CITY OF PAWTUCKET

REQUEST FOR PROPOSALS

BID # 26-012

Riverwalk West Final Phase

04/23/2026

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1.0 - Bid/Solicitation Information

Schedule

Pre-Bid/Proposal Conference: ☐ No ☐ Yes

May 5, 2026 @ 11:00 AM

***** **Non-Mandatory** *****

Location:

200 Taft St
Pawtucket, RI 02860
(Parking is available at the T1 parking lot at 11 Tidewater St
Enter the stadium through the glass doors)

Requests for Further Information:

May 8, 2026 @ 2:00 PM

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

Michael Wilcox, Project Engineer
E-mail: mwilcox@pawtucketri.gov

AND

Todd Ritchie, SLR Consulting

E-mail: tritchie@slrconsulting.com

Please reference the RFP 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:

May 28, 2026 at 4:00 PM

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

Bids will be publicly opened on May 28, at 4:00 PM during a scheduled Purchasing Board meeting. Please note that the bid opening will be held at 100 Freight Street, Pawtucket, RI.

Bonds/Surety Required

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 bid price.

Bonds Required:

Bid Bond: ☐ No ☒ Yes

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 bid 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 proposed improvements at the Town Landing property will provide an extension of the river walk currently in place along the Seekonk River adjacent to the Centreville Bank Stadium. This northerly extension will connect the stadium property through the Town Landing park to the improved sidewalk system leading northerly along Taft Street. It will also provide a link to the new stair project on the west side of Taft Street, which provides a pedestrian link up to the Division Street bridge allowing pedestrians to cross over the Seekonk River to the destinations in Pawtucket east of the river. This provides an important pedestrian link from the Centreville Bank Stadium to parking and other destinations located north and east of the stadium and Town Landing Park.

Proposed improvements along the riverbank will restore an existing stone wall along the waters edge northerly from the stadium property which will meet a proposed sheet pile extension from the Town Landing boat launch area to address existing erosion along the riverbank and provide a long-term stable edge along the Seekonk River. Upgradient of the riverbank improvements riprap stabilization is proposed as an extension of prior work completed at the stadium along with a densely planted buffer between the river walk and the riverbank improvements. A plaza area along with a wooden viewing platform and amphitheater area will provide a pedestrian focal point along the river's edge.

3.2 Project Background

The project is funded from variety of sources including but not limited to a grant from the Department of Housing and Urban Development (HUD) and a loan from the Rhode Island Infrastructure Bank (RIIB).

The project has received permits from the City of Pawtucket Planning Commission and the Rhode Island Coastal Resources Management Council (CRMC). Conditions of those permits will need to be followed for construction of the project.

In water work will be restricted to October 15th to January 15th unless otherwise authorized by the City and/or authorities having jurisdiction.

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 H. In general terms, the location of the Project can be described as follows:

- The project is located along the east side of Taft street between Taft Street and the Seekonk River just north of the Centreville Bank Stadium, and
- Portions of the following properties:
    - Assessor's Plat (A.P.) 54 Lots 827

4.2 General Requirements

4.2.1 Project Schedule

- Bids Due and Opening Date: 05/28/2026 at 4:00PMRefer to noted submission times in this RFP
- Project Award: 6/11/2026
- Project Begins: 7/01/2026
- Substantial Completion: 03/01/2027
- Final Completion: 05/15/2027

4.2.2 Hours of Work

The Contractor shall be permitted to work on-Site from 7:00 AM to 5:30 PM, Monday through Friday. The Contractor may be permitted to work during extended hours outside of this time, but only upon receipt of the DPW's express written authorization.

4.2.3 Pricing

UNIT PRICES: The unit price for each of the several items in the Proposal of each Bidder shall include its pro rata share of overhead and profit so that the sum of the products obtained by multiplying the quantity shown for each item by the unit price Bid represents the Total Bid. The price submitted for items requiring a lump sum Bid shall also include all overhead and profit and represents the total Bid. Any Bid not conforming to this requirement may be rejected as unresponsive. Special attention of all Bidders is called to this provision, for should conditions make it necessary to revise the quantities or unit price, no limit will be fixed for such increased or decreased quantities nor extra compensation allowed, provided the net monetary value of all such additive and subtractive changes in quantities of such items or work (i.e., difference in cost) shall not increase or decrease the original contract price by more than twenty-five percent (25%) except for work not covered in the Contract Documents.

4.2.4 Prevailing Wage Requirements

Bidders are advised that payment of the local prevailing wage, as established by the Rhode Island Department of Labor and Training, is a requirement of this project, as outlined in Appendix B. A copy of the current prevailing wage decision is included in this document as Appendix C. Where a contract will be entered pursuant to competitive bidding procedures, a modification, notice of which is published on the Wage Determination web site at https://sam.gov/content/home; or in the Federal Register less than 10 days before the opening of bids shall be effective unless the agency finds that there is not a reasonable time still available before bid opening to notify bidders of the modification and a report of the finding is inserted in the contract file. Bidders are expected to account for the prevailing wage rates applicable to this project in the formulation of their bid.

All contractors and sub-contractors are required to use the Rhode Island Certified Weekly Payroll and the RI Statement of Compliance form. Use of company payroll forms or other state (MA, CT, etc.) forms is not acceptable. Only employees of the contractor should be listed on the RI Certified Weekly Payroll forms. Subcontractors must do their own separate RI Certified Weekly Payroll form listing all of their workers working on the Prevailing Wage job-site.

Federal forms may be used for Department of Transportation projects only. However, if a complaint is being investigated, the DLT will require the contractor under investigation to resubmit the requested payroll information on the Rhode Island Certified Weekly Payroll form for all hours worked on that Department of Transportation project being investigated.

4.2.5 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.

4.2.6 Experience

The City will require all general contractors and subcontractors have a minimum of 5 years' experience doing similar type of work. This experience should be listed in the form supplied in Section 11 and or attach a separate sheet listing your company's experience and that of subcontractors performing work.

4.3 Scope Detail

The scope of work is defined comprehensively in the Technical Specifications and Site Plans issued for bid, which are incorporated into this RFP as Appendices G and H, respectively.

In general terms, the Project includes, but is not limited to, the following construction activities:

- Mobilization and provide controls as necessary to ensure public safety and facilitate construction;
- Clearing and grubbing of site
- Installation and maintenance of erosion and sediment control devices;
- Removal and proper disposal of cleared material other than soil;
- Earthwork and site preparation including rough grading;
- Installation of Directional, Regulatory, Warning and Guide signage;
- Provision and installation of temporary fencing for site control;
- Maintenance of existing water service;
- Reset existing hydrant
- Provision and installation of removable bollards;
- Provision and installation of benches and granite blocks;
- Provision and installation of porous asphalt pavement section;
- Reconstruction of existing stone wall at river edge

- Placement of riprap along river bank
- Installation of sheet pile wall and cap along river edge
- Provision and installation of concrete or paver plaza area
- Provision and Installation of concrete walks, pads, stairs, and foundations
- Provision and installation of fences and railings
- Provision and installation of wood amphitheater deck, railing, and supports
- Provision and installation of light fixtures, concrete bases conduits, and wiring;
- Installation of pavement underdrain pipes and outfalls;
- Bituminous concrete pavement cut and repair;
- Loam installation for disturbed areas within the site;
- Installation of plantings, mulch and seeding; and
- Demobilize and final cleanup of the site including removal of remaining erosion and sediment control devices and any remaining sediment, pavement sweeping;

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 the Statement of Bidder's Qualifications (if requested) shall be enclosed in a sealed envelope which shall be clearly labeled with the words, **"[Riverwalk West Final Phase], Bid 26-012**", 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, and a website address should be included if available.

Respondents must also include an overview of their company's experience including, but not limited to, the number of years the company has been providing these services, the size of the company (including the number of employees and locations), a description of work undertaken that is similar to what is being requested in this RFP, and, if applicable, certifications that show a knowledge of equipment that would be serviced or provided under this contract.

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. Subcontractors will be required to list their experience doing similar work that are contracted to do.

Three (3) copies of your proposal—one (1) original hard copy and one (1) photo copy; and one digital (1) copy on CD or similar format—must be submitted at the time of submission. Proposals must be in the following format

Bid Form (Section 11 *"ENTIRE SECTION")*
Anti-Kickback Acknowledgement (Appendix A)
Company overview
- Length of time your firm has been in business
- Length of time at current address

All licensing (List types and business license number(s)), certification and permits as required in the Scope of Work

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 based on criteria below and their associated weights.

Evaluation Criteria	Importance
Experience/Qualifications	20%
References	10%
Price	70%

3. The third is a comparison of each proposal's weighted evaluation relative to the costs proposed.

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.

For purposes of evaluating the bid, The City will use the price referenced above in Evaluation Criteria as the price noted in Section 11 Bid Form, which will be the base bid plus ALL alternates if any, and allowances. The City will select alternates as the budget allows.

10.0 - Miscellaneous

- Vendors 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.

11.0 – Bid Form

BID # 26-012 - RIVERWALK WEST FINAL PHASE

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.)

_____

_____

_____

Is your company bonded? Yes ____ No ____

Please describe the nature and extent of all insurance coverage:

_____

_____

_____

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 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

BID # 26-012 - RIVERWALK WEST FINAL PHASE

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 SLR Consulting (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, **(BID # 26-012 – RIVERWALK WEST FINAL PHASE**, 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. Total Price below should include all Bid Items, allowances and all ADD ALTERNATES.

Total Price: $…….dollars,
(amount in words)

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

We have included herewith, the unit price bid forms, bid alternates information, and the required security deposit or Bid Bond as required by the Instruction to Bidders.

For purposes of evaluating the bid, the price noted above will be the base bid plus ALL alternates and allowances. The City will select alternates as the budget allows.

Contractor to provide a lump sum bid for all work necessary to furnish and install the proposed improvements shown on the bid documents. Those items include but are not limited to the summary of items listed in 4.3 above.

Provide a breakdown of the lump sum bid for the following items on a separate sheet and attach to this bid form:

1. Mobilization/Demobilization
2. Demolition
3. General Conditions
4. Erosion Controls
5. Riverwall
6. Walkway
7. Landscaping
8. Lighting
9. Electrical
10. Sculpture Pads
11. Contaminated Soil Management and Capping
12. Decorative Granite Blocks

TOTAL BID _____

TOTAL BID IN WORDS _____

Note: Total Bid shown above shall match Total Price shown on the first page of this bid form. All project costs including labor, equipment, materials, overhead, and profit to complete the Work shall be included.

1.01 ALLOWANCES:

As part of the Base Bid (Total Bid), the Bidder agrees to carry quantities of materials below in the base bid of the contract. 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 costs of the construction authorized by the Owner.

ALLOWANCE NO. 1 Allowance for Removal of Unsuitable Material
The Base Bid Price listed in the Bid Proposal shall include the removal of a quantity of 200 cubic yards of unsuitable material, such as defective gravel base, brick, stone mortar, blocks, cobblestone, curbing, concrete footing and other waste debris that is not scheduled for removal under the other sections of the specifications. The Contractor shall contact the Engineer/Owner's Representative in the event unsuitable material is encountered. Unsuitable material shall not be removed from the site without inspection and approval by the Owner's Representative. Removal requires certification of quantities by the Contractor. Un-used allowances for unsuitable material removal shall be reimbursed to the Owner at the Contract Unit Price stated below.

Removal of 200 Cubic Yards of Unsuitable material

$_____ $_____

Lump Sum In Words LS

Unit Price for the Removal of Unsuitable Material

$_____ $ _____

Cost per Cubic Yard In Words Per Cy

ALLOWANCE NO. 2 Allowance for Removal of Boulders over 3 feet in diameter
The Base Bid Price listed in the Bid Proposal Forma shall include the removal and disposal of a quantity of 25 cubic yards of boulders over 3 feet in diameter (considered unclassified excavation). The Contractor shall contact the Engineer/Owner's Representative in the event boulders are encountered. Boulders shall not be removed from the site without inspections by the Owner's Representative. Certification of quantities are required. Unused allowances for boulder removal shall be reimbursed to the Owner at the Contract Unit Price.

Unit Price for the Removal and Disposal of Boulders over 3 feet in diameter, 25 Cubic Yards:

$_____ $ _____
Cost per Cubic Yard In Words Per Cy

$_____ Total Cost 25 CY Removal and Disposal of Boulders

ALLOWANCE NO. 3 Allowance for Removal and Disposal of Concrete Foundations and Footings requiring jackhammer demolition: The Base Bid Price listed in the Bid Proposal Form shall include the removal and disposal of the quantity of 10 cubic yards of unclassified concrete requiring jackhammer demolition (considered Unclassified Excavation) The Contractor shall contact the Engineer/Owner's Representative in the unclassified foundations or footings are encountered. The concrete rubble may not be removed from the site without inspections by the Owner's Representative. Certification of quantities is required. Unused allowances for Concrete Foundations and Footing Removal and Disposal shall be reimbursed to the Owner at the Contract Unit Price.

Unit Price for the Removal and Disposal of Concrete Foundations and Footings requiring jackhammer demolition, 10 Cubic Yards:

$_____ $ _____
Cost per Cubic Yard In Words Per Cy

$_____
Total Cost 10 CY Removal and Disposal of Concrete Footings and Foundations

ALLOWANCE NO. 4 Furnish and Install Clean Gravel Borrow Fill: The Base Bid Price listed in the Bid Proposal Form shall include the furnishing and installing of 1,100 cubic yards of additional clean gravel borrow fill. This clean fill allowance shall only be used where unclassified excavation has been encountered and described in Items 1-3 in this Section, and as directed by the Owner.

Upon approval of the excavation, the Contractor shall backfill all excavated areas to the proposed line and grade using clean gravel borrow fill. Fill shall be clean of foreign matter, vegetative matter, and organic of compressible soils. All imported clean fill found to be contaminated shall be removed from the site and replaced with clean fill at the Contractor's expense. Unused allowances for clean gravel borrow fill shall be reimbursed to the Owner at the Contract Unit Price.

Unit Price to Furnishing and Installing Clean Gravel Borrow Fill, 1100 Cubic Yards:

$_____ $ _____
Cost per Cubic Yard In Words Per Cy

$_____ Total Cost 1100 CY Clean Gravel Borrow Fill.

ALLOWANCE NO. 5 Permit Allowance: A permit allowance of Four-Thousand Dollars ($4,000.00) shall be provided to address this item. The Contractor shall be responsible for payment of all permit fees and shall request reimbursement thru payment requisitions. The Contractor shall provide documentation that the permit fees have been paid prior to reimbursement. The amount reimbursed will be the amount that is stated on the permit receipt(s). Unused allowances not expended for permitting shall be reimbursed to the Owner.

$ 4,000.00	Four Thousand Dollars
Lump Sum	In Words

ALLOWANCE NO 7. Police Detail for Traffic Protection: An allowance of Eight-Thousand Dollars ($8,000.00) shall be provided to address this item. The Contractor shall be responsible for reviewing proposed work operations with the Engineer/Owner's Representative and shall coordinate and ensure the proper police detail is present to maintain orderly traffic flow and provide the necessary traffic protection.
The Contractor shall provide documentation of the days and manhours required. The amount reimbursed will be the amount that is stated on the permit receipt(s). Unused allowances not expended for Police Detail for Traffic Protection shall be reimbursed to the Owner.

$ 8,000.00	Eight Thousand dollars
Lump Sum	In Words

ALLOWANCE NO 8. Funding Source Signage: An allowance of Three-Thousand Dollars ($3,000.00) shall be provided to address this item. The Contractor shall be responsible for reviewing proposed work operations with the Engineer/Owner's Representative and shall coordinate and ensure the proper signage is installed and visible to the public.
The Contractor shall provide documentation of the invoices for the signage. The amount reimbursed will be the amount that is listed on the invoice. Unused allowances not expended for Police Detail for Traffic Protection shall be reimbursed to the Owner.

$ 8,000.00	Eight Thousand dollars
Lump Sum	In Words

1.02 BID ALTERNATES:

Alternates as quoted are for provision of unit price adjustments to the Base Bid 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.

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.

ALTERNATE BID 1 – Benches and Concrete Anchoring Slabs

Alternate #1 shall be the ADDITION of concrete anchoring slabs and benches as shown on Sheets LA, LS, GU, PR and SD-1. Work includes excavation to subgrade and compaction of subgrade. Placement and compaction of dense grade stone base material. Placement of concrete with welded wire mesh. Supply stainless steel anchor bolts and bench. Install bench per manufacturers recommendations as shown on plans Base Bid is no concrete anchoring pads or benches.

ADD $ _____

ADD AMOUNT (words) _____

ALTERNATE BID 2 – Add Concrete Pavers at Proposed Plaza

Alternate #2 shall be the ADDITION of concrete pavers in the proposed plaza area as shown on Sheets LA, GU, PR, and SD-1. Work included furnish and install standard heavy duty paver (4"x8"x 3-3/8") manufactured by Unilock. Paver A will have an Umbriano finish, color to be French Grey. Paver B will have a Premier Smooth Finish, color Granite Blend. Base Bid 6" concrete base slab set to grade with appropriate control and expansion joints and stiff broom finish surface.

ADD $ _____

ADD AMOUNT (words) _____

ALTERNATE BID 3 – Concrete Plaza Area, Concrete Walk, Stairs, Wood Deck, and Amphiteater

Alternate #3 shall be the ADDITION of the concrete plaza area with associated concrete walk, stairs, wood deck and amphitheater as shown on Sheets LA, GU, PR, and SD-1, SD-2, and SD-3. Work includes earthwork to accommodate proposed improvements Excavation to subgrade and compaction of subgrade. Placement and compaction of stone base material. Forming and placement of rebar and concrete. Forming and placement of deck foundations and framing of deck. Installation of railings and finishes. Base bid is sloping of grade in this area adjacent to river walk at max of 2:1 slope, providing topsoil and seeding of disturbed area.

ADD $ _____

ADD AMOUNT (words) _____

ALTERNATE BID 4 – Reduce Decorative Granite Blocks by 50%

Alternate #4 shall be the DELETION of 50% of the decorative granite blocks as shown on Sheets LA, LS, GU, and PR. Work includes, supply of granite blocks and all labor included in placement of blocks on the ground per plan. Base bid is extension of mulch bed where blocks would otherwise be placed.

DEDUCT $ _____

DEDUCT AMOUNT (words) _____

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 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)

« »« »
« »

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2 OWNER

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5 SUBCONTRACTORS

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12 UNCOVERING AND CORRECTION OF WORK

13 MISCELLANEOUS PROVISIONS

14 TERMINATION OR SUSPENSION OF THE CONTRACT

15 CLAIMS AND DISPUTES

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.

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§ 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.

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§ 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

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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.

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§ 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;

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.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.

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§ 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.

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§ 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.

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§ 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,

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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.

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§ 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.

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§ 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.

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§ 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

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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

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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

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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.

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§ 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.

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§ 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.

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§ 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

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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

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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.

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§ 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.

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§ 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

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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.

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§ 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.

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§ 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.

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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,

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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 th 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

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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

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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.

101.3.2.1 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 or 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 of 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.

200.0 OMITTED

300.0 OMITTED

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 $250.00 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 OMITTED

408.0 OMITTED

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 OMITTED

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.

14.0 – Special Conditions for CDBG Contracts

INTRODUCTION: The following special conditions are items which must be contained in contracts that are fully or partially paid with Community Development Block Grant (CDBG) funds. Some items such as bonding and insurance may also be included elsewhere in the contract documents. The Contractor must comply with those City requirements as well as these Federal requirements.

The Contractor shall comply with all applicable special conditions for CDBG contracts as contained herein and shall insert appropriate provisions in all subcontracts covering work under this contract to insure compliance by subcontractors with such regulations and shall be responsible for the submission of affidavits required of subcontractors there under except as the Secretary of Labor may specifically provide for variations of or exemptions from the requirements thereof.

The Contractor shall not enter into any subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

The Contractor must submit to the Project Manager or Representative, within ten (10) days of bid opening, the names and addresses of the subcontractors he/she proposes to utilize on the project in order for the Project Manager to approve utilization of said subcontractors. If other subcontractors are proposed during the construction phase, their names and addresses are to be submitted to the Project Manager prior to utilization for approval.

Complete language on the Federal labor laws is included in the attached HUD 4010, which is incorporated by reference.

Statements show in italics are instructions to the reader.

I. SPECIAL CONDITIONS FOR ALL CDBG CONTRACTS

A. HUD SECTION 3 CLAUSE

Because this project receives direct Federal financial assistance, compliance with Section 3 of the Housing and Development Act of 1968 and the regulation implementing that Section is required. The Contractor understands that this requires the project to make training, employment and contracting opportunities available, to the greatest extent feasible, to lower income City residents and businesses.

1. COMPLIANCE WITH HUD SECTION 3 CLAUSE

Compliance: Compliance with the provisions of Section 3, the regulations set forth in 24 CFR 135, and all applicable rules and orders issued hereunder prior to the execution of this contract, shall be a condition of the Federal financial assistance provided under this contract and binding upon the City of Pawtucket (City) and any of the City's sub-recipients and subcontractors. Failure to fulfill these requirements shall subject the City, the City's sub-recipients and subcontractors, their successors and assigns, to those sanctions specified by the Agreement through which Federal assistance is provided. The City certifies and agrees that no contractual or other disability exists which would prevent compliance with these requirements.

The Contractor further agrees to comply with these "Section 3" requirements and to include the following language in all subcontracts executed under this Agreement:

"The work to be performed under this contract is a project assisted under a program providing direct Federal financial assistance from HUD and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1988, as amended, 12 U.S.C. 1701. Section 3 requires that to the greatest extent feasible

opportunities for training and employment be given to low- and very low-income residents of the project area and contracts for work in connection with the project be awarded to business concerns that provide economic opportunities for low- and very low-income persons residing in the metropolitan area in which the project is located."

The Contractor further agrees to ensure that opportunities for training and employment arising in connection with a housing rehabilitation (including reduction and abatement of lead-based paint hazards), housing construction, or other public construction project are given to low- and very low-income persons residing within the metropolitan area in which the CDBG-funded project is located; where feasible, priority should be given to low- and very low-income persons within the service area of the project or the neighborhood in which the project is located, and to low- and very low-income participants in other HUD programs; and award contracts for work undertaken in connection with a housing construction, or other public construction project are given to business concerns that provide economic opportunities for low- and very low-income persons residing within the metropolitan area in which the CDBG-funded project is located; where feasible, priority should be given to business concerns which provide economic opportunities to low- and very low-income residents within the service area or the neighborhood in which the project is located, and to low- and very low-income participants in other HUD programs.

The Contractor certifies and agrees that no contractual or other legal incapacity exists which would prevent compliance with these requirements.

2. Notifications

The Contractor agrees to send to each labor organization or representative of workers with which it has a collective bargaining agreement or other contract or understanding, if any, a notice advising said labor organization or worker's representative of its commitments under the Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.

3. Subcontracts

The Contractor will include this Section 3 clause in every subcontract and will take appropriate action pursuant to the subcontract upon a finding that the subcontractor is in violation of regulations issued by the grantor agency. The City will not subcontract with any entity where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR 125 and will not let any subcontract unless the entity has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.

B. Remedies for Violation or Breach of Contract Terms

All claims, disputes and other matters in question between the parties to this agreement, arising out of or relating to this agreement or the breach thereof, shall be resolved as provided by Rhode Island law. Venue shall be in the County of Providence, Rhode Island. Failure to timely comply with the contract without approval from the City shall be deemed a breach of this agreement and the expenses and costs incurred by the City shall be the burden of the Contractor. Disputes regarding the interpretation of this contract shall be resolved in favor of the City.

C. Patent and Copyrights

The U.S. Department of Housing and Urban Development and the City of Pawtucket retain patent rights and copyrights on any project which involves research, developmental, experimental or demonstration work.

D. Adherence to State Energy Conservation Plan

The successful bidder shall recognize and adhere to mandatory standards and policies relating to energy efficiency which are contained in the State energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Public Law 94-163).

E. Access to Records—*For all contracts other than those awarded under small purchase procedures:*

Providence County, the consultant operating on behalf of the City of Pawtucket, the State of Rhode Island, the U. S. Department of HUD, the Comptroller General of the United States or any of their authorized representatives, shall have access to any books, documents, papers and records of the Contractor which are directly pertinent to this contract, for the purpose of performing audit or project monitoring, and such records shall be subject to examination, copying, excerpting or transcribing.

F. Contract Work Hours and Safety Standards—*Applies to any contracts in excess of $2,000, which may involve the employment of mechanics or laborers. (These requirements do not apply to the purchase of supplies or materials or articles ordinarily available on the open market or contracts for transportation or transmission of intelligence.)*

The Contractor shall comply with Sections 103 and 107 of the Contractor Work Hours and Safety Standards Act (40 USC 327-330) as supplemented by Department of Labor Regulations (29 CFR, Part 5). Under Section 103 of the Act each Contractor shall be required to compute the wages of every mechanic and laborer on the basis of a standard work week of forty (40) hours. Work in excess of that standard work week is permissible provided that the worker is compensated at a rate of not less than 1½ times the basic rate of pay for all hours worked in excess of forty (40) hours in the work week. (This requirement applies to time spent on federally assisted contracts only.) Section 107 of the Act is applicable to construction work and provides that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor.

G. Federal Equal Opportunity Laws

1. **Certification of Non-Segregated Facilities** (for contracts over $10,000)

2. **Title VI, Civil Rights Act of 1964**
   Affirmatively furthering the policies of the Fair Housing Act

3. **Section 109 of the Housing and Community Development Act of 1974**
   No person in the United States shall on the grounds of race, color, national origin, religion or sex be excluded from participation in, be denied the benefits of or be subjected to discrimination under any program or activity receiving Federal financial assistance made available pursuant to the Act.

4. **Section 503 Handicapped** (for contracts $2,500 or over)

5. **Age Discrimination Act of 1975**
   Prohibits against discrimination on the basis of age

6. **Section 504 of the Rehabilitation Act of 1973**
   Prohibits against discrimination on the basis of disability

II. ADDITIONAL SPECIAL CONDITIONS FOR ALL CDBG CONSTRUCTION CONTRACTS

A. Copeland "Anti-Kickback Act"

The Contractor shall comply with the Copeland "Anti-Kickback Act" (18 USC 874) as supplemented in Department of Labor regulations (29 (CFR, Part 3). This Act provides that each Contractor or sub-grantee shall be prohibited from inducing, by any means, any person employed in the construction, completion or repair of public work, to give up any part of the compensation to which he is otherwise entitled. The City of Pawtucket shall report all suspected or reported violations to the U. S. Department of HUD.

B. All Construction Contracts Expected to be Over $2,000

Davis-Bacon Requirements

The Contractor shall comply with the Davis-Bacon Act (40 USC 276a to a-7) as supplemented by Department of Labor regulations (29 CFR, Part 5). Under this Act Contractors and subcontractors shall be required to pay wages to laborers and mechanics at a rate not less than the minimum wages specified in a wage determination made by the Secretary of Labor. In addition Contractors shall be required to pay wages not less often than once a week. A copy of the prevailing wage rates is included in this solicitation. Any known changes to these wage rates prior to award of contract shall be made known to offerers. In addition Contractors will be required to provide payroll information to the City of Pawtucket on a weekly basis for verification of compliance. Contractors and subcontractors to submit this information on Certified Payroll Forms as supplied by the State of Rhode Island Department of Labor and Training. The City of Pawtucket will report all suspected or reported violations of this condition to the U. S. Department of HUD and/or the U. S. Department of Labor.

--See attached copy of the applicable wage rates in Appendix C--

C. All Construction Contracts over $10,000

1. Contract Termination

This contract may be terminated upon thirty (30) days' written notice without cause. In the event this contract is terminated without cause, the Contractor shall be compensated for all services performed to termination date together with any expenses incurred to that date. This contract may be terminated by either party upon seven (7) days' written notice should the other party fail substantially to perform in accordance with its terms through no fault of the party initiating the termination. In the event the contract is terminated through fault of the Contractor, the Contractor shall bear all additional expenses incurred by the County for the completion of the contract, including those required to retain additional Contractors to complete the work.

2. Equal Employment Opportunity

Contractors shall comply with Executive Order 11246 entitled "Equal Employment Opportunity," as amended by Executive Order 11375 and as supplemented in Department of Labor regulations (41 CFR, Part 60).

The Contractor also agrees to ensure that Minority Business Enterprises, as defined in 49 CFR, Part 23, have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds provided under this agreement. In this regard the Contractor shall take all necessary

reasonable steps in accordance with 49 CFR, Part 23, to ensure that Minority Business Enterprises have the maximum opportunity to compete for and perform contracts.

D. All Construction Contracts over $100,000

1. Section 306 of the Clean Air Act, Section 508 of the Clean Water Act and EPA Regulations of Nonexempt Federal Contracts

The Contractor shall comply with all applicable standards, orders or requirements issued under Section 306 of the Clean Air Act (42 USC 1857(h)); Section 508 of the Clean Water Act (33 USC 1368), Executive Order 11738; and Environmental Protection Agency Regulations (40 CFR, Part 15), which prohibit the use under Nonexempt Federal contracts, grants or loans of facilities included on the EPA List of Violating Facilities. Violations will be reported to HUD and to the USEPA Assistant Administrator for Enforcement (EN-329).

2. Bonding and Insurance

The following bonding and insurance items are required:

a. A bid guarantee from the bidder equivalent to 5 percent of the bid price. The bid "guarantee" shall consist of a firm commitment such as a bid bond, certified check or other negotiable instrument accompanying the bid as assurance that the bidder will, upon acceptance of his bid, execute such contractual documents as may be required within the time specified.

b. A performance bond on the part of the Contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the Contractor's obligations under such contract.

c. A payment bond on the part of the Contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

III. RESTRICTION ON ALL PUBLIC WORKS PROJECTS

No Contractor, or subcontractor, of a foreign country included on the list of countries that discriminate against U. S. firms published by the Office of the United States Trade Representative (USTR) may be awarded a contract or a subcontract.

IV. ADDITIONAL REQUIRED INFORMATION ON ALL CONTRACTS

All contractors and their subcontractors are required to supply the following so that the City of Pawtucket submit quarterly and yearly reporting as required by the CDBG Grant.

- Unique Entity Identification number (from Federal Government as created in SAM.gov)
- Data Universal Numbering System DUNS #

- Prime Contractor Identification number(Tax ID #)
- Sign “CERTIFICATION OF SPECIAL CONDITIONS FOR CDBG CONTRACTS” form supplied by the City upon award of contract.
- Sign “CERTIFICATIONS SECTION 3 OF THE HOUSING AND URBAN DEVELOPMENT ACT OF 1968” form supplied by the City upon award of contract.

15.0 – Special Conditions for Build America, Buy America Act

U. S. Department of Housing and Urban Development
Office of Community Planning and Development

Special Attention of:

All Secretary's Representatives All State/Area Coordinators
All CPD Division Directors
HUD Field Offices
HUD Regional Offices

NOTICE: CPD-2023-12

Issued: **November 2, 2023**

Expires: Effective until amended, superseded, or rescinded

Cross Reference:
Sections 70901-52 of Pub. L. No. 117-58

Subject: CPD Implementation Guidance for the Build America, Buy America Act's domestic content procurement preference as part of the Infrastructure Investment and Jobs Act.

This Notice provides initial implementation guidance for programs administered by the U.S. Department of Housing and Urban Development's (HUD) Office of Community Planning and Development (CPD) for the "Buy America Preference" (BAP) imposed by the Build America, Buy America Act (BABA) enacted under Division G, Title IX of the Infrastructure Investment and Jobs Act (IIJA, Pub. L. No. 117-58) signed into law on November 15, 2021.

This Notice provides CPD grantees and participating jurisdictions, collectively referred to as grantees, an overview of BABA, including key terms, HUD actions to implement BABA, guidance on HUD's general waivers, the phased implementation schedule for the BAP on CPD programs, and proposed next steps. The attached addenda include answers to frequently asked questions, examples of when the BAP applies for CPD grantees, and sample BAP language for agreements.

Purpose of the Notice

This Notice is intended to notify grantees of the "Buy America Preference" (BAP) requirement under the Build America, Buy America Act (BABA) as they apply to CPD programs. This Notice identifies the CPD programs and activities that must comply with BABA along with the timeline for the application of the BAP. It also highlights issues that grantees will want to consider when preparing for HUD's full implementation of the BAP, as described in "Public Interest Phased Implementation Waiver for FY 2022 and 2023 of Build America, Buy America Provisions as Applied to Recipients of HUD Federal Financial Assistance" (88 Fed. Reg. 17001, effective March 15, 2023). This Notice refers to 88 Fed. Reg. 17001 as the "Phased Implementation Waiver" which establishes BAP implementation points according to a schedule across HUD programs.

Note: The guidance provided in this Notice is subject to change if the Office of Management and Budget (OMB) updates guidance on the application of BABA for Federal financial assistance (FFA) programs for infrastructure.

I. Overview of Build America, Buy America Act

The Build America, Buy America Act (BABA)

The Build America, Buy America Act (BABA) was signed into law by President Biden on November 15, 2021, as part of the Infrastructure Investment and Jobs Act (IIJA) as Sections 7090152 of Pub. L. No. 117-58. In addition to providing funding for roads, bridges, rails, and high-speed internet access, it created an incentive to increase domestic manufacturing across the country through the inclusion of BABA's "Buy America Preference" (BAP). In general, the BAP requires that all iron, steel, manufactured products, and construction materials used in infrastructure projects funded with Federal financial assistance (FFA), as outlined in Section 70914(a) of BABA, must be produced in the United States. The intent of the BAP in BABA is to stimulate private-sector investments in domestic manufacturing, bolster critical supply chains, and support the creation of well-paying jobs for people in the United States. The preference is also intended to bolster American firms' ability to compete and lead globally for years to come by requiring entities that receive Federal infrastructure funds to use American materials and products.

The BABA preference for American materials and products applies to all spending on infrastructure projects by Federal agencies, including HUD. In BABA and for purposes of this Notice, the Federal infrastructure spending with a BAP is referred to as "Federal financial assistance" or "FFA." Under Section 70912(7), FFA for infrastructure "projects" includes the "construction, alteration, maintenance, or repair of infrastructure in the United States". Under Section 70914(a), the use of American iron and steel, construction materials, and manufactured products applies to funding from CPD programs for infrastructure projects. However, the BAP does not apply to "pre and post disaster or emergency response expenditures" under Section 70912(4)(B). A list of CPD disaster or emergency funding meeting these criteria can be found in Section III.

Effective May 14, 2022, the BAP applies to infrastructure spending unless an agency issues a waiver in three limited situations: 1) when applying the domestic content procurement preference would be inconsistent with the public interest, 2) when types of iron, steel, manufactured products or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality, or 3) where the inclusion of those products and materials will increase the cost of the overall project by more than 25 percent. Before issuing a waiver, under Section 70914(c), the head of a Federal agency, including HUD, must make publicly available a detailed written explanation for the proposed determination to issue the waiver and provide a period of not less than 15 days for public comment on the proposed waiver. Additional details on waivers can be found in Section IV.

A. Federal Government-wide Guidance on BABA

As a part of the Federal government's support of domestic production and manufacturing through infrastructure investments, OMB and HUD have taken several steps to implement the BAP by providing guidance and issuing HUD general waivers.

On August 23, 2023, OMB issued final rules for 2 CFR Parts 184 and 200 and provided further guidance on implementing the statutory requirements and improving FFA management and transparency (88 Fed. Reg. 57750, effective October 23, 2023). These government-wide regulations apply to HUD programs and provide direction on implementing a BAP waiver process. The new and revised regulations also provide additional guidance on construction material standards, the cost components of manufactured products, and their definitions.

On October 25, 2023, OMB issued guidance to all Federal agencies on how to implement BABA consistently across the government. The "Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure" (M-24-02) (OMB Guidance) directs Federal agencies, including HUD, on how to apply the BAP and provides an overview of the BAP waiver requirements. OMB may also issue additional or updated guidance in the future, and HUD will update its guidance as necessary.

B. HUD Actions and Guidance on BABA

BABA is a new and complex statute, which became effective in 2022. As such, establishing governmentwide guidance on these new statutory requirements has been an iterative process. Since the passage of BABA, HUD has worked diligently to implement the BAP for all HUD programs. Before the law became effective on May 14, 2022, HUD established a Department-wide BABA leadership committee. Beginning in June 2022, HUD issued a Request for Information (RFI) and collected public comments on potential BABA implications for HUD grantees. Based on these comments and to ease the transition in complying with the BAP, HUD proposed and received four general waivers for covered FFA, which includes CPD programs. These waivers and other BABA information are available on HUD's website at BABA | HUD.gov / U.S. Department of Housing and Urban Development (HUD). Further details on these waivers and their application to CPD programs are provided in Section IV of this Notice.

CPD has taken several actions to notify and communicate with stakeholders and grantees on BABA requirements and their impact on CPD programs. All CPD Fiscal Year (FY) 2022 grant transmittal letters and notices of funding opportunities (NOFOs) included a reference to the BAP under BABA. For the FY2023 funding allocations, all CPD grant agreements with covered FFA included a clause to require that the grantee must comply with BABA, as applicable. Throughout 2023, CPD has held BABA information sessions for CPD grantees and has a dedicated email box at CPDBABA@hud.gov to answer questions from individual grantees and stakeholders.

HUD is continuing to work towards implementing BABA across its covered FFA programs. Next steps include establishing a centralized waiver process for all HUD covered programs. CPD is incorporating BABA in its existing reporting systems and processes. To assist grantees, CPD is also developing additional guidance materials and support as the phased implementation of BABA progresses.

II. Definitions

Key terms that have relevance to the interpretation and implementation of the BAP for CPD programs are defined in the BABA statute and may be found in 2 CFR part 184 and OMB guidance.

A. Build America, Buy America Act is defined in 2 CFR § 184.3 and means division G, title IX, subtitle A, parts I–II, sections 70901 through 70927 of the Infrastructure Investment and Jobs Act (Pub. L. No. 117-58)

B. Buy America Preference is defined in 2 CFR § 184.3 and means the "domestic content procurement preference" set forth in section 70914 of BABA, which requires the head of each Federal agency to ensure that none of the funds made available for a Federal award for an infrastructure project may be obligated unless all of the iron, steel, manufactured products, and construction materials incorporated into the project are produced in the United States.

C. Categorization of Articles. The term "categorization of articles" refers to the requirement that articles, materials, and supplies should only be classified into one of the following categories:

i. Iron or steel products;
ii. Manufactured products;
iii. Construction materials; or
iv. Section 70917(c) materials.

An article, material, or supply should not be classified into more than one category and must be made based on the status of the article, material, or supply upon arrival to the work site for use in an infrastructure project. Articles, materials, or supplies must meet the Buy America Preference for only the single category in which they are classified and, in some cases, may not fall under any of the categories listed above.

D. Component is defined in 2 CFR § 184.3 and means an article, material, or supply, whether manufactured or unmanufactured, incorporated directly into: a manufactured product; or, where applicable, an iron or steel product.

E. Construction Materials is defined in 2 CFR § 184.3 and means articles, materials, or supplies that consist of only one of the items listed in paragraph (1) of this definition, except as provided in paragraph (2) of this definition. To the extent one of the items listed in paragraph (1) contains as inputs other items listed in paragraph (1), it is nonetheless a construction material.

(1) The listed items are:

i. Non-ferrous metals;
ii. Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
iii. Glass (including optic glass);
iv. Fiber optic cable (including drop cable);
v. Optical fiber;
vi. Lumber;
vii. Engineered wood, and
viii. Drywall.

(2) Minor additions of articles, materials, supplies or binding agents to a construction material do not change the categorization of the construction material.

F. Covered Materials includes the following when used in connection with an Infrastructure Project:
(A) all iron and steel;
(B) all Manufactured Products; and (C) all Construction Materials.

G. Covered CPD Programs. The term "covered CPD programs" means any Federal financial assistance administered by CPD that is used for infrastructure purposes, excepting expenditures related to pre and post disaster or emergency response.

H. Grantee**.** The term "grantee," as defined at 24 CFR 5.100, means the person or legal entity to which a grant is awarded and that is accountable for the use of the funds provided.

I. Federal Financial Assistance (FFA) has the meaning given to the term in 2 CFR 200.1 (or successor regulations) and includes all expenditures by a Federal agency to a NonFederal Entity for an Infrastructure Project, except that it does not include:

(A) expenditures for assistance authorized under section 402, 403, 404, 406, 408, or 502 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5170a, 5170b, 5170c, 5172, 5174, or 5192) relating to a major disaster or emergency declared by the President under section 401 or 501, respectively, of such Act (42 U.S.C. 5170, 5191); or

(B) pre and post disaster or emergency response expenditures.

J. Infrastructure is described in 2 CFR 184.4(c) and encompasses public infrastructure projects in the United States, which includes, at a minimum: the structures, facilities, and equipment for roads, highways, and bridges; public transportation; dams, ports, harbors, and other maritime facilities; intercity passenger and freight railroads; freight and intermodal facilities; airports; water systems, including drinking water and wastewater systems; electrical transmission facilities and systems; utilities; broadband infrastructure; and buildings and real property; and structures, facilities, and equipment that generate, transport, and distribute energy including electric vehicle (EV) charging. See also 2 CFR 184.4(d).

K. Infrastructure Project. The term "infrastructure project" is defined in 2 CFR 184.3 and means any activity related to the construction, alteration, maintenance, or repair of infrastructure in the United States regardless of whether infrastructure is the primary purpose of the project.

L. Iron and Steel Products. The term "iron and steel products" is defined in 2 CFR 184.3 and means an article, material, or supply that consists wholly or predominantly of iron or steel, or a combination of both.

M. Predominantly of iron or steel or a combination of both is defined in 2 CFR 184.3 and means that the cost of the iron and steel content exceeds 50 percent of the total cost of all its components. The cost of iron and steel is the cost of the iron or steel mill products (such as bar, billet, slab, wire, plate, or sheet), castings, or forgings utilized in the manufacture of the product and a good faith estimate of the cost of iron or steel components.

N. Made in America Office. The term "Made in America Office" or "MIAO" means the office at the Office of Management and Budget, established by section 70923 of BABA, that is charged with, among other things, enforcing compliance with the BAP and establishing the procedures to review waiver requests proposed by a Federal awarding agency.

O. Manufactured Products is defined in 2 CFR 184.3 and means:

(1) Articles, materials, or supplies that have been:

(i) Processed into a specific form and shape; or

(ii) Combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies.

(2) If an item is classified as an iron or steel product, a construction material, or a section 70917(c) material under 2 CFR 184.4(e) and the definitions set forth in this section, then it is not a manufactured product. However, an article, material, or supply classified as a manufactured product under 2 CFR 184.4(e) and paragraph (1) of this definition may include components that are construction materials, iron or steel products, or section 70917(c) materials.

P. Manufacturer is defined in 2 CFR 184.3 and means the entity that performs the final manufacturing process that produces a manufactured product.

Q. Non-Federal Entity means a State, local government, Indian Tribe, Institution of Higher Education (IHE), or nonprofit organization, as provided in 2 CFR 200.1. Public Housing Agencies are Non-Federal Entities.

R. Not Listed Construction Materials. The term "not listed construction materials" refers to the category of construction materials that are subject to the BAP, but not included in HUD's specifically listed construction materials, as defined in the Phased Implementation Waiver.
This includes:

i. plastic and polymer-based products other than composite building materials or plastic and polymer-based pipe or tube;
ii. glass (including optic glass); and
iii. drywall.

S. Obligate. The term "obligate," for purposes of HUD's phased implementation of BABA, means the date that HUD executed the legal instrument creating the relationship between HUD and the grantee for an award of Federal financial assistance. The milestone that establishes an obligation date depends on each program but for many CPD programs, such as CDBG, the obligation date occurs upon HUD's execution of the grant agreement.

T. OMB Guidance. The term "OMB guidance" refers to 2 CFR Part 184, the "Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure" (M-24-02), issued October 25, 2023, by the Office of Management and Budget, and any subsequent guidance to rescind or replace M-24-02. This guidance is applicable to the heads of all Federal agencies for the implementation of BABA's Buy America Preference.

U. Pre and Post Disaster or Emergency Response Expenditures. The term "pre and post disaster or emergency response expenditures" means Federal funding authorized under section 402, 403, 404, 406, 408, or 502 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) relating to a major disaster or emergency declared by the President under section 401 or 501, respectively. The BAP does not

apply to pre and post disaster or emergency response expenditures authorized by statutes other than the Stafford Act and made in anticipation of or in response to an event that qualifies as an emergency or major disaster within the meaning of the Stafford Act.

V. Produced in the United States is defined in 2 CFR 184.3 and means:
   i. In the case of iron or steel products, all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
   ii. In the case of manufactured products:
      1. The product was manufactured in the United States; and
      2. The cost of components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard that meets or exceeds this standard has been established under applicable law or regulation for determining the minimum amount of domestic content of the manufactured product. See 2 CFR 184.2(a). The costs of components of a manufactured product are determined according to 2 CFR 184.5.
   iii. In the case of construction materials, all manufacturing processes for the construction material occurred in the United States. See 2 CFR 184.6 for more information on the meaning of "all manufacturing processes" for specific construction materials.

W. Project. The term "project" means the construction, alteration, maintenance, or repair of infrastructure in the United States. (Section 70912(7) of BABA).

X. Section 70917(c) Materials. The term "section 70917(c) materials" is defined in 2 CFR 184.3 and means cement and cementitious materials; aggregates such as stone, sand, or gravel, or aggregate binding agents or additives. These materials are not considered "construction materials" for the purpose of BABA implementation.

Y. Specifically listed construction materials. The term "specifically listed construction materials" for HUD programs includes:
   a. non-ferrous metals;
   b. lumber;
   c. composite building materials; and
   d. plastic and polymer-based pipe and tube.

III. Applicability of the BAP on CPD Programs

Under Sections 70912 and 70914, the BAP applies to the purchase of iron, steel, manufactured products, and construction materials for Covered CPD Programs when funds are used for the construction, alteration, maintenance, or repair of infrastructure, as defined by BABA. Covered CPD Programs currently include:

- Community Development Block Grant Formula Programs (CDBG)
- Section 108 Loan Guarantee
- HOME Investment Partnerships Program (HOME)
- HOME Investment Partnerships American Rescue Plan Program (HOME-ARP)
- Housing Trust Fund (HTF)
- Recovery Housing Program (RHP)
- Emergency Solutions Grants (ESG)
- Continuum of Care (CoC)
- Housing Opportunities for Persons With AIDS (HOPWA)
- Self-Help Homeownership Opportunity Program (SHOP)
- Special NOFA for unsheltered and rural homeless
- Veterans Housing Rehabilitation and Modification Program (VHRMP)

- Community Project Funding (CPF)/Economic Development Initiatives (EDI)
- Section 4 Capacity Building
- Rural Capacity Building
- Pathways to Removing Obstacles to Housing (PRO Housing)
- Preservation and Reinvestment Initiative for Community Enhancement (PRICE)
- FY23 Permanent Supportive Housing (PSH) Funds

This list of Covered CPD Programs is subject to change if there are any changes to the eligible uses of funds or the establishment of new programs that fund infrastructure and are covered by BABA.

CPD Programs Not Covered by BAP:

Under Section 70912(4)(B), the BAP does not apply to Federal funds for "pre and post disaster or emergency response." The following CPD funds are administered for disaster or emergency-related purposes and therefore the BAP does not apply:

- Community Development Block Grant – Disaster Recovery Funds (CDBG-DR)
- Community Development Block Grant – Mitigation (CDBG-MIT)
- Community Development Block Grant – National Disaster Resilience Competition (CDBGNDR)
- Community Development Block Grant CARES Act (CDBG-CV)
- Housing Opportunities for Persons With AIDS CARES Act (HOPWA-CV)
- Emergency Solutions Grants CARES Act (ESG-CV)

Additionally, the Community Compass Technical Assistance program is excluded from the BAP as the program does not fund any covered infrastructure activities.

IV. Buy America Preference Waivers Currently in Effect for HUD Programs

Under Section 70914(b), HUD is able to issue, after consultation with OMB's MIAO, general waivers, and project-specific waivers to the BAP if it is determined that a waiver falls into one of the following three categories: 1) when applying the domestic content procurement preference would be inconsistent with the public interest, 2) when types of iron, steel, manufactured product or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality, or 3) where the inclusion of those products and materials will increase the cost of the overall project by more than 25 percent. In order for HUD to consider either a general or project specific waiver request and be able to review it with OMB, the waiver must include a detailed written explanation and allow for the public to comment for at least 15 days, as required under Section 70914(c).

HUD's General Waivers Applicable to Covered CPD Programs

Four general applicability waivers are currently in effect for HUD programs and apply to all Covered CPD Programs. Each waiver is outlined below.

General Waiver Type	Purpose	Effective Dates
Public Interest Phased Implementation	HUD issued a public interest waiver, *"Public Interest Phased Implementation Waiver for FY 2022 and 2023 of Build America, Buy America Provisions as Applied to Recipients of HUD Federal Financial Assistance"* to allow for orderly implementation of the BAP across HUD programs. The Phased Implementation Waiver establishes a schedule for the phased implementation of the BAP across CPD programs and infrastructure materials.	The public interest waiver was issued in March 2023 and established a phased implementation schedule for the application of the BAP to HUD programs through FY2025. The BAP has been in effect since November 15, 2022, for the use of iron and steel for infrastructure projects funded with newly obligated FFA through the CDBG program.
Exigent Circumstances	HUD issued a public interest waiver for exigent circumstances, "*Public Interest Waiver of Build America, Buy America Provisions for Exigent Circumstances as Applied to Certain Recipients of HUD Federal Financial Assistance*". This waiver applies when there is an urgent need by a CPD grantee to immediately complete an infrastructure project because of a threat to life, safety, or property of residents and the community.	The public interest waiver for exigent circumstances is effective from November 23, 2022, for a period of five years ending on November 23, 2027, or such shorter time as HUD may announce via Notice.
***De Minimis*, Small Grants, and Minor Components**	HUD issued a public interest *de minimis,* small grants, and minor components waiver titled "*Public Interest De Minimis and Small Grants Waiver of Build America, Buy America Provisions as Applied to Certain Recipients of HUD Federal Financial Assistance*". This waives the BAP for all infrastructure projects whose total cost (from all funding sources) is equal to or less than the simplified acquisition threshold at 2 CFR 200.1 which is currently $250,000. This Notice also waives the application of the BAP for a	The public interest *de minimis,* small grants, and minor components waiver is effective from November 23, 2022, for a period of five years ending on November 23, 2027, or such shorter time as HUD may announce via Notice.
General Waiver Type	**Purpose**	**Effective Dates**

	de minimis portion of an infrastructure project, meaning a cumulative total of no more than five percent of the total cost of the iron, steel, manufactured products, and construction materials used in and incorporated into the infrastructure project, up to a maximum of $1 million.	
Tribal Recipients Waiver	HUD issued a public interest waiver, "*Extension of Public Interest, General Applicability Waiver of Build America, Buy America Provisions as Applied to Tribal Recipients of HUD Federal Financial Assistance: Final Notice*" for the BAP as it applies to Tribal recipients. HUD will consult with Tribally Designated Housing Entities and other Tribal Entities on how to apply the BAP.	The waiver of the BAP as it applies to Tribal recipients is effective from May 23, 2023, until May 23, 2024.

HUD Project-Specific Waivers

Additionally, a CPD grantee may request a project-specific waiver from the BAP for covered FFA on a limited, case-by-case basis. HUD may grant a project specific waiver after consultation and review with the OMB's MIAO. As with the general waivers, under Section 70914(b) HUD may issue a project-specific waiver to the BAP if it is determined that a waiver falls into one of the following three categories: 1) when applying the domestic content procurement preference would be inconsistent with the public interest, 2) when types of iron, steel, manufactured product or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality, or 3) where the inclusion of those products and materials will increase the cost of the overall project by more than 25 percent. A waiver for a specific project may vary depending upon the circumstances of the project, and specific items, products, or materials in question.

Understanding HUD's Phased Implementation Approach

Under Section 70914(a), the BAP for covered FFA infrastructure projects, including those funded by CPD programs, was required to be in effect no later than 180 days after it was signed into law. Thus, starting May 14, 2022, all new awards of covered FFA for infrastructure projects obligated by HUD would have had a BAP under BABA. Due to the short implementation period of 180 days, and to allow for the domestic industry and FFA recipients to have the time and notice necessary to implement BABA efficiently and effectively, HUD issued several general public interest waivers, including a Phased Implementation Waiver. Over the course of two years, under this waiver, HUD will implement the BAP in an incremental process for all HUD programs, including CPD programs, to come into compliance with BABA. This phased approach is also intended to reduce the burden on grantees due to the uncertain costs of compliance with the BAP. This approach is also intended to provide transparency concerning the full implementation plans in connection with HUD infrastructure projects. HUD wants to avoid any unnecessary and undue hardships that could jeopardize the timely and cost-effective completion of projects that previously were not subject to a BAP and to allow time for grantees to come into full compliance.

In the table below, the columns identify four separate categories of covered materials subject to the BAP (iron and steel, specifically listed construction materials, not listed construction materials, and manufactured products) and the rows identify covered HUD programs. To use the table, find the program that funds the project under consideration, then find the covered materials that will be used in the project. The cell in the table where the applicable row and column intersect indicates the date on which the BAP will begin applying to the specific materials used in the project under consideration. It is important to note that the date of obligation is the date on

which HUD executed the legal instrument creating the relationship between HUD and the grantee for an award of FFA, commonly the date the grant agreement is signed by HUD.

Phased Implementation Schedule for HUD Programs

The table below outlines the phased implementation timeline for HUD's covered programs published in the Phased Implementation Waiver.

BAP will apply to…	Iron and Steel	Construction Materials – Specifically Listed	Construction Materials – Not Listed	Manufactured Products
CDBG Formula Grants	All funds obligated on or after November 15, 2022	As of the date HUD obligates new FFA from Fiscal Year 2024 appropriations	As of the date HUD obligates new FFA from Fiscal Year 2025 appropriations	As of the date HUD obligates new FFA from Fiscal Year 2025 appropriations
Choice Neighborhood, Lead Hazard Reduction, and Healthy Homes Production Grants	New FFA obligated by HUD on or after February 22, 2023	New FFA obligated by HUD on or after August 23, 2024	New FFA obligated by HUD on or after August 23, 2024	New FFA obligated by HUD on or after August 23, 2024
Recovery Housing Program (RHP) Grants	New FFA obligated by HUD on or after August 23, 2023	As of the date HUD obligates new FFA from Fiscal Year 2024 appropriations	As of the date HUD obligates new FFA from Fiscal Year 2025 appropriations	As of the date HUD obligates new FFA from Fiscal Year 2025 appropriations

All HUD other FFA except HOME, Housing Trust Fund, and Public Housing FFA used for maintenance projects	New FFA obligated by HUD on or after February 22, 2024	New FFA obligated by HUD on or after August 23, 2024	New FFA obligated by HUD on or after August 23, 2024	New FFA obligated by HUD on or after August 23, 2024
HOME, Housing Trust Fund, and Public Housing FFA used for maintenance projects	New FFA obligated by HUD on or after August 23, 2024	New FFA obligated by HUD on or after August 23, 2024	New FFA obligated by HUD on or after August 23, 2024	New FFA obligated by HUD on or after August 23, 2024

Phased Implementation Schedule for CPD Programs

Covered CPD programs began applying the BAP for infrastructure projects not covered under a general waiver for specific materials in phases beginning on November 15, 2022, and through FY2025. This section describes when the BAP applies to specific Covered CPD programs in accordance with HUD's Phased Implementation Waiver.

Iron or Steel		
CPD Program	**BAP Effective Date**	**Implementation Examples**
CDBG	The BAP first applied to CDBG funds, obligated on or after November 15, 2022, and that will be used to purchase iron and steel for infrastructure projects.	This means CDBG grants obligated via a CDBG grant agreement signed by HUD on or after November 15, 2022, are subject to the BAP. CDBG grants obligated via a CDBG grant agreement signed by HUD prior to November 15, 2022, are not subject to the BAP.
RHP	The BAP will apply to RHP funds obligated on or after August 23, 2023, used to purchase iron or steel for infrastructure projects.	This means RHP grants obligated via a RHP grant agreement signed by HUD on or after August 23, 2023, are subject to the BAP. A RHP grant obligated via a grant agreement signed by HUD prior to August 23, 2023, is not subject to the BAP.

ESG, CoC, HOPWA, SHOP, VHRMP, CPF/EDI, Section 4, Rural Capacity Building, Pro Housing, PRICE, PSH, and NOFOs	The BAP will apply to funds from all other covered CPD programs, except HOME and HTF, obligated on or after February 22, 2024, used to purchase iron or steel for infrastructure projects.	Grantees should identify the execution date by HUD on the grant agreement or other legal instrument. The BAP applies to funds obligated by HUD on or after February 22, 2024. For HOPWA competitive grants, obligation is the date the award letter is signed. HOPWA competitive grantees should compare the date on its award letter to the February 22, 2024, to determine if its grant is subject to the BAP. EDI Community Project Funding has a different obligation determination. Grantees should consult their Congressional Grant Officer for more information.
HOME & HTF	The BAP will apply to HOME and HTF funds obligated on or after August 23, 2024, used to purchase iron or steel for infrastructure projects.	This means HOME and HTF grants obligated via grant agreements signed by HUD on or after August 23, 2024, are subject to the BAP. A HOME or HTF grant obligated via a grant agreement signed by HUD prior to August 23, 2024, is not subject to the BAP.

Materials Other Than Iron or Steel		
	CDBG & RHP Programs	**All Other Covered CPD Programs**
Specifically Listed Construction Materials (Non-Ferrous Metals, Lumber, Composite Building Materials, Plastic and Polymer Based Pipe and Tube)	The BAP will apply to FY2024 and subsequent CDBG and RHP awards used to purchase specifically listed construction materials as well as to purchase iron and steel.	The BAP will apply to funds from all other Covered CPD programs obligated on or after August 23, 2024, used for the purchase of specifically listed construction materials as well as iron and steel for infrastructure projects.
Not Listed Construction Materials	The BAP will apply to FY2025 and subsequent CDBG and RHP awards used to purchase not listed construction materials for infrastructure projects.	The BAP will apply to all Covered CPD program (except CDBG and RHP) funds obligated on or after August 23, 2024, used for the purchase of not listed construction materials, as well as specifically listed construction materials and iron and steel, for infrastructure projects.

Manufactured Products	The BAP will apply to FY2025 and subsequent CDBG and RHP awards used to purchase manufactured products as well as specifically listed construction materials and iron and steel, for infrastructure projects.	The BAP will apply to all Covered CPD program funds (except CDBG and RHP) obligated on or after August 23, 2024, used for the purchase of manufactured products for infrastructure projects.

Applying the BAP and HUD Waivers to CPD Programs

Once the BAP applies to an infrastructure project, a grantee must:

1. Comply with the BAP, or
2. Utilize one of HUD's general waivers, or
3. Obtain a project-specific waiver to exclude the project from the BAP.

As a part of its record keeping, a CPD grantee should document its process to analyze if the BAP applies to a project using the approach below:

Step 1: Type of project/activity

Are the funds being used for an infrastructure project, as defined by BABA and explained in this notice?

- If yes, proceed to step 2.
- If no, the BAP does not apply. The BAP only applies to infrastructure projects.

Step 2: Funding source

Identify the source(s) of the project funding, including CPD funding, HUD funding or other Federal agency funding that must comply with BABA. Does the project funding include any Covered CPD Programs listed in this notice? (Note: The BAP does not apply to funds that are for pre- or post-disaster or emergency response.)

- If yes, and HUD contributes the largest portion of Federal funds to the project, proceed to step 3.
- If yes, and another Federal agency contributes the largest portion of Federal funds to the project, that Federal agency is the "Cognizant Agency for Made in America", and the grantee should follow that agency's guidance for applicability of the BAP to the project.
- If no, then the project does not need to comply with the BAP for CPD funds but may need to comply with the BAP due to the inclusion of other HUD or Federal funding sources.

Step 3: Materials

Identify the materials that will be used in this infrastructure project. Does the project use materials subject to the BAP (iron or steel, specifically listed construction materials, not listed construction materials, or manufactured products), identified in this Notice?

- If yes, proceed to step 4.
- If no, then the BAP does not apply. The BAP only applies to covered materials.

Step 4: Date of obligation

Consult the Phased Implementation Waiver schedule table. Identify the cell that corresponds to the Covered CPD Program funding and materials used in your project. This cell identifies the date on which the BAP will apply for the Covered CPD Program and the materials. Based on the date of obligation of the Covered CPD Program funds, does the BAP apply to the funding source and materials that will be used in your project?

- If yes, proceed to step 5.
- If no, the BAP does not apply.

Step 5: General waivers

Consider the available HUD General Waivers. As of this Notice, there are three general waivers that may be utilized as an alternative to compliance with the BAP under the Phased Implementation Waiver: 1) Exigent Circumstances Waiver, 2) the De Minimis, Small Grants, and Minor Components Waiver, and 3) the Tribal Recipients Waiver. Analyze each available HUD general waiver, based upon the specific requirements of that waiver.

1. *Exigent Circumstances Waiver*: Is there an urgent need to immediately complete the project because of a threat to life, safety, or property of residents and the community?
    - If yes, the Exigent Circumstances Waiver may apply, and the project would not be subject to the BAP.

2. *De Minimis, Small Grants, and Minor Components Waiver:* Is the total cost of the project equal to or less than $250,000?
    - If yes, the *De Minimis*, Small Grants, and Minor Components Waiver may apply, and the project would not be subject to the BAP.

    OR

    This waiver can be applied to a portion of the products used in an infrastructure project if the cumulative cost of those products does not exceed five percent of the total cost of covered products used in the project (up to $1 million).
    - In that case, the BAP would be waived for part of the project, but the rest of the project would still need to comply with the BAP.

3. *Tribal Recipients Waiver:* Is the project being funded by a Tribal recipient?
    - If yes, the Tribal Recipients Waiver may apply, and the project would not be subject to the BAP. (This is rare for CPD programs.)
    - If no to General Waiver questions 1, 2, and 3, proceed to Step 6.

Step 6: Project-specific waivers

Consider the criteria for project-specific waivers. Project-specific waivers to the BAP may be available if it is determined that a waiver falls into one of the following three categories: 1) when applying the domestic content procurement preference would be inconsistent with the public interest, 2) when types of iron, steel, manufactured product or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality, or 3) where the inclusion of those products and materials will increase the cost of the overall project by more than 25 percent. Project-specific waivers are available on a limited, case-by-case basis, after HUD's consultation and review with OMB's MIAO.

1. Would applying the BAP to the project be inconsistent with the public interest?
    - If yes, a project-specific waiver may be considered.

2. Are the types of iron, steel, manufactured products, or construction materials used in the project not produced in the United States in sufficient and reasonable available quantities or of a satisfactory quality?
    - If yes, a project-specific waiver may be considered.

3. Would the inclusion of iron, steel, manufactured products, or construction materials produced in the United States increase the cost of the overall project by more than 25 percent?
    - If yes, a project-specific waiver may be considered.
    - If no to Project specific waiver questions 1, 2, and 3, the BAP likely applies to the project and the project should comply with the requirements of the BAP.

Grantees should consult the entirety of this Notice and other applicable BABA guidance before making a determination on BAP applicability to a specific project. Grantees should reach out to their local CPD field office if they require additional assistance with determining BAP applicability.

Federal Government-wide Guidance on Project/Product-Specific Waivers

Under Section 70914(b), BABA allows a Federal agency, such as HUD, to waive the BAP for covered FFA in three instances: 1) when applying the domestic content procurement preference would be inconsistent with the public interest, 2) when types of iron, steel, manufactured product or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality, or 3) where the inclusion of those products and materials will increase the cost of the overall project by more than 25 percent. To direct Federal agencies on how to implement this waiver process, OMB issued guidance that HUD will follow when reviewing a waiver request from a CPD grantee. According to OMB, agencies may reject or grant waivers in whole or in part. When an agency is considering a waiver, it should, to the greatest extent possible, be issued at the project level and be product specific. When that is not possible, an agency may issue a broader waiver. The agency should follow three principles before issuing any type of waiver:

1) The waiver may be time-limited, meaning it is issued for a certain period of time, rather than for a specific project. For example, a time-limited waiver may apply when an item that is "nonavailable" is widely used in projects funded by a particular program.

2) The waiver should be targeted, meaning it should only apply to specific item(s), product(s), or material(s) or category(ies) of item(s), product(s), or material(s).

3) The waiver may be conditional with conditions that support the policies of BABA.

OMB guidance outlined the waiver review process for agencies to follow before issuing a waiver. Based on this guidance, HUD is developing its Department-wide project-specific waiver process. For HUD to consider a project or product-specific waiver it must:

- Have a detailed justification for the use of goods, products, or materials mined, produced, or manufactured outside the United States.

- A certification that there was a good faith effort to solicit bids for domestic products supported by terms included in requests for proposals, contracts, and nonproprietary communications with potential suppliers.

- In addition, at a minimum and to the greatest extent practicable, each proposed waiver submitted for consideration by the MIAO should include the following information, as applicable:
    - Waiver type (nonavailability, unreasonable cost, or public interest).
    - Recipient name and Unique Entity Identifier (UEI).
    - Federal awarding agency organizational information (e.g., Common Governmentwide Accounting Classification (CGAC) Agency Code).
    - Financial assistance listing name and number. o Federal financial assistance program name.
    - Federal Award Identification Number (FAIN) (if available). o Federal financial assistance funding amount.
    - Total estimated infrastructure expenditures, including all Federal and non-Federal funds (to the extent known).
    - Infrastructure project description and location (to the extent known).
    - List of iron or steel item(s), manufactured products, and construction material(s) proposed to be excepted from Buy America requirements, including name, cost, country(ies) of origin (if known), and relevant PSC and NAICS code for each.
    - A certification that the Federal official or assistance recipient made a good faith effort to solicit bids for domestic products supported by terms included in requests for proposals, contracts, and nonproprietary communications with the prime contractor.
    - A statement of waiver justification, including a description of efforts made (e.g., market research, industry outreach), by the Federal awarding agency and, and in the case of a project or award specific waiver, by the recipient, in an attempt to avoid the need for a waiver. Such a justification

may cite, if applicable, the absence of any Buy America-compliant bids received in response to a solicitation. ○ Anticipated impact if no waiver is issued.

- Any relevant comments received through the public comment period.

The purpose of the information is to ensure that HUD has adequate information to perform due diligence, that MIAO has sufficient information to determine whether the proposed waiver is consistent with law and policy, and that sufficient information is available for public review. Information provided for public review should help interested manufacturers gauge the demand for products for which agencies are considering waiving a Buy America preference.

Once HUD has reviewed all required information, it will notify OMB's MIAO. The purpose of this consultation is for the MIAO to identify any opportunities to structure the waiver to maximize the use of goods, products, and materials produced in the United States to the greatest extent possible consistent with law. Following this consultation with MIAO, HUD is required to post the proposed waiver on its BABA website with a detailed written explanation of the proposed determination to issue the waiver and must provide at least 15 days for public comment. General applicability waivers require a minimum 30-day public comment period. Once the public comment period ends, HUD will submit the proposed waiver to MIAO to determine if the waiver is consistent with applicable law and policy. The MIAO will notify the agency of its determination of the proposed waiver. Only after this process has been completed may the HUD issue the waiver.

Applying for a HUD Specific Waiver

Prior to seeking a waiver, grantees should determine if and how BABA applies and follow measures to maximize compliance with the BAP based on the above guidance. At this time, HUD's BABA waiver process is as follows:

1. Contact CPDBABA@hud.gov for BABA technical assistance as needed.
2. Prepare a "*Build America Buy America Waiver Request*" with the information required by the MIAO.
3. Submit a waiver application with all necessary information to HUD at BuildAmericaBuyAmerica@hud.gov.
   - HUD is currently using email while an automated process is under development.
4. Provide additional information as requested by HUD during the review process to proceed with public comment in the Federal Register, and final approval by MIAO.
5. HUD reviews waivers before they are posted to the Federal Register for public comment and sent to the MIAO for approval. If approved, the waiver is posted on MadeInAmerica.gov.

CPD Grantees Receiving Funds from Multiple Federal Agencies

For CPD grantees that receive funds from multiple Federal agencies for an infrastructure project, the Federal agency contributing the greatest amount of covered FFA for the project will be considered the "Cognizant Agency for Made in America," according to OMB Guidance. This lead agency should take responsibility for coordinating with the other Federal awarding agencies. Such coordination will provide uniform waiver criteria and adjudication processes, minimize duplicative efforts among Federal agencies, and reduce burdens on recipients. The Cognizant Agency for Made in America shall be responsible for consulting with the other Federal awarding agencies, publicizing the proposed joint waiver, and submitting the proposed joint waiver for review to MIAO.

CPD Record Keeping Requirements

To comply with BABA, the BAP must be included in the terms and conditions of all federal awards including subawards, contracts, and purchase orders for the work performed or products supplied for infrastructure projects. CPD grantees should document the process to analyze if the BAP applies to a project using the approach in this Notice and collect records to demonstrate compliance with BABA requirements. Records should be consistent with existing records retention requirements for each of the Covered CPD programs. If there are no CPD program-specific records requirements, the CPD grantee may follow "retention requirements for records," under 2 CFR § 200.334 as applicable to Federal grants.

HUD will issue guidance about reporting on BABA required activities under 24 CFR 91.520, at a later date. At this time, CPD is working to include the BAP into its existing CPD systems (Integrated Disbursement and Information System, Disaster Recovery Grant Reporting System) for grantees to generate reports to track progress and compliance with BABA. Additional details on record keeping requirements will be determined by HUD and shared with CPD grantees as it is available.

V. Contact Information

Grantees that have questions on this Notice should contact their assigned HUD Field Office Representative or send their request directly to CPDBABA@hud.gov. CPD Field Offices should direct inquiries and comments to their program desk officer.

Addendum 1 Frequently Asked Questions

General Information

1. What is BABA? What is the "Buy America Preference"?

The Build America, Buy America (BABA) Act was enacted on November 15, 2021, as part of the Infrastructure Investment and Jobs Act (IIJA) (Pub. L. No. 117-58) also known as the Bipartisan Infrastructure Law. BABA establishes a domestic content procurement preference known as the "Buy America Preference" (BAP) for Federal infrastructure spending. The BAP requires that all iron, steel, manufactured products, and construction materials used in infrastructure projects funded with Federal financial assistance must be produced in the United States.

2. What types of Federal financial assistance (FFA) are subject to the BAP?

FFA subject to BABA includes all expenditures by a Federal agency to a non-Federal entity for an infrastructure project, including grants, cooperative agreements, non-cash contributions or donations of property, direct assistance, loans, loan guarantees, and other types of financial assistance.

3. What projects or activities does the BAP apply to?

The BAP applies to the iron, steel, construction materials, and manufactured products used in infrastructure projects funded by Federal financial assistance (FFA), which includes covered materials and covered activities. Infrastructure projects include construction, alteration, maintenance, or repair of any infrastructure in the United States as defined in the next paragraph and in the Definitions section of this Notice.

The term "infrastructure" includes the structures, facilities, and equipment for projects traditionally considered infrastructure, including buildings and real property. For CPD programs, this may include, but is not limited to, certain funding for:

- road and sidewalk improvement projects;
- water, sewer, and other utility projects;
- broadband infrastructure;
- housing construction and rehabilitation;
- community facility construction and rehabilitation;
- homeless shelter construction and rehabilitation;
- and other CPD-funded activities that are defined as infrastructure according to BABA (section 70912(5)).

4. What materials does the BAP apply to?

The BAP requires that all iron, steel, manufactured products, and construction materials used in infrastructure projects funded with Federal financial assistance must be produced in the United States.

5. What does "produced in the United States" mean for materials to which the BAP applies?

The term "produced in the United States," as defined in 2 CFR 184.3, means:

- in the case of iron or steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
- in the case of manufactured products that:
  - the product was manufactured in the United States; and
  - the cost of components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard that meets or exceeds this standard has been established under applicable law or regulation for determining the minimum amount of domestic content of the manufactured product; and
- in the case of construction materials, that all manufacturing processes for the construction material occurred in the United States.

CPD Program Specific

6. Which CPD programs are subject to the BAP?

Any CPD program that can be used for the purpose of infrastructure as defined by BABA. These programs are considered Covered CPD programs.

7. Which CPD funds or programs are *NOT* subject to the BAP?

The BAP does not apply to Federal funds for ''pre and post disaster or emergency response'' according to BABA. Therefore, at the time of publication of this notice, the BAP does not apply to the following CPD funds or programs that administer disaster related FFA:

- Community Development Block Grant Disaster Recovery Funds (CDBG-DR)
- Community Development Block Grant Mitigation (CDBG-MIT)
- Community Development Block Grant – National Disaster Resilience Competition (CDBG-NDR)
- Community Development Block Grant CARES Act (CDBG-CV)
- Housing Opportunities for Persons With AIDS CARES Act (HOPWA-CV)
- Emergency Solutions Grants CARES Act (ESG-CV)

The Community Compass Technical Assistance program is also excluded from the BAP as the program does not fund any covered infrastructure activities.

8. I am funding a project with CDBG funds that were obligated (i.e., the grant agreement was signed by HUD) before November 15, 2022. Does the BAP apply?

No, the BAP does not apply to HUD funds that were obligated before November 15, 2022. HUD defines the date of obligation as the date that HUD signed the agreement with the grantee. The BAP will apply to CDBG funds used for iron or steel that were obligated on or after November 15, 2022.

There is an additional consideration. If FY funds for which BABA applies are added to this infrastructure project, BABA then will apply to the entire project.

9. I am a grantee funding a project with CDBG funds that were obligated (i.e., the grant agreement was signed by HUD) on or after November 15, 2022. Does the BAP apply?

If the CDBG funds used in your infrastructure project were obligated on or after November 15, 2022, the BAP will apply to all iron or steel used in the project, unless a waiver applies to the project. If these BABA funds are applied to an infrastructure project that does not have a BAP, the addition of these funds will attach BABA to the entire project. BABA would apply as described in HUD's Phased Implementation Waiver unless there is a project-specific waiver approved by the MIAO.

10. I am funding a public facilities project with total FFA of $2,500,000. $400,000 of CDBG funds are being used for engineering and administration fees of a project. Other federal funding will pay for the remaining construction activities. Is the BAP applicable to this project?

Yes, the total project cost is over $250,000 and the project is construction of an infrastructure project. The total cost of a project must not exceed $250,000 from all sources to qualify for an exemption of the BAP under HUD's general waiver for small projects.

Documentation and Grant Management

11. Does the BAP apply to subrecipients or contractors?

In most cases, yes, the BAP requirements apply to subgrantees, including subrecipients, contractors, and developers who are awarded Federal financial assistance for use in public infrastructure projects. The BAP requirements apply to all FFA and do not distinguish between the end user of the federal funds. The BAP applies as long as the funding is derived from a Federal agency, even if they are a pass-through entity unless a particular section of the terms and conditions of the Federal award specifically indicates otherwise.

12. Is there standard language grantees can include in subrecipient/bid contract documents?

Grantees should include the BABA language from their grant agreement in any subrecipient and bid contract documents to ensure BABA compliance by subrecipients, developers and/or contractors. Please refer to Addendum 3 for the language used in CPD grant agreements.

Waivers

13. Are there any waivers available for the BAP?

There are currently four general applicability waivers in effect for HUD programs that apply to CPD programs: 1) Phased Implementation Waiver, 2) Exigent Circumstances Waiver, 3) *De Minimis*, Small Grants, and Minor Components Waiver, and 4) Tribal Recipients Waiver. The details of each of these waivers can be found in Section IV of this Notice, or by visiting HUD's BABA website to see the latest available HUD waivers at: https://www.hud.gov/program_offices/general_counsel/baba. Waivers, as they are approved by the MIAO, will be updated on HUD's website.

14. Will there be project or product specific waivers of the BAP?

In addition to HUD's general waivers, HUD may also grant "project-specific" waivers from the BAP for covered FFA on a limited, case-by-case basis, after consultation and review with the MIAO at OMB. HUD may issue a project-specific waiver to the BAP if it is determined that a waiver falls into one of the following three categories: 1) when applying the domestic content procurement preference would be inconsistent with the public interest, 2) when types of iron, steel, manufactured product or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality, or 3) where the inclusion of those products and materials will increase the cost of the overall project by more than 25 percent. A waiver for a specific project may vary depending upon the circumstances of the project, and specific items, products, or materials in question. . HUD is currently developing the process through which a grantee may request a waiver. More information will be made available once that process is developed.

Addendum 2 Examples of BAP for CPD Programs

This appendix provides a selection of illustrative examples to assist grantees in determining if the BAP applies to their projects.

Example 1: A grantee funds a water and sewer project containing iron and steel. The project is funded using $1 million in FY23 CDBG funding. The total Federal financial assistance for the project is $3 million.

The BAP applies to this project because it is a CDBG project using funding obligated on or after November 15, 2022, the project contains iron or steel, and the total cost of the project is greater than the simplified acquisition threshold at 2 CFR 200.1 which is currently $250,000.

Example 2: A grantee funds a water and sewer project containing iron and steel. The project is funded using $100,000 in FY23 CDBG funding. The total Federal financial assistance for the project is $2 million.

The BAP applies to this project because it is a CDBG project using funding obligated on or after November 15, 2022, the project contains iron or steel, and the total cost of the project is greater than $250,000.

Example 3: A participating jurisdiction contributes $2 million in HOME funds for construction of a multi-unit residential building, which includes iron or steel. The funds are obligated by HUD on July 15, 2023.

The BAP does not apply to this project because the BAP will not apply to HOME funds used for iron or steel until August 23, 2024.

Example 4: A participating jurisdiction contributes $2 million in HOME funds for the construction of a multi-unit residential building, using iron or steel. The funds are obligated by HUD after August 23, 2024.

The BAP applies to this project because the project includes iron or steel, the total cost of the project is greater than $250,000, and the project uses HOME funds obligated after the date on which the BAP begins to apply to HOME funds used for iron or steel.

Example 5: A grantee funds acquisition of land using $300,000 in Recovery Housing Program (RHP) funds that were obligated on September 1, 2023. The acquisition is part of a multifamily housing construction project containing iron or steel.

The BAP applies because the purpose of the funding is a covered activity (construction) that includes iron or steel. The total cost of the project from all sources is greater than $250,000 and the funds are obligated after the date on which the BAP applies to RHP funds used for iron or steel.

Example 6: A grantee purchases a fire engine which will serve a low- to -moderate-income neighborhood. The grantees uses $300,000 in FY23 CDBG funding for the purchase.

The BAP does not apply because the funding is not used for a covered activity (construction, alteration, maintenance, or repair) for an infrastructure project.

Example 7: A grantee uses $400,000 in Recovery Housing Program (RHP) funds to rehabilitate a multi-unit residential building, using iron or steel. The funds are obligated by HUD after August 23, 2023.

The BAP applies to this project because it uses iron or steel, the total cost of the project is greater than $250,000, and the project uses RHP funding that is obligated after the date on which the BAP begins to apply to RHP funds used for iron or steel (August 23, 2023).

Addendum 3 Sample BABA Language in Grant Agreements

The language below is included in all CPD program NOFOs and grant agreements. Similar to other cross cutting requirements, grantees should include the following BABA language in all contracts and agreements with subrecipients, contractors, developers and subgrantees. Grantees and subrecipients should include this language in any NOFOs and procurement bid/contract documents to ensure BABA compliance by subgrantees, developers and/or contractors.

> The Grantee must comply with the requirements of the Build America, Buy America (BABA) Act, 41 USC 8301 note, and all applicable rules and notices, as may be amended, if applicable to the Grantee's infrastructure project. Pursuant to HUD's Notice, "Public Interest Phased Implementation Waiver for FY 2022 and 2023 of Build America,
> Buy America Provisions as Applied to Recipients of HUD Federal Financial Assistance" (88 FR 17001), any funds obligated by HUD on or after the applicable listed effective dates, are subject to BABA requirements, unless excepted by a waiver.

Appendix A

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:

_____

(submit at time of bid submission)

Appendix B

CITY OF PAWTUCKET
GENERAL TERMS AND CONDITIONS OF PURCHASE

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 37-2-2 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 unordered 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 14.1of 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 on today's date, is bound as part of this Project Manual.

Wage Decision Obtained on 4/23/2026 from SAM.gov

"General Decision Number: RI20260001 01/30/2026

Superseded General Decision Number: RI20250001

State: Rhode Island

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

"General Decision Number: RI20260001 01/30/2026

Superseded General Decision Number: RI20250001

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

Modification Number	Publication Date
0	01/02/2026
1	01/23/2026
2	01/30/2026

ASBE0006-006 09/01/2024

	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)	$ 49.91	36.63

ASBE0006-008 09/01/2024

	Rates	Fringes
Asbestos Worker/Insulator Includes application of all insulating materials, protective coverings, coatings & finishes to all types of mechanical systems.	$ 49.91	36.63

BOIL0029-001 01/01/2025

	Rates	Fringes
BOILERMAKER	$ 50.62	28.82

BRRI0003-001 06/01/2022

	Rates	Fringes
Bricklayer, Stonemason, Pointer, Caulker & Cleaner	$ 46.86	29.14

BRRI0003-002 09/01/2022

	Rates	Fringes

Marble Setter, Terrazzo
Worker & Tile Setter.....$ 46.54 30.34

BRRI0003-003 09/01/2022

	Rates	Fringes
Marble, Tile & Terrazzo Finisher	$ 38.78	29.61

CARP0330-001 06/02/2025

	Rates	Fringes
CARPENTER (Includes Soft Floor Layer)	$ 47.88	30.50
Diver Tender	$ 48.68	30.50
DIVER	$ 60.83	30.50
Piledriver	$ 41.53	29.35
WELDER	$ 48.68	30.50

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.

CARP1121-002 04/21/2025

	Rates	Fringes
MILLWRIGHT	$ 45.72	31.50

ELEC0099-002 06/01/2025

	Rates	Fringes
ELECTRICIAN	$ 56.11	44.10%
Teledata System Installer	$ 42.09	10.45%+15.31

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.

ELEV0039-001 01/01/2025

	Rates	Fringes
ELEVATOR MECHANIC	$ 64.52	38.435+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.

ENGI0057-001 12/01/2025

	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	$ 51.30	29.95
GROUP 2	$ 49.30	29.95
GROUP 3	$ 44.92	29.95
GROUP 4	$ 42.07	29.95
GROUP 5	$ 48.35	29.95
GROUP 6	$ 39.15	29.95
GROUP 7	$ 33.15	29.95
GROUP 8	$ 45.00	29.95
GROUP 9	$ 48.92	29.95

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.

ENGI0057-003 12/01/2025

BUILDING CONSTRUCTION

	Rates	Fringes
Power Equipment Operator		
GROUP 1	$ 50.57	29.95
GROUP 2	$ 48.57	29.95
GROUP 3	$ 48.35	29.95
GROUP 4	$ 44.35	29.95
GROUP 5	$ 41.50	29.95
GROUP 6	$ 47.65	29.95
GROUP 7	$ 47.22	29.95
GROUP 8	$ 44.54	29.95

a.BOOM LENTHS, 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 on cranes

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

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ENGI0057-005 12/01/2025

	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	$ 46.45	29.95
GROUP 2	$ 44.45	29.95
GROUP 3	$ 39.15	29.95
GROUP 4	$ 25.75	29.95
GROUP 5	$ 33.15	29.95
GROUP 6	$ 39.73	29.95
GROUP 7	$ 43.43	29.95
GROUP 8	$ 38.70	29.95

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

b. 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: Cranes, pile drivers, lighters, boom trucks, hoists, derricks

GROUP 2: Digging machines, excavators, locomotives, John Henry's, directional drilling machines, cold planers, reclaimers, pavers, spreaders, graders, front-end loaders (3yds & over), vacuum truck, drill/boring machine operators, vermeer saw, water blaster, hydraulic-demolition robot, Ross Carriers, concrete pump operators, asphalt/material transfer machines, rotating telehandlers,

SPMT type equipment

GROUP 3: Wellpoint installation and drill/boring machine assistants

GROUP 4: Utility engineers

GROUP 5: Signal persons

GROUP 6: Oilers on cranes and deckhands

GROUP 7: Combination loader / backhoes, front-end loaders (less than 3 yds.), forklift, bulldozers, scrapers, boats, rollers, skid steer loaders (regardless of attachments), street sweepers, mechanics, welders, operators in materials yards, shops and garages

GROUP 8: Gas and electric drive heaters, concrete mixers, light plants, welding machines, pumps and compressors

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IRON0037-001 09/16/2025

	Rates	Fringes
IRONWORKER	$ 43.03	33.53

LABO0271-001 12/03/2023

BUILDING CONSTRUCTION

	Rates	Fringes
LABORER		
GROUP 1	$ 37.00	26.90
GROUP 2	$ 37.00	26.90
GROUP 3	$ 37.00	26.90
GROUP 4	$ 37.00	26.90
GROUP 5	$ 39.00	26.90

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

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

LABO0271-002 11/27/2022

HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
LABORER		
COMPRESSED AIR		
Group 1	$ 55.40	24.15
Group 2	$ 52.93	24.15
Group 3	$ 42.45	24.15
FREE AIR		
Group 1	$ 46.00	24.15
Group 2	$ 45.00	24.15
Group 3	$ 42.45	24.15
LABORER		
Group 1	$ 33.05	24.05
Group 2	$ 35.75	24.85
Group 3	$ 36.50	24.85
Group 4	$ 29.00	24.85
Group 5	$ 37.50	24.85
OPEN AIR CAISSON, UNDERPINNING WORK AND BORING CREW		
Bottom Man	$ 41.50	24.15
Top Man & Laborer	$ 35.60	24.15
TEST BORING		
Driller	$ 41.95	24.15
Laborer	$ 41.95	24.15

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

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

PAIN0011-005 06/01/2025

	Rates	Fringes
PAINTER		
Brush and Roller	$ 39.57	26.60
Epoxy, Tanks, Towers, Swing Stage & Structural Steel	$ 41.57	26.60
Spray, Sand & Water Blasting	$ 42.57	26.60
Taper	$ 38.82	25.80
Wall Coverer	$ 38.57	25.80

PAIN0011-006 06/01/2024

	Rates	Fringes
GLAZIER	$ 41.63	26.15

FOOTNOTES:

SWING STAGE: $1.00 per hour additional.

PAID HOLIDAYS: Labor Day & Christmas Day.

PAIN0011-011 06/01/2024

	Rates	Fringes
Painter (Bridge Work)	$ 57.85	26.40

PAIN0035-008 06/01/2011

	Rates	Fringes
Sign Painter	$ 24.79	13.72

PLAS0040-001 01/01/2025

BUILDING CONSTRUCTION

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 44.75	29.10

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.

PLAS0040-002 01/01/2025

HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 44.75	29.10

PLAS0040-003 01/01/2025

	Rates	Fringes
PLASTERER	$ 45.52	29.43

PLUM0051-002 08/25/2025

	Rates	Fringes
Plumbers and Pipefitters	$ 54.34	34.50

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* ROOF0033-004 12/01/2025

	Rates	Fringes
ROOFER	$ 47.49	31.44

SFRI0669-001 04/01/2025

	Rates	Fringes
SPRINKLER FITTER	$ 53.76	33.44

SHEE0017-002 06/01/2025

	Rates	Fringes
Sheet Metal Worker	$ 44.42	41.94

TEAM0251-001 05/01/2025

HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
TRUCK DRIVER		
GROUP 1	$ 31.86	34.51+a+b
GROUP 2	$ 32.01	34.51+a+b
GROUP 3	$ 32.06	34.51+a+b
GROUP 4	$ 32.11	34.51+a+b
GROUP 5	$ 32.21	34.51+a+b
GROUP 6	$ 32.61	34.51+a+b
GROUP 7	$ 32.81	34.51+a+b
GROUP 8	$ 32.31	34.51+a+b
GROUP 9	$ 32.56	34.51+a+b
GROUP 10	$ 32.36	34.51+a+b

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

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 https://www.dol.gov/agencies/whd/government-contracts.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least $13.30 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 2025. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at 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) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate 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. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE:

UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the 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. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to

davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail 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 an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail 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 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.

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END OF GENERAL DECISION"

“END OF GENERAL DECISION"

Appendix D

Federal Labor Standards Provisions – Form HUD 4010

A. APPLICABILITY

The Project or Program to which the construction work covered by this Contract pertains is being assisted by the United States of America, and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

(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 29 CFR 5.5(a)(1)(iv); 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 29 CFR 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 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH1321)) 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.

(ii) Additional Classifications.

(A) Any class of laborers or mechanics 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. HUD shall approve an additional classification and wage rate and fringe benefits therefor 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;
(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, the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division ("Administrator"), Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget ("OMB") under OMB control number 1235-0023.)

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, or HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1235-0023.)

(D) The wage rate (including fringe benefits, where appropriate) determined pursuant to subparagraphs (1)(ii)(B) or (C) of this paragraph, 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. (Approved by the Office of Management and Budget under OMB Control Number 1235-0023.)

(2) Withholding. HUD or its designee shall, upon its own action or upon written request of an authorized representative of the U.S. 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, HUD or its designee 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. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The U.S. Department of Labor shall make such disbursements in the case of direct Davis-Bacon Act contracts.

(3) Payrolls and basic records.

(i) Maintaining Payroll Records. 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(s), 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. (Approved by the Office of Management and Budget under OMB Control Numbers 1235-0023 and 1215-0018)

(ii) Certified Payroll Reports.

(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. 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 transmittals. Instead, the payrolls 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 **https://www.dol.gov/agencies/whd/forms** 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 HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the U.S. Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph 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 HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1235-0008.)

(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 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), 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 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; and

(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 subparagraph (a)(3)(ii)(b).

(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 3729 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph (a)(3)(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the U.S. 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, HUD or its designee 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, fringe benefits 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 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 29 CFR Part 5 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 will insert in any subcontracts the clauses contained in subparagraphs (1) through (11) in this paragraph (a) and such other clauses as HUD or its designee may, by appropriate instructions, require, and a copy of the applicable prevailing wage decision, 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 this paragraph.

(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 U.S. 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 HUD or its designee, 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) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(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) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) Anyone who knowingly makes, presents, or submits a false, fictitious, or fraudulent statement, representation or certification is subject to criminal, civil and/or administrative sanctions, including fines, penalties, and imprisonment (e.g., 18 U.S.C. §§ 287, 1001, 1010, 1012; 31 U.S.C. §§ 3729, 3802.

(11) Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic, to whom the wage, salary, or other labor standards provisions of this Contract are applicable, shall be discharged or in any other manner discriminated against by the contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The provisions of this paragraph (b) are applicable where the amount of the prime contract exceeds **$100,000**. 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 the individual is employed on such work to work in excess of 40 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 40 hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph B(1) of this paragraph, 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 subparagraph B(1) of this paragraph, **in the sum set by the U.S. Department of Labor at 29 CFR 5.5(b)(2)** for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph B(1) of this paragraph. In accordance with the Federal Civil Penalties Inflation Adjustment Act of 1990 (28 U.S.C. § 2461 Note), the DOL adjusts this civil monetary penalty for inflation no later than January 15 each year.

(3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall, upon its own action or upon written request of an authorized representative of the U.S. Department of Labor, 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 contract, 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 subparagraph B(2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph B(1) through (4) of this paragraph 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 subparagraphs B(1) through (4) of this paragraph.

C. HEALTH AND SAFETY

The provisions of this paragraph (c) are applicable where the amount of the prime contract exceeds **$100,000**.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his or her health and safety, as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The contractor shall comply with all regulations issued by the Secretary of Labor pursuant to 29 CFR Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96), 40 U.S.C. § 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract, so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

Appendix E

City of Pawtucket Standard Form of Agreement (Sample)

CONTRACT AGREEMENT
FOR:

PROJECT_TITLE

SAMPLE

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.

SAMPLE

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:

SAMPLE

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.poster/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 on or before July 1st 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 1st 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;

SAMPLE

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, 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;

SAMPLE

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.

CERTIFICATION

I hereby certify that I have reviewed this CONTRACT ADDENUM 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 F

Rhode Island General Laws

Title 37
Public Property and Works

Chapter 13
Labor and Payment of Debts by Contractors
R.I. Gen. Laws § 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.

History of Section.
P.L. 1936, ch. 2361, §§ 2, 3; G.L. 1938, ch. 290, §§ 2, 3; G.L. 1938, ch. 290, § 4; P.L. 1955, ch. 3580, § 1; G.L. 1956, § 37-13-5; P.L. 1965, ch. 77, § 1.

Title 37
Public Property and Works

Chapter 13
Labor and Payment of Debts by Contractors
R.I. Gen. Laws § 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 the transportation of public and private school pupils pursuant to §§ 16-21-1 and 16-21.1-8, or 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 that 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 that 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:

(i) 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

(ii) The rate of costs to the contractor, subcontractor, vendor, or provider that may be reasonably anticipated in providing benefits to employees pursuant to an enforceable commitment to carry out a financially responsible plan or program that 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:

(1) 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); and

(2) Persons employed by a provider contracted for the purpose of transporting public and private school pupils pursuant to §§ 16-21-1 and 16-21.1-8 shall be subject to the provisions of subsections (a) and (b) of this section. For the purposes of this subsection the term employee includes school bus drivers, aides, and monitors who are directly providing transportation services; the term employee does not include mechanics, dispatchers, or other personnel employed by the vendor whose duties are normally performed at a fixed location.

(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 commerce 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 turnpike and bridge authority, the Narragansett Bay water quality management district commission, the Rhode Island telecommunications authority, the convention center authority, the council on postsecondary education, the council on 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.

History of Section.
P.L. 1974, ch. 237, § 3; P.L. 1976, ch. 193, § 1; P.L. 1999, ch. 75, § 1; P.L. 2001, ch. 321, § 1; P.L. 2015, ch. 141, art. 7, § 16; P.L. 2021, ch. 292, § 3, effective July 9, 2021; P.L. 2021, ch. 293, § 3, effective July 9, 2021.

Appendix G

Specifications Issued for Bid

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. Work under this Section shall also comply with the RIDEM approved Remedial Action Work Plan (RAWP, March 2022), RAWP Addendum (August 2022), and the RIDEM Remedial Approval Letter dated September 14, 2022. Where conflicts exist the more stringent requirements shall govern.

1.2 SUMMARY

A. Environmental site investigations conducted at the Site (2013 SIR/TBA, 2018 Addendum, 2021 Supplemental SI) identified widespread historic urban fill containing total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs), and certain metals (arsenic and lead) in soil at concentrations exceeding RIDEM Residential Direct Exposure Criteria (RDEC). Based on these findings, the entire Site is classified as an Area of Environmental Concern (AOEC) and all soils encountered shall be treated as Controlled Materials requiring management in accordance with the RAWP and associated documents.

B. Groundwater is present at approximately 1.6-14 feet below grade, but groundwater impacts were not identified, and groundwater is not anticipated to be encountered during this phase of work, consistent with RAWP findings. If groundwater is encountered, the Contractor shall notify the Engineer and City.

C. Previous investigations confirmed exceedances of RAWP contaminants of concern (PAHs, TPH, arsenic, and lead) in shallow fill across the Site. Accordingly, the Site is designated an AOEC and all soils encountered are Controlled Materials, subject to the restrictions and engineered control requirements established by the RAWP and RIDEM RAL.

D. The Contractor is hereby notified that Controlled Materials requiring special management will be encountered during construction. Contractor shall implement a site-specific Health and Safety Plan (HASP) meeting 29 CFR 1910.20 and the SMP provided in the RAWP. These measures shall include, but are not limited to, engineering controls, personal protective equipment and decontamination, equipment decontamination, and personnel training. WORKER HEALTH AND SAFETY PROTOCOLS WHICH ADDRESS POTENTIAL AND/OR ACTUAL RISK OF EXPOSURE TO SITE SPECIFIC HAZARDS ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

E. Controlled Materials excavated from the Site may be reused only onsite and may be temporarily stockpiled within designated Waste Stockpile Areas (WSA). Stockpiles shall be placed on and covered with polyethylene sheeting and protected using erosion and sediment controls, and/or placed on impervious areas to be removed without the underlying poly. All reuse activities must comply with the RAWP procedures.

F. Controlled Material shall be reused onsite prior to import of clean fill, consistent with the RAWP requirement to minimize handling and potential cross-contamination of materials.

G. All Controlled Materials reused onsite shall meet the following conditions:
   1. Structurally suitable for use as fill, as determined by the Engineer,
   2. Not placed below the groundwater table,
   3. Placed below an approved engineer control, including:
      a. Impervious caps (pavement, concrete)
      b. Type I (1-foot) soil caps, or
      c. Type II (2-feet) soil caps, as defined in the RAWP Sections 4.2.3-4.2.5.
   4. Not placed in areas subject to erosion.

H. Controlled Materials shall not be transported, relocated, reused, or disposed of offsite, except for PPE and decontamination residuals approved for disposal. All impacted soils must remain onsite and be incorporated into the engineered remedy beneath the final cap materials, per the RAWP and RAL.

I. An Environmental Professional (EP) shall be onsite during excavation, grading, WSA operations, and engineered cap construction to monitor compliance with the RAWP, interpret field conditions, and prevent cross-contamination

J. The WSA shall be used exclusively for temporary stockpiling of Controlled Materials generated within the Site. Materials originating offsite shall not be placed, mixed, or stored within the WSA at any time.

PART 2 - PRODUCTS (not used)

PART 3 - EXECUTION (not used)

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. Under this item, the Contractor shall establish protocols and provide procedures to protect the health and safety of its employees and subcontractors as related to the proposed construction activities performed within the Project Limits. Work under this Item consists of the development and implementation of a HASP that addresses the relative risk of exposure to potential hazards present within the Project limits, including those related to soil excavation and handling/removal of contaminated railroad ties. This also includes possible entry into confined spaces or excavations with the potential for vapors to accumulate. In addition to the former stated risks, the HASP must also address the associated risks with the excavation and handling of contaminated soil. The HASP shall establish health and safety protocols that address the relative risk of exposure to regulated substances in accordance with 29 CFR 1910.120 and 29 CFR 1926.65. Such protocols shall only address those potential concerns directly related to site conditions.
   1. Note: The Engineer will prepare a site-specific HASP, which is compatible with the Contractor's HASP, and will be responsible for the health and safety of all Project Inspectors, employees, and consulting engineers.

1.3 SUBMITTALS

A. Three copies of the HASP shall be submitted to the Engineer within four (4) weeks after the Award of Contract or four (4) weeks prior to the start of any work on the Project, whichever is first, but not before the Award of the Contract.

B. The HASP shall be developed by a qualified person designated by the Contractor. This qualified person shall be a Certified Industrial Hygienist (CIH), Certified Hazardous Material Manager (CHMM), or a Certified Safety Professional (CSP). He/she shall have review and approval authority over the HASP and be identified as the Health and Safety Manager (HSM). The HASP shall bear the signature of said HSM indicating that the HASP meets the minimum requirements of 29 CFR 1910.120 and 29 CFR 1926.65.

C. The Engineer will review the HASP within four (4) weeks of submittal and provide written comments as to deficiencies in and/or exceptions to the plan, if any, to assure consistency with the specifications, applicable standards, policies and practices and appropriateness given potential or known site conditions. Items identified in the HASP that do not conform to the specifications will be brought to the attention of the Contractor, and the Contractor shall revise the HASP to correct the deficiencies and resubmit it to the Engineer for determination of compliance with this item. The Contractor shall not be allowed to commence work activities on the Project, as shown on the Plans, or where site conditions exist that may pose a risk to worker health and safety and/or the environment, until the HASP has been reviewed and accepted by

the Engineer. No claim for delay in the progress of work will be considered for the Contractor's failure to submit a HASP that conforms to the requirements of the Contract.

PART 2 - PRODUCTS

2.1 MATERIALS

A. The Contractor must provide chemical protective clothing (CPC) and personal protective equipment (PPE) as stipulated in the Contractor's HASP during the performance of work in areas identified as potentially posing a risk to worker health and safety for workers employed by the Contractor and all subcontractors.

PART 3 - EXECUTION

3.1 EXISTING INFORMATION

A. The Contractor shall utilize all available information and existing records and data pertaining to chemical and physical hazards associated with any of the regulated substances identified in the environmental site investigation to develop the HASP. The documents containing this data are referenced in "Notice to Contractor – Environmental Investigations." Note that as indicated in the Notice to Contractor for this project, the chemical data obtained at this site indicates impacts to soil or groundwater within the Project limits.

