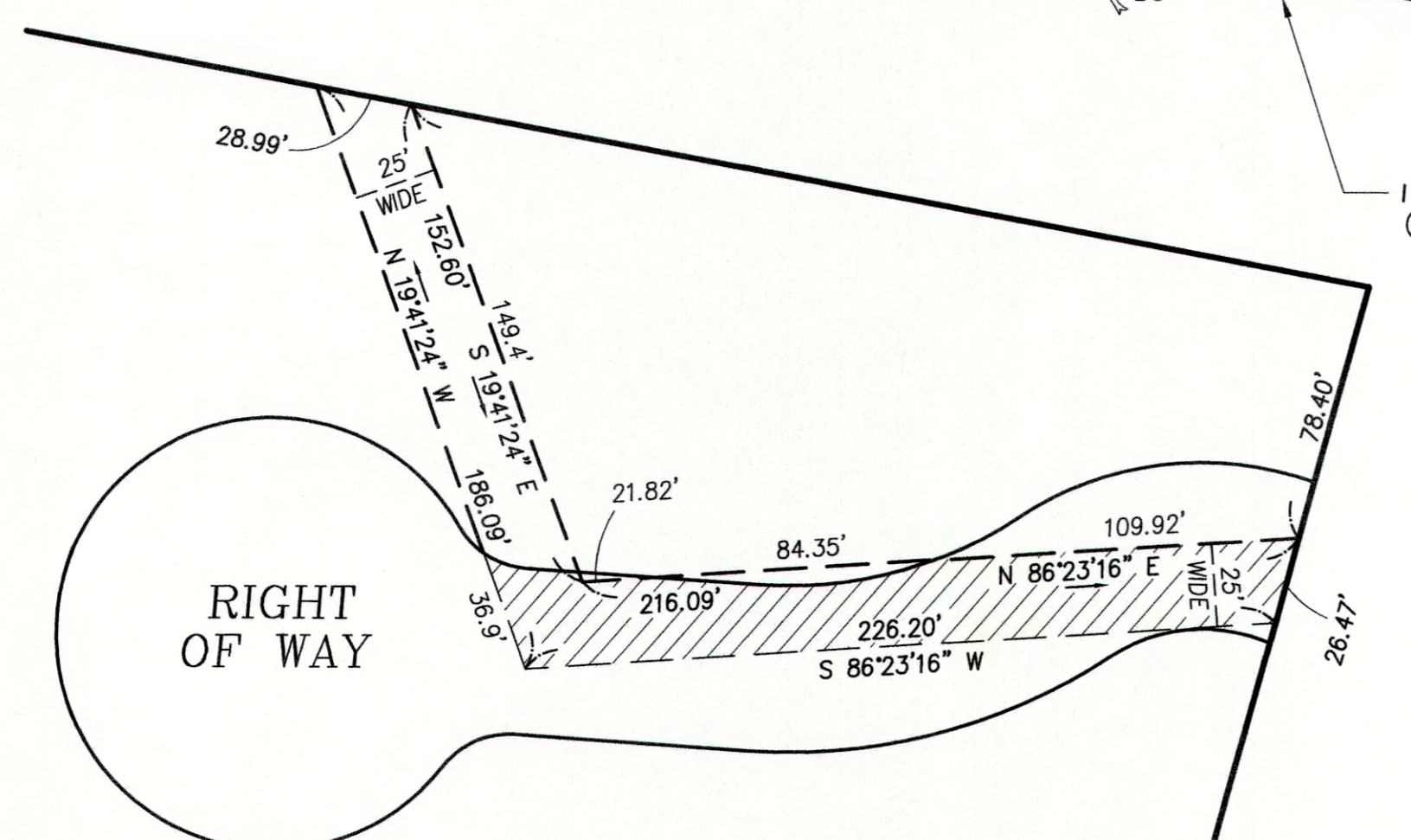
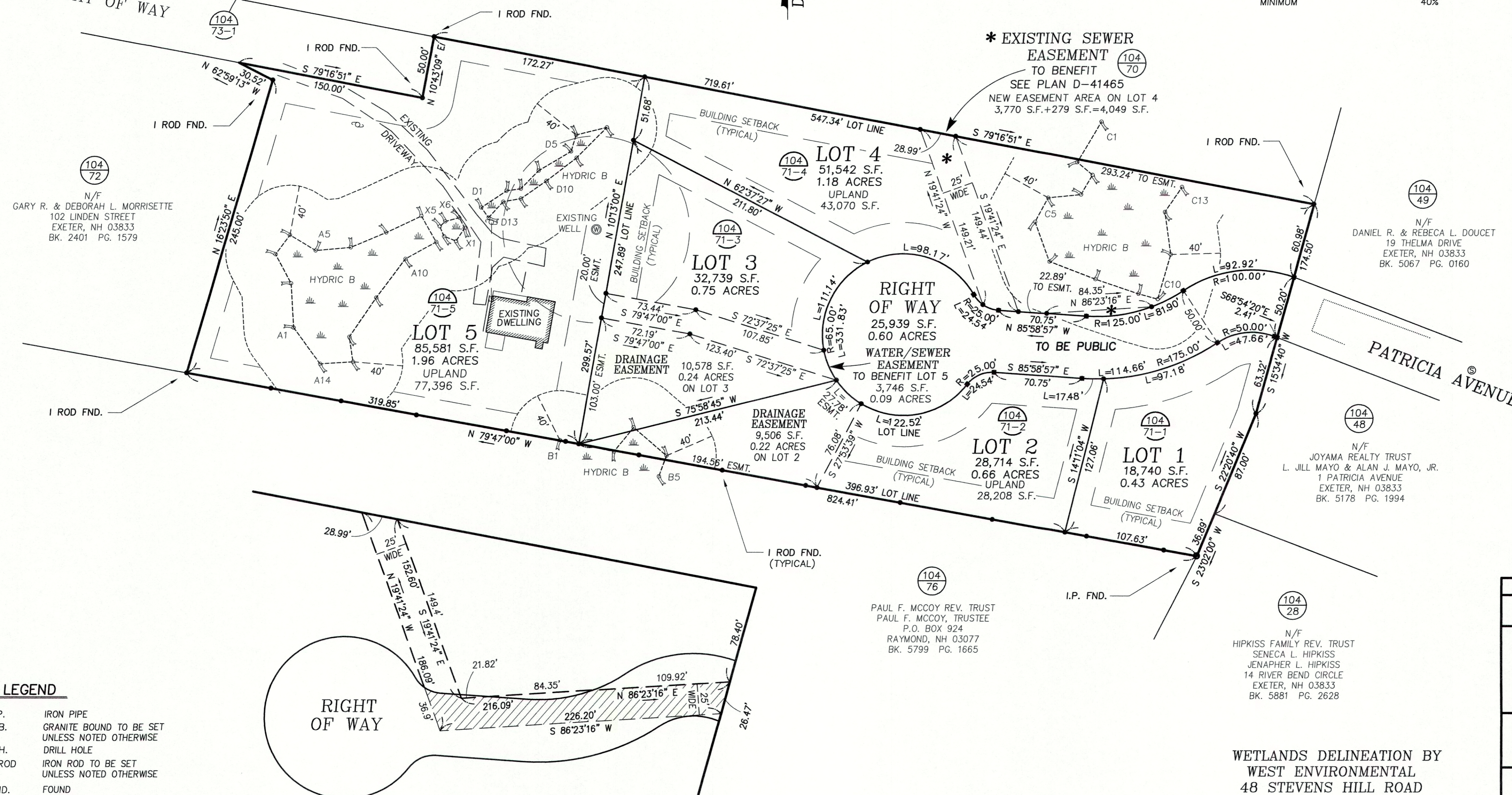
LOCUS MAP
 NOT TO SCALE

N/F
 GARY R. & DEBORAH L. MORRISSETTE
 102 LINDEN STREET
 EXETER, NH 03833
 BK. 5348 PG. 0249

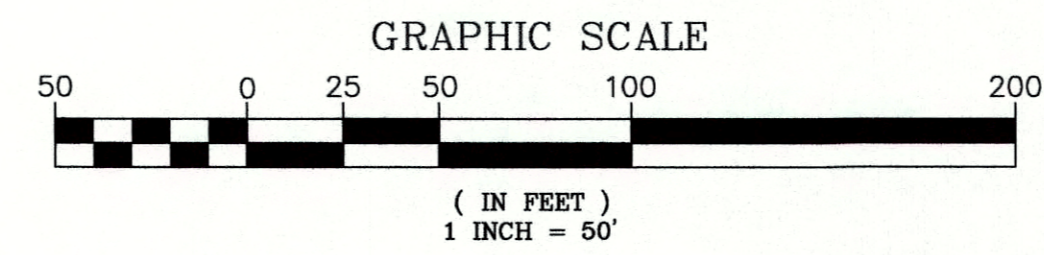
104
 70
 LINDEN WOODS, LLC
 51 CENTRAL AVENUE
 NEWTON, MA 02458
 BK. 5972 PG. 0641

D-29070

50' RIGHT OF WAY

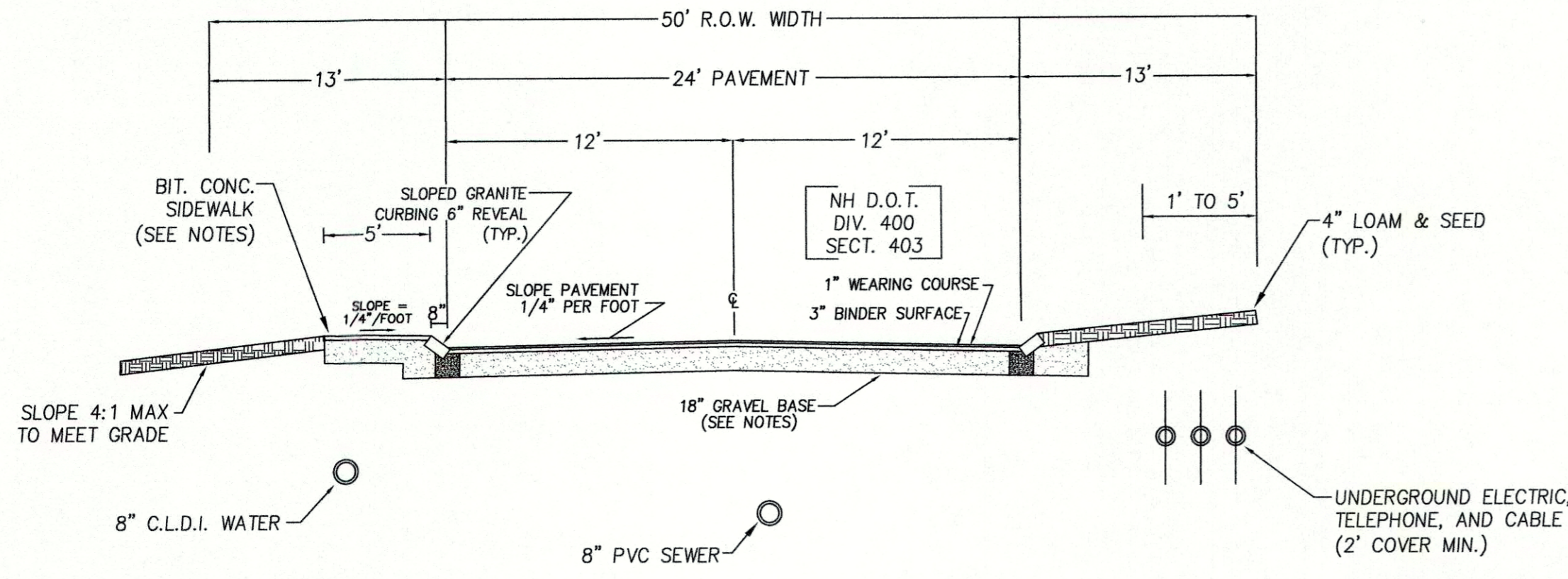


SEWER EASEMENT DETAIL
 HATCHED PORTION OF SEWER EASEMENT (5,713 S.F.) SHALL BE EXTINGUISHED IF AND WHEN RIGHT OF WAY IS ACCEPTED BY THE TOWN OF EXETER.



LEGEND

- I.P. IRON PIPE
- S.B. GRANITE BOUND TO BE SET UNLESS NOTED OTHERWISE
- D.H. DRILL HOLE
- I ROD IRON ROD TO BE SET UNLESS NOTED OTHERWISE
- FND. FOUND
- ASSESSORS MAP AND PARCEL
- WET FLAG WETLANDS
- ⊙ SEWER MANHOLE



ROADWAY
CROSS-SECTION
STA. 0+00 TO STA. 2+75± N.T.S.

PAVEMENT NOTES:

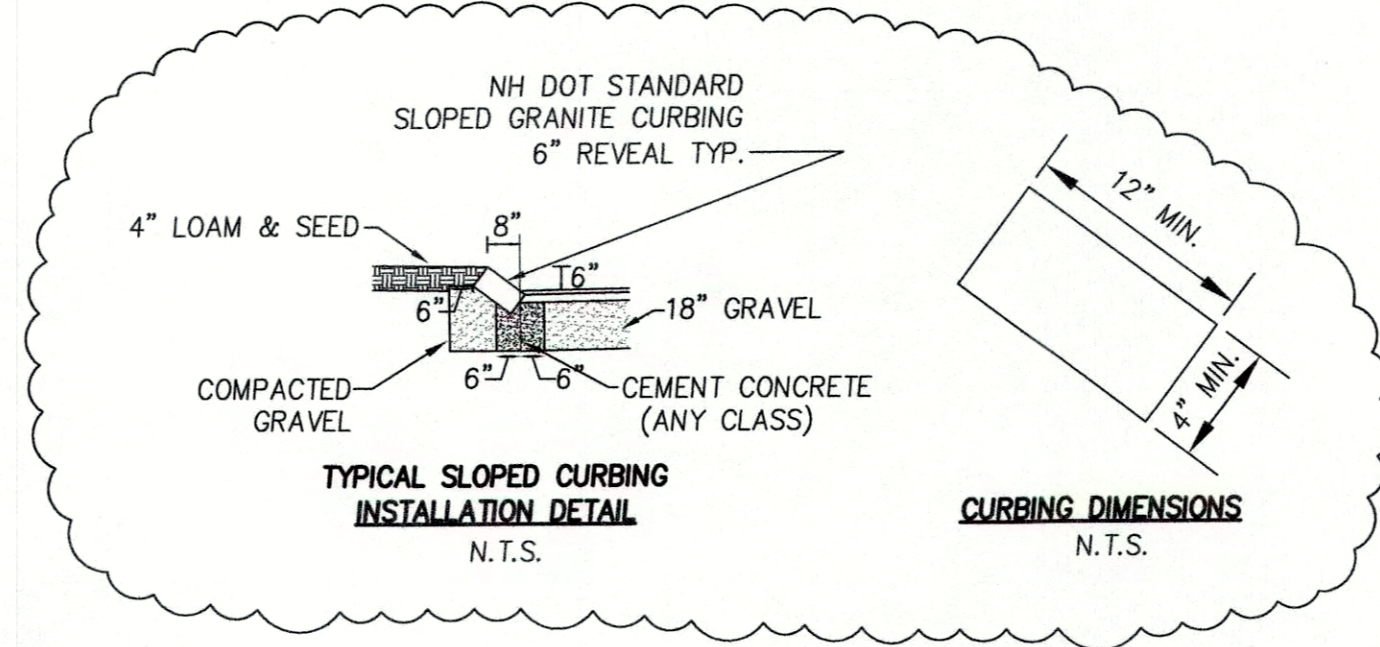
- WEARING COURSE: 1" BITUMINOUS CONCRETE
- BINDER COURSE: 3" BITUMINOUS CONCRETE
- GRAVEL BASE: 6" CRUSHED GRAVEL (ITEM #304.3) OVER 12" OF BANK-RUN GRAVEL (ITEM #304.2)

ROADWAY NOTES:

- 1.) ALL STUMPS, ROCKS AND LEDGE WITHIN THE LIMITS OF THE PROPOSED PAVEMENT SHALL BE REMOVED. ALL LEDGE SHALL BE REMOVED TO A DEPTH OF 2' BELOW FINISHED PAVEMENT GRADE.
- 2.) THE BASE COURSE SHALL BE COMPOSED OF 1) BANK RUN GRAVEL WITH NO STONES LARGER THAN 3" IN DIAMETER, COMPACTED TO A MINIMUM DEPTH OF 12" AND TO 95% OF ITS MAXIMUM DENSITY, AND 2) CRUSHED GRAVEL COMPACTED TO A MINIMUM DEPTH OF 6", IN ACCORDANCE WITH THE STATE OF NEW HAMPSHIRE D.O.T. AND HIGHWAY SPECIFICATIONS.
- 3.) BASE COURSE SHALL NOT BE CONSTRUCTED DURING FREEZING WEATHER OR ON WET OR FROZEN SUBGRADE.
- 4.) GRADING AND ROLLING SHALL BE REQUIRED TO PROVIDE A SMOOTH, EVEN, AND UNIFORM COMPACTED BASE WHICH IS COMPACTED TO A MINIMUM DRY DENSITY OF 95 PERCENT. COMPACTION SHALL BE TESTED AT THE EXPENSE OF THE CONTRACTOR BY AN APPROVED LABORATORY DESIGNATED BY THE TOWN OF HAMPTON.
- 5.) ALL UNSUITABLE MATERIAL SHALL BE EXCAVATED AND REPLACED WITH SUITABLE MATERIAL AND BROUGHT UP TO GRADE.
- 6.) MATERIALS USED FOR GRAVEL SUB-BASE AND CRUSHED GRAVEL BASE SHALL MEET OR EXCEED STANDARDS DESCRIBED IN STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, STATE OF NEW HAMPSHIRE, DEPARTMENT OF TRANSPORTATION - LATEST REVISION. GRADATION TESTS PERFORMED BY AN INDEPENDENT LABORATORY, APPROVED BY THE STATE OF NEW HAMPSHIRE TO PERFORM SUCH TESTS, WILL BE REQUIRED FOR EACH TYPE OF MATERIAL AND SHALL BE PAID FOR BY THE OWNER.
- 7.) MATERIALS USED FOR THE CONSTRUCTION OF ROADWAY FILLS SHALL HAVE THE PHYSICAL CHARACTERISTICS OF SOILS DESIGNATED AS GROUP A-1-a, OR A-3 UNDER AASHTO M145.
- 8.) A 1/4 INCH TOLERANCE IS ALLOWED FOR THE FINE GRADING OF THE CRUSHED GRAVEL AND PLACEMENT OF THE BITUMINOUS CONCRETE. HOWEVER, THE FINISHED PAVEMENT DEPTH MUST BE AT LEAST EQUAL TO OR GREATER THAN THE DEPTH SPECIFIED ON THE APPROVED PLAN.
- 9.) MATERIAL SPECIFICATIONS AND/OR CONSTRUCTION METHODS MAY NOT BE WAIVED BY ANY AGENT OF THE PLANNING BOARD.
- 10.) THE CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES BY CONTACTING "DIG-SAFE" (1-888-344-7233) AND EXETER DPW (1-603-773-6157) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION.
- 11.) THE CONTRACTOR MUST OBTAIN A VALID UTILITY PIPE INSTALLER'S LICENSE AND THE JOB SUPERVISOR OR FOREMAN MUST BE CERTIFIED BY THE TOWN PRIOR TO WORKING ON ANY WATER, SEWER, OR DRAINAGE PIPES THAT ARE IN A TOWN STREET OR RIGHT OF WAY, OR THAT WILL CONNECT OR MAY BE CONNECTED TO A TOWN WATER, SEWER, OR DRAINAGE SYSTEM. A LICENSED SUPERVISOR OR FOREMAN MUST BE PRESENT AT THE JOB SITE AT ALL TIMES DURING THE CONSTRUCTION OF THESE UTILITIES.
- 12.) THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING EROSION AND/OR SEDIMENT CONTROLS DURING CONSTRUCTION. HE/SHE SHALL INSPECT CONTROLS WEEKLY AND AFTER ALL STORM EVENTS. REPAIRS, IF REQUIRED, SHALL BE MADE IMMEDIATELY.
- 13.) THE OWNER/DEVELOPER SHALL SUBMIT TWO HARD COPIES OF AS-BUILT DRAWINGS TO THE EXETER DPW PER THEIR REQUIREMENTS UPON COMPLETION OF THE PROJECT. DRAWINGS SHALL ALSO BE PROVIDED DIGITALLY IN PDF FILE FORMAT AND AUTOCAD FORMAT. AS-BUILTS SHALL INCLUDE ALL LANDBASE AND UTILITIES INFORMATION.

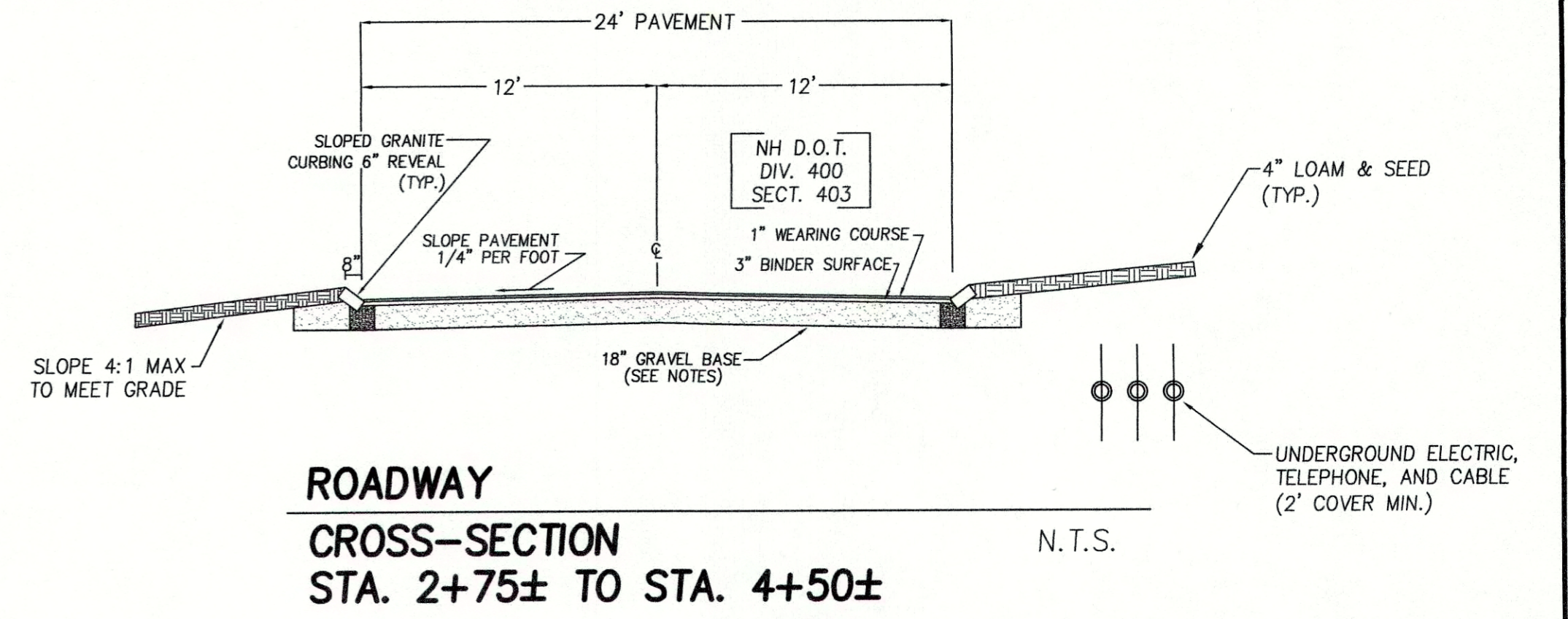
UTILITY NOTES:

- 1.) ALL SEWER MAINS SHALL BE INSTALLED AT LEAST 10 FEET HORIZONTALLY FROM PROPOSED WATER MAINS. IF 10 FOOT SEPARATION IS NOT POSSIBLE, AT LEAST 18" OF VERTICAL SEPARATION IS REQUIRED.
- 2.) ALL SEWER MAINS SHALL MAINTAIN 6 FEET OF COVER OVER THE TOP OF THE PIPING, UNLESS OTHERWISE SHOWN OR APPROVED.
- 3.) ALL WATER MAINS SHALL BE INSTALLED WITH A MINIMUM OF 5 FEET OF COVER OVER THE TOP OF THE PIPE, UNLESS OTHERWISE SHOWN OR APPROVED.
- 4.) WHENEVER WATER AND SEWER SERVICE LINES MUST CROSS, THEY SHALL BE SLEEVED 4 FEET ON EACH SIDE.
- 5.) CHLORINE INJECTION TAPS SHALL BE INSTALLED AS DIRECTED BY AQUARIUM WATER PRIOR TO TESTING OF WATER MAIN.
- 6.) WHENEVER SEWER MAINS MUST CROSS UNDER WATER MAINS, THE SEWER SHALL BE CONSTRUCTED AS FOLLOWS:
 - A) TOP OF THE SEWER MAIN SHALL BE CONSTRUCTED AT LEAST 18" BELOW THE BOTTOM OF THE WATER MAIN.
 - B) SEWER MAIN SHALL BE CLASS 150 PRESSURE PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF WATER MAIN, AND
 - C) ONE FULL LENGTH OF CLASS 150 PRESSURE SEWER PIPE SHOULD BE CENTERED ON THE WATER MAIN AS MUCH AS POSSIBLE. THE SEWER CONSTRUCTED OF THE PRESSURE PIPE MUST BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS.

