

**ZONE 7 WATER AGENCY
2018 PPWTP FILTER MEDIA REPLENISHMENT PROJECT
LIVERMORE, CALIFORNIA
PROJECT 271-18
ADDENDUM NO. 2
September 17, 2018**

This Addendum No. 2 (“Addendum”) is dated the date set forth above and modifies certain Bidding Documents issued by the Alameda County Flood Control and Water Conservation District, acting by and through its Zone 7 Water Agency (“District”) in connection with the District’s project: *2018 PPWTP Filter Media Replenishment Project, Livermore, California*. All capitalized terms not otherwise defined herein shall have the meanings provided in the Bidding Documents. There are no other amendments to the Bidding Documents other than expressly contained in Addendum No. 1 and this Addendum No. 2.

The following clarifications and/or modifications shall be incorporated into plans and specifications for the above-referenced project and shall become part of the Contract Documents. All other provisions and requirements shall remain unchanged.		
CONTRACT DOCUMENTS AND SPECIFICATIONS		
Addendum Item	Document/ Section	Location and Description of Change
1	00400	Replace Document 00400 – Bid Form with Document 00400A – Bid Form Addition of Bid Item 5: Extra Work Allowance
2	00800	Replace Document 00800 – Supplementary Conditions - Division 0 with Document 00800A – Supplementary Conditions - Division 0 Modifies the contract time and the timing for submittal of contract documents following Notice of Award.
3	01100	Replace Document 01100 – Summary with Document 01100A – Summary Addition of Extra Work Allowance
2	13520	Replace Document 13520 – PPWTP Existing Filter Media Replenishment with Document 13520A – PPWTP Existing Filter Media Replenishment These changes include revisions to the scope of work, testing specifications, and addition of scraping to the execution.

Please be reminded that all bidders shall acknowledge receipt of this Addendum No. 2 in Document 00400A (Bid Form) and failure to acknowledge addendum in the Bid Form may render the bid non-responsive and may be cause for its rejection.

**ZONE 7 WATER AGENCY
2018 PPWTP FILTER MEDIA REPLENISHMENT PROJECT
LIVERMORE, CALIFORNIA
PROJECT 271-18
ADDENDUM NO. 2
September 17, 2018**

Acknowledgement of receipt of Addendum No. 2 for the 2018 PPWTP Filter Media Replenishment Project, Livermore, California, Project No. 271-18.

Please also sign and email a copy of this page to Emily Moshier, Zone 7 Water Agency, at emoshier@zone7water.com to acknowledge receipt of Addendum No. 2 for this project.

Signature and Print Name

Date

Company

DOCUMENT 00400A

BID FORM

To be submitted as part of Bidder’s Envelope by the time and date specified in Document 00200 (Instructions to Bidders), paragraph 1.

TO THE HONORABLE BOARD OF DIRECTORS OF THE ZONE 7 WATER AGENCY OF THE ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

THIS BID IS SUBMITTED BY:

(Firm/Company Name)

Re: PROJECT NUMBER 271-18, 2018 PPWTP Filter Media Replenishment Project

- 1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an agreement with the Alameda County Flood Control and Water Conservation District, acting by and through its Zone 7 Water Agency, a public agency of the State of California (“District”) in the form included in the Contract Documents, Document 00520 (Agreement), to perform and furnish all Work as specified or indicated in the Contract Documents for the Contract Sum and within the Contract Time indicated in this Bid and in accordance with all other terms and conditions of the Contract Documents.
- 2. Bidder accepts all of the terms and conditions of the Contract Documents, Document 00100 (Advertisement for Bids), and Document 00200 (Instructions to Bidders), including, without limitation, those dealing with the disposition of Bid Security. This Bid will remain subject to acceptance for 90 Days after the day of Bid opening.
- 3. In submitting this Bid, Bidder represents:
 - (a) Bidder has examined all of the Contract Documents and the following Addenda (receipt of all of which is hereby acknowledged).

Addendum Number	Addendum Date	Signature of Bidder

- (b) Bidder has visited the Site and performed all tasks, research, investigation, reviews, examinations, and analysis and given notices, regarding the Project and the Site, as set forth in Document 00520 (Agreement), Article 5.
 - (c) Bidder has given District prompt written notice of all conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents and as-built drawings and actual conditions and the written resolution thereof through Addenda issued by District is acceptable to Contractor.
- 4. Based on the foregoing, Bidder proposes and agrees to fully perform the Work within the time stated and in strict accordance with the Contract Documents for the following sums of money listed in the following Schedule of Bid Prices:

SCHEDULE OF BID PRICES

All Bid items, including lump sums and unit prices, must be filled in completely. Bid items are described in Section 01100 (Summary of Work). Quote in figures only, unless words are specifically requested.

