

NOTICE AND INSTRUCTIONS TO SUBMITTERS

03/26/2020

Pollard Road Stream Crossing Project At Seaver Brook

1. **LOCATION:** Pollard Road and Congressional Avenue, Town of Plaistow, NH
2. **TYPE OF CONSTRUCTION:** Includes the removal of a 24” reinforced concrete pipe (RCP) culvert; installation of a new road-stream crossing structure consisting of four-sided concrete box with a 18 foot clear span and an internal height of 6 feet; approximately 200 feet of roadway restoration; approximately 105 feet of installation of stream simulation bed material and sediment removal in Seaver Brook within and adjacent to the proposed crossing; bank restoration in the vicinity of the new structure; installation of a rock weir downstream of the proposed crossing; installation of guard rail; installation of rock check dams in existing stormwater swales; traffic control; and all associated road, bank, stream and erosion control work.
3. **CERTIFIED CHECK OR BID BOND:** A certified check in the amount of 5% of the Contractor's Proposal not to exceed \$50,000 or a bid bond furnished by the Contractor's surety for a like amount, payable to the Town of Plaistow is required with the Proposal. Check will be returned upon execution of the Contract. Bid bonds shall be provided on a form supplied by the Submitter that conforms with the American Institute of Architects A.I.A., Document No. A-310.
4. **PROJECT PLANS AND DOCUMENTS:**
Electronic copies of the project plans, the advertisement for Proposal, and all other Proposal documents will be emailed to all Submitters present at the pre-proposal meeting who furnish their email address on the form provided.
5. **PRE-PROPOSAL MEETING:** A mandatory pre-proposal site meeting is scheduled for Tuesday, April 21, 2020 at 10 am. The site is located at the intersection of Pollard Road and Congressional Avenue, where Seaver Brook runs under Pollard Road. The meeting will be held on Congressional Avenue, just off Pollard Road. Only those considering submitting a proposal should attend this meeting, and appropriate “social distancing” recommendations will be followed.
6. **PROPOSAL FORMS:** All Proposals shall be submitted on the attached forms. No lines on the Proposal shall be left blank. All pages of the Proposal forms must be completed. Failure to complete the Proposal will render the Submitter non-responsive, and the Proposal will not be read. The OWNER may waive any informalities or minor defects or reject any or all Proposals. In the event there is any discrepancy in the Proposal between any price in words, figures, or the extended totals, the price in words shall govern and the extended totals in each case shall be corrected accordingly. A conditional or qualified Proposal will not be accepted.
7. **ALTERNATE BRIDGE DESIGN/CONSTRUCTION PROPOSALS:**
An example Water Control Plan (WCP) is provided by the Engineer on Sheet 5 under ‘Water Control Plan Notes’. The Contractor may submit an alternate WCP. See notes on Sheet 5.
8. **QUESTION AND ANSWER PERIOD:** All inquiries must be submitted by phone or email to the owner's representative noted below by Thursday, April 23 at 5 pm. Answers to the questions submitted by the deadline will be responded to via email by Monday, April 27 at 5 pm in the form of an addendum. The addendum so issued shall become part of the Contract Documents.

Owner's representative:
Stone Environmental, Inc.
Attn: Gabe Bolin, P.E.
Mobile Phone: 603-809-6101
Email: gbolin@stone-env.com

- 9. PROPOSAL DUE DATE:** Sealed Proposals, in hard copy form and on forms included herein will be received until 4:00 pm prevailing local time on Thursday, April 30, 2020 at the Plaistow Town Offices. Sealed Proposals shall be marked "Pollard Road Culvert Proposal" and "Attention Mark A. Pearson, Town Manager". Submittals may be via standard mail or hand delivery to the following addresses:

Physical Location:
145 Main Street
Plaistow, NH 03865

Mailing Address:
145 Main Street
Plaistow, NH 03865

Proposals will be opened privately following the submittal deadline.

