



**BOARD OF CONTRACT AND SUPPLY
CITY OF PROVIDENCE, RHODE ISLAND**

REQUEST FOR PROPOSALS

Item Description: SITE IMPROVEMENTS AT OBADIAH BROWN FIELD

Procurement/MinuteTraq #: 44745

Date to be opened: 5/6/2024

Issuing Department: Department of Parks

QUESTIONS

- Please direct questions related to the bidding process, how to fill out forms, and how to submit a bid (Pages 1-8) to the Purchasing Department.
 - Email: purchasing@providenceri.gov
 - Please use the subject line “**Solicitation Question**”
- Please direct questions relative to the Minority and Women’s Business Enterprise Program and the corresponding forms (Pages 9-13) to the MBE/WBE Outreach Director for the City of Providence, Grace Diaz
 - Email: gdiaz@providenceri.gov
 - Please use subject line “**MBE WBE Forms**”
- Please direct questions relative to the specifications outlined (beginning on page 14) to the issuing department’s subject matter expert:
 - Name: Sam Greenwood
 - Title: Landscape Architect
 - Email Address: sgreenwood@providenceri.gov

Pre-bid Conference

There will be a Non-Mandatory Pre-Bid Conference

Date: April 23, 2024

Time: 10:00 AM

Location: Project Site – 52 Obadiah Brown Rd, Providence, RI

Deadline for questions submissions:

Questions are due Friday, April 26, 2024 by 3PM



**BOARD OF CONTRACT AND SUPPLY
CITY OF PROVIDENCE, RHODE ISLAND**

INSTRUCTIONS FOR SUBMISSION

Meeting Date: May 6, 2024

Bids may be submitted up to **2:15 P.M.** on the above meeting date at the **Department of the City Clerk, Room 311, City Hall, 25 Dorrance Street, Providence.** At 2:15 P.M. all bids will be publicly opened and read at the Board of Contract Meeting in Conference Room 305, on the 3rd floor of City Hall.

- Bidders must submit **2 copies** of their bid in sealed envelopes or packages labeled with the captioned **Item Description** and the **City Department to which the solicitation and bid are related and must include the company name and address on the envelope as well.** (On page 1).
- If required by the Department, please keep the original bid bond and check in only one of the envelopes.
- Communications to the Board of Contract and Supply that are not competitive sealed bids (i.e. product information/samples) should have **“NOT A BID”** written on the envelope or wrapper.
- Only use form versions and templates included in this solicitation. If you have an old version of a form do not recycle it for use in this bid.
- The bid envelope and information relative to the bid must be addressed to:

**Board of Contract and Supply
Department of the City Clerk – City Hall, Room 311
25 Dorrance Street
Providence, RI 02903**

****PLEASE NOTE:** This bid may include details regarding information that you will need to provide (such as proof of licenses) to the issuing department before the formalization of an award.

*This information is **NOT** requested to be provided in your initial bid by design.*

All bids submitted to the City Clerk become public record. Failure to follow instructions could result in information considered private being posted to the city’s Open Meetings Portal and made available as a public record. The City has made a conscious effort to avoid the posting of sensitive information on the City’s Open Meetings Portal, by requesting that such sensitive information be submitted to the issuing department only at their request.



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BID PACKAGE CHECKLIST

Digital forms are available in the City of Providence Purchasing Department Office or online at <http://www.providenceri.gov/purchasing/how-to-submit-a-bid/>

The bid package **MUST** include the following, in this order:

- Bid Form 1: Bidder's Blank as the cover page/ 1st page (*see page 6 of this document*)
- Bid Form 2: Certification of Bidder as 2nd page (*see page 7 of this document*)
- Bid Form 3: Certificate Regarding Public Records (*see page 8 of this document*)
- Bid Form 4: Affidavit of City Vendor (*see pages 9 and 10 of this document*)
- Forms from the Minority and Women Business Enterprise Program: Based on Bidder Category. *See forms and instructions enclosed (pages 11-112) or on:*
<https://www.providenceri.gov/purchasing/minority-women-owned-business-mbewbe-procurement-program/>

***Please note: MBE/WBE forms must be completed for EVERY bid submitted and must be inclusive of ALL required signatures. Forms without all required signatures will be considered incomplete.**

- Bidder's Proposal/Packet: Formal response to the specifications outlined in this RFP, including pricing information and details related to the good(s) or service(s) being provided. Please be mindful of formatting responses as requested to ensure clarity.
- Financial Assurance, *if requested* (as indicated on page 5 of this document under "Bid Terms")

All of the above listed documents are REQUIRED. (With the exception of financial assurances, which are only required if specified on page 5.)

*****Failure to meet specified deadlines, follow specific submission instructions, or enclose all required documents with all applicable signatures will result in disqualification, or in an inability to appropriately evaluate bids.**



**BOARD OF CONTRACT AND SUPPLY
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NOTICE TO VENDORS

1. The Board of Contract and Supply will make the award to the lowest qualified and responsible bidder.
2. In determining the lowest responsible bidder, cash discounts based on preferable payment terms will not be considered.
3. Where prices are the same, the Board of Contract and Supply reserves the right to award to one bidder, or to split the award.
4. No proposal will be accepted if the bid is made in collusion with any other bidder.
5. Bids may be submitted on an “equal in quality” basis. The City reserves the right to decide equality. Bidders must indicate brand or the make being offered and submit detailed specifications if other than brand requested.
6. A bidder who is an out-of-state corporation shall qualify or register to transact business in this State, in accordance with the Rhode Island Business Corporation Act, RIGL Sec. 7-1.2-1401, et seq.
7. The Board of Contract and Supply reserves the right to reject any and all bids.
8. Competing bids may be viewed in person at the Department of the City Clerk, City Hall, Providence, immediately upon the conclusion of the formal Board of Contract and Supply meeting during which the bids were unsealed/opened. Bids may also be accessed electronically on the internet via the City’s [Open Meetings Portal](#).
9. As the City of Providence is exempt from the payment of Federal Excise Taxes and Rhode Island Sales Tax, prices quoted are not to include these taxes.
10. In case of error in the extension of prices quoted, the unit price will govern.
11. The contractor will **NOT** be permitted to: a) assign or underlet the contract, or b) assign either legally or equitably any monies or any claim thereto without the previous written consent of the City Purchasing Director.
12. Delivery dates must be shown in the bid. If no delivery date is specified, it will be assumed that an immediate delivery from stock will be made.
13. A certificate of insurance will normally be required of a successful vendor.
14. For many contracts involving construction, alteration and/or repair work, State law provisions concerning payment of prevailing wage rates apply ([RIGL Sec. 37-13-1 et seq.](#))
15. No goods should be delivered, or work started without a Purchase Order.
16. **Submit 2 copies of the bid to the City Clerk, unless the specification section of this document indicates otherwise.**
17. Bidder must certify that it does not unlawfully discriminate on the basis of race, color, national origin, gender, gender identity or expression, sexual orientation and/or religion in its business and hiring practices and that all of its employees are lawfully employed under all applicable federal, state and local laws, rules and regulations. (See Bid Form 2.)



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BID TERMS

1. Financial assurances may be required in order to be a successful bidder for Commodity or Construction and Service contracts. If either of the first two checkboxes below is checked, the specified assurance must accompany a bid, or the bid will not be considered by the Board of Contract and Supply. The third checkbox indicates the lowest responsible bidder will be contacted and required to post a bond to be awarded the contract.
 - a) A certified check for \$_____ must be deposited with the City Clerk as a guarantee that the Contract will be signed and delivered by the bidder.
 - b) A bid bond in the amount of 5 per centum (%) of the proposed total price, must be deposited with the City Clerk as a guarantee that the contract will be signed and delivered by the bidder; and the amount of such bid bond shall be retained for the use of the City as liquidated damages in case of default. Any person signing a bid bond as an attorney-in-fact shall include with the bid bond an original, or a photocopy or facsimile of an original, power of attorney.
 - c) A performance and payment bond with a satisfactory surety company will be posted by the bidder in a sum equal to one hundred per centum (100%) of the awarded contract.
 - d) No financial assurance is necessary for this item.
2. Awards will be made within **nighty (90) days of bid opening**. All bid prices will be considered firm, unless qualified otherwise. Requests for price increases will not be honored.
3. Failure to deliver within the time quoted or failure to meet specifications may result in default in accordance with the general specifications. It is agreed that deliveries and/or completion are subject to strikes, lockouts, accidents, and Acts of God.

The following entry applies only for COMMODITY BID TERMS:

4. Payment for partial delivery will not be allowed except when provided for in blanket or term contracts.

The following entries apply only for CONSTRUCTION AND SERVICE BID TERMS:

5. Only one shipping charge will be applied in the event of partial deliveries for blanket or term contracts.
6. Prior to commencing performance under the contract, the successful bidder shall attest to compliance with the provisions of the Rhode Island Worker's Compensation Act, [RIGL 28-29-1, et seq.](#) If exempt from compliance, the successful bidder shall submit a sworn Affidavit by a corporate officer to that effect, which shall accompany the signed contract.
7. Prior to commencing performance under the contract, the successful bidder shall, submit a certificate of insurance, in a form and in an amount satisfactory to the City.



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BID FORM 1: Bidders Blank

1. Bids must meet the attached specifications. Any exceptions or modifications must be noted and fully explained.
2. Bidder's responses must be in ink or typewritten, and all blanks on the bid form should be completed.
3. The price or prices proposed should be stated both in **WRITING** and in **FIGURES**, and any proposal not so stated may be rejected. **Contracts exceeding twelve months must specify annual costs for each year.**
4. Bids **SHOULD BE TOTALED** so that the final cost is clearly stated (unless submitting a unit price bid), however **each item should be priced individually**. Do not group items. Awards may be made on the basis of *total* bid or by *individual items*.
5. All bids **MUST BE SIGNED IN INK.**

Name of Bidder (Firm or Individual): _____

Contact Name: _____

Business Address: _____

Business Phone #: _____

Contact Email Address: _____

Agrees to bid on (Write the "Item Description" here): _____

If the bidder's company is based in a state *other than Rhode Island*, list name and contact information for a local agent for service of process that *is located within Rhode Island* _____

Delivery Date (if applicable): _____

Name of Surety Company (if applicable): _____

Total Amount in Writing*: _____

Total Amount in Figures*: _____

****If you are submitting a unit price bid, please insert "Unit Price Bid"***

Use additional pages if necessary for additional bidding details.

Signature of Representation

Title



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BID FORM 2: Certification of Bidder
(Non-Discrimination/Hiring)

Upon behalf of _____ (Firm or Individual Bidding),

I, _____ (Name of Person Making Certification),

being its _____ (Title or "Self"), hereby certify that:

1. Bidder does not unlawfully discriminate on the basis of race, color, national origin, gender, sexual orientation and/or religion in its business and hiring practices.
2. All of Bidder's employees have been hired in compliance with all applicable federal, state and local laws, rules and regulations.

I affirm by signing below that I am duly authorized on behalf of Bidder, on
this _____ day of _____, 20_____.

Signature of Representation

Printed Name



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BID FORM 3: Certificate Regarding Public Records

Upon behalf of _____ (Firm or Individual Bidding),

I, _____ (Name of Person Making Certification),

being its _____ (Title or "Self"), hereby certify an

understanding that:

1. All bids submitted in response to Requests for Proposals (RFP's) and Requests for Qualification (RFQ's), documents contained within, and the details outlined on those documents become public record upon receipt by the City Clerk's office and opening at the corresponding Board of Contract and Supply (BOCS) meeting.
2. The Purchasing Department and the issuing department for this RFP/RFQ have made a conscious effort to request that sensitive/personal information be submitted directly to the issuing department and only at request if verification of specific details is critical the evaluation of a vendor's bid.
3. The requested supplemental information may be crucial to evaluating bids. Failure to provide such details may result in disqualification, or an inability to appropriately evaluate bids.
4. If sensitive information that has not been requested is enclosed or if a bidder opts to enclose the defined supplemental information prior to the issuing department's request in the bidding packet submitted to the City Clerk, the City of Providence has no obligation to redact those details and bears no liability associated with the information becoming public record.
5. The City of Providence observes a public and transparent bidding process. Information required in the bidding packet may not be submitted directly to the issuing department at the discretion of the bidder in order to protect other information, such as pricing terms, from becoming public. Bidders who make such an attempt will be disqualified.

I affirm by signing below that I am duly authorized on behalf of Bidder, on

this _____ day of _____, 20_____.

Signature of Representation

Printed Name



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BID FORM 4: Affidavit of City Vendor

Per our Code of Ordinances [Sec. 21.-28.1 \(e\)](#), this form applies to a) the business, b) any political action committee whose name includes the name of the business, c) all persons holding ten (10) percent or greater equity interest or five thousand dollars (\$5,000.00) or greater cash value interest in the business at any time during the reporting period, d) all executive officers of the business entity, e) any spouse or dependent child of any individual identified in a) through d) above.

Executive officers who are not residents of the state of Rhode Island are exempted from this requirement.

Per [R.I.G.L. § 36-14-2](#), "Business" means a sole proprietorship, partnership, firm, corporation, holding company, joint stock company, receivership, trust, or any other entity recognized in law through which business for profit or not for profit is conducted.

Name of the person making this affidavit: _____

Position in the "Business" _____

Name of Entity _____

Address: _____

Phone number: _____

The number of persons or entities in your entity that are required to report under [Sec. 21.-28.1 \(e\)](#): _____

Read the following paragraph and answer one of the options:

Within the 12 month period preceding the date of this bid submission with the City of Providence, or with respect to the contracts that are not in writing within the 12 month period preceding the date of notification that the contract has reached the \$100,000 threshold, have you made campaign contributions within a calendar year to (please list all persons or entities required under [Sec. 21.-28.1 \(e\)](#)).

a. Members of the Providence City Council? Yes No

- If Yes, please complete the following:

Recipient(s) of the Contribution:

Contribution Date(s):

Contribution Amount(s):

b. Candidates for election or reelection to the Providence City Council? Yes No

- If Yes, please complete the following:

Recipient(s) of the Contribution:

Contribution Date(s):

Contribution Amount(s):



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c. The Mayor of Providence? Yes No

- If Yes, please complete the following:

Recipient(s) of the Contribution:

Contribution Date(s):

Contribution Amount(s):

d. Candidates for election or reelection to the office of Mayor of Providence? Yes No

- If Yes, please complete the following:

Recipient(s) of the Contribution:

Contribution Date(s):

Contribution Amount(s):

Signed under the pains and penalties of perjury.

Position



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MBE/WBE Participation Plan

Please complete separate forms for each MBE/WBE subcontractor/supplier to be utilized on the solicitation.

Bidder's Name:				
Bidder's Address:				
Point of Contact:				
Telephone:				
Email:				
Procurement #:				
Project Name:				
Which one of the following describes your business' status in terms of Minority and/or Woman Owned Business Enterprise certification with the State of Rhode Island? (Check all that apply).	<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> Neither MBE nor WBE			
<p>This form is intended to capture commitments between the prime contractor/vendor and MBE/WBE subcontractors and suppliers, including a description of the work to be performed and the percentage of the work as submitted to the prime contractor/vendor. Please note that all MBE/WBE subcontractors/suppliers must be certified by the Office of Diversity, Equity and Opportunity at the time of bid. The MBE/WBE Directory can be found here. Please visit, the City's MBE/WBE page for details of the program (e.g. instructions and requirements).</p> <ul style="list-style-type: none"> Nonprofit organizations are not required to complete the rest of this form. Construction projects unable to identify subcontractors prior to bid submission (e.g. Design Build) are required to provide updates to the MBE/WBE Outreach Office 				
Name of Subcontractor/Supplier:				
Type of RI Certification:	<input type="checkbox"/> MBE <input type="checkbox"/> WBE <input type="checkbox"/> Neither			
Address:				
Point of Contact:				
Telephone:				
Email:				
Detailed Description of Work to Be Performed by Subcontractor or Materials to be Supplied by Supplier Per the Scope of Work provided in the RFP				
Total Contract Value (\$):		Subcontract Value (\$):		Participation Rate (%):
Anticipated Date of Performance:				
I certify under penalty of perjury that the forgoing statements are true and correct.				
Prime Contractor/Vendor Signature		Title		Date
Subcontractor/Supplier Signature		Title		Date

***If you did not meet the 20% MBE/WBE combined participation goal, submit a Waiver Request Form.**



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MBE/WBE Waiver Request Form

**Fill out this form only if you did not meet the 20% MBE/WBE participation goal.
State-certified MBE or WBE Prime Bidders are NOT REQUIRED to fill out this form.**

Submit this form to the City of Providence MBE/WBE Outreach Director, Grace Diaz, at gdi@providenceri.gov or mbe-wbe@providenceri.gov, for review **prior to bid submission**. This waiver applies only to the current bid which you are submitting to the City of Providence and does not apply to other bids your company may submit in the future. **In case a waiver is needed, City Department Directors should not** recommend a bidder for an award if this form is not included, absent or is not signed by the city of Providence MBE/WBE director.

Prime Bidder: _____ Contact Email and Phone _____
Company Name, Address: _____ Trade _____
Project /Item Description (as seen on RFP): _____

To receive a waiver, you must list the certified MBE and/or WBE companies you contacted, the name of the primary individual with whom you interacted, and the reason the MBE/WBE company could not participate on this project.

MBE/WBE Company Name	Individual's Name	Company Name	Why did you choose not to work with this company?

I acknowledge the City of Providence's goal of a combined MBE/WBE participation is 20% of the total bid value. I am requesting a waiver of _____ % MBE/WBE (20% minus the value of **Box F** on the Subcontractor Disclosure Form). If an opportunity is identified to subcontract any task associated with the fulfillment of this contract, a good faith effort will be made to select MBE/WBE certified businesses as partners.

Signature of Prime Contractor /
or Duly Authorized Representative

Printed Name

Date Signed

Signature of City of Providence
MBE/WBE Outreach Director /
or Duly Authorized Representative

Printed Name of City of Providence
MBE/WBE Outreach Director

Date Signed



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SUPPLEMENTAL INFORMATION

If the issuing department for this RFP determines that your firm's bid is best suited to accommodate their need, you will be asked to provide proof of the following prior to formalizing an award.

An inability to provide the outlined items at the request of the department may lead to the disqualification of your bid.

*This information is **NOT** requested to be provided in your initial bid that you will submit to the City Clerk's office by the "date to be opened" noted on page 1. This list only serves as a list of items that your firm should be ready to provide on request.*

All bids submitted to the City Clerk become public record. Failure to follow instructions could result in information considered private being posted to the city's Open Meetings Portal and made available as a public record.

You must be able to provide:

- Business Tax ID will be requested after an award is approved by the Board of Contract and Supply.
- Proof of Insurance.
- Certificate of Good Standing with the Rhode Island Secretary of State.
- **UEI Number – Registration with SAM.gov for receipt of federal (ARPA) Funds**
- **Registrations can be made at <https://usfcr.com/sam-registration/>**



**BOARD OF CONTRACT AND SUPPLY
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SUPPLEMENTAL BID FORM

To whom it may concern:

1. The undersigned, having familiarized (himself) (themselves) (itself) with the **SITE IMPROVEMENTS AT OBADIAH BROWN FIELD** bid affecting the cost of work, and with the Contract Documents (which includes the Invitation for Bids, Instructions to Bidders, Form of Bid Bond, Form of Agreements, form of Non-Collusive Affidavit, Addenda (if any), Drawings, Technical Specification, Form of Surety Bond(s); as prepared by the Providence Parks Department, and on file in the office of the City Clerk 3rd Floor, City Hall, Providence, RI 02903, hereby proposes to furnish all supervision, technical personnel, labor, materials, machinery, tools, equipment and services including utility and transportation services, and to perform such other required work for the **SITE IMPROVEMENTS AT OBADIAH BROWN FIELD** and such other required and incidental work, complete, all in accordance with the above listed documents and for the unit prices for work in-place for the following items and quantities.

2. In submitting this Bid, the bidder understands that the right is reserved by The Providence Parks Department to reject any and all Bids, If written notice of acceptance of this Bid is mailed, telegraphed or delivered to the undersigned within (90) days after the opening thereof, or at any time thereafter before this Bid is withdrawn, the undersigned agrees to execute and deliver an Agreement in the prescribed form and furnish the required bond within (10) days after the Agreement is presented to him/her for signature.

Herewith in accordance with the instructions to Bidders.

3. Attached hereto is an affidavit in proof that the undersigned has not colluded with any person in respect to this. Bid or any bids for the Contractor for which this Bid is submitted. Also attached is a Statement of Bidder's Qualifications.

4. application unit prices are contained in the Agreement (established as the result of either a Unit Price Bid or a Supplemental Schedule of Unit Prices), the City of Providence may order the Contractor to proceed with desired changes in the work, the value of such changes to be determined by the measured quantities involved and the application unit prices specified in the Contract.

5. The City of Providence reserves the right to determine the lowest responsible Bidder based on past experience with the City and/or recommendations by City and/or state agencies with an interest in this procurement. The City reserves the right to award the project to the appropriate bidder in the best interest of the City of Providence.

CERTIFICATION OF NON-SEGREGATED FACILITIES

The Bidder certifies that he/she does not maintain or provide for his/her employees any segregated facilities at any of his establishments, and that he/she does not permit his/her employees to perform their services at any location, under his/her control, where segregation facilities are maintained. The Bidder agrees that a breach of this certification will be a violation of the Equal Opportunity Clause in any contract resulting from acceptance of this Bid. As used in this certification, term "segregation facilities" means any waiting rooms, work rooms, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities provided for employee which are segregated by explicit directive or are in fact segregated on basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. The Bidder agrees that (except where he/she has obtained identical certification from proposed subcontractors for specific time periods) he/she will obtain identical certification from proposed subcontractor prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from provisions of the Equal Opportunity Clause, and that he /she will retain such certifications in his/her files.

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. & 1001.