ITEM	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Mobilization and Demobilization	N/A	Lump sum	-----	\$
2	PPWTP Filter Nos. 1, 2, and 3 Media Replenishment	N/A	Lump sum	-----	\$
3	Coring samples for all PPWTP filters	N/A	Lump sum	-----	\$
4	All Work of Contract Documents other than Work separately provided for under other Bid Items	N/A	Lump sum	-----	\$
<u>5</u>	<u>Extra Work Allowance (to be used as directed by the Engineer)</u>	<u>N/A</u>	<u>Lump sum</u>	<u>Allowance Item</u>	<u>\$ 10,000</u>
TOTAL BID PRICE					\$

5. Subcontractors for work included in all Bid items are listed on the attached Document 00430 (Subcontractors List).
6. The undersigned Bidder understands that District reserves the right to reject this Bid.
7. If written notice of the acceptance of this Bid, hereinafter referred to as Notice of Award, is mailed or delivered to the undersigned Bidder within the time described in paragraph 2 of this Document 00400 or at any other time thereafter before it is withdrawn, the undersigned Bidder will execute and deliver the documents required by Document 00200 (Instructions to Bidders) within the times specified therein. These documents include, but are not limited to, Document 00520 (Agreement), Document 00610 (Construction Performance Bond), Document 00620 (Construction Labor and Material Payment Bond) and insurance certificates and endorsements required by Document 00700 (General Conditions).
8. Notice of Award or request for additional information may be addressed to the undersigned Bidder at the address set forth below.
9. The undersigned Bidder herewith encloses cash, a cashier's check, or certified check of or on a responsible bank in the United States, or a corporate surety bond furnished by a surety authorized to do a surety business in the State of California, in the form specified in Document 00200 (Instructions to Bidders), in the amount of ten percent (10%) of the Total Bid Price and made payable to "Zone 7 Water Agency."
10. The undersigned Bidder agrees to commence Work under the Contract Documents on the date established in Document 00700 (General Conditions) and to complete all work within the time specified in Document 00520 (Agreement). The undersigned Bidder acknowledges that District has reserved the right to delay or modify the commencement date. The undersigned Bidder further acknowledges District has reserved the right to perform independent work at the Site, the extent of such work may not be determined until after the opening of the Bids, and

that the undersigned Bidder will be required to cooperate with such other work in accordance with the requirements of the Contract Documents.

11. The undersigned Bidder agrees that, in accordance with Document 00700 (General Conditions), liquidated damages for failure to complete all Work in the Contract within the time specified in Document 00800 (Supplementary Conditions – Division 0) shall be as set forth in Document 00800 (Supplementary Conditions – Division 0).

12. The names of all persons interested in the foregoing Bid as principals are:

(IMPORTANT NOTICE: If Bidder or other interested person is a corporation, give the legal name of corporation, state where incorporated, and names of president and secretary thereof; if a partnership, give name of the firm and names of all individual co-partners composing the firm; if Bidder or other interested person is an individual, give first and last names in full).

NAME OF BIDDER: _____

Licensed in accordance with an act for the registration of Contractors, and with license number: _____ Expiration: _____

Where incorporated, if applicable

Principals

I certify (or declare) under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Signature of Bidder

NOTE: If Bidder is a corporation, set forth the legal name of the corporation together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation. If Bidder is a partnership, set forth the name of the firm together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership.

Business Address: _____

Contractor's Representative(s), (name, title): _____

Officers authorized to sign contracts: _____

Telephone Number(s): _____

Date of Bid:

END OF DOCUMENT

DOCUMENT 00800~~A~~**SUPPLEMENTARY CONDITIONS – DIVISION 0**

This section includes requirements that supplement or modify Division 0 of the Contract Specifications.

1.0 MODIFICATIONS TO DOCUMENT 00200 (INSTRUCTIONS TO BIDDERS)

1.1 Paragraph 9 – Delete and Insert “NOT USED”.

1.2 Paragraph 10 – Replace “Mandatory” with “Non-Mandatory.”

1.3 Paragraph 11 - Insert as second paragraph “Contractors planning to submit a project bid need to buy the bidding documents and as a formal planholder to receive any potential addenda.”

~~1.4 Paragraph 22.a – Replace “14th Day” with “10th Day”.~~

2.0 MODIFICATIONS TO DOCUMENT 00520 (AGREEMENT)**2.1 Time Allowed for Completion**

In accordance with the provisions of Section 00700, Final Completion of this Project shall be completed within ~~45–70~~ Calendar Days from the date established in the Notice to Proceed for the commencement of Contract Time. Actual work time shall be in accordance with work days and hours as defined in Section 01100.

2.2 Substantial Completion

Substantial Completion of this Project shall be completed within ~~3560~~ Calendar Days from the date established in the Notice to Proceed for the commencement of Contract Time. Substantial Completion of the Project, as required by Document 00700, requires that the following portions of the Work must be operational and ready for the District's continuous use as intended:

PPWTP Filter Nos. 1, 2, and 3 are usable for water production after media replenishment. Install and prepare District approved laboratory sampling of filter media. District will handle disinfection. Complete core sampling to confirm media design depths for each filter cell.

2.3 Final Completion

Portions of the Work not essential to the system operation, which can be completed without interruption of system operations, may be completed after the Work is accepted as Substantially Complete, and may include the following items: Submit for approval filter coring report for PPWTP.

2.4 Damages for Delays

In accordance with the provisions of Section 00700, Liquidated Damages for the period of time that any portion of the work remains unfinished after the time fixed for an interim milestone and/or Substantial Completion in Document 00800-2.1. **Time Allowed for Completion**, as modified by extensions of time granted by the District, it is understood and agreed by the Contractor and the District that the Contractor shall pay the District the damages listed below. These measures of liquidated damages shall apply cumulatively and except as provided below, shall be presumed to be the damages suffered by District resulting from delay in completion of the Work.