- 10. WITHDRAWAL OF PROPOSAL:** A Proposal may not be withdrawn by the Submitter for a period of sixty calendar days after the Proposal opening.
- 11.** Federal Disadvantaged Business Enterprise (DBE) utilization requirements do not apply to this contract; however, Submitters are encouraged to make positive efforts to incorporate DBE firms and/or suppliers into their project team.
- 12.** Federal Wage Rates under Fairground-Bacon and Related Acts (29 CFR Subpart A S5.5) do not apply to this Contract.
- 13.** All work must be completed in accordance with all applicable permits. Permits are by Town and Project Engineer.
- 14.** The OWNER will be responsible for payment in accordance with the terms of the Contract.
- 15. PROPOSAL SELECTION CRITERIA:**
The contract, if awarded, will be awarded to the least costly, best qualified and most responsible Submitter. Note that the Town is not obligated to award the project to the lowest proposal based on cost alone. In determining the "least costly, best qualified and most responsible Submitter," in addition to price, the following may be considered:
1. The substantial performance of the Submitter in meeting the specifications and other terms and conditions of the solicitation;
 2. The ability, capacity and skill of the Submitter to provide the services required, and to do so within the time specified;
 3. The character, integrity, reputation, experience, financial resources and performance of the Submitter under previous contracts with the Town of Plaistow (if applicable) and elsewhere.

The chosen contractor may be required to provide references and demonstrate successful completion of similar work. The chosen contractor may be required to demonstrate that he or she consistently performs work using the highest quality of workmanship. The chosen contractor may be required to demonstrate that he or she owns or has access to the equipment required to

perform this work. Contractor shall not assign or subcontract the performance of this project or any portion thereof to any other contractor without the prior written approval of The Town of Plaistow.

The Owner reserves the right: (1) to accept or reject any or all Proposals in whole or in part and to accept other than the lowest price proposal; (2) to amend, modify, or withdraw this Request for Proposals; (3) to require supplemental statements or information from Submitters; (4) to waive or correct any irregularities in Proposals received, after prior notice to the Submitters; (5) to negotiate with any vendor who submits a proposal.

- 16. PROJECT SCHEDULE:** Start date of June 22, 2020, a Substantial Completion/Roadway Reopened date of August 26, 2020 and then a Final Completion date of September 30, 2020. Project shall be 100% complete no later than the Final Completion date. Project may begin as soon as June 22, 2020, but only after the Notice to Proceed is issued. In stream work shall begin no sooner than the date given in the applicable permits (typically July 1), and all in-water work shall be complete by the Final Completion date.

Note that because of the impact the road closure will have on the community and the need to reopen the road before schools open at end of August, the Town reserves the right to seek liquidated damages in the amount of \$700 for each consecutive calendar day that the Contractor shall be in default of the scheduled discussed in this section.

17. GENERAL INFORMATION:

- a. Insurance Requirements:** As noted previously, Contractor shall furnish the Town of Plaistow with proof of insurance within (5) calendar days from award of Proposal. The chosen Contractor shall supply the Town of Plaistow with a Certificate of Insurance showing liability coverage no less than \$1,000,000 as well as proof of Workers' Compensation insurance for all employees engaged in work.
- b. Performance and Payment Bonds:** A Performance Bond and a Payment Bond, each for 100% of the Proposal value, will be submitted at the time of Contract award on the standard AIA Document A312 -2010 form. Irrevocable Letters of Credit for 100% of the Proposal value may be substituted by the CONTRACTOR for each of the Bonds. The Payment Bond (or Irrevocable Letter of Credit) will not be released until satisfactory evidence has been provided to the OWNER (Town of Plaistow) that all outstanding debts, liens, and judgments incurred by the CONTRACTOR for the performance of SUBCONTRACTORS, or supplies and materials incorporated into the Work have been paid. The Performance Bond (or Irrevocable Letter of Credit) will be held in force for one year after the Substantial Completion and will serve as warranty of the Contract. The Irrevocable Letter of Credit for Performance (if used in place of a Performance Bond) may not be reduced or released prior to completion of the one-year warranty period unless authorized by the OWNER (Town of Plaistow) and approved by the Lending Authority.
- c. Permits:** Note that permits have not yet been received for this project, and will be acquired prior to construction by the Owner's representatives. Work cannot proceed until permits are acquired.
- d. Tree removal:** Note that construction may require the cutting and removal of a limited number of trees. Efforts to cut and remove logs from the site shall be included in the project cost. All other brush created by project construction activities shall become the

property of the Contractor and shall be transported off site to an appropriate location determined by the Contractor.