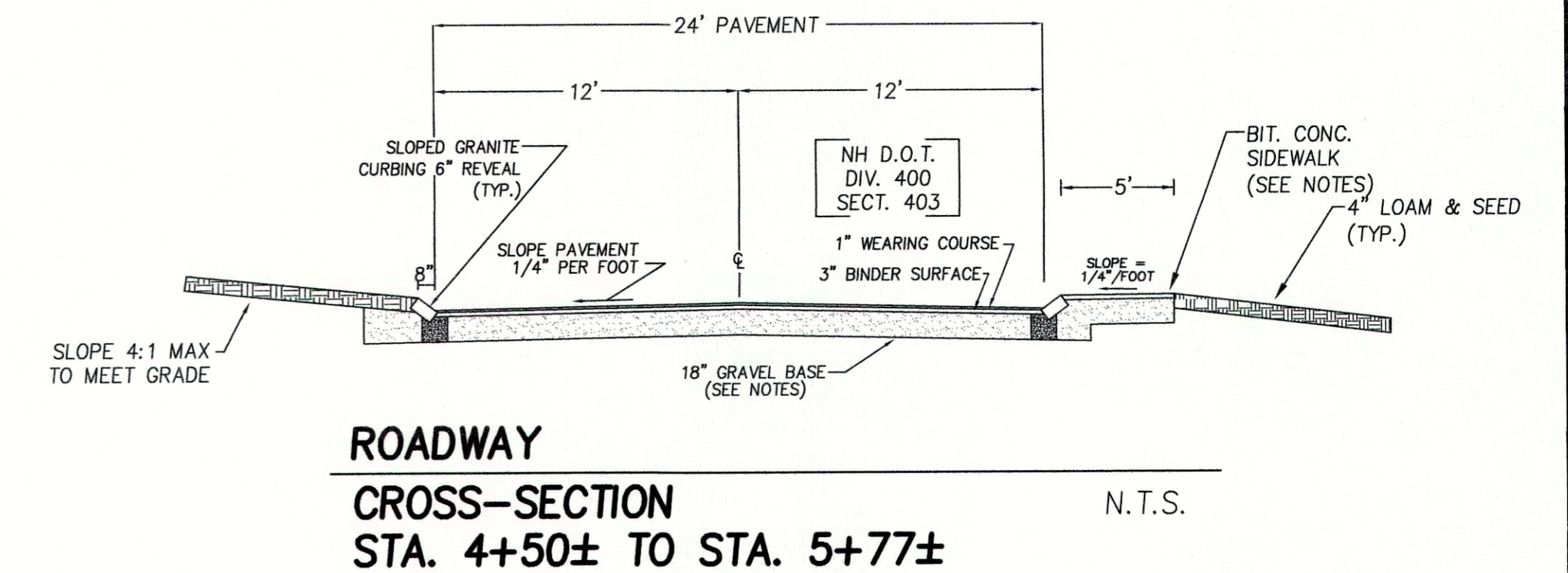


TYPICAL SLOPED CURBING
INSTALLATION DETAIL
 N.T.S.

CURBING DIMENSIONS
 N.T.S.



ROADWAY
CROSS-SECTION
STA. 2+75± TO STA. 4+50± N.T.S.



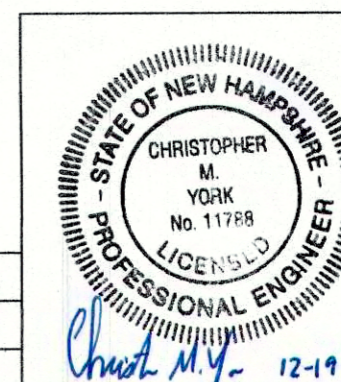
ROADWAY
CROSS-SECTION
STA. 4+50± TO STA. 5+77± N.T.S.

MATERIAL NOTES

ALL MATERIALS AND CONSTRUCTION METHODS OF ALL THE ELEMENTS IN THE SITE PLAN MUST CONFORM TO THE FOLLOWING STANDARDS:

1. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
2. AMERICAN WATER WORKS ASSOCIATION (AWWA)
3. STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES
4. AMERICANS WITH DISABILITIES ACT (ADA)
5. STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC UTILITIES IN EXETER, NH
6. SITE PLAN REVIEW AND SUBDIVISION REGULATIONS FOR THE TOWN OF EXETER, NH

NO.	DATE	DESCRIPTION	BY
2	12/19/19	ADDRESS TRC COMMENTS	C.M.Y.
1	9/10/19	UPDATE RECORD OWNER	C.M.Y.



TYPICAL ROADWAY SECTIONS, NOTES, & DETAILS

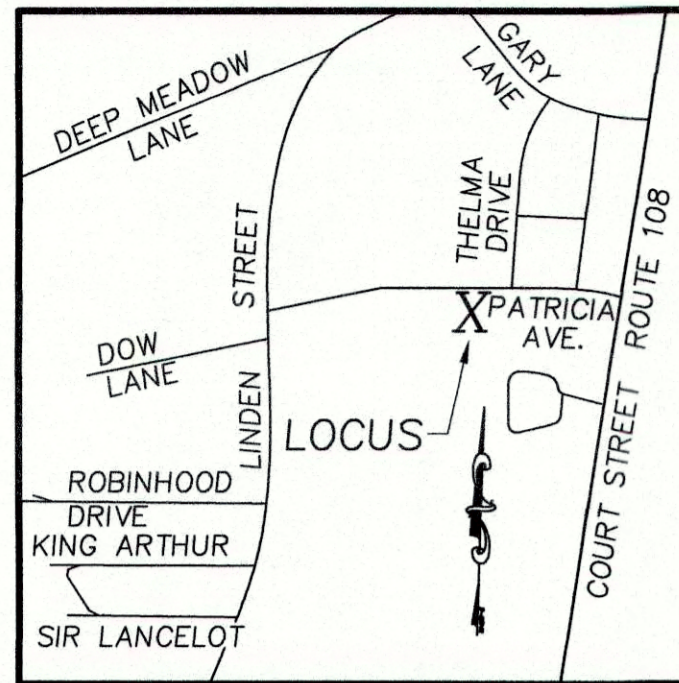
PLAT OF LAND
 IN
EXETER, NH

SHOWING
A SUBDIVISION AT
100 LINDEN STREET AND PATRICIA AVENUE

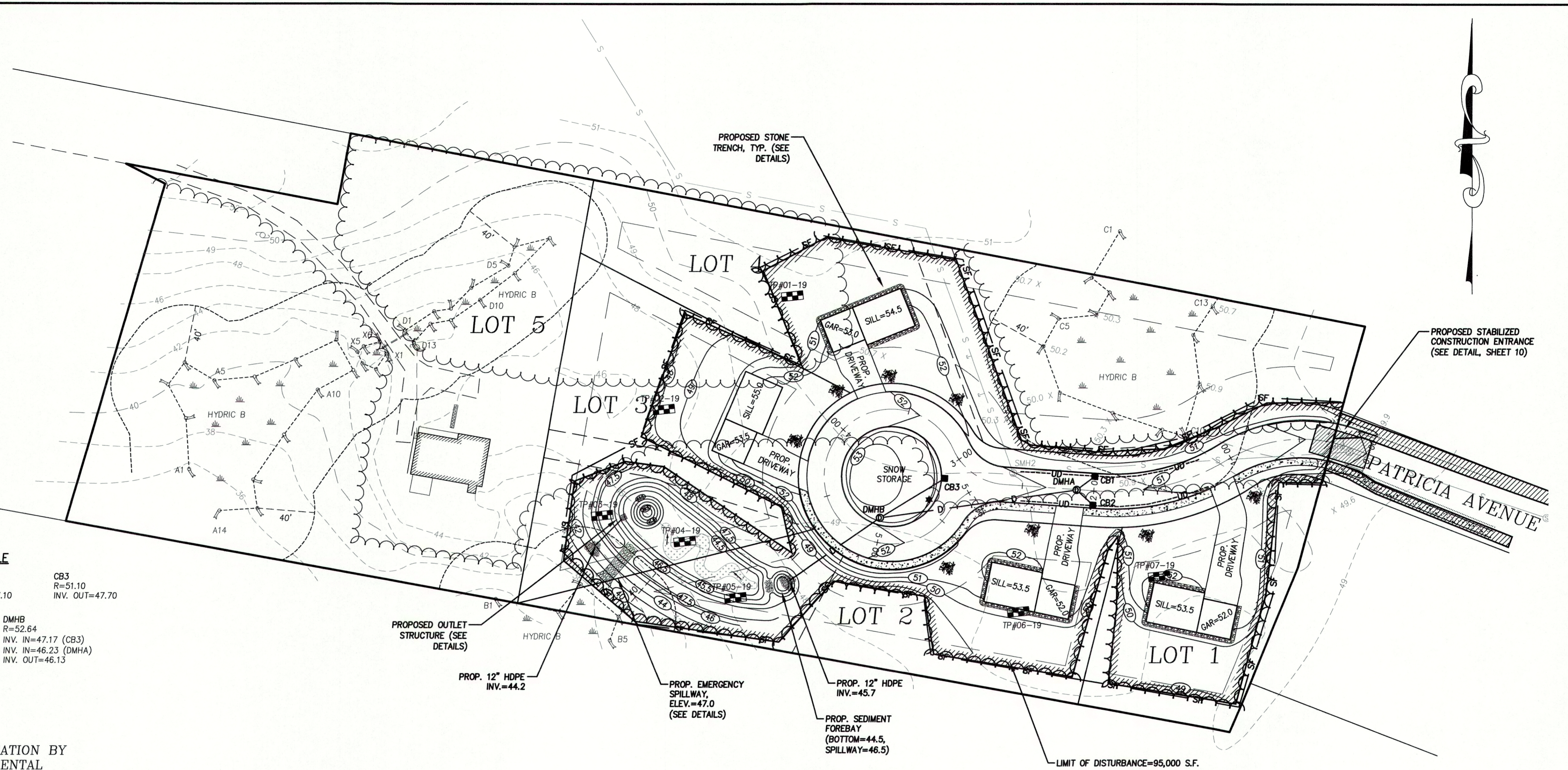
RECORD OWNER
I S REALTY TRUST
 3 VINTAGE DRIVE EXETER, NH 03833

MILLENNIUM ENGINEERING INC.
 ENGINEERS AND LAND SURVEYORS
 P.O. BOX 745 13 HAMPTON ROAD EXETER, NH 03833
 PHONE: (603) 778-0528 FAX: (603) 772-0689

SCALE: AS NOTED	DESG. BY: C.M.Y.	PROJECT: E182237
DATE: AUG. 1, 2019	CHKD. BY: E.W.B.	SHEET: 4 OF 10



LOCUS MAP
NOT TO SCALE



INVERT TABLE

CB1 R=50.50 INV. OUT=47.10	CB2 R=50.50 INV. OUT=47.10	CB3 R=51.10 INV. OUT=47.70
DMHA R=50.89 INV. IN=47.02 (CB1) INV. IN=47.02 (CB2) INV. OUT=46.92	DMHB R=52.64 INV. IN=47.17 (CB3) INV. IN=46.23 (DMHA) INV. OUT=46.13	

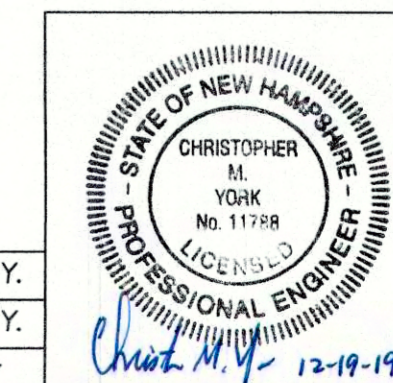
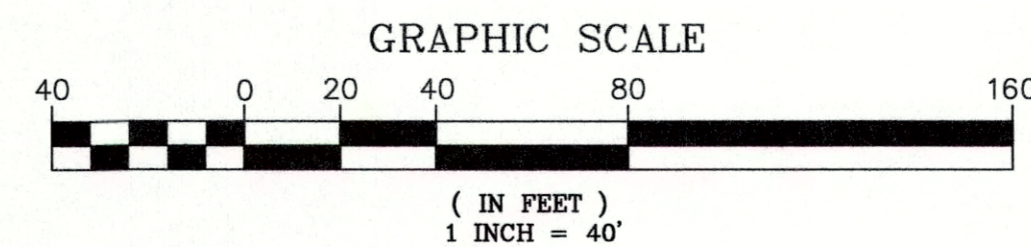
WETLANDS DELINEATION BY
WEST ENVIRONMENTAL
48 STEVENS HILL ROAD
NOTTINGHAM, NH 03290
AS REQUIRED BY THE DES WETLANDS BUREAU.

GENERAL NOTES

- ALL WORK SHALL CONFORM TO; THE EXETER SITE PLAN REVIEW AND SUBDIVISION REGULATIONS AND THESE PLANS.
- WATERSHED PLANS INCLUDED IN STORMWATER MANAGEMENT REPORT.
- PROPOSED DRIVEWAYS AS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL SIZE AND LOCATION OF DRIVEWAYS SHALL BE DETERMINED AS PART OF THE BUILDING LAYOUT PROCESS.
- PROPOSED DWELLINGS AS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL LOCATION, SIZE, SILL ELEVATION AND GRADING OF HOUSES SHALL BE DETERMINED AT TIME OF CONSTRUCTION. HOWEVER, DRAINAGE PATTERNS SHALL DIRECT RUNOFF AS INTENDED BY THIS PLAN.
- THE CONTRACTOR SHALL ENSURE THAT GRADING AROUND THE PROPOSED DWELLINGS ALLOWS FOR POSITIVE PITCH AWAY FROM THE STRUCTURE.
- ALL WATER, SEWER, ROAD AND DRAINAGE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 9.3 STORMWATER MANAGEMENT STANDARDS, STORMWATER MANAGEMENT PLAN, STORMWATER POLLUTION PREVENTION PLAN, AND EROSION AND SEDIMENT CONTROL STANDARDS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC UTILITIES IN EXETER, NH.
- STREET TREES SHALL BE DECIDUOUS AND HAVE A MINIMUM CALIPER OF 2 INCHES.
- TOTAL SITE DISTURBANCE = 95,000 S.F. AN ALTERATION OF TERRAIN PERMIT IS NOT REQUIRED WITH THE NEW HAMPSHIRE DES.
- ONSITE BURIAL OF STUMPS OR ANY OTHER DEBRIS IS PROHIBITED.
- THIS PARCEL DOES NOT LIE WITHIN A FLOOD ZONE. SEE F.I.R.M. COMMUNITY PANEL 33015C 0404 E EFFECTIVE DATE MAY 17, 2005
- ELEVATIONS ARE BASED ON NAVD 1988 DATUM.