<u>Item</u>	<u>Dollars Per Day Liquidated Damages</u>
Final Completion	\$250
Substantial Completion	\$600

2.5 Licenses, permits, taxes, and fees

2.5.A Contractor is responsible for all regulations, licenses, permits and fees in accordance with Document 00700, paragraph 13. Contractor shall develop and plan for all costs for any encroachment permit work, construction water needs, disposal of construction water and/or hydro-static testing, flushing operations through the sanitary sewer system.

2.5.B Zone 7 Water Agency is a wholesale water agency that provides water to the cities of Dublin, Pleasanton, Livermore and unincorporated areas of Alameda County. Zone 7 Water Agency has two treatment plants: the Patterson Pass Water Treatment Plant and the Del Valle Water Treatment Plant. Zone 7 Water Agency also has water production wells and pump stations in the Tri-Valley area. These Zone 7 Water Agency facilities are connected by Zone 7 Water Agency's water transmission system which travels throughout Dublin, Pleasanton and Livermore. While Zone 7 Water Agency has some pipeline easements, Zone 7 Water Agency transmission pipelines and associated facilities are predominantly within the public right-of-way. Therefore, Contractors working for Zone 7 Water Agency are subject to, but not limited to, the following:

1. For work in the City of Dublin, applicable business licenses, encroachment permits, and taxes.
2. For work in the City of Pleasanton, applicable business licenses, encroachment permits, taxes, sewer discharge fees, and construction water.
3. For work in the City of Livermore, applicable business licenses, encroachment permits, taxes, sewer discharge fees, and construction water.
4. For work in unincorporated areas, applicable County of Alameda encroachment permits.
5. For work affecting Dublin San Ramon Services District, applicable encroachment permits, sewer discharge fees, and construction water.
6. For work affecting California Water Service Company in the city of Livermore, applicable encroachment permits.
7. The Contractor shall obtain, as applicable, a permit as required by Cal/OSHA for each of the following:
 - Construction of trenches or excavations that are five feet or more in depth and into which a person is required to descend (or less than five feet if required by Cal/OSHA).
 - Construction or demolition of any building, structure, or scaffolding for falsework more than three stories high, or the equivalent height (36 feet).
 - Erection or dismantling of vertical shoring systems more than three stories high, or the equivalent height (36 feet).
8. Additional permits may be required at Contractor's expense from other companies including, but not limited to, PG&E, AT&T, Sprint, Comcast, Kinder Morgan.

2.5.C. Contractor shall comply with work that is regulated by State and Federal agencies.

3.0 MODIFICATIONS TO DOCUMENT 00550 (NOTICE TO PROCEED – DIVISION 0)

- 3.1 Item 2 – Delete and Insert “NOT USED”.

4.0 MODIFICATIONS TO DOCUMENT 00700 (GENERAL CONDITIONS – DIVISION 0)

- 4.1 Paragraph 2.1B.2 – Delete and insert “NOT USED”.
- 4.2 Paragraph 2.1B.4 – Delete and insert “NOT USED”.
- 4.3 Paragraph 10.2 – Delete and insert “NOT USED”.
- 4.4 16.7.E Labor Compliance – Delete and insert “NOT USED”.

END OF DOCUMENT

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DIVISION 1 GENERAL REQUIREMENTS

SECTION 01100^A

SUMMARY

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes summary of Work including:
1. Summary
 2. Work Covered By Contract Documents
 3. Bid Items and Allowances
 4. Work under Other Contracts
 5. Future Work
 6. Work Sequence
 7. Work Days and Hours
 8. Cooperation of Contractor and Coordination with Other Work
 9. Maintenance, Product Handling, and Protection
 10. Partial Occupancy/Utilization Requirements
 11. Contractor Use of Premises
 12. Lines and Grades
 13. Protection of Existing Structures and Utilities
 14. Damage to Existing Property
 15. Parking
 16. Laydown/Staging Area
 17. Permits
 18. Punch List Verification
 19. Actual Damages for Violations
 20. Unfavorable Construction Conditions
 21. Protection of Water Quality
 22. Work at Site
 23. Construction Site Access
 24. Site Administration

1.2 WORK COVERED BY CONTRACT DOCUMENTS

Work at Patterson Pass Water Treatment Plant (PPWTP) located in Livermore, CA consists of replenishment of anthracite and sand media for Filter Nos. 1, 2, and 3.

- A. Furnish all labor, materials, equipment, services, permits, temporary controls and construction facilities, and all general conditions, general requirements and incidentals required to complete the Work in its entirety as described in the Contract Documents. The Work includes, but is not necessarily limited to the following:
1. PPWTP Filter Nos. 1, 2, and 3 Media Replenishment. Install and test for operations the filter media replenishment of anthracite and silica sand according to the Specifications. Each filter consists of two (2) filter cells 13' wide by 26' long as specified herein. Work shall include review of filter media information and preliminary District coring report, removal and disposal of skimmings of excess fines and contaminants from new media placement.
 2. Core Sample Media Depths. Upon completion of the media replenishment for PPWTP, conduct core sample filter surveillance to confirm depth for anthracite and silica sand meets design depths per Section 13520. Coring locations shall be based on latest Zone 7 surveillance reports PPWTP for gravel profiles for each filter cell. Submit core sample report to District.

Such other items or details not mentioned above, but required by the Drawings and Specifications, shall be performed, placed, constructed, removed, or installed in accordance with the Contract Documents.

