

INVITATION FOR BIDS

FOR

PEPPER ROCK PARK PHASE 2 IMPROVEMENT PROJECT



Response Deadline

March 28, 2024

12:00 PM Central Standard Time (CST)

**To: Nora Dinsmore
Brushy Creek MUD
16318 Great Oaks Drive
Round Rock, TX 78681**

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BRUSHY CREEK MUNICIPAL UTILITY DISTRICT

INVITATION FOR BIDS FOR PEPPER ROCK PARK PHASE 2 PROJECT1. INTRODUCTION

Brushy Creek Municipal Utility District (the “District”) is accepting bids from qualified contractors to provide services related to Pepper Rock Park Improvements as outlined in **Exhibit B** (the “*Project*”). The services generally include the installation of a landscape berm, sod, hydroseeding, irrigation, temporary irrigation, and resurfacing of a basketball court. The Project may also include the installation of automated irrigation improvements in the event the District approves the inclusion of the irrigation improvements in the awarded contract as an alternative bid item.

2. SCOPE OF SERVICES

2.1 General

The District is seeking bids from qualified contractors to provide all labor, equipment, tools, machinery, transportation, storage, supervision, and services necessary, required or reasonably inferable, whether or not expressly set forth in any bid documents for the scope and specifications set forth in **Exhibit B** and in accordance with the terms of the construction contract attached as **Exhibit D**.

2.3 Timeline for Construction

Time of completion is set forth in the construction contract attached as **Exhibit D**.

2.4 Location of Site

The work for the Project will be completed at several locations within the District as indicated in **Exhibit B**.

2.5 Scope and Specifications

Contractors shall be responsible for providing all labor, equipment, tools, machinery, and other services to complete the Project in accordance with the scope and specification indicated within **Exhibit B**.

3. GENERAL INSTRUCTIONS TO BIDDER:

3.1 General Instructions to Bidder:

1. Acceptance Period: Unless otherwise specified herein, bid pricing shall be firm for a minimum period of 90 days after the date of bid opening.
2. Authorized Signatures: Every bid must be signed by the person or persons legally authorized to bind the Contractor to a contract for the execution of the Work. The name, address and telephone number of the Contractor must also be specified.
3. Award of Bid: Award will be made to the Contractor that, in the Board's judgment, will be most advantageous to the District and result in the best and most economical completion of the Work. The criteria are not listed in any order of preferences. The District shall not be obligated to accept the lowest priced bid.

4. Cancellation of Solicitation: The District may cancel this solicitation at any time.
5. Compliance with Laws: All bids shall comply with current federal, state, and other laws relative thereto.
6. Disclosure of Interested Parties: Under Section 2252.908 of the Government Code, governmental entities may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties. If applicable, the District shall not enter into a contract with a contractor unless the contractor submits the required disclosure.
7. Documents to be returned with the Bid: Failure to completely execute and submit required documents before the Submittal Deadline may render a Bid Response to be deemed non-responsive. The documents that must be returned by the Submittal Deadline are listed in Section 4.2: Items to be Provided with Bid Responses.
8. Prices: All Bids shall give the price proposed, both in writing and in figures; shall give all other information requested herein; and shall be signed by the Contractor's authorized representative. Bid prices shall include everything necessary to complete and fulfill the Work, including insurance, bonds, and equipment warranty.
9. Location of Work Site: See **Exhibit B**.

3.2 Specifications/Plans

The construction plans and specifications for the Project will be available to Contractors on CivCast and also be available upon request. Please contact Nora Dinsmore, Procurement Specialist, at n.dinsmore@bcmud.org.

Contractors shall be responsible for providing the equipment and installation that meets or exceeds all of the requirements as set forth in the Project specifications.

4. PROCEDURAL INSTRUCTIONS

4.1. Intent

This procurement is intended to result in the selection of a Contractor that is most advantageous to the District and will result in the best and most economical completion of the Work. The Bid should be presented in a format that corresponds to, and references, the sections outlined in the Section 4.2 below. Responses to each section and subsection should be labeled to indicate which item is being addressed. Bids should be straightforward and concise. Emphasis should be concentrated on conforming to the Invitation to Bid instructions, responding to the bid requirements, and on providing a complete and clear description of the offer.

The District is not liable for any costs incurred by Contractors in responding to this solicitation. The cost of developing the bids and any other such expenses incurred by the Contractor in responding to the Invitation to Bid is entirely the responsibility of the Contractor and shall not be reimbursed in any manner by the District.

4.2. Items to be Provided with Pricing Submittals:

All bids must include the information set forth below. Failure to completely execute and submit the required documents before the Submittal Deadline may render a Bid Response to be deemed non-responsive:

- Cover Letter – signed letter stating that the contractor has the capability of performing the project requested by the District.
- Pricing – Contractor shall specify the pricing for the project to include the materials, equipment and labor according to **Exhibit B**.
- Experience – Contractor must identify at least two (2) examples of similar work to that requested herein and performed by the contractor within the past 24 months.
- Project References – Contractor must identify three references, including name, title, daytime telephone number, and project description with starting and end dates.
- Warranty Information – All work shall be subject to warranty terms set forth in the Construction Contract.
- Performance Bond and Payment Bond Information – see **Exhibit D**
- Deposit or Bid Bond – Contractor must submit a certified or cashier's check on a responsible bank in the state equal to at least two percent of the total amount of the bid, or a bid bond of at least two percent of the total amount of the bid issued by a surety legally authorized to do business in this state, as a good faith deposit to ensure execution of the contract.
- Insurance – Contractor shall specify the types and amounts of insurance that it holds per **Exhibit D** (the contract).
- Work Plan/Timeline – Contractor shall submit a detailed narrative project work plan and detailed timeline outlining the project plans and timeline of each step, including target completion date.
- Conflict of Interest – Contractor shall submit their response to the Conflict of Interest Statement referenced in Section 5.0.
- Completed and signed W9 Tax Form
- Bid Schedule Form – The Contractor shall completely fill and submit the Bid Form. The Signature Page included as part of **Exhibit A** must also be submitted with the bid proposal form.
- Questionnaire and Information Form: The Contractor and Sport Court Subcontractor shall

completely fill out and submit the Bid Form Questionnaire and Information Form, **Exhibit C**.

4.3. Questions

Questions regarding the procurement process or the scope of the Project **must be submitted in writing via e-mail** no later than **12:00 p.m. (CST) Friday, March 22, 2024**. The subject line shall read: ***“Questions for Pepper Rock Phase 2 Project”***. **Questions should be e-mailed to the District contact, Nora Dinsmore at n.dinsmore@bcmud.org**. Copies of the specifications and bid documents will be on file and may be examined at the following location: www.civcastusa.com. Questions will be compiled and all questions and answers will be sent to all known interested contractors and published on CivCast as an Addendum by Tuesday March 26, 2024.

4.4. Timeline:

Procurement Package Distributed to Contractors

Monday March 4, 2024

Pre-bid Meeting

March 13th at 11am (CST)

Brushy Creek MUD

16318 Great Oaks Drive

Round Rock, TX 78681

Written Questions due from Contractors:

Friday, March 22, 2024 Noon CST

Proposal due from Bidders:

Thursday, March 28, 2024 Noon CST

Anticipated Staff recommendation to Board of Directors:

Thursday, April 11, 2024

Anticipated Construction Commencement Date:

Monday, April 15, 2024

4.5. Bid Submissions

All bid submissions must conform to the requirements set forth herein. Sealed proposals and required information must be submitted to the attention of:

Nora Dinsmore

Procurement Specialist

Brushy Creek Municipal Utility District

16318 Great Oaks Drive

Round Rock, TX 78681

by **12:00 PM (CST) Thursday, March 28, 2024**. Any Bids received after the above date and time will not be considered. Sealed bids may be hand delivered or sent by postal service.

All costs associated with the preparation and submissions of Bid documents are the sole

Invitation for Bids

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responsibility of the Bidder. All Bid submissions shall be signed and dated by an official authorized to bind the Bidder in legal matters. All submitted Bids and related information become the property of the District.

4.6. Selection Process

All Bid Responses will be evaluated by the District management team. Recommendations for awarding the work will be submitted to the Board of Directors for consideration at a regularly scheduled meeting following the Bid Response deadline. The District shall award the contract based on a determination by its Board of Directors as to what bid is most advantageous to the District and result in the best and most economical completion of the Work. Criteria used to make the selection will include cost, construction process, timeline, qualifications, and references. If the District has experience with your firm and you do not list the District as a reference, the District reserves the right to use past experience for this Bid.

The successful bidder will be required to execute the District's standard agreement (included in these bid documents) and all other qualifications as described in these bid documents. Contractors and subcontractors shall pay to laborers, workmen, and mechanics the prevailing wage rate for Williamson County. The Williamson County prevailing wages are available at the following website: <https://wdolhome.sam.gov/>.

4.7. Rejection of Proposals

The District reserves the right to reject any or all proposals, or any part of a proposal.

4.8 Confidential Information

The District is subject to the Texas Public Information Act. Any information submitted to the District by a bidder shall be available to the public, unless it is clearly marked "CONFIDENTIAL." If another party requests access to information marked confidential, then the District shall ask the bidder if the information may be released. If the release is agreed to, the District shall release the information. If the release is denied, the matter shall be referred to the Texas Attorney General's Office where the bidder shall be responsible for substantiating its confidentiality. The Attorney General's office shall rule on the matter. Pricing information is not considered confidential under the PIA and will be disclosed without making a request to the Texas Attorney General.

4.9. Taxes, Exempt

The District is exempt from Federal Excise and State Sales Tax.

4.10. Terms of the Offer

The District reserves the right to negotiate final contract terms with any Vendor selected. The contract between the parties will consist of the Bid Response together with any modifications thereto, the awarded Proposer's Bid Response, and all modifications and clarifications that are submitted at the request of the District during the evaluation and negotiation process.

4.11. Contract (Exhibit D)

Attached to this request is the form of agreement to be entered into by the Contractor and District regarding the Pepper Rock Phase 2 project. The form of agreement is a part of this Request. Upon

selection of a Contractor by the Board of Directors, the Contractor must execute the agreement. Failure to do so may constitute cause for the District to enter into an agreement with another Contractor. The District reserves the right to revise the form of the agreement but is under no obligation to do so.

5.0 CONFLICT OF INTEREST

The Board of Directors of the District, in compliance with Section 49.199 of the Texas Water Code, has adopted a Code of Ethics Policy, and the District is subject to the requirements of Chapters 171 and 176 of the Texas Local Government Code. In accordance with the District's policy and Texas law, please disclose the following information:

1. Whether or not any of the Board of Directors or Management Staff listed below, or a family relative thereof, has a substantial interest in the Contractor or its affiliates.
2. Whether or not any of the Board of Directors or Management Staff listed below, or a family relative thereof, has an employment or other business relationship with the Contractor or its affiliates.
3. Whether the Contractor has provided a gift to any of the Board of Directors or Management Staff listed below, or a family relative thereof.

Furthermore, Texas Government Code Section 2252.908 ("Section 2252.908") requires business entities entering into a contract with a local government entity such as the District to complete a FORM 1295 promulgated by the Texas Ethics Commission (TEC) (which is available on the TEC website at <https://www.ethics.state.tx.us/forms/1295.pdf>) and to file it electronically with the TEC before the time the business entity executes and submits the contract to the local governmental entity. As a condition of execution of a contract for the Project by the District, the contractor will be required to electronically file a FORM 1295 with the TEC and provide the District with a completed FORM 1295 and certification of filing generated by the TEC's electronic filing application, as required by Section 2252.908.

District Board of Directors

President/Assistant Treasurer- Michael Tucker
Vice-President- Kim Filiatrault
Secretary- Ken Reifschlager
Treasurer- Rebecca Tullos
Assistant Secretary - Tracey Calloway

District Staff

Shean Dalton, General Manager
Amy Giannini, District Engineer
Angela Niemiec, Parks & Recreation Manager
Bradley Holsapple, District Project Manager
Nora Dinsmore, Procurement Specialist

EXHIBIT A:

BID FORM

EXHIBIT B:

PROJECT SCOPE AND SPECIFICATIONS

EXHIBIT C:

CONTRACTOR INFORMATION & REFERENCE FORM

EXHIBIT D:

PROJECT CONTRACT

Exhibit A

BID FORM

Brushy Creek Municipal Utility District

PEPPER ROCK PARK PHASE 2

The Bidder, hereby offers to complete the Work including providing all labor, equipment, tools, machinery, transportation, storage, supervision and services necessary, required or reasonably inferable, whether or not expressly set forth in any bid documents, to prosecute and complete in a single phase the Project in accordance with the specifications furnished by the District. The Work shall be completed as set forth Specifications and in accordance with the Construction Contract at the prices set forth below:

TOTAL PROPOSED BID: Bidder proposes to provide all labor and materials for the Work in accordance the contract documents for the stipulated sum of (Bidder to provide bid amount in both written and numerical format):

(written bid amount)

(\$ _____) (numerical bid amount)

The cost includes the following subdivisions:

BIDDER will complete the Work in accordance with the Contract Documents for the following prices and will include a one-year warranty period starting at the time of Owner Acceptance:

DEMOLITION & SITE WORK

Tree Pruning \$ _____

Turf Removal \$ _____

Concrete Removal \$ _____

Remove Goal Posts \$ _____

Grade Preparation \$ _____

Finish Grading \$ _____

Tree Protection \$ _____

Concrete Protection \$ _____

Erosion Control (BMP's) \$ _____

Subsurface Drainage \$ _____

**Complete Demolition
& Site Work** \$ _____

HARDSCAPE

New 5' Wide Sidewalk \$ _____

New Basketball Goals
With Concrete Footers \$ _____

Repair, Resurface &
Repaint Sport Court \$ _____

Complete Hardscape \$ _____

IRRIGATION

Permanent Irrigation \$ _____

Temporary Irrigation \$ _____

Complete Irrigation \$ _____

PLANT MATERIALS

Tiff 419 Sod \$ _____ (_____sf @ \$ _____per sf)

Tiff 419 Hydroseed \$ _____ (_____sf @ \$ _____per sf)

Complete Plant Materials \$ _____

BULK MATERIALS

Clean Fill Dirt \$ _____ (_____cy @ \$ _____per cy)

Clay Based Fill Dirt \$ _____ (____cy @ \$_____per cy)
 Composted Topsoil \$ _____ (____cy @ \$_____per cy)
 2" TX Blend River Rock \$ _____ (____cy @ \$_____per cy)
 Natural Hardwood Mulch \$ _____ (____cy @ \$_____per cy)
 3"-8" Limestone Gravel \$ _____ (____cy @ \$_____per cy)

Complete Bulk Materials \$ _____

TOTAL PROPOSED BID \$ _____

ADDITIVE ALTERNATE 1

Connect existing irrigation valves to controller \$ _____

The Bidder shall furnish Unit Price Schedule with this Bid Proposal for all items necessary to complete the Work. These unit prices are to be used to adjust the Base Bid as needed, in case a greater or lesser amount of work is done. The indicated unit prices cover all costs, including but not limited to, the cost of Work including all materials, equipment, labor, overhead, profit, maintenance and guarantee required to render the project complete and in accordance with the Construction Contract.