- e. **Traffic Control:** Contractor to close off Pollard Road during construction and allow for residential access to one property during the construction. Note that the property owners, in addition to emergency vehicles, should have continual access to this particular property, understanding that access could be delayed by a reasonable amount of time (i.e. 1-5 minutes) while construction equipment traverses the staging area and prepares the site for safe ingress/egress. The Contractor should make every effort to eliminate and/or minimize delays to ingress/egress in the event emergency vehicles and/or emergency personnel need to access this property.

What is provided in the Access and Staging Plan and Traffic Control Plan on Sheet 3 of the plans are recommendations; it is the Contractors responsibility to control traffic with signage and barricades to standards set forth by the NHDOT Standard Specifications for Road and Bridge Construction. Note that there are two 'custom' signs in the sign summary and in the Traffic Control Plan on Sheet 3 that state 'Pollard Road Closed'. Their inclusion and placement have been requested by the Town. Detour signage should be installed 2 – 3 weeks prior to the start of the project.

- f. **Staging:** Contractor can temporarily store fill and materials as shown on Sheet 3 of the plans. All areas on which fill is stored shall be returned to their original pre-construction condition.
- g. **Surplus clean fill:** Upon completion of the project and as needed throughout the duration of construction, the Contractor shall transport all surplus clean fill to an offsite location determined by the contractor. Note that the Town is willing to accept some surplus clean fill at the Public Works Garage at 144 Main Street for future Town use. The Town would also be able to provide transport of the material to the Public Works Garage if the Contractor can load material into Town trucks. An item is included in the Schedule of Items for hauling surplus fill offsite by the Contractor, and for the purposes of proposals this is estimated to be roughly half of the excavated material. It is assumed that a portion of the balance of excavated material may be taken by the town, and that the remainder of the balance will be reclaimed for roadway construction (see Item 306.106). Note that these quantity assumptions may be subject to change pending the Town's ability to accept clean fill.

SCHEDULE OF ITEMS

**POLLARD ROAD STREAM CROSSING PROJECT
AT SEAVER BROOK**

TOWN OF PLAISTOW

SUBMITTER agrees to perform all the WORK described in the CONTRACT DOCUMENTS for the following unit prices.

Item No.	Item Description	Quantity	Units	Unit Price	Total Amount for Item = Quantity x Unit Price
201.1	CLEARING AND GRUBBING	0.1	AC	\$ _____	\$ _____
202.41	REMOVAL OF EXISTING PIPE 0-24" DIAMETER	41	LF	\$ _____	\$ _____
203.1	COMMON EXCAVATION	321	CY	\$ _____	\$ _____
-	HAUL AWAY MATERIAL	150	CY	\$ _____	\$ _____
306.106	RECLAIMED STABILIZED BASE PROCESSED IN PLACE, 6" DEEP	580	SY	\$ _____	\$ _____
209.1	GRANULAR BACKFILL	57	CY	\$ _____	\$ _____
304.2	GRAVEL	21	CY	\$ _____	\$ _____
304.3	CRUSHED GRAVEL	37	CY	\$ _____	\$ _____
304.4	CRUSHED STONE (FINE GRADATION)	38	CY	\$ _____	\$ _____
403.11	HOT BITUMINOUS PAVEMENT, MACHINE METHOD	91	TON	\$ _____	\$ _____
503.2	COFFERDAMS	1	UNIT	\$ _____	\$ _____
585.0001	CHANNEL BED MATERIAL	45	CY	\$ _____	\$ _____
585.0002	BANK ROCK	33	CY	\$ _____	\$ _____
585.0003	ROCK WEIR	7	CY	\$ _____	\$ _____
603.0001	FOUR SIDED CONCRETE BOX CULVERT, 18' WIDE x 6' HIGH x 45' LONG	1	UNIT	\$ _____	\$ _____
606.127	GUARDRAIL, MGS LONG SPAN 22' SPAN, 112.5' EA	2	UNIT	\$ _____	\$ _____
606.1255	GUARDRAIL, TERMINAL UNIT TYPE EAGRT, TL 2	4	UNIT	\$ _____	\$ _____
615.03	OBJECT MARKERS (TRAFFIC SIGN TYPE C)	2	UNIT	\$ _____	\$ _____
619.1	MAINTENANCE OF TRAFFIC	1	UNIT	\$ _____	\$ _____
641	LOAM	24	CY	\$ _____	\$ _____
644	SEED	1	LB	\$ _____	\$ _____
645.111	MULCH	222	SY	\$ _____	\$ _____
645.531	SILT FENCE	200	LF	\$ _____	\$ _____
692	MOBILIZATION/DEMOBILIZATION	1	UNIT	\$ _____	\$ _____
699	MISC. TEMPORARY EROSION AND SEDIMENT CONTROL	1	LS	\$ _____	\$ _____