- C. Coordination with other contractors working at the Site and its Subcontractors, coordination with local utility owners and the District, and complying with confined space entry requirements, environmental conditions, project startup and testing, site restoration and cleanup. District is not aware of any applicable permits required.
- D. The Work of this Contract comprises construction of all the Work indicated, described in the Specifications, or otherwise required by the Contract Documents.
- E. Unless provided otherwise in the Contract Documents, all risk of loss to Work covered by Contract Documents shall rest with Contractor until Final Acceptance of the Work.
- F. Contractor's use of the premises for Work and storage (staging area) is limited to the areas indicated on Dwgs. B and D of the plans and Specifications.
- G. Contractor shall be solely responsible for all utilities (including without limitation electricity, phone lines, water, gas, etc.) at the Site.
- H. Existing materials and equipment removed and not reused as a part of the Work shall be returned to the District. Contractor shall carefully remove, in a manner to prevent damage, all materials and equipment specified or indicated to be salvaged and reused or to remain the property of District. Contractor shall store and protect salvaged items specified or indicated to be reused in the Work.

1.3 BID ITEMS AND ALLOWANCES

- A. Any Bid Item may be deleted from the Work and Contract Sum, in total or in part, prior to or after award of Contract without compensation in any form or adjustment of other Bid Items or prices therefore.
- B. Payment of all items is subject to provisions of Contract Documents, including without limitation Section 01200 (Measurement and Payment).
- C. For all Bid Items, furnish and install all work indicated and described in Specifications and all other Contract Documents, including connections to existing systems. Work and requirements applicable to each individual Bid Item, or unit of Work, shall be deemed incorporated into the description of each Bid Item (whether Lump Sum, or Unit Price).
- D. Description of Lump Sum Bid Items: Bid items are not intended to be exclusive description of work categories and Bidder shall determine and include in its pricing all materials, labor and equipment necessary to complete each Bid Item as shown and specified:
 1. Mobilization and Demobilization (Bid Item 1). The lump sum price paid under this item shall be full payment for initial mobilization and demobilization at PPWTP (50% to be paid then or as agreed in the Schedule of Values), including payment for all Bonds and Insurance required by Document 00700 (General Conditions), full payment for providing the Safety Plan, SQPP, applicable permits, as required by Document 00550 (Notice to Proceed), Document 00700 (General Conditions), full payment for providing records and submittals, as required by Document 01330 (Submittal Procedures), and site restoration and clean up at Final Completion of Work to be completed (50% to be paid then or as agreed in the Schedule of Values). Mobilization will not be paid until submission of Statement of Value, SQPP, Safety plan, preliminary Project Schedule.
 2. PPWTP Filter Nos. 1, 2, and 3 Media Replenishment (Bid Item 2). The lump sum price paid under this item shall be full payment for the media replenishment according to the Specifications. This item includes all necessary materials, labor, and equipment required to replace existing filter media to the design Specifications. This work includes review of filter media information and preliminary District coring report, removal and disposal of skimmings of contaminants and excess fines from new media.

3. Core Samples for all PPWTP Filters (Bid Item 3). The lump sum price paid under this item shall be full payment for the core samples after media replenishment for a total of three (3) filters according to the Specifications. This item includes all necessary materials, labor, and equipment required to complete core samples according to the Specifications.
4. All Work of Contract Documents Other than Work Separately Provided for Under Other Bid Items (Bid Item 4). The lump sum price paid under this item shall be full payment for all Work required by the Contract Documents but not covered by any other Bid Item. District is not aware of any necessary permits for this project.
5. Extra Work Allowance (Bid Item 5). This is a contingency item for any extra work to be performed at the written request of the District.

E. Allowances:

1. Allowance work from Bid Item 5 shall be done as Change Orders and as specified in Section 01250 (Modification Procedures). Identify Allowance Items (Document 00400 Bid Form) work on the Progress Schedules and on Applications for Payment.
2. The Amount given on Document 00400 (Bid Form) under each Allowance Item is the sum of money set aside for each Allowance Item. These amounts shall be included in the Contract Sum on the Bid Form.
- ~~3.~~ If the cost of work done under any Allowance Item is less than the amount given on the Bid Form under that Allowance Item, the Contract Sum shall be reduced by the difference between the amount given in the Bid Form and the cost of work actually done.

1.4 WORK UNDER OTHER CONTRACTS

Work at the site performed by others includes the following:

- A. Zone 7's Operations and Maintenance
 1. Routine Operations and Maintenance at the PPWTP site are on-going tasks and may be required within the project site during 2018 PPWTP Filter Media Replenishment Project. PPWTP operates continuously to produce treated water to meet water demands. Replenishment shall be conducted on one filter at a time with the other two existing filters available for use.
- B. Chemical deliveries for ferric chloride, sodium hypochlorite, and caustic soda are frequent, averaging up to 10 deliveries per chemical per month at PPWTP. Operating the centrifuge system and sludge handling and disposal operations are also ongoing. Chemical delivery and off-hauling routes need to remain open as shown on Contract Drawing for PPWTP Layout/Staging Area.

1.5 FUTURE WORK

- A. Future filter replenishment may be needed within the next three years. Contractor bid prices shall be in effect subject to adjustment of bid item amounts in accordance with the Engineering News Record (ENR) CCI for San Francisco baseline of September, 2018.