BID SIGNATURE PAGE

The undersigned Bidder declares: (a) that it has reviewed and agrees to the Scope of Work, Construction Contract and all other documents and terms and conditions incorporated into the District's Invitation for Bids; (b) that through its authorized personnel it has personally examined the location of the proposed work and has determined the amount and character of the proposed work and the supervision, labor, tools, material as identified, and equipment, necessary to complete the same in compliance with the specifications and contract documents (if applicable); and (c) that Bidder has no conflict of interest, as defined in the Invitation for Bids.

ADDENDA (if applicable):

Receipt is hereby acknowledged of the following addenda to the contract documents:

Addenda No. 1: _____ (Date Received)

Addenda No. 2: _____ (Date Received)

BIDDER:

Contractor Name: _____ Contractor Seal and Authorization
(if a corporation)

Signature: _____

By: _____

Title: _____

Telephone Number: _____

Email: _____

END OF BID SCHEDULE

Exhibit B

Project Scope and Specifications

Brushy Creek Municipal Utility District

PEPPER ROCK PARK PHASE 2

1. Pepper Rock Park Improvements

Scope: Park improvements at the Pepper Rock Park are programmed. The scope includes the addition of a new sod covered berm and an expansion with repair and resurfacing of the existing sport court. Grade will be adjusted around the sport court. Sod shall be added on the berm and around the sport court. Permanent irrigation shall be added to all new sod while temporary irrigation shall be installed on all other areas receiving hydroseed. Temporary irrigation shall be protected behind an orange construction fence until grass has become established and the temporary irrigation is removed.

The project also has an Additive Alternate bid item for irrigation. The park currently has automated irrigation at the corner of Great Oaks Dr and Pepper Rock Park Dr and three battery operated valves. The alternate item shall cover adding new irrigation wires to the existing valves to automate the entire system on one controller.

General Location:

8609 Pepper Rock Park Drive

Austin, TX 78717



2. Project Specifications

SECTION 01 56 39 - TREE PRESERVATION, REMOVAL, AND MITIGATION

PART 1 - GENERAL

1.1 SUMMARY

- A. These requirements and specifications shall pertain to all construction projects within the Brushy Creek Municipal Utility District (the District).
- B. Before the start of any activity that will disturb exterior site conditions, trees to be protected shall be clearly identified and approved by the District Engineer or District Project Manager.
- C. The contents of this document shall be included in all Specifications for new and/or renovation projects in the District. City of Round Rock Tree Protection Standards shall apply to all protected items with or without graphic representation shown in the plans.
- D. The work described in this section is applicable to any and all sections of the contract documents. Any and all work that would disturb existing site conditions or present the potential for impacts to soil or any portion of landscape or trees either above or below ground shall adhere fully to this specification section.

1.2 RELATED DOCUMENTS

- A. Standards
 - 1. 32 84 00 Landscape Irrigation
 - 2. 32 90 00 Landscape Planting
- B. References: Use most updated versions of the following:
 - 1. ISA Best Management Practices
 - 2. ANSI A300 – Standards for Tree Care Practices
 - 3. ANSI Z133 – Safety Requirements for Arboricultural Operations

1.3 DEFINITIONS

- A. **Caliper Inch:** [The diameter of a young tree, measured 6" above ground for trees up to 4" caliper size. If caliper exceeds 4", tree shall be measured at 12" above ground. Nursery stock trees are measured in caliper inches.](#)
- B. **Certified Arborist:** An Arborist certified through the ISA (International Society of Arboriculture) after passing a test demonstrating basic knowledge about urban trees and their management, fulfilling an ongoing continuing education requirement and paying regularly scheduled certification fees.

- C. **Critical Root Zone (CRZ):** An area from the base of tree that extends beyond the drip line. It is equal to 1-foot radius for every inch of stem diameter (DBH), calculated as $A=\pi r^2$ and expressed as square feet. This area is needed to ensure tree health and stability.
- D. **Diameter at Breast Height (DBH):** A standard method of measuring stem diameter 4.5 feet above the ground. Established trees in the District are measured in DBH inches.
- E. **Dripline:** The area under the total branch spread of the tree, all around the tree. This should not be confused with critical root zone.
- F. **Existing Tree:** Any tree 3" caliper or greater existing on property prior to any demolition or construction for a project.
- G. **Heritage Trees:** Native trees with a DBH of 24" or greater. Does not include the following species: Ligustrum, Chinaberry, Tree of Heaven, Salt-cedar, Mimosa, Chinese Tallow, Paper Mulberry, Siberian Elm, White Mulberry, Chinese Parasol, Golden Raintree.
- H. **Mitigation:** Compensation to offset the loss of values when trees are removed due to unavoidable construction impacts.
- I. **Owner:** The Brushy Creek Municipal Utility District
- J. **Owner's Designated Representative (ODR):** The District Engineer or District Project Manager serves as the Owner's primary representative for the project. This includes all written and verbal communications and site issue coordination.
- K. **Stem:** The trunk of the tree.
- L. **Tree:** A woody perennial plant usually having one dominant trunk and a mature height greater than 15 feet. Multi-trunk trees have more than one trunk.
- M. **Tree Protection Zone (TPZ):** The area inside the Tree Protection Fencing on the project, containing the tree or tree trunks and critical root zone.

1.4 TREE PROTECTION STANDARDS

- A. Heritage Trees
 - 1. The Owner considers heritage trees as irreplaceable assets to be protected and aim to preserve in place all heritage trees within limits of construction. Coordinate with the ODR if the project requirements will affect such trees.
 - 2. Site plans have been evaluated based on proposed designs and construction impacts to CRZs of heritage trees. The Contractor shall follow regional standards of care and protection for all heritage trees with the aid of a Certified Arborist.
- B. Critical Root Zone Preservation
 - 1. The following standards act as a MINIMUM amount of protection needed to preserve trees through construction.
 - a. All preserved trees shall have a minimum of 50% CRZ fully protected through construction. Only hand digging allowed inside full CRZ of the tree.

- b. Area between ½ CRZ and ¼ CRZ shall have no compaction or cut/fill greater than 4". Further impacts within ½ CRZ will require approval from ODR. Call for a site meeting to evaluate with ODR.
 - c. No impact of any kind allowed inside of ¼ CRZ.
 - 2. To calculate critical root zone (CRZ) for a given tree:
 - a. Measure tree diameter in inches (DBH).
 - b. Express that measurement of inches in feet.
 - c. The result expressed in feet shall be the radius of full CRZ measured from the tree trunk.
 - 3. Proposed site improvements requiring excavation or grade change within CRZ shall meet tree preservation requirements. Contractor shall ensure construction means and methods associated with various design features do not exceed maximum allowable impacts.
 - 4. Project shall meet same tree preservation requirements for trees located outside Limit of Work with any portion of CRZ contained within Limit of Work or otherwise impacted by any construction related activities.
- C. Canopy Preservation
 - 1. Pruning is to be in accordance with the most recent ANSI A300 pruning standard.
 - 2. No more than 25 percent of the foliage should be removed within an annual growing season. The percentage and distribution of foliage to be removed shall be adjusted according to the plant's species, age, health, and site under the guidance of a Certified Arborist.
 - 3. The intent of canopy preservation is to allow for adequate foliage to support physiological processes which generate sugars for maintenance, growth, defense and storage, all key functions for tree health.
- D. Coordinate with ODR on specific tree protection or canopy clearance requirements for scaffolding, construction traffic, build back, forms, foundation, grading or any other issues that may impact trees.
- E. Lights vs Existing Trees
 - 1. Footers and conduit shall be located outside of ½ CRZ.
 - 2. Poles and mounted lights shall not interfere with existing tree canopies.

1.5 PRECONSTRUCTION REQUIREMENTS

- A. Contractor shall furnish all labor, materials, equipment, and services necessary for the protection of existing trees and vegetation as required and as specified herein. Contractors shall also furnish all labor, materials, equipment and apparatus not specifically mentioned herein or noted on the plans, but which are incidental and necessary to complete the work specified for the protection, preservation and/or repair of trees.
- B. Contractor shall protect from damage all existing vegetation and trees to remain on the project site and any adjacent property impacted due to construction activity. Contractor shall

be responsible for the repair of any damage, including that to the adjacent property resulting from failure to comply with the requirements of the Contract Documents or failure to exercise reasonable care in performing the Work. If Contractor fails or refuses to repair the damage promptly and according to specifications and directions, the District may have the necessary work performed with a Certified Arborist and coordinate appropriate charges through the ODR to be assigned to the Contractor per contract.

C. Development Site Tree Survey & Assessment

1. The ODR will perform a site assessment at the start of the project which will include a tree survey that shall provide accurate locations and diameters of all existing trees >3" caliper as well as enough spot elevations to determine the existing elevation of the tree root zone and root flare (the base of the stem where major roots begin).
 - a. Site and tree surveys shall reference existing District tree survey tree tag numbers if present. Do not remove, paint or otherwise alter existing tree tags.
 - b. If a tree is missing a District tree survey tag or has an illegible tag, surveyor may assign a new number and affix their own tag. Inform ODR of these changes in writing with a digital copy in .dwg format of any survey completed.
 - c. Applicable plan sheets shall depict surveyed trunk location, District tree survey tag #, and full area of critical root zone for every tree on site.
2. The Contractor may provide an assessment from an outside ISA Certified Arborist who is approved by the District. This basic assessment shall include a written report and map including current condition of all trees, potential tree pruning, removals, health care, or transplanting and shall be reviewed and approved by the ODR prior to construction.

D. Tree Transplant Specifications

1. No District tree shall be transplanted or relocated without prior written consent from the District or ODR.
2. Trees suitable for transplant and their proposed locations shall be designated on the site plans and marked on site (by paint or tag) prior to issuance of 100% construction documents.
3. PSP to provide a detailed tree transplant execution plan with the following requirements at a minimum included with the construction documents and specifications.
4. Coordination of logistics shall include ODR, general contractor, tree transplant contractor, design team and certified arborist, as appropriate.
5. Final grading and elevation of transplant trees shall be confirmed prior to issuance of 100% construction documents.
6. Adequate time (no less than 90 days) shall be allowed to prep trees. It is recommended that trees be moved between the months of October and February.
7. For all transplant trees, no excavation or disturbance allowed within 5 feet of root ball.
8. The tree transplant contractor or landscape subcontractor shall maintain all transplanted trees during construction and for an additional twelve months following substantial completion. Work includes:

- a. Adequate irrigation, to ensure survivability and continued health of tree.
 - b. Mulching.
 - c. Erosion control, compliant with SWPPP plan, and approval by ODR
 - d. Weed control within CRZ.
 - e. Insect and disease control.
 - f. Other tree needs as required by ODR.
9. Failure to comply with these requirements resulting in tree decline or death during construction shall require the project to mitigate for tree loss with replacement of total caliper inches. The mitigation planted trees shall then be covered under warranty and cared for by the tree transplant contractor or landscape subcontractor for 12 months after planting. The District reserves the right to care for or hire a contractor to care for the transplanted or mitigation planted trees at the Contractor's expense if the Contractor or Subcontractor fail to properly care for the trees.
- E. Pre-Construction Meeting: A pre-construction meeting with the ODR shall be set prior to start of work. This meeting shall review the execution of this section relative to protecting and mitigating impacts to trees remaining on site.

1.6 REQUIREMENTS, MITIGATION, AND COMPENSATION FOR TREE REMOVAL

- A. Tree removals deemed necessary by plans or construction process shall require mitigation as set forth in this section.
- B. Project shall fully cover all replacement costs for trees of any size that are removed or damaged by construction if marked for protection.
- C. Heritage Trees shall not be removed without a review process that adheres to the following:
 - 1. Tree assessment of all heritage trees shall be provided by the District or District approved arborist consultant.
 - 2. The District and ODR shall be involved with the process to provide knowledge of site history, maintenance, tree health, ecosystem benefits, and other values trees provide.
 - 3. Final approval for Heritage Tree removal will be determined by the Owners Designated Representative and the District Board of Directors. This process will consider issues such as site opportunities and constraints, landscape design options, utility locations, and budget.
- D. Calculating Mitigation
 - 1. Heritage trees shall be replaced on a 3" to 1" ratio either aggregate or a single tree. For example: if you have removed a 24" DBH tree, 72 caliper inches shall be replaced.
 - 2. All other existing non-invasive species trees (3"-23") shall be replaced at a 1:1 ratio (1" to 1") in any combinations approved by ODR. For example: a 20" diameter tree will be replaced by 20 caliper inches; this could mean five, 4" trees or ten, 2" caliper trees.
 - 3. Transplant trees provide mitigation credit; any size tree shall count 3:1 (for example: a 20" transplant tree will count as 60" of mitigation credit).
 - 4. Any trees repurposed for milling and use in project design will provide 50% mitigation credit; for example: a 20" diameter (DBH) oak tree stem will only require 10" of

mitigation. The project shall bear full cost and responsibility for repurposing, including transport, milling, kiln drying and storage.

5. Mitigation Options

- a. Mitigate inches with new tree plantings on existing site or other District properties, following all design guidelines and landscape planting standards.
- b. If new tree plantings are not an option or cannot fully satisfy mitigation requirements, calculate value of total remaining mitigation inches to be paid to the District.
 - 1) Formula for mitigation funds are based on the following example: 24 inches are needed to be mitigated; costs shall be calculated based on a 3-inch caliper replacement tree cost (including irrigation) of \$600; 8 irrigated trees (8x3=24 inches) at \$200 per inch = \$4,800.00.
 - 2) These funds shall be paid by the contractor to an account designated by the District for use in providing services, materials, and products to augment the health of trees on District property.

1.7 QUALITY ASSURANCE

A. Contractor Qualifications

1. All tree work required by this section shall be performed by or under the direct supervision of an ISA Certified Arborist and coordinated with the ODR.
2. All applications of regulated chemical pesticides shall be performed by a Texas Department of Agriculture (TDA) licensed applicator. Products shall be applied per label requirements. All applications shall be documented per TDA rules, with copies provided to the ODR for record keeping.

B. Tree Inspections

1. The District shall be informed of construction schedules and progress so work under this section may be observed at the following key times:
 - a. Site conditions prior to start of work including vegetation, soil and drainage conditions, and tree protection fencing.
 - b. Disturbance within CRZs, including removal of existing trees and vegetation, grading, soil preparation, irrigation, and planting.
2. To ensure compliance at other times, a District Representative or project appointed arborist shall conduct regular site inspections. Frequency will be based on project needs. If project has a consultant arborist, inspections shall be monthly at a minimum. Reports shall be provided to the ODR and sent to all parties. Inspections shall include:
 - a. TPZ encroachment and resulting damages
 - b. Structural integrity of tree protection fencing
 - c. Irrigation/soil moisture levels
 - d. Evidence of plant stress
 - e. Insect/disease activity
 - f. Dust levels on leaves

C. Damages

1. Contractor shall repair or replace protected trees, shrubs and other vegetation indicated to remain or be relocated that are damaged by construction operations at no additional cost to the Owner. The District Representative shall specify any repair work, damage penalties, or replacement values.
 2. Refer to 3.12 Damage or Loss of Existing Landscape for further details.
- D. ODR shall be included on landscape/exterior punch walks prior to Substantial Completion of the project.
1. All punch list items shall be addressed by the project team prior to final acceptance. The warranty period shall begin upon final acceptance by the District.

1.8 SUBMITTALS

- A. Submittals of products used in work required by this section shall be made through established procedures for review and approval by the ODR prior to installation on the site. The contractor shall make available physical samples and product literature as requested.