SCHEDULE OF ITEMS

**POLLARD ROAD STREAM CROSSING PROJECT
AT SEAVER BROOK**

TOWN OF PLAISTOW

TOTAL PROPOSAL AMOUNT (Figures) \$ _____

TOTAL PROPOSAL AMOUNT (Written) \$ _____

The Town of Plaistow reserves the right to waive any information in any Proposal and to reject any and all bids

The undersigned Submitter does hereby declare and stipulate that his proposal is made in good faith, without collusion or connection with any other person or persons submitting for the same Work, and that it is made in pursuance of and subject to all the terms and conditions of the Notice and Instructions to Submitters, the Construction Contract, and the Project Plans pertaining to the Work to be done, all of which have been examined by the undersigned.

Respectfully submitted:

Signature

Address

Title

Date

Attest Signature

Printed Name

Title

Date

Proposal

Proposal of _____ (hereinafter called "SUBMITTER"), organized
and

existing under the laws of the State of _____ doing business as: _____
(a corporation, a partnership or an individual)

To the: _____
Town of Plaistow, NH
(Loanee or Grantee) (hereinafter called "OWNER")

In compliance with your Request for PROPOSALS, SUBMITTER hereby proposes to perform all Work for
the
construction of _____
Pollard Road Stream Crossing Project At Seaver Brook

in strict accordance with the Contract Documents, within the time set forth therein, and at the prices stated
below.

Total Bid Price \$ _____

By submission of this PROPOSAL, each SUBMITTER certifies, and in the case of a joint PROPOSAL,
each party thereto certifies as to his own organization, that his PROPOSAL has been arrived at
independently, without consultation, communication, or agreement as to any matter relating to this
PROPOSAL with any other SUBMITTER or with any competitor.

SUBMITTER hereby agrees to commence Work under this contract on the date of issuance of the
NOTICE TO PROCEED and to fully complete the Project by September 30, 2020.

SUBMITTER acknowledges receipt of the following ADDENDUM:

Legal Name of Company: _____

Certifying Official (printed name): _____

Certifying Official (signature): _____

Certifying Official Title: _____

Address: _____

Email: _____

Telephone: _____

Pollard Road Stream Crossing Project
At Seaver Brook

Supplemental Specifications - Earthwork

SECTION 200.0001 - EARTHWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. Rock, which herein will consist of the following: 1) Channel Bed Material, 2) Bank Rock and 3) Rock Weir (or Boulders) will be placed along the bed of Seaver Brook per the extents on Sheet 6 of the plans (Stream Simulation & Restoration Plan). The Contractor shall provide all labor, materials, and equipment necessary to install the Rock in the stream bed and banks as shown on the Drawings and perform all incidental work such as excavation and fill necessary to complete the work.
- B. Management of excavated materials on site and disposal of excess excavated material in the designated stockpile locations, including transportation offsite.
- C. Grading to achieve the lines and grades shown on the Drawings.

1.2 QUALITY ASSURANCE

- A. Referenced Standards:
 - 1. Earthwork shall be performed in accordance with the provisions of the New Hampshire Department of Transportation "Standard Specifications for Road and Bridge Construction", 2016.
 - 2. American Society for Testing and Materials (ASTM):
 - a. C88, Standard Test Method for Soundness of Aggregates by use of Sodium Sulfate or Magnesium Sulfate.
 - b. C127, Test Method for Specific Gravity and Absorption of Coarse Aggregate.
 - c. D422, Sieve Analysis of Fine and Coarse Aggregates.
 - d. D698, Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lb/ft³).
 - e. D2487, Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System.)
 - f. D4253, Standard Test Methods for Maximum Index Density of Soils Using a Vibratory Table.
 - g. D4254, Test Methods for Minimum Index Density of Soils and Calculation of Relative Density.
 - 3. American Association of State Highway & Transportation Officials (AASHTO):
 - a. AASHTO T 96 wear test.
 - b. T103, Soundness of Aggregates by Freezing and Thawing.

