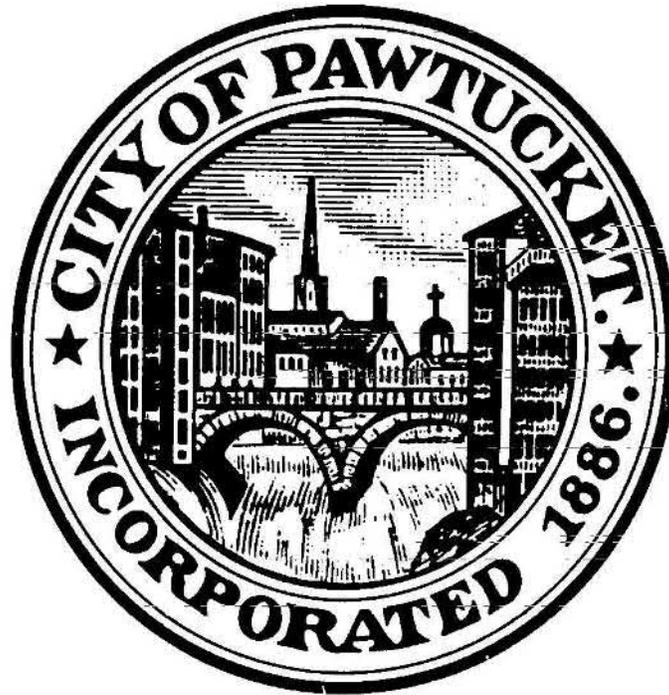


# CITY OF PAWTUCKET

## REQUEST FOR PROPOSALS



**Bid #20-001**  
**TOD District Stormwater Improvements/**  
**Pine Street Green Stormwater**  
**Improvements (GSI)**

June 26, 2019



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## 1.0 - Bid/Solicitation Information

### Schedule

Pre-Bid/Proposal Conference:  No  Yes

July 8, 2019 @ 11:00 AM

\*\*\*\*\* **Mandatory** \*\*\*\*\*

Location:

Public Works Center  
250 Armistice Boulevard  
Pawtucket, RI 02860

Requests for Further Information:

July 18, 2019 @ 4:00 PM

Requests for information or clarification must be made electronically to the attention of:

David Kurowski, Chief of Project Development

E-mail: [dkurowski@pawtucketri.com](mailto:dkurowski@pawtucketri.com)

and

Sean Arruda, Engineer (Fuss & O'Neill, Inc.)

E-mail: [sarruda@fando.com](mailto:sarruda@fando.com)

Please reference the RFP / LOI number on all correspondence. Answers to questions received, if any, will be posted on the internet as an addendum to this bid solicitation.

*RFP Submission Deadline:*

August 8, 2019 at 10:00 AM

**Late submittals will not be considered.**

Proposals must be mailed or hand-delivered in a sealed envelope **marked with the RFP/Bid # and Project Name** to:

Pawtucket City Hall - Purchasing Office  
137 Roosevelt Avenue  
Pawtucket, RI 02860

### **Bonds/Surety Required**

Bid Bond:  No  Yes

Bidder is required to provide a bid surety in the form of a bid bond or certified check payable to the City of Pawtucket in an amount not less than five percent (5%) of the Total Contract Bid Price.

Fidelity Bond:  No  Yes

Performance and Payment Bond:  No  Yes

(Submit upon award of contract)

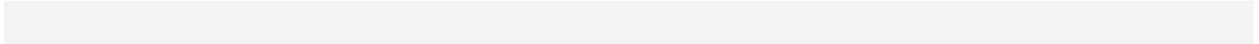
Bidder is required to provide a performance and payment bond as outlined in the City's General Terms & Conditions of Purchase (Appendix B of this RFP) in an amount not less than one hundred percent (100%) of the contract price.

The successful bidder will be required to furnish all insurance documentation as outlined in the attached Purchasing Rules & Regulations and General Terms & Conditions of Purchase.

**Miscellaneous**

The bid process and resulting contract are subject to the Rules and Regulations and General Terms and Conditions of Purchase. Submission of a bid in response to this solicitation is acknowledgement and acceptance of these Rules and Regulations and General Terms and Conditions of Purchase.

The City of Pawtucket reserves the right to award on the basis of cost alone, accept or reject any or all bids, and to act in its best interest including, but not limited to, directly negotiating with any vendor who submits a proposal in response to this RFP and to award a contract based upon the results of those negotiations alone. Proposals found to be technically or substantially non-responsive at any point in the evaluation process will be rejected and not considered further. The City of Pawtucket may, at its sole option, elect to require presentations(s) by bidders clearly in consideration for award.



## 2.0 - Instructions and Notifications to Bidders

- It is the vendor's responsibility to examine all specifications and site conditions thoroughly, and comply fully with specifications and all attached terms and conditions. Vendors must comply with all Federal, State, and City laws, ordinances and regulations, and meet any and all registration requirements where required for contractors as set forth by the State of Rhode Island. Failure to make a complete submission as described herein may result in a rejection of the proposal.
- All costs associated with developing or submitting a proposal in response to this Request, or to provide oral or written clarification of its content shall be borne by the bidder. The City of Pawtucket assumes no responsibility for these costs.
- A submittal may be withdrawn by written request to the Purchasing Agent by the proposer prior to the stated RFP deadline.
- Prior to the proposal deadline established for this RFP, changes may be made to a proposal already received by the City if that vendor makes a request to the Purchasing Agent, in writing, to do so. No changes to a proposal shall be made after the RFP deadline.
- Proposals are considered to be irrevocable for a period of not less than ninety (90) days following the opening date, and may not be withdrawn, except with the express written permission of the Purchasing Agent. Should any vendor object to this condition, the vendor must provide objection through a question and/or complaint to the Purchasing Agent prior to the proposal deadline.
- All pricing submitted will be considered to be firm and fixed unless otherwise indicated herein.
- The vendor has full responsibility to ensure that the proposal arrives at the Purchasing Division Office prior to the deadline set out herein. The City assumes no responsibility for delays caused by the U.S. Postal Service or any other delivery service. Postmarking by the due date will not substitute for actual receipt of response by the due date. Proposals arriving after the deadline may be returned, unopened, to the vendor, or may simply be declared non-responsive and not subject to evaluation, at the sole discretion of the Purchasing Agent. **For the purposes of this requirement, the official time and date shall be that of the time clock in the City of Pawtucket's Purchasing Office.**
- At the time and place fixed for the opening of Bids, the Owner will cause to be opened and publicly read aloud every Bid received within the time set for receiving Bids, irrespective of any irregularities therein. Bidders and other persons properly interested may be present, in person or by representative.
- It is intended that an award pursuant to this Request will be made to a prime contractor, who will assume responsibility for all aspects of the work. Joint venture and cooperative proposals will not be considered, but subcontracts are permitted, provided that their use is clearly indicated in the bidder's proposal, and the subcontractor(s) proposed to be used are identified in the proposal.
- Bidders are advised that all materials submitted to the City of Pawtucket for consideration in response to this Request for Proposals shall be considered to be public records as defined in Title 38 Chapter 2 of the Rhode Island General Laws,

without exception, and may be released for inspection immediately upon request once an award has been made.

- Vendors are responsible for errors and omissions in their proposals. No such error or omission shall diminish the vendor's obligations to the City.
- The City reserves the right to reject any or all proposals, or portions thereof, at any time, with no penalty. The City also has the right to waive immaterial defects and minor irregularities in any submitted proposal at its sole discretion. All material submitted in response to this RFP shall become the property of the City of Pawtucket upon delivery to the Purchasing Agent.
- Bids will be opened publicly at a regularly scheduled purchasing board meeting, the date of which is the same as the RFP submission deadline provided in Section 1.0.
- Interpretations or Addenda: No oral interpretation will be made to any Bidder as to the meaning of the Contract Documents or any part thereof. Every request for such an interpretation shall be made in writing to the City of Pawtucket (hereinafter called the "Owner"). Any inquiry received seven or more days prior to the date fixed for opening of Bids will be given consideration. Every interpretation made to a Bidder will be in the form of an Addendum to the Contract Documents, and when issued, will be on file in the office of the Owner at least five days before Bids are opened. In addition, all Addenda will be mailed to each person holding Contract Documents, but it shall be the Bidder's responsibility to make inquiry as to the Addenda issued. All such Addenda shall become part of the Contract and all Bidders shall be bound by such Addenda, whether or not received by the Bidders.
- Each Bidder shall, upon request of the Owner, submit a detailed financial statement on a form furnish by the Owner for that purpose. The Owner shall have the right to take such steps as it deems necessary to determine the ability of the Bidder to perform his obligations under the Contract and the Bidder shall furnish the Owner all such information and data for this purpose as it may request. The right is reserved to reject any Bid where an investigation of the available evidence or information does not satisfy the Owner that the Bidder is qualified to carry out properly the terms of the Contract.

## **3.0 - Overview**

### **3.1 Project Overview**

The purpose of the project is to reconstruct the section of Pine Street between Goff Avenue and Main Street in order to install green stormwater infrastructure (GSI) practices and reduce the quantity of stormwater discharged to the combined sewer overflow (CSO) system. GSI practices for this project primarily include streetside (bioretention) planters and permeable pavers.

### **3.2 Project Background**

Pine Street will be one of the primary means to access the new train station being developed in Pawtucket as well as the new RIPTA bus hub. The goal of this project is to implement Green Stormwater Infrastructure in order to provide a streetscape that encourages redevelopment of the district around this new development by providing trees and other green space along with parklets. This project will also demonstrate how green stormwater controls could add value to a neighborhood while reducing stormwater volumes.

Funding for the project will be provided through the Narragansett Bay and Watershed Restoration Bond Fund (administered by the Rhode Island Department of Environmental Management), the City of Pawtucket (along with its project partners), the Southeast New England Coastal Watershed Program (SNEP) and the Clean Water State Revolving Fund.

## **4.0 - Scope of Work**

### **4.1 Location**

The location of the proposed construction activity (“the Project”) is shown on the Site Plans Issued for Bid included in this RFP as Appendix E. In general terms, the location of the Project can be described as follows:

- Pine Street right-of-way between its intersections with Goff Avenue and Main Street

### **4.2 General Requirements**

#### **4.2.1 Project Schedule**

Substantial Completion must be achieved within 90 days of Notice to Proceed.

#### **4.2.2 Hours of Work**

Schedule work activities Monday through Friday, 7:30 AM to 4:30 PM.

#### **4.2.3 Pricing**

**CONTRACT BASE BID PRICE:** This lump sum price shall include all overhead, profit, labor, tools, materials, and equipment, and all other incidentals required to finish the work described in the Contract Documents, Drawings and Specifications with the exception of items of work for which Unit Prices are provided and Bid

Alternates. This lump sum price shall be inclusive of Add/Deduct Unit Bid Items at stated quantities and prices indicated on the Pricing Proposal.

**ADD/DEDUCT UNIT BID PRICES:** As part of the Contract Base Bid Price, the Bidder shall carry the quantities listed below at stated quantities and prices indicated on the Pricing Proposal. Each price shall include all overhead, profit, labor, tools, materials, and equipment, and all other incidentals required to finish the work specified for each of the Add/Deduct Unit Bid Items as described for that item of work in the Drawings and Specifications.

The Owner reserves the right to remove these items from the contract totally or in part and to adjust the contract sum to reflect the actual quantities incorporated into the construction as authorized by the Owner. These bid items should not include overhead and profit to complete work other than for these bid items.

**UNIT PRICE BID ITEMS:** Unit Price Bid Items shall include all overhead, profit, labor, tools, materials, and equipment, and all other incidentals required to finish the work specified for each of the Unit Price Bid Items as described for that item of work in the Drawings and Specifications. These bid items should not include overhead and profit to complete work other than for these bid items.

**TOTAL CONTRACT BID PRICE:** The Total Contract Base Bid Price shall be the total of the Contract Base Bid Price and Unit Price Bid Items.

**BID ALTERNATES:** A separate lump sum unit price shall be provided for each Bid Alternate. Each individual lump sum unit price shall include all overhead, profit, labor, tools, materials, and equipment, and all other incidentals required to finish the work specified for each of the Bid Alternate Items as described for that item of work in the Drawings and Specifications.

Bid Alternate prices include replacing specific conventional bioretention planters with shallow bioretention planters. If the bid alternate for the shallow bioretention planters is authorized, it will replace the respective conventional bioretention planter. As a result, the bid alternate unit price for the selected shallow bioretention planter(s) will be added to the Total Contract Bid Price and the unit price for the respective conventional bioretention planter will be deducted from the Total Contract Bid Price.

#### **4.2.4 MBE/WBE Requirements**

Bidders are advised that this project is subject to Chapter 37-14.1 of the Rhode Island General Laws, and regulations promulgated thereunder, which require that ten percent of the dollar value of work performed on the project be performed by minority business enterprises. The undersigned bidder acknowledges its obligation to meet the ten percent (10%) requirement under these regulations. The MBE Utilization Plan is included in Appendix H.

#### **4.2.5 Prevailing Wage Requirements**

Bidders are advised that payment of the local prevailing wage, as established by the Rhode Island Department of Labor and Training and the secretary of labor of the United States of America in accordance with the Davis-Bacon Act, as amended [40 U.S.C. section 276a], is a requirement of this project as outlined in Appendix C. A

copy of the current prevailing wage decision is included in this document as Appendix C. Bidders are advised that the City will not amend this document prior to the bid due date for the purpose of notifying bidders of a superseding wage decision(s). Bidders are expected to account for the prevailing wage rates applicable to this project in the formulation of their bid.

Contractor/subcontractor(s) shall submit completed RI Certified Weekly Payroll forms listing all employees working on the job-site to the awarding authority on a monthly basis for all work completed in the preceding month. Substituting this form with company payroll forms, or other state or federal forms is not acceptable.

#### **4.2.6 Payment Requisitions**

The Contractor shall prepare draft requisitions for payment for the Project Engineer's review and approval and revise the requisitions as necessary prior to submission to the Owner. Payment requisitions shall be prepared using AIA Standard Forms G702 and G703.

The Owner reserves the right to withhold 5% of each progressive request for payment as retainage. The Owner shall release retainage payments per the terms outlined in Section 12.0 of this RFP.

#### **4.3 Scope Detail**

The scope of work is defined comprehensively in the Drawings and Specifications issued for bid, which are incorporated into this RFP as Appendices E and F, respectively.

## **5.0 - Insurance**

The vendor shall maintain and keep in force such comprehensive general liability insurance as shall protect them from claims which may arise from operations under any contract entered into with the City of Pawtucket, whether such operations be by themselves or by anyone directly or indirectly employed by them.

The amounts of insurance shall be not less than \$1,000,000.00 combined single limit for any one occurrence covering both bodily injury and property damage, including accidental death.

The City of Pawtucket shall be named as additional insured on the vendor's General Liability Policy.

The vendor shall maintain and keep in force such Workers' compensation insurance limits as required by the statutes of the State of Rhode Island, and Employer's Liability with limits no less than \$500,000.

## **6.0 - Acknowledgement of Risk & Hold Harmless Agreement**

In addition to the indemnity provisions in the City of Pawtucket's Terms and Conditions of Purchase and to the fullest extent permitted by law, the selected vendor, its officers, agents, servants, employees, parents, subsidiaries, partners, officers, directors, attorneys, insurers, and/or affiliates (Releasors) agree to release, waive, discharge and covenant not to sue the City of Pawtucket, its officers, agents, servants or employees (Releasees) from any and all liability, claims, cross-claims, rights in law or in equity, agreements, promises demands, actions and causes of action whatsoever arising out of or related to any loss, damage, expenses (including without limitation, all legal fees, expenses, interest and penalties) or injury (including death), of any type, kind or nature whatsoever, whether based in contract, tort, warranty, or other legal, statutory, or equitable theory of recovery, which relate to or arise out of the Releasors use of or presence in and/or on City of Pawtucket property. The Releasors agree to defend, indemnify and hold harmless the Releasees from (a) any and all claims, loss, liability, damages or costs by any person, firm, corporation or other entity claiming by, through or under Releasors in any capacity whatsoever, including all subrogation claims and/or claims for reimbursement, including any court costs and attorneys' fees, that may incur due to Releasors use of or presence in and on City of Pawtucket property; and (b) any and all legal actions, including third-party actions, cross-actions, and/or claims for contribution and/or indemnity with respect to any claims by any other persons, entities, parties, which relate to or arise out of Releasors use of or presence in and on City of Pawtucket property.

The Releasors acknowledge the risks that may be involved and hazards connected with use of or presence in and on City of Pawtucket property but elect to provide services under any contract with the City of Pawtucket with full knowledge of such risks. Releasors also acknowledge that any loss, damage, and/or injury sustained by Releasors is not covered by Releasees insurance. Releasors agree to become fully aware of any safety risks involved with the performance of services under any contract with the City of Pawtucket and any safety precautions that need to be followed and agree to take all such precautions.

The duty to indemnify and/or hold harmless the City of Pawtucket shall not be limited by the insurance required under the City of Pawtucket Terms and Conditions of Purchase.

## **7.0 - Additional Insurance Requirements**

In addition to the insurance provisions in the City of Pawtucket Terms and Conditions of Purchase, the liability insurance coverage, except Professional Liability, Errors and Omissions or Workers' Compensation insurance required for performance of a contract with the City of Pawtucket shall include the City of Pawtucket, its divisions, officers and employees as Additional Insureds but only with respect to the selected vendor's activities under the contract. The insurance required through a policy or endorsement shall include:

- A. a Waiver of Subrogation waiving any right to recovery the insurance company may have against the City of Pawtucket; and
- B. a provision that the selected vendor's insurance coverage shall be primary with respect to any insurance, self insurance or self retention maintained by the City of Pawtucket and that any insurance, self insurance or self retention maintained by the City of Pawtucket shall be in excess of the selected vendor's insurance and shall not contribute.

There shall be no cancellation, material change, potential exhaustion of aggregate limits or non-renewal without thirty (30) days written notice from the selected vendor or its insurer(s) to the City of Pawtucket's Purchasing Agent. Any failure to comply with the reporting provision of this clause shall be grounds for immediate termination of the contract with the City of Pawtucket.

Insurance coverage required under the contract shall be obtained from insurance companies acceptable to the City of Pawtucket. The selected vendor shall pay for all deductibles, self insured retentions and/or self insurance included hereunder.

The City of Pawtucket's Purchasing Agent reserves the right to consider and accept alternative forms and plans of insurance or to require additional or more extensive coverage for any individual requirement.

## 8.0 - Proposal Content and Organization

All bids must be submitted on the forms supplied in Section 11.0 and shall be subject to all requirements of the Contract Documents, including these instructions to bidders. All bids must be regular in every respect and no interlineations, excisions or special conditions shall be made or included in the Bid Form by the Bidder. Pricing must include all costs as specified in this solicitation.

The Owner may consider as irregular any Bid on which there is an alteration of or departure from the Bid Form hereto attached and at its option may reject the same.

Bid Documents, including the Bid, the Bid Bond, the Non-Collusion Affidavit, the Anti-Kickback Acknowledgment and subcontractor forms shall be enclosed in a sealed envelope which shall be clearly labeled with the words, "**TOD District Stormwater Improvements / Pine Street Green Stormwater Improvements (GSI), Bid #20-001**", as well as name of Bidder, and date of bid opening.

All Bid Forms must be signed.

If the Contract is awarded, it will be awarded by the Owner to a responsible Bidder on the basis of the lowest qualified bid price and the selected Alternative Bid items, if any.

Vendors must include on the Bid Form a list of at least four (4) references with whom they have contracted to do similar work by including the company name, telephone number, contact person, and number of years they have served this customer. Preferably, references should be municipalities which are of approximate size as the City of Pawtucket.

If any subcontractors are to be used in the performance of any work contracted for under this RFP, please list their name(s), contractor license #, address and phone number, and specific description of the subcontract work to be performed. See Proposed Subcontractors form in Appendix H.

Two (2) copies of your proposal—one (1) original hard copy and one digital (1) copy on flash drive or similar format—must be submitted at the time of submission. Proposals must be in the following format:

- Bid Form
- Bid Bond
- Non-Collusion Affidavit (After Bid Form)
- Anti-Kickback Acknowledgment (Appendix A)
- Proposed Subcontractors Form (Appendix H)
- EPA DBE Subcontractor Performance Form and Subcontractor Utilization Form (as included in Appendix G)

Please state any and all additions, deletions, and exceptions, if any, that you are taking to any portion of this proposal. If not addressed specifically, the City of Pawtucket assumes that the vendor will adhere to all terms and conditions listed in this RFP.

Submission of a proposal is acknowledgement and acceptance of the City of Pawtucket's Purchasing Rules and Regulations and General Terms and Conditions of Purchase.

## **9.0 - Evaluation Criteria**

The evaluation of proposals will be conducted in a time frame convenient to the City.

The City of Pawtucket reserves the right to award on the basis of cost alone, accept or reject any or all proposals, and to otherwise act in its best interest including, but not limited to, directly negotiating with any Vendor who submits a proposal in response to this RFP and to award a contract based upon the results of those negotiations alone. The City reserves the right to consider as unqualified to do the work of general construction any Bidder who does not habitually perform with his own forces the major portions of the work involved in construction of the Improvements embraced in this Contract.

Further, the City reserves the right to waive irregularities it may deem minor in its consideration of proposals.

Proposals found to be technically or substantially non-responsive at any point in the evaluation process will be rejected and not considered further. The City of Pawtucket may elect to require presentations(s) by vendors in consideration for award.

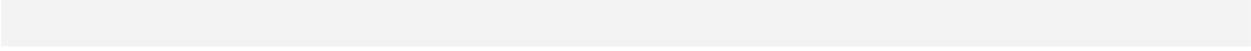
Proposals will be evaluated in three (3) phases:

1. The first phase is an initial review to determine if the proposal, as submitted, is complete. To be complete, a proposal must meet all the requirements of this RFP.
2. The second phase is an in-depth analysis and review of bid prices and qualifications. Basis of bid award will be to the qualified bidder submitting the lowest apparent bid price, as selected solely by the Owner. The Owner reserves the right to select the lowest bid price that consists of the Total Contract Bid Price and any combination of bid alternates that would be the most advantageous to the Owner in comparison to the Owner's project budget.

In the event that the City requires further information and/or a demonstration of any equipment or process offered in any proposal, all vendors asked for same will do so at no cost to the City.

## **10.0 - Miscellaneous**

- Bidders/Contractors shall at all times comply with all federal, state, and local laws, ordinances and regulations and shall defend, indemnify and save harmless the City of Pawtucket against any claims arising from the violation of any such laws, ordinances and regulations, including but not limited to challenges as to the legality of any and all vendor installations.
- The City is exempt from the payment of the Rhode Island State Sales Tax under the 1956 General Laws of the State of Rhode Island, 44-18-30, Paragraph 1, as amended. Further, the City is also exempt from the payment of any excise or federal transportation taxes. The proposal prices submitted must be exclusive of same, and will be so construed.
- The City of Pawtucket reserves the right to cancel an agreement with the Vendor with thirty (30) days written notice and to award the contract to the next highest evaluated bidder.
- The City of Pawtucket reserves the right to renegotiate the terms of this contract with the Vendor for subsequent years provided the Vendor agrees to the contract terms for the renewal period.

- The payment and performance of any obligations under this contract for years beyond the first fiscal year are subject to the availability of funds.
  - The City reserves the right to pay the selected Vendor via credit card at its sole discretion.
  - Bidders/Contractors shall comply with the requirements included in the SRF Contract Documents that are included as part of this Request for Proposals.
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## 11.0 – Bid Form

### 20-001 –TOD District Stormwater Improvements / Pine Street Green Stormwater Improvements (GSI)

Date: \_\_\_\_\_

Submitted By: \_\_\_\_\_

(Include Name, Address and Telephone No.) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name and remittance address that will appear on invoices:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Physical address of business:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

#### General Information

Is your firm a sole proprietorship doing business under a different name? \_\_\_\_ Yes \_\_\_\_ No

If yes, please indicate sole proprietorship, a name, and the name you are doing business under.

\_\_\_\_\_  
\_\_\_\_\_

Is your firm incorporated? \_\_\_\_ Yes \_\_\_\_ No

Will any of the work spelled out in this bid be outsourced? \_\_\_\_ Yes \_\_\_\_ No

If so, please explain below:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Have you or your firm been subject to suspension, debarment or criminal conviction by the City of Pawtucket, the State of Rhode Island, or any other jurisdiction?

Yes: \_\_\_\_\_ No: \_\_\_\_\_

Have the City of Pawtucket and/or the State of Rhode Island ever terminated contracts with your firm for cause?

Yes: \_\_\_\_\_ No: \_\_\_\_\_

Has your firm ever withdrawn from a contract with the City of Pawtucket and/or the State of Rhode Island during its performance?

Yes: \_\_\_\_\_ No: \_\_\_\_\_

Have you or your firm been involved in litigation against the City of Pawtucket and/or the State of Rhode Island.

Yes: \_\_\_\_\_ No: \_\_\_\_\_

If you answered yes to any of the foregoing, please explain the circumstances below. If you or your firm has been involved in litigation against the City of Pawtucket and/or the State of Rhode Island, please include the case caption, case number and status. (If more space is needed, please attach separate sheet and submit with the bid.)

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Is your company bonded? Yes \_\_\_\_ No \_\_\_\_

Please describe the nature and extent of all insurance coverage:

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Addenda

The following Addenda have been received. The noted modifications to the Bidding Documents have been considered and all costs are included in the Bid Sum.

Addendum #1, Dated: \_\_\_\_\_

Addendum #2, Dated: \_\_\_\_\_

Addendum #3, Dated: \_\_\_\_\_

References

Please list at least four (4) companies/municipalities with whom you have contracted to provide similar services. Preferably, references should be municipalities which are of approximate size as the City of Pawtucket, and a website address should be included if available.

Reference #1  
Company Name: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Telephone #: \_\_\_\_\_  
Contract Dates: \_\_\_\_\_ To \_\_\_\_\_  
Website Address: \_\_\_\_\_

Reference # 2  
Company Name: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Telephone #: \_\_\_\_\_  
Contract Dates: \_\_\_\_\_ To \_\_\_\_\_  
Website Address: \_\_\_\_\_

Reference # 3  
Company Name: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Telephone #: \_\_\_\_\_  
Contract Dates: \_\_\_\_\_ To \_\_\_\_\_  
Website Address: \_\_\_\_\_

Reference # 4  
Company Name: \_\_\_\_\_  
Contact Person: \_\_\_\_\_ Telephone #: \_\_\_\_\_  
Contract Dates: \_\_\_\_\_ To \_\_\_\_\_  
Website Address: \_\_\_\_\_

**Pricing Proposal**

**20-001**

**1.00 OFFER:**

- A. Having examined the Place of the Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by Fuss & O'Neill, Inc. (Engineer for the above mentioned project) and the City of Pawtucket, we, the undersigned, hereby offer to enter into a Contract to perform the Work, **TOD District Stormwater Improvements/ Pine Street Green Stormwater Improvements (GSI)**, for the amount indicated below, subject to the additions and deductions according to the terms of the Contract Documents and as stated below. The undersigned will provide all necessary and proper material, machinery, equipment, facilities, and means to complete the Work.
- B. The undersigned hereby understands that the City of Pawtucket (Owner) has the right to reject any and all bids and to award the contract in the best interests of the Owner. The Owner reserves the right to award the entire project or delete portions of the work to funds available, whichever is in the best interest of the Owner.
- C. The undersigned also understands that the contract must be carried out in strict accordance with the contract documents.
- D. The undersigned bidder acknowledges that this project is subject to Chapter 37-14.1 of the Rhode Island General Laws, and regulations promulgated thereunder, which require that ten percent of the dollar value of work performed on the project be performed by minority business enterprises. The undersigned bidder acknowledges its obligation to meet the ten percent (10%) requirement under these regulations.
- E. The undersigned bidder acknowledges that payment of the local prevailing wage, as established by the Rhode Island Department of Labor and Training and the secretary of labor of the United States of America in accordance with the Davis-Bacon Act, as amended [40 U.S.C. section 276a], is a requirement of this project.
- F. The Contract Base Bid Price shall include the following lump sum bid price. This lump sum price shall include all overhead, profit, labor, tools, materials, and equipment, and all other incidentals required to finish the work described in the Contract Documents, Drawings and Specifications with the exception of items of work for which Unit Prices are provided and Bid Alternates. This lump sum price shall be inclusive of Add/Deduct Unit Bid Items at stated quantities and prices indicated on the Pricing Proposal. (Note: the price must be written in words and figures. In case of discrepancy, the amount shown in words will govern.)

**Contract Base Bid Price (Lump Sum):**

\$.....dollars,  
(amount in words)

(\$.....) in lawful money of the United States of America and,  
(amount in figures)

- G. Add/Deduct Unit Bid Items: The following add/deduct unit bid prices are for add/deduct purposes only. As part of the Contract Base Bid Price, the Bidder shall carry the quantities listed below at stated quantities and prices indicated on the Pricing Proposal. Each price shall include all overhead, profit, labor, tools, materials, and equipment, and all other incidentals required to finish the work specified for each of the Add/Deduct Unit Bid Items as described for that item of work in the Drawings and Specifications.



**Unit Price Bid Items** (Note: the unit price must be written in words and figures. In case of discrepancy, the amount shown in words will govern.)

<u>Item No.</u>	<u>Item Description</u>	<u>Unit</u>	<u>Unit Price Words &amp; Figures</u>	<u>Quantity</u>	<u>Amount</u>
UP-1	Bioretention Planter No. 1	Each	_____ _____ Dollars and _____ Cents (\$_____)	1	\$_____
UP-2	Bioretention Planter No. 2	Each	_____ _____ Dollars and _____ Cents (\$_____)	1	\$_____
UP-3	Bioretention Planter No. 3	Each	_____ _____ Dollars and _____ Cents (\$_____)	1	\$_____
UP-4	Bioretention Planter No. 4	Each	_____ _____ Dollars and _____ Cents (\$_____)	1	\$_____
UP-5	Bioretention Planter No. 5	Each	_____ _____ Dollars and _____ Cents (\$_____)	1	\$_____
UP-6	Bioretention Planter No. 6	Each	_____ _____ Dollars and _____ Cents (\$_____)	1	\$_____
UP-7	Bioretention Planter No. 7	Each	_____ _____ Dollars and _____ Cents (\$_____)	1	\$_____
UP-8	Permeable Pavers	SF	_____ _____ Dollars and _____ Cents (\$_____)	1,535	\$_____
		SF	_____ _____ Dollars and _____ Cents (\$_____)	3,275	\$_____
UP-9	Standard-Duty Cement Concrete Sidewalk		_____ _____ Dollars and _____ Cents (\$_____)		
UP-10	Heavy-Duty Cement Concrete Sidewalk	SF	_____ _____ Dollars and _____ Cents (\$_____)	1,285	\$_____

- I. Total Contract Bid Price: The Total Contract Base Bid Price shall be the total of the Contract Base Bid Price and Unit Price Bid Items. (Note: the price must be written in words and figures. In case of discrepancy, the amount shown in words will govern.)

**Total Contract Bid Price (Lump Sum):**

\$.....dollars,  
(amount in words)

(\$.....) in lawful money of the United States of America and,  
(amount in figures)

**1.01 BID ALTERNATES:**

- A. A separate lump sum unit price shall be provided for each Bid Alternate. Each individual lump sum unit price shall include all overhead, profit, labor, tools, materials, and equipment, and all other incidentals required to finish the work specified for each of the Bid Alternate Items as described for that item of work in the Drawings and Specifications.

Alternates will be executed at the Owner’s option. One or more alternates may be chosen. Accepted Alternates will be listed in the Owner/Contractor Agreement.

Alternates as quoted are for provision of adjustments to the Total Contract Bid Price prior to Contract Award. The Bidder shall indicate in the appropriate field whether the Alternate results in an ADD or DEDUCT to the Base Bid unit price. The Alternate ADD or DEDUCT indicated will adjust the Base Bid unit price by the stated amount, not replace the Base Bid unit price, provided that the Alternate is selected by the Owner.

**Bid Alternate Items** (Note: the unit price for each item must be written in words and figures. In case of discrepancy, the amount shown in words will govern.)

<u>Item No.</u>	<u>Item Description</u>	<u>Unit</u>	<u>Unit Price Words &amp; Figures</u>	<u>Quantity</u>	<u>ADD or DEDUCT</u>	<u>Amount</u>
ALT-1	Parklet B Trellis	LS	_____ Dollars and _____ Cents (\$_____)	1	_____	\$_____
ALT-2	Bench	Each	_____ Dollars and _____ Cents (\$_____)	2	_____	\$_____
ALT-3	Picnic Table	Each	_____ Dollars and _____ Cents (\$_____)	3	_____	\$_____

<u>Item No.</u>	<u>Item Description</u>	<u>Unit</u>	<u>Unit Price Words &amp; Figures</u>	<u>Quantity</u>	<u>ADD or DEDUCT</u>	<u>Amount</u>
<b>ALT-4</b>	<b>Bioretention Planter No. 2 (Shallow)</b>	Each	_____	1	_____	\$ _____
			_____ Dollars and _____ Cents (\$ _____)			
<b>ALT-5</b>	<b>Bioretention Planter No. 3 (Shallow)</b>	Each	_____	1	_____	\$ _____
			_____ Dollars and _____ Cents (\$ _____)			
<b>ALT-6</b>	<b>Bioretention Planter No. 4 (Shallow)</b>	Each	_____	1	_____	\$ _____
			_____ Dollars and _____ Cents (\$ _____)			
<b>ALT-7</b>	<b>Bioretention Planter No. 5 (Shallow)</b>	Each	_____	1	_____	\$ _____
			_____ Dollars and _____ Cents (\$ _____)			
<b>ALT-8</b>	<b>Bioretention Planter No. 6 (Shallow)</b>	Each	_____	1	_____	\$ _____
			_____ Dollars and _____ Cents (\$ _____)			

B. We have included herewith, the bid form including base bid, unit price, bid alternates, and add/deduct unit bid items in addition to the required security deposit or Bid Bond as required by the Instruction to Bidders.

## 2.00 ACCEPTANCE:

If this Bid is accepted within the time stated in the contract documents, and we fail to commence the Work, the Bid Bond shall be forfeited as damages to the Owner by reason of our failure, limited in amount to the lesser of the face value of the Bid Bond or the difference between this Bid and the Bid upon which the Contract is executed.

In the event our Bid is not accepted within the time stated in the contract documents, the required Bid Bond shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

The undersigned bidder acknowledges that this project is subject to Chapter 37-14.1 of the Rhode Island General Laws, and regulations promulgated thereunder, which require that ten percent of the dollar value of work performed on the project be performed by minority business enterprises. The undersigned bidder acknowledges its obligation to meet the ten percent (10%) requirement under these regulations.

The City of Pawtucket reserves the right to increase or decrease the quantities stated in the bid at the unit prices quoted.

3.00 BID FORM SIGNATURE(S)

The Corporate Seal of

---

(Bidder - please print the full name of your Proprietorship, Partnership, or Corporation)

was hereunto affixed in the presence of:

---

(Authorized signing officer      Title)

(Seal)

---

(Authorized signing officer      Title)

If the Bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

**NON-COLLUSION AFFIDAVIT OF PRIME BIDDER**

State of \_\_\_\_\_ )  
 ) .ss  
County of \_\_\_\_\_ )

\_\_\_\_\_,  
being first duly sworn, deposes and says that;

(1) He is \_\_\_\_\_ (owner, partner, officer, representative or agent) \_\_\_\_\_ of \_\_\_\_\_, the BIDDER that has submitted the attached bid;

(2) He is fully informed respecting the preparation and contents of the attached Bid and all pertinent circumstances respecting such Bid;

(3) Such Bid is genuine and is not a collusive or sham Bid;

(4) Neither the said BIDDER nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including the affiant, has in any way colluded, conspired or agreed, directly or indirectly, with any other BIDDER, firm or person to submit a collusive or sham bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such a contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other BIDDER, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other BIDDER, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Local Government or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the BIDDER or any of its agents, representatives, owners, employees or parties in interest including this affiant.

(Signed) \_\_\_\_\_  
\_\_\_\_\_  
(Title)

Subscribed and sworn to before me  
This \_\_\_\_\_ Day of \_\_\_\_\_, 20 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

My Commission Expires \_\_\_\_\_

## CERTIFICATE OF COMPLIANCE WITH TAX LAWS

I, \_\_\_\_\_ of \_\_\_\_\_, certify under  
*(principal)* *(corporation)*  
pains and penalties of perjury that said corporation has complied with all the laws of the State of Rhode Island and  
Providence Plantations relating to taxes.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Federal Tax Identification Number

END OF SECTION

## **12 – General Conditions – AIA Document A201**

### **GENERAL CONDITIONS**

#### **AIA DOCUMENT A201, 2007 EDITION**

### **PART I – GENERAL**

#### **DESCRIPTION**

- A. AIA Document A201, General Conditions of the Contract for Construction, Sixteenth Edition, 2007.

# DRAFT AIA® Document A201™ - 2007

## General Conditions of the Contract for Construction

for the following PROJECT:

(Name and location or address)

<< ->>  
<< >>

THE OWNER:

(Name, legal status and address)

<< >><< >>  
<< >>

THE ARCHITECT:

(Name, legal status and address)

<< >><< >>  
<< >>

### ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

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## ARTICLE 1 GENERAL PROVISIONS

### § 1.1 BASIC DEFINITIONS

#### § 1.1.1 THE CONTRACT DOCUMENTS

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding requirements.

#### § 1.1.2 THE CONTRACT

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

#### § 1.1.3 THE WORK

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

#### § 1.1.4 THE PROJECT

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by separate contractors.

#### § 1.1.5 THE DRAWINGS

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules and diagrams.

#### § 1.1.6 THE SPECIFICATIONS

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

#### § 1.1.7 INSTRUMENTS OF SERVICE

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

#### § 1.1.8 INITIAL DECISION MAKER

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2 and certify termination of the Agreement under Section 14.2.2.

### § 1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

### § 1.3 CAPITALIZATION

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles or (3) the titles of other documents published by the American Institute of Architects.

### § 1.4 INTERPRETATION

In the interest of brevity the Contract Documents frequently omit modifying words such as “all” and “any” and articles such as “the” and “an,” but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

### § 1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

§ 1.5.1 The Architect and the Architect’s consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the Architect’s or Architect’s consultants’ reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors and material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers may not use the Instruments of Service on other projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and the Architect’s consultants.

### § 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

## ARTICLE 2 OWNER

### § 2.1 GENERAL

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner’s approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term “Owner” means the Owner or the Owner’s authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of or enforce mechanic’s lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner’s interest therein.

### § 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 Prior to commencement of the Work, the Contractor may request in writing that the Owner provide reasonable evidence that the Owner has made financial arrangements to fulfill the Owner’s obligations under the Contract. Thereafter, the Contractor may only request such evidence if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) a change in the Work materially changes the Contract Sum; or (3) the Contractor identifies in writing a reasonable concern regarding the Owner’s ability to make payment when due. The Owner shall furnish such evidence as a condition precedent to commencement or continuation of the Work or the portion of the Work affected by a material change. After the Owner furnishes the evidence, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.2 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.2.3 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.2.4 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.2.5 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

### § 2.3 OWNER'S RIGHT TO STOP THE WORK

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

### § 2.4 OWNER'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

## ARTICLE 3 CONTRACTOR

### § 3.1 GENERAL

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

### § 3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.2.3, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These

obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall make Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

### § 3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for the jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required means, methods, techniques, sequences or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

### § 3.4 LABOR AND MATERIALS

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

### § 3.5 WARRANTY

The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

### § 3.6 TAXES

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

### § 3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 **Concealed or Unknown Conditions.** If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

### § 3.8 ALLOWANCES

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 Allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;

- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 Whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

### § 3.9 SUPERINTENDENT

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect to reply within the 14 day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

### § 3.10 CONTRACTOR'S CONSTRUCTION SCHEDULES

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 3.10.2 The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval. The Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

### § 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

### § 3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such written notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. The Contractor shall not be required to provide professional services in violation of applicable law. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall cause such services or certifications to be provided by a properly licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

### § 3.13 USE OF SITE

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

### § 3.14 CUTTING AND PATCHING

§ 3.14.1 The Contractor shall be responsible for cutting, fitting or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting and patching shall be restored to the condition existing prior to the cutting, fitting and patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work.

### § 3.15 CLEANING UP

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and Owner shall be entitled to reimbursement from the Contractor.

### § 3.16 ACCESS TO WORK

The Contractor shall provide the Owner and Architect access to the Work in preparation and progress wherever located.

### § 3.17 ROYALTIES, PATENTS AND COPYRIGHTS

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for such defense or loss when a particular design, process or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications or other documents prepared by the Owner or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

### § 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

## ARTICLE 4 ARCHITECT

### § 4.1 GENERAL

§ 4.1.1 The Owner shall retain an architect lawfully licensed to practice architecture or an entity lawfully practicing architecture in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 4.1.2 Duties, responsibilities and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified or extended without written consent of the Owner, Contractor and Architect. Consent shall not be unreasonably withheld.

§ 4.1.3 If the employment of the Architect is terminated, the Owner shall employ a successor architect as to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

#### § 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, except as provided in Section 3.3.1.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

#### § 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5 and 3.12. The Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, of any construction means, methods,

techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more project representatives to assist in carrying out the Architect's responsibilities at the site. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

## ARTICLE 5 SUBCONTRACTORS

### § 5.1 DEFINITIONS

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

### § 5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

§ 5.2.1 Unless otherwise stated in the Contract Documents or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to any such proposed person or entity or (2) that the Architect requires additional time for review. Failure of the Owner or Architect to reply within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person or entity previously selected if the Owner or Architect makes reasonable objection to such substitution.

### § 5.3 SUBCONTRACTUAL RELATIONS

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

### § 5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon such assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

## ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

### § 6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10, 11 and 12.

## § 6.2 MUTUAL RESPONSIBILITY

§ 6.2.1 The Contractor shall afford the Owner and separate contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner and each separate contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

## § 6.3 OWNER'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

# ARTICLE 7 CHANGES IN THE WORK

## § 7.1 GENERAL

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor and Architect; a Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor; an order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

## § 7.2 CHANGE ORDERS

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

### § 7.3 CONSTRUCTION CHANGE DIRECTIVES

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.7.

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.6 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

- .1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- .2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the Work; and
- .5 Additional costs of supervision and field office personnel directly attributable to the change.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be

reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

#### § 7.4 MINOR CHANGES IN THE WORK

The Architect has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect and shall be binding on the Owner and Contractor.

### ARTICLE 8 TIME

#### § 8.1 DEFINITIONS

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

#### § 8.2 PROGRESS AND COMPLETION

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

#### § 8.3 DELAYS AND EXTENSIONS OF TIME

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by delay authorized by the Owner pending mediation and arbitration; or by other causes that the Architect determines may justify delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

### ARTICLE 9 PAYMENTS AND COMPLETION

#### § 9.1 CONTRACT SUM

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

#### § 9.2 SCHEDULE OF VALUES

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit to the Architect, before the first Application for Payment, a schedule of values allocating the entire Contract Sum to the various portions of the Work and prepared in such form and supported by such data to substantiate its accuracy as

the Architect may require. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

### § 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or material supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage and transportation to the site for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

### § 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion and to specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

### § 9.5 DECISIONS TO WITHHOLD CERTIFICATION

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to

make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a separate contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;  
or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.3 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Architect will reflect such payment on the next Certificate for Payment.

#### § 9.6 PROGRESS PAYMENTS

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor no later than seven days after receipt of payment from the Owner the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and material and equipment suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.5 Contractor payments to material and equipment suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors and suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

## § 9.7 FAILURE OF PAYMENT

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' written notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay and start-up, plus interest as provided for in the Contract Documents.

## § 9.8 SUBSTANTIAL COMPLETION

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

## § 9.9 PARTIAL OCCUPANCY OR USE

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer as required under Section 11.3.1.5 and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

## § 9.10 FINAL COMPLETION AND FINAL PAYMENT

§ 9.10.1 Upon receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents; or
- .3 terms of special warranties required by the Contract Documents.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

## ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

### § 10.1 SAFETY PRECAUTIONS AND PROGRAMS

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Contract.

### § 10.2 SAFETY OF PERSONS AND PROPERTY

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

§ 10.2.3 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent sites and utilities.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

#### § 10.2.8 INJURY OR DAMAGE TO PERSON OR PROPERTY

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

#### § 10.3 HAZARDOUS MATERIALS

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Owner and Architect in writing.

§ 10.3.2 Upon receipt of the Contractor's written notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants and agents and employees of any of them from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from

performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall indemnify the Contractor for all cost and expense thereby incurred.

#### § 10.4 EMERGENCIES

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

### ARTICLE 11 INSURANCE AND BONDS

#### § 11.1 CONTRACTOR'S LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. An

additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

§ 11.1.4 The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect's consultants as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations.

#### § 11.2 OWNER'S LIABILITY INSURANCE

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance.

#### § 11.3 PROPERTY INSURANCE

§ 11.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

§ 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.

§ 11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance that will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

§ 11.3.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

§ 11.3.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

#### § 11.3.2 BOILER AND MACHINERY INSURANCE

The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

### § 11.3.3 LOSS OF USE INSURANCE

The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

§ 11.3.4 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

§ 11.3.5 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

§ 11.3.6 Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

### § 11.3.7 WAIVERS OF SUBROGATION

The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other causes of loss to the extent covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

§ 11.3.8 A loss insured under the Owner's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

§ 11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.

## § 11.4 PERFORMANCE BOND AND PAYMENT BOND

§ 11.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

§ 11.4.2 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

## ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

### § 12.1 UNCOVERING OF WORK

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

### § 12.2 CORRECTION OF WORK

#### § 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

#### § 12.2.2 AFTER SUBSTANTIAL COMPLETION

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the Owner to do so unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.4.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction, whether completed or partially completed, of the Owner or separate contractors caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct

the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

#### § 12.3 ACCEPTANCE OF NONCONFORMING WORK

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

### ARTICLE 13 MISCELLANEOUS PROVISIONS

#### § 13.1 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

#### § 13.2 SUCCESSORS AND ASSIGNS

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns and legal representatives to covenants, agreements and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate such assignment.

#### § 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

#### § 13.4 RIGHTS AND REMEDIES

§ 13.4.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed or available by law.

§ 13.4.2 No action or failure to act by the Owner, Architect or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach there under, except as may be specifically agreed in writing.

#### § 13.5 TESTS AND INSPECTIONS

§ 13.5.1 Tests, inspections and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection or approval by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure including those of repeated procedures and compensation for the Architect's services and expenses shall be at the Contractor's expense.

§ 13.5.4 Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.5.5 If the Architect is to observe tests, inspections or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.5.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

#### § 13.6 INTEREST

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as the parties may agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

#### § 13.7 TIME LIMITS ON CLAIMS

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the time period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all claims and causes of action not commenced in accordance with this Section 13.7.

### ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

#### § 14.1 TERMINATION BY THE CONTRACTOR

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, repeated suspensions, delays or interruptions of the entire Work by the Owner as described in Section 14.3 constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' written notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

## § 14.2 TERMINATION BY THE OWNER FOR CAUSE

### § 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the above reasons exist, the Owner, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

## § 14.3 SUSPENSION BY THE OWNER FOR CONVENIENCE

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was or would have been so suspended, delayed or interrupted by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

## § 14.4 TERMINATION BY THE OWNER FOR CONVENIENCE

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

## ARTICLE 15 CLAIMS AND DISPUTES

### § 15.1 CLAIMS

#### § 15.1.1 DEFINITION

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim.

#### § 15.1.2 NOTICE OF CLAIMS

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

#### § 15.1.3 CONTINUING CONTRACT PERFORMANCE

Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

#### § 15.1.4 CLAIMS FOR ADDITIONAL COST

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

#### § 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.5.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

#### § 15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

### § 15.2 INITIAL DECISION

§ 15.2.1 Claims, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise,

or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of such request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of an initial decision, demand in writing that the other party file for mediation within 60 days of the initial decision. If such a demand is made and the party receiving the demand fails to file for mediation within the time required, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

### § 15.3 MEDIATION

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.6 shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

### § 15.4 ARBITRATION

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually

agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

#### § 15.4.4 CONSOLIDATION OR JOINDER

§ 15.4.4.1 Either party, at its sole discretion, may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Either party, at its sole discretion, may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as the Owner and Contractor under this Agreement.

**END SECTION AIA A201**

## **12.1 – Addendum To General Conditions – AIA Document A201**

### GENERAL CONDITIONS

- A. Standard Form: The General Conditions of the Contract forming a part of the Contract Documents and of these Specifications, consists of AIA Document A201, 2007 Edition.
- B. Modifications and Additions: Where Contract Documents refer to General Conditions, such reference shall be interpreted to include Addendum to General Conditions.
- C. Where contract documents refer to “architect”, such reference shall be interpreted to be “engineer”.

### CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

- A. If conflicts or discrepancies occur in the Contract Documents, interpretations will be based on the following priorities:
  - 1. Awarding Authority-Contractor Agreement.
  - 2. Addenda, with those of later date having precedence over those of earlier date.
  - 3. The Supplementary Conditions.
  - 4. The General Conditions of the Contract for Construction.
  - 5. Drawings and Specifications.
- B. For an inconsistency between Drawings and Specifications or within either Document not clarified by Addendum, the better quality or greater quantity of work shall be provided according to the Architect's interpretation.

### ARTICLE 2 - OWNER

Sub-paragraph 2.1.2- delete in its entirety

### ARTICLE 7 – CHANGES IN THE WORK

Sub-paragraph 7.3.4- delete in its entirety

### ARTICLE 11 – INSURANCE AND BONDS

Sub-paragraph 11.3- delete in its entirety.

## **13 – Supplementary Conditions**

### **100.0 CLAIMS FOR EXTRA COST**

100.1 If the Contractor claims that any instructions by Drawings or otherwise involve extra cost or extension of time, they shall, within ten (10) days after the receipt of such instructions, and in any event before proceeding to execute the work, submit their protest thereto in writing to the Owner stating clearly and in detail the basis of his objections. No such claim will be considered unless so made.

100.2 Claims for additional compensation for extra work, due to alleged errors in ground elevations, contour lines, site location, or bench marks, will not be recognized unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted, or would result, in handling more material or performing more work than would be reasonably estimated from the Drawings and map issued.

100.3 Any discrepancies which may be discovered between actual conditions and those represented by the Drawings and maps shall at once be reported to the Owner and work shall not proceed except at the Contractor's risk, until written instructions have been received by them from the Owner.

100.4 If, on the basis of the available evidence, the Owner determines that an adjustment of the Contract Price and/or Time is justifiable, the procedure shall be as provided in Section 110 hereof.

### **101.0 TERMINATION, DELAYS, AND LIQUIDATED DAMAGES**

101.1 Termination of Contract. If the Contractor refuses or fails to prosecute the work with such diligence as will insure its completion within the time specified in these Contract Documents, or as modified as provided in these Contract Documents, the Owner by written notice to the Contractor, may terminate the Contractor's right to proceed with the work. Upon such termination, the Owner may take over the work and prosecute the same to completion of the work and the Contractor shall also be liable to the Owner in its completion of the work and the Contractor shall also be liable to the Owner for liquidated damages for any delay in the completion of the work as provided below. If the Contractor's right to proceed is so terminated, the Owner may take possession of and utilize in completing the work, such materials, tools, equipment, and plant as may be on the site of the work and necessary therefore.

101.2 Liquidated Damages for Delays. If the work be not completed within the time stipulated in Section 402 hereof, including any extensions of time for excusable delays as herein provided, the Contractor shall pay to the Owner as fixed, agreed, and liquidated damages (it being impossible to determine the actual damages occasioned by the delay) for each calendar day of delay, until the work is completed, the amount as set forth in Section 403 hereof and the Contractor and his sureties shall be liable to the Owner for the amount thereof.

101.3 Excusable Delays. The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with liquidated damages for any delays in the completion of the work due.

101.3.1 To any acts of the Government, including controls or restrictions upon or requisitioning of materials, equipment, tools, or labor by reason of war, National Defense, or any other national emergency.

101.3.2 To any acts of the Owner.

101.3.3 To causes not reasonably foreseeable by the parties to this Contract at the time of the execution of the Contract which are beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of the Public enemy, acts of another Contractor in the performance of some other contract with the Owner, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricane, tornadoes, cyclones and other extreme weather conditions; and

101.3.4 To any delay of any subcontractor occasioned by any of the causes specified in subparagraphs 1, 2 and 3 of this paragraph 101.3.

Provided, however, that the Contractor promptly notify the Owner within ten (10) days in writing of the cause of the delay. Upon receipt of such notification, the Owner shall ascertain the facts and the cause and extent of delay. If, upon the basis of the facts and the terms of this contract, the delay is properly excusable, the Owner shall extend the time for completing the work for a period of time commensurate with the period of excusable delay.

## 102.0 SAMPLES, CERTIFICATES AND TESTS

102.1 The Contractor shall submit all material or equipment samples, certificates, affidavits, etc. as called for in the contract documents or required by the Owner promptly after award of the Contract and acceptance of the Contractor's bond. No such material or equipment shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples or certificates have been approved in writing by the Owner. Any delay in the work caused by late or improper submission of samples or certificates for approval shall not be considered just cause for an extension of the contract time.

Each sample submitted by the Contractor shall carry a label giving the name of the Contractor, the property for which it is intended, and the name of the producer. The accompanying certificate or letter from the Contractor shall state that the sample complies with contract requirements, shall give the name and brand of the products, its place or origin, the name and address of the producer and all specifications or other detailed information which will assist the Owner in passing upon the acceptability of the sample promptly. It shall also include the statement that all materials or equipment furnished for use in the project will comply with the samples and/or certified statements.

102.2 Approval of any materials shall be general only and shall not constitute a waiver of the Owner's right to demand full compliance with Contract requirements. After actual deliveries, the Owner will have such check tests made as they deem necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories, which fail to meet check tests have been incorporated in the work, the Owner will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable.

102.3 Except as otherwise specifically stated in the Contract, the costs of sampling and testing will be divided as follows:

102.3.1 The Contractor shall furnish without extra cost, including packing and delivery charges, all samples required for testing purposes except those samples taken on the project by the Owner;

102.3.2. The Contractor shall assume all costs of re-testing materials which fail to meet contract requirements;

102.3.3 The Contractor shall assure all cost of testing materials offered in substitution of those found deficient; and

102.3.4 The Owner will pay all other expenses.

### 103.0 PERMITS AND CODES

103.1 The Contractor shall give all notices required by and comply with all applicable laws, ordinances, and codes of the Local Government. All construction work and/or utility installations shall comply with all applicable ordinances, and codes including all written waivers. Before installing any work, the Contractor shall examine the Drawings and Technical Specifications for compliance with applicable ordinances and codes and shall immediately report any discrepancy to the Owner. Where the requirements of the Drawings and Technical Specifications fail to comply with such applicable ordinances or codes, the

Owner will adjust the Contract by Change Order to conform to such ordinances or codes (unless waivers in writing covering the difference have been granted by the governing body or department) and make appropriate adjustment in the Contract Price or stipulated unit prices.

Should the Contractor fail to observe the foregoing provisions and proceed with the construction and/or install any utility at the variance with any applicable ordinance or code, including any written waivers (notwithstanding the fact that such installation is in compliance with the Drawings and Technical Specifications), the Contractor shall remove such work without cost to the Owner, but a Change Order will be issued to cover only the excess cost the Contractor would have been entitled to receive if the Change had been made before the Contractor commenced work on the items involved.

103.2 The Contractor shall at their own expense, secure and pay to the appropriate department of the Local Government the fees or charges for all permits for street pavement, sidewalks, sheds, removal of abandoned water taps, sealing of house connection drains, pavement cuts, buildings, electrical, plumbing, water, gas and sewer permits required by the local regulatory body or any of its agencies.

103.3 The Contractor shall comply with applicable local laws and ordinances governing excavations and the disposal of surplus excavation, materials, debris and rubbish on or off the Project Area and commit no trespass on any public or private property in any operation due to or connected with the Improvements embraced in this Contract.

### 104.0 CARE OF WORK

104.1 The Contractor shall be responsible for all damages to person or property that occur as a result of their fault or negligence in connection with the prosecution of the work and shall be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance, whether or not the same has been covered in whole or in part by payments made by the Owner.

104.2 The Contractor shall provide, where necessary and as requested by the Owner, sufficient competent watchmen, both day and night, including Saturdays, Sundays, and holidays, from the time the work is commenced until final completion and acceptance.

104.3 In an emergency affecting and safety of life, limb or property, including adjoining property, the Contractor without special instructions or authorization from the Owner is authorized to act at their discretion to prevent such threatened loss or injury, and they shall so act. They shall likewise act if instructed to do so by the Owner. Any compensation claimed by the Contractor on account of such emergency work will be determined by the Owner as provided in Section 110 hereof.

104.4 The Contractor shall avoid damage as a result of their operations to existing sidewalks, streets, curbs, pavements, utilities, (except those which are to be replaced or removed), adjoining property, etc., and they shall at their own expense completely repair any damage thereto caused by their operations.

104.5 The Contractor shall shore up, brace, underpin, secure, and protect as may be necessary, all foundations and other parts of existing structures adjacent to, adjoining, and in the vicinity of the site, which may be in any way affected by the excavations or other operations connected with the construction of the Improvements embraced in this Contract. The Contractor shall be responsible for the giving of any and all required notices to any adjoining or adjacent property Owner or other party before the commencement of any work. The Contractor shall indemnify and save harmless the Owner from any damages on account of settlements or the loss of lateral support of adjoining property and from all loss or expense and all damages for which the Owner may become liable in consequence of such injury of damage to adjoining and adjacent structures and their premises.

#### 105.0 ACCIDENT PREVENTION

105.1 The Contractor shall exercise proper precaution at all times for the protection of persons and property and shall be responsible for all damages to persons or property, either on or off the site, which occur as a result of his prosecution of the work. The safety provisions of applicable laws and building and construction codes shall be observed and the Contractor shall take or cause to be taken such additional safety and health measures as the Owner may determine to be reasonably necessary. Machinery, equipment and all hazards shall be guarded in accordance with the safety provisions of the "Manual of Accident prevention in Construction" published by the Associates General Contractors of America, Inc., to the extent that such provisions are not in conflict with applicable local laws.

105.2 The Contractor shall maintain an accurate record of all cases of death, occupational disease, or injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment on work under the Contract. The Contractor shall promptly furnish the Owner with reports concerning these matters.

105.3 The Contractor shall indemnify and save harmless the Owner from any claims for damages resulting from property damage, personal injury and/or death suffered or alleged to have been suffered by any person as a result of any work conducted under this Contract.

#### 106.0 USE OF PREMISES

106.1 The Contractor shall confine their equipment, storage of materials and construction operations to the Contract limits as shown on the Drawings and as prescribed by ordinances or permits, or as may be desired by the Owner and shall not unreasonably encumber the site or public rights of way with his materials and construction equipment.

106.2 The Contractor shall comply with all reasonable instructions of the Owner and the ordinances and codes of the Local Government, regarding signs, advertising, traffic, fires, explosives, danger signals, barricades and fire prevention.

#### 107.0 REMOVAL OF DEBRIS, CLEANING, ETC.

The Contractor shall, periodically or as directed during the progress of the work, remove and legally dispose of all surplus excavated material and debris, and keep the Project Area and public rights of way reasonably clear. Upon completion of the work, the Contractor shall remove all temporary construction facilities, debris and unused materials provided for the work, and put the work site of the work and public rights of way in a neat and clean condition. Trash burning

on the site of the work will be subject to prior approval of the Owner and existing State and Local regulations.

#### 108.0 INSPECTION

108.1 All materials and workmanship shall be subject to inspection, examination, or test by the Owner and the Engineer at any and all times during manufacture of construction and at any and all places where such manufacture or construction is carried on. The Owner shall have the right to reject defective material and workmanship or require its correction. Unacceptable workmanship shall be satisfactorily corrected. Rejected material shall be promptly segregated and removed from the Project Area and replaced with material of specified quality without charge therefore. If the Contractor fails to proceed at once with correction of rejected workmanship or defective material, the Owner may by Contract or otherwise have the defects remedied or rejected materials removed from the Project Area and charge the cost of the same against any monies which may be due the Contractor, without prejudice to any other rights or remedies of the Owner.

108.2 The Contractor shall furnish promptly all materials reasonably necessary for any tests, which may be required. (See Section 102 hereof). All tests by the Owner will be performed in such manner as not to delay the work unnecessarily and will be made in accordance with the provisions of the Technical Specifications.

108.3 The Contractor shall notify the Owner sufficiently in advance of backfilling or concealing any facilities to permit proper inspection. If any facilities are concealed without approval or consent of the Owner, the Contractor shall uncover for inspection and recover such facilities all at their own expense, when so requested by the Owner.

Should it be considered necessary or advisable by the Owner at any time before final acceptance of the entire work to make an examination of work already completed by uncovering the same, the Contractor shall on request promptly furnish all necessary facilities, labor, and material. If such work is found to be defective in any important or essential respect, due to fault of the Contractor or their subcontractors, the Contractor shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the actual cost of labor and material necessarily involved in the examination and replacement, plus 15 percent of such costs to cover superintendence, general expenses and profit, shall be allowed by the Contractor and they shall, in addition, if completion of the work of the entire Contract has been delayed thereby, be granted a suitable extension of time on account of the additional work involved.

108.4 Inspection of materials and appurtenances to be incorporated in the Improvements embraced in this Contract may be made at the place of production, manufacture or shipment, whatever the quantity justifies it, and such inspection and acceptance, unless otherwise stated in the Technical Specifications, shall be final, except as regards (1) latent defects, (2) departures from specific requirements of the Contract, (3) damage or loss in transit, or (4) fraud or such gross mistakes as amount to fraud. Subject to the requirements contained in the preceding sentence, the inspection of materials as a whole or in part will be made at the Project Site.