1.6 WORK SEQUENCE

- A. Construct Work in stages and at times to accommodate District operation requirements during the construction period; coordinate construction schedule and operations with District and Engineer.
- B. Comply with any additional construction sequencing and constraints as indicated on the Drawings and as specified. Coordinate all items with the District. Provide a minimum fourteen (14) day notification to Engineer prior to performing each item of work which would impact on the operation of the Treatment Plant or other water production and supply facilities.

1.7 WORK DAYS AND HOURS

- A. Work Days and hours: Work shall be conducted only on Business Days as defined in Section 01420, Monday-Friday inclusive, 8:00 a.m. - 5:00 p.m. local time. Work at the Site on weekends or holidays is not permitted, unless Contractor requests otherwise from District in writing at least 48 hours in advance and District approves in its sole discretion. In the case of Work by Contractor after normal working hours, Contractor shall be responsible for any additional inspection costs incurred by the District. Such costs may be withheld from any succeeding monthly progress payment.
- B. The following are holidays recognized by District and Alameda County:
- a. New Year's Day, January 1;
 - b. Martin Luther King Jr.'s Birthday, third Monday in January;
 - c. Lincoln's Birthday, February 12;
 - d. Presidents' Day, third Monday in February;
 - e. Memorial Day, last Monday in May;
 - f. Independence Day, July 4;
 - g. Labor Day, first Monday in September;
 - h. Veterans' Day, November 11;
 - i. Thanksgiving Day, as designated by the President;
 - j. The Day following Thanksgiving Day;
 - k. Christmas Day, December 25; and
 - l. Each day appointed by the Governor of California and formally recognized by the Alameda County Board of Supervisors as a day of mourning, thanksgiving, or special observance.

Connections to Existing Facilities. Unless otherwise specified or indicated, Contractor shall make all necessary connections to existing facilities, including structures, drain lines, and utilities such as water, sewer, gas, telephone, and electricity. In each case, Contractor shall receive permission from District or the owning utility prior to undertaking connections. Contractor shall protect facilities against deleterious substances and damage.

- C. Treatment Plant Shutdown and Tie-ins to Existing Equipment, Facilities, and Pipelines.
1. Contractor shall execute the Work at PPWTP while the facility is in service. Contractor shall prepare and submit a detailed plan that includes planned sequence of work, milestones, advanced notification for planned work for each filter, and projected times of completions of activities, any anticipated problems, Contractor's supervisory personnel, actions desired of District and staff, and contingency plans at least ten Business Days prior to starting any work. Proposed equipment set-up and staging shall not interfere with ingress or egress of chemical deliveries for ferric chloride, caustic soda, and sodium hypochlorite and sludge handling operations. Contractor shall employ sufficient labor, superintendence, and equipment to complete Work within the specified periods at no additional cost to the District. When required to minimize process interruptions while complying with specified sequencing constrains, Contractor shall provide temporary pumping, power, lighting, controls, instrumentation, and safety devices.
 2. Unless the Contract Documents indicate otherwise, the Contractor shall not remove from service, de-energize, or modify settings for any existing operating tank, pipeline, valve, channel, equipment, structure, road, or any other facility without permission from the District.

1.8 COOPERATION OF CONTRACTOR AND COORDINATION WITH OTHER WORK

- A. Coordinate with District and any District forces, or other contractors and forces, as required by Document 00700 (General Conditions), Article 6.
- B. Constantly review Contract Documents, submittals, changes, and prepare overlay drawings as necessary to avoid conflicts, errors, omissions and untimely construction.
- C. The existing facilities must be kept in continuous operation throughout the construction period except for shutdown times previously agreed upon by District. Scheduling of shutdown times shall be coordinated with District by Contractor in strict accordance with Paragraph 1.7, Work Days and Hours and Section 01140

(Coordination and System Outage Request). Contractor will not be permitted to schedule shutdowns on Fridays.

1.9 MAINTENANCE, PRODUCT HANDLING, AND PROTECTION

- A. Transport, deliver, handle, and store materials and equipment at the Site in such a manner as to prevent the breakage, damage or intrusions of foreign matter or moisture, and otherwise to prevent damage.
- B. Hazardous substance compliance: Provide District with copies of the OSHA Material Safety Data Sheets (MSDS) for all products containing a hazardous substance, examples: Adhesives, paints, sealants, and the like.
- C. Packaging: Provide packaged material in manufacturer's original containers with seals unbroken and labels intact until incorporated into the Work.
- D. Remove all damaged or otherwise unsuitable material and equipment promptly from the Site.
- E. Protection: Protect all finished surfaces.
- F. Asbestos Removal: If, during the progress of the Work, suspected asbestos-containing products are identified, Contractor shall stop work in the affected area and engage an asbestos removal Subcontractor to verify the materials and, if necessary, encapsulate, enclose, or remove and dispose of all asbestos in accordance with current regulations of the Environmental Protection Agency and the U. S. Department of Labor – Occupational Safety and Health Administration, the state asbestos regulating agency, and any local government agency. Payment for such work will be made by Change Order.

Asbestos Removal Subcontractor's Qualifications: The Subcontractor for asbestos removal shall be regularly engaged in this type of activity and shall be familiar with the regulations that govern this work. The Subcontractor shall demonstrate to the satisfaction of District that it has successfully completed at least three asbestos removal projects, which it has the necessary staff and equipment to perform the work, and that it has an approved site for disposal of the asbestos. Liability insurance covering the asbestos abatement work shall be provided as specified in the Supplementary Conditions.

