

# TABLE OF CONTENTS

**Checklist**

**Project Narrative**

**Attachment A – Deed**

**Attachment B – Hydrologic and Environmental Studies**

**Attachment C – Erosion and Sedimentation Control Plan**

**Attachment D – Declaration of Covenants, Conditions and Restrictions**

**Attachment E – Agency Letters**

**Attachment F – FEMA Map**

**Attachment G – Stormwater Management Report**

**Attachment H – Technical Capacity**

**Attachment I – Cost Estimate and Financial Capacity**

**Attachment J – Plan Set**

Figure 1  
Subdivision Plat  
C-100 Existing Conditions  
C-101 Overall Site Layout Plan  
C-102 Grading and Erosion Control Plan  
C-200 Plan and Profile 1  
C-201 Plan and Profile 2  
C-300 Erosion Control Notes  
C-301 Civil Details 1  
C-302 Civil Details 2  
C-303 Civil Details 3  
D-100 Existing Stormwater Plan  
D-101 Proposed Stormwater Plan

# SOIL EROSION AND SEDIMENTATION CONTROL

## Introduction

The project is a 13-lot open space residential subdivision . The site is located off Hallowell Road in Durham, Maine. The property is approximately 54 acres, with a few patches of forested wetlands and a stream that runs along the eastern side. The site work will occur on the western side, opposite the stream.

## Site History and Existing Site Conditions

The existing site is predominantly wooded with on-site soils of primarily in Hydrologic Group A. Test pits were performed on-site by Alex Finamore.

The site is boarded by deep glacial ridges with small streams in the center. The majority of the site drains to large wetland in the southeast corner.

## Existing Erosion Problems

There are no existing erosion problems evident at the site. Areas near the stream crossing have been loamed and seeded with a perimeter erosion control berm.

## Critical Areas

The critical areas in the proximity of the site are the stream and the surrounding forested wetlands.

## Protected Natural Resources

Forested wetlands on the Site have been identified and mapped by Alex Finamore and are shown on the drawings that accompany this submission.

## Soil Erosion and Sedimentation Control Measures

The primary goals of the Erosion and Sediment Control Plan for the project are to minimize exposure of native soil materials during construction, to prevent soil erosion and sediment transport to downstream areas, receiving waters and natural resources. Measures will also be taken to ensure sediment is not tracked onto adjacent streets and that stockpiles of imported construction materials are protected from potential contamination. The susceptibility of soils to erosion is indicated on a relative "K" scale of values over a range of 0.02 to 0.69. The "K" value is frequently used with the universal soil loss equation. The higher values are indicative of the more erodible soils. The project area consists of made land with pavements and building slabs covering about one-half of the site. The rear portion of the site is natural forest.

The primary emphasis of the Erosion and Sedimentation Control Plan to be implemented for this project is as follows:

- Construction Schedule – Major earth moving activities at the site will be scheduled for the summer and will be started when a suitable weather window has been identified. This will minimize the potential for exposure of bare soil to inclement weather.
- Temporary Measures – Planning the project to have erosion resistant measures in place with measures to prevent erosion from occurring. The plan includes measures to intercept and convey runoff to temporary sediment control devices as the construction of the project occurs.
- Stabilization of areas denuded to underlying parent material to minimize the period of soil exposure.
- Stabilization of drainage paths to avoid rill and gully erosion.

- The use of on-site measures to capture sediment (hay bales/silt fence, etc.) before it is conveyed to sediment sumps.

### **Description and Location of Limits of All Proposed Earth Movements**

The proposed project will require stripping and grubbing for the construction of the road. The native sandy soil material is suitable for re-use as fill on the site. This will minimize import/export quantities. The topography is relatively flat, but some leveling and grade adjustment will be required.

### **Erosion/Sedimentation Control Devices**

As part of the site development, the Contractor will be obligated to implement the following erosion and sediment control devices. These devices shall be installed as indicated on the plans or as described within this report. For further reference on these devices, see the *Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual for Designers and Engineers, Maine DEP, October 2016*.

1. Silt fence shall be installed down slope of any disturbed areas to trap runoff borne sediments. The silt fence shall be installed per the detail provided in the plan set and inspected immediately after each rainfall, and at least weekly in the absence of significant rainfall. The Contractor shall make repairs immediately if there are any signs of erosion or sedimentation below the fence line. If such erosion is observed, the Contractor shall take proactive action to identify the cause of the erosion and take action to avoid its reoccurrence. Proper placement of stakes and keying the bottom of the fabric into the ground is critical to the fence's effectiveness. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water behind the fence, the barrier shall be replaced with a stone check dam and measures taken to avoid the concentration of flows not intended to be directed to the silt fence.
2. Twin rows of siltation fence with hay bales shall be installed at the foot of steep slopes and adjacent to protected natural resources (wetland areas).
3. Silt fence shall be installed along the downgradient side of construction work areas, with locations being adjusted along with the construction phasing areas. The Contractor may use erosion mix in place of single silt fence barrier.
4. Silt fence will be installed along the upstream perimeter of the work area as shown on the plans, to divert run-on from upslope areas and prevent surface water from entering the construction area. If necessary, and at the direction of the Project Engineer, interception trenches shall be constructed to prevent shallow groundwater from flowing into construction areas
5. Temporary sediment sumps will provide sedimentation control for stormwater runoff from disturbed areas during construction until stabilization has been achieved.
6. A construction entrance will be constructed at all access points onto the site to prevent tracking of soil onto adjacent local roads and streets and the existing parking lot.
7. Stone sediment traps or a premanufactured SiltSack™ and a sediment bag will be installed at catch basin inlets to prevent silt from entering the storm drain system. Installation details are provided in the plan set on the erosion control detail sheets.
8. Dirtbags™ will be required to be on site and available for construction dewatering. The Contractor will be required to provide four Dirtbags™ with one prepared for operation prior to commencing any trenching operations.
9. Silt logs are an option for stone check dams and may be substituted provided the devices are well anchored.

### **Temporary Erosion/Sedimentation Control Measures**

The following are planned as temporary erosion/sedimentation control measures during construction:

The primary and most effective soil erosion and sediment control measure is proactive work scheduling to minimize exposure of erodible soils. The Contractor will make every effort to promptly stabilize and disturbed areas on the site, after removal of existing vegetation, by placing imported granular material

over disturbed areas. This will limit exposure of native soils and fill materials and provide a stable surface with minimal erosion potential.

1. It is anticipated that work on the site will begin in the Fall of 2021. This will allow for the earthwork to be undertaken in the early and mid-summer months when the risk of inclement weather is significantly lower. Scheduling of the field work will be critical to minimizing potential soil erosion impacts. The Contractor will be responsible for selecting an appropriate weather window in which to commence the work to minimize erosion and sediment transport risk.
2. Crushed stone-stabilized construction entrances will be placed at any construction access points from adjacent streets. The locations of the construction entrances shown on the drawings should be considered illustrative and will need to be adjusted as appropriate and located at any area where there is the potential for tracking of mud and debris onto existing roads or streets. Stone stabilized construction entrances will require the stone to be removed and replaced, as it becomes covered or filled with mud and material tracked by vehicles exiting the site.
3. Silt fence shall be installed along the downgradient side of the proposed improvement areas. The silt fence will remain in place and properly maintained until the site is acceptably stabilized. Silt fence needs to be checked to ensure the bottom is properly keyed in and inspected after significant rains. Wood chips from clearing can be used in front of the silt fence to provide an extra margin of safety and security for the silt fence. This practice is encouraged, provided the chips are removed when the fence is removed.
4. Silt fencing with a maximum stake spacing of 6 feet should be used, unless the fence is supported by wire fence reinforcement of minimum 14 gauge and with a maximum mesh spacing of 6 inches, in which case stakes may be spaced a maximum of 10 feet apart. The bottom of the fence should be properly anchored a minimum of 6" per the plan detail and backfilled. Any silt fence identified by the owner or reviewing agencies as not being properly installed during construction shall be immediately repaired in accordance with the installation details.
5. Dirtbags™ shall be installed in accordance with the details in the plan set. The Dirtbags'™ function on the project is to receive any water pumped from excavations during construction. A Dirtbag™ shall be installed and prepared for operation prior to any trenching on site. When Dirtbags™ are observed to be at 50% capacity, they shall be cleaned or replaced. Stone under the Dirtbag™ shall be removed and replaced concurrently with the replacement of the Dirtbag™.
6. Stone check dams, silt logs, or hay bale barriers will be installed at any evident concentrated flow discharge points during construction and earthwork operations
7. Storm drain catch basin inlet protection shall be provided through the use of stone sediment barriers or a premanufactured SiltSack™ as distributed by A. H. Harris Company, Portland, Maine. Stone sediment barrier installation details are provided in the plan set. The barriers or SiltSacks™ shall be inspected after each rainfall and repairs made as necessary, including the removal of sediment. Sediment shall be removed and the barrier or SiltSack™ restored to its original dimensions when the sediment has accumulated to one-half the design depth of the barrier. Sediment shall be removed from SiltSacks™ as necessary. Inlet protection shall be removed when the tributary drainage area has been stabilized.
8. All slopes steeper than 4:1 shall receive erosion control blankets.
9. Areas of visible erosion and the temporary sediment sumps shall be stabilized with crushed stone. The size of the stone shall be determined by the contractor's designated representative in consultation with the Owner.

### **Special Measures for Summer Construction**

The summer period is generally optimum for construction in Maine, but it is also the period when intense short duration storms are most common, making denuded areas very susceptible to erosion,

when dust control needs to be the most stringent, and when the potential to establish vegetation is often restricted by moisture deficit. During these periods, the Contractor must:

1. Implement a program to apply dust control measures on a daily basis except those days where precipitation is sufficient to suppress dust formation. This program shall extend to and include adjacent streets.
2. Spray any mulches with water after anchoring to dampen the soil and encourage early growth. Spraying may be required several times. Temporary seed may be required until the late summer seeding season.
3. Cover stockpiles of fine-grained materials, or excavated soils which are susceptible to erosion. To protect from the intense, short-duration storms which are more prevalent in the summer months.
4. Take additional steps needed, including watering, or covering excavated materials to control fugitive dust emissions to minimize reductions in visibility and the airborne disbursement of fine-grained soils. This is particularly important given the potential presence of soil contaminants, and the proximity of along the adjacent streets and properties.
5. These measures may also be required in the spring and fall during the drier periods of these seasons.

### **Permanent Erosion Control Measures**

The following permanent erosion control measures have been designed as part of the Erosion/Sedimentation Control Plan:

1. The drainage conveyance systems have been designed to intercept and convey the 25-year storm.
2. All areas disturbed during construction, but not subject to other restoration (paving, riprap, etc.), will be loamed, limed, fertilized, mulched, and seeded. Fabric netting, anchored with staples, shall be placed over the mulch in areas where the finish grade slope is greater than 10 percent. Native topsoil shall be stockpiled and temporarily stabilized with seed and mulch and reused for final restoration when it is of sufficient quality.
3. Catch basins shall be provided with sediment sumps for all outlet pipes that are 12" in diameter or greater or where winter sand use is contemplated. A sediment collection bag shall be installed in all basins.

### **Topsoil Management**

Any topsoil removed during the project must be stockpiled on the site and reused to the maximum extent possible. Topsoil piles should be located a minimum of 50' from the edge of wetlands. If a stockpile is intended to remain for more than 14 days, it should be stabilized. All stockpiles should have an erosion control berm placed around the toe of slope.

### **Timing and Sequence of Erosion/Sedimentation Control Measures**

The following construction sequence shall be required to ensure the effectiveness of the erosion and sedimentation control measures is optimized.

The following construction sequence is required:

1. Install construction entrances.
2. Install safety and construction fence to secure the site for demolition.
3. Install all perimeter siltation fence and erosion control barriers. Particular attention shall be paid to areas upstream of protected natural resources and in the vicinity of the two streams at the project site. Signs shall be erected periodically along these perimeter barriers indicating that the downstream areas are off limits to all construction activities.
4. Conduct demolition activities including salvage of materials that can be used for site work aggregate.

5. Construct activities on the site to optimize the handling of materials and restrict the denuded areas to the time stipulated.
6. Construct stabilized pads for foundation and building construction.
7. Maintain stabilized site access and working areas during building construction.
8. Install binder pavement.
9. Landscape (loam and seed).
10. Install surface pavements.
11. Install striping, signage, and miscellaneous site improvements.
12. Review and punch the site.
13. Remove any temporary erosion control measures.

It is anticipated that site construction on the project will be completed by the end of winter in 2023, with some building finishing work extending into the spring.

### **Maine Construction General Permit Requirements**

The project will be constructed by a General Contractor under contract to the Owner/Applicant. The Contractor will submit a detailed schedule for the completion of the work at the start of construction.

The work will be conducted in sections which will limit the amount of exposed area to those areas in which work is expected to be undertaken during the next 30 days. Exposed areas will be covered and stabilized as rapidly as practical. All areas will be permanently stabilized within 7 days of final grading and temporarily stabilized within 7 days of initial disturbance or before a predicted storm event of over ½” of rain. The area of denuded, non-stabilized construction shall be limited to the minimum area practicable. An area shall be denuded until the subbase gravel is installed in parking areas, or the areas of future loam and seed have been loamed, seeded, and mulched, or stabilized with erosion control blanket.

The Contractor must maintain an accurate set of record drawings indicating the date when an area is first denuded, the date of temporary stabilization, and the date of final stabilization. On October 1 of any calendar year, the Contractor shall submit a detailed plan for stabilizing the site for the winter and a description of what activities are planned during the winter.

The Contractor must install any added measures which may be necessary to control erosion/sedimentation and fugitive dust emissions from the site, with adjustments made dependent upon forecasted and actual site and weather conditions.

### **Maintenance of the Erosion/Sedimentation Control Features**

The project will be contracted by the Owner. The Contractor shall prepare a list and designate by name, address and telephone number all individuals who will be responsible for implementation, inspection, and maintenance of all erosion control measures identified within this section and as contained in the Erosion and Sedimentation Control Plan of the contract drawings. Specific responsibilities of the inspector(s) will include:

A weekly certification stating compliance, any deviations, and corrective measures necessary to comply with the erosion control requirements of this section shall be prepared and signed by the inspector(s). In addition to the weekly certifications, the inspector(s) shall maintain written reports recording construction activities on site which include:

1. Dates when major grading activities occur in a particular area.
2. Dates when major construction activities cease in a particular area, either temporarily or permanently.
3. Dates when an area is stabilized.
4. Inspection of this project work site on a weekly basis and after each significant rainfall event (0.25 inch or more within any consecutive 24-hour period) during construction until permanent erosion control measures have been properly installed and the site has been stabilized.

Inspection of the project work site shall include:

1. Identification of proper erosion control measure installation in accordance with the erosion control detail sheet or as specified in this section.
2. Determine whether each erosion control measure is properly operating. If not, identify damage to the control device and determine remedial measures.
3. Identify areas which appear vulnerable to erosion and determine additional erosion control measures which should be used to improve conditions.
4. Inspect areas of recent seeding to determine percent catch of grass. A minimum catch of 90 percent is required prior to removal of erosion control measures.
5. All erosion controls shall be removed within 30 days of permanent stabilization except for mulch and netting not detrimental to the project. Removals shall include but not be limited to all silt fence, hay bales, inlet protection, and stone check dams.
6. Accumulated silt/sediment should be removed when the depth of sediment reaches 50 percent of the barrier height. Accumulated silt/sediment should be removed from behind silt fencing when the depth of the sediment reaches 6 inches.
7. Silt sacks should be removed and replaced at least every three months and at any time where the weekly inspection reveals that siltation has significantly retarded the rate of flow through the silt sack.
8. If inspection of the site indicates a change should be made to the erosion control plan, to either improve effectiveness or correct a site-specific deficiency, the inspector shall immediately implement the corrective measure and notify the Owner of the change.