PART 2 - PRODUCTS

2.1 TREE PROTECTION FENCING

- A. Fencing fixed in position and meeting the following requirements.
1. Fence material shall be a galvanized chain link.
 2. Outside critical root zones, fence shall be secured using steel t-posts or galvanized fence posts.
 3. Inside critical root zones, chain link fence panels on above grade footings shall be substituted. Footings shall be properly weighted and secured.

2.2 TREE PROTECTION SIGNS

- A. Sign shall read:

TREE AND ROOT PROTECTION ZONE
DO NOT ENTER
 NO equipment NO digging
 NO material staging
 NO equipo NO cavar
 NO almacenamiento de materiales
CONTACT GC TO ENTER

- B. Print 8.5"x11", black lettering on white paper sized to fill page, laminated beyond edges of document and securely attached to tree protection fencing every 25 feet.

2.3 MULCH

- A. Single grind hardwood mulch is a coarse chip wood mulch, often produced by running removed trees and woody vegetation through a chipper one time.
- B. Chips stockpiled from the tree removal process are preferred.

2.4 GROUND PROTECTION MATS

- A. ½" plywood sheets or sturdy ground protection mats.

2.5 FERTILIZER

- A. Submit to ODR for approval by District Representative product information for organic fertilizer and rate indicated by soil test results (Texas Soil and Plant Lab or approved equal).

2.6 PESTICIDE

- A. Submit to ODR for approval by District Representative product label for proposed pesticide with intended use and application rate.

2.7 COMPOST

- A. pH balanced; fully finished compost that meets or exceeds the requirements set forth by the United States Department of Agriculture, the United States Composting Council, and State composting requirements.
- B. Acceptable compost is predominantly plant-based, such as cotton bur or leaf mold.
- C. Submit to ODR for approval by District Representative.

2.8 SOIL

- A. Backfill soil shall be a native soil excavated from around tree mixed with District approved compost. Imported topsoil shall be composted landscape blend as approved by ODR.

PART 3 - EXECUTION

3.1 SITE EXAMINATION

- A. Examine the site, tree, plant and soil conditions. Notify the ODR in writing of any conditions that may impact the successful tree and plant preservation that is the intent of this section.

3.2 PREPARATION

- A. Prior to any construction activity at the site including utility work, grading, storage of materials, or installation of temporary construction facilities, District Representative shall review and approve installation locations. Install all tree protection fencing, silt fence, tree protection signs, mulch and other root and tree protection measures as identified on drawings and in preconstruction meeting.
- B. Erosion or sedimentation control barriers shall be installed and maintained in a manner that does not result in damage to tree roots and shall not result in soil buildup within CRZ

C. Mark all trees around main stem with the following flagging tape colors:

1. Red – removal
2. Green – protect

3.3 TREE PROTECTION ZONE (TPZ)

- A. TPZ areas are indicated on the drawings for all trees to remain on site and encompass the entire area of full CRZ for each tree. It is up to the contractor to verify all trees to be protected are shown and identify additional trees needing protection prior to submitting a bid for the project.
- B. Install tree protection fencing along edges of tree protection zones in a manner that will prevent people from easily entering protected area except for inspection and tree maintenance.
- C. No part of any tree shall be used as anchor points for fencing.
- D. Where construction activities come within 6 feet of a tree trunk, protection of the trunk with strapped on wood planking to the height of 8 feet (or the limits of lower branching) shall be required in addition to tree protection fencing.
- E. Protect low limbs outside of TPZ as needed with strapped on wood planking to portions needing additional protection.
- F. The District Representative shall review and approve installed protection. Changes or additions to the protection failing to meet the intent of this section shall be made at the Contractor's expense as directed by the ODR.

3.4 SOIL COMPACTION PREVENTION

- A. All areas within TPZs shall have a 4"-6" coverage layer of wood chips or natural hardwood mulch.
- B. Any portion of CRZ outside of TPZ shall have the following surface protection:
 1. 8-12 inches of wood chips covered by a solid layer of plywood sheeting or acceptable alternative as approved by ODR.

3.5 GENERAL REQUIREMENTS AND LIMITATIONS FOR OPERATIONS WITHIN THE TREE PROTECTION ZONE:

- A. The Contractor shall not engage in any construction activity within the TPZ without the written approval of the District Representative, including:
 1. Storage of construction materials, debris, or excavated material or bulk materials such as soil or aggregate.
 2. Parking vehicles or equipment.
 3. Placement of portable toilets or break/lunch areas.
 4. Foot traffic.

5. Placement of toolboxes, sheds or other storage structures.
 6. Equipment wash down.
 7. Grubbing of soil surface to remove organic matter.
 8. Storage or disposal of chemicals, petroleum products, or other detrimental substances.
 9. Excavation, grading or other soil disturbance unless otherwise indicated.
- B. Protection fencing shall not be moved or damaged and will remain in place until the final walk-through is performed unless earlier removal is approved through ODR. Tree protection fencing found damaged or non-compliant shall be repaired or replaced immediately (same day). Fencing not repaired within 24 hours shall be subject to fines based on the extent of damage and the caliper of the tree. The minimum fine shall be \$200 per day until the tree protection is fixed to the satisfaction of the ODR.
- C. If construction activity is unavoidable within the TPZ, notify the ODR and submit a detailed written plan of action for approval. The plan shall include: a statement detailing the reason for the activity including why other areas are not suited; a description of the proposed activity; the time period for the activity, and a list of remedial actions that will reduce the impact on the TPZ.
- D. Remedial actions shall include but shall not be limited to the following:
1. In general, demolition and excavation within the TPZ shall proceed with extreme care either by the use of hand tools, directional boring, air excavation where indicated or with other low impact equipment that will not cause damage to the tree, roots or soil.
 2. When encountered, tree roots 2 inches and larger in diameter shall be worked around in a manner that does not break the outer layer of the root surface (bark). These roots shall not be cut without the approval of the District Representative. Excavation shall be tunneled under these roots without cutting them. In the areas where roots are encountered, work shall be performed and scheduled to close excavations as quickly as possible over exposed roots. If roots are not backfilled within 48 hours, keep them covered to retain moisture.
 3. No roots greater than 2" diameter extending beyond the TPZ shall be pruned or cut without notifying the ODR. All roots damaged by excavation shall be pruned back to a point of undamaged tissue and backfilled with planting soil or compost as soon as possible. Cuts to oak roots shall be made using disinfected tools and painted when finished. If exposed roots are not backfilled within 48 hours, keep them covered to retain moisture.
 4. Ground protection: Install plywood or ground protection mats over the wood chips to the extent indicated. Do not permit foot traffic, scaffolding or the storage of materials within the TPZ to occur off the temporary matting.
 5. Air Excavation Tool: If excavation is required within the TPZ, air excavation tool techniques shall be used where practical or as designed on the drawings.
 - a. Using a sprinkler or soaker hose, apply water slowly to the area of the excavation for a period of at least 4 hours, approximately 12 hours prior to the work so that the ground water level is at or near field capacity at the beginning of the work.

- b. Remove existing mulch from an area approximately 18 inches beyond the limits of the hole or trench to be excavated. Cover mulch with fabric or plastic sheeting to prevent mixing with dirt.
 - c. Using an air excavation tool specifically designed and manufactured for the intended purpose, and at pressures recommended by the manufacturer of the equipment, fracture the existing soil to the shape and the depths required. Work at rates and using techniques that do not harm tree roots. Air pressure shall be a maximum of 90-100 psi.
 - d. Using a commercial, high-powered vacuum truck if required, remove the soil from the excavation produced by air excavation. The vacuum truck should generally operate simultaneously with the hose operator, such that the soil produced is picked up from the excavation hole, and the exposed roots can be observed and not damaged by the ongoing operation. Do not drive the vacuum truck into the TPZ unless the area is protected from compaction as approved in advance by the ODR.
 - e. Remove all excavated soil and excavated wood chips, and contaminated soil at the end of the excavation.
 - f. Do not let exposed roots dry out.
 - g. Restore soil within the trench as soon as the work is completed. Utilize soil of similar texture to the removed soil and lightly compact with hand tools. Leave soil mounded over the trench to a height of approximately 10% of the trench depth to account for settlement.
 - h. Restore any wood chips or matting that was previously required for the area.
6. Special care shall be taken when removing hardscape elements, sidewalks, streets, pavers, etc. from within CRZ. This will include but not be limited to:
- a. Saw cutting and hand removal of materials within CRZ
 - b. Reduced heavy equipment access within CRZ
 - c. Installation of ground protection
7. Tree branches that interfere with the construction may be tied back or pruned to clear only to the point necessary to complete the work. Other branches shall only be removed when specifically indicated by the ODR. Tying back or trimming of all branches and the cutting of roots shall be in accordance with accepted arboricultural practices (ANSI A300, part 8) and be performed under direct supervision of an ISA Certified Arborist.
- E. If at any time the Contractor judges that the protection of a tree designated to be saved is incompatible with work required, or if operations necessary threaten the health or structural stability of a tree, notify the ODR immediately and do no further work affecting the tree until a written agreement is reached concerning acceptable procedures. Under no circumstances shall the Contractor remove existing trees that are indicated not to be removed.
- F. There shall be no unauthorized alteration or disturbance of existing grade within the TPZ.
- G. Contractor shall install erosion control measures (erosion control log preferred) on the uphill side of the protective fence to divert runoff from construction around protected trees. The erosion control measures shall be maintained until protective fence is removed from the project site.

3.6 TREE PRUNING

- A. All tree pruning required to support construction shall be performed under the direct supervision of a District approved ISA certified arborist in coordination with District standards.
- B. No pruning of a tree's canopy shall take place to compensate for removal or damage to its root system, no exceptions.
- C. No cavities shall be filled with any substance.
- D. All cut surfaces or wounds of any size on all oak species shall be immediately covered with a thin coat of tree wound spray paint.

3.7 TREE REMOVAL

- A. Remove all trees indicated by the drawings and specifications in a manner that will not damage any part of adjacent landscape to remain including trees, soil, pavement, shrubs, groundcover, and understory plants. Protection of trees to remain through construction shall include the root system, trunk, limbs, and crown from breakage or scarring, and the soil from compaction.
- B. Do not drop trees with a single cut unless the tree will fall in an area not included in the TPZ. No tree to be removed within 50 feet of the TPZ shall be pushed over or up-rooted using a piece of grading equipment.
- C. Trees to be repurposed shall be coordinated with ODR.

3.8 WATERING

- A. Watering standards for trees preserved on site
 1. In order to minimize impacts of construction, all trees slated for protection on construction site shall continue to receive necessary levels of irrigation to ensure survival. Coordination shall be made between the District Representative and the general contractor.
 2. Trees within TPZ will continue to be irrigated throughout project duration. This is most important from approximately May-September or when the daytime temperatures exceed 80 degrees F.
 3. Irrigation systems shall be continually monitored to ensure correct coverage.
 4. If irrigation service is interrupted, water shall be provided by the general contractor. Water barrels, soaker hose, tree gators and water trailers/tankers are suitable substitutes as long as they provide coverage to entire CRZ.
 5. Estimations for tree watering are as follows:
 - a. Mature trees: 1 inch of water per week for the area of full CRZ in absence of rain.
 - b. Young trees: tree watering will be coordinated with ODR on a case-by-case basis.

3.9 MAINTENANCE

- A. Contractors shall be responsible for grass and weed maintenance for entire construction site, including TPZs

1. Grass will remain trimmed inside all tree protection fencing; work shall be performed with the same frequency as surrounding area.
2. Routine hand weeding is required for mulch areas located within TPZs.
3. At the end of the construction period provide one final weeding of the TPZs.

3.10 PLANT HEALTH CARE

- A. Soil analysis shall be done when prescribing soil amendments and fertilizer for trees.
- B. Soil health is critical to the survival of trees. Within the District, several tactics are used to improve the soils where trees grow. These include:
 1. Air excavation (via Air Spade or Air Knife) to break up compacted soil.
 2. Incorporating various products such as compost, organic fertilizer, mycorrhizal fungi inoculations, and biostimulants.
- C. The application of pesticides is a last resort where timing or tree condition necessitates immediate action. Any pesticide recommendations shall come from an ISA certified arborist, recommended products shall be least toxic option labeled to target the desired pest and shall require approval by the District. All applications shall be done by a Texas Department of Agriculture (TDA) licensed applicator, recorded per TDA rules, and a copy of application record supplied to ODR.

3.11 SITE CLEAN-UP

- A. Keep the site free of trash, pavements reasonably clean and work area in an orderly condition at the end of each day. Remove trash and debris in containers from the site no less than once a week.
 1. Immediately clean up any spilled or tracked soil, fuel, oil, trash, or debris deposited by the Contractor from all surfaces within the project or on public right of ways and neighboring property.
- B. Once tree protection work is complete, wash all soil from pavements and other structures. Ensure that mulch is confined to planting beds.
- C. Make all repairs to grades, ruts, and damage to the work or the site.
- D. Remove and dispose of all excess wood chips, mulch, imported topsoil, packaging, and all other material brought to the site by the Contractor.

3.12 REMOVAL OF TREE PROTECTION

- A. After final approval and all punch list items have been addressed, remove tree protection including all fencing, wood chips, trunk and branch protection, and other tree protection materials from site.

3.13 DAMAGE OR LOSS OF EXISTING TREES

- A. All standards and specifications shall be adhered to throughout construction or penalties shall apply. The contractor is ultimately responsible to reimburse the District for tree damage or loss. Funds shall be deposited into an established District account to be used for remedial work

on construction-impacted trees. All damages and fines shall be addressed prior to substantial completion.

B. Penalties for damages are outlined as follows:

1. For branches >2" diameter, a penalty of \$200 shall be imposed per branch damaged.
2. For tree roots >2" diameter, a penalty of \$200 shall be imposed per root damaged.
3. If any size tree trunk within limits of construction is damaged, a penalty of \$200 per caliper inch will be imposed. This measurement will use the widest dimension of damaged area.
4. For any unapproved change, damage or removal of tree protection fencing, the contractor will have 24 hours from notice to revert fencing back to original fence detail. If fencing remains uncorrected after the initial 24-hour grace period, a fine of \$200/day shall be charged.
 - a. Additional fines for any damages to roots/branches/trunk within TPZ shall also apply
 - b. If equipment is brought inside of TPZ, contractor will be charged for arborist services to remediate soil compaction.
5. Any remedial work for damages recommended by the consulting arborist shall be completed by the Contractor at no cost to the Owner. Remedial work shall include but is not limited to: soil compaction remediation and vertical mulching, pruning and or cabling, insect and disease control including injections, compensatory watering, additional mulching, or other plant health care activities.

C. A District Representative has ability at any time to make tree damage assessment. If a tree is deemed more than 50% damaged, then tree shall be considered a complete loss and mitigated for under this section.

D. If trees within the limits of construction are damaged, it is at the discretion of the District to determine if a stop work order for affected area is deemed necessary. Stop work order shall be coordinated through ODR.

END OF SECTION 01 56 39

SECTION 32 84 00 – PLANTING IRRIGATION

PART 1 - GENERAL

3.14 GENERAL CONDITIONS

- A. The requirements of the University of Texas at Austin Uniform General Conditions and Supplementary General Conditions, 2013 Amended shall apply to all work of this section with the same force and effect as though repeated in full herein.
- B. Related Documents
 - 1. Section 01 56 39 Tree Preservation and Protection
 - 2. Section 32 90 00 Planting
 - 3. Section 32 01 90 Operations and Maintenance of Planting

3.15 SCOPE OF WORK

- A. Furnish all labor, materials, equipment, transportation, and services necessary to furnish and install the Irrigation System complete in place, as shown on the drawings and specified herein.