1.3 SUBMITTALS

- A. Rock

Pollard Road Stream Crossing Project
At Seaver Brook

Supplemental Specifications - Earthwork

1. The Contractor shall submit the following information to the Engineer and gain approval prior to hauling Rock to the project site.
 - a. Rock source location, name of supplier, and phone number of contact person and samples of the rock to be used.
 - b. Certification of gradation and test results indicating material qualities meeting the specified material requirements.
2. Tests on additional samples may be required by the Engineer to ensure the rock meets Specification. The Contractor will be responsible for the costs of additional test(s) that fail to meet Specifications.

B. Boulders:

1. The Contractor shall submit the following information to the Engineer and gain approval prior to hauling Boulders to the project site.
 - a. Boulder source location, name of supplier, and phone number of contact person and samples of the boulder to be used.
 - b. Range of boulder size along median axis.
 - c. Certification of gradation and test results indicating material qualities meeting the specified material requirements.
2. Tests on additional samples may be required by the Engineer to insure the rock meets Specification. The Contractor will be responsible for the costs of additional test(s) that fail to meet Specifications.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Rock shall conform to the following specifications:

1. Rock shall be imported by the contractor.
2. The Rock shall be washed and free of contaminants prior to being delivered to the site. The least dimension of any Rock shall be not less than $\frac{1}{4}$ its greatest dimension. The Rock shall be resistant to weathering and to water action, and be free from overburden, spoil, shale, structural defects, and organic material.
3. Materials when installed shall meet the following gradations:
 - a. Channel Bed Material which is a blend including:
 - 1) 25% coarse gravel (0.63 inches to 1.26 inches in diameter along the intermediate axis)
 - 2) 35% fine to medium gravel (0.079 inches to 0.63 inches diameter along the intermediate axis)
 - 3) 40% medium to coarse sand (0.01 inches to 0.079 inches diameter along the intermediate axis)
 - b. Bank Rock material which ranges from small to large cobbles (2.5 inches to 10 inches in diameter along the intermediate axis)
 - c. Rock Weir boulders shall range in size from 12 inches to 16 inches in diameter along the intermediate axis

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At Seaver Brook

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4. Unless otherwise allowed, Rock shall have a minimum density of 165 pounds per cubic foot and specific gravity of 2.65 in accordance with ASTM C127, Test Method for Specific Gravity and Absorption of Coarse Aggregate.
 5. Rock shall be free of cracks and fractures in accordance with the referenced standards.
- B. Salvaged Materials
1. Salvaged Bed Material
 - a. The channel bed material removed during the Earthwork portion of construction shall be used as Salvaged Bed Material as shown on the Drawings, except material under and adjacent to any identified invasive plants. Bed material under and adjacent to invasive plants shall be removed with the roots and whole plant and disposed of. Bed material under and adjacent to invasive plants shall not be reused as salvaged fill.
 - b. The Contractor shall be responsible for managing the Salvaged Bed Material on site, maintaining a separate stockpile from the Salvaged Soil, and transporting the salvaged fill to the installation location.
 2. Salvaged Soil
 - a. The soil material removed beyond the brook lateral limits, and above the invert of the existing culvert pipe to facilitate crossing construction shall be used as Salvaged Soil as shown on the Drawings, except material under and adjacent to invasive plants. Soil under and adjacent to invasive plants shall be removed with the roots and whole plant of the invasive plant and disposed of. Soil under and adjacent to invasive plants shall not be reused as Salvaged Soil.
 - b. The Contractor shall be responsible for managing the Salvaged Soil on site, maintaining a separate stockpile from the Salvaged Bed Material, and transporting the Salvaged Soil to the installation location.
- C. Imported Loam
1. Loam fill shall be free of large roots, debris, trash or other deleterious substances.
 2. Loam shall have no particles greater than 3 inches in the maximum dimension.
 3. Loam fill material should be certified by the Engineer as suitable prior to installation in the work.
- D. Boulders
1. Boulders will be imported by the Contractor.
 2. Boulders shall be hard, durable, resistant to weathering and to water action.
 3. Unless otherwise allowed, boulders shall have a minimum density of 165 pounds per cubic foot and specific gravity of 2.65 in accordance with ASTM C127, Test Method for Specific Gravity and Absorption of Coarse Aggregate.
 4. Boulders shall be free of cracks and fractures in accordance to the referenced standards.
 5. The least dimension of any Boulder shall not be less than $\frac{1}{4}$ its greatest dimension.