All certifications, inspection forms, and written reports prepared by the inspector(s) shall be filed with the Owner, and the Permit File contained on the project site. All written certifications, inspection forms, and written reports must be filed within one (1) week of the inspection date.

The Contractor has sole responsibility for complying with the erosion/sediment control report, including control of fugitive dust, and shall be responsible for any monetary penalties resulting from failure to comply with these standards.

Once construction has been completed, long-term maintenance of the stormwater management system will be the responsibility of the applicant. Operations & Maintenance items with a list of maintenance requirements and frequency are listed at the end of Section 12 of the Maine DEP Permit Application.

### **Preconstruction Conference**

Prior to any construction at the site, representatives of the Contractor, the Architect, the Owner, and the site design engineer shall meet to discuss the scheduling of the site construction and the designation of the responsible parties for implementing the plan. The Contractor shall be responsible for scheduling the meeting. Prior to the meeting, the Contractor will prepare a detailed schedule and a marked-up site plan indicating areas and components of the work and key dates showing date of disturbance and completion of the work. The Contractor shall conduct a meeting with employees and sub-contractors to review the erosion control plan, the construction techniques which will be employed to implement the plan and provide a list of attendees and items discussed at the meeting to the Owner. Three copies

of the schedule, the Contractor's meeting minutes, and marked-up site plan shall be provided to the Owner.

## **Construction Schedule**

The following construction sequence is required:

1. Install construction entrances. (Beginning the Fall of 2022)
2. Install safety and construction fence to secure the site for demolition.
3. Install all perimeter siltation fence and erosion control barriers. Particular attention shall be paid to areas upstream of protected natural resources and in the vicinity of the two streams at the project site. Signs shall be erected periodically along these perimeter barriers indicating that the downstream areas are off limits to all construction activities.
4. Conduct demolition activities including salvage of materials that can be used for site work aggregate.
5. Construct activities on the site to optimize the handling of materials and restrict the denuded areas to the time stipulated.
6. Construct stabilized pads for foundation and building construction.
7. Maintain stabilized site access and working areas during building construction.
8. Install binder pavement.
9. Landscape (loam and seed).
10. Install surface pavements.
11. Install striping, signage, and miscellaneous site improvements.
12. Review and punch the site.
13. Remove any temporary erosion control measures.



**A. SOIL EROSION AND SEDIMENT CONTROL NOTES**

TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES INCLUDE THE USE OF STABILIZED CONSTRUCTION ENTRANCES, SILTATION FENCE, EROSION CONTROL MIX, STONE CHECK DAMS, HAY BALE BARRIERS, CATCH BASIN SEDIMENT COLLECTION BAGS, EROSION CONTROL BLANKET, AND TEMPORARY SEEDING AND MULCHING AS REQUIRED. PERMANENT DEVICES INCLUDE THE USE OF RIP RAP AT EXPOSED STORM DRAIN AND CULVERT INLETS AND OUTLETS, AND PERMANENT VEGETATION.

**GENERAL**

- IT IS ANTICIPATED THAT CONSTRUCTION MAY BEGIN AS SOON AS POSSIBLE FOLLOWING RECEIPT OF NECESSARY PERMITS.
- ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MAINE EROSION & SEDIMENT CONTROL BMPs - MANUAL FOR DESIGNERS AND ENGINEERS (2016), OR AS CURRENTLY REVISED OR U.S. ENVIRONMENTAL PROTECTION AGENCY PUBLICATION 832R-92-005 (SEPTEMBER, 1992) STORM WATER MANAGEMENT FOR CONSTRUCTION, CHAPTER 3, WHICHEVER IS MORE STRINGENT.
- ANY ADDITIONAL EROSION AND SEDIMENTATION CONTROL DEEMED NECESSARY BY THE OWNER'S REPRESENTATIVE, DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) PERSONNEL AND/OR MUNICIPAL OFFICIALS SHALL BE INSTALLED BY THE CONTRACTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL FINES RESULTING FROM EROSION OR SEDIMENTATION FROM THE SITE TO SURROUNDING PROPERTIES, WATER BODIES, OR WETLANDS AS A RESULT OF THIS PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR/REPLACEMENT/MAINTENANCE OF ALL EROSION CONTROL MEASURES UNTIL ALL DISTURBED AREAS ARE STABILIZED TO THE SATISFACTION OF THE ABOVE PERSONNEL. DESCRIPTIONS OF ACCEPTABLE PERMANENT STABILIZATION FOR VARIOUS COVER TYPES FOLLOWS:
  - FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS A 90% COVER OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.
  - FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.
  - FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE APPROVED APPLICATION RATES AND LIMITATIONS.
  - FOR AREAS STABILIZED WITH RIP RAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIP RAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIP RAP. STONE MUST BE SIZED APPROPRIATELY.
  - PAVED AREAS: FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE COMPACTED GRAVEL SUBBASE IS COMPLETED.
  - FOR OPEN CHANNELS, PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH MATURE VEGETATION AT LEAST THREE INCHES IN HEIGHT, WITH WELL-GRADED RIP RAP, OR WITH ANOTHER NON-EROSIVE LINING CAPABLE OF WITHSTANDING THE ANTICIPATED FLOW VELOCITIES AND FLOW DEPTHS WITHOUT RELIANCE ON CHECK DAMS TO SLOW FLOW. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE LINING, UNDERCUTTING OF THE BANKS, OR DOWN CUTTING OF THE CHANNEL.

**B. EROSION AND SEDIMENTATION CONTROL MEASURES**

- PRIOR TO THE BEGINNING OF CONSTRUCTION, THE TEMPORARY SILT FENCE SHALL BE INSTALLED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE, OR ENGINEER. SILT FENCE SHALL BE INSTALLED ALONG THE DOWNGRADIENT SIDE OF CONSTRUCTION WORK AREAS, WITH LOCATIONS BEING ADJUSTED ALONG WITH THE CONSTRUCTION PHASING AREAS. THE CONTRACTOR MAY USE EROSION MIX IN PLACE OF SINGLE SILT FENCE BARRIER. IN AREAS WHERE THE GRADE IS STEEPER THAN 8% SILT FENCE AND EROSION CONTROL MIX SHOULD BE USED.
- THE SILT FENCE SHALL BE INSTALLED PER THE DETAIL PROVIDED IN THE PLAN SET AND INSPECTED IMMEDIATELY AFTER EACH RAINFALL, AND AT LEAST WEEKLY IN THE ABSENCE OF SIGNIFICANT RAINFALL. ANY REQUIRED REPAIRS WILL BE MADE IMMEDIATELY. SEDIMENT DEPOSITS SHALL BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDE OF THE SILT BARRIERS. THIS SEDIMENT WILL BE SPREAD AND STABILIZED IN AREAS OF THE SITE NOT SUBJECT TO EROSION. THE CONTRACTOR SHALL MAKE REPAIRS IMMEDIATELY IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE. IF SUCH EROSION IS OBSERVED, THE CONTRACTOR SHALL TAKE PROACTIVE ACTION TO IDENTIFY THE CAUSE OF THE EROSION AND TAKE ACTION TO AVOID ITS REOCCURRENCE. PROPER PLACEMENT OF STAKES AND KEYING THE BOTTOM OF THE FABRIC INTO THE GROUND IS CRITICAL TO THE FENCE'S EFFECTIVENESS. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE, THE BARRIER MUST BE REPLACED WITH A STONE CHECK DAM AND MEASURES TAKEN TO AVOID THE CONCENTRATION OF FLOWS NOT INTENDED TO BE DIRECTED TO THE SILT FENCE. SILT FENCE SHALL BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION.
- TEMPORARY SEDIMENT SUMPS WILL PROVIDE SEDIMENTATION CONTROL FOR STORMWATER RUNOFF FROM DISTURBED AREAS DURING CONSTRUCTION UNTIL STABILIZATION HAS BEEN ACHIEVED.
- A CONSTRUCTION ENTRANCE WILL BE CONSTRUCTED AT ALL ACCESS POINTS ONTO THE SITE TO PREVENT TRACKING OF SOIL ONTO ADJACENT LOCAL ROADS AND STREETS.
- SILT LOGS MAY BE INSTALLED IN LIEU OF STONE CHECK DAMS PROVIDED THE DEVICES ARE WELL ANCHORED, AND IF PRIOR APPROVAL IS RECEIVED FROM THE PROJECT ENGINEER.
- SILTSACKS™ WILL BE UTILIZED IN CATCH BASINS IN OR NEAR WORK AREAS AT RISK FROM RECEIVING TRANSPORTED SEDIMENT.
- ALL CATCH BASINS AND FIELD INLETS, NEW OR EXISTING, THAT MAY RECEIVE RUNOFF FROM DISTURBED AREAS MUST BE PROTECTED DURING CONSTRUCTION.
- REMOVAL OF SOD, TREES, BUSHES AND OTHER VEGETATION AND SOIL DISTURBANCE WILL BE KEPT TO A MINIMUM WHILE ALLOWING PROPER SITE DEVELOPMENT.
- GRUBBINGS AND ANY UNUSABLE TOPSOIL SHALL BE STRIPPED AND REMOVED FROM THE PROJECT SITE AND DISPOSED OF IN AN APPROVED MANNER.
- ANY SUITABLE TOPSOIL WILL BE STRIPPED AND STOCKPILED FOR REUSE IN FINAL GRADING. TOPSOIL WILL BE STOCKPILED IN A MANNER SUCH THAT NATURAL DRAINAGE IS NOT OBSTRUCTED AND NO OFF-SITE SEDIMENT DAMAGE WILL RESULT. IF A STOCKPILE IS NECESSARY, THE SIDE SLOPES OF THE TOPSOIL STOCKPILE WILL NOT EXCEED 2:1. TOPSOIL STOCKPILES WILL BE TEMPORARILY SEEDED WITH AROOSTOOK RYE, ANNUAL OR PERENNIAL RYE GRASS WITHIN 7 DAYS OF FORMATION, OR TEMPORARILY MULCHED IF SEEDING CANNOT BE DONE WITHIN THE RECOMMENDED SEEDING DATES.
- TEMPORARY DIVERSION BERMS AND DRAINAGE SWALES SHALL BE CONSTRUCTED AS NECESSARY TO PREVENT OFF-SITE DRAINAGE FROM ENTERING THE WORK AREA.
- TEMPORARY STABILIZATION SHALL BE CONSTRUCTED WITHIN 7 DAYS OF INITIAL DISTURBANCE OF SOILS, PRIOR TO ANY RAIN EVENT, AND PRIOR TO ANY WORK SHUT DOWN LASTING MORE THAN ONE DAY. TEMPORARY STABILIZATION INCLUDES SEED, MULCH, OR OTHER NON-ERODIBLE COVER.
- TEMPORARY SEEDING SPECIFICATIONS: WHERE SEEDBED HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE APPLYING FERTILIZER, LIME, AND SEED. APPLY LIMESTONE AT A RATE OF 3 TONS PER ACRE (138 LB. PER 1,000 SQUARE FEET) AND 10-10-10 (N-P205-K20) FERTILIZER AT A RATE OF 800 LBS PER ACRE (13.8 LB. PER 1,000 SQUARE FEET). UNIFORMLY APPLY SEED AT THE RECOMMENDED SEEDING RATES AND DATES, APPLY HAY OR STRAW MULCH AT A RATE OF 2 TONS PER ACRES, AND ANCHOR AS NECESSARY. RECOMMENDED TEMPORARY SEEDING DATES AND APPLICATION RATES ARE AS FOLLOWS:
 

AROOSTOOK RYE: RECOMMENDED SEEDING DATES: 8/15 -10/1

APPLICATION RATE: 112 LBS/ACRE

ANNUAL RYE GRASS: RECOMMENDED SEEDING DATES: 4/1 - 7/1

APPLICATION RATE: 40 LBS/ACRE

PERENNIAL RYE GRASS: RECOMMENDED SEEDING DATES: 8/15 - 9/15

APPLICATION RATE: 40 LBS/ACRE
- PERMANENT SEEDING SPECIFICATION: IF A LANDSCAPE PLAN HAS BEEN PREPARED FOR THE PROJECT, SOIL PREPARATION AND SEED SPECIFICATIONS OF THAT PLAN SHALL SUPERSEDE THESE GENERAL PERMANENT SEEDING REQUIREMENTS. IT IS RECOMMENDED THAT PERMANENT SEEDING BE COMPLETED BETWEEN APRIL 1 AND JUNE 15 OF EACH YEAR. LATE SEASON SEEDING MAY BE DONE BETWEEN AUGUST 15 AND SEPTEMBER 15. AREAS NOT SEEDDED OR WHICH DO NOT OBTAIN A SATISFACTORY GROWTH BY OCTOBER 1 SHALL BE SEEDDED WITH AROOSTOOK RYE OR MULCHED AT RATES PREVIOUSLY SPECIFIED. SEE WINTER CONDITIONS NOTES FOR SEEDING STABILIZATION AFTER NOVEMBER 1.
  - APPLY TOPSOIL TO A MINIMUM DEPTH OF 4 INCHES. MIX TOPSOIL WITH THE SUBSOIL TO A MINIMUM DEPTH OF 6 INCHES.
  - APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TESTS. IN LIEU OF SOIL TESTS, APPLY GROUND LIMESTONE AT A RATE OF 3 TONS PER ACRE (138 LB. PER 1,000 SQUARE FEET) AND GRANULAR, COMMERCIAL-GRADE, 10-10-10 (N-P205-K20) FERTILIZER AT A RATE OF 800 LBS PER ACRE (18.4 LBS PER 1,000 SQUARE FEET).
  - UNIFORMLY APPLY SEED MIXTURE AT THE RECOMMENDED SEEDING RATES AND DATES, APPLY HAY OR STRAW MULCH AT A RATE OF 2 TONS PER ACRES, AND ANCHOR AS NECESSARY.
  - THE SEED MIXTURE FOR LAWN AND FILTRATION BASIN AREAS SHALL CONSIST OF SEEDS PROPORTIONED BY WEIGHT AS FOLLOWS:
    - 30% CREEPING RED FESCUE
    - 50% KENTUCKY BLUEGRASS
    - 20% ITALIAN/PERENNIAL RYE GRASS
 NOTE: SEED MIXTURE SHALL CONSIST OF AT LEAST TWO VARIETIES OF EACH TYPE OF GRASS. WHEN USED IN A FILTER BASIN, STORMWATER SHALL NOT BE DIRECTED TO THE BASIN UNTIL THE GRASS IS ESTABLISHED.
- MULCH ALL AREAS SEEDDED SO THAT SOIL IS NOT VISIBLE THROUGH THE MULCH REGARDLESS OF THE APPLICATION RATE.

- DITCH LININGS, STONE CHECK DAMS, AND RIP RAP INLET AND OUTLET PROTECTION SHALL BE INSTALLED WITHIN 48 HOURS OF COMPLETING THE GRADING OF THAT SECTION OF DITCH OR INSTALLATION OF CULVERT.
- RIP RAP REQUIRED AT CULVERTS AND STORM DRAIN INLETS AND OUTLETS SHALL CONSIST OF FIELD STONE OR ROUGH UNHEWN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE.
- EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL PERMANENT SLOPES STEEPER THAN 15%, IN THE BASE OF DITCHES NOT OTHERWISE PROTECTED, AND ANY DISTURBED AREAS WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE (E.G. WETLANDS AND WATER BODIES). EROSION CONTROL BLANKET SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- TEMPORARY CONTROL MEASURES, SUCH AS SILT FENCE, SHALL BE REMOVED WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED.