Procurement #:

**BOARD OF CONTRACT AND SUPPLY
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DATE _____, 20__

Name of Bidder and Official Address:

Name of Authorized Representative (Contact):

By _____
(Signature)
Title _____

E-Mail: _____

Phone: _____

Bidder shall indicate, in space provided,
the earliest possible Project Start-up Date: _____, 20__

ADDENDA: The undersigned acknowledges receipt of the following Addenda, if any, and has included the provisions thereof in this Bid (If Any):

<u>Addendum No.</u>	<u>Date</u>	<u>Addendum No.</u>	<u>Date</u>
_____	_____, 20__	_____	_____, 20__
_____	_____, 20__	_____	_____, 20__

Sub-Contractors (If Any):

Name: _____ **Scope of Work:** _____ **MBE / WBE**

Name: _____ **Scope of Work:** _____ **MBE / WBE**

Name: _____ **Scope of Work:** _____ **MBE / WBE**



**BOARD OF CONTRACT AND SUPPLY
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APPRENTICE REQUIREMENTS

Attention of prospective bidders is called to the fact that this project is to be bid upon and executed under the City of Providence Code of Ordinances Chapter 21 Art. II Section 21-28.1 c(1) and (2) related to utilizing apprentices in the contract. This ordinance outlines requirements for utilizing not less than 15% of total hours worked by apprentices. The City may lower this percentage only if it determines in writing that compliance is not feasible or that it would be unduly cost prohibitive to the project. The attention of prospective bidders is also called to the fact that reporting the efforts undertaken and progress towards achieving the requirements in this ordinance is a condition for payment. Compliance reporting shall be submitted with any contract payment requisition, in a format to be specified by the City. This demonstration of compliance through such reports shall be a condition of the requisition for payment to be processed. Upon the contract being awarded to the successful bidder, a mandatory meeting will be scheduled to review the project requirements relative to apprenticeship requirements and the process and protocols by which these goals will be achieved. At this meeting, specific forms and procedures for the documentation and achievement of these requirements by the successful bidder will be provided, discussed and agreed upon for the execution of the contract.

FIRST SOURCE REQUIREMENTS

Attention of prospective bidders is called to the fact that this project is to be bid upon and executed under the City of Providence Code of Ordinances Chapter 21 Art. III 1/2 First Source Agreements Sec. 21-91 through 21-96. This ordinance outlines requirements for hiring Providence residents to work on this project. The City may waive this requirement only upon a determination in writing that qualified residents of Providence are not available for the project, pursuant to Sec. 21-94(e). The attention of prospective bidders is called to the fact that reporting the efforts undertaken and progress towards achieving the requirements in this ordinance is a condition for payment. Compliance reporting shall be submitted with any contract payment requisition, in a format to be specified by the City. This demonstration of compliance through such reports shall be a condition of the requisition for payment to be processed. Upon the contract being awarded to the successful bidder, a mandatory meeting will be scheduled to review the project requirements relative to the First Source Agreements and the process and protocols by which these goals will be achieved. At this meeting, specific forms and procedures for the documentation and achievement of these requirements by the successful bidder will be provided, discussed and agreed upon for the execution of the contract.



**BOARD OF CONTRACT AND SUPPLY
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ARPA REQUIREMENTS ADDENDUM

Federal and State Contract and Purchasing Requirements

The following terms and conditions apply to all contractors, vendors, or subrecipients of the City of Providence and all subrecipients of subrecipients of the City of Providence and all contractors or vendors hired by the subrecipient, according to the City's Award Terms and Conditions; by ARPA and its implementing regulations; and as established by the Treasury Department.

1. Equal Opportunity.

Contractor shall comply with Executive Order 11246, "Equal Employment Opportunity," as amended by EO 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and as supplemented by regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

2. Minority and Women Business Enterprises (if applicable to this Contract)

Contractor hereby agrees to comply with the following when applicable: The requirements of Executive Orders 11625 and 12432 (concerning Minority Business Enterprise), and 12138 (concerning Women's Business Enterprise), when applicable. Accordingly, the Contractor hereby agrees to take affirmative steps to assure that women and minority businesses are utilized when possible as sources of supplies, equipment, construction, and services. Affirmative steps shall include the following:

- a) Including qualified women's business enterprises and small and minority businesses on solicitation lists;
- b) Assuring that women's enterprises and small and minority businesses are solicited whenever they are potential sources;
- c) When economically feasible, dividing total requirements into smaller tasks or quantities so as to permit maximum participation by small and minority business, and women's business enterprises;
- d) Where the requirement permits, establishing delivery schedules which will encourage participation by women's business enterprises and small and minority business;
- e) Using the services and assistance of the Small Business Administration, and the U.S. Office of Minority Business Development Agency of the Department of Commerce; and
- f) If any subcontracts are to be let, requiring the prime Contractor to take the affirmative steps in a through e above.

For the purposes of these requirements, a Minority Business Enterprise (MBE) is defined as an enterprise that is at least 51 percent owned and controlled in its daily operation by members of the following groups: Black, Hispanic, Asian or Pacific Islander, Native American, or Alaskan Natives. Women Business Enterprise (WBE) is defined as an enterprise that is at least 51 percent owned and controlled in its daily operation by women.



**BOARD OF CONTRACT AND SUPPLY
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3. Suspension and Debarment. (Applies to all purchases.)

- (A) This contract is a covered transaction for purposes of 2 CFR pt. 180 and 2 CFR pt. 3000. As such, the Contractor is required to verify that none of Contractor's principals (defined at 2 CFR § 180.995) or its affiliates (defined at 2 CFR § 180.905) are excluded (defined at 2 CFR § 180.940) or disqualified (defined at 2 CFR § 180.935).
- (B) The Contractor must comply with 2 CFR pt. 180, subpart C and 2 CFR pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
- (C) This certification is a material representation of fact relied upon by the City of PROVIDENCE. If it is later determined that the contractor did not comply with 2 CFR pt. 180, subpart C and 2 CFR pt. 3000, subpart C, in addition to remedies available to the City, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
- (D) The Contractor agrees to comply with the requirements of 2 CFR pt. 180, subpart C and 2 CFR pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The Contractor further agrees to include a provision requiring such compliance in its lower tier covered transactions.

4. Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352, as amended. (Applies to all purchases.)

Contractor certifies that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Contractor shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

Purchases over \$100,000 - Contractors must sign the certification on the last page of this addendum

5. Access to Records. (Applies to all purchases.)

- A. The Contractor agrees to provide the City of PROVIDENCE, the U.S. Department of Treasury, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions. The Contractor agrees to permit any of the foregoing parties to reproduce by any means or to copy excerpts and transcriptions as reasonably needed and agrees to cooperate with all such requests.
- B. The Contractor agrees to provide the Treasury Department or authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.
- C. No language in this contract is intended to prohibit audits or internal reviews by the Treasury Department or the Comptroller General of the United States.

6. Rights to Inventions Made Under a Contract or Agreement.

Contracts or agreements for the performance of experimental, developmental, or research work shall provide for the rights of the Federal Government and the recipient in any resulting invention in accordance with 37 CFR part 401, "Rights to



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Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any applicable implementing regulations.

7. Contract Work Hours and Safety Standards Act (40 U.S.C. 327 through 333) (applies only to purchases over \$100,000, when laborers or mechanics are used.)

Where applicable, all contracts in excess of \$100,000 that involve the employment of mechanics or laborers shall include a provision for compliance with 40 U.S.C. 3702 and 3704 of the Contract Work Hours and Safety Standards Act, as supplemented by Department of Labor regulations (29 CFR part 5). Under Section 3702 of the Act, each contractor shall be required to compute the wages of every mechanic and laborer on the basis of a standard workweek of 40 hours. Work in excess of the standard workweek is permissible provided that the worker is compensated at a rate of not less than 11/2 times the basic rate of pay for all hours worked in excess of 40 hours in the workweek. The requirements of 40 U.S.C. 3704 are 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. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

8. Clean Air Act & Federal Water Pollution Control Act (applies to purchases of more than \$150,000.)

- A. The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
- B. The Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
- C. The Contractor agrees to report each violation of the Clean Air Act and the Water Pollution Control Act to the City of PROVIDENCE
- D. and understands and agrees that the City will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
- E. Contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance.

9. Prohibition on certain telecommunications and video surveillance services or equipment (Huawei and ZTE)

Contractor is prohibited from obligating or expending loan or grant funds to:

- 1. Procure or obtain;
- 2. Extend or renew a contract to procure or obtain; or
- 3. Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications



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equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

I. For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

II. Telecommunications or video surveillance services provided by such entities or using such equipment.

III. Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

10. Buy USA - Domestic Preference for certain procurements using federal funds.

Contractor should, to the greatest extent practicable under a federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards including all contracts and purchase orders for work or products under this award. For purposes of this section:

1. "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

2. "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

11. Procurement of Recovered Materials: (applies only if the work involves the use of materials)

A. In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired:

I. Competitively within a timeframe providing for compliance with the contract performance schedule;

II. Meeting contract performance requirements; or

III. At a reasonable price.

B. Information about this requirement, along with the list of EPA - designated items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.

C. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.

12. Publications.



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Any publications produced with funds from this award must display the following language: "This project [is being] [was] supported, in whole or in part, by federal award number [enter project FAIN] awarded to [name of Recipient] by the U.S. Department of the Treasury."

13. Increasing Seat Belt Use in the United States.

Pursuant to Executive Order 13043, 62 FR 19217 (Apr. 18, 1997), Contractor is encouraged to adopt and enforce on-the-job seat belt policies and programs for your employees when operating company-owned, rented or personally owned vehicles.

14. Reducing Text Messaging While Driving.

Pursuant to Executive Order 13513, 74 FR 51225 (Oct. 6, 2009), Contractor is encouraged to adopt and enforce policies that ban text messaging while driving, and establish workplace safety policies to decrease accidents caused by distracted drivers.

15. Iran Divestment Act.

Pursuant to the North Carolina General Assembly (S.L. 2015-118; SB455), The Iran Divestment Act is to implement the authority granted to states by federal law to impose state-level sanctions against companies that engage in certain investment activities in the energy sector of Iran.

Additional Federal Regulations Applicable to ARPA (is hereby incorporated by reference):

1. Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, 2 C.F.R. Part 200, other than such provisions as Treasury may determine are inapplicable to this Award and subject to such exceptions as may be otherwise provided by Treasury. Subpart F – Audit Requirements of the Uniform Guidance, implementing the Single Audit Act, shall apply to this award.
2. Universal Identifier and System for Award Management (SAM), 2 C.F.R. Part 25, pursuant to which the award term set forth in Appendix A to 2 C.F.R. Part 25 is hereby incorporated by reference
3. Reporting Subaward and Executive Compensation Information, 2 C.F.R. Part 170, pursuant to which the award term set forth in Appendix A to 2 C.F.R. Part 170 is hereby incorporated by reference.
4. OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Non-procurement), 2 C.F.R. Part 180, including the requirement to include a term or condition in all lower tier covered transactions (contracts and subcontracts described in 2 C.F.R. Part 180, subpart B) that the award is subject to 2 C.F.R. Part 180 and Treasury's implementing regulation at 31 C.F.R. Part 19.
5. Recipient Integrity and Performance Matters, pursuant to which the award term set forth in 2 C.F.R. Part 200, Appendix XII to Part 200 is hereby incorporated by reference.
6. Governmentwide Requirements for Drug-Free Workplace, 31 C.F.R. Part 20.
7. New Restrictions on Lobbying, 31 C.F.R. Part 21.



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8. Uniform Relocation Assistance and Real Property Acquisitions Act of 1970 (42 U.S.C. §§ 4601-4655) and implementing regulations.

9. Generally applicable federal environmental laws and regulations.

Statutes and regulations prohibiting discrimination applicable to ARPA awards include, without limitation, the following:

1. Title VI of the Civil Rights Act of 1964 (42 U.S.C. §§ 2000d et seq.) and Treasury's implementing regulations at 31 C.F.R. Part 22, which prohibit discrimination on the basis of race, color, or national origin under programs or activities receiving federal financial assistance;
2. The Fair Housing Act, Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§ 3601 et seq.), 4 which prohibits discrimination in housing on the basis of race, color, religion, national origin, sex, familial status, or disability;
3. Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of disability under any program or activity receiving federal financial assistance;
4. The Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 6101 et seq.), and Treasury's implementing regulations at 31 C.F.R. Part 23, which prohibit discrimination on the basis of age in programs or activities receiving federal financial assistance; and

Title II of the Americans with Disabilities Act of 1990, as amended (42 U.S.C. §§ 12101 et seq.), which prohibits discrimination on the basis of disability under programs, activities, and services provided or made available by state and local governments or instrumentalities or agencies thereto.



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CITY OF PROVIDENCE STANDARD TERMS & CONDITIONS

1. The terms “you” and “your” contained herein refer to the person or entity that is a party to the agreement with the City of Providence (“the City”) and to such person’s or entity’s employees, officers, and agents.
2. The Request For Proposals (“RFP”) and these Standard Terms and Conditions together constitute the entire agreement of the parties (“the Agreement”) with regard to any and all matters. By your submission of a bid proposal or response to the City’s RFP, you accept these Standard Terms & Conditions and agree that they supersede any conflicting provisions provided by bid or in any terms and conditions contained or linked within a bid and/or response. Changes in the terms and conditions of the Agreement, or the scope of work thereunder, may only be made by a writing signed by the parties.
3. You are an independent contractor and in no way does this Agreement render you an employee or agent of the City or entitle you to fringe benefits, workers’ compensation, pension obligations, retirement or any other employment benefits. The City shall not deduct federal or state income taxes, social security or Medicare withholdings, or any other taxes required to be deducted by an employer, and this is your responsibility to yourself and your employees and agents.
4. You shall not assign your rights and obligations under this Agreement without the prior written consent of the City. Any assignment without prior written consent of the City shall be voidable at the election of the City. The City retains the right to refuse any and all assignments in the City’s sole and absolute discretion.
5. Invoices submitted to the City shall be payable sixty (60) days from the time of receipt by the City. Invoices shall include support documentation necessary to evidence completion of the work being invoiced. The City may request any other reasonable documentation in support of an invoice. The time for payment shall not commence, and invoices shall not be processed for payment, until you provide reasonably sufficient support documentation. In no circumstances shall the City be obligated to pay or shall you be entitled to receive interest on any overdue invoice or payment. In no circumstances shall the City be obligated to pay any costs associated with your collection of an outstanding invoice.
6. For contracts involving construction, alteration, and/or repair work, the provisions of applicable state labor law concerning payment of prevailing wage rates (R.I. Gen. Laws §§ 37-13-1 et seq., as amended) and the City’s First Source Ordinance (Providence Code of Ordinances §§ 21-91 et seq., as amended) apply.
7. With regard to any issues, claims, or controversies that may arise under this Agreement, the City shall not be required to submit to dispute resolution or mandatory/binding arbitration. Nothing prevents the parties from mutually agreeing to settle any disputes using mediation or non-binding arbitration.
8. To the fullest extent permitted by law, you shall indemnify, defend, and hold harmless the City, its employees, officers, agents, and assigns from and against any and all claims, damages, losses, allegations, demands, actions, causes of action, suits, obligations, fines, penalties, judgments, liabilities, costs and expenses, including but not limited to attorneys’ fees, of any nature whatsoever arising out of, in connection with, or resulting from the performance of the work provided in the Agreement.
9. You shall maintain throughout the term of this Agreement the insurance coverage that is required by the RFP or, if none is required in the RFP, insurance coverage that is considered in your industry to be commercially reasonable, and you agree to name the City as an additional insured on your general liability policy and on any umbrella policy you carry.
10. The City shall not subject itself to any contractual limitations on liability. The City shall have the time permitted within the applicable statute of limitations, and no less, to bring or assert any and all causes of action, suits, claims or demands the City may have arising out of, in connection with, or resulting from the performance of the work provided in the Agreement, and in no event does the City agree to limit your liability to the price of the Agreement or any other monetary limit.
11. The City may terminate this Agreement upon five (5) days’ written notice to you if you fail to observe any of the terms and conditions of this Agreement, or if the City believes your ability to perform the terms and conditions of this Agreement has been materially impaired in any way, including but in no way limited to loss of insurance coverage, lapsing of a surety bond, if required, declaration of bankruptcy, or appointment of a receiver. In the event of termination by the City, you shall be entitled to just and equitable compensation for any satisfactory work completed and expenses incurred up to the date of termination.



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12. Written notice hereunder shall be deemed to have been duly served if delivered in person to the individual or member of the firm or entity or to an officer of the entity for whom it was intended, or if delivered at or sent by registered or certified mail to the last business address known by the party providing notice.
13. In no event shall the Agreement automatically renew or be extended without a writing signed by the parties.
14. You agree that products produced or resulting from the performance of the Agreement are the sole property of the City and may not be used by you without the express written permission of the City.
15. For any Agreement involving the sharing or exchange of data involving potentially confidential and/or personal information, you shall comply with any and all state and/or federal laws or regulations applicable to confidential and/or personal information you receive from the City, including but not limited to the Rhode Island Identity Theft Protection Act, R.I. Gen. Laws § 11-49.3-1, during the term of the Agreement. You shall implement and maintain appropriate physical, technical, and administrative security measures for the protection of, and to prevent access to, use, or disclosure of, confidential and/or personal information. In the event of a breach of such information, you shall notify the City of such breach immediately, but in no event later than twenty-four (24) hours after discovery of such breach.
16. The Agreement is governed by the laws of the State of Rhode Island. You expressly submit yourself to and agree that any and all actions arising out of, in connection with, or resulting from the performance of the Agreement or relationship between the parties shall occur solely in the venue and jurisdiction of the State of Rhode Island or the federal court located in Rhode Island.
17. The failure of the City to require performance of any provision shall not affect the City's right to require performance at any time thereafter, nor shall a waiver of any breach or default of this Agreement constitute a waiver of any subsequent breach or default or a waiver of the provision itself.
18. If any term or provision of this Agreement, or the application thereof to any person or circumstance shall, in any extent, be invalid or unenforceable, the remainder of this Agreement shall not be affected thereby, and each term and provision shall be valid and enforceable to the fullest extent permitted by law.



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PREVAILING WAGE

This project qualifies for prevailing wages per the Prevailing Wages Statute or the Davis Bacon Act (HUD). Certified payrolls will need to be submitted to the owner for all hours worked on site for this project.

The Wage Decision for this project shall be as recorded on the Bid Date and is available on the RI Department of Labor website.

Federal Labor Standards

U.S. Department of Housing & Urban Development

Applicability

The Project of 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.

- A.1. (i) **Minimum Wages.** All laborers and mechanics employed or working up on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction of development of the project) 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 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 or work actually performed, without regard to skill, excepts as provided in 29 CFR Part 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 CFT part 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.
- (ii) (a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contact shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (2) The classification is utilized in the area by the construction industry; and
 - (3) The proposed wage rate, including any bona fide fringe benefits, bears a relationship to the wage rates contained in the wage determination.
- (b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee on the 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, 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



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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 1215-0140.)

- (c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and 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 1215-0140.)
- (d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(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 1215-0140.)
2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much that 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 (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), 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 comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.
3. (i) Payrolls and basic records. Payrolls and basic record relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of labor has found under 29 CFR 5.5 (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonable anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) or 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 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 1215-0140 and 1215-0017.)



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- (ii) (a) The contractor shall submit weekly for each 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 Part 5.5(a)(3)(i). This information may be submitted in any form desired. Optional Form WH-34 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), Government Printing Office, Washington, Dc 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149.)
- (b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor 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 maintained under 20 CFR Part 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.
- (c) The weekly submission of a property executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph AA.3. (ii)(b) of this section.
- (d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code. (iii)
The contractor or subcontractor shall make the records required under paragraph A.3. (i) of this section available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, 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 Part 5.12.
4. (i) Apprentices and Trainees. 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, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprentice program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training 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



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applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the even the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, 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 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 this part shall be in conformity with the equal employment opportunity requirement 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 subcontract the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as HUD or its designee may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all contract clauses in 29 CFR Part 5.5
7. Contracts 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 as provided in 29 CFR 5.12
8. Compliance with Davis-Bacon and Related Act Requirements. All ruling and interpretations of the Davis-Bacon and Related Act contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.
9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.
10. (i) Certification of Eligibility. By entering in to 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 of 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.
(iii) The penalty to making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1010, Title 18, U.S.C., "Federal Housing Administration transaction", provides in part: "Whoever,



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for the purpose of ...influencing in any way the action of such Administration...makes, utter or publishes any statement, knowing the same to be false...shall be fined not more than \$5,000 or imprisoned not more than two years, or both.”

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. As used in this paragraph, the terms “laborers” and “mechanics” include watchmen and guards.

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

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) or this paragraph, the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in 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 (1) of this paragraph, in the sum of \$25 for each calendar day on which such individual was required or permitted to work in excess of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) Withholding for unpaid wages for liquidated damages. HUD or its designees shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold of 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 (2) of this paragraph.

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

C. Health and Safety

(1) No laborer or mechanic shall be required to work in surrounding 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 by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 (formerly Part 1518) 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).

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



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BID PACKAGE SPECIFICATIONS

Project Description:

Obadiah Brown Field is the only field in Providence used for the Irish sport of Hurling. It was regraded and had a concession stand added in 2019 but is in need of irrigation. Additionally, there was a call from the community for a water feature that could be used by all ages to be able to cool off in the summer.

BASE BID: The Base Bid scope of work for this project shall include, but not be limited to the following:

- F&I Irrigation system as specified
- Fine Grade ex field as needed to remove high/low spots
- F&I Vortex Coolhub Abrio 3 water feature
- F&I 6” exposed aggregate concrete pad
- F&I 4” broom finish concrete walk
- F&I DuMor radius benches
- F&I Pilot Rock Trash Receptacle
- F&I trees per plan
- Loam & Hydroseed all disturbed areas

Abbreviations

R&S	Remove & Stockpile	LF	Linear Foot
R&D	Remove & Dispose	SF	Square Foot
D&I	Deliver & Install, owner provided	CF	Cubic Foot
F&I	Furnish & Install	CY	Cubic Yard
LS	Lump Sum	TN	Ton
EA	Each		

In addition to stating the Total Base Bid, the bidder shall state Unit Prices for related work listed under each bid item which represents the work items included in the Total Base Bid. The Unit Prices are quoted for computing adjustments to the Base Bid prior to Contract award, as well as during the course of construction, based upon extra work ordered by the City or for work countermanded, reduced or omitted by the City in order to stay within the Project budget.