3.2 GENERAL

A. The requirements set forth herein pertain to the provision of workers' health and safety as it relates to proposed Project activities when performed in the presence of hazardous or regulated materials or otherwise environmentally sensitive conditions. THE PROVISION OF WORKER HEALTH AND SAFETY PROTOCOLS WHICH ADDRESS POTENTIAL AND/OR ACTUAL RISK OF EXPOSURE TO SITE SPECIFIC HAZARDS POSED TO CONTRACTOR EMPLOYEES IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.

B. The Contractor shall be responsible for the development, implementation, and oversight of the HASP throughout the performance of work within the limits of the Project, as identified in the Contract Documents, and in other areas identified by the Engineer or by the HASP where site conditions may pose a risk to worker health and safety and/or the environment. No physical aspects of the work on the Project shall begin until the HASP is reviewed by the Engineer and is determined to meet the requirements of the specifications. However, the Contract time, in accordance with Article 1.03.08, will begin on the date stipulated in the Notice to Proceed.

3.3 REGULATORY REQUIREMENTS

A. All construction related activities performed by the Contractor within the limits of the Project or in other areas where site conditions may pose a risk to worker health and safety and/or the environment shall be performed in conformance with 29 CFR 1926, Safety and Health Regulations for Construction and 29 CFR 1910, Safety and Health Regulations for General

Industry. Conformance to 29 CFR 1910.120, Hazardous Waste Site Operations and Emergency Response (HAZWOPER) may also be required, where appropriate.

3.4 HASP PROVISIONS

A. General Requirements

1. The Contractor shall prepare a HASP covering all Project site work regulated by 29 CFR 1910.120(b)/1926.65(b) to be performed by the Contractor and all subcontractors under this Contract. The HASP shall establish in detail the protocols necessary for the recognition, evaluation, and control of all hazards associated with each task performed under this Contract. The HASP shall address site-specific safety and health hazards of each phase of site operation and include the requirements and procedures for employee protection. The level of detail provided in the HASP shall be tailored to the type of work, complexity of operations to be performed, and hazards anticipated. Details about some activities may not be available when the initial HASP is prepared and submitted. Therefore, the HASP shall address, in as much detail as possible, all anticipated tasks, their related hazards and anticipated control measures.
2. The HASP shall interface with the Contractor's Safety and Health Program. Any portions of the Safety and Health Program that are referenced in the HASP shall be included as appendices to the HASP. All topics regulated by the 29 CFR 1910.120(b)(4) and those listed below shall be addressed in the HASP. Where the use of a specific topic is not applicable to the Project, the HASP shall include a statement to justify its omission or reduced level of detail and establish that adequate consideration was given the topic.

B. Elements

1. Site Description and Contamination Characterization
   a. The Contractor shall provide a site description and contaminant characterization in the HASP that meets the requirements of 29 CFR 1910.120/1926.65.
2. Safety and Health Risk Analysis/Activity Hazard Analysis
   a. The HASP shall address the safety and health hazards on this site for every operation to be performed. The Contractor shall review existing records and data to identify potential chemical and physical hazards associated with the site and shall evaluate their impact on field operations. Sources, concentrations (if known), potential exposure pathways, and other factors as noted in CFR 1910.120/126.65, paragraph (c)(7) employed to assess risk shall be described. The Contractor shall develop and justify action levels for implementation of engineering controls and PPE upgrades and downgrades for controlling worker exposure to the identified hazards. If there is no permissible exposure limit (PEL) or published exposure level for an identified hazard, available information from other published studies may be used as guidance. Any modification of an established PEL must be fully documented.
   b. The HASP shall include a comprehensive section that discusses the tasks and objectives of the site operations and logistics and resources required to complete each task. The hazards associated with each task shall be identified. Hazard prevention techniques, procedures and/or equipment shall be identified to mitigate each of the hazards identified.
3. Staff Organization, Qualifications and Responsibilities
   a. The HASP shall include a list of personnel expected to be engaged in site activities and certify that said personnel have completed the educational requirements stipulated in 29 CFR 1910.120 and 29 CFR 1926.65, are currently monitored under a medical surveillance program in compliance with those regulations, and that they are fit for work under "Level C" conditions.
   b. The Contractor shall assign responsibilities for safety activities and procedures. An outline or flow chart of the safety chain of command shall be provided in the HASP.

Qualifications, including education, experience, certifications, and training in safety and health for all personnel engaged in safety and health functions shall be documented in the HASP. Specific duties of each on-site team member should be identified. Typical team members include but are not limited to Team Leader, Scientific Advisor, Site Safety Officer, Public Information Officer, Security Officer, Record Keeper, Financial Officer, Field Team Leader, and Field Team members.

c. The HASP shall also include the name and qualifications of the individual proposed to serve as Health and Safety Officer (HSO). The HSO shall have full authority to carry out and ensure compliance with the HASP. The Contractor shall provide a competent HSO on site who is capable of identifying existing and potential hazards in the surroundings or working conditions that are unsanitary, hazardous or dangerous to employees and who has authorization to take prompt corrective measures to eliminate or control them. The qualifications of the HSO shall include completion of OSHA 40-hour HAZWOPER training, including current 8-hour refresher training, and 8-hour HAZWOPER supervisory training; a minimum of one year of working experience with the regulated compounds that have been documented to exist within Project limits; a working knowledge of federal and state safety regulations; specialized training or documented experience (one year minimum) in personal and respiratory protective equipment program implementation; the proper use of air monitoring instruments, air sampling methods and procedures; and certification training in first aid and CPR by a recognized, approved organization such as the American Red Cross.

d. The primary duties of the HSO shall be those associated with worker health and safety. The Contractor's HSO responsibilities shall be detailed in the written HASP and shall include, but not be limited to the following:
   1) Directing and implementing the HASP.
   2) Ensuring that all Project personnel have been adequately trained in the recognition and avoidance of unsafe conditions and the regulations applicable to the work environment to control or eliminate any hazards or other exposure to illness or injury (29 CFR 1926.21). All personnel shall be adequately trained in procedures outlined in the Contractor's written HASP.
   3) Authorizing Stop Work Orders, which shall be executed upon the determination of an imminent health and safety concern.
   4) Contacting the Contractor's HSM and the Engineer immediately upon the issuance of a Stop Work order when the HSO has made the determination of an imminent health and safety concern.
   5) Authorizing work to resume, upon approval from the Contractor's HSM.
   6) Directing activities, as defined in the Contractor's written HASP, during emergency situations; and
   7) Providing personal monitoring where applicable, and as identified in the HASP.

4. Employee Training Assignments
   a. The Contractor shall develop a training program to inform employees, supplier's representatives, and official visitors of the special hazards and procedures (including PPE, its uses and inspections) to control these hazards during field operations. Official visitors include but are not limited to, Federal Agency Representatives, State Agency Representatives, Municipal Agency Representatives, Contractors, subcontractors, etc. This program shall be consistent with the requirements of 29 CFR 1910.120 and 29 CFR 1926.65.
5. Personal Protective Equipment
   a. The plan shall include the requirements and procedures for employee protection and should include a detailed section on respiratory protection. The Contractor shall describe in detail and provide appropriate PPE to ensure that workers are not exposed to levels greater than the action level for identified hazards for each

operation stated for each work zone. The level of protection shall be specific for each operation and shall be in compliance with all requirements of 29 CFR 1910 and 29 CFR 1926. The Contractor shall provide, maintain, and properly dispose of all PPE.

6. Medical Surveillance Program
   a. All on-site Contractor personnel engaged in 29 CFR 1910.120/1926.65 operations shall have medical examinations meeting the requirements of 29 CFR 1910.120(f) prior to commencement of work.
   b. The HASP shall include certification of medical evaluation and clearance by the physician for each employee engaged in 29 CFR 1910.120/1926.65 operations at the site.
7. Exposure Monitoring / Air Sampling Program
   a. The Contractor shall submit an Air Monitoring Plan as part of the HASP, which is consistent with 29 CFR 1910.120, paragraphs (b)(4)(ii)(E), (c)(6), and (h). The Contractor shall identify specific air sampling equipment, locations, and frequencies in the air-monitoring plan. Air and exposure monitoring requirements shall be specified in the Contractor's HASP. The Contractor's CIH shall specify exposure monitoring/air sampling requirements after a careful review of the contaminants of concern and planned site activities.
8. Site Layout and Control
   a. The HASP shall include a map, work zone delineation (support, contamination, reduction and exclusion), on/off-site communications, site access controls, and security (physical and procedural).
9. Communications
   a. Written procedures for routine and emergency communications procedures shall be included in the Contractor's HASP.
10. Personal Hygiene, Personal Decontamination and Equipment Decontamination
    a. Decontamination facilities and procedures for PPE, sampling equipment, and heavy equipment shall be discussed in detail in the HASP.
11. Emergency Equipment and First Aid Requirements
    a. The Contractor shall provide appropriate emergency first aid kits and equipment suitable to treat exposure to the hazards identified, including chemical agents. The Contractor will provide personnel that have certified first aid/CPR training on site at all times during site operations.
12. Emergency Response Plan and Spill Containment Program
    a. The Contractor shall establish procedures in order to take emergency action in the event of immediate hazards (i.e., a chemical agent leak or spill, fire or personal injury). Personnel and facilities supplying support in emergency procedures will be identified. The emergency equipment to be present on site and the Emergency Response Plan procedures, as required 29 CFR 1910.120, paragraph (1)(1)(ii) shall be specified in the Emergency Response Plan. The Emergency Response Plan shall be included as part of the HASP. This Emergency Response Plan shall include written directions to the closest hospital as well as a map showing the route to the hospital.
13. Logs, Reports and Record Keeping
    a. The Contractor shall maintain safety inspections, logs, and reports, accident/incident reports, medical certifications, training logs, monitoring results, etc. All exposure and medical monitoring records are to be maintained according to 29 CFR 1910 and 29 CFR 1926. The format of these logs and reports shall be developed by the Contractor to include training logs, daily logs, weekly reports, safety meetings, medical surveillance records, and a phase-out report. These logs, records, and reports shall be maintained by the Contractor and be made available to the Engineer.

b. The Contractor shall immediately notify the Engineer of any accident/incident. Within two working days of any reportable accident, the Contractor shall complete and submit to the Engineer an accident report.

14. Confined Space Entry Procedures
    a. Confined space entry procedures, both permit required and non permit required, shall be discussed in detail.
15. Pre-Entry Briefings
    a. The HASP shall provide for pre-entry briefings to be held prior to initiating any site activity and at such other times as necessary to ensure that employees are apprised of the HASP and that this plan in being followed.
16. Inspections/Audits
    a. The HSM or HSO shall conduct Inspections or audits to determine the effectiveness of the HASP. The Contractor shall correct any deficiencies in the effectiveness of the HASP.

C. HASP Implementation
1. The Contractor shall implement and maintain the HASP throughout the performance of work. In areas identified as having a potential risk to worker health and safety, and in any other areas deemed appropriate by the HSO, the Contractor shall be prepared to immediately implement the appropriate health and safety measures, including but not limited to the use of PPE, and engineering and administrative controls.
2. If the Engineer observes deficiencies in the Contractor's operations with respect to the HASP, they shall be assembled in a written field directive and given to the Contractor. The Contractor shall immediately correct the deficiencies and respond, in writing, as to how each was corrected. Failure to bring the work area(s) and implementation procedures into compliance will result in a Stop Work Order and a written directive to discuss an appropriate resolution(s) to the matter. When the Contractor demonstrates compliance, the Engineer shall remove the Stop Work Order. If a Stop Work Order has been issued for cause, no delay claims on the part of the Contractor will be honored.
3. Disposable CPC/PPE (i.e., disposable coveralls, gloves, etc.) which come in direct contact with hazardous or potentially hazardous material shall be placed into 55 gallon USDOT 17-H drums and disposed of in accordance with federal, state, and local regulations. The drums shall be temporarily staged and secured within the WSA until the material is appropriately disposed.

D. HASP Revisions
1. The HASP shall be maintained on site by the Contractor and shall be kept current with construction activities and site conditions under this Contract. The HASP shall be recognized as a flexible document, which shall be subject to revisions and amendments, as required, in response to actual site conditions, changes in work methods and/or alterations in the relative risk present. All changes and modifications shall be signed by the Contractor's HSM and shall require the review and acceptance by the Engineer prior to the implementation of such changes.
2. Should any unforeseen hazard become evident during the performance of the work, the HSO shall bring such hazard to the attention of the Contractor and the Engineer as soon as possible. In the interim, the Contractor shall take action, including Stop Work Orders and/or upgrading PPE as necessary to re-establish and maintain safe working conditions and to safeguard on-site personnel, visitors, the public and the environment. The HASP shall then be revised/amended to reflect the changed condition.

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. All work shall comply with the RIDEM approved Remedial Action Work Plan (RAWP, March 2022), RAWP Addendum (August 2022), Construction SMP (in the RAWP, 2021), and RIDEM Remedial Approval Letter dated September 2022. The more stringent requirement shall govern.

1.2 SUMMARY

A. Work under this Item is intended to provide specific procedural requirements to be followed by the Contractor during the excavation of Controlled Materials from within the site, as shown on the Project Plans. Work under this Item shall include any transporting and stockpiling materials at the Temporary Waste Stockpiles (TWSs) and covering, securing, and maintaining the stockpiled materials throughout the duration of the Project. Large pieces of stone, concrete, asphalt, or other anthropogenic debris should be generally removed from the soil to the extent practical and be stockpiled separately for off-site disposal as standard solid waste material or construction debris.

B. Controlled Materials consisting of soil containing levels of regulated substances including total petroleum hydrocarbons (TPH), metals (arsenic and lead), and polyaromatic hydrocarbons (PAHs) have been documented to exist within the Project. Such contamination is documented in the reports listed in the “Notice to Contractor – Environmental Investigations”. Where contaminated soils are excavated, special handling and documentation procedures will be required. Controlled Materials excavated within the site may be reused as fill/backfill only within the site at the direction of the Engineer. Excess or unsuitable Controlled Material that cannot be reused during the Project will be re-located to a TWS located within the Site boundary. Upon completion of the project the Controlled Material shall be re-used within the Site boundary at the direction of the Engineer. The re-used material shall not be placed where subject to erosion, or below the groundwater table. Any single stockpile should be, to the extent practical, no larger than 100 cubic yards in size and should be located near to the excavation in which it was generated.

PART 2 - PRODUCTS

2.1 MATERIALS

1. The required materials are detailed on the Project Plans. All materials shall conform to the requirements of the Contract.
2. Plastic Sheet: Polyethylene plastic sheeting for covering excavated material shall be a thickness of at least ten (10) mil and shall be at least ten (10) feet wide.
3. Covers for roll-off/storage containers shall be made of polyethylene plastic, or similar water-tight material, that is of sufficient size to completely cover top opening and can be securely fastened to the container.
4. Sandbags: Sandbags used to secure polyethylene covers shall be at least thirty (30) pounds.

PART 3 - EXECUTION

A. General

1. When Controlled Materials are encountered during the course of the work, health and safety provisions shall conform to the appropriate sections of the Contract. Provisions may include implementation of engineering controls, air and personal monitoring, the use of chemical protective clothing (CPC), personal protective equipment (PPE), implementation of engineering controls, air and personal monitoring, and decontamination procedures.
2. Controlled Materials removed from any excavation within the site shall be reused within the site. Controlled Materials that are to be reused within the site shall be temporarily stockpiled adjacent to the excavation for immediate reuse or at temporary WSA.
3. Controlled Materials that are to be reused at a later date within the site shall be transported and stockpiled within the temporary WSA, which shall be located within the Site boundary. Only the volume of Controlled Material that is reasonably estimated to be reused within the site shall be temporarily stockpiled in this way. Stockpiles of Controlled Materials that are to be reused at a later date shall be placed on and covered with polyethylene plastic sheeting at all times, except when the piles are being worked.
4. Controlled Materials may not be transported off site or re-used outside of the Site boundary without approval from the RIDEM and Engineer.
5. Construction of the WSA shall be completed prior to the initiation of construction activities generating Controlled Materials. Measures shall be implemented to divert rainfall away from the WSA. Placement of sorbent boom along the perimeter of the WSA shall be conducted when soil is saturated with free-draining liquids.

B. WSA Maintenance

1. The Contractor shall provide all necessary materials, equipment, tools, and labor for anticipated activities within the WSA. Such activities include, but are not limited to, handling and management of stockpiles and drummed CPC/PPE; uncovering and recovering stockpiles; maintenance of WSA; replacement of damaged components (i.e. sandbags, plastic polyethylene sheeting, etc.); and waste inventory record management. The Contractor shall manage all materials in the WSA in such a way as to minimize tracking of potential contaminated materials across the site and off site and minimize dust generation.
2. No regulated soil will be stockpiled on-site for greater than 30 days and no larger quantity than 500 cubic yards.
3. Any jurisdictional stockpile shall be placed on polyethylene sheeting if placed on pervious surface to prevent cross contamination or impacts to clean engineered controls or placed on existing impervious surfaces that are to be removed as part of construction.
4. Each stockpile shall be securely covered when not in active use with a cover of sufficient size to prevent generation of dust and infiltration of precipitation.
5. The staged stockpiles shall be inspected at least daily by the Contractor to ensure that the cover and containment have not been damaged and that there is no apparent leakage from the piles. If the cover has been damaged, or there is evidence of leakage from the piles, the Contractor shall immediately replace the cover or containment as needed to prevent the release of materials to the environment from the piles.
6. An inventory of stockpiled materials and drummed CPC/PPE shall be conducted on a daily basis. Inventory records shall indicate the approximate volume of material/drums stockpiled per day; the approximate volume of material/drums stockpiled to date; material/drums loaded and transported off site for disposal; any materials loaded and transported for on-site reuse; and identification of stockpiles relative to their points of generation.
7. At the end of the project any remaining stockpiles will be re-used on site as fill material at the direction of the Engineer. The location of the re-used material will be documented by the Contractor. The re-used material will not be located where subject to erosion or placed

below the water table. Following the removal of all stockpiled Controlled Materials, residuals shall be removed from surfaces of the WSA as directed by the Engineer.

C. Decontamination
   1. All equipment shall be provided at the work site free of contamination. The Engineer may prohibit from the site any equipment that in his opinion has not been thoroughly decontaminated prior to arrival. Any decontamination of the Contractor's equipment prior to arrival at the site shall be at the expense of the Contractor. The Contractor is prohibited from decontaminating equipment on the Project that has not been thoroughly decontaminated prior to arrival.
   2. The Contractor shall furnish labor, materials, tools, and equipment for decontamination of all equipment and supplies that are used to handle Controlled Materials. Decontamination shall be conducted in an area approved by the Engineer and may be required prior to equipment and supplies leaving the Project and between stages of the work.
   3. Dry decontamination procedures are recommended. Residuals from dry decontamination activities shall be collected and managed as Controlled Materials. If dry methods are unsatisfactory as determined by the Engineer, the Contractor shall modify decontamination procedures as required subject to the Engineer's approval.

D. Dust Control
   1. The Contractor shall implement a fugitive dust suppression program in accordance with the Contract to prevent the off-site migration of particulate matter and/or dust resulting from excavation, loading, and operations associated with Controlled Materials. It shall be the Contractor's responsibility to supervise fugitive dust control measures and to monitor airborne particulate matter. The Contractor shall:
      a. Employ reasonable fugitive dust suppression techniques.
      b. Visually observe the amounts of particulate and/or fugitive dust generated during the handling of Controlled Materials and continuously monitor the amount of airborne dust during handling of Controlled Materials using a digital dust meter. If the amount of fugitive dust and/or particulate matter is not acceptable to the Engineer, the Engineer may direct the Contractor to implement corrective measures at his discretion, including, but not limited to, the following:
         1) apply water to working surfaces
         2) apply water to equipment and excavation faces; and
         3) apply water during excavation, loading, and dumping.
      c. Dust monitoring shall be implemented with a recordable device(s). The Contractor will notify the Engineer prior to Mobilization to the Site, of the make and model of the dust monitor(s) that will be used for monitoring. Dust monitor(s) will be placed at a downwind location of the activity based on wind direction, and moved, if necessary, based on conditions. Dust levels will be recorded hourly or periodically based on Site activities, recorded in daily logs, and retained by the Contractor for the duration of the project. Work will be stopped if dust levels reach above 5 milligrams per cubic meter as an action level

E. Permit Compliance
   1. The Contractor shall comply with the terms and conditions of the approved RAWP, and any State of local permits required as part of the project. In particular, the Contractor shall:
      a. Maintain soil stockpiles as required by the approved RAWP, and any other State and/or local permits. Any stockpiled materials must be underlain and covered with polyethylene sheeting and be secured at the end of each day.
      b. Any imported clean fill not immediately placed shall be stockpiled and underlain with polyethylene sheeting unless placed on final designed engineer controls.
      c. Maintain a communications system capable of summoning fire, police, and/or other emergency service personnel.

d. Prevent unauthorized entry onto the stockpiles by the use of fences, gates, or other natural or artificial barriers.
e. Isolate and temporarily store incidental waste in a safe manner prior to off-site transport to a facility lawfully authorized to accept such waste.
f. Not store more than 100 cubic yards of incidental waste at any one time.
g. Prevent or minimize the transfer or infiltration of contaminants from the stockpiles to the ground as detailed herein.
h. Securely cover each stockpile of soil as detailed herein.
i. Minimize wind erosion and dust transport as detailed herein.
j. Use anti-tracking measures to ensure the vehicles do not track soil from the project Site onto a public roadway at any time.
k. Instruct the transporters of soil and/or sediment of best management practices for the transportation of such soil (properly covered loads, removing loose material from dump body, etc.).
l. Control all traffic related to the operation of the facility in such a way as to mitigate the queuing of vehicles off site and excessive or unsafe traffic impact in the area where the facility is located.

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. This work shall comply with the RIDEM approved RAWP (March 2022), RAWP Addendum (August 2022), and RIDEM Remedial Approval Letter (September 2022).

1.2 SUMMARY

Work under this Item includes furnishing, constructing, operating, and dismantling a Temporary Waste Stockpile (WSA) in accordance with the approved RAWP, and RIDEM requirements. All regulated/Controlled Materials generated during construction shall be stockpiled on and under polyethylene sheeting, within fenced limits, and managed in accordance with the RAWP. No soil shall be exported from the Site without written authorization from the Engineer or City.

PART 2 - PRODUCTS

2.1 MATERIALS

1. The required materials are detailed on the Project Plans. All materials shall conform to the requirements of the Contract.
2. Polyethylene plastic sheeting for underlayment and covering shall be minimum 30 mil thickness, installed both beneath and over all Controlled Material stockpiles, or placed on existing impervious surfaces and covered.
3. Sandbags used to secure polyethylene sheeting soil covers shall have a minimum weight of thirty pounds.
4. Roll-off/Storage Containers, if utilized, shall be watertight, steel-body construction, of the size specified and able to handle the storage of the material.
5. If soil exhibits staining, odors, sheen, leaching, or free liquids, leak-proof containers or secondary containment are required, consistent with RIDEM requirements.

PART 3 - EXECUTION

3.1 CONSTRUCTION METHODS

A. The WSA shall be constructed per Contract, RAWP, and RAL requirements. Location shall minimize unauthorized access and avoid stormwater pathways.

B. Construction of the WSA shall be completed prior to the initiation of construction activities generating Controlled Materials. The Contractor is responsible for the maintenance and protection of all utilities potentially affected during WSA construction. The Contractor shall locate and mark all existing utilities potentially affected prior to initiating WSA construction.

C. The proposed location of the WSA shall be cleared of any debris and vegetation as directed by the Engineer. Any objectionable materials, which may result in damage to the polyethylene sheeting underlayment, shall be removed prior to stockpiling controlled materials. WSA shall be located to prevent ponding on or against stockpiled materials.

D. In Contractor shall:
   1. Construct and repair the WSA in conformance with the requirements of any State or local permits, and as described in the RAWP, and RIDEM RAL.
   2. Prevent unauthorized entry onto the stockpiles by the use of fences, gates, or other natural or artificial barriers.
   3. Install anti-tracking measures to ensure the vehicles do not track soil from the WSA onto a public roadway at any time.
   4. Controlled materials stockpiles shall be placed on and covered by polyethylene sheeting at all times except during active work.
   5. Stockpiles shall be limited to 100 cubic yards per pile, total WSA area shall not exceed 500 CY, and no stockpile shall remain more than 30 days, per RIDEM approval.
   6. Clean fill stockpiles shall be placed on and covered by poly sheeting, separate from Controlled Material.

E. Following the handling of Controlled Material, the Contractor shall use dry decontamination procedures for all surfaces of the WSA as directed by the Engineer to reduce the potential for cross-contamination. If the results from dry methods are unsatisfactory to the Engineer, the Contractor shall modify decontamination procedures as required.

F. The Contractor shall be responsible for the collection and treatment/recycling/disposal of any liquid wastes that may be generated by its decontamination activities in accordance with applicable regulations.

G. Upon completion of the Project, any remaining material stockpiled will be relocated within the Site boundary and will not be disposed off or re-used at another parcel. The Contractor shall notify the Engineer of where placement of material will occur before re-use. The Controlled Material will not be placed subject to erosion, or below the water-table within the site boundary.

H. Operation and maintenance of the WSA shall be included under SECTION 026115 – Controlled Material Handling.

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. All work shall be performed in accordance with the RIDEM approved Remedial Action Work Plan (RAWP), RAWP Addendum (August 2022), and RIDEM Remedial Approval Letter (RAL) dated September 14, 2022.

1.2 SUMMARY

A. Work under this Item shall consist of the furnishing and placement of a demarcation layer on top of the remediation subgrade as shown on the Project Plans and in accordance with the RAWP. The demarcation layer shall serve as a high-visibility warning barrier identifying the interface between regulated historic fill and overlying clean cap material, consistent with the remedial approach described in the RAWP.

B. A minimum of one-foot (Type 1) or two-foot (Type 2) thickness of approved clean material shall be placed over the demarcation layer, as required for the final engineered control caps and as detailed on the Project Plans and RAWP Sections 4.2.4 and 4.2.5. Demarcation layer installation shall not occur beneath impervious surface aps or building foundations, which themselves serve as approved engineer controls.

PART 2 - PRODUCTS

2.1 MATERIALS

A. The required material for the remediation demarcation layer shall be a high-visibility orange demarcation barrier such as Cargo-Guard OD 5340 High Visibility Orange Demarcation Netting, or an approved equal, consistent with the requirements for a geotextile demarcation layer as described in the RIDEM approved RAWP.

B. The demarcation material shall consist of an extruded polypropylene grid with approximately ¼-inch mesh openings and high-visibility orange color, providing a clearly identifiable warning layer between regulated historic fill and the overlying clean soil cap, in accordance with the RAWP.

C. Approved equal products shall meet or exceed the following requirements:
1. High-visibility orange coloration suitable for long-term identification during future intrusive work.
2. Sufficient tensile strength to withstand installation stresses and placement of clean fill.
3. UV resistant adequate for short-term exposure prior to backfilling.
4. Physical characteristics compatible with RAWP defined roles for geotextile demarcation layers beneath Type 1 and Type 2 soil caps.

PART 3 - EXECUTION

3.1 CONSTRUCTION METHODS

A. The Demarcation Layer shall be installed in accordance with the manufacturer's recommendations (if available) and in full compliance with the RIDEM approved RAWP. The demarcation layer shall be placed over the remediation subgrade in all areas receiving a clean soil cap, including areas designed for Type 1 (1-foot) and Type 2 (2-feet) caps, as shown on the Project Plans. The demarcation layer shall not be placed beneath impervious surface caps, including pavement, concrete walkways, or building foundations, which serve as engineered controls under the RAWP.

B. Prior to placement of the Demarcation Layer, the remediation subgrade shall be smoothed and free of debris, protrusions, or sharp materials, consistent with the Soil Management Plan (SMP) provided in the RAWP. The Demarcation Layer shall be installed and promptly covered with approved clean backfill to minimize ultraviolet exposure and prevent degradation. Installation shall not occur during temperatures that could cause embrittlement or material breakage.

C. During installation, the Contractor shall secure the Demarcation Layer as needed to keep it in place against wind or construction disturbance. Anchoring may include stakes, sandbags, soil berms, or other suitable temporary means, provided such measures do not damage the material or interfere with subsequent placement of clean cap material.

D. Overlaps of adjacent Demarcation Layer panels shall be placed at a minimum of 12-inches, unless otherwise recommended by the manufacturer. Joints shall be positioned to maintain continuous visual coverage across the entire capped area.

E. Placement of clean fill above the Demarcation Layer shall conform to the required cap thickness specified in RAWP Sections 4.2.4 and 4.2.5, including:
   1. Type 1 Cap: Minimum 1-foot clean material consisting of topsoil and clean material.
   2. Type 2 Cap: Minimum 2-feet clean material for deeper root zones and planting areas.

F. The Contractor shall protect installed Demarcation Layer from damage during subsequent construction activities. Any tears, rips, or displacement shall be repaired or replaced before placement of clean cap material.

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 REFERENCE STANDARDS

A. All work specified in this Section shall conform to “Standard Specifications for Road and Bridge Construction” of the Rhode Island Department of Transportation, latest revision, herein referred to as “State Standards”.

1.3 SUMMARY

A. The work of this Section includes the following:

1. Provisions for protection of all existing utilities from damage particularly at heavy construction vehicle crossings.
2. Clearing and grubbing
3. Removal and disposal of flexible pavement, curbing, and bituminous concrete walks at the locations specified on the drawings.
4. Resetting catch basins, manholes, utility structures.
5. Cleaning and maintenance of the site.

1.4 RELATED SECTIONS

A. Section 31 30 00 Earthwork

1.5 DEFINITIONS

A. Cleaning as described in Subsection 212.01.2a of the State Standards.

B. Maintenance as described in Subsection 212.01.2b of the State Standards.

C. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; 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 weeds, roots, toxic materials, or other nonsoil materials.

D. MATERIAL OWNERSHIP

1. All existing soil shall remain on site and be managed in accordance with the soil handling plan. Any existing clean earthen cap materials that may exist on the site shall be separately stockpiles for reuse. Cleared materials other than site soils shall become Contractor's property and shall be removed from Project site and disposed of in a legal manner.

1.6 PROJECT CONDITIONS

A. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted in writing by Owner and then only after arranging to provide temporary utility services according to requirements indicated:

1. Notify Owner or Owner's Representative not less than two weeks in advance of proposed utility interruptions in writing. Renotify in writing 72 hours in advance of proposed utility interruptions.
2. Do not proceed with utility interruptions without Owner's written permission.
   a. All power shut downs shall be coordinated with the Owner
3. Underground utilities were compiled from available record plans and aboveground locations and are approximate. The Contractor shall contact "Dig-Safe" at 1-888- DIGSAFE 72 hours to mark existing utilities prior to commencing work on any part of the site.

B. 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.
2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.

C. The Contractor is responsible to schedule the work and determine any required temporary utility lines and connections required to keep the existing facilities in operation. The cost to furnish and install temporary utility lines and connections shall be included in the Contactor's base bid.

D. Do not commence site operations until temporary erosion and sedimentation control measures are in place.

PART 2 - PRODUCTS

2.1 GENERAL

A. The Contractor shall provide all materials and equipment in suitable and adequate quantity as required to accomplish the work shown and specified

PART 3 - EXECUTION

3.1 PREPARATION
A. Protect and maintain benchmarks and survey control points from disturbance during construction.
B. Locate and clearly flag trees and vegetation to remain or to be relocated.
C. Protect existing site improvements to remain from damage during construction.
- Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 REMOVE AND DISPOSE PAVEMENT, CURBING, LIGHT POLES, AND CONCRETE PADS. SELECTIVE REMOVALS OF STONE WALL AT WATER'S EDGE

A. In accordance with Subsections 201.03.7, and 201.03.10 of the Standard Specifications.

3.3 DISPOSAL

A. Disposal: No disposal of soils off-site is allowed for this project. Remove surplus obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property. Any potentially contaminated soil material encountered, as specified by the State of Rhode Island Department of Environmental Management rules and regulations, shall be placed at an owner-designated location on site.

B. Separate recyclable materials produced during site clearing from other non-recyclable materials. Store or stockpile without intermixing with other materials and transport them to recycling facilities.

3.6 CLEARING

A. Cut or remove trees, brush, and other vegetative matter such as snags, bark and refuse, from areas to be cleared. The Contractor shall mark all trees, shrubs and plants to be removed in accordance with the plans and these specifications. Limits of clearing are specified in the Contract Drawings. The Engineer shall have 7 days to field review the markings and make any adjustments prior to the start of the clearing operation.

B. Cut trees, stumps, and stubs to be cleared, except where clearing done by machinery, as close to ground surface as practicable, but no more than 6 in. above ground surface for small trees and 12 in. for larger trees.

C. Prior to clearing operations, a meeting must be held. Those attending the meeting should include the Contractor, the Engineer, the designer, local tree warden or equivalent, and the District Environmental Coordinator. All clearing issues shall be resolved to the satisfaction of the Engineer before any trees are cut.

3.7 GRUBBING, STRIPPING, DISPOSAL:

A. Remove stumps and roots larger than 3 in. in diameter to a depth of 12 in., and roots larger than 1/2 in. in diameter to a depth of 6 in. Measure depths to cut from existing ground surface or proposed finished grade, whichever is lower.

B. Strip stumps, roots, foreign matter, topsoil, loam and unsuitable earth from ground surface.

C. Promptly dispose off site, material from clearing and grubbing not reused or stockpiled. In doing so, observe all applicable laws, ordinances, rules and regulations. Do not consider work completed until final cleaning, unless otherwise directed.

3.4 CLEANING AND MAINTENANCE OF STORM DRAIN SYSTEM

A. The Contractor shall remove sediment and debris from the existing drainage system prior to commencing work.

B. During construction the Contractor shall be responsible to clean sediment and debris from the existing and recently installed drainage system.

C. Prior to project completion the complete drainage system shall be cleaned of all debris and sediment.

END OF SECTION

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.

B. Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, 2004 Edition (Amended March 2018)

1.2 SECTION INCLUDES

A. Provide all labor, materials, tools and equipment, as and when required to perform the work specified herein or as shown on the plans, including but not necessarily limited to the following:

1. Installation and maintenance of Sediment Filter Fence and/or Filter Tube

2. Installation and maintenance of Construction Entrance

3. Inlet protection for drainage structures

4. Dust control including metering of water of which is at the contractors cost

5. Temporary seeding

6. Slope stabilization with erosion control mat

B. These guidelines shall apply to all work consisting of any and all temporary and/or permanent measures to control water pollution and soil erosion, as may be required, during the construction of the project.

C. In general, all construction activities shall proceed in such a manner so as not to pollute any wetlands, watercourse, waterbody, and conduit carrying water, etc. The Contractor shall limit, insofar as possible, the surface area of earth materials exposed by construction methods and immediately provide permanent and temporary pollution control measures to prevent contamination of adjacent wetlands, watercourses, and waterbodies, and to prevent, insofar as possible, erosion on the site.

1.3 SCOPE OF WORK

A. Construct and maintain temporary silt fencing/ filter tube where shown on the plans and where other excavation or stockpiled material may cause erosion and sedimentation.

B. Construct and maintain construction access tracking pads in locations shown on the plans.

C. Temporary Seeding: Seed areas where surplus material is placed or stockpiled to provide temporary turf establishment.

D. During the construction, the Engineer may direct the Contractor to install additional sediment controls for protection of drainage system at no additional cost to the Owner.

E. Temporary pervious barriers using bales of hay, straw, or siltation tubes held in place with stakes driven through the bales and into the ground or sediment filter fabric fastened to a fence post and buried into the ground, shall be installed and maintained as required to check erosion and reduce sedimentation.

F. Temporary vegetative cover shall be established on all unprotected areas that produce sediment, areas where final grading has been completed, and areas where the estimated period of bare soil exposure is less than 12 months. Temporary vegetative cover shall be applied if areas will not be permanently seeded by September 1.

G. Construction Entrance (Anti-Tracking Pad): The construction entrances shall be located in the field. The Contractor will be responsible to maintain pad(s) (i.e. add stone, regrading, etc.) for the duration of the project.

H. At the completion of the project, the Contractor shall remove and dispose of all temporary sediment and erosion controls, construction entrances, and restore all impacted areas to its original configuration. All material shall be disposed of in a proper manner in accordance with current regulatory standards and in legally acceptable disposal areas.

1.4 RELATED WORK

A. SECTION 31 30 00 – Earthwork

1.5 SUBMITTALS

A. Submit manufacturer's description, design and specifications of all materials specified.

B. Submit a plan and construction details of proposed erosion and sedimentation control measures for review and approval by the Engineer seven days prior to the start of construction

PART 2 - PRODUCTS

A. Temporary Mulching Straw or Hay 70-90 lbs/1,000 sq. ft. (Temporary Vegetative Areas)

B. Construction Entrance filter fabric shall be Amoco No. 4553 Filter Fabric or approved equal.

C. Construction Entrance stone must conform to the requirements of M.01.09 Table I Column II of RI DOT standard Specifications for Road and Bridge Construction

D. Sediment filter fence.

E. Perennial Ryegrass 3 lbs/1,000 sq. ft. (Ioluium Perenne)

F. Water or chemicals for dust control shall be approved by the owner

PART 3 - EXECUTION

3.1 DUST CONTROL

A. A water truck, temporary irrigation, or other dust control measure shall be used to keep clouds of dust from polluting the air, degrading air quality, and impairing vision.

B. Water from adjacent hydrants or on site sources shall be metered by the contractor and at the contractors cost, coordinate with water supply authority for permitting and other requirements.

3.2 CONSTRUCTION OF TEMPORARY PERVIOUS BARRIERS USING BALES OF HAY OR SEDIMENT FILTER FABRIC, AS DETAILED ON THE CONSTRUCTION DRAWINGS.

A. Each bale shall be embedded into the soil a minimum of four (4") inches.

B. Bales shall be securely anchored in place by wood stakes or reinforcement bars driven through the bales and into the ground. The first stake in each bale shall be angled toward the previously laid bale to force bales together.

C. Filter fabric shall be securely anchored at the top of a three (3') foot high fence and buried a minimum of six (6") inches to the soil. Seams between sections of filter fabric shall overlap a minimum of two (2') feet.

3.3 INSTALLATION AND MAINTENANCE

A. Baled hay erosion barriers, sediment filter fence, construction entrances, pumping settling basin and temporary seeding shall be installed at locations shown on the plans and as ordered by the Engineer.

B. All erosion checks shall be maintained until adjacent areas are stabilized.

C. Inspection shall be frequent (at minimum monthly and before and after heavy rain) and repair or replacement shall be made promptly as needed.

D. Erosion checks shall be removed when they have served their usefulness so as not to block or impede storm water flow or drainage.

E. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removals.

3.4 SITE PREPARATION OF TEMPORARY VEGETATIVE COVER

A. Install required surface water control measures.

B. Remove loose rock, stone, and construction debris from area.

C. Apply lime according to soil test or at a rate of one (1) ton of ground dolomitic limestone per acre (5 lbs per 100 sq. ft.).

D. Apply fertilizer according to soil test or at the rate of 300 lbs. or 10-10-10 per acre (7 lbs. per 1,000 sq. ft.) and second application of 200 lbs of 10-10-10 (5 lbs. per 1,000 sq. ft.) when grass is four (4") inches to six (6") inches high. Apply only when grass is dry.

E. Unless hydro-seeded, work in lime and fertilizer to a depth of four (4") inches using a disk or other suitable equipment.

F. Tillage should achieve a reasonably uniform loose seedbed, work on contour if site is sloping.

3.5 ESTABLISHMENT

A. Utilize seed types as noted on the plans and within specifications. Note rates and seeding dates (see vegetative cover selection and mulching specifications).

B. Apply seed uniformly according to the rate indicated by broadcasting, drilling or hydraulic application (see vegetative cover selection and mulching specifications).

C. Unless hydro-seeded, cover ryegrass seeds with not more than ¼ inch of soil with suitable equipment.

D. Mulch immediately after seeding if required. Apply straw or hay mulch and anchor to slopes greater than 3% or where concentrated flow will occur.

END OF SECTION 31 25 00

PART 1 - GENERAL

1.1 SUMMARY

A. The proposed redevelopment activities addressed under this Section pertain to the City of Pawtucket parcel (Town Landing/Riverwalk area), which is a portion of the overall Tidewater Landing project included in the Remedial Action Work Plan (RAWP) Steps 4. Work within this parcel includes site preparation and earthwork required to support Step 4 described in the RAWP as Construction of the Riverwalk portion of the Subject Site, including grading, landscaping areas, and pedestrian connection from Town Landing northward toward the stadium riverwalk system. These activities occur within an area identified on the Project Plans and identified by the RAWP as containing widespread historic fill, requiring implementation of engineered controls during earthwork and development.

B. The overall Tidewater Landing project includes the completed Stadium on the southern portion of the development which was the former NGRID Site, and the Subject Parcel owned by the City of Pawtucket subject to the RAWP that includes this phase of work with the Riverwalk improvements and preparation for the final mixed use development.

C. Work under the Section includes all materials, labor, equipment, and services necessary to complete earthwork associated with the Riverwalk construction and preparation of the future mixed-use development, including excavation, on-site soil management, grading, backfilling, placement of engineered controls, and all related activities. All such work shall be performed in accordance with the RIDEM approved RAWP, and the RIDEM Remedial Approval Letter.

D. The Contractor shall perform the work of this section as shown on the Project Plans, as specified, and as required by job conditions, subject to the environmental requirements of the RAWP and RIDEM RAL, including, but not limited to the following:

1. Stripping, clearing, grubbing and removal of all organic material, topsoil, and subsoil within the portions of the site to be developed. Stripped topsoil shall be stockpiled onsite at locations designated by the Engineer and managed as Controlled Material unless demonstrated otherwise, in accordance with the RAWP. Off-site disposal or reuse is not permitted without RIDEM approval.

2. Soil and rock excavation, rock and boulder removal, trench excavation, subgrade preparation, proof compaction, backfill placement, grading, and compaction required for Riverwalk improvements. All excavation involving Controlled Materials shall be performed under Environmental Professional (EP) oversight to be provided by the City, following the RAWP for excavation, handling, and dust control requirements. Dewatering is not anticipated per RAWP findings; if encountered, work shall stop and the EP or City shall be notified immediately.

3. Soil Management:

a. All existing soils on the parcel are considered Controlled Materials and shall be managed in accordance with the RAWP.

b. All Controlled Materials shall remain onsite and be reused below approve engineered controls (impervious caps, Type 1 or 2 soil caps).

c. No relocation or disposal of Controlled Materials offsite is permitted unless approved RIDEM and supported by waste characterization.

4. Crushing and processing of existing boulders, concrete, and other on-site materials to meet gradation criteria for on-site re-use provided such material is not mixed with Controlled Materials and is allowable by RAWP.

5. Import of Common Borrow and other backfill materials, if required, shall comply with RAWP clean fill acceptance criteria. Imported fill shall meet RIDEM Method 1 RDEC and testing frequency requirements.

6. Placement and spreading of loam or topsoil required for final Type 1 or Type 2 engineered soil caps in accordance with RAWP Section 4.2.

7. Removal and legal off-site disposal shall be limited to non-soil solid waste debris only (e.g., concrete, timber, metal, glass, asphalt) in accordance with the RAWP and RAL. Controlled Materials (soil) shall not be removed from the Site except under RIDEM approved conditions.

8. Preparation of as-built subgrade surveys as specified in Section 1.9, including documentation required to confirm engineered control elevations for RAWP compliance.

1.2 RELATED WORK

A. The General Provisions of the Contract, including General and Supplementary Conditions, apply to the work specified in this Section.

B. Examine all Specifications for requirements affecting work under this Section, including all RAWP driven environmental controls integrated into Sitework, Earthwork, and Riverwalk components.

C. Coordinate work with trades affecting or affected by this Section to maintain consistent progress and prevent disturbance of engineered controls and temporary caps required under the RAWP.

D. Related work specified in other Sections:

1. Section 31 23 00 – Temporary Sediment and Erosion Control

2. Section 32 90 00 – Topsoil, Seeding, and Sodding

3. Section 02 61 15 – Controlled Material Handling

4. Section 02 61 16 – Waste Stockpile Area (WSA)

5. Section 02 61 17 – Demarcation Layer

1.3 DEFINITIONS

A. Owner: City of Pawtucket

B. Property Owner:

1. City of Pawtucket

C. Construction Manager: Dimeo Construction, 75 Chapman St, Providence, Rhode Island 02905, (401) 781-9800

D. Architect: Odell Associates Inc., 212 Tryon Street, Suite 980, Charlotte, NC 28281, (704) 414-1000

E. Site/Civil Engineer and Landscape Architecture: SLR Consulting Limited, 45 Glastonbury Boulevard, Glastonbury, CT 06033, (860) 400-5860

F. Geotechnical Engineer: GZA GeoEnvironmental, Inc. 188 Valley Street Suite 300, Providence, Rhode Island 02909, (401) 421-4140.

G. Structural Engineer: Odeh Engineers, 1223 Mineral Spring Ave, North Providence, RI 02904, (401) 724-1771

H. Excavation: removal of material encountered to subgrade elevations indicated on subsequent placement, management, and reuse of such materials onsite, consistent with the requirements of the RAWP, and RIDEM RAL. All excavated soil shall be treated as Controlled Materials unless otherwise demonstrated.

I. Unauthorized excavation: removal of materials beyond indicated subgrade elevations or dimensions without explicit direction of the Engineer. Unauthorized excavation shall be at the Contractor's expense. Corrective actions must comply with RAWP requirements where Controlled Materials are present.

J. Subgrade: The undisturbed soil or properly compacted soil layer at footing bearing elevations or immediately below subbase of slabs, walks, pavement, lawn areas, or landscaped beds.

K. Structure: buildings, foundations, slabs, tanks, curbs, or other manmade stationary features occurring above or below ground surface.

L. Structure Area (Building Area) is the area below structures defined by a line extending downward and outward at a 1 vertical to 1 horizontal from 5 feet outside the edge of exterior footings.

M. Unsuitable material: on-site materials that are improper gradation, contain excessive fines, organic matter, debris, or otherwise fail to meet the requirements for reuse. Unsuitable Controlled Materials shall not be disposed of offsite except as permitted by RIDEM. Such materials must be managed and reused beneath approved engineered caps in accordance with the RAWP Sections 4.2.3 to 4.2.5.

N. Area of Environmental Concern (AOEC): The entire Site identified by RIDEM as containing widespread urban fill with contaminant concentrations requiring risk-based controls. All earthwork activities occur within an AOEC and must follow RAWP requirements.

O. Controlled Materials: Soil or fill that contains contaminants (including PAHs, TPH, arsenic and lead) above RIDEM Method 1 RDEC, as documented throughout the RAWP and supplemental investigations. All earthwork activities occur within an AOEC and must follow RIDEM RAL requirements.

P. Engineer Control: A physical barrier (impervious cap, Type 1 soil cap, Type 2 soil cap, or building foundation) installed to prevent direct contact with underlying Controlled Material, as defined in RAWP Section 4.2.3 to 4.2.5.

Q. Environmental Professional (EP): A qualified individual designated in the RAWP responsible for oversight of excavation, stockpiling, reuse, and compliance with RAWP and RIDEM requirements during earthwork activities.

1.4 SUBMITTALS

A. Earthwork Plan:

1. Provide a Method of Construction (MOC) submittal for all earthwork activities involving Controlled Materials, including temporary stockpiling, excavation, grading, handling, reuse, and placement beneath engineered caps. Include a schedule and a detailed written description of proposed sequence of earthwork operations, excavation limits and depths, proposed stockpile locations, dust suppression methods, air monitoring equipment, and procedures for encountering groundwater or unexpected materials. Submit the MOC two (2) weeks prior to start of excavation.

2. The earthwork plan shall identify compaction equipment, procedures, and lift thicknesses, and shall also confirm compliance with the RAWP requirements for engineered cap installation (impervious cap, Type 1 and Type 2 soil caps). Submit two (2) weeks prior to compaction work.

B. Fill / Backfill Material Samples:

1. The Contractor shall submit bag samples (40 lbs minimum) of each type of material to be used as fill or backfill two (2) weeks prior to use for geotechnical review and RAWP compliance conformation.

2. For on-site materials intended for reuse, submit representative sample for geotechnical visual inspection and environmental suitability determination. On-site soils shall be reused only below engineered control caps per RAWP Sections 4.2.3 to 4.2.5.

3. For off-site materials, submit the name of each material supplier with specific name, source location, material description, and all required environmental analytical results (see 1.4D), at least two (2) weeks prior to delivery. All imported materials must be approved by the City and Engineer prior to delivery.

4. No off-site materials may be delivered or used until written approval is received confirming compliance with gradation, geotechnical suitability, and RIDEM RDEC criteria as required in the RAL.

C. Test reports: submit the following directly to Owner, with copy to Contractor:

1. Gradation test reports for off-site imported material.

2. One (1) gallon sample for each material type proposed for use or reuse.

3. Optimum moisture-maximum density curve for each type of soil compacted.

4. All testing and material costs shall be included in the Contract Sum.

D. Analytical Testing of Off-Site Fill Materials:

1. All imported fill materials shall be sampled and analyzed for acceptance. Testing shall include:

   a. Arsenic and Lead in accordance with USEPA SW-846 Method 6010/6010 & 7471A.

   b. Priority Pollutant 13 Metals (PP-13) in accordance with USEPA SW-846 Method 6010 and Method 7471A.

   c. Total Petroleum Hydrocarbons (TPH) in accordance with USEPA SW-846 Method 8100M.

   d. Volatile Organic Compounds (VOC) in accordance with USEPA SW-846 Method 8260.

   e. Semi-Volatile Organic Compounds (SVOCs) in accordance with USEPA SW-846 Method 8270.

2. All imported materials must meet RIDEM's Method 1 Residential Direct Exposure Criteria (RDEC).

3. Sampling frequency for imported materials shall be:

   a. 1 sample per 1,000 CY for VOC, SVOC, TPH, and PP-13 metals.

   b. 1 sample per 500 CY for arsenic and lead, consistent with RAL guidance.

   c. Analytical results shall be submitted to the EP, Engineer, Construction Manager, and Property Owner two (2) weeks prior to import of the material to the Site.

4. Imported fill shall not be delivered to the Site until the EP and Owner confirms that analytical results meet the above RAWP/RAL criteria.

E. Certificates

1. Certify that materials are new and meet or exceed specification requirements by submitting a notarized copy of Manufacturer's certificates for all products.

1.5 QUALITY ASSURANCE

A. Codes and Standards: Earthwork shall comply with all local, State, and Federal requirements and with RIDEM approved RAWP, RAWP addendum, and RIDEM RAL, including all requirements for handling, stockpiling, air monitoring, reuse, and caping of Controlled Materials.

B. Earthwork Performance: Earthwork shall be performed to meet the placement and compaction requirements of these specifications and the engineered control requirements defined in RAWP Sections 4.2.3-4.2.5 (impervious caps, Type I and Type II soil caps).

C. Material Quality: Materials provided shall meet gradation and structural requirements of this Section and the clean fill requirements of the RAWP and RAL where applicable. Imported fill shall meet RIDEM Method 1 RDEC criteria.

D. Rhode Island Department of Transportation (RIDOT) Standard Specifications: RIDOT specifications and supplements unless superseded by the RAWP or environmental requirements.

E. Environmental Oversight: All excavation, handling, placement, and reuse of Controlled Materials shall be performed under the oversight of the Environmental Professional (EP), provided by the City, as required by the RAWP.

1.6 OWNER'S RESPONSIBILITIES

A. Soil Testing and Inspection Service:

1. Soil acceptance testing and inspection service for quality control testing during earthwork operations will be supplied by the Owner.

2. The Contractor will bear the cost of retesting or corrective action when materials or compaction fail to meet the requirements of this Section or RAWP requirements.

B. Environmental Oversight: an Environmental Professional (EP) retained by the Owner will observe excavation, stockpiling, and engineered control placement, and will verify compliance with RAWP, SMP, and RAL requirements.

1.7 REFERENCES

A. RIDEM Decision documents including:

1. Remedial Action Work Plan prepared by SLR dated March 2022, defines the Controlled Material handling, engineered controls, and reuse requirements.

2. RAWP Addendum, August 2022, addresses the polysheeting, demarcation, stockpiling, and clean fill confirmation.

3. Construction Soil Management Plan (SMP), October 2021, governs dust control, excavation notifications, EP oversight, stockpile controls, and worker protection protocols, included in the RAWP.

4. RIDEM Remedial Approval Letter, September 14, 2022, approval conditions for soils storage, engineered controls, capping requirements, and 30-day stockpile limitations.

B. All Drawings and all other Sections of the Specifications.

C. The Rhode Island Building Code, latest edition.

D. American Society for Testing and Materials (ASTM) D1586-18 Standard Test Method for Standard Penetration Test (SPT) and Split-Barrel Sampling of Soils.

E. ASTM D1557 Modified Proctor Density.

F. ASTM D422 Particle Size Analysis of Soil.

G. ASTM D2922 Density of Soil and Soil Aggregate In-place by Nuclear Methods.

H. Occupational Safety and Health Administration (OSHA) Regulation 29 CPR Part 1926 - Occupational Safety and Health.

1.8 PERMITS CODES AND SAFETY REGULATIONS

A. All work performed under this contract shall comply with applicable Federal, State, and local laws, including RIDEM requirements contained in the RAWP and RAL.

B. Comply with all rules, regulations, laws and ordinances of all authorities having jurisdiction including but not limited to the City of Pawtucket and the State of Rhode Island. All labor, materials, equipment, and services necessary to make the work comply with such requirements shall be provided without additional cost to the Owner.

C. Comply with the provisions of the Manual of Accident Prevention in Construction of the Associated General Contractors of America, Inc., and the requirements of the Occupational Safety and Health Administration, United States Department of Labor.

D. The Contractor shall obtain all required permits and licenses for the work and shall comply with any RIDEM notifications or approvals required for activities affecting Controlled Materials, including any future changes to the approved RAWP.

1.9 SUBGRADE CONFIRMATION OF GRADE AND ADJUSTMENT:

A. As-built topographic survey shall be by a Land Surveyor licensed in the State of Rhode Island.

B. Engineer's review of grades will be singular. Each subsequent review after the first will be at the contractor's cost.

C. Deliverable:

1. As-built topography shall be provided to the Engineer as an Autodesk Civil 3D CADD file:

a. Drawing format 2013

b. Containing all the content required to compile triangulated irregular network surfaces (TIN Surface)

c. In the same horizontal and vertical datum as the construction documents

d. Be provided with the surface styles showing contours and triangles

2. Adobe portable document file (PDF) representing the content from 1.9.C.1

a. With a title block, legend, north arrow, scale, date, supplier of topography

b. At the scale equivalent to the construction documents

D. Adjustments: Contractor shall adjust grades meeting tolerances per 1.10 below at no additional cost to the contract.

1.10 TOLERANCES FOR GRADES

A. General: the Drawings indicate finished elevations. The grading to be performed under this Section consist of establishing finished grade elevations as shown on the Project Plans and in accordance with the RAWP requirements for Engineered Controls (impervious cap, Type 1 and Type 2 soil caps). Grading activities shall ensure that minimum thicknesses are achieved everywhere and are not reduced by construction tolerances.

B. Uniformly grade areas within limits of grading under this Section, including adjacent transition areas. Smooth finished surfaces within specified tolerances, compact with uniform levels or slopes between points where elevations are indicted, or between such points and existing grades. Finished grades shall ensure that no ponding or erosion occurs that could compromise the effectiveness of the Engineered Controls.

C. Subgrade shall be free from irregular surface changes, and as follows:

1. Topsoil shall be placed to a minimum depth of 6 inches and maximum depth of 8 inches, unless otherwise shown on the Drawings. A maximum of 6 inches will be paid for; placement above 6 inches is at no cost to the Contract. Where topsoil forms apart of the Type 1 or Type 2 soil cap, the combined cap thickness shall not be reduced below the RAWP required minimum (1 foot for Type 1, 2 feet for Type 2).

2. Grades shall be within the construction document grades as follows:

a. Lawn areas/landscaped areas:

1) Equal to or 0.5% steeper than the grades shown

2) Without depressions or high spots which trap water or prevent drainage to structures or natural pathways. Depressions may be corrected in topsoil layer up to the maximum topsoil depth of 8 inches; additional material required above 6 inches is at the Contractor’s cost.

D. Grading in areas receiving Type 1 or Type 2 engineered soil caps shall be performed such that the minimum clean material thickness above the Demarcation Layer is achieved after compaction. Under no circumstances shall grading tolerances result in cap thicknesses falling below:

1. 12 inches of clean soil for Type 1 caps, or

2. 24 inches of clean soil for Type 2 caps.

E. Where grading activities are expose the Demarcation Layer or underlying Controlled Materials, the Contractor shall immediately notify the EP and restore the cap thickness using approved clean material.

1.11 PROJECT CONDITIONS

A. Site Information:

1. Data on indicated subsurface conditions are not intended as representations or warranties of continuity between borings. Such information is provided for the Contractor’s convenience. The Contractor shall understand that all soil at the Site is classified as

Controlled Material within a designated AOEC, per the RAWP and SMP, and shall be handled accordingly regardless of geotechnical descriptions.

a. Boring logs and locations are included in the RAWP.

b. Additional test borings and other explorations may be made by the Contractor at no cost to Owner.

2. If unexpected subsurface conditions or unanticipated environmental conditions are encountered, including, but not limited to, odors, staining, free product, debris, or groundwater, Contractor shall immediately notify the Engineer, EP, and Owner and discontinue work in the affected area until directed to resume.

B. The Contractor shall examine the substrate within the work areas to ascertain existing site conditions before beginning earthwork. Work shall not proceed until unsatisfactory or unstable conditions are corrected to the satisfaction of the Owner and in compliance with the RAWP requirements for excavation, handling, and Engineered Controls.

C. The Contractor shall notify DIG SAFE and procure a Dig Safe Number for each location prior to disturbing existing ground in any way. Work shall not proceed until clearance is received.

D. Existing utilities:

1. Locate existing underground utilities in areas of excavation work. Provide adequate means of support and protection during earthwork operations.

2. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult utility owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.

3. Do not interrupt existing utilities serving facilities occupied by Owner or others during occupied hours except when permitted and then only after acceptable temporary utility services have been provided.

4. Provide adequate notice to the Owner and receive written notice to proceed before interrupting utility.

5. Demolish and completely remove from site existing underground utilities indicated for removal. Abandoned utilities not indicated shall be evaluated with the EP prior to disturbance to confirm proper handling of any Controlled Materials encountered.

E. Protection of persons and property:

1. Barricade open excavations occurring as part of this work and post with warning lights. Operate warning lights during hours from dusk to dawn each day and as otherwise recommended by authorities having jurisdiction.

2. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

3. Protect benchmarks and existing structures, roads, sidewalks, paving, and curbs against damage from equipment and vehicular or foot traffic.

4. Underpin adjacent structures, which may be damaged by excavation work, including service lines and pipe chases.

5. Provide necessary safeguards to prevent accidents, to avoid all necessary hazards, and to protect the public, the work, and the property at all times, including Saturdays, Sundays, and holidays. Dust suppression and monitoring shall be performed in accordance with RAWP requirements, including real-time particulate monitoring during work hours.

6. The Contractor is responsible for all damages arising from failure to provide adequate lights, guards, barriers, dust control, monitoring, or other protective measures required by law and by the RAWP/SMP.

1.12 PERMITS CODES AND SAFETY REGULATIONS

A. All work performed under this Contract shall be accomplished in accordance with all regulations and laws of local, State, and Federal agencies and utility companies. Work shall also comply with the RIDEM approved RAWP, and RAL, which govern all excavation, soil handling, stockpiling, reuse, dust control, and engineered control installation at the Site.

B. Comply with all rules, regulations, laws and ordinances of all authorities having jurisdiction including but not limited to the City of Pawtucket and the State of Rhode Island. All labor, materials, equipment, and services necessary to make the work comply with such requirements, including those in the RAWP, and RAL, shall be provided without additional cost to the Owner.

C. Comply with the provisions of the Manual of Accident Prevention in Construction of the Associated General Contractors of America, Inc., and the requirements of the Occupational Safety and Health Administration, United States Department of Labor. Because all earthwork occurs within a designated Area of Environmental Concern (AOEC) and involves Controlled Materials, the Contractor shall implement a site-specific Health and Safety Plan compliant with OSHA 29 CFR 1910.120 (HAZWOPER), consistent with RAWP requirements for intrusive work, dust monitoring, PPE, and decontamination.

D. The Contractor shall procure and pay for all permits and licenses required for the complete work specified herein and shown on the Drawings. This includes any notifications or approvals required to comply with the RAWP, and RAL, including but not limited to:

1. Excavation of Controlled Materials,

2. Temporary stockpile establishment,

3. Importation of clean fill meeting RIDEM Method 1 RDEC criteria, and

4. Any dewatering activities if groundwater is encountered unexpectedly.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. Sand-Gravel Fill

1. Sand-gravel fill generated on-site shall only be reused below final engineered control cap systems in accordance with the RAWP. Off-site sand-gravel fill must meet RIDEM Method 1 RDEC criteria before import.

2. "Sand-Gravel Fill", "Sand-Gravel", "Gravel Borrow Subbase", "Compacted Gravel", and "Compact Gravel Borrow", shall consist of hard, durable sand and gravel, and shall be free from ice and snow, roots, sod, rubbish, and other deleterious or organic matter. It shall conform to the following gradation requirements:

SIEVE SIZE	PERCENT FINER BY WEIGHT
*	100
1/2-inch	50 - 85
No. 4	40 - 75
No. 10	30 - 60
No. 40	10 - 35
No. 50	8 - 28
No. 100	5 - 20**
No. 200	0 - 10

* Four inches (4") where placed as base course; elsewhere, two-thirds (2/3) of the loose lift thickness; Two inches (2") where placed as bedding and backfill around utilities.

** The amount passing the No. 100 sieve should be between forty percent (40%) and seventy percent (70%) of that amount passing the No. 40 sieve.

B. Granular Fill:

1. Granular fill generated on-site shall only be reused below final engineered control cap systems in accordance with the RAWP. Off-site fill must meet RIDEM Method 1 RDEC criteria before import.

2. "Granular Fill", "Free Draining Gravel", "Free Draining Granular Fill" and "Clean Granular Fill" shall be free from ice and snow, roots, sod, rubbish, and other deleterious or organic matter. It shall conform to the following gradation requirements:

SIEVE SIZE	PERCENT FINER BY WEIGHT
*****	**100**
No. 10	**30 - 95**
No. 40	**10 - 70**
No. 200	**0 - 10****

* Two-thirds (2/3) of the loose lift thickness.

** "Free Draining Granular Fill" and "Clean Granular Fill" shall have less than eight percent passing the number 200 sieve.

C. 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. Alternatively, Gravel Borrow may consist of selected materials which have been reclaimed from within project limits, are proportioned and processed to produce granular material for reuse as Gravel Borrow within the source project limits. Gravel Borrow, whether consisting of bank run or plant processed sand and gravel, or

reclaimed and processed granular material, shall consist of sound, durable particles free from loam, clay, organic soil, vegetative matter, soft and elongate particles.

1. Fill generated on-site shall only be reused below final engineered control cap systems in accordance with the RAWP. Off-site fill must meet RIDEM Method 1 RDEC criteria before import.

2. Bank Run or Plant-Processed Sand and Gravel.

   Bank run or plant-processed sand and gravel proposed for Gravel Borrow shall be well-graded and meet the gradation requirements specified in RIDOT Standard Specifications, Column Ia, Table I in Subsection M.01.09. In addition, the maximum particle size shall not exceed 9 inches or three-fourths of the loose lift thickness, whichever is smaller. It shall conform to the following gradation requirements:

SIEVE SIZE	PERCENT FINER BY WEIGHT
3-inch	60 - 100
1/2-inch	50 - 85
3/8-inch	45 - 80
No. 4	40 - 75
No. 40	5 - 45
No. 200	0 - 10

* Four inches (4") where placed as base course; elsewhere, two-thirds (2/3) of the loose lift thickness; Two inches (2") where placed as bedding and backfill around utilities.

** The amount passing the No. 100 sieve should be between forty percent (40%) and seventy percent (70%) of that amount passing the No. 40 sieve.

D. Dense-Grade Aggregate Base:

1. “Processed Aggregate”, “Dense Grade Aggregate”, “Dense Grade Aggregate Base”, “Aggregate Basecourse”, and “Engineered Fill” for use as slab-on-grade base material and access road pavement base material, shall be in accordance with ASTM D2940 Dense-Grade Aggregate Base*, and shall be free from ice and snow, roots, sod, rubbish, and other deleterious or organic matter. It shall conform to the following gradation requirements:

SIEVE SIZE	PERCENT FINER BY WEIGHT
1½-inch	100
1-inch	85-100
½-inch	50-85
No. 4	40-75
No. 40	8-35
No. 200	2-10

E. Ordinary Fill

1. “Ordinary Fill” shall consist of well-graded mineral soil substantially free of organic materials, loam, wood, trash and other objectionable material which may be compressible or which cannot be compacted properly. Ordinary fill shall be unfrozen and shall not

contain snow, ice, or frozen materials. Ordinary fill shall not contain stones larger than eight (8) inches in largest diameter. It shall have physical properties such that it can be readily spread and compacted during filling.

2. Ordinary fill obtained onsite shall be treated as Controlled Material and may only be reused below the demarcation layer beneath the Engineered Controls.

F. Crushed Stone

1. "Crushed Stone" shall consist of one or the other of the following materials:

   a. Durable crushed rock consisting of the granular fragments obtained by breaking and crushing solid or shattered natural rock, and free from a detrimental quantity of thin, flat, elongated, or other objectionable pieces. Thin or elongated pieces are defined as follows: Thin stones shall be considered to be such stones whose average width exceeds four (4) times their average thickness. Elongated stones shall be considered to be such stones whose average length exceeds four (4) times their average width.

   b. Durable crushed gravel stone obtained by artificial crushing of cobbles, boulders, or field stone with a minimum diameter before crushing of 8 inches.

2. The crushed stone shall be reasonably free from clay, loam, or deleterious material and not more than 1.0% of satisfactory material passing a No. 200 sieve will be allowed to adhere to the crushed stone.

   Crushed stone shall be uniformly blended according to the grading requirements in the following table:

	PERCENT FINER BY WEIGHT			
SIEVE SIZE	**3/8" CRUSHED STONE***	**3/4" CRUSHED STONE****	**1-1/2" CRUSHED STONE**	**2" CRUSHED STONE*****
6-Inch	---	---	---	---
3-Inch	---	---	---	---
2-1/4-Inch	---	---	---	100
2-Inch	---	---	---	90 - 100
1 1/2-Inch	---	---	100	30 - 55
1 1/4-Inch	---	---	85 - 100	0 - 25
1-Inch	---	100	---	0 - 5
3/4-Inch	---	90 - 100	10 - 40	---
1/2-Inch	---	20 - 50	0 - 8	---
3/8-Inch	90 - 100	0 - 20	---	---
No. 4	0 - 10	0 - 5	---	---
No. 10	---	---	---	---
No. 100	---	---	---	---
No. 200	<1	<1	<1	<1

* Also called out on drawings as “No. 8 Crushed Stone”
** Also called out on drawings as “No. 57 Crushed Stone”
*** Also called out on drawings as “3/4” – 2” Clean, Washed, Crushed, Angular Stone”

3. "Crushed Stone", installed adjacent or above Controlled Materials shall not compromise the minimum required cap thickness. Stone used as part of the engineered cap layering must comply with the RAWP grading and demarcation requirements.

G. Pea Stone Gravel

1. Pea stone shall not be used surface cover or top dressing above Controlled Materials unless it is placed above the demarcation layer and beneath clean cap soils.

2. Pea stone gravel shall consist of durable crushed rock or durable crushed gravel stone free from ice and snow, sand, clay, loam, or other deleterious or organic material. The pea gravel shall be double washed and shall be 1/2 to 3/8 inch in size. The pea stone shall be uniformly blended and shall conform to the following requirements:

SIEVE SIZE	PERCENT FINER BY WEIGHT
1/2-inch	100
3/8-inch	85 - 100
No. 4	10 - 30
No. 8	0 - 10
No. 16	0 - 5

* Also called out on drawings as "3/8-Inch Pea Gravel"

H. Topsoil/Loam:

1. Topsoil (stripped from site) or Loam (supplied from off-site) shall be a sandy loam or loam soil classification as defined by the USDA Soil Conservation Service, Soil Classification System consisting of a fertile, friable, natural topsoil/loam typical of locality, without admixture of subsoil, refuse or other foreign materials, shall be obtained from a well-drained arable site, and shall meet ASTM D5268. It shall be such a mixture of sand, silt and clay particles as to exhibit sandy and clayey properties in about equal proportions. It shall be free of stumps, roots, heavy or stiff clay, stones larger than 3/4-inch in diameter, lumps, coarse sand, noxious weeds, sticks, brush or other litter, and shall have the following mechanical analysis:

Textural Class	% of Total Weight	Average %
Sand 0.05 - 2.0mm dia. Range	45 to 75	60
Silt 0.002 - 0.05mm dia. Range	15 to 35	25
Clay less than 0.002mm dia. Range	5 to 25	25

a. 95 percent of Topsoil shall pass a 2.0 mm sieve.

b. Topsoil/Loam shall have a pH value range of 6.0 to 7.0. If Topsoil/Loam material does not fall within the required pH range, limestone or aluminum sulfate shall be added to bring the pH within the specified limit.

2. Loam and topsoil shall contain not less than 4 percent or more than 20 percent organic matter as determined by the loss on ignition of oven-dried samples. Test sample shall be oven-dried to a constant weight at a temperature of 230°F ±9°.

3. All imported loam/topsoil must meet RIDEM Method 1 RDEC requirements and shall be placed only above the demarcation layer as part of the engineered soil cap.

2.2 FILTER FABRIC

A. Non-Woven Filter Fabric: shall be a geotextile such as ADS 601T, Mirafi 160N, or approved equivalent, and as specified on the drawings. Joints shall be continuously sewn or overlapped by a minimum of 18 inches.

B. Woven Filter Fabric: shall be a geotextile such as Mirafi FW700 or approved equal, as specified on the drawings. Joints shall be overlapped by a minimum of 18 inches.

C. Filter fabric used above Controlled Materials shall be compatible with the placement of the demarcation layer and shall not be used as a substitute for the visual barrier.

2.3 EROSION CONTROL BLANKET

A. North American Green S75 or approved equal.

B. Erosion control blankets placed over areas of Controlled Materials shall be installed in conjunction with SMP required erosion and sedimentation controls to prevent exposure or migration of impacted soils.

PART 3 - EXECUTION

3.1 EXCAVATION

A. General:

1. Earth excavation of all materials other than rock excavation. All excavated soils shall be treated as Controlled Material and handled in accordance with the RAWP, and RAL.

2. Earth excavation includes the removal, temporary stockpiling, and onsite reuse of materials encountered while establishing required grades, except where materials are debris unsuitable for reuse. Controlled Materials shall not be disposed of off-site except as explicitly allowed by RIDEM under the RAWP.

3. Perform all excavations to the depths and extents indicated, under Environmental Professional (EP) oversight, as required by the RAWP.

4. Excavate to the minimum depths required for foundations, walls, structures, and utility systems. Where rock is encountered, over-excavate 12 inches unless otherwise directed.

5. Earth excavation includes removal of pavement, foundations, and underground structures indicated for removal. Debris (concrete, wood, metal, plastic) may be removed offsite as solid waste, soils may not.

B. Unauthorized Excavation:

1. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific direction of the Engineer. Unauthorized excavation shall be at the Contractor's expense.

2. Under footings, foundation bases, or retaining walls, fill unauthorized excavation by extending indicated bottom elevation of footing or base to excavation bottom, without altering required top elevation. Clean concrete fill may be used to bring elevations to proper position, when acceptable to the Engineer.

   In locations other than those above, backfill with “Granular Fill” and compact unauthorized excavations as specified for authorized excavations of same classification, unless otherwise directed by the Engineer.

C. Rock Excavation:

1. Rock Excavation shall include the excavation of hard and solid ledge, boulders in excess of one cubic yard in volume and hard cementitious deposits, the removal of which requires the use of drilling, barring, and wedging. Blasting will not be permitted.

2. For the purposes of payment, rock shall be defined as material, which cannot be excavated with equipment rated at less than 120 HP flywheel power developing at least 40,000 pounds breakout force measured in accordance with SAE S732C. Hard and compact materials such as cemented-gravel, glacial till, and relatively soft or disintegrated rock that can be removed without continuous and systematic drilling, barring, wedging, or other mechanical or pneumatic equipment will not be considered as mass rock even though intermittent use of these methods may be performed to increase production.

D. Excavation for Structures:

1. Conform to elevations and dimensions shown within a tolerance of plus or minus 0.10', and extending a sufficient distance from foundations to permit placing and removal of concrete formwork, other construction required, and for inspection.

2. In excavating for foundations, take care not to disturb bottom of excavation. Excavate by hand to final grade just before concrete is placed. Trim bottoms to required lines and grades to leave a solid base to receive concrete.

E. Disturbed Subgrade:

1. If subgrade becomes disturbed or saturated, stabilize as directed by the Engineer. If disturbance involves Controlled Materials, stabilization must comply with RAWP cap requirements to maintain minimum cover thickness.

F. Excavation for Pavement and Hardscape Areas:

1. Cut to the subgrade under pavements to comply with cross-sections, elevations, grades as shown on the Drawings and requirements presented herein.

G. Excavation and Installation of Utilities:

1. Trench for pipes shall be excavated to the required line and grade and of sufficient width to permit thorough tamping of the fill material under the haunches and around the pipe.

2. In general, utility trenches shall be excavated to a minimum 6 inches below the bottom of the utility line to accommodate bedding material as specified hereinafter or as specified by the manufacturer.

3. Soft or unsuitable material encountered below the normal bedding of the pipe shall be removed as directed, replaced with selected sand or manufacturer-recommended bedding material, and thoroughly compacted.

4. The bottom of the trench shall be shaped to conform to the curvature of the pipe. This bed shall also be excavated to accommodate the bells of pipes.

5. All utilities shall be installed as recommended by the manufacturer or as specified herein or as directed by the Geotechnical Engineer.

6. All utility trench excavation within Controlled Materials must follow the RAWP dust control, stockpile containment, and EP oversight requirement

H. Demolition:

1. Remove existing slabs, foundations, debris, and utilities to required limits. Soils disturbed during demolition must be treated as Controlled Material and cannot be exported. Debris may be removed off-site as solid waste, but no impacted soil may leave the site without RIDEM approval.

I. Re-Use of Material:

1. Excavated materials meeting gradation requirements may be reused onsite only below the engineered controls in accordance with the RAWP. Controlled Materials may not be reused near the finished grades or above the demarcation layer.

3.2 EARTHWORK FOR SOD AND SEEDED AREAS

A. Compaction control during earthwork

1. Topsoil for sod and seeded areas must be placed above the demarcation layer and clean soil cap, ensuring minimum cover thickness are met for Type 1 and Type 2 soil caps.

2. Utilize track machines to move the soils on site during construction keeping rubber tire vehicles except for landscape machinery off the soils. Use low ground pressure machines to move and spread soil materials.

3. Use a subsoiler to loosen the subsoil compaction to 6” depth after it is in place and graded if it does not meet the density specifications. Stones if present at the surface from using the subsoiler will need to be raked and removed from the surface before placing topsoil.

3.3 ROCK PAYMENT LINES

A. Rock payment lines are limited to the following:

1. In pipe trenches, one foot below the invert elevation of the pipe and two foot wider than the inside diameter of the pipe, but not less than a three-foot minimum trench width.

2. 12" below top of subgrade elevations.

B. No payment will be made for rock removal beyond specified rock payment lines.

3.4 UNSUITABLE MATERIAL

A. Unsuitable materials are materials that consist of Controlled Material (soil) shall NOT be removed from the Site. Such materials shall be reworked, moisture-conditioned, blended, or placed beneath Engineered Controls per the RAWP.

B. Debris or solid waste that is not soil (asphalt, metal, wood, concrete) may be removed offsite as construction waste.

3.5 STABILITY OF EXCAVATIONS

A. General: comply with local, state, and federal codes, ordinances, and requirements of agencies having jurisdiction.

B. Slope sides of excavations to comply with OSHA requirements and local, state, and federal codes, ordinances, and requirements of agencies having jurisdiction. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated. Maintain sides and slopes of excavations in safe condition until completion of backfilling.

C. Slope the sides of excavations over 5' deep to the angle of repose of the material excavated, but not steeper than 1½ horizontal to 1 vertical. Where sloping is not possible, due to space restrictions or stability of material excavated, shore and brace in accordance with requirements of authorities having jurisdiction. In addition, provide 5' high snow fence around these areas as protection. Temporary slopes should be covered with plastic sheeting or other suitable cover where necessary to prevent the surface from drying or eroding.

D. Maintain sides and slopes of excavation in a safe condition until completion of backfilling, by scaling, benching, shelving, or bracing.

E. Take precautions to prevent slides or cave-ins when excavations are made in locations adjacent to backfilled excavations, and when sides or excavations are subject to vibrations from vehicular traffic or the operation of machinery, or from any other source.

F. Maintain dust suppression and air monitoring during excavation per RAWP.

3.6 SHORING AND BRACING:

A. Where required, provide adequate shoring and bracing, such as soldier piles and lagging, or steel or timber sheeting, in good serviceable condition.

B. Trench shoring and bracing shall comply with OSHA requirements and local codes and authorities having jurisdiction.

C. Coordinate shoring and bracing with the construction to be performed.

D. Construct shoring and bracing system in accordance with the approved plans.

E. Maintain shoring and bracing in excavations during all time periods when excavations are to be open. Extend shoring and bracing downward as excavation progresses.

F. Provide minimum requirements for trench shoring and bracing to comply with ANSI A10.1 "Safety for Building Construction", and with local codes and authorities having jurisdiction.

3.7 DEWATERING

A. If groundwater is encountered unexpectedly, the Contractor shall immediately notify the EP and Owner and suspend work in that area. The RAWP indicates groundwater is not anticipated, encountering groundwater requires corrective action.

B. No groundwater may be discharged without evaluating RAWP requirements and any required RIDEM permitting.

3.8 EXCAVATION OF TRENCHES FOR PIPES AND CONDUIT

A. Where trenching penetrates areas containing Controlled Materials, bedding, backfill, and trench spoils must be handled according to the RAWP and must be reused only below engineered controls.

B. Excavate trenches to uniform width, sufficiently wide to provide ample working room and a minimum of six- to nine-inch clearance on both sides of pipe or conduit, unless otherwise indicated on drawings.

C. Excavate trenches and conduit to depth indicated or required to establish indicated slope and invert elevations and to support bottom of pipe or conduit on undisturbed soil. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.

1. If rock is encountered, carry excavation 12" below required elevation and backfill a six-inch layer of fine aggregate fill prior to installation of pipe.

2. For pipes or conduit less than six inches in nominal size, and for flat-bottomed, multiple-duct conduit units, do not excavate beyond indicated depths. Hand-excavate bottom cut to accurate elevations and support pipe or conduit on undisturbed soil.

3. For pipes and equipment six inches or larger in nominal size, shape bottom of trench to fit of pipe for 90 degrees (bottom 1/4 of the circumference). Fill depressions with tamped fine aggregate backfill. At each pipe joint, dig bell holes to relieve pipe bell of loads and ensure continuous bearing of pipe barrel on bearing surface.

3.9 COLD WEATHER PROTECTION

A. Protect excavation bottoms against freezing when atmospheric temperature is less than 35ºF.

B. Protect bottom of excavations and soil around and beneath foundations from frost.

3.10 BACKFILL AND FILL

A. General: Place acceptable soil materials in layers to required elevations. On-site soils (Controlled Materials) shall only be reused beneath approved Engineered Controls (impervious cap, Type 1 and Type 2 soil cap). They shall not be used as backfill near finished grades or surface soils.

B. Backfill operations shall follow all RAWP requirements, including:

1. EP oversight
2. Dust suppression
3. Stockpile management
4. Maintaining minimum cap thicknesses
5. Protecting the demarcation layer from exposure.

C. Backfill of utility trenches below groundwater is unexpected. If trenches encounter groundwater notify the EP and Owner immediately prior to backfilling.

3.11 PLACING AND COMPACTION

A. General

1. All compacted fill shall be placed in layers. Each layer shall be systemically compacted by approved compaction equipment to the density specified herein.
2. Place backfill and fill materials in layers not more than twelve (12) inches in loose depth for material compacted by heavy compaction equipment, and not more than six (6) inches in loose depth for material compacted by hand-operated equipment and tampers.
3. Compaction equipment in open areas shall consist of a vibratory roller having a minimum drum weight of 10,000 pounds and a dynamic force of at least 20,000 pounds.
4. Compaction in confined areas (in trenches and adjacent to walls) shall be accomplished by hand-operated vibratory equipment or mechanical tampers as approved by the Engineer.
5. Before compaction, moisten or aerate each layer as necessary to provide optimum moisture content. Compact each layer to required percentage of maximum dry density or relative dry density for each area classification. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice.
6. Place backfill and fill materials evenly adjacent to structures to required elevations. Prevent wedging action of backfill against structures by carrying material uniformly around structures to approximately same elevation in each lift.
7. The work area shall be graded, shaped and otherwise drained in such a manner as to minimize soil erosion, siltation of drainage channels, damage to existing vegetation and damage to property outside the limits of the work area.
8. The Contractor shall use extra care when compacting adjacent to walls. Where walls are buried on both sides, backfill and compaction shall proceed on both sides of the wall so

that the difference in top of fill level on either side of the wall shall not exceed two feet (2 ft.) at any stage of construction. Where buried walls are backfilled on only one side, only hand-operated rollers or plate compactors shall be used within a lateral distance of five feet (5 ft.) of back of wall.

9. In freezing weather, a layer of fill shall not be left in an uncompacted state at the close of a day's operations. Prior to terminating operations for the day, the final layer of fill, after compaction, shall be rolled with a smooth-wheeled roller to eliminate ridges of soil left by tractors, trucks and compaction equipment.

10. The Contractor shall not place a layer of compacted fill on snow, ice or frozen soil. Removal of these unsatisfactory materials will be required as directed by the Owner.

11. All on-site soils placed as fill shall be treated as Controlled Materials and may be reused only below approved engineered controls. Fill placement shall not reduce required clean soil cap thicknesses.

12. EP oversight (Owner representative) is required during placement of any Controlled Materials to ensure proper separation from clean imported fill, maintenance of demarcation layer integrity, confirmed cap thickness after compaction, and no placement of Controlled Materials above the demarcation layer.

B. Ground surface preparation: remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placement of fills. Plow, strip, or break up sloped surfaces steeper than one vertical to four horizontal so that fill material will bond with existing surface.

1. Proof-roll proposed pavement and foundation subgrades as described herein.

2. Prior to placing new fill, surface compact the subgrade in areas where existing foundations, slabs, and pavements have been demolished.

3. When existing ground surface has a density less than that specified in this section for particular area classification, break up ground surface and pulverize, moisture condition as required to achieve optimum moisture content, and compact to required depth and percentage of density.

4. Ground surfaces serving as a base for Engineered Controls shall be inspected by the EP prior to placing the demarcation layer or clean cap soils. No Controlled Materials shall be left exposed at completion of daily earthwork operations.

C. Backfilling of Utilities:

1. After pieces and joints have been inspected and approved by the Owner, sand shall be carefully placed and tamped in 6-inch layers under, around, and one foot over the pipe to ensure a uniform bearing surface and to prevent lateral movement of the pipe.

2. The remainder of the backfill may, if it meets fill specifications listed above, be material removed from the utility excavation and shall be placed in approximately 8-inch layers and compacted to the required density.

3. Where trench spoils consist of Controlled Materials, they may only be reused beneath the engineered controls and not be used as final cover or near finished grades. Spoils must be stockpiled on polyethylene sheeting and covered in accordance with the RAWP.

D. Backfill below Pavement Subbase:

1. Backfill below pavement subbase shall be placed in layers having a maximum loose lift thickness of 12 inches, if compaction is with a large vibratory drum roller or in maximum loose lift thickness of 8 inches, if compaction is with hand-operated compaction equipment.

E. Subbase and Base Course:

1. Pavement and slab subbase and base courses shall be placed in layers having a maximum loose lift thickness of 12 inches, except in confined areas or within 3 feet of new or existing structures where maximum loose lift thickness shall be 8 inches or less as determined by the Geotechnical Engineer.

3.12 COMPACTION REQUIREMENTS

A. General

1. Backfill shall be compacted to the minimum percentage of density specified for each area classification.

B. Percentage of Maximum Density Requirements:

1. In areas where Controlled Materials are placed, compaction shall not cause displacement, damage, or exposure of the demarcation layer, nor reduce the minimum clean soil cap thickness.

2. Provide not less than the following percentages of the maximum density of soil material compacted at optimum moisture content, as determined by ASTM D-1557, (Modified Proctor Test). Correct improperly compacted areas or lifts as directed by Engineer if soil density tests indicate inadequate compaction.

a. Pavement base course: Compact "Dense Grade Aggregate" base course below bituminous concrete pavement to 95% of the maximum dry density.

b. Pavement subbase: Compact "Sand-Gravel" subbase below base course to 95% of the maximum dry density.

c. All materials below the pavement subbase, with the exception of crushed stone, shall be compacted to 95% of the maximum dry density for heavy-duty areas (access roads), and to 92% of the maximum dry density in all standard duty areas.

d. All soil materials placed below foundations and within "Structure Areas" with the exception of crushed stone shall be compacted to 95% of the maximum dry density.

e. All materials placed behind retaining walls shall be compacted to 95% of the maximum dry density except for the area within 5 feet of the stem, which shall be compacted to between 90% and 93% of the maximum dry density.

f. All soil materials placed on the sides of and above site utilities and duct banks, with the exception of crushed stone, shall be compacted to 92% of the maximum dry density. Where utilities are placed below “Structure Areas” backfill shall be compacted to 95% of the maximum dry density. All pavement and exterior concrete slab base and subbase courses located above utilities and duct banks shall also be compacted to 95% of the maximum dry density.

g. Fill under Landscaped Areas: Ordinary Fill within the top 3 feet of finished grade shall be compacted to at least 90% of the maximum dry density. Ordinary Fill below 3 feet of finished grade shall be compacted to 85% of the maximum dry density.

C. Moisture Control:

1. Where the subgrade or a layer of soil material must be moisture-conditioned before compaction, uniformly apply water to the surface of subgrade or layer of soil material as needed to obtain optimum moisture content. Apply water in minimum quantity as necessary to prevent free water from appearing on surface during or subsequent to compaction operations.

2. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to the specified density.

3. Stockpile or spread soil material that has been removed because it is too wet to permit compaction. Assist drying by discing, harrowing, or pulverizing until moisture content is reduced to a satisfactory value.

3.13 GRADING

A. General:

1. Final grading shall ensure minimum clean soil cap thickness are met after compaction. Type 1 cap with minimum of 12-inches of clean soil above the demarcation layer, and Type 2 cap with minimum of 24 inches of clean soil above the demarcation layer.

2. At no time shall grading operations exposure the demarcation layer or Controlled Material. If exposure occurs, notify the EP immediately and restore cover thickness with clean soil.

B. Compaction:

1. After grading, compact subgrade surfaces to the depth and percentage of maximum density for each area classification.

2. Final cap surfaces shall be inspected by the EP to confirm that grading maintains long-term cap slope stability, positive drainage, and prevents erosion of clean cap soil.

3.14 FIELD QUALITY CONTROL

A. Quality control testing during construction will be provided by the Owner. The Geotechnical Engineer shall be notified 48 hours prior to any fill, backfill, or compaction operations. Emailed notification is satisfactory.

1. Permit the Engineer to observe all subgrades for each layer of fill or backfill. Additional fill or backfill shall not be placed unless the Geotechnical Engineer has approved the subgrade and/or previous layer of fill.

2. When required or requested by the Engineer, the Contractor shall provide field elevations of the compacted subgrade or fill layer.

3. All excavation, stockpile handling, fill placement, and engineered control construction shall occur under EP oversight, consistent with the RAWP. The EP will be representative of the Owner.

B. Compacted materials which are below specified density shall be re-compacted at no additional expense to the Owner.

3.15 MAINTENANCE

A. Protection of Graded Areas:

1. Protect newly graded areas from erosion and keep free of trash and debris.

2. Repair and re-establish grades in settled, eroded, and rutted areas to specified tolerances.

B. Reconditioning Compacted Areas:

1. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape, and compact to required density prior to further construction.

3.16 ON-SITE SOIL MANAGEMENT

A. Dust Control:

1. The Contractor shall implement dust suppression including watering. Stabilized construction entrances/exits shall be constructed using 6 inches of 2-inch crushed stone, maintained throughout the project.

2. Dust control must comply with the RAWP including air monitoring during excavation activities, and action levels. Any visible dust migration offsite shall trigger immediate work suspension and corrected. Dust suppression must include daily wetting of working faces, speed control of work vehicles, and covering of haul loads when transporting.

B. Stormwater Runoff Control:

1. The contractor shall ring storm drains with haybales and silt capture devices and maintain the conditions throughout the project to control entrainment of surficial sediments in stormwater runoff.

2. Erosion controls must be placed and maintained around all Controlled Material stockpile areas, including silt fence and inlet protection, as required by the RAL.

3. No uncontrolled stormwater may erode or contact Controlled Material.

3.17 OFF-SITE SOIL MANAGEMENT

A. Disposal of excess asphalt, debris, and solid waste shall be in accordance with the Contract Documents. Controlled Materials (soil) shall NOT be disposed offsite unless explicitly approved by RIDEM in writing following waste characterization.

B. All existing soils shall remain onsite. Removal of Controlled Materials offsite may occur only with prior written approval from the RIDEM, in accordance with the RAWP and RAL. Owner or Contractor authorization is not sufficient.

END OF SECTION 31 30 00

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.

B. Rhode Island Stormwater Design and Installation Standards Manual

1.2 SUMMARY

A. Work under this section includes providing all materials, equipment, and services necessary to furnish and deliver work as shown on the Drawings, as specified, and as required by job conditions including, but not limited to the following:

1. Hotmix asphalt pavement (standard mix).

2. Hotmix asphalt pavement (pervious mix). Refer to Rhode Island Stormwater Design and Installation Standards Manual Appendix F - CONSTRUCTION STANDARDS/ SPECIFICATIONS FOR ALTERNATIVE PAVING SURFACES, Amended March 2015, or most current amendment.

3. Permanent pavement repair.

1.3 RELATED WORK SPECIFIED IN OTHER SECTIONS

A. Section 31 10 00 – Site Preparation

B. Section 31 30 00 – Earthwork

1.4 SUBMITTALS

A. In accordance with the General Requirements, submit samples, materials certifications, manufacturer's product data and test reports as hereinafter required.

1. Hotmix asphalt design mix (standard mix).

2. Hotmix asphalt design mix (pervious mix).

3. Sieve analysis on subbase and base material.

1.5 QUALITY ASSURANCE

A. Workers: All workers shall be thoroughly trained and experienced in the necessary crafts, and completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.

B. Testing and Inspection: Contractor shall employ and pay for a qualified independent laboratory to perform testing and inspection service required to confirm compliance with these specifications.

1.6 JOB CONDITIONS

A. Weather limitations: Apply prime and tack coats when ambient temperature is above 50°F (10°C) and when temperature has not been below 35°F (1°C) for 12 hours immediately prior to application. Do not apply when base is wet or contains an excess of moisture.

B. Construct hot-mixed asphalt surface course when atmospheric temperature is above 40°F (4°C), rising, and when the base is dry. Base course may be placed when air temperature is above 30°F (minim 1°C) and rising.

C. Grade control: Establish and maintain required lines and elevations.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Use locally available materials and gradations that exhibit a satisfactory record of previous installations. Follow material specifications and mix proportioning as listed in the Standard Specifications.

A. Base Material (Standard Pavement): Sand Gravel Fill Base

B. Subbase Material (Standard Pavement): Granular Fill Subbase

C. Choker or Upper Layer Material (Pervious Pavement): Choker course shall be double washed,
   1. Shall meet the following:
      a. Maximum Wash Loss of 0.5%
      b. Minimum Durability Index of 35
      c. Maximum Abrasion Loss of 10% for 100 revolutions, and maximum of 50% for 500 revolutions.
      d. Material for the choker course and reservoir course shall have the AASHTO No. 57. Or AASHTO no. 3

D. Filter course material (Pervious Pavement):
   1. Filter course material shall have a hydraulic conductivity of 10 to 60 ft/day at 95% standard proctor compaction unless otherwise approved by the Engineer. The hydraulic conductivity should be determined by ASTM D2434 and reported to the Engineer.
   2. The filter course material is a medium sand. In order to select an appropriate gradation, coefficient of permeability may be estimated through an equation that relates gradation to permeability, such as described in Correlations of Permeability and Grain Size (Shepherd, 1989) or in Section 8.7 Estimation of Saturated Hydraulic Conductivity (Freeze and Cherry, 1979).
   3. Conforms to AASHTO M-6 or ASTM C-33

E. Filter blanket material (Pervious Pavement):

1. Between the filter course and the reservoir course shall be an intermediate size between the finer filter course above, and the coarser reservoir course below, for the purpose of preventing the migration of a fine setting bed into the coarser reservoir material.
2. A pea-gravel with a median particle diameter of 3/8" is commonplace.

F. Reservoir Course (Pervious Pavement):

1. Material for the reservoir course shall have the AASHTO No. 3 gradation. If the AASHTO No. 3 gradation cannot be met, AASHTO No. 5 is acceptable with approval of the Engineer.

G. Hotmix Asphalt (standard mix): Conforming to Section M03.00.0 through M03.12.0 of the Standard Specifications for Highways and Bridges.

1. Wearing surface shall be Binder Mix.

2. Intermediate or Binder course shall be CLASS I-1

				SURFACE COURSES		FRICTION COURSES	
SIEVE SIZE	BASE COURSE	BINDER COURSE	BRIDGE BINDER	CLASS I-1	CLASS I-2 or SIDEWALK	DENSE	RAMP
			GRADATION: PERCENT PASSING BY WEIGHT				
1-1/4"	100						
1"		100				100	
3/4"	70-100	70-100		100		90-100	100
1/2"			100	80-100	100	70-90	95-100
3/8"	46-74	46-74	70-100	70-90	95-100	45-75	70-100
#4			25-45	50-70	55-75	20-40	25-45
#8	22-52	22-52	20-35	35-50	40-55	8-18	20-35
#30	10-34	10-34		18-29	20-30		8-15
#50	6-26	6-26	8-17	10-20	13-23	4-12	5-12
#200	3-8	3-8	2-6	3-8	3-8	2-6	2-6
Asphalt % By Weight	4.0 - 6.5	4.0 – 6.5	5.0 – 7.0	5.5 – 7.0	6.0 – 7.5	4.5 – 5.5	5.0 – 7.0
Marshall Stability Lbs. (min)	1600	1600	750	1000	1000	750	750
% Voids	3 – 8	3 – 8	3 – 8	3 – 5	3 – 5	8 min.	5 min.
VFA	60 – 75	60 – 75	-	65 – 85	65 – 85	-	-
Flow (0.01 in)	8 – 16	8 – 16	8 – 16	8 – 16	8 – 16	-	8 – 16
Mixing Temp °F	300	300	260	300	300	260	260
Compaction #blows at Each end	75	75	50	50	50	50	50

A
C

H. Hotmix Asphalt (pervious mix): Where required per the Construction Plans, at a minimum conforming to:

1. Aggregate materials:

a. 3/4" sieve, 100% Passing

b. 1/2" sieve, 85%-100% passing

c. 3/8” sieve, 55%-75% passing

d. No. 4 sieve, 10%-25% passing

e. No. 8 sieve, 5%-10% passing

f. No. 200 sieve, 25-4%

2. Binder Content (AASHTO T164) = 6%-6.5%

3. Fiber Content = 0.3% cellulose or 0.4% mineral

4. Rubber Solids (SBR) Content By Weight of the Bitumen = 1.5%-3%

5. Air Void Content (AASHTO T275) = 16%-22%

6. Retained Tensile Strength (AASHTO 283) = 80%

7. Cantabro abrasion test on unaged samples (ASTM D7064-04) <or= 20%

8. Cantabro abrasion test on 7 day aged samples <or= 30%

PART 3 - EXECUTION

3.1 SURFACE PREPARATION

A. Proof-roll or densify natural sub-base material via self-powered vibratory drum roller, complete soil density tests 6-inches to 12-inches below the subbase surface. Look for or observe for unstable areas and areas requiring additional soil compaction.

B. Notify Contractor of unsatisfactory conditions. Do not begin paving work until deficient subbase areas have been corrected and are ready to receive base and additionally layered materials.

C. Exercise care in applying bituminous materials to avoid smearing of adjoining cement concrete surfaces. Remove and clean damaged abutting surfaces.

3.2 SUBGRADE PREPARATION (PERVIOUS MIX)

A. Native subgrade refers to materials beyond the limit of the excavation. The existing native subgrade material under all bed areas shall NOT be compacted or subject to excessive construction equipment traffic prior to geotextile and stone bed placement. Compaction is

acceptable if an impermeable liner is used at the base of the porous asphalt system and infiltration is not desired.

B. Where erosion of the native material subgrade has caused accumulation of fine materials and/or surface ponding, this material shall be removed with light equipment and the underlying soils scarified to a minimum depth of 6 inches with a York rake or equivalent and light tractor.

C. Bring subgrade to line, grade, and elevations indicated. Fill and lightly regrade any areas damaged by erosion, ponding, or traffic compaction before the placing of the stone subbase.

D. All bed bottoms are as level as feasible to promote uniform infiltration. For pavements subbases constructed on grade, soil or fabric barriers should be constructed along equal elevation for every 6-12” of grade change to act as internal check dams. This will prevent erosion within the subbase on slope.

3.3 POROUS MEDIA BED INSTALLATION

A. Subbase refers to materials below pavement surface and above native subgrade. Upon completion of subgrade work, the Engineer shall be notified and shall inspect at his/her discretion before proceeding with the porous media bed installation.

B. Sideslope geotextile and porous media bed aggregate shall be placed immediately after approval of subgrade preparation. Any accumulation of debris or sediment which has taken place after approval of subgrade shall be removed prior to installation of geotextile at no extra cost to the Owner.

C. Place sideslope geotextile in accordance with manufacturer's standards and recommendations. Adjacent strips of geotextile shall overlap a minimum of sixteen inches (16"). Secure geotextile at least four feet (1.2 m) outside of the bed excavation and take any steps necessary to prevent any runoff or sediment from entering the storage bed.

D. Install filter course aggregate in 8-inch maximum lifts to a MAXIMUM of 95% standard proctor compaction (ASTM D698 / AASHTO T99). Install aggregate to grades indicated on the drawings.

E. Install choker, gravel, and stone base course aggregate to a MAXIMUM of 95% compaction standard proctor (ASTM D698 / AASHTO T99). Choker should be placed evenly over surface of filter course bed, sufficient to allow placement of pavement, and notify Engineer for approval. Choker base course thickness shall be sufficient to allow for even placement of the porous asphalt but no less than 4-inches (10 cm) in depth.

F. The density of subbase courses shall be determined by AASHTO T 191 (Sand-Cone Method), AASHTO T 204 (Drive Cylinder Method), or AASHTO T 238 (Nuclear Methods), or other approved methods at the discretion of the supervising engineer.

G. The infiltration rate of the compacted subbase shall be determined by ASTM D3385 or approved alternate at the discretion of the supervising engineer. The infiltration rate shall be no less 5-30 ft/day or 50% of the hydraulic conductivity (D2434) at 95% standard proctor compaction (refer to section 2.1.A.5).

H. Compaction of subbase course material shall be done with a method and adequate water to meet the requirements. Rolling and shaping shall continue until the required density is attained. Water

shall be uniformly applied over the subbase course materials during compaction in the amount necessary for proper consolidation.

I. Rolling and shaping patterns shall begin on the lower side and progress to the higher side of the subbase course while lapping the roller passes parallel to the centerline. Rolling and shaping shall continue until each layer conforms to the required grade and cross-section and the surface is smooth and uniform.