**C. SPECIAL MEASURES FOR SUMMER CONSTRUCTION**

- DURING DRY SUMMER CONDITIONS, THE CONTRACTOR SHALL:
- IMPLEMENT A PROGRAM TO APPLY DUST CONTROL MEASURES ON A DAILY BASIS EXCEPT THOSE DAYS WHERE PRECIPITATION IS SUFFICIENT TO SUPPRESS DUST FORMATION. THIS PROGRAM SHALL EXTEND TO AND INCLUDE SWEEPING OF ADJACENT STREETS.
  - SPRAY ANY MULCHES WITH WATER AFTER ANCHORING TO DAMPEN THE SOIL AND ENCOURAGE EARLY GROWTH. SPRAYING MAY BE REQUIRED SEVERAL TIMES. TEMPORARY SEED MAY BE REQUIRED UNTIL THE LATE SUMMER SEEDING SEASON.
  - COVER STOCKPILES OF FINE-GRAINED MATERIALS, OR EXCAVATED SOILS WHICH ARE SUSCEPTIBLE TO EROSION TO PROTECT FROM THE INTENSE, SHORT-DURATION STORMS WHICH ARE MORE PREVALENT IN THE SUMMER MONTHS.
  - TAKE ADDITIONAL STEPS NEEDED, INCLUDING WATERING, OR COVERING EXCAVATED MATERIALS TO CONTROL FUGITIVE DUST EMISSIONS TO MINIMIZE REDUCTIONS IN VISIBILITY AND THE AIRBORNE DISBURSEMENT OF FINE-GRAINED SOILS. THIS IS PARTICULARLY IMPORTANT GIVEN THE POTENTIAL PRESENCE OF SOIL CONTAMINANTS, AND THEIR PROXIMITY ALONG THE ADJACENT STREETS AND PROPERTIES.
  - THESE MEASURES MAY ALSO BE REQUIRED IN THE SPRING AND FALL DURING THE DRIER PERIODS OF THESE SEASONS.

**D. WINTER CONDITIONS**

- "WINTER CONSTRUCTION" IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1ST THROUGH APRIL 15TH. IF AREAS WITHIN THE CONSTRUCTION ACTIVITY ARE NOT STABILIZED WITH TEMPORARY OR PERMANENT MEASURES OUTLINED ABOVE BY NOVEMBER 15TH, THEN THE SITE MUST BE PROTECTED WITH ADDITIONAL STABILIZATION MEASURES THAT ARE SPECIFIC TO WINTER CONDITIONS. NO MORE THAN ONE ACRE OF THE SITE MAY BE WITHOUT STABILIZATION AT ONE TIME.
- SILT FENCE: IN LIEU OF PROVIDING THE 4' X 4' TRENCH, FOR FROZEN GROUND, STONY SOIL, THE PRESENCE OF LARGE ROOTS, OR OTHER PROHIBITIVE CONDITIONS, THE BOTTOM 8" TO 12" OF THE FABRIC MAY BE LAID ON EXISTING GRADE AND BACK FILLED WITH STONE ANCHORING MATERIAL, AS SHOWN ON THE DRAWINGS.
- HAY MULCH SHALL BE APPLIED AT TWICE THE STANDARD TEMPORARY STABILIZATION RATE. AT THE END OF EACH CONSTRUCTION DAY, AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE MUST BE STABILIZED. MULCH MAY NOT BE SPREAD ON TOP OF SNOW.
- AFTER NOVEMBER 1ST OR THE FIRST KILLING FROST FOR THE REGION AND BEFORE SNOW FALL, ALL EXPOSED AND DISTURBED AREAS NOT TO UNDERGO FURTHER DISTURBANCE ARE TO HAVE DORMANT SEEDING. THE DORMANT SEEDING METHOD: PREPARE THE SEEDBED, LIME AND FERTILIZE, APPLY THE SELECTED PERMANENT SEED MIXTURE AT DOUBLE THE REGULAR SEEDING RATE, AND MULCH AND ANCHOR. DORMANT SEEDINGS NEED TO BE ANCHORED EXTREMELY WELL ON SLOPES, DITCH BASES AND AREAS OF CONCENTRATED FLOWS. DORMANT SEEDING REQUIRES INSPECTION AND RESEEDING AS NEEDED IN THE SPRING. ALL AREAS WHERE COVER IS INADEQUATE MUST BE IMMEDIATELY RESEEDDED AND MULCHED AS SOON AS POSSIBLE.
- ALL VEGETATED DITCH LINES THAT HAVE NOT BEEN STABILIZED BY NOVEMBER 1ST, OR WILL BE WORKED DURING THE WINTER CONSTRUCTION PERIOD, MUST BE STABILIZED WITH AN APPROPRIATE STONE LINING BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE UNLESS SPECIFICALLY RELEASED FROM THIS STANDARD BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
- MULCH NETTING MUST BE USED TO ANCHOR MULCH ON ALL SLOPES GREATER THAN 8% UNLESS EROSION CONTROL BLANKETS OR EROSION CONTROL MIX IS BEING USED ON THESE SLOPES.

**E. HOUSEKEEPING**

- SPILL PREVENTION. CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON-SITE, INCLUDING STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORM WATER, AND APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING AND IMPLEMENTATION.
- GROUNDWATER PROTECTION. DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN INFILTRATION AREA IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS, ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS.
- FUGITIVE SEDIMENT AND DUST. ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL.
- DEBRIS AND OTHER MATERIAL. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WATER, MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.
- COMPLY WITH ALL LOCAL AND STATE REGULATIONS FOR THE REMOVAL AND DISPOSAL OF CONSTRUCTION DEBRIS AND WASTE.
- TRENCH OR FOUNDATION DE-WATERING. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED AREAS THAT ARE SPECIFICALLY DESIGNATED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFER DAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE.
- NON-STORMWATER DISCHARGES. IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE.

**F. INSPECTION AND MAINTENANCE**

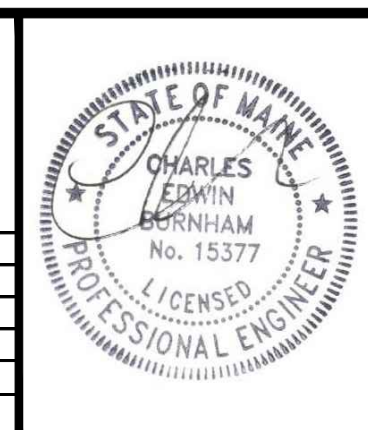
- INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION AND STORM WATER CONTROL MEASURES, AREAS USED FOR STORAGE THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE AT LEAST ONCE A WEEK AND BEFORE AND AFTER A STORM EVENT, PRIOR TO COMPLETION OF PERMANENT STABILIZATION. A PERSON WITH KNOWLEDGE OF EROSION AND STORM WATER CONTROLS, INCLUDING THE STANDARDS IN THE MAINE CONSTRUCTION GENERAL PERMIT AND ANY DEP OR MUNICIPAL COMPANION DOCUMENTS, MUST CONDUCT THE INSPECTION. THIS PERSON MUST BE IDENTIFIED IN THE INSPECTION LOG. IF BEST MANAGEMENT PRACTICES (BMPs) NEED TO BE MODIFIED IF ADDITIONAL BMPs ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (RAINFALL). ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.
- AN INSPECTION AND MAINTENANCE LOG MUST BE KEPT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME AND QUALIFICATIONS OF THE PERSON PERFORMING THE INSPECTION, DATE, AND MAJOR OBSERVATIONS RELATING TO OPERATION OF EROSION AND SEDIMENTATION CONTROLS AND POLLUTION PREVENTION MEASURES.
- INSPECTION OF THE PROJECT WORK SITE SHALL INCLUDE:
  - IDENTIFICATION OF PROPER EROSION CONTROL MEASURE INSTALLATION IN ACCORDANCE WITH THE EROSION CONTROL DETAIL SHEET.
  - DETERMINE WHETHER EACH EROSION CONTROL MEASURE IS PROPERLY OPERATING. IF NOT, IDENTIFY DAMAGE TO THE CONTROL DEVICE AND DETERMINE REMEDIAL MEASURES.
  - IDENTIFY AREAS WHICH APPEAR VULNERABLE TO EROSION AND DETERMINE ADDITIONAL EROSION CONTROL MEASURES WHICH SHOULD BE USED TO IMPROVE CONDITIONS.
  - INSPECT AREAS OF RECENT SEEDING TO DETERMINE PERCENT CATCH OF GRASS. A MINIMUM CATCH OF 90 PERCENT IS REQUIRED PRIOR TO REMOVAL OF EROSION CONTROL MEASURES.
- IF INSPECTION OF THE SITE INDICATES A CHANGE SHOULD BE MADE TO THE EROSION CONTROL PLAN, TO EITHER IMPROVE EFFECTIVENESS OR CORRECT A SITE-SPECIFIC DEFICIENCY, THE INSPECTOR SHALL IMMEDIATELY IMPLEMENT THE CORRECTIVE MEASURE AND NOTIFY THE OWNER OF THE CHANGE.
- ALL CERTIFICATIONS, INSPECTION FORMS, AND WRITTEN REPORTS PREPARED BY THE INSPECTOR(S) SHALL BE FILED WITH THE OWNER, AND THE PERMIT FILE CONTAINED ON THE PROJECT SITE. ALL WRITTEN CERTIFICATIONS, INSPECTION FORMS, AND WRITTEN REPORTS MUST BE FILED WITHIN ONE (1) WEEK OF THE INSPECTION DATE.
- THE PERMITTEE SHALL RETAIN COPIES OF THE ESC PLAN AND ANY FORMS, SUBMISSIONS, REPORTS, OR OTHER MATERIALS REQUIRED BY THE GENERAL PERMIT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE COMPLETION OF PERMANENT STABILIZATION.
- THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR COMPLYING WITH THE EROSION/SEDIMENT CONTROL REPORT, INCLUDING CONTROL OF FUGITIVE DUST, AND SHALL BE RESPONSIBLE FOR ANY MONETARY PENALTIES RESULTING FROM FAILURE TO COMPLY WITH THESE STANDARDS.

**C. CONSTRUCTION SCHEDULE & SEQUENCE**

(TIMELINES ARE APPROXIMATE AND WILL BE DEPENDENT ON WEATHER AND SITE CONDITIONS).

- PRE-CONSTRUCTION CONFERENCE:** PRIOR TO ANY CONSTRUCTION AT THE SITE, REPRESENTATIVES OF THE CONTRACTOR, THE ARCHITECT, THE OWNER, AND THE SITE DESIGN ENGINEER SHALL MEET TO DISCUSS THE SCHEDULING OF THE SITE CONSTRUCTION AND THE DESIGNATION OF THE RESPONSIBLE PARTIES FOR IMPLEMENTING THE PLAN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING THE MEETING. PRIOR TO THE MEETING, THE CONTRACTOR WILL PREPARE A DETAILED SCHEDULE AND A MARKED-UP SITE PLAN INDICATING AREAS AND COMPONENTS OF THE WORK AND KEY DATES SHOWING DATE OF DISTURBANCE AND COMPLETION OF THE WORK. THE CONTRACTOR SHALL CONDUCT A MEETING WITH EMPLOYEES AND SUB-CONTRACTORS TO REVIEW THE EROSION CONTROL PLAN, THE CONSTRUCTION TECHNIQUES WHICH WILL BE EMPLOYED TO IMPLEMENT THE PLAN AND PROVIDE A LIST OF ATTENDEES AND ITEMS DISCUSSED AT THE MEETING TO THE OWNER. THREE COPIES OF THE SCHEDULE, THE CONTRACTOR'S MEETING MINUTES, AND MARKED-UP SITE PLAN SHALL BE PROVIDED TO THE OWNER.
- THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE REQUIRED TO INSURE THE EFFECTIVENESS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES IS OPTIMIZED.
  - INSTALL SAFETY AND CONSTRUCTION FENCE TO SECURE THE SITE FOR DEMOLITION.
  - INSTALL ALL PERIMETER SILTATION FENCE AND EROSION CONTROL BARRIERS. PARTICULAR ATTENTION SHALL BE PAID TO AREAS UPSTREAM OF PROTECTED NATURAL RESOURCES. SIGNS SHALL BE ERECTED PERIODICALLY ALONG THESE PERIMETER BARRIERS INDICATING THAT THE DOWNSTREAM AREAS ARE OFF LIMITS TO ALL CONSTRUCTION ACTIVITIES.
  - INSTALL CONSTRUCTION ENTRANCES.
  - MAINTAIN EXISTING PAVED AREAS FOR LAYDOWN AND ACCESS DURING INITIAL CONSTRUCTION ACTIVITIES.
  - CONSTRUCT ACTIVITIES ON THE SITE TO OPTIMIZE THE HANDLING OF MATERIALS AND RESTRICT THE DENUEDED AREAS TO THE TIME STIPULATED.
  - CONSTRUCT STABILIZED PADS FOR FOUNDATION AND BUILDING CONSTRUCTION.
  - MAINTAIN STABILIZED SITE ACCESS AND WORKING AREAS DURING BUILDING CONSTRUCTION.
  - INSTALL STORWATER BMPs
  - REMOVE EXISTING PAVEMENT AND INSTALL NEW PAVEMENT BASE GRAVEL MATERIALS TO RAISE THE SITE TO THE DESIGN SUBGRADE ELEVATION.
  - INSTALL BINDER PAVEMENT.
  - LANDSCAPE (LOAM AND SEED).
  - INSTALL SURFACE PAVEMENTS.
  - INSTALL STRIPING, SIGNAGE, AND MISCELLANEOUS SITE IMPROVEMENTS.
  - REVIEW AND PUNCH THE SITE.
  - REMOVE ANY TEMPORARY EROSION CONTROL MEASURES.
- THE CONTRACTOR MUST MAINTAIN AN ACCURATE SET OF RECORD DRAWINGS INDICATING THE DATE WHEN AN AREA IS FIRST DENUEDED, THE DATE OF TEMPORARY STABILIZATION, AND THE DATE OF FINAL STABILIZATION. ON OCTOBER 1 OF ANY CALENDAR YEAR, THE CONTRACTOR SHALL SUBMIT A DETAILED PLAN FOR STABILIZING THE SITE FOR THE WINTER AND A DESCRIPTION OF WHAT ACTIVITIES ARE PLANNED DURING THE WINTER.