LEGEND

—60—	EXIST. CONTOUR	□	EXIST. CATCH BASIN
—59—	PROP. CONTOUR	○	EXIST. UTILITY POLE
—SF—	PROP. SILTATION BARRIER	▨	WETLANDS
~~~~~	PROP. TREELINE	⊙	EXIST. TEST PIT
—D—	PROP. DRAIN LINE		
—	PROP. BIT. CONC. SIDEWALK		
■	PROP. CATCH BASIN		
430	PROP. SPOT GRADE		
▨	PROP. OUTLET STRUCTURE		
⊙	PROP. STREET TREE		



NO.	DATE	DESCRIPTION	BY
2	12/19/19	ADDRESS TRC COMMENTS	C.M.Y.
1	9/10/19	UPDATE RECORD OWNER	C.M.Y.

TOWN OF EXETER PLANNING BOARD

CHAIRMAN _____ DATE _____

**GRADING PLAN**

**PLAT OF LAND**  
IN  
**EXETER, NH**

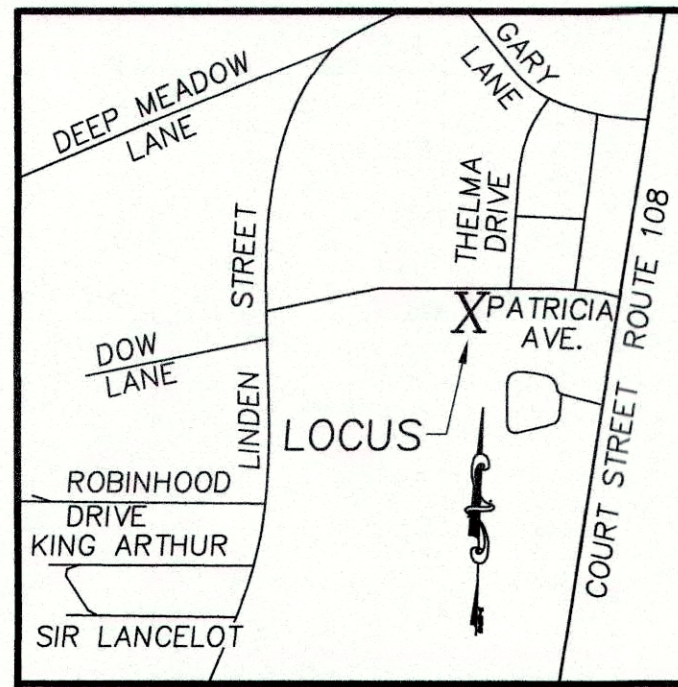
SHOWING  
**A SUBDIVISION AT**  
**100 LINDEN STREET AND PATRICIA AVENUE**

RECORD OWNER  
**I S REALTY TRUST**  
3 VINTAGE DRIVE EXETER, NH 03833

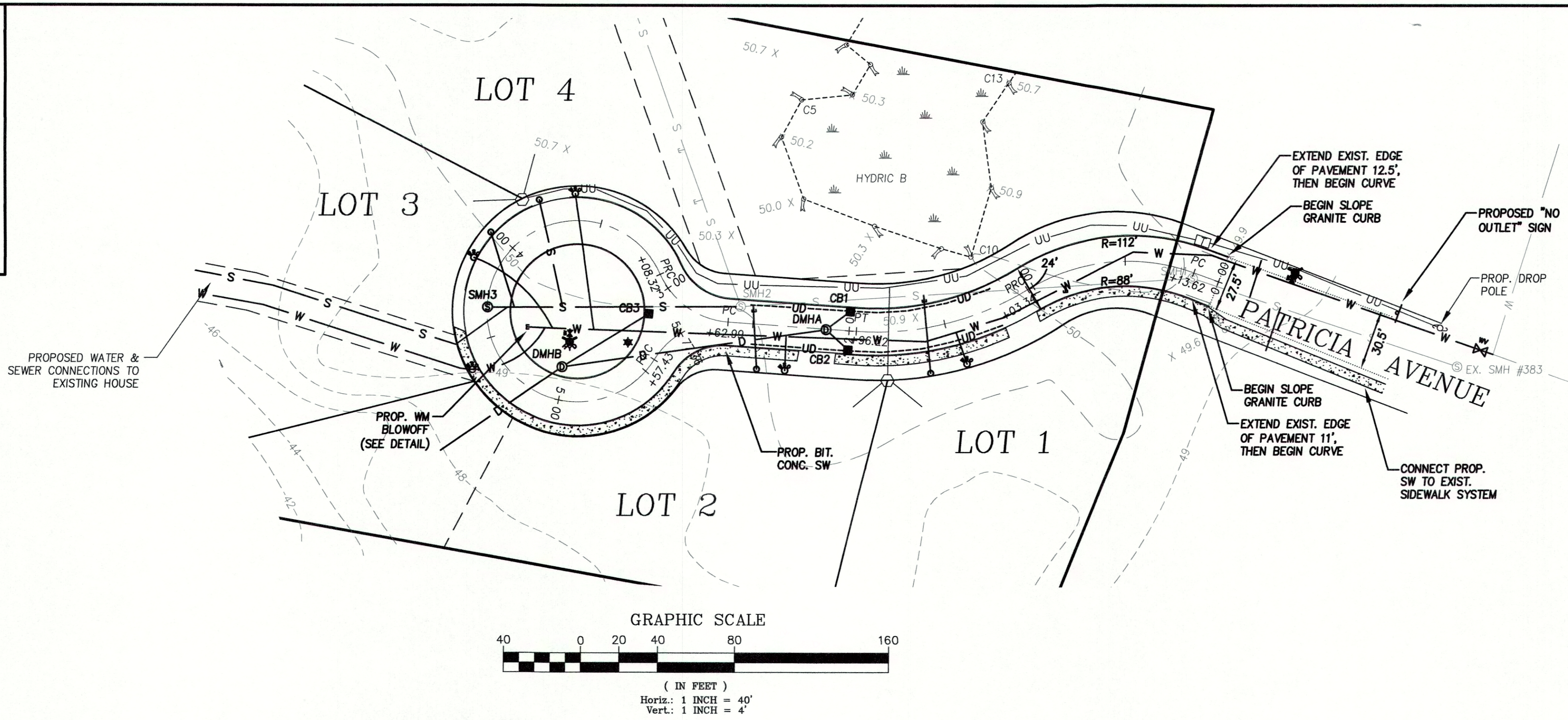
**MILLENNIUM ENGINEERING INC.**  
ENGINEERS AND LAND SURVEYORS  
P.O. BOX 745 13 HAMPTON ROAD EXETER, NH 03833  
PHONE: (603) 778-0528 FAX: (603) 772-0689

SCALE: 1"=40'	DES. BY: C.M.Y.	PROJECT: E1B2237
DATE: AUG. 1, 2019	CHKD. BY: E.W.B.	SHEET: 5 OF 10





LOCUS MAP  
NOT TO SCALE

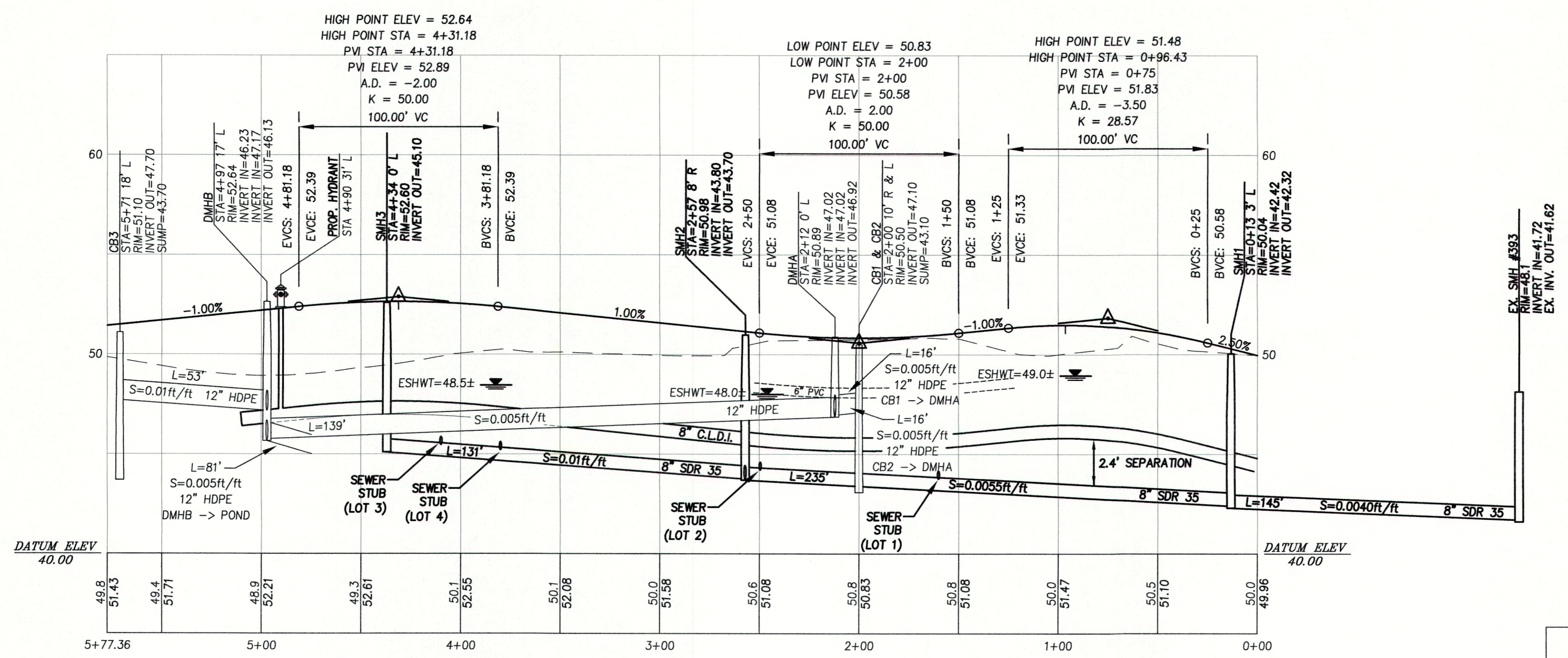


**LEGEND**

- W — EXISTING WATER MAIN
- S — EXISTING SEWER MAIN
- OHW — EXISTING OVERHEAD WIRE
- D — PROPOSED DRAIN LINE
- UD — PROPOSED SUBDRAIN
- W — PROPOSED WATER SERVICE
- SS — PROPOSED SEWER SERVICE
- UU — PROPOSED UNDERGROUND UTILITIES

- ⊠ PROPOSED WATER GATE
- ★ PROPOSED STREET LIGHT
- ⊠ PROPOSED TRANSFORMER
- PROPOSED HAND HOLE
- ⊗ EXISTING FIRE HYDRANT
- ⊕ PROPOSED WATER SHUTOFF
- PROPOSED SEWER CLEANOUT



EX. SMH #383  
RIM=48.1  
INVERT IN=41.72  
EX. INV. OUT=41.82

TOWN OF EXETER PLANNING BOARD

CHAIRMAN _____ DATE _____

**ROADWAY & UTILITIES PROFILE**

**PLAT OF LAND**

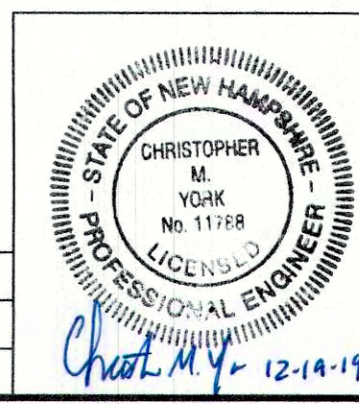
IN  
**EXETER, NH**

SHOWING  
**A SUBDIVISION AT**  
**100 LINDEN STREET AND PATRICIA AVENUE**

RECORD OWNER  
**I S REALTY TRUST**  
3 VINTAGE DRIVE EXETER, NH 03833

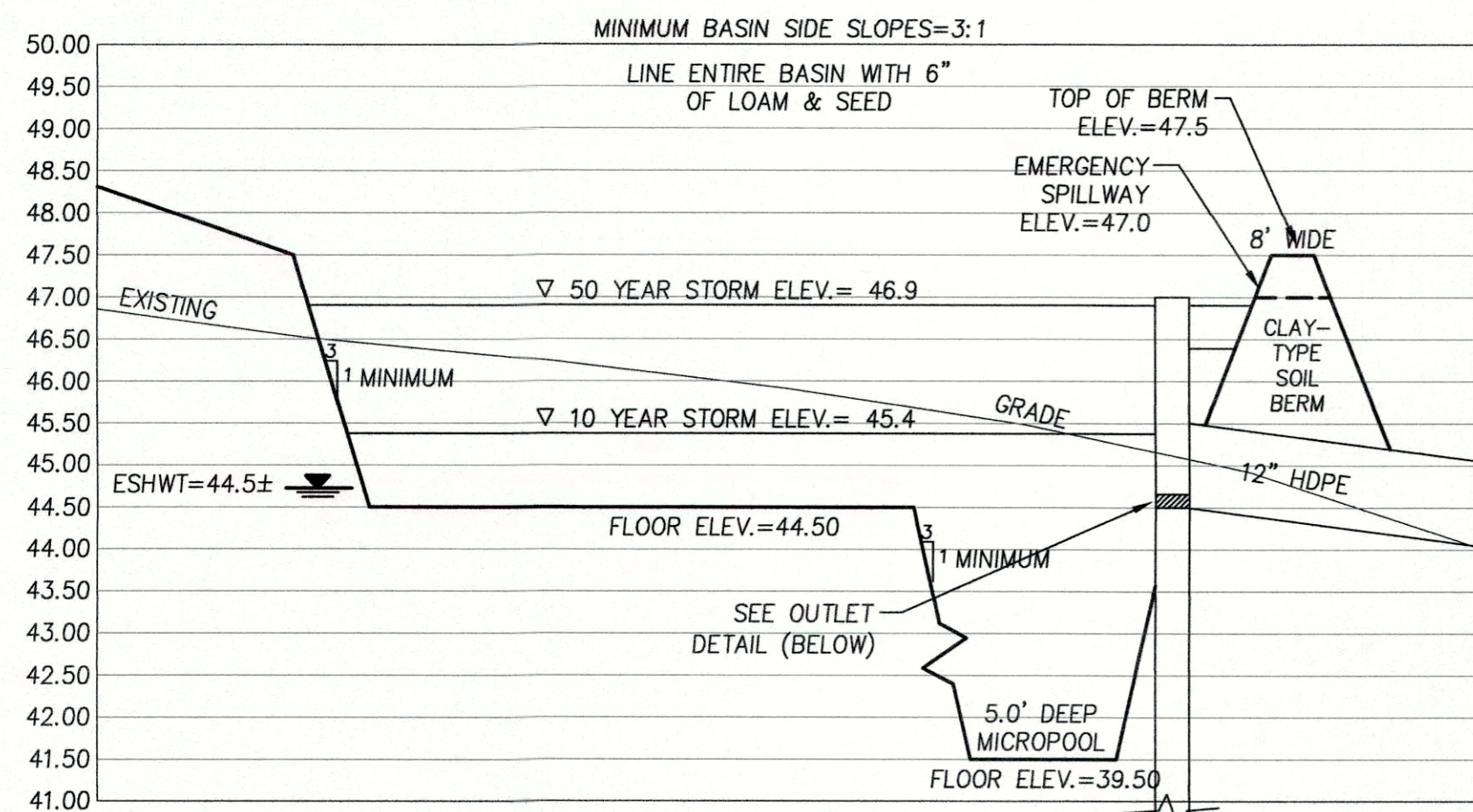
**MILLENNIUM ENGINEERING INC.**  
ENGINEERS AND LAND SURVEYORS  
P.O. BOX 745 13 HAMPTON ROAD EXETER, NH 03833  
PHONE: (603) 778-0528 FAX: (603) 772-0689

SCALE: 1"=40'    DESG. BY: C.M.Y.    PROJECT: E182237  
DATE: AUG. 1, 2019    CHKD. BY: E.W.B.    SHEET: 6 OF 10



NO.	DATE	DESCRIPTION	BY
2	12/19/19	ADDRESS TRC COMMENTS	C.M.Y.
1	9/10/19	UPDATE RECORD OWNER	C.M.Y.





**DETENTION BASIN  
PROFILE VIEW**

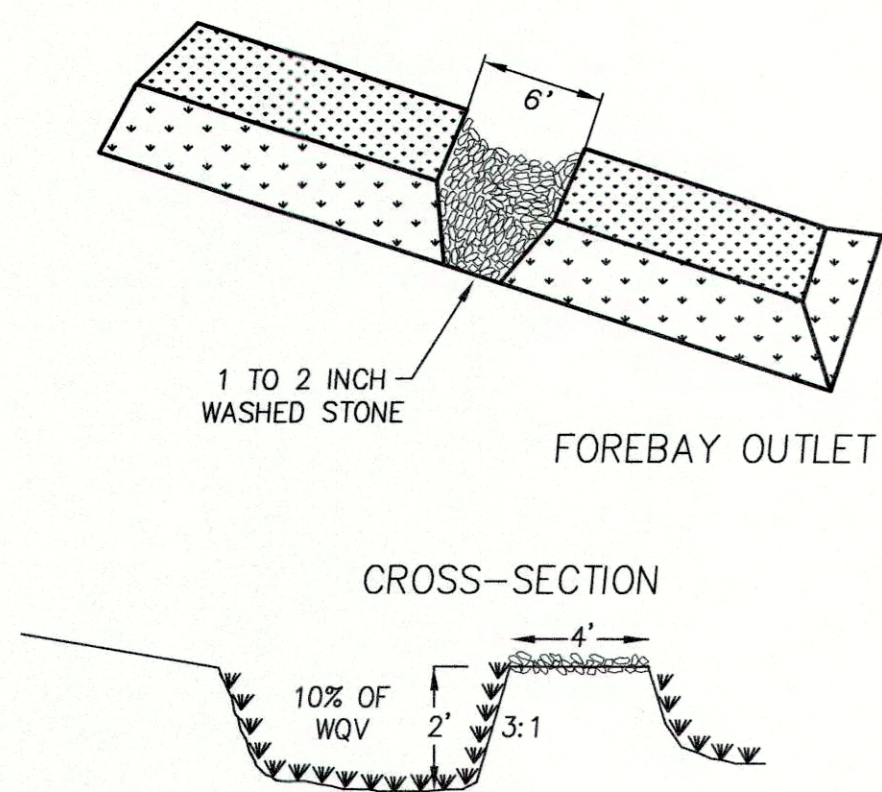
HORIZ. SCALE: N.T.S.  
VERT. SCALE: 1"=2'

**MAINTENANCE**

1. EMBANKMENT—THE EMBANKMENT SHALL BE INSPECTED ANNUALLY TO DETERMINE IF RODENT BURROWS, WET AREAS, OR EROSION OF THE FILL IS TAKING PLACE.
2. VEGETATION—THE VEGETATED AREAS OF THE STRUCTURE SHALL BE PROTECTED FROM DAMAGE BY GRAZING, TRAFFIC, AND DENSE WEED GROWTH. TREES AND SHRUBS SHALL BE KEPT OFF THE EMBANKMENT AND EMERGENCY SPILLWAY AREAS.
3. INLETS—PIPE INLETS AND SPILLWAY STRUCTURES SHALL BE INSPECTED ANNUALLY AND AFTER EVERY MAJOR STORM. ACCUMULATED DEBRIS AND SEDIMENT SHALL BE REMOVED. IF PIPES ARE COATED, THE COATING SHALL BE CHECKED AND REPAIRED AS NECESSARY.
4. OUTLETS—PIPE OUTLETS SHALL BE INSPECTED ANNUALLY AND AFTER EVERY MAJOR STORM. THE CONDITION OF THE PIPES SHALL BE NOTED AND REPAIRS MADE AS NECESSARY. IF EROSION IS TAKING PLACE THEN MEASURES SHALL BE TAKEN TO STABILIZE AND PROTECT THE AFFECTED AREA OF THE OUTLET.
5. SEDIMENT—SEDIMENT SHALL BE CONTINUALLY CHECKED IN THE BASIN. WHEN SEDIMENT ACCUMULATIONS REACH THE PREDETERMINED DESIGN ELEVATION, THEN THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF PROPERLY.
6. SAFETY INSPECTIONS—ALL PERMANENT IMPOUNDMENTS SHALL BE INSPECTED BY A QUALIFIED PROFESSIONAL ENGINEER ON A PERIODIC BASIS. IF THERE IS POTENTIAL FOR SIGNIFICANT DAMAGE OR LOSS OF LIFE DOWNSTREAM, THEN THE INSPECTION SHOULD BE CARRIED OUT ANNUALLY. THE DESIGNATED INDIVIDUAL OR GROUP SHOULD ALSO MAKE INSPECTIONS AFTER EVERY MAJOR STORM EVENT.

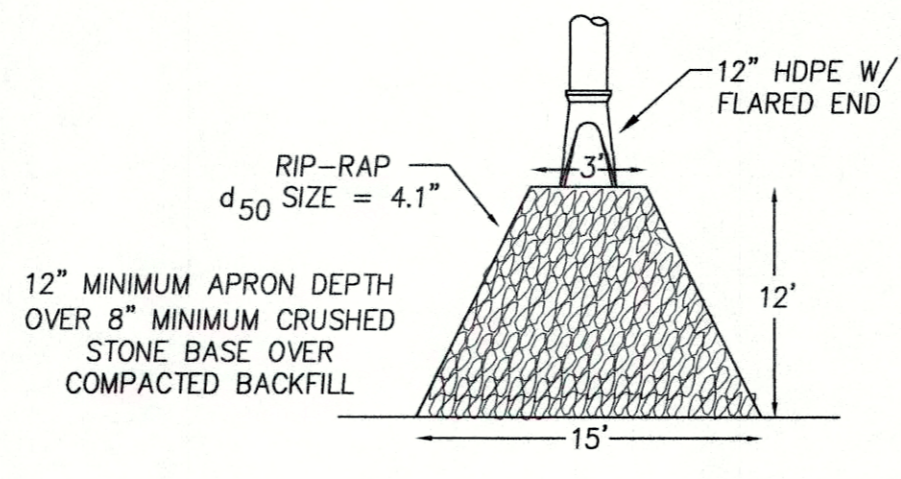
**CONSTRUCTION SPECIFICATIONS**

1. BASIN BERM SHALL BE CONSTRUCTED OF FILL MATERIAL FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE BERM SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL AND HAVE AT LEAST 30% PASSING THE #200 SIEVE. MATERIALS USED IN THE OUTER SHELL OF THE BERMS SHALL BE CAPABLE OF SUPPORTING VEGETATION.
2. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8-INCH LIFTS AND COMPACTED WITH A MINIMUM REQUIRED DENSITY OF NOT LESS THAN 95% OF MAXIMUM DRY DENSITY.
3. PRIOR TO FILL MATERIAL INSTALLATION, ALL TOPSOIL, SUBSOIL, AND UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.



**SEDIMENT FOREBAY  
DETAIL**

N.T.S.



% OF WEIGHT SMALLER THAN THE GIVEN SIZE	SIZE OF STONE
100	6.1 TO 8.2 INCHES
85	5.3 TO 7.4 INCHES
50	4.1 TO 6.1 INCHES
15	1.2 TO 2.0 INCHES

**NOTES**

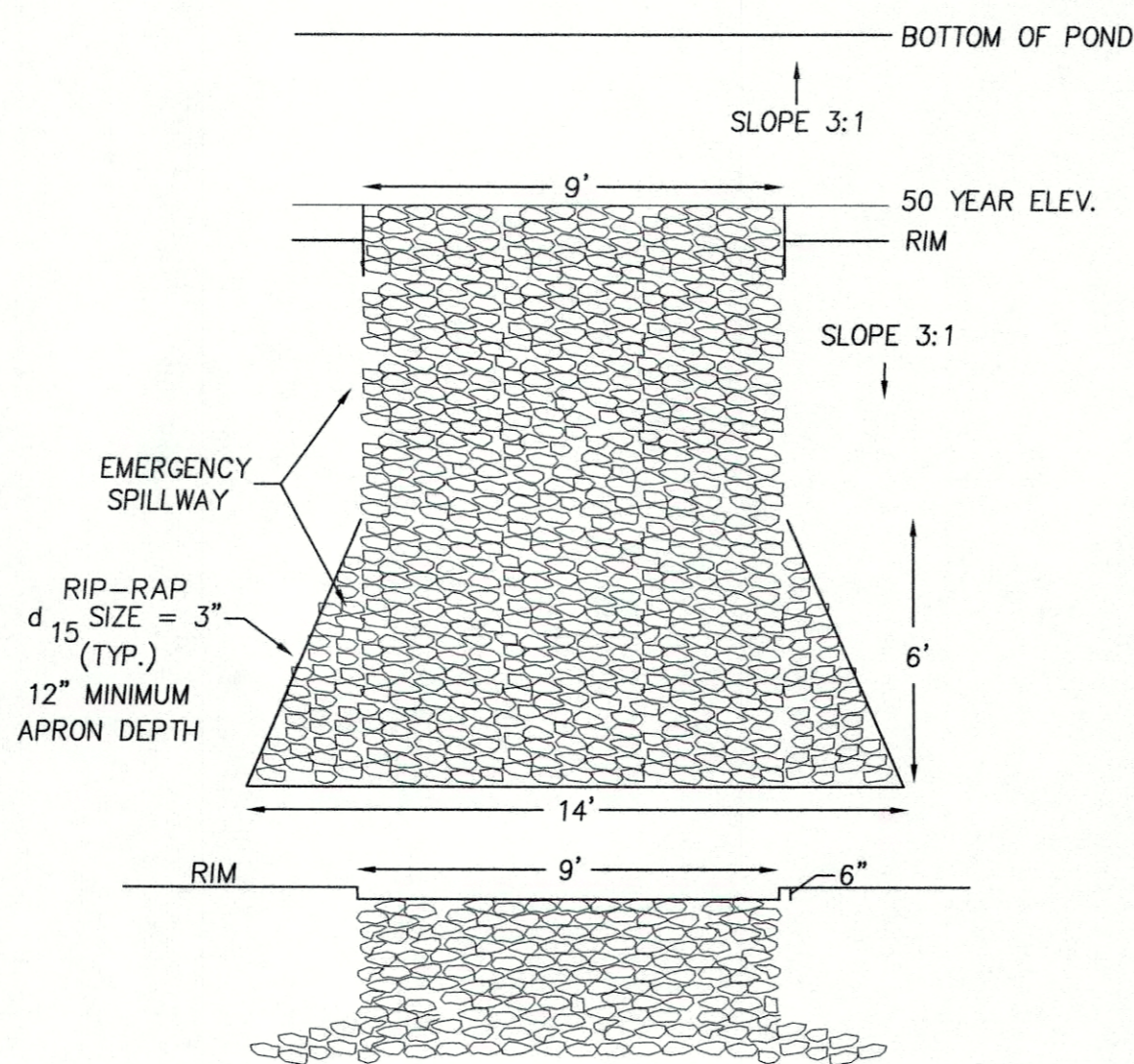
1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIPRAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIPRAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIPRAP. 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 RIPRAP 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**

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

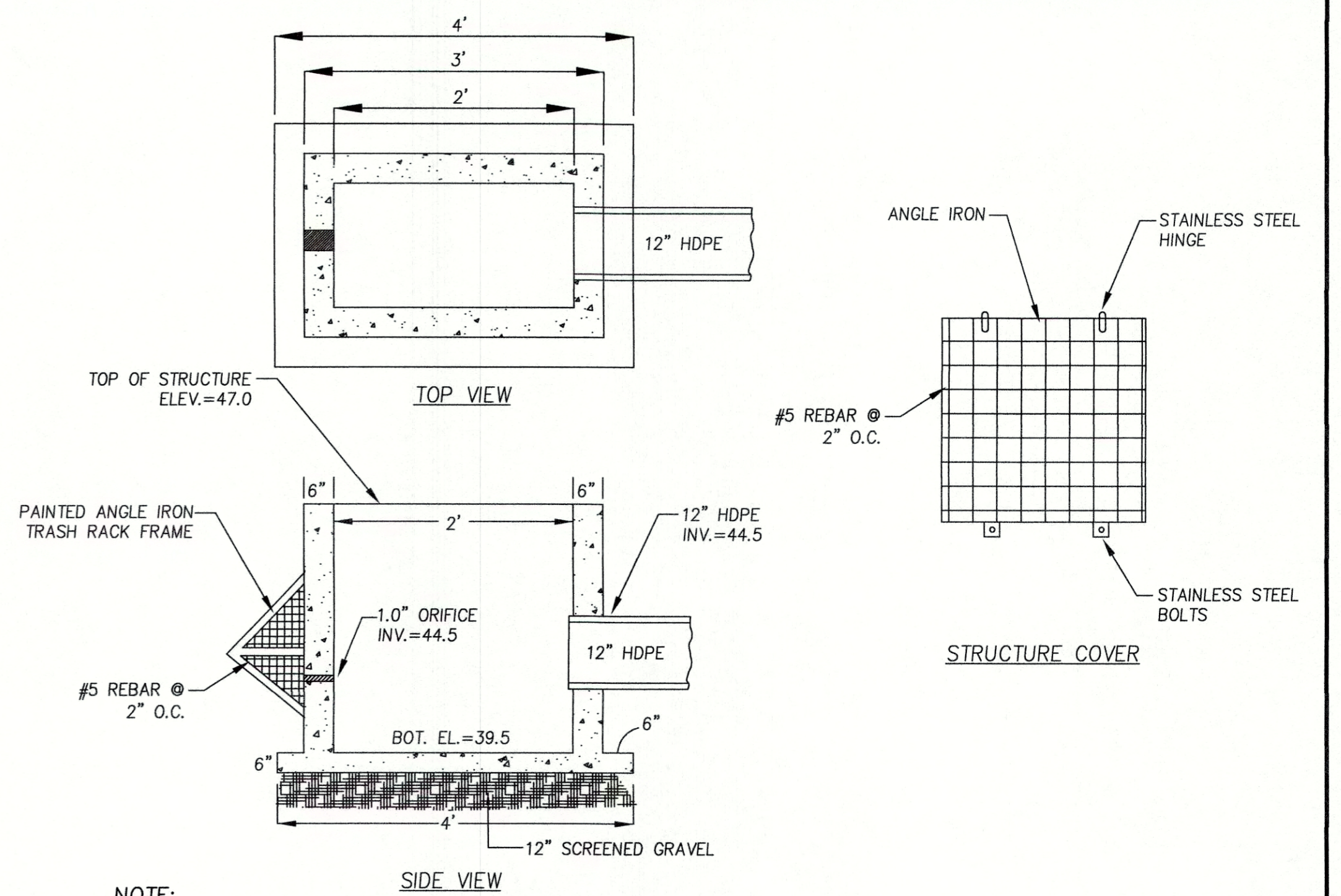
**RIPRAP  
APRON DETAIL**

N.T.S.



**TYPICAL SPILLWAY  
PLAN VIEW**

N.T.S.

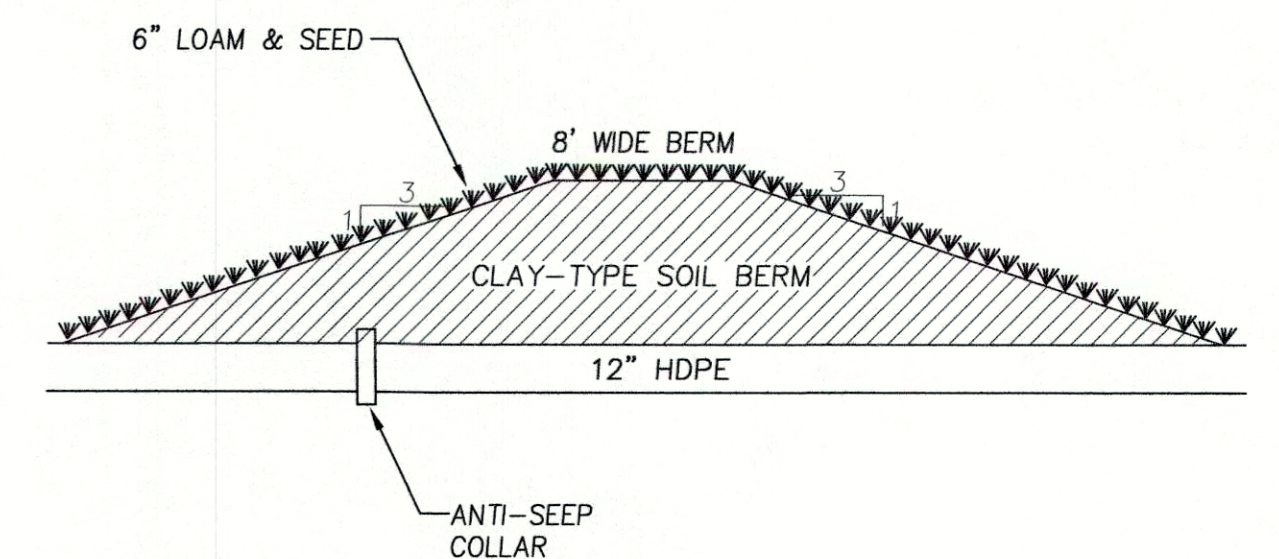


NOTE:

1. ANY EXPOSED REBAR SHALL BE COATED WITH A RUST-RESISTANT PAINT.

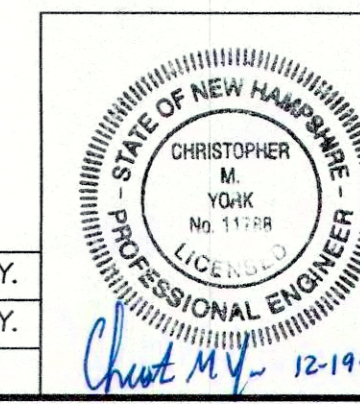
**OUTLET STRUCTURE  
DETAIL**

N.T.S.



**DETENTION BASIN  
BERM DETAIL**

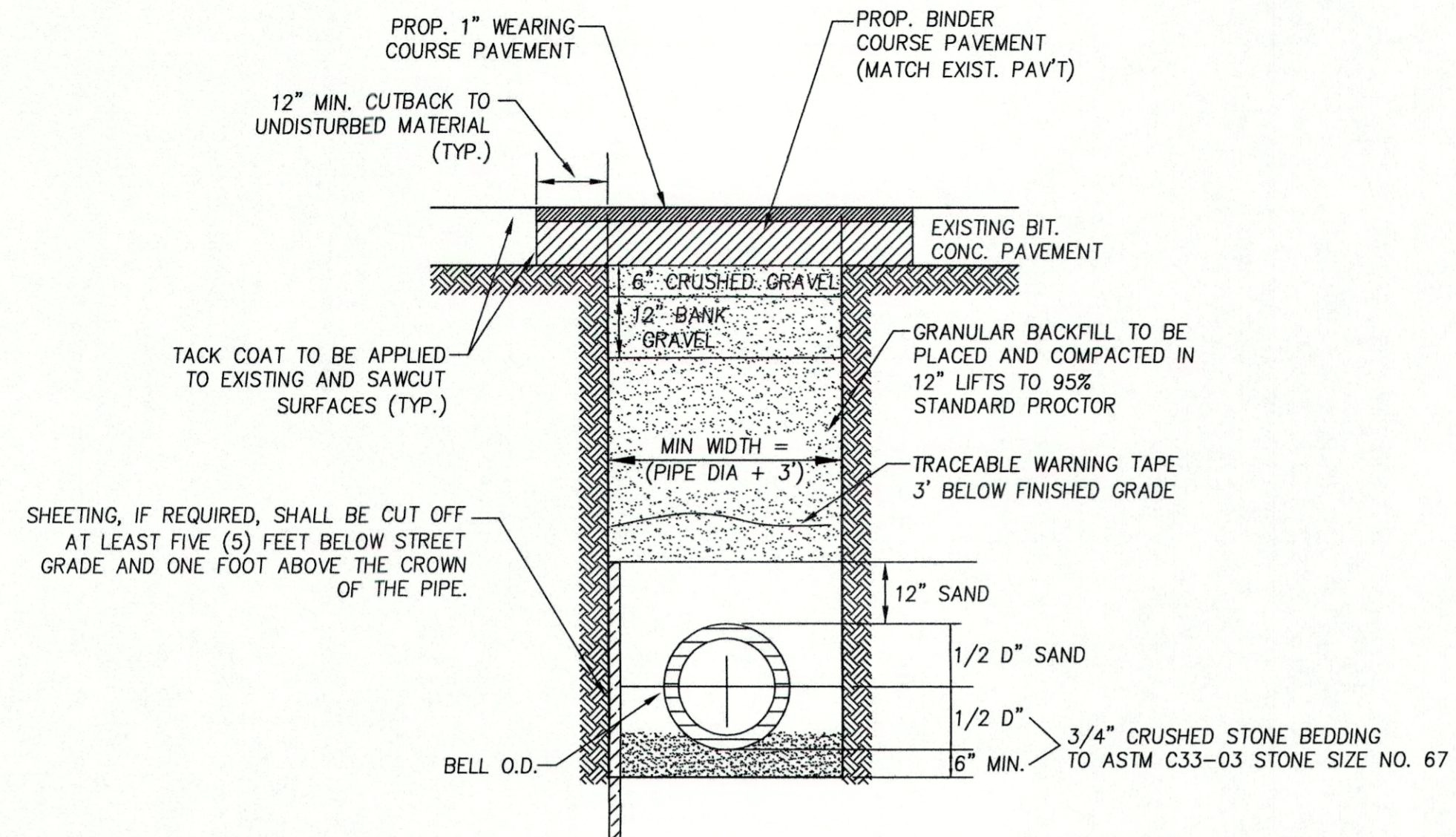
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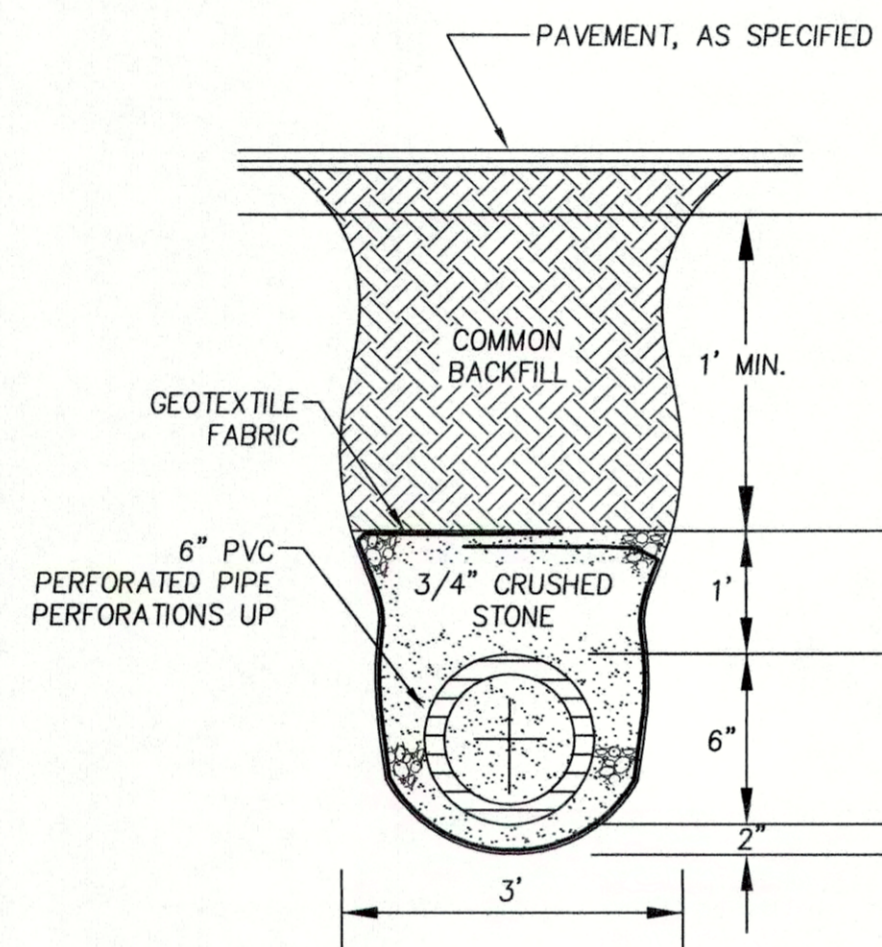
DRAINAGE DETAILS		
PLAT OF LAND		
IN		
EXETER, NH		
SHOWING		
A SUBDIVISION AT		
100 LINDEN STREET AND PATRICIA AVENUE		
RECORD OWNER		
I S REALTY TRUST		
3 VINTAGE DRIVE EXETER, NH 03833		
MILLENNIUM ENGINEERING INC.		
ENGINEERS AND LAND SURVEYORS		
P.O. BOX 745 13 HAMPTON ROAD EXETER, NH 03833		
PHONE: (603) 778-0528 FAX: (603) 772-0689		
SCALE: AS NOTED	DES. BY: C.M.Y.	PROJECT: E182237
DATE: AUG. 1, 2019	CHKD. BY: E.W.B.	SHEET: 7 OF 10

NO.	DATE	DESCRIPTION	BY
2	12/19/19	ADDRESS TRC COMMENTS	C.M.Y.
1	9/10/19	UPDATE RECORD OWNER	C.M.Y.
		DESCRIPTION	

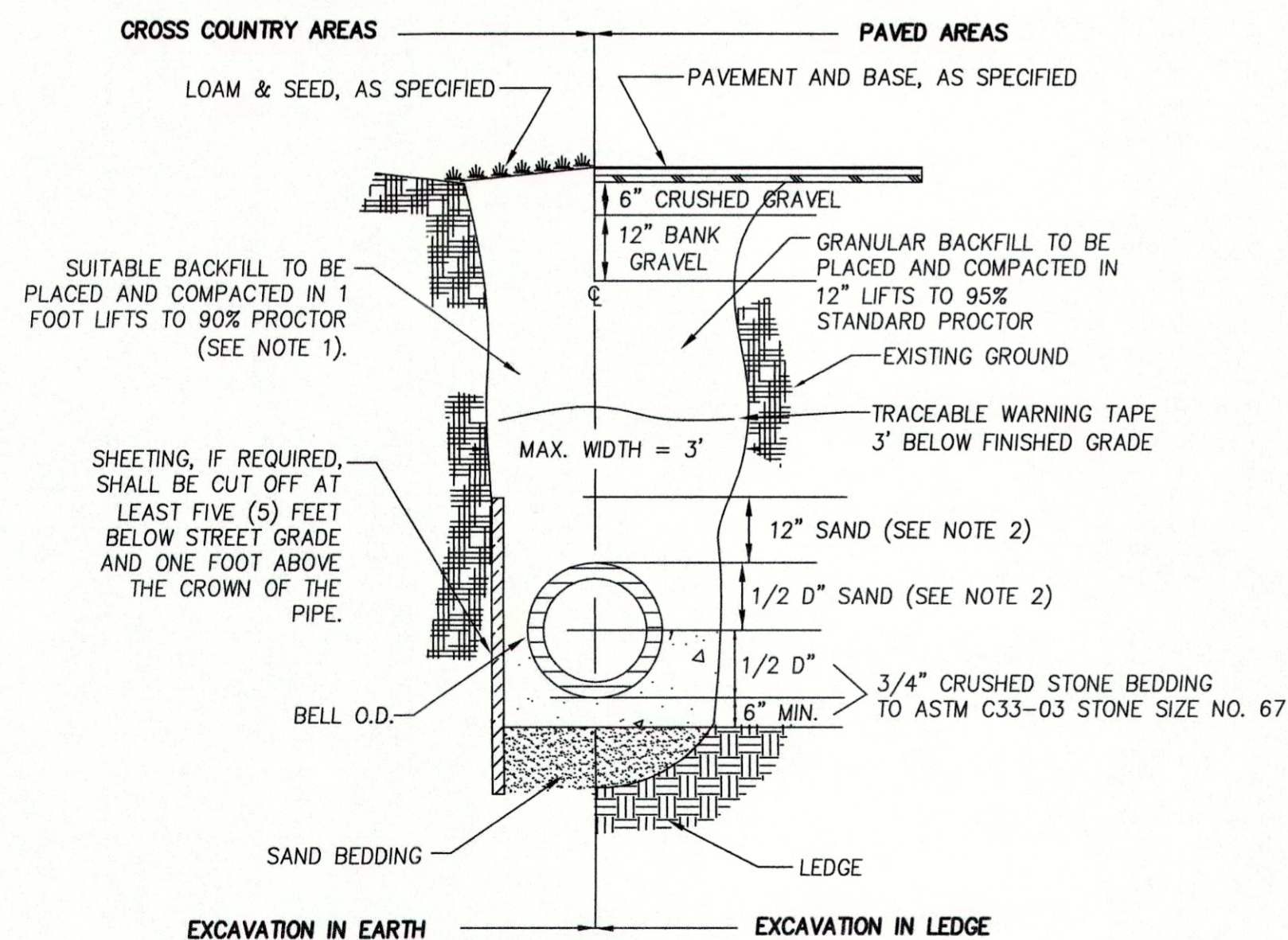




**TYPICAL TRENCH PATCH  
DETAIL WITHIN PAVEMENT** N.T.S.

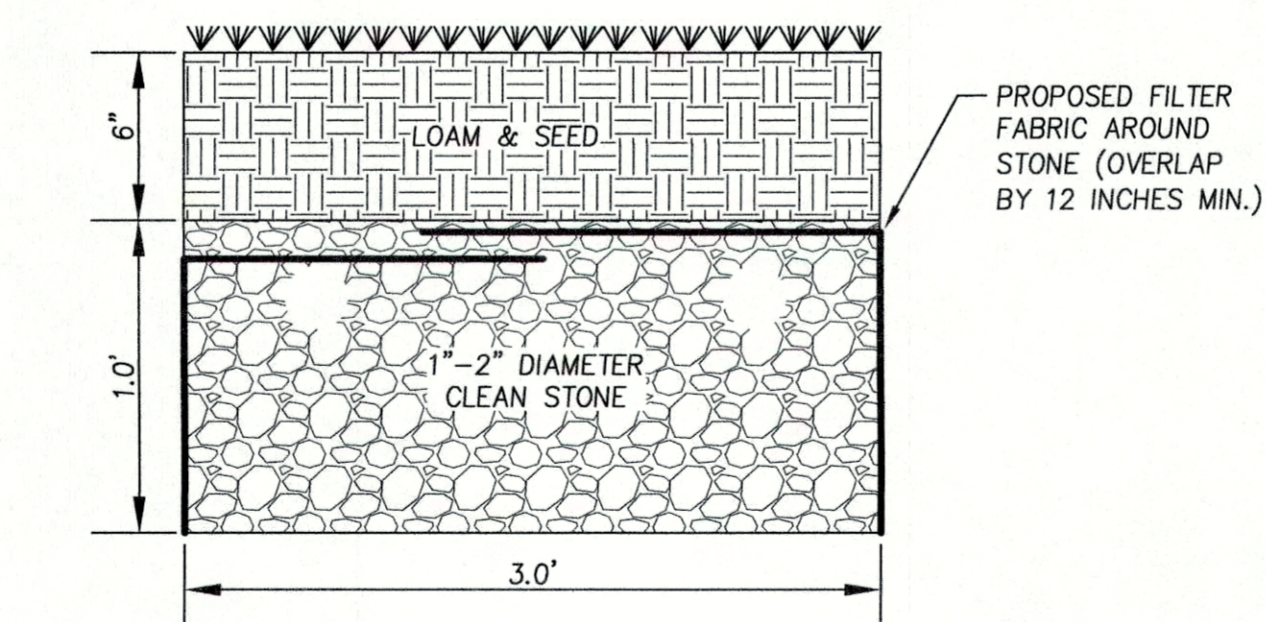


**SUBDRAIN  
DETAIL** N.T.S.



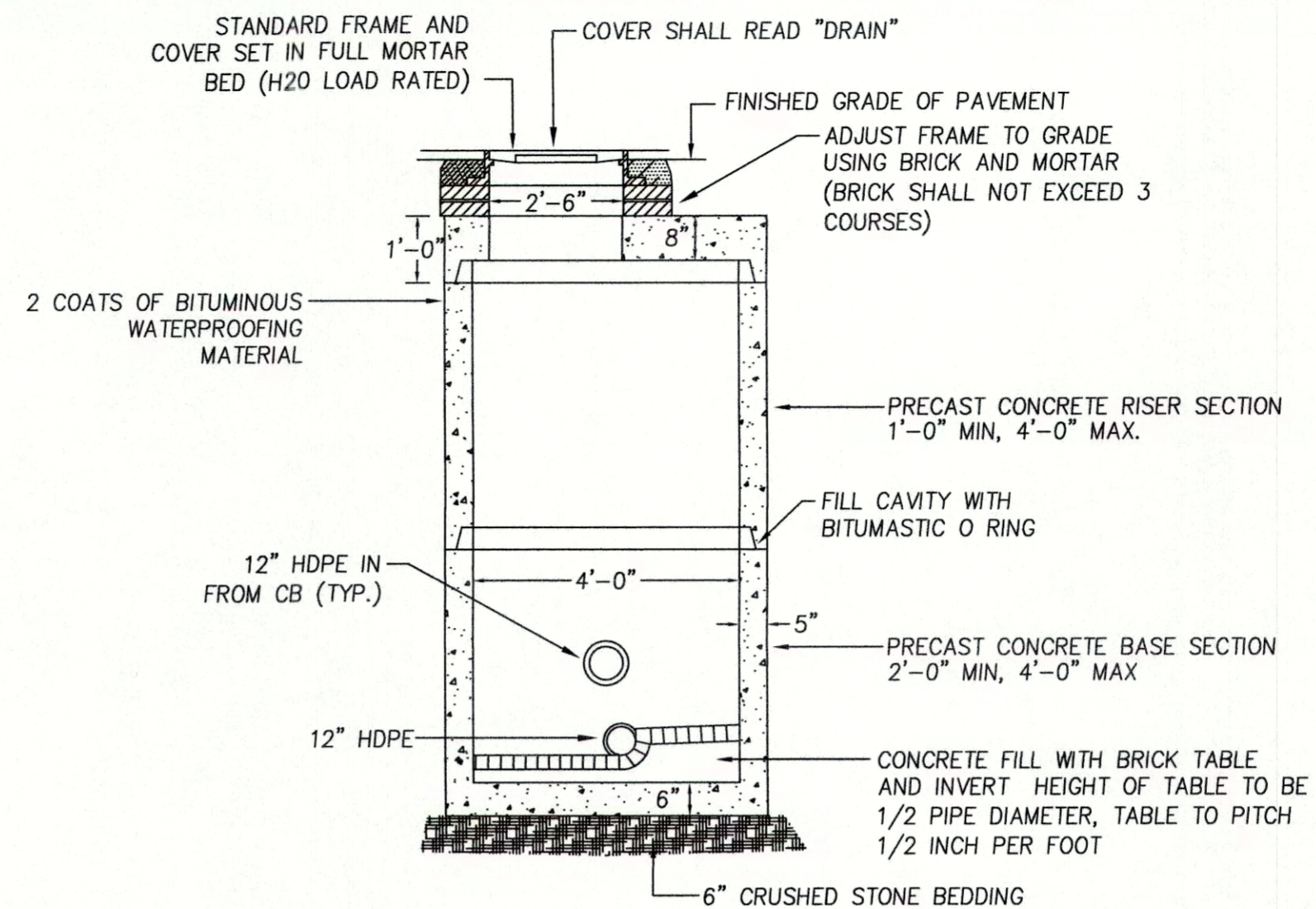
- 1.) BACKFILL SHALL BE SCREENED GRAVEL TO ASTM C33-03 STONE SIZE NO. 67
- 2.) SAND BLANKET MATERIAL SHALL BE GRADED SAND FREE FROM ORGANIC MATERIALS, GRADED SUCH THAT 90-100% PASSES A 0.5" SIEVE AND A MAXIMUM OF 15 PERCENT PASSES A #200 SIEVE.

**TYPICAL  
TRENCH DETAIL** N.T.S.



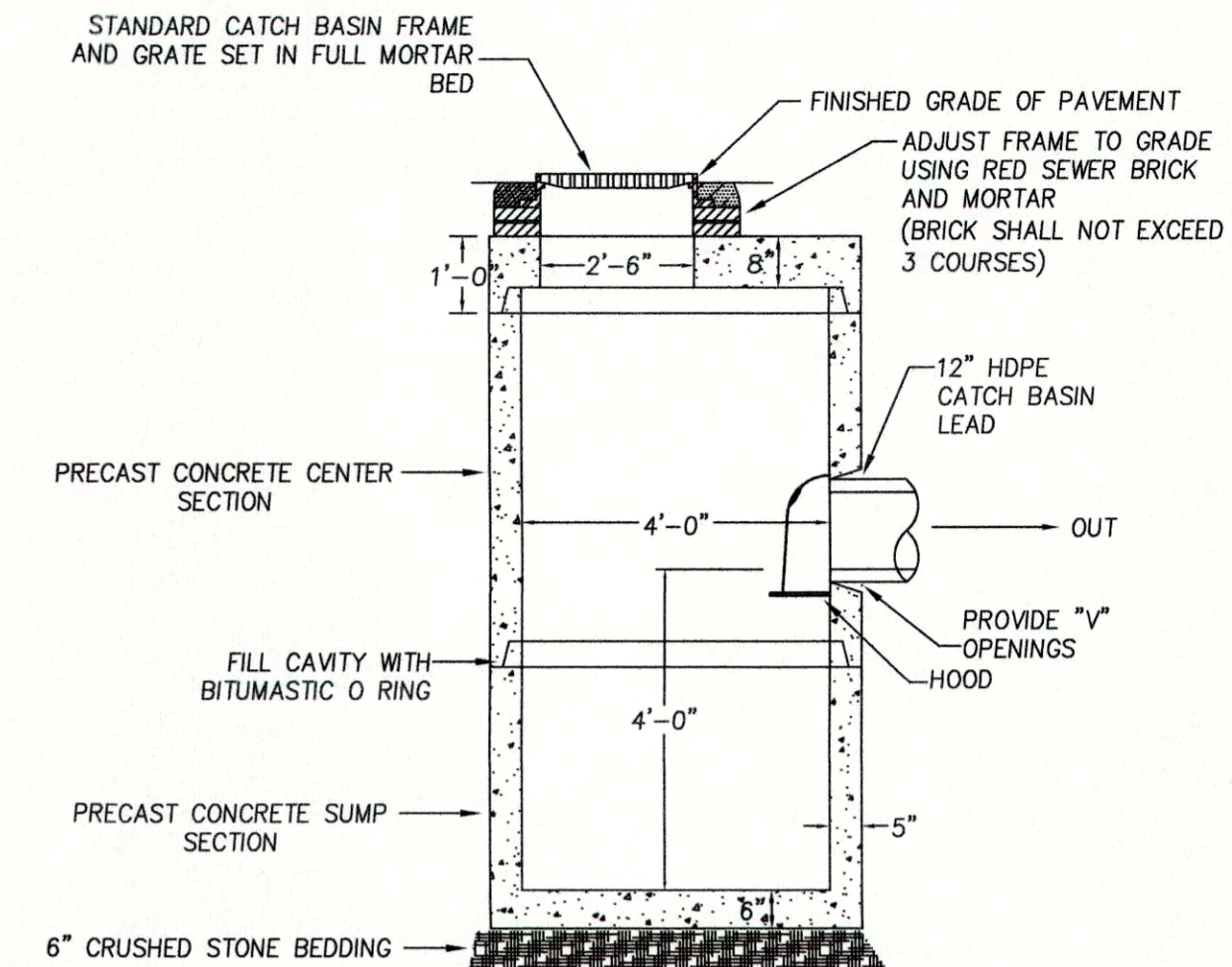
** ANY FILL ENCOUNTERED DURING CONSTRUCTION OF TRENCH SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL (I.E. SAND)

**STONE TRENCH  
DETAIL** N.T.S.



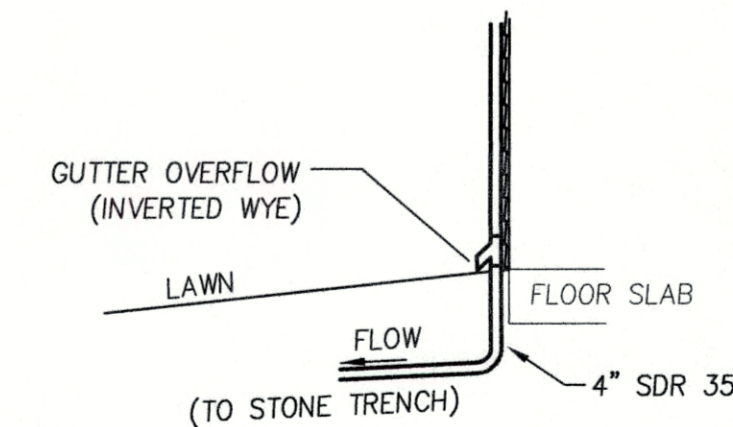
- 1) DRAIN MANHOLES SHALL CONFORM TO ASTM C478 AND ASTM C185