3.16 DEFINITIONS

- A. **Owner:** The Brushy Creek Municipal Utility District
- B. **Owner's Designated Representative (ODR):** The District Engineer or District Project Manager serves as the Owner's primary representative for the project. This includes all written and verbal communications and site issue coordination.
- C. **Contractor:** General Contractor or any sub-contractor responsible for the work specified herein.
- D. **Final Acceptance of Installation:** This acceptance will be granted upon completion of installation of the complete irrigation system according to the plans and as specified herein. Final Acceptance of Installation will not occur before the Final Inspection.
- E. **Final Inspection:** The last inspection immediately prior to Final Acceptance of Installation.

3.17 STANDARDS

- A. ASTM D1785 (ANSI B72.7) – Standard Specification for Poly Vinyl Chloride (PVC) Plastic Pipe, Schedules 40, 80, and 120.
- B. ASTM D2241 (ANSI B72.2) – Standard Specification for Poly Vinyl Chloride (PVC) Plastic Pipe (SDR-PR).
- C. ASTM D2466 – Standard Specification for Poly Vinyl Chloride (PVC) Plastic Pipe Fittings, Schedule 40.
- D. ASTM D2564 (ANSI B72.16) – Standard Specification for Solvent Cements for Poly Vinyl Chloride (PVC) Plastic Pipe and Fittings.
- E. ASTM D2855 (ANSI K65.55) – Standard Recommendation Practice for Making Solvent-Cemented Joints with Poly Vinyl Chloride (PVC) Pipe and Fittings.

3.18 QUALITY ASSURANCE AND REQUIREMENTS

- A. Contractor's Qualifications: Demonstrated experience on projects of similar characteristics and size.
- B. Licensed Irrigator: Installation of the irrigation system shall be under the direct supervision of a superintendent or foreman who is a Licensed Irrigator through the Texas Commission on Environmental Quality (TCEQ) in the State of Texas.
- C. Permits and Inspections
 - 1. In all cases, where inspection of the irrigation system is required and/or where portions of the work are specified to be performed under the direction and/or inspection of the District Representative, the Contractor shall notify ODR at least 24 hours in advance of the time when inspection and/or direction is required, or as specified under "Observation Schedule".
 - 2. All new or altered backflow prevention devices shall be pressure tested by a certified backflow tester. All associated documents shall be delivered to ODR.
 - 3. Any necessary re-excavation or alterations to the system needed because of the failure of the Contractor to have the required inspections shall be performed at the Contractor's expense.
- D. Ordinances and Regulations: All regional, local, municipal and state laws, and rules and regulations governing or relating to any portion of this work are hereby incorporated into and made a part of these specifications, and their provisions shall be carried out by the Contractor. Anything contained in these specifications shall not be construed to conflict with any of the above rules and regulations or requirements of the same. However, when these specifications and drawings call for or describe materials, workmanship, or construction of a better quality, higher standard, or larger size than is required by the above rules and regulations, the provisions of the specifications and drawings shall take precedence.
- E. Manufacturer's Directions: Manufacturer's directions and detailed drawings shall be followed in all cases where the manufacturers of articles used in this contract furnish directions covering points not shown in the drawings and specifications.
- F. Explanation of Drawings:
 - 1. Due to the scale of drawings, it is not possible to indicate all offsets, fittings, etc. which may be required. The Contractor shall carefully investigate the structural and finished conditions affecting all of their work and plan their work accordingly, furnishing such fittings, alterations, etc. as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed. The work shall be installed in such a manner as to avoid conflicts between irrigation systems, planting, hardscape, and architectural features.
 - 2. All work called for on the drawings by notes or details shall be furnished and installed whether or not specifically mentioned in the specifications.
 - 3. The Contractor shall not willfully install the irrigation system as shown on the drawings when it is obvious in the field that obstructions, grade differences or discrepancies in area dimensions exist that might not have been considered. Such obstructions or differences should be brought to the attention of ODR. In the event this notification is not performed, the Contractor shall assume full responsibility for any revision necessary.
- G. Damage to Existing Site Amenities:
 - 1. Damage to existing irrigation, electrical lines, and/or existing elements to remain shall be repaired within 24 hours of damage occurrence. If not repaired within the specified time, the District has the right to make such repairs as necessary and all costs incurred shall be charged to the Contractor.

3.19 CONTRACTOR'S RESPONSIBILITY

- A. Prior to submittal of bids, Contractor shall acquaint himself with all matters and conditions concerning the site and existing conditions.
- B. Follow SECO (State Energy Conservation Office) Water Conservation Design Standards requirements for State Buildings and Institutions of Higher Education Facilities by the Texas Comptroller of Public Accounts.
- C. Contractor shall be responsible for coordinating their work with the other trades so that all phases of the work may be properly coordinated without delays or damage to any parts of the work.
- D. The Contractor shall be responsible for all sleeves and chases under paving, through walls, etc., unless otherwise noted on the plans.
 - 1. Any pipe installed under a sidewalk, driveway, or concrete area should be in a sleeve.
 - 2. Sleeve should be twice the size of the pipe going through it.
 - 3. An extra 2" sleeve shall be installed under any sidewalk, driveway, or concrete area.
 - 4. A visible irrigation sleeve utility marker, or carriage bolt shall be installed on the surface of any new/existing hardscape when directed by ODR to cross streets, medians, concrete drainage basins, etc.
 - 5. Sleeves shall be Schedule 40 PVC.

3.20 SUBMITTALS

- A. Materials List
 - 1. The Contractor shall furnish the articles, equipment, materials, or processes specified by name in the drawings and specifications. No substitution will be allowed without prior written approval by the District.
 - 2. Complete material list shall be submitted prior to performing any work if different from the plans. Material list shall include the manufacturer, model number and description of all materials and equipment to be installed.
 - 3. Equipment or materials installed or furnished without prior approval of the District may be rejected by the ODR and the Contractor required removing such materials from the site at his own expense.
 - 4. Approval of any item, alternate or substitute indicates only that the product or products apparently meet the requirements of the drawings and specifications on the basis of the information or samples submitted.
 - 5. Manufacturer's warranties shall not relieve the Contractor of their liability under the guarantee. Such warranties shall only supplement the guarantee.
- B. Record and As-Built Drawings
 - 1. The Contractor shall provide, and keep up to date, a complete "as-built" set of black or blue line prints which shall be corrected daily and show every change from the original drawings and specifications and the exact "as-built" locations, sizes, and kinds of equipment. This set of drawings shall be kept on the site and shall be used only as a working set.
 - 2. These drawings shall also serve as work progress sheets and shall be the basis for measurement and payment for work completed. These drawings shall be available at all times for inspection and shall be readily available upon request by ODR. Should these "as-

built" progress sheets not be available for review or not be up-to-date at the time of any inspection, it will be assumed that no work is completed.

3. The Contractor shall make neat and legible notations on the "as-built" progress sheets daily as the work proceeds, showing the work as actually installed. For example, should a piece of equipment be installed in a location that does not match the plan, the Contractor must indicate that equipment has been relocated in a graphic manner so as to match the original symbols as indicated in the irrigation legend. The relocated equipment and dimensions will then be transferred to the original Record plan at the proper time.
4. After final inspection, but before final acceptance, the Contractor shall submit to the District the "as-built" prints. These prints shall be submitted before final payment will be made. The as-built shall come with a zone chart and zone map showing all irrigation zone locations, distribution type, and landscape type.
5. The Contractor shall dimension from two (2) permanent points of reference, building corners, or road intersections, etc., the location of the following items:
 - a. Connections to water lines.
 - b. Connection to electrical power.
 - c. Gate valves.
 - d. Routing or sprinkler pressure lines (Mainline and Lateral lines)
 - e. Sprinkler control valves.
 - f. Routing of control wiring.
 - g. Quick coupling valves.
 - h. Other related equipment as directed by ODR.
6. GIS Requirements for District Operations
 - a. GIS data: Horizontal and vertical geometry and attribute data shall be loaded into or created in the LISwaterDistribution-4-12-16.mdb. At a minimum, record the following attributes for pipes and appurtenances:
 - 1) Type
 - 2) Diameter
 - 3) Material
 - 4) Manufacturer
 - b. For system components that have nameplates, document all information on the nameplate. This usually includes the following information:
 - 1) Manufacturer
 - 2) Model number
 - 3) Size
 - 4) Component material or model numbers (e.g., stem, disc, seat, class)
 - 5) Pressure rating
 - 6) In-service date
 - c. All new and existing active underground and under-slab utilities and appurtenances exposed during construction shall be recorded. Coordinates with applicable field notes shall be recorded at:
 - 1) Any significant change in direction, material, or size
 - 2) Deviations from design greater than 6 inches in any direction
 - 3) All appurtenances (valves, junctions, etc.)
 - 4) Every 50 feet otherwise
 - d. The final deliverable coordinate system shall be:
 - 1) 2011 State Plane Texas Central FIPS 4203

- 2) NAD83 (horizontal)
- 3) NAVD88 (vertical)
- 4) US Survey Feet
- 5) Elevation above sea level

C. Operation and Maintenance Manuals:

1. Prepare and deliver to the District within ten calendar days prior to final inspection, one digital copy:
 - a. Index sheet stating Contractor's address and telephone number, list of equipment with name and address of local manufacturer's representative.
 - b. Catalog and parts sheets on every material and equipment installed under this contract.
 - c. Complete operating and maintenance instructions on all major equipment (controller, backflow prevention device, and flow sensor).
2. In addition to the above-mentioned maintenance manuals, provide the District with instructions for major equipment.

D. Equipment to be furnished to the District:

1. Supply as a part of this contract the following:
 - a. Two (2) sets of special tools required for removing, disassembling and adjusting each type of irrigation head and valve supplied on this project, including solenoid wrenches.
 - b. Two (2) keys for each automatic controller.
 - c. Two (2) quick coupler keys with ells when quick couplers are specified.
2. The above-mentioned equipment shall be turned over to the District at the conclusion of the project before final inspection can occur.

3.21 DELIVERY, HANDLING, AND STORAGE

A. Delivery and Handling

1. Contractor is cautioned to exercise care in handling, loading, unloading, and storing of PVC pipe and fittings.
2. All PVC pipe shall be transported in a vehicle which allows the length of pipe to lie flat so as not to subject it to undue bending or concentrated external load at any point.
3. Any section of pipe that has been sun baked, bent, dented, or damaged in any way will be discarded and, if installed, shall be replaced with new piping at the expense of the Contractor.

B. Storage

1. Contractor shall erect a temporary fence and store material inside of the fenced area.
2. Contractor shall be fully responsible for the management of the storage site.
3. All PVC pipe shall be covered or otherwise protected from ultraviolet light during storage.
4. Contractor shall maintain the storage area in a neat and orderly manner. If, in the opinion of ODR, the storage area becomes unsightly, the Contractor shall clean up the storage area within two (2) days of notification.

5. At the completion of the contract, the Contractor shall remove the temporary storage fence and all debris in the area. The Contractor shall restore the storage area to original condition including, but not limited to, grading and turf re-establishment.

3.22 PUBLIC CONVENIENCE AND SAFETY

- A. Materials stored about the work shall be so placed and work shall at all times be so conducted as to cause no greater obstruction to the travelling public than is considered necessary by the District.
- B. The materials excavated, and the construction materials used in the construction of the work, shall be placed so as not to endanger the work or prevent free access to all accessible parking, fire hydrants, water valves, gas valves, manholes for the telephone, telegraph signal or electric conduits, sprinkler systems, sanitary sewers, and fire alarm or police call boxes in the vicinity.
- C. The District reserves the right to remedy any neglect on the part of the Contractor (in regard to public health, safety, and welfare) which may come to its attention, after twenty-four hours' notice in writing to the Contractor; except in cases of emergency, when it shall have the right to remedy any neglect without notice and, in either case, the cost of such work done by the District shall be covered by the project.
- D. This project is located on property which could be used by the Public during the course of this agreement. For this reason, the Contractor must observe the utmost care in regards to the Public's safety. Any possible hazards which could result in injury must be eliminated as soon as possible.
- E. No trenches, ditches, etc. shall remain open overnight outside protective fencing.
- F. Any ditches which are left open must be covered securely so as to prevent any possibility of injury. It shall be the Contractor's responsibility to eliminate any hazards during and after working hours and the Contractor must have personnel available who can eliminate hazards which are discovered after normal working hours and on the weekends and holidays.
- G. Contractor assumes all responsibility for open trenches, ditches etc.

3.23 SUBSTITUTIONS

- A. If the Contractor wishes to substitute any equipment or materials for the equipment or materials listed on the irrigation drawings and specifications, they may do so by providing the following information to the District for approval:
 1. Substitution requests will be considered only after award of the contract.
 2. Substitution requests must be made within 30 days after award of the contract.
 3. Provide a statement indicating the reason for making the substitution. Use a separate sheet of paper for each item to be substituted.
 4. Provide descriptive catalog literature, performance charts, and flow charts for each item to be substituted.
 5. Provide the amount of cost savings if the substituted item is approved.
- B. ODR shall have the sole responsibility in accepting or rejecting any substituted item as an approved equal to those equipment and materials listed on the irrigation drawings and specifications.
- C. Decisions on substitutions by ODR are final.

3.24 CHANGES IN THE WORK

- A. The District may, without invalidating the original contract, work with the Contractor and ODR to request additional work or alterations to the contract.
- B. Minor changes, such as head locations and controller location, which do not involve extra cost and are consistent with the purpose of the work, may be ordered by ODR or the District and no claim for an addition to the contract sum or time schedule will be considered.
- C. Any changes which affect the contract price shall be discussed with the ODR and requested in writing by the Contractor. If necessary, the change order will be presented to the District Board of Director's per District policy for approval. The contract sum and/or schedule shall be adjusted only after approval is made by the Board of Director's or the ODR per District policy. Any extension of time due to additions in work shall be adjusted as a part of the same change order and must be requested by the Contractor.

3.25 FINAL INSPECTION

- A. A qualified person duly authorized to represent the Contractor shall be present at the final inspection to demonstrate the system and prove the performance of the equipment.
- B. Prior to the final inspection, all work under this division shall have been completed, tested, balanced, and adjusted and in final operating condition.
- C. ODR will be present during inspection and must sign off on all irrigation work.

3.26 GUARANTEE

- A. Materials and workmanship shall be fully guaranteed for one year after final acceptance. All material will be new, not refurbished, and the current production model of the material specified.
- B. Guarantee is limited to repair and replacement of defective materials or workmanship, including repair of backfill settlement in trenches and excavated areas.
- C. The Contractor, at his expense, shall repair any defects or replace any defective parts found or occurring during the one-year guarantee period within 48 hours of notification by the District. Any repair cost or time spent by the District fixing the defect during the warranty period will be paid for by the Contractor if they do not arrive within 48 hours of notification.