108.5 Neither inspection, testing, approval nor acceptance of the work in whole or in part, by the Owner or its agents shall relieve the Contractor of their sureties of full responsibility for materials furnished or work performed not in strict accordance with the Contract.

#### 109.0 REVIEW BY THE OWNER

The Owner, its authorized representatives and agents and the Representative for the Secretary (as defined under GENERAL CONDITIONS, PART II) shall, at all times, have access to, and be permitted to observe and review all work, materials, equipment, payrolls, personnel records,

employment conditions, material invoices, and other relevant data and records pertaining to this Contract, provided, however, that all instructions and approval with respect to the work will be given to the Contractor only by the Owner through its authorized representatives or agents.

#### 110.0 FINAL INSPECTION

110.1 When the Improvements embraced in this Contract are substantially completed, the Contractor shall notify the Owner in writing that the work will be ready for final inspection on a definite date, which shall be stated in the notice. The notice will be given at least ten (10) days prior to the date stated for final inspection, and bear the signed concurrence of the representative of the Owner having charge of inspection. If the Owner determines that the status of the Improvements is as represented, it will make the arrangements necessary to have final inspection commenced on the date stated in the notice, or as soon thereafter as is practicable. The inspection party will include representatives of each department of the Local Government having in charge Improvements of like character when such Improvements are later to be accepted by the Local Government.

#### 111.0 DEDUCTION FOR UNCORRECTED WORK

If the Owner deems it not expedient to require the Contractor to correct work not done in accordance with the Contract Documents, an equitable deduction from the Contract Price will be made by agreement between the Contractor and the Owner and subject to settlement, in case of dispute, as herein provided.

#### 112.0 INSURANCE

See Section 5.0 Insurance for information.

#### 113.0 PATENTS

The Contractor shall hold and save the Owner its officers, and employees, harmless from liability of any nature of kind, including costs and expenses, for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the Contract, including its use by the Owner unless otherwise specifically stipulated in the Technical Specifications.

#### 114.0 WARRANTY OF TITLE

No material, supplies, or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditioned sale, lease-purchase or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. The Contractor shall warrant good title to all materials, supplies, and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by them to the Owner free from any claims, liens, or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by this Contract shall have any right to a lien upon any improvement or appurtenance thereon. Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any bond given by the Contractor for their protection or any rights under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this paragraph shall be inserted in all subcontracts and materials contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal Contract is entered into for such materials.

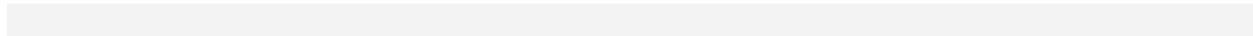
#### 115.0 GENERAL GUARANTY

Neither the final certificate of payment nor any provision in the Contract nor partial or entire use of the Improvements embraced in this Contract by the Owner or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of twelve (12) months from the date of final acceptance of the work. The Owner will give notice of defective materials and work with reasonable promptness.

#### 116.0 CONTRACTOR TO MAKE OWN EXAMINATION

Plans, calculations, estimates of quantities, and any statements made in the Instructions to Bidders or otherwise as to the conditions under which the work is to be performed are not guaranteed by the Owner to be correct or to be a complete representation of all existing data on conditions affecting work, and the Contractor agrees that they have made their examination and will make no claim for damages on account of any errors, inaccuracies or omissions that may be found.

The Contractor shall not take any advantage or have any claim for damages on account of any discrepancy, error or omission in any plans, calculations, estimates of quantities, or any statement made in the Instructions to Bidders or otherwise as to the conditions under which the work is to be performed, and they shall report such discrepancy, error or omission to the Owner in writing as soon as it comes to their knowledge, and before proceeding with work related to such discrepancy, error or omission. Any correction or modification of the plans or specifications may be made by the Owner when necessary, in their opinion, for the proper fulfillment of their purpose or for their proper interpretation.



## **14 – Special Conditions**

SPECIAL CONDITIONS FOR

### **DESIGN OF TOD DISTRICT STORMWATER IMPROVEMENTS PINE STREET GREEN STORMWATER IMPROVEMENTS (GSI)**

#### **402.0 TIME FOR COMPLETION**

The work which the Contractor is required to perform under this Contract shall be commenced at the time stipulated by the Owner in the Notice to Proceed to the Contractor.

The rate of progress shall be such that the whole work shall be performed in accordance with the terms of this contract within the number of calendar days after the date of execution of the contract as herein stipulated, unless the expected as any part may be delayed under the provisions of this contract. The work shall be pursued in a continuous, diligent, and uniform manner throughout the project until completion.

It is agreed that the rates of progress herein required has been purposely made low enough to allow for the ordinary delays incident to construction work of this character. No extension of time will be made for ordinary delays, inclement weather and accidents, and the occurrence of such will not relieve the Contractor from the necessity of maintaining this rate of progress.

If delays are caused by acts of God, acts of Government or State, strikes extra work, floods or other contingencies clearly beyond the control or responsibility of the Contractor, the Contractor shall be entitled to so much additional time wherein to perform and complete this contract on his part as the Engineer shall certify in writing to be just.

#### **403.0 LIQUIDATED DAMAGES**

In case the Contractor fails satisfactorily to complete the entire work contemplated and provided for under this contract on or before the date of completion determined as described above, the Owner shall deduct from the payments due to the Contractor each month the sum of \$100.00 for each calendar day (Sundays and legal holidays excluded) of delay, which sum is agreed upon not as a penalty, but as fixed and liquidated damages, said damages shall be deducted from any other moneys due or to become due the Contractor, and in case such damages exceed the amount of all moneys due or to become due, the Contractor then the Contractor or his Surety shall pay the balance to the Owner.

#### **404.0 RESPONSIBILITIES OF CONTRACTOR**

404.1 Except as otherwise specifically stated in the Contract Documents, and Technical Specifications, the Contract shall provide and pay for all materials, tools, labor, equipment, water, light, heat, power, transportation, superintendence, temporary construction of every nature, charges, levies, fee or other expenses, and all other services and facilities of every nature whatsoever necessary for the performance of the Contract and to deliver all improvements embraced in this Contract complete in every respect within the specified time.

404.2 All materials, workmanship, methods and practices shall conform to the current Standards of the American Water Works Association, the Rhode Island Standard Specifications for Road and Bridge Construction, 2010 edition, including all corrections, all issued compilation of approved specifications, and addendum to date and all general requirements and special requirements

contained in this project specifications. All work zone traffic control shall be in accordance with the manual on uniform traffic control devices, 2009 edition.

404.3 The Contractor shall be responsible for detailed layout, all stakeout and grade control, and shall employ a registered engineer or a registered land surveyor for this purpose as may be necessary. The Owner will provide engineering and inspection.

404.4 The Contractor shall verify dimensions shown on the plans and if any inconsistencies or discrepancies should be noted on the Drawings and the Specifications, he/she shall immediately notify the Owner. The Contractor will be held responsible for any errors resulting from his/her failure to exercise the aforementioned precaution.

404.5 As soon as the Contract is executed, the Contractor shall order any materials necessary and not supplied by the Owner, submit construction schedules as hereinafter specified, and otherwise anticipate the Notice to Proceed. When the Owner gives the Notice to Proceed, the work of construction shall begin at the time stipulated therein and shall be completed within the Time for Completion specified.

404.6 It is the Contractor's responsibility to make his/her own investigation and related assumptions and to satisfy himself as to subsurface conditions and to insure that these are reflected in the prices bid. No change or extra to the price will be accepted due to subsurface conditions or utility locations.

The determination of location and subsequent maintenance and protection of existing subsurface and above ground utilities are the sole responsibility of the Contractor; claims resulting from damage to such by the Contractor will be settled by the Contractor at his/her expense in accordance with the Contract.

404.7 The Contractor shall, at his/her own expense, take out all necessary permits from the county, municipal, or other public authorities; shall give all notices required by law or ordinances; and shall post all bonds and pay all fees and charges incident to the due and lawful prosecution of the work covered by this Contract.

404.8 RESPONSIBILITY FOR MATERIAL FURNISHED BY OWNER: The Contractor's responsibility for material furnished by the Owner shall begin upon Contractor's acceptance at the point of delivery to him. All such material shall be examined, and material defective in manufacture and/or otherwise damaged shall be rejected by the Contractor at the time and place of delivery to him and replaced by the Owner. Material furnished by the Owner which is accepted by the Contractor, but is discovered prior to final acceptance of the work, (1) to be defective in manufacture, shall be replaced by the Owner; (2) to have been damaged before or after acceptance by the Contractor, shall be replaced by the Contractor. Once accepted by the Contractor at the point of delivery to him, all defective and/or damaged material discovered prior to final acceptance of the work shall be removed by the Contractor and he shall install, at his own expense, the material replaced, in its stead, by the Owner or Contractor. In such case, the Contractor shall furnish all labor, equipment, and material incidental to replacement and necessary for the completion of the work to the satisfaction of the Engineer.

404.9 RESPONSIBILITY FOR SAFE STORAGE: The Contractor shall be responsible for the safe storage of all material furnished to or by him and accepted by him until it has been incorporated in the completed project.

#### 405.0 COMMUNICATIONS

405.1 All notices, demands, requests, instructions, approvals, proposals and claims must be in writing.

405.2 Any notice to or demand upon the Contractor shall be sufficiently given if delivered at the office of the Contractor stated on the signature page of the Agreement (or at such other offices as the Contractor may from time to time designate in writing to the Owner), or if deposited in the United States mail in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any telegraph company for translation, in each case addressed to such office.

405.3 All papers; required to be delivered to the Owner shall, unless otherwise specified in writing to the Contractor, be delivered to the CITY OF PAWTUCKET, DEPARTMENT OF PUBLIC WORKS, 250 Armistice Boulevard, Pawtucket, Rhode Island, 02860; any notice to or demands upon the Owner shall be sufficiently given if so delivered, or if deposited in the United States mail in a sealed, postage-prepaid envelope, or delivered with charges prepaid to any telegraph company for transmission to said Owner at such address, or to such other representative of the Owner or to such other address, as the Owner may subsequently specify in writing to the Contractor for such purpose.

405.4 Any such notice shall be deemed to have been given as of the time of actual delivery or (in the case of mailing when the same should have been received in due course of post, or in the case of telegram) at the time of actual receipt, as the case may be.

#### 406.0 PARTIAL USE OF SITE IMPROVEMENTS

The Owner, at its elections may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected, and can be accepted as complying with the Technical Specifications and if in its opinion, each such section is reasonably safe, fit and convenient, for the use and accommodation for which it was intended, provided;

406.1 The use of such sections of the Improvements shall in no way impede the completion of the remainder of the work by the Contractor.

406.2 The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of such sections.

406.3 The use of such sections shall in no way relieve the Contractor or his liability due to having used defective materials or to poor workmanship.

406.4 The period of guarantee shall not begin to run until the date of the final acceptance of all work which the Contractor is required to construct under this Contract.

#### 407.0 CONTRACT DOCUMENTS AND DRAWINGS

(REDACTED)

#### 408.0 NIGHT, SATURDAY AND SUNDAY WORK

(REDACTED)

#### 409.0 EMPLOY SUFFICIENT LABOR AND EQUIPMENT

If, in the opinion of the Engineer, the Contractor is not employing sufficient labor or equipment to complete this contract within the time specified the Owner may, after giving written notice, require said Contractor to employ such additional labor and equipment as may be necessary to enable said work to progress properly.

#### 410.0 INTOXICATING LIQUORS

The Contractor shall not sell and shall neither permit or suffer the introduction or use of intoxicating liquors upon or about the work embraced in this contract.

#### 411.0 ACCESS TO WORK

The Owner and the Engineer, and their agents and employees may, for purposes already specified and for any other purpose, enter upon the work and the premises used by the Contractor, and the Contractor shall provide safe and proper facilities therefor.

#### 412.0 TIME OF BEGINNING WORK

412.1 Except as herein provided, the Contractor shall commence work at such points as the Engineer may approve, within ten (10) days after the execution of this contract by the Owner.

412.2 Such time of starting may be postponed by written agreement between the Owner and the Contractor because of expected delays in receipt of materials and equipment, or if the season be unsuitable for commencement of the work, or because of other contingency clearly beyond the control or responsibility of the Contractor. Unless stipulated otherwise in said agreement, the Contractor shall commence work at such points as the Engineer may direct or approve, within 10 days after the receipt of a written order from the Owner to start work.

#### 413.0 PROVISIONS FOR TRAFFIC

413.1 The Contractor shall not close or obstruct any portion of a street without obtaining permits for from the proper municipal authorities. If any street or private way shall be rendered unsafe by the Contractor's operations, he shall make such repairs or provide such temporary ways or guards as shall be acceptable to the Owner.

413.2 Streets, roads, private ways, and walks shall be maintained passable by the Contractor at his expense, and the Contractor shall assume full responsibility for the adequacy and safety of provisions made. He shall conduct his construction operations such that interference with the flow of traffic will be held to a minimum.

413.3 The Contractor shall cooperate in every way possible with the municipal authorities maintaining a flow of traffic through the site. The Contractor shall notify the Pawtucket Fire Department when any street is to be closed regardless of the length of time or time of day.

413.4 All detours shall be signed and lighted as directed by the City of Pawtucket.

#### 414.0 COORDINATION WITH OUTSIDE PARTIES

414.1 The Contractor shall conduct his work so as to interfere as little as possible with private business and public travel. He shall at his own expense, wherever necessary or required, maintain fences, furnish watchmen, maintain lights and take such other precautions as may be necessary to protect life and property.

414.2 The Contractor shall take all responsibility for the protection of the work and for preventing injuries to persons and damage to property and utilities on or about the work. He shall not be relieved of his responsibility by any right of the City to give permission or issue orders relating to any part of the work, or by any such permission given or orders issued, or by failure of the Engineer to give such permission or issue such orders. The Contractor shall bear all losses resulting to him or to the Owner on account of the amount of character of the work, or because nature of the land in or on which the work is done is different from what was estimated or expected, or on account of the weather, elements or other causes. The Contractor shall assume the defense

of all claims or whatsoever character against the Contractor of the Owner, and indemnify, save harmless and insure the Owner, its officers or agents, against all claims arising out of injury or damage to persons, corporation, or property, whether said claims are for unavoidable damage or not, and from all claims relating to labor and materials furnished for the work. The Contractor shall not be required to indemnify the Owner against damage or claims occasioned by acts of the Owner, except otherwise provided in the articles relative to patents and responsibilities.

#### 415.0 DELAY BY OWNER

The Owner may delay the beginning of the work or any part thereof, if the necessary lands or rights-of-way, or materials for such work shall not have been obtained. The Contractor shall have no claim for damages on account of such delay, but shall be entitled to so much additional time wherein to perform and complete this contract on his part as the City shall certify in writing to be just.

#### 416.0 REGISTRATION OF MOTOR VEHICLES

All motor vehicles used in connection with this contract shall be registered in the State of Rhode Island, in accordance with the laws, rules, and regulations thereof, within forty-eight (48) hours of starting work on the contract.

#### 417.0 PROVISIONS REQUIRED BY LAW DEEMED INSERTED

Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and the contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the contract shall forthwith be physically amended to make such insertion.

#### 418.0 SAFETY AND HEALTH REGULATIONS

These construction documents, and the joint and several phases of construction hereby contemplated are to be governed, at all times by applicable provisions of the Federal law(s), including but not limited to, the latest amendments of the following:

- (1) Williams-Steiger Occupational Safety and Health Act of 1970, Public Law 91-596;
- (2) Part 1910 - Occupation Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations;
- (3) Part 1518 - Safety and Health Regulations for Construction, Chapter XIII of Title 29, Code of Federal Regulations.

In the event of any inconsistencies between the above laws and regulations and the provisions of these documents, the laws and regulations shall prevail.

#### 419.0 NOTIFICATION OF EXCAVATION TO UTILITIES

The Contractor shall provide a minimum of two working days notice to "Dig Safe" (1-800-225-4977) and any other appropriate utility before the Contractor begins excavation.

**ANTI-KICKBACK ACKNOWLEDGMENT**

**ALL BIDDERS/OFFERORS MUST ATTEST TO THE FOLLOWING:**

The vendor acknowledges, under the pains and penalties of perjury, that he/she has not been offered, paid, or solicited for any contribution or compensation, nor has he/she been granted a gift, gratuity, or other consideration, either directly or indirectly by any officer, employee or member of the governing body of the City of Pawtucket who exercises any functions or responsibilities in connection with either the award or execution of the project to which this contract pertains.

Further, the vendor acknowledges, under the pains and penalties of perjury, that he/she has not offered, paid, or solicited by way of any contribution or compensation, nor has he/she granted a gift, gratuity or other consideration either directly or indirectly to any officer, employee, or member of the governing body of the City of Pawtucket who exercises any functions or responsibilities in connection with either the award or execution of the project to which this project or contract pertains.

\_\_\_\_\_  
SIGNATURE OF OFFEROR

\_\_\_\_\_  
DATE

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
COMPANY

Title of RFP:

\_\_\_\_\_



# Appendix B

## CITY OF PAWTUCKET GENERAL TERMS AND CONDITIONS OF PURCHASE

### *Preamble*

The City of Pawtucket's Purchasing Office may, from time to time, make amendments to the General Terms and Conditions when the City of Pawtucket's Purchasing Agent determines that such amendments are in the best interest of the City of Pawtucket. Amendments shall be made available for public inspection at the Purchasing Office located in Pawtucket City Hall but shall not require formal public notice and hearing. Copies of the Terms and Conditions shall be provided to any individual or firm requesting them.

### **CITY OF PAWTUCKET'S PURCHASING OFFICE GENERAL CONDITIONS OF PURCHASE**

All City of Pawtucket purchase orders, contracts, solicitations, delivery orders and service requests shall incorporate and be subject to the provisions of Rhode Island General Laws 8-15-4 and the City of Pawtucket purchasing rules and regulations adopted pursuant thereto, all other applicable provisions of the Rhode Island General Laws, the Pawtucket City Charter, specific requirements described in the Request or Contract, and the following General Conditions of Purchase:

1. **GENERAL**

All purchase orders, contracts, solicitations, delivery orders, and service requests are for specified goods and services, in accordance with express terms and conditions of purchase, as defined herein. For the purposes of this document, the terms "bidder" and "contractor" refer to any individual, firm, corporation, or other entity presenting a proposal indicating a desire to enter into contracts with the City of Pawtucket, or with whom a contract is executed by the City of Pawtucket's Purchasing Agent, and the term "contractor" shall have the same meaning as "vendor".

2. **ENTIRE AGREEMENT**

The City of Pawtucket's Purchase Order, or other City of Pawtucket contract endorsed by the City of Pawtucket Purchasing Office, shall constitute the entire and exclusive agreement between the City of Pawtucket and any contractor receiving an award. In the event any conflict between the bidder's standard terms of sale, these conditions or more specific provisions contained in the solicitation shall govern.

All communication between the City of Pawtucket and any contractor pertaining to any award or contract shall be accomplished in writing.

- a. Each proposal will be received with the understanding that the acceptance, in writing, by contract or Purchase Order by the City of Pawtucket Purchasing Agent of the offer to do work or to furnish any or all the materials, equipment, supplies or services described therein shall constitute a contract between the bidder and the City of Pawtucket. This shall bind the bidder on his part to furnish and deliver at the prices and in accordance with the conditions of said accepted proposal and detailed specifications and the City of Pawtucket on its part to order from such contractor (except in case of emergency) and to pay for at the agreed prices, all materials, equipment, supplies or services specified and delivered. A contract shall be deemed executory only to the extent of funds available for payment of the amounts shown on Purchase Orders issued by the City of Pawtucket to the contractors.
- b. No alterations or variations of the terms of the contract shall be valid or binding upon the City of Pawtucket unless submitted in writing and accepted by the City of Pawtucket Purchasing Agent. All orders and changes thereof must emanate from the City of Pawtucket Purchasing Office: no oral agreement or arrangement made by a contractor with a department or employee will be considered to be binding on the City of Pawtucket Purchasing Agent, and may be disregarded.
- c. Contracts will remain in force for the contract period specified or until all articles or services ordered before date of termination shall have been satisfactorily delivered or rendered and accepted and thereafter until all terms and conditions have been met, unless:
  1. terminated prior to expiration date by satisfactory delivery against orders of entire quantities, or
  2. extended upon written authorization of the City of Pawtucket Purchasing Agent and accepted by the contractor, to permit ordering of the unorderd balances or

additional quantities at the contract price and in accordance with the contract terms, or

3. canceled by the City of Pawtucket in accordance with other provisions stated herein.

d. It is mutually understood and agreed that the contractor shall not assign, transfer, convey, sublet or otherwise dispose of this contract or his right, title or interest therein, or his power to execute such contract, to any other person, company or corporation, without the previous consent, in writing, of the City of Pawtucket Purchasing Agent.

e. If, subsequent to the submission of an offer or issuance of a purchase order or execution of a contract, the bidder or contractor shall merge with or be acquired by another entity, the contract may be terminated, except as a corporate resolution prepared by the contractor and the new entity ratifying acceptance of the original bid or contract terms, condition, and pricing is submitted to the City of Pawtucket Purchasing Office, and expressly accepted.

f. The contractor or bidder further warrants by submission of an offer or acceptance of a purchase order or other contract that he has no knowledge at the time of such action of any outstanding and delinquent or otherwise unsettled debt owed by him to the City of Pawtucket, and agrees that later discovery by the City of Pawtucket Purchasing Agent that this warranty was given in spite of such knowledge, except where the matter is pending in hearing or from any appeal therefrom, shall form reasonable grounds for termination of the contract.

### 3. SUBCONTRACTS

No subcontracts or collateral agreements shall be permitted, except with the City of Pawtucket's express written consent. Upon request, contractors must submit to the City of Pawtucket Purchasing Office a list of all subcontractors to be employed in the performance of any Purchase Order or other contract arising from this Request.

### 4. RELATIONSHIP OF PARTIES

The contractor or bidder warrants, by submission of an offer or acceptance of a purchase order or other contract, that he is not an employee, agent, or servant of the City of Pawtucket, and that he is fully qualified and capable in all material regards to provide the specified goods and services. Nothing herein shall be construed as creating any contractual relationship or obligation between the City of Pawtucket and any sub-bidder, subcontractor, supplier, or employee of the contractor or offeror.

### 5. COSTS OF PREPARATION

All costs associated with the preparation, development, or submission of bids or other offers will be borne by the offeror. The City of Pawtucket will not reimburse any offeror for such costs.

### 6. SPECIFIED QUANTITY REQUIREMENT

Except where expressly specified to the contrary, all solicitations and contracts are predicated on a specified quantity of goods or services, or for a specified level of funding.

a. The City of Pawtucket reserves the right to modify the quantity, scope of service, date of delivery or completion, or funding of any contract, with no penalty or charge, by written notice to the contractor, except where alternate terms have been expressly made a part of the contract.

b. The City of Pawtucket shall not accept quantities in excess of the specified quantity except where the item is normally sold by weight (where sold by weight, the City of Pawtucket will not accept quantities greater than ten per cent [10%] of the specified quantity), or where the Request or Contract provides for awards for other than exact quantities.

c. Purchase Orders or other contracts may be increased in quantity or extended in term without subsequent solicit with the mutual consent of the contractor and the City of Pawtucket, where determined by the City of Pawtucket Purchasing Agent to be in the City of Pawtucket's best interest.

### 7. TERM AND RENEWAL

Where offers have been requested or contracts awarded for terms exceeding periods of twelve (12) months, it is mutually understood and agreed that the City of Pawtucket's commitment is limited to a base term not to exceed twelve (12) months, subject to renewal annually at the City of Pawtucket's sole option for successive terms as otherwise described, except where expressly specified to the contrary. Purchase orders appearing to commit to obligations of funding or terms of performance may be executed for administrative convenience, but are otherwise subject to this provision, and in such cases the City of Pawtucket's renewal shall be deemed to be automatic, conditional on the continued availability of appropriated funds for the purpose, except as written notice of the City of Pawtucket's intent not to renew is served.

8. DELIVERY/COMPLETION

Delivery must be made as ordered and/or projects completed in accordance with the proposal. If delivery qualifications do not appear on the bidder's proposal, it will be interpreted to mean that goods are in stock and that shipment will be made within seven (7) calendar days. If the project completion date is not specified in the proposal, the date shall be determined by the City of Pawtucket Purchasing Agent. The decision of the City of Pawtucket Purchasing Agent, as to reasonable compliance with the delivery terms, and date of completion shall be final. Burden of proof of delay in receipt of order shall rest with the contractor. No delivery charges shall be added to invoices except when authorized on the Purchase Order.

9. FOREIGN CORPORATIONS

In accordance with Title 7 Chapter 1.1 ("Business Corporations") of the General Laws of Rhode Island, no foreign corporation shall have the right to transact business in this state until it shall have procured a certificate of authority so to do from the Secretary of State.

10. PRICING

All pricing offered or extended to the City of Pawtucket is considered to be firm and fixed unless expressly provided for to the contrary. All prices shall be quoted F.O.B. Destination with freight costs included in the unit cost to be paid by the City of Pawtucket, except, where the Request or Contract permits, offers reflecting F.O.B. Shipping Point will be considered, and freight costs may then be prepaid and added to the invoice.

11. COLLUSION

Bidder or contractor warrants that he has not, directly or indirectly, entered into any agreements or participated in any collusion or otherwise taken any action in restraint of full competitive bidding. In special circumstances, an executed affidavit will be required as a part of the bid.

12. PROHIBITION AGAINST CONTINGENT FEES AND GRATUITIES

Bidder or contractor warrants that he has not paid, and agrees not to pay, any bonus, commission, fee, or gratuity to any employee or official of the City of Pawtucket for the purpose of obtaining any contract or award issued by the City of Pawtucket. Bidder or contractor further warrants that no commission or other payment has been or will be received from or paid to any third party contingent on the award of any contract by the City of Pawtucket, except as shall have been expressly communicated to the City of Pawtucket Purchasing Agent in writing prior to acceptance of the contract or award in question. Subsequent discovery by the City of Pawtucket of non-compliance with these provisions shall constitute sufficient cause for immediate termination of all outstanding contracts and suspension or debarment of the bidder(s) or contractor(s) involved.

13. AWARDS

Awards will be made with reasonable promptness and by written notice to the successful bidder (only); bids are considered to be irrevocable for a period of ninety (90) days following the bid opening unless expressly provided for to the contrary in the Request, and may not be withdrawn during this period without the express permission of the City of Pawtucket Purchasing Agent.

- a. Awards shall be made to the bidder(s) whose offer(s) constitutes the lowest responsive price offer (or lowest responsive price offer on an evaluated basis) for the item(s) in question or for the Request as a whole, at the option of the City of Pawtucket. The City of Pawtucket reserves the right to determine those offers which are responsive to the Request, or which otherwise serve its best interests.
- b. The City of Pawtucket reserves the right, before making award, to initiate investigations as to whether or not the materials, equipment, supplies, qualifications or facilities offered by

the bidder meet the requirements set forth in the proposal and specification, and are ample and sufficient to insure the proper performance of the contract in the event of award. If upon such examination it is found that the conditions of the proposal are not complied with or that articles or equipment proposed to be furnished do not meet the requirements called for, or that the qualifications or facilities are not satisfactory, the City of Pawtucket may reject such a bid. It is distinctly understood, however, that nothing in the foregoing shall mean or imply that it is obligatory upon the City of Pawtucket to make any examinations before awarding a contract; and it is further understood that if such examination is made, it in no way relieves the contractor from fulfilling all requirements and conditions of the contract.

- c. Qualified or conditional offers which impose limitations of the bidder's liability or modify the requirements of the bid, offers for alternate specifications, or which are made subject to different terms and conditions than those specified by the City of Pawtucket may, at the option of the City of Pawtucket, be
  - 1. rejected as being non-responsive, or
  - 2. set aside in favor of the City of Pawtucket's terms and conditions (with the consent of the bidder), or
  - 3. accepted, where the City of Pawtucket Purchasing Agent determines that such acceptance best serves the interests of the City of Pawtucket.Acceptance or rejection of alternate or counter-offers by the City of Pawtucket shall not constitute a precedent which shall be considered to be binding on successive solicitations or procurements.
- d. Bids submitted in pencil, or which do not bear an original signature, in ink, by an owner or authorized agent thereof, will not be accepted.
- e. Bids must be extended in the unit of measure specified in the Request. In the event of any discrepancy between unit prices and their extensions, the unit price will govern.
- f. The City of Pawtucket Purchasing Agent reserves the right to determine the responsibility of any bidder for a particular procurement.
- g. The City of Pawtucket Purchasing Agent reserves the right to reject any and all bids in whole or in part, to waive technical defects, irregularities, and omissions, and to give consideration to past performance of the offerors where, in his judgment the best interests of the City of Pawtucket will be served by so doing.
- h. The City of Pawtucket Purchasing Agent reserves the right to make awards by items, group of items or on the total low bid for all the items specified as indicated in the detailed specification, unless the bidder specifically indicates otherwise in his bid.
- i. Preference may be given to bids on products raised or manufactured in the City of Pawtucket or State of Rhode Island, other things being equal.
- j. The impact of discounted payment terms shall not be considered in evaluating responses to any Request.
- k. The City of Pawtucket Purchasing Agent reserves the right to act in the City of Pawtucket's best interests regarding awards caused by clerical errors by the City of Pawtucket Purchasing Office.

#### 14. SUSPENSION AND DEBARMENT

The City of Pawtucket Purchasing Agent may suspend or debar any vendor or potential bidder, for good cause shown:

- a. A debarment or suspension against a part of a corporate entity constitutes debarment or suspension of all of its divisions and all other organizational elements, except where the action has been specifically limited in scope and application, and may include all known corporate affiliates of a contractor, when such offense or act occurred in connection with the affiliate's performance of duties for or on behalf of the contractor, or with the knowledge, approval, or acquiescence of the contractor or one or more of its principals or directors (or where the contractor otherwise participated in, knew of, or had reason to know of the acts).
- b. The fraudulent, criminal or other serious improper conduct of any officer, director, shareholder, partner, employee, or any other individual associated with a contractor may be imputed to the contractor when the conduct occurred in connection with the individual's performance of duties for or on behalf of the contractor, or with the contractor's knowledge, approval or acquiescence. The contractor's acceptance of benefits derived from the conduct shall be evidence of such knowledge, approval, or acquiescence.

- c. A vendor or contractor who knowingly engages as a subcontractor for a contract awarded by the City of Pawtucket to a vendor or contractor then under a ruling of suspension or debarment by the City of Pawtucket shall be subject to disallowance of cost, annulment or termination of award, issuance of a stop work order, or debarment or suspension, as may be judged to be appropriate by the City of Pawtucket's Purchasing Agent.

15. PUBLIC RECORDS

Contractors and bidders are advised that certain documents, correspondence, and other submissions to the City of Pawtucket's Purchasing Office may be voluntarily made public by the City of Pawtucket absent specific notice that portions of such submittals may contain confidential or proprietary information, such that public access to those items should be withheld.

16. PRODUCT EVALUATION

In all specifications, the words "or equal" are understood after each article when manufacturer's name or catalog are referenced. If bidding on items other than those specified, the bidder must, in every instance, give the trade designation of the article, manufacturer's name and detailed specifications of the item the bidder proposes to furnish; otherwise, the bid will be construed as submitted on the identical commodity described in the detailed specifications. The City of Pawtucket's Purchasing Agent reserves the right to determine whether or not the item submitted is the approved equal the detailed specifications.

- a. Any objections to specifications must be filed by a bidder, in writing, with the City of Pawtucket's Purchasing Agent at least 96 hours before the time of bid opening to enable the City of Pawtucket's Purchasing Office to properly investigate the objections.
- b. All standards are minimum standards except as otherwise provided for in the Request or Contract.
- c. Samples must be submitted to the City of Pawtucket's Purchasing Office in accordance with the terms of the proposals and detailed specifications. Samples must be furnished free of charge and must be accompanied by descriptive memorandum invoices indicating whether or not the bidder desires their return and specifying the address to which they are to be returned (at the bidder's risk and expense), provided they have not been used or made useless by tests; and absent instructions, the samples shall be considered to be abandoned. Award samples may be held for comparison with deliveries.
- d. All samples submitted are subject to test by any laboratory the City of Pawtucket's Purchasing Agent may designate.

17. PRODUCT ACCEPTANCE

All merchandise offered or otherwise provided shall be new, of prime manufacture, and of first quality unless otherwise specified by the City of Pawtucket. The City of Pawtucket reserves the right to reject all nonconforming goods, and to cause their return for credit or replacement, at the City of Pawtucket's option. Contract deliverables specified for procurements of services shall be construed to be work products, and subject to the provisions of this section.

- a. Failure by the City of Pawtucket to discover latent defect(s) or concealed damage or non-conformance shall not foreclose the City of Pawtucket's right to subsequently reject the goods in question.
- b. Formal or informal acceptance by the City of Pawtucket of non-conforming goods shall not constitute a precedent for successive receipts or procurements.
- c. Where the contractor fails to promptly cure the defect or replace the goods, the City of Pawtucket reserves the right to cancel the Purchase Order, contract with a different contractor, and to invoice the original contractor for any differential in price over the original contract price.
- d. When materials, equipment or supplies are rejected, the same must be removed by the contractor from the premises of the City of Pawtucket within forty-eight (48) hours of notification. Rejected items left longer than two days will be regarded as abandoned and the City of Pawtucket shall have the right to dispose of them as its own property.

18. PRODUCT WARRANTIES

All product or service warranties normally offered by the contractor or bidder shall accrue to the City of Pawtucket's benefit, in addition to any special requirements which may be imposed by the City of Pawtucket. Every unit delivered must be guaranteed against faulty material and

workmanship for a period of one year unless otherwise specified, and the City of Pawtucket may, in the event of failure, order its replacement, repair, or return for full credit, at its sole option.

19. PAYMENT

Unless otherwise provided for by the Request or Contract, payment shall not be made until delivery has been made, or services performed, in full, and accepted. Payment shall not be due prior to thirty (30) working days following the latest of completion, acceptance, or the rendering of a properly submitted invoice.

- a. Payment terms other than the foregoing may be rejected as being nonresponsive.
- b. No partial shipments, or partial completion will be accepted, unless provided for by the Request or Contract.
- c. Where a question of quality is involved, or failure to complete a project by the specified due date, payment in whole or part against which to charge back any adjustment required, shall be withheld at the direction of the City of Pawtucket Purchasing Agent. In the event a cash discount is stipulated, the withholding of payments, as herein described, will not deprive the City of Pawtucket from taking such discount.
- d. Payments for used portion of inferior delivery or late delivery will be made by the City of Pawtucket on an adjusted price basis.
- e. Payments on contracts under architectural or engineering supervision must be accompanied by a Certificate of Payment and Statement of Account signed by the architect or engineer and submitted to the City of Pawtucket Purchasing Office for approval.

20. THIRD PARTY PAYMENTS

The City of Pawtucket recognizes no assigned or collateral rights to any purchase agreement except as may be expressly provided for in the bid or contract documents, and will not accede to any request for third party or joint payment(s), except as provided for in specific orders by a court of competent jurisdiction, or by express written permission of the City of Pawtucket's Purchasing Agent. Where an offer is contingent upon such payment(s), the offeror is obligated to serve affirmative notice in his bid submission.

21. SET-OFF AGAINST PAYMENTS

Payments due the contractor may be subject to reduction equal to the amount of unpaid and delinquent state taxes (or other just debt owed to the State), except where notice of delinquency has not been served or while the matter is pending in hearing or from any appeal therefrom.

22. CLAIMS

Any claim against a contractor may be deducted by the City of Pawtucket from any money due him in the same or other transactions. If no deduction is made in such fashion, the contractor shall pay the City of Pawtucket the amount of such claim on demand. Submission of a voucher and payment, thereof, by the City of Pawtucket shall not preclude the City of Pawtucket's Purchasing Agent from demanding a price adjustment in any case when the commodity delivered is later found to deviate from the specifications and proposal.

- a. The City of Pawtucket's Purchasing Agent may assess dollar damages against a vendor or contractor determined to be non-performing or otherwise in default of their contractual obligations equal to the cost of remedy incurred by the City of Pawtucket, and make payment of such damages a condition for consideration for any subsequent award. Failure by the vendor or contractor to pay such damages shall constitute just cause for disqualification and rejection, suspension, or debarment.

23. CERTIFICATION OF FUNDING

The Director of Finance shall provide certification as to the availability of funds to support the procurement for the current fiscal year ending June 30th only. Where delivery or service requirements extend beyond the end of the current fiscal year, such extensions are subject to both the availability of appropriated funds and a determination of continued need.

24. UNUSED BALANCES

Unless otherwise specified, all unused Blanket Order quantities and/or unexpended funds shall be automatically canceled on the expiration of the specified term. Similarly, for orders encompassing

more than one fiscal year, unexpended balances of funding allotted for an individual fiscal year may be liquidated at the close of that fiscal year, at the City of Pawtucket's sole option.

25. **MINORITY BUSINESS ENTERPRISES**

Pursuant to the provisions of Title 37 Chapter 14.1 of the General Laws, the City of Pawtucket reserves the right to apply additional consideration to offers, and to direct awards to bidders other than the responsive bid representing the lowest price where:

- a. the offer is fully responsive to the terms and conditions of the Request, and
- b. the price offer is determined to be within a competitive range (not to exceed 5% higher than the lowest responsive price offer) for the product or service, and
- c. the firm making the offer has been certified by the R.I. Department of Economic Development to be a small business concern meeting the criteria established to be considered a Minority Business Enterprise.

26. **PREVAILING WAGE REQUIREMENT**

In accordance with Title 37 Chapter 13 of the General Laws of Rhode Island, payment of the general prevailing rate of per diem wages and the general prevailing rate for regular, overtime and other working conditions existing in the locality for each craft, mechanic, teamster, or type of workman needed to execute this work is a requirement for both contractors and subcontractors for all public works projects.

The rates of pay set forth under this contract, are the minimum to be paid during the life of the Contract. It is therefore, the responsibility of Bidders to inform themselves as to local labor conditions, such as the length of work day and work week, overtime compensation, health and welfare contributions, labor supply and prospective changes or adjustments of rates.

Certified weekly payrolls and statement of compliance forms are required from contractors and subcontractors. Submit on State of Rhode Island Department of Labor and Training forms.

27. **EQUAL OPPORTUNITY COMPLIANCE, HANDICAPPED ACCESS AND AFFIRMATIVE ACTION**

Contractors of the City of Pawtucket are required to demonstrate the same commitment to equal opportunity as prevails under federal contracts controlled by Federal Executive Orders 11246, 11625, 11375 and 11830, and Title 28 Chapter 5.1 of the General Laws of Rhode Island.

Affirmative action plans shall be submitted by the contractor for review by the State Equal Opportunity Office. A contractor's failure to abide by the rules, regulations, contract terms and compliance reporting provisions as established shall be grounds for forfeiture and penalties as shall be established, including but not limited to suspension.

28. **DRUG-FREE WORKPLACE REQUIREMENT**

Contractors who do business with the City of Pawtucket and their employees shall abide by the State's drug-free workplace policy and the contractor shall so attest by signing a certificate of compliance.

29. **TAXES**

The City of Pawtucket is exempt from payment of excise, transportation and sales tax imposed by the Federal or State Government. These taxes should not be included in the proposal price. Exemption Certificates will be furnished upon request.

30. **INSURANCE**

All construction contractors, independent tradesmen, or firms providing any type of maintenance, repair, or other type of service to be performed on City of Pawtucket premises, buildings, or grounds are required to purchase and maintain coverage with a company or companies licensed to do business in the state as follows:

- a. **Comprehensive General Liability Insurance**  
Combined Single Limit not less than \$1,000,000 each occurrence for bodily Injury and property damage.
  - Independent Contractors;
  - Contractual - including construction hold harmless and other types of contracts or agreements in effect for insured operations;

- Products and Completed Operations;
  - Personal Injury (with employee exclusion deleted)
- b. Automobile Liability Insurance  
 Combined Single Limit not less than \$1,000,000 each occurrence for bodily Injury and property damage including non-owned and/or hired vehicle coverage.

OR

Bodily Injury, per person, \$500,000/ Bodily Injury, \$1,000,000 per accident/  
 Property Damage, \$500,000 per accident including non-owned and/or hired  
 vehicle coverage.

- c. Workers' Compensation Insurance  
 As required by the General Laws of Rhode Island.
- Employers liability \$500,000

The City of Pawtucket shall be named as an additional insured on the vendor's Comprehensive General Liability Policy and Automobile Liability Policy.

The City of Pawtucket's Purchasing Agent reserves the right to consider and accept alternate forms and plans of insurance or to require additional or more extensive coverage for any individual requirement. Successful bidders shall provide certificates of coverage, reflecting the City of Pawtucket as an additional insured, to the City of Pawtucket Purchasing Office, forty-eight (48) hours prior to the commencement of work, as a condition of award. Failure to comply with this provision shall result in rejection of the offeror's bid.

31. **BID SURETY**

When requested, a bidder must furnish a Bid Bond or Certified Check for 5% of his bid, or for the stated amount shown in the solicitation. Bid Bonds must be executed by a reliable Surety Company authorized to do business in the State of Rhode Island. Failure to provide Bid Surety with bid may be cause for rejection of bid. The Bid Surety of any three bidders in contention will be held until an award has been made according to the specifications of each proposal. All others will be returned by mail within 48 hours following the bid opening. Upon award of a contract, the remaining sureties will be returned by mail unless instructed to do otherwise.

32. **PERFORMANCE AND LABOR AND PAYMENT BONDS**

A performance bond and labor and payment bond of up to 100% of an award may be required by the City of Pawtucket's Purchasing Agent. Bonds must meet the following requirements:

- a. Corporation: The Bond must be signed by an official of the corporation above his/her official title and the corporate seal must be affixed over his/her signature.
- b. Firm or Partnership: The Bond must be signed by all of the partners and must indicate that they are " Doing Business As (name of firm)."
- c. Individual: The Bond must be signed by the individual owning the business and indicate "Owner."
- d. The Surety Company executing the Bond must be licensed to do business in the State of Rhode Island or Bond must be countersigned by a company so licensed.
- e. The Bond must be signed by an official of the Surety Company and the corporate seal must be affixed over his signature.
- f. Signatures of two witnesses for both the principal and the Surety must appear on the Bond.
- g. A Power of Attorney for the official signing of the Bond for the Surety Company must be submitted with the Bond.

33. **SUSPENSION, DEFAULT AND TERMINATION**

a. Suspension of a Contract by the City of Pawtucket  
 The City of Pawtucket reserves the right at any time and for any reason to suspend all or part of this contract, for a reasonable period, not to exceed sixty days, unless the parties agree to a longer period. The City of Pawtucket shall provide the contractor with written notice of the suspension order signed by the Purchasing Agent or his or her designee, which shall set forth the date upon

which the suspension shall take effect, the date of its expiration, and all applicable instructions. Upon receipt of said order, the contractor shall immediately comply with the order and suspend all work under this contract as specified in the order. The contractor shall take all reasonable steps to mitigate costs and adverse impact to the work specified in the contract during the suspension period. Before the order expires, the City of Pawtucket shall either:

1. cancel the suspension order;
2. extend the suspension order for a specified time period not to exceed thirty (30) days; or
3. terminate the contract as provided herein.

The contractor shall resume performance once a suspension order issued under this section is canceled or expires. If as a result of the suspension of performance, there is a financial or schedule impact upon the contract, an appropriate adjustment may be made by, or with the approval of, the City of Pawtucket's Purchasing Agent. Any adjustment shall be set forth in writing. After a suspension order has been canceled or expires, the contractor shall provide any request for adjustment to the City of Pawtucket's Purchasing Agent within thirty (30) days after resuming work performance.

b. Termination of a Contract by the City of Pawtucket

1. Termination for Default or Nonperformance

If, for any reason, the contractor breaches the contract by failing to satisfactorily fulfill or perform any obligations, promises, terms, or conditions, and having been given reasonable notice of and opportunity to cure such default, fails to take satisfactory corrective action within the time specified by the City of Pawtucket, the City of Pawtucket may terminate the contract, in whole or in part, the termination of all outstanding contracts or sub-contracts held by the contractor, and the suspension or debarment of the contractor from future procurements by giving written notice to the contractor specifying the date for termination. The City of Pawtucket shall endeavor to provide such notice at least seven (7) calendar days before the effective date of the termination.

A contractor who fails to commence within the time specified or complete an award made for repairs, alterations, construction, or any other service will be considered in default of contract. If contractor consistently fails to deliver quantities or otherwise perform as specified, the City of Pawtucket's Purchasing Agent reserves the right to terminate the contract and contract for completion of the work with another contractor and seek recourse from the defaulting contractor or his surety. In the event of a termination for default or nonperformance, in whole or in part, the City of Pawtucket may procure similar goods or services in a manner and upon terms it deems appropriate, and the contractor shall be liable for the excess costs incurred by the City of Pawtucket as a result of the contractor's default. The contractor, or its surety, agrees to promptly reimburse the City of Pawtucket for the excess costs, but shall have no claim to the difference should the replacement cost be less.

2. Termination Without Cause

The City of Pawtucket may terminate the contract in whole or in part without cause at any time by giving written notice to the contractor of such termination at least thirty (30) days before the effective date of such termination. The notice shall specify the part(s) of the contract being terminated and the effective termination date.

Within thirty (30) days of the effective date of the termination of the contract the contractor shall compile and submit to the City of Pawtucket an accounting of the work performed up to the date of termination. The City of Pawtucket may consider the following claims in determining reasonable compensation owed to the contractor for work performed up to the date of termination:

- a. contract prices for goods or services accepted under the contract;
- b. costs incurred in preparing to perform and performing the terminated portion of the contract; or

- c. any other reasonable costs incurred by the contractor as a result of the termination.

The total sum to be paid to the contractor shall not exceed the total contract price, less any payments previously made to the contractor, the proceeds from any sales of goods or manufacturing materials, and the contract price for work not terminated.

3. Contractor's Obligations in the Event of Termination

If the contract is terminated for any reason, or expires pursuant to its terms, the contractor shall transfer and deliver to the City of Pawtucket in the manner and to the extent directed by the City of Pawtucket:

- a. all finished or unfinished material prepared by the contractor; and
- b. all material, if any, provided to the contractor by the City of Pawtucket.

For the purposes of the contract, "material" shall include, but is not limited to, goods, supplies, parts, tools, machinery, equipment, furniture, fixtures, information, data, reports, summaries, tables, maps, charts, photographs, studies, recommendations, files, audiotapes, videotapes, records, keys, security badges, and documents.

If the contract is terminated for cause, the contractor shall not be relieved of liability to the City of Pawtucket for damages sustained because of any breach by the contractor. In such event, the City of Pawtucket may retain any amounts which may be due and owing to the contractor until such time as the exact amount of damages due the City of Pawtucket from the contractor has been determined by the City of Pawtucket Purchasing Agent. The City of Pawtucket may also set off any damages so determined against the amounts retained.

Upon termination of the contract, the contractor shall stop performance on the date specified, terminate any outstanding orders and subcontracts applicable to the terminated portion of the contract, and shall incur no further commitments or obligations in connection with the terminated performance. The contractor shall settle all liabilities and claims arising out of the termination of subcontracts and order generating from the terminated performance. The City of Pawtucket may direct the contractor to assign the contractor's right, title and interest under terminated orders or subcontracts to the City of Pawtucket or a third party.

Terminations of Purchase Order Contracts or Master Pricing Agreements shall require the signature of the City of Pawtucket Purchasing Agent or his designee. Notice of termination by either party shall be submitted in writing to the other party in accordance with the termination clause of the contract, or where no specific termination clause is included, written notice shall be provided no later than thirty (30) days before the expiration of the contract.

34. INDEMNITY

The contractor guarantees:

- a. To save the City of Pawtucket, its agents and employees, harmless from any liability imposed upon the City of Pawtucket arising from the negligence, either active or passive, of the contractor, as well as for the use of any copyrighted or uncopyrighted composition, secret process, patented or unpatented invention, article or appliance furnished or used in the performance of the contract of which the contractor is not the patentee, assignee or licensee.
- b. To pay for all permits, licenses and fees and give all notices and comply with all laws, ordinances, rules and regulations of the City of Pawtucket and of the State of Rhode Island.
- c. That the equipment offered is standard new equipment, latest model of regular stock product with all parts regularly used with the type of equipment offered; also, that no attachment or part has been substituted or applied contrary to manufacturer's recommendations and standard practice.

35. CONTRACTOR'S OBLIGATIONS

In addition to the specific requirements of the contract, construction and building repair contractors bear the following standard responsibilities:

- a. To furnish adequate protection from damage for all work and to repair damages of any kind, for which he or his workmen are responsible, to the building or equipment, to his own work, or to the work of other contractors;
- b. The contractor, its subcontractor(s) and their employees and/or agents, shall protect and preserve property in the contractor or subcontractor's possessions in which the City of Pawtucket has an interest, and any and all materials provided to the contractor or subcontractor by the City of Pawtucket;
- c. To clear and remove all debris and rubbish resulting from his work from time to time, as directed or required, a completion of the work leave the premises in a neat unobstructed condition, broom clean, and in satisfactory order and repair;
- d. To store equipment, supplies, and material at the site only upon approval by the City of Pawtucket, and at his own risk;
- e. To perform all work so as to cause the least inconvenience to the City of Pawtucket, and with proper consideration for the rights of other contractors and workmen;
- f. To acquaint themselves with conditions to be found at the site, and to assume responsibility for the appropriate dispatching of equipment and supervision of his employees during the conduct of the work;
- g. To ensure that his employees are instructed with respect to special regulations, policies, and procedures in effect for any City of Pawtucket facility or site, and that they comply with such rules, including but not limited to security policies or practices and/or criminal background checks for any employees and/or subcontractors;
- h. The contractor shall ensure that its employees or agents are experienced and fully qualified to engage in the activities and services required under the contract;
- i. The contractor shall ensure that at all times while services are being performed under this contract at least one of its employees or agents on the premises has a good command of the English language and can effectively communicate with the City of Pawtucket and its staff;
- j. The contractor and contractor's employees or agents shall comply with all applicable licensing and operating requirements required by federal or state law and shall meet accreditation and other generally accepted standards of quality in the applicable field of activity;
- k. The contractor shall secure and retain all employee-related insurance coverage for its employees and agents as required by law; and
- l. The contractor, subcontractor, and his or her employees and agents shall not disclose any confidential information of the City of Pawtucket to a third party. Confidential information means:
  - (1) any information of a sensitive or proprietary nature, whether or not specially identified as confidential or proprietary; or
  - (2) any information about the City of Pawtucket gained during the performance of a contract that is not already lawfully in the public domain.

36. **FORCE MAJEURE**

All orders shall be filled by the contractor with reasonable promptness, but the contractor shall not be held responsible for any losses resulting if the fulfillment of the terms of the contract shall be delayed or prevented by wars, acts of public enemies, strikes, fires, floods, acts of God, or for any other acts not within the control of the contractor and which by the exercise of reasonable diligence, the contractor is unable to prevent.



## **Appendix C**

### **General Wage Rate Decision Davis Bacon**

The current wage determination (Heavy Construction, Providence County), as obtained from the Rhode Island Department of Labor and Training, is bound as part of this Project Manual.



## **DAVIS-BACON PREVAILING WAGE REQUIREMENTS**

### **(a) GENERAL CONTRACT AND SUBCONTRACT PROVISIONS**

For any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF or a construction project under the DWSRF financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in §5.1 or the FY 2010 appropriation, the following clauses shall be inserted in full:

#### **(1) Minimum Wages**

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in §5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

Wage determinations may be obtained from the U.S. Department of Labor's website, [www.dol.gov](http://www.dol.gov).

(ii)(A) The Owner, on behalf of the EPA, shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The State award official shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

( 1 ) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

( 2 ) The classification is utilized in the area by the construction industry; and

( 3 ) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Owner agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), documentation of the action taken and the request, including the local wage determination shall be sent by the Owner to the State award official. The State award official will transmit the request to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the Owner do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the award official shall refer the questions, including the views of all interested parties and the recommendation of the State award official, to the Administrator for determination. The request shall be sent to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the State award official or will notify the State award official within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

## **(2) Withholding**

The Owner, shall upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this

contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the (Agency) may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

### **(3) Payrolls and Basic Records**

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Owner, that is, the entity that receives the sub-grant or loan from the State capitalization grant recipient. Such documentation shall be available on request of the State recipient or EPA. As to each payroll copy received, the Owner shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee ( e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the owner for transmission to the State or EPA if requested by EPA, the State, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of

compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the Owner.

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

( 1 ) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

( 2 ) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

( 3 ) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

#### **(4) Apprentices and Trainees**

(i) *Apprentices.* Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of

Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) *Trainees*. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) *Equal employment opportunity*. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

## **(5) Compliance with Copeland Act Requirements**

The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

## **(6) Subcontracts**

The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the (write in the name of the Federal agency) may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

## **(7) Contract Termination: Debarment**

A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

## **(8) Compliance with Davis-Bacon and Related Act Requirements**

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

## **(9) Disputes Concerning Labor Standards**

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the Owner, the State, EPA, the U.S. Department of Labor, or the employees or their representatives.

## **(10) Certification of Eligibility**

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

## **(b) CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

For any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act, the following clauses set forth in paragraphs (b) (1), (2), (3) and (4) of this section shall be inserted in full. These clauses shall be inserted in addition to the clauses required in Section (a), above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

### **(1) Overtime Requirements**

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

### **(2) Violation; Liability for Unpaid Wages; Liquidated Damages**

In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

### **(3) Withholding for Unpaid Wages and Liquidated Damages**

The Owner, upon written request of the EPA Award Official or an authorized representative of the Department of Labor shall withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

### **(4) Subcontracts**

The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

### **(c) MAINTENANCE OF RECORDS**

In addition to the clauses contained in Section (a), above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in §5.1 the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. The records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Owner, the State, EPA and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

### **(d) COMPLIANCE VERIFICATION**

(1) The Owner shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The Owner must use Standard Form 1445 (SF 1445) or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are available from EPA on request.

(2) The Owner shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, the Owner should conduct interviews with a representative group of covered employees within two weeks of each contractor or subcontractor's submission of its initial weekly payroll data and two weeks prior to the estimated completion date for the contract or subcontract. Owners must conduct more frequent interviews if the initial interviews or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB . Owners shall immediately conduct necessary interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.

(3) The Owner shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The Owner shall establish and follow a spot check schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the Owner should spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract . Owners must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the Owner shall verify evidence of fringe benefit plans and payments thereunder by contractors and subcontractors who claim credit for fringe benefit contributions.

(4) The Owner shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees

and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.

(5) Owners must immediately report potential violations of the DB prevailing wage requirements to the EPA DB contact listed above and to the appropriate DOL Wage and Hour District Office listed at <http://www.dol.gov/esa/contacts/whd/america2.htm>.

General Decision Number: RI190001 05/24/2019 RI1

Superseded General Decision Number: RI20180001

State: Rhode Island

Construction Types: Building, Heavy (Heavy and Marine) and Highway

Counties: Rhode Island Statewide.

BUILDING CONSTRUCTION PROJECTS (does not include residential construction consisting of single family homes and apartments up to and including 4 stories) HEAVY, HIGHWAY AND MARINE CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Modification Number	Publication Date
0	01/04/2019
1	01/11/2019
2	04/05/2019
3	05/03/2019
4	05/24/2019

ASBE0006-006 06/01/2015

Rates

Fringes

HAZARDOUS MATERIAL HANDLER  
(Includes preparation,  
wetting, stripping, removal

scrapping, vacuuming, bagging  
& disposing of all insulation  
materials, whether they  
contain asbestos or not, from  
mechanical systems).....\$ 31.63                      18.30

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ASBE0006-008 09/01/2018

	Rates	Fringes
Asbestos Worker/Insulator Includes application of all insulating materials, protective coverings, coatings & finishes to all types of mechanical systems.	\$ 42.38	28.75

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BOIL0029-001 01/01/2017

	Rates	Fringes
BOILERMAKER.....	\$ 42.42	24.92

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BRRIO003-001 12/01/2018

	Rates	Fringes
Bricklayer, Stonemason, Pointer, Caulker & Cleaner.....	\$ 39.48	26.85

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BRRIO003-002 03/01/2019

	Rates	Fringes
Marble Setter, Terrazzo Worker & Tile Setter.....	\$ 39.26	27.92

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BRRIO003-003 03/01/2019

	Rates	Fringes
Marble, Tile & Terrazzo Finisher.....	\$ 33.00	26.73

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\* CARP0094-001 01/01/2019

	Rates	Fringes
CARPENTER (Includes Soft Floor Layer).....	\$ 37.13	28.45
Diver Tender.....	\$ 36.28	27.15
DIVER.....	\$ 47.08	27.15
Piledriver.....	\$ 37.13	28.45
WELDER.....	\$ 38.13	28.45

FOOTNOTES:

When not diving or tending the diver, the diver and diver

tender shall receive the piledriver rate. Diver tenders shall receive \$1.00 per hour above the pile driver rate when tending the diver.

Work on free-standing stacks, concrete silos & public utility electrical power houses, which are over 35 ft. in height when constructed: \$.50 per hour additional.

Work on exterior concrete shear wall gang forms, 45 ft. or more above ground elevation or on setback: \$.50 per hour additional.

The designated piledriver, known as the "monkey": \$1.00 per hour additional.

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CARP1121-002 10/01/2017

	Rates	Fringes
MILLWRIGHT.....	\$ 36.85	27.50

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ELEC0099-002 06/01/2018

	Rates	Fringes
ELECTRICIAN.....	\$ 39.21	57.24%
Teledata System Installer.....	\$ 29.41	13.10%+14.15

FOOTNOTES:

Work of a hazardous nature, or where the work height is 30 ft. or more from the floor, except when working OSHA-approved lifts: 20% per hour additional.

Work in tunnels below ground level in combined sewer outfall: 20% per hour additional.

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ELEV0039-001 01/01/2019

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 51.56	33.705+A+B

FOOTNOTES:

A. PAID HOLIDAYS: New Years Day; Memorial Day; Independence Day; Labor Day; Veterans' Day; Thanksgiving Day; the Friday after Thanksgiving Day; and Christmas Day.

B. Employer contributes 8% basic hourly rate for 5 years or more of service of 6% basic hourly rate for 6 months to 5 years of service as vacation pay credit.

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ENGI0057-001 12/01/2018

Rates

Fringes

Operating Engineer: (power plants, sewer treatment plants, pumping stations, tunnels, caissons, piers, docks, bridges, wind turbines, subterranean & other marine and heavy construction work)

GROUP 1.....	\$ 39.90	25.85+a
GROUP 2.....	\$ 38.90	25.85+a
GROUP 3.....	\$ 34.52	25.85+a
GROUP 4.....	\$ 31.67	25.85+a
GROUP 5.....	\$ 37.95	25.85+a
GROUP 6.....	\$ 28.75	25.85+a
GROUP 7.....	\$ 22.75	25.85+a
GROUP 8.....	\$ 34.60	25.85+a
GROUP 9.....	\$ 38.52	25.85+a

a. BOOM LENGTHS, INCLUDING JIBS:

- 150 feet and over + \$ 2.00
- 180 feet and over + \$ 3.00
- 210 feet and over + \$ 4.00
- 240 feet and over + \$ 5.00
- 270 feet and over + \$ 7.00
- 300 feet and over + \$ 8.00
- 350 feet and over + \$ 9.00
- 400 feet and over + \$10.00

a. PAID HOLIDAYS:

New Year's Day, President's Day, Memorial Day, July Fourth, Victory Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, Christmas Day. a: Any employee who works 3 days in the week in which a holiday falls shall be paid for the holiday.

a. FOOTNOTES:

Hazmat work: \$2.00 per hour additional.  
Tunnel/Shaft work: \$5.00 per hour additional.

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, lighters, boom trucks and derricks

GROUP 2: Digging machine, Ross Carrier, locomotive, hoist, elevator, bidwell-type machine, shot & water blasting machine, paver, spreader, graders, front end loader (3 yds. and over), vibratory hammer & vacuum truck, roadheaders, forklifts, economobile type equipment, tunnel boring machines, concrete pump and on site concrete plants.

GROUP 3: Oilers on cranes.

GROUP 4: Oiler on crawler backhoe.

GROUP 5: Bulldozer, bobcats, skid steer loader, tractor, scraper, combination loader backhoe, roller, front end loader (less than 3 yds.), street and mobile-powered sweeper (3-yd. capacity), 8-ft. sweeper minimum 65 HP).

GROUP 6: Well-point installation crew.

GROUP 7: Utility Engineers and Signal Persons

GROUP 8: Heater, concrete mixer, stone crusher, welding machine, generator and light plant, gas and electric driven pump and air compressor.

GROUP 9: Boat & tug operator.