- 2) FLAT TOP STRUCTURES SHALL BE PRECAST SECTIONS AND HAVE A 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI REINFORCED FOR AASHTO H-20 LOADING.
- 3) CONICAL SECTIONS MAY BE SUBSTITUTED FOR FLAT-TOP STRUCTURES IN AREAS WHERE MORE THAN 4 FEET OF COVER IS PROVIDED FOR DRAIN PIPE.
- 4) MORTAR SHALL BE COMPOSED OF PORTLAND CEMENT, HYDRATED LIME AND SAND IN THE PROPORTIONS OF 4.5 PARTS SAND, 1.0 PART CEMENT AND 0.5 PART LIME. CEMENT SHALL BE TYPE II PORTLAND CEMENT CONFORMING TO ASTM C150-05. HYDRATED LIME SHALL BE TYPE S CONFORMING TO THE ASTM C207-06 "STANDARD SPECIFICATIONS FOR HYDRATED LIME FOR MASONRY PURPOSES". SAND SHALL CONSIST OF INERT NATURAL SAND CONFORMING TO THE ASTM C33-03 "STANDARD SPECIFICATIONS FOR CONCRETE, FINE AGGREGATES".

**PRECAST DRAIN  
MANHOLE DETAIL** N.T.S.

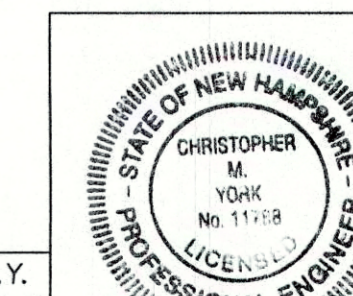


- 1) CATCH BASINS SHALL CONFORM TO ASTM C478 AND ASTM C185
- 2) FLAT TOP STRUCTURES SHALL BE PRECAST SECTIONS AND HAVE A 28 DAY COMPRESSIVE STRENGTH OF 5000 PSI REINFORCED FOR AASHTO H-20 LOADING.
- 3) CONICAL SECTIONS MAY BE SUBSTITUTED FOR FLAT-TOP STRUCTURES IN AREAS WHERE MORE THAN 4 FEET OF COVER IS PROVIDED FOR DRAIN PIPE.
- 4) MORTAR SHALL BE COMPOSED OF PORTLAND CEMENT, HYDRATED LIME AND SAND IN THE PROPORTIONS OF 4.5 PARTS SAND, 1.0 PART CEMENT AND 0.5 PART LIME. CEMENT SHALL BE TYPE II PORTLAND CEMENT CONFORMING TO ASTM C150-05. HYDRATED LIME SHALL BE TYPE S CONFORMING TO THE ASTM C207-06 "STANDARD SPECIFICATIONS FOR HYDRATED LIME FOR MASONRY PURPOSES". SAND SHALL CONSIST OF INERT NATURAL SAND CONFORMING TO THE ASTM C33-03 "STANDARD SPECIFICATIONS FOR CONCRETE, FINE AGGREGATES".

**PRECAST DEEP SUMP  
CATCH BASIN DETAIL** N.T.S.



**GUTTER DOWN  
SPOUT DETAIL** N.T.S.



NO.	DATE	DESCRIPTION	BY
2	12/19/19	ADDRESS TRC COMMENTS	C.M.Y.
1	9/10/19	UPDATE RECORD OWNER	C.M.Y.

Christopher M. V. 12-19-19

**DRAINAGE DETAILS**

**PLAT OF LAND**  
IN  
**EXETER, NH**

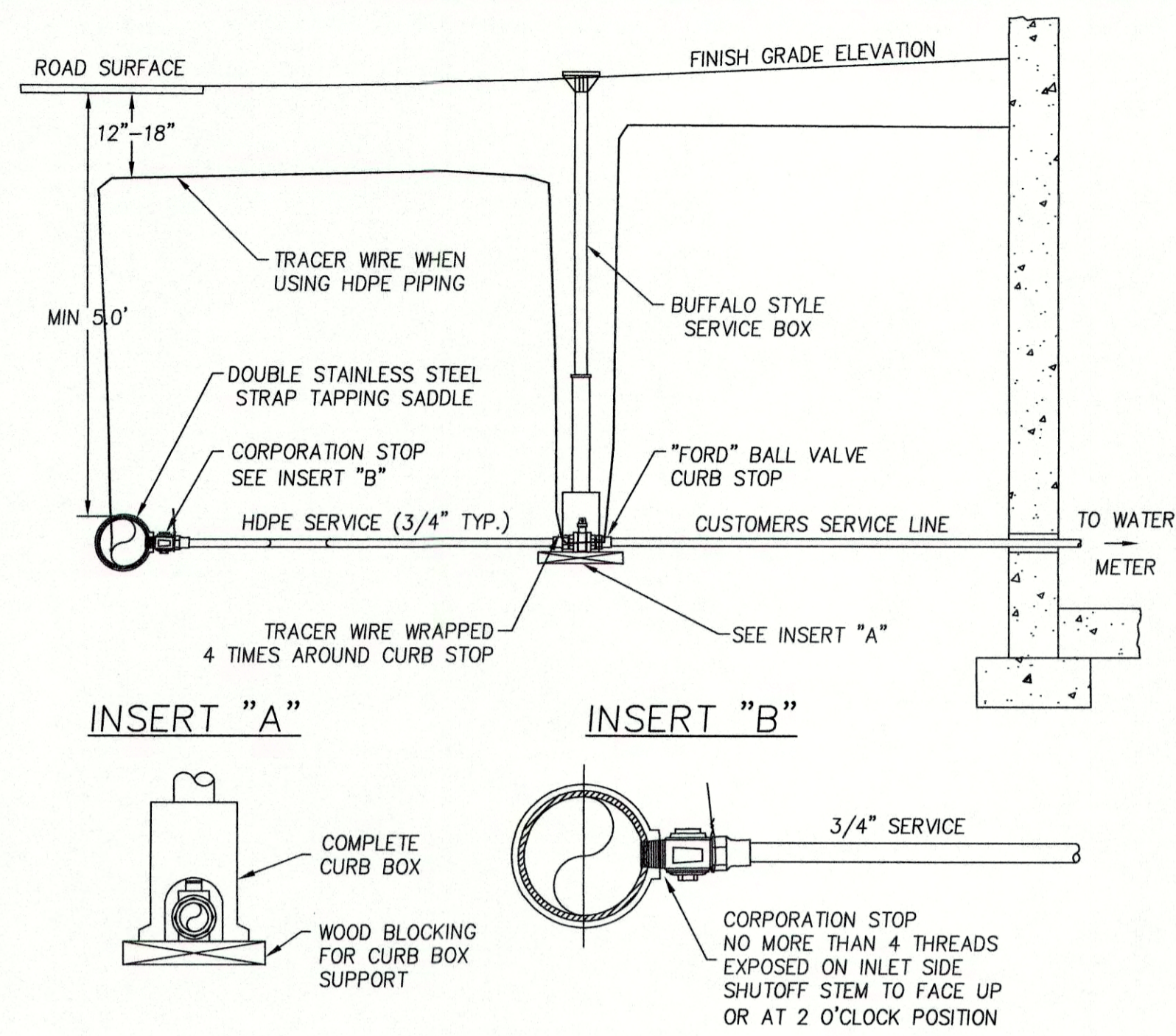
SHOWING  
**A SUBDIVISION AT**  
**100 LINDEN STREET AND PATRICIA AVENUE**

RECORD OWNER  
**I S REALTY TRUST**  
3 VINTAGE DRIVE EXETER, NH 03833

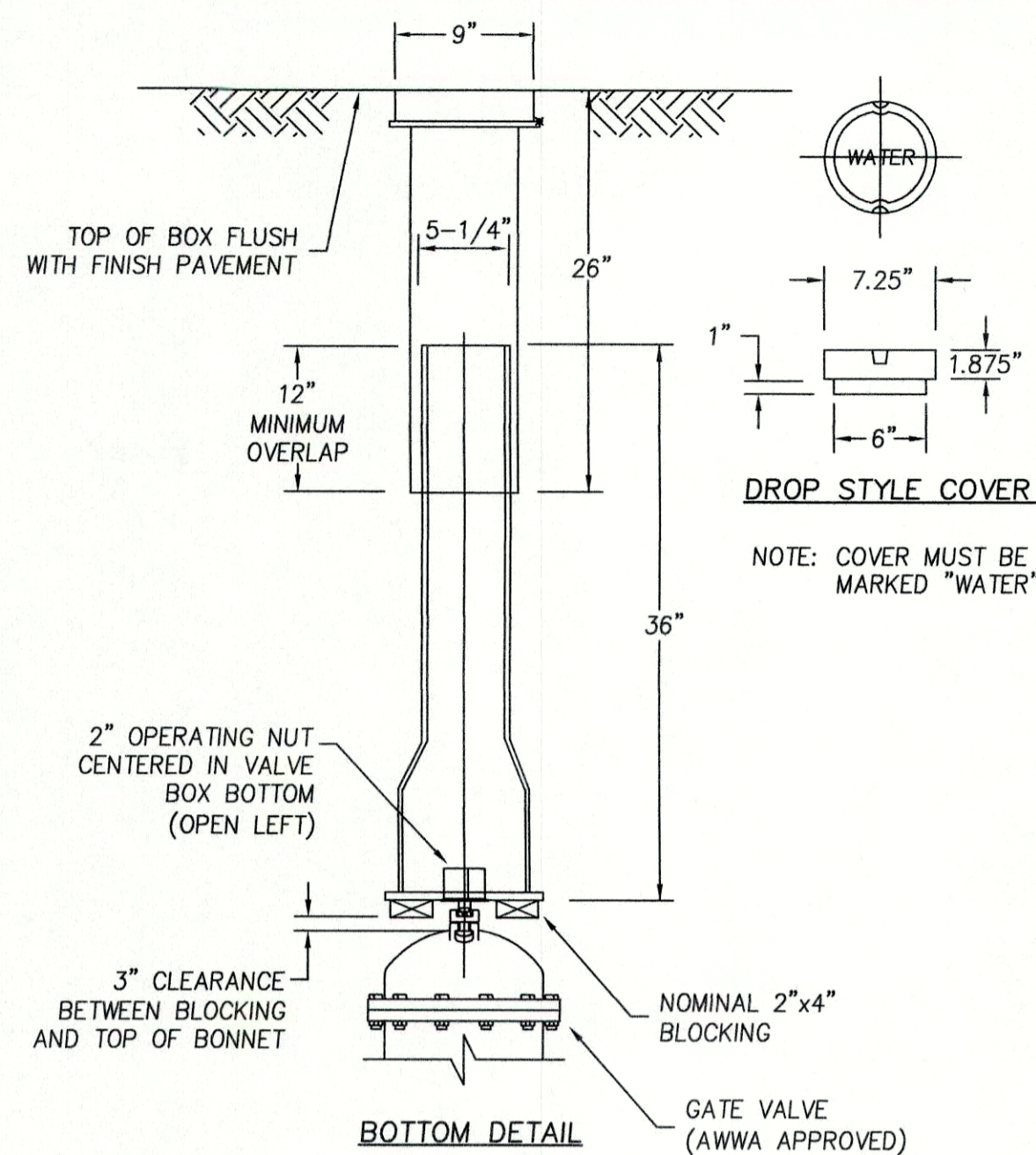
**MILLENNIUM ENGINEERING INC.**  
ENGINEERS AND LAND SURVEYORS  
P.O. BOX 745 13 HAMPTON ROAD EXETER, NH 03833  
PHONE: (603) 778-0528 FAX: (603) 772-0689

SCALE: AS NOTED	DESG. BY: C.M.Y.	PROJECT: E182237
DATE: AUG. 1, 2019	CHKD. BY: E.W.B.	SHEET: 8 OF 10

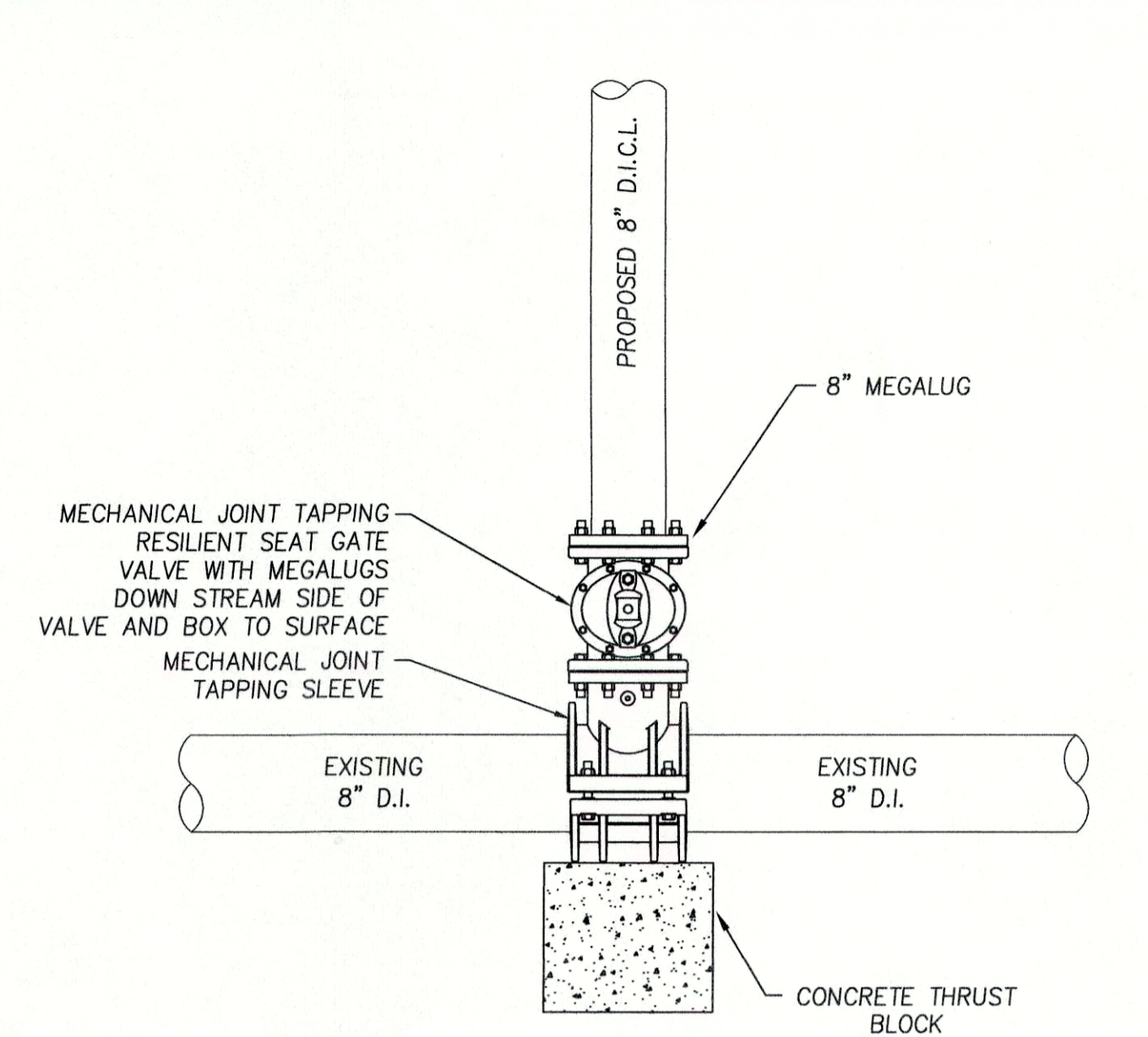




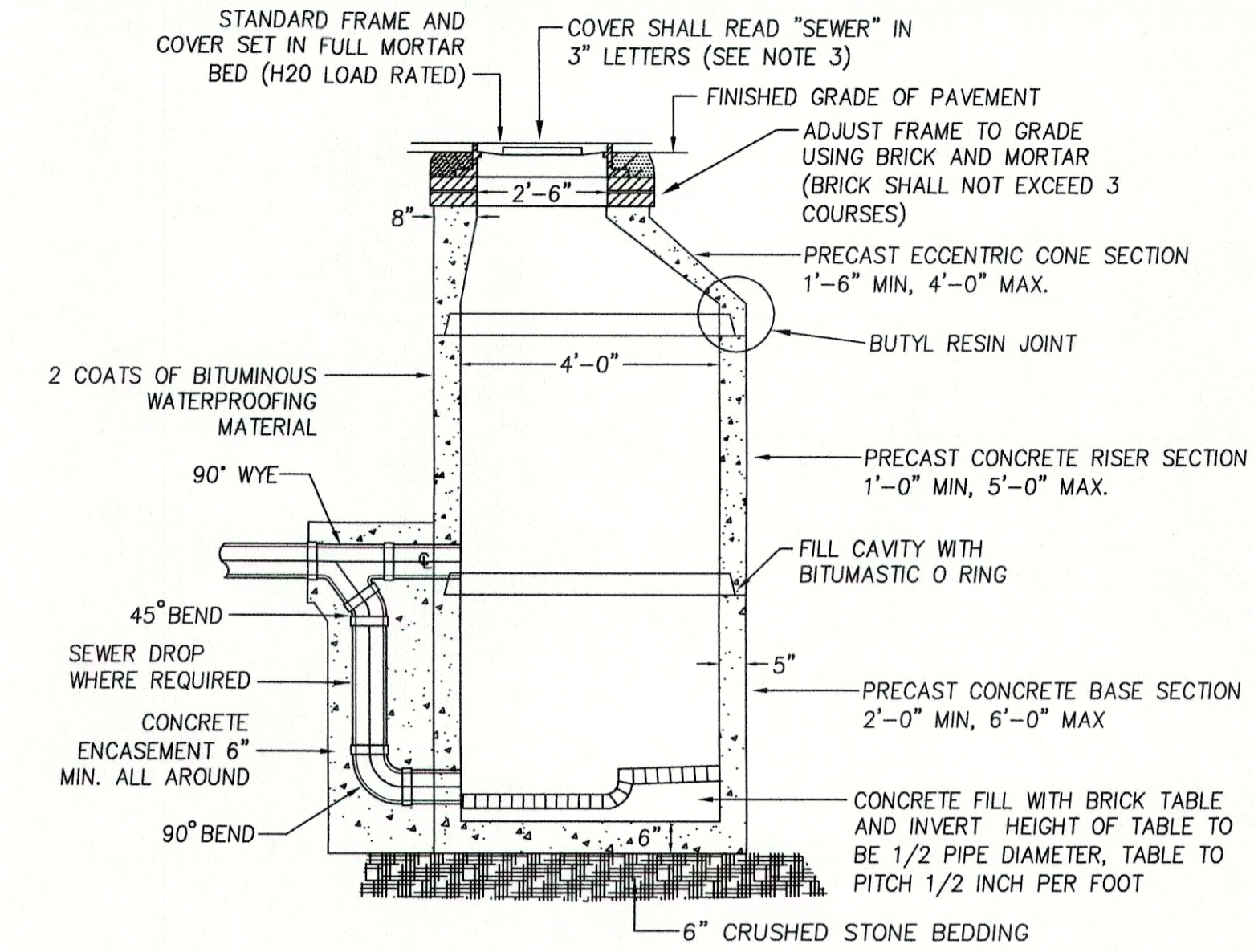
**TYPICAL COPPER SERVICE CONNECTION** N.T.S.



**TYPICAL GATE VALVE BOX DETAIL** N.T.S.

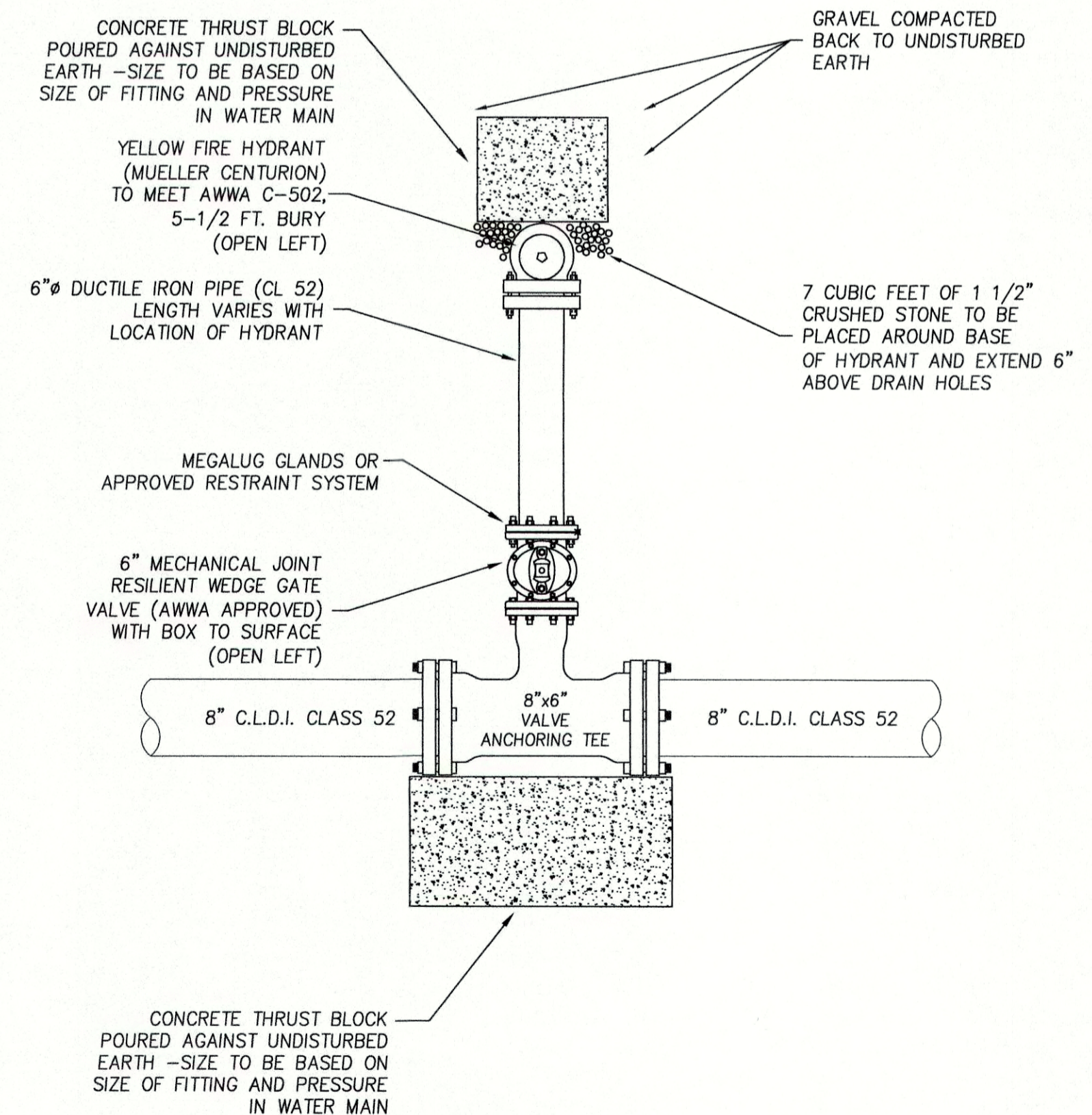


**PROPOSED TAPPING SLEEVE DETAIL** N.T.S.

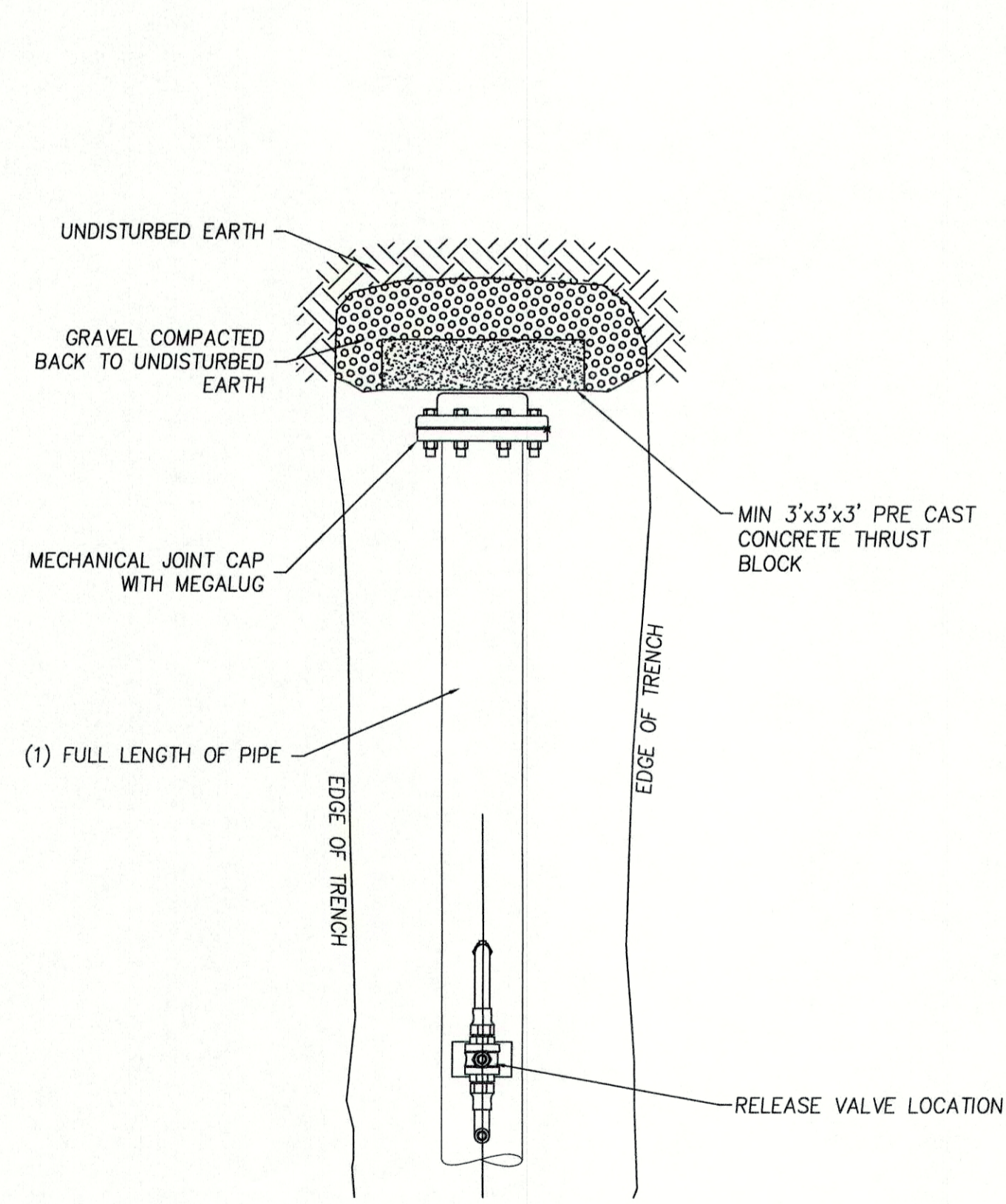


- NOTES:
- 1) SEWER MANHOLES SHALL CONFORM TO ASTM C478 AND ASTM C185
  - 2) ALL MANHOLES SHALL BE TESTED FOR LEAKAGE IN ACCORDANCE WITH ENV-WQ 704.10 (X) THROUGH (aa).
  - 3) MORTAR SHALL BE COMPOSED OF PORTLAND CEMENT, HYDRATED LIME AND SAND IN THE PROPORTIONS OF 4.5 PARTS SAND, 1.0 PART CEMENT AND 0.5 PART LIME. CEMENT SHALL BE TYPE II PORTLAND CEMENT CONFORMING TO ASTM C150-05. HYDRATED LIME SHALL BE TYPE S CONFORMING TO THE ASTM C207-06 "STANDARD SPECIFICATIONS FOR HYDRATED LIME FOR MASONRY PURPOSES". SAND SHALL CONSIST OF INERT NATURAL SAND CONFORMING TO THE ASTM C33-03 "STANDARD SPECIFICATIONS FOR CONCRETE, FINE AGGREGATES".
  - 4) SHELVES SHALL BE CONSTRUCTED TO THE ELEVATION OF THE HIGHEST PIPE CROWN AND SLOPED TO DRAIN TOWARD THE FLOWING THROUGH CHANNEL IN ACCORDANCE WITH ENV-WQ 704.10(J).
  - 5) SEWER MANHOLE COVERS SHALL CONFORM TO ASTM A48 WITH A CASTING EQUAL TO CLASS 30 IN ACCORDANCE WITH ENV-WQ 704.10 (K).

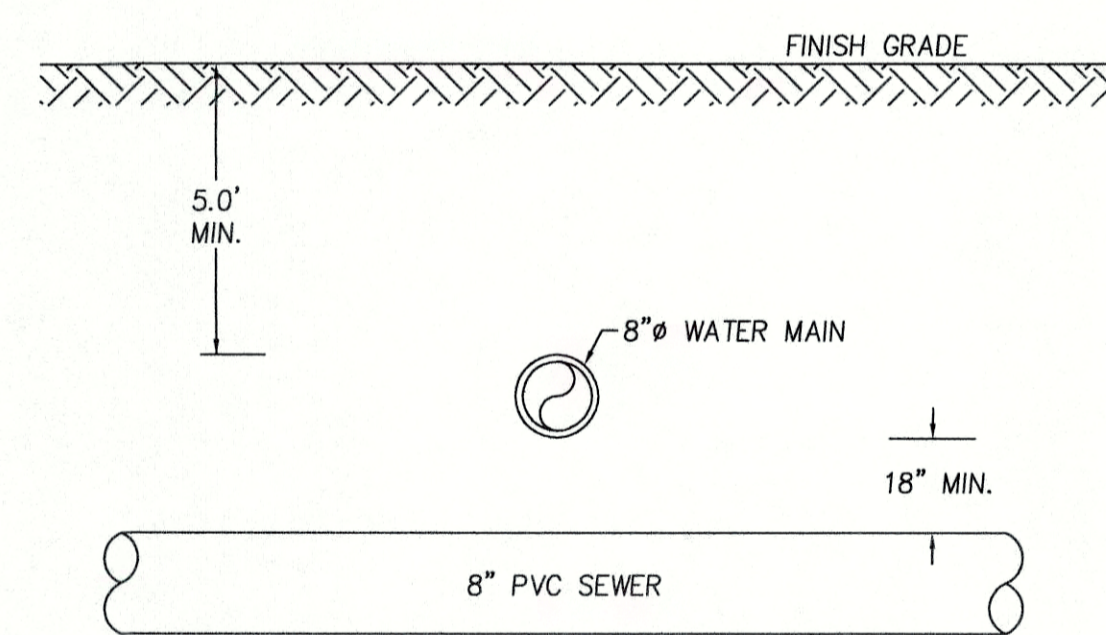
**PRECAST SEWER MANHOLE DETAIL** N.T.S.



**TYPICAL FIRE HYDRANT INSTALLATION** N.T.S.

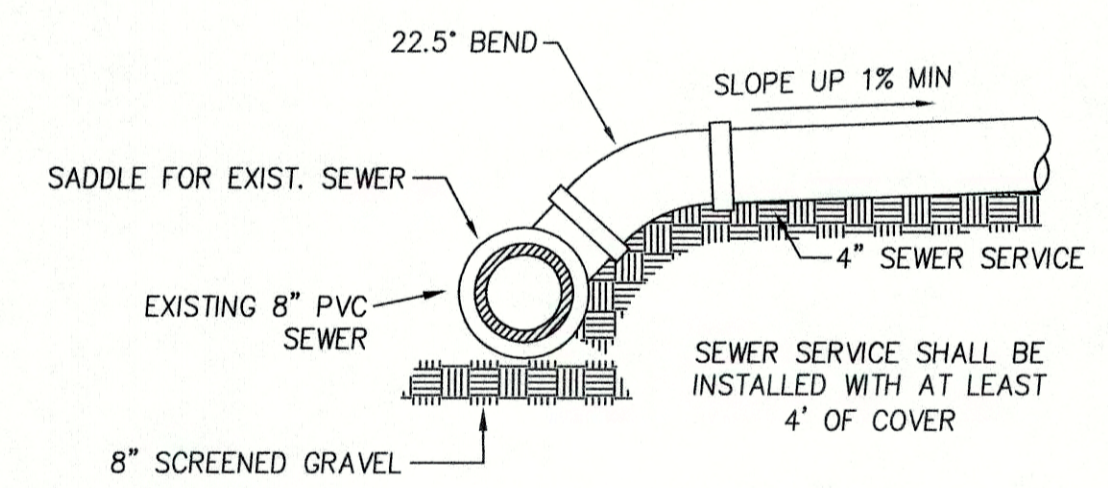


**WATER MAIN BLOWOFF DETAIL** N.T.S.



- NOTES:**
- 1.) ALL SEWER MAINS SHALL BE INSTALLED AT LEAST 10 FEET HORIZONTALLY FROM PROPOSED WATER MAINS. IF 10 FOOT SEPARATION IS NOT POSSIBLE, AT LEAST 18" OF VERTICAL SEPARATION IS REQUIRED.
  - 2.) ALL SEWER MAINS SHALL MAINTAIN 6 FEET OF COVER OVER THE TOP OF THE PIPING, UNLESS OTHERWISE SHOWN OR APPROVED.
  - 3.) ALL WATER MAINS SHALL BE INSTALLED WITH A MINIMUM OF 5 FEET OF COVER OVER THE TOP OF THE PIPE, UNLESS OTHERWISE SHOWN OR APPROVED.
  - 4.) WHENEVER WATER AND SEWER SERVICE LINES MUST CROSS, THEY SHALL BE SLEEVED 4 FEET ON EACH SIDE.
  - 5.) WHENEVER SEWER MAINS MUST CROSS UNDER WATER MAINS, THE SEWER SHALL BE CONSTRUCTED AS FOLLOWS: A) TOP OF THE SEWER MAIN SHALL BE CONSTRUCTED AT LEAST 18" BELOW THE BOTTOM OF THE WATER MAIN, B) SEWER MAIN SHALL BE CLASS 150 PRESSURE PIPE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF WATER MAIN, AND C) ONE FULL LENGTH OF CLASS 150 PRESSURE SEWER PIPE SHOULD BE CENTERED ON THE WATER MAIN AS MUCH AS POSSIBLE. THE SEWER CONSTRUCTED OF THE PRESSURE PIPE MUST BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS.

**WATER/SEWER CROSSING DETAIL** N.T.S.



**SEWER SERVICE DETAIL** N.T.S.

**UTILITY DETAILS**

**PLAT OF LAND**

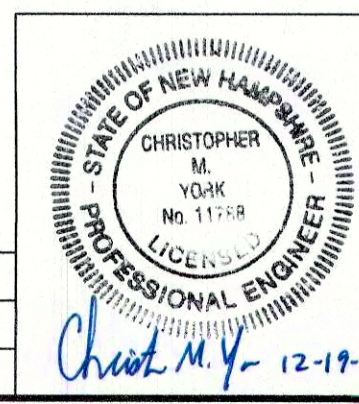
IN  
**EXETER, NH**

SHOWING  
**A SUBDIVISION AT**  
**100 LINDEN STREET AND PATRICIA AVENUE**

RECORD OWNER  
**I S REALTY TRUST**  
3 VINTAGE DRIVE EXETER, NH 03833

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SCALE: AS NOTED DESG. BY: C.M.Y. PROJECT: E182237  
DATE: AUG. 1, 2019 CHKD. BY: E.W.B. SHEET: 9 OF 10

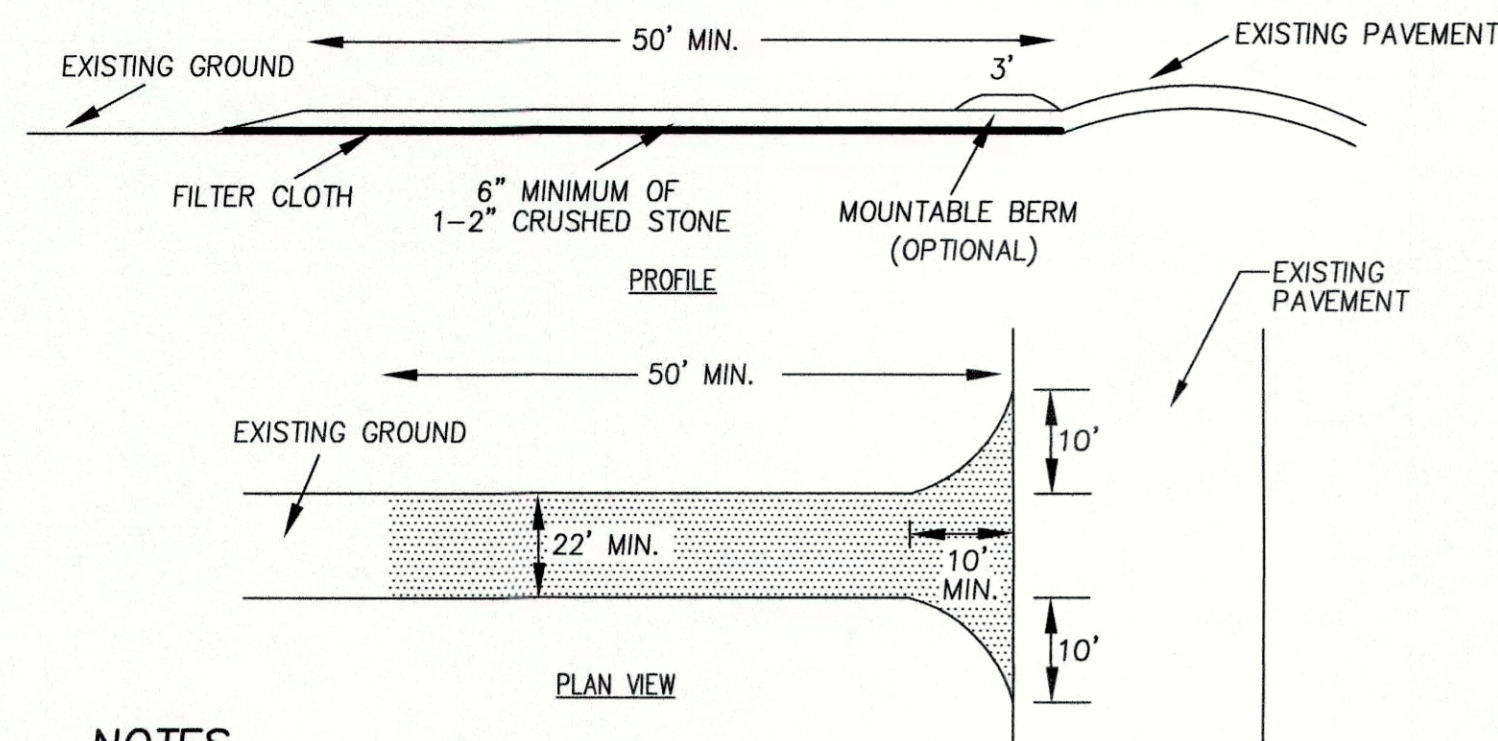


NO.	DATE	DESCRIPTION	BY
2	12/19/19	ADDRESS TRC COMMENTS	C.M.Y.
1	9/10/19	UPDATE RECORD OWNER	C.M.Y.



**GENERAL EROSION CONTROL NOTES**

1. ALL SILT FENCE SHALL BE INSTALLED BEFORE THE START OF CONSTRUCTION. SILT FENCE SHALL BE REMOVED UPON COMPLETION OF THE PROJECT AND STABILIZATION OF ALL SOIL.
2. ALL FILL SHALL BE FREE OF STUMPS AND LARGE STONES.
3. ANY STANDING BODIES OF WATER CREATED DURING EXCAVATION SHALL BE ELIMINATED.
4. THE PROJECT SHALL BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.
5. EROSION CONTROL BARRIERS SHALL BE INSPECTED WEEKLY AND AFTER EVERY 0.25" OF RAINFALL AND PROMPTLY REPAIRED OR REPLACED AS NECESSARY.
6. ACCUMULATED SEDIMENT DEPOSITS UPSTREAM OF BARRIERS SHALL BE PROPERLY DISPOSED OF ON A REGULAR BASIS.
7. PROVIDE SILTSACK (OR APPROVED EQUAL) SEDIMENT FILTER AT ALL CATCH BASINS.
8. A MINIMUM OF 6" OF LOAM SHALL BE INSTALLED ON ALL DISTURBED UNPAVED SURFACES.
9. TEMPORARY SEED MIX SHALL BE ANNUAL RYEGRASS (1 LB./1,000 S.F. OF LAND AREA) OR PERENNIAL RYEGRASS (0.7 LB./1,000 S.F. OF LAND AREA). TEMPORARY SEEDING SHOULD OCCUR BEFORE SEPT. 15TH.
10. PERMANENT SEED MIX SHALL BE A MINIMUM OF 4 LBS./1,000 S.F. OF LAND AREA. SEED MIX SHALL CONSIST OF A MAXIMUM OF 10% RYE GRASS BY WEIGHT AND MINIMUM OF 90% OF PERMANENT BLUEGRASS AND/OR FESCUE GRASS BY WEIGHT.
11. NO MORE THAN 5 ACRES SHALL BE DISTURBED AT ONE TIME. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