Base Bid Items and Unit prices are to be Completed prices to be added or deducted on the basis of quantities of work involved, for each item in place in the unit indicated.

All Work Included in this Project Shall be Completed for the lump sum of:

_____ **Dollars**
(\$ _____), **TOTAL BASE BID**

ALLOWANCE: \$5,000.00

BASE BID W/ ALLOWANCE: \$ _____

UNIT PRICES – BASE BID:

1. F&I Silt Sock Erosion Control

_____ **LF** \$ _____
price in writing

BIDDER: _____



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2. F&I 4” Concrete Paving, complete

_____ SF \$ _____
price in writing

3. F&I 6” Exposed Aggregate Concrete Paving, complete

_____ SF \$ _____
price in writing

4. F&I Vortex Coolhub Abrio 3 Water Feature, complete

_____ EA \$ _____
price in writing

5. F&I Pilot Rock 55 gal Trash Receptacle

_____ EA \$ _____
price in writing

6. F&I DuMor 81” Radius Bench Model R521 in Thermally Modified Red Oak, complete

_____ EA \$ _____
price in writing

7. F&I 1.5 in Class 200 PVC Piping, complete

_____ LF \$ _____
price in writing

8. F&I 2 in Class 200 PVC Piping, complete

_____ LF \$ _____
price in writing

9. F&I Hunter I-25-4 Rotor Head, complete

_____ EA \$ _____
price in writing

10. F&I Rainbird Smartflow Irrigation Controller, complete

_____ EA \$ _____
price in writing

11. F&I Rainbird Wireless Rain Sensor, complete

_____ EA \$ _____
price in writing

12. F&I Rainbird Quick Coupling Valve, complete

_____ EA \$ _____
price in writing

13. F&I Rainbird Mainline Isolation Gate Valve, complete

_____ EA \$ _____
price in writing

BIDDER: _____



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14. F&I *Acer x freemanii* ‘Armstrong’ – 2-2.5” Cal B&B

_____ EA \$ _____
price in writing

15. F&I Loam & Hydroseed in Disturbed Areas

_____ SF \$ _____
price in writing

Please note that the list above is not intended to include all items required to complete the base bid scope of work but can and shall be used to adjust the contract prior to or after award – in the best interest of the City of Providence.

BIDDER: _____



**BOARD OF CONTRACT AND SUPPLY
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BID DOCUMENTS:

The complete set of Bid Documents consists of the Bid Form, Technical Specifications, Minority Participation Forms, and the following Drawings:

DRAWINGS:

- L-1 COVER
- L-2 EXISTING CONDITIONS PLAN
- L-3 GRADING, MATERIALS, LAYOUT, & PLANTING PLAN
- L-4 IRRIGATION PLAN
- L-5 CONSTRUCTION DETAILS
- L-6 IRRIGATION DETAILS

PREVAILING WAGE DECISION

COPY OF THE CONTRACT

TECHNICAL SPECIFICATION:

- 010000 GENERAL REQUIREMENTS
- 116840 SPLASH PADS
- 312316.13 TRENCHING
- 312500 EROSION AND SEDIMENTATION CONTROLS
- 321313 CONCRETE PAVING
- 323300 SITE FURNISHINGS
- 328400 PLANTING IRRIGATION
- 329119 LANDSCAPE GRADING
- 329200 TURF AND GRASSES
- 329300 PLANTS

ADDITIONAL INFORMATION REQUIRED WITH BID:

- Qualifications to Perform Work – See Form Below for Information Required
- Minority Participation Forms – 10% MBE / 10 % WBE Goal on this Project
- Addenda (If Any) - Must Be Acknowledged on Bid Form
- Product Information for Items Submitted as ‘Or Equal’ to Specified Materials



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PROVISIONS OF THIS PROJECT:

- Upon the Issuance of the Award from the Board of Contract – the City shall issue a Contract to be executed by the City and the vendor incorporating the bid specifications. All Provisions of the Specifications are binding.
- Any Permits Required by the City of Providence and/or State of Rhode Island Shall be Obtained by the Vendor – Permit Fees by the City of Providence Shall be Waived – the State ADA Fee Must be Paid
- The Davis Bacon Act Applies (HUD Projects) – Prevailing Wages Must Be Paid for On Site Hours – On-Site Interviews will be Conducted During the Project – Employees Shall be Advised of the Prevailing Wage Rates Prior to Mobilization on Site
- Certified payrolls Must be Submitted With Pay Requests Including Monthly Utilizations Form
- Performance and Payment Bonds (If Required) Must be Submitted within 10 Days of Award or Bid Bond Will be Forfeited
- An Insurance Certificate Shall be Submitted to the City Within 10 Days of Award
- A Copy of the Vendors Contractor’s License Must be Submitted within 10 Days of Award
- All On-Site Personnel Shall be Licensed (If Required) and Shall have Proof of All Licenses Required by the State of Rhode Island to Perform the Work Required
- Pay Requests Must be Submitted on Approved AIA Billing Documents (City will Provide if Needed)
- All Subcontractors Shall be Listed on the Bid Form – All Insurance & Payroll Requirements Apply
 - General Contractor Shall be the Insurance Certificate Holder and the City Shall be Named as ‘Additionally Insured’ with Respect to Liability Insurance
- A Submittal Log Must be Submitted within 10 Days of Award

CLOSE OUT DOCUMENTS:

- Prior to Final Payment the Vendor Shall Provide the Following:
 - Copies of Permits Signed off and Approved (If Any)
 - Operating Manuals and Warranties Shall Be Transferred and/or Delivered
 - Full and Completed As-Built Drawings Shall be Submitted for Approval
 - Training Shall be Provided to City Personnel (If Required)
 - Certification by Manufactures Representative (If Required)

QUALIFICATIONS:

Qualifications will be evaluated on the basis of similar project experience for:

- a. Completion of at least 3 similar projects within the past five years.
- b. Size and dollar value of similar completed projects.
- c. Contractor’s performance with similar projects. (references will be checked)
- d. Relevant experience of individuals assigned to the project.

Questions regarding this bid package shall be submitted via e-mail to Purchasing at purchasing@providenceri.gov and **Sam Greenwood, Landscape Architect, sgreenwood@providenceri.gov**, no later than five (5) working days before the bid opening date.

"General Decision Number: RI20240001 03/22/2024

Superseded General Decision Number: RI20230001

State: Rhode Island

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

Counties: Rhode Island Statewide.

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

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.20 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 2024.
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/05/2024
1	01/12/2024
2	02/23/2024
3	03/08/2024
4	03/22/2024

ASBE0006-006 09/01/2023

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).....\$ 48.15

34.84

ASBE0006-008 09/01/2023

Rates	Fringes
-------	---------

Asbestos Worker/Insulator
 Includes application of
 all insulating materials,
 protective coverings,
 coatings & finishes to all
 types of mechanical systems.\$ 48.15

34.84

BOIL0029-001 01/01/2021

Rates	Fringes
-------	---------

BOILERMAKER.....\$ 45.87

29.02

BRI0003-001 06/01/2022

Rates	Fringes
-------	---------

Bricklayer, Stonemason,
 Pointer, Caulker & Cleaner.....\$ 46.86

29.14

BRI0003-002 09/01/2022

Rates	Fringes
-------	---------

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

30.34

BRI0003-003 09/01/2022

Rates	Fringes
-------	---------

Marble, Tile & Terrazzo
 Finisher.....\$ 38.78

29.61

CARP0330-001 01/01/2024

Rates	Fringes
-------	---------

CARPENTER (Includes Soft
 Floor Layer).....\$ 43.63

30.25

Diver Tender.....	\$ 44.88	30.25
DIVER.....	\$ 57.03	30.25
Piledriver.....	\$ 41.53	29.35
WELDER.....	\$ 44.88	30.25

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 01/02/2023

	Rates	Fringes
MILLWRIGHT.....	\$ 41.54	30.73

ELEC0099-002 06/01/2023

	Rates	Fringes
ELECTRICIAN.....	\$ 48.61	50.44%
Teledata System Installer.....	\$ 36.46	11.59%+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 01/01/2023

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 59.36	37.335+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 11/01/2023

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.....	\$ 41.95	29.75
GROUP 2.....	\$ 39.95	29.75
GROUP 3.....	\$ 35.23	29.75
GROUP 4.....	\$ 38.93	29.75
GROUP 5.....	\$ 38.93	29.75
GROUP 6.....	\$ 34.65	29.75
GROUP 7.....	\$ 28.65	29.75
GROUP 8.....	\$ 34.20	29.75
GROUP 9.....	\$ 43.17	29.45

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.

* ENGI0057-002 11/01/2023

	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.....	\$ 41.95	29.75
GROUP 2.....	\$ 39.95	29.75
GROUP 3.....	\$ 35.23	29.75
GROUP 4.....	\$ 38.93	29.75
GROUP 5.....	\$ 38.93	29.75
GROUP 6.....	\$ 34.65	29.75
GROUP 7.....	\$ 28.65	29.75
GROUP 8.....	\$ 34.20	29.75
GROUP 9.....	\$ 34.28	29.75

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

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

POWER EQUIPMENT OPERATOR CLASSIFICATIONS

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

GROUP 2: Well point installation crew

GROUP 3: Utility engineers and signal persons

GROUP 4: Oiler on cranes

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

GROUP 6: Roller, skid steer loaders, street sweeper

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

GROUP 8: Stone crusher

GROUP 9: Mechanic & welder

* ENGI0057-003 12/01/2023

BUILDING CONSTRUCTION

	Rates	Fringes
Power Equipment Operator		
GROUP 1.....	\$ 46.07	29.75
GROUP 2.....	\$ 44.07	29.75
GROUP 3.....	\$ 42.60	29.75
GROUP 4.....	\$ 39.85	29.75
GROUP 5.....	\$ 37.00	29.75
GROUP 6.....	\$ 43.15	29.75
GROUP 7.....	\$ 42.72	29.75
GROUP 8.....	\$ 40.04	29.75

a. BOOM LENGTHS, INCLUDING JIBS:

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

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

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

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

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

GROUP 2: Digging machine, Ross carrier, locomotive, hoist, elevator, bidwell-type machine, shot & water blasting machine, paver, spreader, front end loader (3 yds. and over), vibratory hammer and vacuum truck

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

GROUP 4: Fireman & oiler 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

IRON0037-001 09/16/2023

	Rates	Fringes
IRONWORKER.....	\$ 40.00	32.58

LAB00271-001 11/27/2022

BUILDING CONSTRUCTION

	Rates	Fringes
LABORER		
GROUP 1.....	\$ 35.50	26.85
GROUP 2.....	\$ 35.75	26.85
GROUP 3.....	\$ 36.25	26.85
GROUP 4.....	\$ 36.50	26.85
GROUP 5.....	\$ 37.50	26.85

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

LAB00271-002 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.....	\$ 44.05	24.15
Free Air		
Group 1.....	\$ 46.00	24.15
FREE AIR		
Group 2.....	\$ 43.05	24.15
Free Air		
Group 2.....	\$ 45.00	24.15
FREE AIR		
Group 3.....	\$ 40.50	24.15
Free Air		
Group 3.....	\$ 42.45	24.15
LABORER		
Group 1.....	\$ 35.50	24.85
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,
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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 06/01/2023

	Rates	Fringes
PAINTER		
Brush and Roller.....	\$ 37.62	22.85
Epoxy, Tanks, Towers, Swing Stage & Structural Steel.....	\$ 39.62	22.85
Spray, Sand & Water Blasting.....	\$ 40.62	22.85
Taper.....	\$ 38.37	22.85
Wall Coverer.....	\$ 38.12	22.85

PAIN0011-006 06/01/2022

	Rates	Fringes
GLAZIER.....	\$ 40.78	23.40

FOOTNOTES:

SWING STAGE: \$1.00 per hour additional.

PAID HOLIDAYS: Labor Day & Christmas Day.

PAIN0011-011 06/01/2023

	Rates	Fringes
Painter (Bridge Work).....	\$ 56.25	23.45

PAIN0035-008 06/01/2011

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

PLAS0040-001 01/01/2024

BUILDING CONSTRUCTION

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 43.00	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 01/01/2024

HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 38.45	25.30

PLAS0040-003 01/01/2024		

	Rates	Fringes
PLASTERER.....	\$ 43.65	29.43

PLUM0051-002 08/28/2023		

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 50.59	32.75

ROOF0033-004 12/01/2023		

	Rates	Fringes
ROOFER.....	\$ 43.80	30.31

SFRI0669-001 01/01/2024		

	Rates	Fringes
SPRINKLER FITTER.....	\$ 47.55	32.85

SHEE0017-002 12/01/2020		

	Rates	Fringes
Sheet Metal Worker.....	\$ 38.58	36.73

TEAM0251-001 05/01/2023		

HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
TRUCK DRIVER		
GROUP 1.....	\$ 29.71	34.602+A+B
GROUP 2.....	\$ 29.86	34.602+A+B
GROUP 3.....	\$ 29.91	34.602+A+B
GROUP 4.....	\$ 29.96	34.602+A+B
GROUP 5.....	\$ 30.06	34.602+A+B
GROUP 6.....	\$ 30.46	34.602+A+B
GROUP 7.....	\$ 30.66	34.602+A+B
GROUP 8.....	\$ 30.16	34.602+A+B
GROUP 9.....	\$ 30.41	34.602+A+B
GROUP 10.....	\$ 30.21	34.602+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>.

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 classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

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

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

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

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

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

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION"

CONSTRUCTION AGREEMENT

This Construction Agreement (“Agreement”) is made and entered into as of this _____ day of _____ 2023 by and between the **City of Providence Board of Park Commissioners**, having an address of The Dalrymple Boathouse, Roger Williams Park, 1000 Elmwood Ave., Providence, RI (“City”) and **[Contractor Name]**, having an address of **[Contractor Address]** (“Contractor”).

WITNESSETH:

WHEREAS, the **[Park Name]** is located at **[Park Address]**. The City plans to make improvements to the park under the **[RFP Name]** project (the “Project”), as detailed in the Request for Proposals (“RFP”) issued by the City on **[RFP Date]** (attached and incorporated by reference as Exhibit A); and

WHEREAS, the Contractor proposed to handle the Project, as detailed in a responsive bid opened on **[bid opening date]** (attached and incorporated by reference as Exhibit B); and

WHEREAS, the Board of Contract and Supply awarded the contract to the Contractor, pursuant to the Board’s Memorandum dated **[award letter date]** (attached and incorporated by reference as Exhibit C).

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained in this Agreement, the Parties agree as follows:

1. **SELECTION.** The City hereby selects the Contractor to provide construction services outlined in its **[bid opening date]** submission.
2. **TERM.** The term of this agreement shall be from and after the date of execution through completion of the Project, which shall be not later than **[completion date]**.
3. **TERMS OF PAYMENT.** The total amount of the awarded contract is **[contract amount]**. The City shall make a good-faith effort to pay the Contractor within sixty (60) days of receipt of a pay requisition for work completed and accepted, less retainage.
4. **COMPENSATION.** The Contractor shall be paid according to the breakdown contained in its bid package.
5. **MERGER AND INTEGRATION.** The procurement documents prepared and issued for purposes of this Project, including the RFP, the bid submitted by Contractor, and any other documents referenced in or attached to this Agreement, are hereby incorporated in and form a part of this Agreement; provided, however, that to the extent those documents differ or contradict the terms of this Agreement, this Agreement shall control.

6. INDEMNIFICATION AND LIABILITY. The Contractor is alone responsible for the safety, efficiency, and adequacy of the construction and for any damage which may result from improper construction, maintenance, or operation. The Contractor shall indemnify, defend, and hold harmless the City, and its employees, representatives, agents, successors and assigns (the "City Indemnified Parties") from and against any and all demands, claims, suits, cause or cause of action, whether at law or in equity, costs, expenses and attorneys' fees and any liability whatsoever to anyone for any bodily injury or property damage resulting from or arising out of the willful misconduct or negligent acts or omissions of the Contractor and/or its employees, representatives, subcontractors, and agents in the performance of this Agreement.
7. RETAINAGE: The City shall retain 5% of all pay requests paid during the Project. When the City and/or its representatives deem the Project as "Substantially Complete," or 85% of the work has been completed, the retainage may be reduced to 2.5% for the work completed. The final payment will be released when all the work has been completed, inspected, and approved by the City's representative and all closeout documents, warranties and as-built plans have been received and approved by the City.
8. INSURANCE. The Contractor is required to carry liability insurance in the amount of not less than one million dollars (\$1,000,000) per occurrence and two million dollars (\$2,000,000) general aggregate and shall furnish to the City an insurance certificate naming the City of Providence, and the Board of Park Commissioners, and the Providence Public Buildings Authority as additional named insureds on a primary but non-contributing basis for General Liability.
9. BINDING EFFECT. This Agreement and all the covenants, provisions, and conditions herein contained shall inure to the benefit of and be binding upon the heirs, successors and assigns of the parties. Neuter pronouns shall be read as masculine or feminine, and words in the singular person as plural, if the nature or number of the parties require.
10. GOVERNING LAW. This Agreement is entered into pursuant to and shall be governed by and construed in accordance with the laws of the State of Rhode Island.
11. NATURE OF RELATIONSHIP. Nothing in this Agreement shall create a partnership, joint venture, trust or other fiduciary relationship between the Contractor and the City.
12. AMENDMENTS AND SUPPLEMENTS. The Contractor and the City may amend, modify, supplement, or waive any provisions of this Agreement in such manner as may be agreed upon by the Parties in a written instrument executed by both Parties.

13. MBE/WBE. The parties acknowledge that the City sets an MBE goal of 10% and a WBE goal of 10%, and the Contractor will make good faith efforts to comply with these goals.
14. TERMINATION. The City may terminate this Agreement at any time upon ninety (90) days prior written notice. This Agreement may be terminated by either party if the other party materially breaches any provision of this Agreement and fails to cure the material breach within 30 days after receiving notice thereof from the non-breaching party. Without limiting the City's right to terminate this Agreement, the City may suspend the Contractor's right to access the Project upon any actual, threatened, or suspected breach of this Agreement.
15. COUNTERPARTS. This Agreement may be executed in multiple counterparts, each of which shall constitute an original, but all of which shall constitute one document.

IN WITNESS WHEREOF, the parties have caused this Agreement to be duly executed as of the date first above written.

CITY OF PROVIDENCE:

By: _____
Brett P. Smiley, Mayor

Approved as to form and correctness:

Jeff Dana, City Solicitor

CONTRACTOR:

By: _____
[Contractor name and title]

- EXHIBIT A: RFP
EXHIBIT B: Bid
EXHIBIT C: Board of Contract and Supply Memorandum dated [award letter date]
EXHIBIT D: ARPA Amendment

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SECTION 010000 - GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 All work done under this Contract shall also be in conformance with the Drawings and these Supplemental Technical Specifications.

A. SCOPE OF WORK

1. The general summary of work to be done under this contract consists of, but shall not be limited, to the following as shown in the Contract Documents:

B. WORK COVERED BY CONTRACT DOCUMENTS

C. The Contractor shall execute the scope of work indicated on Plans and Specifications to enhance the use and operations of the site as shown within the project limits.

D. Work shall be as specifically indicated, shown or described in the Drawings, Technical Specifications, and other Contract Documents.

E. PROJECT INFORMATION

1. OWNER

a. City of Providence Parks Department Roger Williams Park Dalrymple Boathouse,
1000 Elmwood Avenue, Providence, RI 02907, Telephone: 401.680.7200

b. Superintendent of Parks: Wendy Nilsson

2. OWNER'S REPRESENTATIVE

a. Sam Greenwood - 401.749.6314

1.2 PROJECT LOCATION

A. Obadiah Brown Field - 52 Obadiah Brown Road - Providence, RI 02909

PART 2 - PRODUCTS

2.1 CONTRACTOR USE OF PREMISES

A. The Contractor's use of premises shall be within the limits shown on the Drawings and as defined in the Standard Form of Agreement, for the performance of the Work.



1. The Contractor shall maintain vehicular access and utility service to the abutting properties at all times throughout the course of the construction.
2. The Contractor shall assume full responsibility for security of all materials and equipment on the site, including those of the subcontractors.
3. If directed by the Owner's Representative, the Contractor shall relocate or move any stored items that interfere with operations of the Owner.
4. The Contractor may elect to obtain (at no cost to the Owner) additional storage or work areas off-site if needed to perform the work.

2.2 OWNER OCCUPANCY REQUIREMENTS

- A. The Owner (City) anticipates that site inclusive of all on-site amenities beyond the Limit of Work will remain open throughout the course of construction.
- B. Contractor shall provide the Owner's Representative with a written plan describing the sequences and durations anticipated for the execution of the Work.

2.3 MOBILIZATION, SITE PREPARATION, & DEMOLITION

- A. THE WORK SPECIFIED IN THIS SECTION INCLUDES:
 1. Mobilization of all personnel and equipment;
 2. Preparing the construction site for construction operations;
 3. Materials to be removed and legally disposed of off site.
 4. When applicable, verifying and utilizing survey control points as shown on the Drawings
 5. Protecting existing site features to remain, such as fences, trees, shrubs and grassed areas outside the limit of work.
 6. Protecting underground and overhead utilities and other existing facilities from damage.
 7. Where applicable, provisions for site access and of traffic control.
 8. At cessation of site improvement operations: Site clean-up
 9. De-mobilization of all personnel and equipment.

