ADDENDUM NO. 4

TO: ALL CONTRACT DOCUMENT HOLDERS OF RECORD
   ALL PROSPECTIVE BIDDERS

FROM: CDM SMITH INC.
      260 WEST EXCHANGE STREET, SUITE 300
      PROVIDENCE, RHODE ISLAND 02903
      PHONE: (401) 751-5360

DATE ISSUED: JUNE 5, 2018

RE: NEW BEDFORD, MASSACHUSETTS
    HIGH HILL RESERVOIR REHABILITATION
    DWSRF-4214
    BID NO. 18450518

BID OPENING DATE: JUNE 12, 2018 AT 3:00 PM

BID OPENING LOCATION: PURCHASING DEPARTMENT
                       CITY HALL, ROOM 208
                       133 WILLIAM STREET
                       NEW BEDFORD, MASSACHUSETTS 02740

LAST WRITTEN QUESTIONS DUE: MAY 27, 2018

This Addendum No. 4, including all referenced attachments, modifies, amends, and supplements designated parts of the Contract Documents to the above-referenced project and shall be part of the Contract Documents as provided in the “Instructions To Bidders” for the above-referenced project.

Acknowledge receipt of this Addendum by inserting its number and date on page 00300-1 of the Bid Form. Failure to do so may subject the Bidder to disqualification.

The Contract Documents are hereby modified, amended and supplemented as follows:
ATTACHMENTS
The following attachments are included with this addendum:

1. Revised Specification Section 00300 – Bid Form.
2. Revised Specification Section 01025 – Measurement and Payment.

GENERAL
1. The bid date has been extended to June 12, 2018. The time and place remain the same.

2. Changes and modifications in revised Specification sections are generally shown in bold/italics. Changes and modifications to Drawings are generally bubbled. This has been done for contractors’ and potential bidders’ convenience during review of the revised documents. It is not warranted that all changes, modifications, revisions, deletions or additions are bold/italicized or bubbled. All potential bidders should carefully review all revised documents in their entirety.

SPECIFICATIONS
1. SECTION 00200 – INVITATION TO BID: On Page 00200-1, 1st paragraph, 4th line, REPLACE “June 11, 2018” with “June 12, 2018”.

2. SECTION 00300 – BID FORM: REPLACE Section 00300 – Bid Form in its entirety with the attached revised Section 00300 – Bid Form.

3. SECTION 01025 – MEASUREMENT AND PAYMENT: REPLACE Section 01025 – Measurement and Payment with the attached revised Section 01025 – Measurement and Payment.

4. SECTION 01014 – SUGGESTED CONSTRUCTION SEQUENCE AND SPECIAL WORK REQUIREMENTS: At the end of Paragraph 1.11.C.2 on Page 01014-12, INSERT the following sentence:

“The specified line stops are needed to remove and replace existing valves with new valves, piping and fittings at Area “B”.”
5. **SECTION 01014 – SUGGESTED CONSTRUCTION SEQUENCE AND SPECIAL WORK REQUIREMENTS:** **INSERT** the following new paragraph 1.10.A.9 on Page 01014-11:

   “9. The Owner will accept for disposal water in High Hill Reservoir dewatered below elevation 197 feet at no cost to the Contractor at the Owner’s septage receiving facility located at 1103 Shawmut Avenue, New Bedford, Massachusetts. The current normal hours of operation of this facility are Monday through Friday open from 6:00 AM to 9:00 PM (except on Tuesdays when the facility is closed from 7:30 AM to 10:00 AM); Saturday open from 6:00 AM to 1:00 PM; and closed on Sundays. To not inhibit the normal operations of this facility, the Contractor will only be allowed to dispose of the water at this facility during the hours of 5:00 PM to 9:00 PM and 6:00 AM to 7:00 AM during off-peak times (Monday through Friday) and will not be allowed to dispose of water at this facility on Saturdays or Sundays. The disposal of water at this facility, at no cost to the Contractor, is for the convenience of the Contractor and the Owner reserves the right to revoke this privilege at any time without cause or reason with no change in contract price or extension of the schedule. Contractor shall coordinate disposal with the Engineer and Owner and shall not inhibit the operations of this facility in any way.”

6. **SECTION 01300 – SUBMITTALS:** **REPLACE** Paragraph 1.03.A.13 on Page 01300-2 in its entirety with the following revised paragraph:

   “13. American Iron and Steel (when required by the Contract).”

7. **SECTION 02605 – PRECAST CONCRETE MANHOLES AND STRUCTURES:** **INSERT** the following sentence at the beginning of Paragraph 2.01.A.1 on Page 02605-2:

   “The wall thickness of all precast concrete manhole sections shall be in accordance with ASTM 478 and meet the design requirements specified herein.”

8. **SECTION 02901 – MISCELLANEOUS WORK AND CLEANUP:** **REPLACE** Paragraph 1.01.C.10 on Page 02901-1 in its entirety with the following revised paragraph:

   “10. Protection of existing water system facilities during construction and all other miscellaneous and incidental work needed and required as specified in Section 01014, including the specified TV inspections of the existing drain lines.”

9. **SECTION 15102 – BUTTERFLY VALVES:** **INSERT** the following new Paragraph 2.03.C immediately following Paragraph 2.03.B on Page 15102-6:

   “C. All valve stem assemblies, universal joints and stem guides shall be 316 stainless steel.”
DRA WINGS

1. DRAWINGS M-4 – VALVE INSTALLATION DETAILS: REPLACE the Recessed Nut Gate Operator Detail in its entirety with the attached revised Recessed Nut Gate Operator Detail.

2. DRAWING S-1 – STRUCTURAL REPAIRS AND MODIFICATIONS TOP PLAN – SOUTH BASIN: In the heading description for Type 6 repairs, REPLACE “Item 14” with “Item 13G.”

3. DRAWING S-1 – STRUCTURAL REPAIRS AND MODIFICATIONS TOP PLAN – SOUTH BASIN: In the heading description for Type 12 repairs, REPLACE “Detail E” with “Detail F.”

4. DRAWING S-2 – STRUCTURAL REPAIRS AND MODIFICATIONS TOP PLAN – NORTH BASIN: In the heading description for Type 12 repairs, REPLACE “Detail E” with “Detail F.”

5. DRAWING S-4 – STRUCTURAL REPAIRS AND MODIFICATIONS REPAIR DETAILS II: In Detail M – Eave Closure, add the following material requirements for the new replacement eave closure:

   “Solid EPDM Rubber Expansion Seal
   70% Hardness (ASTM D2240)
   Elongation Break (%) 200 (min.) (ASTM D412)
   UV- No cracks or crazing
   Minimum thickness to match existing”

6. DRAWING S-4 – STRUCTURAL REPAIRS AND MODIFICATIONS REPAIR DETAILS II: In Detail M – Eave Closure, add the following typical photograph of the existing eave closure:
WRITTEN QUESTIONS SUBMITTED

1. **QUESTION/COMMENT:** Drawing S-1 Type 6 Repairs reference Pay Item #14. Please confirm this should be paid under Item #13G

   **RESPONSE:** The Bid Documents have been revised in this addendum.

2. **QUESTION/COMMENT:** Drawing S-1 Type 12 Repairs reference Detail E. Please confirm this should be Detail F.

   **RESPONSE:** The Bid Documents have been revised in this addendum.

3. **QUESTION/COMMENT:** What is the chlorine residual in the reservoir?

   **RESPONSE:** Typical chlorine residuals (recorded on June 4, 2018) for High Hill Reservoir are as follows:

   - Inlet Structure – 1.54 mg/L
   - Outlet Structure – 1.30 mg/L
   - North 36-inch Transmission Main – 1.98 mg/L (downstream of the chloramination facility)
   - South 36-inch Transmission Main – 1.70 mg/L (downstream of the chloramination facility)

   Note that these are typical residuals and vary seasonally with changes in weather/temperature.

4. **QUESTION/COMMENT:** What permits are needed?

   **RESPONSE:** Permits are specified in the relevant Specification sections.

5. **QUESTION/COMMENT:** What is the charge for water? Electricity? Can we use existing hydrants?

   **RESPONSE:** See Specification Section 01046 – Control of Work. There is electricity in the inlet and outlet structures, but it is not guaranteed that it is sufficient for contractors’ needs and therefore contractor shall make all arrangements for their power needs.
6. **QUESTION/COMMENT:** Can we remove the top of the reservoir (roof) for access? Can we remove roof panels during construction to lower materials and equipment into the drained reservoir?

   **RESPONSE:** Yes, roof panels can be removed to lower materials and equipment provided the roof is restored by the contractor to a condition equal to or better than what existed prior to construction. All costs for removing and replacing sections of the roof and the contractors means and methods should be included by the contractor in their bid prices for the work.

7. **QUESTION/COMMENT:** Any requirements for sediment removal?

   **RESPONSE:** Analytical data reports are provided in the appendices of the Specifications and Specification Section 02125 – Transportation and Disposal of Material includes requirements for transportation and disposal.

8. **QUESTION/COMMENT:** Are there coatings on the reservoir walls or floor? And if so will they need to be removed?

   **RESPONSE:** There is an existing 4-inch thick concrete liner and it is not specified to be removed.

9. **QUESTION/COMMENT:** Who will be paying for testing for bacteria, concrete, etc.?

   **RESPONSE:** Contractor should plan to pay for all testing and include all such costs in their bid price.

10. **QUESTION/COMMENT:** When can we dig test pits to get the O.D. of the pipe? Does CDM have pipe O.D. on file?

    **RESPONSE:** There is no existing information available on pipe outside diameters and the contractor is responsible for verifying the outside diameters for all needed purposes. Test pits should be planned and excavated by contractor as required based on contractor’s proposed sequence of work and schedule for procuring needed materials. See Section 01014 – Suggested Sequence of Construction and Special Work Requirements for overall scheduling considerations.

11. **QUESTION/COMMENT:** What are the parameters for disposal of sediment?

    **RESPONSE:** See Specification Section 02125 – Transportation and Disposal of Material.
12. **QUESTION/COMMENT:** Data on sediment is from 2013/2014, have chemical treatments changed that would affect this information?

**RESPONSE:** No, there have been no changes since that time that are anticipated to affect this information.

13. **QUESTION/COMMENT:** Where are chloramines/chlorine added into the water? What is the residual?

**RESPONSE:** See Specification Section 01014 – Suggested Contraction Sequence and Special Work Requirements, Paragraph 1.07, for a description of existing site conditions and operations, including where chloramines are added to the water. See answer to previous question for typical chlorine residuals.

14. **QUESTION/COMMENT:** Section 01014 Paragraphs 1.11 C 15 and 16B discuss dewatering to elevation 197 and removing and disposing of the remaining water and sediment at the bottom of the reservoir. If there is 4000 cubic yards (cy) of sediment, that means there is more than 2 million gallons of water to dispose of. The sediment can't be disposed of unless it is separated from the water and dried, a rather daunting but doable task, but there is no item for disposal of the water. Can the water be treated on site and disposed where the rest of the dewatering was discharged? Also, there is no analytical on the water in order to characterize it for disposal if necessary. Please consider an item for water disposal along with some disposal criteria so that disposal costs can be fairly estimated.

**RESPONSE:** The Bid Documents have been revised to include a bid item for disposal of the water below elevation 197 feet. The Owner will accept this water for disposal at no cost to the contractor at the Owner’s septage receiving facility located at 1103 Shawmut Avenue, New Bedford, Massachusetts. The current normal hours of operation of this facility are Monday through Friday open from 6:00 AM to 9:00 PM (except on Tuesdays when the facility is closed from 7:30 AM to 10:00 AM); Saturday open from 6:00 AM to 1:00 PM; and closed on Sundays. To not inhibit the normal operations of this facility, the contractor will only be allowed to dispose of the water at this facility during the hours of 5:00 PM to 9:00 PM and 6:00 AM to 7:00 AM during off-peak times (Monday through Friday) and will not be allowed to dispose of water at this facility on Saturdays or Sundays. The disposal of water at this facility, at no cost to the contractor, is for the convenience of the contractor and the Owner reserves the right to revoke this privilege at any time without cause or reason with no change in contract price or extension of the schedule. Contractor shall coordinate disposal with the Engineer and Owner and shall not inhibit the operations of this facility in any way.
15. **QUESTION/COMMENT:** Considering that the sediment in the reservoir will be covered with a foot of water, it will be nearly impossible to quantify it by the cubic yard for payment. Please consider changing the sediment disposal unit to tons which can be tallied from certified scale tickets.

**RESPONSE:** The Bid Documents (Section 00300 – Bid Form and Section 01025 – Measurement and Payment) have been revised in this addendum.

16. **QUESTION/COMMENT:** Drawing S-1 Type 6 Repairs (Remove & Replace Eave Closure Seals) reference Pay Item #14. Pay Item #14 in the Bid Form is “Disinfect High Hill Reservoir”. Based on the description of the Type 6 Repair it is assumed that the applicable Pay Item should be 13G – Replacement of eave closure around the roof edge of High Hill Reservoir to completely seal the reservoir where it meets the side wall (Est Qty – 2,000 LF). Based on the locations of Repairs 6A, 6B, 6D & 6D along with info on Detail M it is assumed that Detail M should be applicable for the referenced 2,000 LF associated with Pay Item #13G. Please review and confirm.

