

ADDENDUM NO. 2

This Addendum consists of the following **CHANGES TO THE BID DOCUMENTS FOR OFFICIAL NOTICE 54-2010**:

1. In the Specifications for Howard Pumping Station, HS-22 Pump No. 2 Replacement (Variable speed –Low Service) and HS-25 Pump No. 3 Replacement (Single Speed-Low Service to high Service), Section 15800 2.02 L, make the following changes:
 - a. **DELETE:** “The VFD average noise levels shall not exceed 60 dB as established by ANSI and NEMA for self-cooled ratings when measured in accordance with NEMA ST20.”
INSERT: “The VFD sound level shall not exceed 74dB at 2 meters.”
2. In the Specifications for Howard Pumping Station, HS-22 Pump No. 2 Replacement (Variable speed –Low Service) and HS-25 Pump No. 3 Replacement (Single Speed-Low Service to high Service) :
 - a. **DELETE:** All occurrences of the word “vacuum” in reference to the VFD and bypass contactors.
INSERT: The word “air break” in its place.
3. In the Specifications for Howard Pumping Station, HS-22 Pump No. 2 Replacement (Variable speed –Low Service) and HS-25 Pump No. 3 Replacement (Single Speed-Low Service to high Service), Section 15800 2.03 B, paragraph 2, make the following changes:
 - a. **DELETE:** “The SSRV motor controller shall be provided with a plug fuse on the input side.....”
INSERT: “The SSRV motor controller shall be provided with blade fuses on the input side.....”
4. In the Specifications for Howard Pumping Station, HS-22 Pump No. 2 Replacement (Variable speed –Low Service) and HS-25 Pump No. 3 Replacement (Single Speed-Low Service to high Service), Section 15800 2.05, paragraph 3, make the following changes:
 - a. **DELETE:** “The drive shall also include an external vacuum bypass contactor”.

INSERT: “The drive shall also include an internal air break bypass contactor”.

5. In the Specifications for Howard Pumping Station, HS-22 Pump No. 2 Replacement (Variable speed –Low Service) and HS-25 Pump No. 3 Replacement (Single Speed-Low Service to high Service), Section 15800 2.05 D.2, make the following changes:

- a. **DELETE:** “Provide for bottom entry and top exit of power cables.....”.
INSERT: “Provide for top entry and top exit of power cables.....”.

6. In the Specifications for Howard Pumping Station, HS-22 Pump No. 2 Replacement (Variable speed –Low Service) and HS-25 Pump No. 3 Replacement (Single Speed-Low Service to high Service), Section 15800 2.08, make the following changes:

- a. **DELETE:** “.....the Manufacturer shall provide three days (24 hours) service for training the employees.”
INSERT: “.....the Manufacturer shall provide three days (15 hours. 5 per day) service for training the employees.”

SEE NEXT PAGE FOR ANSWERS TO RFI QUESTIONS FOR O.N. 54-2010.

HS-22 & HS-25 RFI RESPONSES
(O.N. 54-2010)

1. I was unable to find how to become an "Approved Equal" on the Pumps and Electric Actuators.
IT IS THE INTENT OF THE SPECIFICATIONS TO SPECIFY PRODUCTS FOR A LEVEL OF QUALITY AND PERFORMANCE DESIRED BASED ON PRIOR EXPERIENCE. ANY DECISION REGARDING AN APPROVED EQUAL IS MADE AFTER THE CONTRACT IS AWARDED, DURING THE SUBMITTAL STAGE OF THE CONTRACT. PRE-APPROVALS OF AN "OR EQUAL" ARE NOT MADE PRIOR TO THE BID OPENING. IT IS THE BIDDER'S RESPONSIBILITY TO DETERMINE IF A PRODUCT MEETS THE SPECIFICATIONS PRIOR TO THE BID OPENING AND DURING THE SUBMITTAL PROCESS.
2. Would you consider "Rotork IQ" as an "Approved Equal" per Section 15100, Part 2.05 Motorized Valve Actuators?
PLEASE SEE RESPONSE FOR #1
3. Would you consider "ITT Goulds Pumps" as an "Approved Equal" per Section 15500, Part 1.03, D Quality Assurance?
PLEASE SEE RESPONSE FOR #1
4. The specifications reference providing new doors for the switchgear sections, but also state to "furnish and install cover plates over all unused openings". Are the existing doors being replaced? Please clarify.
DOORS ARE TO BE REPLACED.
5. Where does the 120v power for the motor heaters originate? At the motor terminal cabinet?
IN THE RESPECTIVE SWITCHGEAR CUBICLE.
6. Where does the 208v motor space heater power originate?
AT THE 208V DC PANEL, ON WEST END SWITCHGEAR BALCONY.
7. Where is the new Current Pressure Transmitter located? In the specifications it says to replace existing but on Drawing HS-25-08 it shows a new transmitter.