J. Following placement of subbase aggregate, the sideslope geotextile shall be folded back along all bed edges to protect from sediment washout along bed edges. At least a four-foot edge strip shall be used to protect beds from adjacent bare soil. This edge strip shall remain in place until all bare soils contiguous to beds are stabilized and vegetated. In addition, take any other necessary steps to prevent sediment from washing into beds during site development. When the site is fully stabilized, temporary sediment control devices shall be removed.

3.4 PLACING STANDARD MIX

A. General: Earthen materials, aggregates, and layered courses shall be installed to the depths or thickness as shown on the Construction Plan details. All material layers shall be placed and spread horizontally to ensure a maximum uncompacted layer thickness of 8-inches. Hot-mix asphalt, standard mix or pervious pavement, shall not be placed on the prepared surface unless the Owners Representative or Engineer has monitored and been satisfied with the installation of the respective layers or courses of materials.

B. Place hot-mixed asphalt mixture on prepared surface, spread, and strike off. Spread mixture at minimum temperature of 225°F (107°C). Place areas inaccessible to equipment by hand raking. Place each course to required grade, cross-section, and compacted thickness.

C. Paver Placing: Place in strips not less than 10 feet wide, unless otherwise acceptable to Engineer. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete base course for a section before placing surface course.

D. Immediately correct surface irregularities in finish course behind paver. Remove excess material forming high spots with shovel or lute.

E. Joints: Make joints between old and new pavements, or between successive days' work, to ensure continuous bond with adjoining work. Construct joints to have same texture, density, and smoothness as other sections of hot-mixed asphalt course. Clean contact surfaces and apply tack coat. All hot-mix asphalt joints shall be overlapping joints; butt joints are not allowed.

F. Curbs: Construct curbs over compacted pavement surfaces. Apply a light tack coat unless pavement surface is still tacky and free from dust.

G. Place curb materials to cross-section indicated using curb paving machine.

3.5 ROLLING

A. General: Begin rolling when mixture will bear roller weight without excessive displacement.

B. Compact mixture with hot hand tampers or vibrating plate compactors in areas inaccessible to self-propelled drum rollers.

C. Breakdown Rolling: Accomplish breakdown or initial rolling immediately following rolling of joints and outside edge. Check surface after breakdown rolling and repair displaced areas by loosening and filling, if required, with hot material.

D. Second Rolling: Follow breakdown rolling as soon as possible, while mixture is hot. Continue second rolling until mixture has been evenly compacted.

E. Finish Rolling: Perform finish rolling while mixture is still warm enough for removal of roller marks. Continue rolling until roller marks are eliminated and course has attained 95 percent laboratory density.

F. Patching: Remove and replace paving areas mixed with foreign materials and defective areas. Cut out such areas and fill with fresh, hot hot-mixed asphalt and compact by rolling to specified surface density and smoothness.

G. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened (8 hours minimum).

H. Erect barricades to protect pavement from vehicle traffic until mixture has cooled at least 8 hours.

3.6 PLACING PERVIOUS MIX

A. Conditioning of Existing Surface.
   1. Contact surfaces such as curbing, gutters, and manholes shall be painted with a thin, uniform coat of Type RS-1 emulsified asphalt immediately before the asphalt mixture is placed against them.

B. Temperature Requirements.
   1. The temperature of the asphalt mixture, at the time of discharge from the haul vehicle and at the paver, shall be between 135-163°C (275 to 325°F), within 6 °C (10 °F) of the compaction temperature for the approved mix design.

C. Spreading and Finishing.
   1. The Porous Asphalt shall be placed either in a single application at 4 inches (10 cm) thick or in two lifts. If more than one lift is used, great care must be taken to insure that the porous asphalt layer join completely. This means: keeping the time between layer placements minimal; keeping the first layer clear from dust and moisture, and minimizing traffic on the first layer.
   2. The Contractor shall protect all exposed surfaces that are not to be treated from damage during all phases of the pavement operation.
   3. The asphalt mixture shall be spread and finished with the specified equipment. The mixture shall be struck off in a uniform layer to the full width required and of such depth that each course, when compacted, has the required thickness and conforms to the grade and elevation specified. Pavers shall be used to distribute the mixture over the entire width or over such partial width as practical. On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the mixture shall be spread and raked by hand tools.
   4. No material shall be produced so late in the day as to prohibit the completion of spreading and compaction of the mixture during daylight hours, unless night paving has been approved for the project.
   5. No traffic will be permitted on material placed until the material has been thoroughly compacted and has been permitted to cool to below 38 °C (100 °F). The use of water to

cool the pavement is not permitted. The Engineer reserves the right to require that all work adjacent to the pavement, such as guardrail, cleanup, and turf establishment, is completed prior to placing the wearing course when this work could cause damage to the pavement. On projects where traffic is to be maintained, the Contractor shall schedule daily pavement operations so that at the end of each working day all travel lanes of the roadway on which work is being performed are paved to the same limits. Suitable aprons to transition approaches, where required, shall be placed at side road intersections and driveways as directed by the Engineer.

D. Compaction.

1. Immediately after the asphalt mixture has been spread, struck off, and surface irregularities adjusted, it shall be thoroughly and uniformly compacted by rolling. The compaction objective is 16% - 19% in place void content (Corelock).
2. Breakdown rolling shall occur when the mix temperature is between 135-163°C (275 to 325°F).
3. Intermediate rolling shall occur when the mix temperature is between 93-135°C (200 to 275°F).
4. Finish rolling shall occur when the mix temperature is between 66-93°C (150 to 200°F).
5. The cessation temperature occurs at approximately 79°C (175°F), at which point the mix becomes resistant to compaction. If compaction has not been done at temperatures greater than the cessation temperature, the pavement will not achieve adequate durability.
6. The surface shall be rolled when the mixture is in the proper condition and when the rolling does not cause undue displacement, cracking, or shoving.
7. Rollers or oscillating vibratory rollers, ranging from 8-12 tons, shall be used for compaction. The number, mass (weight), and type of rollers furnished shall be sufficient to obtain the required compaction while the mixture is in a workable condition. Generally, one breakdown roller will be needed for each paver used in the spreading operation.
8. To prevent adhesion of the mixture to the rolls, rolls shall be kept moist with water or water mixed with very small quantities of detergent or other approved material. Excess liquid will not be permitted.
9. Along forms, curbs, headers, walls, and other places not accessible to the rollers, the mixture shall be thoroughly compacted with hot or lightly oiled hand tampers, smoothing irons or with mechanical tampers. On depressed areas, either a trench roller or cleated compression strips may be used under the roller to transmit compression to the depressed area.
10. Other combinations of rollers and/or methods of compacting may be used if approved in writing by the Engineer, provided the compaction requirements are met.
11. Unless otherwise specified, the longitudinal joints shall be rolled first. Next, the Contractor shall begin rolling at the low side of the pavement and shall proceed towards the center or high side with lapped rollings parallel to the centerline. The speed of the roller shall be slow and uniform to avoid displacement of the mixture, and the roller should be kept in as continuous operation as practical.
12. Rolling shall continue until all roller marks and ridges have been eliminated. Rollers will not be stopped or parked on the freshly placed mat.
13. It shall be the responsibility of the Contractor to conduct whatever process control the Contractor deems necessary. Acceptance testing will be conducted by the Engineer using cores provided by the Contractor.
14. Any mixture that becomes loose and broken, mixed with dirt, or is in any way defective shall be removed and replaced with fresh hot mixture. The mixture shall be compacted to conform to the surrounding area. Any area showing an excess or deficiency of binder shall be removed and replaced. These replacements shall be at the Contractor's expense.
15. If the Engineer determines that unsatisfactory compaction or surface distortion is being obtained or damage to highway components and/or adjacent property is occurring using vibratory compaction equipment, the Contractor shall immediately cease using this

equipment and proceed with the work in accordance with the fifth paragraph of this subsection.

16. The Contractor assumes full responsibility for the cost of repairing all damages that may occur to roadway or parking lot components and adjacent property if vibratory compaction equipment is used. After final rolling, no vehicular traffic of any kind shall be permitted on the surface until cooling and hardening has taken place, and in no case within the first 48 hours. For small batch jobs, curing can be considered to have occurred after the surface temperature is less than 100 ºF (38 ºC). Curing time is preferably one week, or until the entire surface temperature cools below 100 ºF (38 ºC). Provide barriers as necessary at no extra cost to the Owner to prevent vehicular use; remove at the discretion of the Engineer.

E. Joints.

1. Joints between old and new pavements or between successive day's work shall be made to ensure a thorough and continuous bond between the old and new mixtures. Whenever the spreading process is interrupted long enough for the mixture to attain its initial stability, the paver shall be removed from the mat and a joint constructed.
2. Butt joints shall be formed by cutting the pavement in a vertical plane at right angles to the centerline, at locations approved by the Engineer. The Engineer will determine locations by using a straightedge at least 4.9 m (16 feet) long. The butt joint shall be thoroughly coated with Type RS-1 emulsified asphalt just prior to depositing the pavement mixture when pavement resumes.
3. Tapered joints shall be formed by tapering the last 450 to 600 mm (18 to 24 inches) of the course being laid to match the lower surface. Care shall be taken in raking out and discarding the coarser aggregate at the low end of the taper, and in rolling the taper. The taper area shall be thoroughly coated with Type RS- 1 emulsified asphalt just prior to resuming pavement. As the paver places new mixture on the taper area, an evenly graduated deposit of mixture shall complement the previously made taper. Shovels may be used to add additional mixture if necessary. The joint shall be smoothed with a rake, coarse material discarded, and properly rolled.
4. Longitudinal joints that have become cold shall be coated with Type RS-1 emulsified asphalt before the adjacent mat is placed. If directed by the Engineer, joints shall be cut back to a clean vertical edge prior to applying the emulsion.

F. Surface Tolerances.

1. The surface will be tested by the Engineer using a straightedge at least 4.9 m (16 feet) in length at selected locations parallel with the centerline. Any variations exceeding 3 mm (1/8 inch) between any two contact points shall be satisfactorily eliminated. A straightedge at least 3 m (10 feet) in length may be used on a vertical curve. The straightedges shall be provided by the Contractor.
2. Work shall be done expertly throughout, without staining or injury to other work. Transition to adjacent impervious asphalt pavement shall be merged neatly with flush, clean line. Finished pavement shall be even, without pockets, and graded to elevations shown on drawing.
3. Porous pavement beds shall not be used for equipment or materials storage during construction, and under no circumstances shall vehicles be allowed to deposit soil on paved porous surfaces.

G. Repair of Damaged Pavement.

1. Any existing pavement on or adjacent to the site that has been damaged as a result of construction work shall be repaired to the satisfaction of the Engineer without additional cost to the Owner.

3.7 FIELD QUALITY CONTROL

A. General: Testing in-place hot-mixed asphalt (bituminous concrete) courses for compliance with requirements for thickness and surface smoothness will be done by an independent testing laboratory. Repair or remove and replace unacceptable paving as directed by Engineer.

B. Thickness: In-place compacted thickness tested in accordance with ASTM D 3549 will not be acceptable if exceeding following allowable variations:

1. Base Course: Plus or minus 1/2 inch.

2. Surface Course: Plus or minus 1/4 inch.

a. Surface Smoothness: Test finished surface of each hot-mixed asphalt course for smoothness, using 10-foot straightedge applied parallel with and at right angles to centerline of paved area. Surfaces will not be acceptable if exceeding the following tolerances for smoothness:

3. Base Course Surface: 1/4 inch.

4. Wearing Course Surface: 3/16 inch.

C. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch.

D. Check surface areas at intervals as directed by Engineer.

E. The full permeability of the pavement surface shall be tested by application of clean water at the rate of at least 5 gpm (23 lpm) over the surface, using a hose or other distribution devise. Water used for the test shall be clean, free of suspended solids and deleterious liquids and will be provided at no extra cost to the Owner. All applied water shall infiltrate directly without large puddle formation or surface runoff, and shall be observed by the Engineer.

F. Testing and Inspection: Employ at Contractor's expense an inspection firm acceptable to the Engineer to perform soil inspection services, staking and layout control, and testing and inspection of site grading and pavement work. Inspection and list of tests shall be reviewed and approved in writing by the Engineer prior to starting construction. All test reports must be signed by a licensed Engineer.

G. Test in-place base and surface course for compliance with requirements for thickness and surface smoothness. Repair or remove and replace unacceptable work as directed by the Engineer.

H. Surface Smoothness:
1. Test finished surface for smoothness using a 10-foot straightedge applied parallel with and at right angles to the centerline of the paved area. Surface will not be accepted if gaps or ridges exceed 3/16 of an inch.

I. QC/QA requirements for Pervious Pavement Media Bed Construction.
1. QC/QA activities are summarized in Table F-13.

Table F-13 QC/QA requirements for porous media bed construction.

Activity	Schedule
Contractor to notify Engineer for approval	24 hours in advance of start of work
Contractor to employ soil inspector acceptable to Engineer	NA
Contractor to employ staking and layout control inspector acceptable to Engineer	NA
Contractor to employ site grading inspector acceptable to Engineer	NA
Contractor to employ pavement work inspector acceptable to Engineer	NA
Contractor to notify Engineer for approval	after subgrade preparation, before construction of porous media bed
Contractor to notify Engineer for approval	after choker course placed, before placement of pavement

J. QC/QA requirements for Pervious Pavement Operations.

1. QC/QA requirements are summarized in Table F-14

Table F-14 QC/QA requirements during paving.

Activity	Schedule/ Frequency	Tolerance
Inspect truck beds for pooling (draindown)	every truck	NA
Take surface temp. behind joint heater	each pull	6°C (10°F) of compaction temp
Consult with Engineer to determine locations of butt joints	as needed	NA
Test surface smoothness & positive drainage with a 10 ft straightedge	after compaction	4.5 mm (3/16")
Consult with Engineer to mark core locations for QA testing	after compaction	NA
Hose test with at least 5 gpm water	after compaction	immediate infiltation, no puddling

END OF SECTION

PART 1 - GENERAL

1.1 CONTRACT REFERENCES

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1, which are hereby made a part of this section of the specifications.

B. RELATED SECTIONS

1. 31 30 00 Earthwork

2. 32 13 16 Cast-in-Place Concrete.

1.2 SUMMARY

A. This Section includes the following:

1. Precast concrete unit pavers for sidewalks, plazas, and other exterior unit paver treatments.

B. The work under this item shall include all excavation and furnishing and installing pavers where shown on the Contract Drawings. Installation shall be by a contractor and crew with:

1. At least five years of experience installing precast unit pavers on projects of similar nature or dollar cost.

2. A portfolio and references for 5 projects of 25,000 square feet or greater in size.

1.3 SUBMITTALS

A. Shop drawings, product drawings, and product data shall be submitted with the following samples:

1. Joint Material/Setting Bed Material: (1) 1-Pint container, supplier including location of source, and sieve analysis.

2. Concrete: provide testing data conforming to section 32 13 16

3. Aggregate Base: (1) 1-Gallon container, stone supplier including location of quarry, and sieve analysis.

B. Pavers: Supplier, manufacturers product data, (5) Full size samples, for each color, of each brick paver type shall be submitted to indicate color and shape selections. (1) of each paver shall be supplied broken in half.

C. Paver Test results shall be submitted from an independent testing laboratory for compliance to:

1. ASTM C936 - Standard Specification for Solid Concrete Interlocking Paving Units.

2. Resistance of 50 freeze thaw cycles, when tested in accordance with ASTM C67. In addition the paver must pass CSA-A231.2 freeze thaw test in saline solution without the use of sealers or other products applied to the paver. A test report must be submitted by the manufacturer. (Salt is the most common substance used for de-icing during the winter months.)

1.4 QUALITY ASSURANCE

A. Mockups: Paver and sidewalk sample panel width shall be as follows. This portion of that panel shall be installed as specified and detailed, the dimensions will be adjusted in the field as directed by the Engineer to achieve a full width sample; however, the minimum dimensions are 10' x 10':

1. Panel/mockup: Plaza Pattern – panel shall include: Full section depth, with portions of each material visible for approval

a. 20% of the panel shall be complete to the levelling course

b. 80% of the panel shall be complete to represent final product

2. Paver sample panel shall be installed in an area approved by the Engineer and shall be protected throughout duration of the project. The sample panel shall be maintained with material exposures as specified above for the duration of the project.

3. The sample panel will be used to determine joint sizes, lines, laying pattern(s), color(s), and other design features. The approved paver material samples shall be the standard for which all supplied pavers shall be judged against.

4. These panels shall be the standard from which the workmanship will be judged.

B. Workmen: All workmen shall be thoroughly trained and experienced in the necessary crafts, and completely familiar with the specified requirements and the methods needed for proper performance of the work of this section

1.5 PROJECT CONDITIONS

A. Cold-Weather Protection: Do not use frozen materials or build on frozen subgrade.

B. Rain and inclement weather: Protect the base and leveling courses from rain events. Protect the paver installation from rain events until the joint material is in place.

PART 2 - PRODUCTS

2.1 CONCRETE PAVER

A. Product shall be: Standard Heavy Duty Paver (4”x8”x 3-3/8”)

1. Manufactured by Unilock, 35 Commerce Dr, Uxbridge, MA 01569, tel. 800-864-5625 or approved equivalent

2. Product name: Standard Heavy Duty Paver by Unilock

3. **Finish Type 1**: Umbriano – Color: French grey (see plans for location)

4. **Finish Type 2**: Premier Smooth finish – Color: Granite Blend (see plans for location)

B. Concrete Base : comply with specification 32 13 16, Cast In Place Concrete

C. Joint Material:

1. Uni-Lock® Unicare Polymeric Sand Plus (for heavy traffic areas). Color: Gray.

2. Alliance Gatormaxx G2 Polymeric Sand

3. Approved equivalent

D. Setting Bed:

1. The setting bed shall be clean, non-plastic and free from deleterious or foreign material. Natural or manufactured from crushed rock and sand is suitable. Unsuitable materials include limestone screenings and stone dust. The setting bed sand shall conform to ASTM C-33, ASTM C-136 Concrete Sand meeting the gradation of ASTM C-33 is acceptable.

E. Aggregate Base:

1. As shown on the detail

PART 3 - EXECUTION

3.1 INSTALLATION

A. Paver Installation:

1. The Contractor shall not use any pavers with chips, cracks, voids, discolorations, and other defects that might be visible or cause staining in finished work. Efflorescence shall be cause for rejection.

2. Along all edges where pavers do not abut any other pavement, curbing, structures, or any stable materials, the Contractor shall install edging in order to retain pavers, regardless if edging is not identified on drawings and paid for under this item at no extra cost.

3. Do not use unit pavers with chips, cracks, voids, discolorations, or other defects that might be visible or cause staining in finished work. It is the responsibility of the Contractor to remove and replace unit pavers that are loose, chipped, broken, stained, discolored, or otherwise damaged or if units do not match adjoining units as intended. Provide new units to match adjoining units and install in same manner as original units, with same joint treatment to eliminate evidence of replacement.

4. Mix pavers from several pallets or cubes, as they are placed, to produce uniform blend of colors and textures.

5. Provide final protection and maintain conditions in a manner acceptable to the Engineer that ensures that unit paver work is without damage or deterioration at the time of Substantial Completion. The Contractor shall replace any damaged pavers identified by the Engineer during final inspection.

B. Subgrade:

1. Engineer to approve subgrade, compacted density, and elevations conform to the specifications.

2. Shall be stripped of all topsoil and other objectionable materials to the grades specified.

3. All subdrainage of underground services within the pavement area shall be complete.

4. Proof rolled to 95 percent Standard Proctor Density in the presence of the Engineer, with soft spots or localized pockets of objectionable material excavated and properly replaced with approved aggregate base.

5. Shall be trimmed to within 0 to ½ in. of the proposed finished grades with the surface of the prepared subgrade deviating no more than 1/2 in. from the bottom edge of a 10 ft. straight edge laid in any direction.

6. Shall be protected from precipitating weather events.

7. Shall be protected from traffic, with repairs of any resulting damage the responsibility of the Contractor.

8. Under no circumstances shall further pavement construction proceed until the Owner and/ or the Engineer has approved the subgrade.

C. Concrete Base Installation:

1. The concrete base shall be installed as shown on the details. The concrete base shall be finished to within 0 to 1/16-inch of the specified grade. the surface of the prepared concrete base shall not deviate more than 1/8-inch from the bottom edge of a 10 ft. straight edge laid in any direction.

2. Provide a finished surface for the concrete to the dimensions and details as shown on the plans. aggregate base, bedding, joint materials

D. Aggregate Base:

1. Place aggregate base, compact to 100 percent of ASTM D 1557 maximum laboratory density, and screed to depth indicated.

E. Setting Bed:

1. Place leveling course and screed to a thickness of 3/4" to 1”

2. Moisture content and density shall be uniform until pavers are set and compacted.

3. Shall be finished 0 in.to 1/16 in. of the specified grade and un-compacted.

4. Treat leveling course with herbicide to inhibit growth of grass and weeds.

5. Under no circumstances shall further pavement construction proceed until the Owner and/ or the Engineer has approved the subgrade, base, and setting bed.

F. Paver Installation:

1. The Contractor shall not install any pavers until after the Engineer has approved the paver sample panels, subgrade, aggregate base, and the setting bed.

2. Pavers shall be installed in patterns as shown on the Contract Drawings. Pavers shall be mixed from several pallets or cubes as they are placed to produce a uniform blend of colors and textures.

3. Where standard patterns do not apply, the Contractor shall obtain design modifications from the Engineer prior to the installation of the pavers.

4. Set pavers with a joint spacing of one width of a trowel blade, using caution not to clink pavers together and being careful not to disturb leveling base. Place pavers hand tight. Use string lines to keep straight lines.

5. Install edge restraint as detailed.

G. Paver Cutting:

1. The design intent is to avoid and minimize cuts and slivers. Cutting is required to negotiate radius sections and angle points such as the parallel parking area.

2. Cut pavers with motor-driven masonry wet-saw equipment to provide clean, sharp, unchipped edges and to reduce dust.

3. Use of a block splitter or chopsaw or other dry motor driven cutting equipment will not be acceptable.

4. Cutter to fit accurately, neatly, and without damaged edges.

5. Cut units to provide the pattern indicated and to fit adjoining work neatly. Use full units without cutting where possible.

6. Pavers shall be cut to prevent sliver pieces less than an approximate ½ paver in width or length by adjusting the solidier course and running bond patterns.

7. Cut pieces shall be located in the middle of the soldier course and the running bond patterns as opposed to the beginning, end or outer edges.

H. Paver Vibration and Joint Sweeping:

1. Vibrate pavers into leveling course with a low-amplitude plate vibrator capable of a 4,500lbf compaction force at 80 to 90 Hz.

2. Insulate paver surface from vibrator with ¼" to ½" plywood protective layer between the pavers and the vibratory mechanism.

3. Do not allow traffic on installed pavers until joint filler is vibrated into joints.

4. Spread joint material and fill joints immediately after vibrating pavers into leveling course. Vibrate pavers and add joint material until joints are completely filled, then remove excess.

5. Perform vibratory passes after every joint sweeping exercise until the joints are full of joint material. Vibrate under the following conditions:

6. After edge pavers are installed and there is a completed surface or before surface is exposed to rain.

I. Before ending each day's work, fully compact installed pavers within 36 inches of the laying surface. Cover the open layers with non-staining plastic sheets overlapped 48 inches on each side of the laid face to protect it from rain.

END OF SECTION 32 14 13

PART 1 - GENERAL

1.1 REFERENCE 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 RELATED SECTIONS

A. 31 30 00 – Earthwork

B. 05 52 14 – Handrails for Stairs

1.3 SUMMARY

A. Work under this Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes.

1. Concrete walks, curbs, stairs, cheek walls, and slabs beneath pavers

2. Foundations for light poles and boardwalk terrace

3. Slabs for furnishings

1.4 MEASUREMENT AND PAYMENT

A. Welded wire fabric reinforcement shall be placed on chairs prior to pouring concrete, inspected and approved by the engineer. Concrete placed without prior approval of the welded wire fabric will be rejected.

B. Diamond load plates shall be inspected and approved by the engineer. Concrete placed without prior approval of the diamond load plates will be rejected.

C. Provide a line item on schedule of values, paid on estimated percent complete as detailed and specified.

1.5 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Design Mixtures: For each concrete mixture.

C. Shop Drawings: For steel reinforcement and formwork.

D. Material test reports and certificates.

1.6 QUALITY ASSURANCE

A. 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.

1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

B. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:

1. American Concrete Institute (ACI):

a. ACI Detailing Manual SP-66.

b. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."

c. ACI 301, "Specification for Structural Concrete,"

d. ACI 302.1R-04 Guide for Concrete Floor and Slab Construction.

e. ACI 360R-06 Guide for Design of Slabs-on-Ground.

2. American Society for Testing and Materials International (ASTM):

a. A 36 Standard Specifications for Carbon Structural Steel.

b. A 108 Standard Specifications for Steel Bar, Carbon and Alloy, Cold Finished.

C. Workmen: All workmen shall be thoroughly trained and experienced in the necessary crafts, and completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.

D. Pre-installation Conference: Conduct conference at Project site.

PART 2 - PRODUCTS

2.1 FORM-FACING MATERIALS

A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.

B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.

2.2 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60 deformed.

1. Galvanized Reinforcing Bars: ASTM A 767/A 767M, Class I or II zinc coated after fabrication and bending.

B. Galvanized-Steel Welded Wire Reinforcement: ASTM A 185, plain, fabricated from galvanized steel wire into flat sheets.

C. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice."

2.3 CONCRETE MATERIALS

A. Mix designs:

1. Class XX conforming to Section 601 and M.02 of the Standard Specifications for Highways and Bridges.

Minimum Cementitious Content, lb/yd^3	500
Maximum Cementitious Content, lb/yd^3	700
Maximum w/cm	0.42
Acceptance Criteria	
Consistency Range[3], AASHTO T119 Slump, in.	2-4
AASHTO T23 Minimum Compressive Strength, psi	
28 days	4000
56 days	----
Air Content Range, AASHTO T152, %	5-9
Concrete Prequalification Criteria[3]	
Rapid Chloride permeability, AASHTO T277, coulomb (max.)	
28-day standard cure	----
56-day standard cure	----
Surface Resistivity, (4x8 cyl.) AASHTO T 358, (k -cm) (min.)	
28-day standard cure	----
56-day standard cure	----
Maximum 28-day drying shrinkage[6], AASHTO T 160, %	----
Aggregate Prequalification Criteria[7]	
Maximum 14-day expansion ASTM C 1567, %	0.1

Footnote 3: Slump range measured at the point of discharge. Slump shall not exceed 4 inches for surfaces sloped greater than 4 percent unless otherwise approved by the Engineer. If additional workability is desired the Engineer may allow an increase of the

maximum specified slump to 6 inches if an AASHTO M194 Type A - Water Reducing Admixture is used, or an increase of up to 9 inches if an AASHTO M194 Type F or G - High Range Water Reducing admixture is used.

2. Minimum Compressive Strength: As specified herein or detailed at 28 days.

B. Cement:

1. Portland cement shall conform both to the chemical and physical requirements of AASHTO M85Cement shall not exhibit a flash set or cause an abnormal initial rise of temperature when mixed with water. It shall maintain its full plasticity and fluidity during the period required for placing the concrete.

2. The cement shall not contain more than 0.60 percent by weight of alkalies, calculated as the percentage of Na2O plus 0.658 times the percentage of K2O, when determined by either direct intensity flame photometry or by the atomic absorption method. The instrument and procedure used shall be qualified as to precision and accuracy in accordance with the requirements of ASTMC114.

3. The Engineer may raise the maximum alkali content of the cement to 0.75 percent for

4. Concrete that uses non-expansive aggregate or aggregate considered innocuous based upon acceptable values for test methods ASTM C1260 or AASHTO T303. Test results must be submitted and approved by the Engineer before this is permitted.

5. To propose an increase to maximum alkalies, the Contractor must submit an independent testing laboratory results of ASTM C1260; “Potential Alkali Reactivity of Aggregates (Mortar Bar Method)” or AASHTO T303; “Accelerated Detection of Potentially Deleterious Expansion of Mortar Bars Due to Alkali-Silica Reaction.” For either test, mean expansion of the test specimens of less than 0.10 percent at 16 days from casting will suffice to indicate that the aggregate is non-reactive and will validate the use of a cement which has an alkali content not to exceed 0.75 percent by weight of alkalies.

6. If the ASTM C1260 or AASHTO T303 test results do not indicate that the aggregate is nonreactive or are inconclusive, the Contractor may submit to the Engineer results of ASTM C289; “Potential Alkali-Silica Reactivity of Aggregates (Chemical Method),” ASTM C227; “Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar Bar Method),” and ASTM C295; “Petrographic Examination of Aggregates for Concrete.”

7. Petrographic analysis in accordance with ASTM C595 shall identify the constituents of the fine and coarse aggregate. Fine and coarse aggregate containing more than the following quantities of constituents shall be considered potentially reactive:

    a. Optically strained, microfractured, or microcrystalline quartz exceeding 5.0 percent (a common constituent of granite and granite gneiss).
    b. Chert or chalcedony exceeding 3.0 percent.
    c. Tridymite or cristobalite exceeding 1.0 percent.
    d. Opal exceeding 0.5 percent.
    e. Natural volcanic glass in volcanic rocks exceeding 3.0 percent.

8. Mortar bar expansion measurements (ASTM C227) are to be made at three months and at six months and the results shall be submitted to the Engineer at those times. The guidelines in the appendix to ASTM C33; “Standard Specification for Concrete Aggregates“ will be followed to determine whether an aggregate is non-expansive or innocuous. The guidelines state that expansion will be considered excessive at three months if it exceeds

0.05 percent, but that an expansion greater than 0.05 percent at three months will not be considered excessive if the sixmonth expansion remains below 0.10 percent.

9. The petrographic examination (C295), chemical method (C289), and the six-month mortar bar expansion (C227) will be definitive. However, interim acceptability based on the petrographic analysis, the chemical method and the three-month mortar bar expansion will be considered until the six-month test is complete. Such interim acceptance will be granted only when the previous year's six-month mortar bar expansion results were satisfactory.

10. Documentation from an independent laboratory certifying that the aggregate is nonexpansive and innocuous must be submitted to the Engineer annually. An acceptable independent testing laboratory shall conduct each test.

11. Analysis to document alkali content and conformance to AASHTO M85 must be included on all mill test reports submitted to this office.

12. The autoclave expansion shall not exceed 0.50 percent when tested in accordance with AASHTO T107.

C. Aggregates: Per Standard Specifications material M.01.05, M.01.05.3, M.01.05.4, and M.02.02:

1. Definitions of Quarry Rock and Gravel Sources.

   a. Quarry Rock Source. A quarry rock source shall mean a distinct, stated location at which extensive, intact, consolidated bedrock of igneous, metamorphic, or sedimentary type, is or may be exposed by clearing and removal of overlying soil and boulder cover material, and from which exposed bedrock is then extracted by blasting or other mechanical means from a "working face," bench, or floor level, and reduced in size for final crushing and processing for the production of crushed quarry rock aggregates.
   b. Gravel Source. A gravel source shall mean a distinct, stated location at which clay to boulder-sized materials, which may occur as mixed-size or stratified natural deposits, are or may be exposed by clearing, stripping, and removal of vegetation, topsoil, and organic soils, and are then excavated using conventional mechanical excavating equipment, for the production of crushed and/or screened gravel aggregates.

2. Definitions of Aggregate Types. Coarse aggregate shall be classified as "Crushed Quarry Rock" or "Processed Gravel" as defined below.

   a. Crushed Quarry Rock. Crushed quarry rock shall be coarse aggregate consisting of 100 percent crushed bedrock, produced by crushing bedrock extracted from a single-source quarry location. Crushed quarry rock aggregate shall be processed separately from overburden soil deposits, shall not contain crushed or uncrushed gravel, and shall be free of deleterious material or soft, friable particles.
   b. Processed Gravel. Processed gravel shall be coarse aggregate produced by crushing and/or screening naturally occurring boulder, cobble, and gravel-sized materials extracted from a single source location. Processed gravel shall be free of deleterious material or soft, friable particles.

3. Each aggregate supply submitted for use in bituminous or Portland cement concrete mixes shall have been produced from either quarry rock or natural gravel, obtained from one distinct quarry source or natural gravel source whose location and boundaries are defined.

4. Blends of gravel aggregates from more than one source, blends of crushed quarry rock from more than one source, or blends of gravel with crushed rock which are produced by mixing these materials at the crusher feed, shall not be acceptable for use on State projects.

5. Controlled blending of approved aggregates at the asphalt or concrete production plants, of different aggregate types and/or aggregates from different sources, will be allowed, provided that each aggregate type from each separate source is stockpiled in a separate bin at the production plant; and, the Los Angeles abrasion and soundness values of each aggregate type from each source meets the criteria established for that type and for the intended asphalt pavement application or concrete use.

6. Fine aggregate for concrete shall conform to the requirements of AASHTO M6 and shall consist of natural sand, manufactured sand produced from larger aggregate, or a combination thereof. Manufactured sand shall be graded with a minimum percentage of flat elongated particles. All fine sand shall consist of hard, strong, durable particles which are free from coatings or any injurious materials and injurious amount of clay, loam, or other deleterious substances. In addition, the fine aggregate shall not contain substances which, when mixed in Portland cement concrete, produce an unacceptable level of chloride ions in the final product. Substances that produce chloride ions shall be considered deleterious material. Any fine aggregate may be rejected if it is determined by the Engineer to contain sufficient amounts of unsound or deleterious material to be harmful.

7. Coarse aggregate shall consist of screened gravel, crushed gravel, or crushed quarry rock. Coarse aggregate for concrete shall conform to the requirements of AASHTO M80, with the exception that grading shall conform to the requirements in the following tabulation:

Gradation of Coarse Aggregate
In Terms of Amounts Finer than Each Laboratory Sieve
Percent by Weight

	Sieve Sizes								
Aggregate Size	2"	1½"	1"	3/4"	½"	3/8"	No.4	No.8	No. 16
1½"	100	85-100	---	35-70	---	10-30	0-5	---	---
1"	---	100	85-100	---	20-55	---	0-5	---	---
3/4"	---	---	100	85-100	---	20-55	0-10	0-5	---
½"	---	---	---	100	85-100	40-75	5-25	0-10	---
3/8"	---	---	---	---	100	85-100	20-55	5-30	0-10

Coarse aggregate for Portland cement concrete shall have a percent loss of not more than the following amounts as determined by AASHTO T96 (Los Angeles Abrasion Test).

Type of Coarse Aggregate	**Percent Loss (max.)**
Crushed Quarry Rock	45
Screened or Crushed Gravel	45

a. Soundness, sodium sulfate: Aggregate materials shall have a maximum percentage loss of 12 percent as determined by the Sodium Sulfate Test, AASHTO T104.

b. Aggregates shall be resistant to degradation by freeze and thaw and resistant to acid attack.
   1) If lithology or physical character indicate that aggregates may be susceptible to degradation by freeze-thaw or acid attack, or potentially adversely reactive with Portland cement, the Owner may require additional appropriate laboratory testing be performed to demonstrate that the aggregate is suitable for the intended use.

D. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.

2. Retarding Admixture: ASTM C 494/C 494M, Type B.

3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.

4. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.

5. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.

6. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.

E. Water: ASTM C 94/C 94M and potable.

2.4 EVAPORATIOIN RETARDERS

A. Comply with ACI 302 to reduce rapid moisture loss, prevent plastic shrinkage, & cracking.

2.5 VAPOR RETARDERS

A. Plastic Vapor Retarder: ASTM E 1745, Class A. Include manufacturer's recommended adhesive or pressure-sensitive tape.

B. Plastic Vapor Retarder: ASTM E 1745, Class B. Include manufacturer's recommended adhesive or pressure-sensitive tape.

C. Plastic Vapor Retarder: ASTM E 1745, Class C, or polyethylene sheet, ASTM D 4397, not less than 10 mils thick. Include manufacturer's recommended adhesive or pressure-sensitive joint tape.

2.6 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.

B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.

C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

D. Water: ASTM C 94/C 94M and potable.

E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

F. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, non-dissipating [certified by curing compound manufacturer to not interfere with bonding of floor covering].

G. Clear, Solvent-Borne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

H. Clear, Waterborne, Membrane-Forming Curing and Sealing Compound: ASTM C 1315, Type 1, Class A.

2.7 RELATED MATERIALS

A. Diamond shaped load plate: 1/4" and 3/8" saw cut from hot rolled steel plate meeting ASTM A 36. 3/4" saw cut from cold rolled steel plate for acceptable tolerances meeting ASTM 108-03 grade 1018.

B. Pocket former: High density plastic with internal collapsible fins and spacer that hold diamond shaped load plate in correct position and creates a void to its vertical faces. This void, in addition to its tapered shape, shall allow for differential movement and shall prevent horizontal stress accumulation at joint, thus reducing likelihood of random cracking.

C. Refer to ACI 302.1R-04 for selection of plate size and spacing.

D. Dimensions and spacing of plates:

1. 5” to 6” slab thickness: 1/4" by 4-1/2" by 4-1/2" at 18” on center

2. 7” to 8” slab thickness: 3/8" by 4-1/2" by 4-1/2" at 18” on center

3. 9” to 11” slab thickness: 3/4" by 4-1/2" by 4-1/2" at 20” on center

E. Expansion joint material: non-extruding and resilient non-bituminous types of preformed expansion joint fillers meeting AASHTO-M153

F. Expansion joint filler: Polyurethane sealant meeting ASTM C-920, Sikaflex Self-Leveling or equivalent.

2.8 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.9 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and ASTM C 1116, and furnish batch ticket information.

1. When air temperature is between 85 and 90 deg F reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F , reduce mixing and delivery time to 60 minutes.

2.10 SEALER

A. Provide a ready-to-use water-based, VOC compliant silane/siloxane water repellent and “chloride screen” for the protection of concrete and masonry surfaces such as Prosco Saltguard WB.

1. White, odorless liquid

2. Less than 25 grams per Liter Low Solids Coating. Complies with all known national, state and district AIM VOC regulations.

B. Performance requirements:

1. NCHRP 244 Series II Reduction in Chloride Ion Absorption

a. 90 percent

2. NCHRP 244 Series IV Reduction in Chloride Ion Absorption after weathering

a. 85 percent

3. ASTM E 96 Water Vapor Transmission

a. 90% retained

4. ASTM C 140 Water Absorption Immersion

a. 90% broom-finished concrete

5. ASTM E 514 Wind-Driven Rain Penetration (percent reduction of control)

a. 90 %

6. ASTM C 672 Scaling Resistance Exposure to De-Icing Chemicals and Freeze/Thaw Cycles

a. no mass loss; no scaling.

7. ASTM G 154 Accelerated Weathering Resistance

a. no peeling, yellowing or blistering on precast concrete after 2500 hours.

8. Resistance to Sunlight

a. Excellent

9. Resistance to Alkalinity

a. Excellent

PART 3 - EXECUTION

3.1 SUBGRADE

A. The subgrade for the sidewalks and driveways shall be shaped parallel to the proposed surface of the sidewalks and driveways and thoroughly compacted. All depressions in the subgrade shall be filled with suitable material and again compacted until the surface is smooth and hard. Prior to the placement of the subbase, the Contractor shall inspect the prepared subgrade to ensure that it is in conformance with the required grade.

3.2 AGGREGATE BASE

A. An aggregate subbase shall be placed upon subgrade. After being compacted thoroughly, the subbase shall be to thickness detailed and parallel to the proposed surface of the sidewalk. Prior to the placement of the cement concrete, the Contractor shall inspect the prepared subbase material to ensure that it is in conformance with the required grade and cross-section. Subbase material that is not in accordance with the plans or specifications shall be reworked or replaced. When placing cement concrete, the compacted subbase shall not be frozen or have standing water.

3.3 FORMWORK

A. Side forms and transverse forms shall be smooth, free from warp, of sufficient strength to resist springing out of shape, of a depth to conform to the thickness of the proposed sidewalk or wheelchair ramp and of a type satisfactory to the Engineer.

B. All mortar or dirt shall be completely removed from forms that have been previously used. The forms shall be well staked and thoroughly graded and set to the established lines with their upper edge conforming to the grade of the finished sidewalk or wheelchair ramp which shall have sufficient pitch to the roadside edge to provide for surface drainage.

C. All wheelchair ramp joints and transition sections which define grade changes shall be formed staked and checked for dimension, grade and slope conformance prior to placing cement concrete.

D. All forms shall be oiled before placing concrete.

E. Design, erect, shore, brace, and maintain formwork according to ACI 301 to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.

F. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.

G. Chamfer exterior corners and edges of permanently exposed concrete.

3.4 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

3.5 VAPOR RETARDERS

A. Plastic Vapor Retarders: Place, protect, and repair vapor retarders according to ASTM E 1643 and manufacturer's written instructions.

1. Lap joints 6 inches and seal with manufacturer's recommended tape.

3.6 STEEL REINFORCEMENT

A. Welded wire fabric shall be sat on chairs

B. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.

1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.

3.7 JOINTS

A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.

B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.

C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:

1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.

2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.

3.8 CONCRETE PLACEMENT

A. Preformed expansion joint filler shall be placed adjacent to or around existing structures as directed.

B. Detectable warning panels conforming to the plans shall be securely incorporated into the work by means acceptable to the Engineer.

C. On the foundation as specified above, the concrete shall be placed in such quantity that after being thoroughly consolidated in place it shall be the depth specified on the details. No finishing operation shall be performed while free water is present. Finishing operations shall be delayed until all bleed water and water sheen has left the surface and the concrete has started to stiffen. After water sheen has disappeared, edging operations, where required, shall be completed. After edging and joining operations, the surface shall be floated. Immediately following floating, the surface shall be steel-troweled. If tooled joints are specified, the edges shall be rerun before and after troweling to maintain uniformity. After troweling, the surface shall be brushed by drawing a soft-bristled push broom with a long handle over the surface of the concrete to produce a nonslip surface.

D. In conveying the concrete from the place of mixing to the place of deposit, the operation shall be conducted in such a manner that no mortar will be lost, and the concrete shall be so handled that the concrete will be of uniform composition throughout, showing neither excess nor lack of mortar in any one place.

E. The surface of all concrete sidewalks shall be as scored or saw cut per the plans and details, or into 5’ x 5’’ (25sqft) panels.

F. The application of neat cement to surfaces in order to hasten hardening is prohibited.

G. The finishing of concrete surface shall be done by experienced and competent cement finishers.

H. Cold-Weather Placement: Comply with ACI 306.1.

I. Hot-Weather Placement: Comply with ACI 301.

3.9 FINISHING FORMED SURFACES

A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces not exposed to public view.

B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities.

1. Apply to concrete surfaces exposed to public view. Retain rubbed finish in first paragraph below with smooth-formed finish above.

C. Rubbed Finish: Apply the following to smooth-formed finished as-cast concrete where indicated:

1. Smooth-Rubbed Finish: Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or another abrasive until producing a uniform color and texture. Do not apply cement grout other than that created by the rubbing process.

2. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix one part portland cement to one and one-half parts fine sand with a 1:1 mixture of bonding admixture and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Scrub grout into voids and remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray for at least 36 hours.

3. Cork-Floated Finish: Wet concrete surfaces and apply a stiff grout. Mix one part portland cement and one part fine sand with a 1:1 mixture of bonding agent and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Compress grout into voids by grinding surface. In a swirling motion, finish surface with a cork float.

D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.10 FINISHING FLOORS AND SLABS

A. General: Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.

B. Scratch Finish: While still plastic, texture concrete surface that has been screeded and bull-floated or darbied. Use stiff brushes, brooms, or rakes to produce finished profile amplitude of 1/4 inch in 1 direction.

C. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraightening until surface is left with a uniform, smooth, granular texture.

D. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.

E. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces indicated. While concrete is still plastic, slightly scarify surface with a fine broom.

1. Comply with flatness and levelness tolerances for trowel finished floor surfaces.

F. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, and ramps, and elsewhere as indicated.

3.11 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to unformed 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.

C. Cure concrete according to ACI 308.1, by one or a combination of the following methods:

1. Moisture Curing: Keep surfaces continuously moist for not less than seven days.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

   a. After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer. Curing and sealing compound in subparagraph below is usually for floors and slabs and may act as a permanent surface finish.

4. Curing and Sealing Compound: Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.12 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect’s approval.

B. Remove and replace concrete pavement that is broken, damaged, or defective or that does not comply with requirements in this Section.

C. Protect concrete from damage. Exclude traffic from pavement for at least 14 days after placement.

D. Maintain concrete pavement free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than two days before date scheduled for Substantial Completion inspections.

3.13 FIELD QUALITY CONTROL

A. Testing and Inspecting: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.

1. Testing Services: Tests shall be performed according to ACI 301.

3.14 SEALING

A. Before applying, read “Preparation” and “Safety Information” sections in the Manufacturer’s Product Data Sheet. Refer to the Product Data Sheet for additional information about application. Do not dilute or alter unless required by Manufacturers Instructions. Mix well before application.

B. Apply Saltguard® WB in a single saturating application. Use enough to keep the surface wet for 2 to 3 minutes before penetrating. Do not over apply.

C. Broom out all puddles thoroughly until they penetrate the surface. Wipe up all excess material.

D. Apply a single coat. Use enough to completely wet the surface without creating drips, puddles or rundown. Do not over apply. Test for application rate.

E. Protect from irrigation, liquid spills, and rain events for a minimum of 6 hours following treatment. Treated surfaces will be ready for pedestrian and vehicle traffic in 24 hours. Water repellency of treated surfaces will increase for up to 14 days after application.

END OF SECTION

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. Work under this section includes providing all materials, equipment, and services necessary to furnish and deliver work as shown on the Drawings, as specified, and as required by job conditions including, but not limited to the following:

1. Site Bench

2. Trash and Recycling Receptacles

3. Removable Bollard

B. Related Sections:

1. Section 32 13 16 Cast-in-Place Concrete.

1.3 SUBMITTALS

A. In accordance with the General Requirements, submit samples, materials certifications, manufacturer's product data and test reports as hereinafter required.

B. Shop drawings for all site furnishings.

PART 2 - PRODUCTS

A. SITE BENCH –

1. Manufactured by Dumor Inc. Mifflintown, PA 17059, tel. 800-598-4018

2. Model: Bench 58 – SER – 3AR - 8 foot option with middle handrail

3. Provide Shop Drawings for approval

4. Or approved equivalent

B. TRASH AND RECYLING RECEPTACLES –

1. Manufactured by Big Belly LLC

2. Model: The Big Belly Kiosk – Standard Capacity Double Station with foot pedal (SC5.5) with Waste and Recycling icons.

3. Provide Shop Drawings for approval

C. REMOVABLE BOLLARD – Basis of Design:

1. Manufactured by Vestil Manufacturing Corp, 2999 North Wayne Street, Angola, IN, tel. 260-665-7586
2. Model: BOL-OR-40-BK, 39 ½" Ht., 4 ½" diameter.
3. Or approved equivalent
4. Provide Shop Drawings for approval, see details for extended frost footing with drain.

D. INSTALLATION - GENERAL

1. All items shall be assembled and erected per manufacturer's recommendation and located as shown on the Contract Drawings

PART 3 - EXECUTION (NOT USED)

END OF SECTION 32 33 00

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Topsoil
2. Seeding
3. Sodding

1.2 RELATED WORK SPECIFIED IN OTHER SECTIONS

A. Section 31 10 00 – Site Preparation

B. Section 31 30 00 – Earthwork

C. Section 32 93 00 – Plants

1.3 DEFINITIONS

A. Finish Grade: Elevation of finished graded topsoil except that sod needs to account for the sod thickness so that seed and sod are established in a flush condition.

B. Topsoil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.

C. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.

D. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

E. Weeds: Vegetative species other than specified species to be established in given area.

F. Growing Season: May 1 to October 1

1.4 SUBMITTALS

A. All testing and submittals are at the contractor's expense

B. Product data sheets, specifications, performance data, physical properties for the following:

C. Topsoil
1. Dry samples:
a. Existing soil – 1 gallon sample of the topsoil after amendments
b. Proposed soil – 1 gallon sample
2. Tests (all soils) conforming to specification requirements

3. Particle size - Particle size analysis of the topsoil will be determined by ASTM F 1632, Particle Size Analysis conducted by a laboratory accredited by the American Association of Laboratory Accreditation. Test must be recent and approved prior to delivery of material to the site.
   a. Organic matter content shall be submitted prior to seeding – by loss on ignition of oven-dried samples. Test samples shall be oven-dried to a constant weight at a temperature of 230F +/-9F

      1) If organic matter is tested and the soil supplemented 6 weeks or earlier than seeding, testing shall be provided again 2 weeks prior to seeding.

   b. Nutrient analysis - Soil pH and nutrient analysis using the modified Morgan soil test extractant for soil available P, K, Ca and Mg using University of Connecticut, Department of Plant Science, Soil Nutrient Analysis Laboratory.
   c. Soluble salt content measuring EC with a conductivity meter in a soil-water extract using a soil to solution ratio of 1:4.3.4. Organic matter content in the topsoil to be determined by loss of weight on ignition on an overdry sample.

D. Seed
   1. Seed mixes
   2. Certification of grass seed and sod showing compliance with state and federal seed laws.
   3. National Turfgrass Evaluation Program (NETP) overall performance rank per species

E. Sod
   1. Producer's Certificate: Certify that sod grass meets or exceeds specified requirements.

F. Fertilizer: MSDS and product data

G. Seeding Schedule: Indicating anticipated planting dates for each.

1.5 QUALITY ASSURANCE

A. The Owner reserves the right to require testing and reject for cause any material not meeting material specifications by tests in accordance with methods adopted by the Associate of Official Agricultural Chemists. Costs for these tests shall be borne by the Contractor.

B. Sod Producer: Company specializing in products as specified in this Section with minimum 5 years of experience.

C. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when seeding is in progress with minimum 5 years of experience.

D. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory such as the UMASS Agricultural Extension Service
   1. Report suitability of topsoil for lawn growth. State-recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory topsoil.

E. Seed and Sod species shall be National Turfgrass Evaluation Program (NETP) overall performance ranked as required in 2.0 PRODUCTS.

F. Acceptance of the lawn areas shall be established by the Landscape Architect in writing, following the completion of all maintenance work requirements as specified herein, and following the correction of all punch list deficiencies by the Contractor

G. Analysis and standards - Package standard products with manufacturer certified analysis. For other materials, provide analysis by recognized laboratory made in accordance with methods established by the Association of Official Agricultural Chemists, wherever applicable.

1.6 TOLERANCES FOR GRADES

A. Uniformly grade areas within limits of grading under this section, including adjacent transition areas. Smooth finished surfaces within specified tolerances, compact with uniform levels or slopes between points where elevations are indicted, or between such points and existing grades.

B. Shall be free from irregular surface changes, and as follows:

1. Topsoil shall be 6” depth minimum but not more than 8” for lawn areas. Pay limit for topsoil is 6” depth. Topsoil placed at greater depths is at no additional cost to the contract.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver grass seed mixture in new, sealed, containers showing percentage of seed mix, year of production, net weight, date of packaging, and location of packaging. Seed in damaged packaging is not acceptable.

B. Deliver sod moist as rolls and protected from wind damage

C. Deliver only the quantity of sod that can be laid, watered, and protected throughout the installation.

D. Deliver fertilizer in sealed waterproof bags showing weight, chemical analysis and name of manufacturer.

1.8 WATERING

A. Sod or seed shall be watered and protected from dehydration.

1.9 PRODUCT WARRANTY

A. Warranty lawns until final acceptance.

PART 2 - PRODUCTS

2.1 TOPSOIL

A. Particle size - Particle size analysis of the topsoil will be determined by ASTM F 1632, Particle Size Analysis conducted by a laboratory accredited by the American Association of Laboratory Accreditation. Test must be recent and approved prior to delivery of material to the site and meet the following:

1.

Sieve Size	Percent Passing
No. 10	85-100
No. 40	35-85
No. 200	10-35
<20µm	<5
No stones over 3/4 inch in diameter	

B. Organic matter content - by loss on ignition of oven-dried samples. Test samples shall be oven-dried to a constant weight at a temperature of 230F +/-9F:
   1. 5% minimum 2 weeks prior to seeding
   2. Submit organic content reports 2 weeks prior to seeding.

C. Nutrient analysis - Soil pH and nutrient analysis using the modified Morgan soil test extractant for soil available P, K, Ca and Mg using University of Massachusetts, Agricultural Extension Service.

D. Soluble salt content measuring EC with a conductivity meter in a soil-water extract using a soil to solution ratio of 1:4.3.4. Organic matter content in the topsoil to be determined by loss of weight on ignition on an overdry sample.

E. Shall be free of clods, vegetative matter such as sod and wood, contaminants that affect plant growth, foreign material (concrete, glass, etc.) and environmental contaminants that include volatile organic compounds, total petroleum hydrocarbons, metal elements and pesticides that will impact reconstruction of the athletic fields and their surrounds.

F. Shall have a soil pH range of 6.4-7.0

G. Available phosphorus of greater than 5 lbs. per acre as determined by the modified Morgan extractant. If the soil pH and soil available phosphorus is below 6.4 and 5 .lbs. per acre respectively, then agricultural limestone and fertilizer phosphorus are to be added to the topsoil to achieve the minimum above before reuse or delivery to the site.

H. The original source of the topsoil borrow shall be from an A or Ap horizon of a naturally occurring soil and not compounded by intentional mixing of component soils.

2.2 SEED AND SOD

A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Journal of Seed Technology; Rules for Testing Seeds" for purity and germination tolerances.

1. Seed Shall be Hart's Turf Pro Heat & Drought Mixture as supplied by Chas C. Hart Seed Company, 304 Main Street, Wethersfield, CT 06109, p. 860.529.2537, or approved equal containing:
   a. 30% Falcon IV Tall Fescue
   b. 30% Nightcrawler Rhizomatous Tall Fescue
   c. 20% DoubleTime Tetraploid Perennial Ryegrass*
   d. 10% Diva Kentucky Bluegrass
   e. 10% Mercury Kentucky Bluegrass

B. Landscape bed seed mix shall be New England Wildflower Mix as manufactured by New England Wetland Plants Inc., Amherst, MA, tel. 413-548-8000, or approved equivalent.

2.3 INORGANIC SOIL AMENDMENTS

A. Lime: ASTM C 602, agricultural limestone containing a minimum of 80 percent calcium carbonate equivalent and as follows:
   1. Class: O, with a minimum of 95 percent passing through No. 8 sieve and a minimum of 55 percent passing through No. 60 sieve.

2.4 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 3/4-inch sieve; soluble salt content of 5 decisiemens/m.

B. Sphagnum Peat: Partially decomposed sphagnum peat moss, finely divided or of granular texture, with a pH range of 3.4 to 4.8.

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.

2.5 FERTILIZER

A. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 4 percent nitrogen and 10 percent phosphoric acid.

B. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
   1. Composition: 293 lbs. per acre of 15-15-15.

C. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
   1. Composition: 142 lbs. per acre of 20-10-10.

2.6 MULCHES

A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.

B. Sphagnum Peat Mulch: Partially decomposed sphagnum peat moss, finely divided or of granular texture, and with a pH range of 3.4 to 4.8.

2.7 PESTICIDES

A. General: Pesticide, registered and approved by EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.

PART 3 - EXECUTION

3.1 PREPARATION

A. Test the topsoil and provide to UMASS Horticulture Lab for analysis and recommendations for athletic turf grass, or approved equal.

B. Spread soil amendments

C. Reverse tine till the site to subgrade depths.

D. Shape the topsoil to eliminate uneven areas and low spots. Maintain lines, levels, profiles and contours. Make changes in grade gradual. Blend slopes in level areas.

E. Remove stones ¾ inch and larger.

F. Remove foreign materials, debris, weeds, undesirable plants, roots, branches, stones in excess of 1/2 inch in size. Remove subsoil contaminated with petroleum products, or other materials, which would inhibit healthy plant growth.

G. Scarify in areas where equipment is used for hauling and spreading topsoil and has compacted subsoil.

H. Test topsoil prior to grass establishment, amend again with low compaction equipment to avoid soil compaction.

3.2 SPREADING AND TREATING TOPSOIL

A. Equipment must be low pressure or tracked turf equipment for spreading topsoil or work conducted after placement of topsoil.

B. Topsoil is to be placed without compaction. Fine grading operations smooth and compact the topsoil adequately.

C. 6” depth tilling of the topsoil required to uncompact topsoil will be at no additional cost to the project.

D. Provide report and sample of amended topsoil prior to seeding

E. Fine grade topsoil, making changes in grade gradual, eliminating rough or low areas. Blend slopes into level areas. Manually spread topsoil close to trees, plants, and building to prevent damage. Fill depressions to ensure positive drainage.

F. Remove roots, weeds, rocks and foreign material while spreading.

G. Do not apply fertilizer at same time or with same machine as will be used to apply seed.

H. Water to aid the dissipation of fertilizer.

3.3 SEEDING

A. Apply seed by mechanical slit seeder at a rate of 5 pounds per 1000 square feet evenly in two uniform applications. Direction of the second application shall be perpendicular to the first application.

B. Do not seed areas in excess of that which can be mulched on same day.

C. Do not sow immediately following rain or snow, when ground is too dry, or during windy periods.

D. Immediately following seeding apply approved straw mulch to a thickness of 1/8 inch, keeping clear of trees.

E. Apply water with a fine spray immediately after each area has been mulched. Saturate to 4 inches of soil.

3.4 SODDING:

1. Moisten prepared surface immediately prior to laying sod.
2. Lay sod immediately after delivery to Site to prevent deterioration.
3. Joints:
    a. Lay sod tightly with no open joints visible and no overlapping.
    b. Stagger end joints minimum 12 inches.
    c. Do not stretch or overlap sod pieces.
4. Lay smooth and align with adjoining grass areas.
5. Place top elevation of sod to meet grades shown on plans.
6. Slopes:
    a. On slopes 6 in./ft. and steeper, lay sod perpendicular to slope and secure every row with wooden pegs at maximum 2 feet on-center.
    b. If using "big roll," lay sod parallel to slope.
    c. Drive pegs flush with soil portion of sod.
    d. Prior to placing sod on slopes exceeding 8 in./ft. place wire mesh over topsoil and securely anchor wire mesh in place with wood pegs sunk firmly into ground.

3.5 LAWN MAINTENANCE

A. Initial Lawn Maintenance Service: Provide full maintenance by skilled employees of landscape Installer.

B. Begin maintenance immediately after each area is planted and continue until acceptable lawn is established, but for not less than 90 days from seeding.

C. When 90 days extends beyond the current growing season, or if lawn is not accepted, maintenance shall continue into the next growing season.

D. The Contractor is responsible for all mowing until final acceptance.

E. Maintain and establish lawn by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth lawn. Provide materials and installation the same as those used in the original installation.

F. Mow lawn as soon as top growth is tall enough to cut (3-1/2 inches). Repeat mowing to maintain specified height without cutting more than 1/3 of grass height. Remove no more than 1/3 of grass-leaf growth in initial or subsequent mowings.

3.6 SATISFACTORY TURF

A. Turf installations shall meet the following criteria as determined by the Owners Representative:
   1. Density
      a. 90 percent
      b. All bare spots within a 10 foot by 10 foot area shall not exceed a total of 5 by 5 inches.
      c. A 10 foot by 10 foot area shall not contain herbaceous or foreign species
   2. Woody and herbaceous species not included in the seed mix shall be eradicated, overseeded, and established with the specified species.

3.7 INSPECTION AND ACCEPTANCE

A. When landscape work is completed, including maintenance, Landscape Architect will, upon request, make an inspection to determine acceptability.

END OF SECTION 32 90 00

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. Trees
2. Shrubs
3. Ground cover
4. Plants
5. Mulching

1.3 DEFINITIONS

A. Backfill: The earth used to replace or the act of replacing earth in an excavation.

B. Finish Grade: Elevation of finished surface of planting soil.

C. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.

D. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.

E. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.

F. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

1.4 SUBMITTALS

A. All testing and submittals are at the contractors expense.

B. Photographs of plants.

C. Product certificates.

D. Planting Schedule: Indicating anticipated planting dates for exterior plants.

E. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of exterior plants during a calendar year.

1.5 QUALITY ASSURANCE

A. Installer's Field Supervision: Require Installer to coordinate with Landscape Architect to be on site for supervision when planting is in progress.

B. Provide quality, size, genus, species, and variety of exterior plants indicated, complying with applicable requirements in ANSI Z60.1, "American Standard for Nursery Stock."

C. Preinstallation Conference: Conduct conference at Project site.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Do not prune trees and shrubs before delivery. 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 exterior plants during delivery. Do not drop exterior plants during delivery and handling.

B. Handle planting stock by root ball.

C. Deliver exterior plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set exterior plants and trees in shade, protect from weather and mechanical damage, and keep roots moist.

1.7 WARRANTY

A. Special Warranty: Installer's standard form in which Installer agrees to repair or replace plantings that fail in materials, quality of work, or growth within specified warranty period.

1. Failures include, but are not limited to, the following:

a. Death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, abuse by Owner, or incidents that are beyond Contractor's control.
b. Structural failures including plantings falling or blowing over.

2. Warranty Periods from Date of Substantial Completion:

a. Trees and Shrubs: One year.
b. Ground Cover and Plants: One year.

1.8 MAINTENANCE SERVICE

A. Initial Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue until plantings are acceptably healthy and well established, but for not less than maintenance period below.

1. Maintenance Period for Trees and Shrubs: 12 months from date of planting completion.

2. Maintenance Period for Ground Covers and Plants: 12 months from date of planting completion.

PART 2 - PRODUCTS

2.1 TOPSOIL

A. See section 32 90 00

2.2 TREE AND SHRUB 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.

B. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

C. Provide balled and burlapped or container-grown trees.

2.3 GROUND COVER PLANTS

A. Ground Cover: Provide ground cover of species indicated, established and well rooted in pots or similar containers, and complying with ANSI Z60.1.

2.4 PLANTS

A. Perennials: Provide healthy, field-grown plants from a commercial nursery, of species and variety shown or listed, complying with requirements in ANSI Z60.1.

2.5 INORGANIC SOIL AMENDMENTS

A. Lime: ASTM C 602, agricultural limestone containing a minimum of 80 percent calcium carbonate equivalent and as follows:

1. Class: O, with a minimum of 95 percent passing through No. 8 sieve and a minimum of 55 percent passing through No. 60 sieve.

B. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, with a minimum of 99 percent passing through No. 6 sieve and a maximum of 10 percent passing through No. 40 sieve.

2.6 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 3/4-inch sieve; soluble salt content of 5 to 7 decisiemens/m.

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.

2.7 FERTILIZER

A. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 4 percent nitrogen and 10 percent phosphoric acid.

B. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:

1. Composition: 293 lbs. per acre of 15-15-15.

C. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:

1. Composition: 142 lbs. per acre of 20-10-10.

2.8 MULCHES

A. Organic Mulch: Ground or shredded bark.

2.9 PLANTING SOIL MIX

A. Planting Soil Mix: Mix topsoil with the following soil amendments and fertilizers in the following quantities:

1. Ratio of Loose Compost to Topsoil by Volume: 1:4.

2. Ratio of Loose Peat to Topsoil by Volume: 1:4.

3. Ratio of Loose Wood Derivatives to Topsoil by Volume: 1:4.

4. Weight of Lime per 1000 Sq. Ft.: per PH test to achieve 6.0 – 6.5.

PART 3 - EXECUTION

3.1 PLANTING BED ESTABLISHMENT

A. Loosen subgrade of planting beds to a minimum depth of 24 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.

1. Thoroughly blend planting soil mix off-site before spreading; or spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.

2. Spread planting soil mix to a depth of 12 inches but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.

B. Finish Grading: Grade planting beds to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.2 TREES AND SHRUBS

A. Excavation of Pits and Trenches for Shrubs: 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.

B. Excavation of Pits and Trenches for Trees: Excavate circular pits with sides sloped inward. Install and compact approved soil mix at bottom of pit as shown on the Contract Drawings 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 two and one half times as wide as ball diameter.

C. Before planting, verify that root flare is visible at top of root ball according to ANSI Z60.1.

D. Stock with Root Balls: Set trees and shrubs plumb and in center of pit or trench with top of root ball flush with adjacent finish grades.

1. Balled and Burlapped: 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. Container Grown: Carefully remove root ball from container without damaging root ball or plant.
3. 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.

E. Organic Mulching: Apply 4-inch average thickness of organic mulch extending 12 inches beyond edge of planting pit or trench. Do not place mulch within 3 inches of trunks or stems.

3.3 TREE AND SHRUB PRUNING

A. Remove only dead, dying, or broken branches. Do not prune for shape.

3.4 GROUND COVER AND PLANT PLANTING

A. Set out and space ground cover and plants as directed by the Landscape Architect.

B. Dig holes large enough to allow spreading of roots and backfill with planting soil.

C. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.

D. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.

E. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.5 PLANTING BED MULCHING

A. Mulch backfilled surfaces of planting beds and other areas indicated.

1. Organic Mulch: Apply 4-inch average thickness of mulch, and finish level with adjacent finish grades. Do not place mulch against plant stems.

3.6 PLANT MAINTENANCE

A. Tree and Shrub Maintenance: Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, restoring planting saucers, and resetting to proper grades or vertical position, as required to establish healthy, viable plantings. Spray or treat as required to keep trees and shrubs free of insects and disease.

B. Ground Cover and Plant Maintenance: Maintain and establish plantings by watering, weeding, fertilizing, mulching, and other operations as required to establish healthy, viable plantings.

C. Protect exterior plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.

END OF SECTION 32 93 00

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes the following:

1. Work under this Item shall consist of furnishing and installing notched wood post and rail fence at the location shown on the Contract Drawings and in accordance with the dimensions and details shown on the Contract Drawings, or as ordered by the Engineer.

1.02 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: Show locations, components, materials, dimensions, sizes, weights, and finishes of components. Include plans, gate elevations, sections, details of post anchorage, attachment, bracing, and other required installation and operational clearances.

1.03 QUALITY ASSURANCE

A. Workmen: all workmen shall be thoroughly trained and experienced in the necessary crafts, and completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.

PART 2 - PRODUCTS

2.01 WOOD POSTS AND RAIL

A. Wood shall be of the sizes shown on the Contract Drawings.

B. All wood shall be pressure treated wood, shall be No. l KD or better Southern Yellow Pine.

C. Posts shall be nominal 10" x 10" and rails shall be nominal 5" x 8".

D. All wood shall be No. 1 Southern Yellow Pine (Southern Pine Inspection Bureau Grading), or equal. All wood to be new, solid, sound and surface dry with a maximum moisture content of 19%. All wood shall be clearly marked with the official grading information.

2.02 FASTENERS

A. All fasteners, bolts, washers, and hex nuts shall be hot-dipped galvanized steel.

2.03 TREATMENT

A. Pressure treatment shall be ACQ in accordance with AWPA P-5, 0.60 pounds per cubic foot (9.6 kilograms/cubic meter) or Pentachlorophenol in accordance with AWPA P-9, Type B (L.P.G.), 0.50 pounds per cubic foot (8.0 kilograms/cubic meter).

B. All wood to be dressed four sides (S4S). Ends of all members shall be pressure treated.

C. All lumber shall conform to Voluntary Product Standard PS-70 and be certified according to applicable standard grading and dressing rules and shall bear the official grade and/or trademark of the association under whose rules it is produced.

PART 3 - EXECUTION

3.01 INSTALLATION

A. General: Install wood post guide rail to comply with the Contract Drawings

B. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacing's indicated on the Contract Drawings, in firm, undisturbed soil. Should rock or boulders be encountered in making the excavation, this material shall be removed so as to make a hole of sufficient size to set the posts to the normal depth as called for on the Contract Drawings.

C. Post Setting: Set posts at indicated spacing into firm, undisturbed soil.

D. The posts shall be spaced as shown on the Contract Drawings, set plumb and normally with the front face at a uniform distance from the edge of the travel way.

E. Soil at the bottom of the hole shall be thoroughly compacted so that the posts will have a stable foundation. The holes shall be backfilled with an approved material which shall be thoroughly compacted.

F. Railings: The wood railings shall be mounted on the post as shown on the Contract Drawings to anchor the rail to the posts. The rail members shall be accurately cut so as to provide even bearing over entire surface of joints. No shimming of any kind will be allowed in making joints nor will open joints be accepted. All exposed edges of member shall be chamfered.

END OF SECTION
***

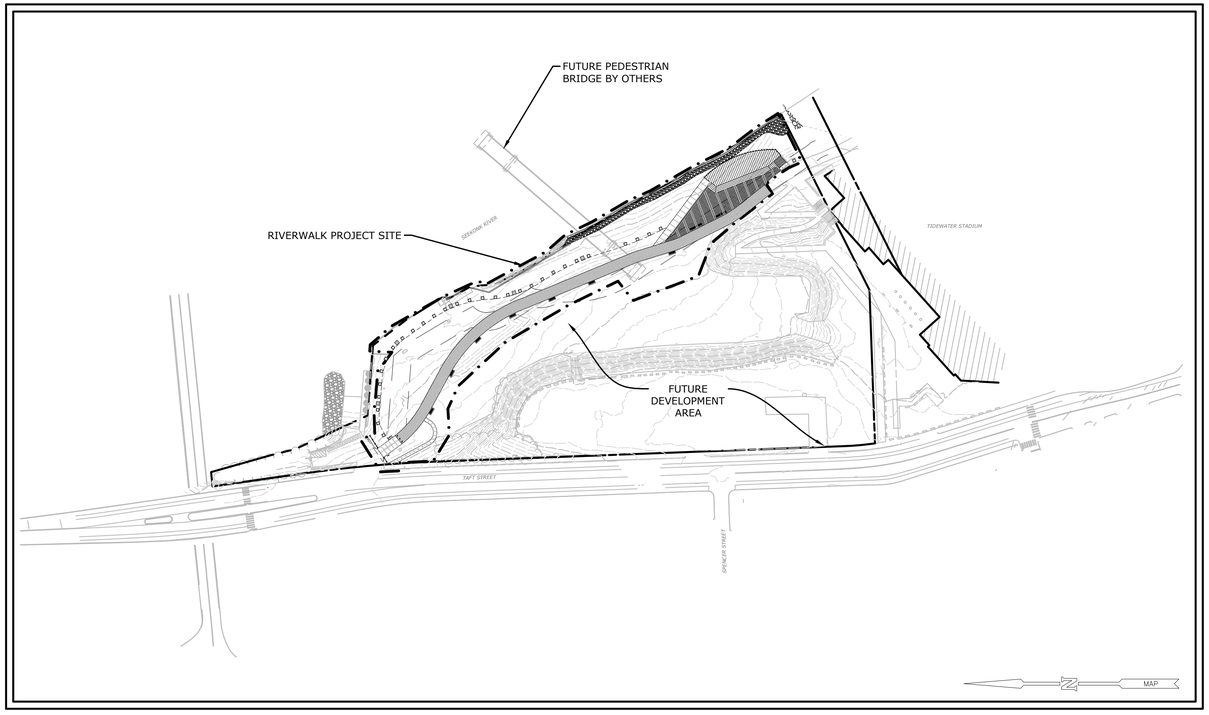
Appendix H

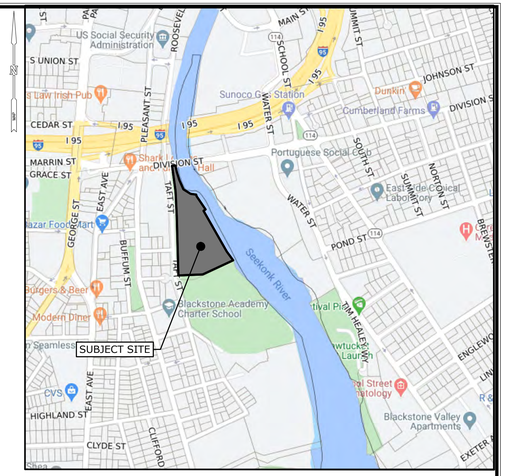
Plan Issued for Bid

RIVERWALK WEST FINAL PHASE SITE IMPROVEMENTS

TAFT STREET
PAWTUCKET, RHODE ISLAND

CONSTRUCTION DOCUMENTS - ISSUED FOR BID
APRIL 15, 2026





LOCATION MAP:

GENERAL NOTES

1. THE PARCEL IS LOCATED ON THE CITY OF PAWTUCKET ASSESSOR'S RECORDS AS PLAT 54 LOT 827.
2. THE PARCEL IS 5.3 ACRES AND IS ZONED RIVERFRONT TIDEWATER ZONE (RTW) .
3. THE OWNER OF AP 54 LOT 827 IS:
   CITY OF PAWTUCKET
   137 ROOOSEVELT AVENUE
   PAWTUCKET, RI , 02860
4. THIS SITE IS LOCATED IN FEMA FLOOD ZONES VE-13, AE-12 AND X. REFERENCE FEMA FLOOD INSURANCE RATE MAP 44007C0307J, MAP REVISED OCTOBER 2, 2015. FEMA FLOOD LINES AS SHOWN ARE BASED ON AVAILABLE CITY OF PAWTUCKET GIS DATA.
5. THE PROPERTY REQUIRES REMEDIAL ACTION AND OVERSIGHT FOR COMPLIANCE WITH THE RIDEM. A COMBINATION OF ENGINEER CONTROLS WILL BE IMPLEMENTED DURING CONSTRUCTION AS DESCRIBED IN THE REMEDIAL ACTION WORK PLAN APPROVED BY THE RIDEM. REFER TO REMEDIAL APPROVAL LETTER - FILE NO. SR-26-1570 DATED SEPTEMBER 14, 2022, FROM RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT - OFFICE OF LAND REVITALIZATION & SUSTAINABLE MATERIALS MANAGEMENT.
6. THE BOUNDARY LINES AS SHOWN ON THE ENGINEERING PLAN SET DEPICTS THE RESULTS TAKEN FROM TOPOGRAPHIC SURVEY PLAN PERFORMED BY DIPRETE ENGINEERING ON OCTOBER 21 & 24, 2025.
7. EXISTING TOPOGRAPHIC INFORMATION IS TAKEN FROM A MAP ENTITLED "TOPOGRAPHIC SURVEY PLAN, TIDEWATER LANDING, ASSESSORS PLAT 54 LOT 827, PAWTUCKET, RHODE ISLAND", PREPARED FOR: CITY OF PAWTUCKET BY DIPRETE ENGINEERING, SCALE 1"=30', DATED 10-21-25.
8. HORIZONTAL DATUM: NORTH ARROW, BEARINGS AND COORDINATES ARE BASED UPON THE RHODE ISLAND STATE PLANE COORDINATE SYSTEM (NAD 1983).
9. VERTICAL DATUM: ELEVATIONS SHOWN HEREON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
10. INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION, MAY BE INCOMPLETE, AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE LOCATION OF ALL EXISTING UTILITIES SHOULD BE CONFIRMED PRIOR TO BEGINNING CONSTRUCTION. CALL "DIG SAFE", 1-888-DIGSAFE (1-888-344-7233). ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.
11. ALL WORK PERFORMED HEREIN IS TO BE GOVERNED BY CURRENT EDITIONS OF THE RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CITY OF PAWTUCKET STANDARD SPECIFICATIONS AND DETAILS AND SPECIFICATIONS INCLUDED AS PART OF THE DRAWINGS. IN AREAS OF CONFLICT BETWEEN THE DIFFERENT SPECIFICATIONS, THE DESIGN PLANS AND PROJECT SPECIFICATIONS WILL TAKE PRECEDENCE OVER THE GENERAL SPECIFICATIONS AND THE DESIGN ENGINEER WILL INTERPRET THE CONSTRUCTION REQUIREMENT. THE CONTRACTOR IS ADVISED TO SUBMIT A REQUEST FOR INFORMATION (RFI) FOR ANY AREAS OF CONFLICT BEFORE COMMITTING TO CONSTRUCTION.
12. THE FOLLOWING DOCUMENTS ARE CONSIDERED PART OF THE PROJECT PLANS AND THE CONTRACTOR/OWNER MUST MAINTAIN THESE DOCUMENTS AS PART OF A FULL PLAN SET:
    SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC). THE SESC CONTAINS THE FOLLOWING:
    - 1.EROSION CONTROL MEASURES
    - 2.SHORT TERM MAINTENANCE
    - 3.ESTABLISHMENT OF VEGETATIVE COVER
    - 4.CONSTRUCTION POLLUTION PREVENTION
    - 5.SEQUENCE OF CONSTRUCTION

    STORMWATER OPERATION AND MAINTENANCE PLAN (O&M). THE O&M CONTAINS:
    - 1.LONG TERM MAINTENANCE
    - 2.LONG TERM POLLUTION PREVENTION
13. REMEDIAL ACTION WORK PLAN. -THE RAWP CONTAINS:
    1. REMEDIAL ACTION PLAN REPORT
    2. PRELIMINARY CONSTRUCTION PLANS
    3. CONSTRUCTION SOIL MANAGEMENT PLAN
    4. DRAFT ELUR AND POST CONSTRUCTION SMP
    5. EXAMPLE CONTINGENCY HASP
14. THIS PLAN SET REFERENCES RIDOT STANDARD DETAILS (DESIGNATED AS RIDOT STD X.X.X). RIDOT STANDARD DETAILS ARE AVAILABLE FROM RIDOT AND ONLINE AT: HTTP://WWW.DOT.RI.GOV/BUSINESS/CONTRACTORSANDCONSULTANTS.PHP.
15. THE DRAINAGE SYSTEM IS DESIGNED TO MEET THE CITY OF PAWTUCKET SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WITH THE USE OF CATCH BASINS, CULVERTS, AND UNDERGROUND DRAINAGE SYSTEMS. THE STORMWATER MANAGEMENT SYSTEM MEETS THE RIDEM BEST MANAGEMENT PRACTICES.
16. SLR CONSULTING ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF MAPS AND DATA WHICH HAVE BEEN SUPPLIED BY OTHERS.
17. ALL UTILITY SERVICES ARE TO BE UNDERGROUND. THE EXACT LOCATION AND SIZE OF ELECTRIC, TELEPHONE, CABLE TELEVISION AND GAS ARE TO BE DETERMINED BY THE RESPECTIVE UTILITY COMPANIES.
18. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
19. ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 12" SCREENED TOPSOIL, AND BE SEEDED WITH GRASS OR SODDED, IN ACCORDANCE WITH THE REMEDIAL ACTION PLAN.
20. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS INDICATE FINISHED GRADE.
21. THE PLANS REQUIRE A CONTRACTOR'S WORKING KNOWLEDGE OF LOCAL, MUNICIPAL, WATER AUTHORITY, AND STATE CODES FOR UTILITY SYSTEMS. ANY CONFLICTS BETWEEN MATERIALS AND LOCATIONS SHOWN, AND LOCAL REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE EXECUTION OF WORK. THE ENGINEER WILL NOT BE HELD LIABLE FOR COSTS INCURRED TO IMPLEMENT OR CORRECT WORK WHICH DOES NOT CONFORM TO LOCAL CODE.
22. ALL FUEL, OIL, PAINT, OR OTHER HAZARDOUS MATERIALS SHOULD BE STORED IN A SECONDARY CONTAINER AND REMOVED TO A LOCKED INDOOR AREA WITH AN IMPERVIOUS FLOOR DURING NON-WORK HOURS.
23. COMPLIANCE WITH THE PERMIT CONDITIONS IS THE RESPONSIBILITY OF BOTH THE CONTRACTOR AND THE PERMITTEE.
24. THE CONTRACTOR MUST MAINTAIN (REPAIR/REPLACE WHEN NECESSARY) THE SILTATION CONTROL UNTIL ALL DEVELOPMENT ACTIVITY IS COMPLETED AND ALL DISTURBED AREAS ARE PERMANENTLY STABILIZED.
25. OVERSIGHT BY ENVIRONMENTAL PROFESSIONAL DURING ALL EXCAVATION PER RIPDEM AND RAWP.
26. THE PROPERTY IS SUBJECT TO A CRMC ASSENT PERMIT #A2025-10-002 APPROVED ON JANUARY 16, 2026 AS PART OF THE PROPOSED DEVELOPMENT OF THIS PARCEL. THE PROPOSED IMPROVEMENTS MUST BE COMPLETED IN ACCORDANCE WITH THE ASSENT PERMIT REQUIREMENTS AND ANY CONDITIONS ASSOCIATED WITH THAT PERMIT.

811
Know what's **below.**
Call before you dig.
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PROJECT SITE VICINITY MAP:

0' 50' 100'
0 1/2" 1"

PROJECT DATA

EXISTING ZONE:	RIVERFRONT TIDEWATER (RTW)
PROPOSED ZONE:	RIVERFRONT TIDEWATER (RTW)

ZONING DATA

Map 58, Zone 826

DIMENSIONAL CRITERIA	REQUIRED	PROPOSED
MIN LOT AREA	5,000 SF	226,402 SF
MIN LOT FRONTAGE	50 FT	±148 FT
MAX LOT COVERAGE	100%	NO CHANGE
MIN. FRONT SETBACK	0 FT	NO CHANGE
MIN. SIDE SETBACK	0 FT	NO CHANGE
MIN. REAR SETBACK	0 FT	NO CHANGE
MAX BUILDING HEIGHT (MAIN)	120 FT	NO CHANGE
MAX BUILDING HEIGHT (ACCESSORY)	15 FT	NO CHANGE

PREPARED BY:

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

TODD D. RITCHIE
No. 14720
REGISTERED PROFESSIONAL ENGINEER
CIVIL

PREPARED FOR:

CITY OF PAWTUCKET
137 ROOSEVELT AVE
PAWTUCKET, 02860

LIST OF DRAWINGS

NO.	NAME	TITLE
01	--	TITLE SHEET
02	1 of 1	TOPOGRAPHIC SURVEY
03	RM	REMOVALS PLAN
04	EC	ENGINEERED CONTROL
05	MA	SITE PLAN - MATERIALS
06	LA	SITE PLAN - LAYOUT
07	GU	SITE PLAN - GRADING & UTILITIES
08	PR	SITE PLAN - SIDEWALK PLAN AND PROFILE
09	LS-1	SITE PLAN - LANDSCAPING
10	LS-2	SITE PLAN - LANDSCAPING
11	SE-1	SITE PLAN - SEDIMENT & EROSION CONTROL
12	SE-2	SEDIMENT & EROSION CONTROL DETAILS
13-17	SD-1-5	SITE DETAILS
18-20	STR-1-3	SITE STRUCTURAL DETAILS

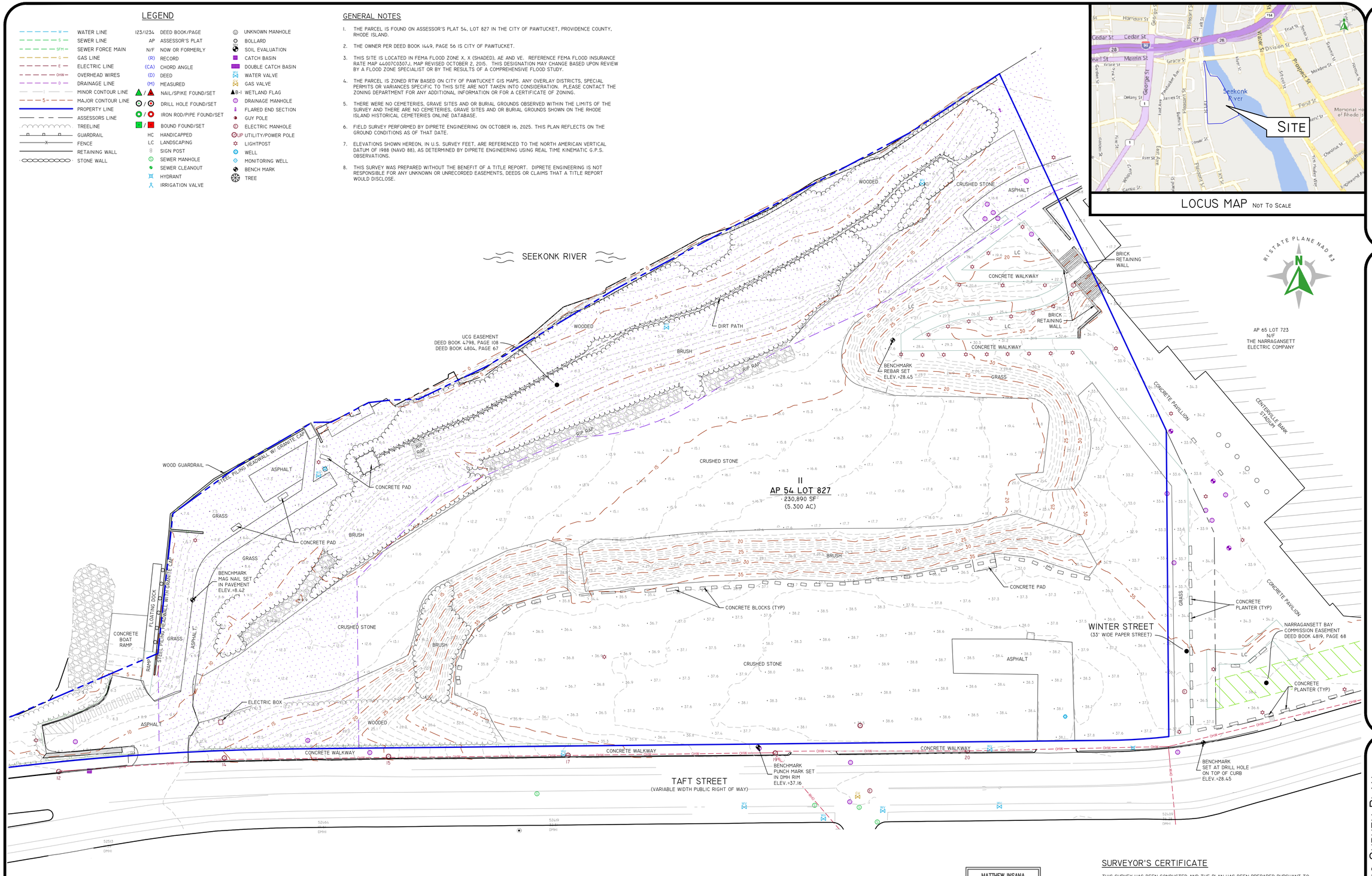
LEGEND

W — WATER LINE	123/1234 DEED BOOK/PAGE	UNKNOWN MANHOLE
S — SEWER LINE	AP ASSESSOR'S PLAT	BOLLARD
SFM — SEWER FORCE MAIN	N/F NOW OR FORMERLY	SOIL EVALUATION
G — GAS LINE	(R) RECORD	CATCH BASIN
E — ELECTRIC LINE	(CA) CHORD ANGLE	DOUBLE CATCH BASIN
OHW — OVERHEAD WIRES	(D) DEED	WATER VALVE
D — DRAINAGE LINE	(M) MEASURED	GAS VALVE
MINOR CONTOUR LINE	NAIL/SPIKE FOUND/SET	B-I WETLAND FLAG
MAJOR CONTOUR LINE	DRILL HOLE FOUND/SET	DRAINAGE MANHOLE
PROPERTY LINE	IRON ROD/PIPE FOUND/SET	FLARED END SECTION
ASSESSORS LINE	BOUND FOUND/SET	GUY POLE
TREELINE	HC HANDICAPPED	ELECTRIC MANHOLE
GUARDRAIL	LC LANDSCAPING	UP UTILITY/POWER POLE
FENCE	SIGN POST	LIGHTPOST
RETAINING WALL	SEWER MANHOLE	WELL
STONE WALL	SEWER CLEANOUT	MONITORING WELL
	HYDRANT	BENCH MARK
	IRRIGATION VALVE	TREE

GENERAL NOTES

1. THE PARCEL IS FOUND ON ASSESSOR'S PLAT 54, LOT 827 IN THE CITY OF PAWTUCKET, PROVIDENCE COUNTY, RHODE ISLAND.
2. THE OWNER PER DEED BOOK 1449, PAGE 56 IS CITY OF PAWTUCKET.
3. THIS SITE IS LOCATED IN FEMA FLOOD ZONE X, X (SHADED), AE AND VE. REFERENCE FEMA FLOOD INSURANCE RATE MAP 44007C0307J, MAP REVISED OCTOBER 2, 2015. THIS DESIGNATION MAY CHANGE BASED UPON REVIEW BY A FLOOD ZONE SPECIALIST OR BY THE RESULTS OF A COMPREHENSIVE FLOOD STUDY.
4. THE PARCEL IS ZONED RTW BASED ON CITY OF PAWTUCKET GIS MAPS. ANY OVERLAY DISTRICTS, SPECIAL PERMITS OR VARIANCES SPECIFIC TO THIS SITE ARE NOT TAKEN INTO CONSIDERATION. PLEASE CONTACT THE ZONING DEPARTMENT FOR ANY ADDITIONAL INFORMATION OR FOR A CERTIFICATE OF ZONING.
5. THERE WERE NO CEMETERIES, GRAVE SITES AND OR BURIAL GROUNDS OBSERVED WITHIN THE LIMITS OF THE SURVEY AND THERE ARE NO CEMETERIES, GRAVE SITES AND OR BURIAL GROUNDS SHOWN ON THE RHODE ISLAND HISTORICAL CEMETERIES ONLINE DATABASE.
6. FIELD SURVEY PERFORMED BY DIPRETE ENGINEERING ON OCTOBER 16, 2025. THIS PLAN REFLECTS ON THE GROUND CONDITIONS AS OF THAT DATE.
7. ELEVATIONS SHOWN HEREON, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), AS DETERMINED BY DIPRETE ENGINEERING USING REAL TIME KINEMATIC G.P.S. OBSERVATIONS.
8. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. DIPRETE ENGINEERING IS NOT RESPONSIBLE FOR ANY UNKNOWN OR UNRECORDED EASEMENTS, DEEDS OR CLAIMS THAT A TITLE REPORT WOULD DISCLOSE.

LOCUS MAP NOT TO SCALE



SURVEYOR'S CERTIFICATE

THIS SURVEY HAS BEEN CONDUCTED AND THE PLAN HAS BEEN PREPARED PURSUANT TO 435-RICR-00-00-1.9 OF THE RULES AND REGULATIONS ADOPTED BY THE RHODE ISLAND STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS ON NOVEMBER 25, 2015, AS FOLLOWS:

- TOPOGRAPHIC SURVEY — CLASS T-2
- DATA ACCUMULATION SURVEY (PLANIMETRIC) — CLASS III
- COMPILATION PLAN (NOT A BOUNDARY SURVEY) — CLASS IV

THIS COMPILATION PLAN HAS BEEN PREPARED FROM SOURCES OF INFORMATION AND DATA WHOSE POSITIONAL ACCURACY AND RELIABILITY HAS NOT BEEN VERIFIED. THE PROPERTY LINES DEPICTED HEREON DO NOT REPRESENT A BOUNDARY OPINION.

THE PURPOSE FOR THE CONDUCT OF THE SURVEY AND FOR THE PREPARATION OF THE PLAN IS AS FOLLOWS: TOPOGRAPHY FOR SITE ENGINEERING AND PERMITTING.

MATTHEW INSANA
No. 2537
PROFESSIONAL LAND SURVEYOR

10/24/2025

MATTHEW INSANA, RIPLS #2537, COA #LS.000A160

NO.	DATE	DESCRIPTION	BY
4	10-24-25	ADDED ELECTRIC BOX	R.G.
3	10-21-25	TOPOGRAPHIC SURVEY	R.G.
2			
1			

DiPrete Engineering
Engineers · Planners · Surveyors
www.diprete-eng.com
Two Stafford Court, Cranston, RI 02920 · Tel 401-943-1000

TOPOGRAPHIC SURVEY PLAN

TIDEWATER LANDING

ASSESSOR'S PLAT 54, LOT 827
PAWTUCKET, RHODE ISLAND

PREPARED FOR:
CITY OF PAWTUCKET
137 ROOSEVELT AVENUE, PAWTUCKET, RHODE ISLAND 02860

SHEET — OF 1

DE JOB NO. 2850-00-001

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z:\dem\projects\2850-001 tidewater landing\autocad drawings\2850-001-402.exc.dwg Plotted: 10/24/2025

EXISTING CONDITIONS LEGEND

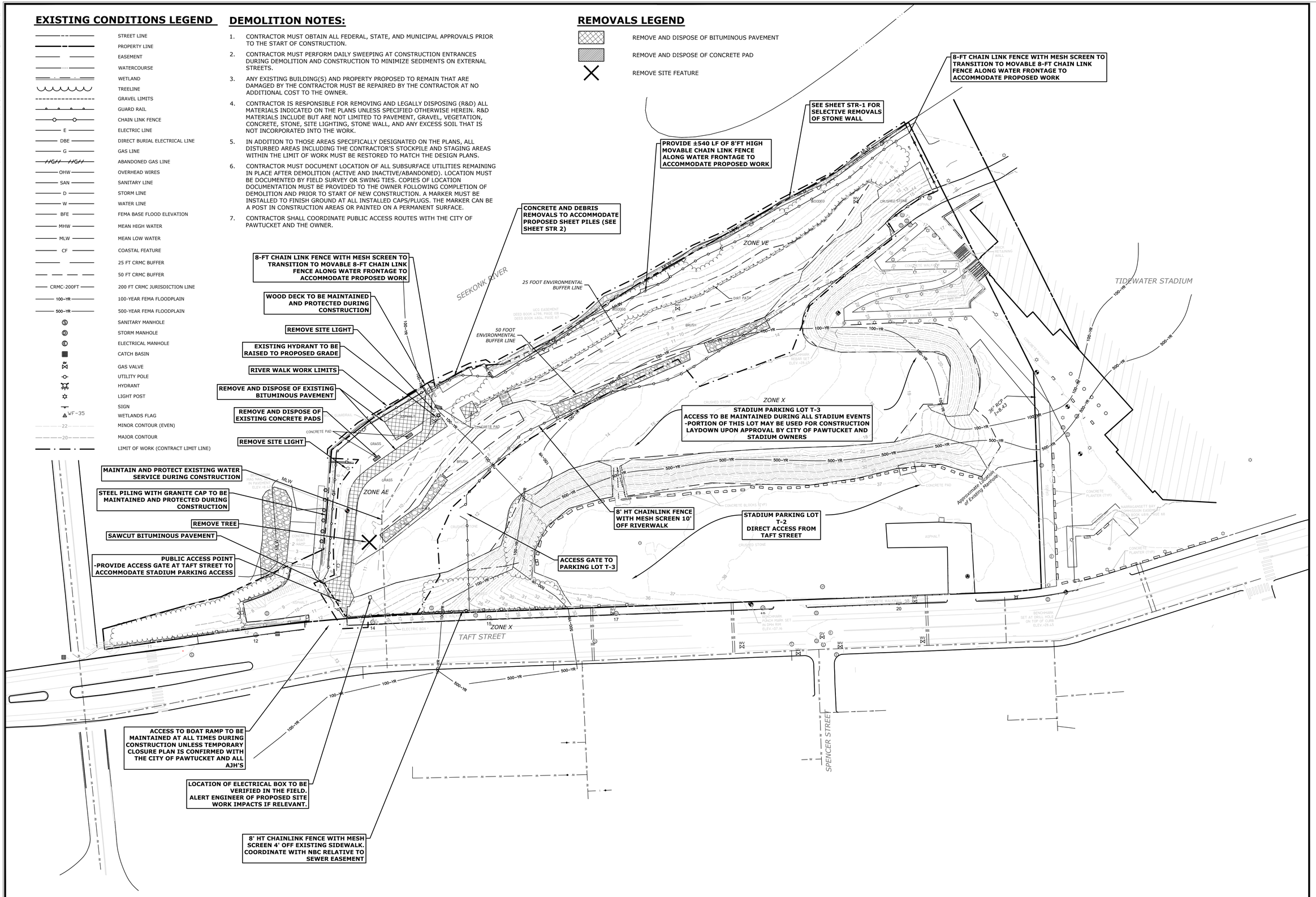
- STREET LINE
- PROPERTY LINE
- EASEMENT
- WATERCOURSE
- WETLAND
- TREELINE
- GRAVEL LIMITS
- GUARD RAIL
- CHAIN LINK FENCE
- E — ELECTRIC LINE
- DBE — DIRECT BURIAL ELECTRICAL LINE
- G — GAS LINE
- //G// — ABANDONED GAS LINE
- OHW — OVERHEAD WIRES
- SAN — SANITARY LINE
- D — STORM LINE
- W — WATER LINE
- BFE — FEMA BASE FLOOD ELEVATION
- MHW — MEAN HIGH WATER
- MLW — MEAN LOW WATER
- CF — COASTAL FEATURE
- 25 FT CRMC BUFFER
- 50 FT CRMC BUFFER
- CRMC-200FT — 200 FT CRMC JURISDICTION LINE
- 100-YR — 100-YEAR FEMA FLOODPLAIN
- 500-YR — 500-YEAR FEMA FLOODPLAIN
- SANITARY MANHOLE
- STORM MANHOLE
- ELECTRICAL MANHOLE
- CATCH BASIN
- GAS VALVE
- UTILITY POLE
- HYDRANT
- LIGHT POST
- SIGN
- WF-35 — WETLANDS FLAG
- 22 — MINOR CONTOUR (EVEN)
- 20 — MAJOR CONTOUR
- LIMIT OF WORK (CONTRACT LIMIT LINE)

DEMOLITION NOTES:

1. CONTRACTOR MUST OBTAIN ALL FEDERAL, STATE, AND MUNICIPAL APPROVALS PRIOR TO THE START OF CONSTRUCTION.
2. CONTRACTOR MUST PERFORM DAILY SWEEPING AT CONSTRUCTION ENTRANCES DURING DEMOLITION AND CONSTRUCTION TO MINIMIZE SEDIMENTS ON EXTERNAL STREETS.
3. ANY EXISTING BUILDING(S) AND PROPERTY PROPOSED TO REMAIN THAT ARE DAMAGED BY THE CONTRACTOR MUST BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
4. CONTRACTOR IS RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) ALL MATERIALS INDICATED ON THE PLANS UNLESS SPECIFIED OTHERWISE HEREIN. R&D MATERIALS INCLUDE BUT ARE NOT LIMITED TO PAVEMENT, GRAVEL, VEGETATION, CONCRETE, STONE, SITE LIGHTING, STONE WALL, AND ANY EXCESS SOIL THAT IS NOT INCORPORATED INTO THE WORK.
5. IN ADDITION TO THOSE AREAS SPECIFICALLY DESIGNATED ON THE PLANS, ALL DISTURBED AREAS INCLUDING THE CONTRACTOR'S STOCKPILE AND STAGING AREAS WITHIN THE LIMIT OF WORK MUST BE RESTORED TO MATCH THE DESIGN PLANS.
6. CONTRACTOR MUST DOCUMENT LOCATION OF ALL SUBSURFACE UTILITIES REMAINING IN PLACE AFTER DEMOLITION (ACTIVE AND INACTIVE/ABANDONED). LOCATION MUST BE DOCUMENTED BY FIELD SURVEY OR SWING TIES. COPIES OF LOCATION DOCUMENTATION MUST BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF DEMOLITION AND PRIOR TO START OF NEW CONSTRUCTION. A MARKER MUST BE INSTALLED TO FINISH GROUND AT ALL INSTALLED CAPS/PLUGS. THE MARKER CAN BE A POST IN CONSTRUCTION AREAS OR PAINTED ON A PERMANENT SURFACE.
7. CONTRACTOR SHALL COORDINATE PUBLIC ACCESS ROUTES WITH THE CITY OF PAWTUCKET AND THE OWNER.