**RESPONSE:** Drawing S-1 – Structural Repairs and Modifications Top Plan – South Basin has been revised in this addendum to reflect the correct Bid Item. Detail M is applicable for the Type 6 Repairs.

17. **QUESTION/COMMENT:** Contract Plans/Items call for the removal and replacement of the existing rubber eave closure seal material. Contract documents do not provide any material requirements/specifications for this scope of work. Please review and advise.

**RESPONSE:** The existing eave closure shall be replaced with the following or approved equal:

- Solid EPDM Rubber Expansion Seal
  - 70% Hardness (ASTM D2240)
  - Elongation Break (%) 200 (min.) (ASTM D412)
  - UV - No cracks or crazing
  - Minimum thickness to match existing

18. **QUESTION/COMMENT:** Type 2 Repairs (Sheet S-3 Detail C) call for the repair of the spalled concrete at beam supports (sections approx. 16” in height). Please confirm Spec 03301 Table 1 are the applicable material requirements for the new concrete to be placed at these repairs.

**RESPONSE:** Yes, that is correct.
19. **QUESTION/COMMENT:** From the analysis, where can the sediment removed from the reservoir be disposed of? Can it be buried on-site and topped with good material? Is it considered hazardous and needs to comply with DEP disposal regulations?

**RESPONSE:** No, the sediment cannot be buried on-site and topped with material. It must be removed and disposed of off-site and it is the responsibility of the contractor to remove and dispose of the material. Analytical data reports are provided in the appendices of the Specification and Specification Section 02125 – Transportation and Disposal of Material includes requirements for transportation and disposal. Based on the analytical data reports provided in the appendices of the Specifications and testing of the materials required of the contractor as specified in Section 02125, the material shall be removed and disposed of by the contractor in accordance with the requirements of Section 02125 and any and all regulatory requirements.

20. **QUESTION/COMMENT:** The butterfly valves in the inlet and outlet structures are shown with extension stems and universal joints. They will need to have an integral side-mounted AWWA gear operator rated for continuous submergence for the depth required with food-grade grease inside them.

**RESPONSE:** It is the responsibility of the contractor to provide the butterfly valves with operators, extension stems and all accessories for the application as shown on the Drawings and to meet all conditions of the intended service (submergence depth, etc.). The materials of construction for the stem assemblies, universal joints and stem guides should be 316 stainless steel and stem guides should be used every 7 to 10 feet of vertical run of the stem.

- END OF ADDENDUM NO. 4 -
BID FORM
TO
CITY OF NEW BEDFORD, MASSACHUSETTS
WATER SYSTEM IMPROVEMENTS
HIGH HILL RESERVOIR REHABILITATION
PROJECT NO. DWSRF-4214
BID NO. 18450518

The undersigned declares that the only persons or parties interested in this Bid as principals are as stated; that the Bid is made without any collusion with other persons, firms, or corporations; that all the Contract Documents as prepared by CDM Smith, 260 West Exchange Street, Suite 300, Providence, Rhode Island 02903 and dated May 2018 have been carefully examined; that the undersigned is fully informed in regard to all conditions pertaining to the Work and the place where it is to be done, and from them the undersigned makes this Bid. These prices shall cover all expenses incurred in performing the Work required under the Contract Documents, of which this Bid Form is a part.

The time period for holding bids, where Federal approval is not required is 30 days, Saturdays, Sundays and legal holidays excluded, after the opening of bids and where Federal approved is required, the time period for holding bids is 30 days, Saturdays, Sundays and holidays excluded after Federal approval.

The Bid Security accompanying this Bid shall be in the amount of five percent of the Bid.

If a Notice of Award accompanied by at least six unsigned copies of the Agreement and all other applicable Contract Documents is delivered to the undersigned within thirty days, excluding Saturdays, Sundays, and legal holidays, after the actual date of the opening of the Bids, the undersigned will within five days, excluding Saturdays, Sundays, and legal holidays, after the date of receipt of such notification, execute and return all copies of the Agreement and all other applicable Contract Documents to Owner. The premiums for all Bonds required shall be paid by Contractor and shall be included in the Contract Price. The undersigned Bidder further agrees that the Bid Security accompanying this Bid shall become the property of Owner if the Bidder fails to execute the Agreement as stated above.

The Bid Security shall be sealed in a separate envelope from the Bid and then attached to the envelope containing the Bid.

The undersigned hereby agrees that the Contract Time shall commence twenty days following the Effective Date of the Agreement and to fully complete the Work within 1,095 Calendar Days and in accordance with the terms as stated in the Agreement. The undersigned further agrees to pay OWNER, as liquidated damages, $2,000 per day for each calendar day beyond the Contract Time Limit or extension thereof that the Work remains incomplete, in accordance with the terms of the Agreement.

The undersigned acknowledges receipt of addenda numbered:

In accordance with the above understanding, the undersigned proposes to perform the Work, furnish all materials and complete the Work in its entirety in the manner and under the conditions required at the prices listed as follows:
<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>ESTIMATED QUANTITY</th>
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<th>UNIT BID PRICE IN FIGURES</th>
<th>AMOUNT IN FIGURES</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Furnish and install all work (including all materials, tools, equipment, labor and all other incidentals and required work) to construct and install new valves for Valve Work Area No. A on Drawing C-3 (Enlarged Plan &quot;A&quot; on Drawing C-4).</td>
<td>N/A</td>
<td>$</td>
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<tr>
<td>2</td>
<td>1</td>
<td>Furnish and install all work (excluding line stops, but including all materials, tools, equipment, labor and all other incidentals and required work) to construct and remove and replace valves for Valve Work Area No. B on Drawing C-3 (Enlarged Plan &quot;B&quot; on Drawing C-4).</td>
<td>N/A</td>
<td>$</td>
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<tr>
<td>3</td>
<td>1</td>
<td>Furnish and install all work (including all materials, tools, equipment, labor and all other incidentals and required work) to construct and install the new 24-inch water main from the existing 36-inch High Hill Reservoir inlet bypass main to the existing 24-inch water main downstream of the reservoir (Drawing C-3) and to remove and replace valves for Valve Work Area No. C on Drawing C-3 (Enlarged Plan &quot;C&quot; on Drawing C-5).</td>
<td>N/A</td>
<td>$</td>
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0309-101381 00300-2 SUBTOTAL PAGE 00300-2: $__________________
<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>ESTIMATED QUANTITY</th>
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<tr>
<td>4</td>
<td>1 Lump Sum</td>
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<td>Furnish and install all work (including all materials, tools, equipment, labor and all other incidentals and required work) to construct and remove and replace valves for Valve Work Area No. D on Drawing C-3 (Enlarged Plan &quot;D&quot; on Drawing C-5).</td>
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<td>N/A</td>
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<tr>
<td>5</td>
<td>1 Lump Sum</td>
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<td>Furnish and install all work (including all materials, tools, equipment, labor and all other incidentals and required work) to construct and remove and replace valves for Valve Work Area No. E on Drawing C-3 (Enlarged Plan &quot;E&quot; on Drawing C-5).</td>
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<td>N/A</td>
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<td>6</td>
<td>2 each</td>
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<td>Furnish and install 36-inch line stops with concrete thrust blocks as shown on the Drawings to facilitate installation of new work and remove line stops at completion of new work.</td>
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0309-101381  00300-3  SUBTOTAL PAGE 00300-3: $__________________
## CITY OF NEW BEDFORD, MASSACHUSETTS
### WATER SYSTEM IMPROVEMENTS
#### HIGH HILL RESERVOIR REHABILITATION
##### PROJECT NO. DWSRF-4214
<BID FORM - ADDENDUM NO. 4 - JUNE 5, 2018>

<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td>7A</td>
<td>1</td>
<td>Furnish and install all work (including all materials, tools, equipment, labor and all other incidentals and required work but excluding restoration of the Inlet Structure Floor) to construct all work and replace all valves for the High Hill Reservoir Inlet Structure Modifications as shown on Drawing M-1.</td>
<td>N/A</td>
<td>$</td>
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<td></td>
<td></td>
<td>Lump Sum</td>
<td></td>
<td></td>
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<tr>
<td>7B</td>
<td>1</td>
<td>Furnish and install all work (including all materials, tools, equipment, labor and all other incidentals and required work) to remove and replace existing floor of the High Hill Reservoir Inlet Structure.</td>
<td>Seventy Thousand Dollars</td>
<td>N/A</td>
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<td></td>
<td></td>
<td>Lump Sum</td>
<td></td>
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<tr>
<td>8</td>
<td>1</td>
<td>Furnish and install all work (including all materials, tools, equipment, labor and all other incidentals and required work) to construct all work, replace all valves, and replace the existing floor for the High Hill Reservoir Outlet Structure Modifications as shown on Drawings M-2, S-5 thru S-7.</td>
<td>N/A</td>
<td>$</td>
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<td></td>
<td></td>
<td>Lump Sum</td>
<td></td>
<td></td>
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0309-101381
00300-4
00300-4
SUBTOTAL PAGE 00300-4: $__________________ __
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<tbody>
<tr>
<td>9</td>
<td>1 Lump Sum</td>
<td>Dewater and drain High Hill Reservoir (both north and south basins and the outlet structure) to facilitate construction of new work, including all materials, tools, equipment, labor and all other incidentals and required work; all required dechloramination/dechlorination; and all work required for dewatering in compliance with all federal, state and local regulations, laws, ordinances, and requirements.</td>
<td>N/A $______________</td>
<td>$______________</td>
</tr>
<tr>
<td>10</td>
<td>1 Lump Sum</td>
<td>Clean High Hill Reservoir (north and south basins and inlet and outlet structures) as specified and as shown on the Drawings.</td>
<td>N/A $______________</td>
<td>$______________</td>
</tr>
<tr>
<td>11A</td>
<td>3,740,000 gallons</td>
<td><strong>Remove and dispose of water below elevation 197 feet in High Hill Reservoir as specified, including all materials, tools, equipment, labor and all other incidentals and required work.</strong></td>
<td>$______________</td>
<td>$______________</td>
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</tbody>
</table>

per gallon
CITY OF NEW BEDFORD, MASSACHUSETTS  
WATER SYSTEM IMPROVEMENTS  
HIGH HILL RESERVOIR REHABILITATION  
PROJECT NO. DWSRF-4214  
BID NO. 18450518

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<tr>
<td>11B</td>
<td>9,000 tons</td>
<td>Remove and dispose of accumulated sediment on the floor of High Hill Reservoir as specified and in accordance with all federal, state and local regulations, laws, ordinances, and requirements.</td>
<td>$ per ton</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>1 Lump Sum</td>
<td>Make all structural repairs and modifications to High Hill Reservoir as shown on Drawings S-1, S-2, S-3, and S-4 (Detail L) including all materials, tools, equipment, labor and all other incidentals and required work to complete all repairs and modifications as required (excluding repairs noted with unit price items).</td>
<td>N/A</td>
<td>$</td>
</tr>
<tr>
<td>13A</td>
<td>100 square feet</td>
<td>Repair cracked/spalled/void/unsound concrete at reservoir wall up to 6-inches deep, as directed by Engineer following Engineer's in-the-dry structural inspections.</td>
<td>$ per square foot</td>
<td></td>
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</tbody>
</table>
### CITY OF NEW BEDFORD, MASSACHUSETTS
### WATER SYSTEM IMPROVEMENTS
### HIGH HILL RESERVOIR REHABILITATION
### PROJECT NO. DWSRF-4214
### BID NO. 18450518

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<tbody>
<tr>
<td>13B</td>
<td>275 linear feet</td>
<td>Epoxy adhesive injection repair of concrete cracks in columns, as directed by Engineer following Engineer's in-the-dry structural inspections.</td>
<td>$ per linear foot</td>
<td>$</td>
</tr>
<tr>
<td>13C</td>
<td>40 square feet</td>
<td>Repair cracked/spalled/void/unsound concrete in columns up to 2-inches deep, as directed by Engineer following Engineer's in-the-dry structural inspections.</td>
<td>$ per square foot</td>
<td>$</td>
</tr>
<tr>
<td>13D</td>
<td>80 linear feet</td>
<td>Repair of exposed rebar at columns, as directed by Engineer following Engineer's in-the-dry structural inspections.</td>
<td>$ per linear foot</td>
<td>$</td>
</tr>
<tr>
<td>13E</td>
<td>30,000 linear feet</td>
<td>Repair cracks in concrete floor and wall liner using injection gel epoxy, as directed by Engineer following Engineer's in-the-dry structural inspections.</td>
<td>$ per linear foot</td>
<td>$</td>
</tr>
</tbody>
</table>

0309-101381  00300-7  SUBTOTAL PAGE 00300-7: $ __________________
### CITY OF NEW BEDFORD, MASSACHUSETTS
#### WATER SYSTEM IMPROVEMENTS
##### HIGH HILL RESERVOIR REHABILITATION
##### PROJECT NO. DWSRF-4214
##### BID NO. 18450518