PART 3 - EXECUTION

3.1 PROTECTION

Pollard Road Stream Crossing Project
At Seaver Brook

Supplemental Specifications - Earthwork

- A. Perform all Earthwork in strict compliance with Section 200 Earthwork, Section 600 Incidental Construction and any other applicable sections of NHDOT 2016 Standard Specifications for Road and Bridge Construction.
- B. Protect existing surface and subsurface features on-site and adjacent to site as follows:
 - 1. Provide barricades, coverings, or other types of protection necessary to prevent damage to existing items indicated to remain in place.
 - 2. Protect and maintain bench marks, monuments or other established reference points and property corners. If disturbed or destroyed, replace at own expense to full satisfaction of Engineer and controlling agency.
 - 3. Verify location of utilities. Omission or inclusion of utility items does not constitute non-existence or definite location. Secure and examine local utility records for location data and call Dig Safe at 1-888-DIG-SAFE (1-888-344-7233).
 - a. Take necessary precautions to protect existing utilities from damage due to any construction activity.
 - b. Repair damages to utility items at Contractor's expense.
 - c. In case of damage, notify Engineer at once so required protective measures may be taken.
 - 4. Maintain free of damage, existing sidewalks, structures, and pavement, not indicated to be removed. Any item known or unknown or not properly located that is inadvertently damaged shall be repaired to original condition. All repairs to be made and paid for by Contractor.
 - 5. Provide full access to public and private premises, fire hydrants, street crossings, sidewalks and other points as designated by Engineer to prevent serious interruption of travel.
 - 6. Maintain stockpiles and excavations in such a manner to prevent inconvenience or damage to structures on-site or on adjoining property.
 - 7. Avoid surcharge or excavation procedures which can result in heaving, caving, or slides.
- C. Salvageable Items: Carefully remove items to be salvaged, and maintain unless otherwise directed by the Engineer.
- D. Dispose of waste materials, legally, off site. Burning, as a means of waste disposal, is not permitted.

3.2 SITE EXCAVATION AND GRADING

- A. The work includes all operations in connection with excavation, borrow, construction of fills and embankments, rough grading, and disposal of excess materials required to attain the finish lines and grades as shown on the Drawings.
- B. Excavation and Grading: Perform as required by the Contract Drawings.
 - 1. Drawings may indicate existing grade, subgrade and finished grade required for construction of Project. Stake all units, structures, piping, roads, parking areas and walks and establish their elevations. Perform other layout work required. Replace property corner markers to original location if disturbed or destroyed.
 - 2. Protection of finish grade: During construction, shape and drain embankment and excavations. Maintain ditches and drains to provide drainage at all times. Protect graded

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areas against action of elements prior to acceptance of work. Reestablish grade where settlement or erosion occurs.