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 ENGI0057-002 05/01/2019

	Rates	Fringes
Power Equipment Operator (highway construction projects; water and sewerline projects which are incidental to highway construction projects; and bridge projects that do not span water)		
GROUP 1.....	\$ 34.95	25.95+a
GROUP 2.....	\$ 29.65	25.95+a
GROUP 3.....	\$ 23.65	25.95+a
GROUP 4.....	\$ 30.23	25.95+a
GROUP 5.....	\$ 33.93	25.95+a
GROUP 6.....	\$ 33.55	25.95+a
GROUP 7.....	\$ 29.20	25.95+a
GROUP 8.....	\$ 30.58	25.95+a
GROUP 9.....	\$ 32.53	25.95+a

a. FOOTNOTE: a. Any employee who works three days in the week in which a holiday falls shall be paid for the holiday.

a. PAID HOLIDAYS: New Year's Day, President's Day, Memorial Day, July Fourth, Victory Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day & Christmas Day.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

GROUP 1: Digging machine, crane, piledriver, lighter, locomotive, derrick, hoist, boom truck, John Henry's, directional drilling machine, cold planer, reclaimer, paver, spreader, grader, front end loader (3 yds. and over), vacuum truck, test boring machine operator, veemere saw, water blaster, hydro-demolition robot, forklift, economobile, Ross Carrier, concrete pump operator and boats

GROUP 2: Well point installation crew

GROUP 3: Utlity engineers and signal persons

GROUP 4: Oiler on cranes

GROUP 5: Combination loader backhoe, front end loader (less than 3 yds.), forklift, bulldozers & scrapers and boats

GROUP 6: Roller, skid steer loaders, street sweeper

GROUP 7: Gas and electric drive heater, concrete mixer, light plant, welding machine, pump & compressor

GROUP 8: Stone crusher

GROUP 9: Mechanic & welder

-----  
ENGI0057-003 12/01/2018

BUILDING CONSTRUCTION

	Rates	Fringes
Power Equipment Operator		
GROUP 1.....	\$ 39.17	25.85+a
GROUP 2.....	\$ 38.17	25.85+a
GROUP 3.....	\$ 37.95	25.85+a
GROUP 4.....	\$ 33.95	25.85+a
GROUP 5.....	\$ 31.10	25.85+a
GROUP 6.....	\$ 37.25	25.85+a
GROUP 7.....	\$ 36.82	25.85+a
GROUP 8.....	\$ 34.14	25.85+a

a. BOOM LENGTHS, INCLUDING JIBS:

- 150 ft. and over: + \$ 2.00
- 180 ft. and over: + \$ 3.00
- 210 ft. and over: + \$ 4.00
- 240 ft. and over: + \$ 5.00
- 270 ft. and over: + \$ 7.00
- 300 ft. and over: + \$ 8.00
- 350 ft. and over: + \$ 9.00
- 400 ft. and over: + \$10.00

a. PAID HOLIDAYS: New Year's Day, President's Day, Memorial Day, July Fourth, Victory Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day & Christmas Day. a: Any employee who works 3 days in the week in which a holiday falls shall be paid for the holiday.

- a. FOOTNOTE: Hazmat work: \$2.00 per hour additional.
- Tunnel/Shaft work: \$5.00 per hour additional.

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, lighters, boom trucks and derricks.

GROUP 2: Digging machine, Ross carrier, locomotive, hoist, elevator, bidwell-type machine, shot & water blasting

machine, paver, spreader, front end loader (3 yds. and over), vibratory hammer and vacuum truck

GROUP 3: Telehandler equipment, forklift, concrete pump & on-site concrete plant

GROUP 4: Fireman & oiler

GROUP 5: Oiler on crawler backhoe

GROUP 6: Bulldozer, skid steer loaders, bobcats, tractor, grader, scraper, combination loader backhoe, roller, front end loader (less than 3 yds.), street and mobile powered sweeper (3 yds. capacity), 8-ft. sweeper (minimum 65 hp)

GROUP 7: Well point installation crew

GROUP 8: Heater, concrete mixer, stone crusher, welding machine, generator for light plant, gas and electric driven pump & air compressor

-----  
IRON0037-001 09/16/2017

	Rates	Fringes
IRONWORKER.....	\$ 34.89	26.87

-----  
LABO0271-001 06/05/2016

BUILDING CONSTRUCTION

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 29.20	23.80
GROUP 2.....	\$ 29.45	23.80
GROUP 3.....	\$ 29.95	23.80
GROUP 4.....	\$ 30.20	23.80
GROUP 5.....	\$ 31.20	23.80

LABORERS CLASSIFICATIONS

GROUP 1: Laborer, Carpenter Tender, Mason Tender, Cement Finisher Tender, Scaffold Erector, Wrecking Laborer, Asbestos Removal [Non-Mechanical Systems]

GROUP 2: Asphalt Raker, Adzemen, Pipe Trench Bracer, Demolition Burner, Chain Saw Operator, Fence & Guard Rail Erector, Setter of Metal Forms for Roadways, Mortar Mixer, Pipelayer, Riprap & Dry Stonewall Builder, Highway Stone Spreader, Pneumatic Tool Operator, Wagon Drill Operator, Tree Trimmer, Barco-Type Jumping Tamper, Mechanical Grinder Operator

GROUP 3: Pre-Cast Floor & Roof Plank Erectors

GROUP 4: Air Track Operator, Hydraulic & Similar Self-Powered

Drill, Block Paver, Rammer, Curb Setter, Powderman & Blaster

GROUP 5: Toxic Waste Remover

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LABO0271-002 06/05/2016

HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
LABORER		
COMPRESSED AIR		
Group 1.....	\$ 46.63	21.80
Group 2.....	\$ 36.15	21.80
Group 3.....	\$ 48.63	21.80
FREE AIR		
Group 1.....	\$ 38.70	21.80
Group 2.....	\$ 36.15	21.80
Group 3.....	\$ 40.70	21.80
LABORER		
Group 1.....	\$ 29.20	21.80
Group 2.....	\$ 29.45	21.80
Group 3.....	\$ 30.20	21.80
Group 4.....	\$ 22.70	21.80
Group 5.....	\$ 31.20	21.80
OPEN AIR CAISSON, UNDERPINNING WORK AND BORING CREW		
Bottom Man.....	\$ 35.20	21.80
Top Man & Laborer.....	\$ 34.25	21.80
TEST BORING		
Driller.....	\$ 35.65	21.80
Laborer.....	\$ 34.25	21.80

LABORER CLASSIFICATIONS

GROUP 1: Laborer; Carpenter tender; Cement finisher tender; Wrecking laborer; Asbestos removers [non-mechanical systems]; Plant laborer; Driller in quarries

GROUP 2: Adzeperson; Asphalt raker; Barcotype jumping tamper; Chain saw operators; Concrete and power buggy operator; Concrete saw operator; Demolition burner; Fence and guard rail erector; Highway stone spreader; Laser beam operator; Mechanical grinder operator; Mason tender; Mortar mixer; Pneumatic tool operator; Riprap and dry stonewall builder; Scaffold erector; Setter of metal forms for roadways; Wagon drill operator; Wood chipper operator; Pipelayer; Pipe trench bracer

GROUP 3: Air track drill operator; Hydraulic and similar powered drills; Brick paver; Block paver; Rammer and curb setter; Powderperson and blaster

GROUP 4: Flagger & signaler

GROUP 5: Toxic waste remover

LABORER - COMPRESSED AIR CLASSIFICATIONS

GROUP 1: Mucking machine operator, tunnel laborer, brake person, track person, miner, grout person, lock tender, gauge tender, miner: motor person & all others in compressed air

GROUP 2: Change house attendant, powder watchperson, top person on iron

GROUP 3: Hazardous waste work within the "HOT" zone

LABORER - FREE AIR CLASSIFICATIONS

GROUP 1: Grout person - pumps, brake person, track person, form mover & stripper (wood & steel), shaft laborer, laborer topside, outside motorperson, miner, conveyor operator, miner welder, heading motorperson, erecting operator, mucking machine operator, nozzle person, rodperson, safety miner, shaft & tunnel, steel & rodperson, mole nipper, concrete worker, form erector (wood, steel and all accessories), cement finisher (this type of work only), top signal person, bottom person (when heading is 50' from shaft), burner, shield operator and TBM operator

GROUP 2: Change house attendant, powder watchperson

GROUP 3: Hazardous waste work within the "HOT" zone

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PAIN0011-005 06/01/2018

	Rates	Fringes
PAINTER		
Brush and Roller.....	\$ 33.62	21.05
Epoxy, Tanks, Towers, Swing Stage & Structural		
Steel.....	\$ 35.62	21.05
Spray, Sand & Water		
Blasting.....	\$ 36.62	21.05
Taper.....	\$ 34.37	21.05
Wall Coverer.....	\$ 34.12	21.05

-----  
PAIN0011-006 06/01/2018

	Rates	Fringes
GLAZIER.....	\$ 37.18	21.05

FOOTNOTES:

SWING STAGE: \$1.00 per hour additional.

PAID HOLIDAYS: Labor Day & Christmas Day.

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PAIN0011-011 06/01/2018

	Rates	Fringes
Painter (Bridge Work).....	\$ 49.75	21.05

-----  
PAIN0035-008 06/01/2011

	Rates	Fringes
Sign Painter.....	\$ 24.79	13.72

-----  
PLAS0040-001 06/04/2018

BUILDING CONSTRUCTION

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 34.30	27.05

FOOTNOTE: Cement Mason: Work on free swinging scaffolds under 3 planks width and which is 20 or more feet above ground and any offset structure: \$.30 per hour additional.

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PLAS0040-002 07/23/2018

HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 31.20	22.10

-----  
PLAS0040-003 07/02/2018

	Rates	Fringes
PLASTERER.....	\$ 35.65	27.40

-----  
PLUM0051-002 09/01/2018

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 42.04	29.45

-----  
ROOF0033-004 12/01/2018

	Rates	Fringes
ROOFER.....	\$ 36.75	26.12

-----  
SFRI0669-001 04/01/2017

	Rates	Fringes
SPRINKLER FITTER.....	\$ 43.92	21.49

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	Rates	Fringes
Sheet Metal Worker.....	\$ 36.13	35.13
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\* TEAM0251-001 05/01/2019

HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....	\$ 27.96	26.8525+A+B+C
GROUP 2.....	\$ 27.61	26.8525+A+B+C
GROUP 3.....	\$ 27.66	26.8525+A+B+C
GROUP 4.....	\$ 27.71	26.8525+A+B+C
GROUP 5.....	\$ 27.81	26.8525+A+B+C
GROUP 6.....	\$ 28.21	26.8525+A+B+C
GROUP 7.....	\$ 28.41	26.8525+A+B+C
GROUP 8.....	\$ 27.91	26.8525+A+B+C
GROUP 9.....	\$ 28.16	26.8525+A+B+C
GROUP 10.....	\$ 27.96	26.8525+A+B+C

FOOTNOTES:

A. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day, plus Presidents' Day, Columbus Day, Veteran's Day & V-J Day, providing the employee has worked at least one day in the calendar week in which the holiday falls.

B. Employee who has been on the payroll for 1 year or more but less than 5 years and has worked 150 Days during the last year of employment shall receive 1 week's paid vacation; 5 to 10 years - 2 weeks' paid vacation; 10 or more years - 3 week's paid vacation.

C. Employees on the seniority list shall be paid a one hundred dollar (\$100.00) bonus for every four hundred (400) hours worked, up to a maximum of five hundred dollars (\$500.00)

All drivers working on a defined hazard material job site shall be paid a premium of \$2.00 per hour over applicable rate.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Pick-up trucks, station wagons, & panel trucks

GROUP 2: Two-axle on low beds

GROUP 3: Two-axle dump truck

GROUP 4: Three-axle dump truck

GROUP 5: Four- and five-axle equipment

GROUP 6: Low-bed or boom trailer.

GROUP 7: Trailers when used on a double hook up (pulling 2 trailers)

GROUP 8: Special earth-moving equipment, under 35 tons

GROUP 9: Special earth-moving equipment, 35 tons or over

GROUP 10: Tractor trailer

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

-----  
The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed

in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

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WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION



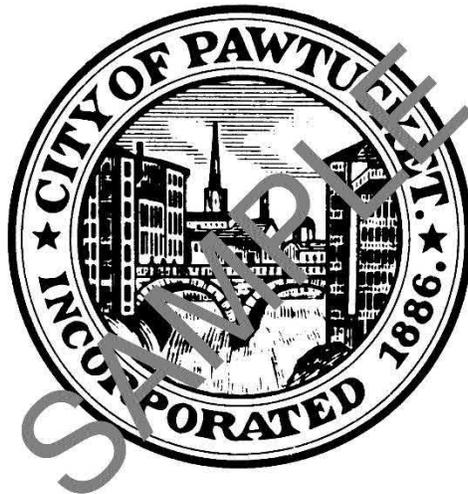
**Appendix D**

**City of Pawtucket Standard Form of Agreement (Sample)**



**CONTRACT AGREEMENT  
FOR:**

**PROJECT\_TITLE**



**PAWTUCKET, RHODE ISLAND**

PURCHASING DIVISION  
137 ROOSEVELT AVE.  
PAWTUCKET, RHODE ISLAND

MM/DD/YYYY

**CONTRACT AGREEMENT**

**PROJECT\_TITLE**

Pawtucket, Rhode Island

**1. AGREEMENT FOR SERVICES**

This Agreement for Services (hereinafter the "Agreement" or "Contract") made this ##th day of #####, 2015 between the City of Pawtucket, a municipal corporation of the State of Rhode Island, with a business address of 137 Roosevelt Avenue, Pawtucket, Rhode Island (hereinafter the "City") and VENDOR, a company authorized to do business in the State of Rhode Island, with a business address of ##### (hereinafter the "Consultant").

**2. SCOPE OF CONSULTANT SERVICES**

This is a contract to provide the City with consulting services as specified herein and as set forth in the following Exhibits, all of which are attached hereto and incorporated into this Agreement by reference herein:

- Exhibit 1 – RFP #####;
- Exhibit 2 – Rhode Island Department of Labor and Training Municipal Contract Addendum;

and all addenda issued and any resulting negotiations and the RFP response received by the City from the Consultant.

**3. COMPENSATION FOR SERVICES**

The City shall pay the Consultant in the following sums for work performed under this Agreement after the effective date as set out below:

\$#####

The payment and performance of any obligations under this contract for years beyond the first fiscal year are subject to the availability of funds. Payment will not be made until services have been fully performed and accepted, and upon a properly submitted invoice. All invoices must clearly display the purchase order number.

**4. RHODE ISLAND LAW AND FORUM**

(a) This Agreement shall be construed according to the law of the State of Rhode Island.

(b) Any litigation between the City and the Consultant arising under this Agreement or out of work performed under this Agreement shall occur, if in the state courts, in the Providence County Superior Court, and in the federal courts, in the United States District Court for the District of Rhode Island.

**5. NOTICE**

Any notice provided for under this Agreement shall be sufficient if in writing and delivered personally to the following addressee or deposited in the United States mail, postage prepaid, certified mail, return receipt requested, addressed as follows, or to such other address as the receiving party hereafter shall specify in writing:

If to the City:

Andrew Silvia, PE, Chief of Project Development  
250 Armistice Boulevard  
Pawtucket, RI 02860

If to the Consultant:

#####

**6. COMPLIANCE WITH LAWS**

Consultant shall materially comply with any and all Federal, state and local laws and regulations now in force and which may hereafter during the term of this contract, be enacted and become effected which are applicable, as well as obtaining any and all required permits and licenses.

**7. TIMEFRAME TO COMPLETE**

The Consultant shall complete the consulting services located in the City of Pawtucket, Rhode Island no later than #####.

**8. WAIVERS**

No waiver of any breach or any one or more of the conditions or covenants of this Contract by City or Consultant shall be deemed to imply or to constitute a waiver of any prior or succeeding breach; and the failure of City or Consultant to insist upon the strict performance of the terms, covenants, agreements and conditions herein contained or any one of them shall not constitute or be construed as a waiver or relinquishment of City's or Consultant's right to thereafter enforce any such default, or any term, covenants, agreement or condition.

**CONSULTANT (VENDOR)**

\_\_\_\_\_  
WITNESS

Subscribed and sworn to before me in the \_\_\_\_\_

on this \_\_\_\_\_ day of \_\_\_\_\_, 2015.

\_\_\_\_\_  
NOTARY PUBLIC  
My Commission Expires:

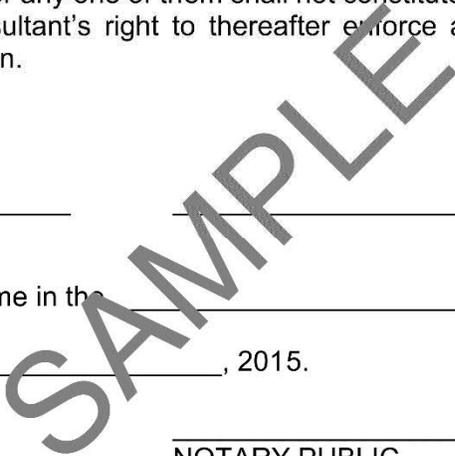
**CITY OF PAWTUCKET**

\_\_\_\_\_  
WITNESS

Subscribed and sworn to before me in the \_\_\_\_\_

on this \_\_\_\_\_ day of \_\_\_\_\_, 2015.

\_\_\_\_\_  
NOTARY PUBLIC  
My Commission Expires:



**EXHIBIT 1:**

**RFP #####**

**SAMPLE**

**EXHIBIT 2:**

**RHODE ISLAND DLT MUNICIPAL CONTRACT ADDENDUM**

**SAMPLE**

**MUNICIPAL CONTRACT ADDENDUM**  
**RHODE ISLAND DEPARTMENT OF LABOR AND TRAINING**  
**PREVAILING WAGE REQUIREMENTS**  
**(37-13-1 ET SEQ.)**

The prevailing wage requirements are generally set forth in RIGL 37-13-1 et seq. These requirements refer to the prevailing rate of pay for regular, holiday, and overtime wages to be paid to each craftsmen, mechanic, teamster, laborer, or other type of worker performing work on public works projects when state or municipal funds exceed one thousand dollars (\$1,000).

All Prevailing Wage Contractors and Subcontractors are required to:

1. Submit to the Awarding Authority a list of the contractor's subcontractors for any part or all of the prevailing wage work in accordance with RIGL § 37-13-4;
2. Pay all prevailing wage employees at least once per week and in accordance with RIGL §37-13-7 (see Appendix B attached);
3. Post the prevailing wage rate scale and the Department of Labor and Training's prevailing wage poster in a prominent and easily accessible place on the work site in accordance with RIGL §37-13-11; posters may be downloaded at [www.dlt.ri.gov/pw/Posters.htm](http://www.dlt.ri.gov/pw/Posters.htm) or obtained from the Department of Labor and Training, Center General Complex, 1511 Pontiac Avenue, Cranston, Rhode Island;
4. Access the Department of Labor and Training website, at [www.dlt.ri.gov](http://www.dlt.ri.gov) on or before July 1<sup>st</sup> of each year, until such time as the contract is completed, to ascertain the current prevailing wage rates and the amount of payment or contributions for each covered prevailing wage employee and make any necessary adjustments to the covered employee's prevailing wage rates effective July 1<sup>st</sup> of each year in compliance with RIGL §37-13-8;
5. Attach a copy of this CONTRACT ADDENDUM and its attachments as a binding obligation to any and all contracts between the contractor and any subcontractors and their assignees for prevailing wage work performed pursuant to this contract;
6. Provide for the payment of overtime for prevailing wage employees who work in excess of eight (8) hours in any one day or forty (40) hours in any one week as provided by RIGL §37-13-10;

7. Maintain accurate prevailing wage employee payroll records on a Rhode Island Certified Weekly Payroll form available for download at [www.dlt.ri.gov/pw.forms/htm](http://www.dlt.ri.gov/pw.forms/htm), as required by RIGL §37-13-13, and make those records available to the Department of Labor and Training upon request;
8. Furnish the fully executed RI Certified Weekly Payroll Form to the awarding authority on a monthly basis for all work completed in the preceding month.
9. For general or primary contracts one million dollars (\$1,000,000) or more, shall maintain on the work site a fully executed RI Certified Prevailing Wage Daily Log listing the contractor's employees employed each day on the public works site; the RI Certified Prevailing Wage Daily Log shall be available for inspection on the public works site at all times; this rule shall not apply to road, highway, or bridge public works projects. Where applicable, furnish both the Rhode Island Certified Prevailing Wage Daily Log together with the Rhode Island Weekly Certified Payroll to the awarding authority.
10. Assure that all covered prevailing wage employees on construction projects with a total project cost of one hundred thousand dollars (\$100,000) or more has a OSHA ten (10) hour construction safety certification in compliance with RIGL § 37-23-1;
11. Assure that all prevailing wage employees who perform work which requires a Rhode Island trade license possess the appropriate Rhode Island trade license in compliance with Rhode Island law; and
12. Comply with all applicable provisions of RIGL §37-13-1, et. seq;

Any questions or concerns regarding this CONTRACT ADDENDUM should be addressed to the contractor or subcontractor's attorney. Additional Prevailing Wage information may be obtained from the Department of Labor and Training at [www.dlt.ri.gov/pw](http://www.dlt.ri.gov/pw).

### **CERTIFICATION**

I hereby certify that I have reviewed this CONTRACT ADDENDUM and understand my obligations as stated above.

By: \_\_\_\_\_

Title: \_\_\_\_\_

Subscribed and sworn before me this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Notary Public  
My commission expires: \_\_\_\_\_

SAMPLE

APPENDIX A

**TITLE 37**  
**Public Property and Works**

**CHAPTER 37-13**  
**Labor and Payment of Debts by Contractors**

**SECTION 37-13-5**

**§ 37-13-5 Payment for trucking or materials furnished – Withholding of sums due.** – A contractor or subcontractor on public works authorized by a proper authority shall pay any obligation or charge for trucking and material which have been furnished for the use of the contractor or subcontractor, in connection with the public works being performed by him or her, within ninety (90) days after the obligation or charge is incurred or the trucking service has been performed or the material has been delivered to the site of the work, whichever is later. When it is brought to the notice of the proper authority in a city or town, or the proper authority in the state having supervision of the contract, that the obligation or charge has not been paid by the contractor or subcontractor, the proper authority may deduct and hold for a period not exceeding sixty (60) days, from sums of money due to the contractor or subcontractor, the equivalent amount of such sums certified by a trucker or materialman creditor as due him or her, as provided in this section, and which the proper authority determines is reasonable for trucking performed or materials furnished for the public works.

APPENDIX B

**TITLE 37**

**Public Property and Works**

**CHAPTER 37-13**

**Labor and Payment of Debts by Contractors**

**SECTION 37-13-7**

**§ 37-13-7 Specification in contract of amount and frequency of payment of wages.**

– (a) Every call for bids for every contract in excess of one thousand dollars (\$1,000), to which the state of Rhode Island or any political subdivision thereof or any public agency or quasi-public agency is a party, for construction, alteration, and/or repair, including painting and decorating, of public buildings or public works of the state of Rhode Island or any political subdivision thereof, or any public agency or quasi-public agency and which requires or involves the employment of employees, shall contain a provision stating the minimum wages to be paid various types of employees which shall be based upon the wages that will be determined by the director of labor and training to be prevailing for the corresponding types of employees employed on projects of a character similar to the contract work in the city, town, village, or other appropriate political subdivision of the state of Rhode Island in which the work is to be performed. Every contract shall contain a stipulation that the contractor or his or her subcontractor shall pay all the employees employed directly upon the site of the work, unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment computed at wage rates not less than those stated in the call for bids, regardless of any contractual relationships which may be alleged to exist between the contractor or subcontractor and the employees, and that the scale of wages to be paid shall be posted by the contractor in a prominent and easily accessible place at the site of the work; and the further stipulation that there may be withheld from the contractor so much of the accrued payments as may be considered necessary to pay to the employees employed by the contractor, or any subcontractor on the work, the difference between the rates of wages required by the contract to be paid the employees on the work and the rates of wages received by the employees and not refunded to the contractor, subcontractors, or their agents.

(b) The terms "wages", "scale of wages", "wage rates", "minimum wages", and "prevailing wages" shall include:

- (1) The basic hourly rate of pay; and
- (2) The amount of:

(A) The rate of contribution made by a contractor or subcontractor to a trustee or to a third person pursuant to a fund, plan, or program; and

(B) The rate of costs to the contractor or subcontractor which may be reasonably anticipated in providing benefits to employees pursuant to an enforceable commitment to carry out a financially responsible plan or program which was communicated in writing to the employees affected, for medical or hospital care, pensions on retirement or death, compensation for injuries or illness resulting from occupational activity, or insurance to provide any of the foregoing, for unemployment benefits, life insurance, disability and sickness insurance, or accident insurance, for vacation and holiday pay, for defraying costs of apprenticeship or other similar programs, or for other bona fide fringe benefits, but only where the contractor or subcontractor is not required by other federal, state, or local law to provide any of the benefits; provided, that the obligation of a contractor or subcontractor to make payment in accordance with the prevailing wage determinations of the director of labor and training insofar as this chapter of this title and other acts incorporating this chapter of this title by reference are concerned may be discharged by the making of payments in cash, by the making of contributions of a type referred to in subsection (b)(2), or by the assumption of an enforceable commitment to bear the costs of a plan or program of a type referred to in this subdivision, or any combination thereof, where the aggregate of any payments, contributions, and costs is not less than the rate of pay described in subsection (b)(1) plus the amount referred to in subsection (b)(2).

(c) The term "employees", as used in this section, shall include employees of contractors or subcontractors performing jobs on various types of public works including mechanics, apprentices, teamsters, chauffeurs, and laborers engaged in the transportation of gravel or fill to the site of public works, the removal and/or delivery of gravel or fill or ready-mix concrete, sand, bituminous stone, or asphalt flowable fill from the site of public works, or the transportation or removal of gravel or fill from one location to another on the site of public works, and the employment of the employees shall be subject to the provisions of subsections (a) and (b).

(d) The terms "public agency" and "quasi-public agency" shall include, but not be limited to, the Rhode Island industrial recreational building authority, the Rhode Island economic development corporation, the Rhode Island airport corporation, the Rhode Island industrial facilities corporation, the Rhode Island refunding bond authority, the Rhode Island housing and mortgage finance corporation, the Rhode Island resource recovery corporation, the Rhode Island public transit authority, the Rhode Island student loan authority, the water resources board corporate, the Rhode Island health and education building corporation, the Rhode Island higher education assistance authority, the Rhode Island turnpike and bridge authority, the Narragansett Bay water quality management district commission, Rhode Island telecommunications authority, the convention center authority, the board of governors for higher education, the board of regents for elementary and secondary education, the capital center commission, the housing resources commission, the Quonset Point-Davisville management corporation, the Rhode Island children's crusade for higher education, the Rhode Island depositors economic protection corporation, the Rhode Island lottery commission, the Rhode Island

partnership for science and technology, the Rhode Island public building authority, and the Rhode Island underground storage tank board.

SAMPLE

**Appendix E**

**Site Plans Issued for Bid**



# TOD DISTRICT STORMWATER IMPROVEMENTS

PINE STREET · PAWTUCKET · RHODE ISLAND

## PINE STREET GREEN STORMWATER IMPROVEMENTS (GSI)

JUNE 2019

PREPARED FOR  
**CITY OF PAWTUCKET**  
137 ROOSEVELT AVENUE  
PAWTUCKET, RHODE ISLAND 02860



PREPARED BY  
**FUSS & O'NEILL**  
317 IRON HORSE WAY, SUITE 204  
PROVIDENCE, RI 02908  
401.861.3070  
www.fando.com

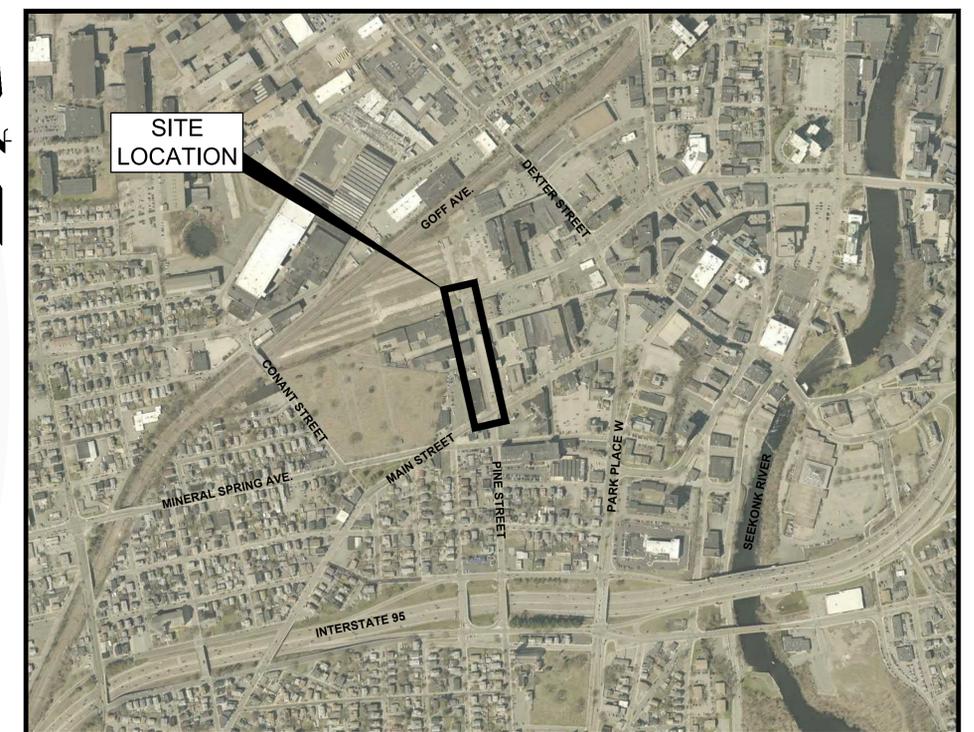
### SHEET INDEX

SHEET No.	SHEET TITLE
GI-001	COVER SHEET
CN-001	GENERAL NOTES & LEGEND
CS-101	EXISTING CONDITIONS PLAN
CS-102	SITE PREPARATION PLAN
CS-103	SITE LAYOUT PLAN
CS-104	SITE ENLARGEMENT PLAN
LP-101	LANDSCAPE PLAN
CT-101 -	TRAFFIC MANAGEMENT
CT-102	PLAN
CD-501 -	CONSTRUCTION DETAILS
CD-505	

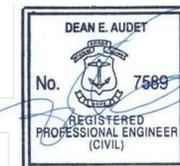
### PROJECT TEAM

FUSS & O'NEILL, INC.  
CIVIL ENGINEER AND LANDSCAPE DESIGNER  
317 IRON HORSE WAY, SUITE 204  
PROVIDENCE, RHODE ISLAND 02908  
401-861-3070

AEROTECH INTERNATIONAL  
LAND SURVEYOR  
365 SMITH STREET, SUITE ONE  
PROVIDENCE, RHODE ISLAND 02908  
401-351-0600



LOCATION MAP  
SCALE: 1" = 500'



PROJ. No.: 20150951.A30  
DATE: JUNE 2019

GI-001

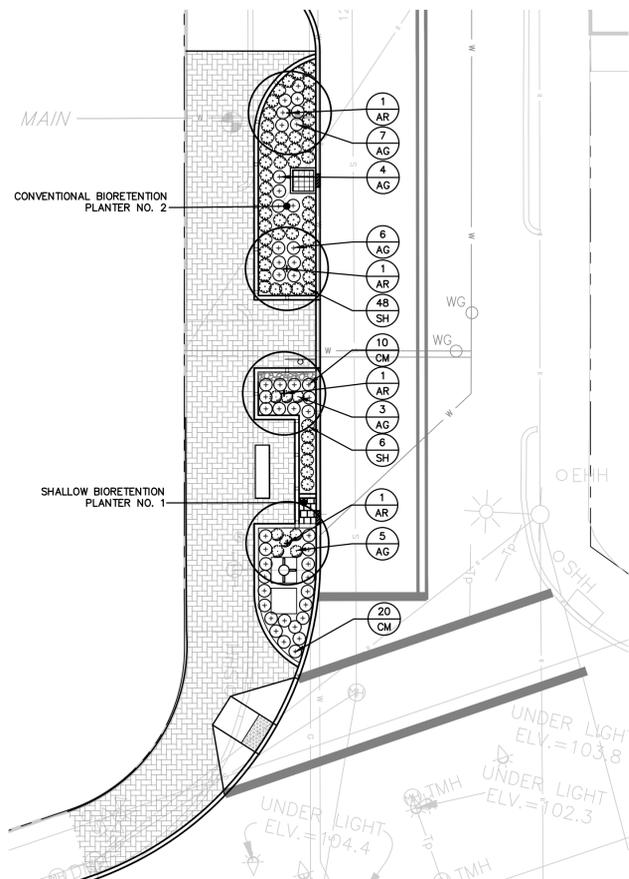




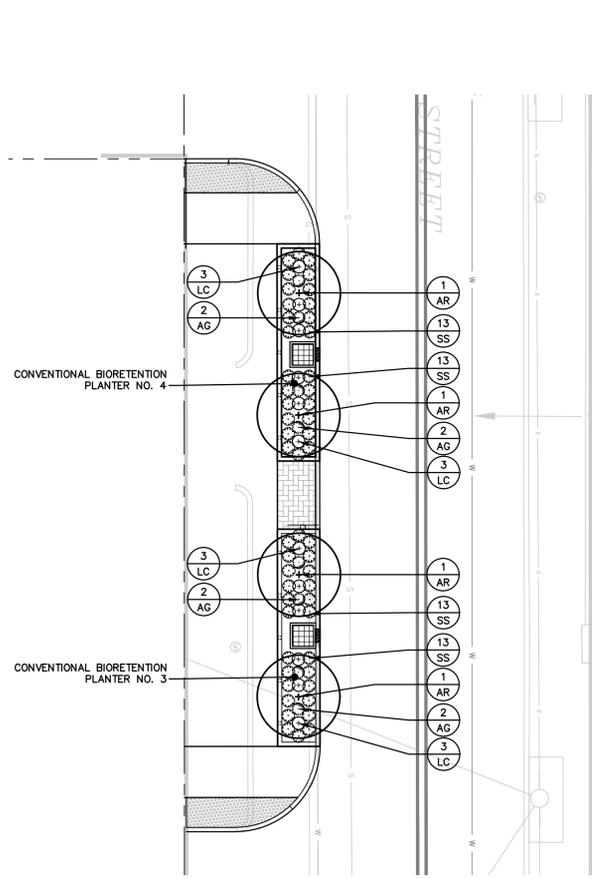




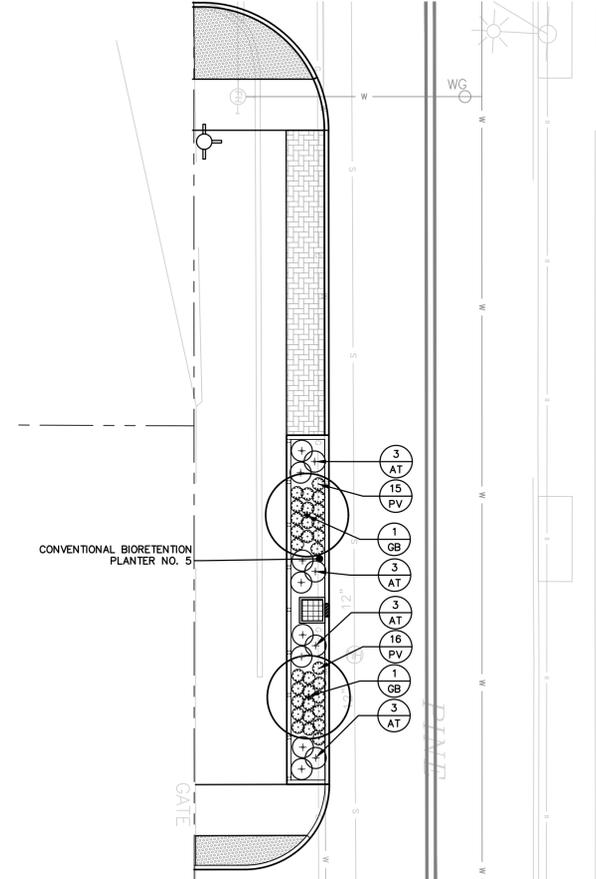




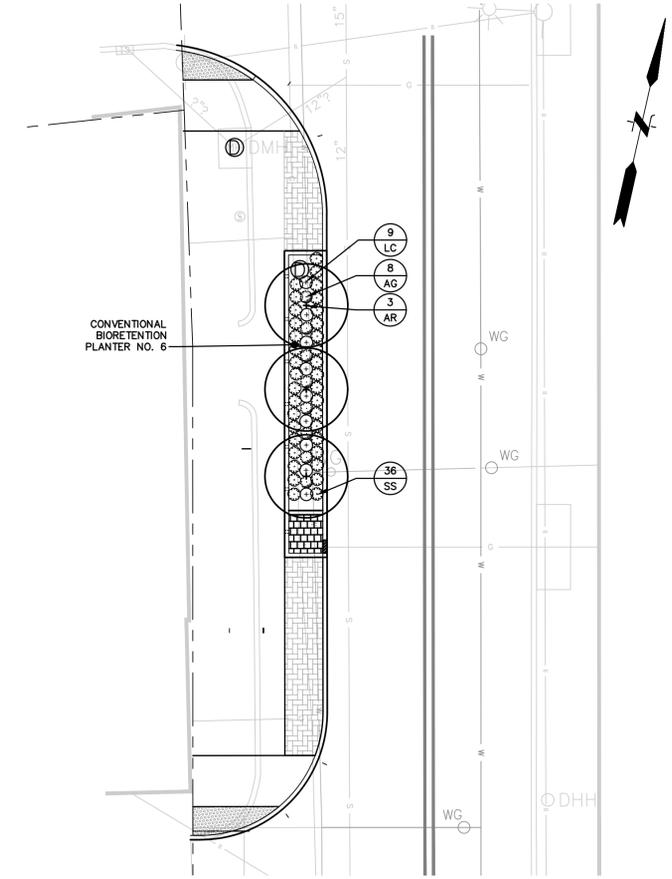
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SCALE: 1"=10'



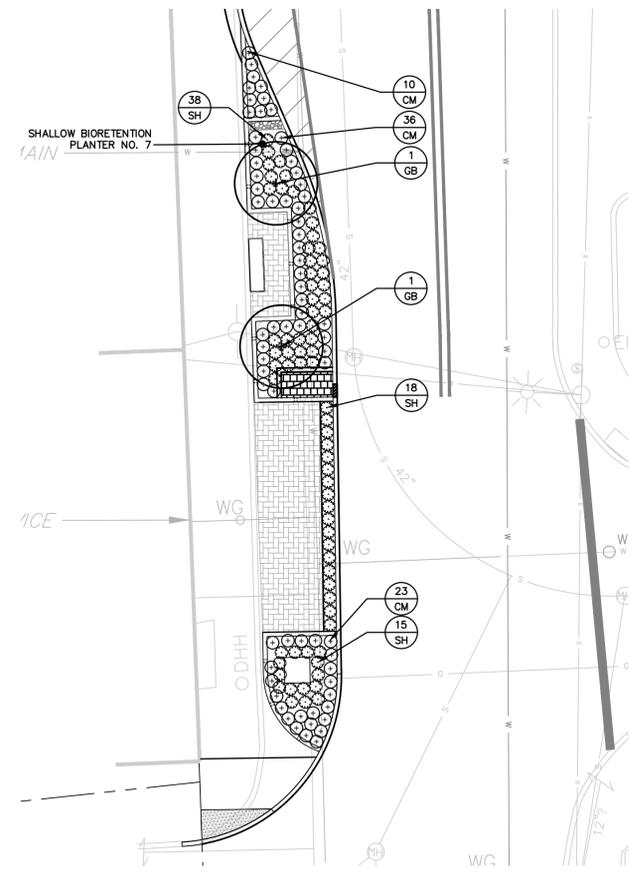
**BIORETENTION PLANTER NO. 3 & 4**  
SCALE: 1"=10'



**BIORETENTION PLANTER NO. 5**  
SCALE: 1"=10'



**BIORETENTION PLANTER NO. 6**  
SCALE: 1"=10'



**PARKLET B & BIORETENTION PLANTER NO. 7**  
SCALE: 1"=10'

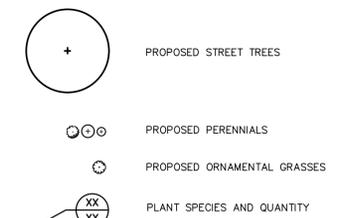
**PLANTING NOTES:**

1. ALL PLANTING MATERIAL TO BE NURSERY GROWN STOCK SUBJECT TO A.A.N. STANDARDS
2. THE CONTRACTOR SHALL SUPPLY ALL PLANTS IN QUANTITIES SUFFICIENT TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND LISTED IN THE PLANT LIST. IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE PLANT LIST AND THOSE REQUIRED BY THE DRAWINGS, THE LARGER NUMBER SHALL APPLY.
3. ALL PLANTS SHALL BE APPROVED PRIOR TO INSTALLATION AND SHALL BE FIELD STAKED ON SITE PRIOR TO INSTALLATION BY THE CONTRACTOR FOR THE APPROVAL OF THE LANDSCAPE ARCHITECT. ANY INSTALLATIONS WHICH WERE NOT APPROVED BY THE LANDSCAPE ARCHITECT AND WHICH ARE SUBSEQUENTLY REQUESTED TO BE MOVED WILL BE DONE AT THE CONTRACTORS EXPENSE.
4. PRECISE LOCATION OF ITEMS NOT DIMENSIONED ON THE PLAN ARE TO BE FIELD STAKED BY THE CONTRACTOR AND SHALL BE SUBJECT TO THE REQUIREMENTS SPECIFIED IN THE PREVIOUS NOTE.
5. TREES SHALL NOT BE STAKED UNLESS OTHERWISE NOTED.
6. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGED VEGETATION AND SHALL REPLACE OR REPAIR ANY DAMAGED MATERIAL, AT HIS OWN EXPENSE. THE CONTRACTOR SHALL CONTACT "DIGSAFE" AT 811 OR (888)344-7233 PRIOR TO CONSTRUCTION.
7. ALL PLANTING AREAS SHALL HAVE CONTINUOUS BEDS OF TOPSOIL 12" DEEP. ALL SOD AND HYDROSEED AREAS SHALL HAVE A MINIMUM TOPSOIL BED OF 6".
8. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES IN THE FIELD. WHERE PLANT MATERIAL MAY INTERFERE WITH UTILITIES, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT TO COORDINATE THEIR INSTALLATION.
9. FOR PLANTING SOIL MIX, SEE SPECIFICATIONS OR PLANTING DETAILS.
10. ALL EXISTING RILL, GULLY OR CHANNEL EROSION SHALL BE FILLED WITH APPROPRIATE BACKFILL MATERIAL, FINE RAKED, SCARIFIED AND STABILIZED WITH APPROPRIATE VEGETATIVE MATERIAL AND / OR APPROPRIATE SEDIMENTATION AND EROSION CONTROL MEASURES.
11. ADJUSTMENTS IN THE LOCATION OF THE PROPOSED PLANT MATERIAL AS A RESULT OF EXISTING VEGETATION TO REMAIN SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
12. THE CONTRACTOR IS RESPONSIBLE FOR ALL MAINTENANCE REPAIR AND REPLACEMENT OF PLANT MATERIAL, AS REQUIRED, FOR THE DURATION OF THE PROJECT AND SUBSEQUENT WARRANTY PERIOD.
13. PLANTINGS INSTALLED IN THE DRY SUMMER MONTHS AND / OR LAWN SEEDED OUT OF SPRING OR FALL PERIODS, IF ALLOWED BY OWNER, WILL REQUIRE AGGRESSIVE IRRIGATION PROGRAMS AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE DIRECTED BY THE OWNER.
14. UPON COMPLETION OF PLANTING, REMOVE FROM SITE ALL EXCESS SOIL, MULCH, AND MATERIALS AND DEBRIS RESULTING FROM WORK OPERATIONS. CLEAN UP SHOULD BE COMPLETED AT THE END OF EACH WORKING DAY. RESTORE TO ORIGINAL CONDITIONS ALL DAMAGED PAVEMENTS, PLANTING AREAS, STRUCTURES AND LAWN AREAS RESULTING FROM LANDSCAPING OPERATIONS.
15. CONTRACTOR SHALL SURVEY, LOCATE, AND PROTECT ALL TREES WITHIN AREAS SHOWN AS "EXISTING VEGETATION TO REMAIN" WITHIN THE DEVELOPMENT ENVELOPE FOR REVIEW BY THE LANDSCAPE ARCHITECT PRIOR TO CLEARING OPERATIONS.
16. CONTRACTOR TO RESEED ALL DISTURBED AREAS.
18. CONTRACTOR TO LIMB UP TREES ABOVE PEDESTRIAN HEIGHT (7').

**PLANT LIST**

KEY	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE
<b>STREET TREES</b>				
AR	ACER RUBRUM 'BOWHALL'	BOWHALL RED MAPLE	11	3.5"-4" CAL.
GB	GINKGO BILOBA 'PRINCETON SENTRY'	PRINCETON SENTRY GINKGO	4	3.5"-4" CAL.
<b>PERENNIALS/ORNAMENTAL GRASSES</b>				
AG	ALLIUM 'GLOBEMASTER'	GLOBE MASTER ORNAMENTAL ONION	41	1 GAL.
AT	AMSONIA TABERNAEMONTANA 'STORM CLOUD'	STORM CLOUD AMSONIA	12	1 GAL.
CM	COREOPSIS 'MOONBEAM'	MOONBEAM COREOPSIS	99	1 GAL.
LC	LOBELIA CARDINALIS	CARDINAL FLOWER	21	1 GAL.
PV	PANICUM VIRGATUM 'RUBY RIBBONS'	RUBY RIBBONS SWITCH GRASS	31	2 GAL.
SS	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM	88	2 GAL.
SH	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSSEED	125	2 GAL.

**ENLARGEMENT PLANTING LEGEND**



CITY OF PAWTUCKET  
LANDSCAPE ENLARGEMENT PLAN  
TOD DISTRICT STORMWATER IMPROVEMENTS  
PAWTUCKET RHODE ISLAND

PROJ. No.: 20150951.A30  
DATE: JUNE 2019

LP-101

DEAN E. AUDET  
No. 7589  
REGISTERED PROFESSIONAL ENGINEER (CIVIL)  
www.fussandoneill.com

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VERT.: 1"=10'  
DATUM:  
HORIZ.: 0  
VERT.: 0  
GRAPHIC SCALE

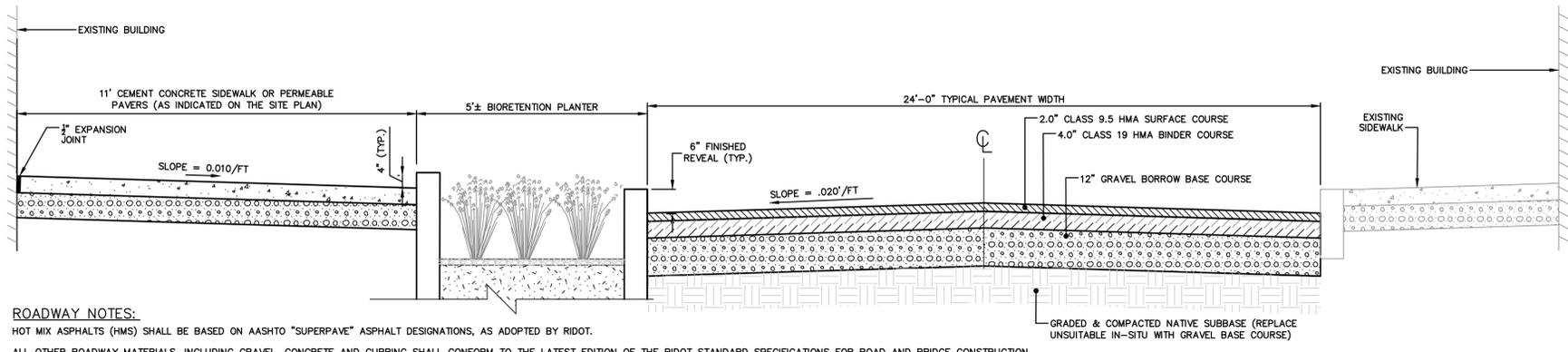
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<b>FUSS &amp; O'NEILL</b> 317 IRON HORSE WAY, SUITE 204 PAWTUCKET, R.I. 02866 401.861.3070 www.fussandoneill.com	
CITY OF PAWTUCKET <b>TRAFFIC MANAGEMENT PLAN</b> TOD DISTRICT STORMWATER IMPROVEMENTS PAWTUCKET RHODE ISLAND	
PROJ. No.: 20150951.A30 DATE: JUNE 2019	
CT-102	

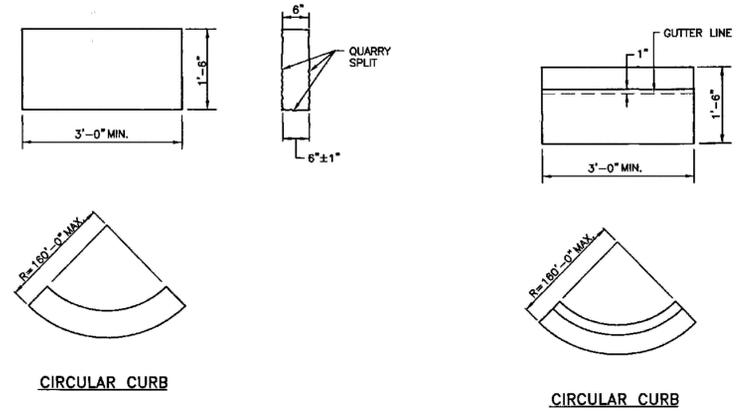


**ROADWAY NOTES:**

- HOT MIX ASPHALTS (HMS) SHALL BE BASED ON AASHTO "SUPERPAVE" ASPHALT DESIGNATIONS, AS ADOPTED BY RIDOT.
- ALL OTHER ROADWAY MATERIALS, INCLUDING GRAVEL, CONCRETE AND CURBING SHALL CONFORM TO THE LATEST EDITION OF THE RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- LANE WIDTH MAY VARY WITH THE APPROVAL OF THE DIRECTOR OF PUBLIC WORKS.
- CONTRACTOR SHALL PROVIDE ANY AND ALL LABORATORY AND FIELD TESTING REQUIRED BY THE TOWN TO DEMONSTRATE/VERIFY THAT MATERIALS CONFORM TO APPLICABLE STANDARDS. MATERIALS FOUND NOT TO CONFORM TO APPLICABLE STANDARDS SHALL BE COMPLETELY REMOVED AND REPLACED WITH SUITABLE MATERIALS.
- THE TOWN SHALL RESERVE THE RIGHT TO MODIFY THE REQUIRED MATERIAL THICKNESSES AND OTHER DIMENSIONS IN SPECIFIC INSTANCES WHERE NON-TYPICAL ROAD LOADINGS AND/OR VEHICLE VOLUMES ARE ANTICIPATED.
- TRIAXIAL GEOGRID SHALL BE "TRIX" AS MANUFACTURED BY TENSAR, OR APPROVED EQUAL, AND SHALL BE TRANSPORTED, STORED AND INSTALLED IN ACCORDANCE WITH ALL MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

**FULL-DEPTH ROADWAY RECONSTRUCTION AND TYPICAL RIGHT-OF-WAY SECTION**

NOT TO SCALE



**NOTES:**

- SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
- TOP SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
- MINIMUM LENGTH OF STRAIGHT OR CIRCULAR PIECES TO BE 3'-0".
- CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.

**VERTICAL FACE GRANITE CURB (R.I. STD. 7.3.0)**

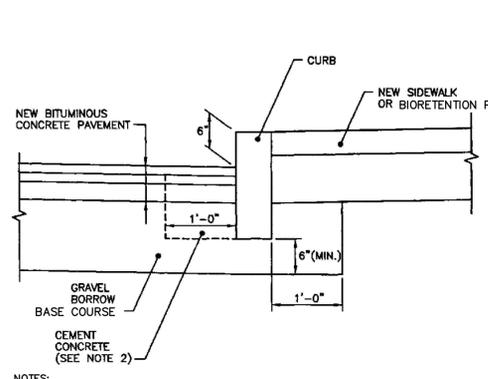
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**NOTES:**

- SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
- TOP SURFACE AND SLOPED SURFACE TO BE DRESSED BY SAW. REMAINDER TO BE QUARRY SPLIT.
- MINIMUM LENGTH OF STRAIGHT OR CIRCULAR PIECES TO BE 3'-0".
- CIRCULAR CURB IS REQUIRED ON CURVES WITH RADII OF 160'-0" OR LESS. STRAIGHT CURB TO BE USED ON CURVES OF MORE THAN 160'-0" RADIUS.

**SLOPE FACE GRANITE CURB (R.I. STD. 7.4.0)**

NOT TO SCALE

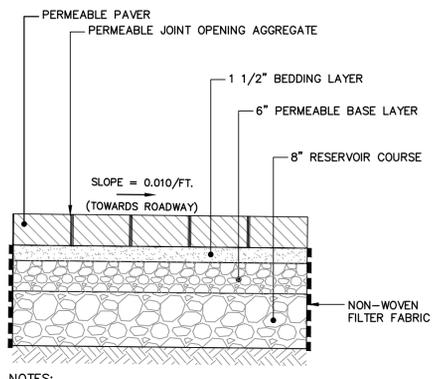


**NOTES:**

- SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
- CEMENT CONCRETE SHALL BE USED ONLY WHEN THE CURB IS SET AFTER THE BASE AND/OR BINDER COURSES ARE IN PLACE, OTHERWISE THE CEMENT CONCRETE WILL BE ELIMINATED AND THE GRAVEL BROUGHT UP TO BOTTOM OF THE BASE COURSE.

**CURB SETTING DETAIL (R.I. STD. 7.6.0)**

NOT TO SCALE

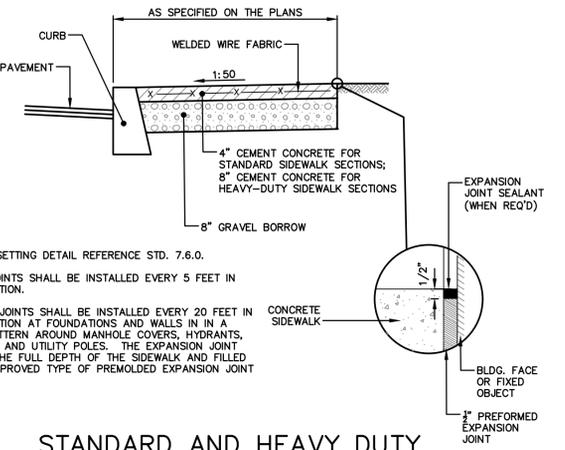


**NOTES:**

- THICKNESS OF PERMEABLE CONCRETE PAVERS SHALL VARY BASED ON PRODUCT AND MANUFACTURER SELECTED.
- THE MINIMUM THICKNESSES OF THE BEDDING LAYER, PERMEABLE BASE LAYER, AND RESERVOIR COURSE LAYER AS SPECIFIED ABOVE REPRESENT MINIMUM THICKNESSES AFTER COMPACTION.
- PROTECT PERMEABLE PAVERS AND AGGREGATES FROM CONSTRUCTION VEHICLE TRAFFIC, RUNOFF FROM ADJACENT AREAS, AND VENTILATION.

**PERMEABLE PAVER SYSTEM TYPICAL DETAIL**

NOT TO SCALE

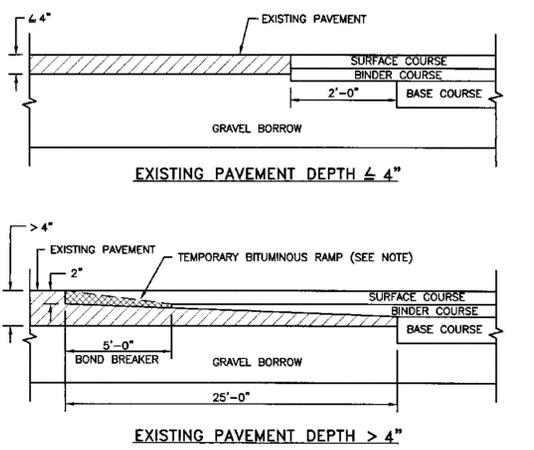


**NOTES:**

- FOR CURB SETTING DETAIL REFERENCE STD. 7.6.0.
- CONTROL JOINTS SHALL BE INSTALLED EVERY 5 FEET IN EACH DIRECTION.
- EXPANSION JOINTS SHALL BE INSTALLED EVERY 20 FEET IN EACH DIRECTION AT FOUNDATIONS AND WALLS IN A SQUARE PATTERN AROUND MANHOLE COVERS, HYDRANTS, SIGN POSTS AND UTILITY POLES. THE EXPANSION JOINT SHALL BE THE FULL DEPTH OF THE SIDEWALK AND FILLED WITH AN APPROVED TYPE OF PREMOULDED EXPANSION JOINT FILLER.

**STANDARD AND HEAVY DUTY CEMENT CONCRETE SIDEWALK**

NOT TO SCALE

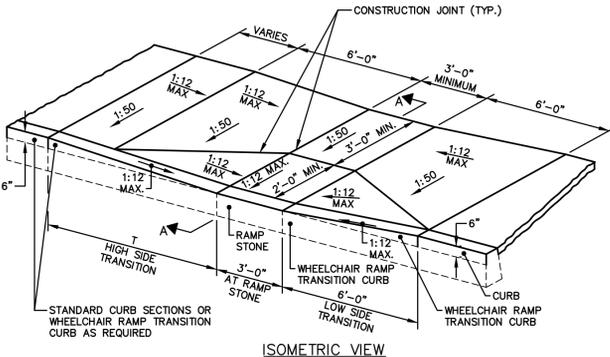


**NOTE:**

A BOND BREAKER (TAPERED OR EQUIVALENT) WILL BE PLACED 5'-0" FROM THE JOINT AND COVERED WITH THE BINDER COURSE AS THE TEMPORARY RAMP. PRIOR TO PLACING THE SURFACE COURSE, THE BINDER COURSE AND BOND BREAKER WILL BE REMOVED.

**TRANSVERSE PAVEMENT CUT AND MATCH (R.I. STD. 47.1.1)**

NOT TO SCALE



**ISOMETRIC VIEW**

ROADWAY PROFILE GRADE (FT.)	T
0.00	6.0
0.01	7.0
0.02	8.0
0.03	9.5
0.04	11.5
0.05	15.0

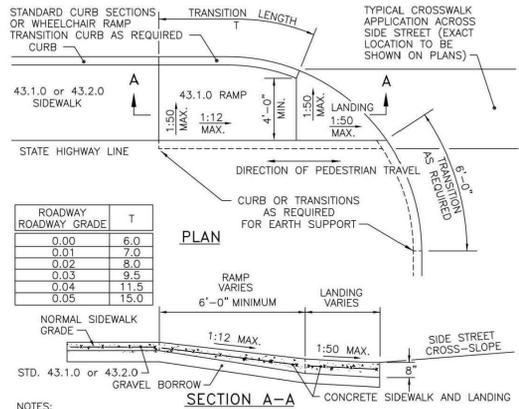
**SECTION A-A**

**TYPE I WHEELCHAIR RAMP (R.I. STD. 43.3.0)**

NOT TO SCALE

**NOTES:**

- SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
- WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, THE WHEELCHAIR RAMP WILL BE PLACED SUCH THAT THE OBSTRUCTION FALLS OUTSIDE OF THE RAMP.
- AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
- DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL WHEELCHAIR RAMPS.
- LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
- IN NO INSTANCE SHALL THE SIDEWALK CROSS SLOPE EXCEED 1:50 EXCEPT WITHIN THE RAMP AREA.
- AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-0" SHALL BE MAINTAINED.
- THE WHEELCHAIR RAMP SLOPE AND SIDE SLOPES (TRANSITIONS), MUST NOT EXCEED 1:12. HOWEVER, THESE SLOPES MAY BE FLATTER THAN 1:12 WHEN WARRANTED BY SURROUNDING CONDITIONS.
- WHERE THE ROAD PROFILE EXCEEDS 5% THE HIGH SIDE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'-0").
- IN NO CASE, WHERE A STOP LINE IS WARRANTED, SHALL A RAMP BE PLACED BEHIND THE STOP LINE.
- THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
- THE WHEELCHAIR RAMP SHALL BE CENTERED RADIALLY, OPPOSITE THE RADIUS POINT WHEN POSSIBLE.
- MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTH PREFERRED).
- ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
- DETECTABLE WARNINGS TO BE PAID FOR UNDER SECTION 942 OF THE RI STANDARD SPECIFICATIONS.
- 8" CONCRETE DEPTH FOR RADIUS WHEELCHAIR RAMPS ONLY. USE 4" DEPTH FOR TANGENT (MID-BLOCK) LOCATIONS.
- GRANITE TRANSITION CURB SHALL BE IN ACCORDANCE WITH R.I. STD. 7.3.2 IN LOCATIONS WHERE VERTICAL GRANITE CURB IS PROPOSED AND IN ACCORDANCE WITH R.I. STD. 7.4.2 IN LOCATIONS WHERE SLOPED FACE CURB IS PROPOSED.
- TYPE I WHEELCHAIR RAMPS SHALL BE REINFORCED WITH WELDED WIRE FABRIC.

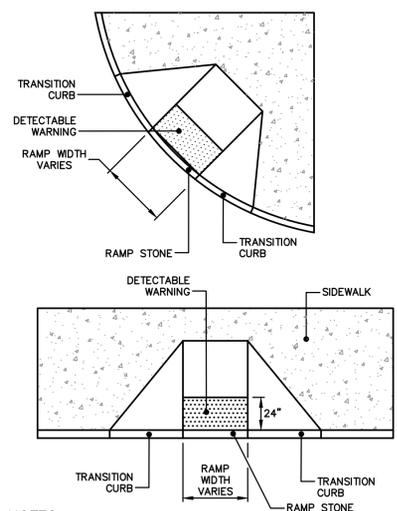


**NOTES:**

- SHALL BE IN ACCORDANCE WITH SECTION 905 OF THE R.I. STANDARD SPECIFICATIONS.
- THIS DETAIL IS TO BE USED ONLY WHEN STATE RIGHT-OF-WAY IS LIMITED TO BACK OF SIDEWALK, AND SIDEWALK IS NARROW WITH NO PEDESTRIAN TRAFFIC FROM SIDE STREET.
- WHEN ANY OBSTRUCTION LOCATED IN THE SIDEWALK FALLS WITHIN A CROSSWALK AREA, IF POSSIBLE, THE OBSTRUCTION SHALL BE PLACED SUCH THAT IT FALLS OUTSIDE OF THE RAMP.
- AT NO TIME IS ANY PART OF THE WHEELCHAIR RAMP TO BE LOCATED OUTSIDE OF THE CROSSWALK, AND IT IS TO BE CENTERED WHENEVER POSSIBLE.
- DRAINAGE FACILITIES ARE TO BE LOCATED UP-GRADE OF ALL WHEELCHAIR RAMPS.
- LOCATION OF WHEELCHAIR RAMPS IS AS SHOWN ON CONTRACT DRAWINGS.
- ALL REQUIRED CUTTING OF CURB PIECES TO BE PAID FOR UNDER COST OF CURB.
- WHERE THE ROAD PROFILE EXCEEDS 5% THE TRANSITION LENGTH (T) SHALL BE EIGHTEEN FEET (18'-0").
- THE ENTRANCE OF THE WHEELCHAIR RAMP SHALL BE FLUSH WITH THE ROADWAY.
- MINIMUM LENGTH OF STRAIGHT OR CIRCULAR FILLER PIECES TO BE 3'-0" (GREATER LENGTHS PREFERRED).
- AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 4'-0" SHALL BE MAINTAINED.
- TYPE II WHEELCHAIR RAMPS SHALL BE REINFORCED WITH WELDED WIRE FABRIC.