2.4 CONSTRUCTION STAGING/STOCKPILE AREAS

- A. Staging areas within the Park is permitted as shown on the Plans with the prior consent of and coordination with the Owner.
- B. Restoration of the site to pre-existing condition shall be the sole responsibility of the Contractor.

2.5 MATERIALS AND EQUIPMENT:

- A. Materials to be Removed and Stockpiled.



1. Materials directed to be removed and stockpiled shall be removed, transported to and stacked in a location directed by the Owner's Representative. All materials shall be neatly stacked as directed.
2. If the Owner's Representative determines that any part of the materials identified to be stockpiled are unsuitable for re use on the site or by the Owner elsewhere, such materials shall be evaluated for legal disposal by Owner's Representative and Contractor.

B. Signs: Conform to requirements of Temporary Facilities and Controls.

C. Temporary Site Protection: Temporary chain-link fence, if so desired shall be furnished, installed and maintained at no additional cost to the Owner. At the completion of all work at the site, the Contractor shall remove all temporary fencing and restore the site to its original condition at no additional cost to the Owner.

2.6 TEMPORARY CONSTRUCTION FACILITIES AND UTILITIES

A. Make arrangements with the Owner's Representative for storage of materials and equipment in designated locations at the construction site. If staged on site, materials shall be secured from vandalism and or theft.

B. Plastic construction fence or snow fencing if installed shall be maintained in good condition. Provide barricades, barrels, fencing and/or other barriers around excavations and trenches as required for safety. Upon completion, temporary fencing shall be removed and the affected area restored existing condition.

2.7 SITE MAINTENANCE

A. Control dust from Contractor operations in accordance with specified dust control measures.

B. Maintain the Site during construction in a manner that will not obstruct use on neighborhood streets. Proceed with the work in an orderly manner, maintaining the construction site free of debris and unnecessary equipment or materials.

C. Legally dispose of all debris, rubbish, hazardous materials, oil, and grease in accordance with local ordinances.

D. Maintain safety and security of the construction site and any stockpiled or staged materials or equipment if left on site.

2.8 TRAFFIC CONTROL

A. For all of his operations, the Contractor shall provide appropriate traffic control in accordance with, TEMPORARY FACILITIES AND CONTROLS. The purposes of the traffic control are 1) to ensure that operations in the project area are performed in a safe and orderly manner, and 2) to



minimize the impact of truck and equipment traffic and noise on adjacent homes near the project area. The Contractor shall be responsible for obtaining any and all required permits and approvals.

- B. Police Details, if required by the City, shall be paid directly to and coordinated with Providence Public Safety by the Owner.

2.9 DEMOBILIZATION

- A. Contractor shall be responsible for site security and safety at all times. Upon substantial completion of the work, Contractor shall remove all excess materials, equipment, construction debris, temporary facilities and construction measures (fencing, signs, barriers, etc.) from the project area, and shall leave the site in suitable condition for full occupancy and use by the Owner. The sedimentation and erosion controls installed as part of the Work may not necessarily be removed at this time (see below).
- B. The Owner's Representative shall be the sole judge of whether the site has been suitably cleaned.
- C. Upon suitable stabilization of all disturbed "erodible" areas (e.g. acceptable level of grass growth in loamed and seeded areas, mulch applied and stable in planting areas, etc.), contractor shall remove and legally dispose of all sedimentation and erosion control measures (silt fence, hay bales, catch basin inserts, etc.). See Section 024119 Selective Demolition and 329200 Turf and Grasses for directives and procedures.

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

- A. The construction site entrance shall be as indicated on the plans. The Owner will provide access to any locked gate. Any tracked debris from the site present on adjacent roadways shall be removed and the roads swept daily to remove any excess mud, dirt, or rock originating from the site. Trucks hauling material shall be covered and equipped with gates that prevent material from falling out. If present, catch basins within 100 feet of site entry and exit locations shall be protected with inlet sediment control devices and maintained for the duration of the work.
- B. Identify, clearly mark and protect all survey monuments, temporary bench marks as well as any adjacent contractors' work and facilities (if applicable). Repair or replacement shall be at Contractor's sole expense if damaged by Contractor.
- C. Protect existing culverts, sewers, and all other utilities including gas, telecommunications, electricity, and water. Repair or replace at Contractor's sole expense if damaged by Contractor.
- D. Utilize or install drum or sawhorse barricades or backfill all open excavations, holes, trenches, and depressions occurring at construction sites or occurring as part of this work.



3.2 CHANGE ORDER PROCEDURE

A. DESCRIPTION

1. The Contractor shall comply with this procedure in the process of giving notification of change and preparing and submitting a proposal for adjustment due to a desired, perceived, or actual change in the work. Changes in the work, or period of performance of the work, may be directed in writing by the Owner's Representative or may be requested by the Contractor. In either case, payment for work accomplished under a modification may not be made until a formal contract modification, incorporating the change into the contract, has been issued and executed. Therefore, it is incumbent upon the Contractor to comply fully with this procedure and to expedite the resolution of changes.

3.3 CHANGE SUBMITTALS

- A. When requested, the Contractor shall submit the following to the Owner's Representative in accordance with the Submittals procedures described in these specifications:
1. Proposal cover letter on Contractor's letterhead;
 2. Detailed price proposal;
 3. Drawings or other explanatory data; and
 4. Time extension statement with justification if any time extension is requested.

3.4 COMPLIANCE

- A. The Contractor shall take such measures as needed to assure familiarity and compliance by its staff with these procedures. If change proposals are incomplete, unclear, or ambiguous or are not supported by adequate documentation, the data will be returned and the Contractor shall resubmit or supplement the proposal as requested by the Owner's Representative. Delay resulting from the Contractor's noncompliance with this procedure shall not in itself constitute the basis for an extension in the time of performance under the contract.

3.5 PROCESSING CHANGES INITIATED BY THE OWNER'S REPRESENTATIVE

- A. The Owner's Representative will initiate changes only in writing. The Owner will sign any Request for Proposal (RFP). This will establish an Extra Work Order (EWO) number, by which the change will be identified until such time as it may be incorporated into the contract by formal Change Order (CO).
- B. The Contractor may or may not be authorized to proceed with the changed work pending resolution of changes in the contract price or time of performance. If the work described in the RFP becomes critical to the timely performance of the Contractor's work, a written request for a Notice to Proceed must be forwarded to the Owner immediately. The Owner will issue any Notice



to Proceed. This unilateral modification to the contract may be subject to further negotiation regarding price and time for completion.

- C. Payment for changed work, covered by an authorized modification, will not be made until a notice to proceed covering the changed work has been executed.
- D. The Contractor shall prepare and submit its proposal for change to include at a minimum:
 - 1. A cover letter referencing the EWO number and citing the attachments, if any, which constitute the Contractor's total proposal.
 - 2. A detailed price proposal showing labor, construction equipment, and material quantities and prices at the lowest practical level of each element of the work.
 - 3. Any drawings, sketches, catalog cuts, samples, certifications, or other data required to be submitted by the Owner's Representative that is required to fully document
 - 4. A statement of the proposed change in the time of completion of the contract, together with all required justification for such a change.
 - 5. A statement to the effect that there is "no change in price and/or time of completion of the work under this contract as a result of this proposed change", if that is the case.
- E. The Owner may accept the Contractor's proposal without negotiation. Alternatively, upon receipt of a proposal which is satisfactory in form, the Owner's Representative may require negotiation with the Contractor to arrive at a fair and equitable change in the contract price and time of completion. Upon agreement, a contract modification will be issued by the Owner for Contractor's execution.

3.6 PROCESSING CHANGES INITIATED BY THE CONTRACTOR

- A. Should the Contractor feel that a change to the work under the contract, or to the contract itself, is necessary or desirable, it shall propose such a change to the Owner's Representative. This proposed change shall include a clear and concise description of the proposed change, along with that information cited in above.
- B. Within a reasonable time, the Owner's Representative will review the Contractor's proposal and determine if the proposed change is in the Owner's best interest. If so, Contractor will be advised of this and a an EWO number will be assigned to Contractor's proposal.

3.7 EXECUTING CHANGED WORK

- A. The Contractor is cautioned not to proceed with the work described in a proposed change until it is authorized to do so in writing by the Owner's Representative.



3.8 TERMINATIONS AND DELAYS

- A. Termination of Contract: If the Contractor or any of his/her subcontractors 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 for in these Contract Drawings, or violates any other Provisions of this Contract, the Local Public Agency, Local Public Agency, City, by written notice to the Contractor, may terminate the Contractor's right to proceed with the Work. Upon such termination, the City of Providence may take over the work and prosecute the same to completion, by contract or otherwise, and the Contractor and his/her sureties shall be liable to the City of Providence for any additional cost incurred by the City of Providence in its completion of the work and they shall also be liable to the City of Providence for liquidated damages for any delay in the completion of the work as provided below. work and they shall also be liable to the City of Providence for liquidated damages for any delay work. in the completion of the work as provided below. work. If the Contractor's right to proceed is so terminated, the Local Public Agency Local Public Agency City may take possession of and utilize in completing the work such materials, tools, equipment, and plants as may be on the site of the work and necessary thereof. Project work must commence 30 days after award of Contract or as mutually agreed upon by the Contractor and the Owner. The Contractor is required to submit a Work Schedule including all items included in the scope of work. The Work Schedule shall mirror the Schedule of Values which should be in chronological order. Both items are identified in the standard Pre-Bid and Pre-Construction Meeting Minutes as required. The work shall be continuous and the Contractor shall staff the project appropriately to meet the agreed upon work schedule. De- Mobilization from the project, prior to completion, must be agreed upon in writing by the Owner.

3.9 INSPECTION OF WORK

A. DESCRIPTION

1. Work included in this Section consists of periodic observation of construction of the project. The Contractor's work shall be monitored periodically by the Owner's Representative
2. The Owner's Representative presence on site or construction observation work is inspectional in nature and will not include supervision or direction of the actual work of the contractor.
3. In no event will the Owner's Representative be responsible or liable for the contractor's use or administration of personnel, machinery, staging, or other temporary or precautionary construction, safety precautions or procedures, or for compliance by the contractor with the provisions, terms, or specifications of the contract. Observation services provided by the Owner's Representative are solely for the benefit of the Owner.
4. The Contractor shall keep the Owner's Representative informed concerning the work status and projected work schedule through regular communications.
5. The Contractor shall not cover any work related to the required field visits until one of the following occurs:
 - a. The Contractor is authorized by the Owner's Representative to proceed after the field visit.



- b. The field visit is re-scheduled by the Owner's Representative to a later construction event
- c. The field visit is waived in writing by the Owner's Representative
6. The Contractor shall request a Final Inspection seven calendar days in advance of the planned completion date. After review of the Notice of Completion, the Owner's Representative may reject the Notice for cause or schedule the Final Inspection. The Owner's Representative will perform its Final Inspection on all phases of the work and develop a comprehensive punch list, which will be provided to the Contractor.
7. The Final Inspection will be scheduled when the punch list items discovered during the Final Inspection have been corrected. If discovered, the Owner's Representative may add new items to the punch list at this inspection.
8. The Contractor is advised that the Owner's Representative will not accept the work until the Owner's Representative determines Substantial Completion has been achieved. Therefore, to minimize its risk, the Contractor should schedule its work to be substantially complete in time to allow the Final Inspection and punch list work to occur in advance of the Project Close Out Date. Due to the construction time period and the anticipated weather conditions, substantially complete will be defined as the completion of construction for all item and the temporary stabilization of all disturbed areas, excluding planting and final seeding. Planting and final seeding is to occur during the time periods specified..
9. Nothing in this Section shall be construed to limit the Owner's Representative right to inspect the work at any time.

3.10 CONSTRUCTION SCHEDULES

A. DESCRIPTION

1. Work included in this Section consists of preparation, submittal, and updating of the project.

3.11 CONSTRUCTION SCHEDULE

A. Submit the following to the Owner's Representative in accordance with the Submittals Section. Submittals are for the record or approval as indicated.

1. The proposed construction schedule shall be submitted for approval within five (5) calendar days after receipt of Notice to Proceed.
2. Submit contract Weekly Summary Reports to the Owner's Representative for the record at weekly site meeting at request by the Owner.
3. Submit construction progress schedule including a two week look ahead as back up to progress invoices.

B. The construction schedule shall show all work activities for completion of the work to be performed under this contract and will reflect Contractor's general sequential approach to the work. The construction schedule will be in a bar chart format. The minimum level of detail



(number of activities) shall include the activities described in the Schedule of Values and the Scope of the Work. The construction schedule shall demonstrate completion of all work within the period of performance of the contract in a reasonable and achievable manner.

3.12 PERIODIC SCHEDULE UPDATES

- A. The Contractor shall support monthly payment requests with an approved construction schedule marked to indicate progress. Submit updated schedule as necessary.
- B. When in the opinion of the Owner's Representative changes in the work occur that significantly affect the schedule, the Contractor shall submit a revised construction schedule for approval. The revised construction schedule shall be submitted within 10 calendar days after it is requested by the Owner's Representative. The current approved construction schedule shall be used as a baseline for progress reporting.
- C. Acts of God: Claims for additional compensation for 'Acts of God' will be reviewed by the Owner. It is the Contractor's responsibility to secure the work site daily and failure to provide adequate provisions to do so may result in repairs to the site at the Contractor's expense. Documented 'Acts of God' such as the state issuing a 'State of Emergency' may result in the Owner's authorization to proceed repair funded by the Owner. No work shall proceed without written authorization by the Owner.

3.13 SUBMITTAL PROCEDURES

A. DESCRIPTION

- 1. This Specification Section covers the preparation and submission of all work plans, drawings, samples, manufacturer's literature and brochures, installation instructions, and operation and maintenance manuals as specified herein and in the various sections of these Specifications.
- 2. A Submittal Schedule shall be submitted for approval within five (5) calendar days after receipt of Notice to Proceed.

3.14 DRAWINGS

- A. The term "drawings" as used herein includes 'Shop Drawings' as required for fabrication, erection and installation, layout, and setting of proposed improvements; lists or schedules of materials and catalogues and brochures; performance and test data; and all other drawings and descriptive data pertaining to materials and methods of construction as may be required to show that the materials, equipment, or systems and the positions thereof conform to the requirements of the Contract Documents.
- B. Where specified and if so directed by the Owner's Representative provide shop drawings that are accompanied by design computations.



- C. Sheet sizes of drawings shall not exceed 24 in. by 36 in. The title block on all drawings shall bear the name of the Owner, the name of the project, and the project location.
- D. The Contractor's drawings shall be submitted electronically in PDF format to the Owner's Representative for review and approval.
- E. The Contractor shall maintain a complete set of construction drawings at the jobsite, clearly marked to reflect as-built conditions. Upon completion of the work, the Contractor shall submit these Record Drawings to the Owner's Representative.
- F. The Owner's Representative will review drawings and schedules only for conformance with the design of the Project and for compliance with the Contract Documents and Contract Drawings. The Contractor shall make any and all updates and corrections required by the Owner's Representative
- G. Drawings shall be reviewed and returned within ten (10) working days of receipt of drawings at jobsite. Drawings and all supporting data, catalogs, or similar information shall be prepared by the Contractor or his suppliers and subcontractors but shall be submitted as instruments of the Contractor.
- H. The Owner's Representative review of drawings will be of a general nature and shall not relieve the Contractor from responsibility for errors and omissions of any sort, for deviations from Drawings or Specifications, or for conflict with the work of others that may result from such deviations. The Owner's Representative review of drawings will not relieve the Contractor of responsibility to complete the work in accordance with the requirements of the Contract Documents.
- I. After Notice of Award, the Contractor shall submit a Submittal Schedule to the Owner's Representative. The Contractor's schedule shall be brought up to date from time to time to show the latest changes, omissions, and additions. The Schedule will be based on the Contractor's Construction Schedule and will show when the Contractor will submit the drawings and when he/she expects them to be returned so that construction activities shown on the Construction Schedule are not interrupted. There will be a minimum of three weeks between these two activities. Specific methods and routines for handling drawing reviews shall be established in advance within the general framework of the Contract Documents.
- J. Work for which the Contractor's submittals are required shall not be started until the submittals have been reviewed and accepted in writing by the Owner or Landscape Architect. Owner or Landscape Architect. Owner or Landscape Architect. Owner or Landscape Architect. Owner's Representative. Any revision by the Contractor of a previously accepted submittal must be accepted in writing by the Owner's Representative before implementation.



3.15 SAMPLES

- A. The Contractor shall, at his or her expense, furnish the Owner's Representative with samples of the various materials as specified in these Specification and Drawings. Samples shall be delivered to the office of the Owner's Representative at the Contractor's expense.

3.16 PRODUCT DATA

- A. The Contractor shall submit to the Owner's Representative all required Material Safety Data Sheets (MSDS) and all Product Data Sheets and any other relevant product information for all items identified in the Technical Specifications and Drawings. All data shall be furnished by the Contractor in accordance with the approved schedule.

B. SUBMITTAL LOG

- 1. Contractor to provided the following information:
 - a. An I.D. number for each item
 - b. Specification Section, Paragraph Number and Line Item Number (ie. 321313 / 1.3 / A)
 - c. Item Name
 - d. Description of the Item
 - e. Date Submitted
 - f. Status: Approved / Approved As Noted / Rejected
 - g. Sub-Contractor (If any) providing the material
 - h. Comments

3.17 QUALITY CONTROL DESCRIPTION

- A. This Section provides the requirements for Contract quality control (QC) pertaining to the Work, including:
 - 1. QC of products and workmanship;
 - 2. Manufacturer's instructions; and
 - 3. Manufacturer's certificates and field services.

3.18 WORKMANSHIP

- A. The Contractor shall comply with industry standards of the region, except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.
- B. The Contractor shall provide suitably-qualified personnel to produce work of specified quality.
- C. The Contractor shall secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and racking.



- D. The Contractor shall provide materials to match approved samples.

3.19 MANUFACTURER'S INSTRUCTIONS

- A. The Contractor shall require compliance with instructions in full detail, including each step in sequence. Should instructions conflict with the Contract Documents, the Contractor shall request clarification from the Owner's Representative before proceeding.

3.20 MANUFACTURER'S CERTIFICATES

- A. When required in individual Specifications sections, the Contractor shall submit manufacturer's certificates, in duplicate, certifying that products meet or exceed specified requirements.

3.21 TESTING LABORATORY SERVICES (NIC)

- A. Not Utilized in this Contract
- B. (Modify as Required)

3.22 MANUFACTURER'S FIELD SERVICES

- A. When required by the manufacturer or Owner's Representative, the Contractor shall have the manufacturer provide a qualified representative to observe field conditions, conditions of surfaces and installation, and quality of workmanship as applicable and to make written report of observations and recommendations to the Owner's Representative

3.23 AUTHORITY OF OWNER'S REPRESENTATIVE

- A. The Owner's Representative will decide all questions that may arise as to the quality and acceptability of materials furnished. All questions that may arise as to the interpretation of the Contract Drawing and Specifications shall be determined by the Owner's Representative.
- B. The Owner and Owner's Representative shall not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions and programs incident thereto, and the Owner's Representative will not be responsible for the Contractor's failure to perform the work in accordance with the Contract Documents.
- C. The Owner's Representative will not be responsible for the acts or omissions of the Contractor or any subcontractors, of the agents or employees of any Contractor or subcontractor, or of any other persons at the site or otherwise performing any of the work.



3.24 COORDINATION OF DRAWINGS AND SPECIFICATIONS

- A. The Contractor shall take no advantage of any apparent error or omission in the Contract Drawings or Specifications. In the event the Contractor discovers such a discrepancy, error or omission, he shall immediately notify the Owner's Representative. After review and consultation with the Owner's Representative the Owner's Representative will issue clarifications, provide interpretations and make such corrections as may be deemed necessary for the Contractor to proceed with fulfilling the intent of the Contract Drawings and Specifications.
- B. When general reference is made on the Contract Drawings or within the Specifications to any cited Standard Specifications, it shall refer to the current edition of such Specifications or the latest revision thereof or interim Specifications adopted and in effect on the date of Effective Date of Agreement. In the event of a conflict between the Contract Drawings and the specifications, the Owner's Representative shall be notified to provide a clarification to the Contractor.

3.25 COOPERATION WITH UTILITIES

- A. The Contractor will notify all utility companies, all pipeline owners, or other parties affected and endeavor to have all necessary adjustments of the public or private utility fixtures, pipelines, and other appurtenances within or adjacent to the limits of construction made as soon as practical.
- B. Water lines, gas lines, wire lines, service connections, water and gas meter boxes, water and gas valve boxes, light standards, cableways, signals, and all other utility appurtenances within the limits of the proposed construction which are to be crossed, relocated or adjusted are to be moved by the Contractor or its designated agents, except as otherwise noted on the Contract Drawings. In the case of utility lines, the Contractor shall coordinate with the respective utilities for their removal and relocation.
- C. Attention is directed to the possible existence of underground facilities not known to the Owner's Representative or in a location different from that which is shown on the Contract Drawings. The Contractor shall take steps to ascertain the exact location of all underground facilities prior to doing work that may damage such facilities or interfere with their service.

3.26 INDEPENDENT TESTING AND INSPECTION (NIC)

- A. Not Applicable under this Contract

3.27 REQUIREMENTS

- A. The requirements for sampling and testing or inspection are specified in the Specifications and Drawings. The Contractor shall maintain a complete and up-to-date file of all quality control documentation at the jobsite.



3.28 MATERIAL AND EQUIPMENT

A. DESCRIPTION

1. This Specification Section includes the requirements for the transportation, handling, storage, and protection of materials and equipment as specified herein and in the various Sections of these Specifications. This Section also addresses the procedure for Contractor-proposed product substitutions.

3.29 MANUFACTURER REQUIREMENTS

- A. In general, the Contractor shall receive, handle, and store materials and equipment in accordance with manufacturer's recommendations and in a manner which will protect such items from damage or deterioration.
- B. GENERAL
- C. Products include the material, equipment, and systems used on this Project. Comply with the Specifications, Drawings and referenced standards as minimum requirements.