THE NEW PRESSURE TRANSMITTER IS LOCATED IN SAME LOCATION AS EXISTING. PROVIDE AND INSTALL NEW COMBINATION PRESSURE TRANSMITTER WITH LED DISPLAY FOR PRESSURE.

8. Where is the 24 dc power supply located for the Transmitter control feed? Where do we pick-up the 120v power for the Transmitter? If we are replacing this transmitter can we re-use the wiring?

EXISTING POWER WIRING MAY BE RE-USED.

9. Where is Pump #2 valve controller located?

THE NORTH FACE OF THE PILLAR NEXT TO PUMP NO. 2, WHERE THE EXISTING ONE IS LOCATED.

10. Can a drawing be issued to show the modifications to the switchgear door panels and the new wiring required in bold print or clouded instead of the same print for the existing and the new?

A NEW DRAWING WILL NOT BE ISSUED AT THIS TIME DUE TO BID CONSTRAINTS; COPIES OF THE EXISTING DOOR PRINTS WILL BE PROVIDED TO THE CONTRACTOR AFTER THE TIME OF THE CONTRACT AWARD.

11. Can existing conduit be re-used where applicable?

YES.

12. Do you want the control wiring replaced or can we re-use the existing wiring?

IT IS THE INTENT OF THE SPECIFICATIONS TO PROVIDE AND INSTALL NEW CONTROL WIRING.

13. What panel or j-box do we take the 125V dc wiring for the pressure switches to?

THE PRESSURE SWITCH DOES NOT REQUIRE POWER; IT IS A MECHANICAL DEVICE WHICH HAS DRY OUTPUT CONTACTS WHICH ARE PART OF THE VALVE OPEN CIRCUIT AND RUN TO THE VALVE CONTROLLER.

14. Is the RTD wiring for the motor shown on Drawing HS-25-08 or is this additional? The specification says these wires are terminated at the VFD.

THE MOTOR CONTROL CABINET CONTAINS TERMINATIONS FOR THE MOTOR BEARING RTD'S. CONNECTION SHALL BE MADE FROM MOTOR CABINET TO VFD.

15. If the motor and the pump are packaged unit wouldn't the RTD's be already wired to the motor terminal cabinet?

THIS ITEM CAN ONLY BE ADDRESSED AT THE TIME OF CONTRACTOR SUBMITTAL AFTER AWARD OF CONTRACT. THIS DEPENDS ON THE TYPE OF PUMP & MOTOR SUBMITTED.

16. It is our understanding that the 5kv feeder (3) #2 & (1) #6 ground to Pump #3 is to be replaced. Is this correct? **YES**
17. Can you provide a drawing for Pump #3 control wiring? Drawing HS-25-11 does not show any control valve wiring.
REFERENCE DRAWING HS-30 SHOWS THE CONTROL SCHEMATICS FOR PUMP NO. 3 DISCHARGE VALVE; OMIT CONTACT 41 FROM THE DIAGRAM SINCE A SYNCHRONOUS MOTOR WILL NOT BE USED.
18. Is the BP controller that is shown on Drawing HS-25-11 in the Motor Terminal cabinet? If so would those wires shown be wired internal?
NO; IT WOULD BE GROUPED WITH THE VFD/ BYPASS SYSTEM.
19. On Drawing HS-25-10 the control wiring shown under feeder breaker #3, are those points also shown on Drawing HS-25-11? **THE GE 469 BRG/WNDG OT CONTACT IS SHOWN ON BOTH DRAWINGS.**
20. Where is the 24v DC power supply located for Pump #2 transmitter?
PLEASE SEE RESPONSE FOR #8.
21. Do we use the same motor terminal compartment diagram for Pump #3 as shown on Drawing HS-25-08, or do we only use the diagram shown on Drawing HS-25-11?
OMIT REFERENCE TO VFD/BP CONTROLLER.
22. Are we just extending the 5kv feeder for Pump #3 or replacing it?
REPLACING IT.
23. Is the same limit switch control for Pump #2 being provided for Pump #3 cone valve discharge minus GLS-6 & GLS-7?
YES – AS SHOWN ON REFERENCE DRAWING HS-30.
24. Specification Section 15100, 2.01 – C calls for DI body. Will they accept our standard cast iron for BFV's?
ONLY DUCTILE IRON.
25. We need the pump shut-off and max flow conditions for pumps – this is required to determine the motor torque for cone valve.