REV	DATE	DESCRIPTION
4	10/17/2022	FINAL SUBMISSION
3	6/22/2022	AMENDED PRELIMINARY SUBMISSION
2	5/16/2022	PRELIMINARY SUBMISSION
1	5/4/2022	SKETCH PLAN SUBMISSION
REV	DATE	DESCRIPTION
REVISIONS		

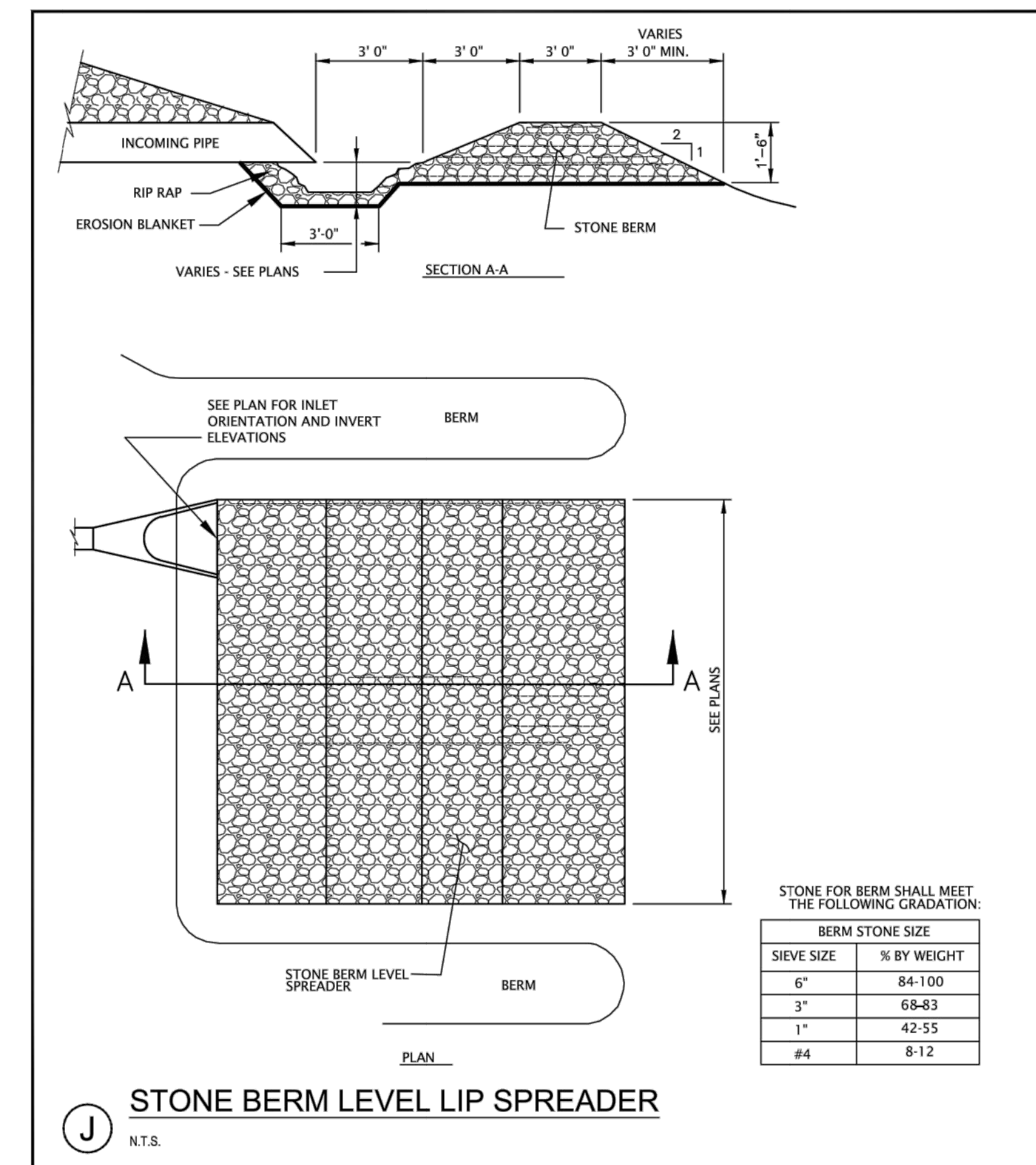
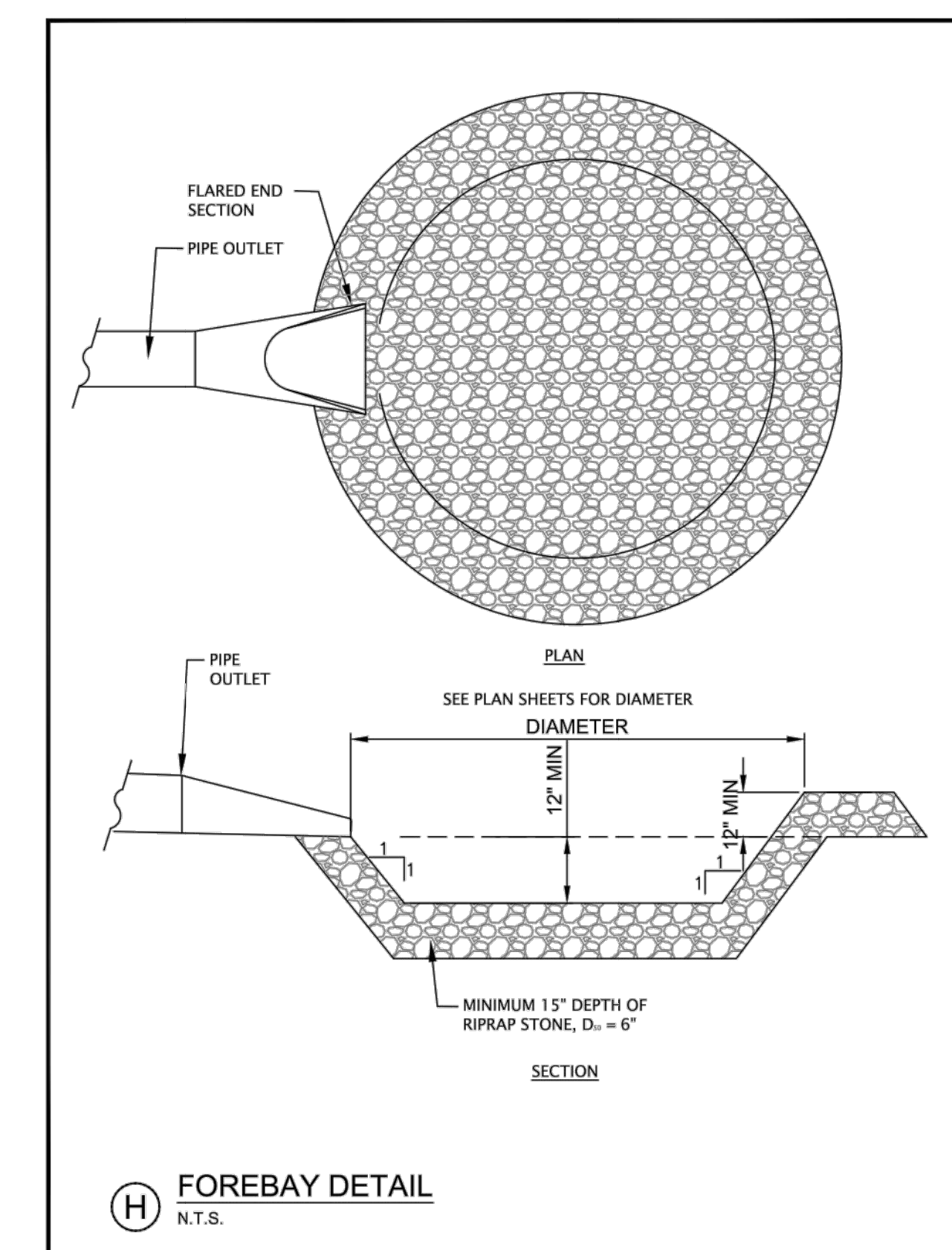
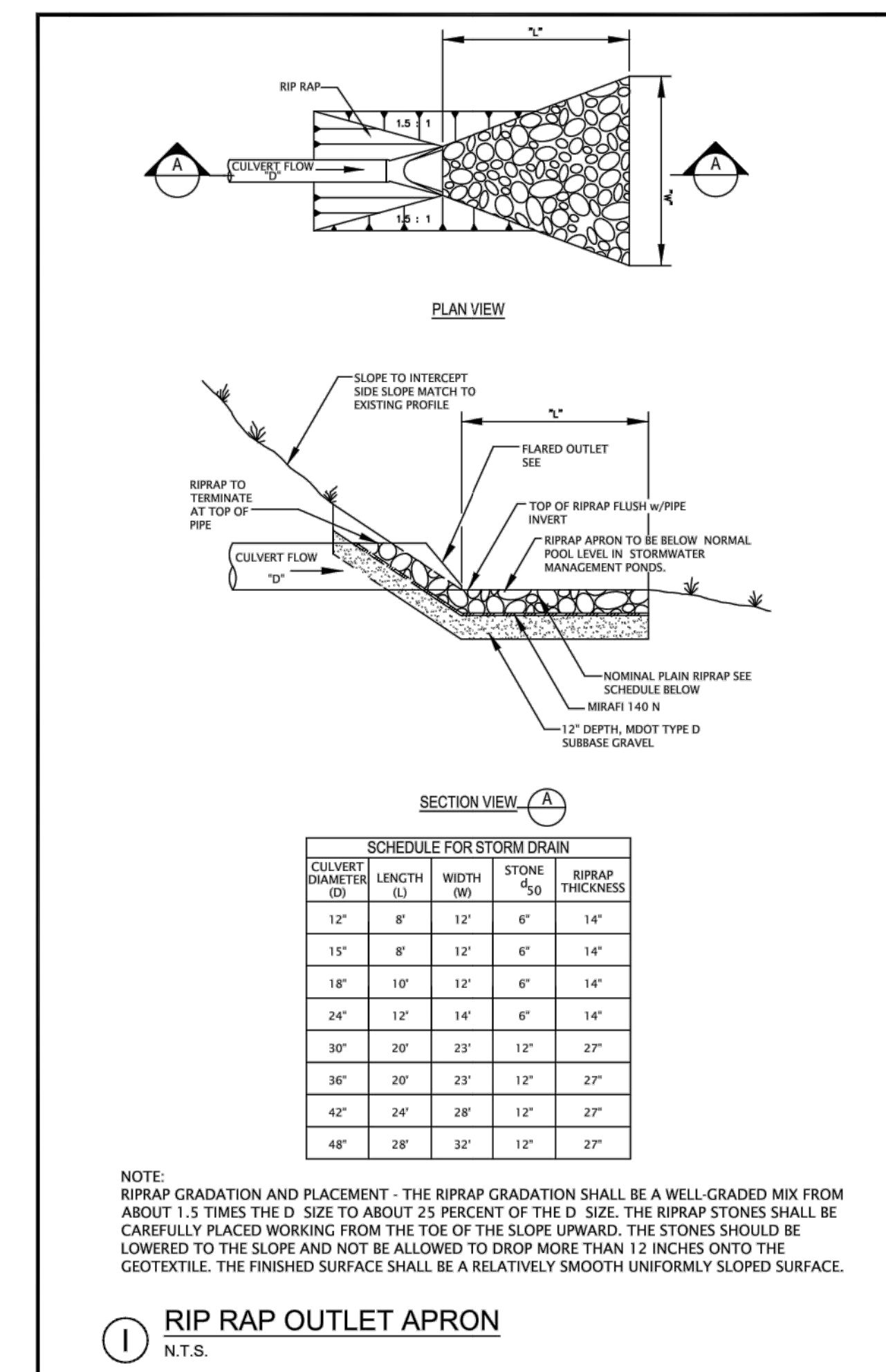