**BID FORM - ADDENDUM NO. 4 - JUNE 5, 2018**

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>ESTIMATED QUANTITY</th>
<th>BRIEF DESCRIPTION OF ITEMS WITH UNIT BID PRICE IN WORDS</th>
<th>UNIT BID PRICE IN FIGURES</th>
<th>AMOUNT IN FIGURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>13F</td>
<td>60,000 linear feet</td>
<td>Remove and replace sealant at construction joints, as directed by Engineer following Engineer's in-the-dry structural inspections.</td>
<td>$ __________________</td>
<td>$ __________________</td>
</tr>
<tr>
<td>13G</td>
<td>2,000 linear feet</td>
<td>Replacement of the eave closure around the roof edge of High Hill Reservoir to completely seal the reservoir where it meets the side wall.</td>
<td>$ __________________</td>
<td>$ __________________</td>
</tr>
<tr>
<td>14</td>
<td>1 Lump Sum</td>
<td>Disinfect High Hill Reservoir (both north and south basins and the inlet and outlet structures) in accordance with AWWA C652 to reactivate High Hill Reservoir following construction work.</td>
<td>N/A</td>
<td>$ __________________</td>
</tr>
<tr>
<td>15A</td>
<td>50 cubic yards</td>
<td>Rock excavation</td>
<td>$ __________________</td>
<td>$ __________________</td>
</tr>
<tr>
<td>15B</td>
<td>50 cubic yards</td>
<td>Boulder excavation</td>
<td>$ __________________</td>
<td>$ __________________</td>
</tr>
</tbody>
</table>

0309-101381  00300-8  SUBTOTAL PAGE 00300-8: $__________________
<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>ESTIMATED QUANTITY</th>
<th>BRIEF DESCRIPTION OF ITEMS WITH UNIT BID PRICE IN WORDS</th>
<th>UNIT BID PRICE IN FIGURES</th>
<th>AMOUNT IN FIGURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>15C</td>
<td>75 cubic yards</td>
<td>Excavating below normal grade including gravel refill</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>16A</td>
<td>150 cubic yards</td>
<td>Controlled Density Fill (CDF)/Controlled Low Strength Material (CLSM) for miscellaneous purposes as directed by Engineer.</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>16B</td>
<td>150 cubic yards</td>
<td>Screened gravel for miscellaneous purposes as directed by Engineer.</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>17</td>
<td>150 cubic yards</td>
<td>Miscellaneous concrete for miscellaneous purposes as directed by Engineer.</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>18</td>
<td>150 cubic yards</td>
<td>Test pits as directed by Engineer.</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>19</td>
<td>1 Lump Sum</td>
<td>Miscellaneous work and clean-up</td>
<td>N/A</td>
<td>$</td>
</tr>
</tbody>
</table>

0309-101381 00300-9 SUBTOTAL PAGE 00300-9: $__________________
<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>QUANTITY</th>
<th>BRIEF DESCRIPTION OF ITEMS WITH UNIT BID PRICE IN WORDS</th>
<th>UNIT BID PRICE IN FIGURES</th>
<th>AMOUNT IN FIGURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>1</td>
<td>Mobilization (no more than 5% of the Base Bid Price)</td>
<td>N/A</td>
<td>$________________</td>
</tr>
</tbody>
</table>

Lump Sum
CITY OF NEW BEDFORD, MASSACHUSETTS
WATER SYSTEM IMPROVEMENTS
HIGH HILL RESERVOIR REHABILITATION
PROJECT NO. DWSRF-4214
BID NO. 18450518

BID FORM - ADDENDUM NO. 4 - JUNE 5, 2018

SUBTOTAL PAGE 00300-2: $__________________
SUBTOTAL PAGE 00300-3: $__________________
SUBTOTAL PAGE 00300-4: $__________________
SUBTOTAL PAGE 00300-5: $__________________
SUBTOTAL PAGE 00300-6: $__________________
SUBTOTAL PAGE 00300-7: $__________________
SUBTOTAL PAGE 00300-8: $__________________
SUBTOTAL PAGE 00300-9: $__________________
SUBTOTAL PAGE 00300-10: $__________________
TOTAL BASE BID PRICE $__________________
The undersigned agrees that extra work, if any, will be performed in accordance with Article 10 of the Conditions of the Contract and will be paid for in accordance with Article 11 of the Conditions of the Contract.

The bidding and award of this Contract will be in accordance with M.G.L. Chapter 30, Section 39M.

The undersigned must furnish a 100 percent Performance Bond and a 100 percent Payment Bond with a surety company acceptable to Owner.

Amounts shall be shown in both words and figures, where indicated. In case of discrepancy, the amount shown in words will govern.

The above prices shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance and incidentals required to complete the Work.

The names and residences of all persons and parties interested in the foregoing Bid as principals are as follows:

(Give first and last names in full. In the case of a corporation, see Article 8.3 of the Instructions to Bidders, in the case of a limited liability company (LLC), see Article 8.4 of the Instructions to Bidders, in the case of a partnership, see Article 8.5 of the Instructions to Bidders.)

The attached forms must be completed and submitted as part of the Bid Proposal:
DIESEL RETROFIT PROGRAM (MDRP) FORM (DEP-DMS-P&S-21)
SCHEDULE OF PARTICIPATION FOR SRF CONSTRUCTION (EEO-DEP-190C)
LETTER OF INTENT FOR SRF CONSTRUCTION (EEO-DEP-191C)
DBE CERTIFICATION OF UNITED STATES CITIZENSHIP
DBE SUBCONTRACTOR PARTICIPATION FORM
CITY OF NEW BEDFORD NON-COLLUSION AND TAX COMPLIANCE FORM
CITY OF NEW BEDFORD VOTE OF CORPORATION
OSHA CERTIFICATION REQUIREMENT
CONTRACTOR CERTIFICATION
BID SUBMISSION CHECKLIST
BIDDERS CERTIFICATE OF UNDERSTANDING
SCHEDULE OF PARTICIPATION - DISADVANTAGE/MINORITY/WOMAN BUSINESS ENTERPRISES
LETTER OF INTENT
MINORITY/WOMAN BUSINESS ENTERPRISE PROGRAM CONTRACTOR IDENTIFICATION STATEMENT
BIDDERS CERTIFICATION
MINORITY/WOMAN BUSINESS ENTERPRISES UNAVAILABILITY CERTIFICATIONS
MINORITY/WOMAN/DISADVANTAGED BUSINESS ENTERPRISES REQUEST FOR WAIVER
Pursuant to M.G.L. Ch. 62C, sec. 49A, I certify under the penalties of perjury that I, to my best knowledge and belief, have filed all state tax returns and paid all state taxes required under law.

The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee.

The undersigned bidder hereby certifies he/she will comply with the specific affirmative action steps contained in the Equal Employment Opportunity/Affirmative Action (EEO/AA) provisions of this Contract, including compliance with the Disadvantaged Business Enterprise provisions as required under these contract provisions. The attached DBE Forms must be completed and submitted as part of the Bid Proposal. The Contractor receiving the award of the contract shall incorporate the EEO/AA provisions of this contract into all subcontracts and purchase orders so that such provisions will be binding upon each subcontractor or vendor.


The undersigned hereby certifies under the penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this section, the word "person" shall mean any natural person, joint venture, partnership, corporation, limited liability company, or other business or legal entity. The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth under the provisions of Section Twenty-nine F of Chapter Twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder; and is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.
Social Security Number or Federal Identification Number

Signature of Individual or Corporate Name

By: __________________________
Corporate Officer (if applicable)

Notice of acceptance should be mailed, faxed, or delivered to the following:

____________________________________
(Name)

By: ________________________________
(Title)

____________________________________
(Business Address)

____________________________________
(City and State)

Date: ________________________________

If the Bidder is a corporation, indicate State of incorporation under signature, and affix corporate seal; if a partnership, give full names and residential addresses, if different from business address.
APPENDIX B
DIESEL RETROFIT PROGRAM

The Department of Environmental Protection ("DEP") has developed the Diesel Retrofit Program in response to increasing public health concerns with the emissions from diesel engines and vehicles.

**Diesel Construction Equipment Standard**

All diesel powered non-road construction equipment and vehicles greater than 50 brake horsepower which will be used in the performance of the work under the Contract (hereinafter "Diesel Construction Equipment") must have the following pollution control device installed unless exempt as provided below:

1. Emission control technology verified by U.S. Environmental Protection Agency ("EPA") or the California Air Resources Board ("CARB") for use with non-road engines;
2. Emission control technology verified by EPA or CARB for use with on-road engines provided that such equipment is operated with diesel fuel that has no more than 15 parts per million sulfur content (i.e. Ultra Low Sulfur Diesel fuel); or
3. Emission control technology certified by the manufacturer that such technology meets or exceeds the emission reductions provided by on-road or off-road emission control technology verified by EPA or CARB, i.e. that a Diesel Oxidation Catalyst is achieving the following minimum emission reductions: particulate matter 20%; carbon monoxide 40%; volatile organic compounds 50%; or a Diesel Particulate Filter is achieving a minimum of 85% emission reductions for particulate matter.

Emission control devices, such as oxidation catalysts or particulate filters, shall be installed on the exhaust system side of the Diesel Construction Equipment. The Contractor shall be responsible to ensure that the emissions control technology is operated, maintained, and serviced as recommended by the manufacturer.

For the latest up-to-date list of EPA verified-technologies, see: https://www.epa.gov/verified-diesel-tech
For the latest up-to-date list of CARB verified technologies, see: http://www.arb.ca.gov/diesel/verdev/vt/cvt.htm

**Exemptions**

The following Diesel Construction Equipment shall be exempt from the standard above. The Contractor shall include such Diesel Construction Equipment in the required recordkeeping:

1. Diesel Construction Equipment not owned by the Contractor and used in the performance of the work under this Contract for 30 calendar days (cumulative days but not necessarily consecutive) or less;
2. Unless otherwise exempt, additional Diesel Construction Equipment originally not anticipated to be used under the Contract or used as permanent replacement after the work under the Contract has commenced, for 15 calendars days from the date such Diesel Construction Equipment is brought on site;
APPENDIX B (cont.)

DIESEL RETROFIT PROGRAM

3. Diesel Construction Equipment with an engine that meets the EPA particulate matter (PM) Tier emission standards in effect at the start of the Contract for non-road diesel engines for the applicable engine power group (e.g., as of January 1, 2009, a piece of Diesel Construction Equipment with a Tier 3 engine is exempt from meeting the standard until the piece of Diesel Construction Equipment is available with a Tier 4 engine) provided that if such emissions standards are superseded during the Contract then such Diesel Construction Equipment must be retrofitted in accordance with the standards above prior to the end of the Contract;

4. A large crane (e.g. a sky crane or link belt crane which is responsible for critical lift operations) if such device would adversely affect the operation of the crane provided the Contractor submits to the municipality’s project engineer written technical justification documenting the adverse impact on operation; and

5. Diesel Construction Equipment that the project engineer has determined is necessary to control a compelling emergency including but not limited to, the need for rescue vehicles or other equipment to prevent harm to human beings or additional equipment required to address a catastrophic emergency such as structure collapse or imminent collapse. After the compelling emergency is controlled, such non-compliant equipment must be removed from the Contract site and may not be used in further performance of the work under this Contract. Meeting Contract deadlines is not a compelling emergency.

Contractor Certification

Each bidder shall submit as part of its bid, the Statement of Intent to Comply. Within 10 days of being notified that it has been awarded a contract, the bidder and each of its Contractors and Subcontractors shall submit a Diesel Retrofit Program Contractor Certification. Each such Certification shall contain the following information for each piece of Diesel Construction Equipment:

1. Contractor or Subcontractor name;
2. Equipment type, make, model;
3. Vehicle Identification Number or VIN;
4. Engine model and year of manufacture;
5. Engine HP rating;
6. Emission Control Device (ECD) type (Diesel Oxidation Catalyst or Diesel Particulate Filter);
7. ECD make, model, and manufacturer;
8. ECD EPA or CARB Verification Number or manufacturer’s certification that the DOC or DPF meets or exceeds emission reductions provided by similar emission control technology verified by EPA or CARB;
9. ECD installation date;
10. Type of fuel to be used; and
11. Whether the equipment is owned or rented.

Recordkeeping

Each Contractor and Subcontractor shall maintain detailed records of all Diesel Construction Equipment used under the Contract, including the dates and duration times the Diesel Construction Equipment is
used at the Contract site. Records shall be available for inspection by DEP. Each Contractor and Subcontractor shall notify DEP within 48 hours of any new Diesel Construction Equipment brought onto the Contract site.

For Diesel Construction Equipment that has an emissions control device with a manufacturer’s certification, the Contractor shall maintain records of all supporting emissions test data and test procedures. If upon review the emissions reductions are not supported by the test data and test procedures, then the emissions control device may need to be replaced with a compliant retrofit device.

**Project Regulatory Agreement**

The following language shall be included section 4 (Covenants of the Borrower) of the municipality’s Project Regulatory Agreement if it receives funds from the State Revolving Fund:

The Borrower shall require each Contractor and Subcontractor to submit the Diesel Retrofit Program Contractor Certification to DEP and the Borrower prior to commencing work on the Project. The Borrower shall not allow any Contractor or Subcontractor to commence work at the Project site prior to submitting such Certification.
STATEMENT OF INTENT TO COMPLY

This form must be signed and submitted by the bidder as part of the bid.