PRODUCTS

3.27 MATERIALS

- A. General: All materials and accessories shall entirely be of new and unused material. Any section of pipe or other material found to be defective before or after installation shall be replaced with new materials at the expense of the Contractor. All new irrigation equipment shall be essentially the standard product of the manufacturer. All new equipment furnished shall have in-service performance records sufficient to verify published capabilities.
- B. PVC Pressure Main Line Pipe and Fittings
 1. Pressure main line piping shall be PVC Schedule 40 with primed and solvent-weld joints.
 2. Pipe shall be made from an NSF approved Type I, Grade II, PVC compound conforming to ASTM resin specification D1785. All pipes must meet requirements as set forth in Federal Specification PS-22-70, with an appropriate standard dimension ratio (SDR) (Solvent-weld pipe).
 3. PVC solvent-weld fittings shall be Schedule 40, 1-2, II-I NSF approved conforming to ASTM test procedure D2466.

4. Solvent cement and primer for PVC solvent-weld pipe and fittings shall be of type and installation methods prescribed by the manufacturer. Primer must be purple IPS Weld On PC-64 or approved equal.
5. All PVC pipe must bear the following markings:
 - a. Manufacturer's name
 - b. Nominal pipe size
 - c. Schedule or class
 - d. Pressure rating in PSI
 - e. NSF (National Sanitation Foundation) approval
 - f. Date of extrusion
6. All fittings shall bear the manufacturer's name or trademark, material designation, size, applicable IPS schedule, and NSF seal of approval.

C. PVC Non-Pressure Lateral Line Piping

1. Non-pressure lateral line piping shall be PVC Schedule 40 with primed and solvent-weld joints. No class 200 pipe to be installed. Any class 200 pipe installed shall be removed and replaced at Contractor's expense.
2. Pipe shall be made from NSF approved, Type I, Grade II PVC compound conforming to ASTM resin specification D1785. All pipes must meet requirements set forth in Federal Specification PS-22-70 with an appropriate standard dimension ratio.
3. Except as noted in paragraphs 1 and 2 of section 2.1 B, all requirements for non-pressure lateral line pipe and fittings shall be the same as for solvent-weld pressure main line pipe and fittings as set forth in section 2.1 B of these specifications.
4. Solvent cement and primer for PVC solvent-weld pipe and fittings shall be of type and installation methods prescribed by the manufacturer. Primer must be purple IPS Weld-On PC-64 or approved equal.

D. Ball Valves

1. Install one ball valve prior to each electric valve or valve bank location for isolation purposes.
2. Install one ball valve between irrigation meter and the backflow prevention device.
3. Install one ball valve after the master valve and the flow sensor.
4. Install one ball valve before each quick coupler valve (hose bib).
5. Ball valves shall be of size and type as indicated on the irrigation drawings. If not indicated on drawings, they shall match the size of pressure line they are attached to.

E. Quick Coupling Valves

1. Quick coupling valves shall have a brass two-piece body designed for working pressure of 150 PSI with a .75-inch diameter outlet. Key size and type shall match the valve. Rainbird 33DRC with 33DK valve key or approved equal.

F. Backflow Prevention Units

1. Backflow prevention units shall be a Double Check Assembly of size and type indicated on the irrigation drawings. Install backflow prevention units in accordance with irrigation construction details or regional standard drawings if detail is not included in construction drawings.

G. Control Wiring

1. Connections between the automatic controllers and the electric control valves shall be made with direct burial copper wire red AWG-12 30 volt. Common wires shall be white and run continuously between valves. Install in accordance with valve manufacturer's specifications and wire chart. In no case shall wire size be less than #14. All electrical work shall conform to code.
2. Lay two additional red control wires from each controller to the farthest valve in each direction from the controller.
3. Wiring shall occupy the same trench and shall be installed along the same route as pressure supply or lateral lines wherever possible. All wire shall be placed under all pipes in the trench.
4. Where more than one (1) wire is placed in a trench, the wiring shall be taped together at intervals of ten (10) feet with black electrical tape. At no time shall the wiring be located above the pipe in the trench.
5. An expansion coil shall be provided at each wire connection. Coil shall be 10 to 15 wraps around a .75-inch pipe. The expansion coil shall be of sufficient length at each splice connection at each control valve, so that in case of repair, the valve bonnet may be brought to the surface without disconnecting the control wire. Control wires shall be laid loosely in trench without stress or stretching of control wire conductors.
6. An expansion coil shall be provided at every splice and located in a 10-inch round box. Limit wire splices between the automatic controller and electrical control valves, locate ALL WIRE SPLICES on "as built" drawings.
7. All splices shall be made with Scotch-Lok #3576 Connector Sealing Packs, Rainbird Snap-Tite wire connector, or approved equal. Use one splice per connector sealing pack.

H. Two-Wire Irrigation Systems

1. Two-wire cable can be by Calsense, Regency's Hunter decoder cable, Paige P 7354D wire, or approved equal; the maximum distance the two-wire cable may run is 6,000 total feet per controller.
2. A grounding rod shall be used at the controller and at the end of the two-wire path. Each ground rod must be 5/8 inch by 8 feet long. The grounding rod at the controller must have a 6 gauge bare solid copper wire from the grounding rod to the controller. The grounding rod at the end of the two-wire path must also have a 6 gauge solid copper wire terminated inside of a 10 inch round box and tagged with a water proof tag indicating the end of the two-wire path.
3. All electrical connections shall use 3M Scotch cast 357 DG connector sealing packs, including all splices along the two-wire path.
4. The two-wire decoders must have #14-gauge direct burial wire to connect to the remote control valves.
5. The Contractor shall use a Flomec Ultrasonic flow meter on all two-wire systems or approved equal.

I. Automatic Controllers

1. Automatic controllers shall be of size and type shown on the plans. Ground the controller according to manufacturer's directions.
2. Final location of automatic controllers shall be approved by the District.

3. Install controller pedestal or wall mount per the manufacturer's instructions per plan or as selected by the District.
4. Irrigation controller shall be a Hunter ICC-2 or an approved equal per the District.

J. Electrical Control Values

1. All electric control valves shall be as called for on the plans.
2. All electric control valves shall have a manual flow adjustment.
3. Schedule 80 nipples with unions are required on each electric control valve.
4. Maximize space by installing up to three control valves in a jumbo size box near a pavement edge when possible.
5. Install a ball valve in a 10-inch round box adjacent to all valve banks or individual valves.
6. A master valve shall be installed on all water sources.
7. All electric control valves shall be labeled with zone identification tags with their corresponding zone number in the field.
8. Rainbird, Hunter, valves or approved equal shall be installed.

K. Control Valve Boxes

1. Use a 10-inch round box with latching cover for all ball valves, quick couplers, NDS, or approved equal. Extension sleeve shall be used where needed.
2. Use 12 X 17 valve boxes for drip valve assemblies and single valves up to 2"; 17 X 30 for up to three valves 1 1/2" or smaller and up to two valves 2" and greater with latching cover for all electrical control valves. Use NDS boxes or approved equal.

L. Irrigation Heads/ Nozzles

1. All irrigation nozzles shall be of the same size, type, and deliver the same rate of precipitation with the diameter (or radius) of throw and discharge as shown on the plans and/or as specified herein. All irrigation heads shall be low flow matched precipitation rotary nozzles or approved equal.
2. Spray nozzles shall have a screw adjustment.
3. All heads shall be installed on swing joints with a minimum of two flexible joints fabricated in accordance with the details shown on the plans.
4. Hard riser nipples will not be used.
5. All irrigation heads of the same type shall be of the same manufacturer; **pop-up spray heads:** Rainbird 1804 SAM PRS, **large turf heads/rotors:** Hunter PGP series or Rainbird 3500; **sport field turf heads/rotors:** Hunter I series (25, 40, 60, 90) or approved equals.
6. Spray heads will not be used in landscape beds or in lawn areas under 8-feet wide.

M. Flow Sensor

1. Flow sensor shall be Hunter Flow-Sync or approved equal. Flow sensor must be compatible with controller installed.
2. Size flow sensor for installation suitable for highest and lowest zone flow of system. Use PVC Tee fitting with slip x slip sized for mainline and FCT sized for properly sized flow sensor.

N. Weather Sensor

1. Weather sensor shall be a wireless type to automatically suspend irrigation for wind, freeze, or rain situations. Weather sensor must be compatible with the controller installed.

O. Drip Irrigation

1. Drip irrigation shall be installed **4 inches below soil** and a type approved to function underground. No installation of drip pipe shall be directly under mulch.
2. Drip emitter spacing shall be 12" at **.9 GPH**.
3. All drip irrigation valves shall have a filter and separate in-line pressure reducer.
4. Drip irrigation shall only be installed in areas less than 8 ft. wide and bordered on two or more sides by impervious surface and all landscape beds.
5. All drip zones shall have a pop-up indicator and Automatic Flush Valve (AFV). Locate AFV inside of a 6-inch round box at point of zone farthest away from corresponding drip assembly control valve.

P. Bubblers

1. Install two adjustable flow flood bubblers per tree on funny pipe. Place bubblers on opposite sides of the tree and within the tree well basin. No single run of funny pipe shall exceed 10-feet. Run SCH 40 pvc sized per required flow between trees. Tree bubblers shall be grouped and placed on their own zone. Add as many trees per zone as location and flow rates will allow on a valve up to 1 ½".

EXECUTION

3.28 ASSESSMENT OF SITE CONDITIONS

- A. All scaled dimensions are approximate. The Contractor shall check and verify all size dimensions and receive District approval prior to proceeding with work under this section.
- B. Exercise extreme care in excavating and working near existing utilities. Contractor shall call Texas 811 prior to any digging. Contractor shall be responsible for damages to utilities which are caused by their operations or neglect. Verify all existing utilities with the appropriate utility, i.e.: electricity, gas, cable, telephone, fiber, etc.
- C. Contractor shall notify ODR as soon as a damaged utility is discovered. Damaged utilities shall be repaired by the Contractor as soon as they are damaged. Work will not commence until the repair is completed and approved by ODR.
- D. Coordinate installation of irrigation materials including pipe to avoid interference with utilities or other construction or difficulty in planting trees, shrubs, and ground covers. Any irrigation that needs to be adjusted to accommodate any stage of this project shall be adjusted or relocated at the Contractor's expense.
- E. The Contractor shall carefully check all grades and current site conditions to satisfy themselves that they may safely proceed without stopping work before starting work on the irrigation system.

3.29 PREPARATION

A. Physical Layout

1. Prior to installation, the Contractor shall stake out all pressure supply lines, valve locations, and head layout for approval by ODR. All layouts shall be approved by ODR prior to installation. Any adjustments or relocation needed to be made per ODR's direction because approval was not acquired will be done at Contractor's expense. Even with layout

approval made by ODR, it is the responsibility of the Contractor to ensure that the irrigation does not interfere with utilities, plantings, or any other portion of the project.

2. All mainlines shall be located 12-inches from hardscape when running parallel. Piping shall follow hardscape edge when possible. All piping shall cross hardscape at a 90-degree angle. Heads shall not be closer than 4-inches to hardscape. Non-pressure lateral lines shall be placed 6-inches from hardscape. Boxes covering valve manifolds shall begin 18" from hardscape. Valves shall be located near hardscape and preferably in a landscape bed when possible.

B. Water Supply

1. Landscape Irrigation system shall be connected to water supply points of connection as indicated on the drawings.
2. Contractor shall verify static water pressure prior to commencement of construction/installation. Should there be a discrepancy between the design pressure and the actual pressure, contact the project Landscape Architect or licensed irrigator before proceeding with the work. Failure to do so will result in the Contractor making necessary changes to the irrigation system without additional cost to the District.
3. The Contractor shall provide all required water taps and water meters necessary for the project as indicated on the plans.
4. Connections shall be made at approximated locations as shown on drawings. Contractor is responsible for minor changes caused by actual site conditions.

C. Electrical Supply

1. Hardwired electrical service must be provided to the controllers by the Contractor. The Contractor shall make the final wiring of the controller. Electrical work shall conform to applicable codes.
2. Connections shall be made at approximate locations as shown on drawings. Contractor is responsible for minor changes caused by actual site conditions.

3.30 INSTALLATION

A. Trenching

1. Dig trenches straight and support pipe continuously on bottom of trench. Lay pipe to an even grade. Trenching excavation shall follow layout indicated on drawings and as noted.
2. Provide for a minimum of eighteen (18) inches cover for all pressurized supply lines.
3. Provide for a minimum cover of twelve (12) inches for all non-pressurized lines.
4. Provide for a minimum cover of eighteen (18) inches for all control wiring.
5. Install pipe so that writing on pipe can be seen during inspection.
6. NO MACHINE TRENCHING IN THE CRITICAL ROOT ZONE (CRZ) OF PRESERVED TREES. Refer to Division 01-Technical Specifications, 01 56 39 Tree Preservation and Protection for definition and explanation of CRZ.

B. Backfilling

1. The trenches shall not be backfilled until all required tests are performed and inspections are made by the District. Partial backfilling between joints is acceptable to prevent pipe from floating. Trenches shall be carefully backfilled with the excavated materials approved for backfilling, consisting of earth, loam, sandy clay, sand, or other approved materials, free

from large clods of earth or stones. Backfill shall be compacted in landscaped areas to a dry density equal to adjacent undisturbed soil in planting areas. Backfill will conform to adjacent grades without dips, sunken areas, humps or other surface irregularities.

2. Flooding of trenches is an acceptable means of settling soil in the trench.
3. If settlement occurs and subsequent adjustments in pipe, valves, sprinkler heads, lawn or planting, or other construction are necessary, the Contractor shall make all required adjustments without extra expense to the District.

C. Trenching and Backfill Under Paving

1. All piping and wiring under existing and proposed paving shall be in appropriately sized sleeves. REFERENCE 1.06 C. For all new/proposed sidewalks and driveways between planting or turf areas, install sleeves. Place a utility marker (ref. 1.06 D 4) inset into hardscape at each sleeve location as directed by ODR. All sleeves must be located on "as-built" set of drawings submitted to the District.
2. Trenches with pipe and wire to be located under areas where any paving, asphalt or concrete will be installed shall be backfilled with sand (a layer three {3} inches below the pipe and six {6} inches above the pipe) and compacted in layers to 95% compaction, using manual or mechanical tamping devices. Trenches for piping shall be compacted to equal the compaction of the existing adjacent undisturbed soil and shall be left in a firm unyielding condition. All trenches shall be left flush with the adjoining grade. The Contractor shall set in-place, cap, and pressure test all piping under paving before burying the pipe.
3. Generally, piping under existing walks is done by jacking or boring, but where any cutting or breaking of sidewalks and/or concrete is necessary, it shall be done and replaced by the Contractor as a part of the contract cost. Permission to cut or break sidewalks and/or concrete shall be obtained from the District.
4. Provide for a minimum cover of eighteen (18) inches between the top of the pipe and the top of pavement for all pressure and non-pressure piping installed under any paving.
5. NO MACHINE TRENCHING IN THE CRITICAL ROOT ZONES OF TREES

D. Drip Irrigation

1. Drip zones shall be installed in areas less than 8-feet wide, bordered by hardscape (impervious surface) on two or more sides and landscape beds.

E. Two-Wire Irrigation Systems

1. Every 300 feet from the controller (along the two-wire path) the contractor shall use grounding plates with 6 gauge bare copper wire. Grounding plates shall be buried 4 feet deep and be perpendicular to the irrigation mainline per manufacturer's specifications. The grounding must be inspected by the District staff prior to back-filling.
2. The maximum run of wire between the decoder and the valve may not exceed 100 feet.
3. All decoders shall be attached to the inside wall of the valve box and be inspected by ODR.
4. The two-wire POC decoder may not exceed 10 feet from the flow meter.
5. This system installation must be inspected by the District for approval at each step of installation.