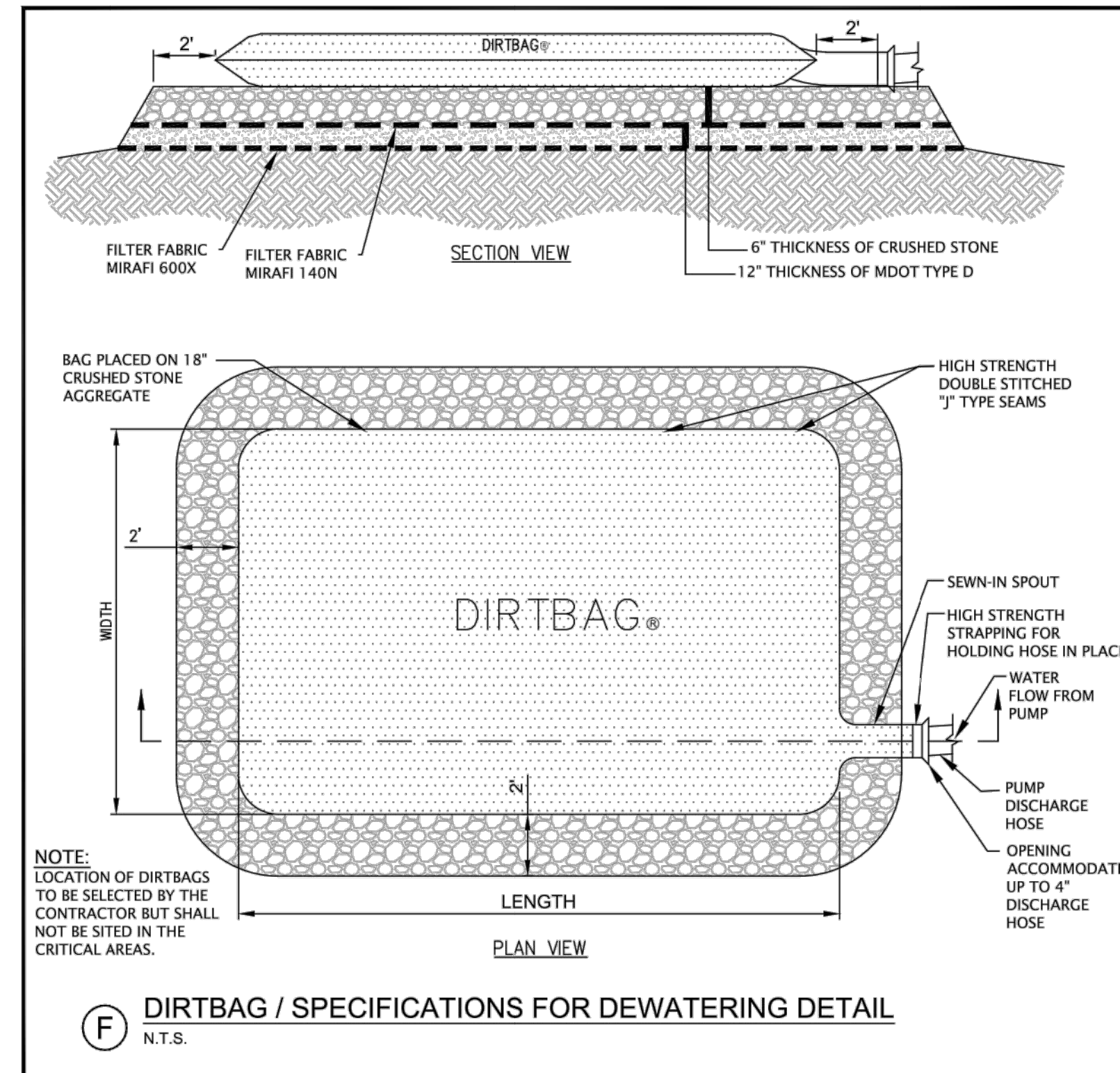
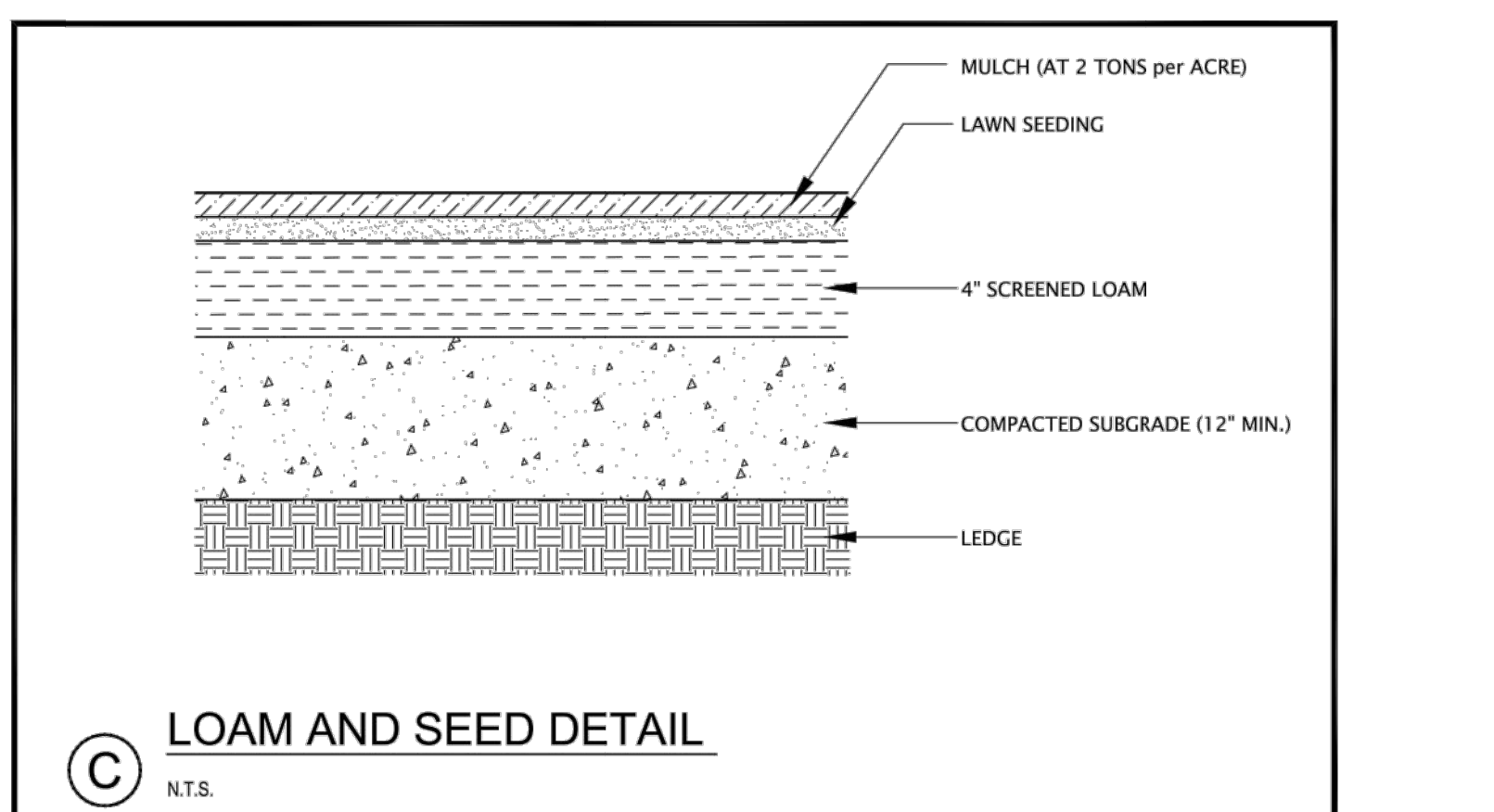
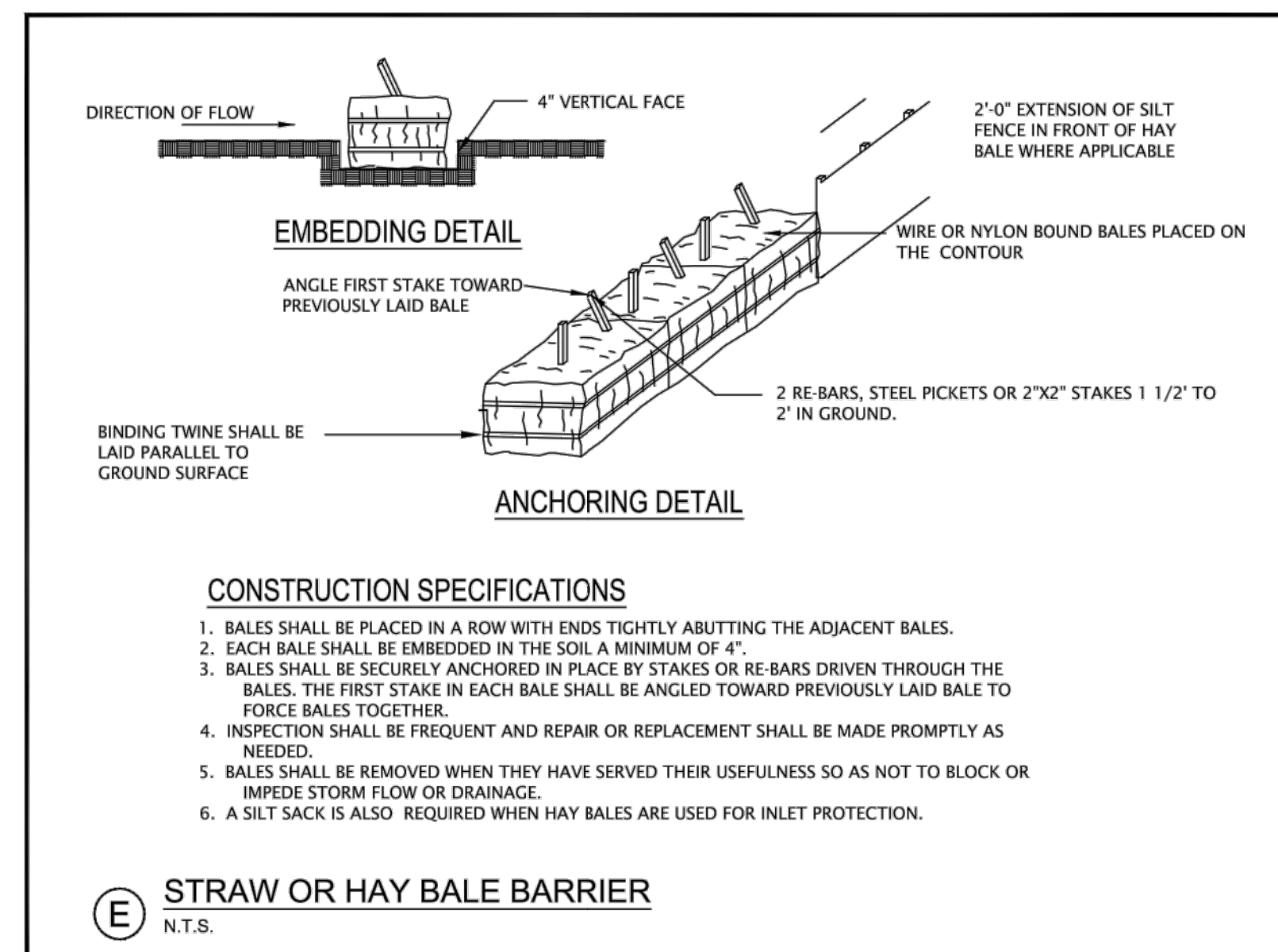
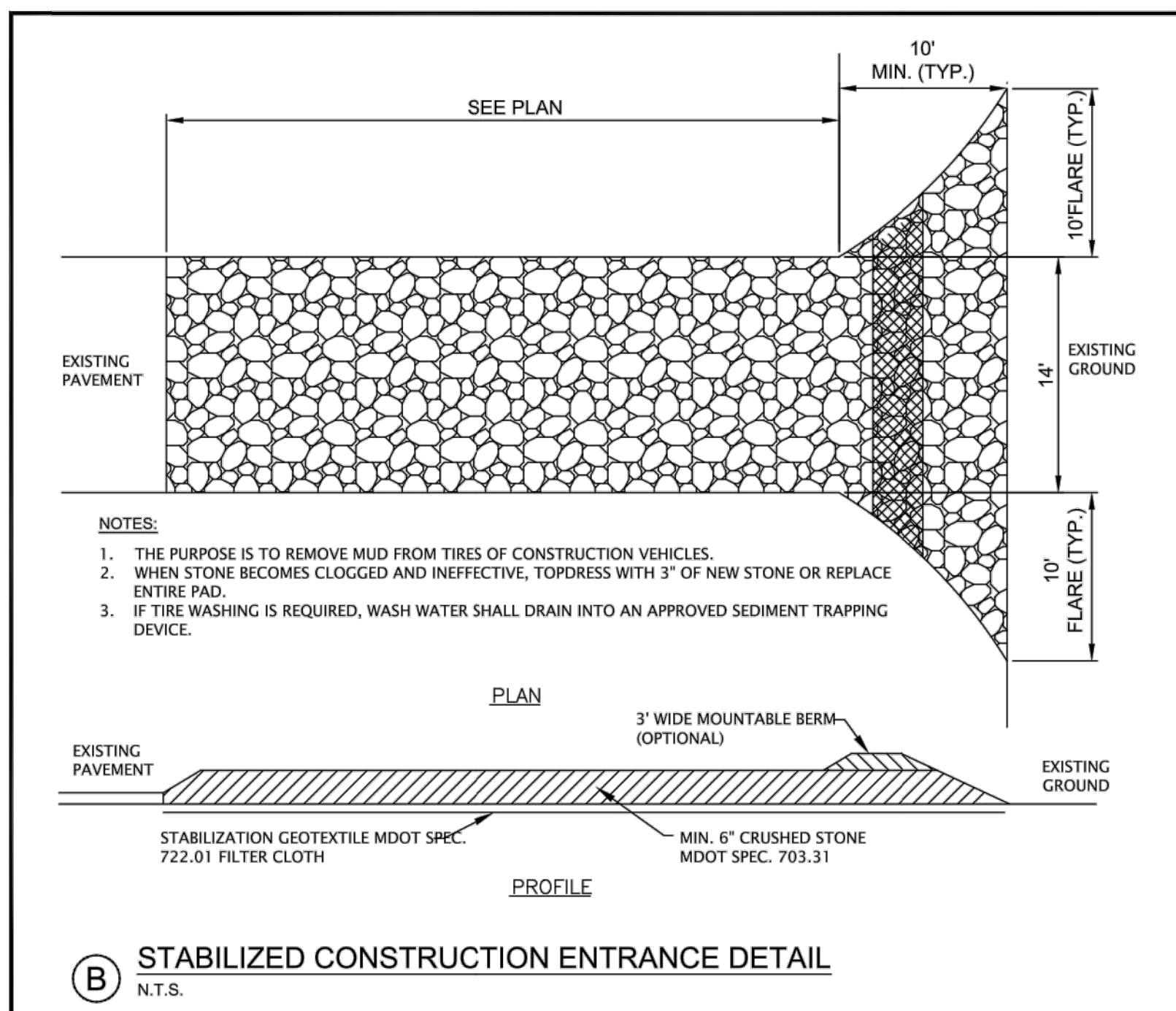
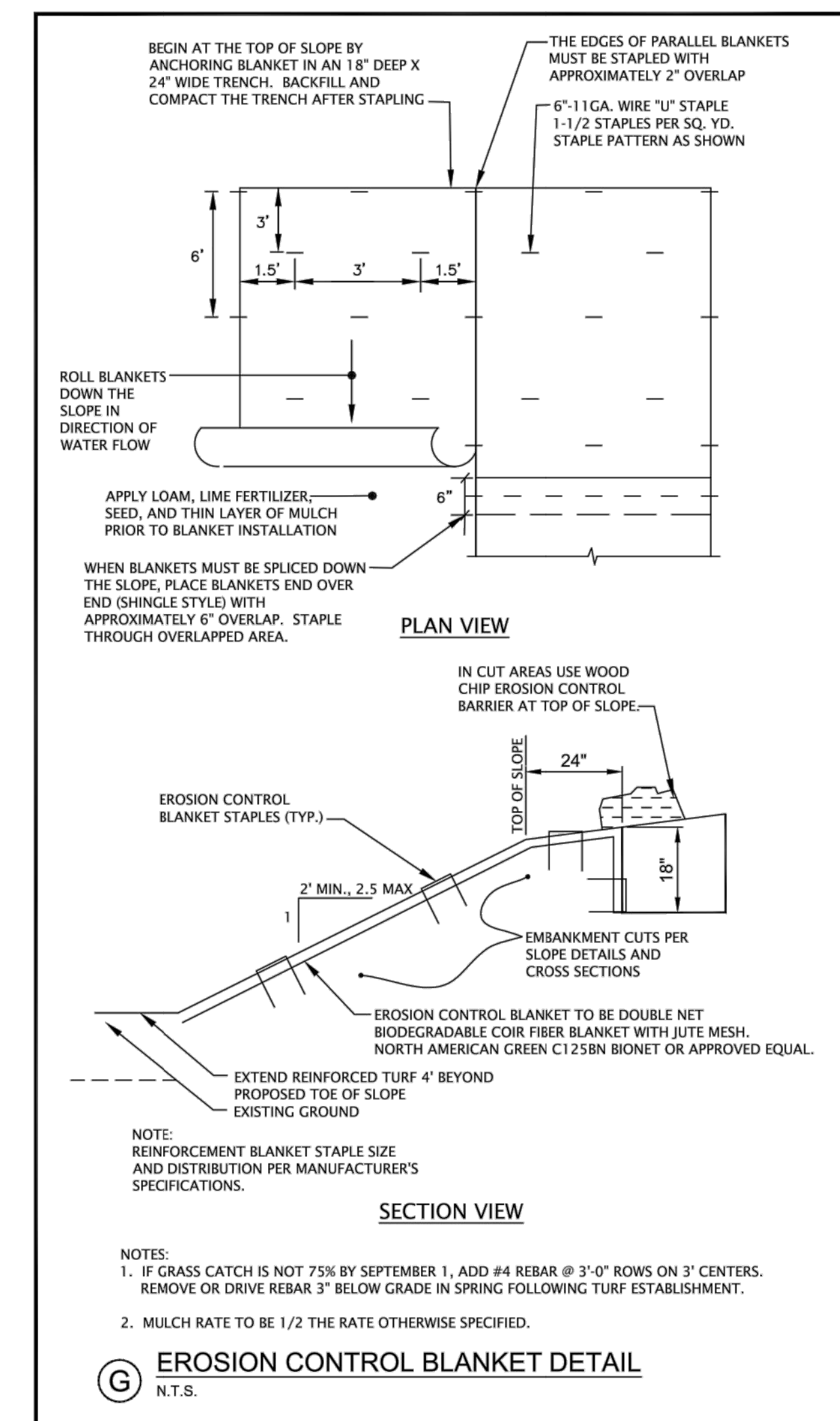
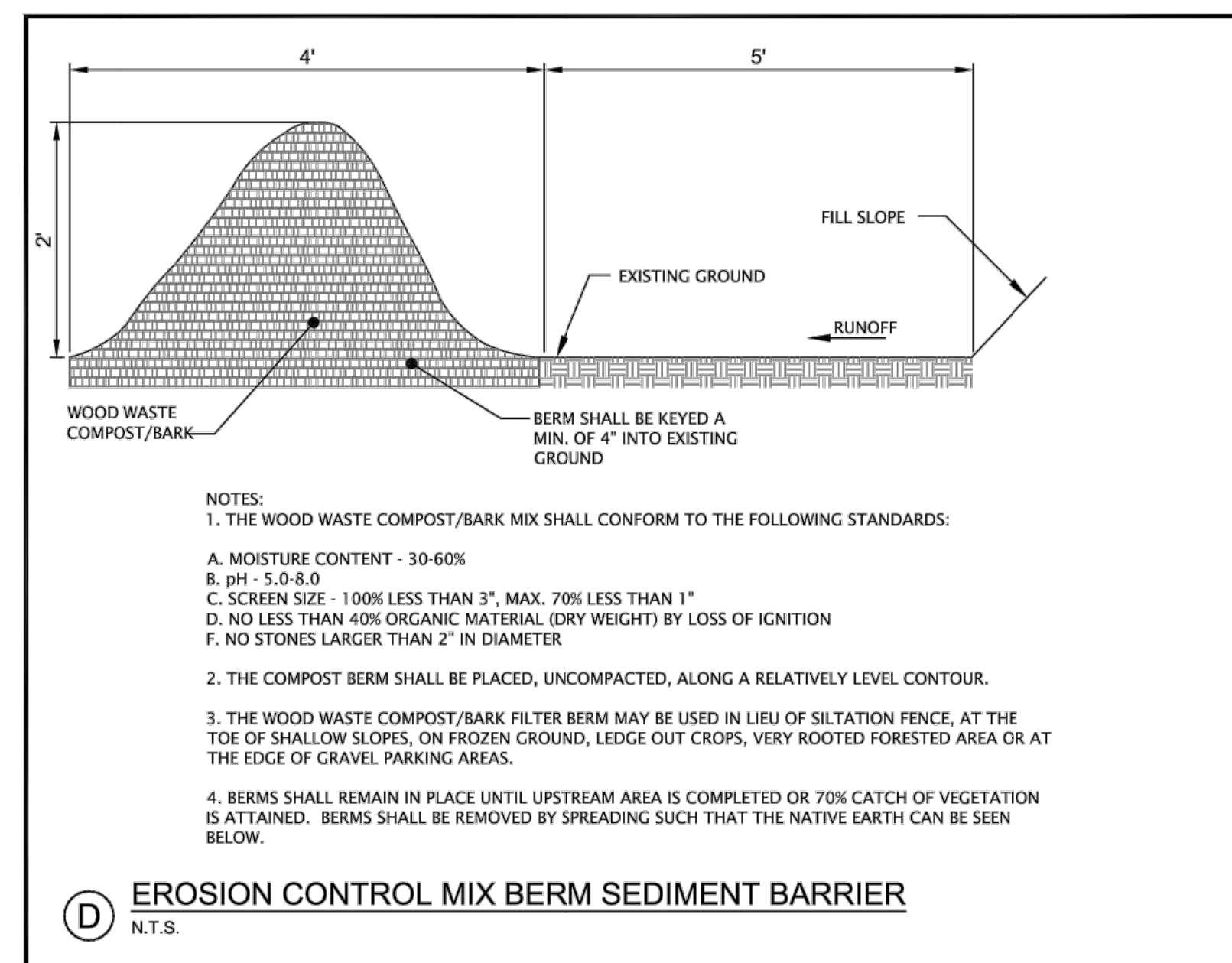
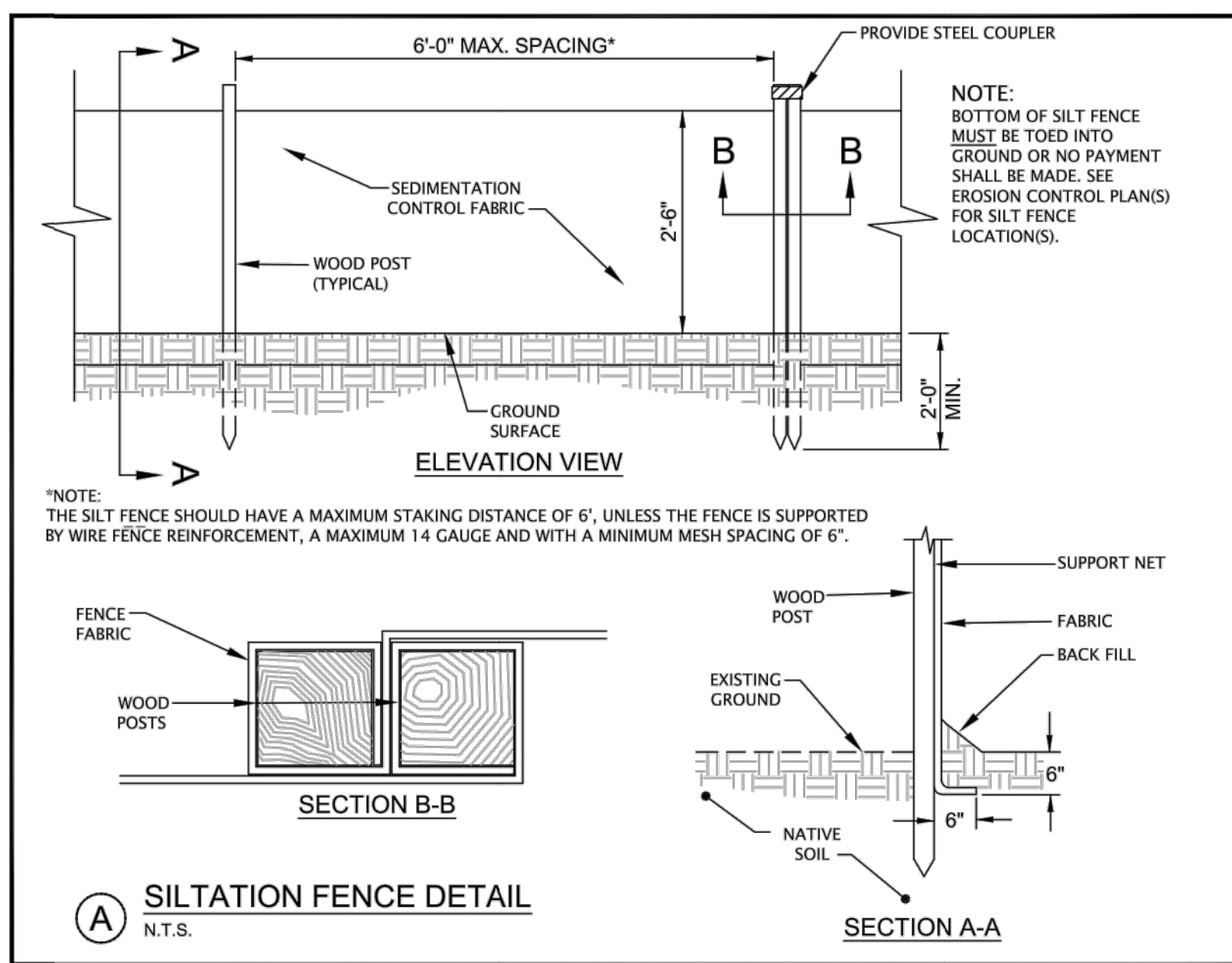