12. WHERE PLACEMENT OF FILL IS REQUIRED FOR STORM WATER CONTROL, FILL SHALL BE PLACED IN AN UNFROZEN STATE UPON UNFROZEN GROUND. UNDER NO CIRCUMSTANCES SHALL FILL BE PLACED FROM NOVEMBER THROUGH JANUARY.
13. DITCHES AND WATER QUALITY SWALES SHALL BE STABILIZED PRIOR TO DIRECTING FLOW TO THEM.
14. DRAINAGE SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION. RUNOFF SHALL BE CONTROLLED AND CONVEYED INTO STORM SEWERS OR OTHER OUTLETS SO IT WILL NOT ERODE THE LAND OR CAUSE OFF-SITE DAMAGE.
15. CRITICAL AREAS, INCLUDING EMBANKMENTS AND SLOPES, EXPOSED FOR LONGER THAN 30 DAYS SHALL BE PROTECTED DURING CONSTRUCTION WITH MULCH OR TEMPORARY CROP COVERS AND WITH MECHANICAL MEASURES SUCH AS DIVERSIONS AND PREPARED OUTLETS.
16. SEDIMENT BASINS, TEMPORARY AND PERMANENT, SHALL BE CONSTRUCTED WHERE NECESSARY TO DETAIN RUNOFF AND TO TRAP SEDIMENT DURING CONSTRUCTION.
17. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED: BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED; A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED; A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
18. ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCT. 15TH, OR WHICH ARE DISTURBED AFTER OCT. 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
19. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCT. 15TH, OR WHICH ARE DISTURBED AFTER OCT. 15TH, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
20. AFTER OCTOBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.
21. STORMWATER PONDS, INFILTRATION BASINS, AND SWALES MUST BE INSTALLED BEFORE ROUGH GRADING THE SITE.
22. DRIVEWAYS AND CUT AND FILL SLOPES MUST BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.

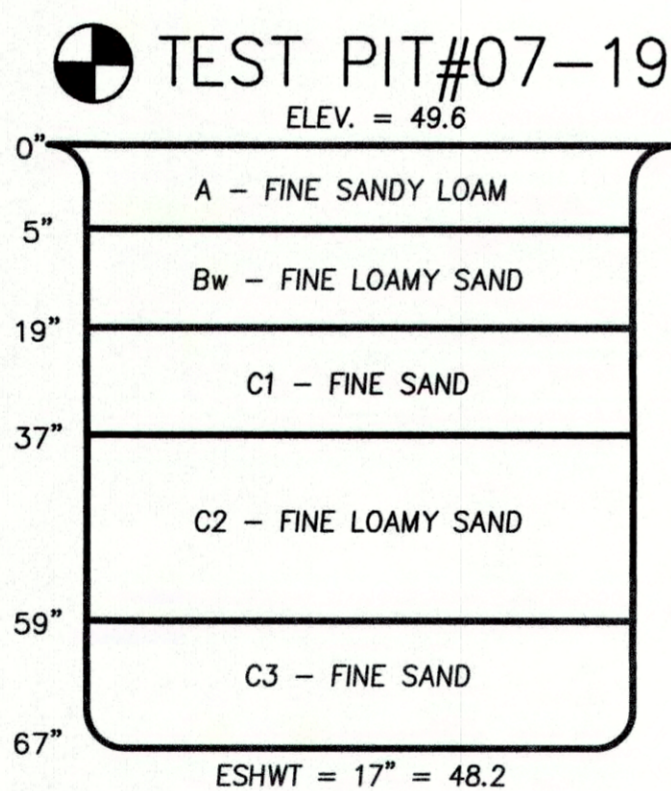
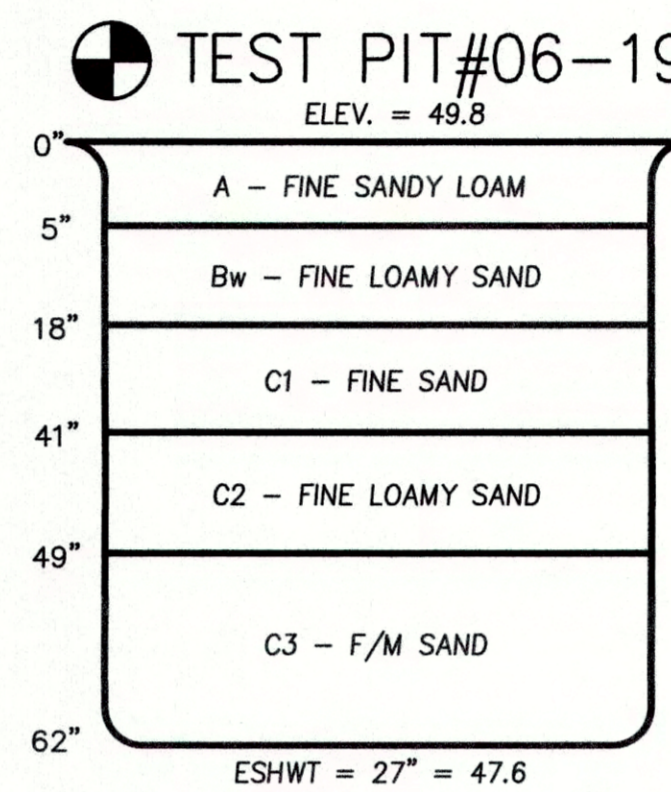
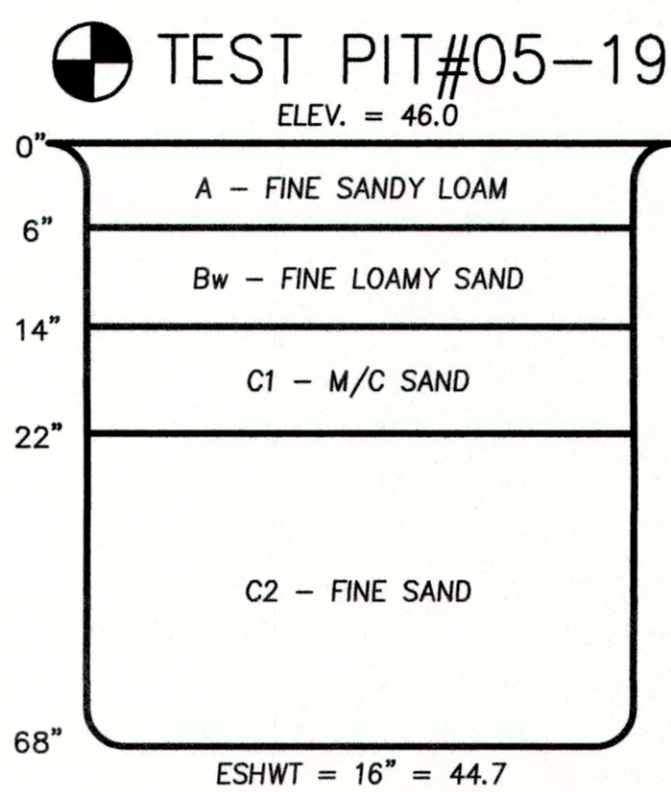
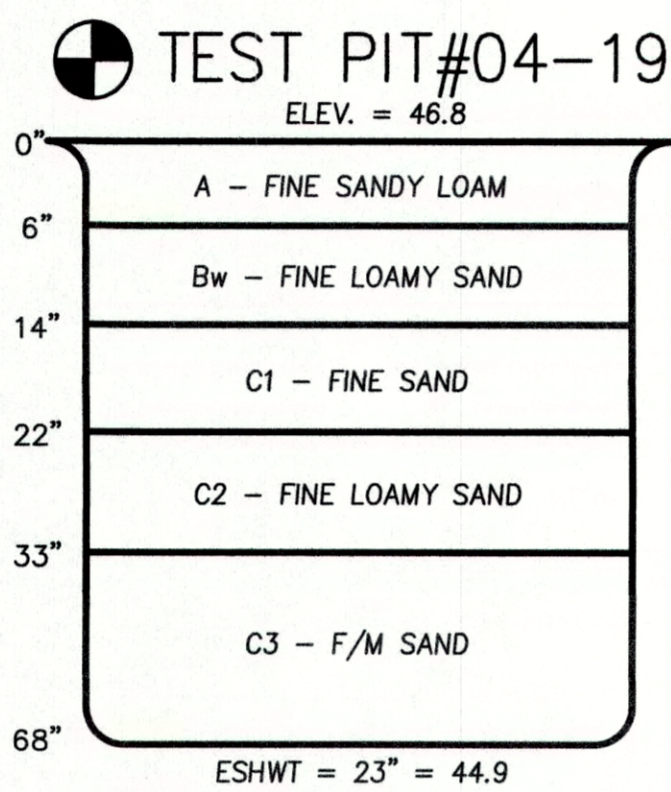
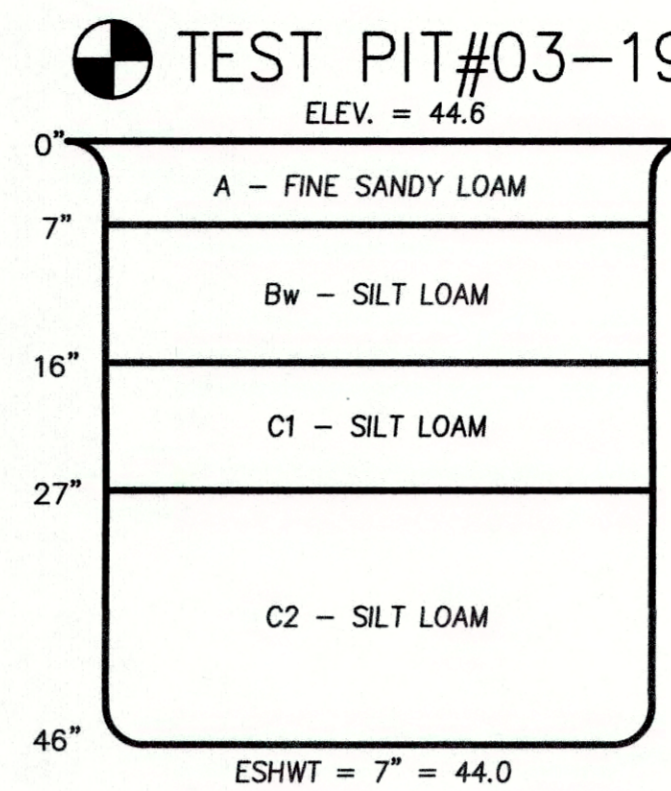
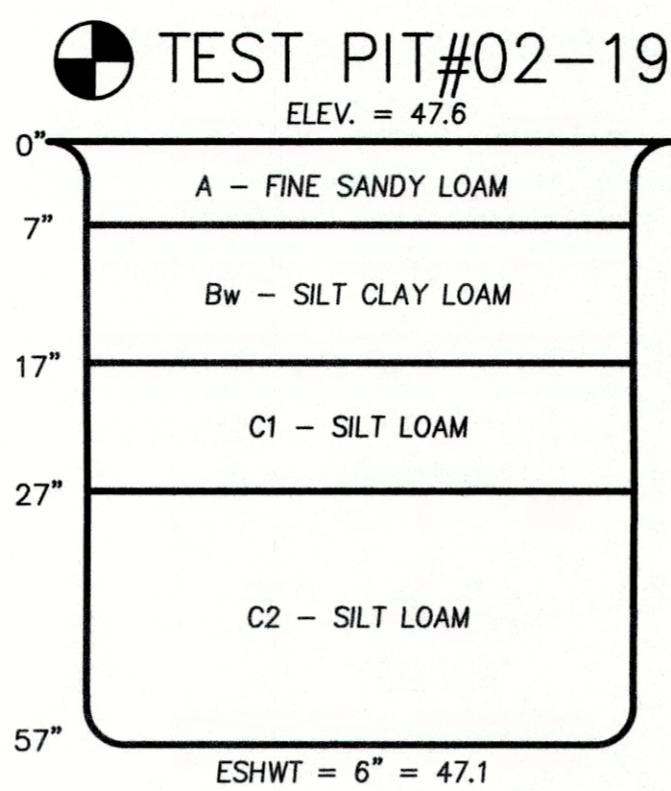
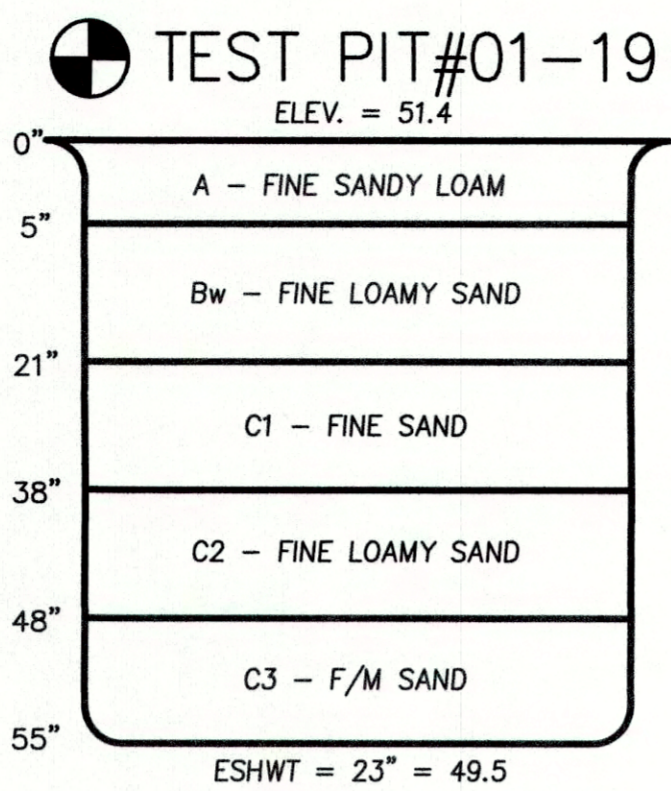


**NOTES**

1. STONE SHALL BE 1-2" STONE, RECLAIMED STONE, OR RECYCLED CONCRETE EQUIVALENT.
2. THE LENGTH OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 50'.
3. THE THICKNESS OF THE STABILIZED ENTRANCE SHALL NOT BE LESS THAN 6".
4. GEOTEXTILE FILTER CLOTH SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING THE STONE.
5. ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
6. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP-DRESSING 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 RIGHTS-OF-WAY MUST BE REMOVED PROMPTLY.
7. 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.

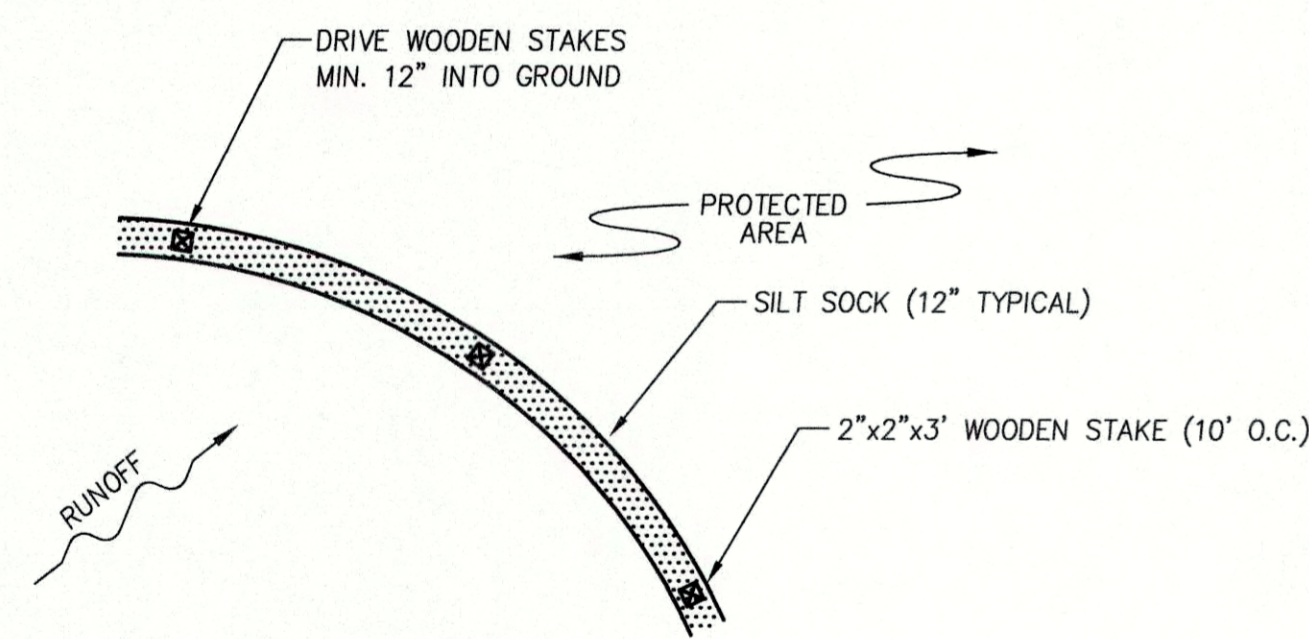
**STABILIZED CONSTRUCTION ENTRANCE**

N.T.S.



**CONSTRUCTION SEQUENCE**

1. CUT TREES.
2. INSTALL EROSION CONTROL AS SHOWN ON PLANS & STAKE OUT DETENTION BASIN.
3. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AS DEPICTED.
4. CLEAR AND GRUB DEBRIS AND DISPOSE OF PROPERLY.
5. STRIP, SCREEN AND STOCKPILE TOPSOIL. TOPSOIL CAN BE TEMPORARILY STOCKPILED ON SITE PROVIDING THAT THE PERIMETER OF THE STOCKPILES ARE PROPERLY STAKED WITH SILT FENCE AT THE TOE OF SLOPE.
6. CONSTRUCT DETENTION BASIN.
7. GRADE ROADWAY TO TOP OF SUBGRADE ELEVATIONS. ALL ROADWAYS MUST BE STABILIZED IMMEDIATELY AFTER GRADING.
8. INSTALL UTILITIES/DRAINAGE STRUCTURES.
9. PLACE RIPRAP WHERE SHOWN ON PLANS. LOAM AND HYDROSEED SWALES, SIDESLOPES, AND ALL DISTURBED AREAS WITHIN 72 HOURS.
10. SPREAD, SHAPE, AND COMPACT PAVEMENT SUBBASE AS PER TYPICAL ROADWAY SECTION TO ATTAIN FINAL DESIGN ELEVATIONS.
11. COMPLETE PAVING.
12. LOAM AND HYDROSEED ANY DISTURBED SURFACES ALONG EDGES OF PAVEMENT AS REQUIRED.
13. CONSTRUCT INDIVIDUAL DRIVEWAYS.
14. REMOVE EROSION CONTROL.



**NOTES**

1. ALL MATERIAL SHALL MEET SPECIFICATIONS BY FILTREXX OR APPROVED EQUAL.
2. SILT SOCK SHALL BE INSPECTED WITHIN 24 HOURS AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
3. THE CONTRACTOR SHALL REMOVE SEDIMENT AT THE BASE OF THE UPSLOPE SIDE OF THE SILT SOCK WHEN ACCUMULATION HAS REACHED 1/2 OF THE EFFECTIVE HEIGHT OF THE SILT SOCK.
4. SILT SOCK SHALL BE MAINTAINED UNTIL DISTURBED AREA ABOVE THE DEVICE HAS BEEN PERMANENTLY STABILIZED AND CONSTRUCTION ACTIVITY HAS BEEN COMPLETED.
5. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE SOCK HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

**SILT SOCK INSTALLATION**

N.T.S.

**EROSION CONTROL DETAILS**

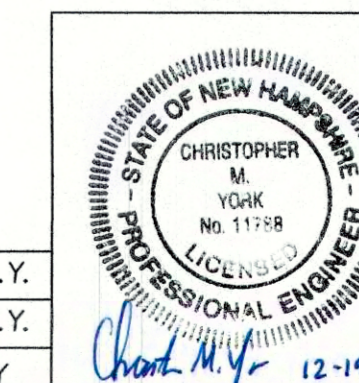
**PLAT OF LAND**  
IN  
**EXETER, NH**

SHOWING  
**A SUBDIVISION AT**  
**100 LINDEN STREET AND PATRICIA AVENUE**

RECORD OWNER  
**I S REALTY TRUST**  
3 VINTAGE DRIVE EXETER, NH 03833

**MILLENNIUM ENGINEERING INC.**  
ENGINEERS AND LAND SURVEYORS  
P.O. BOX 745 13 HAMPTON ROAD EXETER, NH 03833  
PHONE: (603) 778-0528 FAX: (603) 772-0689

SCALE: AS NOTED	DES. BY: C.M.Y.	PROJECT: E182237
DATE: AUG. 1, 2019	CHKD. BY: E.W.B.	SHEET: 10 OF 10



NO.	DATE	DESCRIPTION	BY
2	12/19/19	ADDRESS TRC COMMENTS	C.M.Y.
1	9/10/19	UPDATE RECORD OWNER	C.M.Y.



# 2019 CONSERVATION BY THE NUMBERS



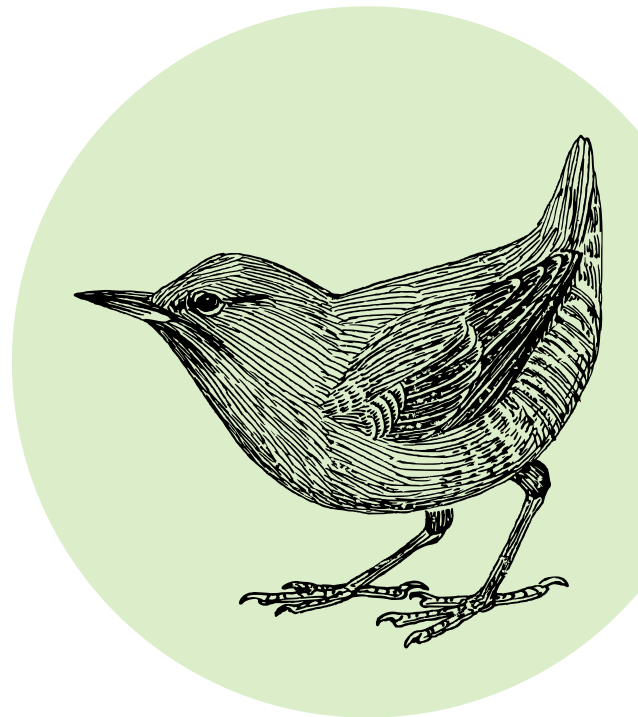
## 63 PROPERTIES, 2,337 ACRES MONITORED

Monitoring conservation lands is a legal responsibility of the Commission. This ensures lands remain in compliance with their conservation deeds and affords us an opportunity to connect with the private land owners supporting our conservation easements. Annually our Conservation Land Steward Internship program helps us achieve this goal.

## 95.5 ACRES OF HABITAT MANAGEMENT COMPLETED

65.5 acres were managed with late season mowing. This avoids the breeding season for grassland birds and maintains a fall seed and nectar source.

30 acres of Henderson Swasey Town Forest were managed through hand pulling of Invasive Plants with support of PEA students and community volunteers



## 13.5 MI. OF RECREATIONAL TRAILS MAINTAINED

With support from our Trail Committee volunteers, Commission members, the Natural Resource Planner, and interns we updated our trail inventory, producing new trail maps, installed directional signage and kiosks, and refreshed trail blazes.

## 13 PUBLIC EVENTS 535 PEOPLE 24.4K FB REACH

#185 Event Attendees and #350 Students

We had a very active event season this year! Highlights include: Full Moon Snowshoe at Irvine, Cottontail Survey Workshop, 5th Grade Spring Tree Program, #TrashTag Clean-Up with SST Students, Invasive Pull with PEA Students, Bats and Bat House Workshop, CMS 8th Grade Water Quality Project, Invasive Plant Pull at Henderson Swasey, McDonnell Bird Walk, Window Repair Workshop, Exploring Exeter: Little River, Water Trail Tour and Raynes Farm Winter Solstice



## 2019 Accomplishment Review Session

**Goal 1:** Deeper partnership with Parks and Rec, YMCA and other community groups. (Relates to Master Plan Support, 3, 7, 8)

- Exploring Exeter trail program w/ Parks and Rec
  - 2/16 Full Moon snowshoe @ Irvine
  - 5/18 Bird Walk @ McDonnell
  - 7/20 Trail Walk @ Little River
  - 9/21 Squamscott Kayak tour (Cancelled-low turnout)