- F. Automatic Controller: Install as per manufacturer's instructions. Remote control valves shall be connected to controller in numerical sequence as shown on the drawings.

- G. 120 Volt wiring for Automatic Controller: Wire controllers per appropriate code. Install water tight conduit when wire must be run above the ground.
- H. Minimal 6" clearance between valve and finish grade inside valve box. Support box on bricks or approved material.
- I. Flushing of System:
 - 1. After all new irrigation pipe lines and swing joints are in place and connected, and prior to installation of irrigation heads, the control valves shall be opened and full head of water used to flush out the system.
 - 2. Irrigation heads shall be installed only after flushing of the system has been accomplished to the complete satisfaction of the District. The system will be flushed a second time after heads have been installed and before nozzles are installed.
- J. Irrigation Heads:
 - 1. Install the irrigation heads as designated on the drawings.
 - 2. Spacing of heads shall not exceed the maximum indicated on the drawings and shall achieve head to head coverage. In no case shall the spacing exceed the maximum recommended by the manufacturer.

3.31 TEMPORARY IRRIGATION

- A. Temporary irrigation will be installed for all seeded areas and per plan. The seeded areas shall be established prior to removal. Temporary irrigation shall remain until Contractor is directed by the District to remove it. Contractor will place temporary irrigation on top of grade using SCH 40 PVC and stake in place at each head. Solid risers can be used to thread head to appropriate PVC fitting. Solvent-weld all joints in place per this section. Battery operated control valves for temporary irrigation is preferred. Contractor shall size pipe and space heads according to manufacturers specifications and recommendations to ensure head to head coverage and proper function. All areas receiving temporary irrigation shall be protected with stakes and an orange construction type fence until the temporary irrigation is removed. Contractor shall remove and dispose of all temporary irrigation and associated materials upon completion.

3.32 FIELD QUALITY CONTROL

- A. Adjustment of the System
 - 1. The Contractor shall flush and adjust all irrigation heads for optimum performance and to prevent over-spray onto walks, roadways, and buildings.
 - 2. If it is determined those adjustments in the irrigation equipment will provide proper and more adequate coverage, the Contractor shall make such adjustments. Adjustments may also include changes in nozzle sizes and degrees of arc as required. Any and all changes shall be recorded on the Record Drawings.
 - 3. All irrigation heads shall be set perpendicular to finished grades unless otherwise designated on the plans.
- B. Testing of Irrigation System
 - 1. The Contractor shall request the presence of ODR at least 48 hours in advance of testing for inspection and witness of test. Schedule will be arranged between ODR and Contractor if conflicts in timing exist. Testing of any part of the irrigation system at any phase will not occur during the weekends.

2. Test all pressure lines under hydrostatic pressure at operating pressure, and prove watertight. Testing of pressure mainlines shall occur after installation of electric control valves.
3. All piping under paved areas shall be tested under hydrostatic pressure at operating pressure and proved watertight.
4. Sustain operational level of air pressure in lines for not less than two hours. If leaks develop, replace joints and repeat test until entire system is proven watertight. The minimum two hour time does not begin until District Staff arrives to begin the clock.
5. All hydrostatic tests shall be made in the presence of District Staff. No pipe shall be backfilled until it has been inspected, tested, and approved by ODR. It is permissible to backfill between pipe joints to prevent pipes from floating. Leave all joints and connections exposed for inspection.
6. When the irrigation system is completed, perform a coverage test in the presence of ODR, to determine if the water coverage for planting areas is adequate. Furnish all materials and perform all work required to correct poor coverage and adjust as-builts as needed. This test shall be accomplished before any planting takes place.
7. Upon completion of each phase of work, the entire system shall be tested and adjusted to meet site requirements.
8. An irrigation audit shall be completed on the irrigation zones for Distribution Uniformity (DU) at the request of ODR. All zones shall have a minimum of 60% DU. The audit should be done by a certified Irrigation Auditor and a formal report shall be delivered to the District at final inspection if required.

3.33 MAINTENANCE

- A. The District does not require a maintenance period from the irrigation contractor. The District shall take responsibility for the system after project punch list items are addressed, final inspection is complete, and project is approved by ODR.

3.34 CLEAN-UP

- A. Clean-up shall be made as each portion of work progresses. Refuse and excess dirt shall be removed from the site and disposed of at the Contractors expense.
- B. At the end of each work day, the Contractor shall leave the site area broom-clean and shall wash down all paved areas within the contract area, leaving the premises in clean condition. All sidewalks, paths, curbs and roads shall be left in a clean and safe condition.
- C. All scars, ruts or other marks in the ground or surrounding area caused by this work shall be repaired to the original condition including replacement of any lost vegetation.

3.35 FINAL INSPECTION PRIOR TO FINAL ACCEPTANCE

- A. The Contractor shall operate each system in its entirety for the District at time of final inspection. Any items deemed not acceptable by the District shall be reworked to meet these standards.

3.36 OBSERVATION SCHEDULE

- A. Contractor shall be responsible for notifying ODR in advance for the following observation meetings, according to the time indicated. Multiple items can be inspected at once with the appropriate coordination. ODR reserves the right to adjust timing for inspections with Contractor based on workload:

1. Pressure supply line installation and testing--48 hours.

2. Automatic controller installation--48 hours.
3. Control wire installation--48 hours.
4. Lateral line and head installation--48 hours.
5. Coverage test--48 hours.
6. Final inspection--7 days.

END OF SECTION 32 84 00

Exhibit C

CONTRACTOR INFORMATION & REFERENCE FORM

Brushy Creek Municipal Utility District

PEPPER ROCK PARK PHASE 2

Bidder and Sport Court subcontractor **MUST** complete this form in its entirety. If a question is not applicable, Bidder should state “not applicable”.

BUSINESS AND CONTACT INFORMATION

Business Name & Type: _____

Federal Tax ID #: _____

Address: _____

City/State/Zip: _____

Contact Name: _____

Phone #: _____

Fax #: _____

E-Mail: _____

Web Site: _____

Number of Years been in Business: _____

State & Year Did Business Organize in Your Current Structure: _____

Full Legal Name of Parent or Holding Company, if any: _____

REFERENCES

Provide reference information for project completed over the past 5 years similar in nature to the work included in the project being bid.

Reference Entity No. 1:

Entity Name: _____
Project Name: _____
Contact Person: _____
Email: _____
Phone Number: _____

Reference Entity No. 2:

Entity Name: _____
Project Name: _____
Contact Person: _____
Email: _____
Phone Number: _____

SIGNATURE

Form completed by:

SIGNATURE: _____
TITLE: _____
PRINTED NAME: _____
DATE: _____

Exhibit D

CONSTRUCTION CONTRACT (Pepper Rock Phase 2 Park Improvements Project)

This Construction Contract (“Agreement”) is entered into by and between **Brushy Creek Municipal Utility District**, a Texas conservation and reclamation district created and operating in accordance with Chapters 49 and 54 of the Texas Water Code, as amended (“District”), and **Legal Name Vendor, a (type of incorporation)** (“Contractor”). Together, District and Contractor are referred to herein as the “Parties.”

Recitals

WHEREAS, District seeks to engage Contractor to provide construction services generally consisting of the installation of a landscape berm, sod, hydroseeding, irrigation improvements, and resurfacing of a basketball court (collectively the “Project” as more particularly described in the Project Manual (defined below)) at the Pepper Rock Park located at 8609 Pepper Rock Drive, Round Rock, Texas 78681 (the “Property”); and

WHEREAS, Contractor has agreed to undertake and complete Project on behalf of District in accordance with the terms and conditions set forth in this Agreement.

NOW THEREFORE, for and in consideration of the mutual promises and covenants herein contained and other good and valuable consideration, the receipt and sufficiency of which is acknowledged by both Parties, it is agreed as follows:

1. **Scope of Work.**

- a. **The Work.** Contractor hereby contracts and agrees to provide all materials, equipment, labor, construction equipment, tools, machinery, transportation, storage, supervision and services necessary, required or reasonably inferable, whether or not expressly set forth in any contract or design documents, to prosecute and complete in a single phase the installation, construction and completion of the Project in accordance with the Project plans and specifications and other materials referenced in **Exhibit “A”** (collectively, the “Project Manual”), which are hereby incorporated into and made part of this Agreement, and the terms and conditions of this Agreement (the “Work”). The Work shall be performed by Contractor in accordance with all applicable regulatory requirements and the Project Manual. In the event of any conflict between the terms and conditions of this Agreement, the Project Manual or any bidding documents, the terms and conditions of this Agreement shall control.
- b. **Changes in the Work.** District, without invalidating this Agreement, may order changes in the Work, consisting of additions, deletions or other revisions. Such changes in the work shall be authorized by written change order signed by District’s authorized representative and Contractor (“Change Order”). The cost or credit to District from a change in the Work, together with any revisions to the completion date, shall be determined by mutual agreement between District and Contractor. Additionally, District has the authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Completion Date and not inconsistent with the intent of this Agreement (“Construction Change Directive”). Such changes shall be effected by written Construction Change Directive and shall be binding on District and Contractor unless Contractor timely delivers a written objection to District reasonably disclosing the basis for its objection, no later than three (3) business days after its receipt of the Construction Change Directive. Contractor shall carry out such written Change Orders and Construction Change Directives promptly. No change in the Work, the Contract Sum, the Completion Date, or any other obligations of the Contractor under the Agreement shall be authorized and enforceable except pursuant to a duly executed Change Order, a binding Construction Change Directive, or a modification to the Agreement.

2. **Time of Completion.**

- a. **Completion Time.** The Contractor shall achieve Substantial Completion of the Work within ___ () days after the “Commencement Date”. The Contractor shall achieve Final Completion of the Work, as that term is defined herein, within thirty (30) days after the date of Substantial Completion. The Commencement Date shall be defined as the date for commencement of work set forth in a “Notice

to Proceed” to be issued by District to Contractor after execution of this Agreement. Contractor shall commence the Work within seven days of the issuance of the Notice to Proceed by District.

- b. **Substantial Completion.** Substantial Completion of the Work is the stage in the progress of the Work when the Work is sufficiently complete in accordance with the Project Manual so that District can utilize the Work for its intended use. At the time of Substantial Completion, any outstanding Work must be minor in nature, so that District could utilize the Project on that date without inconvenience or interference, and so that the completion of the Work by Contractor would not materially interfere with or hamper District in the use or enjoyment of the Project. Further, as a condition to substantial completion, Contractor must certify that all remaining Work is of a “punchlist” nature and will be completed by the deadline for Final Completion set forth above.
 - c. **Final Completion.** Final Completion of the Work (sometimes referred to as “*Completion of the Work*”) means the actual completion of the Work, including any extras or change orders reasonably required or contemplated under this Agreement, other than warranty work or replacement or repair of the Work performed under this Agreement. The Work will not be deemed finally complete until final inspection by and approval of District.
 - d. **Time of Performance.** Time is of the essence of this Agreement and regarding Contractor’s performance of the Work. Contractor shall commence and proceed with its performance of the Work with reasonable diligence. District shall not dictate or determine the schedule of the working hours of Contractor; provided, however, that District may restrict the times during which Contractor accesses and performs Work on the Property and any portions thereof to normal working hours and days, consistent with written holiday schedules and policies of District which will be furnished to Contractor upon request.
 - e. **Liquidated Damages.** Contractor and District recognize that time is of the essence of this Agreement and that the District will suffer financial loss if the Work is not completed within the times specified in this Agreement, plus any extensions thereof allowed in accordance with this Agreement. The Parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by District if the Work is not completed on time. Accordingly, instead of requiring any such proof, District and Contractor agree that as liquidated damages for delay (but not as penalty), Contractor shall pay District two hundred fifty dollars (\$250.00) for each day that expires after the deadline for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse or fail to complete the remaining Work within the deadline for Final Completion, plus any extensions thereof allowed in accordance with this Agreement, Contractor shall pay the District one hundred dollars (\$100.00) for each day that expires after the deadline for Final Completion until the Work is completed and ready for final payment.
3. **Performance by Contractor.**
- a. **Contractor’s General Obligations.** Contractor agrees to perform the Work diligently, using the Contractor’s best skill and attention, and in compliance with the highest applicable industry standards. The Work will be performed by Contractor in a good and workmanlike manner strictly in accordance with the Project Manual. Contractor will also be responsible for proper storage and security for all equipment and materials required for the Work. Contractor will supervise and direct the performance of the Work using its best skill and attention, in a manner commensurate with the usual standards of its profession. Contractor will be solely responsible for all construction, means, methods, techniques, sequences and procedures and for coordinating all portions of the Work.

- b. **Review of Field Conditions by Contractor.** Contractor agrees and acknowledges that it has carefully examined the Property, has adequately investigated the nature and conditions of the Property, has familiarized itself with conditions affecting the difficulty of the Work, and has agreed to the Work based on its own examination, investigation, and evaluation, and not in reliance upon any opinions or representations of District or any other party. Contractor will be responsible for locating all utility lines and facilities, including buried pipelines and cables, in the vicinity of the Work site, and will perform the Work in such a manner as to avoid damaging such lines, cables, and facilities and, if required, Contractor will contact all utility companies applicable to the Work site(s) and obtain a written designation of the location of all utility lines and facilities on the site(s) prior to commencing any of the Work.
- c. **Labor and Materials.** Unless otherwise agreed to in writing by District, Contractor shall furnish at its own cost and expense all services, labor, equipment, tools, transportation, facilities, and all other things necessary for the proper execution and completion of the Work.
- d. **Supervision and Construction Procedures; Safety.** Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures, and for coordinating all portions of the Work. Contractor shall be responsible to District for acts and omissions of Contractor's employees, subcontractors and their agents and employees, and any other persons or entities performing portions of the Work for or on behalf of Contractor or any of its subcontractors. Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Work. Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to: (a) employees and other persons present on the Property or performing the Work, (b) the materials and equipment used in the performance of the Work, and (c) other real and personal property at the site or adjacent thereto.
- e. **Compliance with Laws.** Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations, and lawful orders of public authorities related to the performance of the Work, including those bearing on safety of persons and property and their protection from damage, injury or loss. Contractor shall promptly remedy damage and loss to property caused in whole or in part by Contractor, a subcontractor, a sub-subcontractor or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable for and for which Contractor is responsible hereunder, except for damage or loss attributable to acts or omissions of District and not attributable to the fault or negligence of Contractor.
- f. **Payment to Subcontractors.** Contractor shall promptly pay each subcontractor and supplier, upon receipt of payment from District, out of the amount paid to Contractor on account of such subcontractor's or supplier's portion of the Work, the amount to which such subcontractor or supplier is entitled, reflecting percentages actually retained from payments to Contractor on account of such subcontractor's or supplier's portion of the Work. Contractor shall, by appropriate agreement with each subcontractor, require each subcontractor to make payments to sub-subcontractors in similar manner. District shall have no obligation to pay or see to the payment of money to a subcontractor or supplier except as may otherwise be required by law.
- g. **Warranties of the Work; Correction of Defective Work.** Contractor warrants to District that the performance of the Work will be free from defects not inherent in the quality required or permitted and that the performance of the Work will comply with applicable laws and regulations. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The foregoing warranties shall commence on the Completion Date. Contractor shall promptly correct any Work determined by District to be defective or to fail to conform to the requirements of this Agreement, whether discovered before or after the Completion Date. Costs of correcting such defective or nonconforming Work shall be at Contractor's expense. **IN ADDITION TO THE FOREGOING AND ANY WARRANTIES SET FORTH IN THE PROJECT MANUAL, WHICH ARE HEREBY INCORPORATED BY REFERENCE, IF, WITHIN ONE YEAR AFTER THE DATE FOR COMMENCEMENT OF WARRANTIES ESTABLISHED HEREIN, ANY OF THE WORK IS DEEMED BY**

DISTRICT NOT TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THIS AGREEMENT, CONTRACTOR SHALL CORRECT IT AT NO COST OR EXPENSE TO THE DISTRICT PROMPTLY AFTER RECEIPT OF WRITTEN NOTICE FROM DISTRICT TO DO SO. If Contractor fails to correct defective or non-conforming Work within a reasonable time, District may correct such defective or non-conforming Work and may deduct the reasonable cost thereof from any payment then or thereafter due Contractor or may recover the costs of correction if Contractor has already been paid for the Work. Additionally, Contractor agrees to perform the Work in such manner so as to preserve any and all manufacturer's warranties associated with the materials. The provisions of this Section shall survive Final Completion of the Work or any earlier termination of this Agreement.