**DEER CREEK CROSSING  
DURHAM, MAINE  
EROSION CONTROL  
NOTES**

Jack Doughty  
231 Flying Point Road  
Freeport, Maine 04032

Grange Engineering LLC  
241 Rowe Station Road  
New Gloucester, ME 04260  
Tel: 207.712.6990

DRAWN: CB	DATE: OCTOBER 19, 2022
DESIGNED: CB	SCALE:
CHECKED: CB	JOB NO. 1
FILE NAME:	
SHEET: C-300	



REV	DATE	DESCRIPTION
4	10/17/2022	FINAL SUBMISSION
3	6/22/2022	AMENDED PRELIMINARY SUBMISSION
2	5/16/2022	PRELIMINARY SUBMISSION
1	5/4/2022	SKETCH PLAN SUBMISSION
REV	DATE	DESCRIPTION



DEER CREEK CROSSING  
DURHAM, MAINE  
CIVIL DETAILS  
1  
Jack Doughty  
231 Flying Point Road  
Freeport, Maine 04032

Grange Engineering LLC  
241 Rowe Station Road  
New Gloucester, ME 04260  
Tel: 207.712.6990

DRAWN: CB DATE: OCTOBER 19, 2022  
DESIGNED: CB SCALE:  
CHECKED: CB JOB NO. 1  
FILE NAME:  
SHEET: C-301

**DECLARATION OF  
EASEMENTS, RESTRICTIONS AND COVENANTS  
FOR THE DEER CREEK CROSSING SUBDIVISION**

WHEREAS, JACK DOUGHTY, hereinafter known as Declarant, owns certain real estate in the Town of Durham, County of Androscoggin, State of Maine, as shown on a Plan entitled, "Deer Creek Crossing Subdivision" by Grange Engineering, LLC., dated \_\_\_\_\_ and recorded in the Androscoggin County Registry of Deeds in Plan Book \_\_\_\_\_ (the "**Plan**"), and which property is more particularly shown in **Exhibit A** attached hereto (hereinafter "**Property**"); and

WHEREAS, it is desired that certain easements, restrictions and covenants be imposed upon a portion of said land for the protection of said Declarant and its subsequent Owners.

NOW, THEREFORE, Declarant hereby declares that all of the Property described in the attached Exhibit A shall be held, sold and conveyed subject to the following easements, restrictions, covenants and conditions, which are intended for the purpose of protecting the value and desirability of the said Property. Each of these easements, restrictions, covenants and conditions shall run with the real property. The easements, restrictions, covenants and conditions shall be binding upon all parties having any right, title or interest in the Property or any part thereof. These easements, restrictions, covenants and conditions shall bind their heirs, successors and assigns forever. These easements, restrictions, covenants and conditions shall inure to the mutual benefit of each owner hereafter.

**ARTICLE I  
DEFINITIONS**

1.1 "Association" shall mean the **Deer Creek Crossing Homeowners Association**, its successors and assigns.

1.2 "Common Expenses" shall mean any expenses incurred by the Association for the care of the Common Property, if any, or for expenses common to the Association. These may include, but shall not be limited to, any landscaping, snow removal, garbage removal, detention pond maintenance, common utilities, general repairs, insurance, equipment and supply expenses, overhead and other expenses deemed necessary or appropriate by the Association. Without limitation, Common Expenses shall include road maintenance expenses, including such expenses owed by the Association in accordance with the Association Easement defined herein below. Insurance shall include casualty and liability insurance for any Common Property.

1.3 "Common Property" shall mean the real property, if any (including the improvements thereon), owned by the Association for the common use and enjoyment of the Owners as identified on the Plan. Without limitation and subject to the terms of Article V, the Common Property shall include "\_Road Name\_" identified on the Plan and the Common Property shown on the Plan.

1.4 “Declarant” shall mean Jack Doughty, its successors and assigns.

1.5 “Future Common Property” shall mean any real property (including the improvements thereon), that the Declarant elects to quitclaim to the Association which the Association shall accept and own for the common use and enjoyment of the Owners as identified on the Plan or any amended Plan. Without limitation and subject to the terms of Article V, the Future Common Property shall include any extension of “Road Name” or such other Private Right of Way.

1.6 “Future Lots” shall refer to any plot of land set aside for future residential construction and is identified as “Land to be Retained by Owner”, shown on the Plan. Said Future Lots shall not be considered under the jurisdiction of the Association until such time that there is a recording of an amendment to this Declaration and/or the filing of modified subdivision Plan by Declarant indicating the addition of the Future Lots into the Subdivision, if so required.

1.7 “Lot” shall refer to any plots of land set aside for residential construction.

1.8 “Owner” shall mean the record owner or owners of the fee simple title to any Lot that is part of the Property. It shall not include mortgages until such time as title is transferred by deed. Each Lot shall be deemed to have one owner for voting purposes, regardless of the number of actual owners.

1.9 “Property” shall mean all of that certain real property described in Exhibit A, which is attached hereto and made a part hereof, and such additional real property as may hereafter be brought under the jurisdiction of the Association including Future Lots either.

## **ARTICLE II COVENANTS AND RESTRICTIONS FOR USE OF PROPERTY**

2.1 All Lots or parcels of land conveyed shall be used for primarily residential purposes and the usual and natural uses in connection therewith, unless otherwise designated by Declarant, its successors and assigns. Home occupations allowed under the Durham Zoning Ordinance are permitted. Leasing the home on a Lot for residential use shall be considered a residential use. However, short term leasing of the home (including but not limited to Airbnb, VRBO, Homeaway or other similar short term leasing sites) on a Lot shall be considered a business use and in violation of this declaration.

2.2 No structure or building shall be erected, altered, placed or permitted to remain in any Lot other than one (1) single-family dwelling of not less than 1200 square feet nor more than 2800 square feet of living space, a garage and two (2) auxiliary structures without foundations. No prefabricated housing is allowed. The construction of the dwelling may be phased, but once construction thereon is commenced it must be completed within eighteen

(18) months. No temporary building or trailer may be maintained on the property except in conjunction with the legitimate construction of other permanent buildings.

2.3 Auxiliary structures shall be built in a manner consistent with the construction methods of the principal dwelling, having siding and roofing similar to the principal dwelling.

2.4 All structures on a Lot shall be located within the building envelope shown on the Plan for such Lot.

2.5 No building shall be erected on any Lot hereby conveyed in violation of municipal standards.

2.6 All sanitary plumbing and sewage disposal shall conform to the minimum requirements of the local governing authorities and the State of Maine.

2.7 Utilities shall be placed underground. No more than one antenna or satellite dish not greater than 3 feet long may be maintained on said property.

2.8 No Lot or parcel of land within this subdivision shall be subdivided in any manner without the written approval of the Declarant, its successors and assigns.

2.9 No livestock, poultry or other non-domestic animals shall be permitted on any Lot.

2.10 No house trailers, campers, motor homes, tents or other forms of temporary residence of any type or description shall be used on any Lot for habitation on a regular or extended basis.

2.11 No junk material, junk vehicles, stumps, trash, or similar waste items, or any hazardous or dangerous materials shall be stored on any Lot. Owners shall not conduct any hazardous, noxious, dangerous, offensive, or noisy activity that unreasonably interferes with any other Owner's quiet enjoyment of his or her Lot. Trash, garbage and other waste shall be kept in sanitary covered containers. Such containers shall not be visible from the street or any other Lot.

2.12 No nuisances, public or private may be permitted on said property. No unregistered vehicles or other personal property may be stored unless covered by outbuildings.

2.13 All dwellings shall have masonry or concrete foundations or slabs and be constructed of sound building material. Use of tarpaper, building wrap, Texture 1-11 plywood, or other inferior quality exterior siding material intended for use beyond the allowable time for completion of construction is prohibited. The use of vinyl siding is not allowed.

2.14 Visible roofing material must be of a permanent type, not tarpaper, ice and water shield or other temporary roofing materials. All roofing material must be either standing seam metal or asphalt shingles.

2.15 Any chimney or fireplace located on the exterior of the house shall meet the requirements of applicable codes.

2.16 All lots and building thereon shall be maintained in a neat, attractive manner and kept in good repair.

2.17 No lot owner may increase, decrease, or modify natural drainage such that it adversely impacts another lot.

2.18 No snowmobiles, motorcycles, motorbikes, dirt bike, nor All Terrain Vehicles may be operated on any Lot except to go to and from the lot.

2.19 One sign of less than four (4) square feet may be maintained on each Lot. No other signs shall be permitted on any Lot.

2.20 All trash and recycling must be picked up and disposed of by a private residential trash service, no trash or recycling bins can be put on Hallowell Road for public pick up by the town.

2.21 All homes in the subdivision must be built to the most recent energy codes (the 2015 IECC) and be designed in a way to optimize the overall performance of the home and it's energy efficiencies.

### **ARTICLE III OWNERS' RIGHT TO USE COMMON PROPERTY**

3.1 Every Lot Owner shall have a non-exclusive perpetual easement and right for the use and quiet enjoyment of the Common Property of the Association, as hereinafter described. Said right of use shall be appurtenant to the Owner's Lot and shall pass with title to every Lot, subject only to the following provisions:

(a) the right of the Association to impose annual maintenance and insurance charges to the Owners;

(b) the right of the Association to dedicate, sell or transfer all or any part of the Common Property to the Town of Durham for public use by residents of the Town. The Owners as herein provided shall approve such a transfer, sale or dedication; and

(c) any rights, easements, encumbrances, covenants, restrictions, or Declarant rights, easements, or reservations as described in this Declaration or otherwise shown on the Plan.

3.2 Owners shall forfeit their right of use in the event that any Owner fails to make any payments for Assessments as described herein. Rights of use shall be reinstated upon payment in full of any past due amount.

#### **ARTICLE IV HOMEOWNERS' ASSOCIATION**

4.1 Prior to the date of execution and recording of this Declaration, there has been formed the **Deer Creek Crossing Homeowners Association**, a non-profit non-stock corporation organized under the laws of the State of Maine (the "**Association**"). Each owner of a Lot or Future Lot, shall automatically become and be a member of the Association as long as said Owner continues as owner of a Lot. Upon termination of interest of an Owner in a Lot, the Owner's membership and any interest in the Association shall automatically terminate and transfer and inure to the next successive owner of the Lot. Each owner of a Lot shall be bound by the By-Laws of the Association, as same may be amended from time to time, and each Owner of a Lot shall comply strictly with said By-Laws of the Association. No holder of a mortgage of a Lot shall be considered as a Lot owner until such holder shall acquire title to a Lot by foreclosure, by deed in lieu of foreclosure, or by maintaining possession of the Lot.