Asbestos Removal Methods: The asbestos removal Subcontractor shall submit a work plan of its proposed removal procedure to District before beginning work and shall certify that the methods are in full compliance with the governing regulations. The work plan shall cover all aspects of the removal, including health and safety of employees and building occupants, hygiene facilities, employee certification, clearance criteria, transportation and disposal, enclosure techniques, and other techniques appropriate for the proposed work.

- G. Cost of maintenance of systems and equipment prior to Final Acceptance will be considered as included in prices bid and no direct or additional payment will be made therefor.

1.10 PARTIAL OCCUPANCY/UTILIZATION REQUIREMENTS

- A. Allow District to take possession of and use any completed or partially completed portion of the Work during the progress of the Work as soon as is possible without interference to the Work.
- B. Possession, use of Work, and placement and installation of equipment by District shall not in any way evidence the completion of the Work or any part of it.
- C. Contractor shall not be held responsible for damage to the occupied part of the Work resulting from District occupancy.
- D. Make available, in areas occupied, on a 24-hour per day and 7-day per week basis if required, any utility services in condition to be put in operation at the time of occupancy.
 - 1. Responsibility for operation and maintenance of said equipment shall remain with Contractor.

2. Make, and District shall certify, an itemized list of each piece of equipment so operated with the date operation commences.
 3. Itemized list noted above shall be basis for commencement of warranty period for equipment.
 4. District shall pay for utility cost arising out of occupancy by District during construction.
- E. Use and occupancy by District prior to acceptance of Work does not relieve Contractor of its responsibility to maintain insurance and bonds required under the Contract until entire Work is completed and accepted by District.
- F. Prior to date of Final Acceptance of the Work by District, all necessary repairs or renewals in Work or part thereof so used, not due to ordinary wear and tear, but due to defective materials or workmanship or to operations of Contractor, shall be made at expense of Contractor, as required in Document 00700 (General Conditions).
- G. Use by District of Work or part thereof as contemplated by this Section 01100 shall in no case be construed as constituting acceptance of Work or any part thereof. Such use shall neither relieve Contractor of any responsibilities under Contract, nor act as waiver by District of any of the conditions thereof.

1.11 CONTRACTOR USE OF PREMISES

- A. Confine operations at Site to areas permitted by Contract Documents, permits, ordinances, and laws.
- B. Do not unreasonably encumber Project Site with materials or equipment.
- C. Assume full responsibility for protection and safekeeping of products stored on premises.
- D. Move any stored products that interfere with operations of District or other contractor.
- E. Parking, storage, staging, and work areas shall be coordinated with the District, and comply with all other Contract documents requirements.

1.12 LINES AND GRADES

- A. All Work shall be done to the lines, grades, and elevations indicated on the Drawings.
- B. District shall provide basic horizontal and vertical control points to be used as datums for the Work. All additional survey, layout, and measurement work shall be performed by Contractor as a part of the Work.
- C. Contractor shall keep District informed, a reasonable time in advance, of the times and places at which it wishes to do Work, so that any checking deemed necessary by District may be done with minimum inconvenience to District and minimum delay to Contractor.
- D. Contractor shall remove and reconstruct Work which is improperly located.

1.13 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

Contractor shall refer to Section 01715 (Protection of Existing Facilities and Properties).

1.14 DAMAGE TO EXISTING PROPERTY

Contractor shall refer to Section 01530 (Protection of Existing Facilities and Properties).

1.15 PARKING

Contractor shall provide and maintain suitable parking areas for the use of all construction workers and others performing work or furnishing services in connection with the Project, as required to avoid any need for parking personal vehicles where they may interfere with public traffic, District's operations, or construction activities.

1.16 LAYDOWN/STAGING AREA

Contractor shall utilize the area shown on the Drawings or designated by the Facility Supervisor for storage of all construction materials.

1.17 PERMITS

Contractor shall refer to Document 00700 (General Conditions) and Document 00800 (Supplementary Conditions - Division 0). District is not aware of permits required for work.

1.18 PUNCH LIST VERIFICATION

A punch list examination will be performed upon substantial completion of work. One follow up review of punch list items for each discipline will be provided. If further site visits are required to review punch list items due to incompleteness of the work by contractor, contractor shall reimburse district for these visits.

1.19 ACTUAL DAMAGES FOR VIOLATIONS

- A. In addition to damages which are impracticable or extremely difficult to determine, for which liquidated damages will be assessed as described in paragraph 15.5 of Document 00700 (General Conditions), District may incur actual damages, including fines imposed by any regulatory agency resulting from loss of use of any permit described in this Section 01100, or from use in violation of legal or regulatory requirements where the violations result from Contractor's activities. Continuous operation of District's active production and distribution facilities or sites in compliance with legal or regulatory requirements is essential to avoid violating applicable regulations or permits requirements. Violations or threatened violations may subject the District to fines and/or other costs or civil liabilities.
- B. Contractor shall be liable for and shall pay District the amount of any actual losses in addition to liquidated damages or other remedies provided by the Contract Documents.
- C. The amount of liquidated damages provided in paragraph 15.5 of Document 00700 (General Conditions) and Document 00800 (Supplementary Conditions – Division 0) is not intended to include, nor does the amount include, any damages incurred by District for reasons other than those listed in that paragraph. Any money due or to become due to Contractor may be retained by District to cover both the liquidated and the actual damages described above and, should such money not be sufficient to cover such damages, District shall have the right to recover the balance from Contractor or its sureties.