Local Governmental Unit ________________________________ SRF Project No. ____________________________

Contract No. __________ Contact Title __________________________

Bidder __________________________________________

The undersigned, on behalf of the above-named Bidder, agrees that, if awarded the Contract:

1. the Bidder shall comply with the Department of Environmental Protection’s ("DEP") Diesel Retrofit Program by ensuring that all diesel powered non-road construction equipment and vehicles greater than 50 brake horsepower which will be used in the performance of the work under the Contract are equipped or retrofitted with a pollution control device in accordance with the Diesel Retrofit Program Standard;

2. the Bidder shall require all Subcontractors to comply with DEP’s Diesel Retrofit Program by ensuring all diesel powered non-road construction equipment and vehicles greater than 50 brake horsepower which will be used in the performance of the work under the Contract are equipped or retrofitted with a pollution control device in accordance with the Diesel Retrofit Program Standard; and

3. The Bidder shall submit and shall require each Subcontractor to submit a Diesel Retrofit Program Contractor Certification (form attached) with a Diesel Retrofit List to DEP (NAME and ADDRESS) and the Bidder within 10 days of the bidder being notified that it has been awarded the Contract. The Bidder shall require each Subcontractor to update such Certification and List within 2 days of using additional Diesel Construction Equipment on the project under the Contract.

(Signature of Bidder’s Authorized Representative) (Date)
Each Contractor and its Subcontractor(s) must sign and submit this form to DEP DMS project engineer, 5th Floor, MassDEP, One Winter Street, Boston, MA 02108 and the Municipality within 10 days after the Contractor is notified that it is awarded the Contract.

Local Governmental Unit ___________________________ SRF Project No. ______________________

Contract No. ___________________________ Contact Title ___________________________

Contractor

________________________________________

I, ________________________________________, an authorized signatory for ________________________, whose principal place of business is at ___________________________________________ do hereby certify that any and all diesel powered non-road construction equipment and vehicles greater than 50 brake horsepower which will be used in the performance of the work under the Contract (hereinafter “Diesel Construction Equipment”) have pollution control devices, such as oxidation catalysts or particulate filters, installed on the exhaust system side of the diesel combustion engine equipment in accordance with the Diesel Retrofit Program Standard.

I am submitting on behalf of ________________________ a list of all said Diesel Construction Equipment, labeled “Diesel Retrofit List,” that will be used in connection with this Contract by ________________________. I hereby certify that the information on the attached Diesel Retrofit List is correct and accurate as of the date of signature. The List includes the following information for each piece of Diesel Construction Equipment:

1. Equipment type, make, model;
2. Vehicle Identification Number or VIN;
3. Engine model and year of manufacture;
4. Engine HP rating;
5. Emission Control Device (“ECD”) type (Diesel Oxidation Catalyst or Diesel Particulate Filter);
6. ECD make, model, and manufacturer;
7. ECD EPA or CARB Verification Number or manufacturer’s certification that the DOC or DPF meets or exceeds emission reductions provided by similar emission control technology verified by EPA or CARB;
8. ECD installation date;
9. Type of fuel to be used; and
10. Whether the equipment is owned or rented.
APPENDIX B (cont.)

DIESEL RETROFIT PROGRAM CONTRACTOR CERTIFICATION

shall notify DEP within 48 hours of any new Diesel Construction Equipment brought onto the Contract site. shall maintain detailed records of all Diesel Construction Equipment used at the Contract site, including the dates and duration times the Diesel Construction Equipment is used at the Contract site. shall make such records available for inspection by DEP. shall ensure that the emissions control technology for each piece of Diesel Construction Equipment is operated, maintained, and serviced as recommended by the manufacturer. shall retrofit prior to the end of the Contract any Diesel Construction Equipment no longer exempt from meeting the Diesel Construction Equipment Standard under exemption 3 (because it had an engine that met the EPA particulate matter (PM) Tier emission standards currently in effect at the start of the Contract for non-road diesel engines for the applicable engine power group and such emissions standards were superseded during the Contract).

I acknowledge that this certificate is being furnished as a requirement under this Contract and is subject to applicable State and federal laws, both criminal and civil. Signed under pains and penalty of perjury on this date ____________________.

Signature ______________________

Name: _______________________

Title: ______________________
**SCHEDULE OF PARTICIPATION FOR SRF CONSTRUCTION**

**Project Title:**  
**Project Location:**

| Disadvantaged Minority Business Enterprise Participation in the SRF Loan Work |
|---------------------------------|-----------------|------------------|
| Name & Address of D/MBE | Nature of Participation | Dollar Value of Participation |
| 1. | | |
| 2. | | |
| 3. | | |

**Total D/MBE Commitment:** $ 

**Percentage D/MBE Participation** = (Total D/MBE Commitment) / (Bid Price) =  

| Disadvantaged Women Business Enterprise Participation in the SRF Loan Work |
|---------------------------------|-----------------|------------------|
| Name & Address of D/WBE | Nature of Participation | Dollar Value of Participation |
| 1. | | |
| 2. | | |
| 3. | | |

**Total D/WBE Commitment:** $ 

**Percentage D/WBE Participation** = (Total D/WBE Commitment) / (Bid Price) =  

The Bidder agrees to furnish implementation reports as required by MassDEP to indicate the D/MBEs and D/WBE(s) which it has used or intends to use. Breach of this commitment constitutes a breach of the contract.

**Name of Bidder:**  
**Date:**  
**By:**  
**Signature**

**NOTE:** Participation of a DBE may be counted in only their certified category; the same dollar participation cannot be used in computing the percentage of D/MBE participation and again of D/WBE participation.
LETTER OF INTENT FOR SRF CONSTRUCTION

This form is to be completed by the D/MBE and D/WBE and must be submitted by the Bidder no later than close of business on the third business day after notification by the LGU. A separate form must be completed for each D/MBE and D/WBE involved in the project.

Project Title: ___________________________ Project Location: ___________________________

TO: ____________________________________________________________

(Name of Bidder)

FROM: _________________________________________________________

(Please Indicate Status [ ] D/MBE or [ ] D/WBE)

☐ I/we intend to perform work in connection with the above project as (check one):
  [ ] An individual                          [ ] A partnership
  [ ] A corporation                          [ ] A joint venture with: ___________________________
  [ ] Other (explain): ___________________________

☐ It is understood that if you are awarded the contract, you intend to enter into an agreement to perform the activity described below for the prices indicated.

DBE PARTICIPATION

<table>
<thead>
<tr>
<th>Description of Activity</th>
<th>Date of Project Commencement</th>
<th>$ Amount</th>
<th>% Bid Price</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$</td>
<td>%</td>
</tr>
</tbody>
</table>

☐ The undersigned certify that they will enter into a formal agreement upon execution of the contract for the above referenced project.

BIDDER

(Authorized Original Signature) Date

ADDRESS: ___________________________

TELEPHONE #: ___________________________

FEIN: ___________________________

EMAIL ADDRESS: ___________________________

DBE

(Authorized Original Signature) Date

ADDRESS: ___________________________

TELEPHONE #: ___________________________

FEIN: ___________________________

EMAIL ADDRESS: ___________________________

ORIgINALS:

☐ Compliance Mgr. City/Town Project Location

☐ DEP Program Manager for DEP's AAO Director

☐ Attach a copy of current (within 2 years) DBE Certification

EEO-DEP-191C

EEO-DEP-E Page 11 of 16
DBE CERTIFICATION OF UNITED STATES CITIZENSHIP

For the SRF program, under the EPA Disadvantage Business Enterprise (DBE) Rule, a DBE must be owned or controlled by a socially and economically disadvantaged person that is also a citizen of the United States (See 40 CFR 33.202). “Ownership” is defined at 13 CFR 124.105 and “control” is defined at 13 CFR 124.106.

DBEs are certified for the SRF program through the Supplier Diversity Office using the federal Department of Transportation (DOT) DBE rules. EPA allows the use of DBEs certified under the DOT rules as long as they are also United States citizens. To ensure compliance with the EPA rule, MassDEP must verify United States citizenship through the completion of the following form for each DBE used on the project.

SRF Project Number

Contract Number

Contract Title

DBE Subcontractor

The undersigned, on behalf of the above named DBE subcontractor, hereby certifies that the DBE firm is either owned or controlled by a person or persons that are citizens of the United States.

Printed Name and Title of DBE Signatory

DBE Signature

Date
**DISADVANTAGED BUSINESS ENTERPRISE**  
**PROGRAM DBE SUBCONTRACTOR PARTICIPATION**  
**FORM**

The United States Environmental Protection Agency (EPA) requires that this form be provided to all subcontractors on the project. At the option of the subcontractor, this form may be filled out and submitted directly to the EPA DBE Coordinator.

<table>
<thead>
<tr>
<th>NAME OF SUBCONTRACTOR</th>
<th>PROJECT NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADDRESS</td>
<td>CONTRACT NO.</td>
</tr>
<tr>
<td>TELEPHONE NO.</td>
<td>E-MAIL ADDRESS</td>
</tr>
</tbody>
</table>

**PRIME CONTRACTOR NAME:**

Please use the space below to report any concerns regarding the above EPA-funded project (e.g., reason for termination by prime contractor, late payment, etc.).

________________________________________

________________________________________

________________________________________

<table>
<thead>
<tr>
<th>CONTRACT ITEM NO.</th>
<th>ITEM OF WORK OR DESCRIPTION OF SERVICES RECEIVED FROM THE PRIME CONTRACTOR</th>
<th>AMOUNT SUBCONTRACTOR WAS PAID BY PRIME CONTRACTOR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subcontractor Signature __________________________ Title/Date __________________________

Equivalent to EPA form 6100-2
CITY OF NEW BEDFORD
MASSACHUSETTS

NON-COLLUSION AND TAX COMPLIANCE FORM

CERTIFICATE OF NON-COLLUSION

The undersigned certified under penalties of perjury that this bid has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word “person” shall mean any natural person, business, partnership, corporation, union, committee, club or other organization, entity or group of individuals.

_____________________________
Signature of individual submitting bid

_____________________________
Name of business/organization

TAX COMPLIANCE CERTIFICATION

Pursuant to M.G.L. c. 62C, §49A, I certify under the penalties of perjury that, to the best of my knowledge and belief, I am in compliance with all laws of the Commonwealth relating to taxes reporting of employees and contractor, and withholding and remitting child support.

_____________________________
Signature of person submitting bid

_____________________________
Name of business
At a meeting of the Board of Directors of _______________ duly called and held on _______________, 20____ at which a quorum was present and acting throughout, the following vote was duly adopted.

VOTED: That ____________________________, the_________________________ of the corporation, be and hereby is authorized to affix the Corporate Seal, sign and deliver in the name and behalf of the corporation contract documents with the City of New Bedford, the above mentioned documents to include but not be limited to Bids, Proposals, Deeds, Purchase and Sales Agreements, Agreements, Contracts, Leases, Licenses, Releases and Indemnifications; and also to seal and execute, as above, surety company bonds to secure bids and proposals and the performance of said contract and payment for labor and materials, all in such form and on such terms and conditions as he/she, by the execution thereof, shall deem proper. A true copy

ATTEST:

______________________________________
Name (printed)

______________________________________ (Affix Corporate Seal)
Signature

______________________________________ Date
OSHA CERTIFICATION REQUIREMENT
Effective July 1, 2006, all employees of a contractor to be employed on public building and public works worksites must have successfully completed at least a 10 hour course in construction safety and health approved by OSHA at the time the employee begins work.

I, ___________________________, as ______________________________, of the
(Print Name) (Position with the entity submitting bid)
joint venture/corporation/partnership or other legal entity submitting this bid for a public works project falling under §39M of Chapter 30 of the Massachusetts General Laws and Chapter 149 of the same, do hereby certify that any and all employees found on my worksite for this project have, or will have by the start of their work on the project, successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that was at least 10 hours in duration.

A copy of the OSHA completion cards for each employee must be submitted to the City of New Bedford before work on this project is to begin and must be supplemented as new employees are hired or contracted to work on this project.

_____________________________________, as
Signature
_____________________________________, of
Position
_____________________________________, on
Company/Corporation/Joint Venture/Partnership/Etc.

______________________________
Date
CONTRACTOR CERTIFICATION

As evidenced by the signature of the Contractor’s Authorized signatory below, the Contractor certifies under the pains and penalties of perjury that the Contractor shall not knowingly use undocumented workers in connection with the performance of any City contract; that pursuant to federal and state requirements, the Contractor shall verify the immigration status of all workers assigned to such contracts without engaging in unlawful discrimination; and that the Contractor shall not knowingly or recklessly alter, falsify, or accept altered or falsified documents from any such worker(s). The Contractor understands and agrees that breach of any of these terms during the period of each contract may be regarded as a material breach, subjecting the Contractor to sanctions, including but not limited to monetary penalties, withholding of payments, contract suspension or termination.