**Goal 2:** Have focused/goal oriented outreach events. For example, prioritize Raynes farm in prep for CIP and LCHIP application, prioritize events that also help to meet Town's MS4 and AOC requirements. (Relates to Master Plan Support, 7)

- Conservation Center at Raynes Farm Events
  - 4/22 Woodcock Walk
  - 5/4 NH Bats & Bat Box workshop (moved to TO)
  - 6/29 Window Workshop
  - 10/25, 26 Story Walk and Sky Watch (Cancelled due to weather)
  - 12/21 Solstice Celebration
  - Collaborated w/ DPW to improve parking issues
- Rain Barrel Sale (5/11)
- SST Collaborative Clean Up Morrissette property
- VRAP w/ supplemental volunteer outreach
- EveryDrop Pet Waste @ Trailheads

**Goal 3:** Develop and maintain a list of conservation related activities going on by other groups in town so the Commission members are informed and can be a point of reference for the public. (Relates to MP Support, 8)

- 

**Goal 4:** Incorporate higher quality public events that utilize experts and require a donation by participants to supplement the conservation fund (Relates to MP Support, 8)

- Combine with Goal 2?

**Goal 5:** Improve Commission education on their role, the regulations, communication with the Planning Board, and development of effective recommended conditions. (Relates to MP Communicate, 2?)

- Project Review guidance document

**Goal 6:** Maintain trails on conservation lands open to the public. (Relates to MP Steward, 11 and could relate to MP Steward 12)

- Updated trail inventory & updated trail brochures, kiosks, internal signs
- Directional signage in Oaklands and Henderson Swasey
- Refreshed blazes at Henderson Swasey
- Installed mini-kiosk @ Garrison Ln (Little River @ Pete's path)
- Eagle Project: Morrissette bridge and trail work
  - Deferred: sign @ skate park, sign @ Court St end of McDonnell
- H-S Granite Sign Replacement

**Goal 7:** Work to ensure a resilient community in both the short and long term. (Relates to MP Prepare, 3, 4, 5 and Steward, 1)

- Explored Community garden option but denied
- Mitigation project development
- Invasive Plant management at Henderson Swasey w/ SST and volunteers
- Golf Course Living Shoreline: Requested engineering support w/ US Naval Academy
- Climate Ed/Outreach w/ NHSeaGrant and Coop Ext.

**OTHER:**

- Winter Cottontail Survey training w/ UNH Coop Ext (Kristen)
- Property Monitoring – Interns
- Quarterly Raynes Farm Stewardship Committee meeting (Sally)
- CMS 8th Grade Wetland Buffer Science Program
- CIP for Conservation Fund
- Established a Friends of Raynes Farm Group

	SUPPORT Action	Town Lead	Town Support	Timeframe
3	Identify new facilities or programming, using the findings of the UNH Needs Assessment and Planning Report (2014-2015) as a starting point. Estimate costs and feasibility of providing these new facilities/activities.	Parks & Rec , Town Manager, NRP	Conservation Commission, Selectboard	Mid Term
7	Develop a public awareness campaign to educate residents and businesses about water quality and state and federal mandates that require the Town to improve and monitor it. Include such topics as: what the mandates require the Town to do (new programs, infrastructure projects, etc.), the impact of lower water quality on the quality of life in Exeter, and how residents and businesses can contribute to improving water quality.	DPW, NRP	Conservation Commission, River Advisory Committee	Short Term
8	Sponsor and support events that bring residents and businesses together and celebrate the local community.	Town Manager	All Departments	Ongoing
9	Continue to support quality public education opportunities through the endorsement of the SAU16 Joint Board Strategic Plan. Identify specific strategies in the Strategic Plan where other municipal departments can provide support and incorporate these in department work plans.	Town Manager	All Departments	Ongoing
10	Continue to provide “wrap around” support for critical public meetings like on- site child care, refreshments, recordings, and/or printed summaries.	Town Manager	All Departments	Ongoing



	<b>PREPARE Action</b>	<b>Town Lead</b>	<b>Town Support</b>	<b>Timeframe</b>
2a	Based on most recent data available, inventory properties most vulnerable to sea level rise, storm surge, and other natural hazards. Where possible, estimate the time horizon for impacts. Develop outreach methods to education private property owners about the risks and ways they can minimize impacts to their properties.	Town Planner, NRP	Conservation Commission, Planning Board, River Advisory Committee	Short Term
2b	For areas identified most vulnerable to sea level rise, storm surge, and other natural hazards, evaluate town land use policies for these areas and consider alternatives to minimize risk in each area. These might include: <ul style="list-style-type: none"> <li>• Acquiring property to minimize the impact of sea level rise, chronic flooding, marsh migration, etc. to public and private property.</li> <li>• Limit redevelopment after flood or storm damage.</li> <li>• Decisions where to extend (or not extend) infrastructure (roads, water, sewer, etc.)</li> </ul>	Town Planner, NRP	Conservation Commission, Planning Board, River Advisory Committee	Mid Term
2c	Based on findings of the land use policies evaluation, implement new land use policies and regulations to reduce risks from sea level rise, storm surge, and other natural hazards.	Town Planner, Resource Planner	Selectboard, Planning Board, Conservation	Mid Term

	<b>STEWARD Action</b>	<b>Town Lead</b>	<b>Town Support</b>	<b>Timeframe</b>
1a	Identify properties that are less likely be developed based on regulatory requirements and determine whether this affects their prioritization level for acquisition.	Town Planner, Natural Resource Planner	Conservation Commission	Short Term
1b	Review criteria for acquiring land for conservation and consider adding criteria related to sea level rise, marsh migration, chronic flooding, storm surge, and other impacts of climate change and natural hazards.	Natural Resource Planner	Conservation Commission, River Advisory Committee, Selectboard	Mid Term
2	Based on revised criteria and assessment of natural resources already under regulatory protection, prioritize parcels of interest for conservation purposes. Consider available and future funding sources and other tools available to protect land. Develop a 10-year schedule for implementation.	Natural Resource Planner	Conservation Commission, Selectboard	Mid Term

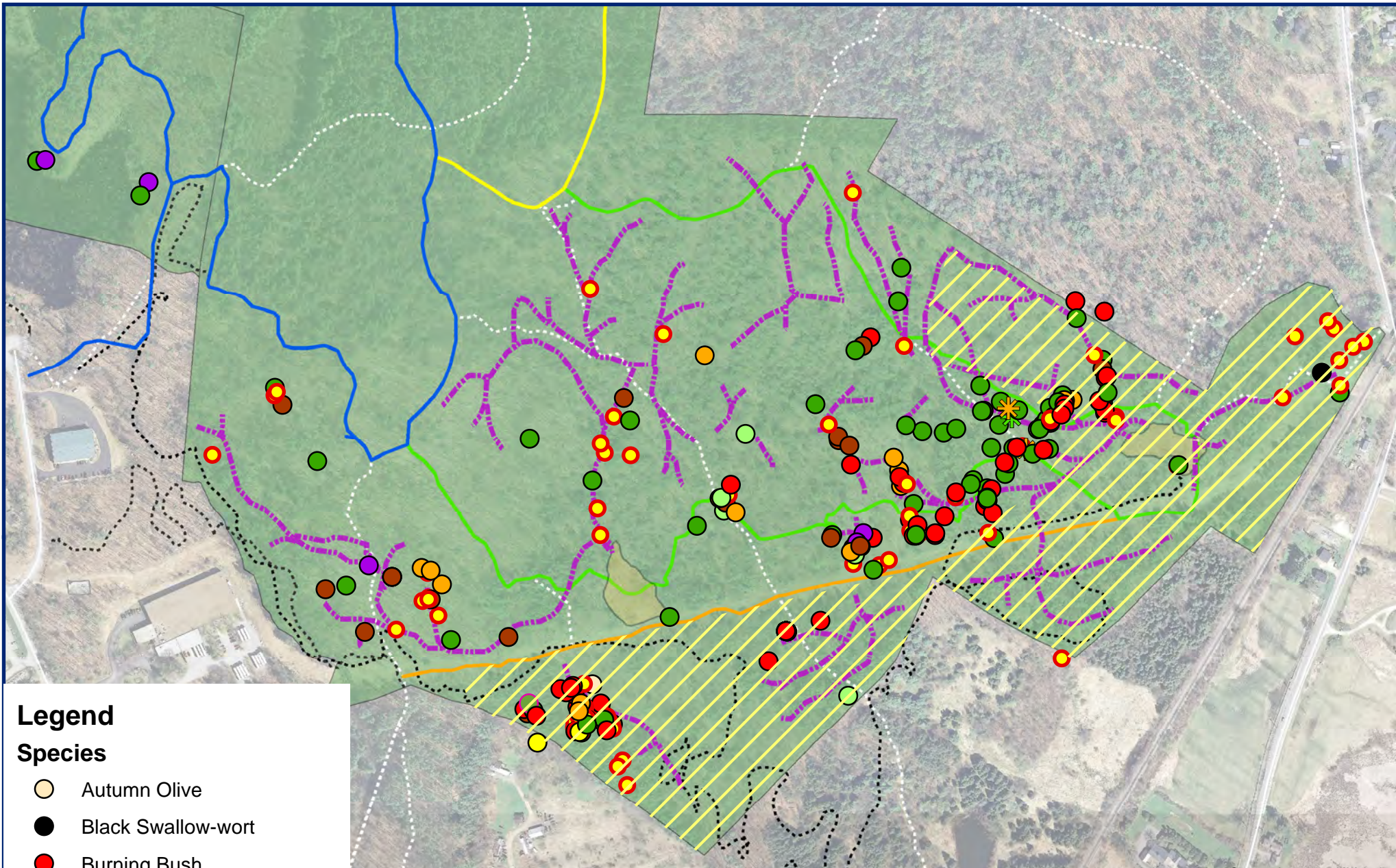
	STEWARD Action	Town Lead	Town Support	Timeframe
6c	<p>Review and update the Trail Maintenance Plan (2009).</p> <ul style="list-style-type: none"> <li>• Identify recommendations that have not been completed.</li> <li>• Determine which recommendations are still relevant and which are not. Identify new recommendations as needed.</li> <li>• Develop a 10-year schedule for maintenance, improvements, or future</li> </ul>	Natural Resource Planner	Conservation	Short Term