REMOVALS LEGEND

- REMOVE AND DISPOSE OF BITUMINOUS PAVEMENT
- REMOVE AND DISPOSE OF CONCRETE PAD
- REMOVE SITE FEATURE



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DESCRIPTION	DATE	BY
CRMC COMMENTS	2025-12-16	JRH
CONSTRUCTION DOCUMENTS	2026-02-27	JRH
UPDATED REVIEW SET	2026-03-27	JRH

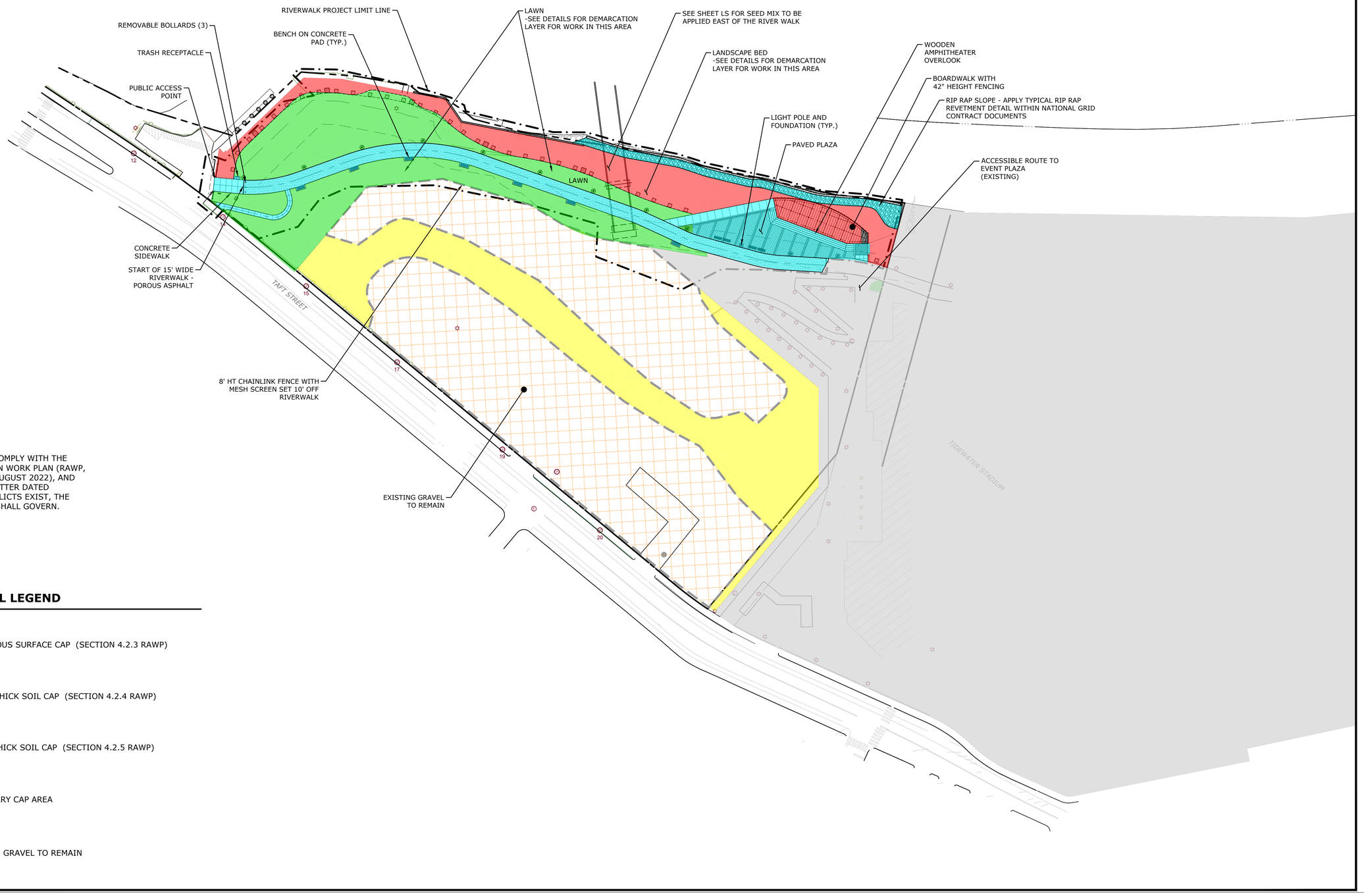
CONSTRUCTION DOCUMENTS - ISSUED FOR BID

SITE PLAN - REMOVALS

RIVERWALK WEST FINAL PHASE
SITE IMPROVEMENTS
TAFT STREET
PAWTUCKET, RHODE ISLAND

BK	PJP	BK
DESIGNED	DRAWN	CHECKED

SCALE: 1"=40'
DATE: APRIL 15, 2026
PROJECT NO.: 15842.00001
SHEET NO.: 03 OF 20
SHEET NAME: RM



NOTE: SITE REMEDIATION SHALL COMPLY WITH THE RIDEM APPROVED REMEDIAL ACTION WORK PLAN (RAWP, MARCH 2022), RAWP ADDENDUM (AUGUST 2022), AND THE RIDEM REMEDIAL APPROVAL LETTER DATED SEPTEMBER 14, 2022. WHERE CONFLICTS EXIST, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.

ENGINEERED CONTROL LEGEND

- IMPERVIOUS SURFACE CAP (SECTION 4.2.3 RAWP)
- 1-FOOT THICK SOIL CAP (SECTION 4.2.4 RAWP)
- 2-FEET THICK SOIL CAP (SECTION 4.2.5 RAWP)
- TEMPORARY CAP AREA
- EXISTING GRAVEL TO REMAIN

0' 25' 50'
0 1/2" 1"

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DESCRIPTION	DATE	BY
CONSTRUCTION DOCUMENTS	2026-02-27	JRH

CONSTRUCTION DOCUMENTS - ISSUED FOR BID

ENGINEERED CONTROL

RIVERWALK WEST FINAL PHASE
SITE IMPROVEMENTS
TAFT STREET
PAWTUCKET, RHODE ISLAND

JRH	JRH	DLO
DESIGNED	DRAWN	CHECKED

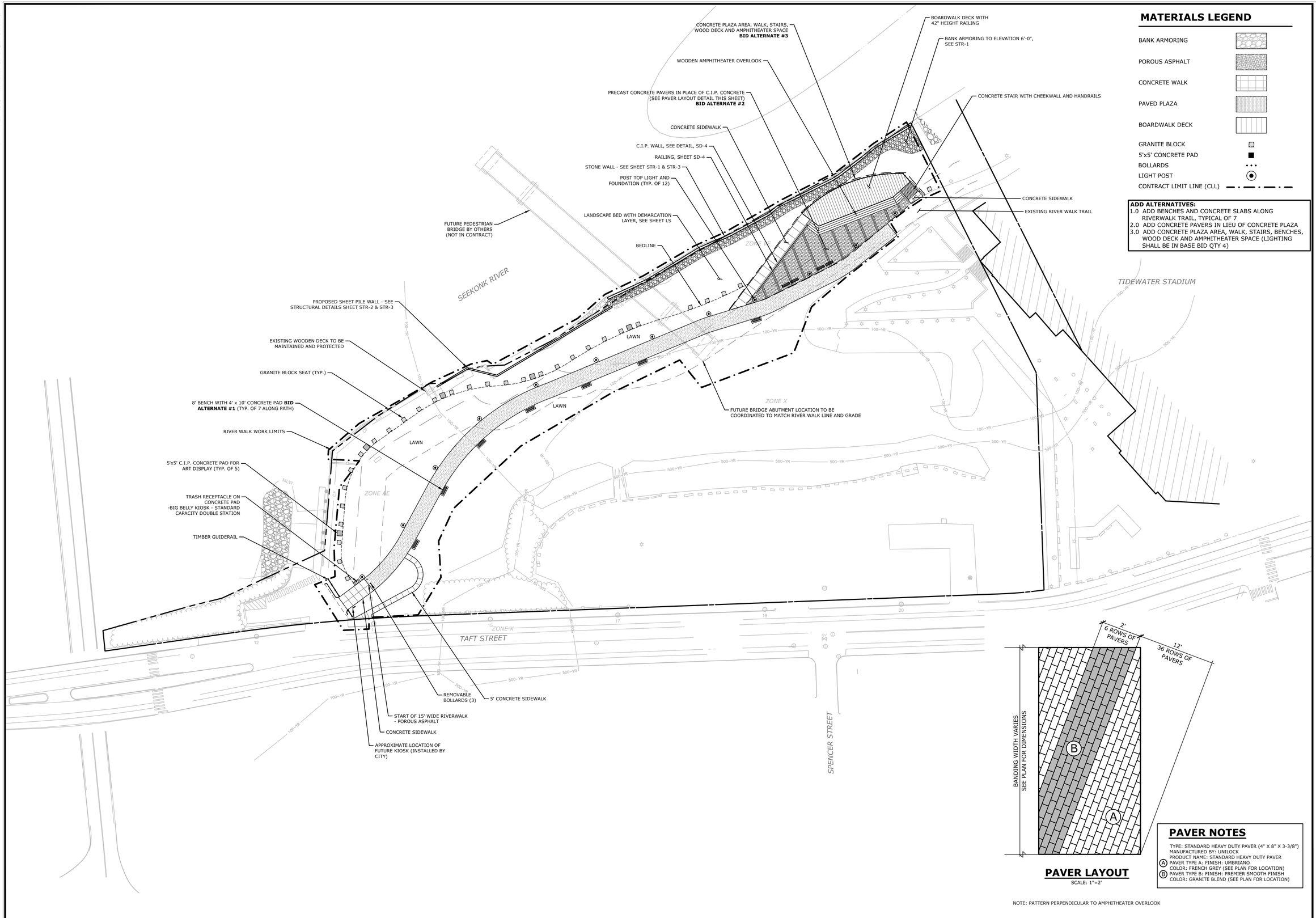
1"=50'
SCALE

APRIL 15, 2026
DATE

15842.00001
PROJECT NO.

04 OF 20
SHEET NO.

EC
SHEET NAME



MATERIALS LEGEND

- BANK ARMORING
- POROUS ASPHALT
- CONCRETE WALK
- PAVED PLAZA
- BOARDWALK DECK
- GRANITE BLOCK
- 5'x5' CONCRETE PAD
- BOLLARDS
- LIGHT POST
- CONTRACT LIMIT LINE (CLL)

ADD ALTERNATIVES:

1.0 ADD BENCHES AND CONCRETE SLABS ALONG RIVERWALK TRAIL, TYPICAL OF 7
2.0 ADD CONCRETE PAVERS IN LIEU OF CONCRETE PLAZA
3.0 ADD CONCRETE PLAZA AREA, WALK, STAIRS, BENCHES, WOOD DECK AND AMPHITHEATER SPACE (LIGHTING SHALL BE IN BASE BID QTY 4)

PAVER LAYOUT

SCALE: 1"=2'

PAVER NOTES

TYPE: STANDARD HEAVY DUTY PAVER (4" X 8" X 3-3/8")
MANUFACTURED BY: UNILOCK
PRODUCT NAME: STANDARD HEAVY DUTY PAVER
(A) PAVER TYPE A: FINISH: UMBRIANO
COLOR: FRENCH GREY (SEE PLAN FOR LOCATION)
(B) PAVER TYPE B: FINISH: PREMIER SMOOTH FINISH
COLOR: GRANITE BLEND (SEE PLAN FOR LOCATION)

NOTE: PATTERN PERPENDICULAR TO AMPHITHEATER OVERLOOK

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CONSTRUCTION DOCUMENTS - ISSUED FOR BID

SITE PLAN - MATERIALS

RIVERWALK WEST FINAL PHASE
SITE IMPROVEMENTS
TAFT STREET
PAWTUCKET, RHODE ISLAND

BK	PJP	BK
DESIGNED	DRAWN	CHECKED

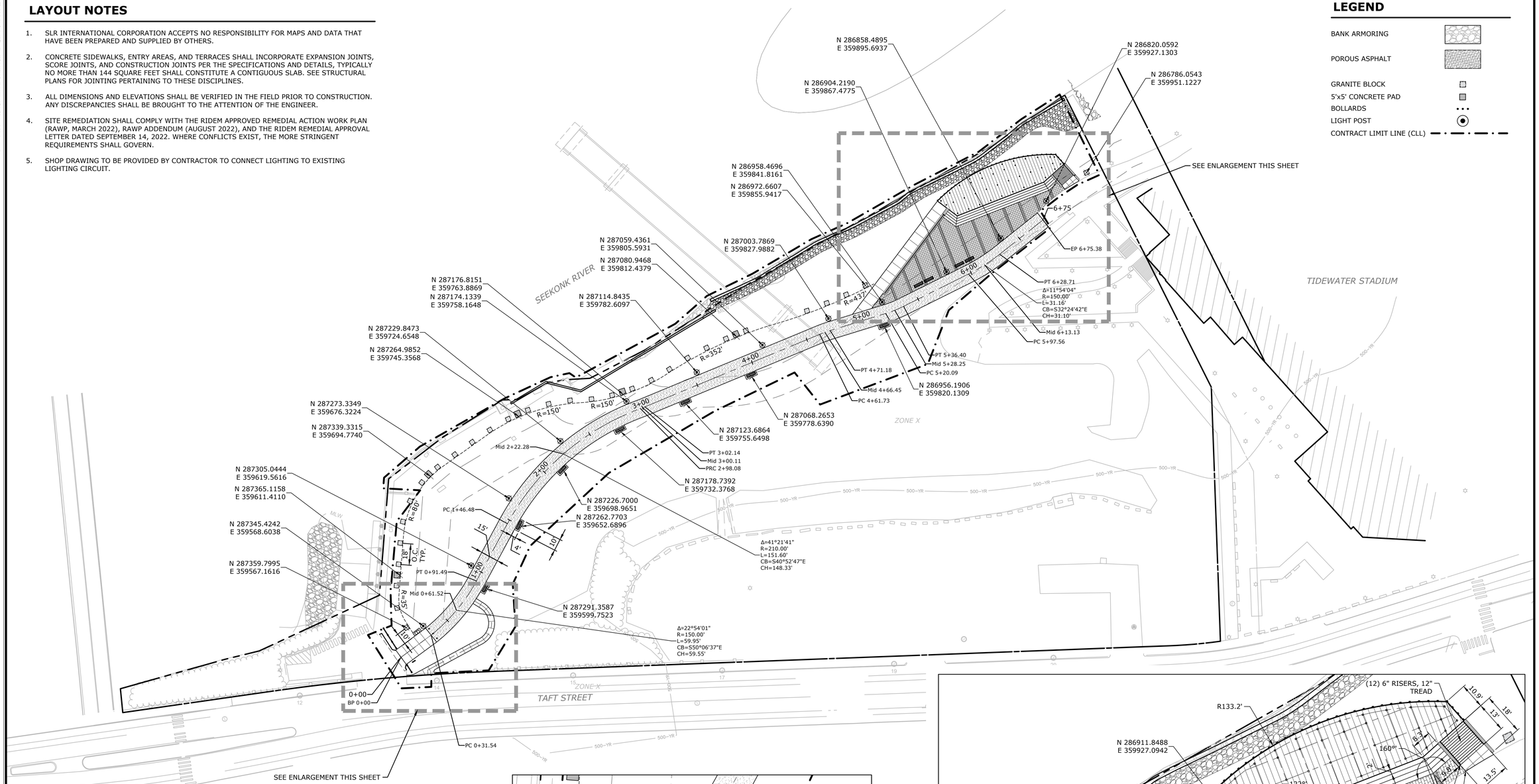
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DATE	APRIL 15, 2026
PROJECT NO.	15842.00001
SHEET NO.	05 OF 20
SHEET NAME	MA

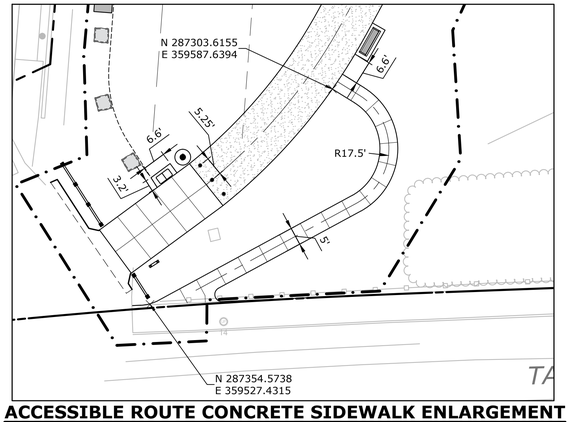
LAYOUT NOTES

1. SLR INTERNATIONAL CORPORATION ACCEPTS NO RESPONSIBILITY FOR MAPS AND DATA THAT HAVE BEEN PREPARED AND SUPPLIED BY OTHERS.
2. CONCRETE SIDEWALKS, ENTRY AREAS, AND TERRACES SHALL INCORPORATE EXPANSION JOINTS, SCORE JOINTS, AND CONSTRUCTION JOINTS PER THE SPECIFICATIONS AND DETAILS, TYPICALLY NO MORE THAN 144 SQUARE FEET SHALL CONSTITUTE A CONTIGUOUS SLAB. SEE STRUCTURAL PLANS FOR JOINTING PERTAINING TO THESE DISCIPLINES.
3. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
4. SITE REMEDIATION SHALL COMPLY WITH THE RIDEM APPROVED REMEDIAL ACTION WORK PLAN (RAWP, MARCH 2022), RAWP ADDENDUM (AUGUST 2022), AND THE RIDEM REMEDIAL APPROVAL LETTER DATED SEPTEMBER 14, 2022. WHERE CONFLICTS EXIST, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
5. SHOP DRAWING TO BE PROVIDED BY CONTRACTOR TO CONNECT LIGHTING TO EXISTING LIGHTING CIRCUIT.

LEGEND

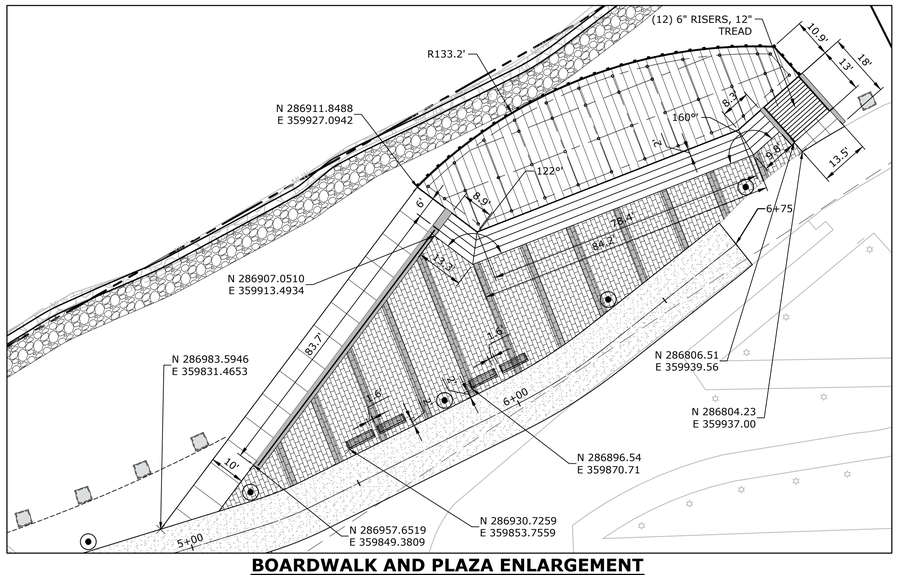
- BANK ARMORING
- POROUS ASPHALT
- GRANITE BLOCK
- 5'x5' CONCRETE PAD
- BOLLARDS
- LIGHT POST
- CONTRACT LIMIT LINE (CLL)





ACCESSIBLE ROUTE CONCRETE SIDEWALK ENLARGEMENT

SCALE: 1"=20'-0"



BOARDWALK AND PLAZA ENLARGEMENT

SCALE: 1"=20'-0"

ADD ALTERNATE #3 - ALSO SEE SHEET SD-4 FOR DECK POST LAYOUT

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CONSTRUCTION DOCUMENTS - ISSUED FOR BID

SITE PLAN - LAYOUT

RIVERWALK WEST FINAL PHASE
SITE IMPROVEMENTS

TAFT STREET
PAWTUCKET, RHODE ISLAND

BK	PJP	BK
DESIGNED	DRAWN	CHECKED

1"=40'
SCALE

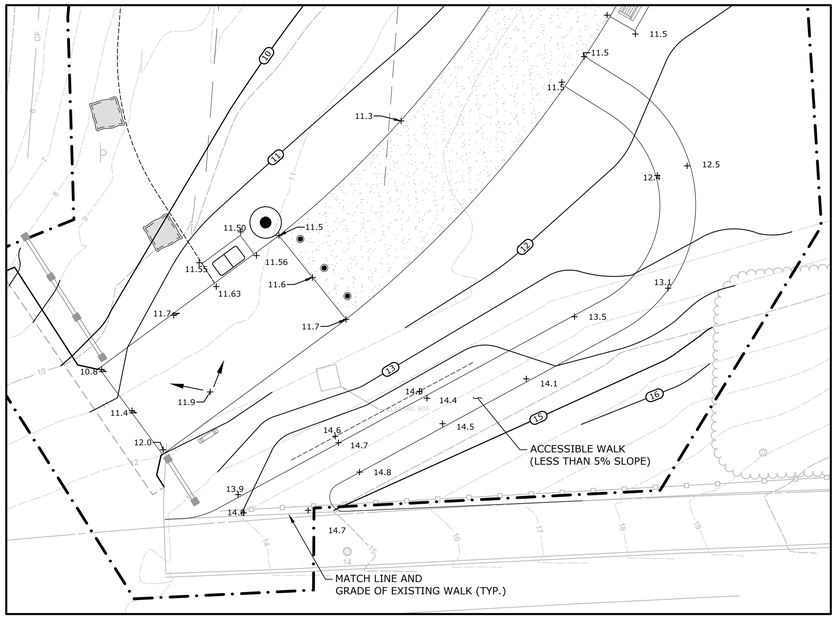
APRIL 15, 2026
DATE

15842.00001
PROJECT NO.

06 OF 20
SHEET NO.

LA
SHEET NAME

Plotted By: BROOKE HOLLAND-BARTELS Plotted On: Apr 15, 2026 - 10:37am
Drawing Name: C:\Users\BHOLLAND-BARTELS\DESKTOP\RIVERWALK & TAFT\GU.dwg



RIVERWALK ENTRANCE PLAZA ENLARGEMENT

SCALE: 1"=10'-0"

GRADING LEGEND

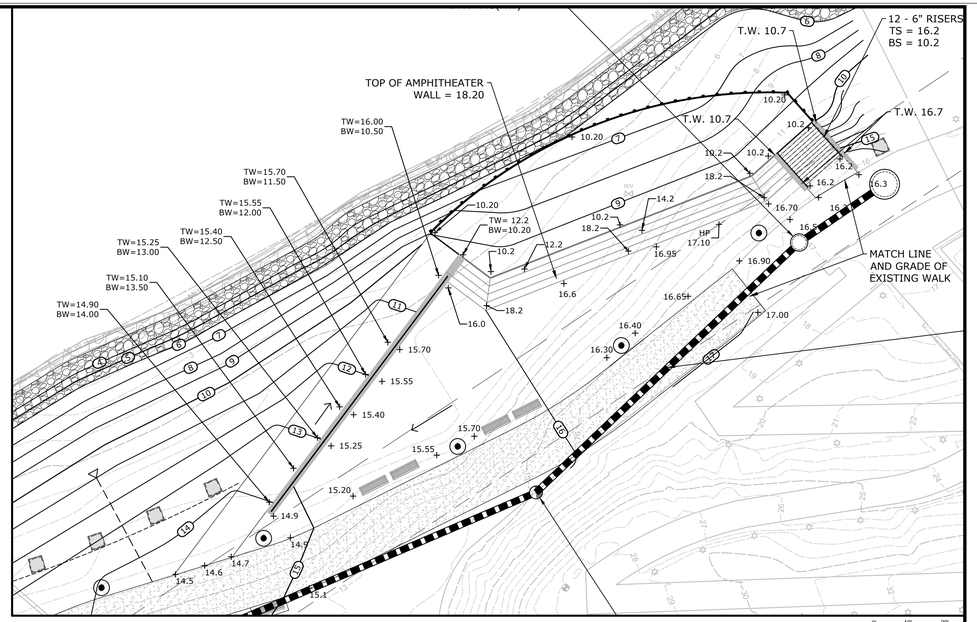
22	MINOR EXISTING CONTOUR
20	MAJOR PROPOSED CONTOUR
+17.2	PROPOSED SPOT ELEVATION
TW=17.2	PROPOSED TOP OF WALL ELEVATION
BW=17.2	PROPOSED BOTTOM OF WALL ELEVATION
22	MINOR PROPOSED CONTOUR
20	MAJOR PROPOSED CONTOUR

GRADING NOTES

1. SIDEWALK LONGITUDINAL SLOPES SHALL BE 1:20 (5%) OR LESS AND CROSS SLOPES SHALL BE 0.5 TO 1.8% (NOT TO EXCEED 1:50 OR 2%).
2. CHANGES IN LEVELS SHALL NOT BE GREATER THAN 1/4 INCH, AND SLOPES SHALL NOT BE GREATER THAN 1:20 UNLESS RAMPS OR LIFTS ARE PROVIDED.
3. ALL SIDEWALK INTERSECTIONS SHALL BE A MINIMUM OF 5' x 5' CLEAR WITH A MAXIMUM SLOPE AND CROSS-PITCH OF 2% IN ANY DIRECTION.
4. IN ALL CASES IN WHICH PROPOSED ROADS, SIDEWALKS AND CURBING WILL BE TIED INTO EXISTING ROAD/SIDEWALK AND/OR CURBS THE CONTRACTOR SHALL MATCH THE LINE AND GRADE OF THE EXISTING SITE ELEMENT.
5. ANY DISCREPANCY OR CONFLICT IN GRADES SHOWN SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER, LANDSCAPE ARCHITECT, AND ENGINEER IMMEDIATELY AND PRIOR TO INSTALLATION OF ANY IMPROVEMENT. ANY IMPROVEMENTS INSTALLED INCORRECTLY DUE TO A PLAN DISCREPANCY THAT WAS NOT FIELD CHECKED AND APPROVED WILL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
6. ANY LENGTHS OF SIDEWALKS EXCEEDING 5% LONGITUDINAL GRADIENT OR SLABS EXCEEDING 2% CROSS SLOPE SHALL BE REMOVED AND REPLACED AT THE PROPER GRADES BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
7. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS INDICATE FINISHED GRADE.

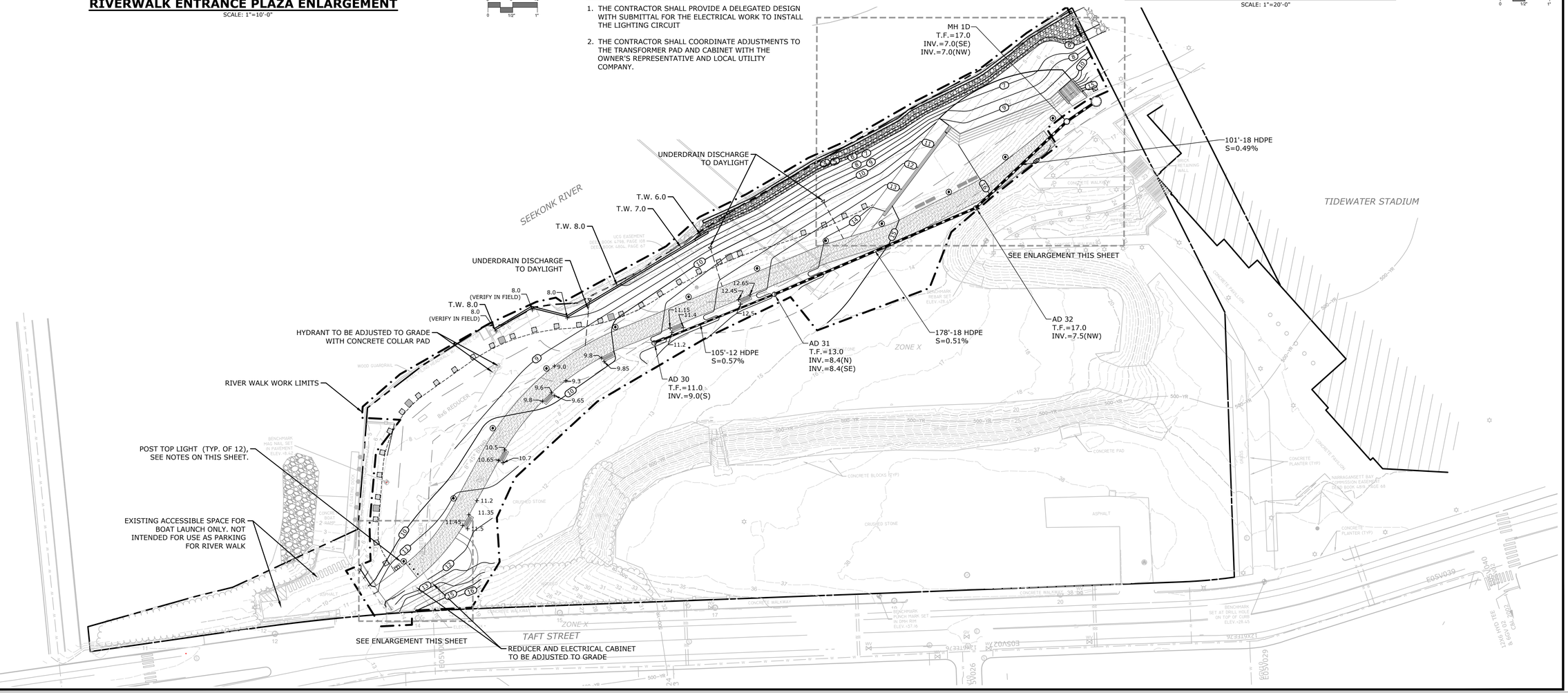
ELECTRICAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE A DELEGATED DESIGN WITH SUBMITTAL FOR THE ELECTRICAL WORK TO INSTALL THE LIGHTING CIRCUIT
2. THE CONTRACTOR SHALL COORDINATE ADJUSTMENTS TO THE TRANSFORMER PAD AND CABINET WITH THE OWNER'S REPRESENTATIVE AND LOCAL UTILITY COMPANY.



BOARDWALK AND PLAZA ENLARGEMENT

SCALE: 1"=20'-0"



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DESCRIPTION	DATE	BY
CRMC COMMENTS	2025-12-16	JRH
CONSTRUCTION DOCUMENTS	2026-02-27	JRH
UPDATED REVIEW SET	2026-03-27	JRH

CONSTRUCTION DOCUMENTS - ISSUED FOR BID

SITE PLAN - GRADING & UTILITIES

RIVERWALK WEST FINAL PHASE
SITE IMPROVEMENTS
TAFT STREET
PAWTUCKET, RHODE ISLAND

BK	PJP	BK
DESIGNED	DRAWN	CHECKED

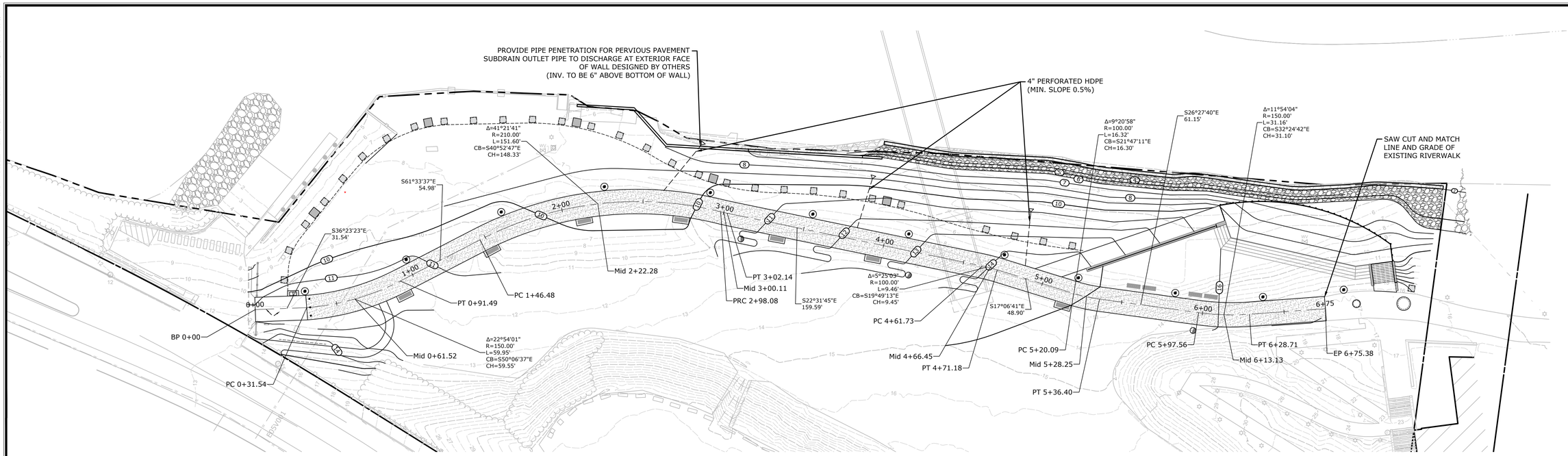
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APRIL 15, 2026
DATE

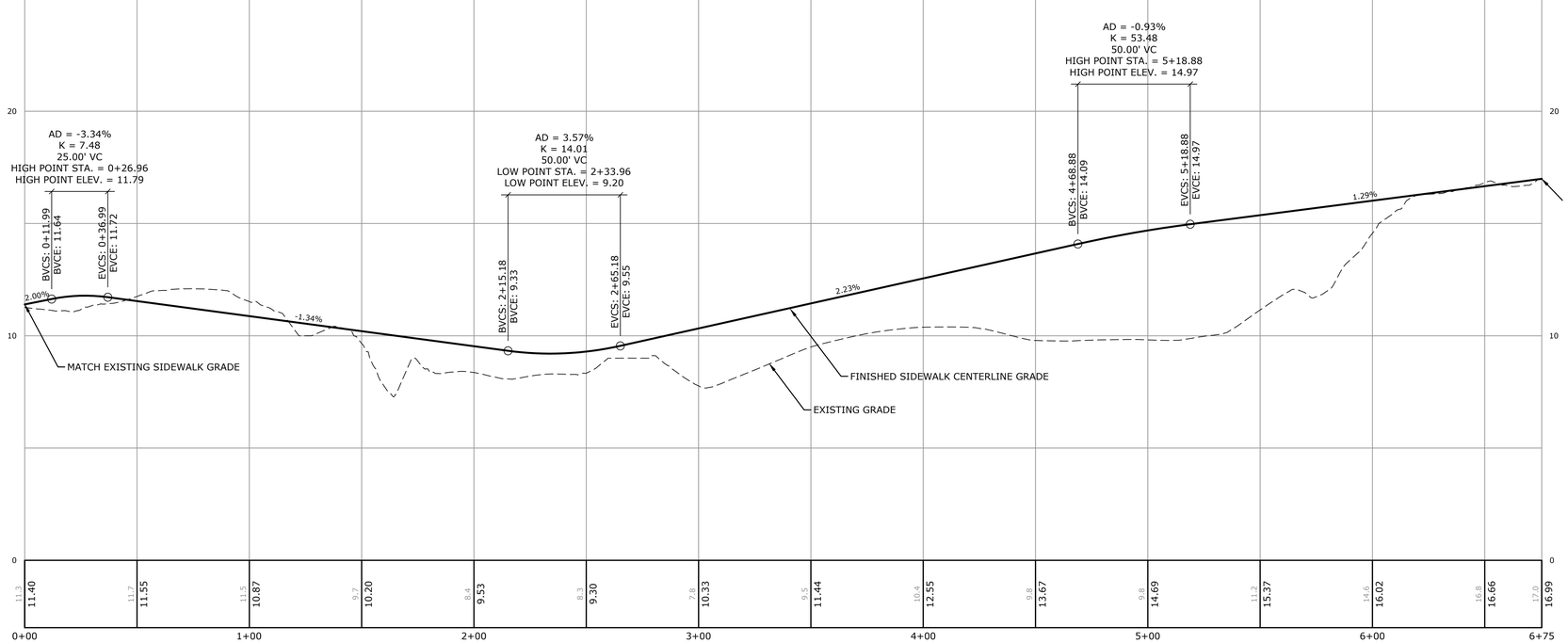
15842.00001
PROJECT NO.

07 OF 20
SHEET NO.

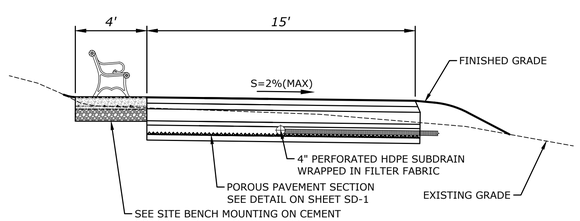
GU
SHEET NAME



PLAN VIEW
SCALE: 1"=30'



PROFILE VIEW
SCALE: 1"=30'H 1"=3'V



TYPICAL SIDEWALK SECTION
SCALE: 1"=4'

0' 15' 30'
0 1/2" 1"

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DESCRIPTION	DATE	BY
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SITE PLAN - SIDEWALK PLAN AND PROFILE

RIVERWALK WEST FINAL PHASE
SITE IMPROVEMENTS

TAFT STREET
PAWTUCKET, RHODE ISLAND

DESIGNED	DRAWN	CHECKED
JRH	JRH	DLO

SCALE: AS NOTED

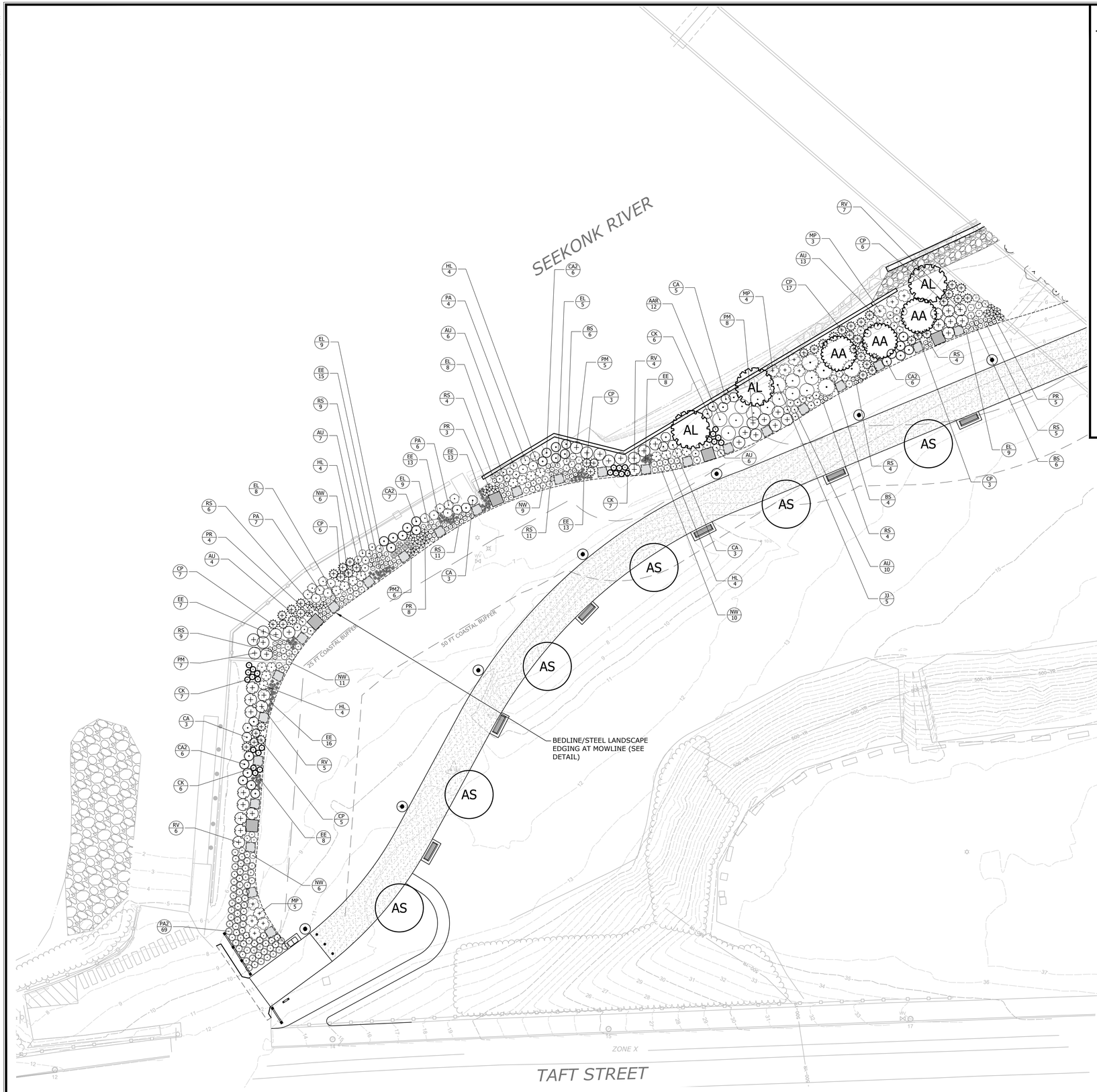
DATE: APRIL 15, 2026

PROJECT NO.: 15842.00001

SHEET NO.: 08 OF 20

SHEET NAME: PR

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Last saved by: DLOCKE on 2026-03-27 15:18:59
C:\USERS\DLOCKE\SLR INTERNATIONAL CORPORATION\SLR - DOCUMENTS\PROJECTS\15842.00001 RIVERWALK WEST FINAL PHASE\CAD\SHEETS\SITE PLAN - SIDEWALK PLAN AND PROFILE.DWG



PLANT SCHEDULE RIVER WALK

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
TREES					
AS	6	Acer rubrum `Red Sunset`	Red Sunset Maple	2.5"-3.0" Cal.	B&B
AA	4	Amelanchier arborea	Downy Serviceberry	1.5"-2.0" Cal.	B&B
AL	4	Amelanchier laevis	Allegheny Serviceberry	1.5"-2.0" Cal.	B&B
BP	5	Betula populifolia	Gray Birch	#20 cont.	
CODE	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONT.**
GRASSES					
CK	26	Calamagrostis acutiflora `Karl Foerster`	Feather Reed Grass	#3	
PA	17	Pennisetum alopecuroides	Fountain Grass	#1 cont.	#1
PA2	69	Pennisetum alopecuroides `Hameln`	Dwarf Fountain Grass	---	#3
GROUNDCOVERS					
AU	115	Arctostaphylos uva-ursi `Massachusetts`	Massachusetts Kinnikinnick	#1 cont.	#1
LB	112	Liriope muscari `Big Blue`	Big Blue Lilyturf	---	#1
PERENNIALS					
BS	22	Boltonia asteroides 'Snowbank'	Snowbank False Aster	#1 cont.	
CA2	49	Ceanothus americanus	New Jersey Tea	#1 cont.	#1
EE	93	Echinacea x 'PAS702917' TM	Pow Wow Wildberry Coneflower	---	#1
EL	53	Eupatorium dubium 'Little Joe'	Little Joe Pye Weed	#1 cont.	
NW	42	Nepeta x faassenii `Walkers Low`	Walkers Low Catmint	---	#3
PR	27	Phlox paniculata 'Robert Poore'	Robert Poore Garden Phlox	#1 cont.	
PM2	9	Pycnanthemum muticum	Blunt Mountainmint	#1 cont.	
RV	74	Rosa virginiana	Virginia Rose	#1 cont.	#1
RS	89	Rudbeckia hirta 'Indian Summer'	Indian Summer Black-eyed Susan	#1 cont.	
BUFFER SHRUBS					
CP	66	Comptonia peregrina	Sweet Fern	#1 cont.	#1
HL	16	Hydrangea paniculata `Little Lime`	Little Lime Hydrangea	---	#3
MP	46	Morella pensylvanica	Bayberry	#1 cont.	#1
MP2	11	Myrica pensylvanica	Northern Bayberry	#5 cont.	#5
LARGE SHRUBS					
AC	9	Amelanchier canadensis	Shadbush	#1 cont.	#1
AAR	12	Aronia arbutifolia	Red Chokeberry	#1 cont.	#1
AM	3	Aronia melanocarpa	Black Chokeberry	#1 cont.	#1
CA	54	Clethra alnifolia	Sweet Pepper Bush	#1 cont.	#1
JJ	10	Juniperus communis	Common Juniper	#1 cont.	#1
PM	36	Prunus maritima	Beach Plum	#1 cont.	#1

LANDSCAPING NOTES

1. ALL LANDSCAPING WITHIN EMBANKMENT TO EDGE OF WATER TO BE IN COMPLIANCE WITH ASSENTS 2021-08-048 AND 2025-02-055.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATING PLANT PITS.
3. SEED ALL DISTURBED AREAS TO LAWN WITHIN CONTRACT LIMIT LINE UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL PROVIDE A 6" MINIMUM DEPTH OF SCREENED TOPSOIL FOR ALL LAWN AREAS TO BE PLACED ABOVE THE REQUIRED CLEAN FILL AND DEMARCATION LAYER AS DETAILED.
4. ALL PLANTING BEDS SHALL HAVE 12" MINIMUM DEPTH OF TOPSOIL TO BE PLACED ABOVE THE REQUIRED CLEAN FILL AND DEMARCATION LAYER AS DETAILED.
5. THE CONTRACTOR SHALL PROVIDE A 4" MIN. DEPTH OF DARK BROWN SHREDDED MULCH OVER TREE PLANTINGS OUTSIDE OF THE EMBANKMENT ZONE
6. ALL PLANT MATERIAL IS SUBJECT TO INSPECTION AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO AND AFTER PLANTING.
7. PLANT SPECIES MAY BE ADJUSTED BASED ON AVAILABILITY AT TIME OF PLANTING. ALL PLANT MATERIAL SUBSTITUTIONS ARE SUBJECT TO REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT.
8. WHERE A SIZE RANGE IS SPECIFIED AT LEAST 50% OF PLANTS PROVIDED SHALL BE OF THE LARGER SIZE.
9. CONTRACTOR TO REMOVE TREE STAKES AFTER ONE GROWING SEASON.
10. ALL PLANT MATERIALS SHALL CARRY A FULL GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE, TO INCLUDE PROMPT TREATMENT OR REMOVAL AND REPLACEMENT OF ANY PLANTS FOUND TO BE IN AN UNHEALTHY CONDITION BY THE LANDSCAPE ARCHITECT. ALL REPLACEMENTS SHALL BE OF THE SAME KIND AND SIZE OF PLANTS SPECIFIED IN THE PLANT LIST.
11. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING AND SHALL CONTINUE UNTIL ACCEPTANCE BY THE LANDSCAPE ARCHITECT. MAINTENANCE SHALL INCLUDE WATERING, MULCHING, TIGHTENING & REPLACING OF GUYS, REPLACEMENT OF SICK OR DEAD PLANTS, RESETTING PLANTS TO PROPER GRADE OR UPRIGHT (PLUMB) POSITION, RESTORATION OF SAUCERS, AND ALL OTHER CARE NEEDED FOR PROPER GROWTH OF THE PLANTS.
12. PLANTING SEASON: SPRING: MARCH 15 TO JUNE 30 (INCLUSIVE) OR FALL: FROM SEPTEMBER 1 TO DECEMBER 15, OR UNTIL THE GROUND FREEZES. NO PLANTING SHALL BE DONE IN FROZEN GROUND OR WHEN SNOW COVERS THE GROUND, OR THE SOIL IS OTHERWISE IN AN UNSATISFACTORY CONDITION FOR PLANTING. PLANTING OUTSIDE THESE LIMITS SHALL ONLY BE CONSIDERED AFTER WRITTEN APPROVAL BY OWNER AND LANDSCAPE ARCHITECT.

SEED MIX LEGEND

NEW ENGLAND WILDFLOWER MIX: TO BE SEEDED THROUGHOUT PLANT BED EAST OF THE RIVER WALK.

APPLICATION RATE: 23 lbs/acre | 1900 sq ft/lb

SPECIES: Little Bluestem (Schizachyrium scoparium), Red Fescue (Festuca rubra), Indian Grass (Sorghastrum nutans), Partridge Pea (Chamaecrista fasciculata), Canada Wild Rye (Elymus canadensis), Virginia Wild Rye (Elymus virginicus), Blue Vervain (Verbena hastata), Butterfly Milkweed (Asclepias tuberosa), Narrowleafed Blue Eyed Grass (Sisyrinchium angustifolium), Black Eyed Susan (Rudbeckia hirta), New England Aster (Symphyotrichum novae-angliae), Spiked Gayfeather/ Marsh Blazing Star (Liatris spicata), Starved/Calico Aster (Aster lateriflorus/Symphyotrichum lateriflorum), Early Goldenrod (Solidago juncea), Hollow-Stem Joe Pye Weed (Eupatorium fistulosum/Eutrochium fistulosum)

AS MANUFACTURED BY:
NEW ENGLAND WETLAND PLANTS INC., AMHERST, MA
413-548-8000

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SLRCONSULTING.COM

DESCRIPTION	DATE	BY
CRMC COMMENTS	2025-12-16	JRH
CONSTRUCTION DOCUMENTS	2026-02-27	JRH
UPDATED REVIEW SET	2026-03-27	JRH

CONSTRUCTION DOCUMENTS - ISSUED FOR BID

SITE PLAN - LANDSCAPING
RIVERWALK WEST FINAL PHASE
SITE IMPROVEMENTS
TAFT STREET
PAWTUCKET, RHODE ISLAND

PJP	PJP	BK
DESIGNED	DRAWN	CHECKED

1"=40'
SCALE

APRIL 15, 2026
DATE

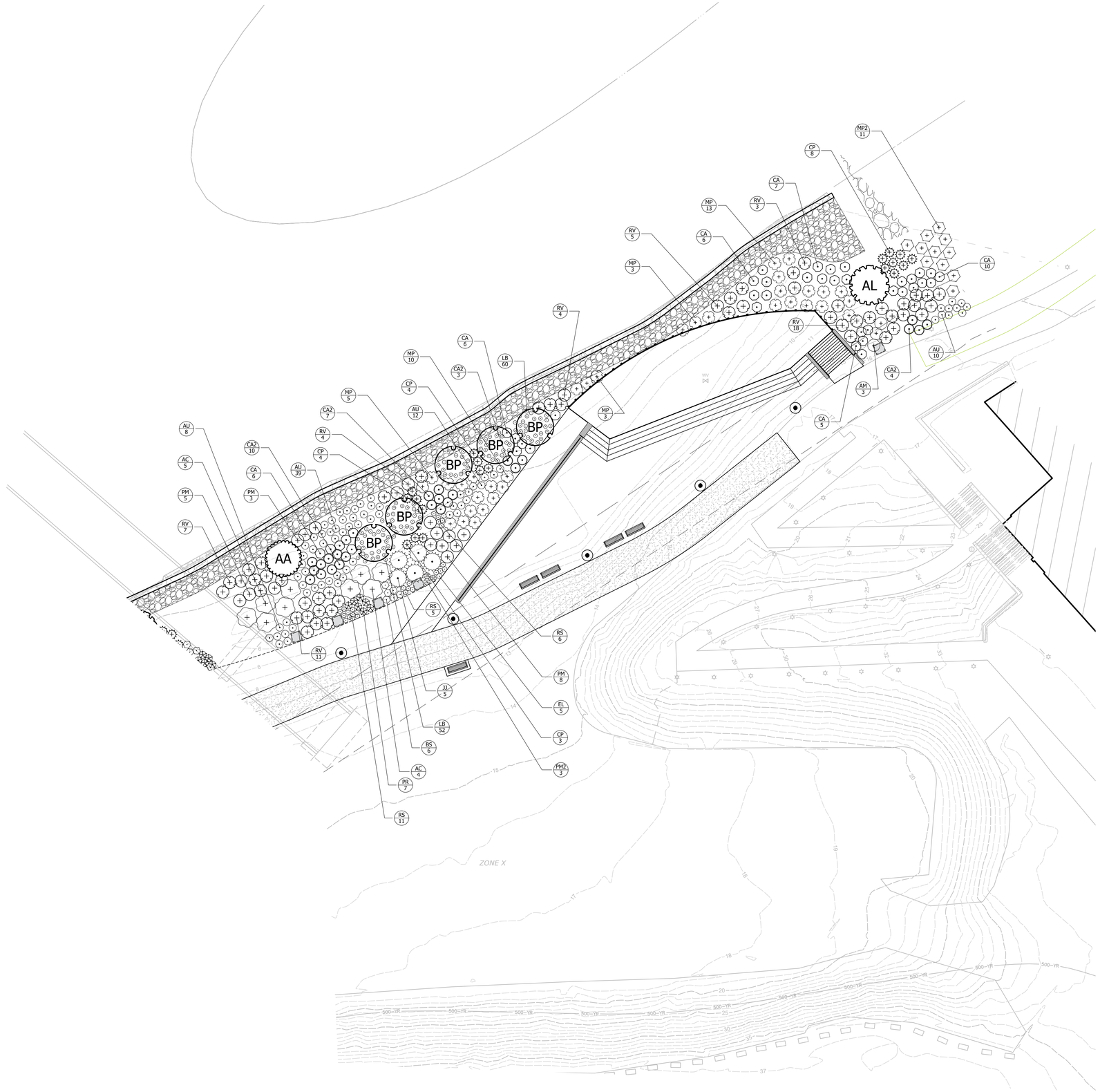
15842.00001
PROJECT NO.

9 OF 20
SHEET NO.

LS-1
SHEET NAME

Plotted by: DSCHOCK on 2026-04-15 11:19:56am
Last Saved By: DSCHOCK on 2026-04-15 11:19:56am
File Name: C:\CAD\RIVERWALK\LANDSCAPING\LS01 Taft.dwg

Plotted By: DSOUZA on Wed Apr 15, 2026 - 10:57am
Drawing Name: C:\Users\DSOUZA\Documents\15842.00001_RIVERWALK_LANDSCAPING_central_Taft-2



PLANT SCHEDULE RIVER WALK

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
TREES					
AS	6	Acer rubrum `Red Sunset`	Red Sunset Maple	2.5"-3.0" Cal.	B&B
AA	4	Amelanchier arborea	Downy Serviceberry	1.5"-2.0" Cal.	B&B
AL	4	Amelanchier laevis	Allegheny Serviceberry	1.5"-2.0" Cal.	B&B
BP	5	Betula populifolia	Gray Birch	#20 cont.	

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONT.
GRASSES					
CK	26	Calamagrostis acutiflora `Karl Foerster`	Feather Reed Grass	#3	
PA	17	Pennisetum alopecuroides	Fountain Grass	#1 cont.	#1
PA2	69	Pennisetum alopecuroides `Hameln`	Dwarf Fountain Grass	---	#3
GROUNDCOVERS					
AU	115	Arctostaphylos uva-ursi `Massachusetts`	Massachusetts Kinnikinnick	#1 cont.	#1
LB	112	Liriope muscari `Big Blue`	Big Blue Lilyturf	---	#1
PERENNIALS					
BS	22	Boltonia asteroides 'Snowbank'	Snowbank False Aster	#1 cont.	
CA2	49	Ceanothus americanus	New Jersey Tea	#1 cont.	#1
EE	93	Echinacea x 'PAS702917' TM	Pow Wow Wildberry Coneflower	---	#1
EL	53	Eupatorium dubium 'Little Joe'	Little Joe Pye Weed	#1 cont.	
NW	42	Nepeta x faassenii `Walkers Low`	Walkers Low Catmint	---	#3
PR	27	Phlox paniculata 'Robert Poore'	Robert Poore Garden Phlox	#1 cont.	
PM2	9	Pycnanthemum muticum	Blunt Mountainmint	#1 cont.	
RV	74	Rosa virginiana	Virginia Rose	#1 cont.	#1
RS	89	Rudbeckia hirta 'Indian Summer'	Indian Summer Black-eyed Susan	#1 cont.	
BUFFER SHRUBS					
CP	66	Comptonia peregrina	Sweet Fern	#1 cont.	#1
HL	16	Hydrangea paniculata `Little Lime`	Little Lime Hydrangea	---	#3
MP	46	Morella pensylvanica	Bayberry	#1 cont.	#1
MP2	11	Myrica pensylvanica	Northern Bayberry	#5 cont.	#5
LARGE SHRUBS					
AC	9	Amelanchier canadensis	Shadbush	#1 cont.	#1
AAR	12	Aronia arbutifolia	Red Chokeberry	#1 cont.	#1
AM	3	Aronia melanocarpa	Black Chokeberry	#1 cont.	#1
CA	54	Clethra alnifolia	Sweet Pepper Bush	#1 cont.	#1
JJ	10	Juniperus communis	Common Juniper	#1 cont.	#1
PM	36	Prunus maritima	Beach Plum	#1 cont.	#1

SEE SHEET LS-1 FOR PLANTING NOTES

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DESCRIPTION	DATE	BY
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CONSTRUCTION DOCUMENTS - ISSUED FOR BID

SITE PLAN - LANDSCAPING

RIVERWALK WEST FINAL PHASE
SITE IMPROVEMENTS
TAFT STREET
PAWTUCKET, RHODE ISLAND

PJP	PJP	BK
DESIGNED	DRAWN	CHECKED

SCALE: 1"=40'
DATE: APRIL 15, 2026
PROJECT NO.: 15842.00001
SHEET NO.: 10 OF 20
SHEET NAME: LS-2

SOIL EROSION CONTROL LEGEND

- DIVERSION RUNOFF CONVEYANCE MEASURE (SWALE AND/OR BERM)
- TEMPORARY SEDIMENT TRAP
- LIMIT OF DISTURBANCE (NO SEDIMENT CONTROL)
- LIMIT OF DISTURBANCE (WITH SEDIMENT CONTROL)
- SILT FENCE
- INLET PROTECTION
- CONSTRUCTION ENTRANCE (RIDOT STD 9.9.0)
- EROSION CONTROL BLANKET
- FINAL CONTOUR GRADE (100)

1. SOIL EROSION AND SEDIMENT CONTROL NOTES:
2. TEMPORARY WASTE STOCKPILE AREA (WSA): ALL SOIL STOCKPILES (CONTROLLED OR IMPORTED SOIL) MUST BE LOCATED WITHIN DESIGNATED WSA. CONTRACTOR FINAL SELECTION OF WSA PENDING ENGINEER APPROVAL.
3. LOCATE WSA ON STABLE SLOPE OUTSIDE OF FLOODPLAIN. ACTUAL LOCATION SHALL BE COORDINATED WITH THE OWNER/ENGINEER AND PLACED IN UPLAND/STABLE AREA.
4. ALL CONTROLLED MATERIALS SHALL BE STOCKPILED ONLY WITHIN WSA, INDIVIDUAL TEMPORARY WASTE STOCKPILES SHALL NOT BE PLACED OUTSIDE OF THIS AREA.
5. ALL SOIL EROSION AND SEDIMENT CONTROLS (SESC) TO BE COORDINATED WITH ACTIVE REMEDIAL ACTIVITIES IN ACCORDANCE WITH THE RIDEM APPROVED REMEDIAL ACTION WORK PLAN (RAWP, MARCH 2022), RAWP ADDENDUM (AUGUST 2022), AND THE RIDEM REMEDIAL APPROVAL LETTER DATED SEPTEMBER 14, 2022. AFTER REMEDIAL ACTIVITIES ARE COMPLETE, THAT PORTION OF THE SITE IS TO BE LEFT WITH 6" OF STONE OR APPROVED STABILIZED, NON-ERODIBLE, SURFACE. CONTRACTOR TO MAINTAIN THIS SURFACE THROUGHOUT CONSTRUCTION. REFER TO PLANS AND SPECIFICATIONS BY SLR CONSULTING AS PART OF THE "FORMER TIDEWATER FACILITY REMEDIAL ACTIVITIES" PERMIT. CONTRACTOR TO UPDATE EXISTING SESC PLAN AS NEEDED TO INCORPORATE ANY ADDITIONAL CONTROLS TO CONSTRUCT THE PROPOSED DEVELOPMENT.
6. THE CONTRACTOR IS RESPONSIBLE FOR ALL SOIL EROSION AND SEDIMENT CONTROL ON SITE WHICH MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE APPLICABLE REGULATIONS AND AUTHORITY HAVING JURISDICTION. THE CONTRACTOR MUST NOTIFY THE DESIGN ENGINEER, THE TOWN ENGINEER, AND THE RI COASTAL RESOURCES MANAGEMENT COUNCIL AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
7. ALL EROSION CONTROLS INCLUDING (BUT NOT LIMITED TO) TEMPORARY SWALES, CONSTRUCTION ENTRANCES, PERIMETER SILT FENCE & TEMPORARY SEDIMENT TRAPS, MUST BE INSTALLED PER THE LATEST EDITION OF THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL (RISESC) HANDBOOK AND THE SOIL EROSION AND SEDIMENT CONTROL PLAN(S). NOTE THE SOIL EROSION AND SEDIMENT CONTROL SHOWN ON THESE PLANS ARE THE MINIMUM QUANTITY/TYPE OF EROSION CONTROL DEVICES AND MATERIALS DEEMED REQUIRED BY SLR CONSULTING TO MEET THE OBJECTIVES OF THE RISESC HANDBOOK, BUT IS CONSIDERED A GUIDE ONLY. ADDITIONAL MEASURES/ALTERNATE CONFIGURATIONS MAY BE REQUIRED IN ORDER TO MEET THE RISESC HANDBOOK BASED ON FACTORS INCLUDING (BUT NOT LIMITED TO) SITE PARAMETERS, WEATHER, INSPECTIONS AND UNIQUE FEATURES. THE SESC WILL CONTINUE TO EVOLVE THROUGHOUT CONSTRUCTION/PHASES. PURSUANT TO NOTE 1 ABOVE, SESC REMAINS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL THE SITE IS FULLY STABILIZED AND/OR SESC RESPONSIBILITIES ARE ASSUMED BY THE OWNER IN WRITING.
8. SILT FENCE SHOWN ON THIS PLAN IS INTENDED FOR PERIMETER EROSION ONLY, NOT FOR FULL CONSTRUCTION SEDIMENT LOAD. INTERIOR EROSION CONTROLS TO BE INSTALLED AND MAINTAINED AS NECESSARY IN ACCORDANCE WITH THE APPROVED SESC PLANS BY SLR CONSULTING.
9. TEMPORARY SWALES MUST BE USED TO CONTROL RUNOFF DURING CONSTRUCTION OF THE PROPOSED SITE WORK. EROSION CONTROL MATS MUST BE INSTALLED, IF NECESSARY, TO PREVENT EROSION AND SUPPORT VEGETATION. AFTER CONSTRUCTION IS COMPLETE AND TRIBUTARY AREAS TO THE SWALES HAVE BEEN STABILIZED, THE TEMPORARY SWALES MUST BE CLEARED AND BROUGHT TO FINAL GRADE PER THE DESIGN PLANS.
10. CONTRACTOR MAY MODIFY SEQUENCE OF CONSTRUCTION WITH APPROVAL FROM DESIGN ENGINEER AND OWNER.

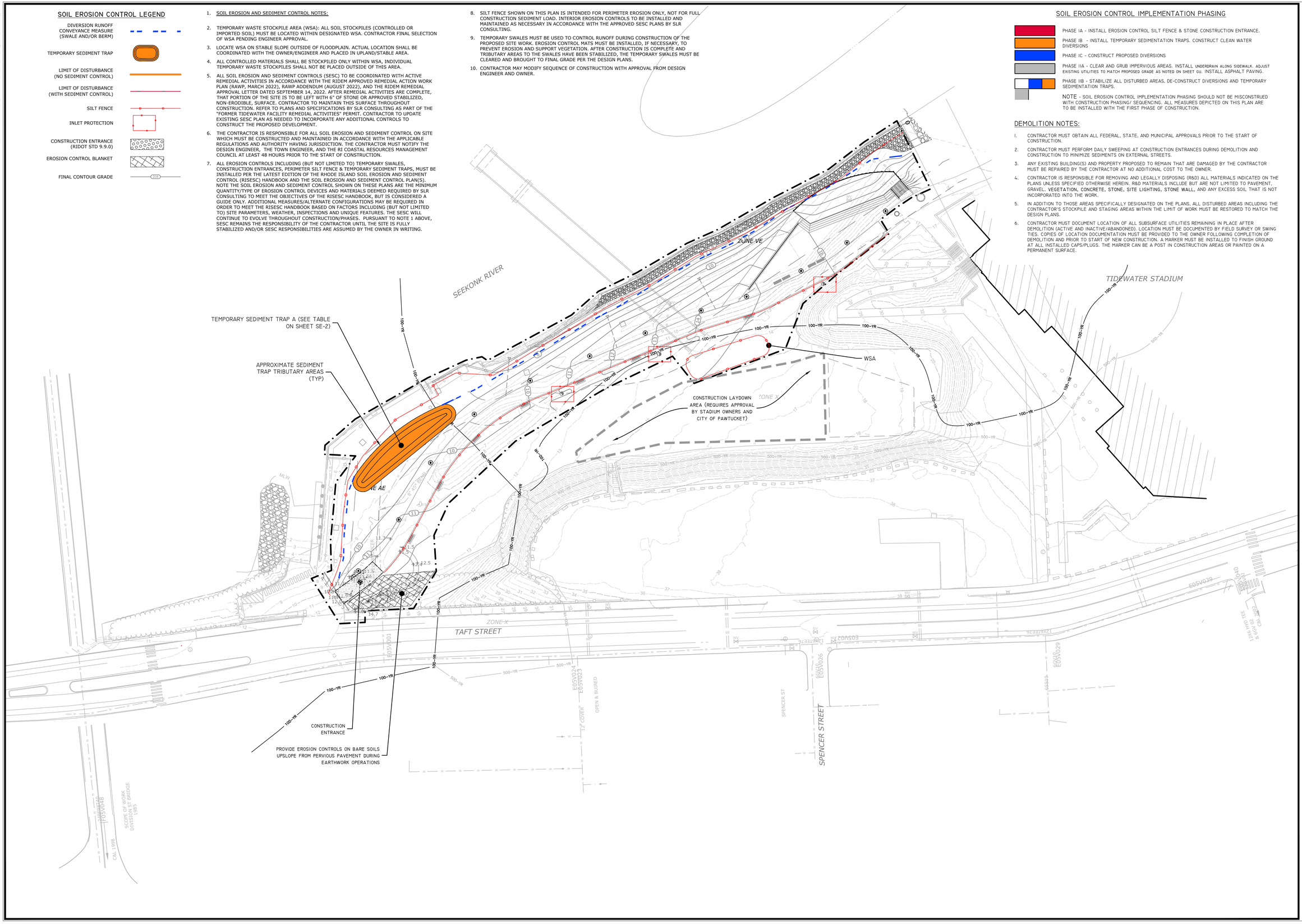
SOIL EROSION CONTROL IMPLEMENTATION PHASING

- PHASE IA - INSTALL EROSION CONTROL SILT FENCE & STONE CONSTRUCTION ENTRANCE.
- PHASE IB - INSTALL TEMPORARY SEDIMENTATION TRAPS. CONSTRUCT CLEAN WATER DIVERSIONS
- PHASE IC - CONSTRUCT PROPOSED DIVERSIONS
- PHASE IIA - CLEAR AND GRUB IMPERVIOUS AREAS. INSTALL UNDERDRAIN ALONG SIDEWALK. ADJUST EXISTING UTILITIES TO MATCH PROPOSED GRADE AS NOTED ON SHEET GU. INSTALL ASPHALT PAVING.
- PHASE IIB - STABILIZE ALL DISTURBED AREAS, DE-CONSTRUCT DIVERSIONS AND TEMPORARY SEDIMENTATION TRAPS.

NOTE - SOIL EROSION CONTROL IMPLEMENTATION PHASING SHOULD NOT BE MISCONSTRUED WITH CONSTRUCTION PHASING/ SEQUENCING. ALL MEASURES DEPICTED ON THIS PLAN ARE TO BE INSTALLED WITH THE FIRST PHASE OF CONSTRUCTION.

DEMOLITION NOTES:

1. CONTRACTOR MUST OBTAIN ALL FEDERAL, STATE, AND MUNICIPAL APPROVALS PRIOR TO THE START OF CONSTRUCTION.
2. CONTRACTOR MUST PERFORM DAILY SWEEPING AT CONSTRUCTION ENTRANCES DURING DEMOLITION AND CONSTRUCTION TO MINIMIZE SEDIMENTS ON EXTERNAL STREETS.
3. ANY EXISTING BUILDING(S) AND PROPERTY PROPOSED TO REMAIN THAT ARE DAMAGED BY THE CONTRACTOR MUST BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
4. CONTRACTOR IS RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) ALL MATERIALS INDICATED ON THE PLANS UNLESS SPECIFIED OTHERWISE HEREIN. R&D MATERIALS INCLUDE BUT ARE NOT LIMITED TO PAVEMENT, GRAVEL, VEGETATION, CONCRETE, STONE, SITE LIGHTING, STONE WALL, AND ANY EXCESS SOIL THAT IS NOT INCORPORATED INTO THE WORK.
5. IN ADDITION TO THOSE AREAS SPECIFICALLY DESIGNATED ON THE PLANS, ALL DISTURBED AREAS INCLUDING THE CONTRACTOR'S STOCKPILE AND STAGING AREAS WITHIN THE LIMIT OF WORK MUST BE RESTORED TO MATCH THE DESIGN PLANS.
6. CONTRACTOR MUST DOCUMENT LOCATION OF ALL SUBSURFACE UTILITIES REMAINING IN PLACE AFTER DEMOLITION (ACTIVE AND INACTIVE/ABANDONED). LOCATION MUST BE DOCUMENTED BY FIELD SURVEY OR SWING TIES. COPIES OF LOCATION DOCUMENTATION MUST BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF DEMOLITION AND PRIOR TO START OF NEW CONSTRUCTION. A MARKER MUST BE INSTALLED TO FINISH GROUND AT ALL INSTALLED CAPS/PLUGS. THE MARKER CAN BE A POST IN CONSTRUCTION AREAS OR PAINTED ON A PERMANENT SURFACE.



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DESCRIPTION	DATE	BY
CONSTRUCTION DOCUMENTS	2026.02.27	JRH

SITE PLAN - SEDIMENT AND EROSION CONTROL

RIVERWALK WEST FINAL PHASE SITE IMPROVEMENTS

TAFT STREET
PAWTUCKET, RHODE ISLAND

CONSTRUCTION DOCUMENTS - ISSUED FOR BID

DESIGNED	DRAWN	CHECKED
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SCALE: 1"=40'

DATE: APRIL 15, 2026

PROJECT NO.: 15842.00001

SHEET NO.: 11 OF 20

SHEET NAME: **SE-1**

GENERAL:

THESE GUIDELINES SHALL APPLY TO ALL WORK CONSISTING OF ANY AND ALL TEMPORARY AND/OR PERMANENT MEASURES TO CONTROL WATER POLLUTION AND SOIL EROSION, AS MAY BE REQUIRED, DURING THE CONSTRUCTION OF THE PROJECT.

IN GENERAL, ALL CONSTRUCTION ACTIVITIES SHALL PROCEED IN SUCH A MANNER SO AS NOT TO POLLUTE ANY WETLANDS, WATERCOURSE, WATER BODY, AND CONDUIT CARRYING WATER, ETC. THE CONTRACTOR SHALL LIMIT, INSOFAR AS POSSIBLE, THE SURFACE AREA OF EARTH MATERIALS EXPOSED BY CONSTRUCTION METHODS AND IMMEDIATELY PROVIDE PERMANENT AND TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT WETLANDS, WATERCOURSES, AND WATER BODIES, AND TO PREVENT, INSOFAR AS POSSIBLE, EROSION ON THE SITE.

LAND GRADING:

THE RESHAPING OF THE GROUND SURFACE BY EXCAVATION AND FILLING OR A COMBINATION OF BOTH, TO OBTAIN PLANNED GRADES, SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING CRITERIA:

a. THE CUT FACE OF EARTH EXCAVATION SHALL NOT BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2:1).

b. THE PERMANENT EXPOSED FACES OF FILLS SHALL NOT BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2:1).

c. THE CUT FACE OF ROCK EXCAVATION SHALL NOT BE STEEPER THAN ONE HORIZONTAL TO TWO VERTICAL (1:2).

d. PROVISION SHOULD BE MADE TO CONDUCT SURFACE WATER SAFELY TO STORM DRAINS TO PREVENT SURFACE RUNOFF FROM DAMAGING CUT FACES AND FILL SLOPES.

e. NO FILL SHOULD BE PLACED WHERE IT WILL SLIDE OR WASH UPON THE INTO ADJACENT WETLANDS, WATERCOURSES, OR WATER BODIES.

f. PRIOR TO ANY RE-GRADING, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE PLACED AT THE ENTRANCE TO THE WORK AREA IN ORDER TO REDUCE MUD AND OTHER SEDIMENTS FROM LEAVING THE SITE.

SOIL PREPARATION:

EXCAVATED LOAM AND FOREST LOAM FROM THE TRAIL EXCAVATION SHALL BE USED IN PLACE OF IMPORTED TOPSOIL. NO TOPSOIL SHALL BE IMPORTED FOR THE PROJECT. LOAM SHALL BE SPREAD OVER ALL EXPOSED AREAS IN ORDER TO PROVIDE A SOIL MEDIUM HAVING FAVORABLE CHARACTERISTICS FOR THE ESTABLISHMENT, GROWTH, AND MAINTENANCE OF VEGETATION.

UPON ATTAINING FINAL SUBGRADES, SCARIFY SURFACE TO PROVIDE A GOOD BOND WITH LOAM.

REMOVE ALL LARGE STONES, TREE LIMBS, ROOTS AND CONSTRUCTION DEBRIS.

APPLY LIME ACCORDING TO SOIL TEST OR AT THE RATE OF TWO (2) TONS PER ACRE.

MATERIAL:

1. LOAM SHOULD HAVE PHYSICAL, CHEMICAL, AND BIOLOGICAL CHARACTERISTICS FAVORABLE TO THE GROWTH OF PLANTS.

2. LOAM SHOULD BE RELATIVELY FREE OF SUBSOIL MATERIAL AND MUST BE FREE OF STONES (OVER 1" IN DIAMETER), LUMPS OF SOIL, ROOTS, TREE LIMBS, TRASH, OR CONSTRUCTION DEBRIS. IT SHOULD BE FREE OF ROOTS OR RHIZOMES SUCH AS THISTLE, NUTGRASS, AND QUACKGRASS.

3. AN ORGANIC MATTER CONTENT OF SIX PERCENT (6%) IS REQUIRED. AVOID LIGHT COLORED SUBSOIL MATERIAL.

4. SOLUBLE SALT CONTENT OF OVER 500 PARTS PER MILLION (PPM) IS LESS SUITABLE. AVOID TIDAL MARSH SOILS BECAUSE OF HIGH SALT CONTENT AND SULFUR ACIDITY.

5. THE pH SHOULD BE MORE THAN 6.0. IF LESS, ADD LIME TO INCREASE pH TO AN ACCEPTABLE LEVEL.

APPLICATION:

1. AVOID SPREADING WHEN LOAM IS WET OR FROZEN.

2. SPREAD LOAM UNIFORMLY TO A DEPTH OF AT LEAST SIX INCHES (6"), OR TO THE DEPTH SHOWN ON THE LANDSCAPING PLANS.

TEMPORARY VEGETATIVE COVER:

TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED ON ALL UNPROTECTED AREAS THAT PRODUCE SEDIMENT, AREAS WHERE FINAL GRADING HAS BEEN COMPLETED, AND AREAS WHERE THE ESTIMATED PERIOD OF BARE SOIL EXPOSURE IS LESS THAN 6 MONTHS. TEMPORARY VEGETATIVE COVER SHALL BE APPLIED IF AREAS WILL NOT BE PERMANENTLY SEEDED BY SEPTEMBER 1.

ESTABLISHMENT:

1. SELECT APPROPRIATE SPECIES FOR THE SITUATION. NOTE RATES AND SEEDING DATES (SEE VEGETATIVE COVER SELECTION & MULCHING SPECIFICATION BELOW).

2. APPLY SEED UNIFORMLY ACCORDING TO THE RATE INDICATED BY BROADCASTING, DRILLING, OR HYDRAULIC APPLICATION.

3. UNLESS HYDROSEEDED, COVER RYEGRASS SEEDS WITH NOT MORE THAN 1/4 INCH OF SOIL USING SUITABLE EQUIPMENT.

EROSION CHECKS

GENERAL:

TEMPORARY PERVIOUS BARRIERS USING COMPOST FILTER TUBES, SHALL BE INSTALLED AND MAINTAINED AS REQUIRED TO CHECK EROSION AND REDUCE SEDIMENTATION.

CONSTRUCTION:

COMPOST FILTER TUBES SHALL BE INSTALLED AND MAINTAINED PER THE MANUFACTURER'S SPECIFICATIONS.

VEGETATIVE COVER SELECTION & MULCHING

TEMPORARY VEGETATIVE COVER:

PERENNIAL RYEGRASS 3 LBS./1,000 SQ.FT. (IOLUIUM PERENNE)

PERMANENT VEGETATIVE COVER:

1. SEE SITE PLAN AND SPECIFICATIONS FOR PERMANENT SEED MIX.

2. MULCHING: STRAW AT 70-90 LBS./1,000 SQ.FT. (TEMPORARY VEGETATIVE AREAS) WOOD FIBER IN HYDROMULCH SLURRY 25-50 LBS./1,000 SQ. FT.

ESTABLISHMENT:

1. SMOOTH AND FIRM SEEDBED WITH CULTIPACKER OR OTHER SIMILAR EQUIPMENT PRIOR TO SEEDING (EXCEPT WHEN HYDROSEEDING).

2. SELECT ADAPTED SEED MIXTURE FOR THE SPECIFIC SITUATION. NOTE RATES AND THE SEEDING DATES (SEE VEGETATIVE COVER SELECTION & MULCHING SPEC. BELOW).

3. APPLY SEED UNIFORMLY ACCORDING TO RATE INDICATED, BY BROADCASTING, DRILLING, OR HYDRAULIC APPLICATION.

4. COVER GRASS AND LEGUME SEED WITH NOT MORE THAN 1/4 INCH OF SOIL WITH SUITABLE EQUIPMENT (EXCEPT WHEN HYDROSEEDING).

5. MULCH IMMEDIATELY AFTER SEEDING, IF REQUIRED, ACCORDING TO TEMPORARY MULCHING SPECIFICATIONS. (SEE VEGETATIVE COVER SELECTION & MULCHING SPECIFICATION BELOW).

6. USE PROPER INOCULANT ON ALL LEGUME SEEDINGS, USE FOUR (4) TIMES NORMAL RATES WHEN HYDROSEEDING.

7. USE SOD WHERE THERE IS A HEAVY CONCENTRATION OF WATER AND IN CRITICAL AREAS WHERE IT IS IMPORTANT TO GET A QUICK VEGETATIVE COVER TO PREVENT EROSION.

PERMANENT VEGETATIVE COVER

PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED AS VARIOUS SECTIONS OF THE PROJECT ARE COMPLETED IN ORDER TO STABILIZE THE SOIL, REDUCE DOWNSTREAM DAMAGE FROM SEDIMENT AND RUNOFF, AND TO ENHANCE THE AESTHETIC NATURE OF THE SITE. IT WILL BE APPLIED TO ALL CONSTRUCTION AREAS SUBJECT TO EROSION WHERE FINAL GRADING HAS BEEN COMPLETED AND A PERMANENT COVER IS NEEDED.

GENERAL NOTES:

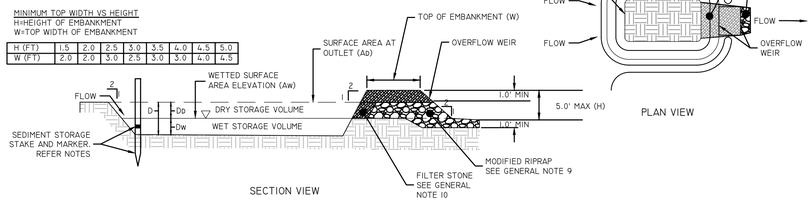
1. THE TEMPORARY SEDIMENT TRAP SHALL MEET ALL REQUIREMENTS FOR TEMPORARY SEDIMENT TRAPS OUTLINED IN THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (LATEST REVISION) SECTION SIX: SEDIMENT CONTROL MEASURES
2. THE TEMPORARY SEDIMENT TRAP MUST PROVIDE A STORAGE VOLUME FOR ONE INCH OF RUNOFF FROM THE CONTRIBUTING AREA. HALF OF THE STORAGE MUST BE PROVIDED IN THE FORM OF WET STORAGE. SEE DETAIL BELOW SECTION 6 OF THE RISESCH.
3. ALL CUT AND FILL SLOPES MUST BE 2:1 OR FLATTER EXCEPT FOR THE EXCAVATED WET STORAGE AREA WHERE SLOPES MUST NOT EXCEED 1.5:1.
4. THE OUTLET MUST BE LOCATED AT THE MOST DISTANT HYDRAULIC POINT FROM THE INLET.
5. THE OUTLET CONSISTS OF A PERVIOUS STONE DIKE WITH A CORE OF MODIFIED RIPRAP AND FACED ON THE UPSTREAM SIDE WITH STONE.
6. TEMPORARY SEDIMENT TRAPS MUST OUTLET ONTO STABILIZED GROUND.
7. MAXIMUM HEIGHT OF A TEMPORARY SEDIMENT TRAP EMBANKMENT IS LIMITED TO 5 FEET (BOTTOM OF DRY STORAGE TO TOP OF EMBANKMENT). TOTAL EMBANKMENT HEIGHT MUST NOT EXCEED 6 FEET (BOTTOM OF WET STORAGE TO TOP OF EMBANKMENT).
8. SIDE SLOPES OF THE EMBANKMENT MUST BE 2:1 OR FLATTER.
9. MODIFIED RIPRAP: SHALL MEET THE REQUIREMENTS OF RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.10.03.2.
10. FILTER STONE: SHALL MEET THE REQUIREMENTS OF RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.01.03 TABLE 1, COLUMN V FILTER STONE.

SEDIMENT TRAP DIMENSIONS*	TRAP A	
TRIBUTARY DRAINAGE AREA	2.11	AC
WET STORAGE DEPTH (Dw)	2.5	FT
DRY STORAGE DEPTH (Dd)	2.0	FT
TOTAL DEPTH (D)	4.5	FT
BOTTOM OF TRAP AREA (Ab)	790	SQ.FT
WETTED SURFACE AREA (Aw)	1,970	SQ.FT
SURFACE AREA AT OUTLET (Ao)	3,030	SQ.FT

*TRAP DIMENSIONS REPRESENT MINIMUM REQUIRED SIZING TO MEET THE RISESCH. CONTRACTOR MAY SHAPE TRAP DIFFERENTLY THAN SHOWN ON PLANS AS LONG AS THE MINIMUM SIZING HAS BEEN PROVIDED.

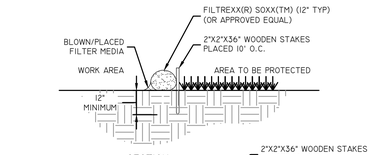
MINIMUM TOP WIDTH VS HEIGHT
H=HEIGHT OF EMBANKMENT
W=TOP WIDTH OF EMBANKMENT

H (FT)	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
W (FT)	2.0	2.0	3.0	2.5	3.0	3.0	4.0	4.5



TEMPORARY SEDIMENT TRAP DETAIL

NOT TO SCALE



NOTES:

1. ALL MATERIAL TO MEET FILTREXX(R) SPECIFICATIONS
2. FILTER MEDIA(TM) FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER
4. STAKES ARE NOT TO BE USED IN PAVEMENT AREAS.
5. SELF WEIGHT OF FILTREXX SYSTEM IS ADEQUATE TO PREVENT SYSTEM MOVEMENT ONCE POSITIONED ALONG AREA SHOWN ON THE PLANS.
6. CONTRACTOR TO PLACE FILTREXX SEDIMENT CONTROL OR APPROVED EQUAL AROUND ALL CURB INLET LOCATIONS AS SPECIFIED ON PLANS.

FILTREXX SEDIMENT CONTROL (OR APPROVED EQUAL)

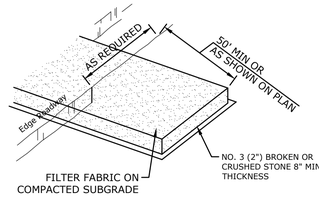
NOT TO SCALE

INSPECTION, MAINTENANCE, AND REMOVAL REQUIREMENTS:

1. INSTALL "SEDIMENT STORAGE" STAKE WITH A MARKER AT ONE HALF OF THE WET STORAGE VOLUME.
2. INSPECT THE TEMPORARY SEDIMENT TRAP AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCH OR GREATER.
3. CHECK THE OUTLET TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT.
4. CHECK FOR SEDIMENT ACCUMULATION AND FILTRATION PERFORMANCE.
5. WHEN SEDIMENTS HAVE ACCUMULATED TO ONE HALF THE MINIMUM REQUIRED VOLUME OF THE WET STORAGE, DEWATER THE TRAP AS NEEDED, REMOVE SEDIMENTS AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS.
6. DISPOSE OF THE SEDIMENT REMOVED FROM THE BASIN IN A SUITABLE AREA AS DESIGNATED BY THE GEOTECHNICAL ENGINEER.
7. THE TEMPORARY SEDIMENT TRAP MAY BE REMOVED AFTER THE CONTRIBUTING DRAINAGE AREA IS STABILIZED.

INSTALLATION NOTES:

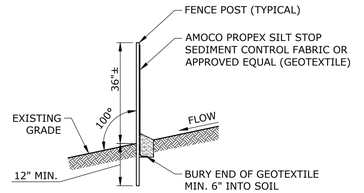
1. CLEAR, GRUB AND STRIP ANY VEGETATION AND ROOT MAT FROM ANY PROPOSED EMBANKMENT AND OUTLET AREA.
2. REMOVE STONES AND ROCKS WHOSE DIAMETER IS GREATER THAN THREE (3) INCHES AND OTHER DEBRIS.
3. EXCAVATE WET STORAGE AND CONSTRUCT THE EMBANKMENT AND/OR OUTLET AS NEEDED TO ATTAIN THE NECESSARY STORAGE REQUIREMENTS.
4. USE ONLY FILL MATERIAL FOR THE EMBANKMENT THAT IS FREE FROM EXCESSIVE ORGANICS, DEBRIS, LARGE ROCKS (OVER SIX (6) INCHES) OR OTHER UNSUITABLE MATERIALS. COMPACT THE EMBANKMENT IN 9-INCH LAYERS BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED
5. STABILIZE THE EARTHEN EMBANKMENT USING ANY OF THE FOLLOWING MEASURES: SEEDING FOR TEMPORARY VEGETATION COVER; SEEDING FOR PERMANENT VEGETATIVE COVER; OR SLOPE PROTECTION, IMMEDIATELY AFTER INSTALLATION



NOTE: CONSTRUCTION ENTRANCE PAD SHALL BE INSTALLED AND MAINTAINED DURING OPERATIONS WHICH PROMOTE VEHICULAR TRACKING OF MUD

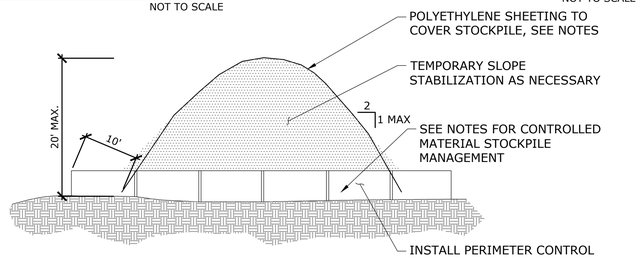
CE CONSTRUCTION ENTRANCE PAD

NOT TO SCALE



SF SEDIMENT FILTER FENCE

NOT TO SCALE

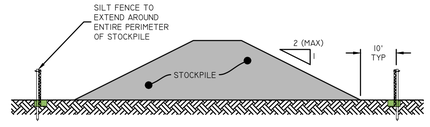


NOTES:

1. PLACE STOCKPILE ON POLY SHEETING (MIN. 10_MIL), FROM THE RIDEM APPROVAL LETTER (REQUIRES STOCKPILES TO BE UNDERLAIN AND COVERED)
2. COVER STOCKPILE WITH POLY SHEETING; SECURE DAILY
3. INSTALL APPROPRIATE EROSION & SEDIMENT CONTROLS (IN THE RIDEM APPROVAL, NOTHING SPECIFIED SO GENERAL S&E NOTES)
4. LOCATE STOCKPILES IN A WAY THAT LIMITS UNAUTHORIZED ACCESS
5. MAX PILE SIZE: ~100 CY, MAX TOTAL FOR WSA 500 CY; MAX ONSITE STORAGE: 30 DAYS (IN THE SMP WITHIN THE RAWP)
6. PROVIDE SECONDARY CONTAINMENT IF LEACHING IS OBSERVED (RIDEM APPROVAL LETTER, CAN USE LEAK-PROOF CONTAINER OR SECONDARY CONTAINMENT IF NEEDED)
7. CLEAN FILL MUST ALSO BE ON & UNDER POLY (IMPORTED CLEAN FILL MUST BE PLACED ON POLY OR FINISHED IMPERVIOUS SURFACE PER RAWP) DETAIL SHOULD SHOW POLY
8. STOCKPILES MUST BE LOCATED WITHIN THE DESIGNATED WSA AND OUTSIDE THE FLOODPLAIN (RIDEM APPROVAL LETTER)
9. STOCKPILES MUST STAY WITHIN THE DESIGNATED ONSITE WSA (THIS IS THE BIGGEST NOTE, WE SHOULD APPROXIMATE LOCATE THE WSA IF THAT WORKS, AND NOTE ALL STOCKPILES MUST BE LOCATED WITHIN THE DESIGNATED WSA, PER THE RAWP). THEY CAN DAILY STOCKPILE ALONG TRENCHES AND WHATNOT BUT THOSE NEED TO BE REUSED BACK IN THE TRENCH AT THE END OF THE DAY OR TRANSPORTED TO THE WSA.

TEMPORARY SOIL STOCKPILE - CONTROLLED SOILS (STK)

NOT TO SCALE



NOTES:

1. ALL STOCKPILES MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH SECTION 3 "STOCKPILE AND STAGING AREA MANAGEMENT" OF THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HAND BOOK (CURRENT EDITION).
2. DIVERT ALL STORMWATER AWAY FROM STOCKPILES.
3. SOIL STOCKPILES THAT ARE NOT TO BE USED WITHIN 30 DAYS MUST BE SEEDED AND MULCHED IMMEDIATELY AFTER FORMATION OF THE STOCKPILE WITH SEED MIX COMPATIBLE WITH THE SOIL TYPE.
4. STOCKPILE AND SILT FENCE MUST BE INSPECTED AT LEAST ONCE PER WEEK AND AFTER RAIN EVENTS IN EXCESS OF 4" OF RAINFALL. REPAIR/ REPLACE SILT FENCE (AND STOCKPILE COVERS WHERE APPLICABLE) AS NEEDED TO KEEP THEM FUNCTIONING ADEQUATELY.
5. SEDIMENT TRAPPED BY SILT FENCES MUST BE REMOVED AND PROPERLY DISPOSED OF WHENEVER SIGNIFICANT ACCUMULATION OCCURS.

STOCKPILE PROTECTION (NON-CONTROLLED)-STK-N

NOT TO SCALE

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No. 14720
REGISTERED PROFESSIONAL ENGINEER
CIVIL

DESCRIPTION	DATE	BY
CONSTRUCTION DOCUMENTS	2026-02-27	JRH
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SITE PLAN - SEDIMENT AND EROSION CONTROL
RIVERWALK WEST FINAL PHASE
SITE IMPROVEMENTS
TAFT STREET
PAWTUCKET, RHODE ISLAND
CONSTRUCTION DOCUMENTS - ISSUED FOR BID

BK	PJP	BK
DESIGNED	DRAWN	CHECKED

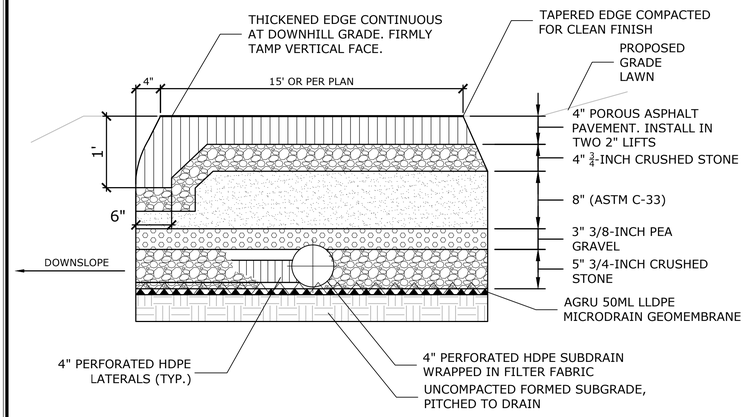
AS NOTED
SCALE

APRIL 15, 2026
DATE

15842.00001
PROJECT NO.

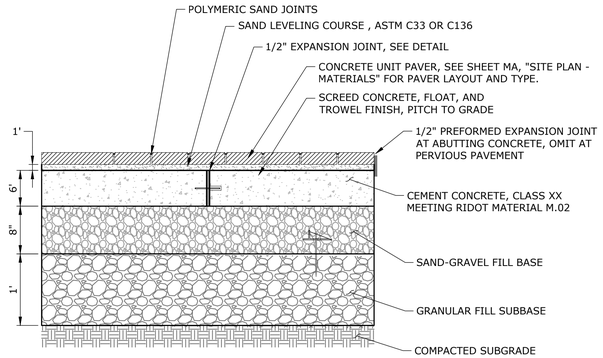
12 OF 20
SHEET NO.

SE-2
SHEET NAME



RIVERWALK DETAIL - POROUS PAVEMENT

NOT TO SCALE

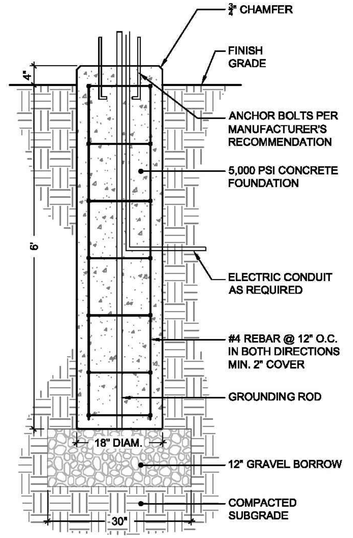


NOTES:
PLAZA BASE BID SHALL BE FOR CONCRETE SURFACE.

1. EXPANSION JOINTS IN CONCRETE BASE SHALL BE 20' O.C. OR 144 S.F. MAX.
2. CONCRETE BASE SHALL BE SCREEDED WITH A FLOAT FINISH, TROWELED, AND PITCHED TO GRADE.
3. TO BE ACCEPTED, PAVERS SHALL BE INSTALLED IN SUCH A MANNER THAT:
   - 3.1. THE PAVER WALKING SURFACES ARE WITHIN 1/8" OF EACH OTHER AND ADJACENT FINISHED SURFACES (I.E. GRANITE CURB AND CONC. WALK)
   - 3.2. THE PAVERS HAVE NO JOINTS GREATER THAN 1/16"
   - 3.3. SAND SWEPT BETWEEN JOINTS IS VIBRATED AND WITHIN 3/16" OF THE PAVER WALKING SURFACE
   - 3.4. NO PAVER IS CRACKED OR BROKEN
   - 3.5. PAVERS ARE VIBRATED IN PLACE, SECURED WITH POLYMERIC SAND IN JOINTS HARDENED.
4. CONTRACTOR SHALL CONSTRUCT A PAVER SAMPLE PATTERN FOR EACH PATTERN AS SPECIFIED AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO AUTHORIZATION TO INSTALL PAVERS.

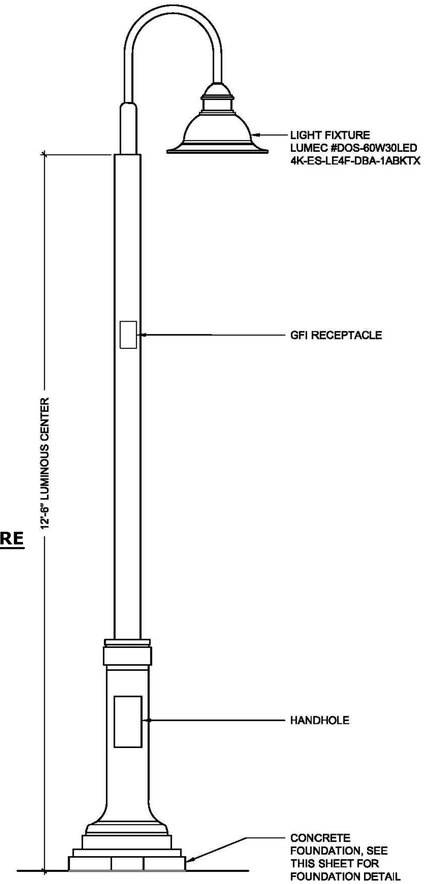
CONCRETE UNIT PAVERS ON 6" CONCRETE SLAB - BID ALTERNATE

NOT TO SCALE



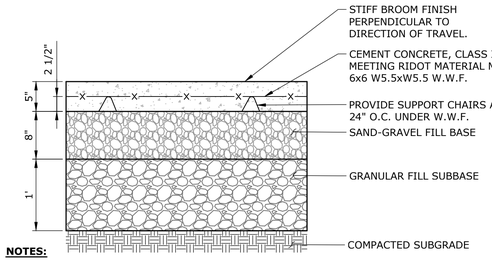
CONCRETE FOUNDATION FOR LIGHT FIXTURE

NOT TO SCALE



LIGHT FIXTURE DETAIL

NOT TO SCALE

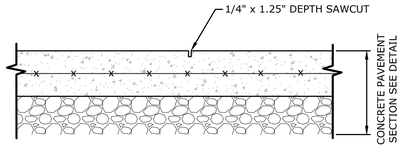


NOTES:

1. EXPANSION JOINTS 20' O.C. MAXIMUM SCORE JOINTS 5' O.C. TYPICAL.
2. SEE EXPANSION JOINT DETAIL
3. SEE SCORE JOINT DETAIL

CONCRETE SIDEWALK - 5" THICKNESS

NOT TO SCALE

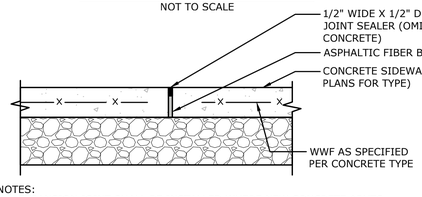


NOTES:

1. PLACE JOINTS 5' O.C., TYPICAL, OR PER PLAN

SCORE JOINT - SAWCUT

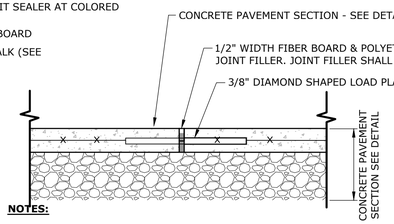
NOT TO SCALE



NOTES:
1. EXPANSION JOINT SHALL BE INSTALLED WHERE NEW CONCRETE ABUTS BUILDING, CURB, WALL, OR EXISTING CONCRETE PAVEMENT

EXPANSION JOINT

NOT TO SCALE



NOTES:

1. PROVIDE DOWELLED EXPANSION JOINT AT ALL LOCATIONS WHERE SHOWN ON PLANS

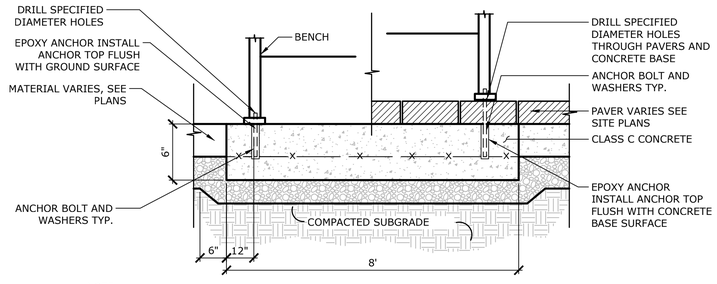
DOWELLED EXPANSION JOINT IN CONCRETE PAVEMENT

NOT TO SCALE

NOTE: 8' LENGTH OPTION WITH CENTER ARMREST FOR ALL LOCATIONS

SURFACE MOUNTED BENCH

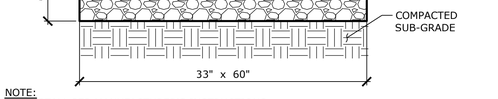
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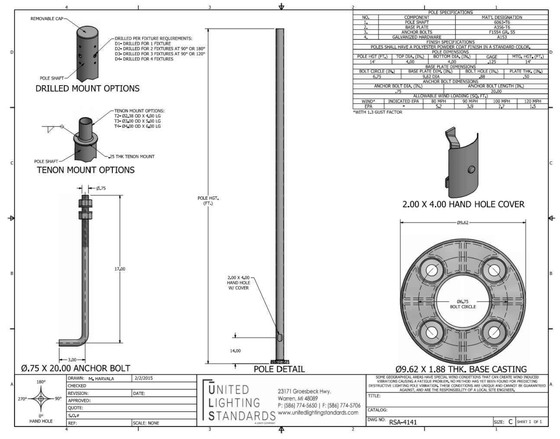
NOTE:
1. DETAIL SHOWS BENCH MOUNTING FOR CONCRETE, BRICK PAVER AND CONCRETE UNIT PAVER SURFACES.
2. CONTRACTOR TO INSTALL BENCHES PER MANUFACTURER'S INSTRUCTIONS.
3. PROVIDE SHOP DRAWINGS FOR APPROVAL.
4. CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MOUNTING HARDWARE.
5. CLEAN EACH ANCHOR HOLE IN ACCORDANCE WITH EPOXY INSTRUCTIONS.
6. USE EPOXY IN EPOXY GUN TO FILL EACH ANCHOR HOLES
7. INSERT ANCHOR INTO EACH ANCHOR HOLE SO ANCHOR TOP IS FLUSH AS DETAILED. ALLOW PROPER CURING TIME BEFORE INSTALLING BENCH.