3.30 TRANSPORTATION AND HANDLING

- A. The Contractor shall receive, handle, and store materials and equipment supplied by him/her in a manner that will protect such items from damage or deterioration in accordance with procedures provided by product manufacturers and the Owner.
- B. Promptly inspect the shipments to assure that the products comply with requirements, the quantities are correct, and the products are undamaged.

3.31 STORAGE AND PROTECTION

- A. Materials and equipment shall be stored off the ground on blocking or pallets and shall be covered for protection from vandalism and weather damage.
- B. Materials and equipment shall be stored, tested, and cleaned prior to use, in accordance with the Specification and all specific manufacturers' requirements. Damaged or nonconforming items shall be removed immediately to a separated storage area for expeditious removal from site.
- C. The Contractor shall provide a secure outside storage area in the vicinity of the site.



3.32 SUBSTITUTIONS

- A. Substitutions will be considered only when a product becomes unavailable due to no fault of the Contractor or when deemed appropriate by the Owner's Representative
- B. Document each request with complete data substantiating the compliance of the proposed substitution with the Contract Documents.
- C. The requested substitution proposed constitutes a representation that the Contractor:
 - 1. Has investigated the proposed product and determined that it meets or exceeds, in all respects, the specified product.
 - 2. Will provide the same warranty for substitution as for the specified product.
 - 3. Will coordinate installation and make other changes which may be required for the Work to be complete in all respects.
 - 4. Waives claims for additional costs which may subsequently become apparent.
- D. Substitutions will be considered when they are indicated or implied on shop drawings or product data submittals without separate written request, or when acceptance will require substantial revision of the Contract Documents.
- E. The Owner's Representative will determine acceptability of the proposed substitution, and will notify the Contractor of acceptance or rejection in writing within a reasonable time. Only one request for the substitution will be considered for each product. When substitution is not accepted, the Contractor shall provide the specified product.

3.33 REJECTED MATERIALS AND DEFECTIVE WORK

- A. Materials furnished by the Contractor and rejected by the Owner's Representative as unsuitable or not in conformity with the specifications shall forthwith be removed from the job-site and work area by the Contractor, and shall not be made use of elsewhere in the work.
- B. Any errors, defects, or omissions in the execution of work or in the materials furnished by the Contractor, even though they may have been passed or overlooked or have appeared after the completion of the work, discovered at any time before the final payment is made hereunder, shall be forthwith rectified and made good by and at the expense of the Contractor and in a manner satisfactory to the Owner or Owner's Representative.
- C. The Contractor shall reimburse the Owner for any expense, losses or damages incurred in consequence of any defect error, omission or act of the Contractor or his employees, as determined by the Owner's Representative, occurring previous to the final payment.

3.34 PROJECT CLOSEOUT

- A. DESCRIPTION



1. This Section specifies administrative and procedural requirements for the project closeout including, but not limited to:
 - a. Project record document (As-Built drawings) submittal. Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.
 - b. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover of each set. Upon completion of work, submit record drawings to the Owner's Representative.
2. Record Specifications
 - a. Maintain one complete copy of the Project Manual, including addenda. Mark these documents to show substantial variations in actual Work performed in comparison with the Specifications and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation. Note related record drawing information and Product Data. Upon completion of the Work, submit record Specifications.
3. Test Results
 - a. Not Applicable this project
4. REMOVAL OF PROTECTION
 - a. Remove temporary protection and facilities installed for protection of the Work during construction. Fencing and erosion and sediment control measures and best management practices can be removed after permanent measures have been established.

3.35 WARRANTIES

A. DESCRIPTION

1. This Section specifies general administration and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturers' standard warranties on products and special warranties.
 - a. Refer to the General Conditions for terms of the Contractor's special warranty of workmanship and materials;
 - b. General closeout requirements are included in Section "Project Closeout"; and
 - c. Specific requirements for warranties for the Work and products and installations that are specified to be warranted are included in the specifications and Drawings.
2. Disclaimers and Limitations
 - a. Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it



relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

B. DEFINITIONS

1. Standard Warranties
 - a. Standard product warranties are pre-printed written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.
2. Special Warranties
 - a. Special warranties are written required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

C. WARRANTY REQUIREMENTS

1. Related Damages and Losses
 - a. When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for corrections of warranted Work.
2. Reinstatement of Warranty
 - a. When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
3. Replacement Cost
 - a. Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner's Representative has benefited from use of the Work through a portion of its anticipated useful service life.
4. Owner's Recourse
 - a. Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights and remedies.
5. Rejection of Warranties
 - a. The Owner's Representative reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents. The Owner's Representative reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to counter sign such commitments are willing to do so.
 - b. All warranties shall be submitted to the Owner in accordance with conditions of the Contract and the Submittals.



D. WARRANTY PERIOD

1. All warranties required by the Contract documents shall commence on the date of Final Acceptance.
2. Warranty period is one (1) year from date of Final Acceptance unless otherwise specified.

END OF SECTION 010000



SECTION 116840 - SPLASH PADS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes: including required fittings, hardware and accessories.
- B. Furnish and install supplementary attachment and accessories as shown in drawings for a complete and secure installation.
- C. Related Sections:
 - 1. Section 321313 – Concrete Paving (for Splash Pad Surfacing)
 - 2. Section 328400 – Planting Irrigation (for connection to water supply)

1.2 REFERENCES

- A. Americans with Disabilities (ADA) Standards for Accessible Design.
- B. ASTM F1487-11 - Standard Consumer Safety Performance Specification for Playground Equipment for Public Use.

1.3 SUBMITTALS

- A. Submit, in accordance with Division 01 10 00 – General Requirements: Submittal Procedures ten (10) days after award of Contract, technical product literature for all commercial products to be used

1.4 VORTEX ABRIO GENERAL CLAUSES:

- A. The refreshing products shall be suitable for installation in municipal and commercial facilities and public areas.
- B. Products shall be specifically designed for the use by children and adults and follow the ASTM F2461-09 norm. The manufacturer should have the following standards and certifications: ISO 9001:2015, EN 1090-1, CWB / CSA W47.1, UL 508A, FCC, CE, ASTM F2376, GB 8408, ADA.



In addition, products shall be manufactured by a company that has at least five (5) years of experience in the design and engineering of aquatic areas.

- C. Any refreshing product belonging to a new product line or series should demonstrate meeting the effective norm or show the conformity and resistance of the prescribed materials if it is proposed equivalency. The contractor or manufacturer must demonstrate meeting specifications by providing technical documents and drawings to be included in their bid proposal.

PART 2 - PRODUCT SPECIFICATIONS:

2.1 PRODUCT STRUCTURE:

- A. The Abrio structure shall be constructed of vertical posts 304/304L stainless-steel structural square tubing with an outside diameter of 4" (101.6mm) and a wall thickness of 0.120" (3mm).
- B. Each vertical post will be equipped with welded angled reinforced brackets to received beams made of 304/304L stainless-steel structural square tubing with an outside diameter of 4" (101.6mm) and a wall thickness of 0.25" (6.3mm). Each post base plate shall be welded and constructed of sheet 304/304L stainless-steel thickness of 0.375" (9.5mm),

2.2 CANOPY: Architectural canopies create a shaded haven during hot days. Between 2 to 4 canopies depending on the Abrio configuration. Solar-powered LEDs emit a soft glow at night to extend your site's hours of operation. At dusk Abrio transforms into a refreshing gathering spot.

- A. The Abrio canopies shall be constructed of sheet 304/304L stainless-steel thickness of 0.120" (3mm), bent in shape with 5 reinforcement ribs thickness of 0.375" (9.5mm) on each sides. Each canopy sides will have a 6.5' (2m) waterproof (IP67) LED strip, 12V warm white color. The LED Strips will be holding in an aluminum profile extrusion with a frosted lens. Under each canopy a cover will be installed to hide all wires and feature components. Each canopy cover shall be made of sheet 304/304L stainless-steel thickness of 0.0625" (1.6mm), bent in a V shape and secure with hardware along each canopy lip.
- B. Each pair of canopy will be equip with a flexible solar panel, 50W, wired all together to the controller board to recharge the integrated battery. Installer must take care of proper solar panel installation for optimal orientation and fonctionnality.



1. South facing panels for North of Equator locations
2. Avoid shadow areas for installation
- 2.3 SOFT RAIN FEATURE: Unwind with the calming and cooling effects of soft rain.
 - A. The Soft rain feature shall be constructed of an PVC enclosure holding a Vortex tubular system of specific drip nozzles. The feature will be connected to the quick connect Abrio tubing system. Specific hydraulic requirements 0.1-0.2 gpm (0.4-0.8 lpm).
- 2.4 MIST FEATURE: Relaxing mist cools the Abrio space and refreshes passersby.
 - A. The mist feature shall be constructed of a PVC enclosure holding a Vortex tubular system of 3 brass mist nozzles. Each mist nozzle will create a visual interest as fine mist water sprays in a cone. The feature will be connected to the quick connect Abrio tubing system. Specific hydraulic requirements 0.15-0.3 gpm (0.5-1.1 lpm). Mist could need more maintenance in hard water areas.
- 2.5 RIVER MAZE FEATURE: Relax to the soothing sounds of water by directing the flow with river stones.
 - A. The River maze will be constructed of a water basin slightly angled forward and a leg of sheet 304/304L stainless-steel thickness of 0.1875" (4.7 mm), bent in shape. The river maze shall include 3 moving soft polymer molded stones, fastened with tamper proof assembly. The water nozzle soft polymer molded stones shall be pre-assemble and fit with a compensated water nozzle that will be connected to the quick connect Abrio tubing system. Specific hydraulic requirements 0.2-0.3 gpm (0.8-1.1 lpm).
 1. User will be able to interact with the water flow and direct the water by turning and placing the river stones in different orientations.
- 2.6 ANCHORING: All vertical posts, seatings and River mazes shall be fastened to the concrete with provided mechanical anchors and follow the provided instructions.
- 2.7 MOUNTING AND ASSEMBLY HARDWARE: All hardware and anchoring systems shall be 304/304L or 316 stainless steel. Exposed and accessible hardware shall be tamper resistant, requiring a special tool for removal to deter vandalism and theft.
- 2.8 EARTH GROUNDING AND BONDING: Each Abrio separate components must be bonded with he provided hardware to join all painted components. They will albl connect to a single copper



wire connected inside the water management system that must be wired to #8 AWG bare copper bonding solid wire, installed underground by installer.

- 2.9 PRODUCT INTERACTIVITY: The Activator shall be the direct interface between the users of the area and the products.
- 2.10 FINISH: Shall be a polyester matte-textures heat-cured powder coat that is UV and chemical resistant, suitable for public spaces.
- 2.11 SAFETY & CRAFTSMANSHIP: All accessible edges shall be machined to a rounded finish. All welds shall be buffed smooth to a non-visible finish. Accessible nozzles and spray heads shall be recessed to ensure a completely safe environment with no pinch points, head entrapments or protrusion hazards.

PART 3 - OVERALL HYDRAULIC REQUIREMENTS

- 3.1 Only use on flow through systems, potable water. Minimum water inlet of ½". The hydraulic requirements shall be under 2 GPM (7.6 LPM) for all Abrio models with a regulated pressure between @ 30-35 psi (2.1-2.4 bar).
- 3.2 Sprayzone is not identified on CAD or Abrio drawings due to low flow of the mist and soft rain. It is subject to wind intensity, direction and natural evaporation of the site.

PART 4 - Water Management System

- 4.1 Water conservation is key with on-demand activation and real-time flow control allow for efficient energy and water usage. Connect to Abrio via application to control water and light functions to reduce on-site maintenance.
- 4.2 General specifications: The manifold shall be be equipped with: a reducer coupling to ½", a main valve ½" (The valve shall have a manual override capability (manual open/close control)), a Y-strainer ½" with mesh 400, a water meter, a pressure regulator, a brass solenoid valve ½" and a quick connect tube manifold with 6 water outlets and a drainage valve. All piping and fitting shall be constructed of SCH 40 PVC, 150 PSI pressure rated.
 - A. The water distribution system shall be factory assembled and water pressure tested before delivery



- B. The electrical solenoid valves shall be wired to the MicroFlow™ controller on site. All connections into the junction box should be made to respect the enclosure Nema 4X integrity.
- 4.3 MicroFlow™ Controller: controller will manage, power (DC Power) and control: the Activator, Valve, LEDs and Solar power. It will also be wired to the activator, valve, water meter, solar panels and LED lights to manage all operations of all the system. A mobile app will give control over operation hours, monitor the water usage and give real time data.
- 4.4 Playstart™ activator: Conserve water with on-demand activation. Easy operation for users of all ages & abilities. Inclusive sound signal to alert activation.
 - A. The activator shall have no moving parts and run on a DC Voltage power. It is an electrical sensor that is used as an interface for processing user input activation. The activation cap shall of 304/304L stainless steel with powder coating and laser engraving. It shall be secured in place using tamper-resistant fasteners.
- 4.5 Water management casing: The casing shall be fix with the main vertical post constructed of a stainless steel frame with 2 sides panels of sheet 304/304L stainless-steel thickness of of 0.120” (3mm), bent in shape. The casing’s interior will hold support plates and brackets to fix the electrical enclosure and water management system parts.

PART 5 - QUALITY ASSURANCE

- 5.1 Provide evidence of commitment of quality craftsmanship as demonstrated by the following:
- 5.2 Manufacturer Qualifications:
 - A. The products shall be designed and produced at a facility owned and directly supervised by the manufacturer.
 - B. All products shall be shipped from a single source.
 - C. All product designs are verified by a licensed engineer.
 - D. All play product anchoring systems are designed to withstand a maximum of 125MPH (200KMH) wind load.
 - E. A full-time licensed engineer must be on-staff.
 - F. A full-time quality control manager must be on-staff.
 - G. All products shall be designed, developed and water tested following a rigorous process.



PART 6 - EQUIVALENCIES CLAUSES

- 6.1 To enable all tenders to be judged equitably, they shall be based on the specified products in this document and shown on the drawings.
- 6.2 The proposal for any substitute products must be attached to the bid or tender separately, identifying the substitute product by its trade name along with any savings it may represent for the client.
- 6.3 Following the opening of the bid or tender, only those substitutes proposed by the lowest bidder of the specified products, will be considered.
- 6.4 All substitute approval requests shall be accompanied by manufacturing drawings.
 - A. No substitution or equivalency submitted will be considered if the products proposed are not part of manufacturers standard existing product line. Written proof that the product has been manufactured previously by the substitute manufacturer and pictures of the manufactured product must be provided. Please refer to General Clauses 1.0.
- 6.5 Each proposed equivalent must be presented to the owner/consultant within seven days following the opening of tenders. Each proposed equivalent solution must have been installed and completely operational. After this time period, the bidder will be required to supply the original specified product.
- 6.6 The owner/consultant reserves the right to grant or deny approval for proposed substitutions without prejudice to his rights and his decision shall be final. The above conditions apply to this section independently of any other clauses on the subject found in this document.
- 6.7 If applicable the products must be interchangeable and of equivalent quality to the materials already installed.

PART 7 - EQUIPMENT WARRANTIES

- 7.1 Minimum Warranty periods
 - A. A 25-year warranty on stainless steel tubing.
 - B. A 5-year warranty on aluminum, brass, polymer panels, and spray nozzles.



- C. A 2-year warranty on finishes, plumbing components, mechanism and hardware, polymer, and elastomer.
- D. A 1-year warranty on electrical components
- E. All warranties are to be managed by the equipment supplier.

END OF SECTION 116840



SECTION 312316.13 - TRENCHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Excavating trenches for utilities and irrigation
2. Compacted fill from top of utility bedding to subgrade elevations .
3. Backfilling and compaction.

B. Related Sections:

1. Section 329119 - Landscape Grading: Filling of topsoil over backfilled trenches to finish grade elevation.
2. 328400 - Planting Irrigation

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

A. Trenching:

1. Basis of Measurement: By cubic yard.
2. Basis of Payment: Includes excavating to required elevations, and Over Excavating: Payment is not made for over excavated work nor for replacement materials.

1.3 REFERENCES

A. American Association of State Highway and Transportation Officials:

1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

B. ASTM International:

1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³).
2. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
3. ASTM D1557 - Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³).



4. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
5. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
6. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

1.4 DEFINITIONS

- A. Utility: Any buried pipe, duct, conduit, or cable.

1.5 SUBMITTALS

- A. Section 013300 - Submittal Procedures: Requirements for submittals.
- B. Excavation Protection Plan: Describe sheeting, shoring, and bracing materials and installation required to protect excavations and adjacent structures and property; include structural calculations to support plan.

1.6 QUALITY ASSURANCE

- A. Perform Work in accordance with RIDOT standards.

1.7 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

1.8 COORDINATION

- A. Verify Work associated with lower elevation utilities is complete before placing higher elevation utilities.

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.1 LINES AND GRADES

- A. Lay pipes to lines and grades indicated on Drawings.



1. Architect/Engineer reserves right to make changes in lines, grades, and depths of utilities when changes are required for Project conditions.
- B. Use laser-beam instrument with qualified operator to establish lines and grades.

3.2 PREPARATION

- A. Call Local Utility Line Information service at 1-888-DIG-SAFE not less than seven working days before performing Work.
 1. Request underground utilities to be located and marked within and surrounding construction areas.
- B. Identify required lines, levels, contours, and datum locations.
- C. Protect plant life, lawns, and other features remaining as portion of final landscaping.
- D. Protect bench marks, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- E. Maintain and protect above and below grade utilities indicated to remain.
- F. Establish temporary traffic control when trenching is performed in public right-of-way. Relocate controls as required during progress of Work.

3.3 TRENCHING

- A. Excavate subsoil required for utilities to irrigation system
- B. Remove lumped subsoil, boulders, and rock above 6" in diameter cu. yd.. .
- C. Perform excavation in accordance with State & Local requirements.
- D. Do not advance open trench more than 200 feet ahead of installed pipe.
- E. Cut trenches sufficiently wide to enable installation and allow inspection. Remove water or materials that interfere with Work.
- F. Excavate bottom of trenches maximum 2 feet wider than outside diameter of pipe.
- G. Excavate trenches to depth indicated on Drawings. Provide uniform and continuous bearing and support for bedding material and pipe .
- H. Trim excavation. Remove loose matter.



- I. Correct areas over excavated areas with compacted backfill as specified for authorized excavation or replace with fill concrete as directed by Architect/Engineer.
- J. Remove excess subsoil not intended for reuse, from site.

3.4 BACKFILLING

- A. Backfill trenches to contours and elevations with unfrozen fill materials.
- B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.
- C. Place fill material in continuous layers and compact .
- D. Maintain optimum moisture content of fill materials to attain required compaction density.
- E. Do not leave more than **50 feet** of trench open at end of working day.
- F. Protect open trench to prevent danger to the public .

3.5 TOLERANCES

- A. Top Surface of General Backfilling: Plus or minus **1 inch** from required elevations.

3.6 PROTECTION OF FINISHED WORK

- A. Section 017000 - Execution and Closeout Requirements: Protecting finished work.
- B. Reshape and re-compact fills subjected to vehicular traffic during construction.

END OF SECTION 312316.13



SECTION 312500 - EROSION AND SEDIMENTATION CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Furnish all labor, materials, equipment and incidentals required and perform all installation, maintenance, removal and area cleanup related to erosion and sedimentation control work required to meet Federal, State, and local permit requirements and as shown on the Drawings and as specified herein. The work shall include, but not necessarily be limited to; installation of temporary access ways and staging areas, compost filter socks, catch basin sediment filters (silt sack), sediment removal and disposal, device maintenance, removal of temporary devices, and final cleanup.
- B. Section Includes:
 - 1. Rock Basin.
- C. Related Sections:
 - 1. Section 329119 - Landscape Grading

1.2 REFERENCES

- A. EPA document titled: "Stormwater Management for Construction Activities — Developing Pollution Prevention Plans and Best Management Practices" document number EPA 832-R-92-005, dated 1992, or most recent edition. State, County Conservation Districts or local Conservation Commission standards can be substituted for the EPA standard if the State, County or Local Conservation Commission standards is equal to, or more detailed than, the EPA standard.
- B. State of Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, Current Edition with latest addenda.

1.3 SUBMITTALS

- A. Submit, in accordance with Division 01 10 00 – General Requirements: Submittal Procedures ten (10) days after award of Contract, technical product literature for all commercial products to be used for erosion and sedimentation control.
- B. If a NPDES General Permit is required, Contractor shall, prior to the start of construction:



1. Prepare and submit the EPA NPDES Notice of Intent to Discharge to the applicable EPA office in accordance with EPA regulations. Submit one copy of the permit to Owner's Representative for informational purposes only.
2. Prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the U.S. Environmental Protection Agency (EPA) National Pollution Discharge Elimination System (NPDES) General Permit for this work. Submit one copy of the permit to Owner's Representative for informational purposes only.

1.4 QUALITY ASSURANCE

- A. Be responsible for the timely installation and maintenance of all erosion and sedimentation control devices necessary to prevent the movement of sediment from the construction site to off-site areas or into the stream system via surface runoff or underground drainage systems. Measures in addition to those shown on the Drawings necessary to prevent the movement of sediment off site shall be installed, maintained, removed, and cleaned up at the expense of the Contractor. No additional charges to the Owner will be considered.
- B. Where Contractor's efforts to control erosion and sediment have been demonstrated to be ineffective or potentially ineffective in the opinion of the Owner's Representative, the Owner's Representative may order that additional measures be implemented and constructed at no additional cost to the Owner.
- C. Perform Work in accordance with requirements of Section 310513, Section 312323, Section 312316, Section 312323, .
- D. Perform Work according to Municipality of Department of Public Works standards.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. When work is performed outside of normal seeding window straw mulch shall be utilized on all newly graded areas to protect areas against washouts and erosion. Straw mulch shall be comprised of threshed straw of oats, wheat, barley, or rye that is free from noxious weeds, mold or other objectionable material. The straw mulch shall contain at least 50 percent by weight of material to be 10-in or longer. Straw shall be in an air-dry condition and suitable for placement with blower equipment.
- B. Compost Filter Sock
 1. Machine produced.
 2. Straw filled tubes of compacted straw of rice, wheat or barley.
 3. Compost filter sock to be certified as weed free.