**TYPE II WHEELCHAIR RAMP (R.I. STD. 43.3.1)**

NOT TO SCALE



**NOTES:**

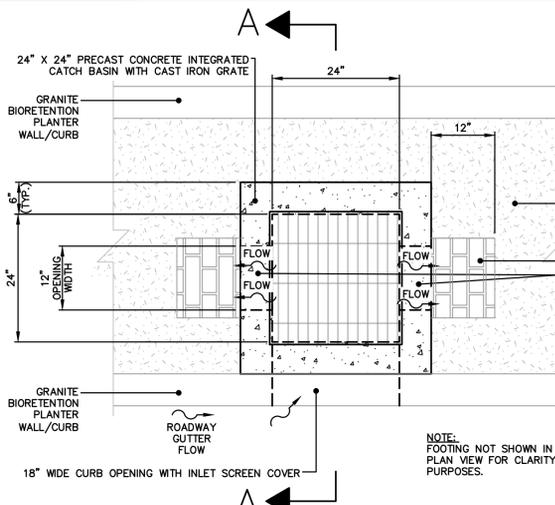
- DETECTABLE WARNING SYSTEM SHALL BE IN ACCORDANCE WITH SECTION 942 OF THE RI STANDARD SPECIFICATIONS.
- GRANITE TRANSITION CURB SHALL BE IN ACCORDANCE WITH R.I. STD. 7.3.2 IN LOCATIONS WHERE VERTICAL GRANITE CURB IS PROPOSED AND IN ACCORDANCE WITH R.I. STD. 7.4.2 IN LOCATIONS WHERE SLOPED FACE CURB IS PROPOSED.

**DETECTABLE WARNING SYSTEM (R.I. STD. 48.1.0)**

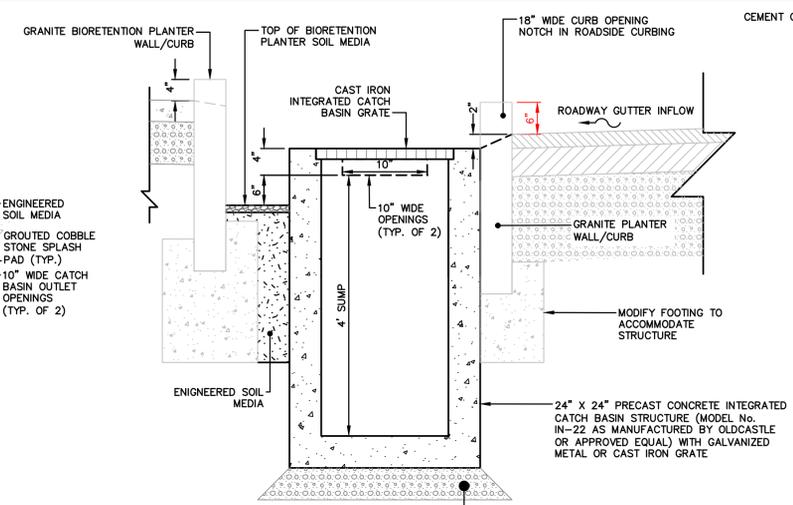
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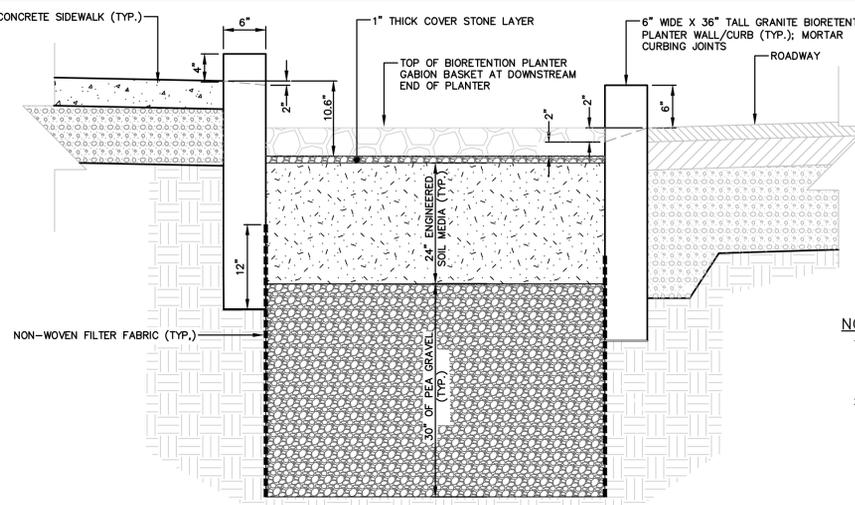
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	VERT.: 1" = 4'
	VERT.: 1" = 4'
	GRAPHIC SCALE
<b>FUSS &amp; O'NEILL</b> 317 IRON HORSE WAY, SUITE 204 FAYETTEVILLE, CT 06236 401.841.3070 www.fussandoneill.com	
CITY OF PAWTUCKET	RHODE ISLAND
<b>CONSTRUCTION DETAILS</b> TOD DISTRICT STORMWATER IMPROVEMENTS PAWTUCKET	
PROJ. No.: 20150951A30 DATE: JUNE 2019	
<b>CD-501</b>	



**INTEGRATED PRETREATMENT CATCH BASIN FOR BIORETENTION PLANTERS**  
NOT TO SCALE



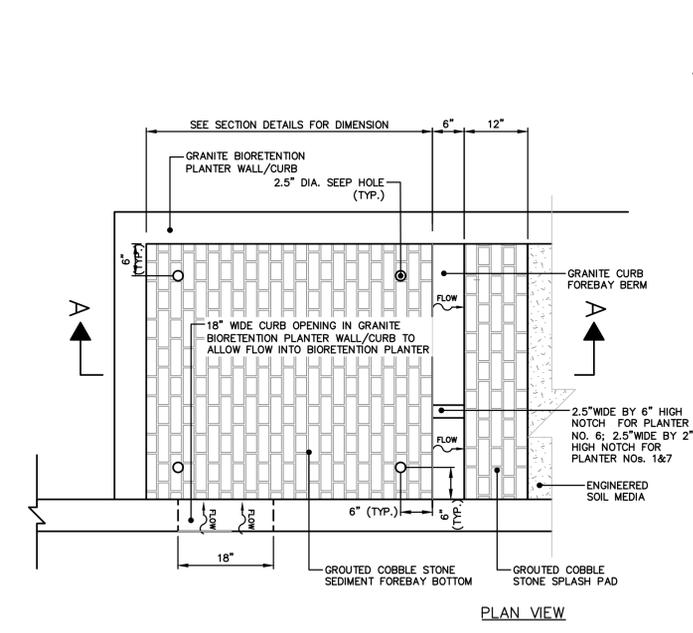
**SECTION A-A**  
NOT TO SCALE



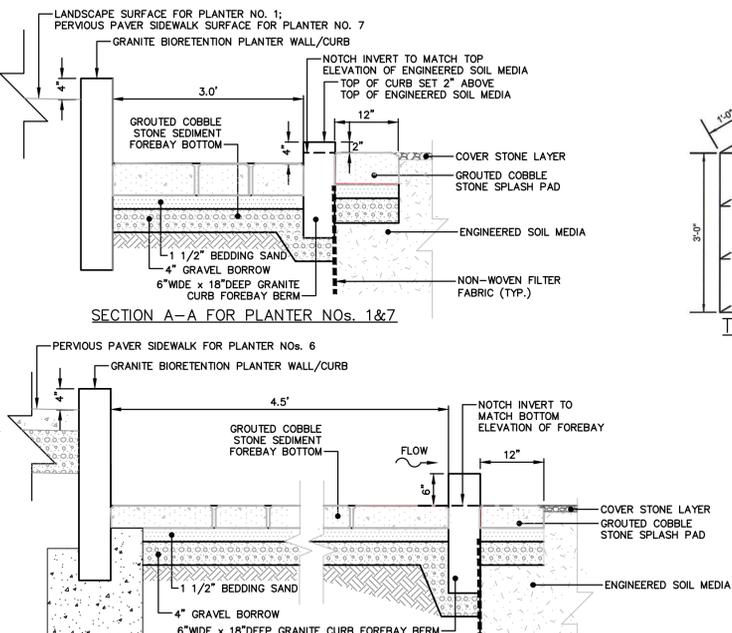
**SHALLOW BIORETENTION PLANTER TYPICAL CROSS SECTION**  
NOT TO SCALE

**NOTES:**  
1. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH A FOUNDATION OF CLASS I OR II MATERIAL AS DEFINED IN ASTM D2321.  
2. MINIMUM TRENCH WIDTH SHALL BE 36\"/>

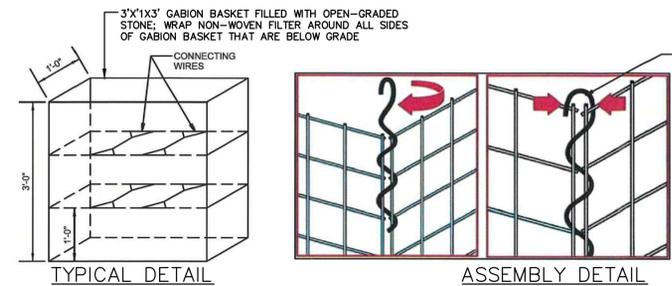
**TYPICAL STORM DRAIN TRENCH DETAIL (FOR HDPE PIPE)**  
NOT TO SCALE



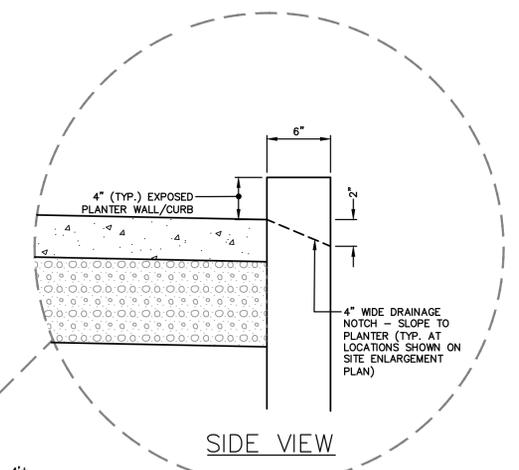
**PRETREATMENT SEDIMENT FOREBAY FOR BIORETENTION PLANTERS**  
NOT TO SCALE



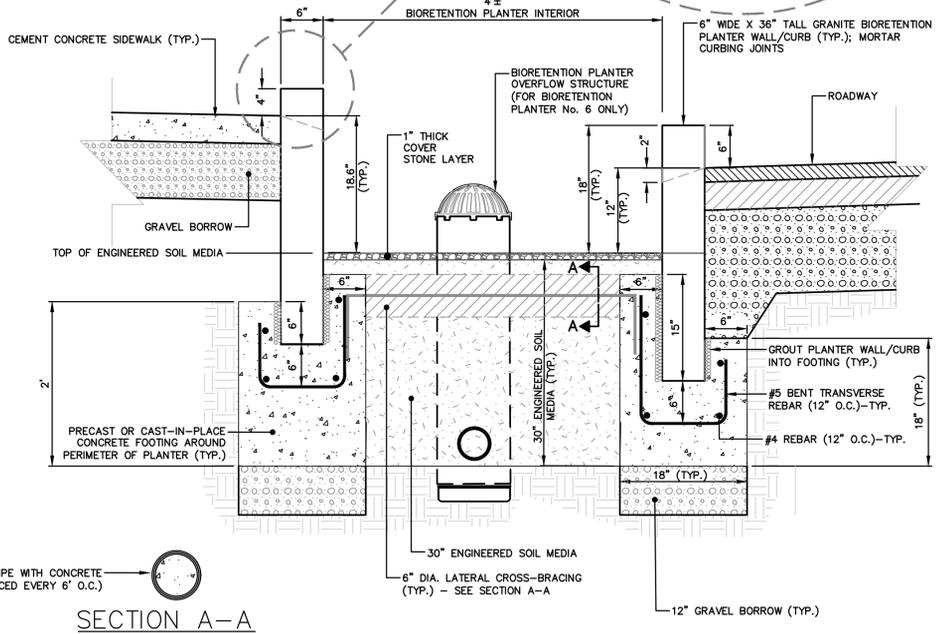
**SECTION A-A FOR PLANTER NOS. 1 & 7**  
**SECTION A-A FOR PLANTER NO. 6**  
NOT TO SCALE



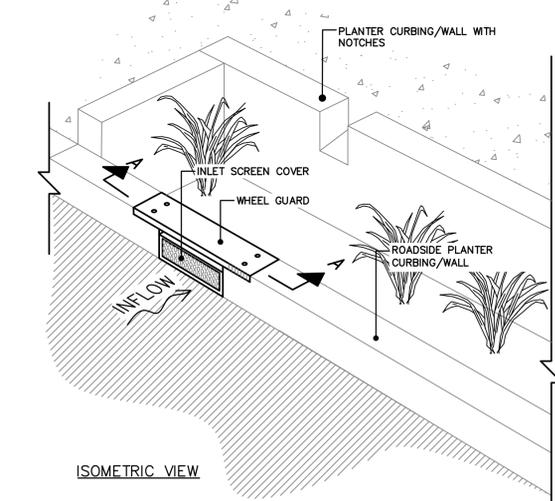
**GABION BASKET (FOR SHALLOW BIORETENTION PLANTERS)**  
NOT TO SCALE



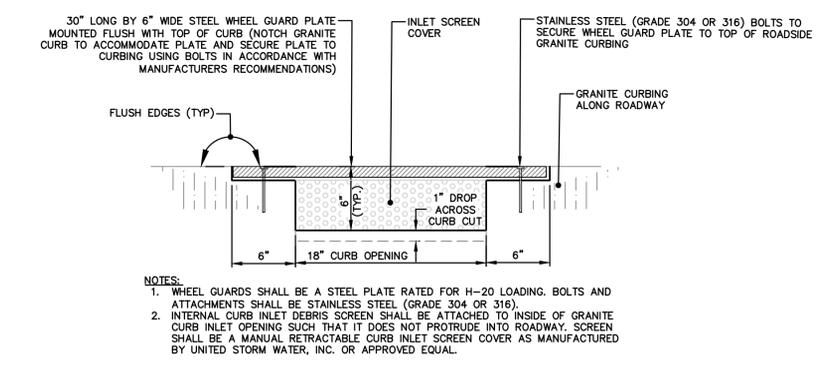
**SIDE VIEW**



**SECTION A-A**  
**CONVENTIONAL BIORETENTION PLANTER TYPICAL CROSS SECTION**  
**BIORETENTION PLANTER NOS. 2-6**  
NOT TO SCALE



**BIORETENTION PLANTER INLET CURB OPENING**  
NOT TO SCALE



**NOTES:**  
1. WHEEL GUARDS SHALL BE A STEEL PLATE RATED FOR H-20 LOADING. BOLTS AND ATTACHMENTS SHALL BE STAINLESS STEEL (GRADE 304 OR 316).  
2. INTERNAL CURB INLET DEBRIS SCREEN SHALL BE ATTACHED TO INSIDE OF GRANITE CURB INLET OPENING SUCH THAT IT DOES NOT PROTRUDE INTO ROADWAY. SCREEN SHALL BE A MANUAL RETRACTABLE CURB INLET SCREEN COVER AS MANUFACTURED BY UNITED STORM WATER, INC. OR APPROVED EQUAL.

File Path: J:\DWG\2019\05\05\A30\Civil\Plan\20150951\A30\_DET01.dwg Layout: CD-502 User: samruda  
MS VIEW: PLOTTER: AUTOCAD PDF (GENERAL DOCUMENTATION) PC3 CTB File: FO.STB

DESIGNER	REVIEWER
DATE	DATE
DESCRIPTION	DESCRIPTION
1.	No.
XX/XX	XX/XX
XX/XX	XX

DEAN E. AUDET  
No. 75889  
REGISTERED PROFESSIONAL ENGINEER  
(CIVIL)

SCALE: HORIZ.: AS NOTED  
VERT.: AS NOTED  
DATE: \_\_\_\_\_  
HORIZ.: \_\_\_\_\_  
VERT.: \_\_\_\_\_  
GRAPHIC SCALE: 1" = 6'-0"

**FUSS & O'NEILL**  
317 IRON HORSE WAY, SUITE 204  
401 861 3070  
www.fussandoneill.com

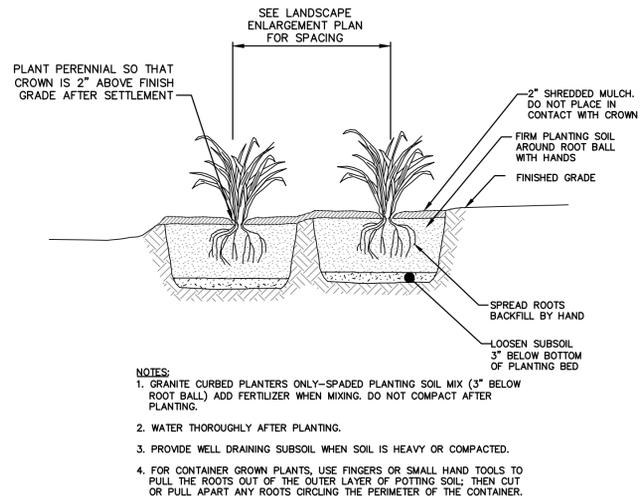
CITY OF PAWTUCKET  
CONSTRUCTION DETAILS  
TOD DISTRICT STORMWATER IMPROVEMENTS  
PAWTUCKET  
RHODE ISLAND

PROJ. No.: 20150951.A30  
DATE: JUNE 2019

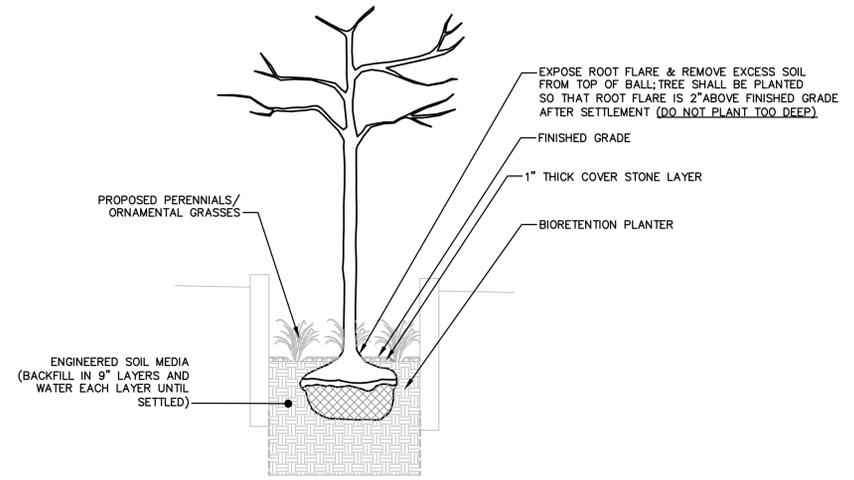
**CD-502**



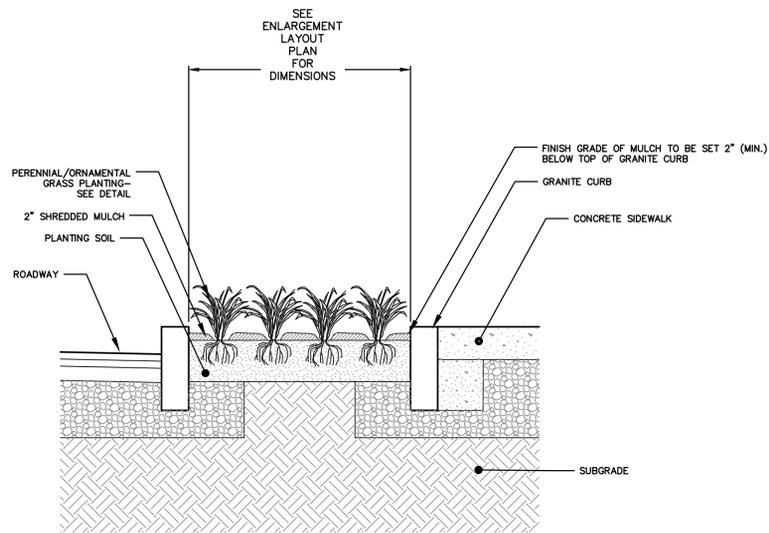




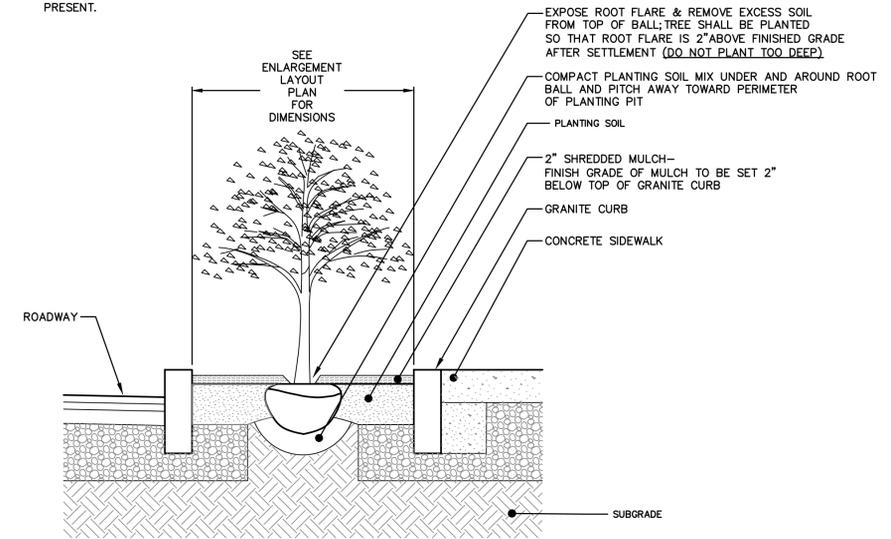
**PERENNIAL/ORNAMENTAL GRASS PLANTING**  
 NOT TO SCALE



**STREET TREE PLANTING IN BIORETENTION PLANTER**  
 NOT TO SCALE



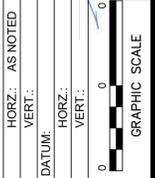
**GRANITE CURBED PLANTER - ORNAMENTAL GRASSES/PERENNIAL PLANTING**  
 NOT TO SCALE



**GRANITE CURBED PLANTER - STREET TREE PLANTING**  
 NOT TO SCALE

- STREET TREE PLANTING NOTES:**
1. REMOVE TREE WRAP, WIRE, STAKES, ANY SYNTHETIC MATERIAL. CUT AWAY MINIMUM OF TOP HALF OF BURLAP &/OR WIRE BASKET. SCARIFY ALL PLANT PITS PRIOR TO PLANTING.
  2. SPRAY WITH ANTIDESICCANT IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS IF FOLIAGE IS PRESENT.

No.	DATE	DESCRIPTION	DESIGNER	REVIEWER
1.			XX/XX	XX



**FUSS & O'NEILL**  
 517 IRON HORSE WAY, SUITE 204  
 PAWTUCKET, R.I. 02866  
 401.861.3070  
 www.fussandoneill.com

CITY OF PAWTUCKET  
 CONSTRUCTION DETAILS  
 TOD DISTRICT STORMWATER IMPROVEMENTS  
 PAWTUCKET  
 RHODE ISLAND

PROJ. No.: 20150951.A30  
 DATE: JUNE 2019

**CD-505**

## **Appendix F**

### **Technical Specifications Issued for Bid**



## SECTION 01100 - SUMMARY

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, RIDOT Standard Specification for Road and Bridge Construction and Division 1 Specification Sections, apply to this Section.

#### 1.2 Summary

- A. Section Includes:
  - 1. Project information.
  - 2. Work covered by Contract Documents.
  - 3. Access to site.
  - 4. Coordination with occupants.
  - 5. Work restrictions.
  - 6. Specification and drawing conventions.
  - 7. Miscellaneous provisions.

#### 1.3 Project Information

- A. Project Identification: Project consists of the installation of green stormwater infrastructure (GSI) practices (i.e. streetside bioretention planters and permeable pavers) and the streetscape reconstruction of Pine Street between Goff Avenue and Main Street.
  - 1. Project Location: Pine Street Right-of-Way between its intersections with Goff Avenue and Main Street and within immediate adjacent areas within the Project's limit of disturbance (LOD) as shown on the Contract Drawings.
  - 2. Property Owner: City of Pawtucket.
- B. Engineer Identification: The Contract Documents prepared for the Project by Fuss & O'Neill, Inc.

#### 1.4 Work Covered by Contract Documents

- A. The work of Project is defined by the Contract Documents and consists of the following:
  - 1. Work includes but is not limited to:
    - a. Furnishing and installing temporary erosion control as necessary throughout construction.
    - b. Streetscape reconstruction including the removal and disposal of pavement and the roadway's westerly sidewalk to accommodate proposed improvements such as the reduction in roadway pavement width, the widening of the roadway's westerly sidewalk, and the introduction of two parklet areas to serve as public amenity features.

- c. Furnishing and installing streetside bioretention planters and appurtenant structures/components; permeable pavers, signage and other site features.
- d. Adjusting existing utilities; relocating two fire hydrants; and installing plantings and other landscaping amenities/features.
- e. Traffic management throughout construction.

#### 1.5 Submittals

- A. Submit the following schedules in accordance with Paragraph 3.2 of this Section:
  1. Construction schedule
  2. Construction phasing plan.
  3. Schedule of submittals/shop drawings.
  4. Schedule of Values.

#### 1.6 Use of Premises

- A. Use of Site: Limit use of site to work in areas indicated by the Limit of Disturbance (LOD) within the Pine Street ROW shown on the Contract Drawings. Do not disturb portions of site beyond areas in which the Work is indicated.
  1. Schedule construction operations to produce an expedient, orderly method and sequence of construction, and to disrupt as few streets as possible at any time.
    - a. Minimize the period an area is under construction.
  2. Limits:
    - a. Confine construction operations to limit of disturbance within the City's rights-of-way, unless otherwise noted on the Contract Drawings.
    - b. Limit linear extent of open trench in one area at any time.
      - 1) Do not leave open excavations overnight.
    - c. Schedule construction to minimize period of time where public streets are disturbed. Approval from Owner for construction sequence is required as part of the Construction Schedule and Construction Phasing Plan submissions.
  3. Regulatory Limits: Confine construction operations to the restrictions and conditions that are included within all Project permits.
  4. Staging Areas: Temporary storage and staging areas may be established within limited portions of the project's limit of disturbance if agreed to by Owner. Contractor shall coordinate with the Owner before use of any such area to review proposed uses (material storage, stockpiling, equipment storage, job trailer, etc.) and locations within these areas. The Owner reserves the right to reject a use or location where it determines that such condition would present an unreasonable adverse impact to public health and safety or otherwise endanger property or adjacent natural resources. The Contractor also reserves the right to coordinate with the Owner for use of any vacant City-owned properties that could be used as off-site staging area(s).
  5. Driveways and Entrances: Keep driveways and entrances serving businesses clear and available to property owners (i.e. those that receive deliveries/shipments from large-size

vehicles). Notify such business owners at least 48 hours in advance and provide accommodations for access as needed.

- a. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
  - b. Concrete sidewalk and wheelchair ramp concrete pours immediately north and south of the Summit Manufacturing driveway shall be limited to Fridays such that concrete will be allowed to effectively cure over the weekend to minimize the potential for damage associated with large vehicle deliveries. Contractor shall coordinate with property owner to avoid deliveries during time that concrete cures.
  - c. During construction, the Contractor shall coordinate with neighboring buildings/property owners that require delivery from large-sized vehicles. Temporary traffic barrels in the vicinity of the Summit Manufacturing driveway and the Bayley Street intersection may need to be temporarily shifted to accommodate the turning movements of these large vehicles at these locations throughout construction. Contractor is responsible for coordination to ensure that final work product meets the standards of this contract while allowing neighboring businesses to continue operating.
6. All work within the Right-of-Way shall conform to the requirements set forth by City of Pawtucket and RIDOT. Excavation restrictions within the Right-of-Way include:
- a. Backfill and temporarily close excavations at the end of each work day unless otherwise authorized by the Engineer.
  - b. Steel plates may be used for the temporary closure of excavations within paved areas during Monday through Friday. Backfill excavations to surface grade Saturday through Sunday.
  - c. No excavations will remain open overnight.
7. The work area is in a fully developed neighborhood and must be performed with staged construction. Access to roads and driveways must be established at the end of each working day to minimize impacts to the adjacent property occupants. Maintain detours in accordance with approved Traffic Management Plan.
8. Pedestrian access will be limited to easterly sidewalk on Pine Street. Provide additional signs as required by the Engineer and/or Owner that separate pedestrians from the Work.

## 1.7 Specification Formats and Conventions

- A. Specification Format: The Specifications are organized into Divisions and Sections using the 16-division format and CSI/CSC's "Master Format" numbering system.
  1. Section Identification: The Specifications use section numbers and titles to help cross-referencing in the Contract Documents. Sections in the Project Manual are in numeric sequence; however, the sequence is incomplete. Consult the table of contents at the beginning of the Project Manual to determine numbers and names of Sections in the Contract Documents.

- B. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be inferred as the sense requires. Singular words shall be interpreted as plural, and plural words shall be interpreted as singular where applicable as the context of the Contract Documents indicates.
  2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by Contractor. Occasionally, the indicative or subjunctive mood may be used in the Section text for clarity to describe responsibilities that must be fulfilled indirectly by Contractor or by others when so noted.
    - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

## 1.8 Utility Locations

- A. Contact Dig Safe at 1-888-344-7233 at least 72 hours prior to the start of construction (excluding weekends and holidays), to mark out the utility locations.
1. Contact the City of Pawtucket to confirm and/or mark out water and sewer utility locations at least 72 hours prior to the start of construction (excluding weekends and holidays).
    - a. Public Works Department Contact: Engineering Department at (401) 782-0500.
    - b. Pawtucket Water Supply Board Contact: Engineering at (401) 729-5015 or Operations at (401)729-5004.

## 1.9 Access to Site

- A. Minimize damage to access routes, and restore damaged areas to their original condition or better.
- B. Acquire necessary permits, authorizations and approvals for working in, on or from property, rights-of-way or easements not owned or controlled by the Owner. The Contractor shall secure access rights of his own for such work. The areas within Limits of Disturbance shown on the Drawings are controlled by the Owner.
1. Acquire necessary permits, authorizations and approvals, from the City of Pawtucket for roadway and sidewalk reconstruction in addition to the relocation of fire hydrants. Such permits include, but are not limited to the following:
    - a. Road Construction Permit from the Department of Public Works.
    - b. Pawtucket DPW Contractor License from the Department of Public Works.
    - c. Utility permits from the Engineering Department (separate permits for each work area may be required).
    - d. Water Permits from the City of Pawtucket.

- C. Remove and restore to original condition landscaping, walls, fences, structures, utility lines, poles, guy wires, anchors, and other improvements required to be relocated for construction of the Work. Costs for such activity shall be borne by the Contractor. Notify the Engineer, the Owner, and utilities of intended modification or disruption to their property and access to their property 72-hours prior to the start of construction and cooperate with them in the scheduling and performance of his operations.
- D. If the Contractor, by direct negotiation and bargain with any land owner, lessee or tenant, has secured any right to use more space or greater privileges in the space provided by the Owner for purposes incidental to the performance of the Contract, s/he shall, upon request of the Engineer, furnish to the Engineer proper evidence that such additional rights have been properly secured and assurance that no damage to or claim upon the Owner, Property Owner, or Engineer will arise there from. Neither the Owner, Property Owner nor the Engineer shall be liable in any way for any expense incurred by the Contractor in securing any such right to use additional property.
- E. The Contractor shall be responsible for and reimburse the Owner and others for any and all losses, damage or expense which the Owner or those others may suffer, either directly or indirectly or through any claims of any person or party, for any trespass outside the spaces and rights of way provided by the Owner to the Contractor or any violation or disregard of the terms and conditions established for the use or occupancy of those rights or for negligence in the exercise of those rights. The Owner may retain or deduct from any sum or sums due or to become due to the Contractor such amount or amounts as may be proper to insure the Owner against loss or expense by reason of the failure of the Contractor to observe the limits and conditions of the rights-of-way, rights-of-access, easements, etc., provided by the Owner.
- F. Contractor shall be responsible for notification to adjacent public and private property owners who may be affected of tentative construction schedule in the neighborhoods. The Contractor shall refer all questions regarding this project to Sean Arruda, Fuss & O'Neill, at 401-861-3070. The Contractor shall notify the private property owners and Owner at least five working days prior to disturbing or restricting access to private properties.

#### 1.10 Scheduling of Work Zone Activities

##### A. WORK HOURS

1. Schedule activities on Monday through Friday, 7:30 AM to 4:30 PM. Should access to the Site at other times be necessary, make arrangements with the Owner, Property Owner and City.
2. State Holidays and Weekends: Excavations shall be backfilled.
3. Prior approval must be obtained from the Owner, Property Owner and City, as applicable, to work any hours or days other than those listed.

- B. Allow unimpeded access to the building at all times.

### 1.11 Site Conditions

- A. The underground utilities and structures shown on the Contract Drawings and are considered approximate as to size and location. There may be additional underground utilities and structures that are not shown on the Contract Drawings, and it shall be the responsibility of the Contractor to locate all existing utilities and structures and to protect same from damage or harm. Restore utilities interfered with or damaged, at the expense of the Contractor, and to the satisfaction of its Owner.
  - 1. Subsequent to the survey of existing conditions performed of the Project Site (as reflected on the Contract Drawings):
    - a. National Grid relocated its gas main to the easterly side of Pine Street.
    - b. Pawtucket Water Supply Board relocated its water main to the easterly side of Pine Street.
  - 2. At least two weeks prior to construction, the Contractor shall confirm the actual locations of the gas and water mains and notify the Engineer/Owner of such changes such that the Engineer has adequate time to make any design/layout modifications as a result of such utility main relocations.
- B. Ensure construction activities do not impact the activities or properties of the Owner and its Departments without prior coordination and consent of these entities.
- C. Immediately notify the Engineer upon encountering archaeological material, including "charcoal," "bone," "cultural objects" (e.g., fire cracked stones/stone flaking material), "middens," or any other artifacts or related items of historical significance.

### PART 2 - PRODUCTS (Not Used)

### PART 3 - EXECUTION

#### 3.1 Schedule And Phasing

- A. Construction phasing requirements approved by the Engineer must be adhered to in the Contractor's detailed construction schedule submitted to the Engineer, including installation of erosion and sedimentation controls.
  - 1. As indicated on the Traffic Management Plan in the Contract Drawings, pavement within the westerly side of Pine Street shall be removed to facilitate the construction of improvements while facilitating one-way traffic flow along the eastern (paved) side of Pine Street. A temporary inductance loop vehicle detector shall be installed at the intersection of the Pine Street and Main Street as indicated on the Contract Drawings during this phase of improvements.
  - 2. Following construction of westerly sidewalk/streetscape improvements, the Contractor shall phase the full-depth reconstruction of the roadway to facilitate one-way traffic at all times

during this reconstruction period. The Contractor shall include its approach to achieve this on its Construction Phasing Plan submittal.

- B. Deviation from Contractor's schedule will require the Contractor to submit notification of such change in schedule to the Engineer at least seven (7) days prior to the subject change. Such notification shall be accompanied by a revised project schedule and phasing drawing

### 3.2 Administrative Submittals

- A. Do not commence portion of the Work requiring a submission until submission has been accepted by the Engineer.
- B. Provide the following submittals within 10 days after the effective date of the Agreement:
  - 1. Schedule of Construction. Submit a proposed schedule of construction (schedule of operations) to the Engineer.
    - a. Provide a bar-chart-type or Gantt-chart-type schedule that clearly indicates the start date and duration of specific construction activities. The Contractor shall not work on Saturday, Sunday, or Holidays without approval of the Owner. Portions of the Work to be performed by subcontractors or utilities shall be clearly indicated as such.
    - b. Incorporate the erosion control including construction phasing provisions into the construction schedule.
    - c. Prepare scaled drawing clearly showing proposed construction phasing areas corresponding to construction schedule.
    - d. No work shall be started until the schedule of construction is reviewed and approved by the Owner.
    - e. Contract completion date shall not be changed by submission of a schedule, unless specifically authorized by Change Order approved by the Owner.
  - 2. Construction Phasing Plan. This plan shall address traffic management during all phases of construction.
  - 3. Schedule of Submittals/Shop Drawings. The Contractor shall submit his proposed schedule of submittals to the Engineer.
  - 4. Schedule of Values. The Contractor shall submit his proposed schedule of values to the Engineer.

### 3.3 Project Meetings

- A. Pre-construction Conference: Prior to the start of construction, a pre-construction conference will be held with the representatives of the Contractor, Engineer, Owner and other interested parties.
- B. Progress Meetings: During progress of the Work, meetings will be conducted bi-monthly or as deemed necessary in order that scheduling and overall job coordination can be maintained. The Contractor shall be required to attend these meetings throughout the Project duration as scheduled by the Engineer.

### 3.4 Regulatory Compliance

- A. All equipment operators and workers performing work at the proposed location shall hold the appropriate State of Rhode Island licenses and safety trainings for their responsibilities.
- B. Contractor shall provide a 'Competent Person', as defined by the US Department of Labor Occupational Safety & Health Administration (OSHA), for the location of the proposed work.
- C. All required licenses and/or certificates for work being performed shall be copied and supplied to the Owner prior to beginning work by each contractor, subcontractor or vendor employee conducting work at the site. All required licenses and/or certificates for work being performed shall be in the possession of the person(s) while performing the work.
- D. The Contractor shall be solely responsible to conduct their operations in a manner that meets all local, state and federal regulations including RIDEM, CRMC, USEPA, OSHA and labor and equipment licensing requirements.

### PART 4 - MEASUREMENT

- A. This work will not be measured for payment.

### PART 5 - PAYMENT

- A. This work shall be paid for as part of the lump sum Contract Base Bid, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Engineer.

END OF SECTION

## SECTION 01250 - CONTRACT MODIFICATION PROCEDURES

### PART 1 - GENERAL

#### 1.1 Summary

- A. This Section includes administrative and procedural requirements for handling and processing Contract modifications.

#### 1.2 Field Order

- A. Engineer will issue written supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Price or the Contract Time, on EJCDC Form C-942. A sample copy of a Field Order is included at the end of the Section.

#### 1.3 Proposal Requests

- A. Owner-Initiated Proposal Requests: Engineer will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Price or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
  - 1. Proposal Requests issued by Engineer are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
  - 2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Price and the Contract Time necessary to execute the change.
    - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change.
  - 1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Price and the Contract Time.
  - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
  - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
  - 4. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and

activity relationship. Use available total float before requesting an extension of the Contract Time.

5. Comply with requirements in Division 1 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.

#### 1.4 Change Order Procedures

- A. On Owner's approval of a Proposal Request, Engineer will issue a Change Order for signatures of Owner and Contractor on EJCDC Document C-941.
  1. Note that all change orders require WRWC approval prior to payment for work to be constructed.

#### 1.5 Work Change Directive

- A. Work Change Directive: Engineer may issue a Work Change Directive on EJCDC Document C-940. Work Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
  1. Work Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Price or the Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Work Change Directive.
  1. After completion of change, submit an itemized account and supporting data necessary to substantiate proposed cost and time adjustments to the Contract.

#### PART 2 PRODUCTS (not applicable)

#### PART 3 - EXECUTION

##### 3.1 Attached Forms

1. Proposal Request.
2. Field Order (EJCDC Form C-942).
3. Work Change Directive (EJCDC Form C-940).
4. Change Order (EJCDC Form C-941).

#### PART 4 - MEASUREMENT AND PAYMENT

- A. This work will not be measured for payment.

#### PART 5 - PAYMENT

- A. This work shall be paid for as part of the lump sum Contract Base Bid, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Engineer.

END OF SECTION

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PROPOSAL REQUEST

Proposal Request No. \_\_\_\_\_

---

Project:	Owner:	Owner's Contract No.:
Contract:	Date of Contract:	
Contractor:	Engineer's Project No.:	

Please submit an itemized quotation for changes in the Contract Price or Contract Time incidental to the proposed modifications to the Contract Documents described herein.

Description:

Attachments: (List documents supporting description)

---

By:

---

---

ENGINEER

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Field Order

No. \_\_\_\_\_

Date of Issuance: \_\_\_\_\_ Effective Date: \_\_\_\_\_

Project:	Owner:	Owner's Contract No.:
Contract:	Date of Contract:	
Contractor:	Engineer's Project No.:	

Attention:

You are hereby directed to promptly execute this Field Order issued in accordance with General Conditions Paragraph 9.05A., for minor changes in the Work without changes in Contract Price or Contract Times. If you consider that a change in Contract Price or Contract Times is required, please notify the Engineer immediately and before proceeding with this Work.

Reference \_\_\_\_\_ (Specification Section(s)) \_\_\_\_\_ (Drawing(s) / Detail(s))

Description:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Attachments:  
\_\_\_\_\_  
\_\_\_\_\_

Engineer: \_\_\_\_\_

Receipt Acknowledged by (Contractor): \_\_\_\_\_ Date: \_\_\_\_\_

Copy to Owner

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Change Order  
No. \_\_\_\_\_

Date of Issuance: \_\_\_\_\_ Effective Date: \_\_\_\_\_

Project:	Owner:	Owner's Contract No.:
Contract:	Date of Contract:	
Contractor:	Engineer's Project No.:	

The Contract Documents are modified as follows upon execution of this Change Order:

Description:  
\_\_\_\_\_  
\_\_\_\_\_

Attachments: (List documents supporting change):  
\_\_\_\_\_  
\_\_\_\_\_

<b>CHANGE IN CONTRACT PRICE:</b> Original Contract Price:  \$ _____  [Increase] [Decrease] from previously approved Change Orders No. _____ to No. _____:  \$ _____	<b>CHANGE IN CONTRACT TIMES:</b> Original Contract Times: <input type="checkbox"/> Working days <input type="checkbox"/> Calendar days Substantial completion (days or date): _____ Ready for final payment (days or date): _____  [Increase] [Decrease] from previously approved Change Orders No. _____ to No. _____: Substantial completion (days): _____ Ready for final payment (days): _____
Contract Price prior to this Change Order:  \$ _____	Contract Times prior to this Change Order: Substantial completion (days or date): _____ Ready for final payment (days or date): _____
[Increase] [Decrease] of this Change  \$ _____	[Increase] [Decrease] of this Change Order: Substantial completion (days or date): _____ Ready for final payment (days or date): _____
Contract Price incorporating this Change  \$ _____	Contract Times with all approved Change Orders: Substantial completion (days or date): _____ Ready for final payment (days or date): _____

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____	By: _____	By: _____
Engineer (Authorized Signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Date: _____	Date: _____	Date: _____
Approved by Funding Agency _____		Date: _____

Change Order Instructions

**A. GENERAL INFORMATION**

This document was developed to provide a uniform format for handling contract changes that affect Contract Price or Contract Times. Changes that have been initiated by a Work Change Directive must be incorporated into a subsequent Change Order if they affect Price or Times.

Changes that affect Contract Price or Contract Times should be promptly covered by a Change Order. The practice of accumulating Change Orders to reduce the administrative burden may lead to unnecessary disputes.

If Milestones have been listed in the Agreement, any effect of a Change Order thereon should be addressed.

For supplemental instructions and minor changes not involving a change in the Contract Price or Contract Times, a Field Order should be used.

**B. COMPLETING THE CHANGE ORDER FORM**

Engineer normally initiates the form, including a description of the changes involved and attachments based upon documents and proposals submitted by Contractor, or requests from Owner, or both.

Once Engineer has completed and signed the form, all copies should be sent to Owner or Contractor for approval, depending on whether the Change Order is a true order to the Contractor or the formalization of a negotiated agreement for a previously performed change. After approval by one contracting party, all copies should be sent to the other party for approval. Engineer should make distribution of executed copies after approval by both parties.

If a change only applies to price or to times, cross out the part of the tabulation that does not apply.

## SECTION 01290 - PAYMENT PROCEDURES

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 Summary

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.

#### 1.3 Definitions

- A. Schedule of Values: A statement furnished by Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

#### 1.4 Schedule Of Values

- A. Coordination: Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule. The Schedule of Values shall include breakdown of items included in developing the Total Contract Base Bid price including unit price, add/deduct, and alternate bid items.
  1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:
    - a. Application for Payment forms with continuation sheets.
    - b. Submittals/Shop Drawing schedule.
  2. Submit three copies of the Schedule of Values to Engineer 10 days after effective date of Agreement. No payment will be made to Contractor before Schedule of Values has been submitted and accepted by Engineer.
  3. Identification: Include the following Project identification on the Schedule of Values:
    - a. Project name and location.
    - b. Engineer's project number: 20150951.A30.
    - c. Contractor's name and address.
    - d. Date of submittal.
  4. Arrange the Schedule of Values in tabular form with separate columns to indicate the following for each item listed:
    - a. Related Specification Section or Division.
    - b. Description of the Work.
    - c. Change Orders (numbers) that affect value.

- d. Dollar value.
  - 1) Percentage of the Contract Price to nearest one-hundredth percent, adjusted to total 100 percent.
  - 2) Contractor's estimated quantity and unit prices.
  - 3) For unit price items, the quantity provided on the bid form and unit prices.
  - 4) For alternate unit price items, the quantity authorized by the Owner and unit prices.
5. Provide a breakdown of the Contract Price in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Coordinate with the Project Manual table of contents. Provide several line items for principal subcontract amounts, where appropriate.
6. Round amounts to nearest whole dollar; total shall equal the Contract Price.
7. Provide a separate line item in the Schedule of Values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
  - a. Differentiate between items stored on-site and items stored off-site. Include evidence of insurance or bonded warehousing if required.
8. Where items are not broken down sufficiently to accurately determine the value of Work completed, Engineer will estimate the value of the Work completed and deduct a conservative value that will allow the Owner to easily complete the Work with the unpaid balance.
  - a. When the required detail in the Schedule of Values is not provided by the Contractor, the Contractor agrees to accept the Engineer's determination.
9. Each item in the Schedule of Values and Applications for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item.
  - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the Schedule of Values or distributed as general overhead expense, at Contractor's option.
10. Allowances: Provide a separate line item in the schedule of values for each allowance. Show line-item value of unit-cost allowances, as a product of the unit cost, multiplied by measured quantity. Use information indicated in the Contract Documents to determine quantities.
11. Schedule Updating: Update and resubmit the schedule of values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

#### 1.5 Schedule of Payments

- A. Coordination: Coordinate preparation of the Schedule of Payments with preparation of Contractor's Construction Schedule and Schedule of Values.
  1. Such schedule shall be broken down by monthly pay period through Project completion and reflect items listed in the Schedule of Values.
  2. Submit three copies of the Schedule of Payments to Engineer 10 days after effective date of Agreement.

## 1.6 Applications For Payment

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by Engineer and paid for by Owner.
  - 1. Initial/Monthly Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is the 15th day of each month. The period covered by each Application for Payment starts on the day following the end of the preceding period and ends 15 days before the date for each progress payment.
- C. Payment Application Forms: AIA Document G 702 or an approved equal.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Engineer will return incomplete applications without action.
  - 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
  - 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
  - 3. Include amounts of Change Orders and Work Change Directives issued before last day of construction period covered by application.
  - 4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.
  - 5. Itemized data and format provided on continuation sheets shall include schedules, line items, and values as stipulated in the Schedule of Values as accepted by Owner.
    - a. Continuation sheets shall include a total list of all scheduled component items of work with item number and scheduled dollar value for each item. Dollar values to be included in each column for each scheduled line item when Work has been performed or products stored. Round off values to nearest dollar or as may be specified for Schedule of Values.
    - b. List each Change Order executed prior to date of submission at end of continuation sheets. List by Change Order number and description as to original component item of Work.
  - 6.
- E. Transmittal: Submit 4 signed and notarized original copies of each Application for Payment to Engineer. One copy shall include waivers of lien and similar attachments if required.
  - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
  - 2. Submit Applications to Engineer by means ensuring receipt within 24 hours.
- F. Ownership: All Work covered by Progress Payments shall, at the time of payment, become the property of Owner.

- G. Processing: With each Application for Payment the Contractor shall certify such Application for Payment represents a just estimate of costs reimbursable to Contractor under terms of the Contract and shall certify there are no Mechanic's or Materialmen's Liens outstanding at the date of that Application for Payment, that all due and payable bills with respect to the Work have been paid to date or shall be paid from the proceeds of that Application for Payment, that there is no known basis for the filing of any Mechanic's or Materialmen's Lien against the Surety in connection with the Work, that Waivers and Bills Paid Affidavit forms from all Subcontractors and Materialmen have been, or will be, obtained in the form agreeable to the Owner, and that amount of the contract remaining to be expended is sufficient to complete the project.
- H. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's liens from subcontractors, sub-subcontractors, and suppliers for construction period covered by the previous application.
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
  2. Contractor shall submit final or full Waivers of Liens and Claims for completed items of work shown on the monthly Application for Payment.
  3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
  4. The Contractor's final Application for Payment shall be submitted with, or preceded by final Waivers from every entity involved with the performance of work, supplying of materials or the providing of professional services covered by the Application who could lawfully be entitled to a Lien.
  5. Waivers of Liens shall be provided on forms, and executed in a manner acceptable to the Owner.
- I. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors with current DBE/MBE/DBE certification forms, as applicable.
  2. Schedule of values.
  3. Contractor's construction schedule (preliminary if not final), updated monthly.
  4. Name of Contractor Superintendent.
  5. Products list (preliminary if not final).
  6. Schedule of unit prices.
  7. Submittal schedule (preliminary if not final).
  8. List of Contractor's staff assignments.
  9. List of Contractor's principal consultants.
  10. Copies of required permits.
  11. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  12. Any material stored off site must carry additional insurance (All Risk Ryder) stating Owner as insured. All material is to be inspected by Engineer or his designated personnel before billing can be approved. Bill of Sale and receipts for items being billed at cost only are required and 50% retainage will be held for off-site stored materials. Paperwork must

- accompany request two weeks prior to billing to insure adequate time to schedule inspection.  
Initial progress report.
13. Report of preconstruction conference.
  14. Certificates of insurance and insurance policies.
  15. Performance and payment bonds.
- J. Application for Payment at Substantial Completion: After Engineer issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum, if any.
  2. Submit warranties and maintenance agreements, as applicable.
  3. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- K. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Completion of items specified by the Engineer for correction after Substantial Completion.
  2. Required Project Records including permit drawings, as constructed drawings both on hard copy and in electronic format.
  3. Evidence of completion of Project closeout requirements.
  4. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
  5. Updated final statement, accounting for final changes to the Contract Sum.
  6. AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims."
  7. AIA Document G706A, "Contractor's Affidavit of Release of Liens."
  8. AIA Document G707, "Consent of Surety to Final Payment."
  9. List of unsettled claims, if any.
  10. Evidence that claims have been settled, if any.
  11. Final liquidated damages settlement statement.
  12. Removal of all temporary facilities and services.
  13. Removal of all surplus materials, rubbish, and similar elements.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT AND PAYMENT

- A. This work will not be measured for payment.

PART 5 - PAYMENT

- A. This work shall be paid for as part of the lump sum Contract Base Bid, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Engineer.

END OF SECTION

## SECTION 01310 - PROJECT MANAGEMENT AND COORDINATION

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 Summary

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. General coordination procedures.
  - 2. Coordination drawings.
  - 3. Requests for Information (RFIs).
  - 4. Administrative and supervisory personnel.
  - 5. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.
- C. Related Requirements:
  - 1. Section 013200 "Construction Progress Documentation" for preparing and submitting Contractor's construction schedule.
  - 2. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.
  - 3. Section 017700 "Closeout Procedures" for coordinating closeout of the Contract.

#### 1.3 Definitions

- A. RFI: Request from Owner, Construction Manager, Engineer, or Contractor seeking information required by or clarifications of the Contract Documents.

#### 1.4 Informational Submittals

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
  - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
  - 2. Number and title of related Specification Section(s) covered by subcontract.
  - 3. Drawing number and detail references, as appropriate, covered by subcontract.

- B. Staff Names: Within five days of starting construction operations, submit a list of principal staff assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home and office telephone numbers. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to Project.
  - 1. Post copies of list in Project meeting room, in temporary field office, and by each temporary telephone.
  
- C. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.
  - 1. Indicate required installation sequences.

#### 1.5 General Coordination Procedures

- A. Coordinate the Work with Authorities having jurisdiction within the work area.
  
- B. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
  - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
  - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
  - 3. Make adequate provisions to accommodate items scheduled for later installation.
  
- C. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
  - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
  
- D. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  - 1. Preparation of Contractor's construction schedule.
  - 2. Preparation of the schedule of values.
  - 3. Installation and removal of temporary facilities and controls.
  - 4. Delivery and processing of submittals.
  - 5. Progress meetings.
  - 6. Preinstallation conferences.
  - 7. Project closeout activities.

- E. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
  - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

#### 1.6 Coordination With Utilities

- A. Contact Dig Safe at 1-888-344-7233 at least 72 hours prior to the start of construction (excluding weekends and holidays), to mark out the utility locations.
  - 1. If above or below ground utilities are damaged during the course of the Work, immediately notify the appropriate utility companies of the incident.
- B. Contact Pawtucket Water Supply Board (401-729-5004) at least 48 hours prior to the start of construction (excluding weekends and holidays), to notify them of proposed work associated with the relocation of the existing fire hydrants.

#### 1.7 Coordination With Local Authorities

- A. Report the location and duration of road closing or traffic detour to the various City and State Authorities, including the Public Works, Police, Fire, Emergency Services, Sanitation and School Departments, a minimum of 2 business days prior to roadway construction activities.
- B. Contact Information
  - 1. Public Works Director: Eric Earls – (401) 728-0500 x 279
  - 2. Highway Supervisor: – (401) 728-0500 x 302
  - 3. Police Department: Chief Goncalves – (401) 727-9100
  - 4. Fire and Emergency Department: Chief Sisson – (401) 725-1422
  - 5. School Department: (401) 729-6300

#### 1.8 Coordination With Local Residents And Business Owners

- A. Coordinate Work to allow pedestrian and vehicular access to adjacent buildings. During construction pedestrian traffic will be diverted to the existing sidewalk along the eastern side of Pine Street.
- B. Coordinate access to driveways. See Division 1 Section "Summary."
- C. Coordinate access with private property owners prior to work that will restrict access or use of property to property occupants.
- D. Coordinate relocation of all site improvements with local residents including fences, mailboxes, vegetative features and miscellaneous site improvements.

1.9 Permits

- A. Obtain required permits, and insurance required in connection with such permits.

1.10 Coordination Drawings

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.
  - 1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
    - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
    - b. Coordinate the addition of trade-specific information to the coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
    - c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
    - d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
    - e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
    - f. Indicate required installation sequences.
    - g. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Engineer indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.

1.11 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
  - 1. Engineer will return RFIs submitted to Engineer by other entities controlled by Contractor with no response.
  - 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
  - 1. Project name.

2. Project number.
3. Date.
4. Name of Contractor.
5. Name of Engineer.
6. RFI number, numbered sequentially.
7. RFI subject.
8. Specification Section number and title and related paragraphs, as appropriate.
9. Drawing number and detail references, as appropriate.
10. Field dimensions and conditions, as appropriate.
11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
12. Contractor's signature.
13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
  - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

#### 1.12 Project Meetings

- A. General: Engineer will schedule and conduct meetings and conferences at Project site, unless otherwise indicated.
  1. Attendees: Engineer will inform participants and others involved, and individuals whose presence is required, of date and time of each meeting.
  2. Agenda: Engineer will prepare the meeting agenda and distribute the agenda to all invited attendees.
  3. Minutes: Engineer will record significant discussions and agreements achieved, and distribute the meeting minutes to everyone concerned, including Owner, within 10 days of the meeting.
- B. Preconstruction Conference: Engineer will schedule a preconstruction conference before start of construction, at a time convenient to Owner, Contractor, and Engineer, but no later than 15 days after execution of the Agreement.
  1. Conduct the conference to review responsibilities and personnel assignments.
  2. Attendees: Authorized representatives of Owner, Engineer, and their consultants; and Contractor and its superintendent; shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  3. Agenda: Discuss items of significance that could affect progress, including the following:
    - a. Tentative construction schedule.
    - b. Phasing.
    - c. Critical work sequencing.
    - d. Designation of responsible personnel.
    - e. Procedures for processing field decisions and Change Orders.

- f. Procedures for processing Applications for Payment.
  - g. Distribution of the Contract Documents.
  - h. Submittal procedures.
  - i. Preparation of Record Documents.
  - j. Use of the premises.
  - k. Responsibility for temporary facilities and controls.
  - l. Parking availability.
  - m. Office, work, and storage areas.
  - n. Equipment deliveries and priorities.
  - o. First aid.
  - p. Security.
  - q. Progress cleaning.
  - r. Working hours.
  - s. Communication plan.
4. Execution of Owner-Contractor Agreement including executed bonds and insurance certificates may be completed immediately prior to the pre-construction conference.
  5. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.
- C. Progress Meetings: Engineer will conduct progress meetings at bi-monthly intervals or as deemed necessary during non-critical phases of work, and weekly if conditions warrant.
1. Attendees: In addition to representatives of Owner and Engineer, each contractor, subcontractor, supplier, and other entity required to finalize discussions regarding current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
    - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
    - b. Review present and future needs of each entity present, including the following:
      - 1) Interface requirements.
      - 2) Sequence of operations.
      - 3) Status of submittals.
      - 4) Deliveries.
      - 5) Off-site fabrication.
      - 6) Access.
      - 7) Temporary facilities and controls.
      - 8) Work hours.

- 9) Hazards and risks.
  - 10) Progress cleaning.
  - 11) Quality and work standards.
  - 12) Change Orders.
  - 13) Documentation of information for payment requests.
3. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present. Include a brief summary, in narrative form, of progress since the previous meeting and report.
    - a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT

- A. This work will not be measured for payment.

PART 5 - PAYMENT

- A. This work shall be paid for as part of the lump sum Contract Base Bid, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Engineer.

END OF SECTION

## SECTION 01323 - PHOTOGRAPHIC DOCUMENTATION

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, RIDOT Standard Specification for Road and Bridge Construction and Division 1 Specification Sections, apply to this Section.

#### 1.2 Summary

- A. Section includes administrative and procedural requirements for the following:
  1. Preconstruction photographs.
  2. Periodic construction photographs.
  3. Final completion construction photographs.
  4. Preconstruction video recordings.
  5. Periodic construction video recordings.

- B. Related Requirements:
  1. Section 02230 "Site Clearing"

#### 1.3 Informational Submittals

- A. Key Plan: Submit key plan of Project site and building with notation of vantage points marked for location and direction of each photograph and video recording. Indicate elevation or story of construction. Include same information as corresponding photographic documentation.
- B. Digital Photographs: Submit image files within three days of taking photographs.
  1. Digital Camera: Minimum sensor resolution of eight megapixels.
  2. Format: Minimum 3200 X 2400 pixels, in unaltered original files, with same aspect ratio as the sensor, uncropped, date and time stamped, in folder named by date of photograph, accompanied by key plan file.
  3. Identification: Provide the following information with each image description in file metadata tag:
    - a. Name of Project.
    - b. Name and contact information for photographer.
    - c. Name of Engineer.
    - d. Name of Contractor.
    - e. Date photograph was taken.
    - f. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
    - g. Unique sequential identifier keyed to accompanying key plan.

- C. Video Recordings: Submit video recordings within seven days of recording.
  - 1. Submit video recordings in digital video disc format acceptable to Engineer.
  - 2. Identification: With each submittal, provide the following information:
    - a. Name of Project.
    - b. Name and address of photographer.
    - c. Name of Engineer.
    - d. Name of Contractor.
    - e. Date video recording was recorded.
    - f. Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.
    - g. Weather conditions at time of recording.
  - 3. Transcript: Prepared on 8-1/2-by-11-inch paper, punched and bound in heavy-duty, three-ring, vinyl-covered binders. Mark appropriate identification on front and spine of each binder. Include a cover sheet with same label information as corresponding video recording. Include name of Project and date of video recording on each page.

#### 1.4 Quality Assurance

- A. Photographer Qualifications: An individual who has been regularly engaged as a professional photographer of construction projects for not less than three years.

#### 1.5 Usage Rights

- A. Obtain and transfer copyright usage rights from photographer to Owner for unlimited reproduction of photographic documentation.

### PART 2 - PRODUCTS

#### 2.1 Photographic Media

- A. Digital Images: Provide images in JPG format, produced by a digital camera with minimum sensor size of eight megapixels, and at an image resolution of not less than 3200 X 2400 pixels.
- B. Digital Video Recordings: Provide high-resolution, digital video disc in format acceptable to Engineer.

### PART 3 - EXECUTION

#### 3.1 Construction Photographs

- A. General: Take photographs using the maximum range of depth of field, and that are in focus, to clearly show the Work. Photographs with blurry or out-of-focus areas will not be accepted.
  - 1. Maintain key plan with each set of construction photographs that identifies each photographic location.