CONCRETE PAD AND MOUNTING FOR TRASH AND RECYCLING RECEPTACLE

NOT TO SCALE



NOTE:
1. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
2. PROVIDE PRODUCT DATA SHEET FOR RECEPTACLE AND COVER FOR APPROVAL.
3. CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL MOUNTING HARDWARE.
4. CLEAN EACH ANCHOR HOLE IN ACCORDANCE WITH EPOXY INSTRUCTIONS.
5. USE EPOXY IN EPOXY GUN TO FILL EACH ANCHOR HOLES
6. INSERT ANCHOR INTO EACH ANCHOR HOLE SO ANCHOR TOP IS FLUSH AS DETAILED. ALLOW PROPER CURING TIME BEFORE INSTALLING TRASH RECEPTACLE.
7. INSTALL EXPANSION JOINT WHERE PAD ABUTS EXISTING CONCRETE PAVEMENT.
8. PITCH PAD TO DRAIN TOWARDS LAWN, AWAY FROM ADJACENT SIDEWALK



LIGHT POLE DETAIL

NOT TO SCALE

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DESCRIPTION	DATE	BY
CONSTRUCTION DOCUMENTS	2026-02-27	JRH
UPDATED REVIEW SET	2026-03-27	JRH

CONSTRUCTION DOCUMENTS - ISSUED FOR BID

SITE DETAILS

RIVERWALK WEST FINAL PHASE
SITE IMPROVEMENTS

TAFT STREET
PAWTUCKET, RHODE ISLAND

BK	PJP	BK
DESIGNED	DRAWN	CHECKED

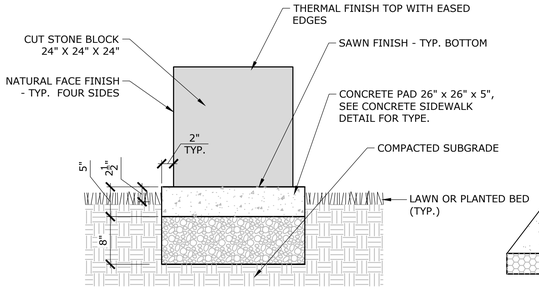
SCALE: AS NOTED

DATE: APRIL 15, 2026

PROJECT NO.: 15842.00001

SHEET NO.: 13 OF 20

SHEET NAME: SD-1

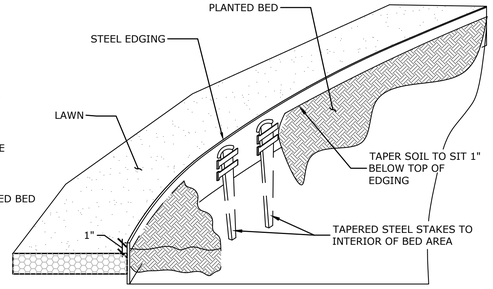


NOTES:

1. ALL STONE SHALL BE NATURALLY QUARRIED STONE NATIVE TO NEW ENGLAND.
2. STONE COLOR SHALL BE NATURAL CUT STONE EARTHTONES OF BEIGE, BROWN AND GRAY.
3. CONTRACTOR TO SUBMIT SUPPLIER AND PICTURES OF STONE FOR APPROVAL. LANDSCAPE ARCHITECT MAY FIELD SELECT STONE.

GRANITE BLOCK SEAT

NOT TO SCALE

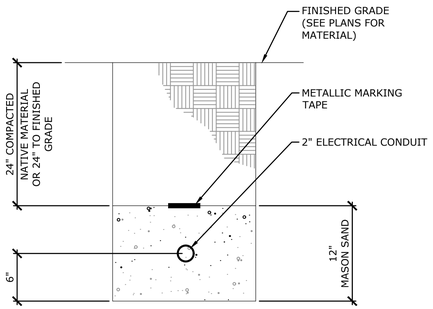


NOTE:

1. PROVIDE 3/8" x 5" x 16' STEEL EDGING, INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. MANUFACTURED FROM SURE-LOC EDGING CORPORATION OR APPROVED EQUAL. (PH. 1-800-787-3562)
3. COLOR: BLACK

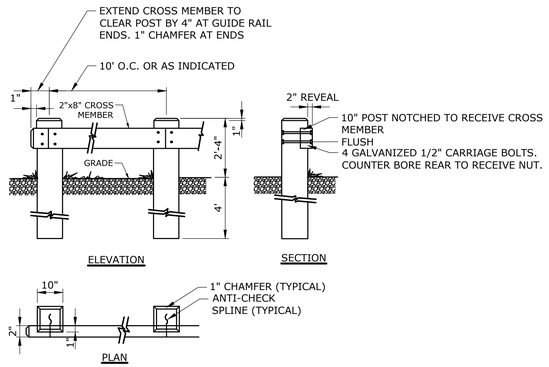
STEEL LANDSCAPE EDGING

NOT TO SCALE



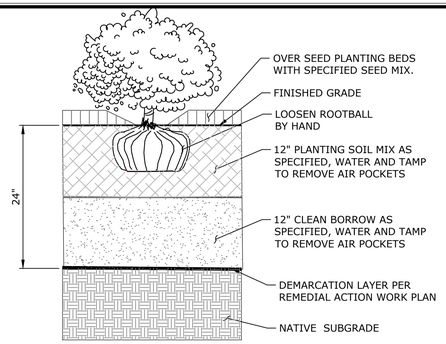
ELECTRIC TRENCH DETAIL

NOT TO SCALE



TIMBER GUIDE RAIL FACEMOUNT 10x10 POSTS

NOT TO SCALE

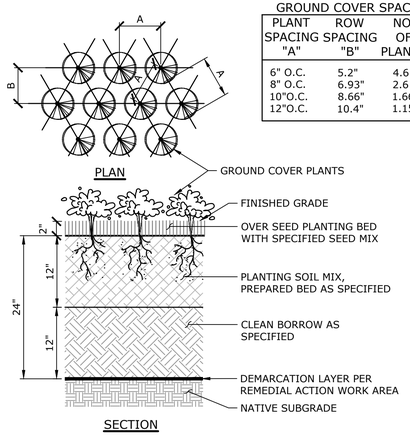


SHRUB PLANTING

NOT TO SCALE

GROUND COVER SPACING TABLE

PLANT SPACING "A"	ROW SPACING "B"	NO. OF PLANTS	AREA UNIT
6" O.C.	5.2"	4.61	1 SQ. FT.
8" O.C.	6.93"	2.6	1 SQ. FT.
10"O.C.	8.66"	1.66	1 SQ. FT.
12"O.C.	10.4"	1.15	1 SQ. FT.



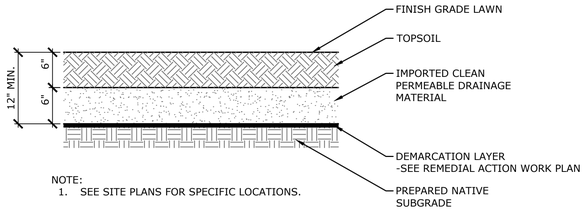
NOTES:

1. ALL GROUND COVER TO BE PLANTED IN TRIANGULAR PATTERN. SEE DETAIL PLAN AND GROUND COVER SPACING TABLE.

GROUND COVER/ PERENNIAL PLANTING

NOT TO SCALE

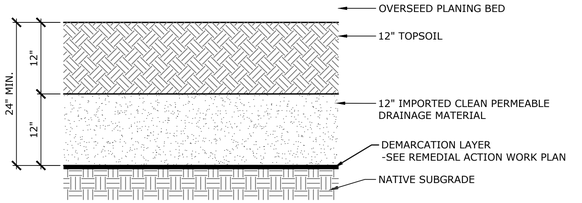
DEMARCATION LAYER DETAILS PER REMIDIAL ACTION WORK PLAN



NOTE:
1. SEE SITE PLANS FOR SPECIFIC LOCATIONS.

ONE FOOT DEPTH SOIL CAP - LAWN AREAS

N.T.S.

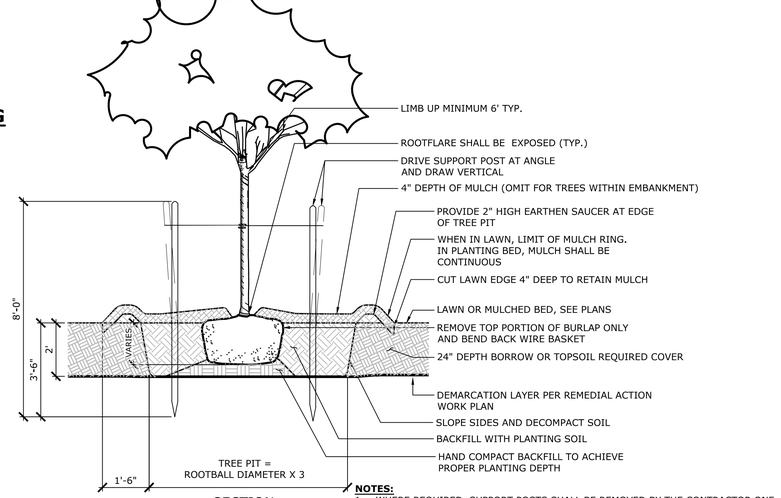


NOTE:
1. SEE SITE PLANS FOR SPECIFIC LOCATIONS.

TWO FOOT DEPTH SOIL CAP - PLANT BED AREAS

N.T.S.

NOTES:
1. NO MULCH TO BE INSTALLED ON EMBANKMENT AREA

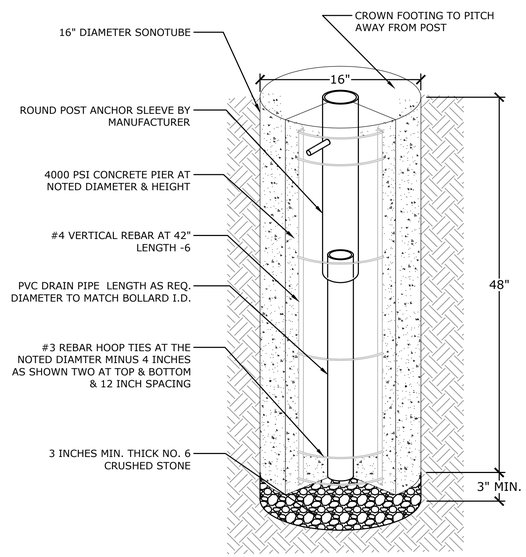


NOTES:

1. WHERE REQUIRED, SUPPORT POSTS SHALL BE REMOVED BY THE CONTRACTOR ONE YEAR AFTER INSTALLATION
2. WHERE TREES ARE PLANTED IN COMPACTED SOILS CONTRACTOR TO INSURE PLANT PIT DRAINS 1.5"/ HOUR
3. DO NOT COVER TREE TRUNK WITH MULCH
4. HOLE DEPTH WILL VARY BY SIZE OF ROOTBALL. TREE SHALL BE SET ON COMPACTED SUBGRADE WITH ROOT FLARE SET AT OR SLIGHTLY ABOVE THE SURROUNDING GRADE AS DETAILED.

TREE PLANTING

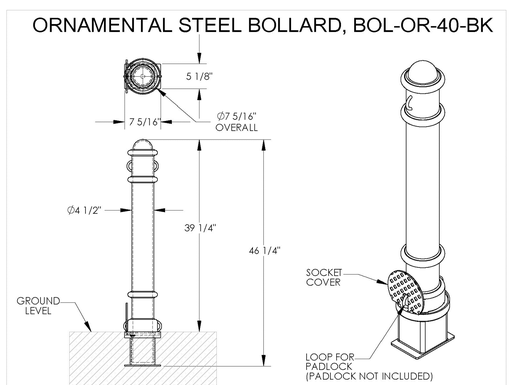
NOT TO SCALE



PIER ELEVATION SECTION

FOUNDATION FOR REMOVABLE BOLLARD

NOT TO SCALE



NOTES:
1. PROVIDE REMOVABLE BOLARD SUCH AS MODEL BOL-OR-40-BK, HEIGHT SHALL BE MIN. 39 ¼", DIA: 4 ½", AS MANUFACTURED BY VESTIL MANUFACTURING CORP. 2999 NORTH WAYNE STREET, P.O. BOX 507, ANGOLA IN 46703, (260) 665-7586, OR APPROVED EQUIVALENT.
2. COLOR SHALL BE GLOSS BLACK.

BOLLARD (REMOVABLE)

NOT TO SCALE

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CONSTRUCTION DOCUMENTS - ISSUED FOR BID

SITE DETAILS

RIVERWALK WEST FINAL PHASE
SITE IMPROVEMENTS

TAFT STREET
PAWTUCKET, RHODE ISLAND

BK	PJP	BK
DESIGNED	DRAWN	CHECKED

AS NOTED (SCALE)

APRIL 15, 2026 (DATE)

15842.00001 (PROJECT NO.)

14 OF 20 (SHEET NO.)

SD-2 (SHEET NAME)

FASTENING NOTES

1. JOISTS TO POSTS - 1/2"Ø LAG BOLTS & 3/4"Ø THRU BOLTS AS SHOWN ON DETAILS.
2. DECKING TO JOISTS - 3" GALVANIZED SCREWS.
3. RAILINGS TO POSTS - 3" GALVANIZED SCREWS.
4. RAILING CABLES TO POSTS PER MANUFACTURER'S RECOMMENDATIONS.

BOARDWALK

PART 1 - GENERAL

DESCRIPTION OF WORK:

BOARDWALK CONSTRUCTION INCLUDES THE FOLLOWING TYPES OF WORK:

- STAINLESS STEEL CABLE RAILING
- CONCRETE ABUTMENTS
- CONCRETE PIERS
- WOOD FRAMING
- TIMBER DECKING

REFERENCES

LUMBER STANDARDS: COMPLY WITH PS 20 AND WITH APPLICABLE RULES OF THE RESPECTIVE GRADING AND INSPECTING AGENCIES FOR SPECIES AND PRODUCTS INDICATED.

SUBMITTALS

PRODUCT DATA: SUBMIT MANUFACTURER'S SPECIFICATIONS AND INSTALLATION INSTRUCTIONS FOR MATERIALS LISTED BELOW:

WOOD TREATMENT DATA: SUBMIT TREATMENT MANUFACTURER'S INSTRUCTIONS FOR PROPER USE OF EACH TYPE OF TREATED MATERIAL.

PRESSURE TREATMENT: FOR EACH TYPE SPECIFIED, INCLUDE CERTIFICATION BY TREATING PLANT STATING CHEMICALS AND PROCESS USED, NET AMOUNT OF PRESERVATIVE RETAINED AND CONFORMANCE WITH APPLICABLE STANDARDS.

PRODUCT HANDLING

DELIVERY AND STORAGE: KEEP MATERIALS DRY AT ALL TIMES. PROTECT AGAINST EXPOSURE TO WEATHER AND CONTACT WITH DAMP OR WET SURFACES. STACK LUMBER AND PLYWOOD, AND PROVIDE AIR CIRCULATION WITHIN STACKS.

PART 2 - PRODUCTS

MATERIALS

LUMBER, GENERAL

FACTORY MARK EACH PIECE OF LUMBER WITH TYPE, GRADE, MILL AND GRADING AGENCY, EXCEPT OMIT MARKING FROM SURFACES TO BE EXPOSED WITH TRANSPARENT FINISH OR WITHOUT FINISH.

NOMINAL SIZES ARE INDICATED, EXCEPT AS SHOWN BY DETAIL DIMENSIONS. PROVIDE ACTUAL SIZES AS REQUIRED BY PS 20, FOR MOISTURE CONTENT SPECIFIED FOR EACH USE.

PROVIDE DRESSED LUMBER, S4S, UNLESS OTHERWISE INDICATED.

PROVIDE SEASONED LUMBER WITH 19% MAXIMUM MOISTURE CONTENT AT THE TIME OF DRESSING.

PROVIDE SOUTHERN PINE LUMBER, FOR FRAMING.

TIMBER PLANKS, PER DETAIL

ALL PRESSURE TREATED LUMBER SHALL BE GRADE 2.
CEDAR POSTS SHALL BE CLEAR OR ARCHITECT KNOTTY
POSTS SHALL RUN FULL HEIGHT AND NO SPLICING ALLOWED.

MISCELLANEOUS MATERIALS

FASTENERS AND ANCHORAGES: PROVIDE SIZE, TYPE, MATERIAL AND FINISH AS INDICATED AND AS RECOMMENDED BY APPLICABLE STANDARDS, COMPLYING WITH APPLICABLE FEDERAL SPECIFICATIONS FOR NAILS, STAPLES, SCREWS, BOLTS, NUTS, WASHERS AND ANCHORING DEVICES. PROVIDE METAL HANGERS AND FRAMING ANCHORS OF THE SIZE AND TYPE RECOMMENDED BY THE MANUFACTURER FOR EACH USE INCLUDING RECOMMENDED NAILS. PROVIDE FASTENERS AND ANCHORAGES WITH A HOT-DIP ZINC COATING (ASTM A 153).

WOOD PRESERVATIVE TREATMENT SHALL BE **UCSB**

PART 3 - EXECUTION

MATERIALS, GENERAL

DISCARD UNITS OF MATERIAL WITH DEFECTS WHICH MIGHT IMPAIR QUALITY OF WORK, AND UNITS WHICH ARE TOO SMALL TO USE IN FABRICATING WORK WITH MINIMUM JOINTS OR OPTIMUM JOINT ARRANGEMENTS.

SET CARPENTRY WORK ACCURATELY TO REQUIRED LEVELS AND LINES, WITH MEMBERS PLUMB AND TRUE AND ACCURATELY CUT AND FITTED.

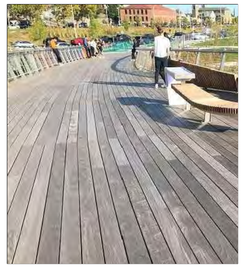
SECURELY ATTACH CARPENTRY WORK TO SUBSTRATE BY ANCHORING AND FASTENING AS SHOWN AND AS REQUIRED BY RECOGNIZED STANDARDS. COUNTERSINK SCREW AND NAIL HEADS ON EXPOSED CARPENTRY WORK AND RILL HOLES. SELECT FASTENERS OF SIZE THAT WILL NOT PENETRATE MEMBERS WHERE OPPOSITE SIDE WILL BE EXPOSED TO VIEW. MAKE TIGHT CONNECTIONS BETWEEN MEMBERS. INSTALL FASTENERS WITHOUT SPLITTING OF WOOD; PRE-DRILL AS REQUIRED.



WOOD AMPITHEATER OVERLOOK - WOOD VENEERED CONCRETE STEPS

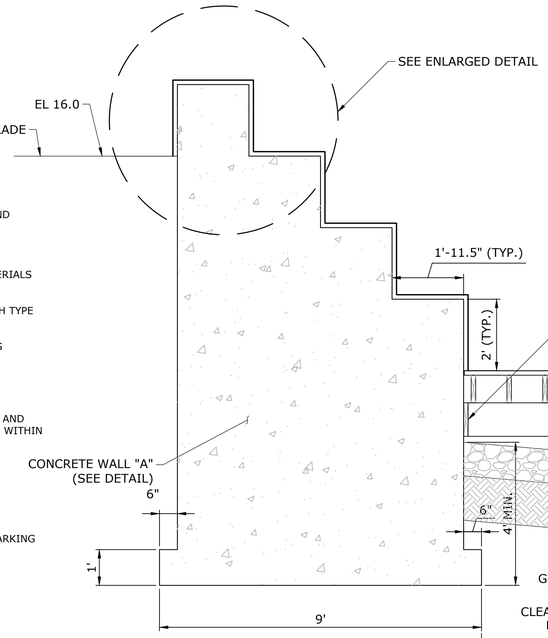
NOT TO SCALE

NOTES:
1. WOOD VENEER TO BE CUMARU HARDWOOD.
2. INTERNAL COMPONENTS TO BE PRESSURE TREATED LUMBER
3. ALL FASTENERS AND HARDWARE TO BE 316 STAINLESS
4. SUBMIT SHOP DRAWING FOR FABRICATION FOR APPROVAL BY LANDSCAPE ARCHITECT AND STRUCTURAL ENGINEER.



WOOD DECKING - CUMARU WOOD SURFACE

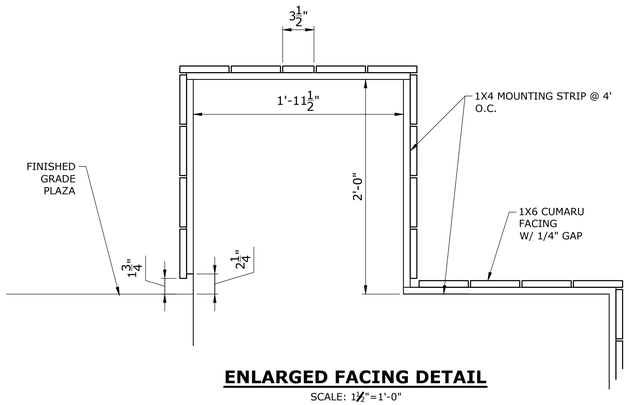
NOT TO SCALE



NOTES:
1. CONCRETE PIERS SHALL BE PLACED @ A MINIMUM OF 10' O.C., SEE SHEET SD-4 FOR PROPOSED LAYOUT.
2. CONTRACTOR SHALL PROVIDE SHOP DRAWING OF PROPOSED DECK AND FOOTING LAYOUT FOR APPROVAL BY ENGINEER.

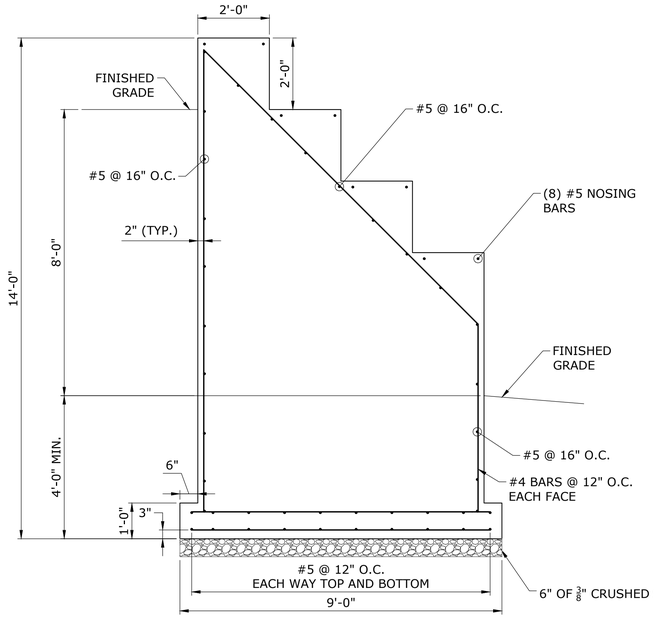
ELEVATED DECK SECTION

SCALE: 1/4"=1'-0"



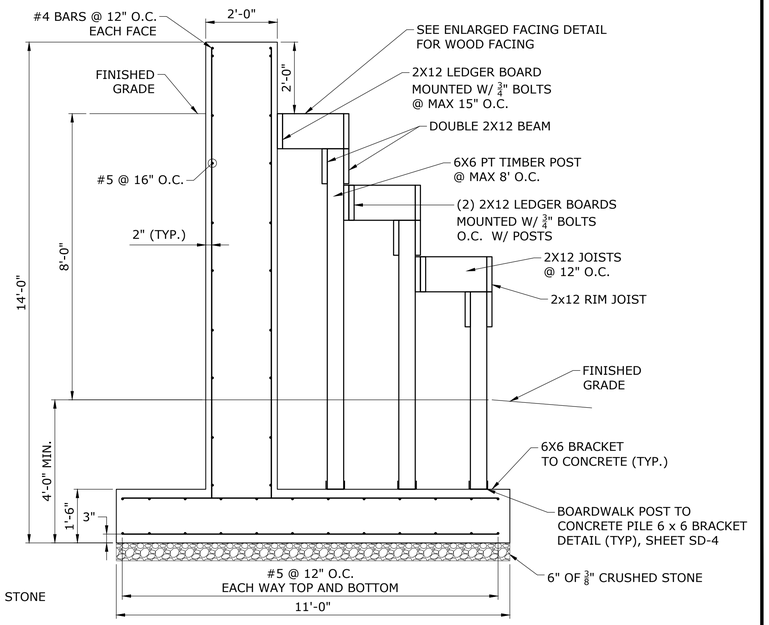
ENLARGED FACING DETAIL

SCALE: 1 1/2"=1'-0"



CONCRETE WALL "A" SECTION

SCALE: 1/2"=1'-0"



ALTERNATIVE CONSTRUCTION METHOD - WOOD FRAMING FOR CONCRETE WALL "A" SECTION

SCALE: 1/2"=1'-0"

KISHOR PATEL
No. 12582
REGISTERED PROFESSIONAL ENGINEER

SLR
99 REALTY DRIVE
CRANSTON, RI 02910
401.217.1173
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
CONSTRUCTION DOCUMENTS	2026-02-27	JRH
UPDATED REVIEW SET	2026-03-27	JRH

SITE DETAILS - BID ALTERNATE 3 - WOOD DECK AND AMPITHEATER

RIVERWALK WEST FINAL PHASE SITE IMPROVEMENTS

TAFT STREET
PAWTUCKET, RHODE ISLAND

CONSTRUCTION DOCUMENTS - ISSUED FOR BID

BK	PJP	BK
DESIGNED	DRAWN	CHECKED

SCALE: AS NOTED

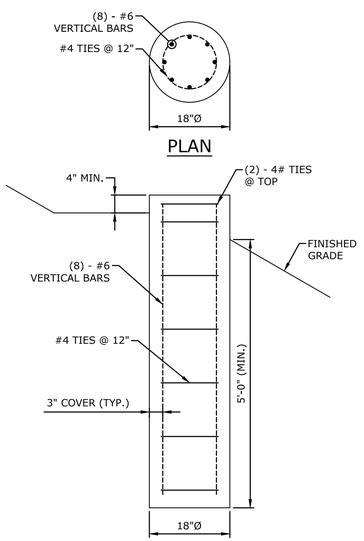
DATE: APRIL 15, 2026

PROJECT NO.: 15842.00001

SHEET NO.: 15 OF 20

SD-3

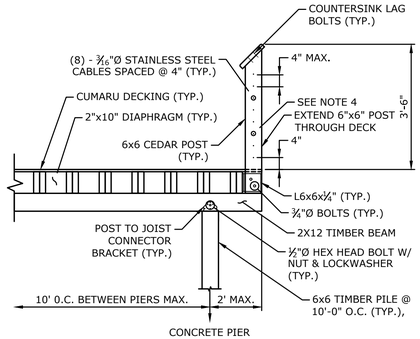
SHEET NAME



CONCRETE PIER DETAIL

SCALE: ¾" = 1'-0"

NOTE:
FOR CONCRETE PIERS, REFER TO BORING DATA LOGS AND GEOTECHNICAL REPORT FOR OVER EXCAVATION REQUIREMENTS.

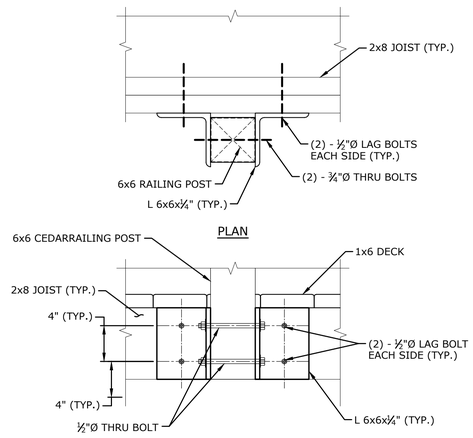


TYPICAL AMPTHEATER OVERLOOK SECTION

SCALE: ½"=1'-0"

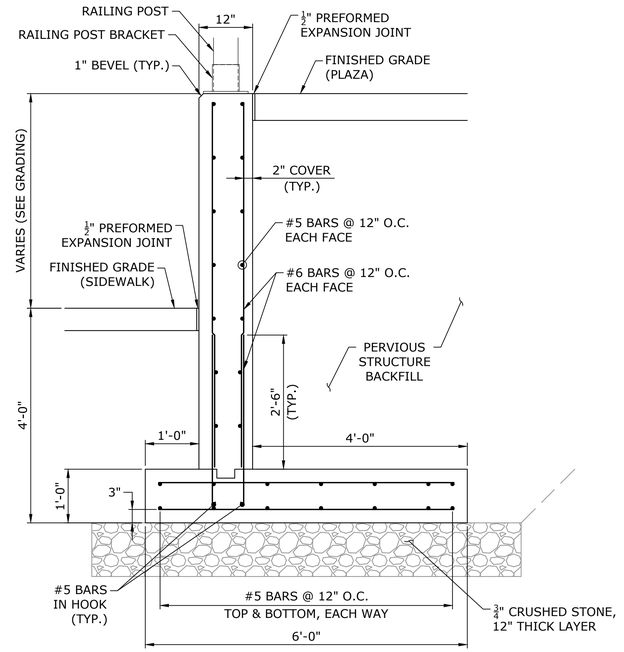
NOTES

1. ALL POSTS AND TOP RAIL SHALL BE ACTUAL SIZE.
2. ALL MEMBERS SHALL BE PRESSURE TREATED TIMBER, COLOR TO BE DETERMINED.
3. ALL PRESSURE TREATED TIMBER SHALL BE NOMINAL SIZE.
4. CROSS BRACE TIMBER PILE AS REQUIRED.
5. ALL EXPOSED END OF POSTS AND RAILS SHALL BE 1" CHAMFERED (45°) EDGES.
6. CABLES SHALL HAVE A CONNECTOR AT EVERY POST, AND CABLES SHALL NOT RUN THRU CENTER POSTS.
7. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR APPROVAL.



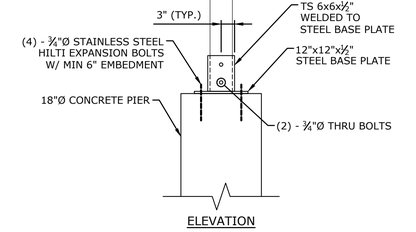
INTERMEDIATE POST CONNECTION

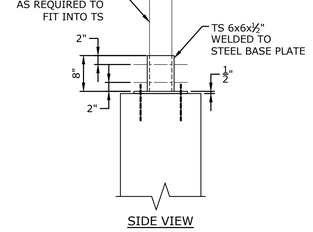
SCALE: 1½"=1'-0"

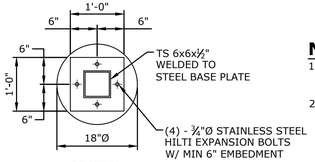


TYPICAL C.I.P. WALL SECTION

SCALE: ¾"=1'-0"







NOTES

1. AFTER THE TS SECTION IS WELDED TO THE BASE PLATE, THE ENTIRE BRACKET IS TO BE HOT-DIPPED GALVANIZED.
2. PROVIDE SHOP DRAWINGS FOR TRIM BOARD AND STEEL BRACKET FOR APPROVAL.

BOARDWALK POST TO CONCRETE PIER BRACKET DETAIL

SCALE: ¾" = 1'-0"

BOARDWALK DECK OVERLOOK FRAMING PLAN

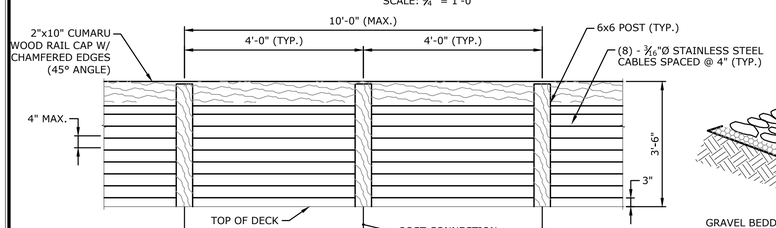
SCALE: ½"=1'-0"

NOTES

1. AFTER THE TS SECTION IS WELDED TO THE BASE PLATE, THE ENTIRE BRACKET IS TO BE HOT-DIPPED GALVANIZED.
2. PROVIDE SHOP DRAWINGS FOR TRIM BOARD AND STEEL BRACKET FOR APPROVAL.

RAILING POST BRACKET DETAIL

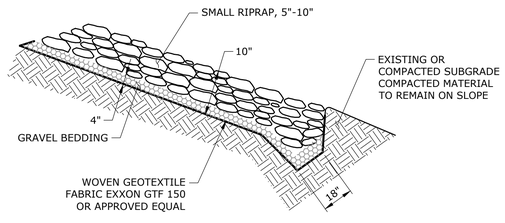
SCALE: ¾" = 1'-0"



NOTE:
RAILING DETAIL APPLIES TO BOARDWALK DECK OVERLOOK AND TO C.I.P. WALL SECTION.
SEE ASSOCIATED DETAILS FOR MOUNTING, WHICH VARIES PER APPLICATION.

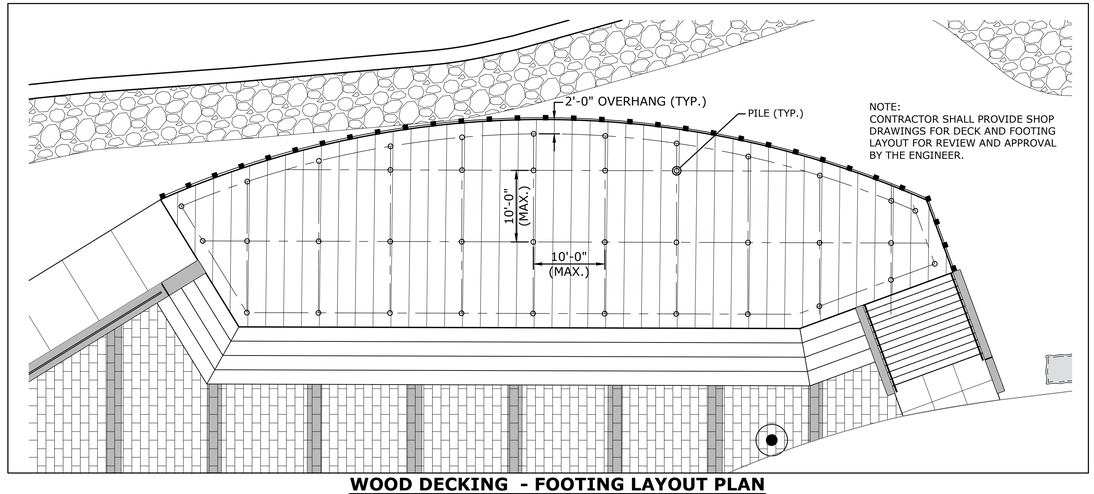
TYPICAL RAILING ELEVATION

SCALE: ½"=1'-0"



RIPRAP AT BOARDWALK PLATFORM

NOT TO SCALE



WOOD DECKING - FOOTING LAYOUT PLAN

NOT TO SCALE

KISHOR PATEL
No. 12582
REGISTERED
PROFESSIONAL ENGINEER

SLR
99 REALTY DRIVE
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(401) 217-1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
CONSTRUCTION DOCUMENTS	2026-02-27	JRH
UPDATED REVIEW SET	2026-03-27	JRH

CONSTRUCTION DOCUMENTS - ISSUED FOR BID

SITE DETAILS - BID ALTERNATE 3 - WOOD DECK AND AMPITHEATER

RIVERWALK WEST FINAL PHASE
SITE IMPROVEMENTS

TAFT STREET
PAWTUCKET, RHODE ISLAND

BK	NP	NP
DESIGNED	DRAWN	CHECKED

SCALE: AS NOTED

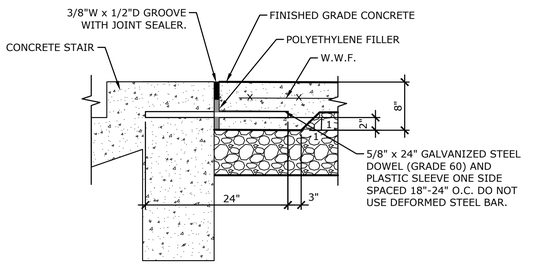
DATE: APRIL 15, 2026

PROJECT NO.: 15842.00001

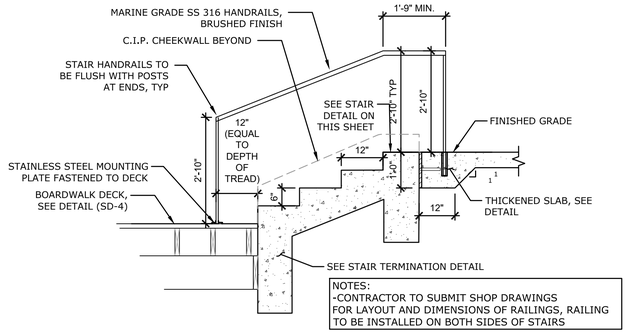
SHEET NO.: 16 OF 20

SHEET NAME: SD-4

Plotted by: [illegible]
Plotted At: 3/27/2026 10:[illegible] AM
Last Saved By: [illegible] On: 3/27/2026 10:[illegible] AM
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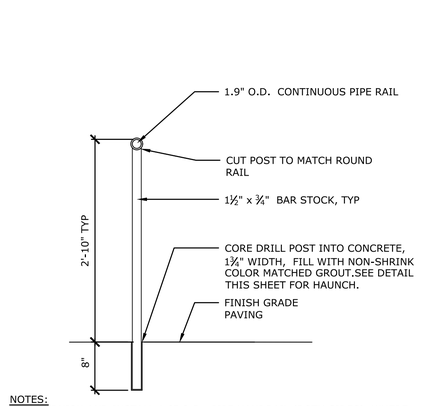


THICKENED SLAB WITH DOWELLED EXPANSION JOINT



HANDRAIL AT CONCRETE STAIR

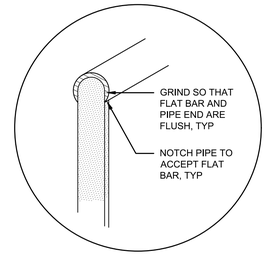
NOT TO SCALE

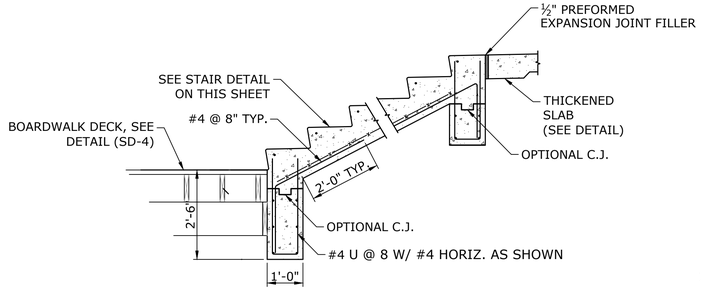


NOTES:
1. FURNISH AND INSTALL 1.9" O.D., PIPE HANDRAIL (BOTH SIDES). WHERE REQUIRED, INTERMEDIATE POSTS SHALL BE SPACED NO MORE THAN 6.5' O.C.
2. ALL WELDS TO BE GROUND SMOOTH
3. HANDRAIL TYPICAL BOTH SIDES OF STAIRS
4. SUBMIT SHOP DRAWINGS FOR APPROVAL

HANDRAIL AT STAIR-ELEVATION

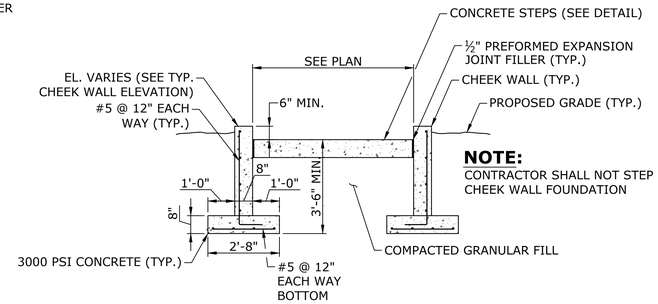
NOT TO SCALE





STAIR TERMINATION DETAIL

SCALE: ½"=1'-0"

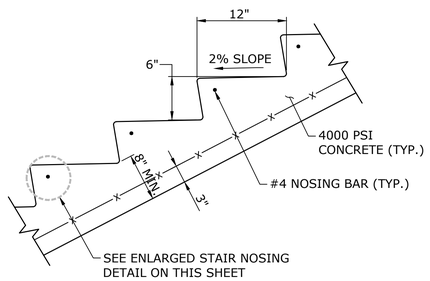


NOTE:
CONTRACTOR SHALL NOT STEP CHEEK WALL FOUNDATION

TYPICAL STAIR CHEEK WALL SECTION

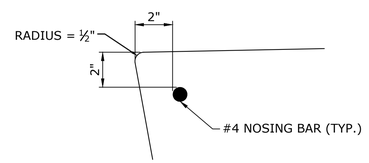
SCALE: ⅜"=1'-0"

NOTE:
1. ALL CHEEK WALLS TO HAVE STONE VENEER ON ALL EXPOSED SURFACES. STONE TO MATCH SITE WALLS. PROVIDE SAMPLES FOR APPROVAL.



TYPICAL CONCRETE STAIR DETAIL

SCALE: 1"=1'-0"



TYPICAL STAIR NOSING DETAIL

SCALE: 3"=1'-0"

KISHOR PATEL
No. 12582
REGISTERED PROFESSIONAL ENGINEER

SLR
99 REALTY DRIVE
CHARLOTTE, NC 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
CONSTRUCTION DOCUMENTS	2026-02-27	JRH
UPDATED REVIEW SET	2026-03-27	JRH

CONSTRUCTION DOCUMENTS - ISSUED FOR BID

SITE DETAILS - BID ALTERNATE 3 - WOOD DECK AND AMPITHEATER

RIVERWALK WEST FINAL PHASE
SITE IMPROVEMENTS

TAFT STREET
PAWTUCKET, RHODE ISLAND

BK	PJP	BK
DESIGNED	DRAWN	CHECKED

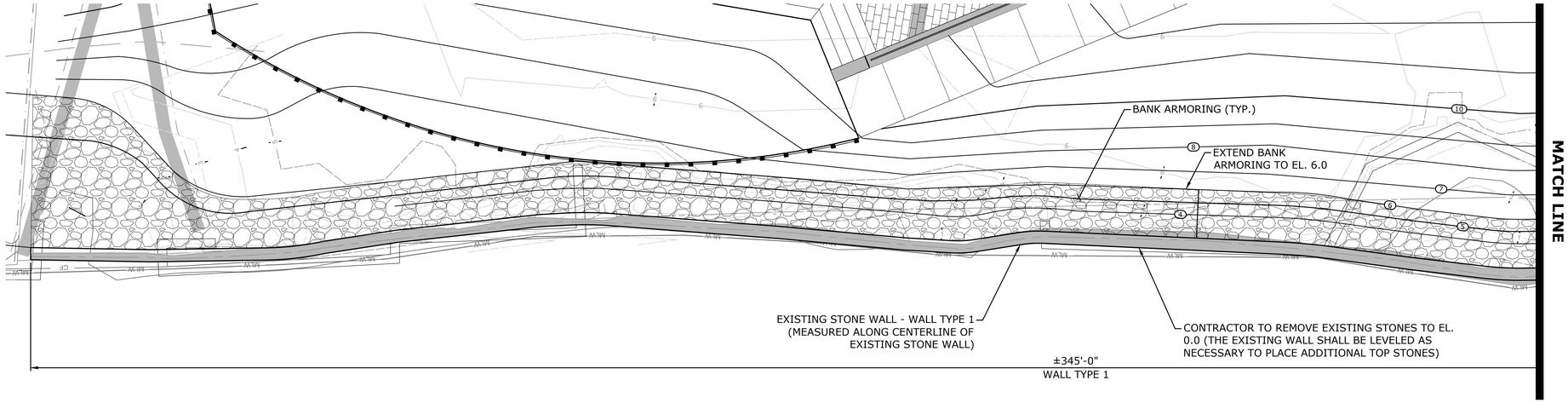
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APRIL 15, 2026 (DATE)

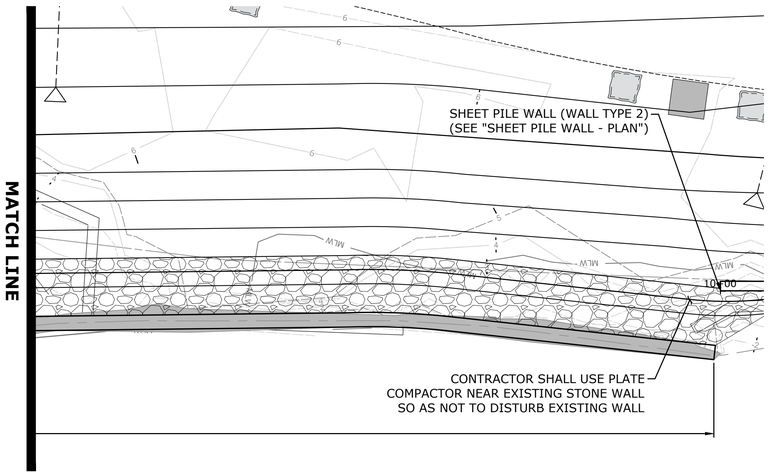
15842.00001 (PROJECT NO.)

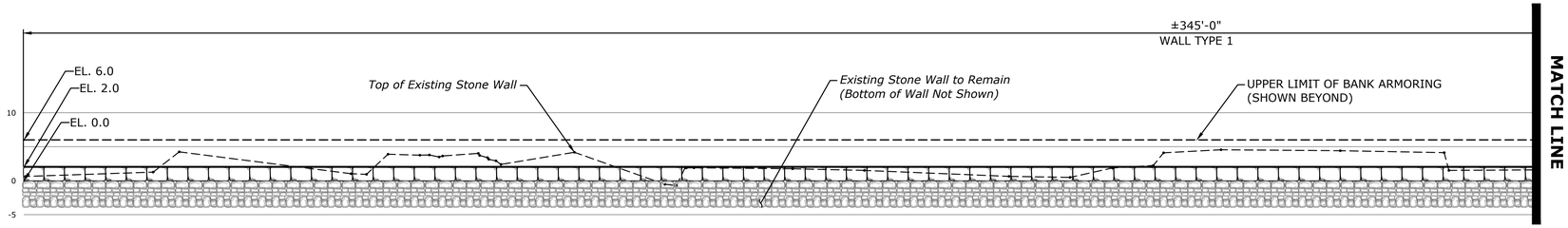
17 OF 20 (SHEET NO.)

SD-5 (SHEET NAME)

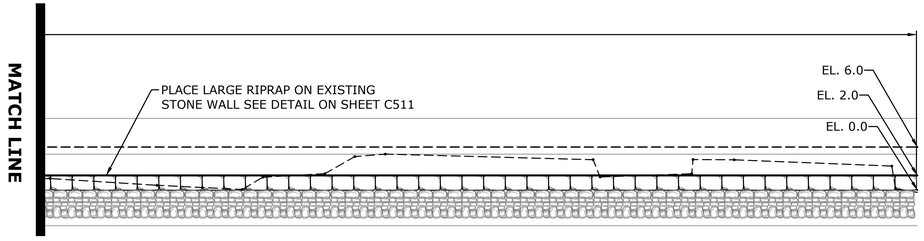


STONE WALL - PLAN
(WALL TYPE 1)
SCALE: 1"=10'





STONE WALL - ELEVATION
(WALL TYPE 1)
SCALE: 1"=10'



KISHOR PATEL
No. 12582
REGISTERED
PROFESSIONAL ENGINEER

SLR
99 REALTY DRIVE
CRANSTON, RI 02910
401.331.7772
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
CONSTRUCTION DOCUMENTS	2026-02-27	JRH

CONSTRUCTION DOCUMENTS - ISSUED FOR BID

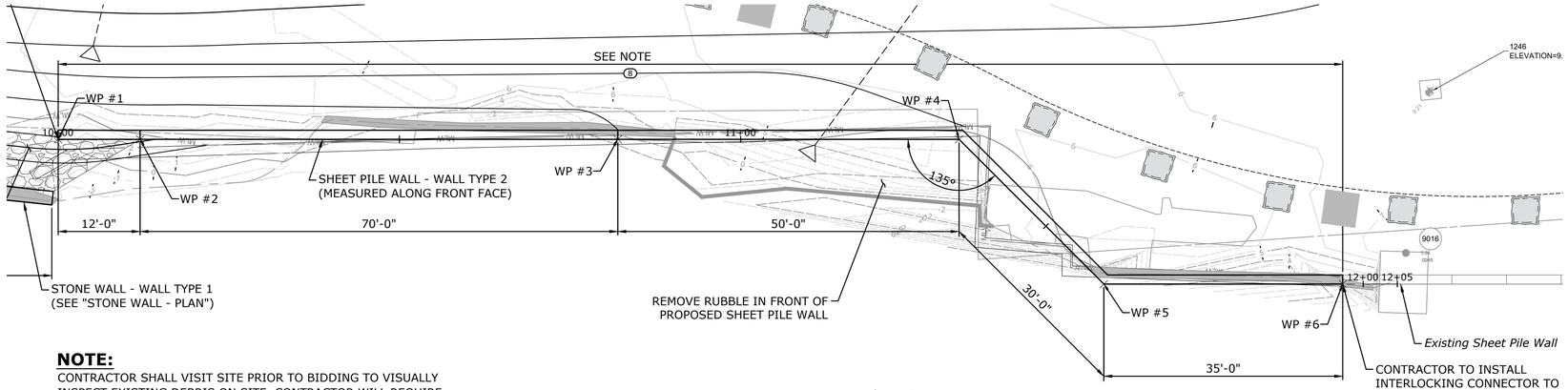
SITE STRUCTURAL DETAILS

RIVERWALK WEST FINAL PHASE
SITE IMPROVEMENTS
TAFT STREET
PAWTUCKET, RHODE ISLAND

KP	PJP	BK
DESIGNED	DRAWN	CHECKED

AS SHOWN (SCALE)
APRIL 15, 2026 (DATE)
15842.00001 (PROJECT NO.)
18 OF 20 (SHEET NO.)

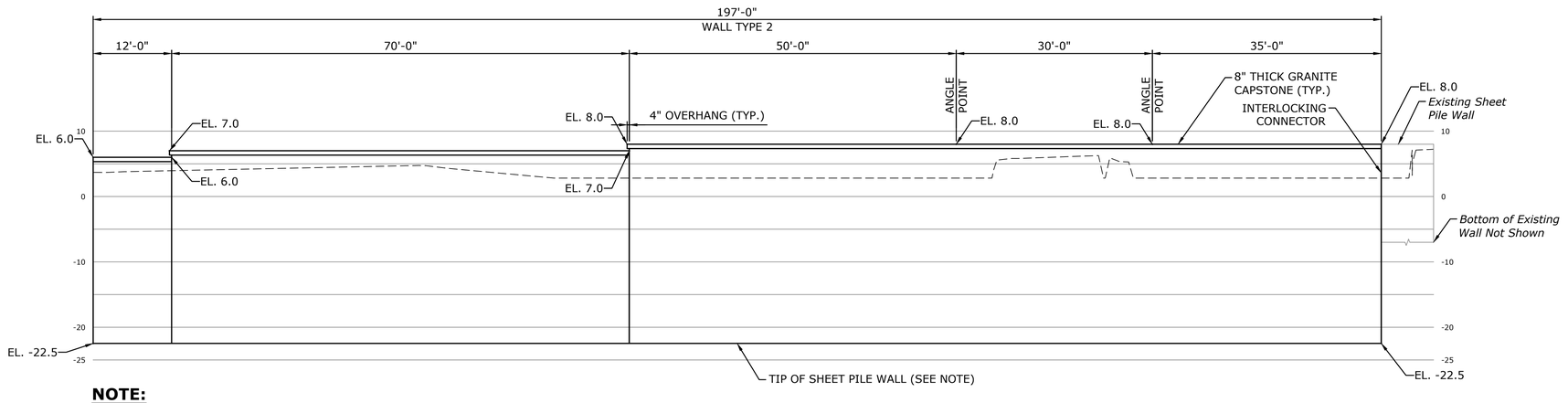
STR-1 (SHEET NAME)



NOTE:
CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING TO VISUALLY INSPECT EXISTING DEBRIS ON SITE. CONTRACTOR WILL REQUIRE REMOVAL OF OBSTRUCTIONS TO INSTALL SHEETING.

SHEET PILE WALL - PLAN
(WALL TYPE 2)
SCALE: 1"=10'

TABLE OF COORDINATES		
WP #	NORTHING	EASTING
1	287099.53	359835.43
2	287109.83	359829.27
3	287169.90	359793.32
4	287212.80	359767.65
5	287241.90	359774.96
6	287271.93	359756.98



NOTE:
IF BEDROCK IS ENCOUNTERED PRIOR TO REACHING TIP ELEVATION DURING INSTALLATION OF SHEET PILE WALL, THE CONTRACTOR SHALL INSTALL ROCK SOCKET TOE PIN. IF NO BEDROCK IS ENCOUNTERED, THE SHEET PILE WALL SHALL BE DRIVEN TO ELEVATION -22.5.

SHEET PILE WALL - ELEVATION
(WALL TYPE 2)
SCALE: 1"=10'

KISHOR PATEL
No. 12582
REGISTERED
PROFESSIONAL ENGINEER

SLR
99 REALTY DRIVE
CRANSTON, RI 02910
401.331.7743
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
CONSTRUCTION DOCUMENTS	2026-02-27	JRH

CONSTRUCTION DOCUMENTS - ISSUED FOR BID

SITE STRUCTURAL DETAILS

RIVERWALK WEST FINAL PHASE
SITE IMPROVEMENTS
TAFT STREET
PAWTUCKET, RHODE ISLAND

KP	PJP	BK
DESIGNED	DRAWN	CHECKED

SCALE: AS SHOWN
DATE: APRIL 15, 2026
PROJECT NO.: 15842.00001
SHEET NO.: 19 OF 20
SHEET NAME: STR-2

SHEET PILING BULKHEAD NOTES:

1. SHEET PILING SHALL BE HOT-ROLLED STEEL SECTIONS CONFORMING TO ASTM A572 (OR EQUIVALENT). MINIMUM YIELD STRENGTH SHALL BE 50,000 PSI. INTERLOCKS SHALL BE FREE SLIDING, PROVIDE A SWING ANGLE SUITABLE FOR THE INTENDED INSTALLATION, AND MAINTAIN CONTINUOUS INTERLOCKING WHEN INSTALLED. SHEET PILING SHALL BE FULL-LENGTH SECTIONS OF THE DIMENSIONS SHOWN ON THE DRAWINGS. SPECIAL FABRICATED SECTION SHALL CONFORM TO THE REQUIREMENTS HEREIN AND THE PILING MANUFACTURER'S RECOMMENDATIONS.
2. SHEET PILING SECTION PROPERTIES: PROVIDE INDICATED PILING MAKE AND SECTION OF EQUIVALENT. EQUIVALENT SECTIONS SHALL PROVIDE SAME OR GREATER OVERALL WALL SECTION AND MOMENT OF INERTIA ON A PER FOOT BASIS AND WILL HAVE A MINIMUM THICKNESS OF ALL ELEMENTS NO LESS THAN 0.48 INCHES.

3. SHEET PILING SHALL BE DRIVEN TO A DEPTH INDICATED ON THE DRAWINGS TO WITHIN AN ALLOWABLE TOLERANCE OF 2". TOP OF PILE SHALL BE CUT WITH PLASMA CUTTER WITH A TOLERANCE OF ±1" FROM THE ELEVATION INDICATED ON THE DRAWINGS.

4. BEFORE PROCEEDING WITH ANY WORK ON SITE, CONTRACTOR SHALL SUBMIT FOR ENGINEER REVIEW WRITTEN PROCEDURES/DRAWINGS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

   4.1. PILE HANDLING/DRIVING EQUIPMENT AND METHOD OF INSTALLATION.

   4.2. MANUFACTURER'S MILL CERTIFICATION THAT MEETS OR EXCEEDS SPECIFIED STEEL REQUIREMENTS.

   4.3. SHOP DRAWINGS THAT SHALL IDENTIFY PILE SECTION PROPERTIES AND WALL THICKNESS, PILE LENGTH PRIOR TO DRIVING, LOCATIONS AND TYPES OF WELDS, CORNER DETAILS, CLOSURE/TIE-IN DETAILS AT EXISTING SHEET PILE WALLS AND CUT-OFF ELEVATIONS.

5. THE CONTRACTOR SHALL LOG EACH SHEET PILE AND MAINTAIN A RECORD WITH THE FOLLOWING INFORMATION:

   5.1. DATE OF INSTALLATION.

   5.2. LOCATION OF IDENTIFICATION MARKS.

   5.3. HAMMER EQUIPMENT AND OPERATION.

   5.4. LENGTH FROM TIP TO CUT-OFF.

   5.5. CUT-OFF ELEVATION.

   5.6. PLUMB (DEVIATION FROM VERTICAL, INCHES PER FOOT).

   5.7. IF SHEET PILING ARE IMPACT DRIVING TO INDICATED TIP ELEVATION, RECORD BLOW COUNTS PER FOOT FOR THE LENGTH OF PILE DRIVEN.

   5.8. COMPLETE LOGS AT THE END OF EACH DAY'S WORK AND IMMEDIATELY SUBMIT (3) LEGIBLE COPIES SIGNED BY THE CONTRACTOR'S REPRESENTATIVE TO THE PORT'S REPRESENTATIVE.

6. PILE DRIVING HAMMERS: HAMMERS SHALL BE STEAM, AIR OR DIESEL DROP, SINGLE ACTING, OR VIBRATORY TYPES. THE HAMMER SHALL HAVE A DELIVERED ENERGY SUITABLE FOR THE TOTAL WEIGHT OF THE PILE AND THE CHARACTER OF SUBSURFACE MATERIAL TO BE ENCOUNTERED. IF UNABLE TO REACH PILE TIP ELEVATIONS, NOTIFY THE ENGINEER BEFORE PROCEEDING WITH PILE OPERATIONS.

   6.1. SHEET PILING SHALL BE DRIVEN WITH THE PROPER SIZE HAMMER AND BY APPROVED METHODS SO AS NOT TO SUBJECT THE PILINGS TO DAMAGE AND TO ENSURE PROPER INTERLOCKING THROUGHOUT THEIR LENGTHS. DRIVING HAMMERS SHALL BE MAINTAINED IN PROPER ALIGNMENT DURING DRIVING OPERATIONS BY USE OF LEADS OR GUIDES ATTACHED TO THE HAMMER. A PROTECTIVE CAP SHALL BE EMPLOYED IN DRIVING WHEN USING IMPACT HAMMERS TO PREVENT DAMAGE TO THE TOPS OF THE PILINGS.

   6.2. PILINGS DAMAGED DURING DRIVING OR DRIVEN OUT OF INTERLOCK SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL COST TO OWNER. PILINGS SHALL BE DRIVEN WITHOUT THE AID OF A WATER JET.

7. SHEET PILING SHALL BE PROVIDED AS ONE PIECE. NO SPLICES WILL BE ALLOWED.

8. SHEET PILES SHALL BE CAREFULLY LOCATED AS SHOWN ON THE DRAWINGS. TEMPORARY WALES, TEMPLATES, OR GUIDE STRUCTURES SHALL BE PROVIDED TO ENSURE THAT THE PILINGS ARE PLACE AND DRIVEN TO THE CORRECT ALIGNMENT.

9. WHERE DRIVEN SHEET PILES HAVE EXCEEDED SPECIFIED TOLERANCES, THE CONTRACTOR SHALL REMOVE SUCH PILES AND DRIVE SUBSTITUTE PILES AT NO ADDITIONAL COST TO OWNER. DETAILS OF SUBSTITUTE PILES SHALL BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO INSTALLATION.

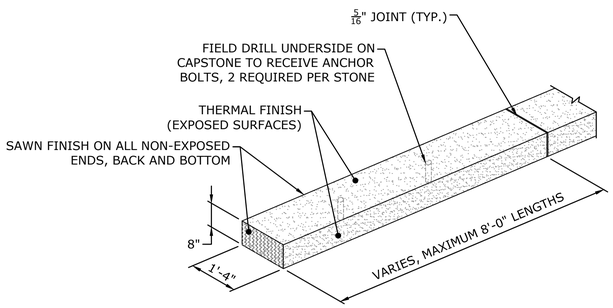
10. ALL SHEET PILES SHALL BE ADVANCED TO THE MINIMUM TIP PENETRATION INDICATED IN THE CONTRACT DRAWINGS. ANY OBSTRUCTIONS ENCOUNTERED (EXISTING PILES, DEBRIS, BOULDERS) SHALL BE PRE-FORMED BY SPUDDING OR DRILLED THROUGH.

11. THE CONTRACTOR SHALL REMOVE ALL SHEET PILE CUT-OFFS AND OTHER DEBRIS FROM THE JOB SITE.

12. FRONT FACE OF SHEET PILING RIVER SHALL BE EPOXY COATED.

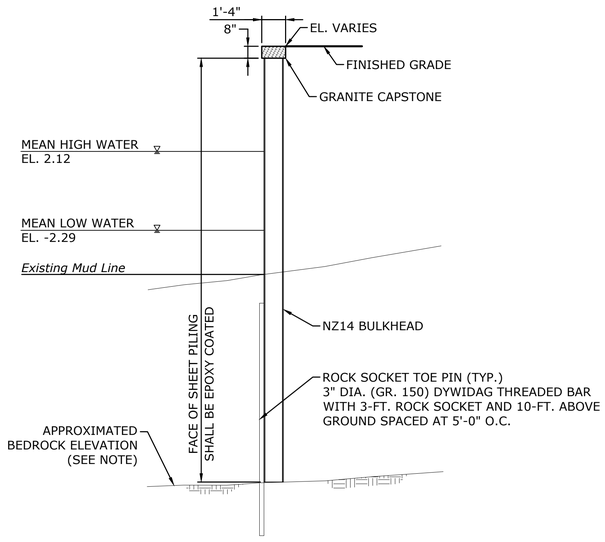
13. ANY EPOXY COATED AREAS DAMAGED DURING STORAGE, HANDLING AND INSTALLATION SHALL RECEIVE A TOUCH-UP EPOXY COATING.

14. WELDING SHALL CONFORM TO THE "STRUCTURAL WELDING CODE FOR STEEL", LATEST EDITION, AS ADOPTED BY THE AMERICAN WELDING SOCIETY (AWS). WELDING SHALL BE PERFORMED BY A WELDER CERTIFIED IN ACCORDANCE WITH AWS STANDARDS.



GRANITE CAPSTONE DETAIL (WALL TYPE 2)

SCALE: 1/2" = 1'-0"

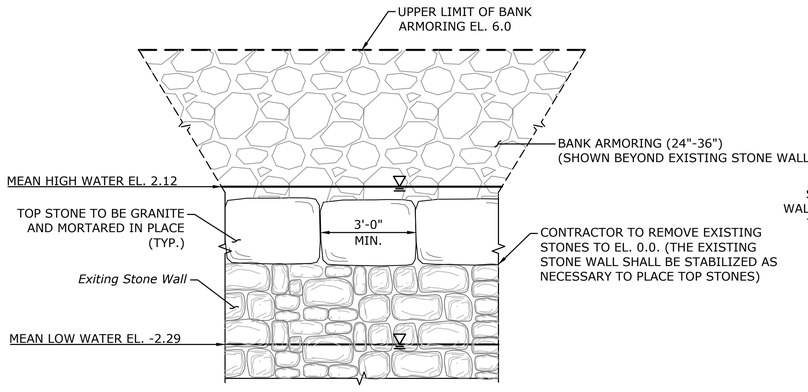


TYPICAL SHEET PILE WALL - SECTION (WALL TYPE 2)

SCALE: 1/4" = 1'-0"

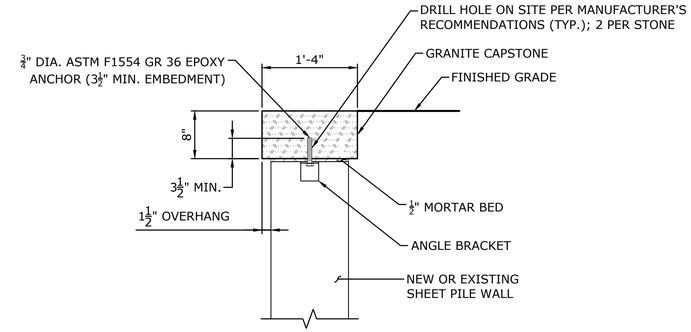
NOTE:

IF BEDROCK IS ENCOUNTERED PRIOR TO TIP ELEVATION DURING INSTALLATION OF SHEET PILE WALL, THE CONTRACTOR SHALL INSTALL ROCK SOCKET TOE PIN AS SHOWN. IF NO BEDROCK IS ENCOUNTERED, THE SHEET PILE WALL SHALL BE DRIVEN TO THE ELEVATION SHOWN ON "SHEET PILE WALL - ELEVATION".



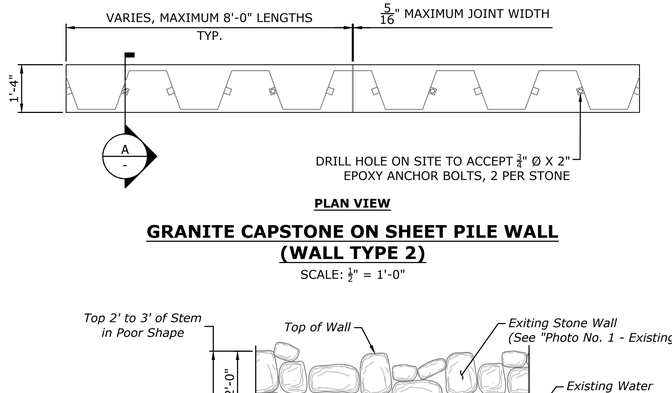
STONE WALL - ELEVATION (WALL TYPE 1)

SCALE: 1/2" = 1'-0"



SECTION A

SCALE: 1/2" = 1'-0"



PLAN VIEW

GRANITE CAPSTONE ON SHEET PILE WALL (WALL TYPE 2)

SCALE: 1/2" = 1'-0"

EXISTING STONE WALL - ELEVATION

SCALE: 1/2" = 1'-0"

STONE WALL - SECTION (WALL TYPE 1)

SCALE: 1/2" = 1'-0"

KISHOR PATEL No. 12582 REGISTERED PROFESSIONAL ENGINEER

SLR

99 REALTY DRIVE
CRANSTON, RI 06410
401.217.1173
SLRCONSULTING.COM

DESCRIPTION	DATE	BY
CONSTRUCTION DOCUMENTS	2026-02-27	JRH

CONSTRUCTION DOCUMENTS - ISSUED FOR BID

SITE STRUCTURAL DETAILS

RIVERWALK WEST FINAL PHASE
SITE IMPROVEMENTS

TAFT STREET
PAWTUCKET, RHODE ISLAND

KP	PJP	PJP
DESIGNED	DRAWN	CHECKED

SCALE: AS SHOWN

DATE: APRIL 15, 2026

PROJECT NO.: 15842.00001

SHEET NO.: 20 OF 20

SHEET NAME: STR-3

Appendix I

CRMC Assent Permit

Bk L5290 Pg283 #17
01-29-2026 @ 09:55a

State of Rhode Island
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 116
Wakefield, RI 02879-1900

(401) 783-3370
Fax (401) 783-3767

ASSENT

CRMC File No.: 2025-10-002 CRMC Assent No.: A2025-10-002

Whereas, of

City of Pawtucket
137 Roosevelt Avenue
Pawtucket, RI 02860

has applied to the Coastal Resources Management Council for assent to: Completion of the remaining landscaping/hardscaping activities from the prior assent #2021-08-048 and current assent #2025-02-055, including a 15 ft wide porous asphalt river walk, paver plaza area, wood amphitheater overlook and boardwalk area. Additional features include benches, lighting, landscaping and grading. Also work includes the maintenance activities for the existing walls (542 +/- feet) along the river and represents that they are the owner(s) of the riparian rights attached to the property involved and submitted plans of the work to be done.

Now, said Council, having fully considered said application in accordance with all the regulations as set forth in the Administrative Procedures Act does hereby authorize said applicant, subject to the provisions of Title 46, Chapter 23 of the General Laws of Rhode Island, 1956, as amended, and all laws which are or may be in force applicable thereto: **Completion of the remaining landscaping/hardscaping activities from the prior assent #2021-08-048 and current assent #2025-02-055, including a 15 ft wide porous asphalt river walk, paver plaza area, wood amphitheater overlook and boardwalk area. Additional features include benches, lighting, landscaping and grading. Also work includes the maintenance activities for the existing walls (542 +/- feet) along the river; located at plat 54, lot 827; Taft Street, Pawtucket, RI,** in accordance with said plans submitted to this Council and approved by this Council. All work being permitted must be completed on or before **January 16, 2029**, after which date this assent is null and void, (unless written application requesting an extension is received by CRMC sixty (60) days prior to expiration date).

Applicant agrees that as a condition to the granting of this assent, members of the Coastal Resources Management Council or its staff shall have access to applicant's property to make on-site inspections to ensure compliance with the assent.

Licensee shall be fully and completely liable to State, and shall waive any claims against State for contribution or otherwise, and shall indemnify, defend, and save harmless State and its agencies, employees, officers, directors, and agents with respect to any and all liability, damages (including damages to land, aquatic life, and other natural resources), expenses, causes of action, suits, claims, costs (including testing, auditing, surveying, and investigating costs), fees (including attorneys' fees and costs), penalties (civil and criminal), and response, cleanup, or remediation costs assessed against or imposed upon Licensee, State, or the Property, as a result of Licensee's control of the Property, or Licensee's use, disposal, transportation, generation and/or sale of Hazardous Substances or that of Licensee's employees, agents, assigns, sublicensees, contractors, subcontractors, permittees, or invitees.

CITY OF PAWTUCKET

Bk L5290 Pg284 #17

Nothing in this assent shall be construed to impair the legal rights of this granting of authority or of any person. By this assent the granting authority by no manner, shape, or form assumes any liability or responsibility implied, or in fact, for the stability or permanence of said project; nor by this assent is there any liability implied or in fact assumed or imposed on the granting authority. Further, the granting authority by its representatives or duly authorized agents shall have the right to inspect said project at all times including, but not limited to, the construction, completion, and all times thereafter.

This Assent is granted with the specific proviso that the construction authorized therein will be maintained in good condition by the owner thereof, his heirs, successors, or assigns for a period of fifty (50) years from the date thereof, after which time this permission shall terminate necessitating either complete removal or a new application.

Permits issued by the CRMC are issued for a finite period of time, confer no property rights, and are valid only with the conditions and stipulations under which they are granted. Permits imply no guarantee of renewal, and may be subject to denial, revocation, or modification.

If this matter appeared before the full Council, a copy of the legal decision from this proceeding may be acquired by contacting the CRMC office in writing.

A copy of this Assent shall be kept on site during construction.

Application for future alteration of the shoreline or other construction or alteration within the CRMC jurisdiction shall be submitted to the CRMC for review prior to commencing such activity.

All applicable policies, prohibitions, and standards of the RICRMP shall be upheld.

All local, state or federal ordinances and regulations must be complied with.

Please be advised that as a further conditions of this Assent, it is hereby stipulated that you and/or your agents shall comply at all times with Federal and State Water Quality Standards and other State standards and regulations regarding water quality, and shall exercise such supervision over and control of these facilities to prevent the dumping or discarding or refuse, sanitary wastes and other pollutants in the tidal waters, either from vessels docked at said facilities or from land adjacent thereto.

No work that involves alteration to wetlands or waters of the United States shall be done under this Assent until the required Federal Permit has been obtained.

Non-compliance with this assent shall result in legal action and/or revocation of this permit.

CAUTION:

The limits of authorized work shall be only for that which was approved by the CRMC. Any activities or alterations in which deviate from this assent or what was detailed on the CRMC approved plans will require a separate application and review. Additionally, if the information provided to the CRMC for this review is inaccurate or did not reveal all necessary information or data, then this permit may be found to be null and void. Plans for any future alteration of the

shoreline or construction or alteration within the 200' zone of CRMC jurisdiction or in coastal waters must be submitted for review to the CRMC prior to commencing such activity.

Permits, licenses or easements issued by the Council are valid only with the conditions and stipulation under which they are granted and imply no guarantee of renewal. The initial application or an application for renewal may be subject to denial or modification. If an application is granted, said permit, license and easement may be subject to revocation and/or modification for failure to comply with the conditions and stipulations under which the same was issued or for other good cause.

ATTENTION: ALL STRUCTURES AND FILLED AREAS IN THE TIDAL, COASTAL, OR NAVIGABLE WATERS OF THE STATE OF RHODE ISLAND ARE SUBJECT TO:

1. The Superior Property Rights of the State of Rhode Island in the Submerged and Submersible Lands of the Coastal, Tidal, and Navigable Waters;
2. The Superior Navigation Servitude of the United States;
3. The Police Powers of the State of Rhode Island and the United States to regulate Structures in the Tidal, Coastal, or Navigable Waters.

THE SUBMERGED AND SUBMERSIBLE LANDS OF THE TIDAL, COASTAL, AND NAVIGABLE WATERS OF THE STATE ARE OWNED BY THE STATE AND HELD IN TRUST FOR THE PUBLIC. CONVEYANCE OF THESE LANDS IS ILLEGAL; TITLES PURPORTING TO TRANSFER SUCH LANDS ARE VOID. ASSENTS THAT INVOLVE THE FILLING OR USE OF THE STATES SUBMERGED LANDS ARE GRANTED WITH THE PROVISO THAT IT IS SUBJECT TO THE IMPOSITION OF A USAGE FEE TO BE ESTABLISHED BY THE COASTAL RESOURCES MANAGEMENT COUNCIL.

The lands adjacent to tidal waters and/or access to these lands may be impacted or rendered unusable in the future due to sea level rise, storm surge, and shoreline erosion. Online resources including STORMTOOLS, Shoreline Change Maps, and Sea Levels Affecting Marshes Model (SLAMM) Maps can be accessed through the CRMC website (www.crmc.ri.gov). The Council recommends the use of these resources to evaluate the flood extent and inundation from sea level rise, storm surge and erosion and damages to land, aquatic life, loss of public access and other natural resources on and near the site of the above assent. The project life may be shortened by these processes and may require additional adaptation measure up to and including relocation of the project. By issuing this assent the granting authority neither explicitly nor implicitly assumes any liability or responsibility for the stability or permanence of said project under future climate and shoreline conditions.

SPECIFIC STIPULATIONS OF APPROVAL

General Stipulations

A. The applicant shall record this assent in its entirety in the land evidence records of the City of Pawtucket within thirty (30) days of the date of assent issuance. Certification by the Town Clerk's office that this stipulation has been complied with shall be furnished to Coastal Resources Management Council by the applicant within fifteen (15) days thereafter. Failure to comply with provision will render this assent null and void.

B. For the purpose of this permit, the coastal feature shall be the manmade shoreline (vertical stacked stone walls); and the inland edge of the coastal feature shall be the inland edge of the manmade shoreline . (vertical stacked stone walls).

Bk L5290 Pg286 #17

C. The approved plan shall be those entitled "Tidewater River Walk West Side Improvements, Taft Street, Pawtucket, RI…,"Revised December 16, 2025, sheets 1-14, by SLR, stamped by Todd D. Ritche, P.E.. Except as stipulated or modified herein, all details and specifications thereon shall be strictly adhered to. Any and all changes require written approval from this office.

D. Prior to commencement of site alterations, you shall post the CRMC assent card. This assent card must be maintained at the site in a conspicuous location until such time that the project is complete.

E. This project required a Coastal Hazards Analysis (CHA) as per the Rhode Island Coastal Resources Management Council's regulations. The Council recommends residential applications meet a minimum of a 30-year design life (longer design life may not meet recommended criteria). Please be advised this project:

- Meets/Does not meet the anticipated 3' rate of Sea Level Rise (SLR).
- Meets/Does not meet/Not applicable the accelerated erosion rate.
- Meets/Does not meet the recommended StormTools Design Elevation (SDE) for three feet (3') of SLR.

Earthwork Stipulations

A. The Permittee shall construct and maintain all soil erosion, runoff, and sediment control practices in accordance with the CRMC approved site plan (referenced herein).

B. All soil erosion, runoff, sedimentation, and construction activity pollution prevention control measures must be implemented in accordance with CRMC approved site plan (referenced herein).

C. Prior to the initiation of site alterations or construction including the mobilization of construction vehicles, equipment or machinery, the Limit of Disturbance (LOD) shall be adequately delineated on site (by survey methods where appropriate). No equipment access, equipment or material storage or other activities including construction vehicle parking shall occur beyond the Limit of Disturbance, even on a temporary basis.

D. All discharges which result from dewatering operations must flow into pumping settling basins, portable sediment tanks or portable sediment bags which are properly installed and maintained in accordance with good engineering practices including the applicable details found in the manufacturer's specifications and/or in the Rhode Island Soil Erosion and Sediment Control Handbook (as amended).

E. All areas of disturbed soils which are impacted by construction, site work and related activities shall be temporarily stabilized throughout the site construction period. Soil stabilization may be achieved through appropriate temporary measures as described by the Rhode Island Soil Erosion and Sediment Control Handbook (as amended). Where the season is not conducive to the establishment of vegetative cover, other temporary measures shall be employed including the application of mulch and/or use of fiber rolls (erosion control blankets, etc.). Temporary erosion, runoff and sediment controls shall be employed and maintained until temporary or permanent vegetative cover can be achieved and/or site improvements such as approved buildings, roadways and parking areas are constructed resulting in a lack of exposed soil.

Bk L5290 Pg287 #17

F. There shall be no discharge or disposal of toxic waste, hazardous materials, oil, grease and other lubricants, excess fertilizer, pesticides or other chemicals or controlled materials either on site or in any area which may enter a wetland, watercourse or groundwater. All spills of such materials shall be reported to the RI Department of Environmental Management for appropriate remediation. All used lubricants, excess chemicals, fertilizers, pesticides, etc., shall be removed from the site for transport, handling and disposal in accordance with all applicable state and federal regulations.

G. All excess excavated materials (soils, rock, gravel, etc.), excess construction materials, demolition debris, temporary erosion, runoff and sediment control measures, etc., shall be removed from the site for appropriate re-use and/or proper disposal at a suitable upland location or landfill. All toxic materials and waste shall be properly transported and disposed of in accordance applicable state and federal regulations.

H. Upon the successful stabilization of exposed soils, all temporary (interim) erosion, runoff and sediment control measures as well as pollution prevention measures shall be appropriately decommissioned and removed from the site for re-use and/or for disposal at a suitable, legal upland location or landfill. All temporary sediment basins, sediment traps and channels, etc., shall be removed and/or restored in accordance with the approved site plans.

I. U. S. Army Corps of Engineers permit is required.

J. Unless herein superseded, all previous requirements related to vegetated buffer zone plantings and management, UCG management, public access and easement areas, stormwater management and construction setback areas contained within previous CRMC Assent #2021-08-048 (Phase 1) for this site remain in full force and effect.

K. The owner is required to also have current approval from applicable City, RIDEM and/or ACOE regulatory authorities for this site prior to further work.

Stipulations for Stormwater Management on Projects Other than Individual Single-Family Residential Lot Development:

A. The Permittee shall construct and maintain the stormwater management practices in accordance with the CRMC approved site plan (referenced herein).

B. All stormwater management practices shall be operated and maintained in accordance with the Operation and Maintenance (O&M) Plan, referenced in Assent 2025-02-055..

Building Stipulations

A. All pertinent requirements of the RI State Building Code as administered by the local building official shall be strictly adhered to.

Bk L5290 Pg288 #17

In Witness Whereof, said Coastal Resources Management Council has hereto set their hands and seal this **16th day of January in the year two-thousand-twenty-six**

Laura Miguel, Deputy Director
Coastal Resources Management Council

/jla

STATE OF RHODE ISLAND

HISTORICAL PRESERVATION & HERITAGE COMMISSION

Old State House 150 Benefit Street Providence, RI 02903

Telephone 401-222-2678 Fax 401-222-2968
TTY 401-222-3700 www.preservation.ri.gov

January 20, 2026

Via email: lturner@crmc.ri.gov & jabbruzzese@crmc.ri.gov, CRMC

Raymond Coia, Chair
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road
Wakefield, Rhode Island 02879

Re: CRMC File Number: CRMC 2025-10-002
Applicant: City of Pawtucket
Taft Street
Pawtucket, RI

Dear Mr. Coia:

The Rhode Island Historical Preservation and Heritage Commission (RIHPHC) staff has reviewed the information that your office provided for the above-referenced application. The City of Pawtucket has submitted an Application for State Assent for Tidewater River Walk West Site Improvements along Taft Street in Pawtucket, RI.

The project scope includes landscaping and hardscaping on the site including retention and repair of the existing stone seawall. Based upon our review of the provided information, it is the RIHPHC's opinion the project will not affect significant historic resources.

These comments are provided in accordance with *650-RICR-20-00-1.2.3 Areas of Historic and Archaeological Significance* of the Coastal Resources Management Council. If you have any questions, please contact Elizabeth Totten (elizabeth.totten@preservation.ri.gov), Project Review Coordinator, or Charlotte Taylor, Staff Archaeologist of this office.

Sincerely,

Elizabeth Totten
FOR

Jeffrey Emidy
Executive Director
State Historic Preservation Officer

260120.11est

Appendix J

Geotechnical Data and RAWP

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF LAND REVITALIZATION & SUSTAINABLE MATERIALS MANAGEMENT
235 Promenade Street, Providence, Rhode Island 02908

REMEDIAL APPROVAL LETTER September 14, 2022
File No. SR-26-1570

Ms. Bianca Policastro
Director of Planning
Pawtucket Planning and Redevelopment
137 Roosevelt Avenue
Pawtucket, RI 02860

RE: Town Landing (a.k.a. Pawtucket Landing)
Taft Street
Pawtucket, Rhode Island
Plat Map 54B / Lot 827

Dear Ms. Policastro:

On April 22, 2020, the Rhode Island Department of Environmental Management's (the Department) Office of Land Revitalization and Sustainable Materials Management (LRSMM) enacted the codified 250-RICR-140-30-1, Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation, and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment. A Remedial Approval Letter (RAL) is a document used by the Department to approve remedial actions at contaminated sites that do not involve the use of complex engineered systems or techniques (e.g. groundwater pump and treat systems, soil vapor extraction systems, etc.).

In the matter of the above-referenced property (the Site), the Department's Office of LRSMM is in receipt of the following documentation submitted pursuant to the Remediation Regulations in response to the reported release at the Site:

1. Remedial Action Work Plan, Town Landing Property, Taft Street, Pawtucket, Rhode Island, (RAWP) received by the Department on March 4, 2022, and prepared by SLR International Corporation (SLR); and

2. Town Landing (a.k.a. Pawtucket Landing) RAWP Addendum, Taft Street, Pawtucket, Rhode Island, received by the Department on August 15, 2022, and prepared by SLR.

Together these documents fulfill the requirements of Section 1.9 (Risk Management) and Section 1.10 (Remedial Action Work Plan (RAWP)) of the Remediation Regulations.

The preferred remedial alternative involves Site-wide installation of engineered controls and recording of an institutional control in the form of an Environmental Land Usage Restriction (ELUR)

with associated post-remediation Soil Management Plan (SMP). Redevelopment plans for the property include commercial operations and restricted residential usage (apartments and condominiums). The remediation and redevelopment of the Site is integrated with the Tidewater Landing Development Project, and includes the construction of the stadium and associated structures on the adjacent Rhode Island Energy (Tidewater) Site using the subject Town Landing Site for construction staging, construction of the riverwalk portion of Town Landing with associated landscaped areas connecting the Town Landing boat launch area to the riverwalk adjacent to the proposed stadium, and final development of the subject Site with mixed-use residential/retail buildings after temporary staging for the stadium project is complete. Export of excess soil is not anticipated as impacted soils will be reworked, excavated, used as fill to meet final grades, and placed below engineered control caps. Department approved engineered controls include using permanent building foundations, hardscapes (asphalt parking lots, paved walkways, concrete walkways, patios, etc.), and/or two types of soil caps (one foot of clean fill over a geotextile, or two feet of clean fill). Any encountered solid waste debris will be removed and properly disposed of at an appropriately licensed disposal facility. Monthly Remedial Progress Reports will be submitted throughout the project. The City of Pawtucket will be responsible for completion of recording of the final ELUR/SMP package at the end of the project. Air quality monitoring will be conducted throughout the project, including during stadium construction work and will continue throughout remedy implementation and Site development.

Based upon review and consideration of the above referenced documents, the Department approves the Remedial Action Work Plan (RAWP) through this RAL provided that:

1. All work must be performed in accordance with all applicable regulations and the Department approved RAWP and RAWP Addendum.

2. Start of the work described in the Department approved RAWP and RAWP Addendum must be initiated within sixty (180) days of issuance of this RAL.

3. Prior to initiating any remedial activities, the Department shall be provided with a list of all contractors, and their respective contact information, that will be used on Site to complete the remedial work described in the Department approved RAWP and RAWP Addendum. The Department shall be notified, when feasible, a minimum of five (5) working days in advance of any changes in contractors and/or consultants involved with the remedial work on this Site. The notification must be promptly supplied in writing with complete contact information for each new contractor or consultant (including but not limited to company name and address, contact name and address, contact telephone number and e-mail address).

4. All excavated regulated soil, if not approved for encapsulation onsite, shall be disposed of off-site at an appropriately licensed disposal facility in accordance with all local, State, and Federal laws. Copies of the material shipping records and manifests associated with the disposal of the material shall be included along with the Closure Report.

5. Areas of the site where contaminated soils are to be excavated must be staged and temporarily stored in a designated area, as proposed in the RAWP and RAWP Addendum, of the site with proper polyethylene covers. Any stockpiled materials, including clean fill, must be underlain and

covered with polyethylene sheeting and be secured at the end of each day with all appropriate erosion and sediment controls to limit the loss of the cover and protect against storm-water and wind erosion (i.e. hay bales, rocks, silt fencing). These appropriate sedimentation and erosion controls must be in place and in proper working order at all times until all disturbed areas are stabilized and capped as proposed. Within reason, the storage location will be selected to limit the unauthorized access to the materials (i.e. away from public roadways/walkways). No regulated soil will be stockpiled on-site for greater than thirty (30) days. In the event that stockpiled soils pose a risk or threat of leaching hazardous materials, a proper leak-proof container (i.e. drum or lined roll-off) or secondary containment will be required and utilized.

6. The Office of LRSMM no longer requires the submittal of analytical data prior to clean fill being brought to a Site. It is the sole responsibility of the Performing Party and their consultant to analyze the material, certify that the material meets the Department's Residential Direct Exposure Criteria (RDEC), as defined by the Remediation Regulations, for all constituents, and is suitable for use on the Site. The Office of LRSMM strongly suggests that enough representative samples of the clean fill are collected prior to moving the material to the Site to satisfy the Performing Party and their consultant that the material meets the RDEC. Please note that the Office of LRSMM reserves its rights to sample the fill, if suspect, to confirm compliance with the RDEC.

7. All regulated soil remaining onsite shall be encapsulated by an engineered control consistent with those described in the Department approved RAWP and RAWP Addendum.

8. Dust suppression techniques (i.e. watering) must be employed at all times during all soil disturbing/handling activities at the site in order to minimize the generation of fugitive dust.

9. Please note that if soil exceeding the Department's Residential Direct Exposure Criteria (RDEC) is to remain onsite then a draft Environmental Land Usage Restriction (ELUR) and Soil Management Plan (SMP) must be submitted to the Office of LRSMM for review and approval prior to recording.

10. Within sixty (60) days of completion of the work described in the Department approved RAWP and RAWP Addendum, a Closure Report detailing the remedial action and including any disposal documentation shall be submitted to the Office of LRSMM.

11. Within sixty (60) days of completion of the work described in the Department approved RAWP and RAWP Addendum, the final Department approved ELUR shall be recorded in the City of Pawtucket Land Evidence Records for the property and a stamped, certified copy returned to the Department within fifteen (15) days of recording. Upon receipt of a copy of the recorded (stamped) ELUR, the Office of LRSMM will issue a Letter of Compliance.

12. Following recording of the ELUR, the site shall be maintained and annually inspected to evaluate the compliance status of the site with the ELUR. Within thirty (30) days of each annual inspection, an evaluation report shall be prepared and submitted to the Office of LRSMM detailing the findings of the inspection and noting any compliance violations at the site.

13. Any changes in the activities detailed in the RAWP or RAWP Addendum shall be reported to the

Office of LRSMM by telephone within one (1) working day and in writing within five (5) business days.

14. The Office of LRSMM shall be notified forty-eight (48) hours prior to initiating the remedial activities at the site associated with the Department approved RAWP and RAWP Addendum.

15. The Office of LRSMM shall be immediately notified of any site or operation condition that results in non-compliance with this RAL.

At this time, the Office of LRSMM offers its concurrence with the proposed remedial action for the property. The Department approves the RAWP provided that all activities and procedures detailed in the RAWP and RAWP Addendum are strictly adhered to. Furthermore, this letter continues to place primary responsibility for the construction, operation, maintenance, and monitoring of the approved RAWP and its associated implementation on Fortuitous Tidewater OZ, LLC (Fortuitous) and the City of Pawtucket (Pawtucket). As the Responsible Party, Pawtucket, and as the Performing Party, Fortuitous, are each expected to implement their portions of the RAWP and RAWP Addendum in an expeditious and professional manner that prevents non-compliance with this RAL and said RAWP and RAWP Addendum, and is protective of human health and the environment.

Please note that at this time the Department does not approve the ELUR for recording in the Land Evidence Records with the City of Pawtucket. The Department understands that the current version of the draft ELUR is presently under review by the City of Pawtucket. Please forward an electronic version of the reviewed draft ELUR and the post-construction SMP in red line / strikeout format for Department review and approval. The draft ELUR and SMP shall be reviewed and approved by the Department, followed by recording of the approved ELUR and SMP by the City, at the completion of all remedial work

This RAL does not remove your obligation to obtain any other necessary permits from other local, State, or Federal agencies.

If you have any questions regarding this letter or would like the opportunity to meet with Department personnel, please contact me by telephone at (401) 222-2797, ext. 2777109, or by E-mail at joseph.martella@dem.ri.gov.

Sincerely,

Joseph T. Martella II

Joseph T. Martella II
Environmental Engineer III
Office of Land Revitalization &
Sustainable Materials Management

Authorized by,

Kelly J. Owens

Kelly J. Owens
Supervising Engineer
Office of Land Revitalization &
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Steven J. Richtarik, BETA
David J. Rusczyk, GZA
Lance Hill, Pare

REMEDIAL ACTION WORK PLAN

Town Landing Property
Taft Street
Pawtucket, Rhode Island

Prepared for:
Fortuitous Tidewater OZ, LLC

SLR #: 141.16222.00005.0201

March 2022

SIGNATURE PAGE

This document has been prepared by SLR International Corporation.

QUALIFICATIONS

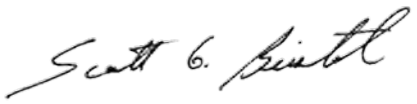
I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Subject Property.

Prepared by:



Peter Shea, LEP
Principal Environmental Scientist

Reviewed by:



Scott Bristol, LEP, PG
Principal Consultant

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1. INTRODUCTION

1.1 PROJECT INFORMATION

SLR International Corporation (SLR) has prepared this Remedial Action Work Plan (RAWP) Addendum on behalf of Fortuitous Tidewater OZ, LLC (Fortuitous) and the City of Pawtucket (City) for the 5.35-acre parcel of land (Plat 54B, Lot 827) located at 0 Taft Street abutting the west shore of the Seekonk River in Pawtucket, Rhode Island (the "Site" or "property") (Figure 1).

This RAWP was prepared to address concentrations of polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), arsenic, and lead that are present in soils across the Site that exceed the applicable Rhode Island Department of Environmental Management (RIDEM) Method 1 numeric criteria for Residential Direct Exposure (RDEC) and/or Industrial/Commercial Direct Exposure Criteria (ICDEC) in the Remediation Regulations.

This work has been funded through the Brownfields Remediation and Economic Development Fund Grant Agreement between the RIDEM Office of Land Revitalization and Sustainable Materials Management and Fortuitous for the period of January 29, 2021, to January 29, 2024. The purpose of the grant was for the Brownfield remediation and assessment of the property.

The work plan is to supplement the RIDEM-approved Short-Term Response Action Work Plan (STRAP) prepared by BETA Group, Inc. (BETA) on behalf of the City dated March 14, 2019. The STRAP was approved for the limited amount of soil disturbance and associated soil management during the river wall repair project at Town Landing that is currently under construction at the time of this report. The project involves construction of marine repairs and improvements at the edge or within the tidal Pawtucket River, including an engineered barrier designed to address potential exposure to impacted soil. This was to be the first of three phases for remedy of the Site. The remedial approach is consistent with the STRAP, but the phases of work have been expanded with the proposed development of the entire Site by Fortuitous and the City.

In lieu of Phases II and III detailed in the STRAP, Fortuitous and the City will implement the remedial action based on the following phases of construction as part of the Tidewater Stadium Project:

- Step 1: National Grid remediation work on its properties as approved by RIDEM under separate authorizations. This construction work is currently in progress.

- Step 2: Repair of the river wall at Town Landing as part of the approved STRAP by the City at the direction of the RIDEM. This phase is already approved by the RIDEM and is not part of this Site Investigation Report (SIR) evaluation. Construction is currently in progress. (Phase I STRAP, 2019)

- Step 3: Construction of the stadium and associated structures on the National Grid site with use of the subject site for construction staging

- Step 4: Construction of the riverwalk portion of the subject site with associated landscaping areas connecting the Town Landing boat launch area to the riverwalk adjacent to the stadium

- Step 5: Development and construction of Division Street parcels, located east of the Seekonk River (not part of this RAWP)

- Step 6: Development of the subject Site as a mixed-use residential/retail building after the temporary staging for the stadium project is complete

This RAWP has been prepared in accordance with Section 9.0 of the RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations) and will detail the remedial work under Step 3 for construction staging at the site, Step 4 for construction of the riverwalk portion of the site, and Step 6 for final development of the Site as mixed-use residential/retail. The preferred remedial alternative is a combination of engineered cap to limit potential future exposure to soils, followed by the recording of an Environmental Land Use Restriction (ELUR). The ELUR will be recorded on the property in conjunction with a Postconstruction Soil Management Plan (SMP). The ELUR will ensure that the established engineered barriers remain in place and that the property will be maintained in commercial and restricted residential (i.e., apartments and condominiums) land use.

1.2 SITE DESCRIPTION

The subject property comprises one 5.35-acre parcel of land (Plat 54B, Lot 827) located at 0 Taft Street on the western side of the Seekonk River in Pawtucket, Rhode Island. The subject property is currently owned by the City, with the northern portion of the parcel used as a public boat launch.

The northern portion of the Site is mostly grass covered except for the paved driveway/parking area and boat launch. There are no buildings or structures on the northern portion except for a pad-mounted electric utility box on the northwest side and hand railings along the western border (Seekonk River). The entirety of the east border of the Site is lined with a partially dilapidated stone wall that abuts the south-flowing Seekonk River. The southern portion of the subject property is wooded with a few walking trails.

The northern portion of the Site is used as a small public park and boat launch, and the southern portion is mostly wooded except for a community garden on the southwest side of the property that has since been relocated by the City to an offsite location.

1.1 SITE HISTORY SUMMARY

The subject property was historically developed by at least the late 1880s as a coal and lumber storage yard. There were two large fires that consumed most of the coal and lumber stored at the Site in 1894 and 1936. The Site was reestablished as a coal and lumber yard following both fires until around the mid 1970s.

At that time, Pawtucket Redevelopment Agency acquired the property and demolished the coal and lumber storage structures, leaving the Site vacant and unused and covered in construction debris. It was reported in a previous investigation that the debris was likely associated with the construction of Interstate 95 located north of the Site.

The Site remained vacant until the early 2000s when a river access point was developed at the northeast corner with a boat launch. The rest of the Site remains as vacant, wooded land.

The surrounding sites to the north, far south, and west were primarily used for residential and commercial-mixed purposes since the late 1880s as well.

The industrial property directly to the south (the Former Tidewater MGP site) was used as a coal and lumber storage yard since at least the late 1880s through the early 1900s, then as a manufactured gas and electric manufacturing plant through the late 1960s. The large oil and gas storage tanks were removed from this site between 2008 and 2012. The parcel is currently being remediated under the supervision of the RIDEM, which remediation is scheduled to be completed in 2021. Fortuitous has obtained approvals from the City and RIDEM to redevelop the Site into a soccer stadium and associated facilities scheduled to be completed by 2023.

Site use to the east across the Seekonk River was similar to the subject property (primarily coal storage, a planning mill, brass foundry, and an automotive repair facility) since at least the late 1800s through the mid 1980s. The Division Street parcel is planned for redevelopment as part of the soccer stadium project.

1.2 TOPOGRAPHY AND DRAINAGE

The Site topography has a significant downward slope on the central and southern portions and is generally flat in the northern portion. The topographic high point for the Site is approximately 35 feet above mean sea level (ftmsl) in the western portion to a low elevation of approximately 5 ftmsl along the eastern border at the Seekonk River.

The general topographic trend of the subject property as well as the surrounding area is downward west to east. The nearest surface water body is the south-flowing Seekonk River, which abuts the eastern border. The Seekonk River ultimately discharges into the Providence River located approximately 4 miles to the south. The Seekonk River is classified by the RIDEM as an SB1 estuarine water body. These types of water bodies are generally defined as waters designated for primary and secondary contact recreational activities and fish and wildlife habitat. In addition, Class SB1 waters shall also be suitable for aquacultural uses, navigation, and industrial cooling. It is noted that this section of the Seekonk River (part of the Narragansett Basin RI0007019E-01) is reported to be impaired for fecal coliform, total nitrogen, and dissolved oxygen.

1.3 GROUNDWATER

According to the RIDEM Environmental Resource Map, groundwater quality beneath the subject property is classified as "GB." The RIDEM Office of Water Resources generally defines "GB" as groundwater that may not be suitable for drinking water use without treatment due to known or presumed degradation.

On May 3, 2021, SLR measured the depth to water in the existing overburden groundwater monitoring wells and collected groundwater samples from four of the wells to help determine the current groundwater quality at the site. Groundwater depth across the site ranged from 1.62 feet below grade (ftbg) at MW-05 to 14.01 ftbg in SLR-MW-A. Groundwater flow was determined to be eastward toward the Seekonk River.

Based on the groundwater laboratory results, there were no detections for TPH, PAHs, or volatile organic compounds (VOCs). Cyanide was detected in MW-01 at a concentration of 0.025 milligrams per liter (mg/L), which is well below the GA-GO criteria. Previous investigations indicated there was a trace detection of tetrachloroethane (PCE) of 2.1 micrograms per liter (ug/L) from well MW-05, which was well below the GB-GO criteria of 150 ug/L. Based on these results, groundwater at the Site is not impacted by an active release and will likely not require management outside of normal best management practices for development of the Site.