______________________________
Contractor Authorized Signature

__________________
Printed Name

__________________
Date

Title: ______________________  Telephone: _________________

Fax: ________________________  Email: ___________________
Bid Submission Checklist

THE GENERAL BIDDER SHALL SUBMIT ALL THE FOLLOWING FORMS AS A PART OF ITS BID SUBMISSION, AND SHALL SUBMIT A COPY OF SUCH TO:

The City of New Bedford
Office of Equal Opportunity
133 William Street Room 208
New Bedford, MA 02740
ph: 979-1446 / fax: 508-991-6148

(1) Certificate of Understanding: Certification of Compliance with Executive Order 11246

(2) Schedule of Participation for Minority, Woman & Disadvantaged Business Enterprises

(3) Letter of Intent - for each MBE/WBE/DBE Participation

(4) MBE/WBE Contractor Identification Statement - for each MBE/WBE/DBE

(5) Bidder’s Certification - must be completed and signed by the General Contractor and all Subcontractors who will work on the project (to include MBE/WBE/DBE and non-MBE/WBE/DBEs)

(6) If applicable, a completed and signed MBE/WBE/DBE Unavailability Certification in the event that the work listed on the Schedule is not sufficient to fulfill the Requirement for MBE/WBE/DBE Participation. This certification must include a statement by the bidder of the reasons why it believes it is in compliance with this Provision, and a list of the names, addresses, telephone numbers and reason given for unavailability of the Minority/Woman/ Disadvantaged Contractor who was contacted by the Bidder with respect to the performance of work under the contract.
Commonwealth of Massachusetts

BIDDERS CERTIFICATE OF UNDERSTANDING


Contractor __________________________ Project __________________________

Address __________________________ Tel. # __________________________ Project #

Fax # __________________________

I, the undersigned, understand that:

A. Minority Business Enterprises are to be awarded at least 11% of the total contract amount for construction/public works projects.

B. Woman Business Enterprises are to be awarded at least 5% of the total contract amount for construction/public works projects.

C. Disadvantaged Business Enterprises are to be awarded at least 4.33% of the total contract amount for airport projects.

D. All required MBE/WBE/DBE forms included in Instructions to Bidders are to be completed and submitted with the bid.

E. Prior to award of the contract, a pre-construction conference must be held (to be attended by the general contractor and all subcontractors, regardless of tier) at which time the following requirements will be discussed:

1. Weekly Workforce Utilization Reports (Form CAD85) are to be submitted weekly with payroll reports within five (5) days of last payroll;

2. Quarterly Manpower Projection Tables (Form CAD85-1) are to be submitted with the Start Construction notification;

3. Any project in the amount of $100,000+ is subject to the New Bedford Resident Hiring and Responsible Employer Plan ordinances;

4. A minimum goal of 18% minority manpower utilization, in terms of total work hours in the aggregate workforce, in each trade or craft, on each project, will be maintained. The goal for female manpower utilization will be maintained at 6.9% according to regulations;

5. Minority and female work hours are to be uniform in each trade, and minorities and females are to be employed evenly on each project;

6. Minority or female employees are not be transferred from project to project for the purpose of meeting goals;

7. A roster of all minority and/or female applicants for employment must be maintained at each project site (Federal & Non-Federal) in the New Bedford Hometown Plan Area.

F. The submission of the above reports and adherence to hiring practices and equal opportunity performance of subcontractors is the responsibility of the prime contractor.

The bidder hereby certifies that he/she shall comply with the minority manpower ratio and specific affirmative action steps contained in the EEO above, including compliance with the minority contractor compliance specifications. The Contractor receiving the award of the contract shall be required to obtain from each of its subcontractors, and submit to the contracting or administering agency prior to the performance of any work under said contract, a certification by said subcontractor, regardless of tier, that it will comply with the minority manpower ratio and specific affirmative action steps contained in this appendix.

Authorized Signature __________________________ Date ____________

Name (Please Print or Type) __________________________ Title ____________
SCHEDULE OF PARTICIPATION
DISADVANTAGED/MINORITY/WOMAN BUSINESS ENTERPRISES
to be completed by the Bidder

Item I - Minority Or Disadvantaged Business Enterprise Participation
1. Name: ________________________________
   Address: ________________________________
   Nature of Participation: __________________
   Dollar Value / % of Bid: __________________

2. Name: ________________________________
   Address: ________________________________
   Nature of Participation: __________________
   Dollar Value / % of Bid: __________________

   TOTAL BID PRICE $ __________________
   TOTAL DBE or MBE COMMITMENT $ ____________ %

Item II – Woman Or Disadvantaged Business Enterprise Participation
1. Name: ________________________________
   Address: ________________________________
   Nature of Participation: __________________
   Dollar Value / % of Bid: __________________

2. Name: ________________________________
   Address: ________________________________
   Nature of Participation: __________________
   Dollar Value / % of Bid: __________________

   TOTAL BID PRICE $ __________________
   TOTAL WBE or DBE COMMITMENT $ ____________ %

The bidder agrees to furnish implementation reports, as required by the awarding authority, to indicate the MBE/WBE or DBE which it has used or intends to use. Breach of this commitment constitutes a breach of the contract.

General Bidder: ________________________________

Signature: ________________________________ Date: ________________
LETTER OF INTENT

to be completed by the DBE/MBE/WBE

This form is to be completed by the DBE or MBE and WBE and must be submitted by the General Bidder as part of the Bid Proposal. A separate form must be completed for each MBE, WBE or DBE involved in the project.

Project Title: ____________________________ Project Location: ____________________________

To: ____________________________
   (Name of Bidder)

From: ____________________________
      (Name of DBE/MBE/WBE)

Indicate DBE/MBE/WBE status:

I / we intend to perform work in connection with the above project as (Check One)

{ } an individual
{ } a corporation
{ } other (explain): ____________________________
{ } a partnership
{ } a joint venture with: ____________________________

It is understood that if you are awarded the contract, you intend to enter into an agreement to perform the activity described below for the prices indicated.

DBE/MBE/WBE PARTICIPATION:

<table>
<thead>
<tr>
<th>Description of Activity</th>
<th>Project Start Date</th>
<th>$ Amount</th>
<th>% of Bid Price</th>
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</tbody>
</table>

The undersigned certify that they will enter into a formal agreement upon execution of the contract for the above-referenced Project

BIDDER

Authorized Signature ____________________________ Date ________________

Address ____________________________

Telephone / Fax ____________________________

DBE/MBE / WBE

Authorized Signature ____________________________ Date ________________

Address ____________________________

Telephone / Fax ____________________________
MINORITY / WOMAN BUSINESS ENTERPRISE PROGRAM

CONTRACTOR IDENTIFICATION STATEMENT

Project Name: ______________________________ Project #: __________________

Total Bid Price: $ ______________________ Bid Date: __________________

In accordance with the New Bedford Minority Business Enterprise Program, the undersigned bidder certifies that he/she:

1. is a bona fide Minority/Woman/Disadvantaged Business Enterprise currently certified by the State Office of Minority/Woman Business Assistance (SOMWBA); and such SOMWBA certification has not changed; and in the event of said status changing, it will immediately forward written notification to the City of New Bedford and SOMWBA; and

2. intends to perform certain work (specified by formal bid proposal) under a contract in connection with the above-named project, and that work will not be sublet to any company at any tier; and

3. will comply with the minority/woman workforce ratio and specific affirmative action steps contained in the EEO/AA Contract Provisions and shall obtain from each of its subcontractors a copy of the bidder’s certification and submit to the administering agency, prior to the award of such subcontract, regardless of tier, that he/she will comply with the minority/woman workforce ratio and specific affirmative action steps contained in these and the EEO/AA Contract Provisions.

SOMWBA CERTIFICATION CATEGORY: ______________________________

{} MBE  {} WBE  {} DBE

CONTRACTORS NAME: ______________________________

ADDRESS: __________________________________________

TELEPHONE #: ______________________ FAX #: ______________________

REPRESENTATIVE NAME & TITLE: ______________________________

AUTHORIZED SIGNATURE: ______________________________

GENERAL BIDDERS NAME: ______________________________
BIDDERS CERTIFICATION

To be completed by General Contractor & each of its Subcontractors (MBE/WBE/DBE and non-MBE/WBE/DBE)

The undersigned bidder hereby certifies that he/she will comply with the Minority/Woman Workforce Ratio and Specific Affirmative Action Steps contained in the EEO/AA Provisions of this contract, including compliance with the Minority/Woman/Disadvantaged Business Enterprise as required under these contract provisions.

The contractor receiving the award of the contract shall be required to obtain, from each of its subcontractors, regardless of tier, a copy of this Bidder’s Certification indicating that it will comply with the Minority/Woman Workforce Ratio and Specific Affirmative Action Steps contained in these EEO/AA Contract Provisions, and submit it to the contracting agency prior to the award of such contract and subcontract.

Name of General Contractor

Name of Subcontractor
{ } MBE { } WBE { } DBE { } Non-MBE/WBE

Signature of Authorized Representative

Signature of Authorized Representative

Name & Title (Printed or Typed)

Name & Title (Printed or Typed)

Date

Date
MINORITY / WOMAN BUSINESS ENTERPRISES
UNAVAILABILITY CERTIFICATIONS

to be completed by General Contractor

(The Bidder shall prepare additional copies of this information form
in the quantity necessary to comply with the bidding requirements)

I, __________________________________________, ____________________________

Name

of ____________________________________________

Contractor Name

certify that on ________________________________, I contacted the below listed MBE/WBE/DBE

Date of Contact

requesting a bid for

Project ______________________________________ as an { } MBE, { } WBE or { } DBE for the provision of

{ } Goods & Services or { } Labor to accomplish

Subcontract Work Offered to this MBE/WBE/DBE Company

__________________________________________

Name of Prospective Sub-Contractor

__________________________________________

Address City and State Telephone #

Contact was made by { } Telephone { } In Person

Said sub-contractor was unavailable for work on this project or unable to prepare a bid for the following reason(s):
(check appropriate answer):

{ } MBE/WBE/DBE Firm Declined Job

{ } MBE/WBE/DBE Firm offered to do a job at the price of $______________________, which was not

acceptable because:____________________________________________________

{ } Other ______________________________________________________________

The above information is accurate and complete, to the best of my knowledge and belief. Signed under the
pains and penalties of perjury.

__________________________________________

Signature of Authorized Representative, General Contractor

__________________________________________

Date
MINORITY / WOMAN/DISAVANTAGED BUSINESS ENTERPRISES

REQUEST FOR WAIVER

Upon exhausting all known sources and making every possible effort to meet the minimum requirements for MBE/WBE/DBE participation, the Contractor may seek relief from these requirements by filing this form (completed) NO LATER THAN FIVE (5) working days following the bid opening. Failure to comply with this process shall be cause the bidder to be rejected, thereby rendering the contractor not eligible for award of the contract.

General Information

Project Title: ________________________________ Location: ________________________________

Bid Opening (time/date): ________________________________ Location: ________________________________

Bidder: ____________________________________________

Mailing Address: __________________________________

Contact Person: ____________________________________

Telephone No.: (___) _____________________________ Ext.

Minimum Requirements

The contractor must show that good faith efforts were undertaken to comply with the percentage goals, as specified. The bidder seeking relief must show that such efforts were taken appropriately, in advance of the time set for opening bid proposals, to allow adequate time for response(s) by submitting the following: (Please check all that apply and attach applicable documentation)

A. A detailed record of the effort made to contact and negotiate with minority, woman or disadvantaged business enterprises, to include:

( ) 1. Names, addresses and telephone numbers of all such companies contacted;

( ) 2. Copies of written notice(s) which were sent to MBE/WBE/DBE potential subcontractors prior to bid opening;

( ) 3. Copies of advertisements prior to bid opening, as appearing in general publications, trade-oriented publications, and applicable minority/women focused media detailing the opportunities for participation;

( ) 4. A detailed statement as to why each subcontractor contacted (a) was not willing to do the job or (b) was not qualified to perform the work as solicited; and

( ) 5. In the case(s) where a negotiated price could not be reached, the bidder should detail what efforts were made to reach an agreement on a competitive price

( ) 6. Contractor certifies that 100% of the project is to be carried out with his/her own workforce. No subcontractors are to be utilized.
B. The Agency may require the contractor to produce such additional information, as it deems appropriate and may obtain whatever other information it deems necessary to reach a conclusion from any source.

C. No later than fifteen (15) days after receipt of all necessary information and documentation, a decision will be made in writing to the bidder. If the waiver request is denied, the facts upon which a denial is based will be set forth. A contractor who is dissatisfied with the decision may then appeal that decision to the Equal Opportunity Employment Agency.

Certification

The undersigned herewith certified that the above information and appropriate attachments are true and accurate to the best of my ability, and that I have been authorized to act on behalf of the bidder in this matter.

Authorized original signature

Date

Submit to: Equal Employment Opportunity
           Compliance Officer
           133 William Street, Room 208
           New Bedford, MA 02740

To be completed by the City of New Bedford’s EEO

Bid Date

Date Received by EEO  Initials
SECTION 01025  
MEASUREMENT AND PAYMENT

PART 1  GENERAL

1.01  REMOVAL AND REPLACEMENT OF EXISTING VALVES AND INSTALLATION OF NEW VALVES AT VALVE WORK AREAS “A” AND “B” ON DRAWING C-3 AND ENLARGED PLANS “A” AND “B” ON DRAWING C-4 (BID ITEMS 1 AND 2)

A. Measurement

1. Removal of existing valves, piping and manholes and the installation of new valves, insertion valves, pipe, fittings, couplings, manholes, appurtenances and all other required work for Valve Work Areas (Valve Work Areas “A” and “B” shown on Drawing C-3 and shown on Enlarged Plans “A” and "B" on Drawing C-4) as shown on the Drawings shall be measured at the Lump Sum prices for each area installed and accepted by the Engineer under Items 1 and 2 in the Bid Form.