4.2 Each Owner shall be entitled to cast one (1) vote upon any matter taken up by the Association, as more particularly set forth in the Bylaws of the Association. This shall apply regardless of any difference in Lot size or value. Any Owner who owns more than one (1) Lot may cast one (1) vote for each such Lot.

4.3 Written notice of any meeting called for the purposes of taking any action authorized under this Declaration shall be sent to all members not less than ten (10) days nor more than sixty (60) days prior to the scheduled date. A quorum shall be necessary for the transaction of business and shall be deemed to exist if fifty percent (50%) of the Owners are present. No proxy voting shall be permitted, except as expressly set forth in the Bylaws. In the event that a quorum does not exist, the only action that may be taken is to adjourn the meeting to another date and direct the secretary to send notice of the new meeting date to all Members.

4.4 To take effect, any matter brought before the Association must be approved by a majority of those Owners who are present and voting. On any proposition to sell or acquire land by the Association, the approval of seventy-five percent (75%) of those Owners who are present and voting shall be required. A quorum must be present at the time any vote is taken. Loss of quorum requires immediate adjournment of the meeting.

#### **ARTICLE V COMMON PROPERTY**

5.1 Declarant shall be responsible for construction, snow plowing and maintenance of the Common Property. After completion of construction of such Common Property or the sale by the Declarant of Seventy-Five Percent (75%) of the Lots to Owners other than the Declarant, whichever is later, the Declarant shall convey to the Association, and the Association

shall accept, the conveyance from the Declarant of such Common Property by Quit-Claim (Release) Deed, and upon such conveyance the obligations and responsibilities of Declarant with respect to the Common Property conveyed by said Deed shall terminate and cease.

5.2 The Declarant shall be responsible for the maintenance, repairs and improvements of any Common Property, until such time as such Common Property is conveyed to the Association as provided herein. Until such time the Common Property is conveyed to the Association, each lot owner shall pay to Declarant his or her pro rata share of the Common Expenses. As of and after the date on which Declarant shall convey any Common Property to the Association and with respect to any other Common Property that the Association may otherwise own or acquire;

a. The Association shall perform and be responsible for maintenance of the Common Property including the maintenance, resurfacing, improvement, clearing and repair of, and snow removal, for payment of any real estate taxes assessed thereon, and for the costs of labor, equipment, materials and management relating to the Common Property and supervision thereof. Assessments by the Association upon the Lots and the Owners thereof shall be used exclusively for the aforesaid purposes and for such other purposes as shall be permitted by the By Laws of the Association. Each of Lot shall be assessed an equal portion of the Common Expenses.

b. In the event that a public authority agrees to accept any road or any other part of or all of the Common Property as public and agrees to assume the responsibilities and costs for maintenance thereof, the Association shall convey the title and such easements as are appropriate to such public authority as may be reasonably required by such public authority.

## **ARTICLE VI ASSESSMENTS**

6.1 No later than thirty (30) days prior to each Annual Meeting of the members of the Association, the Executive Board shall estimate the Common Expenses for each calendar quarter of the following calendar year and shall present such estimate to the members at their Annual Meeting as the proposed budget for such calendar year. Unless otherwise provided in the Association's By-laws, the budget shall be approved by a majority of the members of the Association at their Annual Meeting to be held each year in the month of December prior to the commencement of the calendar year to which the estimated budget of Common Expenses applies. Each Lot shall be liable for a pro rata share of the Common Expenses, to be billed to each Lot Owner in accordance with this Article VI. However, Declarant shall not pay an assessment for any unsold or undeveloped lot and shall only be required to pay an assessment upon any lot owned by Declarant upon which building construction and landscaping is complete.

6.2 Unless otherwise approved by the Association, all assessments shall be billed quarterly no later than the first day of each calendar quarter and each calendar year by the Treasurer of the Association. All sums so assessed and billed shall become



due no later than thirty (30) days after the date of mailing or delivery of each such bill.

6.3 The members of the Association may from time to time at special meetings levy additional assessments, as allowed, by the same majority of votes as required for the annual assessments.

6.4 Assessments authorized and billed by the Association shall be a charge on the Lot and shall be a continuing lien upon the Lot upon which such assessment is made. If the assessment to a Lot Owner shall not be paid within thirty (30) days after the date when due, then said assessment shall be delinquent and shall, together with costs of collection and reasonable attorneys' fees, become a continuing lien on the Lot owned by the delinquent Lot Owner which lien shall bind the Lot with the buildings and improvements thereon as well as the delinquent Lot Owner, his heirs, devisees, successors, personal representatives, and assigns. Said lien may be enforced in the same manner as a lien for assessments against condominium units provided in the Maine Condominium Act, Chapter 31 of Title 33 of the Maine Revised Statutes, as amended. Said lien for unpaid assessments shall be prior to all liens and encumbrances on the Lot other than the first mortgage recorded prior to the date on which the assessment which is sought to be enforced becomes delinquent and liens for real estate taxes and other governmental/municipal assessments or charges against the Lot; provided, however, that any such lien shall not be subject to the provisions of 14 M.R.S.A. Section 4561 or 18-A M.R.S.A Section 2-201 et seq. as they or their equivalents may be amended or modified from time to time. All such charges, in addition to being a lien, shall also constitute the personal liability of the owner of the Lot so assessed at the time of assessment.

## **ARTICLE VII ADDITIONAL EASEMENTS, COVENANTS, RESTRICTIONS**

7.1 The Lots are subject to all drainage and other easements as depicted on the Plan.

7.2 The Owners of the Lots shall have a non-exclusive perpetual easement for ingress and egress over "Road Name" as shown on the plan.

## **ARTICLE VIII CONSTRUCTION**

8.1 These easements, restrictions, covenants are imposed as part of a general scheme for the protection and benefit of Declarant and each subsequent owner of Lots or parcels of said Declarant's land in addition to any and all provisions of any municipal, county or state ordinance, regulation or law. All present or future Owners of Lots or Future Lots are subject to the terms and provisions contained or referred to in this Declaration. The acceptance of a Deed or conveyance of a Lot other than as security, or the entering into of occupancy of any Lot shall signify that the provisions contained or referred to in this Declaration and the decisions of the

Association are accepted and ratified by such owner or occupant. All the provisions contained or referred to herein shall be deemed and taken to be covenants running with the land and shall bind any person having at any time any interest or estate in a Lot (except as mortgage security) as though such provision were recited and stipulated at length in each and every Deed or conveyance of a Lot.

8.2 If any one or more of these covenants, or any part thereof, shall be invalid or unenforceable, such invalidity or unenforceability shall not affect the remaining portions hereof, which shall remain in full force and effect.

#### **ARTICLE IX AMENDMENTS**

Until such time as the Declarant has transferred seventy-five percent (75%) of the Lots to Owners of the Association, the Declarant may amend this Declaration from time to time by instrument recorded in the Cumberland County Registry of Deeds. Thereafter, this Declaration may be amended at any time and from time to time by written instrument duly executed by the Owners of record of seventy-five (75%) percent or more of the Lots and by all of the mortgagees of record of the Lots owned by such Owners. Any such amendment shall be recorded in the Cumberland County Registry of Deeds.

#### **ARTICLE X ENFORCEMENT, WAIVER**

The Association shall have the right to enforce, by any proceeding at law or in equity, all restrictions, liens and charges now or hereafter imposed under the provisions of this Declaration. Failure by the Association to enforce any covenant or restriction herein contained shall in no event be deemed a waiver of right to do so hereafter.

#### **ARTICLE XI RIGHTS AND RESERVATIONS OF DECLARANT**

11.1 Until the construction, marketing and sale of all Lots of Phase I and any Future Lots as reserved herein and Common Property is completed, the Declarant reserves the right to:

(a) Change the size, number and location of Lots, drainage easements, road right-of-way, and other improvements; and the size, layout, and location of any Lot for which a purchase and sale agreement has not been executed by the Declarant or with respect to which the purchaser is in default. The change or changes shall be effective upon the recording of an amendment to this Declaration and/or the filing of modified subdivision Plan by the Declarant indicating the changes made. Without limiting the foregoing, the Declarant specifically reserve the right to further subdivide the Land to be Retained by Owner (Future Lots and Future Common Property) and to include any said Future Lots and Future Common Property in this

Subdivision. The change or changes shall be effective upon recording of an amendment to this Declaration and/or filing of modified subdivision Plan by Declarant indicating the changes made.

(b) Locate on the premises, even though not depicted on the Plan, and grant and reserve easements and rights of way for the installation, maintenance, repair, replacement and inspection of utility lines, wires, pipes, conduits, and facilities, including, but not limited to, water, electric, telephone, fuel oil, natural gas, and sewer.

(c) Connect with and make use of utility lines, wires, pipes, and conduits, located on the property, for construction and sales purposes, provided that the Declarant shall be responsible for the cost of service so used.

(d) Place "For Sale" signs or other signs to aid in the marketing of the Lots and houses thereon.

(e) Appoint and remove the officers of the Association and members of the executive board and veto any action of the Association or the executive board, in accordance with the provisions of the ByLaws. The Declarant shall relinquish all special rights expressed or implied through which it may directly or indirectly control, direct, modify or veto any action of the Association, its Board of Directors or the majority of Lot Owners, and control of the Owner's Association shall pass to the Owners of Lots within the project not later than the earlier of the following: the date on which seventy-five percent (75%) of the Lots have been conveyed to purchasers, or five (5) years from the date of conveyance of the first Lot to a purchaser, or seven (7) years from the date of recording hereof. The requirements of this paragraph shall not affect the Declarant's rights, as a Lot Owner, to exercise the votes allocated to Lot(s) owned by the Declarant.

(f) With respect to its marketing of Lots, to use any Common Property for the ingress and egress of itself, its officers, employees, agents, contractors and subcontractors and for prospective purchasers, including the right of such prospective purchasers to park in parking spaces. The Declarant also reserves the right to use any Lots owned or leased by the Declarant as models, management offices, sales offices for this project or customer service offices. The Declarant reserves the right to relocate the same from time to time within the Property; upon relocation, the furnishing thereof may be removed. The Declarant further reserves the right to maintain on the Property such advertising signs as may comply with applicable governmental regulations, which may be placed in any location on the Property and may be relocated or removed, all at the sole discretion of the Declarant.

(g) To go upon any and all of the Property for purposes of construction, reconstruction, maintenance, repair, renovation, replacement or correction of the units or Common Property. This easement shall include without limitation, the right of vehicular and pedestrian ingress and egress, the right to park motor vehicles and to engage in construction activities of any nature whatsoever, including the movement and storage of building materials and equipment.

(h) Declarant shall have the right to assign or partially assign any of its obligations or its rights under this Declaration.

**ARTICLE XII**  
**GENERAL PROVISIONS**

12.1. Headings. The headings used in this Declaration and the table of contents are inserted solely as a matter of convenience for the readers of this Declaration and shall not be relied upon or used in construing the effect or meaning of any of the provisions of this Declaration.

12.2. Severability. The provisions of this Declaration shall be deemed independent and severable, and the invalidity or unenforceability of any provision or portion thereof shall not affect the validity or enforceability of any other provision or portion hereof unless such deletions shall destroy the uniform plan of development and operation of the Association which this Declaration is intended to create.

12.3. Applicable Law. This Declaration shall be governed and construed according to the laws of the State of Maine.

12.4. Interpretation. The provisions of this Declaration shall be liberally construed in order to effect Declarant's desire to create a uniform plan for development and operation of the Association.

12.5. Effective Date. This Declaration shall become effective when it and the Plan have been recorded.

12.6. Notices. All notices and other communications required or permitted to be given under or in connection with this Declaration shall be in writing and shall be deemed given when delivered in person or on the third business day after the day on which mailed by regular U.S. mail, postage prepaid, addressed to the address maintained in the register of current addresses established by the Common Association.

12.7. Exhibits. All exhibits attached to this Declaration are hereby made a part of this Declaration.

12.8. Pronouns. Wherever used, the singular number shall include the plural, the plural the singular and the use of any gender shall include all genders.

WITNESS, Jack Doughty, Declarant, this \_\_\_\_ day of \_\_\_\_\_, 2022.

---

Name: Jack Doughty

STATE OF MAINE  
Androscoggin, SS

May , 2022

Then personally appeared the above-named Jack Doughty this \_\_\_\_ day of \_\_\_\_  
\_\_\_\_\_, 2022, and acknowledged the foregoing to be his free act and deed.

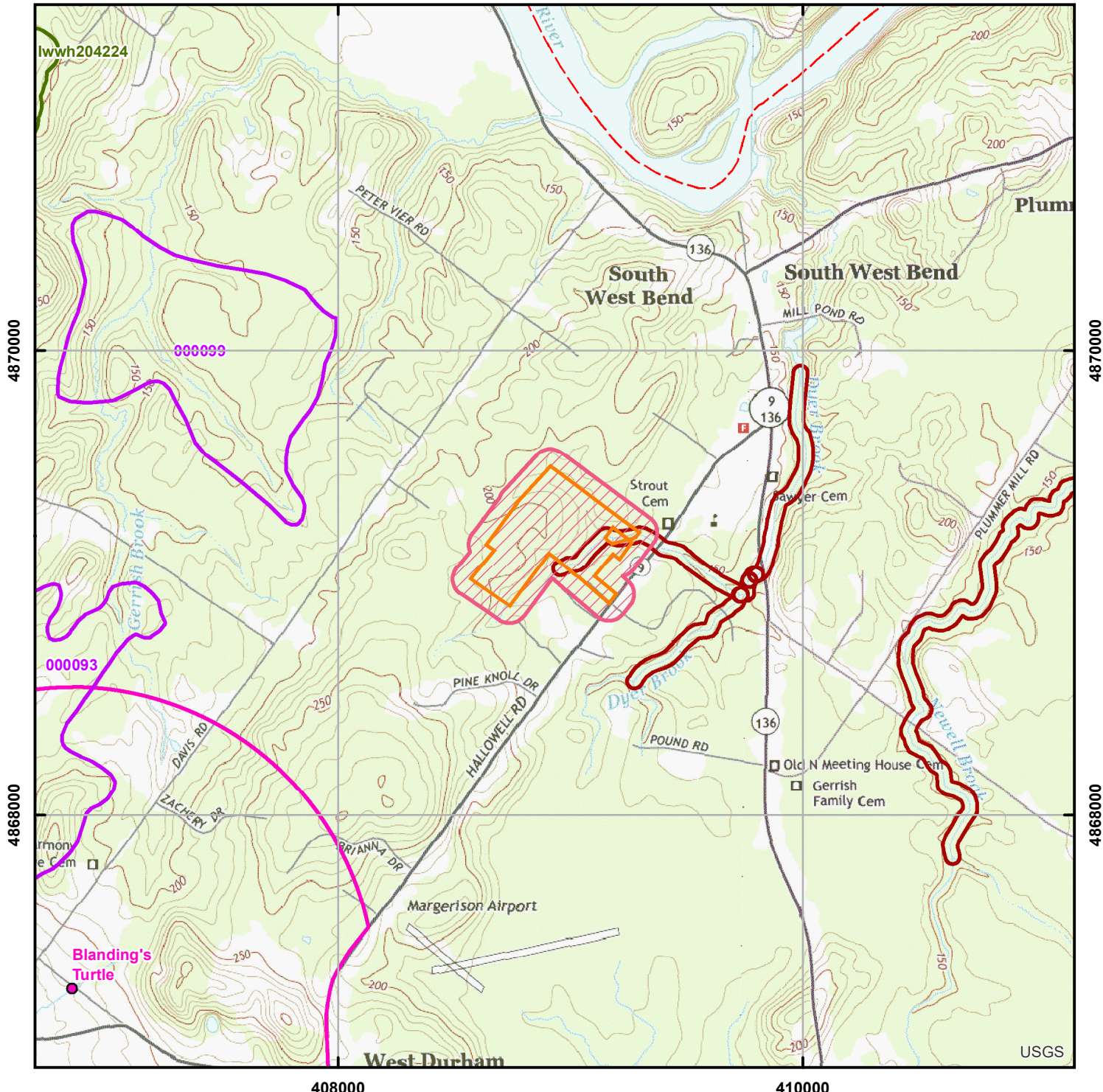
Before me,

---

Notary Public/Attorney at Law

408000

410000

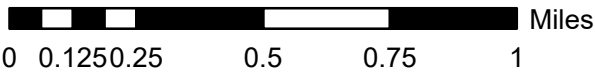


### Environmental Review of Fish and Wildlife Observations and Priority Habitats

Project Name: **Hallowell Road Subdivision, Durham (Version 1)**



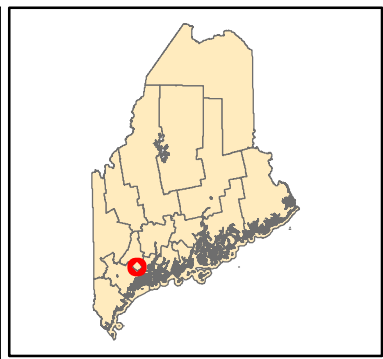
Maine Department of Inland Fisheries and Wildlife