1.4 SURFACE WATER

According to RIDEM's *Water Quality Classification Descriptions*, dated August 6, 1997, the Seekonk River is a Class B1a surface water body, indicating that it is considered appropriate for boating and other secondary contact recreational activities, fish and wildlife habitat, and industrial processes and cooling. Surface water was not evaluated as part of this site investigation (SI) as the development of the Site will be limited to upland areas beyond the proposed bridge crossing.

1.5 PROPOSED SITE DEVELOPMENT

Fortuitous is preparing the final documents for Phase 1A of the Tidewater Landing project, which includes the Tidewater Stadium construction in addition to the surrounding surface parking and riverfront improvements on the west side of the Seekonk River. The riverfront improvements include the riverwalk from the National Grid property up north to the subject Site ("The City property," AP 54 Lot 827) and finally terminating at Town Landing on the subject Site. The stadium project is located mostly on the National Grid parcel (AP 58 Lot 826). Under separate permitting authorizations, National Grid is in the process of a remediation project that will create a capped pad site for the stadium to be constructed above. The initial phase of the stadium work will utilize a portion of the City property to the north for temporary construction staging.

As part of Phase 1A, the subject Site will be cleared and graded with construction access along the river side of the property and temporary gravel parking areas. The gravel areas will provide parking for construction workers and placement of job trailers. The riverwalk constructed in Phase 1A will

incorporate the remedial alternatives selected as part of the SIR and will not start until permitting and approval are obtained from RIDEM and the City. The following is a summary of the proposed construction sequence as part of the overall project:

- Step 1: National Grid remediation work on its properties as approved by RIDEM under separate authorizations. This construction work is currently in progress and under direction of RIDEM approval and not part of this RAWP.

- Step 2: Repair of the river wall at Town Landing as part of the approved STRAP by the City at the direction of the RIDEM. This phase is already approved by the RIDEM and is not part of this RAWP. Construction is currently in progress.

- Step 3: Construction of the stadium and associated structures on the National Grid site with use of the subject Site for construction staging. Temporary engineered controls implemented during staging as detailed in this RAWP.

- Step 4: Construction of the riverwalk portion of the subject Site with associated landscaping areas connecting the Town Landing boat launch area to the riverwalk adjacent to the stadium. Work will include implementation of the proposed remedy for the Site as described in this RAWP.

- Step 5: Development and construction of Division Street parcels, located east of the Seekonk River. Description of this work is not included in this RAWP.

- Step 6: Development of the subject Site as a mixed-use residential/retail building after the temporary staging for the stadium project is complete. Work will include the implementation of the proposed remedy described in this RAWP.

A copy of the current version of the construction plans is provided in Appendix A. The plan set includes the first phase of the overall project with the stadium and associated structures depicted and the subject site as part of the construction staging and riverwalk buildout. The construction plans include a detail on the proposed remedy caps used for the site. A second set of plans are provided showing the conceptual buildout of the property associated with this RAWP.

The proposed remedy will include engineered caps utilizing permanent foundations, hardscapes (asphalt parking lots, paved walkways, concrete walkways, patios, etc.), and two types of soil caps (1 foot thick with geotextile layer and a 2-foot cap of clean fill). These engineer controls will prevent direct exposure to the remaining underlying impacted soil.

Based on the proposed design, there will be vegetation grubbing, grading and relocation of impacted soils, and removal of solid waste debris but will not result in export of any impacted soil.

2. PREVIOUS SITE INVESTIGATIONS

The following section is a summary of the methods and findings of previous assessments or investigations on record with the RIDEM.

2.1 1998 ENVIRONMENTAL SITE ASSESSMENT, ENVIRONMENTAL RESOURCES ASSOCIATES, INC. (ERA)

In 1998, ERA conducted an Environmental Site Assessment (ESA) on behalf of the City of Pawtucket's Redevelopment Agency. The ESA was conducted to help determine if the City would be able to change the site zoning from manufacturing to residential. The Site was proposed to be divided into two parcels with approximately 3 acres to be used for residential usage and the remainder as a public park.

ERA documented that the Site was undeveloped and vegetated with fill material, including asphalt, concrete, and brick observed throughout the central portion. It concluded that the fill material observed was reportedly associated with the construction of Interstate 95, located north of the Site.

Based on the soil results, there were indications of coal and ash observed in the test pits within the upper foot of the soil throughout the Site and most prevalent toward the river. One soil sample was collected from the test pits and analyzed for cyanide and polychlorinated biphenyls (PCBs). Neither was detected above lab reporting limits. Total VOCs were evaluated based on photoionization detector (PID) readings ranging from 5 to 20 parts per million (ppm). However, no VOCs were analyzed as part of the investigation.

Groundwater samples were collected from three of the four wells (one was dry) and analyzed for VOCs and United States Environmental Protection Agency (USEPA) toxic metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver). One well sample was also analyzed for total cyanide, nitrate, and sulfate. Based on the laboratory results, there was no detection of any constituents of concern (COCs) above the USEPA recommended limits.

2.2 2011 PHASE I ESA, FUSS & O'NEIL (F&O)

In March 2011, F&O conducted a Phase I ESA for the Site on behalf of the RIDEM. The report provided a detailed history for the site and identified four Recognized Environmental Conditions (RECs) associated with Historical Site Use, Offsite Properties potential impacts, Documented Releases On Site, and Fill Materials/Demolition Debris Stockpiled On Site. Based on the findings of the Phase I ESA, F&O recommended additional investigation to determine if a release had occurred from the RECs identified.

2.3 2013 SIR/TARGETED BROWNFIELDS ASSESSMENT, F&O

In 2013, the RIDEM retained F&O to conduct a SI and Targeted Brownfields Assessment (SI/TBA) at the Town Landing site. The objective of the SI/TBA was to compile environmental information regarding the Site through research, inspections, and field investigation. The goal of the SI/TBA was to evaluate the

absence or presence of contaminants in environmental media at the Site and to prepare an SIR to fulfill the RIDEM regulations. On February 4, 2011, the RIDEM granted authorization for F&O to conduct the SI/TBA. The SIR evaluated releases identified in the 2011 Phase I ESA summarized in the previous section.

Based on soil borings, F&O concluded the soil consisted of sandy fill material mixed with coal and coal ash to depths of 10 ftbg. Deeper soil consisted of dense silt and clay up to 19 ftbg overlying native sand and gravel. VOCs were detected at concentrations above the laboratory reporting limit (RL) in 18 of the 21 soil samples analyzed but below the applicable RIDEM criteria. Semi-volatile organic compounds (SVOCs) were detected in 13 of the 21 soil samples, with several PAH compounds detected above the RDEC criteria. TPH was detected in 15 of the 21 soil samples, with one concentration above the RDEC. Arsenic, lead, and/or manganese were at concentrations above the RDEC in 10 samples with Synthetic Precipitation Leaching Procedure (SPLP) results below the GB-LC criteria.

In general, F&O concluded the sources of the compounds detected in soil throughout the site were likely attributed to historical use of the site for coal and lumber storage and the presence of fill materials and debris in the Site soil. No exceedances of the SPLP metals analysis for GB-LC were identified, indicating the risks posed by the compounds were limited to direct exposure via ingestion or inhalation and not leaching to the underlying soil or groundwater.

2.4 APRIL 6, 2018, SITE INVESTIGATION REPORT ADDENDUM, BETA

In 2018, BETA prepared an SIR Addendum to the 2013 SIR/TBA (F&O) for the Site on behalf of the City. The addendum updated the Remedial Alternatives Evaluation for the project in view of the revised planned development for the northern portion of the subject property. Since 2013, redevelopment plans for the Site were revised, and in 2016, the City and National Grid collaborated on a Master Plan for the area including the City's Town Landing site and adjacent National Grid Tidewater site.

BETA indicated the former manufactured gas facility, located on the abutting southern parcel, was being remediated by National Grid. At the time, no definitive redevelopment plan was in place, but several key components could be included in the Town Landing site. The preferred alternative remained the same with limited soil excavation, engineered control, and ELUR. The phasing of work was modified focusing on the northern portion of the subject site (the public boat launch area). The Town Landing remediation was to be implemented in the following three phases:

1. Phase I: Soil management during the repair of the river wall
2. Phase II: Construction of a water quality infiltration basin and riverwalk
3. Phase III: Future development of the Town Landing, possibly in conjunction with the Tidewater property to the south that is owned by National Grid

2.5 2019, SHORT-TERM RESPONSE ACTION PLAN (STRAP), BETA

BETA prepared a STRAP for the river wall repair project at the Town Landing portion of the subject property as requested by the RIDEM in the Remedial Decision Letter dated March 2019. The project was

limited to the Phase I: Soil Management during the repair of the river wall described in the 2018 SIR Addendum prepared by BETA. The STRAP included procedures to manage soil generated during the work as well as remedial actions associated with the installation of an engineered control barrier designed to address potential exposures to impacted soil.

The RIDEM approved of the STRAP for the river wall repair project in a letter dated March 22, 2019. The letter detailed how the approval was only for the Phase I portion of the work, as described in the 2018 SIR Addendum. The approval was for the installation of an engineered barrier designed to address potential exposure to impacted soil and construction of marine repairs and improvements at the edge or within the tidal Pawtucket River. The RIDEM indicated the ELUR and associated Soil Management Plan (SMP) will need to be recorded at the completion of Phases 2 and 3 for the entire subject property.

2.6 2021, SUPPLEMENTAL SITE INVESTIGATION REPORT, SLR

SLR developed an additional SI scope of work as outlined in Exhibit B of the Brownfield Grant to supplement the findings of the 2013 SIR/TBA completed by F&O. The subsurface investigation was designed to help determine the current soil and groundwater quality, evaluate the RECs identified in the SLR 2021 Phase I ESA, help evaluate remedial alternatives to achieve compliance with RIDEM regulations, and help design the eventual SMP for the proposed development.

On March 5, 2021, public notice mailings, signage, and community outreach with flyers commenced. On March 15, 2021, SLR mobilized to the site to prepare for mark-out of soil boring and well locations. SLR developed a site-specific Health and Safety Plan for its workers and contractors and retained GZA for oversight of geotechnical soil borings and well installation as part of the conceptual site model development for the Site. SLR retained Underground Surveying, LLC to clear the soil boring and groundwater monitoring well locations for potential unknown underground utilities or underground storage tanks. There were no tanks or utilities identified using ground penetrating radar (GPR).

A total of 11 environmental soil borings (SLR-101 through SLR-111) were advanced across the site to help evaluate soil quality. The environmental borings were advanced using direct-push method with a Geoprobe® drilling rig to a depth of 15 ftbg. Two soil samples were collected from each soil boring to help determine the current soil quality of the previously identified fill (REC-1) and vertical extent of impacts to help determine soil management as part of the proposed construction activities.

A total of 22 soil samples were collected with one duplicate sample and VOC trip blank collected for QA/QC purposes. One surficial soil sample was collected from the wetland area in the southeast corner of the site (SLR-HA-112) to evaluate soil quality within the wetland for potential mitigation assessment. The samples were submitted to a state-certified laboratory (Con-Test Analytical Laboratory) for analysis of the COCs for the Site, including TPH, RCRA-8 metals, SVOCs, and VOCs. Select samples were also analyzed for PCBs and SPLP arsenic and/or lead.

SLR and GZA oversaw the installation of two additional groundwater monitoring wells in March 2021. Monitoring well MW-A was completed within the soil boring GZA-SB-108, and monitoring well MW-B was

installed between borings SLR-106 and SLR-107 at the edge of the asphalt where the former community gardens were located.

All six of the existing wells installed by F&O as part of the 2013 SI were located by SLR and redeveloped along with MW-A. MW-B was dry at installation and again during the groundwater sampling event on May 3, 2021. On May 3, 2021, SLR gauged and collected groundwater samples from select wells at the Site to confirm the results of the 2013 investigation and to help determine the current groundwater quality. The sampled wells were submitted to Con-Test for analysis of TPH, PAHs, VOCs, and cyanide.

Based on the geotechnical information gathered, the findings of the underlying soil are consistent with previous investigations. The fill observed throughout the Site ranged in thicknesses from 2 to 12 feet, consisting of various concentrations of anthropogenic materials (i.e., concrete fragments, asphalt, ash, and coal) overlying native outwash deposits ranging from silty sand to sand and gravel. The thickest layers of fill were observed in the central portion of the Site with piles of concrete, household refuse, glass, and metal within the area. Bedrock was encountered across the Site ranging from 14 to 30 ftbg.

The laboratory results for soil and groundwater were consistent with the previous investigation. Soil results indicated arsenic, lead, TPH, and several PAHs detected above the applicable criteria in the shallow fill. In general, the deeper samples collected blow the fill resulted in lesser concentrations of detected compounds or were below the RL. The exceptions included arsenic detections increasing with depth within soil borings SLR-104 and SLR-105, likely due to heterogeneous fill. PCBs were not detected in any of the soil samples collected from the fill layer.

In general, metals other than arsenic and lead were detected above the RL but well below the applicable criteria in all of the 22 soil samples. Arsenic concentrations ranged from not detected to 78 mg/kg (SLR-105) with nine samples above the RDEC. Lead was the only other metal above the RDEC in one of the 23 samples (SLR-110) at a concentration of 180 mg/kg. Leachability was evaluated in the highest arsenic concentration and lead concentration detected with SPLP arsenic at 12 ug/l and lead at 83/ug/l for sample SLR-105 (11.5-12.5) and SLR-110 (0.5-2.5), respectively.

TPH was detected at concentrations above the RL in 13 of the 18 soil samples with one exceedance of the RDEC in the sample collected from SLR-107 (10-11.5) at a concentration of 570 mg/kg.

VOCs were detected in four of the 12 samples analyzed, with no concentrations above their respective RDEC.

One or more SVOCs were detected in 11 of the 23 samples analyzed. SVOC concentrations were detected at concentrations that exceed their respective RDEC criteria in seven (SLR-101, SLR-102, SLR-103, SLR-104, SLR-105, SLR-106, and SLR-110) of the 12 soil boring locations across the Site. Most of the compounds that exceed the RDEC are associated with PAHs, typically associated with asphalt or urban runoff impacts and within urban fill materials.

Groundwater samples were collected and analyzed from three of the existing monitoring wells (MW-01, MW-03, and MW-09) located downgradient of the proposed development and from constructed MW-A

located in the central portion of the Site and within the footprint of the proposed structure. The second constructed well (MW-B) was located near Taft Street to evaluate upgradient groundwater to the proposed development and was installed at the top of bedrock; however, it resulted in no measurable groundwater in the overburden.

The groundwater assessment was consistent with previous investigations. There were no exceedances of the RIDEM GB-GO or detected concentrations of TPH, SVOCs, or VOCs. A low level of cyanide was detected above the RL in one well (FO-MW-09) near the southeastern boundary of the site but well below the GA-GO criteria. Based on these results, there appears to be no offsite or release areas on site impacting groundwater quality at the Site.

3. REMEDIAL OBJECTIVES (RULE 9.02)

In accordance with Section 9.02 of the Remediation Regulations, this RAWP addresses remedial objectives for all impacted media at the Site in a manner consistent with Section 8.0 (Risk Management) for groundwater, surface water and sediment, soil, and air objectives.

3.1 GROUNDWATER OBJECTIVE

Based on groundwater investigations conducted at the Site, there were no exceedances of the RIDEM GB-GO or detected concentrations of TPH, SVOCs, or VOCs. A low level of cyanide was detected above the RL in one well (FO-MW-09) near the southeastern boundary of the site but well below the GA-GO criteria. Based on these results, there appears to be no offsite or release areas on site impacting groundwater quality at the Site. Therefore, no remedial objectives have been established for groundwater.

3.2 SURFACE WATER AND SEDIMENT OBJECTIVE

The Seekonk River abuts the Site to the east; however, the phases of the development project covered under this RAWP do not include uncontrolled discharge to, realignment of, or dredging of the river. Therefore, no remedial action objectives (beyond best management practices during construction) have been established for surface water or sediment. The objective may be revisited under separate cover for the completion of the proposed footbridge but is not proposed as part of this phase of the development.

3.3 SOIL OBJECTIVE

The primary objectives of the 2021 supplemental SIR were to evaluate the current quality of the Site's environmental media (i.e., soil and groundwater) compared to those identified in the 2013 SIR (F&O) (REC-1), determine if additional releases had occurred due to small quantities of fuels used at the Site by the homeless population, evaluate the extent of fill material and demolition debris (REC-2), determine if former site operations impacted environmental media (REC-3), and help evaluate if offsite releases have affected the site (REC-4).

The results of the subsurface investigation build upon the conclusion of the RIDEM in the Remedial Decision Letter dated March 11, 2019, for the STRAP approval for remedial measures for the subject parcel for Phase I (repair of the river wall). This supplemental SIR was conducted to provide evaluation of the current conditions of the Site on behalf of Fortuitous and due to a modification of the proposed development of the Site. The additional assessment indicated the environmental media has been sufficiently characterized to support the modified development plans for the subject site and in accordance with the RIDEM Remediation Regulations.

Based on the supplemental data, there are concentrations of COCs in soil, including arsenic, lead, TPH, and PAHs, that exceed the Method 1 criteria. In general, the exceedances were concentrated in soil samples collected from the layer of urban fill across the Site. Based on the results, there is no release creating a plume or vertical migration through the Site. The sources of contamination are likely attributed

to the historical placement of fill containing asphalt, ash, and other anthropogenic material with substances intermixed within the fill.

The selected remedial approach, engineered cap and institutional controls, is consistent with the intent of the Remediation Regulations and in keeping with the planned construction/development activities for the property.

The implementation of the remedial action will be completed during two phases of development as part of the overall Tidewater project (refer to Appendix A for site plans). During Step 3, the initial phase for the Site, the property will be utilized for construction staging and completion of the proposed riverwalk. During Step 6 of the overall Tidewater Project, the final remedial action will be implemented at the Site with final buildout of the proposed structures, landscaping, and hardscape.

The Site's soils will be controlled through each phase of construction with best management construction practices, establishment of soil and erosion controls, use of fencing and signage to limit public access at all times until final development is complete, layout of demarcation layer and clean soil cap as the project progresses, and ongoing monitoring to ensure stabilization of soil during construction to prevent offsite migration. The planned construction/development will prevent direct contact by the public and workers during all phases of construction until the final incorporation of the engineered cap and development buildout. A construction SMP has been prepared as part for the bid package for contractors that will detail these best management practices and describe the controls for implementation during construction. A copy of the construction SMP is provided in Appendix B.

The establishment of an ELUR, in conjunction with the SMP, will address the observed conditions and assure the long-term effectiveness of this strategy and maintenance of the engineered control cap and cover material.

3.4 AIR OBJECTIVE

No impacts to air are anticipated as the COCs at the Site are either nonvolatile (i.e., metals) or of low volatility (PAHs or TPH). Therefore, no remedial action objectives have been established for air. Dust control air monitoring will be employed during the construction process and is detailed in the construction SMP provided in Appendix B.

4. PROPOSED REMEDY (RULE 9.03)

The proposed remedy for the Site has been developed to control and/or evaluate known conditions that represent regulatory exceedances as established in the Remediation Regulations. This section details the proposed remedy for the Site and justifies the ability of the remedy to meet the remedial objectives discussed in Section 3.0. A copy of the proposed development plans that includes details on the sequence for the proposed remedy is provided in Appendix A.

The proposed remedy will be completed in phases as part of the Tidewater Stadium project, which includes the redevelopment of the abutting property (former National Grid site) and the subject property. The following is a summary of the construction sequence referenced in Section 1.1 where the proposed remedy will be implemented for the Site:

- Step 3: Construction of the stadium and associated structures on the National Grid site, with use of the subject site for construction staging
- Step 4: Construction of the riverwalk portion of the Site, with associated landscaping areas connecting the Town Landing boat launch area to the riverwalk adjacent to the stadium
- Step 6: Development of the subject Site as a mixed-use residential/retail building after the temporary staging for the stadium project is complete

The proposed remedy for this RAWP is limited to Step 3 for staging on the Site, Step 4 for the construction of the riverwalk, and Step 6 for the development of the mixed-use residential/retail building. In general, the proposed remedy is the placement of surface barrier that is either temporary during Step 3 with the staging of the Site or permanent during Stages 4 and 5 based on final development of the Site. The ELUR will be instituted upon final development of the Site and, for the purposes of this RAWP, will cover work completed as part of the Tidewater Stadium project by Fortuitous on behalf of the City. The City will ultimately be responsible for the completion of the ELUR for the entirety of the property.

4.1 CONTRACTORS AND/OR CONSULTANTS

The following table provides a list of contractors and consultants involved in the implementation of the remedy:

FIRM	ROLE	CONTACT	ADDRESS	PHONE NUMBER
DIMEO CONSTRUCTION	Construction Manager	Curtis Ruotolo	75 Chapman Street Providence, RI 02905	401.781.9800
FORTUITOUS	Developer	Dan Kroeber	953 Chattanooga Avenue Los Angeles, CA 90272	203.464.3071
SLR	Environmental & Engineering	Peter Shea	45 Glastonbury Boulevard Glastonbury, CT 06033	860.400.5680
GZA Environmental	Air Monitoring	Todd Greene	188 Valley Street Providence, RI 02909	401.427.2721

GZA will be conduction air monitoring as part of the abutting National Grid extensive monitoring program that is currently ongoing with the construction of the stadium. They will continue with the air monitoring through the proposed remedy in conjunction with the stadium project and will continue through the Site development.

SLR will be present at the Site during periods of construction activities that involve the remedial components described herein. Consistent with our practice, daily field summaries describing these construction activities will be prepared. Photographic evidence of the placement and thickness of engineered cap (soil and or impervious surfaces) will be provided in the Remedial Action Completion Report.

The City may retain a third-party representative to verify the proposed remedy but has not yet been determined.

4.2 DESIGN STANDARDS AND TECHNICAL SPECIFICATIONS (RULE 9.10)

The design performance standard for the engineered cap is to prevent direct contact with the surface and subsurface soils. The proposed design plans are provided in Appendix A, which detail the locations and phasing of the site development and implementation of the proposed remedy. While the cap types and capping details are not anticipated to change, the in-the field locations may vary from the design due to change in conditions.

The final cap areas will be limited to the work completed as part of the Tidewater Stadium project and does not include the entirety of the Site. This RAWP pertains only to the project area and not the remaining portion of the site that includes the public boat ramp (covered under the STRAP remedial action) and northern end of the parcel.

Descriptions of each type of engineered control cap is provided in the sections. The intent of the designs is to provide the requirements to prevent direct contact with Site soils within the project area and additional capping materials or relocation of impacted soils may be used to increase or maintain the minimum cap thickness to accommodate final Site grading.

All offsite clean fill imported onto the Site and used in the construction of the cap must not contain contaminants at concentrations above the Method 1 RDEC. Each source for the clean fill must be sampled by the contractor and submitted to a certified laboratory for analysis of total metals (Priority Pollutant Metals [PP-13]), VOCs, SVOCs, and TPH at a rate of one sample per 1,000 cubic yards (cy) to determine acceptance of that source. If a new source is utilized or secondary source (etc.,), then the same sample protocol will be completed and approved by the City and engineer prior to acceptance for use at the Site. All sources of clean fill must be approved by the City and/or engineer prior to mobilization to the Site.

Upon approval of the source or sources, the contractor will sample the material at a rate of one sample per 500 tons for imported clean fill for the PP-13 metals and PAHs. Soils or sources not meeting the Method 1 RDEC will be rejected from the Site. All final laboratory reports, as well as weight totals and

weight slips for each type of material used on site, the source of the material, and approval notification from the City and engineer, will be provided to RIDEM as part of the Remedial Action Completion Report.

4.2.1 TEMPORARY STAGING CAP

The Site will be utilized for a temporary construction staging area during the Step 3 (construction of stadium on the former National Grid site). The area of the proposed laydown area is shown on the plans provided in Appendix A. The central portion of the site will be graded, and a gravel access road and laydown area will be constructed. The gravel will act as a temporary cap to prevent erosion or direct exposure to the underlying soil. The work area and laydown area will be capped with gravel as well where workers will be moving around the project area. The gravel used at the site will remain in place or relocated under the final cap for the Site during Steps 4 and 6 of the process.

Soils located in areas with current vegetative cover will be maintained outside of the temporary staging area, and if vegetation is removed, the area will be stabilized with seed or other erosion control to ensure offsite migration through dust or runoff will not occur. These areas will be capped during final grading and implementation of the proposed remedy during Steps 4 and 6. Site controls, including fencing, posted signage, and site security, will be utilized during construction to prevent public access until final development of the Site is complete.

4.2.2 BUILDING CAP

The proposed permanent buildings will be constructed as shown on the design plans and will provide an engineered barrier to serve as a cap to prevent direct access and infiltration to the underlying soils.

4.2.3 IMPERVIOUS SURFACE CAP

The proposed hardscape, including asphalt parking lots, concrete walking paths, brick patios, or other impervious surface, will serve as a cap to prevent direct access to the soils beneath. The base material consisting of process stone or other clean material in conjunction with the hardscape finished surface will provide a permanent barrier to the underlying soil.

4.2.4 1-FOOT-THICK SOIL CAP

The 1-foot-thick soil cap (Type I) will be placed within landscaped areas as depicted on the provided Site plans. The soil cap will be constructed using a minimum of 4 inches of clean soil/loam (topsoil) that is suitable to sustain vegetation, on top of 8 inches of clean, permeable drainage material (subsoil). The ratio of topsoil to subsoil can fluctuate; however, the thickness must be a total of at least 1 foot thick, constructed of approved clean material from an offsite source, and must be underlain by a geotextile material (demarcation layer).

The geotextile material must have a minimum puncture strength of 120 pounds (lbs) and minimum burst strength of 400 pounds per square inch (psi). The contractor shall provide the engineer and City a copy of

the proposed geotextile specification for approval prior to ordering, mobilization, or placement at the Site. A cross section of the soil cap is provided on the plans in Appendix A.

4.2.5 2-FOOT-THICK SOIL CAP

The 2-foot-thick soil cap (Type II) will be placed where landscaping includes trees, shrubs, or other elements that require root development or access that the demarcation layer would impede growth or maintenance. The Type II soil cap will be constructed using a minimum of 4 inches of clean topsoil that is suitable for vegetation, on top of a minimum of 20 inches of clean, permeable drainage material, or minimum of 24 inches of clean, permeable drainage material where vegetation is not planned as part of the design (i.e., mulched areas or other surface that does not require vegetation for stabilization). The ratio of topsoil to clean drainage material can fluctuate; however, Type II soil caps must be a total of at least 2 feet thick and constructed of clean material from an offsite source.

4.3 ENVIRONMENTAL LAND USE RESTRICTION

As part of the overall remedy for the Site, an ELUR will be recorded on the deed for the parcel that comprises the Site. As part of this work, an ELUR will be recorded for the portion of the Site that is being redeveloped as part of the Tidewater project and under the approved STRAP work being completed by the City. The ELUR will specify that the engineered caps as described above are to remain in place and in good condition, prohibit use of the Site groundwater for drinking water, and that the property use will remain as commercial/restricted residential. The ELUR will further require that the cap will not be disturbed without prior approval of RIDEM (except for emergency situations defined by the ELUR and in the Postconstruction SMP). The ELUR will require annual inspections, and evidence of these inspections will be submitted in an annual ELUR report to the RIDEM.

A Postconstruction SMP will be prepared to account for planned and unplanned subsurface activities beneath the engineered control, which may expose people to the underlying impacted soils that will remain on site as part of the final remedy. A draft ELUR and Postconstruction SMP for the Site are provided in Appendix C. The final ELUR and SMP will be submitted to the RIDEM after the remedy has been installed and in conjunction with the RAWP Completion Report. The City will be responsible for placement of the ELUR and recording of the deed following the completion of site work covered in this RAWP.

4.4 REMEDIATION OF IMPACTED GROUNDWATER (RULE 0.04)

Groundwater was not found to be impacted at the Site; therefore, the remediation of impacted groundwater is not proposed as part of this RAWP.

4.5 LIMITED DESIGN INVESTIGATION (RULE 9.05)

A Limited Design Investigation was not necessary and therefore was not conducted for the purposes of this RAWP.

4.6 POINTS OF COMPLIANCE (RULE 9.06)

The engineered caps described in Section 4.0 are designed as physical barriers to the underlying impacted soil, and they meet the performance-based objective of preventing exposure to contaminants documented at the Site within the development work area. Therefore, the point of compliance established for the Site will involve an inspection and evaluation of the engineered caps. The inspection will be documented and included in the annual ELUR report to the RIDEM.

4.7 PROPOSED SCHEDULE FOR REMEDIATION (RULE 9.07)

The construction of the overall Tidewater Stadium project has commenced in December 2021 with Step 1 of the process underway at the former National Grid Site (not part of this RAWP). The first phase of construction within the Site for Step 3, temporary construction staging area, is planned for mid February 2022, with Step 4, the construction of the riverwalk, planned for spring 2022, and final development and final remediation of the Site within Step 6 planned for early 2023.

The final schedule is based on economic factors and final funding for the site development. Site controls will be implemented (fencing, etc.) throughout the construction process to limit public access to the property. These controls will be removed as the site achieves final implementation of the engineered controls through each phase of development.

The anticipated Site activities are as follows:

1. Temporary use of the site to support offsite construction at the former National Grid property; implementation of temporary cap and site controls to limit public access to the property throughout the staging process
2. Construction and implementation of the proposed remedy for the riverwalk area and continued site controls for the staging area
3. Construction of development buildings and landscape for final buildout of the Site covered under this RAWP
4. Filing of ELUR
5. Filing of the RAWP Completion Report

4.8 SITE PLANS (RULE 9.09)

A site location map and site map are provided as Figure 1 and Figure 2, respectively. The design plan for the redevelopment project is provided in Appendix A. The plans provided in Appendix A include the preconstruction staging areas and/or construction areas, pads, liners, berms, etc. The capping details for the engineered controls and aerial extents are included in the plan set in Appendix A and in the appendix of the Construction Soil Management Plan provided in Appendix B.

4.9 SETUP PLANS (RULE 9.11)

The design plans provided in Appendix A include the initial use of the site for temporary construction laydown as part of Step 3 in the overall Tidewater Stadium project. A copy of the Construction SMP is provided in Appendix B, which details preventive measures for soil management at the site.

The design plans provide details where construction activities will occur with the location of temporary site access points, site controls, erosion control construction, and grading. Gravel access roads will be constructed as a temporary cap to prevent exposure to the underlying soil, where necessary. Wooded areas that are undisturbed will remain vegetated, and where tree removal and grubbing is needed, the areas will be stabilized to prevent mobilization of soil from the site.

Clean backfill, tested and approved as described in Section 4.2, may be stockpiled on site in a manner as to prevent sediment generation and runoff and to minimize cross contamination with the Site soils. These materials will be stockpiled on an impervious surface or on polyethylene sheeting and located to not interfere with Site activities. These materials are to be covered by polyethylene sheeting when not actively being worked.

All temporary stockpiled material from the existing soils through grading or excavation activities will be covered with polyethylene until placed back into open excavations or relocated to final capped areas as directed by the engineer. All reworked soils will be managed to prevent sediment generation and runoff.

4.10 EFFLUENT DISPOSAL (RULE 9.12)

Based on the grading plans for the site development, there will be no export of excess soil from the site generated from the proposed remedial action. There is expected to be export of solid waste, including concrete, general refuse, and construction debris that is not covered under this RAWP that will be disposed of at an offsite facility within the rules and regulations of Rhode Island. Impacted soils are to be reworked, excavated, and used as fill across the site to meet final grades. These soils will be relocated and placed below the engineered cap as described in Section 4.2. All remaining soils will be located beneath the engineered cap to achieve the remedial objective of preventing access to the underlying soils at the Site.

If export is found to be required for soils at the Site, then the RIDEM will be notified, the soils will be stockpiled and covered with polyethylene sheeting until waste characterization sampling is completed, and offsite disposal is approved by the RIDEM.

4.11 CONTINGENCY PLAN (RULE 9.13)

SLR has provided an example site-specific Health and Safety Plan (HASP) as Appendix D. The HASP defines the requirements and designates protocols to be followed at the Site during remediation. Contractors involved in implementing the RAWP will have to prepare a HASP for their site personnel and task that they are conducting. The Construction SMP details the requirements of the HASP for the contractor. A copy of the HASP will be available on site during all remediation activities.

The Contingency HASP is applicable to SLR personnel and will be always available at the Site during the implementation of the remedial actions. The HASP summarizes potential constituents of concern, describes the protective measures, designates site personnel, and includes an assessment of risks associated with remedial activities. The HASP will include the names and contact details for emergency coordinators and emergency responders.

4.12 OPERATIONAL LOG (RULE 9.14)

An operational log will be implemented and maintained at the Site by an environmental professional during each day that remedial actions are being completed. The log will be readily available at the Site during the construction phases and will be retained for 3 years post construction. The Operating Log will include at a minimum the following information:

- Personnel on site; date and hours worked
- Summary of remedial actions conducted that day
- Records of any laboratory analysis and/or field screening results as part of the remedial action
- Volume and weight tickets for import of clean fill or other construction materials as part of the remedial action
- Inspection reports detailing compliance with the remedial specifications provided in the design plans and the actions taken to address noncompliant practices or conditions
- Description of instances under which the Contingency Plan was implemented

A copy of the Operational Log will be provided to the RIDEM at the completion of the project as part of the Remedial Action Completion Report.

4.13 SECURITY PROCEDURES (RULE 9.15)

Access to the property will be limited to the specified contractors, consultants, or other designated representatives through the construction fencing and gates, safety fencing, yellow barrier tape, warning signs, and/or other barricades. It will be the responsibility of the contractor to address the following:

- Traffic control into and out of the site
- Debris removal and disposal
- Development of site-specific HASP
- Daily Site maintenance of the construction area
- Inspection and repair of site fencing to prevent public access to the property

5. SHUTDOWN, CLOSURE, AND POST-CLOSURE REQUIREMENTS (RULE 9.16)

Security fencing will remain in place during all phases of construction at the Site. If development plans or the proposed schedule is delayed the RIDEM will be notified, and the security fencing will be maintained to prevent public access during prolonged shutdown. The post-closure requirements for the project include the preparation and submittal of a Remedial Action Completion Report and a final ELUR with a Post Construction SMP. In conjunction with the ELUR, the owner will institute monitoring and maintenance procedures, including requirements to maintain impervious surfaces (sidewalks, patios, and asphalt) in good condition and repair any significant erosion to soil capped areas. The Post Construction SMP will outline specific procedures for conducting any activity that may involve penetration of the engineered control and procedures for soil characterization and disposal.

Annual inspections of the engineer controls (soil cap and hardscapes) will be completed in accordance with the ELUR. An evaluation report detailing the findings of the annual inspection noting compliance violations will be submitted annually to the RIDEM.

6. INSTITUTIONAL CONTROLS AND NOTICES (RULE 9.17)

As detailed in Section 4.3, an ELUR will be recorded on the deed of the property to protect the long-term effectiveness of the remedy. The ELUR will be placed on the property where the STRAP and this RAWP applies. The extent of the area to be covered under the ELUR is depicted on the design plans provided in Appendix A. The draft ELUR and Post Construction Phase SMP is provided in Appendix C.

The ELUR will prohibit activities on the Site that may interfere with the integrity of the engineered controls and prohibits activities that may result in human exposure to the impacted soils underlying the cap, prohibit the use of Site groundwater for drinking water, and limit use of the property to commercial/restricted residential land use. The Post Construction SMP will establish procedures should any future work at the Site involve disturbance of the surfaces and excavation of the underlain soils.

The ELUR will be recorded for the Site with the City of Pawtucket Land Evidence Records after the physical components of the remedy are completed. The ELUR will be recorded after the Remedial Action Completion Report has been approved by the RIDEM. A copy of the final ELUR will be submitted to the RIDEM within 10 days of its recording in the City of Pawtucket Land Evidence Records. A Site plan showing the area pertaining to the ELUR will be referenced in and attached to the ELUR (as an exhibit).

7. COMPLIANCE DETERMINATION (RULE 9.18)

The remedial objectives will be considered compliant when the remedial measures described in this RAWP are implemented and maintained through each step of the construction process at the Site. SLR will prepare a Remedial Action Completion Report that describes the construction activities and documents the Site's compliance with the remedial objectives and points of compliance. The RIDEM will issue a Letter of Compliance for the Site once these conditions have been met.

Maintenance procedures will include requirements to maintain pavement, hardscapes (i.e., sidewalks, patios, etc.,), and/or soil caps in good condition and procedures to be followed to notify contractors of existing Site conditions in the event of utility repair or other activities that might disturb potentially contaminated soils.

The owner will institute annual monitoring and maintenance procedures to ensure the capped soils remain secure as part of the ELUR to maintain long-term compliance. A qualified environmental professional will conduct annual compliance inspection of the area developed as part of this RAWP. The evaluation will include apparent changes in the nature of the Site use, apparent changes to the physical condition of the property (with respect to alterations that may affect the integrity of the engineered controls), and overall condition of the cap materials (landscaped areas for indications of erosion, pavement, and hardscapes used as cap materials). An annual inspection report will be prepared based on the observations and submitted to the RIDEM.

8. CERTIFICATION REQUIREMENTS (RULE 9.19)

In accordance with Section 9.19A of the RIDEM Remediation Regulations, I hereby certify that to the best of my knowledge, the information contained in this Remedial Action Work Plan is complete and accurate.

Peter Shea, LEP
SLR International Corporation
Principal Environmental Scientist

3/2/22
Date

Scott Bristol, CPG, LEP
SLR International Corporation
Principal Consultant

3/2/22
Date

In accordance with Section 9.19B of the RIDEM Remediation Regulations, as an authorized representative of the Performing Party, I hereby certify that to the best of my knowledge, the information contained in this Remedial Action Work Plan is complete and accurate representation of the Site and the releases and contains all known facts surrounding the releases identified.

City of Pawtucket

3.2.22
Date

9. LIMITATIONS

The services described in this work product were performed in accordance with generally accepted professional consulting principles and practices. No other representations or warranties, expressed or implied, are made. These services were performed consistent with our agreement with our client. This work product is intended solely for the use and information of our client unless otherwise noted. Any reliance on this work product by a third party is at such party's sole risk.

Opinions and recommendations contained in this work product are based on conditions that existed at the time the services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. The data reported and the findings, observations, and conclusions expressed are limited by the scope of work. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this work product.

The purpose of an environmental assessment is to reasonably evaluate the potential for, or actual impact of, past practices on a given site area. In performing an environmental assessment, it is understood that a balance must be struck between a reasonable inquiry into the environmental issues and an appropriate level of analysis for each conceivable issue of potential concern. The following paragraphs discuss the assumptions and parameters under which such an opinion is rendered.

No investigation can be thorough enough to exclude the presence of hazardous materials at a given site. If hazardous conditions have not been identified during the assessment, such a finding should not therefore be construed as a guarantee of the absence of such materials on the site, but rather as the result of the services performed within the scope, practical limitations, and cost of the work performed.

Environmental conditions that are not apparent may exist at the site. Our professional opinions are based in part on interpretation of data from a limited number of discrete sampling locations and therefore may not be representative of the actual overall site environmental conditions.

The passage of time, manifestation of latent conditions, or occurrence of future events may require further study at the site, analysis of the data, and/or reevaluation of the findings, observations, and conclusions in the work product.

This work product presents professional opinions and findings of a scientific and technical nature. The work product shall not be construed to offer legal opinion or representations as to the requirements of, nor the compliance with, environmental laws rules, regulations, or policies of federal, state or local governmental agencies.

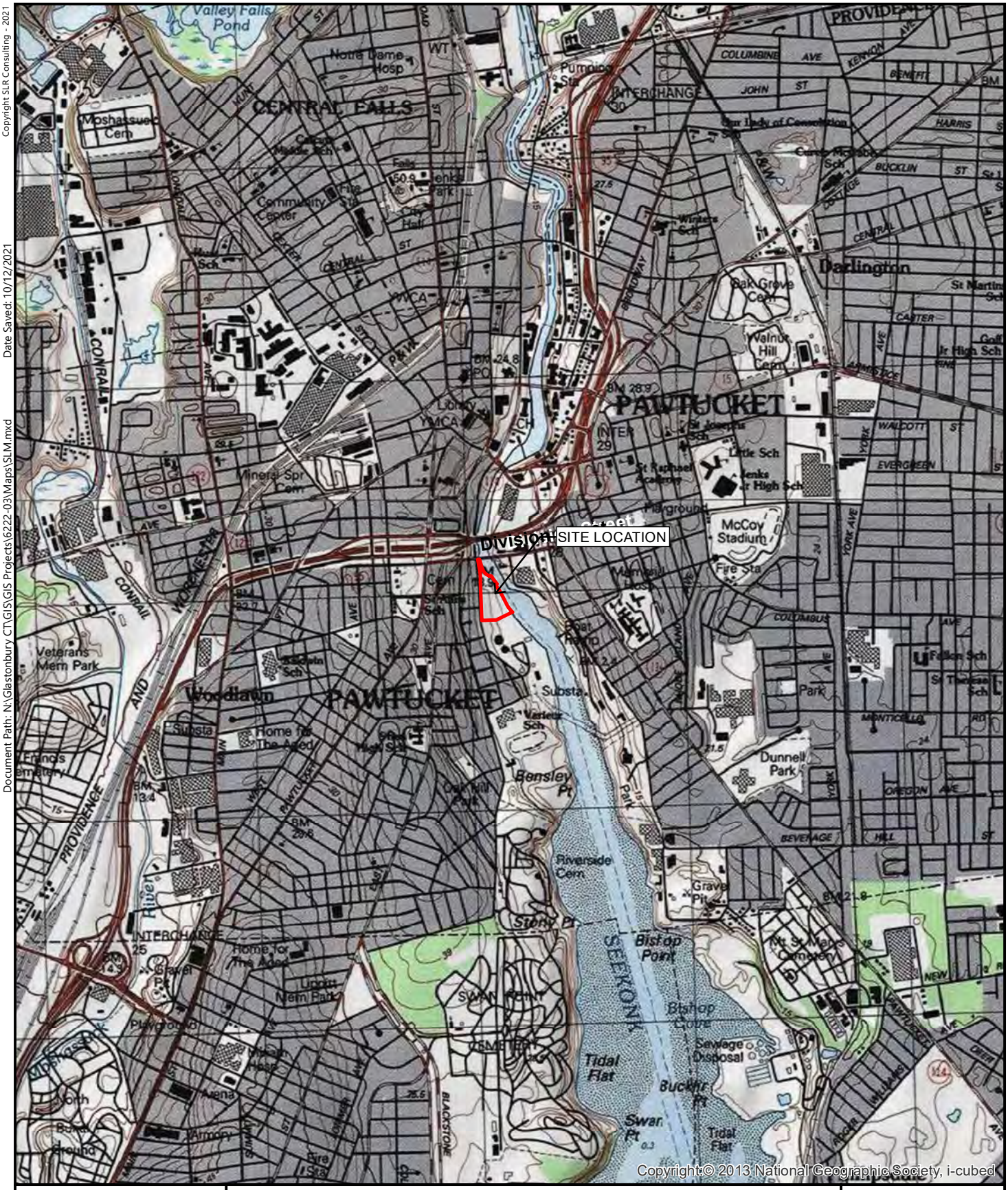
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FIGURES

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SLR

45 GLASTONBURY BLVD
1ST FL
GLASTONBURY, CT 06033
860.400.5680

SITE LOCATION MAP

TOWN LANDING PROPERTY
FORTUITOUS TIDEWATER
TAFT STREET
PAWTUCKET, RHODE ISLAND

N

0 500 1,000
Feet

SCALE 1 " = 2,000 '

DATE 10/12/2021

16222.0005
PROJ. NO.

FIG. 1



Notes:
Aerial - RIDEM, April 2018 flight, ArcGis Image Service
Contours - RIDEM, 2020, ArcGisOnline
Parcels - RIDEM, 2020, ArcGisOnline

Date Saved: 3/1/2022 MXD: N:\NY-Hartford\GIS\GIS Projects\6222-03\Maps\figure2_taftst.mxd

SLR
45 GLASTONBURY BLVD
1ST FL
GLASTONBURY, CT 06033
860.400.5680

SITE MAP

TOWN LANDING PROPERTY
FORTUITOUS TIDEWATER

TAFT STREET
PAWTUCKET, RHODE ISLAND

SCALE: 1" = 120'

DATE: 3/1/2022

PROJECT NO.: 16222.0005

FIG. 2

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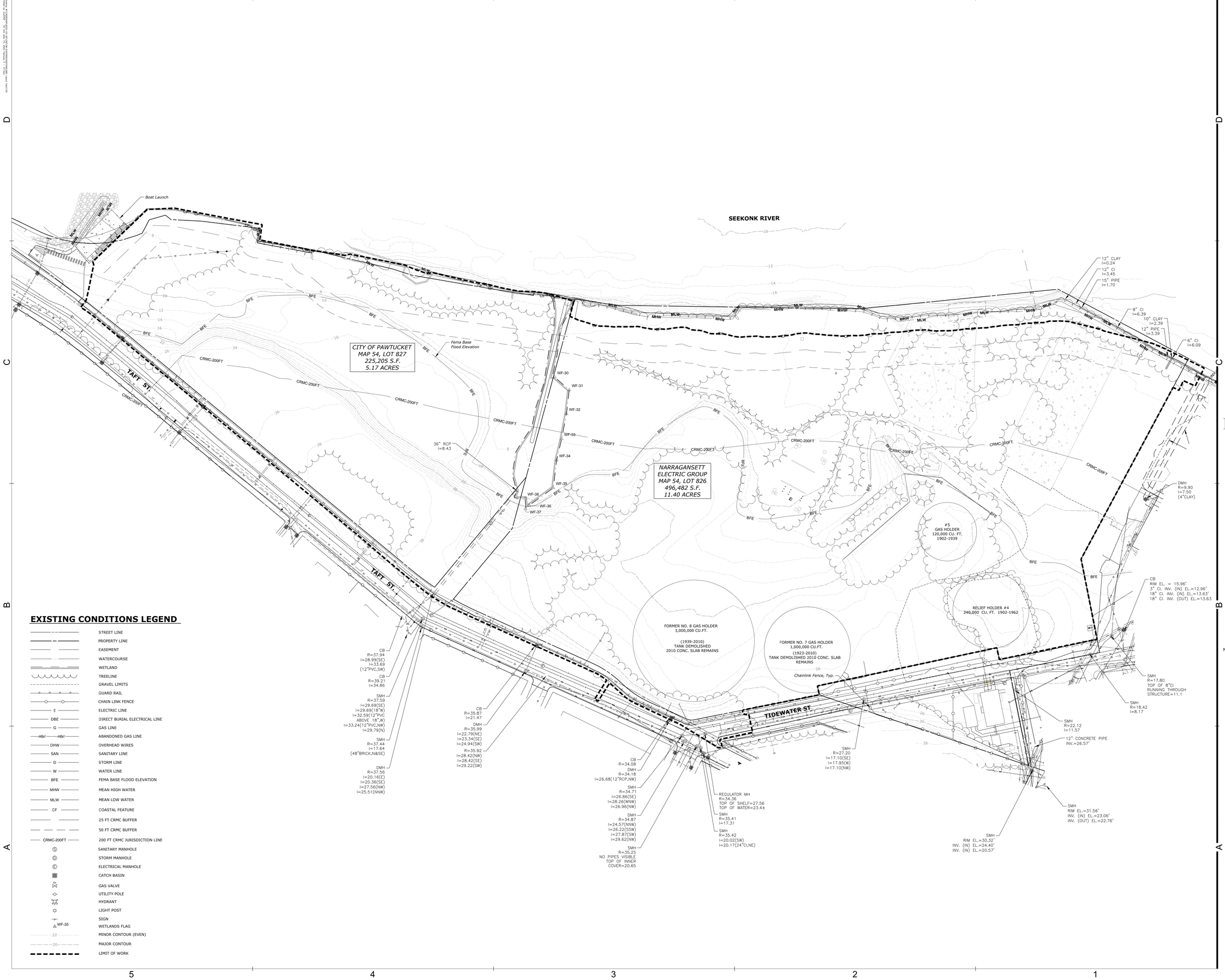
APPENDIX A

PRELIMINARY CONSTRUCTION PLANS

Remedial Action Work Plan

Fortuitous Tidewater OZ, LLC

March 2022



EXISTING CONDITIONS LEGEND

- STREET LINE
- PROPERTY LINE
- EASEMENT
- WATERCOURSE
- WETLAND
- TREELINE
- GRAVEL LIMITS
- GUARD RAIL
- CHAIN LINK FENCE
- E — ELECTRIC LINE
- DBE — DIRECT BURIAL ELECTRICAL LINE
- G — GAS LINE
- ABANDONED GAS LINE
- OHW — OVERHEAD WIRES
- SAN — SANITARY LINE
- D — STORM LINE
- W — WATER LINE
- BFE — FEMA BASE FLOOD ELEVATION
- MHW — MEAN HIGH WATER
- MLW — MEAN LOW WATER
- CF — COASTAL FEATURE
- 25 FT CRMC BUFFER
- 50 FT CRMC BUFFER
- CRMC-200FT — 200 FT CRMC JURISDICTION LINE
- SANITARY MANHOLE
- STORM MANHOLE
- ELECTRICAL MANHOLE
- CATCH BASIN
- GAS VALVE
- UTILITY POLE
- HYDRANT
- LIGHT POST
- SIGN
- WF-35 — WETLANDS FLAG
- 22 — MINOR CONTOUR (EVEN)
- 20 — MAJOR CONTOUR
- LIMIT OF WORK

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CONSTRUCTION DOCUMENTS

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TIDEWATER STADIUM

11 Tidewater Street,
Pawtucket, Rhode Island

FORTUITOUS PARTNERS

NORTH

SCALE: 1"=50'

REVISION	DATE	DESCRIPTION
ADDENDA OR MODIFICATION		
	02/04/2022	CONSTRUCTION DOCUMENTS
ISSUE	DATE	DESCRIPTION
FULL SET ISSUES		

PROJECT NO:	16222.00003
P.I.C.	-
P MGR.	-
P ENGR.	-
DESIGN BY	-
JOB CAPTAIN	-
DRAWN BY	JDL
CHECKED BY	DLO

SHEET TITLE

PRE-REMEDIATION CONDITIONS PLAN

SHEET IDENTIFIER

C100

REMOVALS LEGEND

- REMOVE AND DISPOSE CONCRETE SIDEWALK (BY OTHERS, PART OF NBC WORK)
- REMOVE AND DISPOSE GUARDRAIL AND 10' CLF (BY OTHERS, PART OF NBC WORK)
- REMOVE AND DISPOSE CONCRETE SIDEWALK
- REMOVE AND DISPOSE SITE FEATURE
- REMOVE AND DISPOSE SITE FEATURE
- SITE FEATURE TO BE PROTECTED

TOWN LANDING AREA AND BULKHEAD TO BE PROTECTED

END OF BULKHEAD FROM TOWN LANDING PROJECT

EXISTING HYDRANT TO BE REMAIN AND BE PROTECTED

SEE SHEET C510 FOR RECONSTRUCTION PLAN OF EXISTING STONE WALL AT SEEKONK RIVER FROM END OF TOWN LANDING PROJECT BULKHEAD TO END OF NATIONAL GRID REVETMENT WORK

END OF REVETMENT WORK BY NG

TREES FROM THE SITE HAVE BEEN CLEARED

TAFT ST

NATIONAL GRID TO PERFORM ALL REMOVALS ON PROPERTY -SEE SHEET C101 FOR POST-REMEDIATION CONDITIONS PLAN

REMOVE AND DISPOSE OF ±60 L.F. 36" RCP FROM EXISTING MANHOLE TOWARDS SEEKONK RIVER

REMOVE AND DISPOSE OF EXISTING DRAINAGE STRUCTURE

REMOVE AND DISPOSE ±470 L.F. 7' CLF AT PROPERTY LINE DOWN TO SEEKONK RIVER

START REMOVE AND DISPOSE GUARDRAIL AND 10' CLF (BY OTHERS, PART OF NBC WORK)

CONCRETE SIDEWALK TO BE REPLACED (BY OTHERS, PART OF NBC WORK)

CONTRACTOR TO COORDINATE WITH NBC CONTRACTOR AND NATIONAL GRID FOR DISCONNECT OF POWER AND REMOVAL OF EXISTING UTILITY POLES (TYP. 4 POLES)
-CONCTRACTOR TO COORDINATE WITH CITY RELOCATION OF EXISTING SIGNS FROM UTILITY POLE TO NEW SIGN POSTS

MATCH LINE AND GRADE OF SIDEWALK TO BE CONSTRUCTED BY NBC

REMOVE AND DISPOSE CONCRETE SIDEWALK TO FULL DEPTH (±1500 S.F.)
-GRANITE CURB TO REMAIN AND BE PROTECTED, IF PAINTED MEDIA BLAST TO REMOVE ALL PAINT

END REMOVE AND DISPOSE GUARDRAIL AND 10' CLF (BY OTHERS, PART OF NBC WORK)

REMOVE AND DISPOSE ±80 L.F. CONCRETE CURB

REMOVE AND DISPOSE ±80 L.F. 7' CLF

TIDEWATER ST

NORTH

0' 25' 50'
0 1/2" 1"
SCALE: 1"=50'

REVISION	DATE	DESCRIPTION
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P ENGR. -
DESIGN BY -
JOB CAPTAIN -
DRAWN BY **JDL**
CHECKED BY **DLO**

SHEET TITLE

REMOVALS PLAN

SHEET IDENTIFIER

C102

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TIDEWATER STADIUM
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FORTUITOUS PARTNERS

FURNISHINGS SCHEDULE

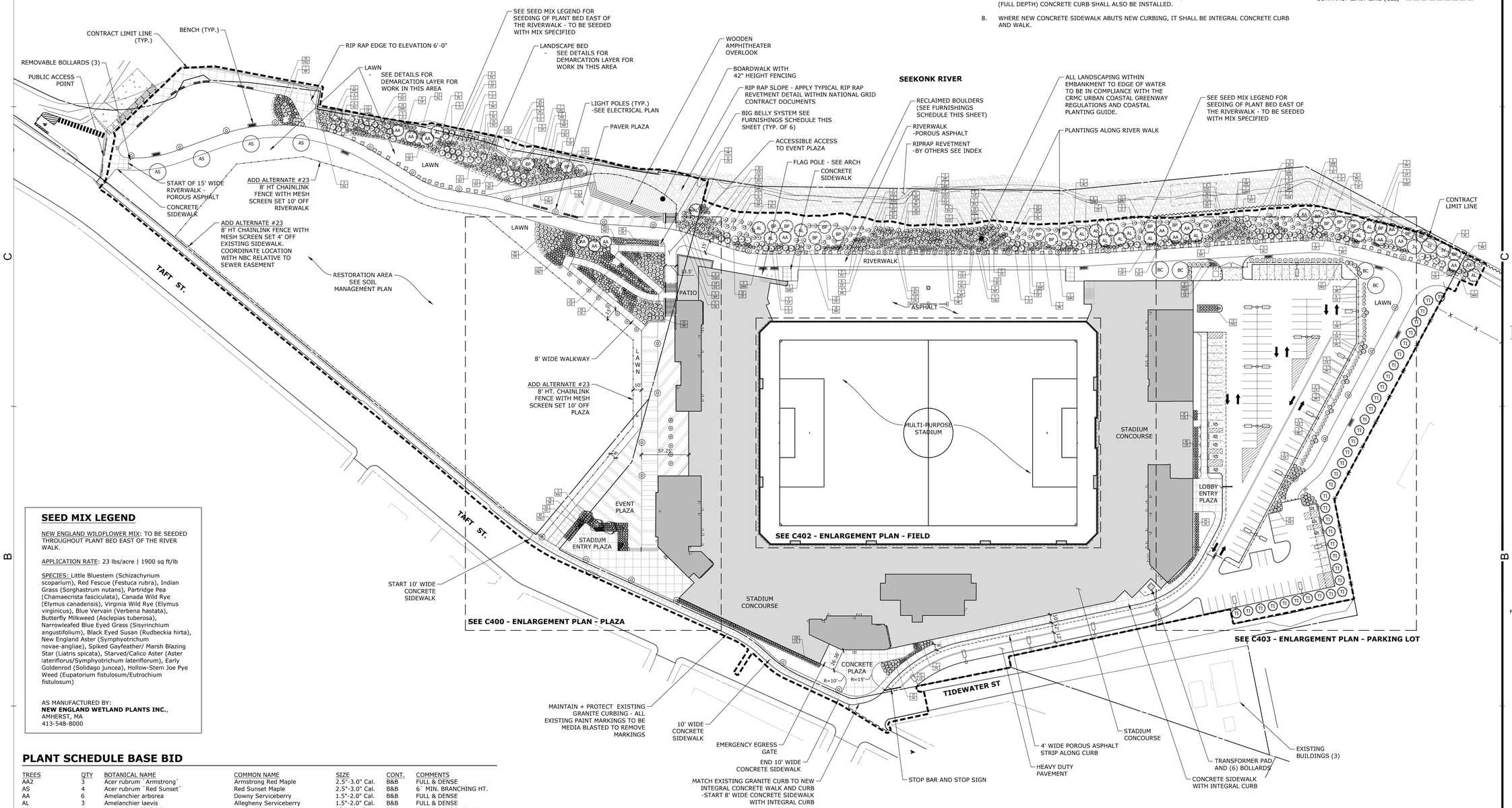
ITEM:	QTY:
TRASH - BIG BELLY COMPACTOR SYSTEM (TO BE COORDINATED WITH CITY STAFF)	6
BENCHES - DUMOR - BENCH 58-SER-3AR	22
RECLAIMED BOULDERS - (2'X2'X2' MIN.) BOULDERS SHOWN ON THIS PLAN ARE RECLAIMED FROM EXISTING SITE WORK COMPLETED BY GZA AND STOCKPOILED ON-SITE FOR USE (COORDINATE QTY WITH GZA TO DETERMINE IF SUPPLEMENTAL BOULDERS ARE REQUIRED)	±200

LAYOUT NOTES

1. SLR INTERNATIONAL CORPORATION ACCEPTS NO RESPONSIBILITY FOR MAPS AND DATA THAT HAVE BEEN PREPARED AND SUPPLIED BY OTHERS.
2. LAYOUT CRITERIA AND DIMENSIONS FOR BUILDINGS ARE NOT SHOWN ON THIS PLAN. ALL BUILDINGS SHALL BE LOCATED BY A LICENSED SURVEYOR AND COORDINATED WITH THE FOUNDATION PLANS SUPPLIED BY THE ARCHITECT. ALL FOUNDATION PLANS SHALL BE PROVIDED TO THE SURVEYOR AND THE ENGINEER AT THE TIME OF STAKE-OUT REQUEST.
3. CONCRETE SIDEWALKS, ENTRY AREAS, AND TERRACES SHALL INCORPORATE EXPANSION JOINTS, SCORE JOINTS, AND CONSTRUCTION JOINTS PER THE SPECIFICATIONS AND DETAILS, TYPICALLY NO MORE THAN 144 SQUARE FEET SHALL CONSTITUTE A CONTIGUOUS SLAB. SEE STRUCTURAL PLANS FOR JOINTING PERTAINING TO THESE DISCIPLINES.
4. ALL DIMENSIONS AND ELEVATIONS SHALL BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
5. FOR DETAILED INFORMATION PERTAINING TO PROPOSED BUILDINGS, AND ASSOCIATED ARCHITECTURAL WALLS REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS.
6. ALL PROPOSED CURBING SHALL BE CAST-IN-PLACE CONCRETE UNLESS OTHERWISE NOTED.
7. WHERE WALK AND PAVED DRIVE ARE SPECIFIED TO BE FLUSH, A FLUSH (FULL DEPTH) CONCRETE CURB SHALL ALSO BE INSTALLED.
8. WHERE NEW CONCRETE SIDEWALK ABUTS NEW CURBING, IT SHALL BE INTEGRAL CONCRETE CURB AND WALK.

LAYOUT LEGEND

BUILDING
POROUS ASPHALT IN DRIVE/PARKING LOT
CONCRETE WALK
SIGN
PARKING LOT LIGHT
WALL
GRANITE BLOCK
BOLLARDS
FENCE (BY OTHERS)
LIGHT POST
CONTRACT LIMIT LINE (CLL)



SEED MIX LEGEND

NEW ENGLAND WILDFLOWER MIX: TO BE SEEDED THROUGHOUT PLANT BED EAST OF THE RIVER WALK.

APPLICATION RATE: 23 lbs/acre | 1900 sq ft/lb

SPECIES: Little Bluestem (Schizachyrium scoparium), Red Fescue (Festuca rubra), Indian Grass (Sorghastrum nutans), Partridge Pea (Chamaecrista fasciculata), Canada Wild Rye (Elymus canadensis), Virginia Wild Rye (Elymus virginicus), Blue Vervain (Verbena hastata), Butterfly Milkweed (Asclepias tuberosa), Narrowleafed Blue Eyed Grass (Sisyrinchium angustifolium), Black Eyed Susan (Rudbeckia hirta), New England Aster (Symphyotrichum novae-angliae), Spiked Gayfeather/ Marsh Blazing Star (Liatris spicata), Starved/Calico Aster (Aster lateriflorus/Symphyotrichum lateriflorum), Early Goldenrod (Solidago juncea), Hollow-Stem Joe Pye Weed (Eupatorium fistulosum/Eutrochium fistulosum)

AS MANUFACTURED BY:
NEW ENGLAND WETLAND PLANTS INC.,
AMHERST, MA
413-548-8000

PLANT SCHEDULE BASE BID

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONT.	COMMENTS
AA2	3	Acer rubrum `Armstrong`	Armstrong Red Maple	2.5"-3.0" Cal.	B&B	FULL & DENSE
AS	4	Acer rubrum `Red Sunset`	Red Sunset Maple	2.5"-3.0" Cal.	B&B	6` MIN. BRANCHING HT.
AA	6	Amelanchier arborea	Downy Serviceberry	1.5"-2.0" Cal.	B&B	FULL & DENSE
AL	3	Amelanchier laevis	Allegheny Serviceberry	1.5"-2.0" Cal.	B&B	FULL & DENSE
BC	4	Betula nigra 'Cully' TM	Heritage River Birch	8`/10` HT.	B&B	FULL & DENSE, CLUMP
BP	5	Betula populifolia	Gray Birch	#20 cont.		FULL & DENSE

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONT.	COMMENTS
AU	116	Arctostaphylos uva-ursi `Massachusetts`	Massachusetts Kinnikinnick	#1 cont.	#1	FULL & DENSE
CK	342	Calamagrostis acutiflora `Karl Foerster`	Feather Reed Grass	#3		FULL & DENSE
CA2	20	Ceanothus americanus	New Jersey Tea	#1 cont.	#1	FULL & DENSE
CA	47	Clethra alnifolia	Sweet Pepper Bush	#1 cont.	#1	FULL & DENSE
CP	56	Comptonia peregrina	Sweet Fern	#1 cont.	#1	FULL & DENSE
EE	78	Echinacea x 'PAS702917' TM	Pow Wow Wildberry Coneflower	---	#1	
HL	40	Hydrangea paniculata `Little Lime`	Little Lime Hydrangea	---	#3	FULL & DENSE
LB	79	Liriope muscari `Big Blue`	Big Blue Lilyturf	---	#1	FULL & DENSE
MP	76	Morella pensylvanica	Bayberry	#1 cont.	#1	FULL & DENSE
NW	109	Nepeta x faassenii `Walkers Low`	Walkers Low Catmint	---	#3	FULL & DENSE
PA	64	Pennisetum alopecuroides	Fountain Grass	#1 cont.	#1	FULL & DENSE
PA2	287	Pennisetum alopecuroides `Hameln`	Dwarf Fountain Grass	---	#3	FULL & DENSE
RV	28	Rosa virginiana	Virginia Rose	#1 cont.	#1	FULL & DENSE

LARGE SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONT.	COMMENTS
AC	9	Amelanchier canadensis	Shadbush	#1 cont.	#1	FULL & DENSE
AAR	14	Aronia arbutifolia	Red Chokeberry	#1 cont.	#1	FULL & DENSE
JJ	24	Juniperus communis	Common Juniper	#1 cont.	#1	FULL & DENSE
PM	112	Prunus maritima	Beach Plum	#1 cont.	#1	FULL & DENSE

BUFFER SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONT.	COMMENTS
MP2	25	Myrica pensylvanica	Northern Bayberry	#5 cont.	#5	FULL & DENSE

PLANT SCHEDULE ADD ALTERNATE #20

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONT.	COMMENTS
AA	10	Amelanchier arborea	Downy Serviceberry	1.5"-2.0" Cal.	B&B	FULL & DENSE
AL	15	Amelanchier laevis	Allegheny Serviceberry	1.5"-2.0" Cal.	B&B	FULL & DENSE
BP	19	Betula populifolia	Gray Birch	#20 cont.		FULL & DENSE
JV	3	Juniperus virginiana	Eastern Red Cedar	#20 cont.		FULL & DENSE
TI	37	Thuja x 'Green Giant'	Green Giant Arborvitae	5`/6` HT.		FULL & DENSE

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONT.	COMMENTS
AU	120	Arctostaphylos uva-ursi `Massachusetts`	Massachusetts Kinnikinnick	#1 cont.	#1	FULL & DENSE
CA2	71	Ceanothus americanus	New Jersey Tea	#1 cont.	#1	FULL & DENSE
CA	91	Clethra alnifolia	Sweet Pepper Bush	#1 cont.	#1	FULL & DENSE
CP	107	Comptonia peregrina	Sweet Fern	#1 cont.	#1	FULL & DENSE
MP	23	Morella pensylvanica	Bayberry	#1 cont.	#1	FULL & DENSE
RV	73	Rosa virginiana	Virginia Rose	#1 cont.	#1	FULL & DENSE

LARGE SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONT.	COMMENTS
AC	24	Amelanchier canadensis	Shadbush	#1 cont.	#1	FULL & DENSE
AAR	34	Aronia arbutifolia	Red Chokeberry	#1 cont.	#1	FULL & DENSE
AM	32	Aronia melanocarpa	Black Chokeberry	#1 cont.	#1	FULL & DENSE
JJ	26	Juniperus communis	Common Juniper	#1 cont.	#1	FULL & DENSE
PM	78	Prunus maritima	Beach Plum	#1 cont.	#1	FULL & DENSE

LANDSCAPING NOTES

1. ALL LANDSCAPING WITHIN EMBANKMENT TO EDGE OF WATER TO BE IN COMPLIANCE WITH THE CRMC URBAN COASTAL GREENWAY REGULATIONS AND COASTAL PLANTING GUIDE.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATING PLANT PITS.
3. SEED ALL DISTURBED AREAS TO LAWN WITHIN CONTRACT LIMIT LINE UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL PROVIDE A 6" MINIMUM DEPTH OF SCREENED TOPSOIL FOR ALL LAWN AREAS.
4. ALL PLANTING BEDS SHALL HAVE 12" MINIMUM DEPTH OF TOPSOIL.
5. THE CONTRACTOR SHALL PROVIDE A 4" MIN. DEPTH OF DARK BROWN SHREDDED MULCH OVER ALL PLANTING BEDS AND TREE PLANTINGS. MULCHED PLANT BEDS SHALL EXTEND 12" FURTHER THEN THE ADJACENT PLANTINGS.
6. ALL PLANT MATERIAL IS SUBJECT TO INSPECTION AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO AND AFTER PLANTING.
7. PLANT SPECIES MAY BE ADJUSTED BASED ON AVAILABILITY AT TIME OF PLANTING. ALL PLANT MATERIAL SUBSTITUTIONS ARE SUBJECT TO REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT.
8. ALL PLANT MATERIALS SHALL CARRY A FULL GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE, TO INCLUDE PROMPT TREATMENT OR REMOVAL AND REPLACEMENT OF ANY PLANTS FOUND TO BE IN AN UNHEALTHY CONDITION BY THE LANDSCAPE ARCHITECT. ALL REPLACEMENTS SHALL BE OF THE SAME KIND AND SIZE OF PLANTS SPECIFIED IN THE PLANT LIST.
9. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING AND SHALL CONTINUE UNTIL ACCEPTANCE BY THE LANDSCAPE ARCHITECT. MAINTENANCE SHALL INCLUDE WATERING, MULCHING, TIGHTENING & REPLACING OF GUYS, REPLACEMENT OF SICK OR DEAD PLANTS, RESETTING PLANTS TO PROPER GRADE OR UPRIGHT (PLUMB) POSITION, RESTORATION OF SAUCERS, AND ALL OTHER CARE NEEDED FOR PROPER GROWTH OF THE PLANTS.
10. WHERE A SIZE RANGE IS SPECIFIED AT LEAST 50% OF PLANTS PROVIDED SHALL BE OF THE LARGER SIZE.
11. CONTRACTOR TO REMOVE TREE STAKES AFTER ONE GROWING SEASON.
12. ALL PLANT MATERIAL MUST BE INSPECTED BY LA PRIOR TO PLANTING.

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CONSTRUCTION DOCUMENTS

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TIDEWATER STADIUM

11 Tidewater Street,
Pawtucket, Rhode Island

FORTUITOUS PARTNERS

NORTH

SCALE: 1"=50'

REVISION	DATE	DESCRIPTION
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	02/04/2022	CONSTRUCTION DOCUMENTS

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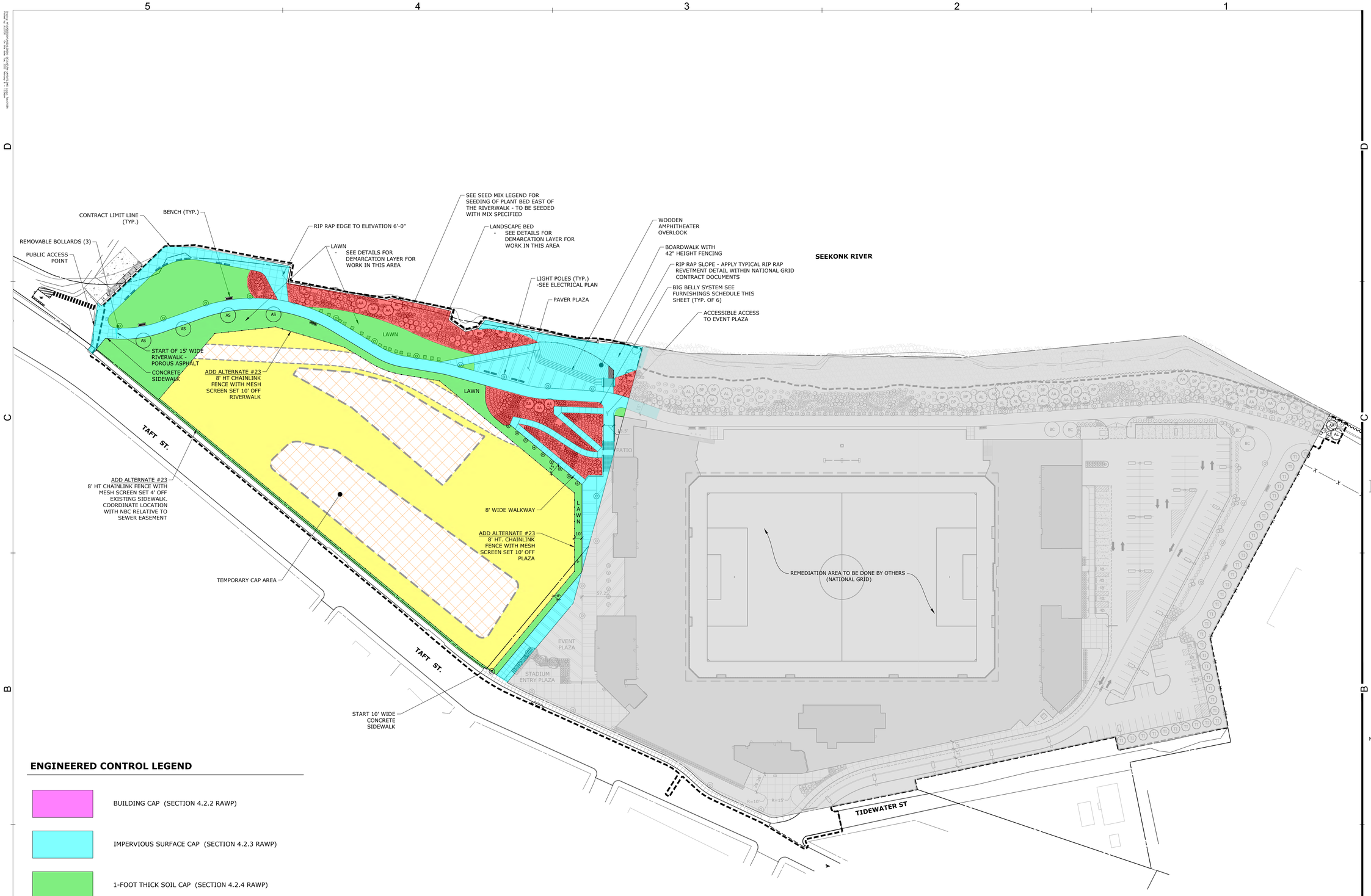
PROJECT NO:	16222.00003
P.I.C.	-
P MGR.	-
P ENGR.	-
DESIGN BY	-
JOB CAPTAIN	-
DRAWN BY	JDL
CHECKED BY	DLO

SHEET TITLE

LAYOUT & LANDSCAPING PLAN

SHEET IDENTIFIER

C103



ENGINEERED CONTROL LEGEND

- BUILDING CAP (SECTION 4.2.2 RAWP)
- IMPERVIOUS SURFACE CAP (SECTION 4.2.3 RAWP)
- 1-FOOT THICK SOIL CAP (SECTION 4.2.4 RAWP)
- 2-FEET THICK SOIL CAP (SECTION 4.2.5 RAWP)
- TEMPORARY CAP AREA
- EXISTING GRADES AND VEGETATION TO REMAIN (FENCE PERIMETER TO PREVENT PUBLIC ACCESS)

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P ENGR.	-
DESIGN BY	-
JOB CAPTAIN	-
DRAWN BY	JDL
CHECKED BY	DLO

SHEET TITLE

ENGINEERED CONTROL - STEP 4

SHEET IDENTIFIER

C103A



ENGINEERED CONTROL LEGEND

- BUILDING CAP (SECTION 4.2.2 RAWP)
- IMPERVIOUS SURFACE CAP (SECTION 4.2.3 RAWP)
- 1-FOOT THICK SOIL CAP (SECTION 4.2.4 RAWP)
- 2-FEET THICK SOIL CAP (SECTION 4.2.5 RAWP)
- PROPOSED FUTURE DEVELOPMENT

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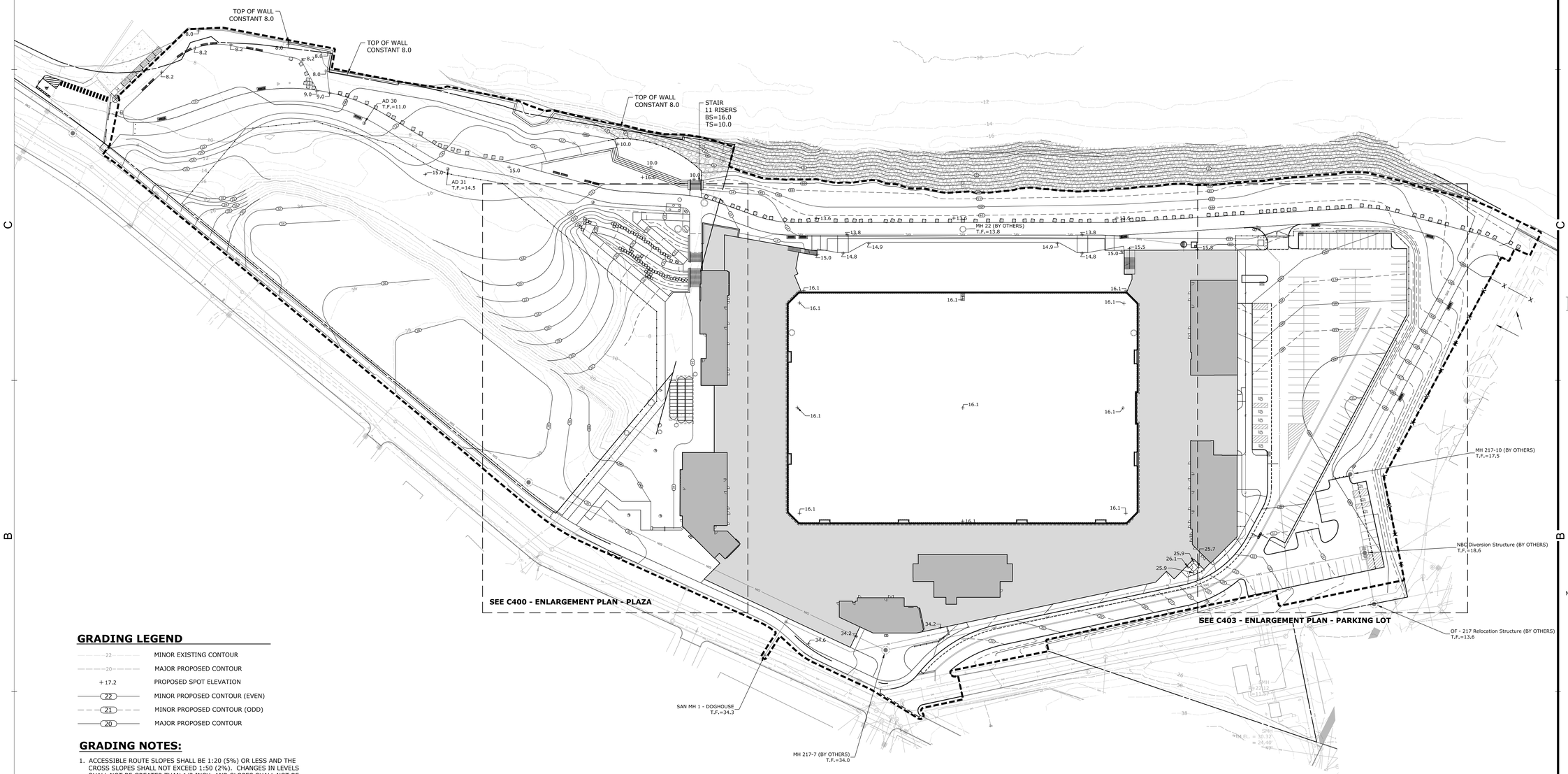
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P.I.C.	-
P MGR.	-
P ENGR.	-
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CHECKED BY	PS

SHEET TITLE

ENGINEERED CONTROL - STEP 6

SHEET IDENTIFIER

C103B



GRADING LEGEND

22	MINOR EXISTING CONTOUR
20	MAJOR PROPOSED CONTOUR
+17.2	PROPOSED SPOT ELEVATION
22	MINOR PROPOSED CONTOUR (EVEN)
21	MINOR PROPOSED CONTOUR (ODD)
20	MAJOR PROPOSED CONTOUR

GRADING NOTES:

1. ACCESSIBLE ROUTE SLOPES SHALL BE 1:20 (5%) OR LESS AND THE CROSS SLOPES SHALL NOT EXCEED 1:50 (2%). CHANGES IN LEVELS SHALL NOT BE GREATER THAN 1/2 INCH, AND SLOPES SHALL NOT BE GREATER THAN 1:20 UNLESS RAMPS OR LIFTS ARE PROVIDED.
2. ALL RAMPS SHALL HAVE A MAXIMUM SLOPE OF 1:12. ALL RAMPS, EXCLUDING SIDEWALK DROP RAMPS, SHALL HAVE HANDRAILS ON BOTH SIDES.
3. ALL RAMP LANDINGS SHALL BE A MINIMUM OF 5'X5' CLEAR WITH A MAXIMUM SLOPE AND CROSS-PITCH OF 2%.
4. ALL ACCESSIBLE DOORS SHOWN ARE .02" DIFFERENCE IN ELEVATION FROM EXTERIOR TO INTERIOR FINISHED FLOOR ELEVATIONS. LINES AT ACCESSIBLE DOORS DO NOT INDICATE A CHANGE IN ELEVATION GREATER THAN .02".
5. IN ALL CASES IN WHICH PROPOSED ROADS, SIDEWALKS AND CURBING WILL BE TIED INTO EXISTING ROAD/SIDEWALK AND/OR CURBS THE CONTRACTOR SHALL MATCH THE LINE AND GRADE OF THE EXISTING SITE.
6. ODD NUMBERED CONTOURS ARE SHOWN IN SOME CASES TO CLARIFY THE INTENT OF THE GRADING PLAN AND ARE SHOWN AS A DASHED LINE

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SHEET TITLE

GRADING PLAN

SHEET IDENTIFIER

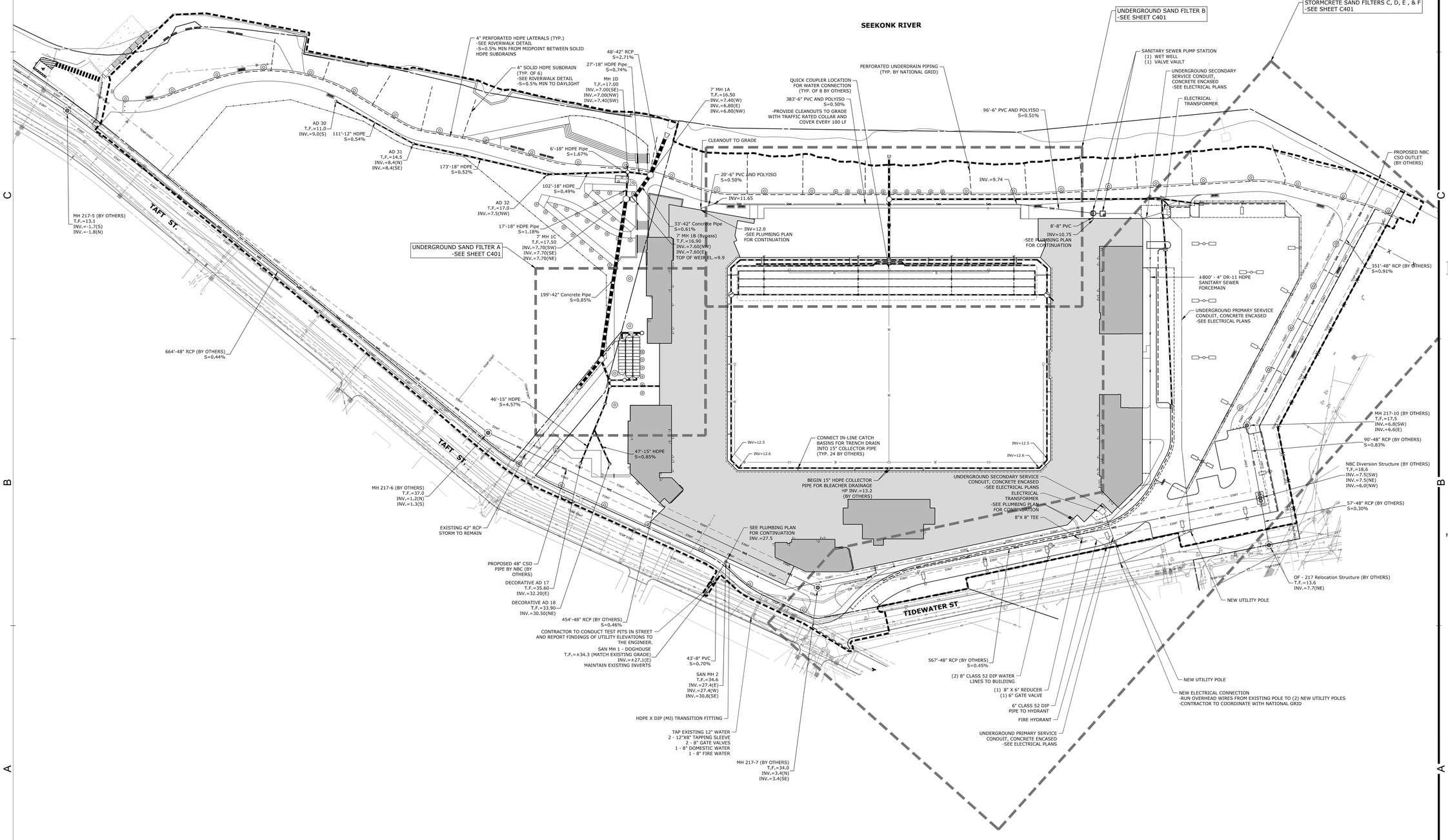
C150

GENERAL NOTES

1. THE PURPOSE OF THESE PLANS IS TO PROVIDE THE LOCATIONS, TYPICAL CROSS SECTIONS AND DETAILS FOR THE PROPOSED STORMWATER MANAGEMENT SYSTEM FOR PHASE 1A OF THE TIDEWATER LANDING DEVELOPMENT. THESE PLANS ARE LIMITED ONLY TO THE STORMWATER TREATMENT SYSTEMS AND DO NOT PROVIDE ADEQUATE INFORMATION FOR THE FULL SCOPE OF THE PROPOSED DEVELOPMENT. FOR ADDITIONAL DETAILS, INCLUDING OUTFALL LOCATIONS, INVERTS, MATERIALS, ETC. REFER TO DESIGN PLANS BY SLR CONSULTING AS PART OF THIS PLAN SET.
2. PHASE 1A IS APPROXIMATELY 8.94± ACRES AND CONSISTS OF THE TIDEWATER STADIUM, SURFACE PARKING LOT AND SURROUNDING CONCOURSE AREAS AND EVENT PLAZA.
3. EXISTING FEATURES, INCLUDING, BUT NOT LIMITED TO, THE BOUNDARY LINE, CONTOUR DATA AND EXISTING UTILITY LOCATIONS WERE SUPPLIED BY SLR CONSULTING.
4. ALL WORK PERFORMED HEREIN IS TO BE GOVERNED BY CURRENT EDITIONS OF THE RHODE ISLAND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CITY OF PAWTUCKET STANDARD SPECIFICATIONS AND DETAILS AND SPECIFICATIONS INCLUDED AS PART OF THE DRAWINGS. IN AREAS OF CONFLICT BETWEEN THE DIFFERENT SPECIFICATIONS, THE DESIGN PLANS AND PROJECT SPECIFICATIONS WILL TAKE PRECEDENCE OVER THE GENERAL SPECIFICATIONS AND THE DESIGN ENGINEER WILL INTERPRET THE CONSTRUCTION REQUIREMENT. THE CONTRACTOR IS ADVISED TO SUBMIT A REQUEST FOR INFORMATION (RFI) FOR ANY AREAS OF CONFLICT BEFORE COMMITTING TO CONSTRUCTION.
5. THE FOLLOWING DOCUMENTS ARE CONSIDERED PART OF THE PROJECT PLANS AND THE CONTRACTOR/OWNER MUST MAINTAIN THESE DOCUMENTS AS PART OF A FULL PLAN SET:
   - SOIL EROSION AND SEDIMENT CONTROL PLAN (SESC). THE SESC CONTAINS THE FOLLOWING:
     - EROSION CONTROL MEASURES
     - SHORT TERM MAINTENANCE
     - ESTABLISHMENT OF VEGETATIVE COVER
     - CONSTRUCTION POLLUTION PREVENTION
     - SEQUENCE OF CONSTRUCTION
   - STORMWATER OPERATION AND MAINTENANCE PLAN (O&M). THE O&M CONTAINS:
     - LONG TERM MAINTENANCE
     - LONG TERM POLLUTION PREVENTION
6. THIS PLAN SET REFERENCES RIDOT STANDARD DETAILS (DESIGNATED AS RIDOT STD X.X.X). RIDOT STANDARD DETAILS ARE AVAILABLE FROM RIDOT AND ONLINE AT: HTTP://WWW.DOT.RI.GOV/BUSINESS/CONTRACTORSANDCONSULTANTS.PHP.
7. THE DRAINAGE SYSTEM IS DESIGNED TO MEET THE CITY OF PAWTUCKET SUBDIVISION AND LAND DEVELOPMENT REGULATIONS WITH THE USE OF CATCH BASINS AND UNDERGROUND DRAINAGE SYSTEMS. THE STORMWATER MANAGEMENT SYSTEM MEETS THE RIDEM BEST MANAGEMENT PRACTICES.
8. ANY PROPRIETARY PRODUCTS REFERENCED IN THIS PLAN SET ARE REPRESENTATIVE OF THE MINIMUM DESIGN REQUIREMENTS FOR THE PURPOSE THEY PROPOSE TO SERVE. ALTERNATIVES TO ANY PROPRIETARY PRODUCT MAY BE SUBMITTED TO THE ENGINEER OF RECORD FOR CONSIDERATION, WHICH MUST BE ACCOMPANIED BY APPROPRIATE SPECIFICATION SHEETS/DESIGN CALCULATIONS THAT DEMONSTRATE THE ALTERNATIVE(S) MEET THE MINIMUM DESIGN PARAMETERS OF THE PRODUCT SHOWN ON THE PLANS. NO ALTERNATIVES MAY BE USED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
9. THIS PLAN SET MAY REFERENCE AND/OR INCLUDE REPRODUCTIONS OF PROPRIETARY PRODUCTS/ DETAILS BY OTHERS, AND/OR THEIR ASSOCIATED SPECIFICATIONS. ANY REFERENCED OR REPRODUCED PROPRIETARY PRODUCT OR DETAIL BY OTHERS THAT IS SHOWN ON DIPRETE PLANS IS STRICTLY FOR INFORMATION/SPECIFICATION PURPOSES ONLY. DIPRETE ENGINEERING DOES NOT WARRANT ANY PROPRIETARY PRODUCTS, DETAILS BY OTHERS OR THEIR RESPECTIVE DESIGNS. IF A DIPRETE ENGINEERING PLAN INCLUDES A PROPRIETARY PRODUCT/DETAIL BY OTHERS (EITHER EXPLICITLY OR IMPLIED) AND IS STAMPED BY A REGISTERED PROFESSIONAL ENGINEER AND/OR REGISTERED LANDSCAPE ARCHITECT OF DIPRETE ENGINEERING, SAID STAMP DOES NOT EXTEND TO ANY PORTION OF THE PROPRIETARY PRODUCT/DETAIL BY OTHERS OR ITS DESIGN.

UTILITY LEGEND

- ELECTRIC LINE — E
- GAS LINE — G
- SANITARY LINE — SAN
- STORM LINE
- DOMESTIC WATER LINE — DW
- FIRE PROTECTION LINE — FP
- EASEMENT — ESMT
- TEMPORARY EASEMENT — TEMP ESMT
- SANITARY MANHOLE
- STORM MANHOLE
- CATCH BASIN
- GAS VALVE — GV
- UTILITY POLE
- HYDRANT
- YARD DRAIN



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CONSTRUCTION DOCUMENTS

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TIDEWATER STADIUM

11 Tidewater Street,
Pawtucket, Rhode Island

FORTUITOUS PARTNERS

NORTH

SCALE: 1"=50'

REVISION	DATE	DESCRIPTION
		ADDENDA OR MODIFICATION
	02/04/2022	CONSTRUCTION DOCUMENTS
ISSUE	DATE	DESCRIPTION
		FULL SET ISSUES

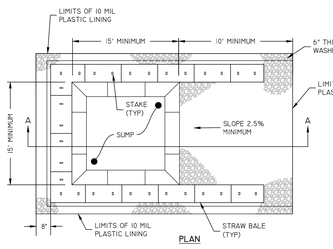
PROJECT NO:	16222.00003
P.I.C.	-
P MGR.	-
P ENGR.	-
DESIGN BY	-
JOB CAPTAIN	-
DRAWN BY	JDL
CHECKED BY	DLO

SHEET TITLE

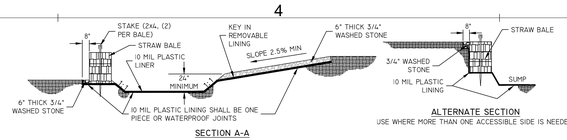
UTILITY PLAN

SHEET IDENTIFIER

C160



PLAN



SECTION A-A

ALTERNATE SECTION

USE WHERE MORE THAN ONE ACCESSIBLE SIDE IS NEEDED

ALL CONCRETE TRUCKS SHALL WASHOUT HERE

WASHOUT SIGN

NOTES:

1. PIT IS SPECIFICALLY DESIGNATED, DIKED AND IMPERVIOUS CONTAINMENT TO PREVENT CONTACT BETWEEN CONCRETE WASH AND STORMWATER.
2. WASH WATER SHALL NOT BE ALLOWED TO FLOW TO SURFACE WATER.
3. FACILITY MUST HOLD SUFFICIENT VOLUME TO CONTAIN CONCRETE WASTE WITH A MINIMUM FREEBOARD OF 12."
4. FACILITY SHALL NOT BE FILLED BEYOND 95% CAPACITY UNLESS A NEW FACILITY IS CONSTRUCTED.
5. SAWCUT PORTLAND CEMENT CONCRETE, RESIDUE FROM SAWCUT AND GRINDING TO BE DISPOSED OF IN THE PIT.
6. CONCRETE WASHOUTS SHALL BE LOCATED A MINIMUM OF 100' FROM DRAINAGE WAYS, INLETS, AND SURFACE WATERS.
7. MANUFACTURED CONCRETE WASHOUT DEVICES MAY BE USED IF REMOVED FROM THE SITE WHEN 95% FULL CAPACITY.

CONCRETE WASHOUT AREA

NOT TO SCALE

SOIL EROSION CONTROL LEGEND

- DIVERSION RUNOFF CONVEYANCE MEASURE (SWALE AND/OR BERM)
- TEMPORARY SEDIMENT TRAP
- EROSION CONTROL (COMPOST SOCK, SILT FENCE (RI STD 9.2.0, OR APPROVED EQUAL)
- LIMIT OF DISTURBANCE (NO SEDIMENT CONTROL)
- LIMIT OF DISTURBANCE (WITH SEDIMENT CONTROL)
- TRIBUTARY AREA TO SESC BMP
- CONSTRUCTION ENTRANCE (RIDOT STD 9.9.0)
- FILTERING BMP (TO BE PROTECTED DURING CONSTRUCTION)
- FINAL CONTOUR GRADE
- INLET SEDIMENT CONTROL
- LIMIT OF WORK COVERED UNDER NATIONAL GRID PERMIT

SOIL EROSION CONTROL IMPLEMENTATION PHASING

PHASE IA - INSTALL EROSION CONTROL SILT FENCE & STONE CONSTRUCTION ENTRANCE.

PHASE IB - INSTALL TEMPORARY SEDIMENTATION TRAPS. CONSTRUCT CLEAN WATER DIVERSIONS

PHASE IC - CONSTRUCT PROPOSED DIVERSIONS

PHASE IIA - CLEAR AND GRUB IMPERVIOUS AREAS. CONSTRUCT PROPOSED BUILDINGS & INSTALL UTILITIES WITHIN ROADWAYS. INSTALL DRAINAGE NETWORK WORKING FROM THE DOWN GRADIENT BASINS UP TO THE START OF NETWORK. INSTALL ASPHALT PAVING.

PHASE IIB - STABILIZE ALL DISTURBED AREAS, DE-CONSTRUCT DIVERSIONS AND TEMPORARY SEDIMENTATION TRAPS.

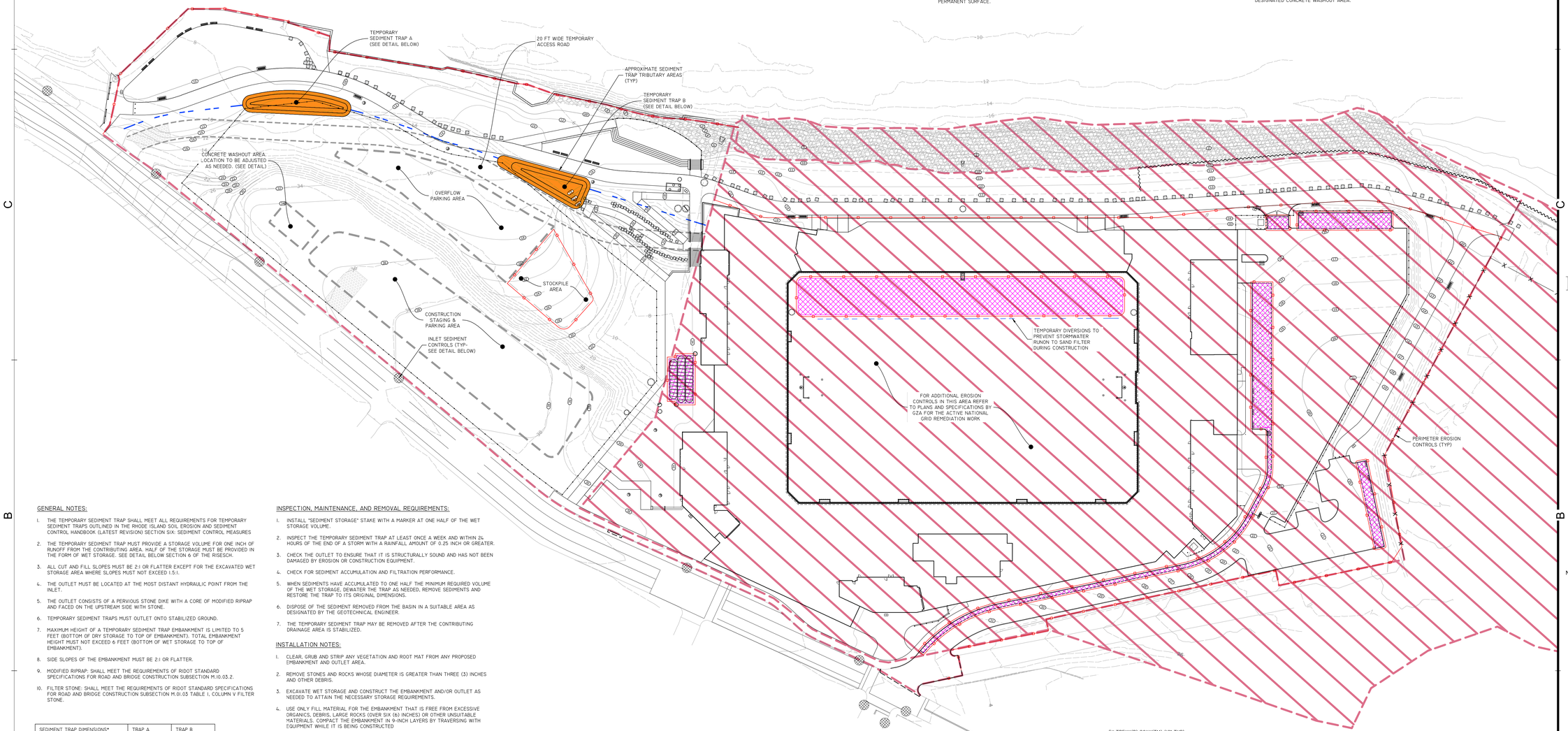
NOTE - SOIL EROSION CONTROL IMPLEMENTATION PHASING SHOULD NOT BE MISCONSTRUED WITH CONSTRUCTION PHASING/ SEQUENCING. ALL MEASURES DEPICTED ON THIS PLAN ARE TO BE INSTALLED WITH THE FIRST PHASE OF CONSTRUCTION.

DEMOLITION NOTES:

1. CONTRACTOR MUST OBTAIN ALL FEDERAL, STATE, AND MUNICIPAL APPROVALS PRIOR TO THE START OF CONSTRUCTION.
2. CONTRACTOR MUST PERFORM DAILY SWEEPING AT CONSTRUCTION ENTRANCES DURING DEMOLITION AND CONSTRUCTION TO MINIMIZE SEDIMENTS ON EXTERNAL STREETS.
3. ANY EXISTING BUILDING(S) AND PROPERTY PROPOSED TO REMAIN THAT ARE DAMAGED BY THE CONTRACTOR MUST BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
4. CONTRACTOR IS RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) ALL MATERIALS INDICATED ON THE PLANS UNLESS SPECIFIED OTHERWISE HEREIN. R&D MATERIALS INCLUDE BUT ARE NOT LIMITED TO PAVEMENT, GRAVEL, CATCH BASINS, MANHOLES, GRATES/FRAMES/COVERS, AND ANY EXCESS SOIL THAT IS NOT INCORPORATED INTO THE WORK.
5. IN ADDITION TO THOSE AREAS SPECIFICALLY DESIGNATED ON THE PLANS, ALL DISTURBED AREAS INCLUDING THE CONTRACTOR'S STOCKPILE AND STAGING AREAS WITHIN THE LIMIT OF WORK MUST BE RESTORED TO MATCH THE DESIGN PLANS.
6. CONTRACTOR MUST DOCUMENT LOCATION OF ALL SUBSURFACE UTILITIES REMAINING IN PLACE AFTER DEMOLITION (ACTIVE AND INACTIVE/ABANDONED). LOCATION MUST BE DOCUMENTED BY FIELD SURVEY OR SWING TIES. COPIES OF LOCATION DOCUMENTATION MUST BE PROVIDED TO THE OWNER FOLLOWING COMPLETION OF DEMOLITION AND PRIOR TO START OF NEW CONSTRUCTION. A MARKER MUST BE INSTALLED TO FINISH GROUND AT ALL INSTALLED CAPS/PLUGS. THE MARKER CAN BE A POST IN CONSTRUCTION AREAS OR PAINTED ON A PERMANENT SURFACE.