B. Payment

1. Payment for removing existing valves, piping and manhole assemblies and furnishing and installing new valves, insertion valves, pipe, fittings, couplings, manholes, appurtenances and all other required work of the sizes and types shown on the Drawings and as specified for Valve Work Areas “A” and “B” shown on Drawing C-3 (and Enlarged Plans “A” and “B” on Drawing C-5) will be made for the respective quantities as above determined, at the applicable price bid under Items 1 and 2 in the Bid Form. Such price and payment shall be full compensation for all work as shown on the Drawings, which includes but is not limited to environmental protection procedures; erosion and sedimentation control; all needed test pits for the Valve Work Areas (whether shown on or not specifically called for on the Drawings) to confirm depth and location of existing utilities and/or take measurements and determine pipe outside diameters for materials fabrication; saw cutting existing pavement; trench excavation of all material of every description and of whatever substance encountered (excluding rock and boulder excavation and excavation below normal grade, which will be paid for under separate bid items); sheeting and bracing; excavation support and protection; protection and support of existing utilities including furnishing and placing screened gravel for all utility crossings; dust control; dewatering and drainage; dewatering and dechlorinating/dechloraminating all existing water mains shut down to facilitate construction of new work; handling leakage in water mains as specified; furnishing and installing any geotextile filter fabric required; disposal of excess excavated material; removal and disposal of existing water main piping, valves, and manhole structures where noted on the Drawings or as required by Engineer; capping and restraining existing water mains if required; capping existing water mains shut down to prevent debris intrusion during construction; hydrostatically and leakage testing new butterfly valves in accordance with Section 02640 prior to installation; furnishing, laying and jointing new butterfly valves and manual air release assemblies, including specified pipe and couplings, brass wedges, all pipe and fittings; furnishing and installing all required joint restraints and thrust blocks (all joints must be restrained); furnishing and installing position indicators and overtorque protectors required for new valves as specified; furnishing and installing any flanged coupling adapters or other fittings and adapters necessary to complete connections of new piping based on Contractor’s specific proposed sequence of work, whether or not they are shown on the Drawings; removing existing hydrants and furnishing and installing...
new fire hydrants (if new hydrants are shown within work area payment limits); furnishing and installing insertion valves of the sizes and types specified; furnishing and installing joint restraints or thrust blocks for existing water mains as required; testing of all pipe, valves, fittings and appurtenances in accordance with Section 01445 prior to backfilling for leaks as specified; cleaning and disinfection of all pipe, fittings, valves and appurtenances as specified to clean and disinfect new pipes and existing pipes shut down to facilitate new work, all of which shall be performed in accordance with AWWA standards as specified; filling of all dewatered sections of existing and new piping and the flushing and dechloramination of one complete volume of the section; bacteriological testing of the section and rechlorination of the section if bacteriological tests fail and the repeat flushing, disinfection and testing as required at no additional cost to the Owner; furnishing and installing valve boxes and covers, extension shafts, and position indicators; furnishing, installing and placing controlled density fill (CDF)/controlled low strength material (CLSM) to completely backfill all new valves, piping, fittings and couplings as shown on the Drawings for trench backfill; furnishing and installing granular fill materials as shown on the Drawings and as specified; compaction and backfilling; restoring the trench to surface grade; restoring all physical features to grade and to the condition existing prior to construction, including furnishing and installing gravel and all materials for pavement subbase, initial pavement and permanent trench-width pavement as specified in Section 02576 for any pavement disturbed during construction, loaming and seeding and all other restoration required (including resetting or replacing the existing steps to the outlet structure that were removed or disturbed during construction); to restore the area to a condition equal to or better than what existed prior to construction; and all other work necessary to complete the work.

1.02 NEW 24-INCH WATER MAIN FROM EXISTING 36-INCH HIGH HILL RESERVOIR INLET BYPASS MAIN TO EXISTING 24-INCH WATER TRANSMISSION MAIN DOWNSTREAM OF HIGH HILL RESERVOIR ON DRAWING C-3, INCLUDING VALVE WORK AREA “C” ON DRAWING C-3 AND ENLARGED PLAN “C” ON DRAWING C-5 (BID ITEM 3)

A. Measurement

1. Removal of existing water transmission main valves, piping and manholes and the installation of new valves, pipe, fittings, couplings, check valves, hydrants, manholes, appurtenances and all other required work to install the new 24-inch water main from the existing 36-inch High Hill Reservoir inlet bypass to the existing 24-inch water transmission main downstream of High Hill Reservoir as shown on Drawing C-3, including Valve Work Area “C” (Enlarged Plan “C” as shown on Drawing C-5), shall be measured at the Lump Sum price installed and accepted by the Engineer under Item 3 in the Bid Form.

B. Payment

1. Payment for removing existing water transmission main valves, piping and manhole assemblies and furnishing and installing new water transmission main valves, pipe, fittings, couplings, check valves, hydrants, manholes, appurtenances and all other required work of the sizes and types shown on Drawing C-3 and as specified to install the new 24-inch water main from the existing 36-inch High Hill Reservoir inlet bypass to the existing 24-inch water transmission main downstream of High Hill Reservoir, including Valve Work Area “C” (Enlarged Plan “C” on Drawing C-5), will be made for the respective quantities as
above determined, at the applicable price bid under Item 3 in the Bid Form. Such price and payment shall be full compensation for all work as shown on the Drawings, which includes but is not limited to environmental protection procedures; erosion and sedimentation control; all needed test pits (whether shown on or not specifically called for on the Drawings) to confirm depth and location of existing utilities and/or take measurements and determine pipe outside diameters for materials fabrication; saw cutting existing pavement; trench excavation of all material of every description and of whatever substance encountered (excluding rock and boulder excavation and excavation below normal grade, which will be paid for under separate bid items); sheeting and bracing; excavation support and protection; protection and support of existing utilities including furnishing and placing screened gravel for all utility crossings; dust control; dewatering and drainage; dewatering and dechlorinating/dechloraminating all existing water mains shut down to facilitate construction of new work; handling leakage in water mains as specified; furnishing and installing any geotextile filter fabric required; disposal of excess excavated material; removal and disposal of existing water main piping, valves, and manhole structures where noted on the Drawings or as required by Engineer; capping and restraining existing water mains if required; capping existing water mains shut down to prevent debris intrusion during construction; hydrostatically and leakage testing new butterfly valves in accordance with Section 02640 prior to installation; furnishing, laying and jointing all new piping, butterfly valves, fittings, check valves in manholes, hydrants, manual air release assemblies, couplings, brass wedges, all pipe and fittings; furnishing and installing all required joint restraints and thrust blocks (all joints must be restrained); furnishing and installing position indicators and overtorque protectors required for new valves as specified; furnishing and installing any flanged coupling adapters or other fittings and adapters necessary to complete connections of new piping based on Contractor’s specific proposed sequence of work, whether or not they are shown on the Drawings; removing existing hydrants and furnishing and installing new fire hydrants (if new hydrants are shown within work area payment limits); furnishing and installing joint restraints or thrust blocks for existing water mains as required; testing of all pipe, valves, fittings and appurtenances in accordance with Section 01445 prior to backfilling for leaks as specified; cleaning and disinfection of all pipe, fittings, valves and appurtenances as specified to clean and disinfect new pipes and existing pipes shut down to facilitate new work, all of which shall be performed in accordance with AWWA standards as specified; filling of all dewatered sections of existing and new piping and the flushing and dechloramination of one complete volume of the section; bacteriological testing of the section and rechlorination of the section if bacteriological tests fail and the repeat flushing, disinfection and testing as required at no additional cost to the Owner; furnishing and installing valve boxes and covers, extension shafts, and position indicators; furnishing, installing and placing controlled density fill (CDF)/controlled low strength material (CLSM) to completely backfill all new valves, piping, fittings and couplings as shown on the Drawings for trench backfill; furnishing and installing granular fill materials as shown on the Drawings and as specified; compaction and backfilling; restoring the trench to surface grade; restoring all physical features to grade and to the condition existing prior to construction, including furnishing and installing gravel and all materials for pavement subbase, initial pavement and permanent trench-width pavement as specified in Section 02576 for any pavement disturbed during construction, loaming and seeding and all other restoration required to restore the area to a condition equal to or better than what existed prior to construction; and all other work necessary to complete the work.
1.03 REMOVAL AND REPLACEMENT OF EXISTING WATER TRANSMISSION MAIN VALVES AND INSTALLATION OF NEW WATER TRANSMISSION MAIN VALVES AT VALVE WORK AREAS “D” AND “E” ON DRAWING C-3 AND ENLARGED PLANS “D” AND “E” ON DRAWING C-5 (BID ITEMS 4 AND 5)

A. Measurement

1. Removal of existing water transmission main valves, piping and manholes and the installation of new valves, pipe, fittings, couplings, manholes, appurtenances and all other required work for Valve Work Areas “D” and “E” on Drawing C-3 and Enlarged Plans “D” and “E” on Drawing C-5 shall be measured at the Lump Sum prices for each area installed and accepted by the Engineer under Items 4 and 5 in the Bid Form.

B. Payment

1. Payment for removing existing water transmission main valves, piping and manhole assemblies and furnishing and installing new water transmission main valves, pipe, fittings, couplings, manholes, appurtenances and all other required work of the sizes and types shown on the Drawings and as specified for Valve Work Areas “D” and “E” on Drawing C-3 and Enlarged Plans “D” and “E” on Drawing C-5 will be made for the respective quantities as above determined, at the applicable price bid under Items 4 and 5 in the Bid Form. Such price and payment shall be full compensation for all work as shown on the Drawings, which includes but is not limited to environmental protection procedures; erosion and sedimentation control; all needed test pits for the Valve Work Areas (whether shown on or not specifically called for on the Drawings) to confirm depth and location of existing utilities and/or take measurements and determine pipe outside diameters for materials fabrication; saw cutting existing pavement; trench excavation of all material of every description and of whatever substance encountered (excluding rock and boulder excavation and excavation below normal grade, which will be paid for under separate bid items); sheeting and bracing; excavation support and protection; protection and support of existing utilities including furnishing and placing screened gravel for all utility crossings; dust control; dewatering and drainage; dewatering and dechlorinating/dechloraminating all existing water mains shut down to facilitate construction of new work; handling leakage in water mains as specified; furnishing and installing any geotextile filter fabric required; disposal of excess excavated material; removal and disposal of existing water main piping, valves, and manhole structures where noted on the Drawings or as required by Engineer; capping and restraining existing water mains if required; capping existing water mains shut down to prevent debris intrusion during construction; hydrostatically and leakage testing new butterfly valves in accordance with Section 02640 prior to installation; furnishing, laying and jointing new butterfly valves and manual air release assemblies, including specified pipe and couplings, brass wedges, all pipe and fittings; furnishing and installing all required joint restraints and thrust blocks (all joints must be restrained); furnishing and installing position indicators and overtorque protectors required for new valves as specified; furnishing and installing any flanged coupling adapters or other fittings and adapters necessary to complete connections of new piping, whether or not they are shown on the Drawings; removing existing hydrants and furnishing and installing new fire hydrants (if new hydrants are shown within work area payment limits); furnishing and installing joint restraints or thrust blocks for existing water mains as required; testing of all pipe, valves, fittings and appurtenances in accordance with Section 01445 prior to
backfilling for leaks as specified; cleaning and disinfection of all pipe, fittings, valves and appurtenances as specified to clean and disinfect new pipes and existing pipes shut down to facilitate new work, all of which shall be performed in accordance with AWWA standards as specified; filling of all dewatered sections of existing and new piping and the flushing and dechlorination of one complete volume of the section; bacteriological testing of the section and rechlorination of the section if bacteriological tests fail and the repeat flushing, disinfection and testing as required at no additional cost to the Owner; furnishing and installing valve boxes and covers, extension shafts, and position indicators; furnishing, installing and placing controlled density fill (CDF)/controlled low strength material (CLSM) to completely backfill all new valves, piping, fittings and couplings as shown on the Drawings for trench backfill; furnishing and installing granular fill materials as shown on the Drawings and as specified; compaction and backfilling; restoring the trench to surface grade; restoring all physical features to grade and to the condition existing prior to construction, including furnishing and installing gravel and all materials for pavement subbase, initial pavement and permanent trench-width pavement as specified in Section 02576 for any pavement disturbed during construction, loaming and seeding and all other restoration required to restore the area to a condition equal to or better than what existed prior to construction; and all other work necessary to complete the work.

1.04 LINE STOPS TO FACILITATE SHUT DOWNS FOR WATER TRANSMISSION MAIN VALVE REMOVAL AND INSTALLATION OF NEW WATER TRANSMISSION MAIN VALVES (BID ITEM 6)

A. Measurement

1. Line stops and concrete thrust blocks to facilitate water transmission main valve removal and installation of new water transmission main valves shall be measured as the number of each line stop and concrete thrust block installed and accepted by the Engineer under Item 6 in the Bid Form.