7	<p>Establish a “Friends” group of volunteers for individual town conservation properties to support and help with maintenance, including trail infrastructure, debris and litter, installations, etc.</p>	Natural Resource Planner	Conservation Commission	Short Term
8	<p>Prioritize town conservation properties in need of invasive species management. Estimate costs and develop a 10-year schedule for management strategies.</p>	Natural Resource Planner	Conservation Commission	Mid Term
9	<p>Review and revise existing forest management plans (Henderson-Swasey (2011) and Oaklands (1993)) as needed to ensure they remain relevant to conservation land management goals.</p> <ul style="list-style-type: none"> <li>• Identify recommendations that have not been completed.</li> <li>• Determine which recommendations are still relevant and which are not.</li> <li>• Identify new recommendations as needed.</li> </ul>	Natural Resource Planner	Conservation Commission	Short Term

	GROW Action	Town Lead	Town Support	Timeframe
5a	<p>Evaluate the Town’s property tax exemption programs (elderly, alternative energy, RSA 79E, etc.) to determine their costs and project future impacts based on demographic changes and other trends.</p>	Town Manager, Tax Assessor, Economic Development Director	Selectboard	Mid Term
11	<p>Continue to identify improvements to public spaces and the public realm in the Downtown to enhance its character. This may include public art, pedestrian amenities, or signage. Maintain consistency with bike and pedestrian linkages under CONNECT.</p>	Town Planner		Ongoing

CONNECT Action		Town Lead	Town Support	Timeframe
2a	<p>Prepare a town-wide Bike and Pedestrian Master Plan that looks at both walking and biking as modes of transportation beyond recreation. Identify improvements to existing amenities and areas where new amenities could be feasibly installed to promote walking and biking. Use the concurrent parking study (or parking management plan if already developed) for Downtown to inform the plan.</p> <p>Destinations/Routes to consider:</p> <ul style="list-style-type: none"> <li>• All public schools</li> <li>• Epping Road to Downtown</li> <li>• Lincoln Street/Train Station to Downtown</li> </ul>	Town Planner, Dept of Public Works	Planning Board	Short Term
4	Working with private and public land owners, evaluate the feasibility of a pedestrian walkway/access along the Squamscott River from Swasey Parkway to the Library.	Town Planner, Manager	Selectboard, River Advisory Committee	Short Term

COMMUNICATE Action		Town Lead	Town Support	Timeframe
4	Continue to organize community forums to discuss issues important to Exeter. Ensure that events, especially large ones, provide options for food and child care.	TBD	Selectboard, All Boards, Town Departments	Short to Mid Term
5	Evaluate the ways in which the Town communicates with the public and ensure that strategies maximize citizen engagement across multiple platforms. Determine the strategies that could be strengthened and move forward with ways for improvement.	TBD		Short to Mid Term
6	Develop language to be included in municipal RFPs that requires the inclusion of diverse and effective public engagement processes as part of municipal planning, design, and construction processes.	Town Manager	All Departments RFPs	Short Term





## Legend

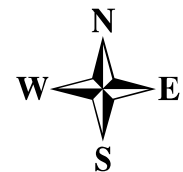
### Species

- Autumn Olive
- Black Swallow-wort
- Burning Bush
- Burning Bush, Gl. Buckthorn
- Burning Bush, Gl. Buckthorn, Barberry
- Common Buckthorn
- Garlic Mustard
- Glossy Buckthorn
- Japanese Barberry
- Morrows Honeysuckle
- Multiflora Rose
- Oriental Bittersweet
- Purple Loosestrife
- Phragmites
- Privet

Heavy Infestation

Skid Roads

Landings



0 0.125 0.25 Miles



# Exeter Conservation Commission invites you to

*Snow Moon – Sabra Field, Portrait Diva*



## **Full Moon Snowshoe* Hike**

**Exeter Country Club/Irvine Conservation Land**

**Saturday February 8th 6:30 PM**

Meet at the Exeter Country Club parking lot (58 Jady Hill Ave) for  
a guided walk followed by hot cocoa.

*This event will occur with or without snow—so dress for the weather and look for updates on our facebook page.

Exeter Conservation Commission  
December 10, 2019  
Town Offices Nowak Room  
Draft Minutes

**Call To Order**

1. Introduction of Members Present

Present at tonight's meeting were Bill Campbell, Carlos Guindon, Ginny Raub, Andrew Koff, Sally Ward, Todd Piskovitz, Dave Short, Trevor Mattera, Julie Gilman, and Kristen Murphy.

Lindsey White, Andy Weeks, and Alyson Eberhardt were not present.

Mr. Piskovitz called the meeting to order at 7 PM.

2. Public Comment

**Action items**

1. Event Request for the Conservation Center at Raynes Barn (Ben Anderson)

Ben Anderson described the proposed event, which would be a concert at the barn with seating outside. Ms. Ward asked about parking, and Mr. Anderson said he is expecting about 200 people but believes there would be enough parking; there are over 100 spaces available at the Word Barn. Mr. Piskovitz asked if the police would be involved, and Mr. Anderson said it depends on how the event shapes up. Mr. Piskovitz asked Mr. Campbell asked when the event would be, and Mr. Anderson said probably in the beginning of August, after the first hay cut.

**MOTION:** Mr. Koff moved that the Commission has reviewed Mr. Anderson's application and recommend the event be approved, with the note that Mr. Anderson will notify the Commission on the specifics and a date as they become known. Ms. Ward seconded. All were in favor.

2. Continued consideration of conservation easement on +/- 61 acres of land within Tax Map and Lots 98-37 and 80-18 surrounding the Ridge and the Boulders at RiverWoods development in accordance with the condition of approval issued by the Planning Board on June 5, 2008. (Sharon Somers)

Ms. Murphy said that this easement was issued conditional approval in 2008, and they've been working to get it implemented. In September, a Conservation Commission subcommittee was formed to review the agreement, and she, Mr. Guindon, and Mr. Campbell met and made some changes. They were presented to RiverWoods, who were supportive. She's looking for the Commission to accept the draft for presentation to the Select Board. Mr. Piskovitz asked if it had been reviewed by legal counsel, and Ms. Murphy said that was the next step after their approval.

Sharon Somers, legal counsel for RiverWoods, thanked the Conservation Commission for their consideration.

**MOTION:** Mr. Campbell moved that they have reviewed this proposal and recommend acceptance of the conservation easement for Tax Map and Lots 98-37 and 80-18, to go before the Select Board. Ms. Ward seconded. All were in favor.

3. Committee Reports

a. Property Management

i. Relinquishment of Claim to Deed from Book 2365 Page 489 by Robert Webb