- B. Digital Images: Submit digital images exactly as originally recorded in the digital camera, without alteration, manipulation, editing, or modifications using image-editing software.
  - 1. Date and Time: Include date and time in file name for each image.
  - 2. Field Office Images: Maintain one set of images accessible in the field office at Project site, available at all times for reference. Identify images in the same manner as those submitted to Engineer.
  
- C. Preconstruction Photographs: Before commencement of excavation, commencement of demolition, starting construction, take photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by Engineer.
  - 1. Flag construction limits before taking construction photographs.
  - 2. Take a minimum of 20 photographs to show existing conditions adjacent to property before starting the Work.
  - 3. Take a minimum of 20 photographs of existing buildings either on or adjoining property to accurately record physical conditions at start of construction.
  - 4. Take additional photographs as required to record settlement or cracking of adjacent structures, pavements, and improvements.
  
- D. Periodic Construction Photographs: Take a minimum of 20 photographs coinciding weekly with the cutoff date associated with each Application for Payment. Select vantage points to show status of construction and progress since last photographs were taken.
  
- E. Engineer-Directed Construction Photographs: From time to time, Engineer will instruct photographer about number and frequency of photographs and general directions on vantage points. Select actual vantage points and take photographs to show the status of construction and progress since last photographs were taken.
  
- F. Time-Lapse Sequence Construction Photographs: Take a minimum of 20 photographs as indicated, to show status of construction and progress since last photographs were taken.
  - 1. Frequency: Take photograph weekly, with timing each month adjusted to coincide with the cutoff date associated with each Application for Payment.
  - 2. Vantage Points: Following suggestions by Engineer and Contractor, photographer to select vantage points. During each of the following construction phases, take not less than two of the required shots from same vantage point each time to create a time-lapse sequence as follows:
    - a. Commencement of the Work, through completion of subgrade construction.
    - b. Above-grade structural framing.
    - c. Exterior building enclosure.
    - d. Interior Work, through date of Substantial Completion.
  
- G. Final Completion Construction Photographs: Take a minimum of 20 color photographs after date of Substantial Completion for submission as project record documents. Engineer will inform photographer of desired vantage points.

1. Do not include date stamp.

H. Additional Photographs: Engineer may request photographs in addition to periodic photographs specified. Additional photographs will be paid for by Change Order and are not included in the Contract Sum or in the allowance for construction photographs.

1. Three days' notice will be given, where feasible.
2. In emergency situations, take additional photographs within 24 hours of request.
3. Circumstances that could require additional photographs include, but are not limited to, the following:
  - a. Special events planned at Project site.
  - b. Immediate follow-up when on-site events result in construction damage or losses.
  - c. Photographs to be taken at fabrication locations away from Project site. These photographs are not subject to unit prices or unit-cost allowances.
  - d. Substantial Completion of a major phase or component of the Work.
  - e. Extra record photographs at time of final acceptance.
  - f. Owner's request for special publicity photographs.

### 3.2 Construction Video Recordings

- A. Video Recording Photographer: Engage a qualified videographer to record construction video recordings.
- B. Recording: Mount camera on tripod before starting recording unless otherwise necessary to show area of construction. Display continuous running time and date. At start of each video recording, record weather conditions from local newspaper or television and the actual temperature reading at Project site.
- C. Narration: Describe scenes on video recording by audio narration by microphone while video recording is recorded. Include description of items being viewed, recent events, and planned activities. At each change in location, describe vantage point, location, direction (by compass point), and elevation or story of construction.
  1. Confirm date and time at beginning and end of recording.
  2. Begin each video recording with name of Project, Contractor's name, videographer's name, and Project location.
- D. Transcript: Provide a typewritten transcript of the narration. Display images and running time captured from video recording opposite the corresponding narration segment.
- E. Preconstruction Video Recording: Before starting demolition, excavation, or construction, record video recording of Project site and surrounding properties from different vantage points, as directed by Engineer.
  1. Flag construction limits before recording construction video recordings.
  2. Show existing conditions adjacent to Project site before starting the Work.
  3. Show existing buildings either on or adjoining Project site to accurately record physical conditions at the start of excavation, demolition, and construction.

4. Show protection efforts by Contractor.

PART 4 - MEASUREMENT AND PAYMENT

- A. This work will not be measured for payment.

PART 5 - PAYMENT

- A. This work shall be paid for as part of the lump sum Contract Base Bid, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Engineer.

END OF SECTION

## SECTION 01330 - SUBMITTAL PROCEDURES

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 Summary

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
  - 1. Section 01290 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
  - 2. Section 01320 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.

#### 1.3 Definitions

- A. Action Submittals: Written and graphic information and physical samples that require Engineer's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Engineer's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."
- C. File Transfer Protocol (FTP): Communications protocol that enables transfer of files to and from another computer over a network and that serves as the basis for standard Internet protocols. An FTP site is a portion of a network located outside of network firewalls within which internal and external users are able to access files.
- D. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.
- E. Addresses: Include mailing address, telephone number, facsimile number, and e-mail address.

#### 1.4 Submittal Procedures

- A. General: Upon Contractor request, and at the sole discretion of the Engineer, electronic copies of CAD Drawings of the Contract Drawings may be provided to the Contractor for use in preparing submittals.
- B. Method of Transmitting Submittals: Electronic transmission of submittals, including a facsimile and e-mail process, will be permitted. Hard copies must also be transmitted as indicated.
- C. Clarity: Provide neat, clean and legible printed materials that can be easily reproduced by normal photocopying or blueprinting process. Illegible submittals will be returned without review.
- D. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
  - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
    - a. Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- E. Processing Time: Allow enough time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal.
  - 1. Initial Review: Allow 21 days for initial review of each submittal. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
  - 2. Concurrent Review: Where concurrent review of submittals by Engineer's consultants, Owner, or other parties is required, allow 30 days for initial review of each submittal.
  - 3. If intermediate submittal is necessary, process it in same manner as initial submittal.
  - 4. Allow 21 calendar days for processing each resubmittal.
  - 5. No extension of the Contract Time or claims for delay will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.
- F. Identification: Place a permanent label or title block on each submittal for identification.
  - 1. Indicate name of firm or entity that prepared each submittal on label or title block.
  - 2. Provide a space approximately 4 by 5 inches on label or beside title block to record Contractor's review and approval markings and action taken by Engineer.
  - 3. Include the following information on label for processing and recording action taken:
    - a. Project name.
    - b. Date.
    - c. Name and address of Engineer.
    - d. Name and address of Contractor.

- e. Name and address of subcontractor.
  - f. Name and address of supplier including name and telephone number of contact.
  - g. Name of manufacturer including name and telephone number of contact.
  - h. Unique identifier, including revision number.
  - i. Number and title of appropriate Specification Section.
  - j. Drawing number and detail references, as appropriate.
  - k. Other necessary identification.
- G. Deviations: Highlight, encircle, or otherwise identify deviations from the Contract Documents on submittals. Provide list or narrative of deviations on Submittal Transmittal form.
- 1. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Engineer.
  - 2. Additional copies submitted for maintenance manuals will be marked with action taken and will be returned.
- H. Transmittal: Package each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Engineer will return submittals, without review, received from sources other than Contractor.
- 1. On an attached separate sheet, prepared on Contractor's letterhead, record relevant information, requests for data, revisions other than those requested by Engineer on previous submittals, and deviations from requirements of the Contract Documents, including minor variations and limitations. Include the same label information as the related submittal.
  - 2. Include Contractor's certification stating that information submitted complies with requirements of the Contract Documents.
  - 3. Transmittal Form: Use sample form at end of Section.
- I. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- J. Use for Construction: Use only final submittals with mark indicating action taken by Engineer in connection with construction.
- 1.5 Quality Assurance
- A. Where "RIDOT Standard Specifications" is used, it shall mean "Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction" amended 2018, and issued supplements.

## PART 2 - PRODUCTS

### 2.1 Action Submittals

- A. General: Prepare and submit Action Submittals required by individual Specification Sections.

1. Number of Copies: Submit one (1) copy of each submittal, unless otherwise indicated. Mark up and retain one returned copy as a Record Document.
  - a. Submit a preliminary single copy of each submittal where selection of options, color, pattern, texture, or similar characteristics is required. Engineer will return submittal with options selected.
  
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
  1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
  2. Mark each copy of each submittal to show which products and options are applicable.
  3. Include the following information, as applicable:
    - a. Manufacturer's written recommendations.
    - b. Manufacturer's product specifications.
    - c. Manufacturer's installation instructions.
    - d. Standard color charts.
    - e. Manufacturer's catalog cuts.
    - f. Wiring diagrams showing factory-installed wiring.
    - g. Printed performance curves.
    - h. Operational range diagrams.
    - i. Mill reports.
    - j. Standard product operating and maintenance manuals.
    - k. Compliance with recognized trade association standards.
    - l. Compliance with recognized testing agency standards.
    - m. Application of testing agency labels and seals.
    - n. Notation of coordination requirements.
  
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
  1. Preparation: Include the following information, as applicable:
    - a. Dimensions.
    - b. Identification of products.
    - c. Fabrication and installation drawings.
    - d. Roughing-in and setting diagrams.
    - e. Wiring diagrams showing field-installed wiring, including power, signal, and control wiring.
    - f. Shopwork manufacturing instructions.
    - g. Templates and patterns.

- h. Schedules.
    - i. Design calculations.
    - j. Compliance with specified standards.
    - k. Notation of coordination requirements.
    - l. Notation of dimensions established by field measurement.
  2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches but no larger than 24 by 36 inches.
- D. Samples: Prepare physical units of materials or products, including the following:
  1. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
    - a. Include cost and wearing capability of each color and pattern.
  2. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from the same material to be used for the Work, cured and finished in manner specified, and physically identical with the product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
  3. Preparation: Mount, display, or package Samples in manner specified to facilitate review of qualities indicated. Prepare Samples to match Engineer's sample where so indicated. Attach label on unexposed side that includes the following:
    - a. Generic description of Sample including type, quality or grade designation.
    - b. Product name or name of manufacturer.
    - c. Sample source.
    - d. Name of Project.
    - e. Name of Contractor or subcontractor.
  4. Additional Information: On an attached separate sheet, prepared on Contractor's letterhead, provide the following:
    - a. Size limitations.
    - b. Compliance with recognized standards.
    - c. Availability.
    - d. Delivery time.
  5. Submit Samples for review of kind, color, pattern, and texture for a final check of these characteristics with other elements and for a comparison of these characteristics between final submittal and actual component as delivered and installed.
    - a. If variation in color, pattern, texture, or other characteristic is inherent in the product represented by a Sample, submit at least two (2) sets of paired units that show approximate limits of the variations.



- E. Material or Product Certificates: Prepare written statements on manufacturer's letterhead certifying that material or product complies with requirements. Use attached sample Material Certificate, or provide certificate that includes the following information.
1. Project to which material is consigned.
  2. Name of contractor receiving material.
  3. Item number and description of material.
  4. Quantity of material represented by the certificate.
  5. Means of identifying consignment including label, marking, or lot number.
  6. Preparation of substrates.
  7. Required substrate tolerances.
  8. Sequence of installation or erection.
  9. Required installation tolerances.
  10. Required adjustments.
  11. Recommendations for cleaning and protection.
- F. Manufacturer's Field Reports: Prepare written information documenting factory-authorized service representative's tests and inspections. Include the following, as applicable:
1. Name, address, and telephone number of factory-authorized service representative making report.
  2. Statement on condition of substrates and their acceptability for installation of product.
  3. Statement that products at Project site comply with requirements.
  4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
  5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
  6. Statement whether conditions, products, and installation will affect warranty.
  7. Other required items indicated in individual Specification Sections.
- G. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.

## PART 3 - EXECUTION

### 3.1 Contractor's Review

- A. Review each submittal and check for compliance with the Contract Documents. Note corrections and field dimensions. Mark each copy of each submittal with approval stamp before submitting to Engineer.
- B. Approval Stamp: Stamp each submittal with a uniform approval stamp.

- C. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents. See attached Submittal Transmittal for sample of statement.

### 3.2 Engineer's Action

- A. General: Engineer will not review submittals that do not bear Contractor's approval stamp and submittal transmittal and will return them without action.
  - 1. Engineer may elect not to review partial or incomplete submittals and will return such submittals with no action taken.
- B. Action Submittals: Engineer will review each submittal, make marks to indicate corrections or modifications required, and return it. Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
  - 1. Furnish as Submitted: Submittal appears to conform to Contract Documents and Contractor may proceed with ordering and installation.
  - 2. Furnish as Noted: Same as "Furnish as Submitted" except that the Contractor must comply with modifications or notes added to the submittal by the Engineer.
  - 3. Rejected: Submittal must be revised and resubmitted.
- C. Informational Submittals: Engineer will review each submittal and will not return it, or will reject and return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.
- D. Submittals not required by the Contract Documents will not be reviewed and may be discarded.

### PART 4 - MEASUREMENT AND PAYMENT

- A. This work will not be measured for payment.

### PART 5 - PAYMENT

- A. This work shall be paid for as part of the lump sum Contract Base Bid, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Engineer.

END OF SECTION

FUSS & O'NEILL, INC.  
20150951.A30  
05/2019

TOD DISTRICT STORMWATER IMPROVEMENTS  
PAWTUCKET, RI

To: Fuss & O'Neill, Inc.  
317 Iron Horse Way; Suite 204  
Providence, RI 02908  
ATTN: Sean Arruda

From:

PROJECT: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SUBMITTAL NO.: \_\_\_\_\_  
(List Section No., Article No., Paragraph)  
\_\_\_\_\_  
(Revision: 1st, 2nd, 3rd, etc.)

Transmitted herewith for review and comment are the following:

Copies	Dwg.	No.	Description
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

MANUFACTURER / SUPPLIER

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone No.: \_\_\_\_\_ Facsimile No.: \_\_\_\_\_  
For Additional Information, Contact \_\_\_\_\_  
E-mail Address: \_\_\_\_\_

I hereby certify that I have carefully examined the enclosed submittal and have determined and verified all field measurements, construction criteria, materials, catalog numbers and similar data, coordinated the submittal with other submissions and the work of other trades and contractors, and that to the best of my knowledge and belief, the enclosed submittal is in full compliance with the Contract Documents, except for the following deviations:

BY:

Signature: \_\_\_\_\_  
Date: \_\_\_\_\_  
Title: \_\_\_\_\_

-- SAMPLE -- MATERIALS CERTIFICATE -- SAMPLE --  
(Submit on Manufacturer's letterhead)

Date: \_\_\_\_\_

WE HEREBY CERTIFY THAT \_\_\_\_\_  
(Description, Kind of Material, Product Name, Model No.)

FURNISHED TO \_\_\_\_\_  
(Name of Contractor) (Prime or Subcontractor)

FOR USE ON \_\_\_\_\_  
(Project Name)

OWNER \_\_\_\_\_  
(Project Owner)

IDENTIFIED BY: \_\_\_\_\_  
(Label, Marking, Seal No., Consignment, or Waybill No.)

SHIPPED VIA: \_\_\_\_\_  
(Method of Shipment, Car No., Truck No.)

SHIPPED ON: \_\_\_\_\_ DELIVERED ON: \_\_\_\_\_

MEETS THE REQUIREMENTS OF THE CONTRACT DOCUMENTS FOR THE SUBJECT PROJECT IN ALL RESPECTS. PROCESSING, PRODUCT TESTING AND INSPECTION CONTROL OF RAW MATERIALS ARE IN CONFORMANCE WITH APPLICABLE SPECIFICATIONS, DRAWINGS AND STANDARDS OF ARTICLES FURNISHED. ARTICLES FURNISHED COMPLY WITH THE FOLLOWING STANDARD SPECIFICATIONS:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

All records and documents pertinent to this certificate and not submitted herewith will be maintained available by the undersigned for a period of not less than 3 years from the date of this certificate.

\_\_\_\_\_  
(Name of Manufacturer)

\_\_\_\_\_  
(Authorized Representative's Signature)

\_\_\_\_\_  
(Title)

## SECTION 01400 - QUALITY REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspection services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
  - 1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
  - 2. Specified tests, inspections, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with the Contract Document requirements.
  - 3. Requirements for Contractor to provide quality-control services required by Engineer, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

#### 1.2 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction complies with requirements. Services do not include contract enforcement activities performed by Engineer.
- C. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing Laboratory shall mean the same as testing agency.

#### 1.3 DELEGATED DESIGN

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
  - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Engineer.

#### 1.4 SUBMITTALS

- A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

- B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.
- C. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
1. Specification Section number and title.
  2. Description of test and inspection.
  3. Identification of applicable standards.
  4. Identification of test and inspection methods.
  5. Number of tests and inspections required.
  6. Time schedule or time span for tests and inspections.
  7. Entity responsible for performing tests and inspections.
  8. Requirements for obtaining samples.
  9. Unique characteristics of each quality-control service.
- D. Reports: Prepare and submit certified written reports that include the following:
1. Date of issue.
  2. Project title and number.
  3. Name, address, and telephone number of testing agency.
  4. Dates and locations of samples and tests or inspections.
  5. Names of individuals making tests and inspections.
  6. Description of the Work and test and inspection method.
  7. Identification of product and Specification Section.
  8. Complete test or inspection data.
  9. Test and inspection results and an interpretation of test results.
  10. Ambient conditions at time of sample taking and testing and inspecting.
  11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
  12. Name and signature of laboratory inspector.
  13. Recommendations on retesting and reinspecting.
- E. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

## 1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- B. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- C. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- D. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product, which are similar to those indicated for this Project in material, design, and extent.
- F. Professional Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing surveying services of the kind indicated.

## 1.6 QUALITY CONTROL

- A. Unless otherwise indicated, provide quality-control services specified and required by authorities having jurisdiction.
  - 1. Engage a qualified testing agency to perform these quality-control services.
  - 2. Notify testing agencies and Engineer at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
  - 3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
  - 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
  - 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
- B. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.
- C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for

construction that revised or replaced Work that failed to comply with requirements established by the Contract Documents.

- D. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
  2. Incidental labor and facilities necessary to facilitate tests and inspections, at site or at source of products, including storage and curing of test samples.
  3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
  4. Facilities for storage and field-curing of test samples.
  5. Delivery of samples to testing agencies.
  6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
  7. Security and protection for samples and for testing and inspecting equipment at Project site.
- E. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

## PART 2 - PRODUCTS (Not used)

## PART 3 - EXECUTION

### 3.1 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Sections of these Specifications. Restore patched areas and extend restoration into adjoining areas in a manner that eliminates evidence of patching.
  2. Repair items of work where testing indicates that the work does not meet requirements specified herein and retest at no cost to the Owner.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

PART 4 - MEASUREMENT AND PAYMENT

- A. This work will not be measured for payment.

PART 5 - PAYMENT

- A. This work shall be paid for as part of the lump sum Contract Base Bid, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Engineer.

END OF SECTION

## SECTION 01410 – TESTING LABORATORY SERVICES

### PART 1 - GENERAL

#### 1.1 Summary

- A. This Section consists of requirements for the services of Independent Testing Laboratories to perform specified testing of work and materials at the Project site or at point of manufacture.

#### 1.2 Requirements

- A. The Contractor shall pay all charges of the Testing Laboratory. Employment of Testing Laboratory shall in no way relieve Contractor of his obligation to perform work in accordance with Contract.
- B. The Contractor will select and employ an Independent Testing Laboratory, approved by the Engineer and holding current certification with the State of Rhode Island, prior to the commencement of the Work, to perform soil testing services as well as other field testing services required by the Contract Documents. Laboratories shall also meet qualifications listed in Division 2 Sections for the types of testing to be conducted.

#### 1.3 Submittals

- A. Contractor shall submit for Engineer's approval the name and qualifications of the Independent Testing Laboratory prior to the commencement of work.

### PART 2 - PRODUCTS (Not Used)

### PART 3 - EXECUTION

#### 3.1 Laboratory Duties

- A. Demonstrate expertise in providing services as specified in the Contract Documents.
- B. Test the samples submitted by Contractor.
- C. Cooperate with Owner and Contractors; provide qualified personnel promptly on notice. Perform specified inspections, sampling and testing of materials and methods of construction; ascertain compliance with requirements of Contract Documents.
- D. The Testing Laboratory shall perform specified inspections, sampling, testing of materials and methods of construction as described in the Contract Documents.

- E. The Testing Laboratory shall promptly notify the Engineer of observed irregularities or deficiencies of work or products and shall perform additional testing as required. The Testing Laboratory shall promptly submit two (2) copies of written reports for each test and inspection to the Engineer and one copy to the Contractor. Each report shall include:
  - 1. Date issued.
  - 2. Project title and number.
  - 3. Testing laboratory name, address, and telephone number.
  - 4. Name and signature of field and/or laboratory inspector.
  - 5. Date, time, and location of sampling or inspection.
  - 6. Record of temperature and weather conditions.
  - 7. Date of test.
  - 8. Identification of products and Specification Section.
  - 9. Location of sample or test in the Project. Sample locations shall be shown on site plan sketch.
  - 10. Type of inspection or test.
  - 11. Results of test and compliance with Contract Documents.
  - 12. Interpretation of test results.
  
- F. The Testing Laboratory shall not be authorized to release, revoke, alter or enlarge upon any requirements of the Contract Documents and Laboratory shall not approve or accept any portion of the Work that does not conform to these Specifications.
  
- G. Laboratory may not assume any duties of the Contractor; and the Laboratory has no authority to stop work.

### 3.2 Contractor's Responsibility

- A. Cooperate with Laboratory personnel and provide access to work and facilitate the execution of the Laboratory's required services.
- B. Provide to Laboratory representative samples of materials to be tested in required quantities.
- C. Furnish labor and facilities to provide access to work to be tested, to obtain and handle samples at the site, and to facilitate inspections and tests.
- D. Notify Laboratory sufficiently in advance of operations to allow for its assignment of personnel and schedule of tests.
- E. Arrange with Laboratory, and pay for, any additional samples and testing required for Contractor's convenience.
- F. Arrange with Laboratory, and pay for, any additional inspections, sampling and testing required when initial tests indicate that work does not comply with Contract Documents.

- G. Arrange for and conduct any inspections required by State and/or local building, fire protection, safety, health or environmental officials.
- H. Testing shall be provided by the Contractor; the Contractor will supply any laborers and equipment necessary for performing the testing at no additional cost. This work may include, but is not limited to providing materials and samples and revising or repairing work to meet the intent of the plans and specifications. The Contractor is also responsible for any costs associated with conformance testing performed by an Independent Laboratory.

#### PART 4 - MEASUREMENT AND PAYMENT

##### 4.1 Measurement

- A. This work will not be measured for payment.

##### 4.2 Payment

- A. This work shall be paid for as part of the lump sum Contract Base Bid, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Engineer.

END OF SECTION

## SECTION 01420 - REFERENCES

### PART 1 - GENERAL

#### 1.1 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": When used to convey Engineer's action on Contractor's submittals, applications, and requests, "approved" is limited to Engineer's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Engineer. Other terms including "requested," "authorized," "selected," "approved," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Installer": Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
  - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- G. "Experienced": When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- H. "Project Site": Space available for performing construction activities. The extent of Project Site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

#### 1.2 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.

- C. **Conflicting Requirements:** If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Engineer for a decision before proceeding.
1. **Minimum Quantity or Quality Levels:** The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Engineer for a decision before proceeding.
- D. **Copies of Standards:** Each entity engaged in construction on Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
- E. **Abbreviations and Acronyms for Standards and Regulations:** Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the standards and regulations in the following list. Names, telephone numbers, and Web-site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

ADAAG	Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities Available from Access Board <a href="http://www.access-board.gov">www.access-board.gov</a>	(800) 872-2253 (202) 272-0800
ANSI Z260.1	Nursery Stock, latest edition, published by the American Association of Nurserymen, Inc. (AAN).	
CFR	Code of Federal Regulations Available from Government Printing Office <a href="http://www.gpoaccess.gov/cfr/index.html">http://www.gpoaccess.gov/cfr/index.html</a>	(866)-512-1800 (202) 512-1800
CRD	Handbook for Concrete and Cement Available from Army Corps of Engineers Waterways Experiment Station <a href="http://www.erdc.usace.army.mil/">http://www.erdc.usace.army.mil/</a>	(601) 634-2505
DEC	Rhode Island Department of Environmental Management Residential Direct Exposure Criteria according to the most recent Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases.	(401) 222-6800
DOD	Department of Defense Specifications and Standards Available from Defense Automated Printing Service <a href="http://www.astimage.daps.dla.mil/online">www.astimage.daps.dla.mil/online</a>	(215) 697-6257
FED-STD	Federal Standard (See FS)	

FS	Federal Specification Available from Defense Automated Printing Service <a href="http://www.astimage.daps.dla.mil/online">www.astimage.daps.dla.mil/online</a>	(215) 697-6257
	Available from General Services Administration <a href="http://www.fss.gsa.gov/pub/fed-specs.cfm">www.fss.gsa.gov/pub/fed-specs.cfm</a>	(202) 619-8925
	Available from National Institute of Building Sciences <a href="http://www.nibs.org">www.nibs.org</a>	(202) 289-7800
FTMS	Federal Test Method Standard (See FS)	
MILSPEC	Military Specification and Standards Available from Defense Automated Printing Service <a href="http://www.astimage.daps.dla.mil/online">www.astimage.daps.dla.mil/online</a>	(215) 697-6257
RCRA	Resource Conservation Recovery Act	
SPN	"Standardized Plant Names," latest edition, by the American Joint Committee on Horticultural Nomenclature.	
UFAS	Uniform Federal Accessibility Standards Available from Access Board <a href="http://www.access-board.gov">www.access-board.gov</a>	(800) 872-2253 (202) 272-0800

### 1.3 ABBREVIATIONS AND ACRONYMS

- A. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."
- B. Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web-site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

AA	Aluminum Association, Inc. (The) <a href="http://www.aluminum.org">www.aluminum.org</a>	(703) 358-2960
AAADM	American Association of Automatic Door Manufacturers <a href="http://www.aadm.com">www.aadm.com</a>	(216) 241-7333
AABC	Associated Air Balance Council <a href="http://www.aabchq.com">www.aabchq.com</a>	(202) 737-0202
AAMA	American Architectural Manufacturers Association <a href="http://www.aamanet.org">www.aamanet.org</a>	(847) 303-5664

AAN	American Association of Nurserymen (See ANLA)	
AASHTO	American Association of State Highway and Transportation Officials www.aashto.org	(202) 624-5800
AATCC	American Association of Textile Chemists and Colorists (The) www.aatcc.org	(919) 549-8141
ABMA	American Bearing Manufacturers Association www.abma-dc.org	(202) 367-1155
ACI	American Concrete Institute/ACI International www.aci-int.org	(248) 848-3700
ACPA	American Concrete Pipe Association www.concrete-pipe.org	(972) 506-7216
AEIC	Association of Edison Illuminating Companies, Inc. (The) www.aeic.org	(205) 257-2530
AFPA	American Forest & Paper Association (See AF&PA)	
AF&PA	American Forest & Paper Association www.afandpa.org	(800) 878-8878 (202) 463-2700
AGA	American Gas Association www.aga.org	(202) 824-7000
AGC	Associated General Contractors of America (The) www.agc.org	(703) 548-3118
AHA	American Hardboard Association <a href="http://domensino.com/AHA/default.htm">http://domensino.com/AHA/default.htm</a>	(847) 934-8800
AHAM	Association of Home Appliance Manufacturers www.aham.org	(202) 872-5955
AI	Asphalt Institute www.asphaltinstitute.org	(859) 288-4960
AIA	American Institute of Architects (The) www.aia.org	(800) 242-3837 (202) 626-7300
AISC	American Institute of Steel Construction www.aisc.org	(312) 670-2400
AISI	American Iron and Steel Institute www.steel.org	(202) 452-7100

AITC	American Institute of Timber Construction <a href="http://www.aitc-glulam.org">www.aitc-glulam.org</a>	(303) 792-9559
ALCA	Associated Landscape Contractors of America <a href="http://www.alca.org">www.alca.org</a>	(800) 395-2522
ALSC	American Lumber Standard Committee <a href="http://www.alsc.org/">http://www.alsc.org/</a>	(301) 972-1700
AMCA	Air Movement and Control Association International, Inc. <a href="http://www.amca.org">www.amca.org</a>	(847) 394-0150
ANLA	American Nursery & Landscape Association (Formerly: AAN - American Association of Nurserymen) <a href="http://www.anla.org">www.anla.org</a>	(202) 789-2900
ANSI	American National Standards Institute <a href="http://www.ansi.org">www.ansi.org</a>	(202) 293-8020
AOAC	Association of Official Agricultural Chemists	(800) 379-2622
AOSA	Association of Official Seed Analysts <a href="http://www.aosaseed.com">www.aosaseed.com</a>	(607) 256-3313
APA	APA - The Engineered Wood Association <a href="http://www.apawood.org">www.apawood.org</a>	(253) 565-6600
APA	Architectural Precast Association <a href="http://www.archprecast.org">www.archprecast.org</a>	(941) 454-6989
API	American Petroleum Institute <a href="http://www.api.org">www.api.org</a>	(202) 682-8000
ARI	Air-Conditioning & Refrigeration Institute <a href="http://www.ari.org">www.ari.org</a>	(703) 524-8800
ASCA	Architectural Spray Coaters Association	(609) 848-6120
ASCE	American Society of Civil Engineers <a href="http://www.asce.org">www.asce.org</a>	(800) 548-2723 (703) 295-6300
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers <a href="http://www.ashrae.org">www.ashrae.org</a>	(800) 527-4723 (404) 636-8400
ASME	ASME International (The American Society of Mechanical Engineers International) <a href="http://www.asme.org">www.asme.org</a>	(800) 843-2763 (202) 785-3756
ASSE	American Society of Sanitary Engineering <a href="http://www.asse-plumbing.org">www.asse-plumbing.org</a>	(440) 835-3040

ASTM	ASTM International (American Society for Testing and Materials International) www.astm.org	(610) 832-9500
AWCI	AWCI International (Association of the Wall and Ceiling Industries International) www.awci.org	(703) 538-1600
AWCMA	American Window Covering Manufacturers Association (See WCMA)	
AWI	Architectural Woodwork Institute www.awinet.org	(571) 323-3636
AWPA	American Wood-Preservers' Association www.awpa.com	(205) 733-4077
AWS	American Welding Society www.aws.org	(800) 443-9353 (305) 443-9353
AWWA	American Water Works Association www.awwa.org	(800) 926-7337 (303) 794-7711
BHMA	Builders Hardware Manufacturers Association www.buildershardware.com	(212) 297-2122
BIA	Brick Industry Association (The) www.bia.org	(703) 620-0010
CLFMI	Chain Link Fence Manufacturers Institute www.chainlinkinfo.org	(301) 596-2583
CPPA	Corrugated Polyethylene Pipe Association (A part of the Plastic Pipes Institute) <a href="http://plasticpipe.org/drainage/index.html">http://plasticpipe.org/drainage/index.html</a>	(469) 499-1044
CRSI	Concrete Reinforcing Steel Institute www.crsi.org	(847) 517-1200
CSI	Construction Specifications Institute (The) www.csinet.org	(800) 689-2900 (703) 684-0300
FM	Factory Mutual System (See FMG)	
FMG	FM Global (Formerly: FM - Factory Mutual System) www.fmglobal.com	(401) 275-3000
GRI	Geosynthetic Research Institute	(610) 522-8440

NECA	National Electrical Contractors Association www.necanet.org	(301) 657-3110
NEMA	National Electrical Manufacturers Association www.nema.org	(703) 841-3200
NFPA	National Fire Protection Association www.nfpa.org	(800) 344-3555 (617) 770-3000
NRMCA	National Ready Mixed Concrete Association www.nrmca.org	(888) 846-7622 (301) 587-1400
PCI	Precast/Prestressed Concrete Institute www.pci.org	(312) 786-0300
RFCI	Resilient Floor Covering Institute www.rfci.com	(706) 882-3833
RIS	Redwood Inspection Service <a href="http://www.redwoodinspection.com/">http://www.redwoodinspection.com/</a>	(925) 935-1499
SAE	SAE International www.sae.org	(724) 776-4841
SSPC	SSPC: The Society for Protective Coatings www.sspc.org	(877) 281-7772 (412) 281-2331
STI	Steel Tank Institute www.steeltank.com	(847) 438-8265
TIA/EIA	Telecommunications Industry Association/Electronic Industries Alliance www.tiaonline.org	(703) 907-7700
TPI	Truss Plate Institute <a href="http://www.tpinst.org/">http://www.tpinst.org/</a>	(703) 683-1010
TPI	Turfgrass Producers International www.turfgrassod.org	
UL	Underwriters Laboratories Inc. www.ul.com	(877) 854-3577
UNI	Uni-Bell PVC Pipe Association www.uni-bell.org	(972) 243-3902
WCLIB	West Coast Lumber Inspection Bureau www.wclib.org	(503) 639-0651
WWPA	Western Wood Products Association www.wwpa.org	(503) 224-3930

- C. Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web-site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

BOCA	BOCA International, Inc. <a href="http://www.iccsafe.org/help/redirect-bocai.html">http://www.iccsafe.org/help/redirect-bocai.html</a>	(888) 422-7233
CABO	Council of American Building Officials (See ICC)	
IAPMO	International Association of Plumbing and Mechanical Officials (The) <a href="http://www.iapmo.org">www.iapmo.org</a>	(909) 472-4100
ICBO	International Conference of Building Officials <a href="http://www.iccsafe.org/">http://www.iccsafe.org/</a>	(888) 422-7233
ICC	International Code Council, Inc. (Formerly: CABO - Council of American Building Officials) <a href="http://www.iccsafe.org/">http://www.iccsafe.org/</a>	(888) 422-7233
SBCCI	Southern Building Code Congress International, Inc. <a href="http://www.iccsafe.org/">http://www.iccsafe.org/</a>	(888) 422-7233

- D. Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web-site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

EPA	Environmental Protection Agency <a href="http://www.epa.gov">www.epa.gov</a>	(202) 272-0167
GSA	General Services Administration <a href="http://www.gsa.gov">www.gsa.gov</a>	(877) 472-3779
HUD	Department of Housing and Urban Development <a href="http://www.hud.gov">www.hud.gov</a>	(202) 708-1112
NCHRP	National Cooperative Highway Research Program (See TRB)	
OSHA	Occupational Safety & Health Administration <a href="http://www.osha.gov">www.osha.gov</a>	(800) 321-6742
RUS	Rural Utilities Service (See USDA)	(202) 720-9540
TRB	Transportation Research Board <a href="http://www.nas.edu/trb">www.nas.edu/trb</a>	(202) 334-2934

USDA	Department of Agriculture www.usda.gov	(202) 720-2791
USPS	Postal Service www.usps.com	(202) 268-2000

E. State Government Agencies and Universities: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list. Names, telephone numbers, and Web-site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CRMC	Coastal Resources Management Council www.crmc.state.ri.us/	(401) 783-3370
RIDEM	Rhode Island Department of Environmental Management www.dem.ri.gov/	(401) 222-6800 (401) 222-3070
RIDOT	Rhode Island Department of Transportation www.dot.state.ri.us/	(401) 222-2481
UMASS	University of Massachusetts UMASS Extension (Amherst) www.umass.edu/	(413) 545-0111
UNHSC	University of New Hampshire Stormwater Center <a href="http://www.unh.edu/erg/cstev/">http://www.unh.edu/erg/cstev/</a>	
URI	University of Rhode Island www.uri.edu	(401) 874-1000

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT AND PAYMENT

A. This work will not be measured for payment.

PART 5 - PAYMENT

A. This work shall be paid for as part of the lump sum Contract Base Bid, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Engineer.

END OF SECTION

## SECTION 01500 - MOBILIZATION

### PART 1 - GENERAL

#### 1.1 Summary

- A. This Section includes work necessary for the movement of personnel and equipment to and from the Project site.

#### 1.2 Submittals

- A. Not used.

#### 1.3 Quality Assurance

- A. Not used.

### PART 2 – PRODUCTS (Not used)

### PART 3 - EXECUTION

#### 3.1 Safety

- A. The Contractor shall comply with all requirements of the most recent version of the Occupational Safety and Health Act (OSHA).
- B. When any support system is used that requires design by an engineer, copies of the design stamped by a Professional Engineer registered in the State of Rhode Island shall be submitted to the Engineer.
- C. The Contractor has full responsibility to comply with all provisions of the State of Rhode Island Public General Statutes concerning Occupational Safety and Health. Any fines levied against the Contractor for violations shall be the Contractor's responsibility.

#### 3.2 Protection

- A. The Contractor shall assume full responsibility for the protection of all public or private buildings, structures and utilities in the streets, gas pipes, water pipes, hydrants, sewers, drains, electric and telephone cables, and any other improvements whether or not they are shown on the Drawings. The Contractor shall carefully support and protect all such structures and utilities from damage of every description and any such damage thereto shall be repaired or otherwise made good by the Contractor, at his expense, in a manner acceptable to the Engineer.

- B. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons and damage to property. The Contractor shall, at the Contractor's own expense, provide suitable and safe bridges and other crossings for accommodating travel by pedestrians and workmen. The length or size of excavation will be controlled by the particular surrounding conditions, but shall always be confined to the limits prescribed by the Engineer.

#### PART 4 - MEASUREMENT

- A. This work will not be measured for payment.

#### PART 5 - PAYMENT

- A. This work shall be paid for as part of the lump sum Contract Base Bid, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Engineer.

END OF SECTION

## SECTION 01500 - TEMPORARY FACILITIES AND CONTROLS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes requirements for temporary facilities and controls, including temporary utilities, support facilities, and security and protection facilities.
- B. Temporary utilities include, but are not limited to, the following:
  - 1. Sanitary facilities, including toilets, wash facilities, and drinking-water facilities.
  - 2. Electric power service.
  - 3. Telephone/internet service.
- C. Support facilities include, but are not limited to, the following:
  - 1. Temporary paving.
  - 2. Dewatering facilities and drains.
  - 3. Waste disposal facilities.
- D. Security and protection facilities include, but are not limited to, the following:
  - 1. First Aid.
  - 2. Environmental protection.
  - 3. Stormwater control.
  - 4. Barricades, warning signs, and lights.
- E. Project Signage

#### 1.2 USE CHARGES

- A. General: Cost or use charges for temporary facilities are not chargeable to Owner or Engineer and shall be included in the Work. Allow other entities to use temporary services and facilities without cost, including, but not limited to, the following:
  - 1. Owner.
  - 2. Engineer.
  - 3. Testing agencies.
  - 4. Personnel of authorities having jurisdiction.
- B. Sewage disposal service, potable water service, electric power service, telephone service, and internet service shall be paid by the Contractor, whether metered or otherwise, for all services used by entities engaged in construction activities at the Project site.

### 1.3 QUALITY ASSURANCE

- A. Standards: Comply with ANSI A10.6, NECA's "Temporary Electrical Facilities," and NFPA 241.
  - 1. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Comply with all applicable code, laws and regulations.
- D. Where Standard Specifications is used it shall mean "State of Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, Amended August 2013" and as supplemented.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. General: Provide new materials. Undamaged, previously used materials in serviceable condition may be used if approved by Engineer. Provide materials suitable for use intended.
- B. Water: Potable.

### 2.2 EQUIPMENT

- A. General: Provide equipment suitable for use intended.
- B. Fire Extinguishers: Hand carried, portable, UL rated. Provide class and extinguishing agent as indicated or a combination of extinguishers of NFPA-recommended classes for exposures.
  - 1. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.
- C. Self-Contained Toilet Units: Single-occupant units of chemical, aerated recirculation, or combustion type; vented; fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material for the exclusive use of the Engineer.
- D. Project Sign
  - 1. All materials shall meet the requirements shown on the Drawings and comply with State of Rhode Island and Department of Environmental Management requirements.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

- B. Temporary facilities and controls shall be installed on-site within seven calendar days of commencement of work on the site, unless special conditions on-site prevent such installation in which case installation shall be complete as quickly as practical.
- C. Maintain and modify as required. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

### 3.2 TEMPORARY UTILITY INSTALLATION

- A. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking-water fixtures. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.
  - 1. Disposable Supplies: Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility. Maintain adequate supply. Provide covered waste containers for disposal of used material.
  - 2. Toilets: Install self-contained toilet units. Shield toilets to ensure privacy.
- B. Electric Power Service: If needed, provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload-protected disconnecting means, automatic ground-fault interrupters, and main distribution switchgear.
  - 1. Install power distribution wiring overhead and rise vertically where least exposed to damage.

### 3.3 SUPPORT FACILITIES INSTALLATION

- A. General: Comply with the following:
  - 1. Locate storage sheds, sanitary facilities, and other temporary construction and support facilities for easy access.
  - 2. Maintain support facilities until near Substantial Completion. Remove before Substantial Completion.
  - 3. Temporary construction and staging areas shall be limited to City property within the limit of disturbance immediately adjacent to construction activities unless the City agrees to allow the Contractor use of an off-site property owned by the City within the vicinity of proposed construction.
- B. Dewatering Facilities and Drains: Maintain Project site, excavations, and construction free of water.
  - 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining property nor endanger permanent Work or temporary facilities.
  - 2. Although groundwater is not anticipated to be encountered, utilize dewatering pumps set within crushed stone sumps when groundwater is encountered during trench or bioretention planter excavations prior to discharge to existing CSO system.
  - 3. Remove snow and ice as required to minimize accumulations.

- C. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Containerize and clearly label hazardous, dangerous, or unsanitary waste materials separately from other waste.
  - 1. If required by authorities having jurisdiction, provide separate containers, clearly labeled, for each type of waste material to be deposited.
  - 2. Develop a waste management plan for Work performed on Project. Indicate types of waste materials Project will produce and estimate quantities of each type. Provide detailed information for on-site waste storage and separation of recyclable materials. Provide information on destination of each type of waste material and means to be used to dispose of all waste materials.
- D. Janitorial Services: Provide janitorial services on a weekly basis for toilets, wash facilities, and similar areas.

### 3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Contractor is responsible for security of the project site.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects. Avoid using tools and equipment that produce harmful noise.
- C. Stormwater Control: Provide earthen embankments and similar barriers in and around excavations and subgrade construction, sufficient to prevent flooding by runoff of stormwater from heavy rains.
- D. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and public of possible hazard. Where appropriate and needed, provide lighting, including flashing red or amber lights.

### 3.5 PROJECT SIGN INSTALLATION

- A. Coordinate location for project sign with Owner.
- B. Install and maintain sign as shown on Drawings in accordance with State of Rhode Island and Department of Environmental Requirements in a manner that the sign is functional and readable as new throughout construction.
- C. Remove and properly dispose sign after substantial completion.

### 3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage caused by freezing temperatures and similar elements.

- B. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are the property of the Contractor.
  2. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements in Division 1 Section "Closeout Procedures."

#### PART 4 - MEASUREMENT

- A. This work will not be measured for payment.

#### PART 5 - PAYMENT

- A. This work shall be paid for as part of the lump sum Contract Base Bid, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Engineer.

END OF SECTION

## SECTION 01550 - TRAFFIC CONTROL

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes operations necessary to maintain vehicular and pedestrian traffic flow on public and private access ways and roads.
- B. Traffic controls include, but are not limited to, the following as indicated on the Contract Drawings:
  - 1. Barricades, signs, and temporary lighting to inform the general public of hazards during construction of the Work.
  - 2. Temporary bridging of trenches.
  - 3. Relocating and maintaining traffic control items.

#### 1.2 SUBMITTALS

- A. Construction Phasing Plan: Prior to initial mobilization, the Contractor shall submit, to the Engineer, a Construction Phasing Plan that includes phased Temporary Traffic Control Plans and Detour Plans for approval. The plans shall meet the following requirements in order to obtain approval:
  - 1. General:
    - a. Each traffic control setup shall meet minimum standards set forth in Part 6 of the Manual on Uniform Traffic Control Devices, latest edition with revisions.
    - b. The first phase of traffic control shall comply with the Contract Drawings.
    - c. Temporary through traffic road closures may be implemented when approved by City, Owner, and Engineer for subsequent phases of traffic control. For all phases of traffic control, emergency vehicle and local access must be maintained at all times. If road closures are to be implemented, access to residences and businesses shall be maintained to the maximum extent possible.
    - d. Trenching shall be covered with steel plating during non-working hours.
- B. Notice to Police, Fire, and Residents: The Contractor shall notify the Pawtucket Police and Fire Departments and all affected residences and businesses, in writing, of alterations to roadway operations no less than three days prior to enacting such alterations. Correspondence must include:
  - 1. Date(s) closures and/or modification will be in effect
  - 2. Description of closure area, operation change, and/or parking restriction.
  - 3. Alternative route(s) to access residences/businesses, if necessary.
  - 4. Construction foreman name and field telephone number

### 1.3 DEFINITIONS

#### A. Trafficmen

1. Local Police Officers: Uniformed, off-duty, local police officers. Contractor is responsible for coordinating for police detail if determined necessary.

### 1.4 QUALITY ASSURANCE

- #### A.
- Where "RIDOT Standard Specifications" is used, it shall mean "Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction" amended 2018, and issued supplements.

## PART 2 - PRODUCTS

### 2.1 TRAFFIC CONTROL DEVICES

- #### A.
- Traffic Drums: RIDOT Standard Specifications, Section 923.02.
- #### B.
- Traffic Cones: RIDOT Standard Specifications, Section 923.02.
- #### C.
- Construction Barricades: RIDOT Standard Specifications, Section 926.02.
- #### D.
- Temporary Construction Signs: RIDOT Standard Specifications, Section 922.02.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- #### A.
- Traffic control shall be implemented as indicated on the Traffic Management Plan in the Contract Drawings. For the initial phase of traffic control/management, one-way traffic flow shall be maintained along the eastern (paved) side of Pine Street. A temporary inductance loop vehicle detector shall be installed at the intersection of the Pine Street and Main Street as indicated on the Contract Drawings during this phase.
- #### B.
- Following construction of westerly sidewalk/streetscape improvements, the Contractor shall phase the full-depth reconstruction of the roadway to facilitate one-way traffic at all times during this reconstruction period. The Contractor shall include its approach to achieve this on its Construction Phasing Plan submittal.
- #### C.
- Do not barricade streets without prior approval of local authorities. Keep closings to as brief a period as possible.
- #### D.
- Coordinate with City Police to provide details as required for the proper directing and control of traffic during the Work. The Contractor shall be responsible for scheduling details. Police detail paid for by Owner.

### 3.2 TRAFFIC CONTROL DEVICES

- A. Furnish, erect, maintain, move and dismantle barricades, warning signs, lights, and traffic control items as necessary, to protect the Work, to provide for public safety, as required by the Engineer, and in accordance with the requirements of Section 937.03 of the RIDOT Standard Specifications, the Traffic Management Plan included in the Contract Drawings, and the approved Construction Phasing Plan.
- B. Furnish, erect, maintain, move and dismantle temporary trench bridging for vehicular and pedestrian traffic across trenches. Prevent slippery surface conditions resulting from construction operations.
- C. Traffic Drums: Place traffic drums in accordance with Section 923.03 of the RIDOT Standard Specifications.
- D. Traffic Cones: Provide traffic cones in sufficient number to adequately control traffic on roadways during construction and in accordance with Section 923.03 of the RIDOT Standard Specifications.
- E. Construction Barricades: Install in accordance with Section 926.03 of the RIDOT Standard Specifications.
- F. Temporary Construction Signs: Install in accordance with Section 922.03 of the RIDOT Standard Specifications.

### 3.3 TRAFFIC CONTROL OFFICERS

- A. Comply with local authorities and State policies regarding the services of trafficmen for construction projects including requirements for canceling scheduled trafficmen.

### PART 4 - METHOD OF MEASUREMENT

- A. This work will not be measured for payment.

### PART 5 - BASIS OF PAVEMENT

- A. This work shall be paid for as part of the lump sum Contract Base Bid, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Engineer.

END OF SECTION

## SECTION 01600 - PRODUCT REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 Summary

- A. Section includes administrative and procedural requirements for selection of products for use in Project; product delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; and comparable products *or equal*.

#### 1.2 Definitions

- A. Products: Items obtained for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
  - 2. New Products: Items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects are not considered new products.
  - 3. Comparable Product: Product that is demonstrated and approved through submittal process to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

#### 1.3 Action Submittals

- A. Comparable Product Requests: Submit request for consideration of each comparable product. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Include data to indicate compliance with the requirements specified in "Comparable Products" Article.
  - 2. Engineer's Action: If necessary, Engineer will request additional information or documentation for evaluation within one week of receipt of a comparable product request. Engineer will notify Contractor of approval or rejection of proposed comparable product request within 15 days of receipt of request, or seven days of receipt of additional information or documentation, whichever is later.
    - a. Form of Approval: As specified in Section 013300 "Submittal Procedures."
    - b. Use product specified if Engineer does not issue a decision on use of a comparable product request within time allocated.

#### 1.4 Quality Assurance

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, select product compatible with products previously selected, even if previously selected products were also options.

#### 1.5 Product Delivery, Storage, And Handling

- A. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft and vandalism. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
  - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  - 4. Inspect products on delivery to determine compliance with the Contract Documents and to determine that products are undamaged and properly protected.
- C. Storage:
  - 1. Store products to allow for inspection and measurement of quantity or counting of units.
  - 2. Store materials in a manner that will not endanger Project structure.
  - 3. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
  - 4. Protect foam plastic from exposure to sunlight, except to extent necessary for period of installation and concealment.
  - 5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
  - 6. Protect stored products from damage and liquids from freezing.
  - 7. Provide a secure location and enclosure at Project site for storage of materials and equipment by Owner's construction forces. Coordinate location with Owner.

#### 1.6 Product Warranties

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
  - 1. Manufacturer's Warranty: Written warranty furnished by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.

2. Special Warranty: Written warranty required by the Contract Documents to provide specific rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
  2. Specified Form: When specified forms are included with the Specifications, prepare a written document using indicated form properly executed.
  3. See other Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 017700 "Closeout Procedures."

## PART 2 - PRODUCTS

### 2.1 Product Selection Procedures

- A. General Product Requirements: Provide products that comply with the Contract Documents, are undamaged and, unless otherwise indicated, are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
  2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
  3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
  4. Where products are accompanied by the term "as selected," Engineer will make selection.
  5. Descriptive, performance, and reference standard requirements in the Specifications establish salient characteristics of products.
  6. Or Equal: For products specified by name and accompanied by the term "or equal," or "or approved equal," or "or approved," comply with requirements in "Comparable Products" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures:
1. Product: Where Specifications name a single manufacturer and product, provide the named product that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
  2. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.
  3. Products:
    - a. Restricted List: Where Specifications include a list of names of both manufacturers and products, provide one of the products listed that complies with requirements.

Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.

- b. Nonrestricted List: Where Specifications include a list of names of both available manufacturers and products, provide one of the products listed, or an unnamed product, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed product.
4. Manufacturers:
- a. Restricted List: Where Specifications include a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements. Comparable products or substitutions for Contractor's convenience will be considered unless otherwise indicated.
  - b. Nonrestricted List: Where Specifications include a list of available manufacturers, provide a product by one of the manufacturers listed, or a product by an unnamed manufacturer, that complies with requirements. Comply with requirements in "Comparable Products" Article for consideration of an unnamed manufacturer's product.
- C. Visual Matching Specification: Where Specifications require "match Engineer's sample", provide a product that complies with requirements and matches Engineer's sample. Engineer's decision will be final on whether a proposed product matches.
- D. Visual Selection Specification: Where Specifications include the phrase "as selected by Engineer from manufacturer's full range" or similar phrase, select a product that complies with requirements. Engineer will select color, gloss, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

## 2.2 Comparable Products

- A. Conditions for Consideration: Engineer will consider Contractor's request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Engineer may return requests without action, except to record noncompliance with these requirements:
1. Evidence that the proposed product does not require revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
  2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
  3. Evidence that proposed product provides specified warranty.
  4. List of similar installations for completed projects with project names and addresses and names and addresses of Engineers and owners, if requested.
  5. Samples, if requested.

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT AND PAYMENT

- A. This work will not be measured for payment.

PART 5 - PAYMENT

- A. This work shall be paid for as part of the lump sum Contract Base Bid, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Engineer.

END OF SECTION

## SECTION 01700 - EXECUTION REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
  - 1. Construction layout.
  - 2. Field engineering and surveying.
  - 3. General installation of products.
  - 4. Progress cleaning.
  - 5. Starting and adjusting.
  - 6. Protection of installed construction.
  - 7. Correction of the Work.
- B. Certificates: Submit certificate signed by land surveyor or professional engineer certifying that location and elevation of improvements comply with requirements.
- C. Certified Surveys: Submit 2 copies stamped by a professional land surveyor.

#### 1.2 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.

### PART 2 - PRODUCTS (Not used)

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Existing Conditions: The existence and location of site improvements and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of improvements and other structures.
- B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning site Work, investigate and verify the existence and location of underground utilities and other construction affecting the Work.
- C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
  - a. Description of the work.
  - b. List of detrimental conditions, including substrates.
  - c. List of unacceptable installation tolerances.
  - d. Recommended corrections.
2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
3. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- B. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Engineer. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

### 3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Engineer prior to proceeding with the Work.
- B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
  1. Establish benchmarks and control points to set lines, grades, and elsewhere as needed to locate each element of Project.
  2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
  3. Check the location, level and plumb, of every major element as the Work progresses.
  4. Notify Engineer when deviations from required grades, lines, and levels exceed allowable tolerances.
  5. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- C. Site Improvements: Locate and lay out site improvements, including grading, fill and topsoil placement, utility slopes, and invert elevations.
- D. Structure Lines and Levels: Locate and lay out control lines and levels for structures. Transfer survey markings and elevations for use with control lines and levels.

- E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Engineer.

### 3.4 FIELD ENGINEERING

- A. Reference Points: Locate existing permanent benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
  - 1. Do not change or relocate existing benchmarks or control points without prior written approval of Owner. Report lost or destroyed permanent benchmarks or control points promptly. Report the need to relocate permanent benchmarks or control points to Engineer before proceeding.
  - 2. Replace lost or destroyed permanent benchmarks and control points promptly. Base replacements on the original survey control points.
- B. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark.
  - 1. Record benchmark locations, with horizontal and vertical data, on Record Documents.
  - 2. Where the actual location or elevation of layout points cannot be marked, provide temporary reference points sufficient to locate the Work.
  - 3. Remove temporary reference points when no longer needed. Restore marked construction to its original condition.

### 3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  - 1. Make vertical work plumb and make horizontal work level.
  - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
- B. Comply with manufacturers' written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Conduct construction operations and activities to minimize the creation and dispersion of dust. If the Engineer determines that water, calcium chloride, mulch and/or crushed stone is required for more effective dust control, provide such measures at no additional cost.

- F. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
- G. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- H. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

### 3.6 PROGRESS CLEANING

- A. Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
- B. Maintain Project site free of waste materials and debris.
- C. Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work and use of the existing properties.
- D. Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- E. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.
- F. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar materials.
  - 1. Thoroughly clean surfaces before applying paint or other finishing materials.
- G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials into waterways will not be permitted.
- H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
- J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.7 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

3.8 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
  - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

PART 4 - MEASUREMENT AND PAYMENT

- A. This work will not be measured for payment.

PART 5 - PAYMENT

- A. This work shall be paid for as part of the lump sum Contract Base Bid, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Engineer.

END OF SECTION

## SECTION 01770 - CLOSEOUT PROCEDURES

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Inspection procedures.
  - 2. Record Documents.
  - 3. Final cleaning.

#### 1.2 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
  - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
  - 2. Complete startup testing of systems.
  - 3. Complete final cleaning requirements.
- B. Inspection: When the Work is ready for its intended use, submit a written request for inspection for Substantial Completion. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Engineer that must be completed or corrected before certificate will be issued.
  - 1. Reinspection: Request reinspection when the work identified in previous inspections as incomplete is completed or corrected.
  - 2. Results of completed inspection will form the basis of requirements for Final Completion.

#### 1.3 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
  - 1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
  - 2. Submit certified copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Engineer. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  - 3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will notify Contractor of construction that must be completed or corrected before final payment will be issued.
  - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

#### 1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit one (1) electronic PDF copy of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.

#### 1.5 RECORD DOCUMENTS

- A. General: Do not use Record Documents for construction purposes. Protect Record Documents from deterioration and loss. Provide access to Record Documents for Engineer's reference during normal working hours.
- B. Prepare and submit Record Documents in accordance with Division 1 Section "Record Documents."

### PART 2 - PRODUCTS (Not Applicable)

### PART 3 - EXECUTION

#### 3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and federal, State, and local environmental and antipollution regulations.
- B. Cleaning:
  - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
    - a. Clean areas disturbed by construction activities of rubbish, surplus soil, waste material, litter, and other foreign substances.
    - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
    - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
    - e. Remove debris from limited access spaces, including trenches, equipment vaults, manholes, and similar spaces.

- f. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury stumps, debris or excess materials brought to the site on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.
- D. If the Contractor fails to clean up, the Owner may do so and the cost thereof will be charged to the Contractor.

#### PART 4 - MEASUREMENT AND PAYMENT

- A. This work will not be measured for payment.

#### PART 5 - PAYMENT

- A. This work shall be paid for as part of the lump sum Contract Base Bid, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Engineer.

END OF SECTION

## SECTION 01780 - RECORD DOCUMENTS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for Record Documents, including the following:
  - 1. Record Drawings.
  - 2. Record Product Data.
- B. Related Requirements:
  - 1. Section 017700 "Closeout Procedures" for general closeout procedures.

#### 1.2 CLOSEOUT SUBMITTALS

- A. Record/As-Built Drawings: Comply with the following:
  - 1. Number of Copies: Submit copies of record Drawings as follows:
    - a. Initial Submittal: Submit one (1) electronic PDF set of Marked-up Record Prints. Engineer will initial and date each and mark whether general scope of changes, additional information recorded, and quality of drafting are acceptable. Engineer will return prints for organizing into sets, printing, binding, and final submittal. The purpose of this submittal is for the Engineer to indicate whether general scope of changes, additional information recorded, and quality of drafting are acceptable.
    - b. Final Submittal:
      - 1) Submit PDF electronic file(s) of Final Record/As-Built Prints.
      - 2) Per project funding requirements, the Final Record/As-Built Drawings must be stamped by a licensed professional engineer in the State of Rhode Island with written verification that the project was constructed in accordance with the approved design plans or approved field modifications.
- B. Record Product Data: Submit annotated PDF electronic files of each submittal.
- C. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Submit [annotated PDF electronic files and directories of each submittal.

### PART 2 - PRODUCTS

#### 2.1 RECORD DRAWINGS

- A. Marked-up Record Prints: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.

1. Preparation: Mark record prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
    - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
    - b. Accurately record information in an acceptable drawing technique.
    - c. Record data as soon as possible after obtaining it.
    - d. Record and check the markup before enclosing concealed installations.
    - e. Cross-reference record prints to corresponding archive photographic documentation.
  2. Content: Types of items requiring marking include, but are not limited to, the following:
    - a. Dimensional changes to Drawings.
    - b. Revisions to details shown on Drawings.
    - c. Locations and depths of underground utilities.
    - d. Revisions to routing of piping and conduits.
    - e. Revisions to electrical circuitry.
    - f. Actual equipment locations.
    - g. Duct size and routing.
    - h. Locations of concealed internal utilities.
    - i. Changes made by Change Order or Construction Change Directive.
    - j. Changes made following Engineer's written orders.
    - k. Details not on the original Contract Drawings.
    - l. Field records for variable and concealed conditions.
    - m. Record information on the Work that is shown only schematically.
  3. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
  4. Mark initial submittal of record set with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
  5. Mark important additional information that was either shown schematically or omitted from original Drawings.
  6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Final Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked-up record prints with Engineer. When authorized, prepare a full set of corrected digital data files of the Contract Drawings, as follows:
1. Format: Same digital data software program, version, and operating system as the original Contract Drawings.
  2. Format: Annotated PDF electronic file.
  3. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.
  4. Refer instances of uncertainty to Engineer for resolution.

5. Engineer will furnish Contractor one set of digital data files of the Contract Drawings for use in recording information.
  - a. See Section 01330 "Submittal Procedures" for requirements related to use of Engineer's digital data files.
  - b. Engineer will provide data file layer information. Record markups in separate layers.
- C. Format: Identify and date each record drawing; include the designation "AS-BUILT DRAWING" in a prominent location.
  1. Record Prints: Organize record prints and newly prepared record Drawings into manageable sets. Bind each set with durable paper cover sheets. Include identification on cover sheets.
  2. Format: Annotated PDF electronic file[ with comment function enabled].
  3. Record Digital Data Files: Organize digital data information into separate electronic files that correspond to each sheet of the Contract Drawings. Name each file with the sheet identification. Include identification in each digital data file.
  4. Identification: As follows:
    - a. Project name.
    - b. Date.
    - c. Designation "AS-BUILT DRAWINGS."
    - d. Name of Engineer.
    - e. Name of Contractor.

## 2.2 RECORD PRODUCT DATA

- A. Preparation: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal.
  1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
  3. Note related Change Orders, Marked-up Record Prints, and Product Data where applicable.

## 2.3 MISCELLANEOUS RECORD SUBMITTALS

- A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

### PART 3 - EXECUTION

#### 3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for Record Document purposes. Post changes and modifications to Record Documents as they occur; do not wait until the end of Project.
- B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Record Documents for Engineer's reference during normal working hours.

### PART 4 - MEASUREMENT

- A. This work will not be measured for payment.

### PART 5 - PAYMENT

- A. This work shall be paid for as part of the lump sum Contract Base Bid, including all products, materials, equipment, tools, labor and incidentals thereto, complete and accepted by the Engineer.

## SECTION 02111 – SOIL MANAGEMENT

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, RIDOT Standard Specification for Road and Bridge Construction, and Division 1 Specification Sections, apply to this Section.
- B. Soil boring logs from the February 2019 Limited Investigation, attached as Appendix I.