THE PERFORMANCE AND DESIGN REQUIREMENT AS SHOWN IN SPECIFICATION SECTION 15500, PART 2 SHALL SUFFICE.

26. Verify all motors are o/c.
REFER TO CONTRACT DRAWINGS.
27. Should we assume for bidding purposes that the motor FLA for Pump #2 will be equal or less than NEC typical motor currents for a 200HP, 3 phase, 460VAC induction machine as published in Table 430-150 (240Amps)?
YES.
28. Confirm how many hours of training time is required. Section 1.06 states 15 hours. Section 2.08 states 24 hours.
15 HOURS
29. Confirm that warranty period is 24 months from project completion / 30 months from shipment. Does the warranty cover parts only or parts & labor to repair?
THE WARRANTY SHALL BE AS STATED IN SECTION 15800, 1.09 AND SHALL INCLUDE PARTS & LABOR TO REPAIR.
30. Confirm enclosure rating for VFD. Paragraph 6 of Section 2.01 makes reference to NEMA 1 protection class, but Section 2.02, J makes reference to UL Type 1, NEMA 12. Section 2.03A makes reference to NEMA 12.
VFD ENCLOSURE SHALL BE NEMA 12 PROTECTION CLASS.
31. The PowerFlex 700 has a sound level of 74dB measured at 2 meters. Specification states 60dB. Please confirm that this is acceptable.
THE VFD SOUND LEVEL SHALL NOT EXCEED 74DB AT 2 METERS.
32. Confirm what viewing window for VFD is for as specified in Paragraph 2. The VFD will have a door mounted operator interface with digital display as specified in Section 2.03A, Paragraph 5. Can the window be omitted?
THE DIGITAL DISPLAY WINDOW WITH OPERATOR INTERFACE IS ADEQUATE.
33. Confirm that standard low voltage contactors (air break) are acceptable. Specification states vacuum contactors which are typically used in medium voltage type applications (not low voltage).
THE VFD AND SOFT START BYPASS SHALL UTILIZE AIR BREAK CONTACTORS.

34. Allen-Bradley PowerFlex 700 VFD has one regulator internal to the VFD (not 2 as specified). Power Flex 700 regulator also only has a proportional and integral component (no derivative). CompactLogix processor has capability to perform multiple PID control. Preference would be to use CompactLogix for any PID control required.

THIS WOULD BE ACCEPTABLE.

35. Recommended fuses for the VFD and reduced voltage soft starter are not available as a plug-style fuse. Industry standard blade type fuses will be used.

NOTED.

36. Allen-Bradley SMC-Flex has an internal bypass contactor. Once the motor is up to speed, this internal contactor will be used to bypass the SRC's that are part of the SMC-Flex. An external bypass contactor would only be required if across the line starting of the motor is required. Please confirm that an external contactor is not required to bypass the SMC-Flex.

THE BYPASS CONTROLLER SHALL INCLUDE AN INTERNAL AIR BREAK BYPASS CONTACTOR, NOT AN EXTERNAL BYPASS VACUUM CONTACTOR.

37. Confirm that standard low voltage contactors (air break) with standard interlocking relays are acceptable. Specification states an 86M lockout relay should be used. If this is required, could the City provide a recommend device or equivalent? Example: GE HEA61 or equivalent. 86M devices are more typically used for MV applications (not low voltage).

THE VFD AND SSRV BYPASS SYSTEM SHALL UTILIZE STANDARD LOW VOLTAGE AIR BREAK CONTACTORS, NOT VACUUM CONTACTORS. THE CONTRACTOR SHALL PROVIDE AN 86M RELAY OR APPROVED EQUAL EQUIPMENT WITH IDENTICAL FUNCTIONS. PROPOSED EQUIPMENT WILL BE EVALUATED AS TO ITS ACCEPTABILITY AS AN APPROVED EQUAL AT THE TIME OF SUBMITTAL.

38. From site visit it appears top entry and top exit would be the best and lowest cost option for the complete VFD and bypass enclosure. Specification asks for bottom entry. Please confirm top entry and top exit is OK.

THE VFD AND BYPASS ENCLOSURES SHALL BE PROVIDED FOR TOP ENTRY AND TOP EXIT OF POWER AND CONTROL WIRING CONDUITS, NOT BOTTOM ENTRY AND TOP EXIT.

END OF ADDENDUM NO. 2