SOIL EROSION AND SEDIMENT CONTROL NOTES:

1. ALL SOIL EROSION AND SEDIMENT CONTROLS (SESC) TO BE COORDINATED WITH ACTIVE REMEDIAL ACTIVITIES. AFTER REMEDIAL ACTIVITIES ARE COMPLETE, THAT PORTION OF THE SITE IS TO BE LEFT WITH 6" OF STONE OR APPROVED STABILIZED, NON-ERODIBLE, SURFACE. CONTRACTOR TO MAINTAIN THIS SURFACE THROUGHOUT CONSTRUCTION. REFER TO PLANS AND SPECIFICATIONS BY GZA AS PART OF THE "FORMER TIDEWATER FACILITY REMEDIAL ACTIVITIES" PERMIT. CONTRACTOR TO UPDATE EXISTING SESC PLAN AS NEEDED TO INCORPORATE ANY ADDITIONAL CONTROLS TO CONSTRUCT THE PROPOSED DEVELOPMENT.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL SOIL EROSION AND SEDIMENT CONTROL ON SITE WHICH MUST BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE APPLICABLE REGULATIONS AND AUTHORITY HAVING JURISDICTION. THE CONTRACTOR MUST NOTIFY THE DESIGN ENGINEER, THE TOWN ENGINEER, AND THE RI COASTAL RESOURCES MANAGMENT COUNCIL AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
3. ALL EROSION CONTROLS INCLUDING (BUT NOT LIMITED TO) TEMPORARY SWALES, CONSTRUCTION ENTRANCES, PERIMETER SILT FENCE & TEMPORARY SEDIMENT TRAPS, MUST BE INSTALLED PER THE LATEST EDITION OF THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL (RISESC) HANDBOOK AND THE SOIL EROSION AND SEDIMENT CONTROL PLAN(S). NOTE THE SOIL EROSION AND SEDIMENT CONTROL SHOWN ON THESE PLANS ARE THE MINIMUM QUANTITY/TYPE OF EROSION CONTROL DEVICES AND MATERIALS DEEMED REQUIRED BY DIPRETE ENGINEERING TO MEET THE OBJECTIVES OF THE RISESC HANDBOOK, BUT IS CONSIDERED A GUIDE ONLY. ADDITIONAL MEASURES/ALTERNATE CONFIGURATIONS MAY BE REQUIRED IN ORDER TO MEET THE RISESC HANDBOOK BASED ON FACTORS INCLUDING (BUT NOT LIMITED TO) SITE PARAMETERS, WEATHER, INSPECTIONS AND UNIQUE FEATURES. THE SESC WILL CONTINUE TO EVOLVE THROUGHOUT CONSTRUCTION/PHASES. PURSUANT TO NOTE 1 ABOVE, SESC REMAINS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL THE SITE IS FULLY STABILIZED AND/OR SESC RESPONSIBILITIES ARE ASSUMED BY THE OWNER IN WRITING.
4. SILT FENCE SHOWN ON THIS PLAN IS INTENDED FOR PERIMETER EROSION ONLY, NOT FOR FULL CONSTRUCTION SEDIMENT LOAD. INTERIOR EROSION CONTROLS TO BE INSTALLED AND MAINTAINED AS NECESSARY IN ACCORDANCE WITH THE APPROVED SESC PLANS BY GZA.
5. TEMPORARY SWALES MUST BE USED TO CONTROL RUNOFF DURING CONSTRUCTION OF THE PROPOSED SITE WORK. EROSION CONTROL MATS MUST BE INSTALLED, IF NECESSARY, TO PREVENT EROSION AND SUPPORT VEGETATION. AFTER CONSTRUCTION IS COMPLETE AND TRIBUTARY AREAS TO THE SWALES HAVE BEEN STABILIZED, THE TEMPORARY SWALES MUST BE CLEARED AND BROUGHT TO FINAL GRADE PER THE DESIGN PLANS.
6. INLET PROTECTION MUST BE INSTALLED ON ALL CATCH BASINS ONCE CONSTRUCTED.
7. CONTRACTOR MAY MODIFY SEQUENCE OF CONSTRUCTION WITH APPROVAL FROM DESIGN ENGINEER AND OWNER.
8. IF CONCRETE TRUCKS ARE WASHED OUT ON SITE, ALL WASHOUT MUST BE PERFORMED IN THE DESIGNATED CONCRETE WASHOUT AREA.



GENERAL NOTES:

1. THE TEMPORARY SEDIMENT TRAP SHALL MEET ALL REQUIREMENTS FOR TEMPORARY SEDIMENT TRAPS OUTLINED IN THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HANDBOOK (LATEST REVISION) SECTION SIX: SEDIMENT CONTROL MEASURES
2. THE TEMPORARY SEDIMENT TRAP MUST PROVIDE A STORAGE VOLUME FOR ONE INCH OF RUNOFF FROM THE CONTRIBUTING AREA. HALF OF THE STORAGE MUST BE PROVIDED IN THE FORM OF WET STORAGE. SEE DETAIL BELOW SECTION 6 OF THE RISESCH.
3. ALL CUT AND FILL SLOPES MUST BE 2:1 OR FLATTER EXCEPT FOR THE EXCAVATED WET STORAGE AREA WHERE SLOPES MUST NOT EXCEED 1.5:1.
4. THE OUTLET MUST BE LOCATED AT THE MOST DISTANT HYDRAULIC POINT FROM THE INLET.
5. THE OUTLET CONSISTS OF A PERVIOUS STONE DIKE WITH A CORE OF MODIFIED RIPRAP AND FACED ON THE UPSTREAM SIDE WITH STONE.
6. TEMPORARY SEDIMENT TRAPS MUST OUTLET ONTO STABILIZED GROUND.
7. MAXIMUM HEIGHT OF A TEMPORARY SEDIMENT TRAP EMBANKMENT IS LIMITED TO 5 FEET (BOTTOM OF DRY STORAGE TO TOP OF EMBANKMENT). TOTAL EMBANKMENT HEIGHT MUST NOT EXCEED 6 FEET (BOTTOM OF WET STORAGE TO TOP OF EMBANKMENT).
8. SIDE SLOPES OF THE EMBANKMENT MUST BE 2:1 OR FLATTER.
9. MODIFIED RIPRAP: SHALL MEET THE REQUIREMENTS OF RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.10.03.2.
10. FILTER STONE: SHALL MEET THE REQUIREMENTS OF RIDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SUBSECTION M.01.03 TABLE 1, COLUMN V FILTER STONE.

INSPECTION, MAINTENANCE, AND REMOVAL REQUIREMENTS:

1. INSTALL "SEDIMENT STORAGE" STAKE WITH A MARKER AT ONE HALF OF THE WET STORAGE VOLUME.
2. INSPECT THE TEMPORARY SEDIMENT TRAP AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCH OR GREATER.
3. CHECK THE OUTLET TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT.
4. CHECK FOR SEDIMENT ACCUMULATION AND FILTRATION PERFORMANCE.
5. WHEN SEDIMENTS HAVE ACCUMULATED TO ONE HALF THE MINIMUM REQUIRED VOLUME OF THE WET STORAGE, DEWATER THE TRAP AS NEEDED, REMOVE SEDIMENTS AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS.
6. DISPOSE OF THE SEDIMENT REMOVED FROM THE BASIN IN A SUITABLE AREA AS DESIGNATED BY THE GEOTECHNICAL ENGINEER.
7. THE TEMPORARY SEDIMENT TRAP MAY BE REMOVED AFTER THE CONTRIBUTING DRAINAGE AREA IS STABILIZED.

INSTALLATION NOTES:

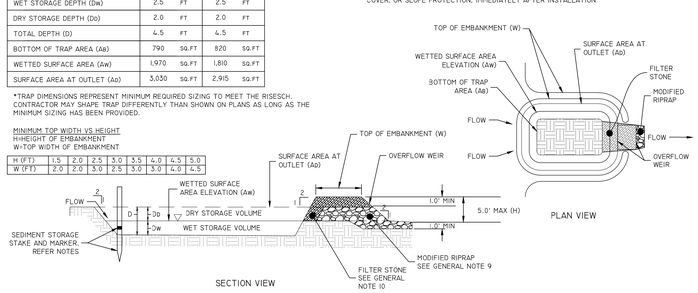
1. CLEAR, GRUB AND STRIP ANY VEGETATION AND ROOT MAT FROM ANY PROPOSED EMBANKMENT AND OUTLET AREA.
2. REMOVE STONES AND ROCKS WHOSE DIAMETER IS GREATER THAN THREE (3) INCHES AND OTHER DEBRIS.
3. EXCAVATE WET STORAGE AND CONSTRUCT THE EMBANKMENT AND/OR OUTLET AS NEEDED TO ATTAIN THE NECESSARY STORAGE REQUIREMENTS.
4. USE ONLY FILL MATERIAL FOR THE EMBANKMENT THAT IS FREE FROM EXCESSIVE ORGANICS, DEBRIS, LARGE ROCKS (OVER SIX (6) INCHES) OR OTHER UNSUITABLE MATERIALS. COMPACT THE EMBANKMENT IN 9-INCH LAYERS BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED
5. STABILIZE THE EARTHEN EMBANKMENT USING ANY OF THE FOLLOWING MEASURES: SEEDING FOR TEMPORARY VEGETATION COVER; SEEDING FOR PERMANENT VEGETATIVE COVER; OR SLOPE PROTECTION, IMMEDIATELY AFTER INSTALLATION

SEDIMENT TRAP DIMENSIONS*	TRAP A		TRAP B	
TRIBUTARY DRAINAGE AREA	2.17	AC	1.96	AC
WET STORAGE DEPTH (Dw)	2.5	FT	2.5	FT
DRY STORAGE DEPTH (Dd)	2.0	FT	2.0	FT
TOTAL DEPTH (D)	4.5	FT	4.5	FT
BOTTOM OF TRAP AREA (Ab)	790	SQ.FT	820	SQ.FT
WETTED SURFACE AREA (Aw)	1,970	SQ.FT	1,810	SQ.FT
SURFACE AREA AT OUTLET (Ao)	3,030	SQ.FT	2,915	SQ.FT

*TRAP DIMENSIONS REPRESENT MINIMUM REQUIRED SIZING TO MEET THE RISESCH. CONTRACTOR MAY SHAPE TRAP DIFFERENTLY THAN SHOWN ON PLANS AS LONG AS THE MINIMUM SIZING HAS BEEN PROVIDED.

MINIMUM TOP WIDTH VS HEIGHT
H=HEIGHT OF EMBANKMENT
W=TOP WIDTH OF EMBANKMENT

H (FT)	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
W (FT)	2.0	2.0	3.0	2.5	3.0	3.0	4.0	4.5

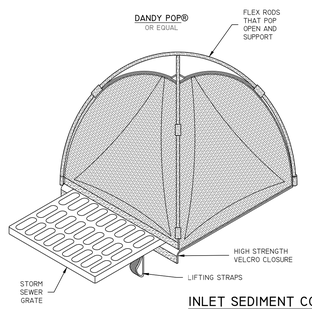


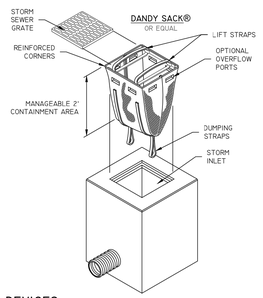
PLAN VIEW

SECTION VIEW

TEMPORARY SEDIMENT TRAP DETAIL

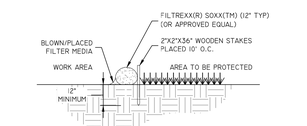
NOT TO SCALE





INLET SEDIMENT CONTROL DEVICES

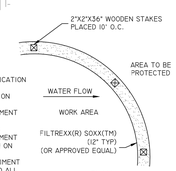
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SECTION

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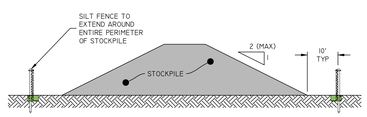
1. ALL MATERIAL TO MEET FILTREXX(R) SPECIFICATIONS
2. FILTER MEDIA(TM) FILL TO MEET APPLICATION REQUIREMENTS.
3. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER
4. STAKES ARE NOT TO BE USED IN PAVEMENT AREAS.
5. SELF WEIGHT OF FILTREXX SYSTEM IS ADEQUATE TO PREVENT SYSTEM MOVEMENT ONCE POSITIONED ALONG AREA SHOWN ON THE PLANS.
6. CONTRACTOR TO PLACE FILTREXX SEDIMENT CONTROL OR APPROVED EQUAL AROUND ALL CURB INLET LOCATIONS AS SPECIFIED ON PLANS.



PLAN

FILTREXX SEDIMENT CONTROL (OR APPROVED EQUAL)

NOT TO SCALE



NOTES:

1. ALL STOCKPILES MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH SECTION 3 "STOCKPILE AND STAGING AREA MANAGEMENT" OF THE RHODE ISLAND SOIL EROSION AND SEDIMENT CONTROL HAND BOOK (CURRENT EDITION).
2. DIVERT ALL STORMWATER AWAY FROM STOCKPILES.
3. SOIL STOCKPILES THAT ARE NOT TO BE USED WITHIN 30 DAYS MUST BE SEEDED AND MULCHED IMMEDIATELY AFTER FORMATION OF THE STOCKPILE WITH SEED MIX COMPATIBLE WITH THE SOIL TYPE.
4. STOCKPILE AND SILT FENCE MUST BE INSPECTED AT LEAST ONCE PER WEEK AND AFTER RAIN EVENTS IN EXCESS OF ½" OF RAINFALL. REPAIR/ REPLACE SILT FENCE (AND STOCKPILE COVERS WHERE APPLICABLE) AS NEEDED TO KEEP THEM FUNCTIONING ADEQUATELY.
5. SEDIMENT TRAPPED BY SILT FENCES MUST BE REMOVED AND PROPERLY DISPOSED OF WHENEVER SIGNIFICANT ACCUMULATION OCCURS.

STOCKPILE PROTECTION

NOT TO SCALE

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CONSTRUCTION DOCUMENTS

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TIDEWATER STADIUM

11 Tidewater Street,
Pawtucket, Rhode Island

FORTUITOUS PARTNERS

NORTH

0' 25' 50'
0 1/2" 1"
SCALE: 1"=50'

REVISION	DATE	DESCRIPTION
		ADDENDA OR MODIFICATION
	02/04/2022	CONSTRUCTION DOCUMENTS
ISSUE	DATE	DESCRIPTION
		FULL SET ISSUES

PROJECT NO:	16222.00003
P.I.C.	-
P MGR.	-
P ENGR.	-
DESIGN BY	-
JOB CAPTAIN	-
DRAWN BY	JDL
CHECKED BY	DLO

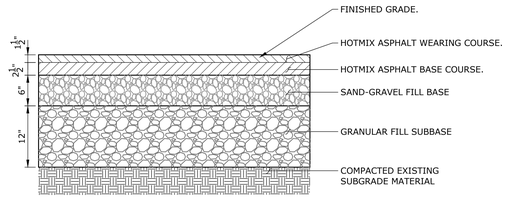
SHEET TITLE

SOIL EROSION & SEDIMENT CONTROL PLAN

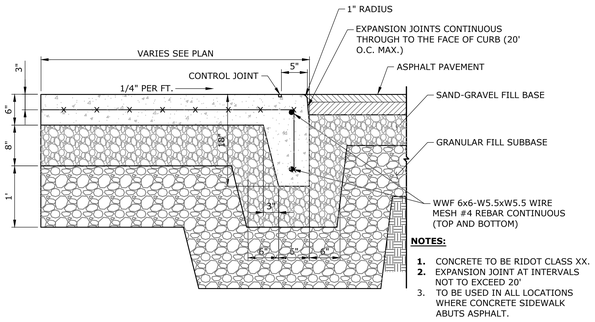
SHEET IDENTIFIER

C170

IMPERVIOUS SURFACE CAP
SECTION 4.3.3 RAWP



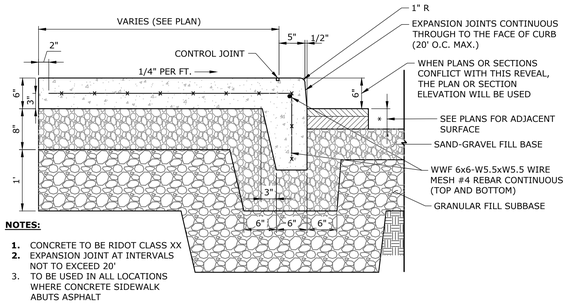
HOTMIX ASPHALT PAVEMENT - HEAVY DUTY
NOT TO SCALE



NOTES:

1. CONCRETE TO BE RIDOT CLASS XX.
2. EXPANSION JOINT AT INTERVALS NOT TO EXCEED 20'
3. TO BE USED IN ALL LOCATIONS WHERE CONCRETE SIDEWALK ABUTS ASPHALT.

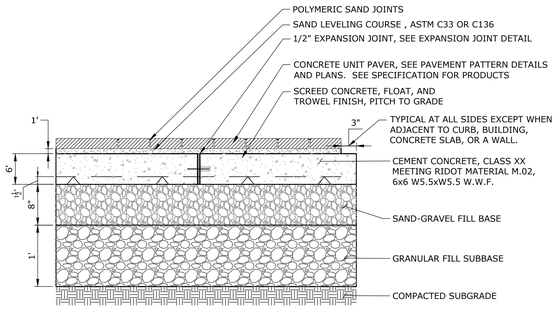
FLUSH INTEGRAL CONCRETE WALK & CURB
NOT TO SCALE



NOTES:

1. CONCRETE TO BE RIDOT CLASS XX
2. EXPANSION JOINT AT INTERVALS NOT TO EXCEED 20'
3. TO BE USED IN ALL LOCATIONS WHERE CONCRETE SIDEWALK ABUTS ASPHALT

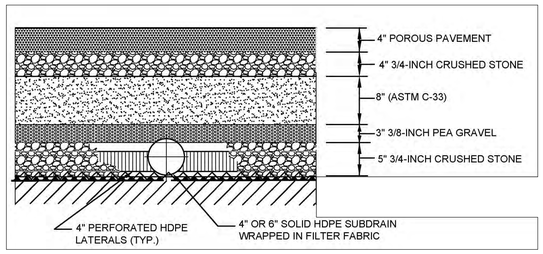
INTEGRAL CONCRETE WALK AND CURB - WITH REVEAL
NOT TO SCALE



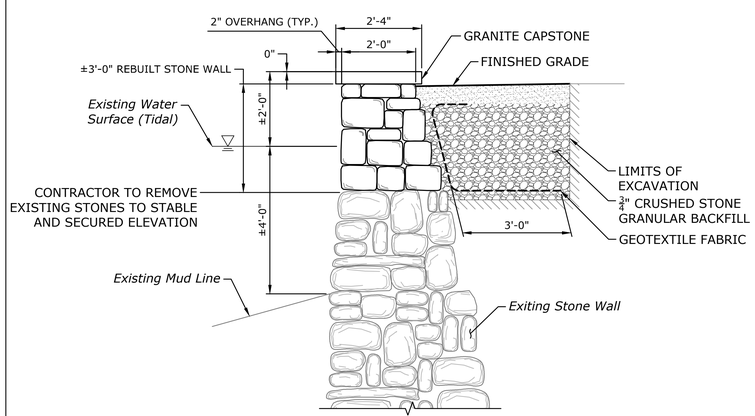
NOTES:

1. PAVERS SHALL BE AS SPECIFIED.
2. EXPANSION JOINTS IN CONCRETE BASE SHALL BE 20' O.C. OR 144 S.F. MAX.
3. CONCRETE BASE SHALL BE SCREEDED WITH A FLOAT FINISH, TROWELED, AND PITCHED TO GRADE.
4. TO BE ACCEPTED, PAVERS SHALL BE INSTALLED IN SUCH A MANNER THAT:
   - 4.1. THE PAVER WALKING SURFACES ARE WITHIN 1/8" OF EACH OTHER AND ADJACENT FINISHED SURFACES (I.E. GRANITE CURB AND CONC. WALK)
   - 4.2. THE PAVERS HAVE NO JOINTS GREATER THAN 1/16"
   - 4.3. SAND SWEPT BETWEEN JOINTS IS VIBRATED AND WITHIN 3/16" OF THE PAVER WALKING SURFACE
   - 4.4. NO PAVER IS CRACKED OR BROKEN
   - 4.5. PAVERS ARE VIBRATED IN PLACE, SECURED WITH POLYMERIC SAND IN JOINTS HARDENED.
5. CONTRACTOR SHALL CONSTRUCT A PAVER SAMPLE PATTERN FOR EACH PATTERN AS SPECIFIED AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO AUTHORIZATION TO INSTALL PAVERS.

PAVERS ON 6" CONCRETE SLAB
NOT TO SCALE

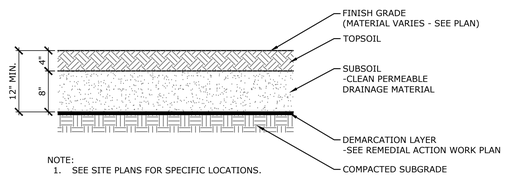


RIVERWALK DETAIL - POROUS PAVEMENT
NOT TO SCALE



REBUILT STONE WALL - SECTION (WALL TYPE 2)
SCALE: ½" = 1'-0"

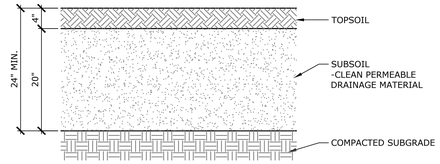
1-FOOT-THICK SOIL CAP (TYPE I)
SECTION 4.3.4 RAWP



NOTE:
1. SEE SITE PLANS FOR SPECIFIC LOCATIONS.

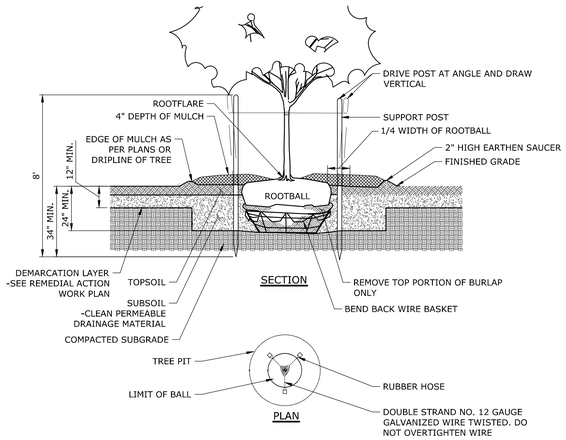
1-FOOT-THICK SOIL CAP - LAWN AREAS
N.T.S.

2-FOOT-THICK SOIL CAP (TYPE II)
SECTION 4.3.5 RAWP



NOTE:
1. SEE SITE PLANS FOR SPECIFIC LOCATIONS.

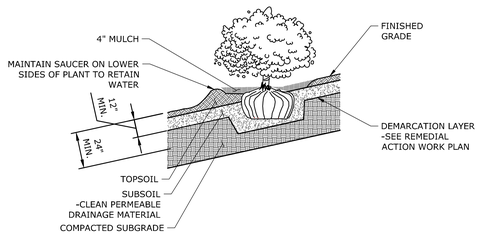
2-FOOT-THICK SOIL CAP - PLANT BED AREAS
N.T.S.



NOTE:

1. SUPPORT STAKES SHALL BE REMOVED BY THE CONTRACTOR ONE YEAR AFTER INSTALLATION.

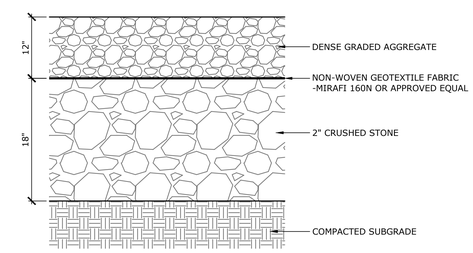
TREE PLANTING
NOT TO SCALE



NOTES:

1. UNLESS OTHERWISE DIRECTED SHREDDED MULCH SHALL BE PLACED TO A LIMIT OF ONE FOOT BEYOND THE CENTER OF THE OUTERMOST SHRUBS IN SHRUB BED.

SHRUB PLANTING
NOT TO SCALE



TEMPORARY ACCESS ROAD
N.T.S.

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CONSTRUCTION DOCUMENTS

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TIDEWATER STADIUM

11 Tidewater Street,
Pawtucket, Rhode Island

FORTUITOUS PARTNERS

REVISION	DATE	DESCRIPTION
		ADDENDA OR MODIFICATION
	02/04/2022	CONSTRUCTION DOCUMENTS
ISSUE	DATE	DESCRIPTION
		FULL SET ISSUES

PROJECT NO:	16222.00003
P.I.C.	-
P MGR.	-
P ENGR.	-
DESIGN BY	-
JOB CAPTAIN	-
DRAWN BY	JDL
CHECKED BY	PS

SHEET TITLE

SITE DETAILS

SHEET IDENTIFIER

C500

APPENDIX B

CONSTRUCTION SOIL MANAGEMENT PLAN

Remedial Action Work Plan

Fortuitous Tidewater OZ, LLC

March 2022

CONSTRUCTION SOIL MANAGEMENT PLAN

Town Landing Property
Taft Street
Pawtucket, Rhode Island

Prepared for:

Fortuitous Tidewater OZ, LLC

SLR #141.16222.00005

OCTOBER 18, 2021



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FIGURES

Figure 1 Site Location Map

APPENDICES

Appendix A Limitations

Appendix B Draft SIR Summary Tables & Figures

Construction Soil Management Plan

Town Landing Property

Pawtucket, Rhode Island

Prepared for:
Fortuitous Tidewater OZ, LLC

This document has been prepared by SLR International Corporation (SLR). The material and data in this report were prepared under the supervision and direction of the undersigned.

Peter Shea, LEP
Senior Environmental Scientist

Scott Bristol, LEP, CPG
Principal Consultant

1. INTRODUCTION

SLR International Corporation (SLR) has prepared this Soil Management Plan (SMP) to establish an approach for proper planning and management of soils and groundwater for a portion of "Phase 1A" of the Tidewater Landing project during construction activities. This SMP is specific to the activities that are proposed for the 5.35-acre parcel of land (Plat 54B, Lot 827) located at Taft Street abutting the west shore of the Seekonk River in Pawtucket, Rhode Island (the "Site" or "property) (Figure 1).

Phase IA of the Tidewater Landing project includes the Tidewater Stadium construction in addition to the surrounding parking and riverfront improvements on the west side of the Seekonk River. The riverfront improvements include the riverwalk from the National Grid property north to the subject Site ("The City property," AP 54 Lot 827) and finally terminating at Town Landing on the subject Site. The stadium project is located mostly on the National Grid parcel (AP 58 Lot 826) that is under separate permitting authorizations. The initial phase of the stadium work will utilize a portion of the Site for temporary construction access and staging.

As part of Phase IA, the Site will be cleared and graded with construction access along the river side of the property and temporary gravel parking areas. The gravel areas will provide parking for construction workers and placement of job trailers. The riverwalk constructed in Phase IA will incorporate the remedial action approved by the Rhode Island Department of Environmental Management (RIDEM) prior to the start of construction. Work on the Site may not begin until all approvals have been obtained from the RIDEM. This SMP is based on the following construction sequence as part of the Site work related to the overall project:

- Step 1: Construction of the stadium and associated structures on the National Grid site with the use of the subject Site for construction staging.

- Step 2: Construction of the riverwalk portion of the Site with associated landscaping areas connecting the Town Landing boat launch area to the riverwalk adjacent to the stadium.

- Step 3: Development of the Site as a mixed-use residential/retail building after the temporary stating for the stadium project is complete.

Refer to the construction specifications and drawings for details on the overall sequence for Phase IA and locations of the referenced areas. This SMP will apply to all soils encountered across the Site and includes the management of non-soil material such as debris, ash, and other materials that are intermixed with predominantly soil matrix to the extent they cannot be reasonably segregated.

Previous environmental investigations have documented the presence of widespread urban fill containing detectable concentrations of total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs), and certain metals (arsenic and lead) in soil within the proposed construction areas. Several areas had concentrations of one or more of these compounds above the RIDEM numeric criteria in the Remediation Regulations. The SMP will not apply to clean soils that may be imported to the Site during

development and does not address specific remediation activities that might be performed. The SMP is subject to the Limitations included in Appendix A.

1.1 INTENT AND APPLICABILITY

This SMP addresses general construction-related activities that are expected to disturb soil and/or require management of soil, field assessment of soil for management purposes, and characterization for waste disposal or re-use. The SMP applies to the entirety of the Site.

Other soil-related media that will be managed in accordance with this SMP includes soil mixed with anthropogenic debris (i.e., glass, concrete, wood, etc.) and miscellaneous urban fill materials. The SMP also addresses impacted or potentially impacted groundwater handling procedures as it is anticipated to be encountered during construction activities.

This SMP is not intended to address specific remediation activities that might be required. The intent is to guide general construction activities where soil disturbance is to occur and provide minimum health and safety requirements for working with potentially impacted soils. A Site-specific health and safety plan (HASP) that considers the contaminants of concern (COC) should be prepared by the individual Contractor prior to initiating work at the Site.

2. SITE CONDITIONS

The following section provides a summary of Site conditions for general knowledge pertaining to potential impacted soil to be encountered during construction activities. Refer to the construction specifications and plans for detailed information on sequencing and work areas.

2.1 SUBSURFACE CONDITIONS

The subsurface conditions described below are based on various borings completed at the property as part of previous environmental investigations, and geotechnical assessments completed by SLR and GZA in 2021.

Based on the geotechnical information the fill observed throughout the site ranged in thicknesses of 2 to 14 ft consisting of various concentrations of anthropogenic materials (i.e., concrete fragments, asphalt, ash, and coal) overlying native outwash deposits ranging from silty sand to sand and gravel. The thickest layers of fill were observed in the central portion of the site with piles of concrete, household refuse, glass, and metal within the area. Bedrock was encountered across the site ranging from 14 to 30 ftbg.

2.2 GROUNDWATER

On May 3, 2021, SLR measured the depth to water in the existing overburden groundwater monitoring wells and collected groundwater samples from four of wells to help understand the current groundwater

quality at the site. Groundwater depth across the site ranged from 1.62 ftbg (feet below grade) at MW-05 to 14.49 ftbg in SLR-MW-A. Groundwater flow was determined to be to eastward towards the Seekonk River.

Based on the groundwater laboratory results there were no detections for TPH, semi-volatile organic compounds (SVOCs), or volatile organic compounds (VOCs). Cyanide was detected in MW-01 at a concentration of 0.025 mg/l that is well below the regulatory criteria. Based on these results groundwater at the site does not appear to be impacted by an active release and will likely not require management outside of normal best management practices for development of the site.

2.3 ENVIRONMENTAL CONDITIONS

In May 2021, SLR conducted a supplemental site investigation consisting of the collection of soil and groundwater samples for laboratory analysis of contaminants of concern (COCs) documented in previous environmental investigations and based on the conclusions of the Phase I Environmental Site assessment (ESA) completed by SLR in 2021. These COCs included VOCs, SVOCs, TPH, metals, and to a lesser extent PCBs.

The results of the subsurface investigation build upon the conclusion of the RIDEM in the Remedial Decision Letter dated March 11, 2019, for the STRAP approval for remedial measures for the Subject Parcel for Phase I (repair of the river wall). This supplemental SIR was conducted to provide evaluation of the current conditions of the site on behalf of Fortuitous and due to a modification of the proposed development of the Site. The additional assessment indicated the environmental media has been sufficiently characterized to support the modified development plans for the Subject Site and in accordance with RIDEM Remediation Regulations.

Based on the supplemental data there are concentrations of COCs in soil, including arsenic, lead, TPH, and PAHs that exceed the applicable RIDEM numeric criteria (Residential Direct Exposure) in the Remediation Regulations. A copy of the draft SIR soil and groundwater summary tables and figures are provided for reference in Appendix B. In general, the exceedances were concentrated in soil samples collected from the layer of urban fill across the site. Most of the concentrations decreased with depth compared to deeper samples collected from the underlying outwash deposits of silty sand or sand and gravel except for TPH in one boring at 10 ftbg. Based on the results there does not appear to be a release creating a plume or vertical migration through the site. The sources of contamination are likely attributed to the historical placement of fill containing asphalt, ash and other anthropogenic material with substances intermixed within the fill.

The groundwater assessment was consistent with previous investigations. There were no exceedances of the RIDEM criteria for the COCs. A low-level of cyanide was detected above the in one well (FO-MW-09) near the southeastern boundary of the site, but well below the applicable criteria. Based on these results there appears to be no off-site or release areas on-site impacting groundwater quality at the Site.

These conclusions are consistent with previous investigations conducted at the Site and remedial response actions will be required to bring the site into compliance with the RIDEM Remediation

Regulations. SLR is currently in the process of obtaining RIDEM approvals for the remedial actions for the Site. This SMP is subject to be modified based on RIDEM final approval for the Site.

3. HEALTH AND SAFETY

The Contractor will be required to prepare a HASP covering all project Site work regulated by 29 CFR 1910.120(b)/1926.65(b) to be performed by the Contractor and all subcontractors under this Contract. The HASP will establish in detail, the protocols necessary for the recognition, evaluation, and control of anticipated hazards associated with each task to be performed. The HASP will address site-specific safety and health hazards of each phase of *Site* operation and include the requirements and procedures for employee protection. The level of detail provided in the HASP will be tailored to the type of work, complexity of operations to be performed, and hazards anticipated. Details about some activities may not be available when the initial HASP is prepared and submitted. Therefore, the HASP will address, in as much detail as possible, all anticipated tasks, their related hazards and anticipated control measures.

The HASP will interface with the Contractor's Safety and Health Program. Any portions of the Health and Safety Program that are referenced in the HASP should be included as appendices to the HASP. All topics regulated by the 29 CFR 1910.120(b)(4) and those listed below should be addressed in the HASP. Where the use of a specific topic is not applicable to the project, the HASP should include a statement to justify its omission or reduced level of detail and establish that adequate consideration was given the topic. The HASP should consider the potential for previously documented, Site-specific environmental contamination, including TPH, PAHs, arsenic, and lead.

3.1 SITE-WIDE HASP ELEMENTS

The following items should be included in the Contractor HASP associated with any project work at the *Site*:

a. Site Description and Contamination Characterization

The Contractor should provide a Site description and contaminant characterization in the HASP that meets the requirements of 29 CFR 1910.120/1926.65.

b. Safety and Health Risk Analysis/Activity Hazard Analysis

The HASP will address the safety and health hazards on this Site for every operation to be performed. The Contractor will review existing records and data to identify potential chemical and physical hazards associated with the Site and will evaluate their impact on field operations. Sources, concentrations (if known), potential exposure pathways, and other factors as noted in CFR 1910.120/126.65, paragraph (c)(7) employed to assess risk will be described. The Contractor will develop and justify action levels for implementation of engineering controls and personal protective equipment (PPE) upgrades and downgrades for controlling worker exposure to the identified hazards. If there is no permissible exposure limit (PEL) or published exposure level for an identified hazard, available information from other published studies may be used as guidance. Any modification of an established PEL must be fully documented.

The HASP will include a comprehensive section that discusses the tasks and objectives of the *Site* operations and logistics and resources required to complete each task. The hazards associated with each task will be identified. Hazard prevention techniques, procedures and/or equipment will be identified to mitigate each of the hazards identified.

c. Staff Organization, Qualifications and Responsibilities

The Contractor will assign responsibilities for safety activities and procedures. An outline or flow chart of the safety chain of command will be provided in the HASP. Qualifications, including education, experience, certifications, and training in safety and health for all personnel engaged in safety and health functions will be documented in the HASP. Specific duties of each on-*Site* team member should be identified. Typical team members may include, but are not limited to, Team Leader, Excavation Competent Person, *Site* Safety Officer, Security Officer, Record Keeper, Field Team Leader, and Field Team members.

The HASP will also include the name and qualifications of the individual proposed to serve as Health and Safety Officer (HSO). The HSO will have full authority to carry out and ensure compliance with the HASP. The Contractor will provide a competent HSO onsite who is capable of identifying existing and potential hazards in the surroundings or working conditions which are unsanitary, hazardous or dangerous to employees and who has authorization to take prompt corrective measures to eliminate or control them. The qualifications of the HSO will include completion of the Occupational Safety and Health Administration (OSHA) 40-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training, including current 8-hour refresher training, and 8-hour HAZWOPER supervisory training; a minimum of one year of working experience with the regulated compounds that have been documented to exist within Project limits; a working knowledge of federal and state safety regulations; specialized training or documented experience (one year minimum) in personal and respiratory protective equipment program implementation; the proper use of air monitoring instruments, air sampling methods and procedures; and certification training in first aid and CPR by a recognized, approved organization such as the American Red Cross.

The primary duties of the HSO will be those associated with worker health and safety. The Contractor's HSO responsibilities will be detailed in the written HASP and will include, but not be limited to the following:

i. Directing and implementing the HASP.

ii. Ensuring that all Project personnel have been adequately trained in the recognition and avoidance of unsafe conditions and the regulations applicable to the work environment to control or eliminate any hazards or other exposure to illness or injury (29 CFR 1926.21). All personnel will be adequately trained in procedures outlined in the Contractor's written HASP.

iii. Authorizing Stop Work Orders, which will be executed upon the determination of an imminent health and safety concern.

iv. Contacting the Contractor's HSM and the Engineer immediately upon the issuance of a Stop Work order when the HSO has made the determination of an imminent health and safety concern.

v. Authorizing work to resume, upon approval from the Contractor's HSM.

vi. Directing activities, as defined in the Contractor's written HASP, during emergency situations; and

vii. Providing personal monitoring where applicable, and as identified in the HASP.

d. Employee Training Assignments

The Contractor will develop a training program to inform employees, supplier's representatives, and official visitors of the special hazards and procedures (including PPE, its uses and inspections) to control these hazards during field operations. This program will be consistent with the requirements of 29 CFR 1910.120 and 29 CFR 1926.65.

e. Pre-Entry Briefings

The HASP will provide for pre-entry briefings to be held prior to initiating any *Site* activity and at such other times as necessary to alert workers to the potential for environmental hazards at the *Site* and ensure that employees are apprised of the HASP and that this plan is being followed.

f. Inspections/Audits

The HSM or HSO will conduct Inspections or audits to determine the effectiveness of the HASP. The Contractor will correct any deficiencies in the effectiveness of the HASP.

g. Communications

Written procedures for routine and emergency communications procedures will be included in the Contractor's HASP.

h. Confined Space Entry Procedures

Confined space entry is not anticipated as part of the scope of work.

i. Exposure Monitoring / Air Sampling Program

The Contractor will submit an Air Monitoring Plan as part of the HASP, specific to monitoring for airborne dust with the potential for containing lead above the PEL. This air monitoring plan will be consistent with 29 CFR 1910.120, paragraphs (b)(4)(ii)(E), (c)(6), and (h). The Contractor will identify specific air sampling equipment, locations, and frequencies in the air monitoring plan. Air and exposure monitoring requirements will be specified in the Contractor's HASP. The Contractor's will specify any other recommended exposure monitoring/air sampling requirements after a careful review of the contaminants of concern and planned *Site* activities.

If dust suppression techniques are unsuccessful in minimizing the presence of airborne dust, in accordance with the prescribed levels in Section 4.1.3, (i.e., dust levels measured at 0.1 – 0.5 mg/m^3 for over two consecutive hourly measurements), the Contractor will implement exposure monitoring under the Air Monitoring Plan.

j. Personal Hygiene, Personal Decontamination and Equipment Decontamination

In general, it is not anticipated that extraordinary equipment decontamination procedures will be required on the Site, except for when working in the disposal site boundary, as indicated in Section 4.3 of this SMP. Equipment will be decontaminated when work is completed and before equipment is moved off-Site. Soil will be physically removed/brushed from equipment and kept on the Site. Washing of equipment will be completed when the soil is observed to contain petroleum or other environmental contaminants. Decontamination facilities and procedures for PPE, sampling equipment, and heavy equipment will be discussed in detail in the HASP.

In the event obviously contaminated material is encountered at the Site during construction (e.g., petroleum product, highly odorous materials, etc.), Disposable PPE (i.e., disposable coveralls, gloves, etc.) that comes in direct contact with hazardous or potentially hazardous material will be placed into 55-gallon USDOT 17-H drums and disposed of in accordance with federal, state, and local regulations. The drums will be temporarily staged and secured within a separate area of the *Site* until the material is appropriately disposed.

k. Emergency Equipment and First Aid Requirements

The Contractor will provide appropriate emergency first aid kits and equipment suitable to treat exposure to the hazards identified, including chemical agents. The Contractor will provide personnel that have certified first aid/CPR training onsite at all times during site operations.

l. Emergency Response Plan and Spill Containment Program

The Contractor will establish procedures in order to take emergency action in the event of immediate hazards (i.e., a chemical agent leak or spill, fire or personal injury). Personnel and facilities supplying support in emergency procedures will be identified. The emergency equipment to be present on-site and the Emergency Response Plan procedures, as required 29 CFR 1910.120, paragraph (1)(1)(ii) will be specified in the Emergency Response Plan. The Emergency Response Plan will be included as part of the

HASP. This Emergency Response Plan will include written directions to the closest hospital as well as a map showing the route to the hospital.

m. Logs, Reports and Record Keeping

The Contractor will maintain safety inspections, logs, and reports, accident/incident reports, medical certifications, training logs, monitoring results, etc. All exposure and medical monitoring records are to be maintained according to 29 CFR 1910 and 29 CFR 1926. The format of these logs and reports will be developed by the Contractor to include training logs, daily logs, weekly reports, safety meetings, medical surveillance records, and a phase-out report. These logs, records, and reports will be maintained by the Contractor and be made available to the Engineer. The Contractor will immediately notify the Engineer of any accident/incident. Within two working days of any reportable accident, the Contractor will complete and submit to the Engineer an accident report.

3.2 ADDITIONAL HASP ELEMENTS

In addition to the safety elements indicated above, the health and safety procedures presented in the following subsections will be implemented due to the documented concentrations of COCs above regulatory criteria across the site.

a. Training

The HASP will include a list of personnel expected to be engaged in work within the Site boundary and certify that said personnel have completed the educational requirements stipulated in 29 CFR 1910.120 and 29 CFR 1926.65, are currently monitored under a medical surveillance program (Part c. below) in compliance with those regulations, and that they are fit for work under “Level C” conditions.

b. Personal Protective Equipment

The plan should include the requirements and procedures for employee protection and should include a detailed section on respiratory protection. The Contractor will describe in detail and provide appropriate PPE to ensure that workers are not exposed to levels greater than the action level for identified hazards for each operation stated for each work zone. The level of protection will be specific for each operation and will be in compliance with all requirements of 29 CFR 1910 and 29 CFR 1926.

c. Medical Surveillance Program

All on-site Contractor personnel engaged in 29 CFR 1910.120/1926.65 operations within the Site boundary will have medical examinations meeting the requirements of 29 CFR 1910.120(f) prior to commencement of work. The HASP will include certification of medical evaluation and clearance by the physician for each employee engaged in 29 CFR 1910.120/1926.65 operations at the disposal site.

d. Site Layout and Control

The HASP will include a map, work zone delineation (e.g., support, contamination, reduction, etc.), on/off-site communications, disposal site access controls, and security (physical and procedural).

3.3 HASP IMPLEMENTATION

The Contractor will implement and maintain the HASP throughout the performance of work. In areas identified as having a potential risk to worker health and safety, and in any other areas deemed appropriate by the HSO, the Contractor will be prepared to immediately implement the appropriate health and safety measures, including but not limited to the use of PPE, and engineering and administrative controls.

4. SOIL MANAGEMENT PLAN

This section provides the details for Site controls and soil management that the Contractor will be responsible for through the duration of the project. Refer to project construction-related plans and specifications for details on Site development. These controls will be implemented to limit the potential for a release of environmental hazards during the Project, and potential human exposure to potential hazards, impacted soil within the site boundary, or other impacted environmental media (soil and groundwater) that may be encountered during construction activities as part of the larger project. The controls include the use of appropriate and applicable best management practices (BMPs), good housekeeping at the construction Site, and worker awareness training to minimize the potential for uncontrolled exposures or releases to the environment.

The Owner or Developer will engage a qualified environmental professional to conduct observations of excavation activities within the site boundary.

4.1 SITE CONTROLS

4.1.1 EROSION CONTROLS

Erosion controls should be installed according to construction specifications and inspected by the Engineer prior to ground disturbance at the Site. Erosion controls should be inspected routinely prior to daily activities and following precipitation events as a requirement of National Pollutant Discharge Elimination System (NPDES) General Permit Notice of Intent.

4.1.2 SITE SECURITY

Temporary fencing must be installed around the Site prior to any ground-breaking activities in accordance with project plans. The Contractor will be responsible for Site security and must limit the entrances to the

Site. The entrance must be secured during non-working hours with posted signs restricting access and notifying the area is a restricted construction zone.

4.1.3 DUST CONTROL

Best Management Procedures (BMPs) will be incorporated to minimize the potential for contaminants to be released in particulate form during any work-related activities that may disturb Site soils (i.e. clearing, grading, or excavation). Dust control measures will be implemented if dust is observed during such activities. These measures include the use of water to pre-wet soil to prevent airborne migration when visible dust is observed near the Site boundary.

Based on previous environmental investigations COCs for the Site include TPH, PAHs, arsenic, and lead in soil; therefore, perimeter dust monitoring will be required to monitor for potential off-Site impacts during soil disturbance activities. Dust must be monitored in real-time with a recordable device(s). The Contractor will notify the Engineer prior to mobilization to the Site, of the make and model of the dust monitor(s) that will be used for perimeter monitoring. Dust monitor(s) will be placed prior to daily field activities that include disturbance of soil, calibrated daily before use based on manufacturer's specifications, placed in a location downwind of the activity based on wind direction, and moved, if necessary, based on a change in conditions. Dust levels will be recorded hourly or periodically depending on Site activities, recorded on daily logs, and retained by the Contractor for the duration of the project.

Work will be stopped if dust levels reach above 5 milligrams per cubic meter (mg/m^3) as an action level. The temporary work stoppage will continue until the Contractor mitigates dust generation with the measures previously mentioned. The following action levels will be implemented based on dust levels at monitoring location:

- Background – 0.1 mg/m^3: No Action
- 0.1 – 0.5 mg/m^3 for over two consecutive hourly measurements: Notify Engineer and Site personnel, Contractor will implement dust suppression and exposure monitoring under the Air Monitoring Plan (see Section 3.1).
- >5 mg/m^3 (visible dust) for over two consecutive hourly measurements: Notify Engineer and Site personnel, Contractor to implement work stoppage to review modifications to Site activities and implementation of additional dust control measures.

4.2 EXCAVATION AND SOIL HANDLING

During excavation operations, the Contractor will notify the Engineer (or designated environmental professional (EP)) immediately if there is evidence of apparent soil contamination different than that identified in this SMP. Such conditions may include, but not be limited to, evidence of sheen on groundwater, free-phase petroleum product in soil or groundwater, petroleum odors, soil staining, underground storge tanks, drums, or other sub-structures. If such conditions are discovered, the Contractor will immediately stop work in the area of concern until the Engineer has evaluated the conditions and provided the Contractor express approval to proceed.

4.2.1 EXCAVATION NOTIFICATIONS

The Contractor will notify the Engineer in writing no less than three days prior to any ground disturbance activities. The Engineer will coordinate with the Contractor for an EP to conduct oversight of all excavation activities within the Site boundary.

The written notice will include:

- Schedule start date of the ground disturbance
- Name and credentials of the operator and personnel that will be conducting the activities
- Contact information for coordination of excavation activities

EP oversight is critical to help establish proper implementation of this SMP, the associated RAWP, and to meet regulatory requirements of the RIDEM. The EP will assist the Contractor in identification of impacted soil and implementation of field monitoring, if necessary.

4.2.2 FIELD SCREENING AND SOIL SAMPLING

The Contractor will not be required to conduct field screening or sampling of soil at the Site.

4.2.3 TEMPORARY WASTE STOCKPILES

If applicable, temporary waste stockpiles (TWSs) will be made during soil excavation and planned relocation activities at the Site. Large pieces of stone, concrete, asphalt, or other anthropogenic debris should be generally removed from the soil to the extent practical and be stockpiled separately for off-Site disposal as standard solid waste material or construction debris.

Any single stockpile should be, to the extent practical, no larger than approximately 100 cubic yards in size and should be located nearby to the excavation from which it was generated. Additionally, TWSs must be located within the fenced area of the Site limits and placed to prevent ponding of water in, on, or in contact with the soil piles. Stockpiles in TWSs should be no larger than approximately 500 cubic yards in size. Plastic sheeting (minimum of 10-mil thickness) will be used to cover the TWSs at all times, except when the soil is being handled. The plastic sheeting will be adequately secured with sandbags or other means to prevent the sheeting from being dislodged. The stockpiles will be inspected prior to the start of the day and at the end of the day to ensure covering is property maintained.

To the extent practical, excavated soil will be used as backfill material in the general area in which it was generated. No material is to be transported off-Site for disposal without authorization from the Engineer.

4.2.4 EXCAVATION CONTROL

A Competent Person will oversee excavation work as required by OSHA 1926.650. Entry into any excavation is authorized only in accordance with the HASP and safe work practices, and under the observation of the Competent Person. Open excavations will be demarcated with caution tape during

periods of inactivity and at the end of each workday to help prevent fall ins. Any excavated soil not re-used at the end of the day will be covered with plastic sheeting with sandbags placed to prevent the sheeting from being dislodged.

4.2.5 TEMPORARY CONSTRUCTION DEWATERING

Based on previous measured depths to groundwater at the Site, it is not anticipated that groundwater will be encountered during this phase of work at the Site. Therefore, construction dewatering is not anticipated. Groundwater may be encountered during the final development of the buildings, which is not included as part of this SMP. If groundwater is encountered the Contractor shall notify the Engineer immediately.

4.2.6 EXCAVATION ACTIVITIES

Prior to any ground disturbance the Contractor will notify the Engineer as detailed in Section 4.2.1. A qualified environmental professional will be retained by the Owner/Developer to be on-site during ground disturbance activities for oversight and to ensure work is conducted in accordance with the approved RAWP and this SMP.

Any excavated soil not re-used within the Site boundary will be temporary stored in a TSW as detailed in Section 4.2.3.

Any personnel working within the Site are required to review the HASP and the Contractor will retain daily work logs through the project. In general, the level of protection that will be used by workers within the Site will consist of Level D and the following equipment:

- Appropriate work boots
- Eye protection (safety glasses)
- Nitrile gloves when working with impacted soils
- Protective working gloves when outside of impacted soils or handling debris
- Hard hat.

4.3 DECONTAMINATION

The Contractor will perform decontamination of on-site heavy equipment following excavation activities within the Site to minimize potential for cross-contamination. Physical removal, such as dry brushing may be adequate, unless visual or olfactory observations of gross contamination are encountered. In that instance, high-pressure water, or a steam cleaner should be used for equipment decontamination prior to removal from the disposal site boundary. All decontamination materials will be disposed of as controlled material with fluids discharged to the ground surface within the Site boundary.

Additionally, all equipment will be decontaminated before leaving the Site. A vehicle anti-tracking pad consisting of process gravel or other suitable material will be constructed at the Site entrance. The anti-tracking pad will help to minimize tracking of material from the site onto the surrounding streets.

4.4 ADDITIONAL WASTE CHARACTERIZATION

If excess soils are generated during excavation that cannot be re-used on-Site, then they will be stockpiled in the TWS as detailed in Section 4.2.3. The Contractor will notify the Engineer when all excavation and backfill activities are completed and provide an estimate for soils remaining in the stockpiles. The Engineer will coordinate Waste Characterization with appropriate frequency, depending on the volume of material and requirements of the accepting disposal facility. Based on the site design, excess soil is not anticipated as part of this project.

Due to the nature of the Site and results of the environmental investigations, off-site disposal will require waste characterization results prior to transportation off-Site. No soil will be transported off-Site without first being characterized by the Engineer.

4.5 DEMARCATION LAYER AND ENGINEERED CONTROL

The application of the engineered control will be part of the final approved remedial action detailed in the RAWP (not included as part of this SMP). The remedial action at the site will include a combination of soil removal, relocation and capping with clean fill or use of impervious surfaces to reduce the potential for direct exposure to soil containing COCs. The primary risk associated with the Site is the potential for direct exposure to the impacted soil by the public. For the purposes of this SMP this remedial action is included, however, it may be modified based upon final RIDEM approval.

During the initial construction phase the Site would be utilized for construction staging, followed by construction of the riverwalk near the waterfront, and eventually final redevelopment of the site.

The primary risk associated with the site remains the potential for direct exposure to soil by site users, including construction personnel, and public living in the surrounding area. Access to the Site from the start of construction through the final development of the site will be limited with temporary fencing, and construction entrances.

The construction of the engineered cap (i.e. demarcation layer) will mitigate exposure to site-wide soil by creating a physical barrier between soil and human receptors. The demarcation layer will mitigate risks for air-born migration of contaminants off-site through dust and reduce potential for off-site migration from stormwater runoff to the river.

The soil capping will consist of the following activities:

- Temporary construction access roads will be constructed of clean imported gravel or fill overlying a demarcation layer consisting of geotextile fabric. The roads will remain in-place and maintained until final development actions are completed.

- In landscaped areas, at least one foot of clean fill overlying a demarcation layer (i.e., orange geotextile fabric, or other material that will act as a visual boundary), and at least two-feet of clean fill will be placed from base of roots for tree plantings or potted vegetation without the demarcation layer.
- New paved or other impervious surface (i.e., concrete patio, or walkways) that prevents access to the underlying soil to be maintained.

- New buildings, foundations or other permanent structures that results in the underlying soil to be inaccessible or isolated.

The capping specifications will be provided in the RAWP addendum as part of the new proposed development for the project, in accordance with Section 9.0 of the Remediation Regulations. Refer to the construction plans and specifications for details on the capping materials.

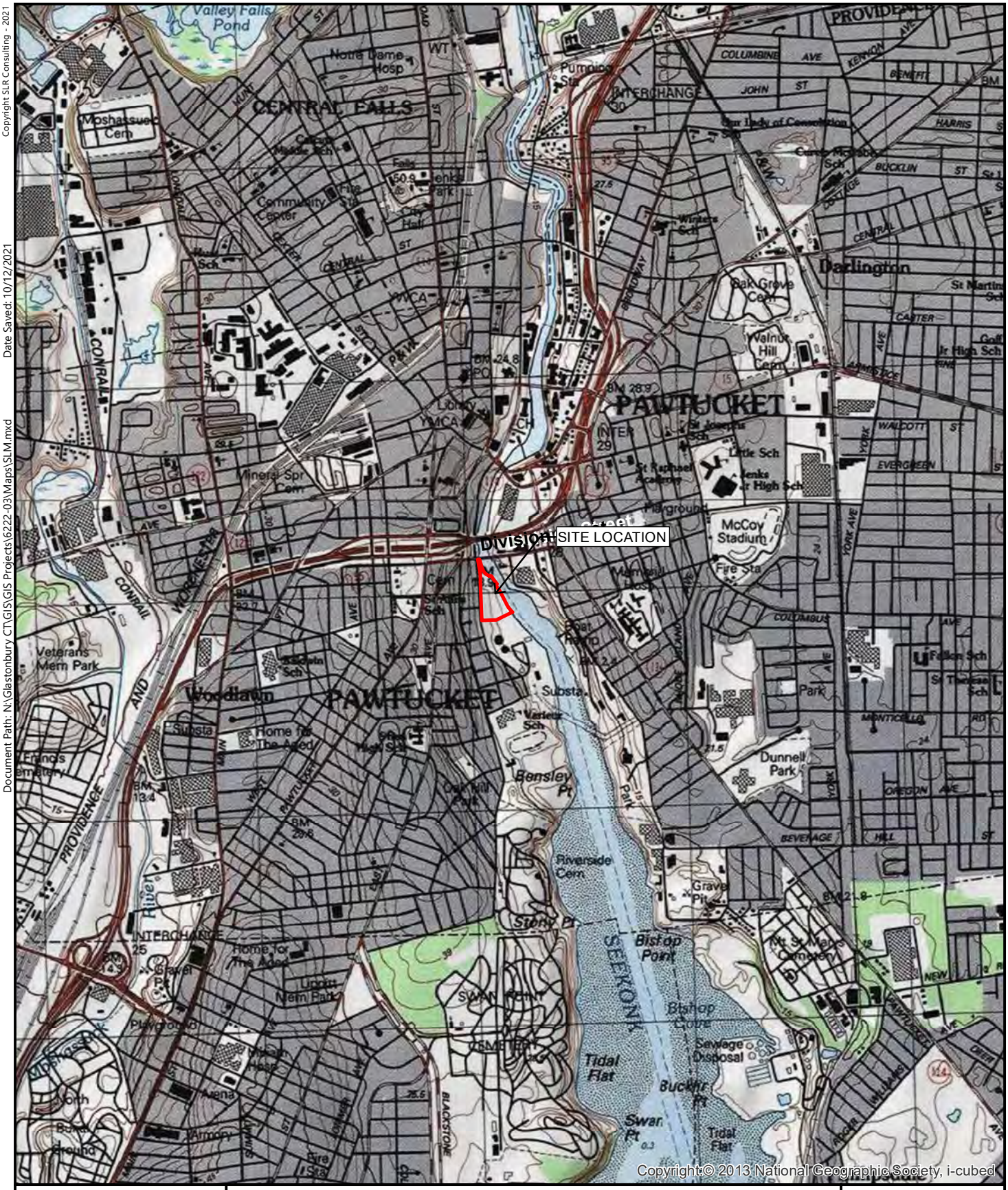
Locations of the site in which no site improvements are proposed, between the construction staging and final development, will be restricted to those areas through the installation of fencing, existing thick vegetation, or other restrictive barriers. A temporary soil cap would only be installed where construction access and staging areas are located until final development of the riverwalk, and remaining portion of the property occurs.

FIGURES

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Document Path: N:\Glastonbury CT\GIS\GIS Projects\6222-03\Maps\SLM.mxd



SLR

45 GLASTONBURY BLVD
1ST FL
GLASTONBURY, CT 06033
860.400.5680

SITE LOCATION MAP

TOWN LANDING PROPERTY
FORTUITOUS TIDEWATER
TAFT STREET
PAWTUCKET, RHODE ISLAND

N

0 500 1,000
Feet

SCALE 1 " = 2,000 '

DATE 10/12/2021

16222.0005
PROJ. NO.

FIG. 1

APPENDIX A

LIMITATIONS ON WORK PRODUCT

Town Landing Property
Taft Street

Fortuitous Tidewater OZ, LLC

LIMITATIONS

The services described in this work product were performed in accordance with generally accepted professional consulting principles and practices. No other representations or warranties, expressed or implied, are made. These services were performed consistent with our agreement with our client. This work product is intended solely for the use and information of our client unless otherwise noted. Any reliance on this work product by a third party is at such party's sole risk.

Opinions and recommendations contained in this work product are based on conditions that existed at the time the services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. The data reported and the findings, observations, and conclusions expressed are limited by the scope of work. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this work product.

The purpose of an environmental assessment is to reasonably evaluate the potential for, or actual impact of, past practices on a given site area. In performing an environmental assessment, it is understood that a balance must be struck between a reasonable inquiry into the environmental issues and an appropriate level of analysis for each conceivable issue of potential concern. The following paragraphs discuss the assumptions and parameters under which such an opinion is rendered.

No investigation can be thorough enough to exclude the presence of hazardous materials at a given site. If hazardous conditions have not been identified during the assessment, such a finding should not therefore be construed as a guarantee of the absence of such materials on the site, but rather as the result of the services performed within the scope, practical limitations, and cost of the work performed.

Environmental conditions that are not apparent may exist at the site. Our professional opinions are based in part on interpretation of data from a limited number of discrete sampling locations and therefore may not be representative of the actual overall site environmental conditions.

The passage of time, manifestation of latent conditions, or occurrence of future events may require further study at the site, analysis of the data, and/or reevaluation of the findings, observations, and conclusions in the work product.

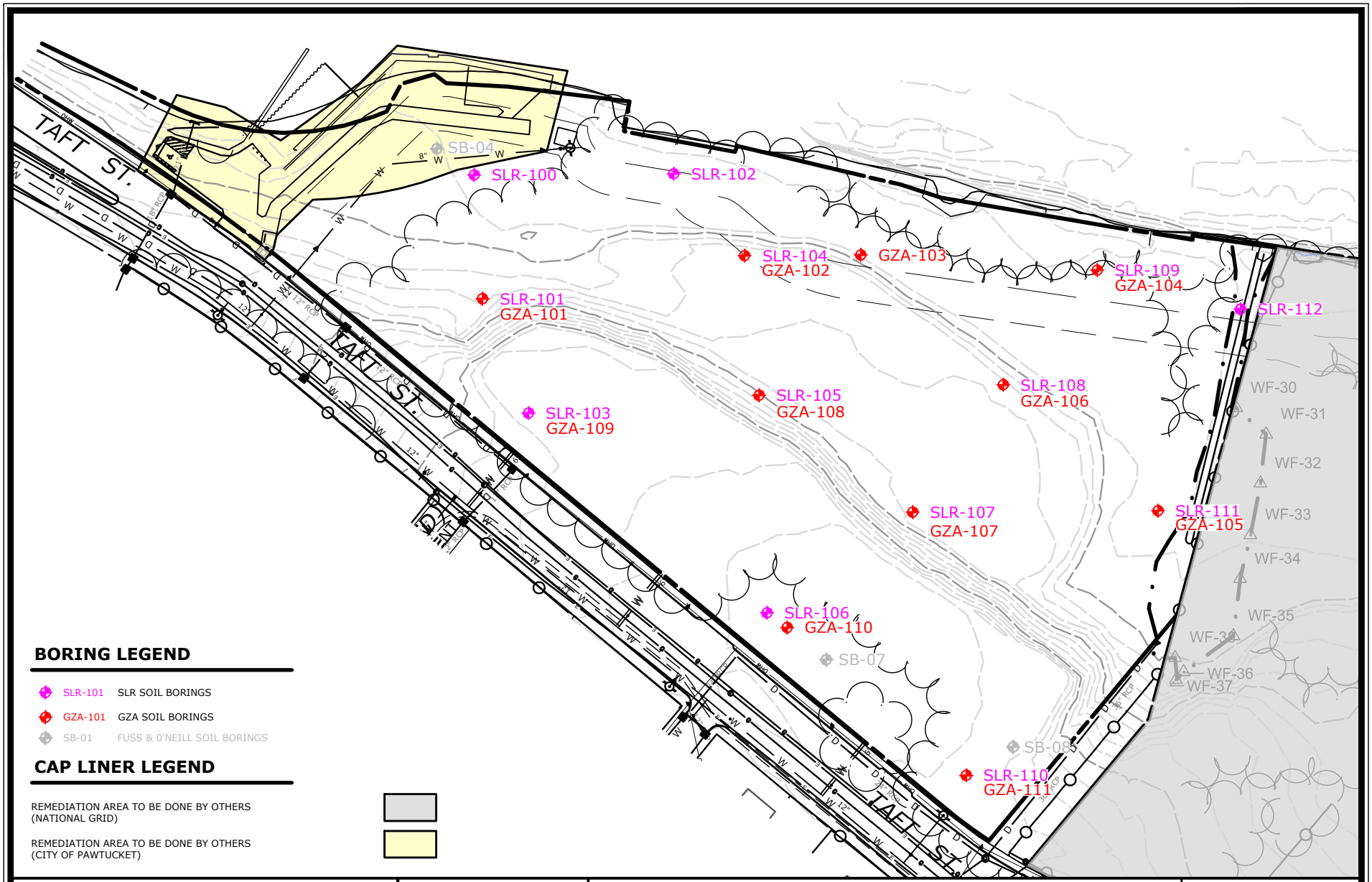
This work product presents professional opinions and findings of a scientific and technical nature. The work product will not be construed to offer legal opinion or representations as to the requirements of, nor the compliance with, environmental laws rules, regulations, or policies of federal, state or local governmental agencies.

APPENDIX B

DRAFT SIR SUMMARY TABLES & FIGURES

Town Landing Property
Taft Street

Fortuitous Tidewater OZ, LLC



SLR
45 GLASTONBURY BOULEVARD, 1ST FLOOR
GLASTONBURY, CT 06033
860.400.5680
SLRCONSULTING.COM

DATE	10/11/2021
SCALE	1"=100'
PROJ. NO.	16222.0005
DESIGNED	PS
DRAWN	JDL
CHECKED	PS

SUBSURFACE INVESTIGATION - GZA/SLR

TOWN LANDING PROPERTY
FORTUITOUS TIDEWATER

TAFT STREET
PAWTUCKET, RHODE ISLAND

0' 50' 100'
0 1/2" 1"

PROJECT PHASE:

DRAWING NAME:

FIG. 3

Drawing: W:\CADDESIGN\16222-03-DE\CAD\NONPLANSET\TO PETE SHEA\2021-09-14\TW-EXCOND.DWG Layout Tab:FIG 3
Plotted by: JLUSTER On this date: Mon, 2021 October 11 - 10:32pm

Table 2
Summary of Soil Results
Taft Street (Town Landing)
Pawtucket, Rhode Island

Parameter	Rhode Island Remediation Regulations				SLR-101 (3-4 ft)	SLR-101 (4-6 ft)	SLR-102 (0.5-2.5 ft)	SLR-102 (4-6 ft)	SLR-103 (0-1.5 ft)	SLR-103 (1.5-3.5 ft)	SLR-104 (2-4 ft)	SLR-104 (10-12 ft)	SLR-105 (8-10 ft)	SLR-105 (11.5-12.5 ft)	SLR-106 (0.5-2.5 ft)	SLR-106 (3-5 ft)	SLR-107 (10-11.5 ft)	SLR-107 (13-15 ft)	SLR-108 (8.5-9.5 ft)	DUP001 (SLR-108) (8.5-9.5 ft)	SLR-108 (11.5-12 ft)
	RDEC	I/CDEC	GA LC	GB LC	4/2/2021	4/2/2021	4/5/2021	4/5/2021	4/5/2021	4/5/2021	4/2/2021	4/2/2021	4/2/2021	4/2/2021	4/5/2021	4/5/2021	4/2/2021	4/2/2021	4/2/2021	4/2/2021	4/2/2021
Total Petroleum Hydrocarbons (mg/Kg)																					
TPH (C9-C36)	500	2,500	500	2,500	430	---	390	---	110	ND<9.3	240	130	440	ND<9.1	140	---	**570**	ND<9.8	25	58	---
Total Metals (mg/Kg)																					
Arsenic	7.0	7.0	~	~	5.1	ND<3.7	**25**	**7.7**	**7.7**	6.3	3.7	**38**	**16**	**78**	5.7	ND<3.4	6.5	ND<4.1	6.4	6	3.6
Barium	5,500	10,000	~	~	42	16	130	34	23	14	36	61	170	34	42	14	32	35	33	32	22
Cadmium	39	1,000	~	~	ND<0.36	ND<0.37	0.65	ND<0.38	ND<0.37	ND<0.37	ND<0.36	ND<0.42	ND<0.43	ND<0.37	ND<0.38	ND<0.34	ND<0.38	ND<0.41	ND<0.39	ND<0.39	ND<0.35
Chromium	1,400/ 390*	10,000/ 10,000*	~	~	13	5.8	6.2	10	8.6	7.2	9.6	6.2	6.2	15	10	6.2	7.3	14	8.6	9.1	8.7
Lead	150	500	~	~	62	5.8	45	8.8	13	4	73	39	71	14	92	4.2	73	9.6	38	34	8.3
Mercury	23	610	~	~	0.055	ND<0.029	0.084	ND<0.029	ND<0.028	ND<0.028	0.11	0.054	0.056	ND<0.028	0.054	ND<0.027	0.065	0.038	0.081	0.063	ND<0.027
Selenium	390	10,000	~	~	ND<3.6	ND<3.7	ND<4.1	ND<3.8	ND<3.7	ND<3.7	ND<3.6	ND<4.2	ND<4.3	ND<3.7	ND<3.8	ND<3.4	ND<3.8	ND<4.1	ND<3.9	ND<3.9	ND<3.5
Silver	200	10,000	~	~	ND<0.36	ND<0.37	ND<0.41	ND<0.38	ND<0.37	ND<0.37	ND<0.36	ND<0.42	ND<0.43	ND<0.37	ND<0.38	ND<0.34	ND<0.38	ND<0.41	ND<0.39	ND<0.39	ND<0.35
Leachable Metals by Synthetic Precipitation Leaching Procedure (ug/l)																					
Arsenic	~	~	~	~	---	---	---	---	---	---	---	---	---	12	---	---	---	---	---	---	---
Lead	~	~	40	~	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Polychlorinated Biphenyls (PCBs) by Soxhlet Extraction (mg/Kg)																					
Total PCBs (None Detected)	10	10	10	10	---	---	---	---	ND	---	ND	---	ND	---	---	---	ND	---	---	---	---
Semi-Volatile Organic Compounds (mg/Kg)																					
1-Methylnaphthalene	~	~	~	~	ND<0.19	---	0.71	---	ND<0.19	---	ND<0.18	---	0.37	---	ND<0.19	---	ND<0.20	---	ND<0.20	ND<0.20	---
2-Methyl naphthalene	123	10,000	~	~	0.44	ND<0.20	1.1	ND<0.20	ND<0.19	ND<0.19	ND<0.18	ND<0.21	0.81	ND<0.19	ND<0.19	ND<0.18	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.18
Acenaphthene	43	10,000	~	~	ND<0.19	ND<0.20	ND<0.21	ND<0.20	ND<0.19	ND<0.19	0.45	ND<0.21	ND<0.21	ND<0.19	0.2	ND<0.18	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.18
Anthracene	35	10,000	~	~	0.20	ND<0.20	0.76	ND<0.20	0.6	ND<0.19	1.1	0.24	0.27	ND<0.19	0.32	ND<0.18	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.18
Benzo(a)anthracene	0.9	7.8	~	~	0.82	ND<0.20	5.1	ND<0.20	1.4	ND<0.19	2.0	0.67	0.78	ND<0.19	2.1	ND<0.18	ND<0.20	ND<0.20	ND<0.20	0.2	ND<0.18
Benzo(a)pyrene	0.4	0.8	240	~	**0.81**	ND<0.20	**3.2**	ND<0.20	**1.4**	ND<0.19	**1.7**	0.45	0.61	ND<0.19	**2.4**	ND<0.18	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.18
Benzo(b)fluoranthene	0.9	7.8	~	~	1.1	ND<0.20	6.1	ND<0.20	1.8	ND<0.19	2.4	0.75	1.4	ND<0.19	2.9	ND<0.18	0.32	ND<0.20	ND<0.20	0.23	ND<0.18
Benzo(g,h,i)perylene	0.8	10,000	~	~	0.40	ND<0.20	1.1	ND<0.20	0.73	ND<0.19	0.78	0.22	0.34	ND<0.19	1.2	ND<0.18	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.18
Benzo(k)fluoranthene	0.9	78	~	~	0.43	ND<0.20	2.1	ND<0.20	0.75	ND<0.19	0.89	0.28	0.41	ND<0.19	1.2	ND<0.18	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.18
Carbazole	~	~	~	~	ND<0.19	---	0.8	---	0.41	---	0.77	---	ND<0.21	---	0.19	---	ND<0.20	---	ND<0.20	ND<0.20	---
Chrysene	0.4	780	~	~	0.87	ND<0.20	6.2	ND<0.20	1.5	ND<0.19	2.0	0.66	1.4	ND<0.19	2.2	ND<0.18	0.32	ND<0.20	ND<0.20	0.24	ND<0.18
Dibenz(a,h)anthracene	0.4	0.8	~	~	ND<0.19	ND<0.20	0.71	ND<0.20	0.21	ND<0.19	0.24	ND<0.21	ND<0.21	ND<0.19	0.33	ND<0.18	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.18
Dibenzofuran	~	~	~	~	ND<0.37	---	ND<0.41	---	ND<0.38	---	0.45	---	ND<0.43	---	ND<0.39	---	ND<0.40	---	ND<0.39	ND<0.40	---
Fluoranthene	20	10,000	~	~	1.5	ND<0.20	8	ND<0.20	3.3	ND<0.19	5.0	1.3	1.5	ND<0.19	3.9	ND<0.18	0.40	ND<0.20	ND<0.20	0.47	ND<0.18
Fluorene	28	10,000	~	~	ND<0.19	ND<0.20	0.25	ND<0.20	0.29	ND<0.19	0.57	ND<0.21	ND<0.21	ND<0.19	ND<0.19	ND<0.18	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.18
Indeno(1,2,3-cd)pyrene	0.9	7.8	~	~	0.43	ND<0.20	1.6	ND<0.20	0.82	ND<0.19	0.89	0.25	0.38	ND<0.19	1.4	ND<0.18	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.18
Naphthalene	54	10,000	0.8	~	0.23	ND<0.20	0.79	ND<0.20	0.24	ND<0.19	ND<0.18	ND<0.21	0.44	ND<0.19	0.19	ND<0.18	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.18
Phenanthrene	40	10,000	~	~	0.92	ND<0.20	4.1	ND<0.20	2.6	ND<0.19	5.8	0.93	1.7	ND<0.19	2.3	ND<0.18	0.38	ND<0.20	ND<0.20	0.48	ND<0.18
Pyrene	13	10,000	~	~	1.3	ND<0.20	5.1	ND<0.20	2.4	ND<0.19	3.6	0.90	1.1	ND<0.19	3.4	ND<0.18	0.33	ND<0.20	ND<0.20	0.4	ND<0.18
Volatile Organic Compounds (mg/Kg)																					
1,2,4-Trimethylbenzene	~	~	~	~	0.094	---	ND<0.13	---	ND<0.087	---	ND<0.0019	---	ND<0.092	---	ND<0.078	---	ND<0.10	---	ND<0.082	ND<0.099	---
Ethylbenzene	71	10,000	27	62	0.071	---	ND<0.13	---	ND<0.087	---	ND<0.0019	---	ND<0.092	---	ND<0.078	---	ND<0.10	---	ND<0.082	ND<0.099	---
Methyl Cyclohexane	~	~	~	~	ND<0.067	---	ND<0.13	---	ND<0.087	---	ND<0.0019	---	ND<0.092	---	ND<0.078	---	ND<0.10	---	ND<0.082	ND<0.099	---
Naphthalene	54	10,000	0.8	~	ND<0.13	---	ND<0.26	---	1.1	---	ND<0.0039	---	ND<0.18	---	ND<0.16	---	ND<0.21	---	ND<0.16	ND<0.20	---
Tetrachloroethylene	12	110	0.1	4.2	ND<0.067	---	ND<0.13	---	ND<0.087	---	ND<0.0019	---	ND<0.092	---	ND<0.078	---	0.22	---	ND<0.082	ND<0.099	---
Toluene	190	10,000	32	54	0.12	---	ND<0.13	---	ND<0.087	---	ND<0.0019	---	ND<0.092	---	ND<0.078	---	ND<0.10	---	ND<0.082	ND<0.099	---
Total Xylenes	110	10,000	540	~	0.15	---	ND	---	ND	---	ND	---	ND	---	ND	---	ND	---	ND	ND	---
Trichloroethylene	13	520	0.2	20	ND<0.067	---	ND<0.13	---	ND<0.087	---	ND<0.0019	---	ND<0.092	---	ND<0.078	---	0.13	---	ND<0.082	ND<0.099	---

Table 2
Summary of Soil Results
Taft Street (Town Landing)
Pawtucket, Rhode Island

Parameter	Rhode Island Remediation Regulations				SLR-109 (0.5-2 ft) 4/2/2021	SLR-109 (2.5-4.5 ft) 4/2/2021	SLR-110 (0.5-2.5 ft) 4/5/2021	SLR-110 (4-6 ft) 4/5/2021	SLR-111 (0.5-2.5 ft) 4/2/2021	SLR-111 (6-8 ft) 4/2/2021	SLR-HA-112 (0-0.5 ft) 4/5/2021
	RDEC	I/CDEC	GA LC	GB LC							
Total Petroleum Hydrocarbons (mg/Kg)											
TPH (C9-C36)	500	2,500	500	2,500	85	---	140	ND<9.7	100	ND<10	110
Total Metals (mg/Kg)											
Arsenic	7.0	7.0	~	~	**8.2**	4.4	**7.6**	4.1	**37**	4.5	5.7
Barium	5,500	10,000	~	~	47	22	84	25	53	36	13
Cadmium	39	1,000	~	~	ND<0.37	ND<0.36	ND<0.39	ND<0.38	ND<0.39	ND<0.40	ND<0.43
Chromium	1,400/ 390*	10,000/ 10,000*	~	~	9.5	13	10	9.8	9.2	14	9.7
Lead	150	500	~	~	60	11	180	6.4	85	9.7	23
Mercury	23	610	~	~	0.13	ND<0.028	0.26	ND<0.030	0.083	ND<0.031	ND<0.032
Selenium	390	10,000	~	~	ND<3.7	ND<3.6	ND<3.9	ND<3.8	ND<3.9	ND<4.0	ND<4.3
Silver	200	10,000	~	~	ND<0.37	ND<0.36	ND<0.39	ND<0.38	ND<0.39	ND<0.40	ND<0.43
Leachable Metals by Synthetic Precipitation Leaching Procedure (ug/l)											
Arsenic	~	~	~	~	---	---	---	---	---	---	---
Lead	~	~	40	~	---	---	83	---	---	---	---
Polychlorinated Biphenyls (PCBs) by Soxhlet Extraction (mg/Kg)											
Total PCBs (None Detected)	10	10	10	10	---	---	ND	---	ND	---	ND
Semi-Volatile Organic Compounds (mg/Kg)											
1-Methylnaphthalene	~	~	~	~	ND<0.18	---	ND<0.19	---	ND<0.20	ND<0.21	ND<0.22
2-Methyl naphthalene	123	10,000	~	~	ND<0.18	ND<0.18	ND<0.19	ND<0.20	ND<0.20	ND<0.21	ND<0.22
Acenaphthene	43	10,000	~	~	ND<0.18	ND<0.18	ND<0.19	ND<0.20	ND<0.20	ND<0.21	ND<0.22
Anthracene	35	10,000	~	~	ND<0.18	ND<0.18	0.2	ND<0.20	ND<0.20	ND<0.21	ND<0.22
Benzo(a)anthracene	0.9	7.8	~	~	ND<0.18	ND<0.18	0.9	ND<0.20	ND<0.20	ND<0.21	0.3
Benzo(a)pyrene	0.4	0.8	240	~	ND<0.18	ND<0.18	**0.93**	ND<0.20	ND<0.20	ND<0.21	0.31
Benzo(b)fluoranthene	0.9	7.8	~	~	0.21	ND<0.18	1.3	ND<0.20	0.2	ND<0.21	0.48
Benzo(g,h,i)perylene	0.8	10,000	~	~	ND<0.18	ND<0.18	0.46	ND<0.20	ND<0.20	ND<0.21	ND<0.22
Benzo(k)fluoranthene	0.9	78	~	~	ND<0.18	ND<0.18	0.45	ND<0.20	ND<0.20	ND<0.21	ND<0.22
Carbazole	~	~	~	~	ND<0.18	---	ND<0.19	---	ND<0.20	ND<0.21	ND<0.22
Chrysene	0.4	780	~	~	0.23	ND<0.18	1.0	ND<0.20	0.28	ND<0.21	0.38
Dibenz(a,h)anthracene	0.4	0.8	~	~	ND<0.18	ND<0.18	ND<0.19	ND<0.20	ND<0.20	ND<0.21	ND<0.22
Dibenzofuran	~	~	~	~	ND<0.37	---	ND<0.39	---	ND<0.39	ND<0.42	ND<0.43
Fluoranthene	20	10,000	~	~	0.29	ND<0.18	1.7	ND<0.20	0.20	ND<0.21	0.64
Fluorene	28	10,000	~	~	ND<0.18	ND<0.18	ND<0.19	ND<0.20	ND<0.20	ND<0.21	ND<0.22
Indeno(1,2,3-cd)pyrene	0.9	7.8	~	~	ND<0.18	ND<0.18	0.52	ND<0.20	ND<0.20	ND<0.21	ND<0.22
Naphthalene	54	10,000	0.8	~	ND<0.18	ND<0.18	ND<0.19	ND<0.20	ND<0.20	ND<0.21	ND<0.22
Phenanthrene	40	10,000	~	~	0.27	ND<0.18	1.1	ND<0.20	ND<0.20	ND<0.21	0.34
Pyrene	13	10,000	~	~	0.20	ND<0.18	1.5	ND<0.20	ND<0.20	ND<0.21	0.57
Volatile Organic Compounds (mg/Kg)											
1,2,4-Trimethylbenzene	~	~	~	~	ND<0.066	---	ND<0.078	---	ND<0.078	---	ND<0.0017
Ethylbenzene	71	10,000	27	62	ND<0.066	---	ND<0.078	---	ND<0.078	---	ND<0.0017
Methyl Cyclohexane	~	~	~	~	ND<0.066	---	0.08	---	ND<0.078	---	ND<0.0017
Naphthalene	54	10,000	0.8	~	ND<0.13	---	ND<0.16	---	ND<0.16	---	ND<0.0033
Tetrachloroethylene	12	110	0.1	4.2	ND<0.066	---	ND<0.078	---	ND<0.078	---	ND<0.0017
Toluene	190	10,000	32	54	ND<0.066	---	ND<0.078	---	ND<0.078	---	ND<0.0017
Total Xylenes	110	10,000	540	~	ND	---	ND	---	ND	---	ND
Trichloroethylene	13	520	0.2	20	ND<0.066	---	ND<0.078	---	ND<0.078	---	ND<0.0017

NOTES:

ND = Not detected above lab reporting limits.
~ = No Rhode Island Remediation Regulation limit available.
Shaded values exceed one criterion.
Bolded and shaded values exceed multiple criteria.
RDEC = Residential Direct Exposure Criteria
I/CDEC = Industrial/ Commercial Direct Exposure Criteria
GA LC = GA Leachability Criteria
GB LC = GB Leachability Criteria
DUP### = Duplicate Sample
mg/kg = milligrams per kilogram
ug/l = micrograms per liter
* = Criteria are for trivalent/hexavalent chromium
--- = Not analyzed
Parameters that were not detected in any of the samples are not displayed.
For these results, see the analytical laboratory reports

Table 3
Summary of Groundwater Results
Taft Street (Town Landing)
Pawtucket, Rhode Island

Parameter	Rhode Island Remediation Regulations			FO-MW-01	FO-MW-03	SLR-MW-A	FO-MW-09	DUP-001 (FO-MW-09)	Trip Blank
	GA-GO	GB-GO	GB UCL	5/3/21	5/3/21	5/3/21	5/3/21	5/3/21	5/3/21
Total Petroleum Hydrocarbons (mg/L)									
TPH (C9-C36)	~	~	~	ND<0.20	ND<0.20	ND<0.20	ND<0.20	ND<0.19	---
Total Metals (mg/L)									
Cyanide	0.2	~	~	0.025	---	---	ND<0.010	---	---
Polyaromatic Hydrocarbons (µg/L)									
Non Detected	~	~	~	ND	ND	ND	ND	ND	---
Volatile Organic Compounds (µg/L)									
Non Detected	~	~	~	ND	ND	ND	ND	ND	ND

NOTES:
ND = Not detected above lab reporting limits.
~ = No Rhode Island Remediation Regulation limit available.
DUP### = Duplicate Sample
mg/L = milligrams per liter
ug/l = micrograms per liter
GA-GO = GA Groundwater Objectives
GB-GO = GB Groundwater Objectives
GB UCL = Upper Confidence Limits for groundwater classified as GB
--- = Not analyzed
Parameters that were not detected in any of the samples are not displayed. For these results, see the analytical laboratory reports

APPENDIX C

DRAFT ELUR AND POST CONSTRUCTION SMP

Remedial Action Work Plan

Fortuitous Tidewater OZ, LLC

March 2022

ENVIRONMENTAL LAND USAGE RESTRICTION

This Declaration of Environmental Land Usage Restriction ("Restriction") is made on this _____ day of _____, 20___ by **the City of Pawtucket**, and its successors and/or assigns (hereinafter, the "Grantor").

WITNESSETH:

WHEREAS, the Grantor the **City of Pawtucket** is the Owner in fee simple of certain real property identified as **Plat 54B, Lot 827, 0 Taft Street, Pawtucket** Rhode Island (the "Property"), more particularly described in Exhibit A (Legal Description) which is attached hereto and made a part hereof;

WHEREAS, the Property (or portion thereof identified in the Class I survey which is attached hereto as Exhibit 2A and is made a part hereof) has been determined to contain soil and/or groundwater which is contaminated with certain Hazardous Materials and/or petroleum in excess of applicable **residential or industrial/commercial Direct Exposure Criteria** pursuant to the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases ("Remediation Regulations");

WHEREAS, the Grantor and the Rhode Island Department of Environmental Management ("Department") have determined that the environmental land use restrictions set forth below are consistent with the regulations adopted by the Department pursuant to R.I.G.L. § 23-19.14-1 and that this restriction shall be a Conservation Restriction pursuant to R.I.G.L. § 34-39-1 et. seq. and shall not be subject to the 30-year limitation provided in R.I.G.L. § 34-4-21;

WHEREAS, the Department's written approval of this Restriction is contained in the document entitled: **Remedial Approval Letter** issued pursuant to the Remediation Regulations;

WHEREAS, to prevent exposure to or migration of Hazardous Substances and to abate hazards to human health and/or the environment, and in accordance with the **Remedial Approval Letter**, the Grantor desires to impose certain restrictions upon the use, occupancy, and activities of and at the **Property**;

WHEREAS, the Grantor believes that this Restriction will effectively protect public health and the environment from such contamination; and

WHEREAS, the Grantor intends that such restrictions shall run with the land and be binding upon and enforceable against the Grantor and the Grantor's successors and assigns.

NOW, THEREFORE, Grantor agrees as follows:

A. Restrictions Applicable to the Property: In accordance with the **Remedial Approval Letter**, the use, occupancy and activity of and at the **Property** is restricted as follows:

i. No residential use of the **Property** shall be permitted that is contrary to Department approvals and restrictions contained herein;

ii. No groundwater at the **Property** shall be used as potable water;

iii. No soil at the **Property** shall be disturbed in any manner without written permission of the Department's Office of Land Revitalization & Sustainable Materials Management, except as permitted in the Remedial Action Work Plan (RAWP) or Soil Management Plan (SMP), Exhibit B and attached hereto, approved by the Department in a written approval letter dated _____(date);

[iv. Humans engaged in activities at the **Property** shall not be exposed to soils containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department approved Direct Exposure Criteria set forth in the Remediation Regulations;

[v. The engineered controls at the **Property** described in the **SMP** contained in Exhibit B attached hereto shall not be disturbed and shall be properly maintained to prevent humans engaged in **commercial or restricted residential (i.e., apartment buildings or condominiums)** activity from being exposed to soils containing Hazardous Materials and/or petroleum in concentrations exceeding the applicable Department-approved **industrial/commercial** Direct Exposure Criteria in accordance with the Remediation Regulations; and

B. No action shall be taken, allowed, suffered, or omitted at the **Property if such action or omission is reasonably likely to:**

i. Create a risk of migration of Hazardous Materials and/or petroleum;
ii. Create a potential hazard to human health or the environment; or
iii. Result in the disturbance of any engineering controls utilized at the **Property**, except as permitted in the Department-approved **SMP** contained in Exhibit B.

C. Emergencies: In the event of any emergency which presents a significant risk to human health or to the environment, including but not limited to, maintenance and repair of utility lines or a response to emergencies such as fire or flood, the application of Paragraphs A (iii.-viii.) and B above may be suspended, provided such risk cannot be abated without suspending such Paragraphs and the Grantor complies with the following:

i. Grantor shall notify the Department's Office of Land Revitalization & Sustainable Materials Management in writing of the emergency as soon as possible but no more than three (3) business days after Grantor's having learned of the emergency. (This does not remove Grantor's obligation to notify any other necessary state, local or federal agencies.);

ii. Grantor shall limit both the extent and duration of the suspension to the minimum period

reasonable and necessary to adequately respond to the emergency;

iii. Grantor shall implement reasonable measures necessary to prevent actual, potential, present and future risk to human health and the environment resulting from such suspension;

iv. Grantor shall communicate at the time of written notification to the Department its intention to conduct the Emergency Response Actions and provide a schedule to complete the Emergency Response Actions;

v. Grantor shall continue to implement the Emergency Response Actions, on the schedule submitted to the Department, to ensure that the **Property** is remediated in accordance with the Remediation Regulations (or applicable variance) or restored to its condition prior to such emergency. Based upon information submitted to the Department at the time the ELUR was recorded pertaining to known environmental conditions at the **Property**, emergency maintenance and repair of utility lines shall only require restoration of the **Property** to its condition prior to the maintenance and repair of the utility lines; and

vi. Grantor shall submit to the Department, within ten (10) days after the completion of the Emergency Response Action, a status report describing the emergency activities that have been completed.

D. Release of Restriction; Alterations of Subject Area: The Grantor shall not make, or allow or suffer to be made, any alteration of any kind in, to, or about any portion of the **Property** inconsistent with this Restriction unless the Grantor has received the Department's prior written approval for such alteration. If the Department determines that the proposed alteration is significant, the Department may require the amendment of this Restriction. Alterations deemed insignificant by the Department will be approved via a letter from the Department. The Department shall not approve any such alteration and shall not release the **Property** from the provisions of this Restriction unless the Grantor demonstrates to the Department's satisfaction that Grantor has managed the **Property** in accordance with applicable regulations.

E. Notice of Lessees and Other Holders of Interests in the Property: The Grantor, or any future holder of any interest in the **Property**, shall cause any lease, grant, or other transfer of any interest in the **Property** to include a provision expressly requiring the lessee, grantee, or transferee to comply with this Restriction. The failure to include such provision shall not affect the validity or applicability of this Restriction to the **Property**.

F. Enforceability: If any court of competent jurisdiction determines that any provision of this Restriction is invalid or unenforceable, the Grantor shall notify the Department in writing within fourteen (14) days of such determination.

G. Binding Effect: All of the terms, covenants, and conditions of this Restriction shall run with the land and shall be binding on the Grantor, its successors and assigns, and each Owner and any other party entitled to control, possession or use of the **Property** during such period of Ownership or possession.

H. Inspection & Non-Compliance: It shall be the obligation of the Grantor, or any future holder of any interest in the **Property,** to provide for annual inspections of the **Property** for compliance with the ELUR in accordance with Department requirements.

An officer or Director of the company with direct knowledge of past and present conditions of the Property (the "Company Representative"), or a qualified environmental professional will, on behalf of the Grantor or future holder of any interest in the **Property**, evaluate the compliance status of the **Property** on an annual basis. Upon completion of the evaluation, the **Company Representative or** environmental professional will prepare and simultaneously submit to the Department and to the Grantor or future holder of any interest in the **Property** an evaluation report detailing the findings of the inspection and noting any compliance violations at the **Property**. If the **Property** is determined to be out of compliance with the terms of the ELUR, the Grantor or future holder of any interest in the **Property** shall submit a corrective action plan in writing to the Department within ten (10) days of receipt of the evaluation report, indicating the plans to bring the **Property** into compliance with the ELUR, including, at a minimum, a schedule for implementation of the plan.

In the event of any violation of the terms of this Restriction, which remains uncured more than ninety (90) days after written notice of violation, all Department approvals and agreements relating to the **Property**may be voided at the sole discretion of the Department.

I. Terms Used Herein: The definitions of terms used herein shall be the same as the definitions contained in Section 3 (DEFINITIONS) of the Remediation Regulations.

IN WITNESS WHEREOF, the Grantor has hereunto set (his/her) hand and seal on the day and year set forth above.

[**Name of Person(s), company, LLC or LLP**]

By: _____ _____
Grantor (signature)_____ _____Grantor (typed name)

STATE OF RHODE ISLAND
COUNTY OF _____

In (CITY/TOWN), in said County and State, on the _____ day of _____, 20___, before me Personally appeared _____, to me known and known by me to be the party executing the foregoing instrument and (he/she) acknowledged said instrument by (him/her) executed to be (his/her) free act and deed.

RI Department of Environmental Management
Environmental Land Usage Restriction (ELUR)
Annual Compliance Evaluation Form
(Please type or print)

Site Name:		**Property Owner:**	
RIDEM File Number:		**Telephone Number of Owner:**	
RIDEM Project Manager:		**Mailing Address of Owner:**	
Site Address:		**E-Mail Address of Owner:**	
City/Town:		**ELUR Recording Date:**	
Plat / Lot(s) Numbers:		**Inspection Date:**	

This Annual Compliance Evaluation Form is not appropriate for use on sites that require the use of any active remediation systems (e.g. active SSDS, ongoing air or groundwater monitoring, etc.) unless explicit, written permission has been granted by the Department.

1. Site Description

a. Is the ELUR applicable to the entire site?

◯ Yes ◯ No

If no, please describe the portion of the property subject to the ELUR:
_____

b. What does the ELUR restrict? (Select all that apply)

☐ Residential uses
☐ Groundwater
☐ Exposure to site soils
☐ Infiltration of water
☐ Subsurface structures
☐ Other (Please explain): _____
_____

2. Groundwater

a. Are there any known or observed groundwater wells present?

◯ Yes ◯ No

b. Are these well(s) used for drinking water?

◯ Yes ◯ No ◯ Not applicable

If no, please state what they are used for (e.g. irrigation, cooling, etc.):

_____

c. Are there any environmental monitoring wells present?

◯ Yes ◯ No

3. Engineered Controls (e.g. asphalt, concrete, building foundations, landscaped areas, etc.)

a. What are the engineered controls on the site? (Select all that apply)

☐ Two feet of clean fill
☐ One foot of clean fill over geotextile liner
☐ Asphalt (minimum six inches of clean fill and four inches of asphalt)
☐ Concrete (minimum six inches of clean fill and four inches of concrete)
☐ Building foundation(s)
☐ Fence
☐ Restricted access
☐ Impermeable cap (to prevent infiltration)
☐ Passive SSDS
☐ Vapor barrier
☐ Other (Please describe): _____
_____

b. Overall condition of the engineered control(s):

◯ Good ◯ Non-compliant
◯ Acceptable ◯ Not applicable (Sites where only groundwater is restricted)

c. Are there any areas on the property that have broken concrete, cracked asphalt, potholes, eroded landscaping, etc.?

◯ Yes ◯ No ◯ N/A

If yes:

Please provide a description of the area(s) of concern: _____
_____
_____

Could water infiltrate through these areas into underlying contaminated soils?

◯ Yes ◯ No ◯ N/A; Infiltration not restricted

When will the area(s) of concern be repaired? _____
_____

d. Have there been any soil disturbances or excavations into the cap (engineered control) in the last year?

◯ Yes ◯ No

If yes:

How large was the area of disturbance? _____

Please provide the reason or cause for disturbance or excavation: _____
_____
_____

Was this disturbance or excavation approved by the Department?

◯ Yes, Date of approval: _____
◯ No
◯ N/A

Was the Soil Management Plan (SMP) properly followed?

◯ Yes ◯ No ◯ N/A

If no, please explain: _____
_____
_____

Was any soil taken offsite?

◯ Yes ◯ No ◯ N/A

e. Within the past year has there been any construction at the property **unauthorized** by the Department?

◯ Yes ◯ No

If yes:

Please explain: _____
_____
_____

Did this construction disturb site soils, the existing building or capped surfaces (asphalt, concrete, or landscaped areas)?

◯ Yes ◯ No

If yes, please specify: _____
_____
_____

f. Have there been any subsurface structures (underground storage tanks, below grade foundations, septic systems, storm water systems, French drains, etc.) constructed or installed since the remediation was completed?

◯ Yes ◯ No

If yes:

Please explain: _____
_____
_____

Was permission of the Department's Office of LRSMM obtained?

◯ Yes, Date of approval: _____
◯ No

g. Condition of landscaped areas:

◯ Good ◯ Acceptable ◯ Non-compliant ◯ N/A

h. Does the cap effectively limit exposure to contaminated subsurface soil?

◯ Yes ◯ No ◯ N/A

4. Property Use

a. What is the current use of the property? _____
_____

b. Are there any residential uses on the property (i.e. houses, apartments or condominiums, etc.) that **were not** previously approved by the Department?

◯ Yes ◯ No ◯ Residential use is permitted

If yes, please explain: _____
_____
_____

c. Are there any schools, daycare facilities or recreational facilities on the property that **have not** been approved by the Department?

◯ Yes ◯ No ◯ Residential use is permitted

If yes, please explain: _____
_____
_____

d. Has the property use changed in any way since the ELUR was recorded?

◯ Yes ◯ No

If yes, please explain: _____
_____
_____

5. Fencing (if applicable)

a. Overall condition of the fencing:

◯ Good ◯ Acceptable ◯ Non-compliant ◯ No fence required

b. Does the fencing effectively limit the ELUR area?

◯ Yes ◯ No ◯ N/A

6. Overall Assessment

Does this site meet the standards imposed in the ELUR?

◯ Compliant ◯ Non-compliant

7. Observations, comments, and areas of concern:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

8. Please attach photos that document compliance with the ELUR, potential areas of concern, and the current state of the engineered controls.

Certification of Property Owner

I _____ certify to the best of my knowledge that this Annual Compliance Evaluation Form is a complete and an accurate representation of the site and contains all known facts concerning the Environmental Land Use Restriction imposed on the site.

_____ _____

Signature Owning Company (If applicable)

_____ _____

Printed Name Title

_____

Date

_____ _____

Telephone Number Email Address

Certification of the Inspector (if different than Owner)

I _____ certify to the best of my knowledge that this Annual Compliance Evaluation Form is a complete and accurate representation of the site and contains all known facts concerning the Environmental Land Use Restriction imposed on the site.

_____ _____

Signature Environmental Company Name

_____ _____

Printed Name Title

_____

Contact Information (If Applicable)

_____ _____

Telephone Number Email Address

Notary Public: _____

My Comm. Expires: _____

Post Remediation Soil Management Plan
Tidewater Landing
0 Taft Street, Plat 54B & Lot 827
Pawtucket, Rhode Island

This Post Remediation Soil Management Plan (SMP) has been prepared to establish procedures that will be followed should future construction/maintenance activities at the Tidewater Landing property require the need to manage soils excavated from the subsurface or when existing site engineered controls (asphalt, concrete, landscaping and/or foundations) are disturbed. The plan serves to supplement, and will be initiated by, the Rhode Island Department of Environmental Management (RIDEM) notification requirement established by the Environmental Land Use Restriction (ELUR) for the property pursuant to the Rules and Regulations for Investigation and Remediation of Hazardous Material Releases (Remediation Regulations).

Background

The subject property consists of one 5.35-acre parcel of land, located at 0 Taft Street, on the western side of the Seekonk River, in Pawtucket, Rhode Island. The property is owned by the City of Pawtucket. Historically the property was developed in the late 1880s as a coal and lumber storage yard until the mid-1970s. The structures on the property were raised and the property reportedly received debris during the construction of Interstate 95 located just north of the property.

The northern portion of the property contains a public boat launch and landing owned and operated by the City of Pawtucket that was developed in the 2000s. The remaining portion of the property was vacant wooded land.

Based on multiple environmental investigations the property was found to contain concentrations of polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), arsenic, and lead in soil at concentrations that exceed the numeric criteria for direct exposure in the RIDEM Remediation Regulations. The site has been developed as part of the Tidewater Stadium Project by Fortuitous Tidewater OZ, LLC as a mixed-use residential/retail building and associated recreational space in support of the soccer stadium located on the abutting parcel.