1.20 UNFAVORABLE CONSTRUCTION CONDITIONS

During unfavorable weather, wet ground, or other unsuitable construction conditions, Contractor shall confine its operations to Work which will not be affected adversely by such conditions. No portion of the Work shall be constructed under conditions which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by Contractor to perform the Work in a proper and satisfactory manner.

1.21 PROTECTION OF WATER QUALITY

Contractor shall ensure that the water quality of the District's water supply facilities located at the project sites are protected from contamination at all times during construction. Protective measures shall include, but not be limited

to, securing covers on storage facilities and securing or removing containers for contaminants from the Site when Contractor's forces are not present and at the end of each workday.

1.22 WORK AT SITE

The project includes modifications of or additions to existing water supply facilities that serve the public. It is imperative that existing facilities continue to operate throughout the duration of contract Work. The Contractor shall carry out construction activities in a manner that does not disrupt facility operations at the Site.

Contractor shall schedule all construction activities that affect the operation of the facilities with District. The Contractor shall provide all labor, equipment, and materials required to maintain the operation on a temporary basis whenever usual facility activities must be interrupted by work on this project. Any temporary operating arrangement shall be scheduled with and approved by the District. The Contractor shall be responsible for any and all costs, including attorneys' fees, incurred as a result of any violation or threatened violation of any permit requirements where the violation or threatened violation arises out of or in connection with Contractor's construction activities. This remedy is in addition to any other remedy existing under this contract.

Contractor is referred to paragraph 1.20 of this Section 01100 for information about actual damages.

1.23 CONSTRUCTION SITE ACCESS

Contractor shall at all times limit access to the Site to necessary personnel only. All personnel associated with construction of the Project shall enter the Site through access gate, at the location indicated on the Drawings. Access for construction personnel shall be limited to 8:00 a.m. to 5:00 p.m. local time. All mail and deliveries (Federal Express, equipment, etc.) shall be sent to a separate address specifically arranged by Contractor for the Project.

1.24 SITE ADMINISTRATION

Contractor shall be responsible for all areas of the Site used by it and by all Subcontractors in the performance of the Work. Contractor shall exert full control over the actions of all employees and other persons with respect to the use and preservation of property and existing facilities, except such controls as may be specifically reserved to District or others. Contractor shall have the right to exclude from the Site all persons who have no purpose related to the Work or its inspection, and may require all persons on the Site (except District's employees) to observe the same regulations as Contractor requires of its employees.

PART 2 PRODUCTS

2.1 PRODUCTS ORDERED IN ADVANCE – NOT USED

2.2 DISTRICT-FURNISHED PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

END OF SECTION

SECTION 13520A

PPWTP EXISTING FILTER MEDIA REPLENISHMENT

PART 1 – GENERAL

1.0 SCOPE OF WORK

- A. Furnish all labor, materials, equipment, and incidentals required, install, and replenishment of anthracite and sand media for PPWTP Filter Nos. 1, 2, and 3 (total of three filters), where each filter consists of two (2) filter cells 13' wide x 26' long as specified herein. District Operations will handle disinfection prior to placing all filters back in-service.
- B. Contractor shall also furnish coring measurements and report, minimum ~~three-five~~ measurements per filter cell (one in each corner and one in the center) to document meeting design depth of anthracite and sand layers herein Section 13520, Paragraph 2.0, Items E and F for all existing filters at PPWTP. Contractor shall use the latest Zone 7 surveillance reports at PPWTP for gravel profiles for each filter cell to confirm core location is located where there is no existing gravel surface disturbance.

1.1 QUALITY ASSURANCE

A. Reference Standards:

1. American National Standards Institute (ANSI) & NSF International:
 - a. NSF/ANSI Standard 61 – Drinking Water System Components – Health Effects
2. American Water Works Association (AWWA)
 - a. AWWA B100, Filtering Material
3. American Society for Testing and Materials (ASTM):
 - a. ASTM C 33 – Specification for Concrete Aggregates.
 - b. ASTM C 123 – Test Method for Lightweight Particles in Aggregate.
 - c. ASTM C 128 – Test Method for Specific Gravity and Absorption of Fine Aggregate.
 - d. ASTM D 409 – Test Method for Grindability of Coal by the Hardgrove-Machine Method.
 - e. ASTM D 3174 – Test Method of Ash in the Analysis Sample of Coal and Coke from Coal.
 - f. ASTM D 3175 – Test Method for Volatile Matter in the Analysis Sample of Coal and Coke.
 - g. ASTM E 11 – Specification for Wire Cloth and Sieves for Testing Purposes.