4. Netting for tubes to be seamless, high density polyethylene with ultra violet inhibitors.
5. Roll length to be 10.0 feet to 25.0 feet.
6. Weight per linear foot, 12-inch: 2.5 lbs. minimum 9-inch: 1.5 lbs. minimum
7. Stakes shall be wooden, 1 1/8-inch x 1 1/8-inch x 2.5 feet long, with lower ends tapered to facilitate driving into compacted soil. Rebar may be substituted for wooden stakes

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Staging areas and stabilized construction entrance shall be surfaced with a minimum depth of 6 inches of crushed stone (if so directed by the Landscape Architect. Stabilized construction entrances shall be installed as shown on the Plans.

3.2 MAINTENANCE AND INSPECTION

- A. Inspections
 1. Make a visual inspection of all erosion and sedimentation control devices once per week and promptly after every rainstorm. If such inspection reveals that additional measures are needed to prevent movement of sediment to offsite areas, promptly install additional devices as needed. Sediment controls in need of maintenance shall be repaired promptly.

3.3 REMOVAL AND FINAL CLEANUP

- A. Once the site has been permanently stabilized against erosion, remove all sediment control devices and sediment. Dispose sediment and all waste materials in a proper manner.
- B. When sediment accumulation in sedimentation structures has reached a point one-third depth of sediment structure or device, remove and dispose of sediment.
- C. Do not damage structure or device during cleaning operations.
- D. Clean channels when depth of sediment reaches approximately one half channel depth.
- E. Clean channels when depth of sediment reaches approximately one half channel depth.

3.4 SITE STABILIZATION

- A. Incorporate erosion control devices indicated on the Drawings into the Project at the earliest practicable time.



- B. Construct, stabilize and activate erosion controls before site disturbance within tributary areas of those controls.
- C. Stockpile and waste pile heights shall not exceed **35 feet**. Slope stockpile sides at 2: 1 or flatter.
- D. Stabilize any disturbed area of affected erosion control devices on which activity has ceased and which will remain exposed for more than 20 days.
 - 1. During non-germinating periods, apply mulch at recommended rates.
 - 2. Stabilize disturbed areas which are either at finished grade or will not be disturbed within one year in accordance with Section 329219 permanent seeding specifications.
- E. Stabilize diversion channels, sediment traps, and stockpiles immediately.

END OF SECTION 312500



SECTION 321313 - CONCRETE PAVING

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 Concrete Paving Including the Following:
 - 1. Walks.
 - 2. Seating Areas/Pads for Site Furnishings
 - 3. Splash Pads

1.3 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of blended hydraulic cement, fly ash, slag cement, and other pozzolans.
- B. W/C Ratio: The ratio by weight of water to cementitious materials.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site .
 - 1. Review methods and procedures related to concrete paving, including but not limited to, the following:
 - a. Concrete mixture design.
 - b. Quality control of concrete materials and concrete paving construction practices.
 - c. Best practices for concrete installation in hot/cold temperatures .
 - 2. Require representatives of each entity directly concerned with concrete paving to attend, including the following:
 - a. Contractor's superintendent.
 - b. Ready-mix concrete manufacturer's representative (only for larger projects).
 - c. Concrete paving Subcontractor.



1.5 PRODUCT SUBMITTALS

- A. Product Data: For each type of product.
- B. Sustainable Design Submittals:
 - 1. Ground Granulated Blast Furnace Slag (GGBFS)
- C. Samples for Initial Selection: For each type of product, ingredient, or admixture requiring color selection.
- D. Design Mixtures: For each concrete paving mixture. Include alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
 - 1. Provide confirmation of mix design with each delivery of concrete to the project site

1.6 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For the following, from manufacturer:
 - 1. Cementitious materials.
 - 2. Steel reinforcement and reinforcement accessories. (DELETE IF NOT USED)
 - 3. Fiber reinforcement.
 - 4. Admixtures.
 - 5. Curing compounds.
 - 6. Applied finish materials.
 - 7. Bonding agent or epoxy adhesive.
 - 8. Joint fillers.

1.7 QUALITY ASSURANCE

- A. Ready-Mix-Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
 - 1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities" (Quality Control Manual - Section 3, "Plant Certification Checklist").
- B. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Build mockups of full-thickness sections of concrete paving to demonstrate typical joints; surface finish, texture, and color; curing; and standard of workmanship.



2. Build mockups of concrete paving in the location and of the size indicated or, if not indicated, build mockups where directed by Architect and not less than 48"x48" .
3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 FIELD CONDITIONS

- A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.
- B. Cold-Weather Concrete Placement: Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing, or low temperatures. Comply with ACI 306.1 and the following:
 1. When air temperature has fallen to or is expected to fall below 40 deg F, uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50 deg F and not more than 80 deg F at point of placement.
 2. Do not use frozen materials or materials containing ice or snow.
 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in design mixtures.
 4. Cover base material with thermal blankets prior to concrete pour in order to keep temperature of base material above 40 deg F
 5. When temperatures are forecasted to drop below 40 deg F, cover concrete with plastic sheeting followed by thermal blankets for a minimum of 1 week or per mix design requirements.
- C. Hot-Weather Concrete Placement: Comply with ACI 301 and as follows when hot-weather conditions exist:
 1. Cool ingredients before mixing to maintain concrete temperature below 90 deg F at time of placement. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated in total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
 2. Cover steel reinforcement with water-soaked burlap, so steel temperature will not exceed ambient air temperature immediately before embedding in concrete.
 3. Fog-spray forms , steel reinforcement, and subgrade just before placing concrete. Keep subgrade moisture uniform without standing water, soft spots, or dry areas.



PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

- A. ACI Publications: Comply with **ACI 301** unless otherwise indicated.

2.2 FORMS

- A. Form Materials: Plywood, plastic lumber, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, and smooth exposed surfaces.
 - 1. Use flexible or uniformly curved forms for curves with a radius of **100 feet** or less.
- B. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and that will not impair subsequent treatments of concrete surfaces.

2.3 STEEL REINFORCEMENT

- A. Plain-Steel Welded-Wire Reinforcement: ASTM A 1064/A 1064M, fabricated from 10 gauge galvanized-steel wire into flat sheets.
- B. Plain-Steel Wire: ASTM A 1064/A 1064M, .
- C. Epoxy-Coated-Steel Wire: ASTM A 884/A 884M, Class A; coated, .
- D. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded-wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified, and as follows:
 - 1. Equip wire bar supports with sand plates or horizontal runners where base material will not support chair legs.
 - 2. For epoxy-coated reinforcement, use epoxy-coated or other dielectric-polymer-coated wire bar supports.
- E. Epoxy Repair Coating: Liquid, two-part, epoxy repair coating, compatible with epoxy coating on reinforcement.
- F. Zinc Repair Material: ASTM A 780/A 780M.



2.4 CONCRETE MATERIALS

- A. Cementitious Materials: Use the following cementitious materials, of same type, brand, and source throughout Project:
1. Portland Cement: ASTM C 150/C 150M, gray portland cement Type I/II .
 2. Slag Cement: ASTM C 989/C 989M, Grade 100 or 120.
- B. Normal-Weight Aggregates: ASTM C 33/C 33M, Class 4S , uniformly graded. Provide aggregates from a single source.
1. Maximum Coarse-Aggregate Size: **3/4 inch** nominal.
 2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
- C. Exposed Aggregate: Selected, hard, and durable; washed; free of materials with deleterious reactivity to cement or that cause staining; from a single source, with gap-graded coarse aggregate as follows:
1. Aggregate Sizes: 1/4" to 3/8" nominal.
 2. Aggregate Source, Shape, and Color: Native riverstone (rounded stones in a mix of earth tones) .
- D. Air-Entraining Admixture: ASTM C 260/C 260M.
- E. Color Pigment: ASTM C 979/C 979M, synthetic mineral-oxide pigments or colored water-reducing admixtures; color stable, nonfading, and resistant to lime and other alkalis.
1. Color: As indicated on drawings .
- F. Water: Potable and complying with ASTM C 94/C 94M.

2.5 FIBER REINFORCEMENT

- A. Synthetic Fiber: Fibrillated polypropylene fibers engineered and designed for use in decorative concrete paving, complying with ASTM C 1116/C 1116M, Type III, **1/2 to 1-1/2 inches** long.

2.6 CURING MATERIALS

- A. Absorptive Cover: AASHTO M 182, Class 3, burlap cloth made from jute or kenaf, weighing approximately **9 oz./sq. yd.** dry or cotton mats.
- B. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- C. Water: Potable.



- D. Evaporation Retarder: Waterborne, monomolecular, film forming, manufactured for application to fresh concrete.
- E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

2.7 RELATED MATERIALS

- A. Joint Fillers: ASTM D 1752, cork or self-expanding cork in preformed strips.
- B. Bonding Agent: ASTM C 1059/C 1059M, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
- C. Epoxy-Bonding Adhesive: ASTM C 881/C 881M, two-component epoxy resin capable of humid curing and bonding to damp surfaces; of class suitable for application temperature, of grade complying with requirements, and of the following types:
 - 1. Types I and II, nonload bearing , for bonding hardened or freshly mixed concrete to hardened concrete.

2.8 CONCRETE MIXTURES

- A. Prepare design mixtures, proportioned according to **ACI 301**, for each type and strength of normal-weight concrete, and as determined by either laboratory trial mixtures or field experience.
 - 1. Use a qualified independent testing agency for preparing and reporting proposed concrete design mixtures for the trial batch method.
 - 2. When automatic machine placement is used, determine design mixtures and obtain laboratory test results that comply with or exceed requirements.
- B. Cementitious Materials: use one of the following to reduce the amount of Portland cement needed.
 - 1. Ground Granulated Blast Furnace Slag (GGBFS): preferred, minimum 20 percent, maximum 60 percent
 - 2. Fly Ash or Pozzolan: minimum 15, maximum 25 percent.
 - 3. Slag Cement: minimum 20, maximum 50 percent.
 - 4. Combined Fly Ash or Pozzolan, and Slag Cement: minimum 20, maximum 50 percent, with fly ash or pozzolan not exceeding 25 percent.
- C. Add air-entraining admixture at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air content as follows:
 - 1. Air Content: 6 percent plus or minus 1-1/2 percent for **3/4-inch** nominal maximum aggregate size.



- D. Limit water-soluble, chloride-ion content in hardened concrete to 0.15 percent by weight of cement.
- E. Chemical Admixtures: Use admixtures according to manufacturer's written instructions.
 - 1. Use water-reducing admixture high-range, water-reducing admixture high-range, water-reducing and retarding admixture plasticizing and retarding admixture in concrete as required for placement and workability.
 - 2. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
- F. Synthetic Fiber: Uniformly disperse in concrete mixture at manufacturer's recommended rate, but not less than **1.0 lb/cu. yd.** .
- G. Color Pigment: Add color pigment to concrete mixture according to manufacturer's written instructions and to result in hardened concrete color consistent with approved mockup.
- H. Concrete Mixtures: Normal-weight concrete.
 - 1. Compressive Strength (28 Days): **4000 psi** .
 - 2. Maximum W/C Ratio at Point of Placement: 0.45 .
 - 3. Slump Limit: **4 inches** , plus or minus **1 inch**.

2.9 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M. Furnish batch certificates for each batch discharged and used in the Work.
 - 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.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine exposed subgrades and subbase surfaces for compliance with requirements for dimensional, grading, and elevation tolerances.
- B. Proof-roll prepared subbase surface below concrete paving to identify soft pockets and areas of excess yielding.
 - 1. Completely proof-roll subbase in one direction and repeat in perpendicular direction. Limit vehicle speed to **3 mph**.



2. Correct subbase with soft spots and areas of pumping or rutting exceeding depth of **1/2 inch** according to requirements in Section 312000 "Earth Moving."

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Remove loose material from compacted subbase surface immediately before placing concrete.

3.3 EDGE FORMS AND SCREED CONSTRUCTION

- A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.
- B. Clean forms after each use and coat with form-release agent to ensure separation from concrete without damage.

3.4 STEEL REINFORCEMENT INSTALLATION

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, or other bond-reducing materials.
- C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.
- D. Install welded-wire reinforcement in lengths as long as practicable. Lap adjoining pieces at least one full mesh, and lace splices with wire. Offset laps of adjoining widths to prevent continuous laps in either direction.
- E. Zinc-Coated Reinforcement: Use galvanized-steel wire ties to fasten zinc-coated reinforcement. Repair cut and damaged zinc coatings with zinc repair material.
- F. Epoxy-Coated Reinforcement: Use epoxy-coated steel wire ties to fasten epoxy-coated reinforcement. Repair cut and damaged epoxy coatings with epoxy repair coating according to ASTM D 3963/D 3963M.
- G. Install fabricated bar mats in lengths as long as practicable. Handle units to keep them flat and free of distortions. Straighten bends, kinks, and other irregularities, or replace units as required before placement. Set mats for a minimum **2-inch** overlap of adjacent mats.



3.5 JOINTS

- A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.
1. When joining existing paving, place transverse joints to align with previously placed joints unless otherwise indicated.
- B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.
1. Continue steel reinforcement across construction joints unless otherwise indicated. Do not continue reinforcement through sides of paving strips unless otherwise indicated.
 2. Provide tie bars at sides of paving strips where indicated.
 3. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one-half of dowel length to prevent concrete bonding to one side of joint.
- C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated.
1. Locate expansion joints at intervals of 20 feet unless otherwise indicated.
 2. Extend joint fillers full width and depth of joint.
 3. Terminate joint filler not less than **1/2 inch** or more than **1 inch** below finished surface if joint sealant is indicated.
 4. Place top of joint filler flush with finished concrete surface if joint sealant is not indicated.
 5. Furnish joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together.
 6. During concrete placement, protect top edge of joint filler with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.
- D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness, as follows:
1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with grooving tool to a **1/4-inch** radius. Repeat grooving of contraction joints after applying surface finishes. Eliminate grooving-tool marks on concrete surfaces.
 - a. Tolerance: Ensure that grooved joints are within **3 inches** either way from centers of dowels.
 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 developing random contraction cracks.

- a. Tolerance: Ensure that sawed joints are within **3 inches** either way from centers of dowels.
- E. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a **3/8-inch** radius. Repeat tooling of edges after applying surface finishes. Eliminate edging-tool marks on concrete surfaces.

3.6 CONCRETE PLACEMENT

- A. Before placing concrete, inspect and complete formwork installation, steel reinforcement, and items to be embedded or cast-in.
- B. Remove snow, ice, or frost from subbase surface and steel reinforcement before placing concrete. Do not place concrete on frozen surfaces.
- C. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.
- D. Comply with **ACI 301** requirements for measuring, mixing, transporting, and placing concrete.
- E. Do not add water to concrete during delivery or at Project site. Do not add water to fresh concrete after testing.
- F. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.
- G. Consolidate concrete according to **ACI 301** by mechanical vibrating equipment supplemented by hand spading, rodding, or tamping.
 1. Consolidate concrete along face of forms and adjacent to transverse joints with an internal vibrator. Keep vibrator away from joint assemblies, reinforcement, or side forms. Use only square-faced shovels for hand spreading and consolidation. Consolidate with care to prevent dislocating reinforcement dowels and joint devices.
- H. Screed paving surface with a straightedge and strike off.
- I. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleedwater appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.



3.7 FLOAT FINISHING

- A. General: Do not add water to concrete surfaces during finishing operations.
- B. Float Finish: Begin the second floating operation when bleedwater sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.
 - 1. Medium-to-Fine-Textured Broom Finish: Draw a soft-bristle broom across float-finished concrete surface, perpendicular to line of traffic, to provide a uniform, fine-line texture.
 - 2. Medium-to-Coarse-Textured Broom Finish: Provide a coarse finish by striating float-finished concrete surface **1/16 to 1/8 inch** deep with a stiff-bristled broom, perpendicular to line of traffic.

3.8 SPECIAL FINISHES

- A. Seeded Exposed-Aggregate Finish: Immediately after initial floating, spread a single layer of aggregate uniformly on paving surface. Tamp aggregate into plastic concrete and float finish to entirely embed aggregate with mortar cover of **1/16 inch**.
 - 1. Spray-apply chemical surface retarder to paving according to manufacturer's written instructions.
 - 2. Cover paving surface with plastic sheeting, sealing laps with tape, and remove sheeting when ready to continue finishing operations.
 - 3. Without dislodging aggregate, remove mortar concealing the aggregate by lightly brushing surface with a stiff, nylon-bristle broom. Do not expose more than one-third of the average diameter of the aggregate and not more than one-half of the diameter of the smallest aggregate.
 - 4. Fine-spray surface with water and brush. Repeat cycle of water flushing and brushing until cement film is removed from aggregate surfaces to depth required.

3.9 CONCRETE PROTECTION AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. Comply with ACI 306.1 for cold-weather protection.
- C. Evaporation Retarder: Apply evaporation retarder to concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching **0.2 lb/sq. ft. x h** before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete but before float finishing.



- D. Begin curing after finishing concrete but not before free water has disappeared from concrete surface.
- E. Curing Methods: Cure concrete by moisture-retaining-cover curing curing compound or as follows:
 - 1. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover, placed in widest practicable width, with sides and ends lapped at least **12 inches**, and sealed by waterproof tape or adhesive. Immediately repair any holes or tears occurring during installation or curing period, using cover material and waterproof tape.
 - 2. 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.

3.10 PAVING TOLERANCES

- A. Comply with tolerances in **ACI 117** and as follows:
 - 1. Elevation: **3/8 inch**.
 - 2. Thickness: Plus **3/8 inch**, minus **1/4 inch**.
 - 3. Surface: Gap below **10-feet-** long; unlevel straightedge not to exceed **1/2 inch**.
 - 4. Alignment of Tie-Bar End Relative to Line Perpendicular to Paving Edge: **1/2 inch per 12 inches** of tie bar.
 - 5. Lateral Alignment and Spacing of Dowels: **1 inch**.
 - 6. Vertical Alignment of Dowels: **1/4 inch**.
 - 7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Paving Edge: **1/4 inch per 12 inches** of dowel.
 - 8. Joint Spacing: **3 inches**.
 - 9. Contraction Joint Depth: **1/8 inch**,
 - 10. Joint Width: Plus **1/8 inch**, no minus.

3.11 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Strength of each concrete mixture will be satisfactory if average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than **500 psi**.
- C. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect.



- D. Concrete paving will be considered defective if it does not pass tests and inspections.
- E. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.12 REPAIR AND PROTECTION

- A. Remove and replace concrete paving that is broken, damaged, or defective or that does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Architect.
- B. Drill test cores, where directed by Architect, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory paving areas with portland cement concrete bonded to paving with epoxy adhesive.
- C. Protect concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.
- D. Maintain concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 321313



SECTION 323300 - SITE FURNISHINGS

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. Seating.
 - 2. Trash receptacles.

1.3 ACTION SUBMITTALS

- A. A. Manufacturer's Literature: Submit copies of each of manufacturer's material descriptions, dimensions, details, and installation instructions for the following. Submit manufacturer's material descriptions for primer coat and finish coat.

1.4 INFORMATIONAL SUBMITTALS

- A. Complete Shop Drawings for the installation of 6' bench without back
- B. Complete Shop Drawings for the installation of trash receptacle with metal hood

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For site furnishings to include in maintenance manuals.
- B. The Contractor shall furnish and deliver standard written manufacturer's guarantee in Owner's name covering all materials and workmanship under this Section 323300, Site Furnishings, in addition to, and not in lieu of, guarantee requirements set forth under Section 010000, GENERAL REQUIREMENTS, and other liabilities which the Contractor may have by law or other provisions of the Contract Documents.



- C. Supplier shall pay for repairs of any damage to any part of the project caused by defects in his work and for any repair to the materials or equipment caused by replacement. All repairs are to be done to the satisfaction of the Owner's Representative.
- D. Any part of the work installed under this contract requiring excessive maintenance shall be considered as being defective, and shall be replaced by the Supplier during the one year guarantee period at no cost to the Owner.

PART 2 - PRODUCTS

2.1 SEATING

- A. 5' long backless bench, surface mount on concrete pad, Thermally Modified Red Oak slats with black supports, (model #R521-81-001) as manufactured by Dumor, Inc P.O. Box 142 Mifflintown, PA 17059 or approved equal

2.2 TRASH RECEPTACLES

- A. 26.5" x 36" (55 Gal) round black steel trash receptacle with dome lid (CN-2755), surface mount on concrete pad, Model # CN-R/R-55 as manufactured by Pilot Rock

2.3 FABRICATION

- A. Factory Assembly: Factory assemble components to greatest extent possible to minimize field assembly. Clearly mark units for assembly in the field.

2.4 GENERAL FINISH REQUIREMENTS

- A. Appearance of Finished Work: Noticeable variations in same piece are unacceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for correct and level finished grade, mounting surfaces, installation tolerances, and other conditions affecting performance of the Work.



- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Comply with manufacturer's written installation instructions unless more stringent requirements are indicated. Complete field assembly of site furnishings where required.
- B. All metal inserts, anchor slots, anchors, anchor bolts, fastenings, and other fastening devices, for attachment of site improvement items to pavements, except as otherwise specified under other Sections of this Specification, shall be in specified, provided, delivered installed and paid for under the work of this Section 02800, Site Furnishings.
- C. Unless otherwise indicated, install site furnishings after landscaping and paving have been completed.
- D. Free-standing site improvement items shall be set plumb and horizontal regardless of the pitch of the finished surrounding grade unless otherwise shown on the Contract Documents.
- E. The Contractor shall be responsible for timing the delivery of site improvement items so as to minimize the on-site storage time prior to installation. All stored materials are the responsibility of the Contractor and shall be protected from weather, careless handling and vandalism.
- F. Contractor shall be responsible for the correct location of site improvement items. Take particular care to maintain shapes, plumb and level during the pouring of concrete.
- G. All Work shall be accurately set to established lines and elevations and rigidly set in place to supporting construction.
- H. Install site furnishings level, plumb, true, and positioned at locations after final approval in the field by Owner's Representative.
- I. Post Setting: Set cast-in support posts in concrete footing with smooth top, shaped to shed water. Protect portion of posts above footing from concrete splatter. Verify that posts are set plumb or at correct angle and are aligned and at correct height and spacing. Hold posts in position during placement and finishing operations until concrete is sufficiently cured.

END OF SECTION 323300



SECTION 328400 - PLANTING IRRIGATION

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. Piping.
2. Encasement for piping.
3. Pressure-reducing valves.
4. Automatic control valves.
5. Automatic drain valves.
6. Transition fittings.
7. Miscellaneous piping specialties.
8. Quick couplers.
9. Drip irrigation specialties.
10. Controllers.
11. Boxes for automatic control valves.

- B. Sprinklers.

- C. Related Sections:

1. 312316.13 - Trenching
2. Section 329200 - Turf & Grasses

1.3 DEFINITIONS

- A. Circuit Piping: Downstream from control valves to sprinklers, specialties, and drain valves. Piping is under pressure during flow.
- B. Drain Piping: Downstream from circuit-piping drain valves. Piping is not under pressure.
- C. ET Controllers: EvapoTranspiration Controllers. Irrigation controllers which use some method of weather-based adjustment of irrigation. These adjusting methods include use of historical monthly averages of ET; broadcasting of ET measurements; or use of on-site sensors to track ET.



- D. Main Piping: Downstream from point of connection to water distribution piping to, and including, control valves. Piping is under water-distribution-system pressure.
- E. Low Voltage: As defined in NFPA 70 for circuits and equipment operating at less than 50 V or for remote-control, signaling power-limited circuits.

1.4 PERFORMANCE REQUIREMENTS

- A. Irrigation zone control shall be automatic operation with controller and automatic control manual operation with manual valves.
- B. Location of Sprinklers and Specialties: Design location is approximate. Make minor adjustments necessary to avoid plantings and obstructions such as signs and light standards. Maintain 100 percent irrigation coverage of areas indicated.
- C. Minimum Working Pressures: The following are minimum pressure requirements for piping, valves, and specialties unless otherwise indicated:
 - 1. Irrigation Main Piping: 200 PSI.
 - 2. Circuit Piping: 150 PSI.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include rated capacities, operating characteristics, and furnished specialties and accessories.
- B. Wiring Diagrams: For power, signal, and control wiring.

1.6 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Irrigation systems, drawn to scale, on which components are shown and coordinated with each other, using input from Installers of the items involved. Also include adjustments necessary to avoid plantings and obstructions such as signs and light standards.
- B. Qualification Data: For qualified Installer.
- C. Zoning Chart: Show each irrigation zone and its control valve.
- D. Controller Timing Schedule: Indicate timing settings for each automatic controller zone.



1.7 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For sprinklers controllers and automatic control valves to include in operation and maintenance manuals.

1.8 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Spray Sprinklers: 5 units.

1.9 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers that include a Licensed Master Irrigator .
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Deliver piping with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent -end damage and to prevent entrance of dirt, debris, and moisture.
- B. Store plastic piping protected from direct sunlight. Support to prevent sagging and bending.

1.11 PROJECT CONDITIONS

- A. Interruption of Existing Water Service: Do not interrupt water service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary water service according to requirements indicated:
 - 1. Notify Construction Manager no fewer than two days in advance of proposed interruption of water service.
 - 2. Do not proceed with interruption of water service without Owner's written permission.



PART 2 - PRODUCTS

2.1 PIPES, TUBES, AND FITTINGS

- A. Comply with requirements in the piping schedule for applications of pipe, tube, and fitting materials, and for joining methods for specific services, service locations, and pipe sizes.
- B. PVC Pipe: ASTM D 1785, PVC 1120 compound, Schedule 40 .
 - 1. PVC Socket Fittings: ASTM D 2466, Schedules 40 and 80.
 - 2. PVC Threaded Fittings: ASTM D 2464, Schedule 80.
 - 3. PVC Socket Unions: Construction similar to MSS SP-107, except both headpiece and tailpiece shall be PVC with socket ends.
- C. PVC Pipe, Pressure Rated: ASTM D 2241, PVC 1120 compound, SDR 21 and SDR 26.
 - 1. PVC Socket Fittings: ASTM D 2467, Schedule 80.
 - 2. PVC Socket Unions: Construction similar to MSS SP-107, except both headpiece and tailpiece shall be PVC with socket or threaded ends.

2.2 PIPING JOINING MATERIALS

- A. Pipe-Flange Gasket Materials: AWWA C110, rubber, flat face, **1/8 inch** thick unless otherwise indicated; full-face or ring type unless otherwise indicated.
- B. Brazing Filler Metals: AWS A5.8/A5.8M, BCuP Series, copper-phosphorus alloys for general-duty brazing unless otherwise indicated.
- C. Solder Filler Metals: ASTM B 32, lead-free alloys. Include water-flushable flux according to ASTM B 813.
- D. Solvent Cements for Joining PVC Piping: ASTM D 2564. Include primer according to ASTM F 656.
- E. Plastic, Pipe-Flange Gasket, Bolts, and Nuts: Type and material recommended by piping system manufacturer unless otherwise indicated.

2.3 MANUAL VALVES

- A. Plastic Ball Valves:
 - 1. **Manufacturers:** Subject to compliance with requirements, undefined:
 - a. NIBCO INC.
 - b. Spears Manufacturing Company.



- c. WATTS.
- d. Or Approved Equal
2. Description:
 - a. Standard: MSS SP-122.
 - b. Pressure Rating: 125 psig minimum .
 - c. Body Material: PVC.
 - d. Type: Union.
 - e. End Connections: Socket or threaded.
 - f. Port: Full.

2.4 PRESSURE-REDUCING VALVES

A. Water Control Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. WATTS.
 - b. Zurn Industries, LLC.
 - c. Or Approved Equal
2. Description: Pilot-operation, diaphragm-type, single-seated main water control valve. Include small pilot control valve, restrictor device, specialty fittings, and sensor piping.
 - a. Main Valve Body: Cast- or ductile-iron body with AWWA C550 or FDA-approved, interior epoxy coating; or stainless-steel body.
 - b. Pattern: Angle -valve design.
 - c. Trim: Stainless steel.
 - d. Pressure Rating: Initial pressure of 150 psig minimum.
 - e. End Connections: Threaded for NPS 2 and smaller; Gasket Joint for NPS 2-1/2 and larger.

2.5 AUTOMATIC CONTROL VALVES

A. Plastic, Automatic Control Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Hunter Industries Incorporated.
 - b. Rain Bird PGA or Approved Equal
2. Description: Molded-plastic body, normally closed, diaphragm type with manual-flow adjustment, and operated by 24-V ac solenoid.



2.6 AUTOMATIC DRAIN VALVES

- A. Description: Spring-loaded-ball type of corrosion-resistant construction and designed to open for drainage if line pressure drops below **2-1/2 to 3 psig.**

2.7 TRANSITION FITTINGS

- A. General Requirements: Same size as, and with pressure rating at least equal to and with ends compatible with, piping to be joined.
- B. Transition Couplings:
- Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - Ford Meter Box Company, Inc. (The).
 - JCM Industries, Inc.
 - Smith-Blair, Inc.
 - Or Approved Equal
 - Description: AWWA C219, metal sleeve-type coupling for underground pressure piping.

2.8 SPRINKLERS

- A. General Requirements: Designed for uniform coverage over entire spray area indicated at available water pressure.
- B. Plastic, Pop-up, Gear-Drive Rotary Sprinklers:
- Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - Hunter Industries Incorporated.
 - Or Approved Equal
 - Description:
 - Body Material: ABS.
 - Nozzle: ABS .
 - Retraction Spring: Stainless steel.
 - Internal Parts: Corrosion resistant.

2.9 QUICK COUPLERS

- A. **Manufacturers:** Subject to compliance with requirements, provide products by the following:
- Rain Bird Corporation.
 - Or Approved Equal



- B. Description: Factory-fabricated, bronze or brass, two-piece assembly. Include coupler water-seal valve; removable upper body with spring-loaded or weighted, rubber-covered cap; hose swivel with ASME B1.20.7, 3/4-11.5NH threads for garden hose on outlet; and operating key.
1. Locking-Top Option: Vandal-resistant locking feature. Include one matching key(s).

2.10 CONTROLLERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Rain Bird Corporation.
 2. Or Approved Equal
- B. Description:
1. Controller Stations for Automatic Control Valves: Each station is variable from approximately 5 to 60 minutes. Include switch for manual or automatic operation of each station.
 2. Exterior Control Enclosures: NEMA 250, Type 4, weatherproof, with locking cover and two matching keys; include provision for grounding.
 - a. Body Material: Enameled-steel sheet metal .
 - b. Mounting: Freestanding type for concrete base .
 3. Interior Control Enclosures: NEMA 250, Type 12, dripproof, with locking cover and two matching keys.
 - a. Body Material: Molded plastic.
 - b. Mounting: Surface type for wall.
 4. Control Transformer: 24-V secondary, with primary fuse.
 5. Timing Device: Adjustable, 24-hour, 14-day clock, with automatic operations to skip operation any day in timer period, to operate every other day, or to operate two or more times daily.
 - a. Manual or Semiautomatic Operation: Allows this mode without disturbing preset automatic operation.
 - b. Nickel-Cadmium Battery and Trickle Charger: Automatically powers timing device during power outages.
 - c. Surge Protection: Metal-oxide-varistor type on each station and primary power.
 6. Moisture Sensor: Adjustable from one to seven days, to shut off water flow during rain.
 7. Smart Controllers: Use ET, tested in accordance with IA SWAT Climatological Based Controllers 8th Draft Testing Protocol and compliant with ASHRAE Standard 189.1.
 8. Wiring: UL 493, Type UF multiconductor, with solid-copper conductors; insulated cable; suitable for direct burial.
 - a. Feeder-Circuit Cables: No. 12 AWG minimum, between building and controllers.
 - b. Low-Voltage, Branch-Circuit Cables: No. 14 AWG minimum, between controllers and automatic control valves; color-coded different from feeder-circuit-cable jacket color; with jackets of different colors for multiple-cable installation in same trench.



- c. Splicing Materials: Manufacturer's packaged kit consisting of insulating, spring-type connector or crimped joint and epoxy resin moisture seal; suitable for direct burial.
9. Concrete Base: Reinforced precast concrete not less than **36 by 24 by 4 inches** thick, and **6 inches** greater in each direction than overall dimensions of controller. Include opening for wiring.

2.11 BOXES FOR AUTOMATIC CONTROL VALVES

A. Plastic Boxes:

1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. Ametec.
 - b. Armorcast Products Company.
 - c. Carson.
 - d. Or Approved Equal
2. Description: Box and cover, with open bottom and openings for piping; designed for installing flush with grade.
 - a. Size: As required for valves and service.
 - b. Shape: Rectangular.
 - c. Sidewall Material: PE, ABS, or FRP .
 - d. Cover Material: PE, ABS, or FRP .
 - 1) Lettering: " IRRIGATION ."

- ### B. Drainage Backfill:
- Cleaned gravel or crushed stone, graded from **3/4 inch** minimum to **3 inches** maximum.

PART 3 - EXECUTION

3.1 EARTHWORK

- #### A. Excavating, trenching, and backfilling are specified in Section 312316.13 - Trenching
- #### B. Drain Pockets:
- Excavate to sizes indicated. Backfill with cleaned gravel or crushed stone, graded from **3/4 to 3 inches** , to **12 inches** below grade. Cover gravel or crushed stone with sheet of asphalt-saturated felt and backfill remainder with excavated material.
- #### C. Provide minimum cover over top of underground piping according to the following:
1. Irrigation Main Piping: Minimum depth of 18 inches below finished grade, or not less than
 2. Circuit Piping: **12 inches** .
 3. Drain Piping: **12 inches** .
 4. Sleeves: 18 inches



3.2 PREPARATION

- A. Set stakes to identify locations of proposed irrigation system. Obtain Architect's approval before excavation.

3.3 PIPING INSTALLATION

- A. Location and Arrangement: Drawings indicate location and arrangement of piping systems. Install piping as indicated unless deviations are approved on Coordination Drawings.
- B. Install piping at minimum uniform slope of 0.5 percent down toward drain valves.
- C. Install piping free of sags and bends.
- D. Install groups of pipes parallel to each other, spaced to permit valve servicing.
- E. Install fittings for changes in direction and branch connections.
- F. Install unions adjacent to valves and to final connections to other components with **NPS 2** or smaller pipe connection.
- G. Install flanges adjacent to valves and to final connections to other components with **NPS 2-1/2** or larger pipe connection.
- H. Install underground thermoplastic piping according to ASTM D 2774.
- I. Install expansion loops in control-valve boxes for plastic piping.
- J. Lay piping on solid subbase, uniformly sloped without humps or depressions.
- K. Install ductile-iron piping according to AWWA C600.
- L. Install PVC piping in dry weather when temperature is above **40 deg F**. Allow joints to cure at least 24 hours at temperatures above **40 deg F** before testing.
- M. Install water regulators with shutoff valve and strainer on inlet and pressure gage on outlet. Install shutoff valve on outlet. Install aboveground or in control-valve boxes.
- N. Water Hammer Arresters: Install between connection to building main and circuit valves aboveground or in control-valve boxes.
- O. Install piping in sleeves under parking lots, roadways, and sidewalks.
- P. Install sleeves made of Schedule 40 PVC pipe and socket fittings, and solvent-cemented joints.
- Q. Install transition fittings for plastic-to-metal pipe connections according to the following:



1. Underground Piping:
 - a. **NPS 1-1/2** and Smaller: Plastic-to-metal transition fittings.
 - b. **NPS 2** and Larger: AWWA transition couplings.
2. Aboveground Piping:
 - a. **NPS 2** and Smaller: Plastic-to-metal transition fittings .
 - b. **NPS 2** and Larger: Use dielectric flange kits with one plastic flange.

3.4 JOINT CONSTRUCTION

- A. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- B. Remove scale, slag, dirt, and debris from inside and outside of pipe and fittings before assembly.
- C. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
 1. Apply appropriate tape or thread compound to external pipe threads unless dry seal threading is specified.
 2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged. Do not use pipe sections that have cracked or open welds.
- D. Flanged Joints: Select rubber gasket material, size, type, and thickness for service application. Install gasket concentrically positioned. Use suitable lubricants on bolt threads.
- E. Copper-Tubing Brazed Joints: Construct joints according to CDA's "Copper Tube Handbook," using copper-phosphorus brazing filler metal.
- F. Copper-Tubing Soldered Joints: Apply ASTM B 813 water-flushable flux to tube end unless otherwise indicated. Construct joints according to ASTM B 828 or CDA's "Copper Tube Handbook," using lead-free solder alloy (0.20 percent maximum lead content) complying with ASTM B 32.
- G. PVC Piping Solvent-Cemented Joints: Clean and dry joining surfaces. Join pipe and fittings according to the following:
 1. Comply with ASTM F 402 for safe-handling practice of cleaners, primers, and solvent cements.
 2. PVC Pressure Piping: Join schedule number, ASTM D 1785, PVC pipe and PVC socket fittings according to ASTM D 2672. Join other-than-schedule-number PVC pipe and socket fittings according to ASTM D 2855.
 3. PVC Nonpressure Piping: Join according to ASTM D 2855.



3.5 VALVE INSTALLATION

- A. Underground Curb Valves: Install in curb-valve casings with tops flush with grade.
- B. Underground Iron Gate Valves, Resilient Seat: Comply with AWWA C600 and AWWA M44. Install in valve casing with top flush with grade.
 - 1. Install valves and PVC pipe with restrained, gasketed joints.
- C. Aboveground Valves: Install as components of connected piping system.
- D. Pressure-Reducing Valves: Install in boxes for automatic control valves or aboveground between shutoff valves.
- E. Throttling Valves: Install in underground piping in boxes for automatic control valves.
- F. Drain Valves: Install in underground piping in boxes for automatic control valves.

3.6 SPRINKLER INSTALLATION

- A. Install sprinklers after hydrostatic test is completed.
- B. Install sprinklers at manufacturer's recommended heights.
- C. Locate part-circle sprinklers to maintain a minimum distance of **4 inches** from walls and **2 inches** from other boundaries unless otherwise indicated.

3.7 AUTOMATIC IRRIGATION-CONTROL SYSTEM INSTALLATION

- A. Equipment Mounting: Install interior controllers on wall.
 - 1. Place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 - 2. Install anchor bolts to elevations required for proper attachment to supported equipment.
- B. Equipment Mounting: Install exterior freestanding controllers on precast concrete bases.
 - 1. Place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 - 2. Install anchor bolts to elevations required for proper attachment to supported equipment.
- C. Install control cable in same trench as irrigation piping and at least **2 inches** below or beside piping. Provide conductors of size not smaller than recommended by controller manufacturer. Install cable in separate sleeve under paved areas.



3.8 CONNECTIONS

- A. Comply with requirements for piping specified in Section 221113 "Facility Water Distribution Piping" for water supply from exterior water service piping, water meters, protective enclosures, and backflow preventers. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. Install piping adjacent to equipment, valves, and devices to allow service and maintenance.
- C. Connect wiring between controllers and automatic control valves.

3.9 IDENTIFICATION

- A. Identify system components. Comply with requirements for identification specified in Section 220553 "Identification for Plumbing Piping and Equipment."
- B. Equipment Nameplates and Signs: Install engraved plastic-laminate equipment nameplates and signs on each automatic controller.
 1. Text: In addition to identifying unit, distinguish between multiple units, inform operator of operational requirements, indicate safety and emergency precautions, and warn of hazards and improper operations.
- C. Warning Tapes: Arrange for installation of continuous, underground, detectable warning tapes over underground piping during backfilling of trenches. See Section 312000 "Earth Moving" for warning tapes.

3.10 FIELD QUALITY CONTROL

- A. Perform tests and inspections.
 1. Manufacturer's Field Service: Engage a factory-authorized service representative to inspect components, assemblies, and equipment installations, including connections, and to assist in testing.
- B. Tests and Inspections:
 1. Leak Test: After installation, charge system and test for leaks. Repair leaks and retest until no leaks exist.
 2. Operational Test: After electrical circuitry has been energized, operate controllers and automatic control valves to confirm proper system operation.
 3. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
- C. Any irrigation product will be considered defective if it does not pass tests and inspections.



- D. Prepare test and inspection reports.

3.11 STARTUP SERVICE AND WINTERIZATION

- A. Perform startup service.

1. Complete installation and startup checks according to manufacturer's written instructions.
2. Verify that controllers are installed and connected according to the Contract Documents.
3. Verify that electrical wiring installation complies with manufacturer's submittal.

- B. Perform winterization Service

1. Complete (1) system shut-down with training

- C. Perform Spring Startup

1. Complete (1) system start-up with training

3.12 ADJUSTING

- A. Adjust settings of controllers.

- B. Adjust automatic control valves to provide flow rate at rated operating pressure required for each sprinkler circuit.

- C. Adjust sprinklers and devices, except those intended to be mounted aboveground, so they will be flush with, or not more than 1/4 inch above, finish grade.

3.13 CLEANING

- A. Flush dirt and debris from piping before installing sprinklers and other devices.

3.14 DEMONSTRATION

- A. Train Owner's maintenance personnel to adjust, operate, and maintain automatic control valves and controllers.

3.15 PIPING SCHEDULE

- A. Install components having pressure rating equal to or greater than system operating pressure.



- B. Piping in control-valve boxes and aboveground may be joined with flanges or unions instead of joints indicated.
- C. Underground irrigation main piping, 2-1/2" , shall be one of the following:
 - 1. Schedule 40, PVC Gasket Joint pipe and socket fittings
 - 2. PVC Class 200 SDR 21 - 2.5" Dia.
- D. Circuit piping, 1 inch to 2 inch , shall be one of the following:
 - 1. Schedule 40, PVC pipe and socket fittings; and solvent-cemented joints.
 - 2. SDR 26, PVC, pressure-rated pipe; Schedule 40, PVC socket fittings; and solvent-cemented joints.
- E. Underground Branches and Offsets at Sprinklers and Devices: Schedule 80, PVC pipe; threaded PVC fittings; and threaded joints.
 - 1. Option: Plastic swing-joint assemblies, with offsets for flexible joints, manufactured for this application.
- F. Risers to Aboveground Sprinklers and Specialties: hard copper tube, wrought-copper fittings, and soldered joints.
- G. Risers to Aboveground Sprinklers and Specialties: Schedule 80, PVC pipe and socket fittings; and solvent-cemented joints.
- H. Drain piping shall be one of the following:
 - 1. SDR 21, 26, or 32.5, PVC, pressure-rated pipe; Schedule 40, PVC socket fittings; and solvent-cemented joints.

3.16 VALVE SCHEDULE

- A. Underground, Shutoff-Duty Valves: Use the following:
 - 1. **NPS 2** and Smaller: Curb valve, curb-valve casing, and shutoff rod.
 - 2. **NPS 3** and Larger: Iron gate valve, resilient seated; iron gate valve casing; and operating wrench(es).
- B. Drain Valves:
 - 1. **NPS 1/2 and NPS 3/4**: Plastic ball valve.
 - 2. **NPS 1 to NPS 2**: Plastic ball valve.

END OF SECTION 328400



SECTION 329119 - LANDSCAPE GRADING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Final grade topsoil for finish landscaping.