The RIDEM approved the remedial remedy that included the use of engineer controls to prevent direct contact with underlying impacted soils that potentially exceed the Department's Method 1 Direct Exposure Criteria. The RIDEM approved engineer control for the development of the property consisted of the following types:

- Building Cap consisting of the existing structures to prevent direct access or infiltration to the underlying soils.
- Impervious Surface Cap consisting of concrete walkways, asphalt parking areas, or other hardscape that prevents access to the underlying soil.
- Type 1 (1-foot-thick soil cap) consisting of a minimum of one-foot of clean fill (soil) overlying a geotextile demarcation layer.
- Type 2 (2-feet-thick soil cap) consisting of a minimum of two-feet of clean fill (soil) where landscaping requirements were needed to vegetative growth or variable surface where geotextile barrier was not suitable.

Applicable Area

This SMP and affiliated ELUR, which restricts the property to mixed-use commercial and restricted residential (i.e. apartments or condominiums) land use, pertains to the majority of the parcel excluding the existing boat launch area in then northern portion of the property. See attached site figure for a depiction of the applicable area for this SMP.

RIDEM Approval

In accordance with Section A iii of the ELUR, no soil at the property is to be disturbed in any manner without prior written permission of the RIDEM's Office of Land Revitalization & Sustainable Materials Management, except for minor inspections, maintenance, and landscaping activities that do not disturb the contaminated soil at the Site. As part of the notification process, the site owner shall provide a brief written description of the anticipated site activity involving soil excavation. The notification should be submitted to the RIDEM no later than 60 days prior to the proposed initiation of the start of site activities. The description shall include an estimate of the volume of soil to be excavated, a list of the known and anticipated contaminants of concern, a site figure clearly identifying the proposed areas to be excavated/disturbed, the duration of the project and the proposed disposal location of the soil.

Following written Notification, the Department will determine the post closure reporting requirements. Significant disturbances of regulated soil will require submission of a Closure Report for Department review and approval documenting that the activities were performed in accordance with this SMP and the Department approved ELUR. Minor disturbances of regulated soil may be documented through the annual certification submitted in accordance with Section H (Inspection & Non-Compliance) of the Department approved ELUR. The Department will also make a determination regarding the necessity of performing Public Notice to abutting property owners/tenants concerning the proposed activities. Work associated with the Notification will not commence until written Department approval has been issued. Once Department approval has been issued, the Department will be notified a minimum of two (2) days prior to the start of activities at the site. Shall any significant alterations to the Department approved plan be necessary, a written description of the proposed deviation, will be submitted to the Department for review and approval prior to initiating such changes.

Worker Health and Safety

To ensure the health and safety of on-site workers, persons involved in the excavation and handling of the material on site are required to wear a minimum of Level D personal protection equipment, including gloves, work boots and eye protection. Workers are also required to wash their hands with soap and water prior to eating, drinking, smoking, or leaving the site.

Soil Management

The disturbance of soils below any of the engineered controls (described above) within the ELUR area must do so in accordance with the requirements described as follows. Requirements will vary depending on the vertical extent of excavation or work activities and the type of engineered control. Soil disturbances for landscaping or other surficial maintenance above the "cap" does not

require additional handling requirements other than restoration requirements to maintain the cap thickness and to ensure the cap integrity. Any activities that will breach the soils beneath any of the engineered controls will require specific procedures for handling and management of excavated soils as described below.

Shallow Soil Disturbances

Any work within the area of the ELUR that requires disturbance of soil above the cap should take care to maintain the geotextile layer, as applicable, and maintain the required minimum thickness upon restoration of the area. The soil from above the cap may be re-used to backfill the disturbed area, and any excess soil must be disposed off and an off-site licensed facility approved to receive the material. Records of the disposal, if necessary, will be provided to RIDEM as part of the annual inspection report.

Engineered Control Disturbances

The direct exposure pathway is the primary concern at the site. Individuals engaged in activities at the site may be exposed through incidental ingestion, dermal contact, or inhalation of vapors or entrained soil particles if proper precautions are not taken. Therefore, the following procedures will be followed to minimize the potential of exposure.

During site work, the appropriate precautions will be taken to restrict unauthorized access to the property.

During all site/earth work, dust suppression (e.g. watering, etc) techniques must be employed at all times. If it is anticipated due to the nature of the contaminants of concern that odors may be generated during site activities, air monitoring and means to control odors will be utilized, as appropriate (e.g. odor-suppressing foam, etc).

In the event that an unexpected observation or situation arises during site work, such activities will immediately stop. Workers will not attempt to handle the situation themselves but will contact the appropriate authority for further direction.

In the event that certain soils on site were not previously characterized, these soils are presumed to be regulated until such time that it is demonstrated to the RIDEM, through sampling and laboratory analysis that they are not regulated. (For example, presumptive remedies or locations of previously inaccessible soil.)

If excess soil is generated / excavated from the Property, the soil is to remain on-site for analytical testing, to be performed by an environmental professional, to determine the appropriate disposal and/or management options. The soil must be placed on and covered with polyethylene/plastic sheeting during the entire duration of its staging and secured with appropriate controls to limit the loss of the cover and protect against stormwater and / or wind erosion (e.g. hay bales, silt fencing, rocks, etc).

Excavated soils will be staged and temporarily stored in a designated area of the property. Within reason, the storage location will be selected to limit the unauthorized access to the materials (e.g.,

away from public roadways/walkways). No regulated soil will be stockpiled on-site for greater than 60 days without prior RIDEM approval.

In the event that stockpiled soils pose a risk or threat of leaching hazardous materials, a proper leak-proof container (e.g. drum or lined roll-off) or secondary containment will be utilized.

Soils excavated from the site may not be re-used as fill on residential property. Excavated fill material shall not be re-used as fill on commercial or industrial properties unless it meets the RIDEM's Method 1 Residential Direct Exposure Criteria for all constituents listed in Table 1 of the Remediation Regulations. Copies of the laboratory analysis results shall be maintained by the site owner and included in the annual inspection report for the site, or the closure report if applicable. If the soil does not meet any of these criteria, the material must be properly managed and disposed of off site at a licensed facility.

Site soils, which are to be disposed of off-site, must be done so at a licensed facility in accordance with all local, state, and federal laws. Copies of the material shipping records associated with the disposal of the material shall be maintained by the site owner and included in the annual inspection report for the site.

Best soil management practices should always be conducted, and regulated soils should be segregated into separate piles (or cells or containers) as appropriate based upon the results of analytical testing, when multiple reuse options are planned (e.g., reuse on-site, reuse at a RIDEM approved Industrial/Commercial property, or disposal at a RIDEM approved licensed facility).

All non-disposable equipment used during the soil disturbance activities will be properly decontaminated as appropriate prior to removal from the site. All disposable equipment used during the soil disturbance activities will be properly containerized and disposed of following completion of the work. All vehicles utilized during the work shall be properly decontaminated as appropriate prior to leaving the site.

At the completion of site work, all exposed soils are required to be recapped with RIDEM approved engineered controls described above (1-ft of clean fill underlain by geotextile fabric, building foundations or other permanent structure, impervious surface, or 2-feet clean fill) and returned to surface conditions prior to the work that took place. These measures must also be consistent with the RIDEM approved ELUR recorded on the property.

Any clean fill material brought on site is required to meet the RIDEM's Method 1 Residential Direct Exposure Criteria or be designated by an Environmental Professional as Non-Jurisdictional under the Remediation Regulations. The Annual Inspection Report for the site, or Closure Report if applicable, should include either analytical sampling results from the fill demonstrating compliance or alternatively include written certification by an environmental professional that the fill is not jurisdictional.

APPENDIX D

EXAMPLE CONTINGENCY HASP

Remedial Action Work Plan

Fortuitous Tidewater OZ, LLC

March 2022

SITE SPECIFIC HEALTH, SAFETY, and ENVIRONMENTAL PLAN

Client: Fortuitous Tidewater OZ, LLC (Fortuitous)	Location: Taft Street Parcel, Pawtucket, Rhode Island
SLR Project No.: 141.16222.00005 Task 204	HSEP effective period: All of 2022
Project Name: Town Landing	

(HSEP must be updated if there are any changes in the scope of work)

1.0 Project Emergency Contact List

Local Emergency Numbers	Name	Telephone Numbers (Include AREA Code)	
For life threatening injuries call 911 to summon emergency responders. For non-life threatening injuries call the 24/7 nurse hotline provided through XstremeMD – **(800) 600-9015.** Will help to assess your injury, provide first aid recommendations, and directions to an off-site medical facility near you if warranted. Report any injuries to your Supervisor or Project Manager as soon as it is safe to do so (within 1-hour of occurrence).			
Hospital / Ambulance Services	Rhode Island Hospital: Emergency Services 593 Eddy St, Providence, RI	(401) 444-4000 for non-emergencies or 911 for emergencies	
First Aid Facilities	XstremeMD	XstremeMD – (401) 725-4100 (local) or (800) 600-9015	
Police	City of Pawtucket Police Department	(401) 727-9100 for non-emergencies or 911 for emergencies	
Fire	City of Pawtucket Fire Department	(401) 725-3590 for non-emergencies or 911 for emergencies	
Public utility locate services	One-Call Service: Dig Safe	811 or 1-888-DIG-SAFE (344-7233)	
Private utility locate services	Underground Surveying, LLC	(203) 312-9844	
Client Contacts	**Name**	**Telephone Numbers**	
Corporate and Site Contact	Daniel J. Kroeber, PE	Office	(203) 344-7883
		Cell	(203) 464-3071
SLR Contacts	**Name**	**Telephone Numbers**	
Project Manager	Scott Bristol, LEP, PG	Office	(860) 400-5701
		Cell	(860) 372-2660
Site Safety Officer	Peter Shea, LEP	Office	(860) 400-5719
		Cell	(860) 202-2181
Regional Operations Manager and Local HSE Coordinator	Kevin King, LEP	Office	(860) 558-4656
		Cell	(860) 558-4656
Incident Reporting	Pat Moore, HSE Manager	Cell	(206) 478-6464

Subcontracted Company Role	Name	Telephone Numbers
Private utility markout	Underground Surveying, LLC	(800) 596-9608
Brush clearing, drill soil borings, and install monitoring wells	New England Boring Contractors	(860) 633-4649

2.0 Incident Response and Reporting Guidelines

If an incident or near miss occurs the SLR Site Safety Officer (SSO) will assume charge of the situation in regards to coordination of notification of site emergency response personnel. By default, the SSO is the highest ranking SLR employee on site. The SLR SSO will access the incident situation and make a determination concerning the need to seek medical attention for any injured or ill personnel, and any potential need to shut down the job task to assess work practices/procedures, PPE usage, etc.

DEFINITIONS:
Incident – Any occurrence or event that caused injury, illness, environmental damage, or significant property damage.
Near Miss – Any occurrence or event that, with slightly different circumstances, could have resulted in an incident.

The following steps will be followed by the SLR SSO or their designee in the event of an incident or near miss:

The following steps will be followed by the SLR SSO or their designee in the event of an incident or near miss:

1. Stop work and access the situation. This includes for near misses as well as incidents.
2. If possible, move any injured personnel to a safe location if a hazard is still present. Do not attempt to move anyone with a head, neck or spinal injury, or if they are unconscious unless it is necessary to prevent further injury.
3. Provide first aid and/or CPR within your level of training.
4. **For life-threatening injuries call 911 to summon emergency responders.**
5. For non-life threatening injuries call the **24/7 nurse hotline** provided through XstremeMD – **(800-600-9015)**. They will help to assess the injury, provide first aid recommendations, and directions to an off-site medical facility near you if warranted.
6. Another SLR employee, preferably the injured employee's Supervisor, should accompany them to the hospital or other medical facility and provide information to the medical staff about the incident as requested, especially if the injured employee is unconscious or otherwise unable to property communicate the details of the incident.
7. Report any injuries or near misses to your Supervisor or Project Manager as soon as it is safe to do so (within 1-hour of occurrence).
8. Supervisors/Project Managers to promptly report the incident to HSE Management and the appropriate TDM and SLOM.
9. Report the incident to the SLR client representative in accordance with their incident reporting requirements, or as soon as practical.

10. Do not restart work until discussing the circumstance of the incident or near miss with Project Management and HSE Management.

Refer to SLR HSE Manual, *Section 16 – Incident Reporting* for additional incident reporting guidance.

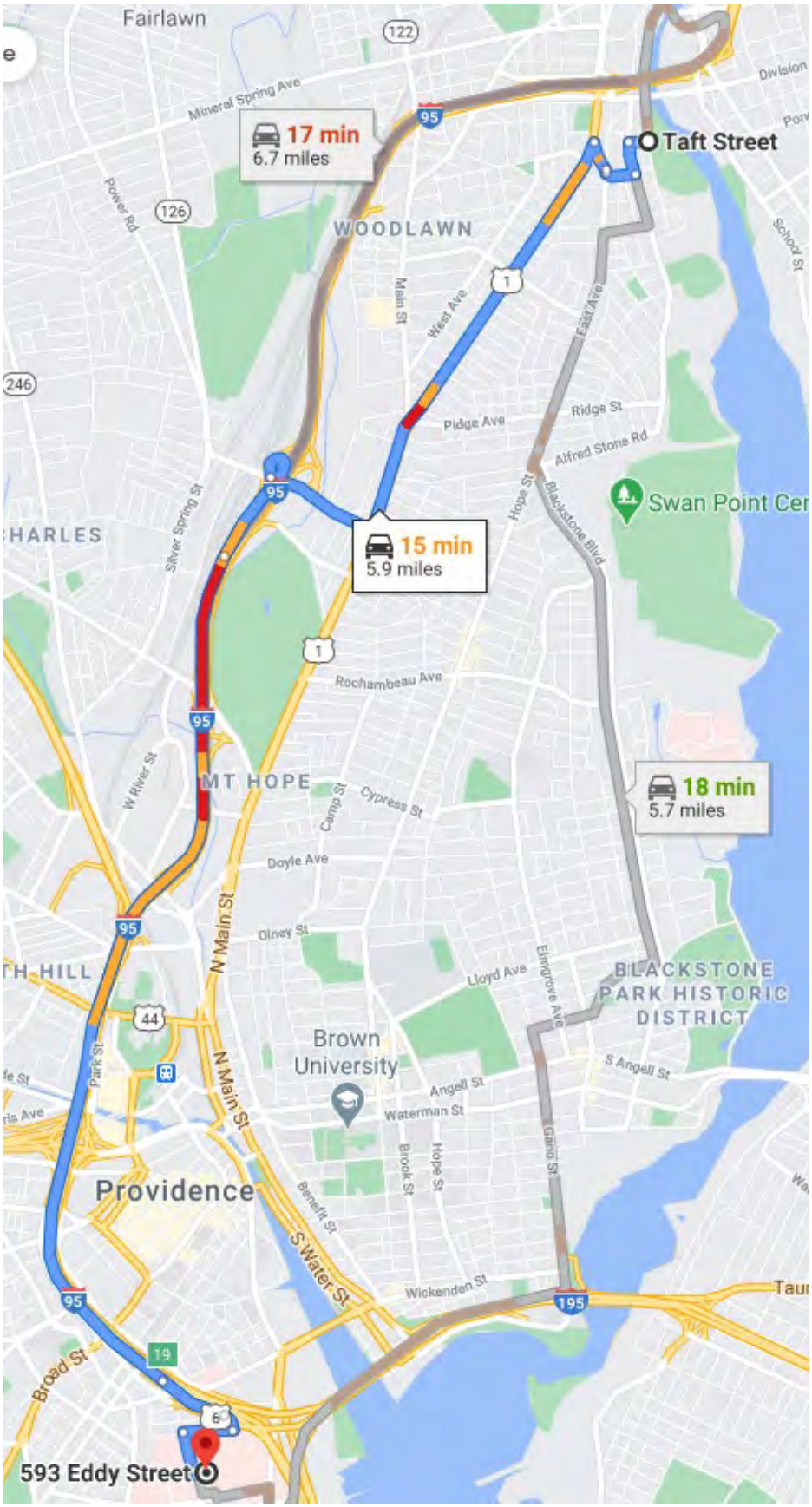
2.1 Hospital Name, Address & Route Map:

Rhode Island Hospital: 593 Eddy Street, Providence, RI

Starting at Taft Street, Pawtucket, RI

1. Take Pleasant St, Tower St and George St to US-1 S/Pawtucket Ave
2. Head west on Spencer St toward Pleasant St
3. Turn left onto Pleasant St
4. Turn right onto Tower St
5. Slight right onto East Ave
6. Slight left onto George St
7. Sharp left onto US-1 S/Pawtucket Ave
8. Continue to follow US-1 S
9. Pass by Subway (on the left in 1.1 mi)
10. Get on I-95 S
11. Turn right onto Smithfield Ave
12. Turn right to merge onto I-95 S
13. Follow I-95 S to Borden St. Take exit 19 from I-95 S
14. Merge onto I-95 S
15. Take exit 19 toward Eddy St
16. Keep right at the fork, follow signs for Borden St
17. Continue on Borden St to your destination
18. Turn right onto Borden St
19. Turn left onto Plain St
20. Turn left
21. Destination will be on the right

Arrive at Rhode Island Hospital: 593 Eddy Street, Providence, RI


Fairlawn
122
Mineral Spring Ave
95
17 min
6.7 miles
Taft Street
Division
Power Rd
126
WOODLAWN
Main St
West Ave
1
East Ave
School St
246
Pidge Ave
Ridge St
Alfred Stone Rd
Swan Point Cem
Hope St
Blackstone Blvd
Silver Spring St
15 min
5.9 miles
Rochambeau Ave
W River St
MT HOPE
Camp St
Cypress St
18 min
5.7 miles
Doyle Ave
N Main St
Olney St
Lloyd Ave
Elmgrove Ave
BLACKSTONE PARK HISTORIC DISTRICT
44
Brown University
S Angell St
Angell St
Waterman St
Park St
Providence
Brook St
Hope St
Gano St
Benefit St
S Water St
Wickenden St
195
Broad St
19
593 Eddy Street

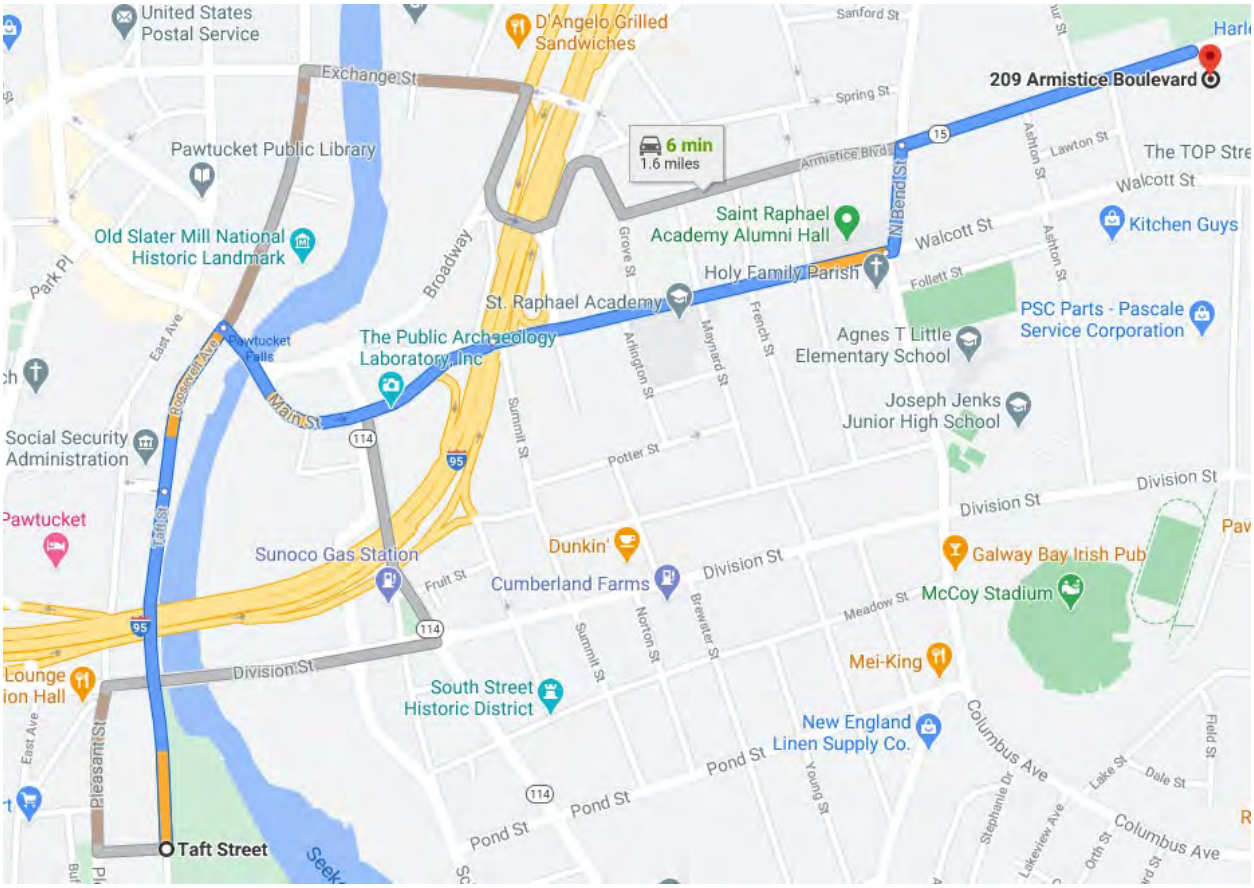
2.2 First Aid Facility Name, Address & Route Map:

For treatment of non-life threatening injuries, proceed to Armistice Urgent Care And Occupational Health Center, a XstremeMD first aid office.

Starting at Taft Street, Pawtucket, RI

1. Head north on Taft St toward Jenks Way
2. Continue onto Roosevelt Ave/Roosevelt Ave Ext
3. Turn right onto Main St/Main St Bridge
4. Continue to follow Main St
5. Main St turns slightly right and becomes Walcott St
6. Turn left onto N Bend St
7. Turn right at the 1st cross street onto Armistice Blvd
8. Destination will be on the right

Pawtucket, RI 02860 Arrive at Armistice Urgent Care And Occupational Health Center:
209 Armistice Boulevard, Pawtucket, RI
(401) 725-4100



Brief description of work scope:

1. Use ground penetrating equipment and public location services (Dig Safe) to locate utilities on Site. Based on provided mapping, utilities may be located within the parking area on the western side of the Site.

2. Wooded areas will be cleared of brush to enable drill rig access to soil boring locations. Prior to site work, Pawtucket police officers will encourage on-site encampment communities to remove items from proposed soil boring locations and drill rig pathways.

3. SLR proposes the advancement of approximately 14 soil borings using a Geoprobe® track-mounted rig. The soil boring locations have been determined in part by Areas of Concern (AOCs) identified during the Phase I Environmental Site Assessment (2021) in conjuction with anticipated soil disturbance areas during redevelopment. Excess soil will be be used to fill corresponding completed soil borings.

   The core barrel of the drill rig will be decontaminated prior to advancing each soil boring. Excess soil on the core barrel will be removed with a dry brush, then washed with a mixture of deionized water and Alconox® solution, followed by distilled water free of contaminants, and air drying.

   From each of the boreholes, at least one soil sample will be selected for laboratory analysis based on one or more of the following: (1) the depth where the strongest evidence of impact is observed, according to visual or olfactory evidence and soil gas readings carried out by means of a PID, or (2) at a depth that is most likely to exhibit impacts based on the nature of the AOC and/or the contaminants of concern.

   Soil samples will be submitted to a Rhode Island certified laboratory for one or more of the following analyses: volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and/or RCRA 8 metals.

4. SLR will observe the installation of one groundwater monitoring well. The newly-installed and existing monitoring wells will provide adequate Site coverage for the assessment of groundwater characteristics. A Geoprobe® track-mounted rig will be used to install permanent PVC monitoring wells with well screens approximately five to seven feet below the observed water table.

5. Development of the newly-installed monitoring well will be completed by surging and pumping groundwater from the screened interval using either a whale pump or similarly approved device to remove fine soil particles from the well screen and sand filter pack.

6. SLR will collect one groundwater sample from each monitoring well using EPA approved low-flow sampling procedures. Groundwater samples will be submitted to a Rhode Island certified laboratory for one or more of the following analyses: VOCs, TPH, and/or PAHs.

Does this project involve ground disturbance activities? Yes ☒ No ☐ **If "Yes", be sure to fill out the SLR utility clearance log and ground disturbance checklist (see Appendix A)**
Does this project involve a SLR Subcontractor(s)? Yes ☒ No ☐ **If "Yes", provide a description of their work scope(s):** Subcontractors will have the following responsibilities: • Subsurface utility locating using ground-penetrating radar; • Brush clearing to create drill rig pathways in wooded areas; • Police detail to encourage encampment communities to remove items from drill rig pathways and proposed soil boring locations; • Geoprobe drilling for the purpose of soil sampling; • Returning excess soil to associated the borehole and backfilling with sand if needed; and • Installation of groundwater monitoring wells.
Is the subcontractor(s) performing "Safety Critical" activities? Yes ☒ No ☐ N/A ☐
If "Yes" have they been pre-approved by HSE Mangement for such work? Yes ☒ No ☐ N/A ☐
Elevated Risk Task List - **Select any and all that apply to the planned scope of work (includes SLR's subcontractor(s) as well):**

- ☒ Potential exposure to hazardous chemicals or substances (e.g., inhalation, skin or eye contact, etc.)
- ☐ Potential need for respiratory protection devices
- ☒ Exposure to elevated noise sources (e.g., working around heavy equipment, industrial sources, etc.)
- ☒ Working near moving or rotating parts (e.g., drilling operations, pumps, fans, belts, etc.)
- ☒ Working in roadways or near other vehicle hazards (includes work in parking lots, near forklifts, etc.)
- ☐ Work adjacent to or within the right-of-way of of railway tracks
- ☐ Work adjacent to aircraft runway operations
- ☐ Potential for entry into excavations, trenches or test pits
- ☐ Work requiring entry into confined spaces (includes tanks, sumps, manholes, etc.)
- ☐ Potential for work underground (mine shalft, tunnel, etc.)
- ☒ Exposure to underground or overhead utilities (hazard of electric shock, gas/explosions, etc.)
- ☐ Work on or around hazardous energy sources – LOTO needed (electric, hydraulic, pneumatic, etc.)
- ☐ Working from a boat
- ☒ Working on or near water (e.g. on a pier, in marshland or mudflat, bank of a river/pond, etc.)
- ☐ Work that requires travel by a single-engine plane or helicopter
- ☐ Working at Heights (> 6 feet off the ground or within 6-feet of an unprotected edge, roof, etc.)
- ☐ Working at any height over dangerous equipment where a fall could injure you
- ☐ Working at locations greater than 8,000 feet in elevation
- ☐ Potential for working under elevated loads (e.g., crane operations and other lifting activities)
- ☐ Performance of hot work (flame, spark producing or use of non-intrinsically safe equipment)
- ☒ Exposore to significant hot or cold stress conditions
- ☐ Anticipated severe weather conditions (tornado season, local flooding, hurricanes, etc.)
- ☒ Potential for encountering significant wildlife hazards (bears, foxes, snakes, etc.)
- ☒ Potential for encountering significant biological hazards (ticks and other insects, poisonous plants, etc.)
- ☐ Performance of Remote or Lone Work activities (i.e., limited access to people and emergency services)
- ☐ Work at a site where there could be unexploded ordinance
- ☒ Potential for exposure to hazards caused by the client or other contractors on the work site

Be sure to address in the HIRAC planning documents the hazard control methods and/or PPE requirement that will be utilized to address all of the hazardous activities identified above.

3.2 Site Characteristics:

Past/Present Site Use:

The Site was historically used as a coal and lumber company and storage yard from the mid-1800s to the mid-1970s. These former Site structures were destroyed twice as a result of two separate fires in the late-1800s and in the mid-1930s; however, the Site remained occupied by coal and lumber storage until the Pawtucket Redevelopment Association acquired the property and cleared the structures in the mid-1970s.

The Site remained cleared and vacant from that time until approximately 2001, when the existing paved driveway, sidewalk features, boat launch access, and community garden were constructed.
Expected Contaminants of Concern and Concentrations: Polycyclic aromatic hydrocarbons (PAHs): Detected at concentrations exceeding the RDEC in soil. Unknown groundwater concentrations. Petroleum hydrocarbons: Detected at concentrations exceeding the RDEC in soil. Unknown groundwater concentrations. Metals: Total arsenic has been detected at concentrations exceeding the RDEC in soil. Unknown groundwater concentrations.
Worst Case Vapor Exposure Calculations (if applicable, will be conducted by HSE Manager): Based on the scope of work, soil disturbance is expected to be minimal. As a result, air monitoring is not necessary.
Unusual Work Plan Items (e.g. work off site, air monitoring required, traffic control, etc.): Brush clearing is required to enable drill rig access to the proposed soil borings.
Unusual Site Features (e.g. cell phone coverage, remote site, high onsite traffic, etc.): Encampments are located throughout the Site. SLR will not disturb on-site encampments and will ensure that drilling activities are conducted away from these areas to the extent possible.
Describe any work occurring onsite that SLR is not prime contractor for: Subcontractors will be doing the utility clearance, drilling, well installation, and waste handling.

3.3 Site Plan:


Legend
Proposed Geotech Borings
SLR Locations
Soil Boring
Proposed Overburden Well
Route Clearing
Existing Wells
Division Street
PROPOSED WELL (OVERBURDEN)
PROPOSED WELL (OVERBURDEN)
Walker Street
Taft Street
WELL INSTALL ONLY NO SOIL SAMPLE
PROPOSED WELL (OVERBURDEN)
School Street
HAND AUGER SAMPLE OF THE FILL MATERIAL AND BORING DOWNGRADIENT OF HE FILL MATERIAL FROM NATIVE BELOW OR FILL BELOW.
PROPOSED WELL (OVERBURDEN)

4.0 Chemical Hazard Information

NOTE: For any chemicals brought on site by SLR or our Subcontractors be sure to gather Safety Data Sheets (SDS) on the chemicals involved and have them either included in this HSE Plan or otherwise available on site for personnel to reference.

4.1 Contaminants of Concern Information

Compound	Physical/Chemical Characteristics (Target Organs/ Route of Entry)	OEL (STEL)	Odor Threshold	LEL (%)	IP (eV)
Volatile Organic Compounds					
Benzene (71-43-2) 1 ppm = 3.19 mg/m3	Skin, eye, inhalation, and ingestion hazard. Colorless liquid with an aromatic odor. Air odor threshold 34-119 ppm. LEL: 1.2%, UEL: 7.8%. Prolonged skin contact with Benzene or excessive inhalation of its vapor may cause headache, weakness, loss of appetite, and lassitude. A human carcinogen. Extremely flammable, keep sources of ignition away. Incompatible with fluorides, chlorides, oxygen, permanganates, acids, and peroxides.	0.5 ppm TWA; (2.5 ppm) Skin IDLH: 500 ppm (CA)	61 ppm	1.2	9.25
Ethylbenzene (100-41-4) 1 ppm = 4.34 mg/m^3	Skin, eye, inhalation, and ingestion hazard. Colorless liquid with an aromatic odor. Air odor threshold of 0.092 – 0.60 ppm. LEL: 0.8%, UEL: 6.7%. Moderately toxic by ingestion, inhalation, mucous membranes, and skin absorption. Irritant to the skin and eyes.	100 ppm TWA (125 ppm) IDLH: 800 ppm	0.60 ppm	0.8	8.76
Toluene (108-88-3) 1 ppm = 3.77 mg/m^3	Inhalation, absorption, ingestion and eye hazard. Colorless liquid with a sweet, pungent, benzene-like odor. Air odor threshold of 1.6 ppm. LEL: 1.1%, UEL: 7.1%. Poison by intraperitoneal route. Moderately toxic by inhalation and subcutaneous routes. A skin and eye irritant. Central nervous system effects. May cause impairment of coordination and reaction time.	20 ppm TWA (150 ppm) 300 ppm Ceiling; IDLH: 500 ppm	1.7 ppm	1.1	8.82
Xylenes, total (1330-20-7) 1 ppm = 4.34 mg/m^3	Inhalation, absorption, ingestion and eye hazard. Colorless liquid with an aromatic odor. Odor threshold of 0.62 – 20 ppm. LEL: 1.1%, UEL: 7%. Moderately toxic by ingestion and inhalation. An eye irritant. May be narcotic at high concentrations.	100 ppm TWA (150 ppm) IDLH: 900 ppm	5 ppm	1	8.44
Semi-Volatile Organic Compounds					
Chlorodiphenyl (42% Chlorine)	Skin, eye, inhalation, and ingestion hazard. Colorless to light-colored, viscous liquid with a mild hydrocarbon odor. Irritation of eyes,	0.001 mg/m^3 TWA (42% Cl) Skin	N/A	N/A	Not known

Compound	Physical/Chemical Characteristics (Target Organs/ Route of Entry)	OEL (STEL)	Odor Threshold	LEL (%)	IP (eV)
(53469-21-9) PCB Constituent	skin; acne-form dermatitis; potential carcinogen (liver / leukemia); reproductive effects. Reacts with strong oxidizers.	Ca (5 mg/m^3)			
Chlorodiphenyl (54% Chlorine) (11097-69-1) PCB Constituent	Skin, eye, inhalation, and ingestion hazard. Colorless to light-colored, viscous liquid with a mild hydrocarbon odor. Irritation of eyes, skin; acne-form dermatitis; potential carcinogen (liver / leukemia); reproductive effects. Reacts with strong oxidizers.	0.001 mg/m^3 TWA (54% Cl) Skin Ca (5 mg/m^3)	N/A	N/A	Not known
Polycyclic aromatic hydrocarbons (PAHs) – as coal tar pitch volatiles. (Includes benzo(a)pyrene, chrysene, phenanthrene, fluoranthene, pyrene, acenaphthene, methylnaphthalenes, and anthracene)	Skin, eye, inhalation, and ingestion hazard. The pitch of coal tar is black or dark brown amorphous residue that remains after the redistillation process. Odor thresholds vary. Direct contact or exposure to the vapors may be irritating to the eyes. Direct contact can be highly irritating to the skin and can cause dermatitis. Exposure to high vapor concentrations may cause headaches, nausea, vomiting, and other symptoms. Includes human carcinogens. Reacts with acids and oxidizers; produces acrid smoke, toxic gases when involved in fires, thermal decomposition. Exposure to all routes should be carefully controlled to levels as low as possible. Confirmed Animal Carcinogen.	0.2 mg/m^3 TWA 0.1 mg/m^3 TWA (Cyclohexane-extractable fraction)	N/A	N/A	Not known
Naphthalene (91-20-3) 1ppm = 5.24 mg/m^3	Skin eye, ingestion, and inhalation hazard. Over exposure may cause headache, nausea, diaphoresis, hematuria, fever, anemia, liver damage, vomiting, convulsions, and coma. Flammable when exposed to heat or flame reacts with oxidizing materials. Reacts violently with CrO3; aluminum chloride + benzoyl chloride.	10 ppm TWA (15 ppm) Skin IDLH: 250 ppm	<0.3 ppm	0.9	8.12
Metals / Inorganics					
Arsenic, and inorganic compounds as As (7440-38-2)	A human carcinogen; a powerful allergen, inhalation and contact causes burning, swelling and redness in the eyes, nose, throat and skin; ingestion causes nausea, vomiting, nervous system effects in the extremities (numbness, tingling, weakness); long term exposure can cause liver, kidney, and blood damage. A fire hazard in the form of dust or contact with oxidizers; thermal decomposition produces toxic gases	0.01 mg/m^3 TWA C – 0.002 mg/m^3 (15-min) IDLH/Ca: (5 mg/m^3 as As)	N/A	N/A	N/A

Compound	Physical/Chemical Characteristics (Target Organs/ Route of Entry)	OEL (STEL)	Odor Threshold	LEL (%)	IP (eV)
Cadmium, as dust (7440-43-9)	Exposure routes via inhalation and ingestion. A suspected human carcinogen; skin, eye, respiratory irritation; mild flu and fever symptoms (metal fume fever); pneumonitis, pulmonary edema. Silver-white, blue-tinged lustrous, odorless solid. Reacts violently with ammonium nitrate; finely divided cadmium metal can become pyrophoric; avoid heat, flame, causes cadmium fume formation.	0.005 mg/m^3 TWA IDLH/Ca: 9 mg/m^3 (as Cd)	N/A	N/A	N/A
Copper, dusts and mists as Cu (7440-50-8)	Exposure routes via inhalation, ingestion, skin and/or eye contact. A mucous membrane, respiratory tract irritant. Also can produce conjunctivitis, dermatitis, nausea, vomiting, abdominal pain, liver, kidney damage, and anemia. Reacts with acids and oxidizers, copper reactions may release flammable gas (hydrogen).	1 mg/m^3 as Cu dusts or mists IDLH: 100 mg/m^3 as Cu	N/A	N/A	N/A
Chromium III inorganic oxide compounds as Cr (1308-38-9)	Exposure routes via inhalation, ingestion and skin exposure. Dust may cause respiratory tract and skin irritation. May cause allergic reaction in certain individuals. Poorly absorbed into the human body and exists primarily as a nuisance dust.	0.5 mg/m3 as Cr (III) Soluble	N/A	N/A	N/A
Chromium VI inorganic compounds as Cr (both water-soluble and insoluble varieties) (7440-47-3)	Exposure routes via inhalation, ingestion and skin exposure. Some Chromium (VI) compounds are confirmed human carcinogens; corrosive irritant to skin, eyes, respiratory tract; deep skin ulcers; not (always) immediately painful; an allergic sensitizer; 5 grams ingested can be fatal. Reacts with strong oxidizers, alkalis, oils, grease, paper and plastics.	0.0002 mg/m3 as Cr (VI) (0.0005 mg/m^3) Ca	N/A	N/A	N/A
Lead and inorganic compounds as Pb (7439-92-1)	Primarily an Inhalation and ingestion hazard. Symptoms include weakness, insomnia; loss of appetite, loss of weight, abdominal pain; anemia; tremors; weakness of wrists/ ankles; kidney damage; low blood pressure. Incompatible with strong oxidizers, hydrogen peroxide and acids.	0.05 mg/m^3 TWA IDLH: 100 mg/m^3	N/A	N/A	N/A
Decontamination / Sample Preservative Chemicals					
Methanol (Methyl alcohol) (67-56-1) 1 ppm = 1.31 mg/m^3	Exposure routes via inhalation, skin absorption, ingestion, skin and/or eye contact. Irritant of eyes, skin and upper respiratory system. Defatting of the skin; optic nerve damage, blindness; narcosis, nausea, and headache. This substance may also be toxic to blood, kidneys, liver, brain,	200 ppm (250 ppm) Skin IDLH: 6000 ppm	Variable depending upon purity (10 to 20,000 ppm)	6.0	10.84

Compound	Physical/Chemical Characteristics (Target Organs/ Route of Entry)	OEL (STEL)	Odor Threshold	LEL (%)	IP (eV)
	peripheral nervous system, upper respiratory tract, skin and central nervous system.				

OEL – Occupational Exposure Limit STEL – Short Term Exposure Limit (usually 15-minutes) LEL – Lower Explosive Limit IP – Ionization Potential eV – electron volt TWA- Time Weight Average C – Ceiling limit (concentration that cannot be exceeded at any time [or for indicated time frame]) IDHL- Immediate Danger to Life or Health concentration Ca – Known or Suspected human carcinogen Skin – indicates significant exposure risk from skin exposure

4.2 Air Monitoring Action Levels for Field Activities

Task	Monitoring Instrument	Monitoring Frequency	Action Levels [1]	Required Action
FID or PID use when Benzene and/or Vinyl Chloride <u>are</u> expected to be a contaminant of concern.				
These action levels apply to any work that involves the potential contact or inhalation of chemicals present at this site (e.g., drilling, excavation, soil or groundwater sampling, opening tanks / drums, etc.)	FID or PID Meter (11.7 eV lamp)	Use a FID or PID to conduct exposure monitoring whenever product odors or visible sheens are present.	0 to 1 ppm above background in the BZ	Wear Level D protection at a minimum. Use chemical protective gloves and other PPE as necessary to prevent skin contact with contaminants. Work upwind from chemical sources when possible.
		Continuously when VOCs are > 1 ppm in the BZ	1 ppm or greater in the BZ for > 15 minutes[1] (based on Benzene and/or Vinyl Chloride as potential contributors)	Upgrade to Level C respiratory protection or evacuate the work area until BZ concentrations are < 1 ppm. Action levels may be able to be adjusted if Benzene and/or Vinyl Chloride are ruled out as being contributors to the FID/PID readings.[2]
		Continuously when VOCs are > 1ppm in the BZ	10 ppm or greater in the BZ for any period of time (based on Benzene and/or Vinyl Chloride as potential contributors)	Regardless of respirator usage, evacuate area until concentrations in BZ are < 10 ppm. Action levels may be able to be adjusted if Benzene and/or Vinyl Chloride are ruled out as being contributors to the PID readings.[2] Use of fans or other engineering controls may be necessary. Contact HSE Management for assistance.

O_2 – Oxygen LEL – Lower Explosive Limit H_2S – Hydrogen Sulfide CO – Carbon Monoxide

[1]Five excursions above the action level in any 15 minute period or a sustained reading in excess of the action levels for five minutes will trigger a response.

[2] For example, the OSHA permissible exposure limit (PEL) for gasoline is 300 ppm, therefore the action level for upgrading to Level C could be adjusted (to 1/2 of the PEL - 150 ppm) if you are certain that gasoline is the only contributor to the VOC measurement. Contact HSE Management for details concerning compound-specific sampling options.
Note: LEL readings should be taken at the point of operation (top of drill stem, well head, etc.). PID, O2, and H2S readings should be taken in the worker's breathing zone (BZ).

5.0 Personal Protective Equipment (PPE) Requirements

Refer to Section 7 of this site-specific HSE Plan for details concerning PPE needs for this project.

In general, SLR field work will require the following mandatory PPE.

- ANSI Z41-1991 approved steel toe boots
- ANSI Z87.1-1989 approved safety glasses with side shields
- Reflective / High visibility vest (or included stitched onto coveralls)
- Leather gloves (on your person ready for use)

Be sure to consider the following potential PPE needs based on project risks or client requirements.

- Hearing protection (ear plugs or ear muffs required for drilling, excavations, etc.)
- ANSI Z89.1-1986 approved hardhat with side impact protection
- Chemical Resistant Gloves (appropriate to the chemical hazards present)
- Chemical Resistant Coveralls or Apron (appropriate to the chemical hazards present)
- Puncture Resistant Gloves (when handling sharp objects)
- High Temperature Rated Gloves (when working near hot surfaces or handling hot materials)
- Boots equipped with meta-tarsal protection (when working where falling / rolling objects are present)
- Boots equipped with steel shanks (when walking on sharp objects)
- Personal Fall Protection System (including full body harness, lanyard, deceleration device, and anchorage)
- NIOSH approved ½ face air purifying respirator with Organic/HEPA cartridges
- Other NIOSH approved respirator (filtering face-piece, tight-fitting full-face, powered-air-purifying, etc.)
- Fire-retardant coveralls (i.e. Nomex)
- Personal Floatation Device (when working in or around water deep enough for the PFD to work)
- Cold Weather Gear (Required on the Alaska North Slope between October 1st and May 1st)
- Traction spikes for Boots (when walking in icy conditions)
- Knee Pads (any functions the require crawling or consistent kneeling)
- Hip or Chest Waders

6.0 HSE Guiding Principles

The following HSE guiding principles are paramount on SLR projects:

- Injuries and occupational illnesses are preventable.
- Safety is fundamental to the conduct of our business.
- Employee involvement, feedback, and recognition are fundamental to safety.
- Safe behavior is doing the job right.
- Workplace risk will be reduced in the following priority:

  1. Engineering controls;

2. Administrative controls and operating practices;

3. Personal protective equipment.

- Management is responsible for visibly and consistently establishing safety as a core value.
- Management is responsible and accountable for the safety of employees, contractors, and the general public.
- Employees and contractors are responsible and accountable for their actions.
- Employees and contractors have an obligation, without fear of reprisal, to notify management of apparent hazards, and they have the right to receive timely and adequate responses.

7.0 Project Hazard Identification & Risk Assessment

7.1 Conducting a Hazard Identification and Risk Assessment

A formal written hazard identification and risk assessment process must be conducted for all field work before the work commences. Use the published SLR Project HIRAC Form to conduct and document the HIRAC process in accordance with SLR HSE Manual, Section 09: Hazard Identification Risk Assessment and Control (HIRAC). Templates for conducting this activity are provided on the Connect HSE page.

Development of the project HIRAC form will be led by the SLR Project Manager (PM) or their designee, in consultation with the rest of the field team members, including subcontractors, as applicable, to adequately address the hazards involved. Office HSE Coordinators, and/or the HSE Manager should be consulted as needed to address any unusual identified hazards.

Each identified risk/hazard on the HIRAC form shall be ranked as to their anticipated level of risk from high to low (Red, Yellow, or Green) based on the potential Consequences and Probability of an undesirable event/outcome taking place (i.e., fall from a height, cut by a tool, struck by an object, etc.).

This risk ranking process can be somewhat subjective, however personnel conducting this process need to be consistent when making risk ranking determinations so that the focus remains on addressing those hazards that pose the highest risk.

Selected hazard control measures on the HIRAC form shall be based on the hazard control hierarchy with personal protective equipment (PPE) used only as a last resort. It may be necessary to use a combination of engineering, administrative and PPE controls to achieve the necessary level of worker safety. NOTE: See SLR HSE Manual, Section 13: Personal Protective Equipment for additional guidance concerning proper selection and use of PPE.

Exposure to high (“R”) rated hazard must have the approval of the PM. PMs must consult with the HSE Manager prior to approving any work that is still deemed high risk after applying work practice controls.

7.2 Project Hazard Identification, Risk Assessment and Control (HIRAC) Form

7.3 Job Safety Analysis

Any work tasks conducted or hazards identified that are not addressed on the developed Project HIRAC form shall be discussed and documented by field project personnel using SLR's Job Safety Analysis (JSA) Form (provided in Appendix A of this plan).

The SSO is responsible for ensuring that the Project HIRAC form and/or JSA adequately address all potential hazards to project personnel and that they are properly mitigated and documented.

Some project sites may require a documented JSA to be developed and discussed with the work crew on a daily basis. If this is the case the SLR JSA form will be utilized for this purpose unless directed otherwise by the client site. Recommend referencing the information in the Project HIRAC form on the JSA form as applicable.

Documented JSAs shall be forwarded to the SLR HSE Manager for review and potential revision of the HSE Plan to meet the identified hazards / mitigation methods.

8.0 HSE Forms / References to be included in the Field:

Included in the HASP:

☒ Tailgate Safety Meeting Form

☒ Vehicle Inspection Form (Attachment 21J)

☒ Safety Observation/Conversation Form (Attachment 5A)

☒ Incident/Near Miss/Hazard Identification Report Form (Attachment 5B)

☒ Utility Clearance Mark-out Log (Attachment 10A)

☒ Ground Disturbance Checklist (Attachment 10B)

☒ Job Safety Analysis Form (Attachment 9C)

☒ Vehicle Accident Reporting Form (Attachment 16C)

☒ Witness Statement Form (Attachment 17C)

☒ Project Site Checklist

Optional (Dependent upon work scope, copies to be added to this document or kept in field binder.)

☒ Traction Device Selection and Use (Attachment 13H)

☒ Journey Management Plan Form (Attachment 20A)

☒ Contact Schedule Form (Attachment 20B)

☒ Vehicle Operations Guidelines (Attachment 20C)

☒ All-Terrain Vehicles – Off Road Vehicle Operation Guidelines (Attachment 20D)

☐ Snowmobile Operation Guidelines (Attachment 20E)

☐ Helicopter Use Guidelines (Attachment 20F)

☐ Small Aircraft Use Guidelines (Attachment 20G)

☐ Small Vessel-Working Near Water Guidelines (Attachment 20H)

☐ HSE Requirements for Working Abroad (Attachment 20I)

☒ Hand Tool Use (Attachment 21E)

☒ Proper Lifting – Manual Material Handling (Attachment 21F)

☒ Walking on Uneven or Low Traction Surfaces (Attachment 21G)

☒ Heat Stress (Attachment 22A)

☒ Cold Stress (Attachment 22B)

☒ Storm Conditions (Attachment 22C)

☐ Personal Fall Arrest System Requirements (Attachment 23B)

☐ Portable Ladder Use Requirements (Attachment 23C)

☐ Working at Height Tool Management Requirements (Attachment 23D)

☐ Proper Stair Use Requirements (Attachment 23E)

☐ Fall Protection Plan Template (Attachment 23F)

☐ Working at Heights Rescue Plan (Attachment 23G)

☐ Working at Heights Equipment Inspection Forms (Attachment 23H)

☐ Typical Unplanned Prolonged Stay Supplies (Attachment 25A)

☐ Energy Hazard Assessment Form (Attachment 39B)

☐ LOTO Log (Attachment 39C)

☐ LOTO for Electrical Equipment (Attachment 39D)

☐ LOTO for Compressed Air and Gases (Attachment 39E)

☐ LOTO for Steam, Water and Fluid Lines (Attachment 39F)

☐ LOTO for Hydraulic Equipment (Attachment 39G)

9.0 Daily Tailgate Safety Meetings

The SLR field crew will discuss potential hazards and mitigation measures (see developed Project HIRAC form) each day before starting work, including applicable SLR and client HSE requirements.

The daily safety meetings will be documented describing the topics discussed and will be signed by the field crew. The Daily Safety Meeting Form provided in Appendix A, or similar document, will be used for this purpose. Copies of safety meeting documentation will be kept in project files at the managing SLR office.

10.0 Reporting of HSE Leading Indicators

Field personnel are encouraged to utilize SLR's Behavior Based Safety (BBS) Program (SLR HSE Manual, Section 005) to pro-actively document and report HSE-related leading indicators.

BBS is an approach to safety management that focuses on employee behaviors which may increase the risk of an accident. The approach assumes that employee behaviors often precede an incident and therefore modifying behavior can prevent an incident.

SLR's BBS program involves reporting the following HSE-related leading indicators which can assist with identifying and correcting unsafe conditions and behaviors:

- First Aids;
- Near Misses;
- Hazard Identifications; and
- Safety Observations / Conversation (SO/SC)

The SLR SSO should conduct at least one SO/SC at each project site during the course of field activities. Completed forms shall be forwarded to the Project Manager and HSE Manager for review.

Field personnel are encouraged to make safety observations and transmit any safety observations to the SLR SSO using the SO/SC Form (see Appendix A).

Field personnel are also expected to document and report any first aid cases, near misses or identified hazards to the SLR SSO utilizing SLR's Incident / Near Miss / Hazard Identification Form (see Appendix A).

11.0 SLR HSEP Completion / Review / Signoff

All HSEPs must be reviewed and signed by the SLR project manager and the office HSEC or their designate.

Project Manager	Signature	Date
HSE Coordinator	Signature	Date

NOTE: Some of our clients have very specific HSE contract and program requirements that we must adhere to. Please refer to the HSE Plan Templates and Review Requirements page on Connect for a list of clients where an SLR HSE Manager will need to review the HSEP prior to conducting field work. If applicable, the SLR HSE Manager will sign below:

HSE Manager	Signature	Date

12.0 Acknowledgement

(All onsite SLR and SLR subcontractor personnel must sign)

I acknowledge I have reviewed the health and safety plan for this project, understand it, and agree to comply with all of its provisions. I acknowledge that I have participated in the Job Safety Analysis identification of hazards and safety controls and agree to comply with the indicated steps/procedures. I understand that I may be prohibited by the Site Safety Officer or other SLR personnel from working on the project for not complying with any aspect of this Health and Safety Plan.

Name	Signature	Company Affiliation	Date

Appendix A
Field Documents

SLR

SLR TAILGATE SAFETY MEETING FORM

Section 1: General Information		
Date:	Time:	Project #:
Project Name:		
Project Location: ☐ Remote ☐ Urban ☐ Other_____		
Type of Work: ☐ Sampling ☐ Excavation ☐ Construction ☐ Other (describe below)		
HSE Documents: ☐ SLR JHA (HIRAC) ☐ SLR Site-Specific HSE Plan ☐ Client JHA/JSA ☐ Work Permit ☐ Other:_____ None (explain):_____		

Section 2: Task Description / Health and Safety Discussion

Section 3: Hazard Identification & Control (check all applicable)		
Environmental: ☐ Remote Travel ☐ Driving ☐ Temperature Extremes ☐ Wildlife (bears, moose, etc.) ☐ Insects (mosquitoes, etc.) ☐ Poisonous plants ☐ Other: _____ ☐ Other: _____	**Chemical Exposure Routes:** ☐ Ingestion ☐ Inhalation ☐ Dermal Contact **Chemical Type** ☐ Hydrocarbon/VOC ☐ Metals/PCB/PFAS ☐ Asbestos/Lead ☐ Other: _____	**Physical:** ☐ Slip/trip/fall ☐ Heavy Machinery ☐ Classified (FRC) areas ☐ Noise ☐ Dust ☐ Repetitive stress ☐ Other: _____ ☐ Other: _____

Section 4: Personal Protective Equipment (check all applicable)		
General: ☐ Safety Glasses (required) ☐ Hardhat ☐ Safety toe boots ☐ Reflective clothing ☐ Hearing protection ☐ Arctic Gear (boot/jacket/pant) ☐ Flame-resistant (FRC) outerwear	**Gloves:** ☐ Nitrile (disposable) ☐ Chemical resistant (e.g. neoprene) ☐ Cut-resistant (e.g. Kevlar®) ☐ Abrasion-resistant (e.g. leather) ☐ Insulating (hot/cold) ☐ Other:_____	**Miscellaneous:** ☐ LEL/VOC/H_2S Monitor ☐ Dust mask (N95) ☐ ½ Face respirator ☐ Fall protection ☐ Bear Spray ☐ Other: _____

ATTENDEES:			
Name / Signature		Name / Signature	

ATTENDEES:	
Name / Signature	Name / Signature
Additional Discussion Items Documentation Section (as needed)	

ATTACHMENT 20J: VEHICLE INSPECTION FORM

The following vehicle inspection must be performed and documented for all field projects where vehicles (company owned, rented, leased or personal-owned) are utilized on a constant or periodic basis. Inspections shall be conducted at the beginning of the project and per the following schedule.

Remember to perform a 360-degree walk around of the vehicle before each operation.

Project Name: _____ Project #: _____

Vehicle ID Info. (make/model/license #, etc.): _____

Vehicle Inspection Components	Condition		Comments
	Ok	Not Ok	
Weekly Checks			
Tires (legal tread depth, bald spots, sidewall damage, punctures)	☐	☐	
Windshield and windows (cracks)	☐	☐	
Windshield wipers (present, functional, worn)	☐	☐	
Seatbelts (missing, frayed, does not snap)	☐	☐	
Horn (operational)	☐	☐	
Head lights and taillights (all functional, cracks)	☐	☐	
Brake lights and turn signals (all functional)	☐	☐	
Backup lights and four-way flashers (functional)	☐	☐	
Brakes (solid feel, squealing, no warning light)	☐	☐	
Mirrors (present, functional, appropriate to use (trailer)	☐	☐	
Monthly Checks			
Spare Tire (inflated, jack, lug wrench present)	☐	☐	
Windshield wiper fluid (present, appropriate type for conditions)	☐	☐	
Bumpers (missing, lose, broken, dented)	☐	☐	
Body panels (newly dented or scraped)	☐	☐	
Climate control (cabin heat, defrost)	☐	☐	
Oil level	☐	☐	
Battery (color indicator, terminals clean and tight, secured)	☐	☐	
Hoses (cuts, cracks, leaks, bulges, chaffing, deterioration)	☐	☐	
Clutch (engages well, not slipping)	☐	☐	
Fuel tank (leaks, odor)	☐	☐	
Exhaust system (leaks)	☐	☐	
Coolant system (leaks)	☐	☐	
First aid kit (Either sealed or appears to be fully stocked)	☐	☐	
Portable Fire Extinguisher (Proper pressure; maintenance tag up to date)	☐	☐	

Inspected By: _____ Date: _____

Attachment 10A: Utility Clearance Mark-out Log

This log is to be completed by SLR personnel prior to initiation of ground disturbance activities (e.g., boring, excavations, staking, etc.) to assess the potential for underground structures, underground utilities, and aboveground power lines in the area selected for disturbance.

Contact the appropriate local utility locating service (One Call, Miss Dig, etc.) or a local utility locator contractor to have sub grade utilities located and marked. NOTE: Boring locations on private property (out of the public right-of-way) are typically not marked out by the One Call public utility mark-out service, and a private utility locate service must be used.

Utility Service Name	Telephone #	Service Confirmation #	Date / Time Notified

Belowground Services					
Utility	Company Name	Telephone #	Present or Unknown	Not Present	Markings (flags, paint, stakes / colors used)
Bldg. foundation					
Cable/Internet					
Electric					
Gas					
Fiber Optic					
Fire System					
Irrigation					
Landscaping					
Sewer / Septic					
Storm water					
UST					
Water					

If overhead lines could be potentially impacted by site activities, then use the following table to document information for the utilities involved, and contact them as necessary to de-energize or otherwise protect the lines from contact in accordance with Table 10-1.

Aboveground Services					
Utility	Company Name	Telephone #	Present	Not Present	Markings (flags, stakes / colors used)
Cable/Internet					
Electric					
Overhead supports					
Telephone					
Traffic light cables					

Attachment 10B: Ground Disturbance Checklist
(Page 1)

Prior to conducting ground disturbance activities, the SS must conduct a site survey for signs of underground and overhead utilities. If any of the questions below are answered "no," then the Project Manager must be contacted regarding concerns/issues. Document the reason(s) for any "no" answers on page 2 of this form and retain in the project files.

Pre-Ground Disturbance Considerations	Yes	No
1. Has the public One Call Center been contacted?		
2. Are as-built drawings available that show the location of utilities?		
3. Has a visual inspection of the work area(s) been completed?		
4. If One Call is not available or does not completely address the planned work area, has a private locating service been contacted?		
5. Have all utility locating service providers notified by the One Call Center marked out their facilities in the vicinity of the GD operations or otherwise notified SLR that they do not have facilities near the proposed locations?		
6. Have identified utilities been marked on the site plan/drawings?		
7. Were the utility markings conducted no more than 48 hours from the time of the GD activity?		
8. Are any fiber optic cables at least 50 feet away from the GD locations?		
9. If fiber optic cables are within 50 feet of the GD locations, has an agreement been made for the fiber optic company to be present during work?		
10. Does each GD location allow for clear entry and exit, adequate workspace, and a clear path for raising and lowering all equipment?		
11. Are all planned GD locations at least 3 feet from any surface and identified subsurface utility?		
12. Has the site representative indicated no knowledge of any subsurface utilities within 3 feet of the proposed GD locations?		
13. Are all proposed GD locations at least 3 feet from any visual line (straight line) indicators of a potential utility? Examples would be manhole covers, water, gas, and/or electrical meters and visible aboveground lines/poles.		
14. Are all proposed locations for pavement cutting clear of pavement joints, curbs, crash posts, or other engineered structures?		
15. Does the pavement lack signs of previous excavation (e.g., no pavement subsidence, differences in pavement texture or color, or pavement patching)?		
16. Does the soil encountered at the GD location appear to be native material? (Non-native materials would include materials free of gravel, clean sand, aggregate base, etc.)		
17. Have all expected utilities been identified and all missing utilities explained?		
18. Has a pre-job tailgate safety meeting been conducted for site personnel?		
19. Has a pre-job tailgate safety meeting been conducted for site personnel?		

Attachment 10B: Ground Disturbance Checklist

(Page 2)

Document any "no" answers from the Ground Disturbance Checklist below and the conclusions from the discussions held with the Project Manager for mitigating the identified concerns.

Attachment 9C: Job Safety Analysis Form

Job Name: _____ Job No. _____

Supervisor: _____ Date: _____

The Job Safety Analysis (JSA) will be developed in collaboration with the field work crew with their input on the necessary job steps, associated hazards and control measures necessary to perform the work safely. If the job steps are found to be different than originally anticipated or additional hazards are noted the work shall be stopped and a new JSA conducted.

	Job Steps	Hazards	Controls
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

All field work crew members shall review the contents of the JSA and sign below acknowledging their understanding of its contents.

Company Name	Attendee Name	Signature

Attachment 5A: Safety Observation/Conversation Form

Event Classification(s) – Mark all that apply

☐ Safety Observation ☐ Safety Conversation

Date _____ Time _____

Location _____

Client name _____ Project # _____

Safety Observations					
At Risk	**Human Behaviors**	**Safe**	**At Risk**	**Working Conditions**	**Safe**
☐	Attention to Work	☐	☐	Ambient Conditions	☐
☐	Communications	☐	☐	Condition of Tools and Equipment	☐
☐	Housekeeping Behavior	☐	☐	Housekeeping Conditions	☐
☐	Job Setup/Sequence	☐	☐	Guards and Barriers	☐
☐	Use of PPE	☐	☐	Workplace Design	☐
☐	Following HSEP/JSA/HSE Manual	☐	☐	Walking/Working Surfaces	☐
☐	Proper use of Tools/Equipment	☐	☐	Working at Heights	☐
☐	Recognition of Change of Conditions	☐	☐	Chemical Exposures	☐
☐	Body Position/Mechanics	☐	☐	Biological Exposures	☐
☐	Other:	☐	☐	Other:	☐
Comments					

Safety Conversations
What topic(s) were discussed? Employee behaviors? Working Conditions? LMRA? JSA?
Follow up action – Any corrective actions needed? HSEP or JSA revision needed? Positive feedback?

Any new hazards identified? ☐ **Yes** ☐ **No** **If Yes, complete and submit Incident/Near Miss/Hazard ID form**

Completed By: _____ _____ _____
(Print) (Signature) (Date)

Project Manager/Supervisor: _____ _____ _____
(Print) (Signature) (Date)

Attachment 5B: Incident/Near Miss Hazard Identification Report Form

Event Classification

☐ Incident – Injury or Illness ☐ Near Miss ☐ First Aid Case

☐ Incident – Significant Property Damage ☐ Hazard Identification ☐ Stop Work Action

☐ Incident – Environmental Damage ☐ Vehicle Accident (complete Vehicle Accident Form)

Date _____ Time _____

Location _____

Client name _____ Project # _____

Names of Known Witnesses _____

Notifications: Verbal notification within 1 hour for Incidents (if possible) / Provide written report within 24 hours

Function	Time	Contact Name	Contact number
☐ Emergency Responders			
☐ Medical Facility			
☐ PM or Supervisor			
☐ HSE Director			
☐ Office HSC or Manager			
☐ Regional Ops Manager			
☐ Client			
☐ Government agency(ies)			

Event Description (what happened, how, who was involved; provide diagram on back or photos.)
Immediate Response to the Event (Response on site and within next 8 hrs):
Recommendations for further actions:

Completed By: _____ _____ _____

(Print) (Signature) (Date)

Project Manager/Supervisor: _____ _____ _____

(Print) (Signature) (Date)

This report must be completed by the employee's supervisor or Site Safety Officer immediately upon learning of the incident. The completed report must be reviewed and signed by the Project Manager and e-mailed within 24 hours of the incident to Area HSE Manager e-mail: pmoore@slrconsulting.com

ATTACHMENT 16-C: Vehicle Accident Reporting Form

This report is to be initiated by the employee involved in the accident or his/her direct supervisor. Please answer all questions completely. This report must be forwarded to the appropriate HSE Director within **24 hours** of the accident. **Attach Police Report**.

Accident Description

Accident Date: Time: ☐ A.M. or ☐ P.M.

Location of Accident (City, State):

Description of Accident:

Witness: Phone No.

Address: City: State: ZIP:

Police Officer's Name and Badge #: Department:

Work Vehicle Description

Driver: Drivers' License No. State:

Address: City: State: ZIP:

Work Phone No. Project Name: Project No.

Vehicle No. Year: Make: Model: License Plate No.

State: Vehicle Owner: ☐ Company ☐ Rented/Leased ☐ Private Vehicle

Vehicle Type: ☐ Commercial Motor Vehicle ☐ Non-Commercial

If not Company-owned: Owner: Phone No.

Address: City: State: ZIP:

Vehicle Damage Description:

No. of vehicles towed from scene: Number of Injuries: Number of Fatalities:

Were hazardous materials released? ☐ No ☐ Yes If Yes, describe materials:

Other Vehicle(s)

Driver: Drivers' License No. State:

Address: City: State: ZIP:

Phone No. Owner's Name (☐Check if same as Driver):

Address: City: State: ZIP:

Insurance Company: Policy Number:

Agent's Name: Phone Number:

Address: City: State: ZIP:

Vehicle Year: Make: Model: Plate No. State:

Vehicle ID No.

Vehicle Damage Description:

Passengers: ☐ No ☐ Yes Injuries: ☐ No ☐ Yes (if Yes, list names and telephones numbers below)

Attachment 16-C: Vehicle Accident Report (continued)

Weather: ☐ Clear ☐ Cloudy ☐ Fog ☐ Rain ☐ Sleet ☐ Snow Other:
Pavement: ☐ Asphalt ☐ Steel ☐ Concrete ☐ Wood ☐ Gravel/Dirt ☐ Brick/Stone Other:
Condition: ☐ Dry ☐ Wet ☐ Icy ☐ Pot Holes Other:
Traffic Control: ☐ Traffic Light ☐ Stop Sign ☐ Railroad ☐ No Intersection ☐ No Control
Roadway: No. of Lanes each direction: ☐ Residential ☐ Divided Hwy ☐ Undivided Hwy

Draw and name roadways showing each vehicle, direction of travel, and point of impact. Indicate travel before the accident with a solid line, and post-accident movement with a broke line.

SYMBOLS:

Your Vehicle: ①

Other Vehicle(s): ②, ③

Pedestrian:

Stop Sign:

Yield Sign:

Railroad track:

Additional Information: _____

Employee _____ (Print) _____ (Signature) _____ (Date)

Supervisor _____ (Print) _____ (Signature) _____ (Date)

HSE Representative _____ (Print) _____ (Signature) _____ (Date)

ATTACH POLICE REPORT TO VEHICLE ACCIDENT REPORT FORM

ATTACHMENT 17-C: Witness Statement Form

Witness Statement Form

This information is being solicited from you so that the company can accurately assess the reported incident to avoid similar occurrences in the future. Describe only the facts you have personal knowledge of.

Exact Location of Incident:

Date of Incident: Time: ☐ a.m. ☐ p.m.

Date of this Statement: Time: ☐ a.m. ☐ p.m.

Witness Information

Name: Phone No.

Company:

Did you see the Incident? ☐ Yes ☐ No

How Far From You (approx., in feet) Did the Incident Occur?

Stating only factual information, describe in detail what happened and include any applicable events leading to the incident.

Witness Signature / Date

Print Name

Project Site Checklist

Project Activities: _____

Checklist Items	Yes	No	N/A
Written HSEP is on-site			
Addendums to the HSEP are documented on-site			
Information in the HSEP matches conditions and activities at the site			
HSEP has been read and signed by all site personnel, including visitors			
Daily tailgate safety meetings have been held and documented			
Site personnel have appropriate training and medical clearance			
Air monitoring is performed as described in the HSEP			
Air monitoring equipment has been calibrated daily			
Site zones are set up and observed where appropriate			
Access to the work area is limited to authorized personnel			
Decontamination procedures are followed and match the requirements of the HSEP			
Decontamination stations (including hand/face wash) are set up and used			
Personnel protective equipment used matches HSEP requirements			
Hearing protection used where appropriate			
Respirators are properly cleaned and stored			
Overhead utilities do not present a hazard to field equipment/personnel			
Traffic control measures have been implemented			
Emergency and first aid equipment is on-site as described in the HSEP			
Drinking water is readily available			
Accessible phone is readily available for emergency use			
Proper drum and material handling techniques are used			
Drums and waste containers are labeled appropriately			
Extension cords are grounded and protected from water and vehicle traffic			
Tools and equipment are in good working order			
Other:			
Other:			
Other:			

Notes: (All "no" answers must be addressed and corrected immediately. Note additional health and safety observations here).

_____

_____

_____

Conducted by: _____ Signature: _____ Date: _____

Appendix B
Additional HSE Documentation

August 15, 2022

Mr. Joseph T. Martella II
Environmental Engineer II
Office of Land Revitalization &
Sustainable Materials Management
235 Promenade Street
Providence, Rhode Island 02908

Re: Town Landing (a.k.a. Pawtucket Landing) RAWP Addendum
Taft Street
Pawtucket, Rhode Island
SLR #141.16222.00005

Dear Mr. Martella,

SLR International Corporation (SLR) has reviewed the LRSMM's RAWP comment letter (File No. SR-26-1570) regarding the Remedial Action Work Plan, Town Landing Property, Taft Street, Pawtucket, Rhode Island (RAWP). Our responses to the department's questions are outlined below:

1. General Comment - The Department requests that periodic Remedial Progress Reports be submitted throughout the project. The submittals should be submitted monthly in an electronic format (PDF) suitable for posting to the Department's dedicated Tidewater web page and should include:

a. A brief summary of the work completed during the current reporting period.

b. A brief summary of what work is anticipated to be completed during the upcoming reporting period; and

c. Results of Air Quality Monitoring (AQM) for dust during the reporting period, including the number of transient and sustained exceedances at the property perimeter, how they were responded to and how they were resolved.

SLR will instruct the contractor to keep detailed records of work completed during each monthly reporting period and prepare a brief summary of work expected to be completed during the following monthly period. Additionally, SLR has developed an Air Monitoring Plan as part of the Soil Management Plan. This plan is consistent with EPA 29 CFR 1910.120, paragraphs (b)(4)(ii)(E), (c)(6), and (h). According to the plan, the Contractor will maintain safety inspections, logs, and reports, accident/incident reports, medical certifications, training logs, monitoring results, etc. All exposure and medical monitoring records are to be maintained according to 29 CFR 1910 and

29 CFR 1926. The format of these logs and reports will be developed by the Contractor to include training logs, daily logs, weekly reports, safety meetings, medical surveillance records, and a phase-out report. This data will be reported to the Department on a monthly basis in PDF format.

2. Section 4. (Proposed Remedy) indicates "the proposed remedy is the placement of surface barrier that is either temporary during Step 3 with the staging of the Site or permanent during Stages 4 and 5 based on final development of the Site." Please confirm that the reference above to Step 5 should have been to Step 6.

The reference to step 5 was made in error. The sentence should read, "In general, the proposed remedy is the placement of surface barrier that is either temporary during Step 3 with the staging of the Site or permanent during Stages 4 and 6 based on final development of the Site.

3. Section 4.2 (Design Standards and Technical Specifications) indicates "This RAWP pertains only to the project area and not the remaining portion of the site that includes the public boat ramp (covered under the STRAP remedial action) and northern end of the parcel." The Department understands that the repairs and improvements associated with the public boat ramp project will be performed under the approved Short-Term Response Action Plan, which includes remedial activities. Please clarify the exact location and extent of the "northern end of the parcel" that is not covered under the draft RAWP, including who is responsible for completing the remediation of that area, and what the current remediation/redevelopment plans and schedule are for that area.

The northern end of the parcel refers to the area outside of the limit of work (see sheet C100 Pre-Remediation Conditions Plan in the RAWP), the northernmost corner of the existing boat ramp area. The small area not part of the STRAP remedial action or the area covered under this RAWP will be evaluated by the City.

In 2022, work for the City sewer pipeline, part of the NBC CSO tunnel project, was completed in this area including utility clearance and installation of the new infrastructure. The City evaluated if the potential UST, identified on one Sanborn Fire Insurance Map (Phase I ESA), is present with the use of a Geophysical Survey. The City requested additional information from the contractor to determine if any indications of release or impacts were observed during construction activities associated with the pipeline. To date, there has been no evidence beyond the Sanborn Mapping that a tank was present in this area, and likely no remedial action will be needed for this area. City engineers corresponded with Digregorio Construction, who completed the NBC sewer man and manhole in the indicated area of the potential UST. The contractors reported that they did not see a UST, nor did they see evidence of soils impacted by a UST release down to a depth of approximately 8 feet below grade.

The area is to remain part of the City boat ramp and is currently paved for associated parking with rip-rap along the riverbank to remain in place. No work is proposed in this area as part of

the proposed development plan. The City will be responsible for completing any investigation or notification to RIDEM on its findings.

4. Section 4.3 (Environmental Land Usage Restriction) indicates that "The City will be responsible for placement of the ELUR and recording of the deed following the completion of site work covered in this RAWP." Has an authorized representative of the City of Pawtucket reviewed and approved the version of the draft ELUR and SMP provided in RAWP Appendix C?

The City has been in communications with Fortuitous on the responsibility of the ELUR to be placed. It is SLR's understanding that the City will retain ownership of the land and Fortuitous will develop the area as proposed and operated with a lease to the City. A City representative is currently reviewing the ELUR language and upon receipt SLR will provide the comments or authorization as provided in the RAWP.

5. Regarding Section 4.7 (Proposed Schedule for Remediation):

a. It is indicated that "The first phase of construction within the Site for Step 3, temporary construction staging area, is planned for mid February 2022." Please provide an updated schedule.

The construction of the Stadium portion of the project on the former National Grid Site is scheduled to commence in Fall of 2022. The City portion of the property will commence, as provided in the RAWP, by Spring 2023.

b. Regarding the description of anticipated Site activities, please be advised that activity 5 (Filing of the RAWP Completion Report), should be completed before activity 4 (Filing of ELUR). The RAWP Completion Report should be reviewed and approved by the Department prior to the recording of the final Department approved ELUR and SMP, just in case there are any outstanding items that need to be addressed or resolved before ELUR recording.

SLR will ensure that the Department has had a chance to review and approve the report before filing the ELUR.

6. Section 4.10 (Effluent Disposal) discusses the potential stockpiling of excess impacted soils. Please be reminded that any jurisdictional stockpiled soils should be placed on and covered by polyethylene sheeting if they are placed in a temporarily capped or permanently capped area of the Site.

SLR will remind contractors to hand jurisdictional stockpiled soils on and under polyethylene sheeting and will include a construction spec in the site plan with poly thickness and stockpile covering procedure.

7. Site Figure Sheet C102 (Removals Plan) references Sheet C101 (Post-Remediation Conditions Plan). Please provide a copy of Sheet C101.

Sheet C101 has been included in this RAWP Addendum.

8. Construction Soil Management Plan comments:

a. Regarding Section 4.1.3 (Dust Control), the Air Quality Monitoring should include downwind perimeter dust monitoring during all work with a potential to generate dust and utilize a 15-Minute Sustained Perimeter Threshold Level of 150 µg/m3 for respirable dust, consistent with the Department approved level for the adjacent Tidewater Site.

This comment will be incorporated into the Construction Soil Management Plan.

b. Regarding Section 4.2.3 (Temporary Waste Stockpiles), consistent with Comment 6 above, please be reminded that any jurisdictional stockpiled soils should be placed on and covered by polyethylene sheeting if they are placed in a temporarily capped or permanently capped area of the Site to prevent potential cross contamination or impacts to the clean engineered controls.

All jurisdictional stockpiled soils will be placed on and covered by polyethylene sheeting to prevent cross contamination.

c. The final paragraph on page 15 indicates "Locations of the site in which no site improvements are proposed, between the construction staging and final development, will be restricted to those areas through the installation of fencing, existing thick vegetation, or other restrictive barriers." Please clarify if this means that there are some locations on the Site where installation of one of the Department approved engineered controls is not planned. If so, please identify these areas on a Site figure and specify the exact proposed long-term measures to prevent potential exposure to regulated soils.

There do not appear to be any areas of the site with no improvements proposed according to the Layout and Landscaping Plan (C103) This sentence was likely included in error.

9. Draft ELUR comments:

a. It is not clear from the language in the draft RAWP, ELUR and SMP whether there will be a single final Site wide ELUR, or multiple ELURs (i.e. one for the area covered in the RAWP and another for the boat launch area). Please clarify what is intended and who will be responsible for future management and annual monitoring of the ELUR(s).

There is one ELUR for the entirety of the parcel at Map 54 Lot 827, which includes the town landing site. This parcel is owned by the City of Pawtucket, and thus the city will be responsible for future management and annual monitoring of the ELUR. Details on final ELUR are being reviewed by the City and any changes relating to responsibility or the ELUR will be detailed and provided to RIDEM prior to the completion of work at the Site.

b. If only one Site wide ELUR is proposed, then the entire Site remedy (including the boat ramp work under the STRAP and the remedy for the northern end of the parcel described in Section 4.2 as not being part of the RAWP), should be completed before the final Department approved ELUR is recorded.

The ELUR will not be implemented until the completion of the full scale of work proposed in this RAWP and under the STRAP remedial action. The draft ELUR provided in the RAWP is an example for the purposes of review under this RAWP. It is SLR's understanding that the City will be responsible, as owners, to prepare and finalize the ELUR and will be coordinated with the RIDEM for approval before recording with the land records.

10. Draft Post Remediation Soil Management Plan (PRSMP) Comments:

a. ELUR Section A.v. references the engineered controls described in the SMP, and the draft PRSMP includes general descriptions of the engineered controls. The final PRSMP should include a detailed description of all final engineered controls installed at the Site, and should include RAWP Figure C500 (Site Details) which details each approved engineered control design specification.

RAWP figure C500 will be included in the report.

b. An As-Built Site Figure, showing the type and extent of all final installed engineered caps, should be included as an attachment to the final PRSMP.

An as-built Site Figure will be incorporated into the final PRSMP.

c. PRSMP Section (Applicable Area) references a site figure for depiction of the applicable area for the SMP. The Department acknowledges that this figure may not be currently available for review, but please be reminded that the final PRSMP, including the referenced site figure, should be submitted to the Department for review and approval prior to recording of the final ELUR/SMP package.

This figure will be included in the final report.

11. It is the Department's understanding that there is currently no pending application submitted to the Rhode Island Coastal Resources Management Council (CRMC) for review regarding the Town Landing project. Please provide an update about the plans and schedule for submitting an application to the CRMC.

The CRMC has approved the riverwalk and development plans for the proposed stadium project on for the Town Landing and former National Grid areas. The proposed bridge connecting the Division Street parcels and Town Landing has not been brought to the CRMC until final engineering and build-out for this phase has been completed.

12. Is there any proposed in water work that would require review and approval by the US Army Corps of Engineers (ACOE)? If so, please provide an update regarding permitting and approvals through the ACOE.

CRMC approved an Assent permit for the stadium project and the work on the Town Landing site including the riverwalk. As part of this phase of work there is currently no proposed work within the water that would require ACOE approval. The next phase including the bridge over the Seekonk may require ACOE and/or US Coast Guard approval. Design and permitting of the bridge have not yet begun. This will follow later this year or early 2023.

13. It is the OLRSMM's understanding that the Department's Office of Water Resources (OWR) Water Quality Certification (WQC) Program issued a WQC Modification for the Pawtucket Town Landing site (WQC 09-026) on May 13, 2019. Please be aware that the WQC Modification expires on May 13, 2022, so an application for an extension along with a $200 check, a filled out WQC Application Form, and a letter requesting an extension including a statement that there are no proposed changes to the plans from the previously approved Modification, should be submitted to the WQC Program. If there are proposed changes, the request should be for another Modification. Additionally, if it is a new Modification, the Department will have to make a determination if the new changes represent a substantial increase in fill and/or disturbance that will require a new 30-day Public Notice.

The CRMC Assent permit included all of the required permits for the contemplated improvements. The permit included storm water improvements associated with the stadium and the riverfront improvements.

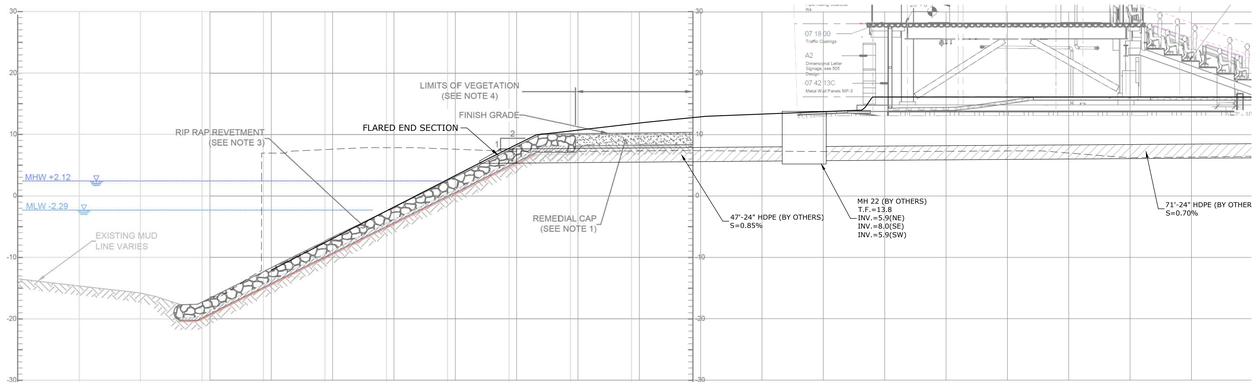
The actions stated in this RAWP Addendum are intended to address the Rhode Island LRSMM's comments as listed in the April 19, 2022, letter (File No. SR-26-1570). Please contact the undersigned with any further comments or concerns.

Sincerely,

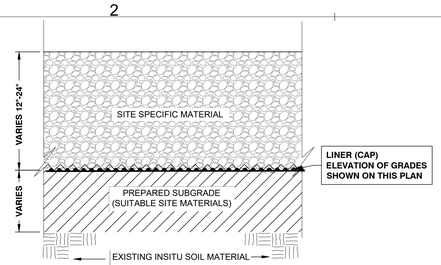
SLR International Corporation

Matthew Rose
Project Environmental Scientist

Peter Shea, LEP
Principal Environmental Scientist

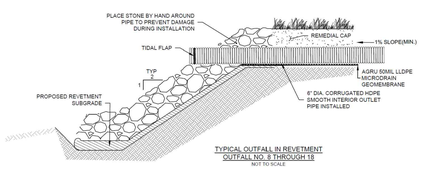


SECTION AT 24 INCH OUTFALL
1"=10' H & V
FOR MORE INFORMATION ON REVETMENT, SEE PLANS PER NOTE 1



CAP SECTION - FOR REFERENCE PURPOSES ONLY

NOT TO SCALE
FOR MORE INFORMATION SEE PLANS PER NOTE 1



TYPICAL OUTFALL IN REVETMENT
OUTFALL NO. 8 THROUGH 18
NOT TO SCALE

UNDERDRAIN TYPICAL OUTFALL - FOR REFERENCE PURPOSES ONLY

NOT TO SCALE
FOR MORE INFORMATION SEE PLANS PER NOTE 1

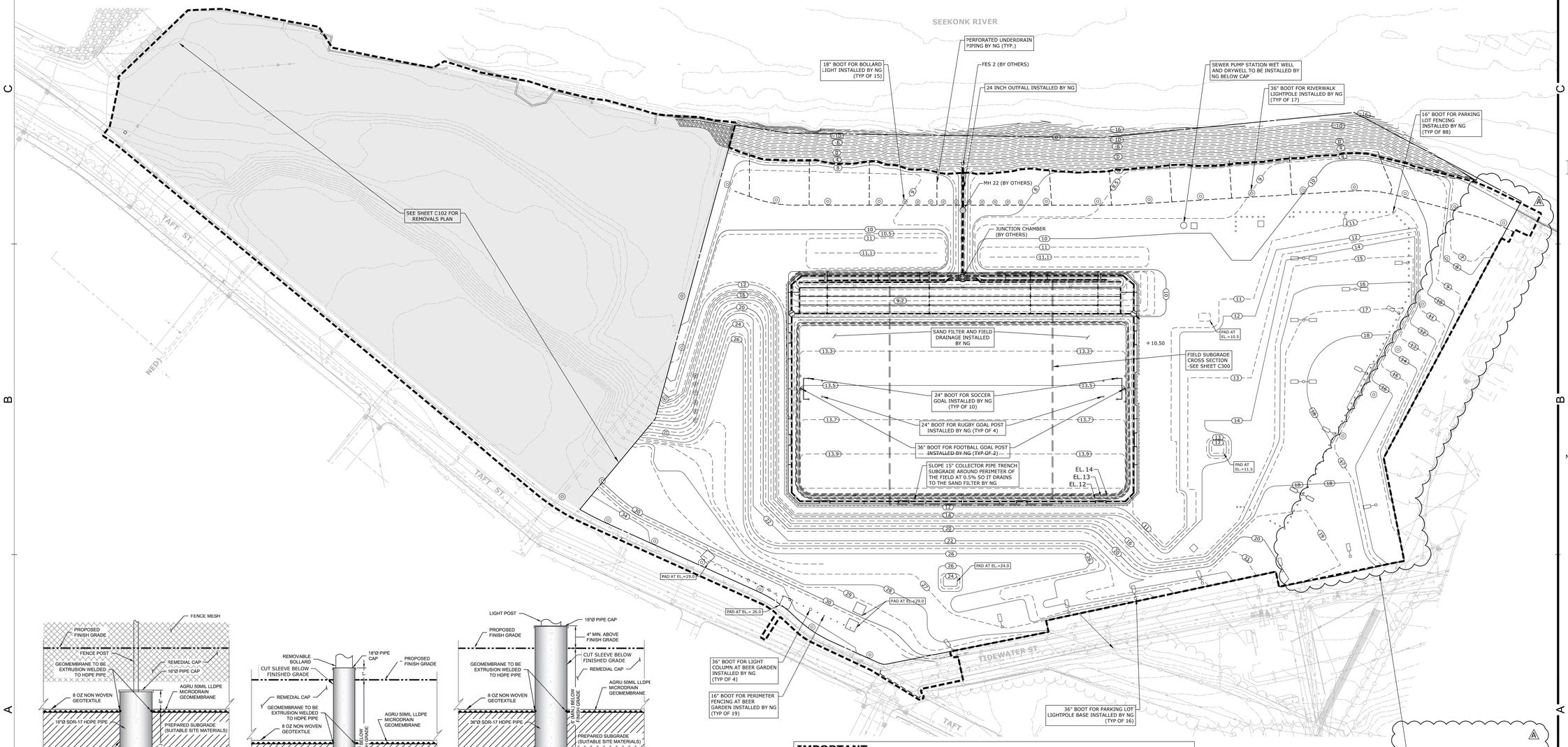
NOTES

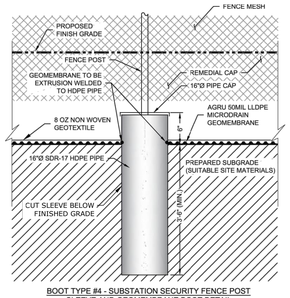
1. REFER TO "FORMER TIDEWATER FACILITY PAWTUCKET, RHODE ISLAND SITEWIDE REMEDY PLAN, CONTRACT DOCUMENTS PHASE 4 & 5 MAY 28, 2021, REVISED JUNE 25, 2021," PREPARED FOR NATIONAL GRID, PREPARED BY GZA.
2. ELEVATIONS INDICATE ELEVATION OF LINER (CAP).
3. ALL WORK BELOW THE CAP, THE CAP LINER, AND 12-18" OF CLEAN FILL ON TOP OF THE CAP IS BY NATIONAL GRID AND NOT PART OF THIS CONTRACT.
4. BOOTS FOR LIGHT POLE FOUNDATIONS, BOLLARDS, AND GOAL POSTS TO BE INSTALLED BY NATIONAL GRID (NG).

LEGEND

PARKING LOT LIGHT

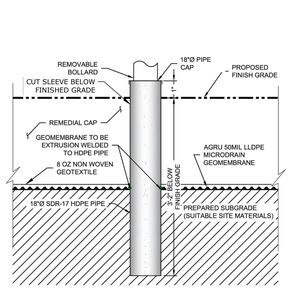
SITE LIGHT





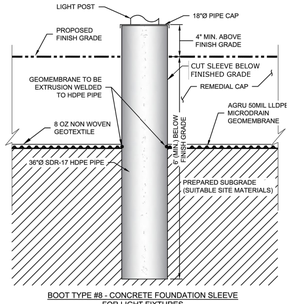
BOOT TYPE #4 - SUBSTATION SECURITY FENCE POST SLEEVE AND GEOMEMBRANE BOOT DETAIL

NOT TO SCALE



BOOT TYPE #7- REMOVABLE BOLLARD SLEEVE

NOT TO SCALE



BOOT TYPE #8 - CONCRETE FOUNDATION SLEEVE FOR LIGHT FIXTURES

NOT TO SCALE

BOOT DETAILS - FOR REFERENCE PURPOSES ONLY

NOT TO SCALE
FOR MORE INFORMATION SEE PLANS PER NOTE 1

IMPORTANT
- **ALL WORK SHOWN ON THIS SHEET IS BY NATIONAL GRID (NG)**
- **CONTOURS REPRESENT ELEVATION OF LINER. 18" OF CLEAN FILL ABOVE LINER WILL BE PROVIDED BY NG AND WILL BE THE STARTING ELEVATION OF THIS CONTRACT.**

ODELL

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CONSTRUCTION DOCUMENTS

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TIDEWATER STADIUM

11 Tidewater Street,
Pawtucket, Rhode Island

FORTUITOUS PARTNERS

NORTH

SCALE: 1"=50'

REVISION	DATE	DESCRIPTION
A	2/23/2022	Addendum A
ADDENDA OR MODIFICATION		
	06/24/2021	REGULATORY SUBMISSION SET
	10/01/2021	DESIGN DEVELOPMENT / GMP
	11/01/2021	CD Progress Set - Addendum A
	02/04/2022	CONSTRUCTION DOCUMENTS
ISSUE	DATE	DESCRIPTION
FULL SET ISSUES		

PROJECT NO:	16222.00003
P.I.C.	-
P MGR.	-
P ENGR.	-
DESIGN BY	-
JOB CAPTAIN	-
DRAWN BY	JDL
CHECKED BY	DLO

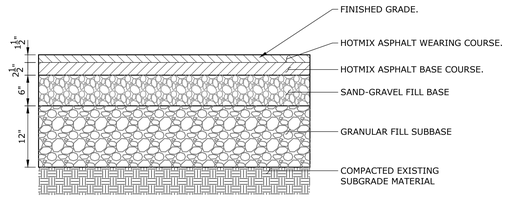
SHEET TITLE

POST-REMEDIATION CONDITIONS PLAN

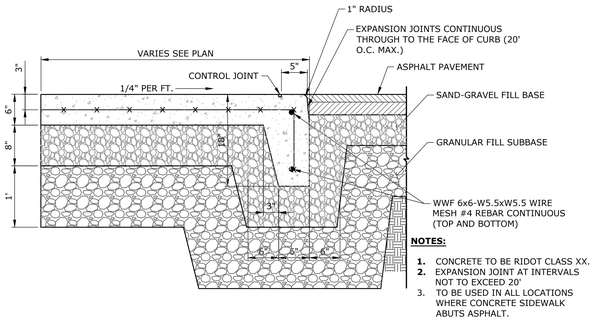
SHEET IDENTIFIER

C101

IMPERVIOUS SURFACE CAP
SECTION 4.3.3 RAWP



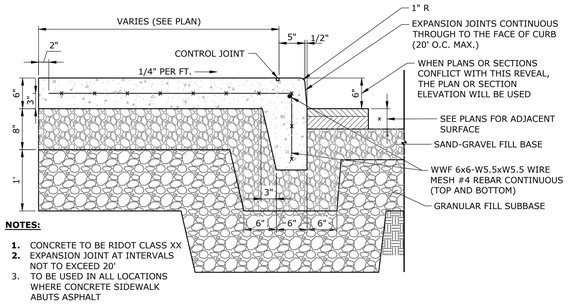
HOTMIX ASPHALT PAVEMENT - HEAVY DUTY
NOT TO SCALE



NOTES:

1. CONCRETE TO BE RIDOT CLASS XX.
2. EXPANSION JOINT AT INTERVALS NOT TO EXCEED 20'
3. TO BE USED IN ALL LOCATIONS WHERE CONCRETE SIDEWALK ABUTS ASPHALT.

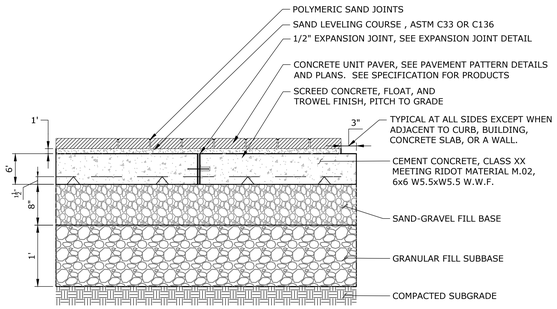
FLUSH INTEGRAL CONCRETE WALK & CURB
NOT TO SCALE



NOTES:

1. CONCRETE TO BE RIDOT CLASS XX
2. EXPANSION JOINT AT INTERVALS NOT TO EXCEED 20'
3. TO BE USED IN ALL LOCATIONS WHERE CONCRETE SIDEWALK ABUTS ASPHALT

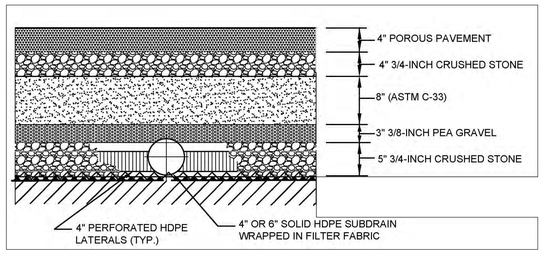
INTEGRAL CONCRETE WALK AND CURB - WITH REVEAL
NOT TO SCALE



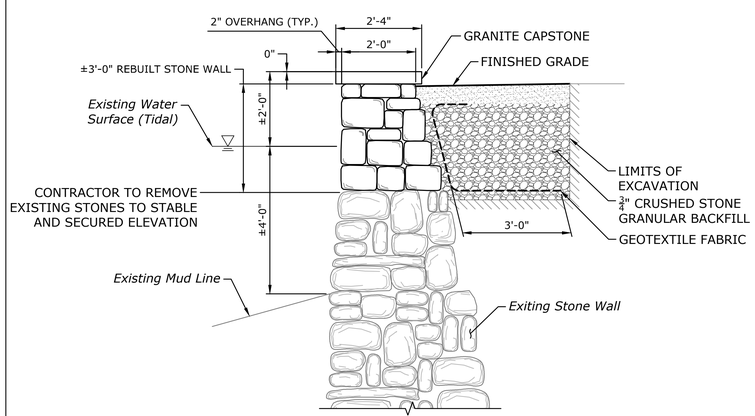
NOTES:

1. PAVERS SHALL BE AS SPECIFIED.
2. EXPANSION JOINTS IN CONCRETE BASE SHALL BE 20' O.C. OR 144 S.F. MAX.
3. CONCRETE BASE SHALL BE SCREEDED WITH A FLOAT FINISH, TROWELED, AND PITCHED TO GRADE.
4. TO BE ACCEPTED, PAVERS SHALL BE INSTALLED IN SUCH A MANNER THAT:
   - 4.1. THE PAVER WALKING SURFACES ARE WITHIN 1/8" OF EACH OTHER AND ADJACENT FINISHED SURFACES (I.E. GRANITE CURB AND CONC. WALK)
   - 4.2. THE PAVERS HAVE NO JOINTS GREATER THAN 1/16"
   - 4.3. SAND SWEPT BETWEEN JOINTS IS VIBRATED AND WITHIN 3/16" OF THE PAVER WALKING SURFACE
   - 4.4. NO PAVER IS CRACKED OR BROKEN
   - 4.5. PAVERS ARE VIBRATED IN PLACE, SECURED WITH POLYMERIC SAND IN JOINTS HARDENED.
5. CONTRACTOR SHALL CONSTRUCT A PAVER SAMPLE PATTERN FOR EACH PATTERN AS SPECIFIED AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO AUTHORIZATION TO INSTALL PAVERS.

PAVERS ON 6" CONCRETE SLAB
NOT TO SCALE

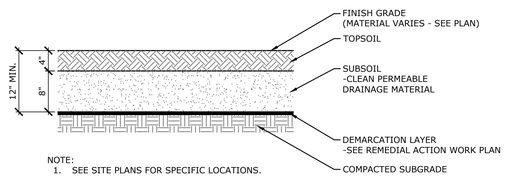


RIVERWALK DETAIL - POROUS PAVEMENT
NOT TO SCALE



REBUILT STONE WALL - SECTION (WALL TYPE 2)
SCALE: ½" = 1'-0"

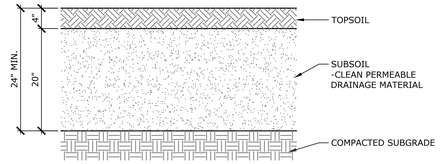
1-FOOT-THICK SOIL CAP (TYPE I)
SECTION 4.3.4 RAWP



NOTE:
1. SEE SITE PLANS FOR SPECIFIC LOCATIONS.

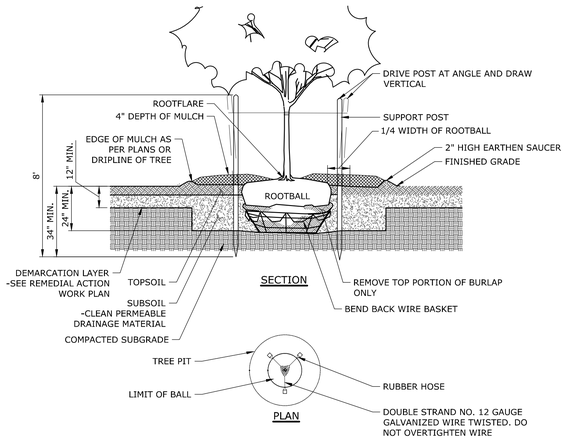
1-FOOT-THICK SOIL CAP - LAWN AREAS
N.T.S.

2-FOOT-THICK SOIL CAP (TYPE II)
SECTION 4.3.5 RAWP



NOTE:
1. SEE SITE PLANS FOR SPECIFIC LOCATIONS.

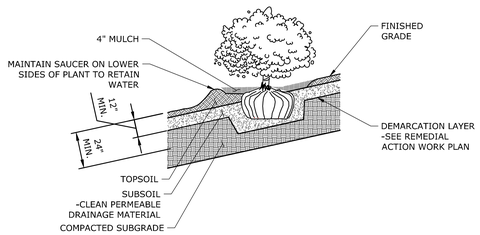
2-FOOT-THICK SOIL CAP - PLANT BED AREAS
N.T.S.



NOTE:

1. SUPPORT STAKES SHALL BE REMOVED BY THE CONTRACTOR ONE YEAR AFTER INSTALLATION.

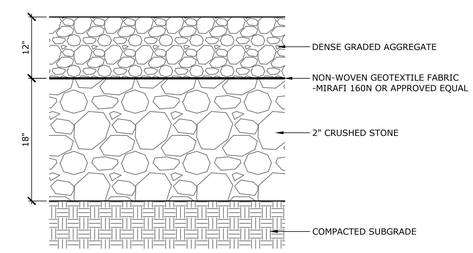
TREE PLANTING
NOT TO SCALE



NOTES:

1. UNLESS OTHERWISE DIRECTED SHREDDED MULCH SHALL BE PLACED TO A LIMIT OF ONE FOOT BEYOND THE CENTER OF THE OUTERMOST SHRUBS IN SHRUB BED.

SHRUB PLANTING
NOT TO SCALE



TEMPORARY ACCESS ROAD
N.T.S.

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CONSTRUCTION DOCUMENTS

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TIDEWATER STADIUM

11 Tidewater Street,
Pawtucket, Rhode Island

FORTUITOUS PARTNERS

REVISION	DATE	DESCRIPTION
		ADDENDA OR MODIFICATION
	02/04/2022	CONSTRUCTION DOCUMENTS
ISSUE	DATE	DESCRIPTION
		FULL SET ISSUES

PROJECT NO:	16222.00003
P.I.C.	-
P MGR.	-
P ENGR.	-
DESIGN BY	-
JOB CAPTAIN	-
DRAWN BY	JDL
CHECKED BY	PS

SHEET TITLE

SITE DETAILS

SHEET IDENTIFIER

C500