B. Payment

1. Payment for furnishing and installing 36-inch line stops of the class and size specified will be made for the respective quantities as above determined, at the applicable price bid under Item 6 in the Bid Form. Such price and payment shall be full compensation for all work as specified in Section 02767, which includes but is not limited to trench excavation of all material of every description and of whatever substance encountered (excluding rock and boulder excavation and excavation below normal grade); sheeting and bracing; excavation support and protection; dust control; dewatering and drainage; all measures necessary for environmental protection; disposal of excess excavated material; supporting and protecting existing utility lines in the trench; installing concrete thrust blocks as required to restrain existing water mains; furnishing and installing the tapping sleeve and line stops as specified; disinfecting and testing the line stop; maintaining the line stop location throughout the required construction duration; removing the line stops when work is complete as specified; furnishing and installing all backfill material including common fill and select common fill; backfilling; compaction; restoring the trench surface to grade, including furnishing and installing all pavement subbase and base materials, initial pavement and permanent trench-width pavement as specified in Section 02576 to restore any pavement disturbed during construction, loaming and seeding and all other restoration required to restore the area to a condition equal to or better than what existed prior to construction; restoring all physical features to grade and to the condition existing prior to construction;
construction (including resetting or replacing the existing steps to the outlet structure that were removed or disturbed during construction); cleaning; and all else incidental thereto for which separate payment is not provided under other Items in the Bid Form.

1.05 HIGH HILL RESERVOIR INLET STRUCTURE MODIFICATIONS (BID ITEMS 7A AND 7B)

A. Measurement

1. High Hill Reservoir Inlet Structure Modifications, including removal and replacement of existing sluice gates and all valves in and adjacent to the Inlet Structure as shown on Drawing M-1, shall be measured at the Lump Sum price bid under Item 7A in the Bid Form.

2. High Hill Reservoir Inlet Structure Modifications, including all labor, materials, equipment and incidentals to completely remove and dispose of the existing floor including but not limited to 5/8-inch plywood, timber grate (2-5/8 inch x 1-3/4 inch) floor and structural steel beams and plates and replace in its entirety with a new aluminum stiffened diamond cover plate supported by aluminum beams and channels. The work shall be measured at the Lump Sum price bid under item 7B in the Bid Form.

B. Payment

1. Payment for High Hill Reservoir Inlet Structure Modifications shown on Drawing M-1 for removing and replacing existing sluice gates and all valves in and adjacent to the Inlet Structure as shown on Drawing M-1 will be made for the respective quantities as above determined, at the applicable price bid under Item 7A in the Bid Form. Such price and payment shall be full compensation for all work, which includes but it not limited to all materials, tools, equipment, labor and all other incidentals and required work to furnish and install temporary bulkheads in-the-wet as required to isolate the inlet structure from the reservoir; all required work to dewater and drain the Inlet Structure to facilitate the work, including dechlorinating/dechloraminating all water discharged in accordance with all federal, state and local regulations, laws, ordinances and requirements; handling leakage as specified; removing and disposing of existing sluice gates and valves; hydrostatically and leakage testing new butterfly valves in accordance with Section 02640 prior to installation; furnishing and installing all new valves, fittings, appurtenances and all required materials; all required work to disinfect and reactivate the Inlet Structure in accordance with AWWA C652; removal of temporary bulkheads following successful disinfection in accordance with AWWA C652; all materials and work to restore the Inlet Structure to conditions equal to or better than what existed before construction; and all other work necessary and required to complete the work, whether or not it is shown on the Drawings or including in the Specifications and for which no other separate payment is included on the Bid Form.

2. Payment for High Hill Reservoir Inlet Structure Modifications, removal and replacement of the existing floor, will be made for the respective quantities as above determined, at the applicable price bid under Item 7B in the Bid Form. Such price and payment shall be full compensation for all work, which includes but is not limited to providing for an in-the-dry inspection by the Engineer following dewatering of the inlet structure as specified in Section 01014, all materials, tools, equipment, labor and all other incidentals and required work to remove and replace the floor of the High Hill Reservoir Inlet Structure floor following replacement of all sluice gates and valves.
1.06 HIGH HILL RESERVOIR OUTLET STRUCTURE MODIFICATIONS (BID ITEM 8)

A. Measurement

1. High Hill Reservoir Outlet Structure Modifications, including removal and replacement of all existing valves in and adjacent to the Outlet Structure and demolition and removal of the existing mechanical screens as shown on Drawing M-2 and replacement of the Outlet Structure floor as shown on Drawings S-5 thru S-7, shall be measured at the Lump Sum price bid under Item 8 in the Bid Form.

B. Payment

Payment for High Hill Reservoir Outlet Structure Modifications shown on Drawing M-2 for removing and replacing existing valves in the Outlet Structure and demolition and removal of the existing mechanical screens as shown on Drawing M-2 and replacement of the Outlet Structure floor as shown on Drawings S-5 thru S-7 will be made for the respective quantities as above determined, at the applicable price bid under Item 8 in the Bid Form. Such price and payment shall be full compensation for all work, which includes but it not limited to all materials, tools, equipment, labor and all other incidentals and required work to dewater and drain the Outlet Structure to facilitate the work, including furnishing and installing temporary bulkheads as required and in-the-wet and dechlorinating/dechloraminating all water discharged in accordance with all federal, state and local regulations, laws, ordinances and requirements; handling leakage as specified; removing and disposing of existing valves; removing and disposing of the existing mechanical screens; hydrostatically and leakage testing new butterfly valves in accordance with Section 02640 prior to installation; furnishing and installing all new valves, fittings, appurtenances and all required materials; all materials, tools, equipment, labor and all other incidentals and required work to replace the floor of the High Hill Reservoir Outlet Structure following replacement of all valves and as shown on Drawings S-5 thru S-7; all required work to disinfect and reactivate the Outlet Structure in accordance with AWWA C652; removal of all temporary bulkheads following successful disinfection in accordance with AWWA C652; restoring the Outlet Structure to conditions at equal to or better than what existed before construction; and all other work necessary and required to complete the work, whether or not it is shown on the Drawings or including in the Specifications and for which no other separate payment is included on the Bid Form.

1.07 DEWATER AND DRAIN HIGH HILL RESERVOIR TO FACILITATE CONSTRUCTION OF NEW WORK (BID ITEM 9)

A. Measurement

1. Dewatering and draining High Hill Reservoir (both the north and south basins) shall be measured at the Lump Sum price bid under Item 9 in the Bid Form.

B. Payment

1. Payment for dewatering and draining High Hill Reservoir (both the north and south basins and the outlet structure) will be made for the respective quantities as above determined, at the applicable price bid under Item 9 in the Bid Form. Such price and payment shall be full compensation for all work, which includes but it not limited to all materials, tools, equipment, labor and all other incidentals and required work to dewater and drain High Hill Reservoir.
Hill Reservoir to facilitate construction of new work and as specified, including dechlorinating/dechloraminating all water discharged in accordance with all federal, state and local regulations, laws, ordinances and requirements as specified.

1.08 CLEANING HIGH HILL RESERVOIR (BID ITEM 10)

A. Measurement

1. Cleaning High Hill Reservoir (both the north and south basins and the inlet and outlet structures) shall be measured at the Lump Sum price bid under Item 10 in the Bid Form.

B. Payment

1. Payment for cleaning High Hill Reservoir (both the north and south basins and the inlet and outlet structures) will be made for the respective quantities as above determined, at the applicable price bid under Item 10 in the Bid Form. Such price and payment shall be full compensation for all work, which includes but is not limited to all materials, tools, equipment, labor and all other incidentals and required work to clean High Hill Reservoir as specified, including but not limited to power washing or cleaning by other means acceptable to the Engineer to clean all surfaces, remove all coatings, efflorescence, dirt and foreign matters so that all surfaces are clean; and disposal of all dirt, debris and foreign matter from cleaning operations in accordance with all federal, state and local regulations, laws, ordinances and requirements.

1.09 REMOVAL AND DISPOSAL OF WATER AND ACCUMULATED SEDIMENT ON THE HIGH HILL RESERVOIR FLOOR (BID ITEMS 11A AND 11B)

A. Measurement

1. Removing and disposing of the water below elevation 197 feet on the floor of High Hill Reservoir (both the north and south basins and the inlet and outlet structures) shall be measured in gallons at the price bid under Item 11A in the Bid Form.

2. Removing and disposing of the accumulated sediment on the floor of High Hill Reservoir (both the north and south basins and the inlet and outlet structures) shall be measured in tons at the price bid under Item 11B in the Bid Form.

B. Payment

1. Payment for removing and disposing of the water below elevation 197 feet on the floor of High Hill Reservoir (both the north and south basins and the inlet and outlet structures) will be made for the respective quantities as above determined, at the applicable price bid under Item 11A in the Bid Form. Such price and payment shall be full compensation for all work, which includes but is not limited to all materials, tools, equipment, labor and all other incidentals and required work to remove and dispose of the water below elevation 197 feet on the floor of High Hill Reservoir as specified.

2. Payment for removing and disposing of the accumulated sediment on the floor of High Hill Reservoir (both the north and south basins and the inlet and outlet structures) will be made for the respective quantities as above determined, at the applicable price bid under Item 11B in the Bid Form. Such price and payment shall be full compensation for all work,
which includes but is not limited to all materials, tools, equipment, labor and all other incidentals and required work to remove and dispose of the accumulated sediment on the floor of High Hill Reservoir as specified and in accordance with all federal, state and local regulations, laws, ordinances and requirements.

1.10 STRUCTURAL REPAIRS AND MODIFICATIONS TO HIGH HILL RESERVOIR (BID ITEM 12)

A. Measurement

1. Structural Repairs and Modifications to High Hill Reservoir as shown on Drawings S-1, S-2, S-3 and S-4 (Detail L) shall be measured at the Lump Sum price bid under Item 12 in the Bid Form.

B. Payment

1. Payment for all Structural Repairs and Modifications to High Hill Reservoir as shown on Drawings S-1, S-2, S-3 and S-4 (Detail L) will be made for the respective quantities as above determined, at the applicable price bid under Item 12 in the Bid Form. Such price and payment shall be full compensation for all work, which includes but it not limited to all materials, tools, equipment, labor and all other incidentals and required work to make all structural repairs and modifications to High Hill Reservoir as shown on Drawings S-1, S-2, S-3 and S-4 (Detail L). Payment for this item includes all work shown on these drawings with the exception of the repair work with unit Bid Items in Item 13.

1.11 HIGH HILL RESERVOIR STRUCTURAL AND RELATED RESERVOIR REPAIRS AS DIRECTED BY ENGINEER FOLLOWING ENGINEER’S IN-THE-DRY INSPECTIONS (BID ITEMS 13A THROUGH 13G)

A. Measurement

1. The work under Item 13A for repairing cracked/spalled/void/unsound concrete at the reservoir walls up to 6-inches deep shall include furnishing all labor, materials, equipment and incidentals required for repair of cracked/spalled/void/unsound concrete as shown on Drawings S-1, S-2 and S-3, as indicated by the Engineer after the Engineer’s investigations, and as specified in Divisions 0, 1 and 3 inclusive. Measurement will be the number of square feet of polymer-modified repair mortar required to fill the cavities based on measurements made prior to placing the repair mortar. The work for these items shall also include coordination with all other Contractors and subcontractors.

2. The work under Item 13B for epoxy grout injection repair of concrete cracks in columns shall include furnishing all labor, materials, equipment and incidentals required for epoxy grout to be installed in cracks as indicated by the Engineer after the Engineer’s inspections and as specified in Divisions 0, 1 and 3 inclusive. Measurement will be the actual number of linear feet of sealed and accepted cracks measured in place. The work for these items shall also include coordination with all other Contractors and subcontractors.

3. The work under Item 13C for repairing cracked/spalled/void/unsound concrete in columns up to 2-inches deep shall include furnishing all labor, materials, equipment and incidentals required for repair of cracked/spalled/void/unsound concrete as shown on Drawings S-1, S-2, and S-3, as indicated by the Engineer after the Engineer’s inspection, and as specified in...
Divisions 0, 1 and 3 inclusive. Measurement will be the number of square feet of polymer-modified repair mortar required to fill the cavities based on measurements made prior to placing the repair mortar. The work for these items shall also include coordination with all other Contractors and subcontractors.

4. The work under Item 13D for repairing exposed rebar at columns shall include furnishing all labor, materials, equipment and incidentals required for repair of Exposed Rebar at Columns as shown on Drawing S-2, as indicated after the Engineer’s inspections, and as specified in Divisions 0, 1 and 3 inclusive. Measurement will be the number of linear feet of exposed rebar based on measurements made prior to placing the repair mortar. The work for these items shall also include coordination with all other Contractors and subcontractors.

5. The work under Item 13E for injection gel epoxy repair of concrete cracks in the concrete floor liner shall include furnishing all labor, materials, equipment and incidentals required for the crack surface to be routed and for injection gel epoxy to be installed in cracks as shown on Drawings S-1, S-2 and S-4, as indicated by the Engineer after the Engineer’s inspection, and as specified in Divisions 0, 1 and 3 inclusive. Measurement will be the number of linear feet of sealed and accepted cracks measured in place. The work for these items shall also include coordination with all other Contractors and subcontractors.