Ms. Murphy said this was a tax deeded parcel that did not have a description associated. The owner, Robert Webb, approached Ms. Murphy about logging it. She believed that it was a conservation easement, but he had been paying taxes on it. The town reviewed the case and determined that the property was an easement. The case went before the Select Board, who agreed to pay him his back taxes, and he relinquished his claim.

ii. Conservation Fund Budget Recommendations Committee outcome and Conservation Plan Concept

Ms. Murphy discussed the presentation of the \$100,000 Conservation Fund allocation request to the BRC. She said that several members of the BRC suggested that it was the same burden to the taxpayers to get a bond, and they would have more money up front to work with. The BRC were also struggling with a 4% increase in the budget and were trying to find cost savings. Their vote was to reduce the allocation to \$50,000, and that's how it will go before the Select Board. Ms. Murphy said they have a good list of properties for consideration, and she suggested that before March a subcommittee should come up with a top three. They should also consider which properties may come in as partial donations. They could start the landowner outreach process.

Mr. Mattera said that if a developer is looking to develop land, they are supposed to look to a town's mitigation list before they go to ARM, but currently developers are skipping this step. Ms. Murphy said it would go a long way to have appraisals ready and have these properties queued up.

Mr. Short asked where the Land Use Change Tax goes, and Mr. Piskovitz said to the General Fund. Mr. Short said they could look at changing that. That source of funding, combined with a bond, could really move things along. Ms. Murphy said that Don Clement told her it was discussed and not supported in the past. The NHACC Handbook does have the language written out to approach the Select Board with if they were interested in pursuing it. It doesn't have to be all or nothing, they could take a portion of the Land Use Change Tax.

Ms. Gilman corrected the budget figure, saying that it's 3.1% increase, not 4%.

b. Trails

Mr. Short said that he and Mr. Campbell still have to finish the tunnel signs. They have all the materials and may be able to get to it soon. Mr. Campbell said there are a few that need to be dug in that will have to wait for a thaw. Ms. Murphy said they still have the Oaklands to do as well. Mr. Campbell asked when Eversource is leaving Raynes, and Ms. Murphy said the end of this week.

c. Outreach Events

i. Upcoming: 12/21 4-6 PM Winter Solstice Celebration @ Raynes Farm

Ms. Ward said that Ms. Murphy had the idea of an event with lanterns, which would be limited to 50 people as there would be a component inside the barn. This would celebrate the solstice and also highlight Raynes Farm. They are looking for someone to help with the bonfire. The DPW will either plow the parking lot or Parks and Rec will have a shuttle. Ms. Murphy said they had 50 reservations and more people interested in coming. Ms. Ward said her hope is that this will be the first annual solstice event.

Ms. Murphy said that the full moon snowshoe February 8th coincides with Deliberative Session, and she asked if members were okay with the overlap, but they had no concerns.

Ms. Murphy said they had the idea of "Open Barn" events at Raynes where people could play in the fields and come inside for some cocoa. It would be a good way to increase support for the farm. They could have monthly "Pop Up" events to work with snow days. Ms. Ward said she'd be more comfortable with fixed events so they could ensure volunteers were available. Ms. Raub said she would rather be flexible to work with the snowfall, and she could do an event in January. Mr. Koff said he'd be interested in the pop-up events so that they can avoid cancelling another event. Ms. Murphy said she'll announce a pop-up and look for registrants.

Ms. Murphy said Ben Anderson said he could put lights up at Raynes to draw attention in the winter, and the Commission liked that idea. Mr. Campbell thought putting lights on the barn or using garden lights along the path would also be nice.

Mr. Piskovitz asked Ms. Ward if there were updates on the Tree City USA process. Ms. Ward said all the requirements have now been met and the application has been submitted. They should hear back on the status in March.

4. Approval of Minutes: November 12, 2019

**MOTION:** Mr. Campbell moved to approve the minutes of November 12, 2019 as submitted. Ms. Ward seconded. All were in favor.

5. Correspondence

Mr. Koff said they got a request from a town consultant for permission to explore water resources on some of the conservation properties. The consultant would use equipment that would not disturb the ground. Ms. Murphy said this was related to the Drinkwater Road properties, and she had shared information with the consultant on the long-term limitations on those properties.

6. Other Business

Mr. Piskovitz said at the October 25th Planning Board meeting, they passed 4-3 a motion to allow the Town Planner or his designee to approve fertilizer waiver requests. Their discussion at the meeting was that they have faith in Dave Sharples and Ms. Murphy to make these determinations, but Mr. Piskovitz was concerned that they approved a position, rather than a specific person, to make the decision. Also, if it's done by one person in an office, that takes public comment out of the process. Ms. Raub said that she had been on the fertilizer committee and spent a lot of time calculating percentages, and Mr. Sharples and Ms. Murphy have the background and know-how to approve or deny it, more so than the Planning Board. Ms. Ward said she wanted the public to be able to weigh in.



Ms. Murphy said that in her opinion, the waiver provision is limited. Even with a waiver, fertilizer would still be prohibited within 100 feet of a shoreland district. The applicant would also still need to follow the state best management practices. Their proposal would need to show they're using a minimum of 50% slow release nitrogen and that it's phosphate free, unless soil testing showed it was depleted of phosphorous. There's very little decision making being made, just documenting that their management plan conforms to the guidelines. Mr. Campbell asked if this was for commercial purposes, and Ms. Murphy said this was only for heavily used turf. This came up because an organic lawn care company and PEA were unable to maintain their turf. This was a compromise between the science and being too strict. If there were a question about compliance, they would bring it back to the Planning Board.

7. Next Meeting

- a. Date Scheduled 1/14/20, Submission Deadline 1/3/20

**Adjournment**

**MOTION:** Mr. Campbell moved to adjourn. Ms. Raub seconded. All were in favor and the meeting was adjourned at 8:10 PM.

Respectfully Submitted,  
Joanna Bartell  
Recording Secretary