#### 1.2 Summary

- A. This Section includes the following requirements and guidelines:
  - 1. Protective measures required during excavation of soil.
  - 2. Excavating, hauling, staging and stockpiling of soil.
  - 3. Loading, transporting, and legally disposing off-site of soil that is designated for off-site disposal.
- B. If contradictions or discrepancies are evident between Contract Drawings and Specifications, implement the most stringent standard.
- C. Related Sections:
  - 1. Section 02230 "Site Clearing"
  - 2. Section 02300 "Earth Moving."
  - 3. Section 02372 "Temporary Erosion and Sediment Control."
  - 4. Appendix I – Soil Boring Logs

#### 1.3 References

- A. Occupational Safety & Health Administration
  - 1. 29 CFR 1910.120/1926.65: Safety and Health Regulations for Hazardous Waste Operations and Emergency Response.
- B. Regulations of State of Rhode Island
  - 1. RIDEM "Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases" (Remediation Regulations).
- C. United States Environmental Protection Agency
  - 1. 40 CFR Parts 239 to 282: Resource Conservation and Recovery Act

#### 1.4 Abbreviations

- A. HASP: Site Specific Health and Safety Plan
- B. OHM: Oil and/or hazardous materials
- C. OSHA: Occupational Safety & Health Administration
- D. R-DEC: Method 1 Residential Direct Exposure Criteria
- E. RCRA: Resource Conservation and Recovery Act
- F. RIDEM: Rhode Island Department of Environmental Management
- G. USEPA: United States Environmental Protection Agency

#### 1.5 Definitions

- A. Clean Soil. Soil excavated with no visual or olfactory evidence of contamination, or with chemical analytical testing results at or below RIDEM Method 1 R-DEC.
- B. Contaminated Soil. Soil and materials that may be polluted, contaminated, or hazardous or are known or suspected soils that have contaminant concentrations at a level greater than the Method 1 R-DEC criteria but that do not meet the hazardous waste criteria. Contaminated Soil and materials are jurisdictional under the RIDEM Remediation Regulations.
- C. Hazardous Soil. Soil known to contain contaminants at characteristically hazardous concentrations. Soil with chemical or physical analytical testing results greater than the USEPA hazardous waste criteria as defined by 40 CFR Part 261.

#### 1.6 Submittals

- A. Certification Letters
  - 1. Training: Certify that personnel engaged in site activities that involve handling of Contaminated Soil have appropriate training per OSHA 29 CFR 1910.120/1926.65.
- B. Qualification Data:
  - 1. Submit copies of current licenses, permits or approvals, as applicable
    - a. Proposed excavation contractor.
    - b. Proposed waste haulers.
    - c. Proposed Transportation Storage and Disposal Facilities.
- C. Disposal Records: For all soil designated for off-site disposal, submit records indicating receipt and acceptance by a facility licensed to accept the type of waste in question.
  - 1. Records must clearly indicate name of accepting facility, quantity of material accepted (e.g., tons of soil) and dates of acceptance.

2. Records must indicate that the disposal facility was provided with satisfactory waste characterization data.

D. For Information

1. Site Specific Health and Safety Plan (HASP)
  - a. Written by a Certified Industrial Hygienist or a Certified Industrial Planner.
  - b. Conform to OSHA 29 CFR 1910.120/1926.65.
  - c. Maintain on-site a copy of the HASP for review by Owner or other authorities having jurisdiction.
2. Material shipment records required by applicable Federal, State and local regulations.
3. Scale tickets for confirmation of payment.

1.7 Quality Assurance

- A. Soil Management Contractor Qualifications: An experienced Contractor that has completed work similar in scope to that indicated for this Project.
- B. Testing Agency Qualifications: An independent testing agency, with the experience and capability to conduct environmental characterization sampling, and certified by the State of Rhode Island.
- C. Where "Standard Specifications" is used, it shall mean "Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction," as amended in 2018 and issued supplements.

1.8 Delivery, Storage, And Handling

- A. Provide equipment free of contamination upon delivery to the site. Equipment that has not been thoroughly decontaminated prior to site delivery, as determined by the Engineer, will be prohibited from entering the site.
  1. On-site cleaning of equipment that is not thoroughly decontaminated upon delivery to the site is prohibited.

1.9 Project Conditions

- A. Keep contaminated equipment within designated contaminated work area. Decontaminate equipment each time it is removed from contaminated work area to another area on site.

PART 2 - PRODUCTS

2.1 Materials

- A. Plastic Sheet: Polyethylene sheeting, 6-mil minimum thickness, 10 feet minimum width.

- B. Shipping Drums: New DOT approved shipping drums complying with 49 CFR Part 173, labeled in accordance with 49 CFR Part 172, and compatible with liquid and semi-liquid contaminated materials present at the site.
- C. Vehicles for Transporting Impacted Material:
  - 1. Registered with RIDEM and meeting appropriate State and Federal Department of Transportation standards.

## 2.2 Dust Control

- A. Water: Potable.
- B. Crushed Stone: See Section 02300 "Earth Moving" for gradation of crushed stone to be used for dust control applications.

## PART 3 - EXECUTION

### 3.1 General

- A. Reuse excavated material wherever possible, unless other material is indicated on the Contract Drawings or specified or such material is determined to be contaminated. Stockpile suitable excavated material in an appropriate location for reuse on an ongoing basis until the project is complete
- B. Excavated material that cannot be utilized as on-site will be designated for off-site disposal and must be properly characterized and disposed as a licensed facility.
- C. If material that demonstrates obvious signs of contamination is encountered (e.g. odor, sheen, free liquids, discoloration, etc.), work must immediately stop, and the Engineer shall be notified.
- D. Sweep paved areas daily.
- E. Prevent surface waters from pooling or accumulating in stockpile area.
  - 1. Prevent surface waters from excavated areas in accordance with Section 02300 "Earth Moving."
  - 2. The Contractor shall be responsible for managing any water which comes in contact with Contaminated Soil and prevent its release to the environment and minimize exposure.

### 3.2 Preparation

- A. Install and maintain erosion and sedimentation controls in accordance with Section 02372 "Temporary Erosion and Sediment Control" to protect surrounding areas and associated waterways, utilities, pavements, and other facilities from contaminant migration or damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

### 3.3 Dust Control

- A. Control dust and wind erosion. Control dust to prevent soil from becoming airborne and potentially affecting adjoining properties. Dust control measures may include (but are not limited to):
  - 1. Sprinkling or misting exposed soil surfaces with water.
  - 2. Uniformly applying calcium chloride on exposed soil and haul roads.
  - 3. Sweeping and washing paved areas.
  - 4. Crushed Stone: See Section 02300 "Earth Moving" for gradation of crushed stone to be used for dust control applications.
- B. Apply water uniformly over the surface when dust becomes visible or when directed by the Engineer.
  - 1. Apply calcium chloride, with prior approval of the Engineer, only if water alone does not satisfactorily control dust generation.
- C. Cover soil stockpile when not actively working in the area.

### 3.4 Decontamination Procedures

- A. When handling soil, follow the requirements of OSHA 29 CFR 1910.120/1926.65 and the site HASP.
  - 1. At a minimum, employ personnel decontamination work practices that limit the spread of contaminants, including the following:
    - a. Use disposable protective clothing
    - b. Practice and implement proper personal hygiene practices including
      - 1) No smoking within the work area
      - 2) Washing of exposed skin areas prior to leaving the work area for breaks, lunch, or at the conclusion of each work day.
- B. Provide labor, materials, tools, and equipment for decontamination of all personnel, equipment and supplies that enter the work area or are exposed to contaminated material.
- C. Dispose of wastes generated from decontamination activities at an appropriate facility.
- D. Equipment Decontamination Resulting from the Work:
  - 1. The Engineer may collect random samples of decontamination fluids or wipe surfaces to ensure proper decontamination procedures are being followed.
  - 2. If the Engineer determines that decontamination procedures are inadequate, supply the necessary labor, materials, tools, and equipment to provide an adequate level of decontamination.
- E. Collect decontamination wastes in DOT approved drums unless otherwise directed by the Engineer.

### 3.5 Identification Of Contaminated Soil

- A. If soil that is visibly impacted or suspected to be impacted by releases of OHM is discovered during construction activities, such activities shall immediately stop, and the Engineer shall be notified prior to disturbance of such soil.
- B. Limits of Excavation
  - 1. When areas of Contaminated Soil are encountered, limits of excavation will be determined in the field by the Engineer.
  - 2. Contractor will be compensated for the additional excavation beyond the limit of excavation shown on the drawings as allowed in the Contract.

### 3.6 Excavation And Staging Of Soil

- A. Perform excavation in accordance with Section 02230 "Site Clearing" and Section 02300 "Earth Moving".
  - 1. Stop excavation and immediately inform Engineer when material displays characteristics of contamination.
- B. Construct containment system for stockpiling of soil to prevent seepage of soil or water into the environment.
  - 1. Lay down 6-mil polyethylene sheeting of sufficient size for soil stockpile.
  - 2. When excavation is ongoing, occasionally mist contaminated stockpile with water during windy or dry conditions.
  - 3. Soil shall be covered by 6-mil polyethylene sheeting and secured with weights, rocks or other items to prevent loss of cover at the end of each work day.
- C. Maintain stockpile and containment system. Inspect daily for damage and signs of leakage. Immediately replace damaged materials.

### 3.7 Backfill

- A. Backfill excavations in accordance with Section 02300 "Earth Moving".
- B. Use stockpiled material for backfill of excavations or obtain borrow material off-site.

### 3.8 Loading, Transportation And Disposal

- A. Excavated Material
  - 1. Excavated material that cannot be used as backfill at the site (excess soil) will be designated for off-site disposal. Material designated for off-site disposal is to remain on-site for analytical testing in order to determine the appropriate disposal and/or management options.
  - 2. Characterize the material for disposal in accordance with the testing requirements of the designated disposal facility. Testing and disposal facility acceptance shall be the

responsibility of the Contractor. Provide the Owner and Engineer with appropriate characterization data and disposal facility acceptance prior to disposal.

3. Preparation of shipping documentation, including Uniform Hazardous Waste Manifests or Bills of Lading as appropriate, shall be the responsibility of the Contractor.
4. Load material designated for off-site disposal from stockpiles into approved containers for shipment and transport to an appropriately licensed receiving and disposal facility.
5. Utilize maximum legal load limits for transport from the site to the disposal facility.
6. Maintain records of disposal and provide records to Engineer.

B. Drums

1. If drums are utilized for the collection of personal protection equipment or decontamination rinse water, these drums are the responsibility of the Contractor and shall be loaded and transported to an appropriate waste disposal facility, as arranged by the Contractor.

3.9 Field Quality Control

- A. Engineer may collect random samples of decontamination soils and fluids, or wipe surfaces to ensure that proper decontamination procedures are being followed. If decontamination is determined by the Engineer to be ineffective or insufficient, undertake additional decontamination measures necessary to provide an adequate level of decontamination.

PART 4 - METHOD OF MEASUREMENT

- A. Soil Disposal will be measured by the actual net weight in tons of excess soil delivered to treatment/disposal facilities, as measured by the permanent scales at the respective facilities. The total weight will be the summation of weight bills issued by such facilities.

PART 5 - BASIS OF PAYMENT

- A. Soil Disposal will be paid for as an add/deduct unit bid item per net weight, in tons, of excess soil delivered to disposal facility. The process so-stated constitutes full and complete compensation for all labor, materials, and equipment, including sampling/testing, disposal facility approval, hauling, disposing, placing, and all other incidentals required to finish the work, complete and accepted by the Engineer.
- B. Soil Disposal includes, but is not limited to, the following:
1. Sampling/testing, disposal facility approval, staging, handling, transporting, and disposing to approved disposal facilities of soil excavated from the site that cannot be replaced on-site as backfill.
  2. Preparation of manifests or bills of lading, fees paid, and incidental materials, tools, equipment, and services.

- C. For the purpose of this bid item, assume Soil Disposal will be as "Solid Waste Soil" at the Rhode Island Resource Recovery Corporation in Johnson, Rhode Island.

END OF SECTION

## SECTION 02230 - SITE CLEARING

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, RIDOT Standard Specification for Road and Bridge Construction and Division 1 Specification Sections, apply to this Section.

#### 1.2 Summary

- A. This Section Includes the following:
  - 1. Removing existing vegetation.
  - 2. Clearing and grubbing.
  - 3. Removing above- and below-grade site improvements.
  - 4. Removing and disposing bituminous concrete pavement. The removal of pavement shall be sequenced to facilitate construction of improvements on the western side of the Pine Street Right-of-Way while allowing one-way traffic flow through the eastern side of the Pine Street Right-of-Way as reflected on the Contract Drawings.
  - 5. Disconnecting, capping or sealing, and removing site utilities.
  - 6. Removing and disposing monitoring wells.
  - 7. Removing and resetting signs and posts.
  - 8. Resetting or replacing site improvements.
  - 9. Salvaging site improvements.
  - 10. Protecting site improvements and utilities to remain.
- B. Limits of Work: Minimize disturbance within limit of disturbance. Limits of disturbance shown on Contract Drawings indicates the furthest extent allowed. Perform only as much clearing as required to complete the Work. Proposed features may be adjusted as approved by Engineer in order to preserve trees, landscaping and other existing site features to remain.
  - 1. Work areas are in close proximity to private property. Work shall remain within the Pine Street Right-of-Way and shall not disturb private property, except as indicated on the Contract Drawings. Where private property is disturbed, the disturbed area shall be restored to existing conditions as approved by the property owner.
- C. Related Sections:
  - 1. Section 02111 "Soil Management."
  - 2. Section 02372 "Temporary Erosion and Sediment Control".

### 1.3 Definitions

- A. Existing to Remain: Existing items of construction that are not permanently removed and that are not otherwise indicated to be removed, removed and disposed, remove and relocated, or removed and stockpiled.
- B. Remove and Dispose: Detach items from existing construction and legally dispose of them off-site.
- C. Remove and Relocate: Carefully detach from existing construction in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Remove and Stockpile: Carefully detach from existing construction in a manner to prevent damage, prepare for reuse, and reuse where indicated. Dispose of excess salvaged materials.
- E. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- F. Site Improvements: Miscellaneous structures and site elements including pavement, curbing, fences, fire hydrants, signs, property line markers, pipes, poles, wires, etc..
- G. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.
- H. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil and is the zone where plant roots grow. Its appearance is generally friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of subsoil and weeds, roots, toxic materials, or other non-soil materials.
- I. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

### 1.4 Material Ownership

- A. Except for materials indicated to remain or be returned to the Owner on the Contract Drawings, cleared materials shall become Contractor's property and shall be removed from Project site for proper disposal. Existing site features not shown on the Plans shall be coordinated with the Owner and shall be salvaged or removed as directed by the Owner.

### 1.5 Informational Submittals

- A. Existing Conditions: Documentation of preconstruction conditions, including adjoining construction and site improvements, that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.
  - 1. Submit a sufficiently detailed video and photographs prior to start of site clearing.
  - 2. Include Drawings and notations to indicate specific wounds and damage conditions of each item designated to remain.
- B. Record Drawings: Identifying and accurately showing locations of capped utilities and other subsurface structural, electrical, and mechanical conditions.

### 1.6 Quality Assurance

- A. Where "RIDOT Standard Specifications" is used, it shall mean "Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, Amended March 2018 and issued supplements.
- B. Preconstruction Meeting: Conduct meeting with Engineer, Owner, and on-site supervisor to review the following:
  - 1. Limits of disturbance and pavement removal limits.
  - 2. Curb cut and drive entrance modifications.

### 1.7 Project Conditions

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
  - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction and without notifying occupants affected by blocking access to residences or businesses.
  - 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Reusable Improvements: Carefully remove items indicated to be stockpiled or relocated and store on Owner's premises. The Contractor shall coordinate with the City/Owner to determine an acceptable location to store reusable items.
- C. Protect-In-Place Existing Site Improvements: Support and protect in place existing site improvements. Restore items promptly; do not leave until end of construction.
- D. Utility Locator Service: Notify Dig Safe of Project area prior to site clearing.
- E. Do not commence site clearing operations until temporary erosion- and sedimentation-control as well as tree and shrub -protection measures are in place.

- F. Do not direct vehicle or equipment exhaust towards protected vegetation.
  - G. Restore items and surfaces damaged by construction operations to existing condition or better.
  - H. Equipment Operations
    - 1. On paved surfaces, do not operate equipment with tracks, treads, or wheels that cut or otherwise damage paved surfaces to remain.
    - 2. Operate equipment with care to prevent injury to trees and overhanging branches and limbs.
  - I. Prohibit heat sources, flames, ignition sources, and smoking near protected vegetation.
  - J. Soil Stripping, Handling, and Stockpiling: Perform only when the topsoil is dry or slightly moist.
- 1.8 Protecting Existing Structures
- A. Support and protect in place existing site improvements designated by the Engineer to be preserved in place.
    - 1. Restore items damaged by the Contractor, at a minimum, to the condition in which the item was found immediately before beginning the Work. Restore items promptly; do not leave until end of construction.

## PART 2 - PRODUCTS

### 2.1 Materials

- A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 02300 "Earth Moving."
  - 1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.
- B. Sign Posts and Mountings: Utilize existing sign post and mountings when relocating such structures. If any existing sign or mounting are damaged by construction or during removal, such damaged materials shall be replaced in-kind to the satisfaction of the Owner.
- C. Fire Hydrant, mountings, and restraints: Utilize existing fire hydrant, mountings, and restraints mountings when relocating such structures if such appurtenances are determined to be in acceptable condition to the Pawtucket Water Supply Board. If any existing fire hydrant or mountings are damaged by construction or during removal, such damaged materials shall be replaced in-kind to the satisfaction of the Owner.

## PART 3 - EXECUTION

### 3.1 General

- A. Reuse excavated material wherever possible, unless other material is indicated on the Contract Drawings or specified. Stockpile suitable excavated material in an appropriate location for reuse on an ongoing basis until the project is complete.

### 3.2 Preparation

- A. Document conditions for the following:
  - 1. Existing surface conditions within limit of disturbance where improvements are proposed.
  - 2. Existing features within the project area including trees, shrubs, fences, fire hydrants, signs, walls, curbs, driveways, poles, drainage structures, docks, decks, sheds, foundations, and walks.
- B. Protect and maintain benchmarks and survey control points from disturbance during construction.
- C. Protect existing site improvements to remain from damage during construction.
- D. Restore damaged improvements to their original condition, as acceptable to Owner.

### 3.3 Utilities

- A. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed or abandoned in place.
- B. Existing Utilities: Do not interrupt utilities unless authorized under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
  - 1. Notify utility owner and Engineer not less than ten days in advance of proposed utility interruptions.
  - 2. Notify utility owner with advance notice required by the utility owner. Contact utility owner prior to construction to determine coordination requirements.
  - 3. Do not proceed with utility interruptions without utility owner and Engineer's written permission.
- C. Fire hydrant relocations: The relocation of the two fire hydrants indicated on the Contract Drawings shall be coordinated with the Pawtucket Water Supply Board.

### 3.4 Clearing And Grubbing

- A. Remove obstructions to permit installation of new construction. Removal includes digging out stumps and obstructions, and grubbing roots. Promptly dispose of material off-site.
  - 1. Do not remove trees, shrubs, and other vegetation to remain or to be relocated.

2. Cut minor roots and branches of trees to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.
  3. Use only hand methods for grubbing within drip line of remaining trees.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated.
1. Place fill material in horizontal layers not exceeding 8-inch loose depth, and compact each layer to a density equal to adjacent original ground.

### 3.5 Site Improvements

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.
- B. Reset existing site improvements and replace elements damaged during construction to meet existing conditions or better. Replace rotted materials that prevent resetting of existing site improvements.
- C. Remove only as much existing pavement as necessary to perform the Work.
1. Neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.
  2. Do not mix excavated pavement with other excavated materials. Remove pavement not to be reclaimed from area and dispose of properly.
  3. Sequence the removal of pavement as indicated on the Traffic Management Plan included within the Contract Drawings. Removal of pavement on the western side of the sawcut line will allow for construction of improvements within the western side of the pine street right-of-way while facilitating one-way traffic flow along the eastern (paved) side of Pine Street.
- D. Remove and reset existing site improvements as approved by the Engineer.
1. Restore items damaged by the Contractor, at a minimum, to the condition and location in which the item was found immediately before beginning the Work.
  2. Restore items promptly; do not leave until end of construction.
- E. Remove and stockpile granite curb in accordance with Subsection 906.03.5 of the RIDOT Standard Specifications. Existing granite curb meeting the requirements of proposed vertical face granite curb shall be re-used. The Contractor shall coordinate/confirm with the City if it prefers to have excess granite curb (that cannot be re-used) delivered to its DPW facility or disposed of off-site.

3.6 Remove and Dispose Bituminous Concrete Pavement and Cement Concrete Sidewalks and Driveways

- A. Remove and dispose bituminous concrete pavement including surface, base and/or subbase courses; granite, concrete and bituminous curbing; and concrete and bituminous sidewalks as shown on the Drawings and according to Section 201 of the RIDOT Standard Specifications.
- B. In areas where sidewalks are to be removed in front of existing walls or buildings, the Contractor shall sawcut one (1) foot in front of the wall/building and remove the strip of sidewalk structure adjacent to the wall/building by hand.
- C. Any damage to the wall or building by the Contractor shall be repaired by the Contractor at no additional cost to the City.

3.7 Remove and Stockpile Cobblestones

- A. Remove and stockpile cobblestones for reuse as indicated on the Contract Drawings.
- B. Install cobblestones as indicated on the Contract Drawings. The Contractor shall also coordinate/confirm with the City if it prefers to have excess cobblestones (i.e. in excess of cobblestones used to create bioretention planter sediment forebays and splash pads) delivered to its DPW facility or disposed of off-site.

3.8 Remove and Reset Signs and Posts

- A. Remove and reset street and traffic signs and posts as indicated on the Contract Drawings.
- B. Installation:
  - 1. Hand trim excavations to required elevations. Correct over excavation with gravel fill or select fill stockpiles on site as approved by the Project Representative.
  - 2. Remove large stones or other hard matter which could impede sign post installation.
  - 3. Excavate three (3) foot deep hole with 18 inch diameter.
  - 4. Install signs to a maximum variation from plumb of 1/8 inch in ten (10) feet.
  - 5. Install signs to a minimum variation as shown on the Drawings of six (6) inches.
  - 6. Traffic directional signs shall be installed five feet to the bottom of the sign above adjacent pavement grade. Handicapped signs shall be installed three (3) feet to the bottom of the sign above adjacent pavement grade.
  - 7. Attach sign to sign post with a minimum two (2) tamper proof sets of mounting hardware as recommended by the manufacturer.
  - 8. Protect finished work from damage by other work.

3.9 Restoration

- A. Repair or restore existing site improvements and vegetation to remain, which is damaged by construction operations, to existing condition or better as determined by the Engineer, at no additional cost to the Owner.

3.10 Disposal Of Surplus And Waste Materials

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property unless such materials are desired by the City. Any excess materials (i.e. granite curb and cobblestones) that the City desires to retain shall be delivered to the DPW facility or other local off-site location agreed upon by the City.

PART 4 - METHOD OF MEASUREMENT

- A. Items associated with this work will not be measured for payment.

PART 5 - BASIS OF PAYMENT

- A. This work shall be paid as part of the lump sum Contract Base Bid Price. The price for these items constitutes full and complete compensation for all labor, tools, materials, and equipment, and all other incidentals required to finish the work, complete and in place and accepted by the Engineer/Owner.

END OF SECTION

## SECTION 02300 - EARTH MOVING

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, RIDOT Standard Specification for Road and Bridge Construction, and Division 1 Specification Sections, apply to this Section.

#### 1.2 Summary

- A. Section Includes:
  - 1. Preparing subgrades for bituminous concrete pavements, cement concrete sidewalks and wheelchair ramps, permeable paver sidewalk areas, granite curbed planter, bioretention planters and other site improvements.
  - 2. Dewatering.
  - 3. Excavating and backfilling for site features.
  - 4. Imported soil products and geotextiles including, but not limited to:
    - a. Bioretention planter sediment forebay bedding sand and gravel borrow material.
    - b. Gravel borrow material used to support Precast Bioretention Planter Pretreatment Structures, Bioretention Planter Components, standard and heavy-duty cement concrete sidewalks, wheelchair ramps, and roadway reconstruction.
  - 5. Disposal excess soil, if required.
- B. Related Sections:
  - 1. Section 02111 "Soil Management."
  - 2. Section 02230 "Site Clearing"
  - 3. Section 02372 "Temporary Erosion and Sediment"
  - 4. Section 02630 "Storm Drainage"

#### 1.3 Definitions

- A. ASTM: American Society for Testing and Materials
- B. Backfill: Soil material used to fill an excavation or trench.
  - 1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
  - 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- C. Base Course: Aggregate layer placed between the subbase course and hot-mix asphalt pavement or cement concrete pavement.

- D. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.
- E. Common Borrow: Satisfactory on-site or soil imported from off-site for use as fill or backfill.
- F. Clean Soil: Soils excavated with no visual or olfactory evidence of contamination, or with chemical test results at or below RIDEM Method 1 R-DEC.
- G. Engineered Soil Media: Layer consisting of a mixture of sand, loam, and organic matter that is installed within bioretention planters to facilitates stormwater filtration and vegetative growth.
- H. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
  - 1. Additional Excavation: Excavation below subgrade elevations or indicated dimensions as directed by Engineer.
  - 2. Boulders and detached rock fragments which have a volume of less than 1 cubic yard are considered "Earth Excavation."
  - 3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as indicted on the Drawings. Unauthorized excavation shall be without additional compensation.
- I. Fill: Soil materials used to raise existing grades.
- J. Final Backfill: Shall be as indicated on the Contract Drawings and consist of suitable native or imported material conforming to Class I or II and installed as required in ASTM D2321, latest edition.
- K. Gravel Borrow: Imported bank run sand and gravel or plant-processed, crushed or uncrushed gravel with fine aggregate added as filler.
- L. Hazardous Soil: Soils known to contain contaminants at characteristically hazardous concentrations. Soil with chemical or physical analytical testing results greater than the USEPA hazardous waste criteria as defined by 40 CFR Part 261.
- M. Initial Backfill: Shall be as indicated on the Contract Drawings and consist of suitable native or imported material conforming to Class I or II and installed as required in ASTM D2321, latest edition.
- N. RIDEM: Rhode Island Department of Environmental Management.
- O. Rock: Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material 3/4 cu. yd. or more in volume that exceed a standard penetration resistance of 100 blows/2 inches when tested by a geotechnical testing agency, according to ASTM D 1586.

- P. Satisfactory Soils: Free of debris, waste, frozen materials, vegetation, clay and other deleterious matter; adequately graded for satisfactory compaction.
  - 1. On-Site Material: Native soil additionally free of organic matter, roots, and stones larger than 3 inches in any dimension, subject to approval by the Engineer.
  - 2. Borrow: Free of rock or gravel larger than 3 inches in any dimension; and meeting Standard Specification Section M.01.01.
- Q. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.
- R. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.
- S. Utilities: On-site underground pipes, conduits, ducts, and cables, as well as underground services within buildings.

#### 1.4 Informational Submittals

- A. Testing Agency: Provide qualifications of an independent geotechnical engineering testing agency that is certified in the State of Rhode Island and familiar with RIDOT geotechnical and pavement testing procedures.
  - 1. Geotechnical Testing Agency Qualifications: Qualified according to ASTM E 329 and ASTM D 3740 for testing indicated.
- B. Pre-excavation Photographs or Videotape: Show existing conditions of adjoining construction and site improvements, including finish surfaces, which might be misconstrued as damage caused by earth moving operations. Submit before earth moving begins.

#### 1.5 Action Submittals

- A. Material Test Reports - From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated. Prepare separate reports for each source of I material imported for fill and backfill as follows (including base course materials):
  - 1. Gradation according to ASTM D 422 and classification according to ASTM D 2487.
  - 2. Laboratory compaction curve according to ASTM D 698.
  - 3. Engineered soil media mixture composition verification.
- B. Compaction testing results shall be provided for testing completed as specified herein.
- C. Soil/Material Origin: Provide a description for each originating off-site location or project from which imported soil/material is obtained, including known historical activities occurring on the site,

and any possible releases that have occurred. Soil imported to the site shall be Clean Soil, as defined in Section 02111 "Soil Management."

#### 1.6 Quality Assurance

- A. Where "RIDOT Standard Specifications" is used, it shall mean "Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction" as amended in 2018 and issued supplements.
- B. Geotechnical Testing Agency Qualifications: Qualified according to ASTM E 329 and ASTM D 3740 for testing indicated.
- C. Perform excavation operations in accordance with OSHA Regulations 1926.651 and 1926.652.
- D. Pre-excavation Conference: Conduct conference at Project site.

#### 1.7 Project Conditions

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth moving operations.
  - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
  - 2. Install traffic management/protection measures in accordance with the Traffic Management Plans included in the Contract Drawings.
- B. Utility Locator Service: Notify "Dig Safe" and the City of Pawtucket Department of Public Works for the area where Project is located before beginning earth moving operations.
- C. Do not commence earth moving operations until temporary erosion- and sedimentation-control measures, specified in Section 02372 "Temporary Erosion and Sediment" are in place.
- D. Extent of excavated areas shall be within the Limits of Disturbance shown on the Contract Drawings.
- E. Place excavated material, backfill and equipment a minimum of 2 feet from edge of excavation. Cast excavated material so as not to interfere with ordinary use of the traveled way.
- F. Remove and immediately dispose of unsuitable excavated material.
- G. In the event that Contaminated Soil encountered, it shall be properly managed in accordance with Section 02111 "Soil Management."

## PART 2 - PRODUCTS

- 2.1 Soil Materials
- A. General: Provide imported common borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
  - B. Base Layer: Permeable Base Layer for the pervious pavers shall consist of ASTM NO.57 clean, washed stone.
  - C. Bedding Course: Bedding course material shall consist of clean, native or imported compacted gravel having a gradation in accordance with Section M.01.09, Table I, Column Ib of the RIDOT Standard Specifications.
  - D. Bedding Sand: Bedding Sand shall be natural or manufactured material conforming to the grading requirement of ASTM C33.
  - E. Common Borrow: Shall meet the requirements of Satisfactory Soils and shall conform to subsection M.01.01 of the RIDOT Standard Specifications.
  - F. Cobblestones: Cobblestones for the cobblestone splash pad shall be recycled from existing cobblestones recycled from the site or cobblestones that conform to M.10.05 of RIDOT's Standard Specifications.
  - G. Final Backfill: Native or imported gravels having a gradation in accordance with Section M.01.09, Table I, Column Ib of the RIDOT Standard Specifications. For water applications, the material is subject to approval of the Pawtucket Water Supply Board.
  - H. Gravel Borrow: Gravel Borrow shall consist of bank run sand and gravel or plant processed, crushed or uncrushed gravel with fine aggregate added as filler conforming to Subsection M.01.09, Table I, Column 1a or 1b of RIDOT's Standard Specifications.
  - I. Gravel Borrow Base Course: Shall meet the requirements of Gravel Borrow for Subsection M.01.09, Table I, Column 1a of RIDOT's Standard Specifications.
  - J. Impervious Fill: Clayey gravel and sand mixture capable of compacting to a dense state.
  - K. Initial Backfill: Native or imported gravels having a gradation in accordance with Section M.01.09, Table I, Column Ib of the RIDOT Standard Specifications. For water applications, the material is subject to approval of the Pawtucket Water Supply Board.
  - L. Suitable Subbase Course: Shall meet the requirements of Subsection M.01.09; Gradation of Aggregates, Table I, Column Ia of the RIDOT's Standard Specifications.

## 2.2 Geotextiles

- A. Non-woven Filter Fabric : Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288 and the following, measured per test methods referenced:
1. Survivability: Class 2; AASHTO M 288.
  2. Grab Tensile Strength: 160 lbf; ASTM D 4632.
  3. Sewn Seam Strength: 142 lbf (630 N); ASTM D 4632.
  4. Trapezoid Tear Strength: 65 lb ASTM D 4533.
  5. Puncture Strength: 410 lb; ASTM D6241.
  6. Apparent Opening Size: No. 70 sieve, maximum; ASTM D 4751.
  7. Permittivity: 0.15 per second, minimum; ASTM D 4491.
  8. UV Stability: 70 percent after 500 hours' exposure; ASTM D 4355.

## PART 3 - EXECUTION

### 3.1 Preparation

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth moving operations.
- B. Protect and maintain erosion and sedimentation controls during earth moving operations.
- C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

### 3.2 Dewatering

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- B. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
- C. At a minimum the following discharge requirements must be met for dewatering activities:
1. Do not discharge visible floating solids or foam.
  2. To the extent feasible, utilize vegetated, upland areas of the site to infiltrate dewatering water before discharge. In no case will surface waters be considered part of the treatment area.

3. At all points where dewatering water is discharged, utilize velocity dissipation devices.
4. Utilize filter bags at the discharge of dewatering pumps if groundwater discharge from sump pits is still turbid. Replace and clean the filter bags used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.
5. Protect and maintain dewatering system during dewatering operations.

D. Promptly repair damages to adjacent facilities caused by dewatering.

### 3.3 Explosives

A. Explosives: Do not use explosives.

### 3.4 Geotextiles

- A. Non-woven filter fabric shall be furnished in rolls, and shall be wrapped or otherwise covered completely until such time as it is to be installed. Filter fabric rolls previously opened, uncovered or unrolled shall not be used.
- B. Filter fabric shall be installed in accordance with manufacturer's installation directions and recommendations.

### 3.5 Excavation, General

- A. Excavate to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include soil materials, and obstructions.
  1. If excavated materials intended for fill and backfill include unsatisfactory soil materials and rock, replace with satisfactory soil materials.

### 3.6 Excavation For Structures

- A. Excavate trenches to indicated gradients, lines, depths, and elevations. Prepare finished bottom of excavation accurately with hand tools.
  1. Trench shoring and bracing located below the narrow limit of trench must be left-in-place until backfilling occurs.
- B. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.
  1. Excavations for Footings and Foundations: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.

2. Excavation for Underground Basins and Drainage and Utility Structures: Excavate to elevations and dimensions indicated within a tolerance of plus or minus 1 inch. Do not disturb bottom of excavations intended as bearing surfaces.

### 3.7 Excavation For Pavements, Sidewalks, and Wheelchair Ramps

- A. Excavate surfaces under sidewalks, wheelchair ramps, and pavements to indicated lines, cross sections, elevations, and subgrades.

### 3.8 Subgrade Inspection

- A. Notify Engineer when excavations have reached required subgrade.
- B. If Engineer or Owner determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.
- C. Proof-roll subgrade below areas of full-depth pavement reconstruction with a pneumatic-tired and loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
  1. Completely proof-roll subgrade in one direction. Limit vehicle speed to 3 mph.
  2. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Engineer, and replace with compacted backfill or fill as directed.
- D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for unit prices.
- E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Engineer, without additional compensation.

### 3.9 Unauthorized Excavation

- A. Fill unauthorized excavation beneath bottom limits of excavation with gravel fill, sand, bedding material, or concrete as directed by Engineer at no additional cost.

### 3.10 Storage Of Soil Materials

- A. Stockpile common borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
  1. Stockpile soil materials 2 feet minimum away from edge of excavations. Do not store within drip line of remaining trees.
  2. When excavating in or near a road or walk, place excavated material so as not to interfere with ordinary use of traveled way.
  3. The contractor shall stockpile excavated existing soil materials.

- B. The Contractor shall ensure that all Clean Soil to be used at the site is properly segregated from all other material on the site and not co-mingled, which could result in the contamination of material. Contaminated Soil shall be managed in accordance with Section 02111 "Soil Management."

### 3.11 Backfill, General

- A. Place and compact backfill in excavations promptly, but not before completing the following:
  - 1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
  - 2. Surveying locations of underground utilities for Record Documents.
  - 3. Testing and inspecting underground utilities.
  - 4. Removing concrete formwork.
  - 5. Removing trash and debris.
  - 6. Removing temporary shoring and bracing, and sheeting.
  - 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

### 3.12 Stormwater Drainage and Utility Trench Backfill

- A. Place backfill on subgrades free of mud, frost, snow, or ice.
- B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. Backfill voids with satisfactory soil while removing shoring and bracing (if used).
- D. Bedding shall be placed in layers not exceeding six (6) inches in loose depth, and each layer shall be compacted by at least two (2) passes of an approved plate-type vibratory compactor
- E. Bedding shall be graded, compacted and shaped so that the full length of pipe barrel has complete and uniform bearing for the bottom quadrant of each pipe. Bell holes and depressions for joints shall be dug after the sand bedding has been graded and compacted, and shall be the proper clearance for jointing of pipes. Bedding shall be placed to a minimum height approximately equivalent with the center of the pipe, for the entire trench width, per Drawings.
- F. Place and compact initial backfill material free of particles larger than 1 1/2 inches in any dimension, to a minimum height of over the pipe or conduit as indicated on the Contract Drawings.
  - 1. Carefully compact initial backfill evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit
- G. Place and compact final backfill of satisfactory soil to final subgrade elevation.

- H. Installation of backfill for water utilities shall be in accordance with the Pawtucket Water Supply Board.

### 3.13 Soil Fill

- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
  - 1. Under grass and planted areas, use satisfactory soil material.
  - 2. Under walks and pavements, use gravel borrow.
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

### 3.14 Soil Moisture Control

- A. Uniformly moisten or aerate subgrade and each subsequent fill or backfill soil layer before compaction to within 2 percent of optimum moisture content.
  - 1. Do not place backfill or fill soil material on surfaces that are muddy, frozen, or contain frost or ice.
  - 2. Remove and replace, or scarify and air dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

### 3.15 Compaction of Soil Backfills And Fills

- A. Do not compact subgrade or backfills for bioretention planters. Refer to Section 02630 "Storm Drainage" for installation of engineered soil media within bioretention planters.
- B. Under pavements and structures, place backfill and fill soil materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
- C. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
- D. With the exception of soils within bioretention planters, compact soil materials to not less than the following percentages of maximum dry unit weight according to ASTM D 698 or ASTM D 1557:
  - 1. Under structures and pavements(including sidewalks and wheelchair ramps), scarify and re-compact top 12 inches of existing subgrade and each layer of backfill or fill soil material at 95 percent.
  - 2. Under turf or unpaved areas, scarify and re-compact top 6 inches below subgrade, and compact each layer of backfill or fill soil material at 85 percent.
  - 3. For utility trenches, compact each layer of initial and final backfill soil material at 95 percent.

- E. For compacting backfill, use equipment specifically designed for compaction purposes, and which provides satisfactory results as approved by the Engineer.

### 3.16 Grading

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
  - 1. Provide a smooth transition between adjacent existing grades and new grades.
  - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to required elevations within the following tolerances:
  - 1. Turf or Unpaved Areas: Plus or minus 1 inch.
  - 2. Walks: Plus or minus 1 inch.
  - 3. Pavements: Plus or minus 1/2 inch

### 3.17 Subbase And Base Courses Under Pavements

- A. Place subbase course and base course on subgrades free of mud, frost, snow, or ice.
- B. On prepared subgrade, place subbase course and base course under pavements and walks as follows:
  - 1. Subbase course installation shall conform to Sections 301.03.2, 302.03.1 and 302.03.2 of the RIDOT Standard Specifications for Road and Bridge Construction.
  - 2. Compaction of each layer shall continue until a density of not less than 95 percent of the maximum density determined in accordance with AASHTO T180 has been achieved. The surface of each layer shall be maintained during the compaction operations in such a manner that a reasonable uniformity is produced. The compacted surface shall have a tolerance of ½-inch, plus-or-minus, to the grades shown on the Plans or as directed. However, no plus or minus deviation may continue for more than 100 feet in any direction.

### 3.18 Field Quality Control

- A. Testing Agency: Contractor will engage a qualified geotechnical engineering testing agency to perform tests and inspections.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.
- C. Testing agency will test compaction of soils in place according to ASTM D 1556, ASTM D 2167, ASTM D 2922, and ASTM D 2937, as applicable. Tests will be performed at the following locations and frequencies:

1. Trench Backfill for Storm Drain and Utilities: At each compacted initial and final backfill layer, at least one test for every 150 feet or less of trench length, but no fewer than two tests.
2. Paved and Sidewalk Areas: At subgrade and at each compacted fill and backfill layer, at least one test for every 2000 square feet or less of paved or sidewalk area, but in no case fewer than three tests.

- D. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; re-compact and retest until specified compaction is obtained at no additional cost.

### 3.19 Protection

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
1. Scarify or remove and replace soil material to depth as directed by Engineer; reshape and re-compact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

### 3.20 Disposal Of Surplus And Waste Materials

- A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.
- B. Transport surplus satisfactory soil to designated storage areas on Owner's property. Stockpile or spread soil as directed by Engineer.
1. Remove waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.
- C. Remove and dispose of excess excavated material that cannot be utilized as backfill in accordance with Section 02111 "Soil Management".

## PART 4 - METHOD OF MEASUREMENT

- A. Items associated with this work will not be measured for payment.

PART 5 - BASIS OF PAYMENT

- A. This work with the exception of bioretention shall be paid as part of the lump sum Contract Base Bid Price. The price for these items constitutes full and complete compensation for all labor, tools, materials, and equipment, and all other incidentals required to finish the work, complete and in place and accepted by the Engineer/Owner.

END OF SECTION

## SECTION 02372 – TEMPORARY EROSION AND SEDIMENTATION CONTROL

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, RIDOT Standard Specification for Road and Bridge Construction, RI Soil Erosion and Sediment Control Handbook and Division 1 Specification Sections, apply to this Section.

#### 1.2 Summary

- A. This Section includes furnishing, placing, and maintaining sedimentation control measures as shown on the Drawings, as directed by the Engineer and/or Owner, and where necessary to reduce sediment content of runoff. Control measures are to remain in place until after completion of construction. Measures include the following:
  - 1. Perimeter Erosion Control Protection.
  - 2. Catch Basin Inlet Protection.
  - 3. Curb Inlet Protection.
  - 4. Temporary seeding and mulching.
  - 5. Dust control.

#### 1.3 Related Sections

- A. Section 02230 "Site Clearing."
- B. Section 02300 "Earth Moving."

#### 1.4 Submittals

- A. Product data and manufacturer's installation instructions: For the following:
  - 1. Perimeter Erosion Control Protection.
  - 2. Catch Basin Inlet Protection.
  - 3. Curb Inlet Protection.
  - 4. Dust control.

1.5 Quality Assurance

- A. Where "RIDOT Standard Specifications" is used, it shall mean "Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, Amended March 2018" and issued supplements.
- B. Sedimentation and erosion control measures shall be installed and maintained in accordance with the most recent version of the "Rhode Island Soil Erosion and Sediment Control Handbook" by the Rhode Island State Conservation Committee, Rhode Island Department of Environmental Management, Rhode Island Coastal Resources Management Council, Rhode Island Department of Transportation, and The University of Rhode Island.

1.6 Project Conditions:

- A. All erosion and sedimentation control work shall comply with the regulatory and permitting requirements.
- B. Contractor shall submit 24-hour contact name and number for response to situations that may require immediate response.

PART 2 - PRODUCTS

2.1 Perimeter Erosion Control

- A. Weighted sediment tubes shall be installed around stockpile areas and/or as directed in the field by the Engineer/Owner.
- B. Product and Manufacturer: Erosion Eel as manufactured by ACF Environmental, or approved equal.

2.2 Catch Basin Inlet Protection

- A. Woven polypropylene that meets the following:

<u>Properties</u>	<u>Requirement</u>	<u>Unit</u>
Grab Tensile Strength (ASTM D4632):	300	Lbs
Grab Tensile Elongation (ASTM D4632):	15	Percent
Puncture Strength (ASTM D4833):	120	Lbs
Mullen Burst (ASTM D3786):	800	PSI
Trapezoid Tear (ASTM D4533):	90	Lbs
Flow Rate (ASTM D4491):	40	Gal/Min/Sq.Ft
Permittivity (ASTM D4491)	0.55	Sec-1

<u>Properties</u>	<u>Requirement</u>	<u>Unit</u>
UV Resistance(at 500 hours) (Retained strength) (ASTM D4355):	80	Percent
Apparent Opening Size (ASTM D4751):	#40	US Sieve

1. Manufacturer: Siltsack™ as manufactured by ACF Environmental, or approved equal.

### 2.3 Curb Inlet Protection

- A. Curb Inlet Protection shall consist of a weighted inlet tube, GutterGator manufactured by ACF Environmental or approved equal.
  1. Curb inlet protection shall extend 12" beyond each end of curb inlet opening.
  2. Curb inlet protection shall be weighted to resist movement.

### 2.4 Temporary Seeding and Mulching

- A. Fresh, viable, re-cleaned pure quality seed of the latest crop, delivered in original unopened packages, bearing guaranteed analysis tags and name of the supplier.
- B. See Contract Drawings for temporary seed mix composition and mulching.

### 2.5 Dust Control

- A. Water: Potable.
- B. Crushed Stone: See Section 02300 "Earth Moving" for gradation of crushed stone to be used for dust control applications.

## PART 3 - EXECUTION

### 3.1 General

- A. Install erosion and sediment control measures prior to clearing, demolition or construction.
- B. Attend a preconstruction meeting with the Engineer and/or Owner, to review permit conditions and construction methods.
- C. Implement and maintain the erosion and sediment controls in accordance with the Site Preparation Plan and Erosion Control Notes included within the Contract Drawings. Inform parties engaged on the construction site of the requirements and objectives of this Plan.

- D. Control dust to prevent a hazard to traffic on adjacent transportation corridors. Dust control includes, but is not limited to, sprinkling of water, mulch and/or crushed stone on exposed soils and haul roads.
- E. Inspect site weekly and prior to anticipated rain events. Ensure that erosion controls are properly maintained and functioning.
- F. Install additional control measures if deemed necessary by the Engineer or Owner.
- G. Do not discharge directly into drainage systems, wetlands or watercourses where dewatering is necessary. Utilize methods and devices as permitted by authorities having jurisdiction and appropriate regulations to minimize and retain suspended solids including pumping water into a temporary sedimentation bowl, providing surge protection at inlet and outlet of pumps, floating pump intake.
  - 1. If pumping operation results in turbidity problems, stop pumping until means of controlling turbidity are determined and implemented.

### 3.2 Stockpiles and Perimeter Erosion Controls

- 1. Stockpile Side Slopes: 2:1 maximum.
- 2. Surround stockpiles by perimeter erosion control measure.
- 3. Stabilize stockpiles not to be used within 30 days with temporary vegetation and mulch immediately after formation of stockpile.

### 3.3 Catch Basin Inlet Protection

- A. Install in accordance with manufacturer's written instructions and the Contract Drawings.

### 3.4 Curb Inlet Protection

- A. Install in accordance with manufacturer's written instructions and the Contract Drawings.
- B. Weighted curb inlet tubes shall be installed to prevent material from entering the catch basin inlet. Weighted inlet tubes shall cover the entire opening and closely abut the curb to provide a seal along the gutter line against the pavement and curb.

### 3.5 Temporary Seeding and Mulching

- A. For soil stockpiles that will not be used within 30 days, stabilize soils with temporary vegetation and mulch. Refer to Contract Drawings for temporary seed mixture and recommended seeding dates.

### 3.6 Dust Control

- A. Apply water, and/or crushed stone uniformly over the surface when dust becomes a nuisance or when directed by the Engineer. Provide shut-off valve in convenient location on water truck, to

allow for regulating water flow such that discharged water does not cause excessive ponding or erosive runoff.

- B. Keep adjacent roadways free of sediment at all times throughout the construction period at no additional cost to the owner. Wet sweep roadways to remove any tracked sediment with mechanical vacuum-assisted equipment. Do not use blowers or similar methods that may disperse dust and debris. If tracking of sediment becomes an issue, the Engineer and/or Owner shall require additional methods or systems to control dust, such as construction access, more frequent water application, and sweeping.

### 3.7 Maintenance

- A. Inspect all erosion controls according to the requirements in the Contract Drawings, local and state regulations, and the manufacturer's recommendations.
- B. Remove and dispose of accumulated sediments when sediment reaches approximately one-half the height of the control system, or when directed by the Engineer.
- C. Replace control system promptly if fabric decomposes or system becomes ineffective prior to the expected usable life.
- D. Maintain or replace system until no longer necessary for the intended purpose.
- E. Contractor shall be responsible to fix and/or replace all damaged erosion control systems damaged by storm events promptly as needed or to the satisfaction of the Engineer or Owner.

### 3.8 Removal

- A. Remove and dispose of temporary erosion control systems after respective up-gradient areas are stabilized with stable growth and a satisfactory stand of vegetation as directed by the Engineer and/or Owner.

## PART 4 - METHOD OF PAYMENT

- A. Items associated with this work will not be measured for payment.

## PART 5 - BASIS OF PAYMENT

- A. This work shall be paid as part of the lump sum Contract Base Bid Price. The price for these items constitutes full and complete compensation for all labor, tools, materials, and equipment, and

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all other incidentals required to finish the work, complete and in place and accepted by the  
Engineer/Owner.

END OF SECTION

## SECTION 02510 - WATER UTILITY DISTRIBUTION

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, RIDOT Standard Specification for Road and Bridge Construction and Division 1 Specification Sections, apply to this Section.
- B. The Contractor shall be responsible for all materials furnished by him/her, and shall replace at his/her own expense all such material found defective in manufacture or damaged in handling after delivery by the manufacturer. This shall include the furnishing of all material and labor required for the replacement of installed material discovered defective prior to final acceptance of the work.
- C. Materials not explicitly specified herein shall conform to the preceding standard details. In all cases, materials to be used shall be of premium quality, new, and employed in accordance with the purposes for which they were designed.

#### 1.2 Summary

- A. This Section includes water-distribution piping and related components for the following:
  - 1. Fire hydrant relocation including the removal and replacement of its associated water service/lateral to avoid conflict with proposed improvements as indicated on the Drawings.
- B. Related Work:
  - 1. Section 02230 "Site Clearing."
  - 2. Section 02300 "Earth Moving"

#### 1.3 Definitions

- A. PA: Polyamide (nylon) plastic.
- B. AC: Asbestos cement.
- C. PE: Polyethylene plastic.
- D. PP: Polypropylene plastic.
- E. PVC: Polyvinyl chloride plastic.
- F. Water Distribution Piping: Water pipe that conveys domestic water from water main to individual service-meter assemblies.

#### 1.4 Action Submittals

- A. Product Data and Material Certificates of Compliance: For each type of product indicated including the following:
  - 1. Piping, fittings, and structures.
  - 2. Piping specialties.
  - 3. Valves and accessories.
- B. Shop Drawings: For layout of piping, fittings, and structures for fire hydrant relocations.

#### 1.5 Informational Submittals

- A. Field quality-control test reports.

#### 1.6 Closeout Submittals

- A. Provide submittals as required by the Pawtucket Water Supply Board.
- B. Coordination and Record Drawings: Provide record drawings as required by the Pawtucket Water Supply Board to document improvements made to water distribution piping. Show pipe sizes, locations, and elevations. Indicate interface and spatial relationship between water main, gate valves, and proximate structures including, but not limited to, fire hydrants.

#### 1.7 Quality Assurance

- A. Where "RIDOT Standard Specifications" is used, it shall mean "Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, Amended March 2018 and issued supplements.
- B. Regulatory Requirements: Comply with the Pawtucket Water Supply Board Rules and Regulations and Pawtucket Water Supply Board Standard Details (<http://pwsb.org/content/rules-and-regulations>).
- C. Piping materials shall bear label, stamp, or other markings of specified testing agency.
- D. NSF Compliance:
  - 1. Comply with NSF 14 for plastic potable-water-service piping.
  - 2. Comply with NSF 61 for materials for water-service piping and specialties for domestic water.

#### 1.8 Delivery, Storage, And Handling

- A. Preparation for Transport: Prepare valves according to the following:
  - 1. Ensure that valves are dry and internally protected against rust and corrosion.
  - 2. Protect valves against damage to threaded ends and flange faces.
  - 3. Set valves in best position for handling. Set valves closed to prevent rattling.

- B. During Storage: Use precautions for valves according to the following:
  - 1. Do not remove end protectors unless necessary for inspection; then reinstall for storage.
  - 2. Protect from weather. Store indoors and maintain temperature higher than ambient dew-point temperature. Support off the ground or pavement in watertight enclosures when outdoor storage is necessary.
- C. Handling: Use sling to handle valves if size requires handling by crane or lift. Rig valves to avoid damage to exposed parts. Do not use hand wheels or stems as lifting or rigging points.
- D. Deliver piping with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe-end damage and to prevent entrance of dirt, debris, and moisture.
- E. Protect stored piping from moisture and dirt. Elevate above grade. Do not exceed structural capacity of floor when storing inside.
- F. Protect flanges, fittings, and specialties from moisture and dirt.
- G. Store plastic piping protected from direct sunlight. Support to prevent sagging and bending.
- H. The Contractor shall be responsible for the safe storage of material on the site, and shall prevent damage until such materials have been incorporated in the work.
- I. The interior of all pipe, fittings, and other accessories shall be kept free from dirt and foreign matter at all times. Valves and hydrants shall be drained and stored in a manner that will protect them from damage by freezing.
- J. Pipe, valves, hydrants, fittings, and other-accessories shall be handled by methods that avoid shock or damage to the item and/or its coating, if applicable. Under no circumstances shall such material be dropped. Repair, if allowed by the Engineer, shall be made at the Contractor 's expense in a manner approved by the Water Superintendent or Engineer.

#### 1.9 Project Conditions

- A. Interruption of Existing Water-Distribution Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary water-distribution service according to requirements indicated:
  - 1. Notify Engineer and Owner no fewer than 14 days in advance of proposed interruption of service.
  - 2. Do not proceed with interruption of water-distribution service without Owner's written permission.

#### 1.10 Coordination

- A. Coordinate the removal and relocation of hydrants, the removal and relocation of gate valves and boxes, and the installation of new gate valves and boxes with the City of Pawtucket's Department of Public Works, Pawtucket Water Supply Board, and local residents as indicated in Division 1 Section "Coordination."

## PART 2 - PRODUCTS

### 2.1 General

Provide all materials and products in accordance with the requirements of the Pawtucket Water Supply Board (<http://pwsb.org/sites/default/files/pdf/approved-materials-spec-april-2013.pdf>).

## PART 3 - EXECUTION

### 3.1 General

A. Complete all water utility work in accordance with the requirements of the Pawtucket Water Supply Board.

### 3.2 Field Quality Control

A. Inspection and Piping Tests: After installation of water utilities, coordinate inspection and testing with Pawtucket Water Supply Board.

### 3.3 Cleaning, Testing, and Disinfection

A. Cleaning, testing, and disinfection of new water-distribution piping and accessories shall be coordinated with the Pawtucket Water Supply Board.

## PART 4 - METHOD OF MEASUREMENT

A. Items associated with this work will not be measured for payment.

## PART 5 - BASIS OF PAYMENT

A. This work shall be paid as part of the lump sum Contract Base Bid Price. The price for these items constitutes full and complete compensation for all labor, tools, materials, and equipment, and all other incidentals required to finish the work, complete and in place and accepted by the Engineer/Owner.

END OF SECTION

## SECTION 02630 - STORM DRAINAGE

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, RIDOT Standard Specification for Road and Bridge Construction and Division 1 Specification Sections, apply to this Section.

#### 1.2 Summary

- A. Section Includes:
  - 1. Pipes and fittings.
  - 2. Integrated Pretreatment Catch Basin.
  - 3. Pretreatment Sediment Forebay.
  - 4. Shallow and Conventional Bioretention Planters.
  - 5. Permeable pavers.
  - 6. Converting existing drop inlet manhole structure to drain manhole.
- B. Related Sections:
  - 1. Section 02230 "Site Clearing."
  - 2. Section 02372 "Temporary Erosion and Sediment."  
Section 02300 "Earth Moving."

#### 1.3 Definitions

- A. Bioretention Planter Components: Includes engineered soil media, pea gravel, cover stone, planter wall/curb and footings, cobblestone splash pads, overflow structure, lateral cross-bracing, wheel guard plates, inlet screen covers, and gabion baskets.
- B. FRP: Fiberglass-reinforced plastic.
- C. HDPE: High-density polyethylene plastic.
- D. PVC: Polyvinyl chloride.

#### 1.4 Quality Assurance

- A. Where "RIDOT Standard Specifications" is used, it shall mean "Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, Amended March 2018 and issued supplements.

#### 1.5 Action Submittals

- A. Product Data/Certificates: For each type of product indicated.
  - 1. Pipes and fittings.
  - 2. Bioretention planter component products including grout used to secure planter wall/curb to footings.
  - 3. .
  - 4. Permeable pavers.
  - 5. Filter Fabric.
- B. Engineered Soil Media:
  - 1. Grain size rain size analysis results of the sand component performed in accordance with American Society for Testing and Materials (ASTM) D422, Standard Test Method for Particle Size Analysis of Soils. C. Grain size analysis results of sandy loam soil component performed in accordance with ASTM D422., Standard Test Method for Particle Size Analysis of Soils. D. Grain size analysis results of compost component performed in accordance with ASTM D422, Standard Test Method for Particle Size Analysis of Soils.
  - 2. Grain size analysis results of sandy loam soil component performed in accordance with ASTM D422., Standard Test Method for Particle Size Analysis of Soils.
  - 3. Grain size analysis results of compost component performed in accordance with ASTM D422, Standard Test Method for Particle Size Analysis of Soils.
  - 4. Organic matter content test results of compost. Organic matter content tests should be performed in accordance with ASTM F 1647, Standard Test Methods for Organic Matter Content of Athletic Field Rootzone Mixes or Testing Methods for the Examination of Compost and Composting (TMECC) 05.07A, Loss-On-Ignition Organic Matter Method.
  - 5. Testing laboratory qualifications including use of ASTM and USDA method of standards.
- C. Shop Drawings:
  - 1. Integrated Pretreatment Catch Basins:
    - a. Height, thickness of base, wall thickness, sump depth, and interior dimensions.
    - b. Steel reinforcement size and location.
    - c. Inlet and outlet opening cut orientation and sizes.
    - d. Castings.
  - 2. Bioretention Planter Overflow Structure:

- a. Height, sump depth, and interior diameter.
  - b. Structure top elevation (where overflow begins to occur).
  - c. Outlet orientation and invert elevation.
  - d. Castings.
3. Conventional Bioretention Planter Footings:
- a. Height, length, thickness, and slot dimensions where granite wall/curb shall be set.
  - b. Steel reinforcement size and location.
  - c. Lateral cross-bracing size and locations.

#### 1.6 Delivery, Storage, And Handling

- A. Do not store plastic pipe, fittings, and structures in direct sunlight.
- B. Protect pipe, pipe fittings, and seals from dirt and damage.
- C. Handle Precast Bioretention Planter Pretreatment Structures according to manufacturer's written rigging instructions.

#### 1.7 Project Conditions

- A. Site Information: Research public utility records and verify existing utility locations prior to construction.

### PART 2 - PRODUCTS

#### 2.1 Pipes and Fittings

- A. HDPE Pipe and Fittings: AASHTO M 294 (for pipes 12-inches and larger), Type S, with smooth interior and annular exterior corrugations for couplings.
  1. Soil-tight Couplings: AASHTO M 294, corrugated, matching pipe and fittings to form soil-tight joints.
  2. All appurtenances shall be provided by the same manufacturer and designed for the application and pipe that is installed.
  3. Pipe shall be joined using an integral bell & gasketed spigot joint meeting AASHTO M294. The joint shall be soil-tight and gaskets shall meet the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable wrap to ensure the gasket is free from debris. A joint lubricant supplied by the manufacturer shall be used on the gasket and bell during assembly.
  4. Fittings shall conform to AASHTO M294 or ASTM F2306. Bell and spigot connections shall utilize a spun-on or welded bell and valley or saddle gasket meeting the soil-tight joint performance requirements of AASHTO M294 or ASTM F2306.

## 2.2 Integrated Pretreatment Catch Basin

1. Description: Integrated pretreatment catch basins shall be Model No. IN-22 as manufactured by Oldcastle of approved equal. Shall be in accordance with Section 702 of the RIDOT Standard Specifications and shall comply with ASTM C 478 for reinforced precast concrete structures, of depth indicated, with provision for rubber gasketed joints. All precast sections shall be designed and constructed in accordance with ASTM C 890 as appropriate for AASHTO HS-25 loads and the general dimensions shown on the Drawings.
2. Structures shall have 24-inch by 24-inch internal dimensions with the sump depth specified on the Contract Drawings.
3. Base Section: 6" minimum thickness floor slab and walls and base riser section; base section shall be manufactured with integral floor as specified on the Contract Drawings.
4. Riser Sections: 6" minimum thickness; length of riser section must be selected to provide depth indicated on Contract Drawings.
5. Joint Gaskets: Joints shall be rubber gasketed conforming to ASTM C 443, rubber.
6. Mortar (if needed): Composed by volume, of one part Portland cement and two parts sand.
7. Grout (if needed): ASTM C476.
8. Grate: Cast iron grate of size compatible with structure inlet opening size.

## 2.3 Pretreatment Sediment Forebay

- A. Description: Shall consist of grouted cobblestone bottom forebays underlain by bedding sand and gravel borrow to the thicknesses specified on the Contract Drawings.
- B. Cobblestone: Shall consist of re-used (existing) cobblestones from site.
- C. Grout: High strength non-shrink grout shall be suitable for outdoor use, and it shall have a minimum compression strength of 8,000 psi after 28 days as determined by testing under ASTM C109. It shall not exhibit any measurable decrease in volume after curing. All grout materials shall be listed on the RIDOT's Approved Materials List.
- D. Sediment Forebay Berm: Shall consist of vertical face granite curb conforming to Section M.09.01 of the RIDOT Standard Specifications having an 18-inch depth.