- h. **Cleaning Up.** Contractor will confine its activities to areas designated by District and must maintain these areas in a neat and clean condition. All excess material and trash generated from the prosecution of the Work will be neatly stockpiled in the area designated by District and removed from the site as frequently as necessary to maintain the site in a neat and safe condition. Upon the completion of any portion of the Work, Contractor will remove all equipment, materials, supplies, and temporary structures from the area of the completed portion and leave the area in a neat and clean condition. Contractor will also keep all adjacent properties, public or private, including streets, free of dirt, trash, debris, or other materials relating to or resulting from the prosecution of the Work. At completion of the Work, Contractor shall remove from and about the job site and surrounding area waste materials, rubbish, Contractor's tools, construction equipment, machinery, and surplus material. Failure to comply with the clean-up requirements set forth in this Agreement shall constitute a breach of this Agreement.
- i. **Contractor's Representations and Additional Warranties.** Contractor represents and warrants to District that, with respect to Contractor and each of the Agents:

 - i. Contractor is authorized and licensed, if applicable, to perform the Work, in Texas;
 - ii. Contractor has the full right, power, legal capacity and authority to enter into, execute and deliver this Agreement and to perform the obligations to be performed by Contractor; and
 - iii. Contractor is not a party to or bound by any agreement or contract or subject to any restrictions that would prevent the Contractor from entering into and performing the obligations under this Agreement.
- 4. **Prevailing Wages.** District is subject to the provisions of Chapter 2258, Subchapter B, Texas Government Code, pertaining to prevailing wage rates. In accordance with Section 49.279, Texas Water Code, District specifies the prevailing wage rate for public workers of Williamson County as District's prevailing wage rate. Contractor agrees to pay not less than the specified prevailing wage rate to workers employed by it in the execution of the Work, and to comply with all applicable provisions of Chapter 2258, Subchapter B, Texas Government Code, including the recordkeeping required thereunder.
- 5. **Payment.** Payment for the Work shall be made to Contractor by District as provided herein below.

 - a. **Total Compensation.** Contractor is entitled to receive compensation for the full and complete performance of the Work in the amount of \$_____ (the "Contract Sum"). The Contract Sum includes the items of Work set forth in Contractor's bid.
 - b. **Progress Payments.** Contractor shall submit its applications for progress payments by the 5th of each month for work completed during the previous calendar month. District shall pay Contractor for said work within twenty-five (25) calendar days after receipt of a properly submitted application

for payment. A progress payment made to Contractor shall not constitute acceptance of the Work thereafter determined by the District to be defective or nonconforming.

- c. **Retainage.** During the progress of the Work, District shall retain 10% of each progress payment. However, if District at any time after 50 percent of the Work has been completed finds that satisfactory progress is being made, it may authorize any of the remaining progress payments to be made in full. Final payment, constituting the entire balance of the Contract Sum (including any retainage withheld by District), shall be made by District to Contractor after Contractor has fully performed the Work to the District's satisfaction and complied with all conditions to final payment required by this Agreement. District shall not pay interest on amounts retained except as may otherwise be required by law.
 - d. **Requirements for Progress Payments.** Contractor shall submit with each application for payment such documentation as may be required or requested by District to substantiate the amounts for which payment is requested, along with (a) a sworn representation and warranty by Contractor that it has properly performed and completed all Work for which payment is requested, (b) a release and waiver of Contractor's lien rights (conditioned upon Contractor's actual receipt of funds) in connection with the Work performed by Contractor through the applicable pay period, and (c) a sworn representation and warranty by Contractor (a "bills paid affidavit") that it has fully paid all known bills or obligations for Work covered in previously paid applications for payment. Upon request by the District and as a further condition of payment, Contractor shall obtain similar releases and waivers of lien rights and bills paid affidavits from its subcontractors.
 - e. **District's Right to Withhold Payment.** District shall be entitled to withhold payment from Contractor to the extent reasonably necessary to protect District as a result of (a) defective Work not remedied, (b) third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to District is provided by the Contractor, (c) failure of the Contractor to make payments properly to subcontractors or for labor, materials or equipment, (d) damage to District property, or (e) the persistent failure to carry out the Work in accordance with the requirements set forth in the Agreement.
 - f. **Sales Tax.** District is a tax-exempt, political subdivision of the State of Texas. Accordingly, no sales tax will be charged to District or included in the Contract Sum.
 - g. **Final Payment.** The making of final payment by District will not constitute a waiver of claims by District. The acceptance of final payment by Contractor will constitute a waiver of claims by Contractor, except those previously made in writing and identified by Contractors as unresolved at the time of final application for payment.
6. **Termination.** This Agreement will continue in effect unless terminated by either Party as provided herein below.
- a. **Termination of the Agreement by District.** District may terminate the Agreement at any time for convenience (without cause) or for cause (due to Contractor's material breach). District may terminate the Agreement immediately following written notice of termination to Contractor. If termination is for cause, at District's sole option, Contractor may be given time to cure such breach as specified in the notice, after which the Agreement will terminate immediately if the breach is not cured. Upon receipt of District's notice of termination, Contractor shall stop all Work immediately but, unless expressly directed in writing by District to the contrary, shall take such actions reasonably necessary for the protection and preservation of the Work. In the event of termination for cause, District may take possession of the Work site and of all materials, equipment, tools and construction equipment and machinery thereon owned by Contractor, require Contractor to assign its subcontracts to District, and may finish the Work by whatever reasonable method District may deem expedient. Contractor shall not be entitled to any further payment except to the extent of any amount by which the Work completed or installed by Contractor prior to termination and not

previously paid for by District exceeds the amount due by Contractor to District, including all damages which District is entitled to recover against Contractor for breach of the Agreement. In the event that termination is for convenience, Contractor shall be paid for (a) the Work properly executed in accordance with the Agreement and goods furnished prior to the effective date of termination (to the extent not previously paid to or for the benefit of Contractor) and (b) the actual, reasonable costs necessarily incurred by Contractor to protect the Work following the termination as required herein. District shall not be responsible for damages or recoveries arising from the termination of the Agreement except as expressly provided herein. In the event of termination by the District for convenience or cause, Contractor must deliver to the District all equipment for which the District has provided prepayment, or refund the prepaid amounts for which the Work has not been completed (including prepayment for equipment not delivered), within 30 days after termination.

- b. **Termination of the Agreement by Contractor.** Contractor may terminate the Agreement only for cause (due to District's material breach). Contractor may deliver a written notice of termination of the Agreement to District setting forth in reasonable detail the basis for such termination and providing District with a period of not less than ten (10) calendar days to cure such default. If District fails to cure the default within the time period stated in the initial notice of termination letter, Contractor may terminate the Agreement no less than five (5) calendar days following delivery of a final notice of termination letter to District. Contractor access to the Property shall cease upon the effective termination of the Agreement; however, prior to leaving the Property, Contractor shall take such actions reasonably necessary for the protection and preservation of the Work. In the event of Contractor's termination for cause, Contractor shall be entitled to recover (a) payment for the Work properly executed in accordance with the Agreement prior to the effective date of termination (to the extent not previously paid to or for the benefit of Contractor) and (b) the actual, reasonable costs necessarily incurred by Contractor to protect the Work following the termination as required herein, demobilize Contractor's workforce, and cancel Contractor's subcontracts. District shall not be responsible for damages or recoveries arising from the termination of the Agreement except as expressly provided herein.
 - c. **Survival of Obligations following Termination.** Except as may be expressly agreed in writing by the Parties, all warranty obligations or other obligations of the Contractor to complete or repair defective Work arising under the Agreement shall survive any termination of such Agreement (other than Contractor's termination of the Agreement for cause). Further, in the event of termination for any reason and by any Party, Contractor agrees to comply with District directives regarding the return of all materials purchased by District. Contractor shall provide reasonable cooperation to District in effecting a smooth and orderly transition of all matters that were being handled by Contractor prior to termination. All records, including all documents, articles or items that may be supplied by District to Contractor, shall be and remain the sole and exclusive property of District and shall be surrendered to it upon demand (and, in any event, within five (5) days of termination). Upon the termination of the Agreement (or this Agreement) or upon the demand of District prior to termination, Contractor shall immediately deliver to District at such place or places as may be designated by it, any and all other property of District in its possession or under its control.
7. **Relationship of Parties.** The Parties understand and agree that Contractor shall provide the Work to District as a non-exclusive independent contractor, with all of its attendant rights and liabilities, and not as an agent or employee of District. Nothing in the Agreement or otherwise is intended or will be construed to create a joint venture, partnership, employment or similar relationship. Neither Contractor nor any of Contractor's employees, representatives or agents will be deemed to be employed by District or be eligible for any employee benefits from District and, except as may be required by lawful authority, District will make no deductions or payment for taxes, insurance, bonds or other sums. The name "District" may not be used by Contractor in any manner tending to give the impression that any authority has been delegated to Contractor or Agents other than that as an independent contractor. Neither Party shall have the authority to bind the other to any contract or agreement whatsoever. Nothing in the Agreement shall be interpreted as authorizing Contractor or Agents to act for District in the collection of money, extension of credit, acceptance of service of process, or to make any commitment that would

bind District to any contract or agreement. Contractor has sole authority and responsibility to hire, fire and otherwise controls its employees and neither Contractor nor its employees are employees of District. Contractor acknowledges and agrees that nothing herein shall entitle or render Contractor eligible to participate in any benefits or privileges provided by District for its employees.

8. **Taxes.** Contractor agrees to timely withhold and pay all taxes and fees assessed on Contractor or required of Contractor to pay or withhold to, for, or with respect to any person in connection with or incident to the performance of the Agreement, by the United States, any state and any governmental agency, as well as unemployment compensation insurance, social security, or any other taxes upon Contractor. Contractor acknowledges that Contractor is responsible for payment of all income taxes, including estimated quarterly payments. Contractor shall pay all sales tax for taxable materials and labor or services (to the extent such labor or services are taxable) purchased by or furnished to Contractor by its subcontractors and suppliers. All subcontracts shall be separated so that no sales tax is incurred, charged or paid on non-taxable labor or services.

9. **Insurance.**
 - a. As an independent contractor, Contractor acknowledges that it is solely responsible for providing its own insurance coverage, including, but not limited to, unemployment compensation and workers' compensation to its employees, and that such coverage shall be maintained by Contractor in the statutory limits which are presently in effect or which may be in effect in each of the applicable jurisdictions where Contractor will perform the Work. Without limiting the foregoing, Contractor shall, at Contractor's sole cost and expense, maintain the following insurance with insurers satisfactory to District and with limits no less than those states as follows:
 - i. Statutory Workers Compensation Insurance (statutory coverage) and Employer's Liability insurance with limits of not less than \$500,000 per occurrence. Such policy shall be endorsed to name District as "alternate employer" to prevent Contractor's workers' compensation carrier from denying coverage based on a claim of employment status. Such alternate employer endorsement shall not imply an employer/employee relationship the Parties. Contractor hereby waives all claims and causes of action against District for any and all injuries suffered by Agents;
 - ii. Commercial General Liability insurance providing coverage against liability arising out of or based on any act, error or omission of Contractor or any of the Agents under this Agreement, with limits of not less than \$1,000,000 for each occurrence of bodily injury and property damage liability, \$1,000,000 general aggregate and products/completed operations coverage; and
 - iii. Business Automobile Liability insurance with a limit of not less than \$1,000,000 per occurrence for bodily injury and property damage liability written to cover all owned, hired and non-owned automobiles arising out of the use thereof by or on behalf of the Contractor and Agents.
 - b. All of the above-listed insurance must be maintained in force throughout the term of this Contract and must be written by insurance companies authorized to sell insurance where work is being performed and have an A.M. Best's rating of B++ VII or better. All insurance policies must provide that they may not be cancelled or modified without 30 days' prior written notice to District and that they are primary and noncontributory over any insurance that may be carried by District.
 - c. All such insurance shall be primary. All policies shall include a waiver of subrogation in favor of District, and all policies shall require at least thirty (30) days prior written notice to District of any intention to cancel, terminate or reduce coverage provided thereby. District shall be named as additional insureds on the commercial general liability and business automobile liability policies. Prior to the commencement of the Work, Contractor shall furnish to District a Certificate of Insurance, endorsements, or evidence of coverage signed by authorized representatives of the

companies providing the coverage required under the terms of the Agreement. Upon request and without expense to District, Contractor shall furnish District with certified copies of said insurance policies signed by authorized representatives of the insurance companies. Failure to secure the insurance coverages, or the failure to comply fully with any of the insurance provisions of the Agreement as may be necessary to carry out the terms and provisions of the Agreement shall be deemed to be a material breach of the Agreement. The lack of insurance coverage does not reduce or limit Contractor's responsibility to indemnify District as set forth in the Agreement. Any and all deductibles and premiums associated with the above-described insurance policies shall be assumed by, for the account of, and at the sole risk of the Contractor. District reserves the right to review the insurance coverage requirements of the Agreement. Contractor shall require similar insurance levels from its sub-contractors and other Agents.

- d. As required by Section 406.096, Texas Labor Code, Contractor hereby certifies that Contractor provides workers' compensation insurance coverage for each employee of Contractor who will be employed on the Project. Further, Contractor agrees that each subcontractor which Contractor engages to perform work on the Project will be required to provide a written certification that the subcontractor provides workers' compensation insurance coverage for each employee of the subcontractor who will be employed on the Project, and that Contractor will provide such certification to District before the subcontractor performs any work on the Project.
10. **Performance and Payment Bonds.** In accordance with Chapter 2253, Texas Government Code and Section 49.275 of the Texas Water Code, Contractor must provide District with the following: (i) a performance bond in the amount of the Contract Sum and in a form and substance, and with a surety, satisfactory to District prior to commencement of the Work if the Contract Sum is in excess of \$100,000; and (ii) a payment bond in the amount of the Contract Sum and in a form and substance, and with a surety, satisfactory to District prior to commencement of the Work if the Contract Sum is in excess of \$25,000.

