



ADDENDUM # 4

Solicitation Number: 16-1307

Title: 16-1307 REPLACEMENT OF IRRIGATION SYSTEM CEF BUILDING 84

Date: December 23, 2016

The following supplements and/or supersedes the Invitation to Tender documents issued on November 30, 2016. This addendum forms part of the contract documents and is to be read, interpreted, and coordinated with all other parts. Any change to the cost of the work as a result of this addendum is to be included in the price proposal. The following revisions supersede the information contained in the original Invitation to Tender Package for the above-mentioned project to the extent referenced and shall become part thereof.

Bidders who did not attend or send a representative to the mandatory site visit will not be given an alternative appointment and their bids will be rejected as non-compliant.

CLARIFICATIONS

1. Motors to be ODP – supplied with pumps, installed by mechanical contractor, suitable for VFD control.
 2. VFD's are to be c/w with by-pass.
 3. Additional 3% input line reactors that add to the standard 5% reactor for a total input impedance of 8% to be supplied.
 4. VFD's to include output Dv/Dt filters factory mounted in the same enclosure. External field wired options will not be considered acceptable.
 5. Supply and install Aegis shaft grounding ring (or approved equivalent) on each motor to operate with a VFD.
 6. All controls to be provided by owner.
 7. Pumps performance as per schedule on drawing (suction pit is approx. 3 m deep)
 8. No spare parts are to be supplied.
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QUESTION AND ANSWER

Q1 There is a section where they talk about skid mounting vertical multistage pumps, but the pumps specified are horizontal double suction? Also, it isn't clear how many pumps there are. Can you clarify how many pumps there are?

A1 Three (3) pumps with motor to be provided, no palette (skid).

Q2 Whether they are looking for a package - or just pumps with loose VFDs?

A2 Individual pumps and VFD's (see clarifications)



- Q3 Do only the NEMA 12 VFD and disconnect + fuse need to be supplied? Meaning the VFD will be wall-mounted.
- A3 VFD's to be mounted on wall using standard mounting arrangements (i.e. Unistrut) See clarifications.
- Q4 Does the VFD need to be mounted in a NEMA 12 enclosure, including protection and accessories (fused disconnect, ventilation, 120V power supply, relays, etc.)?
- A4 NEMA 3R is acceptable. VFD's to be mounted on wall using standard mounting arrangements (i.e. Unistrut)
- Q5 Is an L or RLC output filter required? Depending on the distance between the VFD and the motor, is it a new or existing motor? Is the motor NEMA MG-1 Part 31?
- A5 There should be filters on the drives per the specifications. Motors must be new. VFD's to include output Dv/Dt filters factory mounted in the same enclosure. External field wired options will not be considered acceptable.
- Q6 Are the installation and hookup of the DRIVES the responsibility of the electrical contractor? (Note: The plans mention that provision of the DRIVES is a Mechanical responsibility.)
- A6 Yes. Mechanical contractor provides pumps and supplies VFD's. Electrical contractor installs VFD's and provides electrical connections from existing disconnect switch to VFD and from VFD to pump motor.
- Q7 Could you provide a more detailed explanation of the mode of operation of the DRIVES (input/output of the pressure sensors...) and the pump control system?
- A7 Controlled by flow. Pressure sensor is only a limit – AAFC will do the controls in conjunction with the Contractor's electrician. Flow meter (ABB Industrial Differential Pressure cell) signal 4-20 MA. All control work to be performed by in-house by client
- Q8 Could you provide the characteristics of the new pressure sensor (there is very little information in the plans and specifications)?
- A8 Pressure sensor - 0-100 Psi. 0-10 VDC signal output. All control work to be performed by in-house.



Q9 The specification only refers to a Bell & Gossett pump, but nowhere does it say whether an equivalent brand can be submitted. May we submit a bid for an equivalent Armstrong pump?

A9 Yes, however pumps must meet the specifications. Alternate product (pumps c/w motors) is acceptable, shop drawings of proposed alternate to be submitted with tender bid.

Q10 Do we need to supply a new motor for each pump, or can the existing motors be reused?

A10 Yes, a new motor for each pump must be supplied. See clarifications

Q11 In section 22 05 00, under heading 1.2 (MAINTENANCE), the document says to furnish spare parts. Do we need to furnish every single part requested? Because some of the requested spare parts are not found on the specified pumps. Can you please specify which spare parts need to be furnished?

A11 No spare parts are to be supplied.

Q12 Is there an existing external controller for controlling the three (3) pumps (e.g. BACNet, Modbus or any other type of communication)?

A12 All control work will be performed in-house.

Q13 Does this invitation to tender include controlling the three (3) pumps using an external controller? If so, what characteristics does the external controller need to have?

A13 All control work will be performed in-house.

Q14 In the description of the gate valves in item 2.2 of section 23 05 23 (Valves – Cast Iron, page 2/4), paragraph .4 states that the stem must be “bronze to ASTM B62.” However, paragraph .7 calls for the stem to be “wrought steel.” Which type of stem must be provided?

A14 Provide wrought steel stem.

Q15 Would it be possible to obtain the data sheets of the valves you provide?

A15 The valves are:

- 3 units of 6” Mueller A2600-6BB Check valves; and
- 3 units of 6” Mueller 851A flex disc check valve with drain plug

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.

End of Addendum #4