## 2.4 Shallow and Conventional Bioretention Planters

- A. Description: Bioretention planters shall consist of the following:
  1. Engineered soil media and pea gravel (for shallow bioretention planters).
  2. Cover stone- Shall consist of 3/8" washed semi-rounded stone free of fines in accordance with Column VI, Table I, Section M.01.09 of the RIDOT Standard Specifications.
  3. Planter wall/curb: Vertical face granite curb conforming to Section M.09.01 of the RIDOT Standard Specifications having a 36-inch depth.
  4. Planter wall/curb footings: Shall consist of cast-in-place or precast reinforced concrete installed to the dimensions specified on the Contract Drawings.

- a. Concrete shall be Class XX in accordance with Section 601 of the RIDOT Standard Specifications.
  - b. Steel reinforcement shall conform to Section M.05.01 of the RIDOT Standard Specifications.
  - c. Grout: High strength non-shrink grout shall be suitable for outdoor use, and it shall have a minimum compression strength of 8,000 psi after 28 days as determined by testing under ASTM C109. It shall not exhibit any measurable decrease in volume after curing. All grout materials shall be listed on the RIDOT's Approved Materials List.
5. Grouted Cobblestone Splash Pads: Shall consist of grouted cobblestone splash pads installed in the locations and to the dimensions specified on the Contract Drawings.
- a. Cobblestones: Shall consist of re-used (existing) cobblestones from site.
  - b. Grout: High strength non-shrink grout shall be suitable for outdoor use, and it shall have a minimum compression strength of 8,000 psi after 28 days as determined by testing under ASTM C109. It shall not exhibit any measurable decrease in volume after curing. All grout materials shall be listed on the RIDOT's Approved Materials List.
6. Bioretention Planter Overflow Structure: Shall consist of a 24-inch diameter PVC drain basin as manufactured by Nyloplast-ADS Inc. or approved equal.
- a. Grate: Ductile iron dome-shaped grate to fit outside diameter of overflow structure. Grate shall be manufactured by Nyloplast-ADS Inc. or approved equal.
7. Lateral Cross Bracing: Shall consist of a 6" diameter dual wall, smooth interior corrugated polyethylene pipe filled with concrete. A No. 4 rebar shall be installed in center of pipe which shall be connected to the planter wall/curb footings.
- a. Concrete shall be Class XX in accordance with Section 601 of the RIDOT Standard Specifications.
  - b. Steel reinforcement shall conform to Section M.05.01 of the RIDOT Standard Specifications.
  - c. Polyethylene Piping: Shall conform to AASHTO M252 as manufactured by ADS or approved equal. Joints shall be soil tight.
8. Wheel Guard Plates: Shall consist of a ½" thick galvanized steel plate (with a silver color) installed at bioretention planter inlet curb openings in the locations and to the dimensions specified on the Contract Drawings.
- a. Plates shall have a minimum compressive strength of 35,000 psi.
  - b. Bolts and attachments shall be stainless steel (Grade 304 or 316).
9. Inlet Screen Covers: Shall consist of a debris screen attached to the inside of the granite curb inlet notch opening such that no portion of the screen protrudes past the vertical face into the roadway.
- a. Screen cover shall be a fixed or manual retractable curb inlet screen cover as manufactured by United Storm Water, Inc. or approved equal.

10. Gabion Baskets: Shall consist of stone-filled, welded mesh gabions installed within Shallow Bioretention Planters in the locations and to the dimensions specified on the Contract Drawings.

- a. The dimensions of the welded mesh gabion are to be three (3) feet wide by one (1) foot thick by three (3) feet tall. The welded mesh, spiral fasteners, and lacing wire are to have the following parameters:

Welded Mesh

	Unit	Value
Wire Diameter	inch	0.120 (min.)
Tensile Strength	PSI	80,000 (min.)
Weld Shear	Lbs.	450 (min.)/ 548 (avg.)
Zinc Coating Weight	oz/ft	0.85 (min.)
Mesh Opening Dimension	inch	2" x 2" (max.)

Spiral Fasteners

	Unit	Value
Tensile Strength	PSI	80,000 (min.)
Diameter	inch	0.120 (min.)

Lacing Wire

	Unit	Value
Wire Diameter	inch	0.086 (min.)
Tensile Strength	PSI	60,000 (min.)

- b. Stone fill – Shall conform to Section M.10.03.2 of the RIDOT Standard Specifications and shall meet the gradation of NSA No. R-3 graded stone riprap.
- c. Gabions require fabrication. The front, base, back and lid shall be woven into a single unit using the spiral fasteners. The lid should be left open until gabion is filled with aggregate at which point it shall be wired tightly shut using the lacing wire. Gabions are to be constructed according to manufacturer's recommendations.

11. Non-Woven Filter Fabric: Non-woven filter fabric shall meet the following requirements:

- a. Filter fabric material shall conform to the following performance characteristics, measured per the test methods referenced:
  - 1) 4 oz., nonwoven needle punched geotextile composed of 100% polypropylene staple fibers that are inert to biological degradation and resists naturally encountered chemicals, alkalis, and acids.
  - 2) Grab Tensile Strength: ASTM D 4632: 115 lbs.
  - 3) Grab Tensile Elongation: ASTM D 4632: 50%
  - 4) Trapezoidal Tear: ASTM D4533: 50 lbs.
  - 5) Puncture: ASTM D4833: 65 lbs.
  - 6) Apparent Opening Size: ASTM D 4751: 0.212 mm, 70 U.S. Sieve
  - 7) Permittivity: ASTM D 4491: 2.0 sec -1
  - 8) Flow Rate: ASTM D 4491: 140 gal/min/s.f.
- b. Shall conform to Section 703.02.2 of the RIDOT Standard Specifications and shall be included on RIDOT's Approved Materials List for underdrain applications.

B. Engineered Soil Media:

1. Soil for bioretention planters shall have a sandy loam, loamy sand, or loam texture per USDA textural triangle. Soil mixture shall be 60 - 70% sand by volume; 15 - 25% topsoil or loam by volume; and 15 - 25% organic matter (consisting of partially decomposed Sphagnum Peat with 100% passing a ½" sieve, and a PH of 3.4 to 4.8; or ground pine bark mulch) by volume, with a maximum silt and clay content of 8%.
2. Soil mixture shall have a maximum silt and clay content of 8% by volume.
3. The soil shall be a uniform mix, free of stones, stumps, roots, or other similar objects larger than two inches. The soil shall be free of Bermuda Grass, Quackgrass, Johnson Grass, Mugwort, Nutsedge, Poison Ivy, Canadian Thistle, Tearthumb, or other noxious weeds.
4. Laboratory Testing:
  - a. Engineered soil media shall be tested for the following criteria:
    - a) pH range 5.5-6.5
    - b) Magnesium not to exceed 32 ppm
    - c) Phosphorus P2O5 not to exceed 69 ppm
    - d) Potassium K2O not to exceed 78 ppm
    - e) Soluble salts not to exceed 500 ppm
  - b. Bioretention planters shall have a minimum of one test. Each test shall consist of both the standard soil test for pH, phosphorus, and potassium and additional tests of organic matter, and soluble salts. All testing results shall be performed by the same qualified testing facility.
  - c. Soil may be modified to adjust pH (higher) with lime or (lower) with iron sulfate plus sulfur.

- C. Pea Gravel: Shall consist of  $\frac{3}{8}$ " size washed pea gravel conforming to ASTM D 448 No. 8 gradation as follows:

U.S. Standard Sieve Size	% Passing By Weight
1/2 Inch	100
3/8 Inch	85 - 100
No. 4	10 - 30
No. 8	0 - 10
No. 16	0 - 5

- D. Cover Stone: Shall consist of  $\frac{3}{8}$ " to  $\frac{3}{4}$ " size washed stone conforming to gradation listed in Section M.01.09, Table I, Column VI of the RIDOT's Standard Specifications.

## 2.5 Permeable Pavers

- A. Description: Shall consist of permeable pavers installed in locations and to the dimensions specified on the Contract Drawings.
1. Permeable Pavers: Shall consist of Eco-Priora Permeable Concrete Pavers as manufactured by Unilock or approved equal. Pavers shall meet the minimum material and physical properties set forth in ASTM C 936, Standard Specification for Interlocking Concrete Paving Units. Efflorescence is not a cause for rejection.
    - a. Average compressive strength 8000 psi (55MPa) with no individual unit under 7,200 psi (50 MPa).
    - b. Average absorption of 5% with no unit greater than 7% when tested according to ASTM C 140.
    - c. Resistance to 50 freeze-thaw cycles, when tested according to ASTM C1645, with no breakage greater than 1.0% loss in dry weight of any individual unit. Conduct this test method not more than 12 months prior to delivery of units.
  2. Color: Granite blend.
  3. Laying Pattern: Pattern E.
  4. Finish: Standard.
  5. Edge: Chamfer - 3 mm rolled
  6. Size: Manufacture the sizes indicated with a maximum tolerance of plus or minus 1/16 in all directions.
    - a. 120 mm (5 in) x 240 mm (10 in) x 80 mm (3-1/8 in) thick
    - b. 240 mm (10 in) x 240 mm (10 in) x 80 mm (3-1/8 in) thick

Note: Imperial dimensions are nominal equivalents to the metric dimensions.
  7. Permeable Joint Opening Aggregate: 1/8" to 3/16" Granite chips conforming to ASTM C 33 and following gradation requirements:

U.S. Standard Sieve Size	% Passing By Weight
1/4 Inch	97 - 100

U.S. Standard Sieve Size	% Passing By Weight
No. 4	70 - 83
No. 8	37 - 50
No. 16	0 - 12

8. Bedding Layer: Clean, crushed aggregate conforming to ASTM C 33 and gradation requirements of ASTM D 448 No. 8 as follows:

U.S. Standard Sieve Size	% Passing By Weight
1/2 Inch	100
3/8 Inch	85 - 100
No. 4	10 - 30
No. 8	0 - 10
No. 16	0 - 5

9. Permeable Base Layer: Clean, washed stone aggregate conforming to ASTM C 33 and gradation requirements of ASTM D 448 No. 57 as follows:

U.S. Standard Sieve Size	% Passing By Weight
1-1/2 Inch	100
1 Inch	95 - 100
1/2 Inch	25 - 60
No. 4	0 - 10
No. 8	0 - 5

10. Reservoir Course: Clean, crushed stone aggregate conforming to ASTM C 33 and gradation requirements of ASTM D 448 No. 2 as follows:

U.S. Standard Sieve Size	% Passing By Weight
3 Inch	100
2- 1/2 Inch	90 - 100
2 Inch	35 - 70
1-1/2 Inch	0 - 15
3/4	0 - 5

11. Non-Woven Filter Fabric: Non-woven filter fabric shall meet the following requirements:

- a. Filter fabric material shall conform to the following performance characteristics, measured per the test methods referenced:
  - 1) 4 oz., nonwoven needle punched geotextile composed of 100% polypropylene staple fibers that are inert to biological degradation and resists naturally encountered chemicals, alkalis, and acids.
  - 2) Grab Tensile Strength: ASTM D 4632: 115 lbs.
  - 3) Grab Tensile Elongation: ASTM D 4632: 50%

- 4) Trapezoidal Tear: ASTM D4533: 50 lbs.
  - 5) Puncture: ASTM D4833: 65 lbs.
  - 6) Apparent Opening Size: ASTM D 4751: 0.212 mm, 70 U.S. Sieve
  - 7) Permittivity: ASTM D 4491: 2.0 sec -1
  - 8) Flow Rate: ASTM D 4491: 140 gal/min/s.f.
- b. Shall conform to Section 703.02.2 of the RIDOT Standard Specifications and shall be included on RIDOT's Approved Materials List for underdrain applications.

## 2.6 Converting Existing Drop Inlet Manhole Structure to Drain Manhole

1. Description: Convert existing drop inlet manhole structure to drain manhole in accordance with the dimensions and details indicated on the Contract Drawings or as directed by the Engineer.
2. Materials used shall conform to the requirements of Section 702.02 of the RIDOT Standard Specifications.
  1. Clay Brick, Concrete Masonry Units, Lime, Mortar, Frames, Grates, Covers, and Ladder Rungs shall conform to the applicable requirements of Section M.04.03 of the RIDOT Standard Specifications.
    - a. Mortar: Shall conform to Section M.04.03.5 of the RIDOT Standard Specifications.
    - b. Clay Brick: Shall conform to Section M.04.03.1 of the RIDOT Standard Specifications for Sewer Brick (AASHTO M91, Grade SM).
  2. Gravel Borrow: See Section 02300 "Earth Moving."
  3. Concrete: Concrete for these structures shall conform to the applicable requirements of Section 601 of the RIDOT Standard Specifications.
  4. Frame and Cover: Re-use existing frame and cover.
  5. Grade Rings: If necessary and where space permits, include two or three reinforced-concrete rings of 6- to 9-inch total thickness matching the 24-inch diameter frame and grate or cover.
  6. Steps: Fiberglass, individual steps or ladder. Include width that allows worker to place both feet on one step and is designed to prevent lateral slippage off step. Cast steps or anchor ladder into base, riser, and top section sidewalls at 12- to 16-inch intervals. Omit steps for structures less than 60 inches deep.
  7. Pipe Connectors: ASTM C 923, resilient, of size required, for each pipe connecting to base section.
  8. Grout: ASTM C476.

## PART 3 - EXECUTION

### 3.1 Pipes And Fittings

- A. General Locations and Arrangements: Drawing plans and details indicate general location and arrangement of underground storm drainage piping. Location and arrangement of piping layout

take into account design considerations. Install piping as indicated, to extent practical. Where specific installation is not indicated, follow piping manufacturer's written instructions.

- B. Install piping beginning at low point, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings according to manufacturer's written instructions for use of lubricants, cements, and other installation requirements.

### 3.2 Pipe Joint Construction

- A. General: Join and install pipe and fittings according to installations indicated.
- B. HDPE Pipe and Fittings:
  - 1. Join pipe with soiltight joints according to manufacturer's written instructions.
  - 2. Install according to ASTM D 2321 and manufacturer's written instructions.
  - 3. Install corrugated piping according to the Corrugated Polyethylene Pipe Association's "Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings."
- C. Pipe joints and storm drain connections must be adequately sealed to avoid water seeping through pipe or structure joints. Pipe sections shall be coupled using suitable connection rings and flanges. Field connections to stormdrain structures and pipes shall be sealed with polymer grout material that is capable of adhering to surfaces.

### 3.3 Integrated Pretreatment Catch Basin

- A. Install integrated pretreatment catch basins in accordance with Section 702 of the RIDOT Standard Specifications.
  - 1. Install in locations and to the grades indicated on the Contract Drawings.
  - 2. Set atop a layer of compacted gravel borrow as indicated on the Contract Drawings.
- B. Set grates to be approximately two inches below the roadway gutter elevation as indicated.

### 3.4 Pretreatment Sediment Forebays

- A. Install cobblestones atop a compacted layer of gravel borrow and bedding sand.
- B. Install weep holes in locations indicated on the Contract Drawings. Trim any excess material set to form the weep hole flush with the finished surface of the forebay.
- C. Install granite curb sediment forebay berm. Create notch in curbing as indicated on the Contract Drawings.
- D. Clean joints and install grout in between joints of cobblestones. Remove any excess grout from stones and discard it.

### 3.5 Shallow and Conventional Bioretention Planter

- A. Engineered Soil Media and Planter Walls/Footings
  - 1. Excavate to bottom of engineered soil media and footings as indicated on the Drawings.

2. Install cast-in-place or precast concrete footings taking care not to compact subgrade outside of the footprint of the footing.
  3. After installation of footings, scarify the bottom of the excavation prior to placing filter media.
  4. Install granite planter wall/curb within notch of footings. Align wall/curb as required to have a vertical face and grout into place.
  5. Install mortar between joints of planter wall/curb.
  6. Install non-woven filter fabric along any sidewalls of engineered soil media that extend below the footings. Overlap the fabric above bottom of footing as indicated on the Contract Drawings.
  7. Place engineered soil media within the bioretention planters in 12-inch maximum lifts. Installation of soils shall be done in a manner that will ensure adequate filtration. No additional manual compaction of soil shall be performed. Equipment should operate from the top of the excavation to avoid compaction within the footprint of the bioretention area. Allow time for natural compaction and settlement between lifts. Rake soil material as needed to level out. Overfill above the proposed surface elevation to accommodate natural settlement to final grade. Engineered soil media shall not be placed when the subgrade or engineered soil media is frozen, excessively wet, extremely dry, or in a condition otherwise detrimental to the proposed seeding, planting or soil structure.
  8. In order to speed up the natural compaction process, presoak the engineered soil media within the bioretention planter. If weather and construction scheduling permit, allow natural settlement to occur with the help of rain events to presoak the bioretention soil media. Otherwise, use potable water.
  9. The material delivered to the site shall be visually and continuously inspected by Engineer during construction to ensure that it is consistently the same material previously approved and delivered to the site. If changes in material occur, soil delivery shall cease immediately, the Contractor shall not incorporate the new material into the work until the material meets these specifications. The Contractor shall test the new material as a new source and submit his results to the Engineer for his/her approval as outline above. If the Engineer rejects the material, the Contractor shall immediately remove the material from the project site at no additional cost.
  10. After engineered soil media placement and final grading, no heavy equipment, pickup trucks, or other construction vehicles shall be permitted to travel on these completed areas. The Contractor shall, through mechanical raking and hand grading with rakes and shovels, grade all areas around fences, pipes and other structures in preparation for seeding or planting.
  11. The Contractor shall, as part of the engineered soil media spreading operation, mechanically rake and clean all undesirable materials from the Engineered Soil prior to seeding or planting operations. The soil shall be firm prior to seeding operations. The discing of the soil just prior to seeding is not permitted. The method for this work must be accepted by the Engineer.
  12. The Contractor shall dispose of all undesirable materials raked from the engineered soil media at no additional costs.
- B. Grouted Cobblestone Splash Pads
1. Install in locations and to elevations indicated on the Contract Drawings.
  2. Install cobblestones atop a compacted layer of gravel borrow and bedding sand.

3. Clean joints of cobblestones and install grout in between joints. Remove any excess grout from cobble stones.
  - C. Bioretention Planter Overflow Structure
    1. Install in location and to elevation in accordance with manufacturer's instructions..
    2. Fasten dome grate to structure in accordance with the manufacturer's instructions.
  - D. Wheel Guard Plates
    1. Notch out the top of granite curb on each side of the inlet curb opening notch to accommodate installation of wheel guard plate. The depth of the notch along top of granite curbing shall match the thickness of the wheel guard plate such that the top of the plate is flush with top of adjacent granite curbing.
    2. Secure plate to curbing using stainless steel bolts as recommended by plate manufacturer.
  - E. Inlet Screen Covers
    1. Attach the cover to the inside of the curb opening notch such that the cover and associated attachments do not extend past the roadside face of curb (to avoid conflicts with future plowing operations).
  - F. Gabion Baskets
    1. The top of the baskets shall be set approximately 4 inches above the top of the engineered soil media.
  - G. Planter wall/curb footings
    1. Concrete shall consist of Class XX Concrete in accordance with Section 601 of RIDOT's Standard Specifications.
    2. Steel Reinforcement shall be uncoated reinforcing steel in accordance with Section 810 of RIDOT's Standard Specifications.
- 3.6 Permeable Pavers
- A. Compact subgrade uniformly to at least 95 percent Modified Proctor per ASTM D 1557.
  - B. Install non-woven filter fabric along the sides of the excavation.
  - C. Install the reservoir course in uniform lifts not exceeding 6 inches loose thickness and compact with at least two passes in the vibratory mode then at least two in the static mode with a minimum 10 ton vibratory roller until there is no visible movement. Do not crush aggregate with the roller. Do not exceed the specified surface grade of the reservoir course material by more than  $3/4 \pm$  inches.
  - D. Install the permeable base layer atop the reservoir course layer in uniform lifts not exceeding 6 inches and compact to at least 95 percent as per ASTM D 4254 with at least two passes in the vibratory mode then at least two in the static mode with a minimum 10 ton vibratory roller until

there is no visible movement. Do not crush aggregate with the compaction device. Do not exceed the specified surface grade of the compacted permeable base layer more than  $1/2 \pm$  inches. Grade and compact the upper surface of the permeable base layer material sufficiently to prevent infiltration of the bedding layer to be installed above it. Aggregate material both during construction and throughout its service life.

- E. Install the bedding layer atop the permeable base layer. Provide and spread the bedding layer aggregate evenly over the permeable base layer and screed to a nominal thickness of 1-1/2 inches. Protect the screeded bedding layer from being disturbed.
- F. Screed only the area which can be covered by pavers in one day. Do not use bedding layer aggregate material to fill depressions in the permeable base layer surface. Keep moisture content constant and density loose and constant until the permeable pavers are set and compacted.
- G. Install permeable pavers in accordance with manufacturer instructions. Replace unit pavers with chips, cracks, voids, discolorations, and other defects that might be visible in finished work prior to installation. Vibrate pavers into leveling course with a low-amplitude plate vibrator capable of a 5000-lbf (22-kN) compaction force at 80 to 90 Hz. Perform at least three passes across paving with vibrator. Vibrate only after edge pavers are installed and there is a completed surface. Protect concrete paver surface from scuffing during compaction by utilizing a urethane pad. Remove any cracked or structurally damaged pavers and replace with new units prior to installing Permeable Joint Opening Aggregate material.
- H. Provide, spread and sweep Permeable Joint Opening Aggregate into joints immediately after vibrating pavers until full. Vibrate pavers and add Permeable Joint Opening Aggregate material until joints are completely filled, then remove excess material. This will require at least 4 passes with a plate compactor. Remove excess Permeable Joint Aggregate broom clean from surface when installation is complete.

### 3.7 Converting Existing Drop Inlet Manhole to Drain Manhole

- A. This work shall consist of converting the existing drop inlet manhole to a drain manhole by removing its frame/cover and adjacent drop inlet stone and reconstructing/remodeling its top section and adjusting its frame/cover to meet the sidewalk grade/elevation shown on the Contract Drawings or as directed by the Engineer and/or Owner in accordance with Section 704 of the RIDOT Standard Specifications.
- B. The existing inlet and outlets shall be maintained and a new inlet connection shall be made to accommodate the storm drain piping from the overflow structure associated with Bioretention Planter No.7.
  - 1.

### 3.8 Field Quality Control

#### A. Drainage Piping and Structures:

1. Clear interior of piping and structures of dirt and superfluous material as work progresses. Maintain swab or drag in piping, and pull past each joint as it is completed.
2. In large, accessible piping, brushes and brooms may be used for cleaning.
3. Place plug in end of incomplete piping at end of day and when work stops.
4. Flush piping between structures to remove collected debris, if required by authorities having jurisdiction.
5. Defects requiring correction include:
  - a. Alignment: Less than full diameter of inside of pipe is visible between structure.
  - b. Deflection: Flexible piping with deflection that prevents passage of ball or cylinder of size not less than 92.5 percent of piping diameter.
  - c. Damage: Crushed, broken, cracked, or otherwise damaged piping.
  - d. Infiltration: Water leakage into piping.
  - e. Exfiltration: Water leakage from or around piping.
6. Replace defective piping using new materials, and repeat inspections until defects are within allowances specified.
7. Reinspect and repeat procedure until results are satisfactory.

#### B. Permeable Pavers:

1. Verify final elevations for conformance to the Contract Drawings after sweeping the surface clean.
  - a. Prevent final permeable paver finished grade elevations from deviating more than  $\pm 3/8$  in. under a 10 ft (3 m) straightedge or indicated slope, for finished surface of paving.
  - b. Lippage: No greater than 1/32 inch difference in height between permeable pavers and adjacent paved surfaces.

#### C. Shallow and Conventional Bioretention Planters

1. Disallow the practice of mixing material onsite. Blending engineered soil media should be done in a controlled setting instead of in the field. Material source testing is required prior to blending to ensure consistency. Testing is also be required periodically through the blending process to ensure compliance.
2. Any stone (including cobblestones) used within the bioretention planters shall be washed and remain free of sediment prior to installation.
3. Planter curbing/walls shall have a vertical and horizontal tolerance of plus or minus 1 inch.
4. The rim of the overflow structure shall be within plus or minus 1 inch of the elevation specified on the Contract Drawings.

### 3.9 Cleaning

- A. Clean interior of piping and structures of dirt and superfluous materials. Flush with water.

#### PART 4 - METHOD OF MEASUREMENT

- A. Permeable pavers will be measured by the number of square feet actually placed in accordance with the Drawings and/or as directed by the Engineer.
- B. Bioretention planter items will be measured by the number and type (shallow or conventional) of benches installed in accordance with the Drawings and/or as directed by the Engineer.
- C. All other items associated with this work will not be measured for payment.

#### PART 5 - BASIS OF PAYMENT

- A. The accepted quantity of Permeable Pavers shall be paid for at the contract unit price per each for that item. The price for these items constitutes full and complete compensation for all labor, tools, materials, and equipment, and all other incidentals required to finish the work, complete and in place and accepted by the Engineer/Owner.
- B. The accepted quantity of Bioretention Basins (shallow or conventional) shall be paid for at the contract unit price per each for that item. The price for these items constitutes full and complete compensation for all labor, tools, materials, and equipment, and all other incidentals required to finish the work, complete and in place and accepted by the Engineer/Owner. If one or more of the shallow bioretention planter bid alternates are awarded, the shallow bioretention planter shall replace the conventional bioretention planter that was included in the Unit Price Bid Items.
- C. All remaining work shall be paid as part of the lump sum Contract Base Bid Price. The price for this work constitutes full and complete compensation for all labor, tools, materials, and equipment, and all other incidentals required to finish the work, complete and in place and accepted by the Engineer/Owner.

END OF SECTION

## SECTION 02741 - ASPHALT PAVING

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, RIDOT Standard Specification for Road and Bridge Construction and Division 1 Specification Sections, apply to this Section

#### 1.2 Summary

- A. Section Includes:

- 1. Hot-mix asphalt paving
- 2. Temporary bituminous ramps at the beginning and end sections of roadway reconstruction proposed for Pine Street in addition to full-depth sawcut locations where Pine Street intersects Bayley Street and Waverly Street and at bituminous driveway locations.
- 3. Adjust structures to grade including, but not limited to, sanitary manholes, grates, monitoring wells, signal handholes, and drainage handholes.
- 4. Adjust water gate, gas gate, and miscellaneous gate boxes to grade.

- B. Related Requirements:

- 1. Section 02230 "Site Clearing"
- 2. Section 02300 "Earth Moving"

#### 1.3 Definitions

- A. Bituminous Concrete Roadway Binder Course (Class 19 HMA Binder Course): Asphalt-aggregate layer placed over subgrade and aggregate base course; and beneath bituminous concrete surface course.
- B. Bituminous Concrete Roadway Surface Course (Class 9.5 HMA Surface Course): The asphalt-aggregate top course of a bituminous concrete pavement, sometimes called a wearing course.
- C. RIDOT: Rhode Island Department of Transportation.

#### 1.4 Action Submittals

- A. Product Data: For each type of product/asphalt mix indicated on the Drawings.
  - 1. Include technical data and tested physical and performance properties.
    - a. Job-Mix Designs: For each job mix proposed for the Work.

### 1.5 Informational Submittals

- A. Qualification Data: For manufacturer and testing agency.
- B. Material Certificates: For each paving material. Include statement that mixes containing recycled materials will perform equal to mixes produced from all new materials.
- C. Material Test Reports: For each paving material, by a qualified testing agency.

### 1.6 Quality Assurance

- A. Where "RIDOT Standard Specifications" is used, it shall mean "Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, Amended March 2018 and issued supplements.
- B. Supplier Qualifications: A qualified supplier registered with and approved by RIDOT.
- C. Regulatory Requirements: Comply with the RIDOT Standard Specifications for bituminous concrete paving work.
- D. Asphalt-Paving Publication: Comply with AI MS-22, "Construction of Hot Mix Asphalt Pavements," unless more stringent requirements are indicated.
- E. Preinstallation Conference: Conduct conference at Project Site.
  - 1. Review methods and procedures related to hot-mix asphalt paving including, but not limited to, the following:
    - a. Review proposed sources of paving materials, including capabilities and location of plant that will manufacture hot-mix asphalt.
    - b. Review condition of subgrade and preparatory work.
    - c. Review requirements for protecting paving work, including restriction of traffic during installation period and for remainder of construction period.
    - d. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.

### 1.7 Delivery, Storage, and Handling

- A. Transport bituminous concrete mixture in tight body trucks that have been previously cleaned of foreign material.
  - 1. Tightly cover trucks with waterproof canvas or other suitable covers.
- B. Deliver mixture within 25 deg F of approved job mix formula temperature.

## 1.8 Field Conditions

- A. Environmental Limitations: Do not apply asphalt materials if subgrade is wet or excessively damp, if rain is imminent or expected before time required for adequate cure, or if the following conditions are not met:
1. Tack Coat: Minimum surface temperature of 60 degrees F.
  2. Asphalt Binder Course: Minimum surface temperature of 40 degrees F and rising at time of placement.
  3. Asphalt Surface Course: Minimum surface temperature of 60 degrees F at time of placement.

## PART 2 - PRODUCTS

### 2.1 Bituminous Concrete

- A. Dense graded hot mix asphalt (HMA) pavement shall conform to Section 401 of the RIDOT Standard Specifications. The HMA shall be composed of a mixture of aggregate, PGAB, and filler if required. The aggregate shall be sized, graded and combined in such proportions that the resulting mixture meets the gradation requirements of the job mix formula (JMF).
- B. Performance-Graded Asphalt Binder (PGAB): All grades shall conform to AASHTO M 320 and R29. The PGAB shall meet the requirements of PG 64S-28 with the exception of both Class 19.0 and mixes designated as "Base Course" which shall incorporate PG 64S-22 for mixes with less than 15% RAP. Both Class 19.0 and "Base Course" mixes with 15 to 25 percent RAP shall incorporate PG 58S-28. Should a class of HMA be designated as "Modified", the binder shall meet the requirements of PG 64E-28 and shall incorporate at least 2.0% SBS polymer. The non-recoverable creep compliance versus percent recovery of the binder shall be plotted and must fall above the curve in Figure X1.1 in Appendix X1 of AASHTO M 332.
- C. Aggregate: Shall be in conformance with Subsection M.03.02.2 of the RIDOT Standard Specifications and AASHTO M 323.
- D. Filler: Shall be in conformance with Subsection M.03.02.3 of the RIDOT Standard Specifications.

### 2.2 Asphalt Emulsion Tack Coat

- A. Asphalt Emulsion Tack Coat: Shall conform to Section M.03; Materials and Section 403; Asphalt Emulsion Tack Coat of the Standard Specifications.

### 2.3 Bituminous Concrete Mixes

- A. Bituminous Concrete Mix Design: Shall conform to shall conform to Section 401 of the RIDOT Standard Specifications. The following mixes shall be used:

1. Class 19.0 HMA for binder course used in full-depth roadway reconstruction and for bituminous concrete driveways.
2. Class 9.5 HMA for surface course used in full-depth roadway reconstruction and for bituminous concrete driveways.

Each mix shall meet the gradation requirements listed within the table below:

	<b>Class 19.0</b>	<b>Class 12.5</b>	<b>Class 9.5</b>	<b>Class 4.75</b>
25.0mm (1")	100%	100%	100%	100%
19.0mm (3/4")	90% - 100%	100%	100%	100%
12.5mm (1/2")	90% max	90% - 100%	100%	100%
9.5mm (3/8")	-	90% max	90% - 100%	95% - 100%
4.75mm (#4)	-	-	90% max	85% - 100%
2.36mm (#8)	± 5% from design	± 5% from design	± 5% from design	-
1.18mm (#16)	-	-	-	±5% from design
0.075mm (#200)	>2%	>2%	>2%	>2%
Control Sieve	2.36mm (#8)	2.36mm (#8)	2.36mm (#8)	1.18mm (#16)

### PART 3 - EXECUTION

#### 3.1 Examination

- A. Verify that subgrade is dry and in suitable condition to begin paving.
- B. Proof-roll subgrade below pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
  1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph
  2. Proof roll with a loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons.
  3. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Engineer, and replace with compacted backfill or fill as directed.
- C. Proceed with paving only after unsatisfactory conditions have been corrected.

#### 3.2 Surface Preparation

- A. General: Immediately before placing bituminous concrete, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.
  1. Sweep loose granular particles from surface of unbound-aggregate base course. Do not dislodge or disturb aggregate embedded in compacted surface of base course.

- B. Tack Coat: Apply uniformly to surfaces of existing pavement at a rate of 0.05 to 0.15 gal./sq. yd.
  - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
  - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

### 3.3 Bituminous Concrete Placing

- A. Machine place hot bituminous concrete on prepared surface, spread uniformly, and strike off. Place by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.
  - 1. Place bituminous concrete base course in a single lift.
  - 2. Place bituminous concrete surface course in a single lift.
  - 3. Spread mix at minimum temperature of 250 deg F.
  - 4. Begin applying mix along centerline of crown for crowned sections and on high side of one-way slopes, unless otherwise indicated.
  - 5. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in bituminous concrete paving mat.
  - 6. In areas inaccessible to pavers, use staked forms to maintain indicated line and grade. Prevent segregation of mix when placing mix by hand.
- B. Place paving in consecutive strips not less than 10 feet wide unless infill edge strips of a lesser width are required.
  - 1. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete a section of bituminous concrete base course before placing bituminous concrete surface course.
- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot bituminous concrete to prevent segregation of mix; use suitable hand tools to smooth surface.

### 3.4 Joints

- A. Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions, with same texture and smoothness as other sections of hot-mix asphalt course.
  - 1. Clean contact surfaces and apply tack coat to joints.
  - 2. Offset longitudinal joints, in successive courses, a minimum of 6 inches.
  - 3. Offset transverse joints, in successive courses, a minimum of 24 inches.
  - 4. Construct transverse joints at each point where paver ends a day's work and resumes work at a subsequent time. Construct these joints using either "bulkhead" or "papered" method according to AI MS-22, for both "Ending a Lane" and "Resumption of Paving Operations."
  - 5. Compact joints as soon as hot-mix asphalt will bear roller weight without excessive displacement.

6. Compact asphalt at joints to a density within 2 percent of specified course density.

### 3.5 Compaction

- A. Roadways: Compaction shall be in accordance with Subsection 401.03.6; Compaction of RIDOT's Standard Specifications.

### 3.6 Temporary Bituminous Ramp

- A. Temporary bituminous ramps are required at the beginning and end sections of roadway reconstruction proposed for Pine Street in addition to full-depth sawcut locations where Pine Street intersects Bayley Street and Waverly Street and at bituminous driveway locations during the period when Pine Street pavement is removed and replaced. Temporary bituminous ramps shall provide a transition at longitudinal drop-offs between proposed and existing roadway grades.
- B. Longitudinal Drop-Offs: A longitudinal drop-off occurs along the outside edges of pavement and is the difference in elevation between the top of recently placed bituminous pavement and the top of existing ground (or pavement).
  1. Temporary bituminous ramp pavement slopes shall not exceed 5%.
  2. Install as indicated on the Contract Drawings.

### 3.7 Installation Tolerances

- A. Thickness: Shall conform to Subsection 401.03.10; Thickness Requirements of the RIDOT Standard Specifications.
- B. Surface Smoothness: Shall conform to Subsection 401.03.9; Surface Tolerances of the RIDOT Standard Specifications.
- C. Variation from Design Elevation: 1/4 inch.

### 3.8 Weather Limitations

Weather Limitations: shall conform to Subsection 401.03.11; Weather Limitations and Subsection 401.03.12; Cold Weather Paving of RIDOT's Standard Specifications.

### 3.9 Field Quality Control

- A. Testing Agency: The Contractor will be responsible for retaining the testing agency for required testing.
  1. Testing agency will conduct and interpret tests and state in each report whether tested Work complies with or deviates from specified requirements.
- B. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

- C. Thickness: In-place compacted thickness of bituminous concrete courses will be determined according to ASTM D 3549.
- D. Surface Smoothness: Finished surface of each bituminous concrete course will be tested for compliance with smoothness tolerances.
- E. In-Place Density: Testing agency will take samples of uncompacted paving mixtures and compacted pavement according to AASHTO T 168.
  - 1. Reference maximum theoretical density will be determined by averaging results from four samples of bituminous concrete mixture delivered daily to site, prepared according to AASHTO T 209, and compacted according to job-mix specifications.
  - 2. In-place density of compacted pavement will be determined by nuclear method according to ASTM D 2950 and correlated with ASTM D 1188 or ASTM D 2726. In-place density shall be a minimum of 95 percent of Marshall density as determined at the plant.
    - a. One test shall be performed for every 1000 sq. yd. or less of installed pavement.
- F. Remove and replace or install additional bituminous concrete where test results or measurements indicate that it does not comply with specified requirements.

### 3.10 Adjust Structures to Grade

- A. This work consists of adjusting the frames and covers or grates of existing drainage structures, sanitary manholes, signal handholes, and drainage handholes to those new grades and details indicated on the Contract Drawings or as directed by the Engineer and/or Owner, in accordance with Section 707 of the RIDOT Standard Specifications.

### 3.11 Adjust Gate Boxes, Gate Valves, Monitoring Well to Grade

- A. This work consists of adjusting existing utility gate boxes, utility valve gates, monitoring well and curb stops to those new grades and details indicated on the Contract Drawings or as directed by the Engineer and/or Owner, in accordance with Section 713 of the RIDOT Standard Specifications.

### 3.12 Removing and Disposing Abandoned Gate Boxes

- A. This work consists of removing and disposing gate boxes of abandoned gas and water mains and/or laterals that are no longer in service. Remove and dispose portions of gate boxes to at least 3 feet (minimum) below the finished pavement surface under the road and to at least 12 inches below the finished grade outside of the road in sidewalk areas.

### 3.13 Waste Handling

- A. Except for material indicated to be recycled, remove excavated materials from Project site and legally dispose of them in an approved landfill if not stockpiled in Contractor's yard.
  - 1. Do not allow excavated materials to accumulate on-site.

PART 4 - METHOD OF MEASUREMENT

- A. Items associated with this work will not be measured for payment.

PART 5 - BASIS OF PAYMENT

- A. This work shall be paid as part of the lump sum Total Contract Base Bid Price. The price for this work includes full and complete compensation for all labor, materials and equipment, and for all other incidentals required to finish the work, complete and accepted by the Engineer/Owner.

END OF SECTION

## SECTION 02742 - CONCRETE PAVING

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, RIDOT Standard Specification for Road and Bridge Construction and Division 1 Specification Sections, apply to this Section

#### 1.2 Summary

- A. Section Includes:
  - 1. Type I and II Concrete Wheelchair Ramps (with Detectable Warning Panels).
  - 2. Standard and Heavy-Duty Cement Concrete Sidewalks.
- B. Related Sections:
  - Section 02300 "Earth Moving".

#### 1.3 Definitions

- A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash and other pozzolans, and ground granulated blast-furnace slag.
- B. Detectable Warning Panels: Panels with truncated domes in an arrayed pattern that is compliant with Americans with Disabilities Act (ADA) warning and directional systems for the visually impaired.
- C. Heavy-duty Cement Concrete Sidewalk: Cement concrete sidewalk consisting of an 8-inch thick layer of reinforced Portland cement concrete. It is anticipated that these areas of sidewalk could be impacted by the turning movements of larger sized delivery vehicles.
- D. Standard Cement Concrete Sidewalk: Cement concrete sidewalk consisting of a 4-inch thick layer of reinforced Portland cement concrete. It is not anticipated that these areas of sidewalk could be impacted by the turning movements of larger sized delivery vehicles.
- E. Type I Wheelchair Ramp - Cement concrete wheelchair ramp, consisting of an 8-inch thick layer of reinforced Portland cement concrete, which is located in a sidewalk area where the ramp landing only occupies a portion of the sidewalk area.
- F. Type II Wheelchair Ramp - Cement concrete wheelchair ramp, consisting of an 8-inch thick layer reinforced Portland cement concrete, which is located in a sidewalk area where the ramp landing occupies the entire width of the sidewalk area.

#### 1.4 Action Submittals

- A. Product Data: For each type of product indicated including detectable warning panels.
- B. Other Action Submittals:
  - 1. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

#### 1.5 Informational Submittals

- A. Qualification Data: For qualified installer of detectable warnings, ready-mix concrete manufacturer, and testing agency.
- B. Material Certificates: For the following, from manufacturer:
  - 1. Cementitious materials.
  - 2. Steel reinforcement/wire fabric and reinforcement accessories.
  - 3. Admixtures.
  - 4. Curing compounds.
  - 5. Bonding agent or epoxy adhesive.
  - 6. Joint fillers.
- C. Material Test Reports: Provide Sieve Analysis for each of the following:
  - 1. Aggregates.
- D. Field quality-control reports.

#### 1.6 Quality Assurance

- A. Where "RIDOT Standard Specifications" is used, it shall mean "Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, Amended March 2018 and issued supplements.
- B. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
- C. Testing Agency Qualifications: Qualified according to ASTM C 1077 and ASTM E 329 for testing indicated.
  - 1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-1 or an equivalent certification program.
- D. Concrete Testing Service: Engage a qualified testing agency to perform material evaluation tests and to design concrete mixtures.

- E. ACI Publications: Comply with ACI 301 unless otherwise indicated.
  - F. Preinstallation Conference: Conduct conference at Project location.
    - 1. Review methods and procedures related to concrete paving, including but not limited to, the following:
      - a. Concrete mixture design.
      - b. Quality control of concrete materials and concrete paving construction practices.
      - c. Standard versus heavy-duty cement concrete sidewalk locations.
  - G. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of the State of Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, 2004 Edition (Amended March 2018)" and issued supplements. This document will be referred to, herein, as the "RIDOT Standard Specifications."
- 1.7 Project Conditions
- A. Traffic Control: Maintain access for vehicular traffic as documented on Traffic Management Plans included within the Contract Drawings. Pedestrian access will be limited (during construction) to the existing sidewalk on the eastern side of Pine Street.
  - B. Concrete sidewalk and wheelchair ramp concrete pours immediately north and south of the Summit Manufacturing driveway shall be limited to Fridays such that concrete will be allowed to effectively cure over the weekend to minimize the potential for damage associated with large vehicle deliveries. The contractor shall adequately notify and coordinate with the adjacent building owners prior to installation of concrete.

## PART 2 - PRODUCTS

### 2.1 Forms

- A. Form Materials: Wood or metal in accordance with Section 905.03.3 of RIDOT's Standard Specifications. Form materials shall provide for a full-depth, continuous, straight, and smooth exposed surface.
  - 1. Use flexible or uniformly curved forms for curves with a radius of 100 feet (30.5 m) or less. Do not use notched and bent forms.
- B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and that will not impair subsequent treatments of concrete surfaces.

## 2.2 Steel Reinforcement

- A. Welded Wire Fabric: Shall consist of 4" x 4" welded wire fabric reinforcing conforming to the requirements of Section M.05.02.1 of the RIDOT Standard Specifications.
- B. Epoxy-Coated, Joint Dowel Bars: Dowel bars shall be #5 epoxy coated bars, 24 inches long.

## 2.3 Concrete Materials

- A. Portland Cement Concrete: Portland cement shall conform to the requirements of Section M.02 of the RIDOT Standard Specifications and be listed on the Department's Approved Materials List.
- B. Coarse and Fine Aggregate shall conform to the requirements of Subsections M.02.03 and M.02.02 of the RIDOT Standard Specifications, respectively.
- C. Water: Potable and complying with ASTM C 94/C 94M. Water shall not contain any impurities in sufficient amounts to cause discoloration of the concrete or produce etching of the surface.
- D. Chemical Admixtures: Calcium Chloride in any form shall not be used in any Portland cement concrete. No chemical admixtures shall be used in the work unless they are approved by the Engineer. Chemical admixtures shall be those listed on the Department's Approved Materials List and shall conform to the requirements below:
  - 1. Chemical Admixtures - AASHTO M194
  - 2. Air-entraining Admixtures - AASHTO M154.
- E. Vibrators: Vibrators, for full width vibration of concrete paving, may be either the surface pan type or the internal types with either immersed tube or multiple spuds. They may be attached to the spreader or the finishing machine, or may be mounted on a separate carriage to accommodate either slip form or side form paving methods. They shall not come in contact with the joint, load transfer devices, subgrade, reinforcing, or side forms.
  - 1. The frequency of the surface vibrators shall not be less than 3,500 impulses per minute and the frequency of the internal type shall not be less than 5,000 impulses per minute for tube vibrators and not less than 7,000 impulses per minute for spud vibrators.
  - 2. Vibrators shall be rubber tipped to prevent damage to epoxy-coated reinforcing steel.

## 2.4 Curing Materials

- A. Burlap Cloth: Burlap cloth made from jute or Kenaf shall conform to the requirements of AASHTO M182 Class 2 or 4. Burlap shall be clean and free from cuts, tears, uneven weaving and contaminants.
- B. Sheet Materials for Curing Concrete: The use of waterproof paper is not allowed as a curing medium for Portland cement concrete.
  - 1. Moisture-Retaining Cover: ASTM C 171, polyethylene film.

2. Plastic coated fiber Blanket: White plastic coated fiber blankets or white plastic coated absorbent synthetic fiber blankets shall conform to the test requirements of AASHTO M171, for white-burlap polyethylene sheets, for moisture loss and reflectance.
  - C. Liquid Membrane Curing Compound: White plastic coated fiber blankets or white plastic coated absorbent synthetic fabric blankets shall conform to the test requirements of AASHTOM171, Table 1, for white-burlap polyethylene sheets, for moisture loss and reflectance.
- 2.5 Concrete Mixtures
- A. Shall be Class XX min and have a minimum 28-day compressive strength of 4,000 psi in accordance with Section 601 of the RIDOT Standard Specifications.
- 2.6 Admixtures
- A. Chemical Admixtures: Calcium Chloride in any form shall not be used in any Portland cement concrete. No chemical admixtures shall be used in the work unless they are approved by the Engineer. Chemical admixtures shall be those listed on the Department's Approved Materials List and shall conform to the requirements below:
    1. Chemical Admixtures - AASHTO M194
    2. Air-entraining Admixtures - AASHTO M154.
- 2.7 Detectable Warning Panels
- A. Detectable warning panels shall be of dimension shown on the Contract Drawings or as directed by the Owner/Engineer and of a color contrast within ADA standards and the discretion of the Owner. The panels shall be gray cast iron conforming to AASHTO M105 and AASHTO M306 and Section 942 of the RIDOT Standard Specifications. The panels shall have integrally cast domes and shall be manufactured with integral embedment lugs for the express installation into fresh unset Portland cement concrete.

### PART 3 - EXECUTION

#### 3.1 Examination

- A. Examine exposed subgrades and subbase surfaces for compliance with requirements for dimensional, grading, and elevation tolerances. The alignment and grade elevations of the forms shall be checked and corrections made by the Contractor before placing the concrete. When any form has been disturbed or any grade has become unstable, the form shall be reset and rechecked.
- B. Proof-roll prepared subbase surface below concrete paving to identify soft pockets and areas of excess yielding.

1. Completely proof-roll subbase in one direction and repeat in perpendicular direction. Limit vehicle speed to 3 mph.
2. Proof-roll with a pneumatic-tired and loaded, 10-wheel, tandem-axle dump truck weighing not less than 15 tons.
3. Correct subbase with soft spots and areas of pumping or rutting exceeding depth of 1/2 inch according to requirements in Section 312000 "Earth Moving."

C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 Preparation

- A. Remove loose material from compacted subbase surface immediately before placing concrete.
- B. When side forms have been securely set to grade, the subgrade or base course shall be brought to proper cross section.
1. High areas shall be trimmed to proper elevation.
  2. Low areas may be filled and compacted to a condition similar to that of surrounding grade, or filled with concrete integral with the pavement.
  3. The finished grade shall be maintained in a smooth and compacted condition until the pavement is placed.

### 3.3 Concrete Mixing, Delivery, and Discharge

- A. Concrete may be mixed at the site of construction, at a central point, or in transit mixers, all in accordance with these Specifications.
1. Equipment - Mixers and Agitators. Mixers may be stationary mixers or truck mixers. Agitators may be truck mixers or truck agitators.
    - a. Stationary mixers shall be equipped with a metal plate or plates on which are plainly marked the mixing speed of the drum or paddles, and the maximum capacity in terms of the volume of mixed concrete. When used for the complete mixing of concrete, stationary mixers shall be equipped with an acceptable timing device that will not permit the batch to be discharged until the specified mixing time has elapsed.
    - b. Each truck mixer or agitator shall have attached thereto in a prominent place a metal plate or plates on which are plainly marked the gross volume of the drum, the capacity of the drum or container in terms of the volume of the mixed concrete, and the minimum and maximum mixing speeds of rotation of the drum, blades, or paddles. When the concrete is truck-mixed the volume of concrete mixed per batch shall not exceed the mixer's nominal capacity as shown on the manufacturer's standard rating plate on the mixer, except that an overload up to 10 percent above the mixer's nominal capacity may be permitted, provided concrete test data for strength, segregation, and uniform consistency are satisfactory, and provided no spillage of concrete takes place.
    - c. Truck mixers and agitators shall be equipped with means by which the number of revolutions of the drum, blades, or paddles may be readily verified. Truck mixers

- must also have a means of measuring the amount of water added during retempering such as a water meter or other method approved by the Engineer.
- d. All stationary and truck mixers shall be capable of combining the ingredients of the concrete within the specified time or number of revolutions specified herein into a thoroughly mixed and uniform mass and of discharging the concrete so that no less than 5 of the 6 requirements shown in AASHTO M157-93 Table A1 shall have been met.
  - e. The agitator shall be capable of maintaining the mixed concrete in a thoroughly mixed and uniform mass and of discharging the concrete with a satisfactory degree of uniformity as defined by AASHTO M157-93 Annex A1.
  - f. Slump tests of individual samples taken after discharge of approximately 15 percent and 85 percent of the load may be made for a quick check of the probable degree of uniformity. These two samples shall be obtained within an elapsed time of not more than 15 minutes. If these slumps differ more than that specified in AASHTO M157-93 Annex A1, the mixer or agitator shall not be used unless the condition is corrected.
  - g. Mixers and agitators shall be examined or weighted routinely as frequently as necessary to detect changes in condition due to accumulations of hardened concrete or mortar and examined to detect wear of blades. When such changes are extensive enough to affect the mixer performance, the proof-tests described in AASHTO M157-93 Annex A1 shall be performed to show whether the correction of deficiencies is required.
- B. Mixing and Delivery. Ready-mixed concrete shall be mixed and delivered to the point designated by the Engineer by means of one of the following combinations of operations, central mixed and truck-mixed concrete. 6-13 Agitators and non-agitating equipment shall only be used for delivering pre-mixed concrete. Mixers and agitators shall be operated within the limits of capacity and speed of rotation designated by the manufacturer of the equipment. 1.
1. Central Mixed Concrete. Concrete that is mixed completely in a stationary mixer and transported to the point of delivery either in a truck agitator, or a truck mixer operating at agitating speed, or in non-agitating equipment approved by the Engineer and meeting the requirements specified herein shall conform to the following:
    - a. The mixing time shall be counted from the time all the solid materials are in the drum.
    - b. The batch shall be so charged into the mixer that some water will enter in advance of the cement and aggregate, and all water shall be in the drum by the end of the first one-fourth of the specified mixing time.
  2. Where no mixer performance tests are made, the acceptable mixing time for mixers having capacities of 1 cubic yard or less shall not be less than 1 minute. For mixers of greater capacity, this minimum shall be increased 15 seconds for each cubic yard or fraction thereof of additional capacity. For mixer performance refer to AASHTO M157-93 Annex A1. 2.
- C. Truck Mixed Concrete is that which is completely mixed in a truck mixer, 70 to 100 revolutions at the mixing speed designated by the manufacturer, to produce the uniformity of concrete indicated in AASHTO M157-93 Annex A1.

1. Concrete uniformity tests shall be made in accordance with AASHTO M157-93 and if requirements for uniformity of concrete indicated in AASHTO M157-93 Annex A1 are not met with 100 revolutions of mixing, after all ingredients, including water, are in the drum, that mixer shall not be used until the condition is corrected.
  2. When satisfactory performance is found in one truck mixer, the performance of mixers of substantially the same design and condition of blades may be regarded as satisfactory. Additional revolutions of the mixer beyond the number found to produce the required uniformity of concrete shall be at a designated agitating speed.
- D. Use of Non-agitating Equipment.
1. Central-mixed concrete may be transported in suitable non-agitating equipment approved by the Engineer. The proportions of the concrete shall be approved by the Engineer and the following limitations shall apply:
  2. Bodies of non-agitating equipment shall be smooth, watertight, metal containers equipped with gates that will permit control of the discharge of the concrete. Covers shall be provided for protection against the weather when required by the Engineer.
  3. The concrete shall be delivered to the site of the work in a thoroughly mixed and uniform mass and discharged with a satisfactory degree of uniformity as prescribed in AASHTO M157-93 Annex A1.
- E. Discharge
1. Time and Rate.
    - a. The time elapsing from the time water is added to the mix until the concrete is in the forms at the site of the work shall not exceed 90 minutes when hauled in truck mixers or truck-agitators, or 30 minutes when concrete is hauled by non-agitating equipment. Concrete not discharged into its final place within 90 minutes (30 minutes when using non-agitating 6-14 equipment) after batching shall be wasted at no additional expense to the State, even if a retarder is used. The rate of discharge of mixed concrete from transit mixers or agitators shall be controlled by the speed of rotation of the drum in the discharge direction with the discharge gate fully open. These limits shall not be exceeded. If the discharge of concrete is accomplished by tilting
  2. Retempering.
    - a. Retempering concrete by adding water or by other means will not be permitted until after arrival on the job site and only when delivered in truck mixers. Additional water or admixtures may be added to the batch materials and additional mixing performed to increase the slump or air content to meet the specified requirements, if permitted by the Engineer, and provided that:
      - 1) All these operations are performed within 60 minutes after the initial mixing operation
      - 2) The maximum water-cement ratio is not exceeded,
      - 3) The admixture dosages do not exceed manufacturer's recommendations. If additional water is to be incorporated into the concrete, the drum shall be

revolved not less than 30 revolutions at mixing speed immediately after retempering the concrete and before discharge is commenced.

- 4) All admixtures shall be added at the plant. The Engineer may approve chemical admixture (superplasticizers, air entrainment, etc.) adjustments at the job site by means of a metered, pressurized wand with the exception of silica fume.
- 5) The manufacturer's recommended dosage shall not be exceeded. If additional admixtures are incorporated into the concrete, the drum shall be revolved not less than 30-to-60 revolutions at mixing speed immediately after retempering the concrete and before discharge is commenced.
- 6) Concrete that is not within the specified slump or air content limits at the time of placement shall not be used. The Contractor shall assume the responsibility of any concrete retempering at the site as permitted by the Engineer.
- 7) Retempering with admixtures will be permitted only with the approval of the Engineer or when specifically provided for in the Contract.

### 3.4 Edge Forms And Screed Construction

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

### 3.5 Joints

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Joint Fillers: These joints shall consist of load transfer devices, poured joint seal, and expansion joint filler. Expansion joint filler shall be preformed joint filler.
  1. Performed Joint Filler: Performed joint filler shall conform to AASHTO M153 Type II; Expanded Rubber Specification ASTM D1056, Type 2C2; or AASHTO M33 and M213.
  2. Poured Joint Sealer: Poured joint sealer shall be a rubber compound of the hot poured type, conforming to the requirements of AASHTO M173 unless otherwise noted on the Drawings.

### 3.6 Concrete Placement

- A. Before placing concrete, inspect and complete formwork installation, steel reinforcement, and items to be embedded or cast-in. Concrete shall not be placed on soft, muddy, or frozen subgrade or subbase. Also, concrete shall not be placed when subgrade is frozen under adjacent pavement which is to remain in place. Remove snow, ice, or frost from subbase surface and steel reinforcement before placing concrete. Do not place concrete on frozen surfaces.

- B. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.
- C. Comply with ACI 301 requirements for measuring, mixing, transporting, and placing concrete.
- D. The concrete shall be deposited on the grade in such manner as to require as little re-handling as possible. Unless truck mixers, truck agitators, or non-agitating hauling equipment are equipped with means for discharge of concrete without segregation of the materials, the concrete shall be unloaded into an approved spreading device and mechanically spread on the grade in such manner to prevent segregation of the materials.
- E. Placing shall be continuous between transverse joints without the use of intermediate bulkheads. Necessary hand spreading shall be done with shovels, not rakes. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- F. Workmen shall not be allowed to walk in the freshly mixed concrete with boots or shoes coated with earth or foreign substances. Where concrete is to be placed adjoining a previously constructed lane of pavement and mechanical equipment will be operated upon the existing lane of pavement, that pavement shall meet the minimum flexural strength of 525 pounds per square inch when tested by the third-point method in accordance with AASHTO T97.
- G. If only finishing equipment is carried on the existing lane, paving in adjoining lanes may be permitted after three days. Concrete shall be thoroughly consolidated against and along the faces of all forms and along the full length and on both sides of all joint assemblies, by means of internal vibrators inserted in the concrete.
- H. Consolidate concrete according to ACI 301 by mechanical vibrating equipment supplemented by hand spading, rodding, or tamping.
  - 1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies or side forms. Use only square-faced shovels for hand spreading and consolidation. Consolidate with care to prevent dislocating dowels and joint devices.
- I. Vibrators shall not be permitted to come in contact with a joint assembly, the grade, reinforcement, or a side form. In no case shall the vibrator be operated longer than 10 seconds in any one location. The vibration shall be of sufficient duration to thoroughly consolidate the concrete but not so long as to produce segregation. Concrete shall be deposited as near to expansion and contraction joints as possible without disturbing them, but shall not be dumped from the discharge bucket or hopper onto a joint assembly unless the hopper is well centered on the joint assembly. Should any concrete materials fall on or be worked into the surface of a completed slab, they shall be removed immediately by approved methods.
- J. Screed paving surface with a straightedge and strike off.

- K. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleed water appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.
- L. Do not add water to concrete during delivery or at Project site. Do not add water to fresh concrete after testing.
- M. Cold-Weather Placement: Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing, or low temperatures. Comply with ACI 306.1 and the following:
  - 1. When air temperature has fallen to or is expected to fall below 40 deg F uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F and not more than 80 deg F at point of placement.
  - 2. Do not use frozen materials or materials containing ice or snow.
  - 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in design mixtures.
- N. Hot-Weather Placement: Comply with ACI 301 and as follows when hot-weather conditions exist:
  - 1. Cool ingredients before mixing to maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated in total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
  - 2. Cover steel reinforcement with water-soaked burlap so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
  - 3. Fog-spray form, steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.

### 3.7 PAVING TOLERANCES

- A. Comply with tolerances in ACI 117 and as follows:
  - 1. Elevation: 3/4 inch (19 mm).
  - 2. Thickness: Plus 3/8 inch (10 mm), minus 1/4 inch (6 mm).
  - 3. Surface: Gap below 10-foot- (3-m-) long, unlevelled straightedge not to exceed 1/2 inch (13 mm).
  - 4. Alignment of Tie-Bar End Relative to Line Perpendicular to Paving Edge: 1/2 inch per 12 inches (13 mm per 300 mm) of tie bar.
  - 5. Lateral Alignment and Spacing of Dowels: 1 inch (25 mm).
  - 6. Vertical Alignment of Dowels: 1/4 inch (6 mm).
  - 7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Paving Edge: 1/4 inch per 12 inches of dowel.
  - 8. Joint Spacing: 3 inches.
  - 9. Contraction Joint Depth: Plus 1/4 inch, no minus.

10. Joint Width: Plus 1/8 inch, no minus.

### 3.8 Finishing

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleed-water sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
  1. Burlap Finish: Drag a seamless strip of damp burlap across float-finished concrete, perpendicular to line of traffic, to provide a uniform, gritty texture.
  2. Medium-to-Fine-Textured Broom Finish: Draw a soft-bristle broom across float-finished concrete surface perpendicular to line of traffic to provide a uniform, fine-line texture.
  3. Medium-to-Coarse-Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface 1/16 to 1/8 inch deep with a stiff-bristled broom, perpendicular to line of traffic.

### 3.9 Concrete Protection and Curing

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.
- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by moisture curing, curing compound or a combination of these as follows:
  1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
    - a. Water.
    - b. Continuous water-fog spray.
    - c. Absorptive cover, water saturated and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.

### 3.10 Field Quality Control

- A. Testing Agency: The Contractor shall engage a qualified testing agency to perform tests and inspections.
- B. Testing Services: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
  - 1. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. or fraction thereof of each concrete mixture placed each day.
  - 2. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
  - 3. Air Content: ASTM C 231, pressure method; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
  - 4. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F and below and when it is 80 deg F and above, and one test for each composite sample.
  - 5. Compression Test Specimens: ASTM C 31/C 31M; cast and laboratory cure one set of three standard cylinder specimens for each composite sample.
  - 6. Compressive-Strength Tests: ASTM C 39/C 39M; test one specimen at seven days and two specimens at 28 days.
    - a. A compressive-strength test shall be the average compressive strength from two specimens obtained from same composite sample and tested at 28 days.
- C. Testing: Documentation from an independent laboratory certifying that the aggregate is non-expansive and innocuous must be submitted to the Engineer. An acceptable independent testing laboratory shall conduct each test.
- D. Strength of each concrete mixture will be satisfactory if average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi.
- E. Test results shall be reported in writing to Engineer, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
- F. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Engineer.
- G. Concrete paving will be considered defective if it does not pass tests and inspections.

- H. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- I. Prepare test and inspection reports.

### 3.11 Repairs And Protection

- A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Engineer.
- B. Drill test cores, where directed by Engineer, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory paving areas with Portland cement concrete bonded to paving with epoxy adhesive.
- C. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.
- D. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

### 3.12 Detectable Warning Panels

- A. Panels shall be set flush into fresh unset concrete at the required line and grade to match the running grade and cross slope of the ADA accessible ramp or blended transition that warranted the installed panel. The Contractor shall ensure that the alignment of the panel will match line and grade of the ramp such that the panel is flush with the ramp, and there is no physical conflict with other castings, fittings, structures, foundations or appurtenance thereof.