6. The work under Item 13F for removal and replacement of sealant at construction joints shall include furnishing all labor, materials, equipment and incidentals required to remove and replace sealant at construction joints as shown on Drawings S-1, S-2 and S-4, as indicated by the Engineer after the Engineer’s inspections, and as specified in Divisions 0, 1 and 3 inclusive. Measurement will be the number of linear feet of sealant required to replace the existing sealant based on measurements made prior to placing the new sealant. The work for these items shall also include coordination with all other Contractors and subcontractors.

7. Measurement for removal and replacement of eave closure around the roof edge of High Hill Reservoir to seal the entire reservoir where it meets the side wall will be measured as the number of linear feet of eave closure required to be removed and replaced.

B. Payment

1. Payment for the above determined quantity in Item 13A will be at the price per square foot bid for Item 13A in the Bid Form and shall be full compensation for furnishing all labor, materials, equipment and incidentals required, including scaffolding and supports, and repairing cracked/spalled/deteriorated/unsound concrete, including saw cutting and chipping out cracked/spalled/deteriorated/unsound concrete; cleaning the exposed reinforcing steel; installing replacement reinforcing steel; preparing the concrete surface; placing, supporting and curing the repair mortar; and all else incidental thereto.

2. Payment for the above determined quantity in Item 13B shall be at the price per linear foot bid for Item 13B in the Bid Form and shall be full compensation for furnishing all labor, materials, equipment and incidentals required, including all scaffolding and supports and filling the cracks, including concrete surface preparation, preparing and placing the epoxy adhesive, removing and sealing injection ports, and all else incidental thereto.
3. Payment for the above determined quantity in Item 13C will be at the price per square foot bid for Item 13C in the Bid Form and shall be full compensation for furnishing all labor, materials, equipment and incidentals required, including scaffolding and supports, and repairing cracked/spalled/deteriorated/unsound concrete, including saw cutting and chipping out cracked/spalled/deteriorated/unsound concrete; cleaning the exposed reinforcing steel; installing replacement reinforcing steel; preparing the concrete surface; placing, supporting and curing the repair mortar; and all else incidental thereto.

4. Payment for the above determined quantity in Item 13D will be at the price per linear foot bid for Item 13D in the Bid Form and shall be full compensation for furnishing all labor, materials, equipment and incidentals required, including scaffolding and supports, and repairing exposed rebar, including saw cutting and chipping out cracked/spalled/deteriorated/unsound concrete; cleaning the exposed reinforcing steel; installing replacement reinforcing steel; preparing the concrete surface; placing, supporting and curing the repair mortar; and all else incidental thereto.

5. Payment for the above determined quantity in Item 13E shall be at the price per linear foot bid for Item 13E in the Bid Form and shall be full compensation for furnishing all labor, materials, equipment and incidentals required, including all scaffolding and supports and sealing the cracks, including routing the surface of the crack, concrete surface preparation, preparing and placing the injection gel epoxy, and all else incidental thereto.

6. Payment for the above determined quantity in Item 13F shall be at the price per linear foot bid for Item 13F in the Bid Form and shall be full compensation for furnishing all labor, materials, equipment and incidentals required, and replacing sealant at construction joints, including removing the existing sealant, cleaning the exposed joint, installing replacement foam backer material; preparing the concrete surface; placing the sealant, and all else incidental thereto.

7. Payment for removal and replacement of the eave closure around the roof edge of High Hill Reservoir to seal the entire reservoir where it meets the side wall shall will be made for the respective quantities as above determined, at the applicable price bid under Item 13G in the Bid Form. Such price and payment shall be full compensation for all work, which includes but is not limited to all required and needed labor, materials, tools, equipment, supplies and incidentals required to remove and replace the eave closure around the roof edge of High Hill Reservoir to completely seal the entire reservoir where it meets the side wall.

1.12 DISINFECTION OF HIGH HILL RESERVOIR (BID ITEM 14)

A. Measurement

1. Disinfecting High Hill Reservoir (both the north and south basins and the inlet and outlet structures) in full accordance with AWWA C652 – Disinfection of Water Storage Facilities shall be measured at the Lump Sum price bid under Item 14 in the Bid Form.

B. Payment

1. Payment for disinfecting High Hill Reservoir (both the north and south basins and the inlet and outlet structures) in full accordance with AWWA C652 – Disinfection of Water Storage Facilities will be made for the respective quantities as above determined, at the
applicable price bid under Item 14 in the Bid Form. Such price and payment shall be full compensation for all work, which includes but is not limited to all required and needed labor, materials, tools, equipment, supplies and incidentals required to disinfect High Hill Reservoir (including both the north and south basins and the inlet and outlet structures) in full accordance with AWWA C652 standards and as specified herein.

1.13 ROCK AND BOULDER EXCAVATION AND EXCAVATION BELOW NORMAL GRADE (ITEMS 15A, 15B AND 15C)

A. Measurement

1. When rock is encountered, the material shall be uncovered and the Engineer notified. The Engineer will take cross sections of the rock surface. If the Contractor fails to uncover the rock and notify the Engineer to allow ample time for cross-sectioning the undisturbed material, the Contractor shall have no right-of-claim to any classification other than that allowed by the Engineer. Removal of old concrete foundations, reinforced concrete subbase, cobblestones and trolley tracks found beneath pavement, if any, shall be classified as rock.

2. Measurements of rock excavation will extend 12 inches below the bottom of pipe. Maximum trench widths will be indicated in Section 01046 (maximum trench width corresponds to initial trench paving).

3. Boulders of more than 1 cubic yard in volume when encountered in earth or trench excavation will be measured for payment.

4. The quantity of rock and boulder excavation to be paid for will be the number of cubic yards of rock or boulders measured in place, as directed by the Engineer, within the limits herein specified.

5. Measurement of earth excavation and refill below normal grade (Item 15C) will extend only downward from a normal grade to a depth determined by the Engineer in the field, for a maximum width of trench as specified in Section 01046 (maximum trench width corresponds to initial trench paving).

6. If the trench bottom is below normal grade through error by the Contractor or if improper drainage softens the subgrade and additional excavation in the trench is required before laying the pipe, such removal and replacement of material will not be measured for payment under Item 15C. No allowance will be made for shrinkage or compaction of gravel in place. Measurement by truck count will not be permitted.

7. Screened gravel used in accordance with the Specifications to replace excavation below normal grade or for rock and boulder removal is a part of this work and will not be measured for separate payment under the Bid Item for Screened Gravel.

B. Payment

1. Payment for rock and boulder excavation (Items 15A and 15B) will be made for the quantities as above determined, measured in cubic yards, at the unit price bid in the Bid Form, which price and payment will be full compensation for excavation; breaking and disposing of rock, following all requirements of other utility agencies to protect other
utilities (i.e., gas, electric, cable, telephone, etc.) in adjacent trenches; backfilling and providing screened gravel for any deficiency of trench backfill; and all work incidental thereto, for which payment is not provided under other items.

2. Old concrete foundations, reinforced concrete subbase, cobblestones and trolley tracks, if any are encountered during excavation, will be measured and paid for as rock excavation and removal. Price and payment shall include delivery of removed cobblestones and trolley tracks removed to the Owner at a location designated by the Owner.

3. Payment for earth excavation and refill below normal grade will be made for the quantity as above-determined at the price per cubic yard bid for Item 15C in the Bid Form. Price and payment shall be full compensation for excavation and disposal of all materials below normal grade; furnishing, placing and compacting screened gravel; and all other work incidental thereto for which separate payment is not provided under other items in the Bid Form.

1.14 FILL MATERIALS (BID ITEMS 16A AND 16B)

A. Measurement

1. Controlled Density Fill (CDF)/Controlled Low Strength Material (CLSM) used in conjunction with utility crossings and at other miscellaneous locations when its use is ordered by the Engineer under Item 16A will be measured in cubic yards at actual in-place dimensions as determined by the Engineer. If used in trenches, the payment limits shall not exceed the trench widths as Specified in Section 01046 for initial trench paving. CDF/CLSM used for trench backfill as part of Valve Work Areas and water main installation work will be paid for under the respective Bid Items and will not be measured for separate payment under Bid Item 16A.

2. Screened gravel (Item 16B) when used for unspecified and miscellaneous purposes as directed by the Engineer and incorporated in the work will be measured in cubic yards as directed by the Engineer. Under no circumstances will measurement for payment under this item be made unless specifically ordered by the Engineer.

B. Payment

1. Payment for furnishing and placing Controlled Density Fill (CDF)/Controlled Low Strength Material (CLSM) as specified locations when its use is ordered by the Engineer will be made for the quantity determined above at the respective unit prices bid for Item 16A in the Bid Form. Price and payment shall be full compensation for furnishing, hauling, and placing or pumping CDF/CLSM, and all else incidental thereto for which separate payment is not provided under other items in the Bid Form.

2. Payment for furnishing and placing screened gravel for miscellaneous purposes when its use is ordered by the Engineer will be made for the quantity determined above at the respective unit prices bid for Item 16B. Price and payment shall be full compensation for furnishing, hauling, placing, and compacting gravel and all else incidental thereto for which separate payment is not provided under other items in the Bid Form.
1.15 MISCELLANEOUS CONCRETE (BID ITEM 17)

A. Measurement

1. Concrete (Item 17) for miscellaneous purposes as directed by the Engineer shall be measured in place in the completed work by average dimensions in each of three planes. Slip measurement shall not be allowed.

B. Payment

1. Payment for concrete used for miscellaneous purposes when ordered by the Engineer shall be made for the quantity measured in place (cubic yards) at the unit price bid in the Bid Form for Item 17 and shall be full compensation for all work required for, or incidental to the satisfactory completion of the Item as specified herein for which separate payment is not provided under other items in the Bid Form.

1.16 TEST PITS (BID ITEM 18)

A. Measurement and Payment

1. Test pits for the purpose of locating underground utilities; exposing, repairing and replacing existing valves; determining pavement depth/material and for other purposes as ordered by the Engineer or as shown on the Drawings are specified under Section 02221. Test pits shall be made where shown on the Drawings and as directed by the Engineer. Test pits shall be paid at the unit price bid in Item 18 in the Bid Form and shall be full compensation for cutting pavement; all excavation (excluding rock and boulder excavation); sheeting and bracing; excavation support and protection; backfilling and compaction; and all other work required for or incidental to the satisfactory completion of this Item. The measured quantity of excavation for test pits will be in cubic yards in accordance with the following test pit depths and established volumes per vertical foot:

<table>
<thead>
<tr>
<th>Test Pit Depth</th>
<th>Cubic Yards per Vertical Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 8 feet</td>
<td>1.5</td>
</tr>
<tr>
<td>Over 8 feet</td>
<td>2.0</td>
</tr>
</tbody>
</table>

2. Test pits for Valve Work Areas will not be measured and paid for under Item 18 and shall be included under the respective Bid Items in the Bid Form.

1.17 MISCELLANEOUS WORK AND CLEANUP (BID ITEM 19)

A. Measurement and Payment

1. Payment for Miscellaneous Work and Cleanup (Item 19) will be made at the lump sum price bid in the Bid Form. This price shall include costs incurred by the Contractor for usage of public supply water as specified and defined in Section 01046, and shall be full compensation for all labor, materials, tools, equipment, supplies and incidentals required to do all the work specified in Section 02901 including work not specifically included under other items but which are obviously necessary for the proper completion of the Contract. Work under Miscellaneous Work and Cleanup is as specified in Section 02901 and
includes but is not limited to submittals; furnishing and providing temporary facilities in accordance with Section 01500, including the procuring all required equipment as specified in Section 01500; staked haybales, silt fences and catch basin drop inlet sediment filters; coordination with other contractors and connection to work by others; photographic and video documentation; all work required to furnish, install, maintain and remove temporary bypass service pipe, service connections and hydrants (if required based on Contractor’s proposed approach and sequence of construction); crossing and relocating existing utilities; repair of existing utilities damaged during construction; protection of existing water system facilities during construction and all needed and incidental work to meet the requirements of Section 01014; restoration and replacement of driveways, sidewalks, fences and curbing disturbed by construction, including the replacement of sidewalks and curbing where noted within new paving limits as shown on the Drawings; protection and/or removal and reinstallation of signs, lampposts and mailboxes; protection and bracing of utility poles; restoring easements and Right-Of-Ways; loaming and seeding; all other restoration work; cleaning up; and all other incidental work required for the successful completion of the project.

1.18 MOBILIZATION (BID ITEM 20)

A. Measurement

1. Measurement for payment of mobilization costs shall be on a Lump Sum basis but the cost shall not exceed five percent of the base bid price.

B. Payment

Payment of the Lump Sum price bid in the Bid form for Item 20 shall be full compensation for all costs associated with initiating the Contract, exclusive of the cost of materials. Payment shall include compensation for all insurance, bonds, permits, project signs, site preparation, and in general the costs associated with establishing the work on-site and to ensure that the construction will proceed in a continuous manner.

END OF SECTION
2" SQ. OPERATING NUT (304 SST)

COVER PLATE (SEE SHEET S–7 FOR NUT OPERATOR COVER DETAIL)

FINISHED FLOOR LEVEL

VALVE OR GATE POSITION INDICATOR

STAINLESS STEEL NON–RISING STEM

SHAFT GUIDE AT 5'–0" MAX SPACING (TYP). CONTRACTOR TO PROVIDE DESIGN OF SHAFT GUIDE AND ANCHORAGE.

RECESSED NUT GATE OPERATOR

DETAIL

NTS

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