B. Testing

1. Filter media material shall be sampled and tested in accordance with AWWA B100 standards by an independent testing laboratory not associated with the supplier, prior to media shipment and after media placement. The supplier shall submit to the Owner, for approval, the name of the testing laboratory to be used for media analysis. The supplier shall bear the costs of all media analysis costs for tests performed.
2. The laboratory testing, PRIOR TO SHIPMENT BY AT LEAST TEN WORKING DAYS, shall include the following information for each of the submitted materials:
 - a. Filter Sand
 1. Sieve analysis (particle size distribution), effective size, and uniformity coefficient
 2. Specific Gravity
 3. Acid Solubility
 4. ~~Hardness based on the MOH scale~~
 5. ~~Shape~~

- b. Anthracite
 - 1. Sieve analysis (particle size distribution), effective size, and uniformity coefficient
 - 2. Specific Gravity
 - 3. Acid Solubility
 - 4. Hardness based on the MOH scale
 - ~~5. Shape~~

~~3. The laboratory testing, AFTER MEDIA INSTALLATION, shall be performed prior to placing the filter in service and will include the following information for each of the submitted materials:~~

- ~~a. Filter Sand

 - ~~1. Effective Size~~
 - ~~2. Uniformity Coefficient~~
 - ~~3. Hardness based on the MOH scale~~
 - ~~4. Shape~~~~
- ~~b. Anthracite

 - ~~1. Effective Size~~
 - ~~2. Uniformity Coefficient~~
 - ~~3. Hardness based on the MOH scale~~
 - ~~4. Shape~~~~

PART 2 – PRODUCTS

2.0 MATERIALS

- A. Filter media replenishment for existing PPWTP Filter Nos. 1, 2, and 3 (total of three filters) shall include anthracite and silica sand.
- B. All media shall meet the requirements of AWWA B100.
- C. All media shall have NSF 61 certification.
- D. Submit proper documentation showing NSF-61 certification of all filter media to be supplied.

E. Sand – shall be silica sand composed of hard, durable, uncoated, dense grains that will resist degradation during handling and use. The filter sand shall be thoroughly washed and screened, and shall contain no more than a total of one percent of clay, loam, and dust; shall not be contaminated with dirt, organic impurities or other foreign materials, and shall meet the following specifications:

Type	Silica Sand
Depth for PPWTP filters	12"
Skimming Allowance	5%
Effective Size	0.50-0.55 mm
Uniformity Coefficient	≥ 1.45, ≤ 1.55
Specific Gravity	2.60 to 2.65
Acid Solubility	≤ 2.5%
Elevation from top of clay tile block	12" – 24"

F. Anthracite – filter anthracite shall be composed of hard, durable anthracite grains. The anthracite shall be free from any significant amounts of iron sulfides, clay, shale, dust, dirt, silt, organic impurities or other foreign materials, and meet the following specifications:

Depth for PPWTP filters only	20"
Skimming Allowance	5%
Effective Size	1.05 – 1.15 mm
Uniformity Coefficient	≥ 1.45, ≤ 1.55
Average Apparent Specific Gravity	1.65 ± 0.05
Hardness	≥ 3.20 on MOH's Scale
Acid Solubility	≤ 2.5%
Elevation from top of clay tile block	24" – 44"

PART 3 - EXECUTION

3.0 INSTALLATION FOR EXISTING PPWTP FILTER NOS. 1, 2, and 3

The anthracite and silica sand shall be as specified in Paragraph 2.0 for all PPWTP filters. Based on the District's filter coring report completed in March, 2018, the estimated replenishment depth of media in inches for each existing PPWTP filter is listed in the tables below.

While the District strives to make the media replenishment depth information in the contract as accurate as possible, the District makes no claims, promises, or guarantees about the accuracy, completeness, or adequacy of the contents presented, and expressly disclaims liability for errors and omissions in the contents. The Contractor has the option to perform additional coring samples at their own cost as necessary to meet the design depth (thickness) of anthracite and sand layers herein per Section 13520, Paragraph 2.0, Items E and F.

Replenishment work shall be coordinated with District Operations on sequential work for any designated filter. Two existing filters shall remain in operation at all times. District plans to execute current "lock-out, tag-out" procedures to isolate designated filter while keeping the remaining filters in-service, as necessary. District anticipates two to three days downtime for disinfection before issuing the next filter for replenishment. This includes time to disinfect a replenished filter, take bacteriological samples, return the completed filter to service, and ready the next filter for Contractor.

Existing PPWTP Filter Nos. 1, 2, 3:

Filter No.	Sand Replenishment - Inches	Sand Replenishment - Inches	Anthracite Replenishment - Inches	Anthracite Replenishment - Inches
	Cell A	Cell B	Cell A	Cell B
1	3.0	2.0	2.0	6.0
2	1.0	3.0	6.0	6.0
3	5.0	2.0	6.0	7.0

A. Scraping

The new filter media shall be transported, delivered, and placed in accordance with manufacturer's instructions and AWWA B100. Replenished media shall be backwashed and scraped at least two times. Zone 7 will backwash three times between each scraping. Scraping shall be repeated as many times as necessary to remove fine material and any organic material such as wood.

If additional filter media are required following the initial scraping, sufficient media shall be added before the final scraping operation. Adequate filter media shall be added to anticipate the final scraping.

4.0 WORK SEQUENCING AND SCHEDULING

Contractor shall submit a work plan for District approval that includes completing filter media replenishment of the existing filter media at PPWTP prior to Substantial Completion. Work plan shall include schedule for sequentially replenishing each existing PPWTP filter while the two other filters remain in operation. Work Plan shall also show layout of equipment used for replenishment to minimize duration for any traffic blockage of access roads for chemical fill trucks, construction equipment, and maintenance vehicles. Contractor shall allow for road access between the Ultrafiltration (UF) Plant Building and the filters structure at all times for any chemical delivery trucks or maintenance vehicles.

END OF SECTION