B. Related Sections:

1. Section 329200 - Turf and Grasses

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

A. Topsoil:

1. Basis of Measurement: By Cubic Yard (CY) .
2. Basis of Payment: Includes excavating existing topsoil, supplying topsoil materials, stockpiling, preparing and scarifying substrate surface, placing where required, and rolling.

1.3 SUBMITTALS

A. Section 013300 - Submittal Procedures: Submittal procedures

B. Samples: Submit, in air-tight containers, 1 cup sample of loam to testing laboratory.

C. Materials Source: Submit name of imported materials source.

1.4 QUALITY ASSURANCE

A. Furnish each topsoil material from single source throughout the Work.

B. Perform Work in accordance with RIDOT Standard Specifications for Road & Bridge Construction, latest edition .



PART 2 - PRODUCTS

2.1 MATERIAL

- A. Topsoil:
 - 1. High quality loam, blended with compost and screened to be free of rocks and other debris with a 3/4 inch sieve

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 010000 - General Requirements: Verification of existing conditions before starting work.
- B. Verify substrate base has been contoured and compacted.

3.2 PREPARATION

- A. Protect landscaping and other features remaining as final Work.
- B. Protect existing structures, sidewalks, utilities, paving, and curbs.

3.3 SUBSTRATE PREPARATION

- A. Eliminate uneven areas and low spots.
- B. Remove debris, loose roots, branches, stones, in excess of **1/2 inch** in size. Remove contaminated subsoil.
- C. Scarify surface to depth of **3 inches** where topsoil is scheduled. Scarify in areas where equipment used for hauling and spreading topsoil has compacted subsoil.

3.4 PLACING TOPSOIL

- A. Place topsoil in areas where seeding, to thickness as scheduled. Place topsoil during dry weather.
- B. Fine grade topsoil to eliminate rough or low areas. Maintain profiles and contour of subgrade.
- C. Remove roots, weeds, rocks, and foreign material while spreading.



- D. Manually spread topsoil close to plant material, and path to prevent damage.
- E. Roll placed topsoil.
- F. Remove surplus subsoil and topsoil from site.
- G. Leave stockpile area and site clean and raked, ready to receive landscaping.

3.5 TOLERANCES

- A. Section 01000 - General Requirements: Tolerances.
- B. Top of Topsoil: Plus or minus **1/2 inch**.

3.6 PROTECTION OF INSTALLED WORK

- A. Section 010000 - General Requirements: Requirements for protecting finished Work.
- B. Prohibit construction traffic over topsoil.

3.7 SCHEDULES

- A. Compacted topsoil thicknesses:
 - 1. Seeded Grass: **6 inches**.
 - 2. When meeting existing grade, gradually reduce depth of topsoil so that an even gradient is achieved

END OF SECTION 329119



SECTION 329200 - TURF AND GRASSES

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. Seeding.
- 2. Hydroseeding.

- B. Related Requirements:

- 1. Section 329300 "Plants" for trees, shrubs, ground covers, and other plants as well as border edgings and mow strips.

1.3 DEFINITIONS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- C. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- D. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See Section 329113 "Soil Preparation" and drawing designations for planting soils.
- E. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.



1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site .

1.5 INFORMATIONAL SUBMITTALS

- A. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture, stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
- B. Product Certificates: For fertilizers, from manufacturer.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: Recommended procedures to be established by Owner for maintenance of turf and meadows during a calendar year. Submit before expiration of required maintenance periods.

1.7 QUALITY ASSURANCE

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws, as applicable.
- B. Sod: Harvest, deliver, store, and handle sod according to requirements in "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" sections in TPI's "Guideline Specifications to Turfgrass Sodding." Deliver sod within 24 hours of harvesting and in time for planting promptly. Protect sod from breakage and drying.
- C. Bulk Materials:
 - 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
 - 2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
 - 3. Accompany each delivery of bulk materials with appropriate certificates.



1.9 FIELD CONDITIONS

- A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with initial maintenance periods to provide required maintenance from date of Substantial Completion.
 - 1. Spring: April 15th - June 1st
 - 2. Fall: September 1st - October 15th
- B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 SEED MIXES

- A. Use the following seed mix for Mowed areas:
 - 1. Endophyte Enhanced Mix (modified):
 - a. 30% Improved Perennial Rye
 - b. 30% Turf Type Tall Fescue
 - c. 35% Chewings Fescue
 - d. 5% Miniature or Dutch White Clover
 - 2. Available from:
 - a. Allen's Seed Store - 693 S County Trail Exeter, RI 02822 Phone: 401-294-2722
 - b. Approved Equal

2.2 FERTILIZERS

- A. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - 1. Composition: fertilizer to have a ratio of 18 Nitrogen (N) - 0 Phosphorous (P) - 12 Potassium (K)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to be planted for compliance with requirements and other conditions affecting installation and performance of the Work.



1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
2. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
3. Uniformly moisten excessively dry soil that is not workable or which is dusty.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.

3.2 PREPARATION

A. Protect structures; utilities; sidewalks; pavements; and other facilities, trees, shrubs, and plantings from damage caused by planting operations.

1. Protect adjacent and adjoining areas from hydroseeding and hydromulching overspray.
2. Protect grade stakes set by others until directed to remove them.

B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.3 TURF AREA PREPARATION

A. General: Prepare planting area for soil placement and mix planting soil according to Section 32 91 19 - Landscape Grading

B. Placing Planting Soil: Place and mix planting soil in place over exposed subgrade .

1. Reduce elevation of planting soil to allow for soil thickness of sod.

C. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

D. Before planting, obtain Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.4 PREPARATION FOR EROSION-CONTROL MATERIALS

A. Prepare area as specified in "Turf Area Preparation" Article.



- B. For erosion-control mats, install planting soil in two lifts, with second lift equal to thickness of erosion-control mats. Install erosion-control mat and fasten as recommended by material manufacturer.
- C. Fill cells of erosion-control mat with planting soil and compact before planting.
- D. For erosion-control blanket or mesh, install from top of slope, working downward, and as recommended by material manufacturer for site conditions. Fasten as recommended by material manufacturer.
- E. Moisten prepared area before planting if surface is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

3.5 HYDROSEEDING

- A. Hydroseeding: Mix specified seed, fertilizer, and fiber mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogeneous slurry suitable for hydraulic application.
 - 1. Mix slurry with fiber-mulch manufacturer's recommended tackifier.
 - 2. Spray-apply slurry uniformly to all areas to be seeded in a one-step process. Apply slurry at a rate so that mulch component is deposited at not less than **1500-lb/acre** dry weight, and seed component is deposited at not less than the specified seed-sowing rate (5-7 lbs/1000 sq ft).

3.6 TURF MAINTENANCE

- A. General: Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
 - 1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
 - 2. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.
 - 3. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.
- B. Watering: Install and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of **4 inches**.



1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
2. Water turf with fine spray at a minimum rate of **1 inch** per week unless rainfall precipitation is adequate.

C. Mowing/Cutting:

1. Turf areas (seeded or sodded):
 - a. Mow turf as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than one-third of grass height. Remove no more than one-third of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:
 - 1) Mow Lawn Areas to a height of **2 to 3 inches** .

3.7 SATISFACTORY TURF

A. Turf installations shall meet the following criteria as determined by Architect:

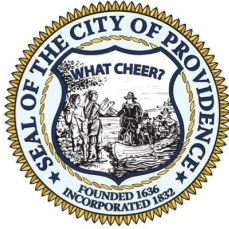
1. Satisfactory Seeded Turf: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any **10 sq. ft.** and bare spots not exceeding **5 by 5 inches** .
2. Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities.

B. Use specified materials to reestablish turf that does not comply with requirements, and continue maintenance until turf is satisfactory.

3.8 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.
- C. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.
- D. Remove nondegradable erosion-control measures after grass establishment period.

Providence Parks Department
Site Improvements at Obadiah
Brown Field



SECTION 329200 - TURF
AND GRASSES

END OF SECTION 329200



SECTION 329300 - PLANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

1. Plants.
2. Tree stabilization.
3. Tree-watering devices.

- B. Related Requirements:

1. Section 329119 "Landscape Grading" for preparation of planting beds.

1.3 DEFINITIONS

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Balled and Burlapped Stock: Plants dug with firm, natural balls of earth in which they were grown, with a ball size not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required; wrapped with burlap, tied, rigidly supported, and drum laced with twine with the root flare visible at the surface of the ball as recommended by ANSI Z60.1.
- C. Finish Grade: Elevation of finished surface of planting soil.
- D. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. Pesticides include insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. They also include substances or mixtures intended for use as a plant regulator, defoliant, or desiccant. Some sources classify herbicides separately from pesticides.
- E. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. Pests include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- F. Planting Area: Areas to be planted.



- G. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth. See Section 329113 "Soil Preparation" for drawing designations for planting soils.
- H. Plant; Plants; Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, ground covers, ornamental grasses, bulbs, corms, tubers, or herbaceous vegetation.
- I. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.
- J. Stem Girdling Roots: Roots that encircle the stems (trunks) of trees below the soil surface.
- K. Subgrade: The surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.

1.4 COORDINATION

- A. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and before planting turf areas unless otherwise indicated.
 - 1. When planting trees, shrubs, and other plants after planting turf areas, protect turf areas, and promptly repair damage caused by planting operations.

1.5 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site .

1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Plant Materials: Include quantities, sizes, quality, and sources for plant materials.
 - 2. Plant Photographs: Include color photographs in digital **3- by 5-inch** print format of each required species and size of plant material as it will be furnished to Project. Take photographs from an angle depicting true size and condition of the typical plant to be furnished. Include a scale rod or other measuring device in each photograph. For species where more than 20 plants are required, include a minimum of three photographs showing the average plant, the best quality plant, and the worst quality plant to be furnished. Identify each photograph with the full scientific name of the plant, plant size, and name of the growing nursery.



1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For landscape Installer. Include list of similar projects completed by Installer demonstrating Installer's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.
- B. Product Certificates: For each type of manufactured product, from manufacturer, and complying with the following:
 - 1. Manufacturer's certified analysis of standard products.
 - 2. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.
- C. Sample Warranty: For special warranty.

1.8 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful establishment of plants.
 - 1. Professional Membership: Installer shall be a member in good standing of either the Professional Landcare Network or the American Nursery and Landscape Association.
 - 2. Experience: Five years' experience in landscape installation in addition to requirements in Section 014000 "Quality Requirements."
 - 3. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
 - 4. Personnel Certifications: Installer's field supervisor or personnel assigned to the Work shall have certification in one or all of the following categories from the Professional Landcare Network:
 - a. Landscape Industry Certified Technician - Exterior.
 - b. Landscape Industry Certified Interior.
 - c. Landscape Industry Certified Horticultural Technician.
 - 5. Pesticide Applicator: State licensed, commercial.
- B. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.
 - 1. Selection of plants purchased under allowances is made by Architect, who tags plants at their place of growth before they are prepared for transplanting.
- C. Measurements: Measure according to ANSI Z60.1. Do not prune to obtain required sizes.
 - 1. Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container-grown stock. Measure main body of tree or shrub for height and spread; do not



- measure branches or roots tip to tip. Take caliper measurements **6 inches** above the root flare for trees up to **4-inch** caliper size, and **12 inches** above the root flare for larger sizes.
2. Other Plants: Measure with stems, petioles, and foliage in their normal position.
- D. Plant Material Observation: Architect may observe plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, cultivar, size, and quality. Architect may also observe trees and shrubs further for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and may reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.
1. Notify Architect of sources of planting materials seven days in advance of delivery to site.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and Federal laws if applicable.
- B. Bulk Materials:
 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
 2. Provide erosion-control measures to prevent erosion or displacement of bulk materials; discharge of soil-bearing water runoff; and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
 3. Accompany each delivery of bulk materials with appropriate certificates.
- C. Deliver bare-root stock plants within 24 hours of digging. Immediately after digging up bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting. Transport in covered, temperature-controlled vehicles, and keep plants cool and protected from sun and wind at all times.
- D. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.
- E. Handle planting stock by root ball.
- F. Store bulbs, corms, and tubers in a dry place at **60 to 65 deg F** until planting.
- G. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks (before wrapping), branches, stems, twigs, and foliage to protect during digging, handling, and transportation.



1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.
- H. Wrap trees and shrubs with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.
- I. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.
 1. Heel-in bare-root stock. Soak roots that are in less than moist condition in water for two hours. Reject plants with dry roots.
 2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
 3. Do not remove container-grown stock from containers before time of planting.
 4. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly wet condition.

1.10 FIELD CONDITIONS

- A. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.
- B. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.
 1. Spring Planting: March 15 - May 15
 2. Fall Planting: Sep 1-Nov 15 .
- C. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.

1.11 WARRANTY

- A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, 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 abuse, lack of adequate maintenance, or neglect by Owner.
 - b. Structural failures including plantings falling or blowing over.
 - c. Faulty performance of tree stabilization edgings and tree grates .
 - d. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
2. Warranty Periods: From date of planting completion .
 - a. Trees, Shrubs, Vines, and Ornamental Grasses: 12 months.
 3. Include the following remedial actions as a minimum:
 - a. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
 - b. Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
 - c. A limit of one replacement of each plant is required except for losses or replacements due to failure to comply with requirements.
 - d. Provide extended warranty for period equal to original warranty period, for replaced plant material.

PART 2 - PRODUCTS

2.1 PLANT MATERIAL

- A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant List, Plant Schedule, or Plant Legend indicated on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
 1. Trees with damaged, crooked, or multiple leaders; tight vertical branches where bark is squeezed between two branches or between branch and trunk ("included bark"); crossing trunks; cut-off limbs more than **3/4 inch** in diameter; or with stem girdling roots are unacceptable.
 2. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.
- B. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Architect, with a proportionate increase in size of roots or balls.
- C. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which begins at root flare according to ANSI Z60.1. Root flare shall be visible before planting.



- D. Labeling: Label each plant of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant.
- E. If formal arrangements or consecutive order of plants is indicated on Drawings, select stock for uniform height and spread, and number the labels to assure symmetry in planting.

2.2 MULCHES

- A. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:
 - 1. Type: Ground or shredded bark Wood and bark chips .
 - 2. Size Range: 3 inches minimum. .
 - 3. Color: Natural. No color dyed mulch.
- B. Compost Mulch: Well-composted, stable, and weed-free organic matter, pH of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through a **1-inch** sieve; soluble-salt content of 2 to 5 dS/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 - 1. Organic Matter Content: 50 to 60 percent of dry weight.
 - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.

2.3 TREE-STABILIZATION MATERIALS

- A. Trunk-Stabilization Materials:
 - 1. Upright and Guy Stakes: Rough-sawn, sound, new hardwood , free of knots, holes, cross grain, and other defects, **2-by-2-inch nominal** by length indicated, pointed at one end.
 - 2. Tree-Tie Webbing: UV-resistant polypropylene or nylon webbing with brass grommets.

2.4 TREE-WATERING DEVICES

- A. Slow-Release Watering Device: Standard product manufactured for drip irrigation of plants and emptying its water contents over one week ; manufactured from UV-light-stabilized nylon-reinforced polyethylene sheet, PVC, or HDPE plastic.
 - 1. Manufacturers:
 - a. Tree Gator
 - b. A.M. Leonard
 - c. Approved Equal
 - 2. Color: As selected by Architect from manufacturer's full range dark chocolategreen or .



2.5 MISCELLANEOUS PRODUCTS

- A. Mycorrhizal Fungi: Dry, granular inoculant containing at least 5300 spores per **lb** of vesicular-arbuscular mycorrhizal fungi and 95 million spores per **lb** of ectomycorrhizal fungi, 33 percent hydrogel, and a maximum of 5.5 percent inert material.
- B. Tree Watering Bag: provide each tree with a ARBORRAIN TOWER TREE AND PLANT HYDRATOR by AM Leonard (or Approved Equal) following planting. Contractor is responsible for filling bag when it becomes empty for during active growing seasons for 1 year following substantial completion.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas to receive plants, with Installer present, for compliance with requirements and conditions affecting installation and performance of the Work.
 - 1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
 - 2. Verify that plants and vehicles loaded with plants can travel to planting locations with adequate overhead clearance.
 - 3. Suspend planting operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
 - 4. Uniformly moisten excessively dry soil that is not workable or which is dusty.
- B. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Architect and replace with new planting soil.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.
- B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.



3.3 PLANTING AREA ESTABLISHMENT

- A. General: Prepare planting area for soil placement and mix planting soil according to Section 329113 "Soil Preparation." Section 329115 "Soil Preparation (Performance Specification)."
- B. Placing Planting Soil: Place and mix planting soil in-place over exposed subgrade Place manufactured planting soil over exposed subgrade Blend planting soil in place .
- C. Before planting, obtain Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.
- D. Application of Mycorrhizal Fungi: At time directed by Architect, broadcast dry product uniformly over prepared soil at application rate according to manufacturer's written recommendations .

3.4 EXCAVATION FOR TREES AND SHRUBS

- A. Planting Pits and Trenches: Excavate circular planting pits.
 - 1. Excavate planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are unacceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.
 - 2. Excavate approximately three times as wide as ball diameter for stock.
 - 3. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.
 - 4. If area under the plant was initially dug too deep, add soil to raise it to the correct level and thoroughly tamp the added soil to prevent settling.
 - 5. Maintain angles of repose of adjacent materials to ensure stability. Do not excavate subgrades of adjacent paving, structures, hardscapes, or other new or existing improvements.
 - 6. Maintain supervision of excavations during working hours.
 - 7. Keep excavations covered or otherwise protected overnight, after working hours, and when unattended by Installer's personnel.
 - 8. If drain tile is indicated on Drawings or required under planting areas, excavate to top of porous backfill over tile.
- B. Backfill Soil: Subsoil and topsoil removed from excavations may be used as backfill soil unless otherwise indicated.
- C. Obstructions: Notify Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.



1. Hardpan Layer: Drill **6-inch-** diameter holes, **24 inches** apart, into free-draining strata or to a depth of **10 feet**, whichever is less, and backfill with free-draining material.
- D. Drainage: Notify Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub planting pits.
- E. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

3.5 TREE, SHRUB, AND VINE PLANTING

- A. Inspection: At time of planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.
- B. Roots: Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.
- C. Balled and Burlapped Stock: Set each plant plumb and in center of planting pit or trench with root flare **2 inches** above adjacent finish grades.
 1. Backfill: Planting soil . For trees, use excavated soil for backfill.
 2. After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and 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.
 3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 4. Continue backfilling process. Water again after placing and tamping final layer of soil.
- D. and Stock: Set each plant plumb and in center of planting pit or trench with root flare **2 inches** above adjacent finish grades.
 1. Backfill: Planting soil . For trees, use excavated soil for backfill.
 2. Carefully remove root ball from container without damaging root ball or plant.
 3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
 4. Continue backfilling process. Water again after placing and tamping final layer of soil.
- E. Slopes: When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.



3.6 TREE, SHRUB, AND VINE PRUNING

- A. Remove only dead, dying, or broken branches. Do not prune for shape.
- B. Do not apply pruning paint to wounds.

3.7 TREE STABILIZATION

- A. Trunk Stabilization by Upright Staking and Tying: Install trunk stabilization as follows unless otherwise indicated:
 - 1. Upright Staking and Tying: Stake trees with two stakes for trees up to high and **2-1/2 inches** or less in caliper; three stakes for trees less than **14 feet** high and up to **4 inches** in caliper. Space stakes equally around trees.
 - 2. Support trees with bands of flexible ties at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree.
- B. Root-Ball Stabilization: Install at- or below-grade stabilization system to secure each new planting by the root ball unless otherwise indicated.
 - 1. Proprietary Root-Ball Stabilization Device: Install root-ball stabilization system sized and positioned as recommended by manufacturer unless otherwise indicated and according to manufacturer's written instructions.

3.8 PLANTING AREA MULCHING

- A. Mulch backfilled surfaces of planting areas and other areas indicated.
 - 1. Trees and Treelike Shrubs in Turf Areas: Apply organic mulch ring of **3-inch** average thickness, with **12-inch** radius around trunks or stems. Do not place mulch within **6 inches** of trunks or stems.
 - 2. Organic Mulch in Planting Areas: Apply **3-inch** average thickness of organic mulch extending **12 inches** beyond edge of individual planting pit or trench and over whole surface of planting area, and finish level with adjacent finish grades. Do not place mulch within **3 inches** of trunks or stems.
 - 3. Mineral Mulch in Planting Areas: Apply **3-inch** average thickness of mineral mulch extending **12 inches** beyond edge of individual planting pit or trench and over whole surface of planting area, and finish level with adjacent finish grades. Do not place mulch within **3 inches** of trunks or stems.

3.9 EDGING INSTALLATION

- A. Shovel-Cut Edging: Separate mulched areas from turf areas, curbs, and paving with a 45-degree, **4- to 6-inch-** deep, shovel-cut edge as indicated on Drawings.



3.10 INSTALLING SLOW-RELEASE WATERING DEVICE

- A. Provide one device for each tree.
- B. Place device on top of the mulch at base of tree stem and fill with water according to manufacturer's written instructions.

3.11 PLANT MAINTENANCE

- A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.
- B. Fill in, as necessary, soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
- C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices when possible to minimize use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

3.12 REPAIR AND REPLACEMENT

- A. General: Repair or replace existing or new trees and other plants that are damaged by construction operations, in a manner approved by Architect.
 - 1. Submit details of proposed pruning and repairs.
 - 2. Perform repairs of damaged trunks, branches, and roots within 24 hours, if approved.
 - 3. Replace trees and other plants that cannot be repaired and restored to full-growth status, as determined by Architect.

3.13 CLEANING AND PROTECTION

- A. During planting, keep adjacent paving and construction clean and work area in an orderly condition. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.
- C. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.



- D. After installation and before Substantial Completion , remove nursery tags, nursery stakes, tie tape, labels, wire, burlap, and other debris from plant material, planting areas, and Project site.
- E. At time of Substantial Completion, verify that tree-watering devices are in good working order and leave them in place. Replace improperly functioning devices.

END OF SECTION 329300