

City of Cambridge

PURCHASING DEPARTMENT

795 Massachusetts Ave. • Cambridge, Massachusetts 02139-3219

Amy L. Witts
Purchasing Agent

TO: All Bidders

FROM: City of Cambridge

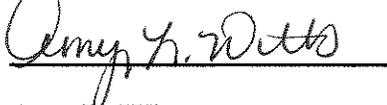
DATE: March 21, 2016

RE: File No. 7132 –Pumping System Improvements at the Walter J. Sullivan Water Purification Facility- Addendum No. 7

This addendum is comprised of:

1. Questions and Answers (attached)
2. Technical Specification Revisions

All other details remain the same.



Amy L. Witts
Purchasing Agent

Addendum No. 7

**Responses to Questions and
Technical Specification Revisions**

File No. 7132

**Pumping System Improvements at the Walter J. Sullivan Water Purification Facility
City of Cambridge, Massachusetts**

Prepared by CDM Smith Inc.

March 21, 2016

CONTRACTOR QUESTIONS

Text shown in "italics" indicates question asked. Bold text shown immediately following indicates the response to the question asked.

1. *Would it be possible to view the site where the work is to take place at the same time as the plans of the existing plant can be viewed which is this coming Tuesday, 3/22/16 between 8:00 AM and 10:00 AM per Addendum #6?*

Yes a walk-through of the facility will be provided at that time.

2. *Addendum 5 appears to have confirmed that the VFDs and Motors are to be supplied by the Electrical Sub-bidder as part of Add Alternate 1:*

Please note the following clarifications. Bidders are directed to Specifications for details of the work required.

- **VFDs for the Raw Water System are to be supplied by the Electrical Sub-bidder as part of the base project. See Section 26 29 23.**
 - **Pumps and motors for the Raw Water System are to be supplied by the General Contractor as part of the base project. See Section 43 24 13.**
 - **VFDs for the Finished Water System are to be supplied by the Electrical Sub-bidder as part of Add Alternate No. 1 if selected by the City. See Section 26 29 23.**
 - **Motors for the Finished Water System are to be supplied by the Electrical Sub-bidder as part of Add Alternate No. 1 if selected by the City. See Section 26 07 10.**
3. *We have been told that the pump manufacturers will not warranty pumps if motors are not included as part of the package. Please clarify who will be responsible for Warranty the pumps and motors now that they are not being supplied as a package?*

The Raw Water System pump manufacturer has unit responsibility for the pumps and motors to be supplied by the General Contractor as part of the base project. Warranty requirements are provided under Paragraph 1.11 of Section 43 24 13.

For the Finished Water System Add Alternate No. 1, only motors are being replaced if Add Alternate No. 1 is selected. These motors are to be provided by the Electrical Sub-bidder. Warranty requirements are provided under Paragraph 1.10 of Section 26 07 10. Requirements

for integrating the new motors with the existing pumps are provided under Section 40 05 93.10 and are the responsibility of the General Contractor.

4. *Please confirm whether the GC or the Electrical Contractor mounts the motors to the pumps?*

For the Raw Water System, the pump/motor installation is the responsibility of the General Contractor per Section 43 24 13.

For the Finished Water System, motors are to be installed and mechanically integrated with the existing pump rotating assembly by the General Contractor. The motors shall be wired by the Electrical Sub-bidder. See revisions to technical specifications below.

5. *Please confirm who is responsible for vibration issues if encountered during vibration testing? Who will determine which manufacturer is responsible (the pump manufacturer or the motor manufacturer)?*

RE: Raw Water System. For the vibration analysis, field testing and any problem resolution, the General Contractor and pump manufacturer are responsible. See Section 43 24 13.

RE: Finished Water System (Add Alternate No. 1). For the vibration analysis, field testing and any problem resolution, the General Contractor and mechanical integration subconsultant are responsible. See Section 40 05 93.10.

6. *Please confirm who is responsible for providing the coupling between the pump and motor?*

For the Raw Water System, the motor to pump coupling is specified in Paragraph 2.05 of Section 43 24 13 with the pump manufacturer having unit responsibility for the pumps and motors to be supplied by the General Contractor as part of the base project.

For the Finished Water System under Add Alternate No. 1, the motor to pump coupling is the responsibility of the General Contractor under Section 40 05 93.10. See technical specification revisions below.