3. Excavations performed shall be contained with silt fences, filter socks, sheet pile or other means to prevent excavated material from entering the brook.
4. Engineer must grant approval to begin excavations following inspection of erosion control measures.
5. Excavate to elevations and dimensions indicated or specified.
6. Removal of obstructions and undesirable materials in excavation includes, but is not necessarily limited to, removal of old foundations, existing construction, logs, riprap, and any other materials which may be concealed beneath the waterline or present grade, as required to perform the Work as indicated on the Drawings. If undesirable material and obstructions are encountered during excavation, remove material and replace as directed by the Engineer.
7. Salvaged Fill consists of Salvaged Bed Material and Salvaged Soil. Varying soil moisture contents will be encountered during the excavation. The Contractor shall be equipped to handle excavation with moisture content ranging from dry to very wet during excavation, handling, loading, transport and disposal. Any material under and adjacent to invasive plants shall be removed with the whole plant and disposed of.
8. Manage Salvaged Fill in the staging area identified on the Drawings so as to be reused according to the Drawings and these Specifications.
9. Excavated materials not earmarked for salvage, stockpile and reuse shall be disposed by the Contractor offsite. The Contractor will be responsible for managing disposal operations within the project site.
10. The Contractor will be responsible for managing the Rock and Boulders on the site and transporting the Rock and Boulders from the staging location to the locations of their installation in the work.
11. Do not carry excavations beyond that shown on the Drawings. No extra compensation will be made to Contractor for excavation beyond the grades shown on the drawings without prior approval by the Engineer
12. Protection of structures: Prevent new and existing structures from becoming damaged due to construction operations. A 10 foot minimum buffer must be maintained between all grading and the existing buildings.
13. Shoring: Shore, sheet pile, slope, or brace excavations as required to prevent them from collapsing. Remove shoring as backfilling progresses but only when banks are stable and safe from caving or collapse.
14. Drainage: Control grading so that ground is pitched to prevent water from running into areas beyond the limits of work. Provide pumping required keeping excavated spaces clear of water during construction as required to facilitate excavation progress.

C. Construct fills as required by the Contract Drawings:

1. Construct embankments and fills at locations and to lines and grades indicated. Completed fill shall correspond to shape of typical cross section or contour indicated regardless of method used to show shape, size, and extent of line and grade of completed work.
2. Provide approved fill material from salvaged onsite sources. Do not place imported topsoil, salvaged bed material and salvaged soil in layers greater than 8 inch loose thickness. Place layers horizontally and compact each layer prior to placing additional fill.

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3. Compact as required to obtain specified density found in applicable sections of NHDOT 2016 Standard Specifications for Road and Bridge Construction. Control moisture for each layer necessary to meet requirements of compaction.

3.3 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing agency to perform field quality-control testing.
- B. Extent of compaction testing will be necessary to assure compliance with Specifications.
- C. Should any compaction density test or subgrade inspection fail to meet Specification requirements, perform corrective work as necessary.
- D. Contractor shall pay for all costs associated with corrective work and retesting resulting from failing compaction density tests.

3.4 COMPACTION DENSITY REQUIREMENTS

- A. Obtain approval from Engineer with regard to suitability of soils and acceptable subgrade prior to subsequent operations.
- B. Provide dewatering system necessary to successfully complete compaction and construction requirements.
- C. Remove frozen, loose, wet, or soft material and replace with approved material if directed by Engineer.
- D. Stabilize subgrade with well graded granular materials if directed by Engineer.
- E. Assure by results of testing that compaction densities comply with the following requirements:

<u>MATERIAL</u>	<u>COMPACTION DENSITY</u>
Channel Fill:	90 percent, ASTM D698
Floodplain Surfaces:	85 percent, ASTM D698

3.5 INSTALLATION

- A. Rock
 1. Slopes to be protected by rock shall be free of brush, trees, stumps and other objectionable material and shall be dressed to a smooth surface. Soft or spongy material shall be removed and replaced with approved material. Filled areas shall be thoroughly compacted.
 2. Rock shall be placed at slopes shown on the Drawings.

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3. The Rock shall be placed so as to secure a rock mass of the thickness, height and length shown on the Drawings, or as staked, with a minimum of voids.
4. All placed Rock material shall be so placed and distributed that there will be an even distribution of all sizes of rock with no local accumulation of either the larger or smaller sizes of rock.
5. The Rock shall be manipulated by suitable equipment or hand labor to insure an even distribution of rock sizes and mass stability.
6. Rock protection shall be placed to its full course thickness at one operation and in such a manner as to avoid displacing the underlying material. Placing of rock protection in layers or by dumping into chutes or by similar methods likely to cause segregation will not be permitted.
7. ***Wash in the fine portion of the Rock gradation to fill underlying void space.***

3.6 EARTHWORK TOLERANCES

A. Slope Grading

1. When completed, the average plane of the slopes shall conform to the slopes indicated on the Drawings, and no point on the completed slopes shall vary from the designated plane by more than 0.5 feet measured at right angles to the slope, unless directed by the Engineer.

END OF SECTION 200.0001