## PART 4 - METHOD OF MEASUREMENT

- A. Standard Cement Concrete Sidewalk will be measured by the number of square feet actually placed in accordance with the Drawings and/or as directed by the Engineer.
- B. Heavy Duty Cement Concrete Sidewalk will be measured by the number of square feet actually placed in accordance with the Drawings and/or as directed by the Engineer.
- C. Type I and II Concrete Wheelchair Ramps (with Detectable Warning Panels) will not be measured for payment.

PART 5 - BASIS OF PAYMENT

- A. The accepted quantity of Standard Cement Concrete Sidewalk shall be paid for at the contract unit price per each for that item. The price for these items constitutes full and complete compensation for all labor, tools, materials, and equipment, and all other incidentals required to finish the work, complete and in place and accepted by the Engineer/Owner.
- B. The accepted quantity of Heavy Duty Cement Concrete Sidewalk shall be paid for at the contract unit price per each for that item. The price for these items constitutes full and complete compensation for all labor, tools, materials, and equipment, and all other incidentals required to finish the work, complete and in place and accepted by the Engineer/Owner.
- C. Type I and II Concrete Wheelchair Ramps (with Detectable Warning Panels) will not be measured for payment.

This work shall be paid as part of the lump sum Total Contract Base Bid Price. The price for this work constitutes full and complete compensation for all labor, materials and equipment, including expansion joint material, reinforcement, joints, detectable warning panels, and all incidentals required to finish the work, complete and accepted by the Engineer.

END OF SECTION

## SECTION 02760 - PAVEMENT MARKINGS

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, RIDOT Standard Specification for Road and Bridge Construction and Division 1 Specification Sections, apply to this Section

#### 1.2 Summary

- A. Section includes temporary and permanent painted markings applied to bituminous concrete pavement.

#### 1.3 Preinstallation Meetings

- A. Preinstallation Conference: Conduct conference at Project Site.
  - 1. Review methods and procedures related to marking pavement including, but not limited to, the following:
    - a. Pavement aging period before application of pavement markings.
    - b. Review requirements for protecting pavement markings, including restriction of traffic during installation period.

#### 1.4 Action Submittals

- A. Product Data: For each type of product.
  - 1. Include technical data and tested physical and performance properties.
- B. Shop Drawings: For pavement markings.
  - 1. Indicate pavement markings placement, colors, lane separations, and dimensions to adjacent work.
- C. Samples: For each exposed product and for each color and texture specified; on rigid backing, 8 inch square.
- D. Certifications: Obtain from the manufacturer of the epoxy material and glass beads, final certification that each batch of material furnished meets the requirements of the Standard Specifications. Indicate the batch numbers utilized and include the manufacturer's production control tests for each batch; and include the manufacturer's material safety data sheets. Retain "Samples" Paragraph below for single-stage Samples, with a subordinate list if applicable.

### 1.5 Quality Assurance

- A. Where "RIDOT Standard Specifications" is used, it shall mean "Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, Amended March 2018 and issued supplements.
- B. Store pavement-marking materials in a clean, dry, protected location within temperature range required by manufacturer. Protect stored materials from direct sunlight.
- C. Comply with materials, workmanship, and other applicable requirements of Section 910, Section T.20 and Section M.17 of the RIDOT Standard Specifications, as applicable and appropriate.

### 1.6 Field Conditions

- A. Environmental Limitations: Proceed with pavement marking only on clean, dry surfaces and at ambient temperatures in accordance with Section 910.03.2 of the RIDOT Standard Specifications.

## PART 2 - PRODUCTS

### 2.1 Pavement-Marking Paint

- A. Temporary and permanent paving marking paint as indicated on the Contract Drawings shall conform to Sections M.17.03 and T.20.03 of the RIDOT Standard Specifications for thermoplastic pavement markings.

## PART 3 - EXECUTION

### 3.1 Examination

- A. Verify that pavement is dry and in suitable condition to begin pavement marking according to manufacturer's written instructions.
- B. Proceed with pavement marking only after unsatisfactory conditions have been corrected.

### 3.2 Pavement Marking

- A. Do not apply pavement-marking paint until layout, colors, and placement have been verified with Engineer.
- B. Allow paving to age for a minimum of 30 days before starting pavement marking.
- C. Sweep and clean surface to eliminate loose material and dust.

- D. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 14 – 16 mils.
  - 1. Apply graphic symbols and lettering with paint-resistant, die-cut stencils, firmly secured to pavement. Mask an extended area beyond edges of each stencil to prevent paint application beyond the stencil. Apply paint so that it cannot run beneath the stencil.
  - 2. Broadcast glass beads uniformly into wet markings at a rate of 6 lb/gal.

### 3.3 Protecting And Cleaning

- A. Protect pavement markings from damage and wear during remainder of construction period.
- B. Clean spillage and soiling from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

### PART 4 - METHOD OF MEASUREMENT

- A. Items associated with this work will not be measured for payment.

### PART 5 - BASIS OF PAYMENT

- A. This work shall be paid as part of the lump sum Contract Base Bid Price. The price for these items constitutes full and complete compensation for all labor, tools, materials, and equipment, , and all other incidentals required to finish the work, complete and in place and accepted by the Engineer/Owner.

END OF SECTION

## SECTION 02770 - CURBING

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, RIDOT Standard Specification for Road and Bridge Construction and Division 1 Specification Sections, apply to this Section

#### 1.2 Summary

- A. This Section includes the following:
  - 1. Vertical face granite curb.
  - 2. Slope face granite curb.
- B. Related Sections
  - 1. Section 02300 "Earth Moving."
  - 2. Section 02630 "Storm Drainage"
  - 3. Section 02742 "Concrete Paving"

#### 1.3 Submittals

- A. Material Certification. For each product, certifying material meets the Specification requirements.

#### 1.4 Quality Assurance

- A. Where "RIDOT Standard Specifications" is used, it shall mean "Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, Amended March 2018 and issued supplements.

### PART 2 - PRODUCTS

#### 2.1 Materials

- A. Vertical Face Granite Curb: In accordance with Subsection M.09.01 of the RIDOT Standard Specifications.
- B. Slope Face Granite Curb: In accordance with Subsection M.09.02 of the RIDOT Standard Specifications.

### PART 3 - EXECUTION

#### 3.1 Installation

- A. Excavate, prepare foundation, set curb, and point joints in accordance with the dimensions shown

on the Contract Drawings or as directed by the Engineer and as included in Subsections 906.03.1 (granite curbing) of the RIDOT Standard Specifications. The gravel subbase upon which the curbing is placed shall be compacted to a firm, even surface. All soft and unsuitable materials below curbing shall be removed and replaced with gravel borrow material. Gravel borrow, if required, shall be placed in layers not exceeding 6 inches in depth before compaction. Each layer shall be compacted to 95 percent of maximum density (AASHTO-180) by means of a vibratory compactor of size and type approved by Engineer.

- B. Install curbing as indicated on the Contract Drawings and as recommended by manufacturer. The curbing shall be set such that the front top arris line conforms to the required line and grade.
  - 1. Maintain 6-inch curb reveal between top of curb placed along roadway and top of adjacent roadway surface course.
  - 2. Install curbing as indicated on the Contract Drawings and as recommended by manufacturer. The curbing shall be set such that the front top arris line conforms to the required line and grade.
  - 3. Curbing units shall be placed end-to-end as close as possible. No more than ½-inch opening shall show for the full width of the top and the top 8 inches of the vertical joint
- C. After the curbing has been set, any remaining excavated areas shall be backfilled with approved material and thoroughly compacted back and front to grade in accordance with Section 906.3.1 of RIDOT's Standard Specifications. Methods of compaction shall preserve the line and grade of the curbing.

### 3.2 Installation Tolerances

- A. Curb Alignment: 1/4-inch maximum, as determined by using a 10-foot straight edge along front face of curb.

## PART 4 - METHOD OF MEASUREMENT

- A. Items associated with this work will not be measured for payment.

## PART 5 - BASIS OF PAYMENT

- A. This work shall be paid as part of the lump sum Contract Base Bid Price. The price for these items constitutes full and complete compensation for all labor, tools, materials, and equipment, and all other incidentals required to finish the work, complete and in place and accepted by the Engineer/Owner.

END OF SECTION

## SECTION 02870 - SITE FURNISHINGS

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, RIDOT Standard Specification for Road and Bridge Construction and Division 1 Specification Sections, apply to this Section

#### 1.2 Summary

- A. Section Includes:
  - 1. Bench (Bid Alternate Item)
  - 2. Picnic Table (Bid Alternate Item)
  - 3. Trellis. (Bid Alternate Item)
  - 4. Concrete Base for Art Sculpture.
- B. Related Requirements:
  - 1.
  - 2. Section 02300 "Earth Moving"

#### 1.3 Action Submittals

- A. Product Data: For trellis, bench, picnic table and concrete base for art sculpture.product.
- B. Samples: For each exposed product and for each color and texture specified.
- C. Samples for Initial Selection: For units with factory-applied finishes.
- D. Samples for Verification: For each type of exposed finish, not less than 6-inch-long linear components and 4-inch-square sheet components.
  - 1. Include full-size Samples of bench.
- E. Shop Drawings:
  - 1. Stamped Engineered shop drawings provided by manufacturer for trellis, post, and footing. The footings shall be a delegated design.
- F. Product Schedule: For site furnishings. Use same designations indicated on Drawings.

#### 1.4 Closeout Submittals

- A. Maintenance Data: Provide maintenance manuals from manufacturer for bench, trellis and picnic table.

## PART 2 - PRODUCTS

### 2.1 Bench (Bid Alternate Item)

#### A. Backless Bench

1. Manufacturer: Forms + Surfaces; 800-451-0410; [www.forms-surfaces.com](http://www.forms-surfaces.com); or approved equal.
2. Model: Trio
3. Bench Length: 6'
4. Color: Manufacturer's standard powdercoat- black
5. Mounting Condition: Surface Mount

### 2.2 Picnic Table (Bid Alternate Item)

#### A. 36" Table, 2 Steel Seats

1. Manufacturer: DuMor, Inc.; 800-598-4018; [www.dumor.com](http://www.dumor.com); or approved equal.
2. Model: 297-36-20HS
3. Picnic Table and Seat Color: manufacturer's standard powder coat black
4. Mounting Condition: Surface Mount If sizes of units or components are critical and are not indicated on Drawings, insert in "Seat( and Back)" and "Table Top" paragraphs below to suit Project.

### 2.3 Trellis (Bid Alternate Item)

- #### A. Manufacturer: Poligon/ Porter Corp.; 616-399-1963; 4240 N. 136<sup>th</sup> Ave. Holland, MI 49424 (or approved equal)

#### B. Products:

1. Parklet B Trellis: Trellis shall be DB-115-Single Column Line Flat Suspended Latilla

#### C. Steel Frame

1. Color: Manufacturer's Standard Powder coated- Black

#### D. Wood Species and Finish Options:

1. Cedar- 3"x6" NOM. Natural, Smooth Finish

#### E. Trellis Options

1. Modern Latilla and Truss End Cuts

## 2.4 Concrete Base for Art Sculpture

- A. Concrete Base for art sculpture shall be a prefabricated product with the following material requirements.
  - 1. Concrete shall be Class XX in accordance with Section 601 of the RIDOT Standard Specifications.
  - 2. Steel reinforcement shall conform to Section M.05.01 of the RIDOT Standard Specifications.
  - 3. Smooth finish.

## 2.5 General Finish Requirements

- A. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

## PART 3 - EXECUTION

### 3.1 Examination

- A. Examine areas and conditions, with Installer present, for compliance with requirements for correct and level finished grade, mounting surfaces, installation tolerances, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 Installation, General

- A. Comply with manufacturer's written installation instructions unless more stringent requirements are indicated. Complete field assembly of site furnishings where required.
- B. Unless otherwise indicated, install site furnishings after landscaping and paving have been completed.
- C. Install site furnishings level, plumb, true, and securely anchored at locations indicated on Drawings.

### 3.3 Bench Installation

- A. Install benches according to the manufacturer's specifications.

### 3.4 Picnic Table Installation

- A. Install picnic table and seats according to the manufacturer's specifications.

3.5 Trellis Installation

- A. Install trellis according to the manufacturer's specifications.
- B. Install foundation in accordance with approved shop drawing.

3.6 Concrete Base for Art Sculptures

- A. Install concrete base on a gravel borrow base and set level and parallel to the street.

PART 4 - METHOD OF MEASUREMENT

- A. The Concrete Base for Art Sculpture work will not be measured for payment.
- B. The Parklet B Trellis bid alternate item will not be measured for payment.
- C. The Bench bid alternate item will be measured by the number of benches installed in accordance with the Drawings and/or as directed by the Engineer.
- D. Picnic table bid alternate item will be measured by the number of benches installed in accordance with the Drawings and/or as directed by the Engineer.

PART 5 - BASIS OF PAYMENT

- A. The Concrete Base for Art Sculpture shall be paid as part of the lump sum Contract Base Bid Price. The price for these items constitutes full and complete compensation for all labor, tools, materials, and equipment, and all other incidentals required to finish the work, complete and in place and accepted by the Engineer/Owner.
- B. The Parklet B Trellis bid alternate item shall be paid for at the contract lump sum price for that item. The price for these items constitutes full and complete compensation for all labor, tools, materials, and equipment, and all other incidentals required to finish the work, complete and in place and accepted by the Engineer/Owner.
- C. The accepted quantities of benches shall be paid for at the contract unit price per each for that item. The price for these items constitutes full and complete compensation for all labor, tools, materials, and equipment, and all other incidentals required to finish the work, complete and in place and accepted by the Engineer/Owner.
- D. The accepted quantities of picnic tables shall be paid for at the contract unit price per each for that item. The price for these items constitutes full and complete compensation for all labor, tools, materials, and equipment, and all other incidentals required to finish the work, complete and in place and accepted by the Engineer/Owner.

END OF SECTION

## SECTION 02894 – LOOP DETECTORS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, RIDOT Standard Specification for Road and Bridge Construction and Division 1 Specification Sections, apply to this Section

#### 1.2 Summary

- A. This Section includes sawcutting of pavement, furnishing and installing temporary and permanent inductance vehicle loop detectors and necessary wiring, connecting detectors and wiring to the existing loop detector conduit or signal hand hole at the northwestern corner of the Main Street/Pine Street intersection, and applying sealing compound as required.

#### 1.3 Quality Assurance

- A. Where "RIDOT Standard Specifications" is used, it shall mean "Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, Amended March 2018 and issued supplements.

#### 1.4 SUBMITTALS

- A. Product Data. Complete description of each traffic item specified herein, including cuts and other descriptive literature which completely illustrates such items presented for formal approval.
  - 1. Inductance vehicle loop detector harness and wiring.
- B. Materials Certificate. Confirming the conformance of each item with the requirements set forth in the Contract Documents.
  - 1. Inductance vehicle loop detector wiring.
- C. Certificate of Compliance.
  - 1. Inductance vehicle loop detector wiring.

### PART 2 - PRODUCTS

#### 2.1 Loop Vehicle Detector

- A. Wiring: Shall meet the requirements of M.15.02.5 of the Standard Specifications.
- B. Lead-in Cable: Shall meet the requirements of M.15.02.6 of the Standard Specifications.
- C. Relay – Loop: Shall meet the requirements of M.15.14 of the Standard Specifications.

### PART 3 - EXECUTION

#### 3.1 Loop Detector Schedule

- A. The Contractor must schedule loop detector installations such that no roadway approach is without detection for more than 30 calendar days. Once a loop detector has been disconnected due to pavement removal, trench excavation for drainage or utility work, conduit installation, or any other construction activity, the Contractor must restore loop detection within 30 calendar days, unless otherwise authorized in writing by the Engineer.

#### 3.2 Loop Detector Installation

- A. Inductance loops shall be installed in accordance with the details specified on the Contract Drawings and Section T.13.03.2 of RIDOT's Standard Specifications.
- B. Handholes, conduits and curb cuts shall be completed before beginning the loop installation.
- C. The loop shall be outlined on the pavement to conform to the specified configuration.
- D. A power saw shall be used to cut a slot in the pavement. The cut shall be of sufficient width (min. 3/8") to allow easy placement of loop wire (single or twisted pair) into the saw cut and have a depth which will place the last loop turn from 1½-inches to 2½-inches below the final surface unless specified otherwise on the Plans.
- E. The corners shall be saw cut, cored, drilled or chipped out as indicated on the Plans. Sharp edges in the corners shall be smoothed.
- F. The intersection of saw cuts shall overlap so that the slots have full depth and a smooth bottom.
- G. Immediately after sawing, the slot and pavement shall be flushed with high pressure clean water to remove the saw slurry. Filtered compressed air shall be used to remove all dust and moisture from the slot.
- H. The installation shall not proceed until the slot is dry. Hot air may be used to dry the saw slot.
- I. To protect the loop wire at the edge of the pavement or curb, 1-inch minimum diameter flexible PVC or vinyl conduit(s) shall be installed between the pavement and handhole, in accordance with the details indicated on the Plans.
- J. The loop wire shall be installed starting at the roadside handhole, around the loop for the specified number of turns, and back to the handhole.
- K. Splices shall not be permitted outside the handhole. The wire shall be depressed in the slot without the use of sharp objects which might damage the wire insulation.
- L. The loop shall be held in place every 2 feet with 2-inch (approximate) strips of open-celled polyurethane backer rod as approved by the Engineer.
- M. These hold down strips shall be left in place when the slot is filled with roadway loop embedding sealer.

- N. Where the loop wire crosses pavement joints and cracks, the loop wires shall be further protected using the method specified on the Plans.
- O. T-26 The ends of the vinyl or PVC tubing encasing the wire shall be given a waterproof seal immediately after placing the wire to prevent moisture from entering the tube. The tubing shall be of a continuous length from the curb to the handhole.
- P. The pair of loop wires between the edge of the loop and the splice to the shielded lead-in cable in the handhole shall be twisted together 3 to 5 turns per foot.
- Q. The splice between the loop wires (twisted pair) and the shielded lead-in cable shall be moisture proof and shall have a dielectric strength at least equal to that of the original insulation. Moisture shall be excluded from the splice during the operation and the work shall be done in dry weather or under shelter. All parts of the splice and tools involved shall be clean and dry. Individual splices in each wire shall be staggered in a manner so as to minimize the outside diameter of the finished splice. The bared conductor ends shall be twisted and soldered and reinsulated using an electrical grade fast drying sealant and plastic polyvinyl chloride tape.
- R. The reinsulation shall extend approximately one inch onto the adjacent insulation at each end. Sufficient layers of tape shall be applied such that the thickness is one and one-half times that of the original insulation. Reinsulation of the outer jacket shall be accomplished in a similar manner except that the reinsulation shall extend approximately 4 inches onto the adjacent jacket at each end. The shielded lead-in cable shall be continued (no splices) from the splices to the loop wires, to the controller cabinet terminals only.
- S. The completed loop installation, including the shielded lead-in to the controller cabinet, shall have a minimum of 50 megohms leakage resistance to ground. This resistance shall be tested after the splice is made between the loop wires (twisted pair) and shielded lead-in.
- T. The Contractor, in addition to measuring the leakage to ground, shall, by test instruments capable of measuring electrical values of the installed loop wires and lead-ins, measure induced AC voltage, inductance in microhenries, high "Q" indication, and the resistance of the conductors in ohms. Upon measuring the loops, the Contractor shall report to the Engineer any unusual readings, or readings not in agreement with the calculated values. Testing of the loop may take place during or after the installation of the loop. When a loop is found to be not in accordance with calculated values, a new loop will be installed in its place at the Contractor's expense.
- U. The pavement temperatures shall be 40 F and rising before the sealer is placed. All work involving the sealer shall be done in compliance with the manufacturer's specifications. When the loop embedding sealer has set sufficiently to open the loop to traffic, but the surface remains tacky, the loop may be dusted with cement to facilitate opening the loop to traffic.

#### PART 4 - METHOD OF MEASUREMENT

- A. METHOD OF MEASUREMENT
- B. Items associated with this work will not be measured for payment.

PART 5 - BASIS OF PAYMENT

- A. This work shall be paid as part of the lump sum Contract Base Bid Price. The price for this work constitutes full and complete compensation for all labor, tools, materials, and equipment, and all other incidentals required to finish the work, complete and in place and accepted by the Engineer/Owner.

END OF SECTION

## SECTION 02930 - PLANTS

### PART 1 - GENERAL

#### 1.1 Related Documents

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 Summary

- A. Section Includes:
  - 1. Street Trees.
  - 2. Ornamental Grasses.
  - 3. Perennials.
- B. Related Requirements:
  - 1. Section 02230 "Site Clearing."
  - 2. Section 02300 "Earth Moving."

#### 1.3 Definitions

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Balled and Burlapped Stock: Exterior plants dug with firm, natural balls of earth in which they are grown, with ball size not less than diameter and depth recommended by ANSI Z60.1 for type and size of tree or shrub required; wrapped, tied, rigidly supported, and drum-laced as recommended by ANSI Z60.1.
- C. Container-Grown Stock: Healthy, vigorous, well-rooted plants grown in a container, with a well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for type and size of plant required.
- D. Finish Grade: Elevation of finished surface of planting topsoil.
- E. Planting Area: Areas to be planted.
- F. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- G. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

#### 1.4 Coordination

- A. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and before planting turf areas unless otherwise indicated.
  - 1. When planting trees, shrubs, and other plants after planting turf areas, protect turf areas, and promptly repair damage caused by planting operations.

#### 1.5 Submittals

- A. Product Data: For each type of product indicated.
  - 1. Plant Materials: Include quantities, sizes, quality, and sources for plant materials.
  - 2. Plant Photographs: Include color photographs in digital format of each required species and size of plant material as it will be furnished to Project. Take photographs from an angle depicting true size and condition of the typical plant to be furnished. Include a scale rod or other measuring device in each photograph. For species where more than 20 plants are required, include a minimum of three photographs showing the average plant, the best quality plant, and the worst quality plant to be furnished. Identify each photograph with the full scientific name of the plant, plant size, and name of the growing nursery.
- B. Product Certificates: For each type of manufactured product, signed by product manufacturer, and complying with the following:
  - 1. Manufacturer's certified analysis for standard products.
  - 2. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.
- C. Qualification Data: For landscape Installer. Include list of similar projects completed by Installer demonstrating Installer's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.
- D. Material Test Reports: For existing surface soil and imported topsoil.
  - 1. Sieve analysis
  - 2. Organic constituent analysis
  - 3. Microorganism content
  - 4. Acidity-alkalinity test (pH)
  - 5. Soluble salts
  - 6. Percentage tests for the following:
    - a. Nitrogen (N)
    - b. Phosphoric Acid (P205)
    - c. Potash (K20)
- E. Planting Schedule: Indicating anticipated planting dates for exterior plants.
- F. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of plants during a calendar year. Submit before expiration of required maintenance periods.

## 1.6 Quality Assurance

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful establishment of exterior plants.
  - 1. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.
- B. Soil-Testing Laboratory Qualifications: An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
- C. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; deleterious material; pH; and mineral and plant nutrient content of topsoil. One analysis shall be completed per source of topsoil.
  - 1. Report suitability of topsoil for plant growth. State recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce a satisfactory topsoil.
  - 2. Contractor shall supplement soil with amendments and additions at no additional cost as required to remedy any deficiencies indicated in tests and to meet laboratory recommendations.
- D. Provide quality, size, genus, species, and variety of exterior plants indicated, complying with applicable requirements in ANSI Z60.1, "American Standard for Nursery Stock."
- E. Tree Measurements: Measure according to ANSI Z60.1 with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements 6 inches above ground for trees up to 4-inch caliper size, and 12 inches above ground for larger sizes. Measure main body of tree for height and spread; do not measure branches or roots tip-to-tip.
- F. Observation: Landscape Architect may observe trees and shrubs either at place of growth or at site before planting for compliance with requirements for genus, species, variety, size, and quality. Landscape Architect retains right to observe trees and shrubs further for size and condition of balls and root systems, insects, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.
  - 1. Notify Landscape Architect of sources of planting materials seven days in advance of delivery to site.
  - 2. Notify Landscape Architect three days in advance of proposed delivery to site.

## 1.7 Delivery, Storage, And Handling

- A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws if applicable.

- B. Bulk Materials:
    - 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
    - 2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
    - 3. Accompany each delivery of bulk materials with appropriate certificates.
  - C. Do not prune trees and shrubs before delivery, except as approved by Landscape Architect. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during delivery. Do not drop plants during delivery.
  - D. Handle planting stock by root ball.
  - E. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks (before wrapping), branches, stems, twigs, and foliage to protect during digging, handling, and transportation.
    - 1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.
  - F. Wrap trees and shrubs with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.
  - G. Deliver plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set plants trees in shade, protect from weather and mechanical damage, and keep roots moist.
    - 1. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
    - 2. Do not remove container-grown stock from containers before time of planting.
    - 3. Water root systems of plants stored on-site with a fine-mist spray. Water as often as necessary to maintain root systems in a moist condition.
- 1.8 Coordination
- A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.
    - 1. Deciduous Plants:
      - a. Spring Planting: April 1 to June 1.
      - b. Fall Planting: August 5 to September 30.
  - B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.

- C. Coordination with Turfs: Plant trees and shrubs after finish grades are established and before planting turfs, unless otherwise acceptable to Landscape Architect.
  - 1. When planting trees and shrubs after turfs, protect turf areas and promptly repair damage caused by planting operations.

#### 1.9 Substitutions

- A. Pre-Bid: If any plant specified is not obtainable, submit a written substitution request to Contracting Officer.
- B. Substitutions of planting materials will not be permitted unless Contractor has made a good faith effort to find material.

#### 1.10 Warranty

- A. Special Warranty: Warrant the following exterior plants, for the warranty period indicated, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by Owner, or incidents that are beyond Contractor's control.
- B. Submit written warranty signed by material supplier and installer agreeing that they will:
  - 1. Warranty Period for Trees and Shrubs: One year from date of Substantial Completion and acceptance by Landscape Architect.
  - 2. Remove dead exterior plants immediately. Replace immediately unless required to plant in the succeeding planting season.
  - 3. Replace exterior plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.

#### 1.11 Maintenance

- A. Trees: Maintain for the following maintenance period by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, tightening and repairing stakes and guy supports, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings. Spray as required to keep trees and shrubs free of insects and disease. Restore or replace damaged tree wrappings.
  - 1. Maintenance Period: One year from date of expectance by Landscape Architect for all new plants furnished under this contact have been satisfactorily installed.

### PART 2 - PRODUCTS

#### 2.1 Plant Material

- A. General: Furnish nursery-grown trees and shrubs complying with ANSI Z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy,

vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.

1. Trees with damaged, crooked, or multiple leaders; tight vertical branches where bark is squeezed between two branches or between branch and trunk ("included bark"); crossing trunks; cut-off limbs more than 3/4 inch in diameter; or with stem girdling roots are unacceptable.
  2. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.
- B. Grade: Provide trees and shrubs of sizes and grades complying with ANSI Z60.1 for type of trees and shrubs required. Trees and shrubs of a larger size may be used if acceptable to Landscape Architect, with a proportionate increase in size of roots or balls.
- C. Label at least one tree and one shrub of each variety and caliper with a securely attached, waterproof tag bearing legible designation of botanical and common name.
- D. If formal arrangements or consecutive order of trees or shrubs is shown, select stock for uniform height and spread to assure symmetry in planting.
- E. Street Trees
1. Street Trees; Single-stem trees with straight trunk, well balanced crown, and intact leader, of height and caliper indicated, complying with ANSI Z60.1; stem form as indicated.
    - a. Provide balled and burlapped or container-grown trees.
- F. Perennials, Ornamental Grasses, and Vines
1. Provide healthy, disease-free plants of species and variety shown or listed, with well-established root systems reaching to sides of container to maintain a firm ball, but not with excessive root growth encircling the container. Provide only plants that are acclimated to outdoor conditions before delivery and that are in bud but not yet in bloom.

## 2.2 Topsoil

- A. Topsoil shall consist of imported loam conforming to Section M.18.01 of the RIDOT Standard Specifications or shall consist of natural, friable, sandy loam, native topsoil material. Imported or native topsoil shall be approved by Testing Laboratory and the Owner. Native topsoil shall conform to the following:
1. 5 to 20 percent organic matter as determined by soil testing service, maximum particle size 1/2", and with maximum 3 percent retained on 1/4 inch screen.
    - a. Screened.
    - b. Free of roots, rocks larger than 1/2 subsoil, debris, large weeds, and foreign matter.
    - c. PH 5.5 to 7.0.
  2. Acceptable Textural Classes with component percentages as established by the USDA Classification System.
    - a. Fine Sandy Loam.

- b. Sandy Loam.
- c. Loam.

### 2.3 Fertilizers

- A. Planting Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.
- B. Products Include:
  - 1. Bonemeal: Finely ground raw bonemeal having a minimum analysis of one percent nitrogen and 11 percent phosphoric acid.
  - 2. Plantone: Organic plant nutrient with potential acidity (CACO<sub>2</sub>) at 80 pounds per 2,000 pounds as manufactured by Espoma, Millville, New Jersey, or approved equal.
  - 3. Fluid Fertilizer: "Algro" 14-7-4 low chlorine 40 percent organic root food as manufactured and supplied by Plant Food Chemical Company, Cranberry, New Jersey, or approved equal.

### 2.4 Inorganic Soil Amendments

- A. Lime: ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:
  - 1. Provide lime in form of dolomitic limestone, with a minimum of 95 percent passing a No.100 sieve.

### 2.5 Organic Soil Amendments

- A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
  - 1. Organic Matter Content: 50 to 60 percent of dry weight.
- B. Peat: Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water-absorbing capacity of 1100 to 2000 percent.
- C. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.
  - 1. Product: "Bovung" or equal.

### 2.6 Water

- A. Water: Potable

## 2.7 Mulches

- A. General: Free from noxious weeds, mold pesticides, or other deleterious materials, and suitable as a top dressing of all trees, perennials, and ornamental grasses.
- B. Compost Mulch: Well- composted, stable, and weed-free organic matter, pH of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through a 1-inch sieve; soluble-salt content of 2 to 5 dS/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
  - 1. Organic Matter Content: 50 to 60 percent of dry weight
  - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings' or source-separated or compostable mixed solid waste.
- C. For temporary erosion control applications, use mulch specified on the Contract Drawings.

## 2.8 Planting Soil

- A. Planting Soil: Mix topsoil with the following soil amendments and fertilizers in the following quantities:
  - 1. Ratio of loose compost to topsoil volume: 1:4
  - 2. Ratio of loose peat or manure to topsoil by volume: 1:4
  - 3. Weight of lime, bonemeal, superphosphate, and commercial fertilizer per 1000 sq. ft: as determined by topsoil test report.

## 2.9 Miscellaneous Products

- A. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.
  - 1. Product: "Wilt-Pruf" or equal.
- B. Trunk-Wrap Tape: Two layers of crinkled paper cemented together with bituminous material, 4-inch- wide minimum, with stretch factor of 33 percent.

## PART 3 - EXECUTION

### 3.1 Examination

- A. Examine areas to receive plants, for compliance with requirements and conditions affecting installation and performance. Proceed with installation only after unsatisfactory conditions have been corrected

1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
  2. Verify that plants and vehicles loaded with plants can travel to planting locations with adequate overhead clearance.
  3. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
  4. Uniformly moisten excessively dry soil that is not workable or which is dusty.
- B. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Engineer and replace with new planting soil.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.
- 3.2 Preparation
- A. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.
- B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- C. Lay out individual tree and shrub locations and areas for multiple plantings. Stake locations, outline areas, adjust locations when requested, and obtain Engineer's acceptance of layout before excavating or planting. Make minor adjustments as required.
- D. Lay out plants at locations directed by Landscape Architect/Engineer. Stake locations of individual trees and shrubs and outline areas for multiple plantings.
- E. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks, branches, stems, twigs, and foliage to protect during digging, handling and transportation.
1. If street trees are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.
- 3.3 Excavation For Trees And Shrubs
- A. Pits and Trenches: Excavate circular pits with sides sloped inward. Trim base leaving center area raised slightly to support root ball and assist in drainage. Do not further disturb base. Scarify sides of plant pit smeared or smoothed during excavation.
1. Excavate approximately three times as wide as ball diameter.
  2. Excavate pit to a depth to allow a 6-inch layer of topsoil beneath ball.
- B. Subsoil removed from excavations may not be used as backfill.

- C. Obstructions: Notify Landscape Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
- D. Drainage: Notify Landscape Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub pits.

### 3.4 Planting

- A. Set planting stock plumb and in center of pit or trench with top of root ball 1 inch above adjacent finish grades.
  - 1. Remove burlap and wire baskets from tops of root balls and partially from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
  - 2. Place planting soil mix around root ball in layers, tamping to settle mix and eliminate voids and air pockets. When pit is approximately one-half backfilled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Water again after placing and tamping final layer of planting soil mix.
  - 3. Carefully remove root ball from container without damaging root ball or plant.
- B. Organic Mulching: Apply 2-inch average thickness of organic mulch extending beyond edge of planting pit or trench where shown on Contract Drawings. Do not place mulch within 3 inches of trunks or stems or in bioretention planters.
- C. Wrap trees of 2-inch caliper and larger with trunk-wrap tape. Start at base of trunk and spiral cover trunk to height of first branches. Overlap wrap, exposing half the width, and securely attach with a coarse sisal twine without causing girdling. Do not nail or staple to tree. Inspect tree trunks for injury, improper pruning, and insect infestation; take corrective measures required before wrapping.
- D. Spray trees with antidesiccant in accordance with manufacturer's instructions if foliage is present.

### 3.5 Tree and Shrub Pruning

- A. Prune, thin, and shape trees and shrubs according to standard horticultural practice. Prune trees to retain required height and spread. Unless otherwise indicated by Landscape Architect, do not cut tree leader; remove only injured or dead branches from street trees. Prune to retain natural character.

### 3.6 Plant Maintenance

- A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.
- B. Fill in, as necessary, soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.

- C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices when possible to minimize use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

### 3.7 Repair And Replacement

- A. General: Repair or replace existing or new trees and other plants that are damaged by construction operations, in a manner approved by Landscape Architect.
  - 1. Submit details of proposed pruning and repairs.
  - 2. Perform repairs of damaged trunks, branches, and roots within 24 hours, if approved.
  - 3. Replace trees and other plants that cannot be repaired and restored to full-growth status, as determined by Landscape Architect.
- B. Remove and replace trees that are more than 25 percent dead or in an unhealthy condition before the end of the corrections period or are damaged during construction operations that Landscape Architect determines are incapable of restoring to normal growth pattern.
  - 1. Provide new trees of same size as those being replaced for each tree of 6 inches or smaller in caliper size.
  - 2. Provide one new tree(s) of 6-inch caliper size for each tree being replaced that measure more than 6 inches in caliper size.
  - 3. Species of Replacement Trees: Same species being replaced.

### 3.8 Cleaning And Protection

- A. During planting, keep adjacent paving and construction clean and work area in an orderly condition. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.
- C. After installation and before Substantial Completion, remove nursery tags, nursery stakes, tie tape, labels, wire, burlap, and other debris from plant material, planting areas, and Project site.

### 3.9 Disposal

- A. Disposal: Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

## PART 4 - METHOD OF MEASUREMENT

- A. Items associated with this work will not be measured for payment.

PART 5 - BASIS OF PAYMENT

- A. This work shall be paid as part of the lump sum Contract Base Bid Price. The price for this work constitutes full and complete compensation for all labor, tools, materials, and equipment, and all other incidentals required to finish the work, complete and in place and accepted by the Engineer/Owner.

END OF SECTION

## **Appendix G**

### **SRF Contract Documents**



# Good Faith Efforts

## What is the Purpose of the Good Faith Efforts?

The Good Faith Efforts are methods employed by all EPA financial assistance agreement recipients to ensure that disadvantaged business enterprises (DBEs) have the opportunity to compete for procurements funded by EPA financial assistance funds.

## What Are the Good Faith Efforts?

- ❖ Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and local government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
- ❖ Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
- ❖ Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
- ❖ Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
- ❖ Use the services and assistance of the SBA and the Minority Business Development Agency of the Department of Commerce.
- ❖ If the prime contractor awards subcontracts, require the prime contractor to take the steps in paragraphs (a) through (e) of this section.

## What are the New Contract Administration Provisions?

When the DBE rule goes into effect, there are a number of new provisions designed to prevent unfair practices that adversely affect DBEs. Those provisions are as follows:

- ❖ A recipient must require its prime contractor to pay its subcontractor for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the recipient.
- ❖ A recipient must be notified in writing by its prime contractor prior to any

termination of a DBE subcontractor for convenience by the prime contractor.

- ❖ If a DBE subcontractor fails to complete work under the subcontract for any reason, the recipient must require the prime contractor to employ the Six Good Faith Efforts if soliciting a replacement subcontractor.
- ❖ A recipient must require its prime contractor to employ the Six Good Faith Efforts even if the prime contractor has achieved its fair share objectives.

### **What are the New Forms Associated With the New Contract Administration Provisions?**

EPA Form 6100-2 - DBE Program Subcontractor Participation Form. This form gives a DBE subcontractor the opportunity to describe the work the DBE subcontractor received from the prime contractor, how much the DBE subcontractor was paid and any other concerns the DBE subcontractor might have.

EPA Form 6100-3 - DBE Program Subcontractor Performance Form. This form captures an intended subcontractor's description of work to be performed for the prime contractor and the price of the work submitted to the prime.

EPA Form 6100-4 – DBE Program Subcontractor Utilization Form. This form captures the prime's intended use of an identified DBE subcontractor, and the estimated dollar amount of the subcontract.

<b>Form</b>	<b>Requirement</b>	<b>Provided By</b>	<b>Completed By</b>	<b>Submitted To</b>
EPA Form 6100-2	Recipients required to have prime contractors provide form to Subcontractors	Prime Contractors	DBE Subcontractors	EPA DBE Coordinator
EPA Form 6100-3	Recipients required to have prime contractors provide form to Subcontractors	Prime Contractors	DBE Subcontractors	Recipients as part of bid or proposal package
EPA Form 6100-4	Recipients required to have prime contractors complete the form	Recipients	Prime Contractors	Recipients as part of bid or proposal package

**Disadvantaged Business Enterprise (DBE) Program  
DBE Subcontractor Utilization Form**

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE<sup>1</sup> subcontractors<sup>2</sup> and the estimated dollar amount of each subcontract. An EPA Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Issuing/Funding Entity:			

I have identified potential DBE certified subcontractors	__ YES	__ NO	
If yes, please complete the table below. If no, please explain:			
<b>Subcontractor Name/ Company Name</b>	<b>Company Address/ Phone/ Email</b>	<b>Est. Dollar Amt</b>	<b>Currently DBE Certified?</b>

Continue on back if needed

<sup>1</sup> A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

<sup>2</sup> Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Disadvantaged Business Enterprise (DBE) Program  
DBE Subcontractor Performance Form**

This form is intended to capture the DBE<sup>1</sup> subcontractor's<sup>2</sup> description of work to be performed and the price of the work submitted to the prime contractor. An EPA Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractors bid or proposal package.

Subcontractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity:	

Contract Item Number	Description of Work Submitted to the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor
DBE Certified By: <input type="checkbox"/> DOT <input type="checkbox"/> SBA <input type="checkbox"/> Other: _____		Meets/ exceeds EPA certification standards? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Unknown

<sup>1</sup> A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

<sup>2</sup> Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Disadvantaged Business Enterprise (DBE) Program  
DBE Subcontractor Performance Form**

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

<b>Prime Contractor Signature</b>	<b>Print Name</b>
<b>Title</b>	<b>Date</b>

<b>Subcontractor Signature</b>	<b>Print Name</b>
<b>Title</b>	<b>Date</b>

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

**Disadvantaged Business Enterprise (DBE) Program  
DBE Subcontractor Utilization Form**

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

<b>Prime Contractor Signature</b>	<b>Print Name</b>
<b>Title</b>	<b>Date</b>

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

**Disadvantaged Business Enterprise (DBE) Program  
DBE Subcontractor Participation Form**

An EPA Financial Assistance Agreement Recipient must require its prime contractors to provide this form to its DBE subcontractors. This form gives a DBE<sup>1</sup> subcontractor<sup>2</sup> the opportunity to describe work received and/or report any concerns regarding the EPA-funded project (e.g., in areas such as termination by prime contractor, late payments, etc.). The DBE subcontractor can, as an option, complete and submit this form to the EPA DBE Coordinator at any time during the project period of performance.

Subcontractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity:	

Contract Item Number	Description of Work Received from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Amount Received by Prime Contractor

<sup>1</sup> A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

<sup>2</sup> Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.



# DEBARMENT & SUSPENSION

## Executive Order 12549--Debarment and Suspension

**Source:** The provisions of Executive Order 12549 of Feb. 18, 1986, appear at 51 FR 6370, 3 CFR, 1986 Comp., p. 189, unless otherwise noted.

By the authority vested in me as President by the Constitution and laws of the United States of America, and in order to curb fraud, waste, and abuse in Federal programs, increase agency accountability, and ensure consistency among agency regulations concerning debarment and suspension of participants in Federal programs, it is hereby ordered that:

**Section 1.** (a) To the extent permitted by law and subject to the limitations in Section 1(c), Executive departments and agencies shall participate in a system for debarment and suspension from programs and activities involving Federal financial and nonfinancial assistance and benefits. Debarment or suspension of a participant in a program by one agency shall have government-wide effect.

(b) Activities covered by this Order include but are not limited to: grants, cooperative agreements, contracts of assistance, loans, and loan guarantees.

(c) This Order does not cover procurement programs and activities, direct Federal statutory entitlements or mandatory awards, direct awards to foreign governments or public international organizations, benefits to an individual as a personal entitlement, or Federal employment.

**Sec. 2.** To the extent permitted by law, Executive departments and agencies shall:

(a) Follow government-wide criteria and government-wide minimum due process procedures when they act to debar or suspend participants in affected programs.

(b) Send to the agency designated pursuant to Section 5 identifying information concerning debarred and suspended participants in affected programs, participants who have agreed to exclusion from participation, and participants declared ineligible under applicable law, including Executive Orders. This information shall be included in the list to be maintained pursuant to Section 5.

(c) Not allow a party to participate in any affected program if any Executive department or agency has debarred, suspended, or otherwise excluded (to the extent specified in the exclusion agreement) that party from participation in an affected program. An agency may grant an exception permitting a debarred, suspended, or excluded party to participate in a particular transaction upon a written determination by the agency head or authorized designee stating the reason(s) for deviating from this Presidential policy. However, I intend that exceptions to this policy should be granted only infrequently.

**Sec. 3.** Executive departments and agencies shall issue regulations governing their implementation of this Order that shall be consistent with the guidelines issued under Section 6. Proposed regulations shall be submitted to the Office of Management and Budget for review within four months of the date of the guidelines issued under Section 6. The Director of the Office of Management and Budget may return for reconsideration proposed regulations that the Director believes are inconsistent with the guidelines. Final regulations shall be published within twelve months of the date of the guidelines.

**Sec. 4.** There is hereby constituted the Interagency Committee on Debarment and Suspension, which shall monitor implementation of this Order. The Committee shall consist of representatives of agencies designated by the Director of the Office of Management and Budget.

**Sec. 5.** The Director of the Office of Management and Budget shall designate a Federal agency to perform the following functions: maintain a current list of all individuals and organizations excluded from program participation under this Order, periodically distribute the list to Federal agencies, and study the feasibility of automating the list; coordinate with the lead agency responsible for government-wide debarment and suspension of contractors; chair the Interagency Committee established by Section 4; and report periodically to the Director on implementation of this Order, with the first report due within two years of the date of the Order.

**Sec. 6.** The Director of the Office of Management and Budget is authorized to issue guidelines to Executive departments and agencies that govern which programs and activities are covered by this Order, prescribe government-wide criteria and government-wide minimum due process procedures, and set forth other related details for the effective administration of the guidelines.

**Sec. 7.** The Director of the Office of Management and Budget shall report to the President within three years of the date of this Order on Federal agency compliance with the Order, including the number of exceptions made under Section 2(c), and shall make recommendations as are appropriate further to curb fraud, waste, and abuse.

### **Implementation in the SRF Programs**

A company or individual who is debarred or suspended cannot participate in primary and lower-tiered covered transactions. These transactions include SRF loans and contracts and subcontracts awarded with SRF loan funds.

Under 40 C.F.R. 32.510, the SRF agency must submit a certification stating that it shall not knowingly enter into any transaction with a person who is proposed for debarment, suspended, declared ineligible, or voluntarily excluded from participation in the SRF program. This certification is reviewed by the EPA regional office before the capitalization grant is awarded.

A recipient of SRF assistance directly made available by capitalization grants must provide a certification that it will not knowingly enter into a contract with anyone who is ineligible under the regulations to participate in the project. Contractors on the project have to provide a similar certification prior to the award of a contract and subcontractors on the project have to provide the general contractor with the certification prior to the award of any subcontract.

In addition to actions taken under 40 C.F.R. Part 32, there are a wide range of other sanctions that can render a party ineligible to participate in the SRF program. Lists of debarred, suspended and otherwise ineligible parties are maintained by the General Services Administration and should be checked by the SRF agency and all recipients of funds directly made available by capitalization grants to ensure the accuracy of certifications.

### **Additional References**

C 40 C.F.R. Part 32: EPA Regulations on Debarment and Suspension.

**CERTIFICATION REGARDING DEBARMENT & SUSPENSION  
AND OTHER RESPONSIBILITY MATTERS**

In accordance with the Executive Order 12549, the prospective primary participant certifies to the best of his / her knowledge and belief, that its principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offence in connection with obtaining, attempting to obtain, or performing a public (federal, state, or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state, or local) with commission of any of the offenses enumerated in paragraph (1) (b) of this certification.
- d. Have not within a three-year period preceding this application / proposal had one or more public transactions (federal, state, or local) terminated for cause of default.
- e. Acknowledge that all sub-contractors selected for this project must be in compliance with paragraphs (1) (a – d) of this certification.

\_\_\_\_\_  
Name and Title of Authorized Agent

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Authorized Agent

\_\_\_\_\_ I am unable to certify to the above statements. My explanation is attached.



**Appendix H**

**Proposed Subcontractors Form**

### Disadvantaged Business Enterprise (DBE) Program DBE Subcontractor Utilization Form

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE<sup>1</sup> subcontractors<sup>2</sup> and the estimated dollar amount of each subcontract. An EPA Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Issuing/Funding Entity:			

I have identified potential DBE certified subcontractors	__ YES	__ NO	
If yes, please complete the table below. If no, please explain:			
Subcontractor Name/ Company Name	Company Address/ Phone/ Email	Est. Dollar Amt	Currently DBE Certified?

Continue on back if needed

<sup>1</sup> A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

<sup>2</sup> Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.



OMB Control No:  
Approved:  
Approval Expires:

**Disadvantaged Business Enterprise (DBE) Program  
DBE Subcontractor Utilization Form**

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

<b>Prime Contractor Signature</b>	<b>Print Name</b>
<b>Title</b>	<b>Date</b>

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

# Appendix I

## Soil Boring Logs



Project Name: Main and Pine Street  
 Project Location: Pawtucket, Rhode Island

Site Id: MW-01  
 Project Number: 2015-0591 A30



Location: Main & Pine Street – intersection  
 Description: Monitoring Well, Shallow Datum:  
 Date(s): 02/25/19 – 02/25/19 Ground Elevation: 0.00'  
 Completed Depth: 20.00' Coordinate X: 0.000  
 Total Depth: 20.00' Coordinate Y: 0.000  
 Remarks: Field Instrument: Tiger PID  
 Development Method: Bailer on 02/25/2019  
 No refusal.

Logged By: S. DeVincendis  
 Contractor: Geologic  
 Drilling Method: Direct Push  
 Blank Casing: type: PVC dia: 2.00in fm: 0.0' to: 10.00'  
 Screens: type: Slotted size: 0.010in dia: 2.00in fm: 10.00' to: 20.00'  
 Annular Fill:  
 type: Concrete fm: 0.00' to: 0.70'  
 type: Native Material fm: 0.70' to: 7.00'  
 type: Bentonite Chips fm: 7.00' to: 9.00'  
 type: #2 Sand fm: 9.00' to: 20.00'  
 type: fm: to:

Elevation	Depth	Sample No.	Recovery	Material Description	Graphic Log	USCS Code	Well Construction	PID
0		N/A		0-0.33': ASPHALT. 0.33-1.33': SAND, F-M; trace F gravel; trace brick; trace silt; (10YR 3/1), dry. Loose. (Fill). 1.33-3.5': SAND, F-M; trace silt; (10YR 7/4), dry. Loose.		AS FI	MP. EL. 0.00	0.1 ppm
-2	2					SP		0.2 ppm
-4	4	N/A		4.0-6.5': SAND, F-C; trace silt; (10YR 8/2), dry. Loose.		SW		0.2 ppm
-6	6							
-8	8	N/A		8.0-8.9': Same as above. 8.9-11.2': SAND, F-C; little F gravel; trace silt; (10YR 8/1), dry. Loose.				0.2 ppm
-10	10							0.5 ppm
-12	12	N/A		12-14.3': SAND, F-C; little F gravel; trace silt; (10YR 5/3), wet at 14.25 feet.				0.0 ppm
-14	14					SP		
-16	16	N/A		16-18.7': SAND, F-M; little F-M gravel; little silt; (10YR 4/2). Loose.				0.1 ppm
-18	18							
-20	20			End of boring at 20 feet.				
-22	22							
-24	24							
-26	26							
-28	28							
-30	30							
-32	32							
-34	34							

Project Name: Main and Pine Street  
 Project Location: Pawtucket, Rhode Island

Site Id: MW-02  
 Project Number: 2015-0591 A30



Location: See site map  
 Description: Monitoring Well, Shallow  
 Date(s): 02/25/19 - 02/25/19  
 Completed Depth: 20.00'  
 Total Depth: 20.00'  
 Remarks: Field Instrument: Tiger PID  
 Development Method: Bailer on 02/25/2019  
 No refusal.

Datum:  
 Ground Elevation: 0.00'  
 Coordinate X: 0.000  
 Coordinate Y: 0.000

Logged By: S. DeVincents  
 Contractor: Geologic  
 Drilling Method: Direct Push  
 Blank Casing: type: PVC dia: 2.00in fm: 0.0' to: 10.00'  
 Screens: type: Slotted size: 0.010in dia: 2.00in fm: 10.00' to: 20.00'  
 Annular Fill:  
 type: Concrete fm: 0.00' to: 0.70'  
 type: Benseal-Sand fm: 0.70' to: 2.00'  
 type: Native Material fm: 2.00' to: 7.00'  
 type: Bentonite Chips fm: 7.00' to: 9.00'  
 type: #2 Sand fm: 9.00' to: 20.00'

Driller:  
 Borehole Dia.: 3.25in

Elevation	Depth	Sample No.	Recovery	Material Description	Graphic Log	USCS Code	Well Construction	PID
0		N/A		0-0.33': ASPHALT. 0.33-0.8': SAND, F-C; little F gravel; little silt; black, dry. Loose. (Fill). 0.8-3.3': SAND, F-M; trace silt; (10YR 8/1), dry. Loose. (Fill).		AS FI	MP. EL. 0.00	0.3 ppm 0.2 ppm
-2	2							
-4	4	N/A		4.0-6.3': SAND, F-M; trace F gravel; trace silt; (10YR 7/2), dry. Loose.				0.2 ppm
-6	6							
-8	8	N/A		8.0-10.6': SAND, F-M; trace F gravel; trace silt; (10YR 7/3), dry. Loose.				0.2 ppm
-10	10					SP		
-12	12	N/A		12-15.75': SAND, F-M; trace silt; (10YR 8/2), moist to wet at 13 feet. Loose. 15.75-16': GRAVEL, F angular; little F-M sand; (10YR 5/3). Loose.				0.1 ppm
-14	14							
-16	16	N/A		16-20': No recovery. Shell casing shattered.		GP		0.8 ppm
-18	18					NR		
-20	20			End of boring at 20 feet.				
-22	22							
-24	24							
-26	26							
-28	28							
-30	30							
-32	32							
-34	34							

Project Name: Main and Pine Street  
 Project Location: Pawtucket, Rhode Island

Site Id: MW-03  
 Project Number: 2015-0591 A30



Location: See site map  
 Description: Monitoring Well, Shallow  
 Date(s): 02/25/19 - 02/25/19  
 Completed Depth: 20.00'  
 Total Depth: 20.00'  
 Remarks: Field Instrument: Tiger PID  
 Development Method: Bailer on 02/25/2019  
 No refusal.

Datum:  
 Ground Elevation: 0.00'  
 Coordinate X: 0.000  
 Coordinate Y: 0.000

Logged By: S. DeVincentis  
 Contractor: Geologic  
 Drilling Method: Direct Push  
 Blank Casing:  
 type: PVC dia: 2.00in fm: 0.0' to: 10.00'  
 Screens:  
 type: Slotted size: 0.010in dia: 2.00in fm: 10.00' to: 20.00'  
 Annular Fill:  
 type: Concrete fm: 0.00' to: 0.70'  
 type: Benseal-Sand fm: 0.70' to: 2.00'  
 type: Native Material fm: 2.00' to: 7.00'  
 type: Bentonite Chips fm: 7.00' to: 9.00'  
 type: #2 Sand fm: 9.00' to: 20.00'

Driller:  
 Borehole Dia.: 3.25in

Elevation	Depth	Sample No.	Recovery	Material Description	Graphic Log	USCS Code	Well Construction	PID
0		N/A		0-0.33': ASPHALT. 0.33-1.1': SAND, F-C; little angular gravel; black, dry. Loose. (Fill). 1.1-3.2': SAND, F-M; trace gravel; trace silt; (10YR 5/4), dry. Loose.		AS FI	MP. EL. 0.00	0.4 ppm 0.4 ppm
-2	2							
-4	4	N/A		4.0-8.0': No recovery.				
-6	6							
-8	8	N/A		8.0-11.2': SAND, F-M; trace F gravel; trace silt; (10YR 5/6), moist.		SP		0.4 ppm
-10	10							
-12	12	N/A		12-15.25': SAND, F-M; trace silt; wet at 14 feet. Loose. Color striations.				0.4 ppm
-14	14							
-16	16	N/A		16-20': No recovery. Shell casing shattered.		NR		
-18	18							
-20	20			End of boring at 20 feet.				
-22	22							
-24	24							
-26	26							
-28	28							
-30	30							
-32	32							
-34	34							

Project Name: Main and Pine Street  
 Project Location: Pawtucket, Rhode Island

Site Id: MW-04  
 Project Number: 2015-0591 A30



Location: See site map  
 Description: Monitoring Well, Shallow  
 Date(s): 02/25/19 - 02/25/19  
 Completed Depth: 20.00'  
 Total Depth: 20.00'  
 Remarks: Field Instrument: Tiger PID  
 Development Method: Bailer on 02/25/2019  
 No refusal.

Datum:  
 Ground Elevation: 0.00'  
 Coordinate X: 0.000  
 Coordinate Y: 0.000

Logged By: S. DeVincendis  
 Contractor: Geologic  
 Drilling Method: Direct Push  
 Blank Casing:  
 type: PVC dia: 2.00in fm: 0.0' to: 10.00'  
 Screens:  
 type: Slotted size: 0.010in dia: 2.00in fm: 10.00' to: 20.00'  
 Annular Fill:  
 type: Concrete fm: 0.00' to: 0.70'  
 type: Benseal-Sand fm: 0.70' to: 2.00'  
 type: Native Material fm: 2.00' to: 6.00'  
 type: Bentonite Chips fm: 6.00' to: 9.00'  
 type: #2 Sand fm: 9.00' to: 20.00'

Driller:  
 Borehole Dia.: 3.25in

Elevation	Depth	Sample No.	Recovery	Material Description	Graphic Log	USCS Code	Well Construction	PID
0		N/A		0-0.33': ASPHALT.		AS	MP. EL. 0.00	0.1 ppm
-2	2			0.33-1.7': SAND, F-C; trace F gravel; trace silt; (10YR 3/2), dry. Loose. (Fill). 1.7-1.9': GRAVEL, F, angular; some F-C sand; (10YR 4/2), dry. Loose. (Fill).		FI		0.1 ppm
-4	4	N/A		4.0-5.9': SAND, F-C; little F gravel; trace silt; (10YR 4/2), moist. Loose. 5.9-6.2': SAND, F-C; trace F gravel; trace silt; (10YR 2/2). Loose. 6.2-8.0': SAND, F-C; little gravel; trace silt; (10YR 3/3). Loose.		SW	0.2 ppm	
-6	6							0.1 ppm
-8	8	N/A		8.0-8.5': SAND, F-M; little gravel; little silt; (10YR 5/2), moist. Loose. 8.5-11': SILT; some organic material; black. Dense.		SP		0.1 ppm 0.1 ppm
-10	10					ML		
-12	12	N/A		12-16': No recovery. Shell casing shattered.				
-14	14					NR		
-16	16	N/A		16-18.1': SAND, F-M; some silt and organic material; (10YR 2/1). Dense. 18.1-20': SAND, F-M; little silt; little F gravel; (5.2R 5/1). Dense.				0.1 ppm
-18	18							
-20	20			End of boring at 20 feet.		SP		0.1 ppm
-22	22							
-24	24							
-26	26							
-28	28							
-30	30							
-32	32							
-34	34							

Project Name: Main and Pine Street  
 Project Location: Pawtucket, Rhode Island

Site Id: B-05  
 Project Number: 2015-0591 A30



Location: Datum: Logged By: S. DeVincentis Driller:  
 Description: Soil Boring Ground Elevation: 0.00' Contractor: Geologic Borehole Dia.: 3.25in  
 Date(s): 02/25/19 - 02/25/19 Coordinate X: 0.000 Drilling Method: Direct Push  
 Total Depth: 20.00' Coordinate Y: 0.000 Back Fill:  
 Remarks: Field Instrument: Tiger PID type: Native Material fm: 0.00' to: 20.00'  
 type: fm: to:  
 type: fm: to:  
 type: fm: to:

Elevation	Depth	Sample No.	Recovery	Material Description	Graphic Log	USCS Code	PID
0		N/A		0-0.33': ASPHALT. 0.33-0.9': SAND, F-C; little gravel; trace silt; black, dry. Loose. (Fill). 0.9-1.6': SAND, F-M; trace gravel; (10YR 4/1), dry. Loose. (Fill). 1.6-2.2': SAND, F-C; trace silt; (10YR 6/4), dry. Loose. 2.2-3.4': SAND, F-C; trace silt; (10YR 7/2), wet. Loose.		AS FI	0.2 ppm 0.1 ppm 0.1 ppm 0.1 ppm
-2	2						
-4	4	N/A		4.0-6.0': Same as above. 6.0-6.75': SAND, F-C; trace silt; (10YR 6/2), dry. Loose.		SW	0.1 ppm
-6	6						0.2 ppm
-8	8	N/A		8.0-8.9': SILT; trace F-M sand; (10YR 5/2), moist. Dense. 8.9-10.5': SAND, F-C; some silt; (10YR 5/1). Dense.		ML ML	0.1 ppm 0.1 ppm
-10	10						
-12	12	N/A		12-12.75': SAND, F-C; little silt; (10YR 5/2). Dense. 12.75-15.1': GRAVEL, F-M, subangular; little F-C sand; little silt; (10YR 4/2), wet at 13' feet. Dense.		SM SW	
-14	14						
-16	16	N/A		16-16.25': SAND, F-C; little silt; little F sub-angular gravel. Dense. 16.25-19.2': SILT; little F sand; little F sub-angular/sub-rounded gravel. Very dense.		GP SW	0.3 ppm
-18	18						
-20	20			End of boring at 20 feet.		ML	
-22	22						
-24	24						
-26	26						
-28	28						
-30	30						
-32	32						
-34	34						
-36	36						

Project Name: Main and Pine Street  
 Project Location: Pawtucket, Rhode Island

Site Id: B-06  
 Project Number: 2015-0591 A30



**FUSS & O'NEILL**  
 317 IRON HORSE WAY, SUITE 204  
 PROVIDENCE, RI 02908  
 401.861.3070

Location:	Datum:	Logged By: S. DeVincentis	Driller:
Description: Soil Boring	Ground Elevation: 0.00'	Contractor: Geologic	Borehole Dia.: 3.25in
Date(s): 02/25/19 - 02/25/19	Coordinate X: 0.000	Drilling Method: Direct Push	
Total Depth: 20.00'	Coordinate Y: 0.000	Back Fill:	
Remarks: Field Instrument: Tiger PID		type: Native Material	fm: 0.00' to: 20.00'
		type:	fm: to:

Elevation	Depth	Sample No.	Recovery	Material Description	Graphic Log	USCS Code	PID
0		N/A		0-0.33': ASPHALT. 0.33-0.8': SAND, F-C; little F gravel; trace silt; black, dry. Loose. (Fill). 0.8-2.0': SAND, F-M; trace silt; (10YR 6/4), dry. Loose. 2.0-2.9': SAND, F-M; trace silt; (10YR 7/2), dry. Loose.		AS FI	0.1 ppm 0.1 ppm
-2	2						0.1 ppm
-4	4	N/A		4.0-6.2': Same as above.		SP	0.1 ppm
-6	6						
-8	8	N/A		8.0-10.2': SAND, F-C; trace silt; (10YR 7/3), moist to wet at 9.5 feet. Loose. 10.2-10.5': SAND, F-C; trace F angular gravel; trace silt; (10YR 4/4). Loose.			0.1 ppm
-10	10						0.1 ppm
-12	12	N/A		12-12.7': Same as above. 12.7-14': SAND, F-C; trace F gravel; trace silt; (10YR 7/2). Loose. 14-14.8': SAND, F-C; little F gravel; trace silt; (10YR 4/1).			0.1 ppm 0.1 ppm
-14	14					SW	0.1 ppm
-16	16	N/A		16-20': Same as above.			0.1 ppm
-18	18						
-20	20			End of boring at 20 feet.			
-22	22						
-24	24						
-26	26						
-28	28						
-30	30						
-32	32						
-34	34						
-36	36						