11. **Indemnity.**

- a. **General Indemnification.** TO THE FULLEST EXTENT PERMITTED BY LAW, CONTRACTOR WILL INDEMNIFY AND HOLD DISTRICT AND ITS DIRECTORS, OFFICERS, EMPLOYEES, AGENTS, AND REPRESENTATIVES (COLLECTIVELY, THE "INDEMNITEES") HARMLESS FROM ALL CLAIMS, LIABILITIES, DAMAGES, LOSS, AND EXPENSE, INCLUDING BUT NOT LIMITED TO ATTORNEYS' AND CONSULTANTS' FEES AND EXPENSES, ARISING OUT OF OR RESULTING FROM: (1) THE PERFORMANCE OF THE WORK, ATTRIBUTABLE TO PERSONAL INJURY, SICKNESS, DISEASE, OR DEATH, OR TO INJURY TO OR DESTRUCTION OF TANGIBLE PROPERTY, INCLUDING THE LOSS OF USE RESULTING THEREFROM, AND CAUSED IN WHOLE OR IN PART BY ANY NEGLIGENT OR OTHER ACT OR OMISSION OF CONTRACTOR, ANY SUBCONTRACTOR, OR ANY SUPPLIER, OR ANYONE, DIRECTLY OR INDIRECTLY, EMPLOYED BY ANY OF THEM, OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, OR (2) THE FAILURE OF THE WORK TO BE FIT FOR ITS INTENDED PURPOSE. THIS OBLIGATION WILL NOT BE CONSTRUED TO NEGATE, ABRIDGE, OR OTHERWISE REDUCE ANY OTHER RIGHT OR OBLIGATION OF INDEMNITY THAT WOULD OTHERWISE EXIST UNDER THIS AGREEMENT OR AT LAW OR IN EQUITY AS TO ANY OTHER PARTY OR PERSON. THIS INDEMNIFICATION WILL EXTEND TO CLAIMS, DEMANDS, OR LIABILITIES FOR INJURIES OCCASIONED AFTER COMPLETION OF THE WORK, AS WELL AS DURING THE WORK'S PROGRESS. **THE OBLIGATIONS IN THIS PARAGRAPH (A) APPLY WHETHER ALLEGED OR ACTUAL, NEGLIGENT, OR GROSS NEGLIGENT ACTS OR OMISSIONS OR OTHER FAULT OF ANY INDEMNITEE CAUSED THE LOSS IN WHOLE OR IN PART; PROVIDED HOWEVER, IN THE EVENT OF ANY JOINT OR CONCURRENT LIABILITY BETWEEN AN INDEMNITEE AND CONTRACTOR, CONTRACTOR'S OBLIGATIONS HEREIN WILL BE REDUCED BY THE PERCENTAGE OF NEGLIGENCE OR FAULT APPORTIONED TO THE INDEMNITEE; AND (B) INCLUDE WITHOUT LIMITATION, CLAIMS BY THE CONTRACTOR'S CREW OR EMPLOYEES AGAINST THE INDEMNITEES.** This

provision relating to indemnification shall survive the termination of this Agreement and may be enforced by District, or its successors or assigns.

- b. **Indemnification for Lien Claims.** CONTRACTOR SHALL INDEMNIFY DISTRICT AND INDEMNITEES AGAINST ALL LIEN CLAIMS AND BOND CLAIMS, INCLUDING EXPENSES, COSTS OF BONDS TO REMOVE LIENS, AND ATTORNEYS' FEES RELATED TO SUCH CLAIMS, WHICH MAY BE ASSERTED BY MECHANICS, MATERIALMEN, SUPPLIERS, SUBCONTRACTORS OR EQUIPMENT LESSORS OF CONTRACTOR OR ITS AGENTS OR ANYONE CLAIMING UNDER ANY OF THEM. IN THE EVENT LIENS ARE PLACED ON THE WORK OR THE PROPERTY, CONTRACTOR SHALL IMMEDIATELY OBTAIN A BOND TO REMOVE SUCH LIEN OR PROVIDE SUCH OTHER ALTERNATIVE SECURITY AS DISTRICT DEEMS APPROPRIATE. IF BOND CLAIMS OR LIEN CLAIMS ARE FILED BY ANY SUBCONTRACTORS, MATERIALMEN, SUPPLIERS, MECHANICS OR EQUIPMENT LESSORS OF CONTRACTOR OF ITS AGENTS, DISTRICT SHALL HAVE THE RIGHT TO SUSPEND PAYMENTS TO CONTRACTOR AND EITHER HOLD MONEY DUE CONTRACTOR OR, IF SATISFACTORY SECURITY IS NOT TIMELY FURNISHED, MAKE PAYMENTS TO SAID CLAIMANTS AND CHARGE THE PAYMENTS AGAINST CONTRACTOR.
- c. **Indemnification for Defense Costs.** CONTRACTOR'S OBLIGATION TO INDEMNIFY DISTRICT AND INDEMNITEES AGAINST ANY ATTORNEYS' FEES OR OTHER COSTS OR EXPENSES INCURRED BY DISTRICT AND INDEMNITEES IN CONNECTION WITH THE DEFENSE OF ANY CLAIMS OR CAUSES OF ACTION WITHIN THE SCOPE OF THIS SECTION 14 SHALL BE CONSTRUED AS A SEPARATE ITEM OF INDEMNIFICATION WHICH SHALL BE AN ABSOLUTE OBLIGATION OF CONTRACTOR EVEN IF SUCH CLAIMS OR CAUSES OF ACTION ARE INVALID OR GROUNDLESS.

12. **Dispute Resolution/Mediation.** The Parties agree to meet and confer in good faith on all matters of common interest or all controversies, claims, or disputes which may arise under the Agreement. The Parties agree that all disputes arising out of or relating to the Agreement that cannot be resolved through informal conference will be submitted to mediation prior to exercising any judicial remedies.

13. **Notices.** All notices and correspondence shall be in writing and shall be deemed to have been given (a) when delivered by hand (with written confirmation of receipt); (b) when received by the addressee if sent by a nationally recognized overnight courier (receipt requested); (c) on the date sent by facsimile or e-mail of a PDF document (with confirmation of transmission) if sent during normal business hours of the recipient, and on the next business day if sent after normal business hours of the recipient or (d) on the third day after the date mailed, by certified or registered mail, return receipt requested, postage prepaid. Such communications must be sent to the respective parties at the following addresses (or at such other address for a Party as shall be specified in a notice given in accordance with this Section 13):

If to District:

Brushy Creek Municipal Utility District
16318 Great Oaks Drive
Round Rock, TX 78681
Attn: General Manager
Telephone: (512) 255-7871
Fax: (512) 255-0332

If to the Contractor:

Legal Business Name
Address
City, TX ZIP

Notice shall be effective only upon receipt by the party being served, except notice shall be deemed delivered and received seventy-two (72) hours after posting by the United States Post Office, if the notice is sent by certified mail. Confirmation of receipt of any facsimile sent must be received in order to presume that the transmission was received.

14. General Provisions.

- a. **Assignment.** This Agreement and Contractor's obligation and duties to District hereunder are not transferable or assignable by Contractor.
- b. **Waiver.** Failure of District at any time to enforce any provisions of this Agreement shall not be construed to be a waiver or relinquishment of District's rights granted hereunder or of the future performance of such provision, and the obligations of Contractor with respect thereto shall continue in full force and effect. No provision of this Agreement will be deemed waived and no breach excused unless such waiver or consent will be in writing and signed by the Party giving the waiver or consent.
- c. **Choice of Law.** This Agreement is made under and will be enforced and construed in accordance with the laws of the State of Texas. All claims, disputes or causes of action arising hereunder will be resolved pursuant to Section 12 of this Agreement. Should, for any reason whatsoever, any claim, dispute, or cause of action fail to be resolved pursuant to Section 12 of this Agreement, such claim, dispute, or cause of action shall be filed in the court of competent jurisdiction in Williamson County, Texas, which venue shall be exclusive.
- d. **Counterparts.** This Agreement may be executed in multiple counterparts, each of which shall constitute one of the same Agreements. Faxed and electronic scanned signatures and countersignatures shall be deemed originals for all purposes and proper evidence of assent of this Agreement.
- e. **Severability.** If any provision of this Agreement is illegal, invalid, or unenforceable under present or future laws, it is the intention of the parties that the remainder of this Agreement not be affected thereby, and it is also the intention of the parties that, in lieu of each provision of this Agreement that is illegal, invalid, or unenforceable, there be added as a part of this Agreement a provision as similar in terms to the illegal, invalid, or unenforceable provision as is possible, and is legal, valid, and enforceable.
- f. **Attorneys' Fees.** Any party to this Agreement who is the prevailing party in any legal proceeding against any other party brought under or in connection with this Agreement or the subject matter hereof will be additionally entitled to recover court costs and reasonable attorney's fees, and all other litigation expenses, including deposition costs, travel, and expert witness fees, from the non-prevailing party.
- g. **Authority.** Each party represents and warrants that it has the full right, power, and authority to execute this Agreement and all related documents. Each person executing this instrument on behalf of a party represents that he or she is an authorized representative of and has the authority to sign this document on behalf the respective party.
- h. **Additional Requirements.**
 - i. **No Boycott Provisions.**
 1. Pursuant to Section 2270.002, Texas Government Code, Contractor hereby represents that it and its parent company, wholly- or majority-owned subsidiaries, and other affiliates, if any, do not boycott Israel and, to the extent this Agreement is a contract for goods or services, will not boycott Israel during the term of this Agreement. The foregoing verification is made solely to comply with Section

2270.002, Texas Government Code, and to the extent such Section does not contravene applicable Federal law. As used in the foregoing verification, “boycott Israel” means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli-controlled territory, but does not include an action made for ordinary business purposes. Contractor understands “affiliate” to mean an entity that controls, is controlled by, or is under common control with Contractor and exists to make a profit.

2. Pursuant to Subchapter F, Chapter 2252, Texas Government Code, Contractor represents that neither it nor any of its parent company, wholly- or majority-owned subsidiaries, and other affiliates is a company identified on a list prepared and maintained by the Texas Comptroller of Public Accounts under Section 2252.153 or Section 2270.0201, Texas Government Code, and posted on any of the following pages of such officer’s internet website:

<https://comptroller.texas.gov/purchasing/docs/sudan-list.pdf>,

<https://comptroller.texas.gov/purchasing/docs/iran-list.pdf>, or

<https://comptroller.texas.gov/purchasing/docs/fto-list.pdf>.

The foregoing representation is made solely to comply with Section 2252.152, Texas Government Code, and to the extent such Section does not contravene applicable Federal law and excludes Contractor and each of its parent company, wholly- or majority-owned subsidiaries, and other affiliates, if any, that the United States government has affirmatively declared to be excluded from its federal sanctions regime relating to Sudan or Iran or any federal sanctions regime relating to a foreign terrorist organization. Contractor understands “affiliate” to mean any entity that controls, is controlled by, or is under common control with the Assignor and exists to make a profit.

3. **Verification Regarding Energy Company Boycotts.** To the extent this Agreement constitutes a contract for goods or services for which a written verification is required under Section 2274.002, Texas Government Code, (as added by Senate Bill 13, 87th Texas Legislature, Regular Session) as amended, Contractor hereby verifies that it and its parent company, wholly- or majority-owned subsidiaries, and other affiliates, if any, do not boycott energy companies and, will not boycott energy companies during the term of this Agreement. The foregoing verification is made solely to comply with Section 2274.002, Texas Government Code, as amended, to the extent Section 2274.002, Texas Government Code does not contravene applicable Texas or federal law. As used in the foregoing verification, “boycott energy companies” shall have the meaning assigned to the term “boycott energy company” in Section 809.001, Texas Government Code. Contractor understands “affiliate” to mean an entity that controls, is controlled by, or is under common control with Assignors and exists to make a profit.

- ii. **Verification Regarding Discrimination Against Firearm Entity or Trade Association.** To the extent this Agreement constitutes a contract for the purchase of goods or services for which a written verification is required under Section 2274.002, Texas Government Code, (as added by Senate Bill 19, 87th Texas Legislature, Regular Session, “SB 19”), as amended, Contractor hereby verifies that it and its parent company, wholly- or majority- owned subsidiaries, and other affiliates, if any: (i) do not have a practice, policy, guidance or directive that discriminates against a

firearm entity or firearm trade association; and (ii) will not discriminate during the term of this Agreement against a firearm entity or firearm trade association. The foregoing verification is made solely to comply with Section 2274.002, Texas Government Code, as amended, to the extent Section 2274.002, Texas Government Code does not contravene applicable Texas or federal law. As used in the foregoing verification, “discriminate against a firearm entity or firearm trade association” shall have the meaning assigned to such term in Section 2274.001(3), Texas Government Code (as added by SB 19). Contractor understands “affiliate” to mean an entity that controls, is controlled by, or is under common control with Assignors and exists to make a profit.

- iii. **HB 1295 Compliance.** Section 2252.908 of the Texas Government Code requires that a party to certain types of contracts with governmental entities must fill out a conflict of interest form (“Disclosure of Interested Parties”) at the time the party submits a signed contract to the governmental entity. Further information is set forth on the Texas Ethics Commission website via the following link: https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm. The District has no obligation under this Agreement until such form is accurately completed and properly submitted, and any District obligation is conditioned on such proper completion and submission.
- iv. **Disclosure of Interested Parties.** Contractor acknowledges that Texas Government Code Section 2252.908 (“Section 2252.908”) requires business entities entering into a contract with a local government entity such as the District to complete a FORM 1295 promulgated by the TEC (which is available on the TEC website at <https://www.ethics.state.tx.us/forms/1295.pdf>) and to file it electronically with the TEC before the time the business entity executes and submits the contract to the local governmental entity. Contractor confirms that it has reviewed Section 2252.908, electronically filed a FORM 1295 with the TEC, and has provided the District with a completed FORM 1295 and certification of filing generated by the TEC’s electronic filing application, as required by Section 2252.908.
- v. **Conflict of Interest Certification.** Contractor acknowledges that Texas Local Government Code Chapter 176 requires a vendor that seeks to or enters into a contract with a local governmental entity to file a conflicts of interest questionnaire if the vendor: (i) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer; (ii) has given a local government officer, or a family member of the officer, one or more gifts that exceed certain values; (iii) has a family relationship with a local government officer. Similarly, the Texas Penal Code prohibits the acceptance any benefit as consideration for a decision, opinion, recommendation, vote, or other exercise of discretion by a public servant. By execution of this Agreement, Contractor certifies as follows: (i) Contractor has fully complied with the applicable requirements of Chapter 176 of the Texas Local Government Code; (ii) Contractor has not provided any gift, payment or other benefit to any director or employee of the District; and (iii) Contractor has no other conflict of interest with the District, or any director or employee of the District.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement effective as of the date signed by the last signatory hereto.

DISTRICT:

By: _____

Print Name: _____

Title: _____

Date: _____

CONTRACTOR:

Legal Business Name, a Texas corporation

Signature: _____

Print Name: _____

Title: _____

Date: _____

Exhibit A

Project Manual for Work

All Work shall be undertaken in accordance with the following (collectively, the Project Manual), which are hereby incorporated by reference for all purposes:

1. Landscape Improvement plan for Pepper Rock Park labeled “Pricing Plans” prepared by SEC Planning and dated January 11, 2024.
2. All specifications listed in Exhibit B of Invitation to bid shall be a part of this contract.