7. *Is the General Contractor responsible for building permit and City of Cambridge building permit fees?*

Permits, licenses and fees will be handled as designated in Article 5.10 in the General Terms and Conditions of the Contract.

8. *Will the new FW and BW Pump discharge pipe/valves require pipe insulation?*

Yes. All new piping and valves are required to be insulated per Section 23 07 00 Thermal Insulation added via Addendum #4.

9. *The hydraulic distribution field piping can be Swagelok or welded. If SS Swagelok pipe fittings are used in lieu of welded fittings, will it still be necessary to perform the flushing requirements per specification Section 40 05 23.86 Part 3 3.01C., D & E. for the 3/8" & 1/4" SS Hydraulic piping?*

Yes flushing will be required.

TECHNCAL SPECIFICATIONS

1. To Section 26 07 10 Form Wound Induction Motors 250 HP and Above, **DELETE** Paragraph 3.02A in its entirety, and **REPLACE WITH** the following:

“3.02

- A. Purposely left blank.”

2. In Section 26 07 10 Form Wound Induction Motors 250 HP and Above, to Paragraph 3.02.C.3 **DELETE** the words “proper mounting.”.

3. To Section 26 07 10 Form Wound Induction Motors 250 HP and Above, **DELETE** Paragraphs 3.02.C.4 and 3.02.C.5 in their entirety,

4. To Section 40 05 93.10 Mechanical Integration of Existing Pumps and New Motors, **DELETE** the first sentence of Paragraph 1.01A, and **REPLACE WITH** the following:

“The Work of this Section shall include labor, materials, equipment, and incidentals necessary to install and integrate four new 400 HP pump motors with existing vertical turbine finished water pumps.”

5. To Section 40 05 93.10 Mechanical Integration of Existing Pumps and New Motors, **DELETE** the reference to “Paragraph 1.04” in Paragraph 1.04.A.2 and **REPLACE WITH** “Paragraphs 1.07 and 1.08”.

6. To Section 40 05 93.10 Mechanical Integration of Existing Pumps and New Motors, **DELETE** the reference to “Paragraph 1.05.B.” in Paragraph 1.08.C. and **REPLACE WITH** “Paragraph 1.07.B.”.

7. To Section 40 05 93.10 Mechanical Integration of Existing Pumps and New Motors, **DELETE** PART 2 in its entirety and **REPLACE WITH** the following:

“PART 2 PRODUCTS

2.01 MOTOR TO PUMP COUPLING

- A. Pump shafting shall be directly connected to the motor by means of spacer-type keyed coupling, suitably sized to transmit the required driving torque, axial thrust and be easily accessible for impeller adjustment, packing or mechanical seal replacement.”

8. To Section 40 05 93.10 Mechanical Integration of Existing Pumps and New Motors, **INSERT** the following new Paragraph 3.01 after PART 3 EXECUTION, and renumber existing 3.01 PUMP TESTING to 3.02 PUMP TESTING.

“3.01 MOTOR INSTALLATION

- A. Install the motors per manufacturer’s installation instructions.

1. Prepare rigid foundation or mounting surface to minimize vibration and maintain alignment between motor and load shaft.
2. Align the motor shaft with driven equipment according to manufacturers' written instructions. Adjust axial position of motor frame with respect to load shaft.
3. Accurately adjust flexible couplings for direct drive according to machine manufacturers' guidelines. Check alignment to minimize vibrations. Coupling spacing shall be according to coupling manufacturer guidelines.
4. Anchor motor base to load bearing surface with grade 5 steel bolts or better.

B. Pre-Commissioning Inspection

1. Inspect for physical damage. Verify all shipping materials and braces are removed.
2. Inspect for proper mounting. Verify that the motor and the coupled load are properly aligned. Inspect bearings for proper lubrication and rotate motor shaft by hand to check for binding. Oil lubricated bearing housings that have been filled with preservative oil shall be drained and re-filled with the proper grade of bearing oil before putting the machine into service. Check all hardware for looseness and re-tighten as necessary.
3. Clean motor externally, on completion of installation. Vacuum dirt and debris; do not use blown compressed air to assist in cleaning."

9. To Section 40 05 93.10 Mechanical Integration of Existing Pumps and New Motors, **INSERT** the following after renumbered 3.02.E.

"3.02

- F. Pumping test specified herein shall be completed in accordance with sequencing of Section 01 12 16 Construction Sequences and Constraints."