Projection: UTM, NAD83, Zone 19N

Date: 5/12/2022

ProjectSearchAreas - All Versions	Deer Winter Area	Roseate Tern
Maine Cliff and Talus Areas	LUPC p-fw	Piping Plover and Least Tern
Cooperative DWAs	Seabird Nesting Islands	Aquatic ETSc - 2.5 mi review
Shorebird Areas	Inland Waterfowl and Wading Bird	Rare Mussels - 5 mi review
2008 lwvh - Shoreland Zoning	Tidal Waterfowl and Wading Bird	Maine Heritage Fish Waters
Significant Vernal Pools	Environmental Review Polygons	Arctic Charr Habitat
		Redfin Pickerel and Swamp Darter Habitats - buffer100ft
		Special Concern occupied habitats - 100ft buffer
		Wild Lake Trout Habitats





STATE OF MAINE  
DEPARTMENT OF  
INLAND FISHERIES & WILDLIFE  
353 WATER STREET  
41 STATE HOUSE STATION  
AUGUSTA ME 04333-0041



June 9, 2022

Charlie Burnham  
Grange Engineering LLC  
241 Rowe Station Road  
New Gloucester, ME 04260

**RE: Information Request – Hallowell Road Subdivision Project, Durham**

Dear Charlie:

Per your request received on May 11, 2022, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information for known locations of Endangered, Threatened, and Special Concern species; designated Essential and Significant Wildlife Habitats; and inland fisheries habitat concerns within the vicinity of the *Hallowell Road Subdivision* project in Durham.

Our Department has not mapped any Essential Habitats that would be directly affected by your project.

***Endangered, Threatened, and Special Concern Species***

Bat Species – Of the eight species of bats that occur in Maine, the three *Myotis* species are protected under Maine’s Endangered Species Act (MESA) and are afforded special protection under 12 M.R.S §12801 - §12810. The three *Myotis* species include little brown bat (State Endangered), northern long-eared bat (State Endangered), and eastern small-footed bat (State Threatened). The five remaining bat species are listed as Special Concern: big brown bat, red bat, hoary bat, silver-haired bat, and tri-colored bat. While a comprehensive statewide inventory for bats has not been completed, based on historical evidence it is likely that several of these species occur within the project area during migration and/or the breeding season. However, our Agency does not anticipate significant impacts to any of the bat species as a result of this project.

Blanding’s Turtle - Multiple occurrences of Blanding’s turtles, a State Endangered species, have been documented in the immediate vicinity of the proposed project area. In Maine, Blanding’s turtles are found most frequently in complexes of small, vernal pools, acidic wetlands and larger marsh complexes in large blocks of forested habitat. Development activity that compromises riparian integrity or migration permeability among seasonally critical wetlands can lead to degradation of habitat quality and potential loss of local populations. Additionally, development projects that lead to significant increases in local traffic volume will likely lead to increased roadkill and possible extirpation of the local population.

Eastern Ribbon Snake - There is a potential for occurrences of Eastern ribbon snake, a state Species of Special Concern, within the proposed project. This rare species is a slender, semiaquatic snake often observed near the edges of emergent marshes, wet meadows, scrub-shrub wetlands, beaver impoundments, bogs, river and stream floodplains, and vegetated shorelines of ponds and lakes.

If habitats for the above species are present in the project area, we recommend that they be avoided and adequately buffered. We recommend 250-foot intact, no cut buffers be applied to habitats suitable for

each species. Alternatively, the applicant can survey for the above turtle and snake species to determine presence or absence in the project area. These surveys should be conducted by qualified biologists following MDIFW's most recent survey protocols.

### ***Significant Wildlife Habitat***

Significant Vernal Pools - At this time MDIFW Significant Wildlife Habitat (SWH) maps indicate no known presence of SWHs subject to protection under the Natural Resources Protection Act (NRPA) within the project area, which include Waterfowl and Wading Bird Habitats, Seabird Nesting Islands, Shorebird Areas, and Significant Vernal Pools. However, a comprehensive statewide inventory for Significant Vernal Pools has not been completed. Therefore, we recommend that surveys for vernal pools be conducted within the project boundary by qualified wetland scientists prior to final project design to determine whether there are Significant Vernal Pools present in the area. These surveys should extend up to 250 feet beyond the anticipated project footprint because of potential performance standard requirements for off-site Significant Vernal Pools, assuming such pools are located on land owned or controlled by the applicant. Once surveys are completed, survey forms should be submitted to our Agency for review well before the submission of any necessary permits. Our Department will need to review and verify any vernal pool data prior to final determination of significance.

### ***Fisheries Habitats***

We generally recommend maintaining 100-foot undisturbed vegetated buffers from the upland edge of all intermittent and perennial streams and any contiguous wetlands. Maintaining and enhancing buffers along these resources is critical to the protection of water temperatures, water quality, natural inputs of coarse woody debris, and various forms of aquatic life necessary to support fish and other aquatic species. Riparian buffers also provide critical habitat and important travel corridors for a variety of wildlife species. Stream crossings should be avoided, but if a stream crossing is necessary, or an existing crossing needs to be modified, it should be designed to provide for full aquatic passage. Small streams, including intermittent streams, can provide crucial rearing habitat, cold water for thermal refugia, and abundant food for juvenile salmonids on a seasonal basis. Undersized crossings may inhibit these functions and become a frequent maintenance problem that causes reoccurring damage to the resource. Generally, MDIFW recommends that all new, modified, and replacement stream crossings be sized to span at least 1.2 times the bankfull width of the stream. In addition, we generally recommend that stream crossings be open bottomed (i.e. natural bottom), although embedded structures which are backfilled with representative streambed material have been shown to be effective in providing habitat connectivity for fish and other aquatic organisms. Construction Best Management Practices should be closely followed to avoid erosion, sedimentation, alteration of stream flow, and other impacts as eroding soils can travel significant distances as well as transport other pollutants resulting in direct impacts to fish, other aquatic life, and their habitats. In addition, we recommend that any necessary instream work occur between July 15 and October 1.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance we recommend additional consultation with the municipality, and other state resource agencies including the Maine Natural Areas Program, Maine Department of Marine Resources, and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance.



Letter to Charlie Burnham, Grange Engineering LLC  
Comments RE: Hallowell Road Subdivision, Durham  
June 9, 2022

Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

A handwritten signature in black ink, appearing to read 'Becca Settele', with a stylized, cursive script.

Becca Settele  
Wildlife Biologist



**STATE OF MAINE**  
**DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY**

177 STATE HOUSE STATION  
AUGUSTA, MAINE 04333

**JANET T. MILLS**  
GOVERNOR

**AMANDA E. BEAL**  
COMMISSIONER

May 12, 2022

Charlie Burnham  
Grange Engineering  
241 Rowe Station Road  
New Gloucester, ME 04260

Via email: [grange.engineering.me@gmail.com](mailto:grange.engineering.me@gmail.com)

Re: Rare and exemplary botanical features in proximity to: #1 Hallowell Road Subdivision, Durham, Maine

Dear Mr. Burnham:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received May 10, 2022 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Durham, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

**MOLLY DOCHERTY, DIRECTOR**  
MAINE NATURAL AREAS PROGRAM  
BLOSSOM LANE, DEERING BUILDING



PHONE: (207) 287-804490  
[WWW.MAINE.GOV/DACF/MNAP](http://WWW.MAINE.GOV/DACF/MNAP)

Letter to Grange Engineering  
Comments RE: Hallowell subdivision, Durham  
May 12, 2022  
Page 2 of 2

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

The Maine Natural Areas Program has instituted a fee structure of \$75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for \$150.00 for two hours of our services.

Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

*Lisa St. Hilaire*

Lisa St. Hilaire | Information Manager | Maine Natural Areas Program  
207-287-8044 | [lisa.st.hilaire@maine.gov](mailto:lisa.st.hilaire@maine.gov)

**Rare and Exemplary Botanical Features within 4 miles of  
Project: #1, Hallowell Subdivision, Durham, ME**

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
<b>Adder's Tongue Fern</b>						
	SC	S1	G5	1905-08-10	7	Non-tidal rivershore (non-forested, seasonally wet),Open
<b>Climbing Hempweed</b>						
	PE	SH	G5	1916-08	1	Dry barrens (partly forested, upland),Open wetland, not
<b>Clothed Sedge</b>						
	E	S1	G5	1898-06-15	1	Dry barrens (partly forested, upland)
<b>Dry Land Sedge</b>						
	SC	S2	G5	1997-07-08	3	Old field/roadside (non-forested, wetland or upland)
<b>Fern-leaved False Foxglove</b>						
	SC	S3	G5	1938-08-18	11	Dry barrens (partly forested, upland),Hardwood to mixed
	SC	S3	G5	1893-08-28	14	Dry barrens (partly forested, upland),Hardwood to mixed
<b>Mountain Honeysuckle</b>						
	E	S2	G5	1933-09	4	Dry barrens (partly forested, upland),Hardwood to mixed
<b>Ram's-head Lady's-slipper</b>						
	E	S1	G3	1935	11	Forested wetland,Hardwood to mixed forest (forest,
<b>Sassafras</b>						
	SC	S2	G5	1906	10	Hardwood to mixed forest (forest, upland),Old field/
<b>Showy Lady's-slipper</b>						
	SC	S3	G4G5	1907-07-09	38	Forested wetland,Open wetland, not coastal nor
<b>Smooth Winterberry Holly</b>						
	SC	S3	G5	1989	22	Forested wetland
<b>Unicorn Root</b>						
	SC	S1	G5	1884	1	Dry barrens (partly forested, upland)

Date Exported: 2022-05-12 12:28

## Conservation Status Ranks

**State and Global Ranks:** This ranking system facilitates a quick assessment of a species' or habitat type's rarity and is the primary tool used to develop conservation, protection, and restoration priorities for individual species and natural habitat types. Each species or habitat is assigned both a state (S) and global (G) rank on a scale of critically imperiled (1) to secure (5). Factors such as range extent, the number of occurrences, intensity of threats, etc., contribute to the assignment of state and global ranks. The definitions for state and global ranks are comparable but applied at different geographic scales; something that is state imperiled may be globally secure.

The information supporting these ranks is developed and maintained by the Maine Natural Areas Program (state ranks) and NatureServe (global ranks).

Rank	Definition
<b>S1</b> <b>G1</b>	<b>Critically Imperiled</b> – At very high risk of extinction or elimination due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors.
<b>S2</b> <b>G2</b>	<b>Imperiled</b> – At high risk of extinction or elimination due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
<b>S3</b> <b>G3</b>	<b>Vulnerable</b> – At moderate risk of extinction or elimination due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
<b>S4</b> <b>G4</b>	<b>Apparently Secure</b> – At fairly low risk of extinction or elimination due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
<b>S5</b> <b>G5</b>	<b>Secure</b> – At very low risk of extinction or elimination due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
<b>SX</b> <b>GX</b>	<b>Presumed Extinct</b> – Not located despite intensive searches and virtually no likelihood of rediscovery.
<b>SH</b> <b>GH</b>	<b>Possibly Extinct</b> – Known from only historical occurrences but still some hope of rediscovery.
<b>S#S#</b> <b>G#G#</b>	<b>Range Rank</b> – A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem.
<b>SU</b> <b>GU</b>	<b>Unrankable</b> – Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
<b>GNR</b> <b>SNR</b>	<b>Unranked</b> – Global or subnational conservation status not yet assessed.
<b>SNA</b> <b>GNA</b>	<b>Not Applicable</b> – A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities (e.g., non-native species or ecosystems).
<b>Qualifier</b>	<b>Definition</b>
<b>S#?</b> <b>G#?</b>	<b>Inexact Numeric Rank</b> – Denotes inexact numeric rank.
<b>Q</b>	<b>Questionable taxonomy that may reduce conservation priority</b> – Distinctiveness of this entity as a taxon or ecosystem type at the current level is questionable. The “Q” modifier is only used at a global level.
<b>T#</b>	<b>Intraspecific Taxon (trinomial)</b> – The status of intraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank.

**State Status:** Endangered and Threatened are legal status designations authorized by statute. Please refer to MRSA Title 12, §544 and §544-B.

Status	Definition
<b>E</b>	<b>Endangered</b> – Any native plant species in danger of extinction throughout all or a significant portion of its range within the State or Federally listed as Endangered.
<b>T</b>	<b>Threatened</b> – Any native plant species likely to become endangered within the foreseeable future throughout all or a significant portion of its range in the State or Federally listed as Threatened.
<b>SC</b>	<b>Special Concern</b> – A native plant species that is rare in the State, but not rare enough to be considered Threatened or Endangered.
<b>PE</b>	<b>Potentially Extirpated</b> – A native plant species that has not been documented in the State in over 20 years, or loss of the last known occurrence.

**Element Occurrence (EO) Ranks:** Quality assessments that designate viability of a population or integrity of habitat. These ranks are based on size, condition, and landscape context. Range ranks (e.g., AB, BC) and uncertainty ranks (e.g., B?) are allowed. The Maine Natural Areas Program tracks all occurrences of rare plants and natural communities/ecosystems (S1-S3) as well as exemplary common natural community types (S4-S5 with EO ranks A/B).

Rank	Definition
<b>A</b>	<b>Excellent</b> – Excellent estimated viability/ecological integrity.
<b>B</b>	<b>Good</b> – Good estimated viability/ecological integrity.
<b>C</b>	<b>Fair</b> – Fair estimated viability/ecological integrity.
<b>D</b>	<b>Poor</b> – Poor estimated viability/ecological integrity.
<b>E</b>	<b>Extant</b> – Verified extant, but viability/ecological integrity not assessed.
<b>H</b>	<b>Historical</b> – Lack of field information within past 20 years verifying continued existence of the occurrence, but not enough to document extirpation.
<b>X</b>	<b>Extirpated</b> – Documented loss of population/destruction of habitat.
<b>U</b>	<b>Unrankable</b> – Occurrence unable to be ranked due to lack of sufficient information (e.g., possible mistaken identification).
<b>NR</b>	<b>Not Ranked</b> – An occurrence rank has not been assigned.

Visit the Maine Natural Areas Program website for more information  
<http://www.maine.gov/dacf/mnap>

