ADDENDUM 2

DATE: April 19, 2016

PROJECT: MSB Lab AHU L-7 & L-8 Replacement

RFP NO: 744-R1615

OWNER: The University of Texas Health Science Center at Houston

TO: Prospective Proposers

The following questions were submitted before the deadline, Tuesday-April 12, 2016 at 11:00AM CST. The responses are in red.

1. What is the estimated date to proceed with the project? Is that going to be a summer job or fall job?

There is no schedule for it; they can start as soon as the project is awarded.

2. We self-perform some work but this RFP has not work for us to self-perform. I noticed that this is mainly mechanical work thus do you need GC's (General Contractors) to submit pricing or are you expecting to receive numbers directly from mechanical (HVAC) subcontractors?

We will accept pricing from a GC or a mechanical subcontractor; the bidder just has to be able to meet all of the RFP requirements.

3. Can we submit the CD-ROM the following day instead of the same day we submit the 7 copies of the proposal?

Yes; you may submit the copy of your proposal on CD the day after the proposal is due. The proposal due date is Thursday-April 21, 2016 by 11:00AM CST. Therefore, please have the on CD in our office on Friday-April 22, 2016 by 11:00AM CST.

4. Specification 23 73 23 Air Handling Units

Paragraph 2.05 C specifies face and bypass dampers. Drawing M300 indicates a bypass damper only for the heat pipe coil. Please confirm that only the bypass damper is required. No face coil is required.

Correct. Only a bypass damper is required.

5. Paragraph 2.11 says no painting is required, but paragraph 1.11 A. says all equipment must have a prime coat of paint. Please confirm that paint is not required.

Paint is not required.

6. Paragraph 3.01 C. says high pressure units must be assembled by bolting together. Please define high pressure.

These units will be high pressure units.

7. Specification 23 82 16 Air Coils

Paragraph 2.01 B. requires maximum 8 fpi. Drawing M400 AHU schedule says minimum 8 fpi. Please advise if greater than 8 fpi is allowed. If so, provide maximum fpi. The 8 fpi should be noted as the maximum.

- 8. Paragraph 2.02 A. requires aluminum fins. Preheat coil on drawing M400 AHU schedule requires aluminum fins. Reheat coil on drawing M400 AHU schedule requires copper fins. Please provide the desired heating coil fin material.

 All heating coils may have aluminum fins.
- 9. Drawing M300 Detail 03 and 04

The cooling coil condesate receiver is drawn in a way that implies it is recessed into the floor. Please clarify the desired receiver location. See attached sketch for details. No, we do not plan for the receiver to be recessed into the floor. The detail is showing the receiver being in front of the concrete pad and base rails.

10. Drawing M500 Detail 06

The bypass and isolation valves for the upstream cooling coils are drawn with actuators. Are manual isolation valves acceptable? If they are motorized, please provide a control sequence. See attached sketch for details.

No manual valves are not acceptable. The valves shall shut off the first coil when the outside air dewpoint is under 62 degrees (owner adjustable).

Sequence to be:

- A. The cooling coils for the units consist of multiple coils in series. There are three control valves controlling the leaving air temperature. One valve is a fully-modulating control valve controlling the total water flow through one or both of the coils, the other two are two-position valves used to open and close one of the coil banks.
- B. When the outside air dewpoint is over 62 degrees (owner adjustable), the coil, two-position valve (NO) shall be open while the bypass valve (NC) shall be shut and the fully modulating valve shall control discharge air temperature by modulating chilled water flow through both of the series coils.
- C. When the outside air dewpoint is 62 degrees or below (owner adjustable), the coil, two-position valve (NO) shall close while the bypass valve (NC) shall open and allow the fully modulating valve to control discharge temperature by modulating chilled water flow through only one of the coils.

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- 11. Please confirm that this project is to follow the Harris County Building Construction Prevailing Wage Rates (Quarter 2 of 2016) found at http://appsqa.harriscountytx.gov/AE/hcpid/prevailingwage.aspx Confirmed; please see Revised Appendix Seven-Special Conditions (separate attachment). It replaces the Special Conditions included in the initial bid; additionally it contains these items:
 - Attachment A: Prevailing Wage Determination Houston/Galveston area
 - Attachment B: Change in Work-Cost Analysis Form
 - Attachment C: Sample Project Specific Safety Plan/Job Hazard Analysis Checklist
- 12. Please confirm that a full time GC superintendent is required for the duration of the project. Yes, Full time Superintendent is required.
- 13. Please confirm that there is no asbestos abatement in this project's scope of work.

 Any Abatement will be handled by the owner.
- 14. Please modify the Pricing and Delivery Schedule to reflect what Specification 23 73 23 section 1.12 requires from the AHU Manufacture. Please disregard this section in the specifications referencing future AHU pricing. Future AHU projects will require a new bid process.
- 15. Existing AHU unit to be demo'd (P.107?): Return air and outside air duct not shown on drawings, do we demo or leave? All ductwork and piping associated with the AHUs are to be removed and capped outside the wall of the unit room except that duct specifically shown to be removed completely in the gym. This includes RA and OA duct.
- 16. New units to be added: At the cinder block wall by P.103D, should there be a 2' clearance for install purposes? If space is required for install, please provide. Built-up units may be able to be installed from inside the unit and that will be acceptable. If you need 2' for install, the L7 unit will need to be replaced first to provide the clearance and the floor drain and some additional piping will likely need to be moved.
- 17. Where would an acceptable crane location be to set up for a lift? In the same area looking at the front of the building it looks like we would make a lift to the top where the letters are on the building, is that correct?

 Loading dock would be the best location; but means and methods are up to the contractor.
- 18. The parking lot on the front side of the building in front of the loading dock what is under the parking lot? Can it hold the weight of a crane truck?
 Harris Gully is under parts of that parking lot, so we are not sure if a crane can set up there. It is not UT's parking lot; it is TMC's lot.
- 19. If parking lot can't be utilized, will be loading dock be acceptable to set up? Yes; the loading dock is acceptable but on weekends only.

- 20. Will Energy Labs be considered an acceptable manufacturer for the custom AHUs? Yes. This was part of Addendum 1.
- 21. Will Air Zone be considered an acceptable manufacturer for the custom AHUs? Yes. This was part of addendum 1.
- 22. Drawing M400, Mechanical Schedules references "electrical" drawings for Division 26 to determine where to connect the exterior mounted junction boxes to provide power to the units. The electrical drawings assume the existing feeders can be reused to power the new variable drive motors based on horsepower comparisons. We need more detailed power requirements form the manufacturer to verify if this assumption is correct. Please advise.

 The existing motors are 125HP, the new are 120HP with 125HP VFDs. If new feeders are required due to VFD requirements, please verify and provide.
- 23. Pump schedules are insufficient to properly determine electrical connections and motor controller specs. Please advise.
 Sorry, part of the problem may be that it is noted as 4BHP, but it is 4A, 1/6 HP. The type specified is a plug-in type connection. This does not have to be the pump, any sump doing the duty can be provided. The one noted is one available from Grainger.
- 24. Control conduit is called out, but no routing schematic or point-to-point schedules are provided. Please advise.
 - Most control conduit is existing. If any is to be relocated, it must be per specifications. The pre/post coil will have some control points as well as the sump pump if that alternate is selected.
- 25. Electrical drawings state to reuse the existing equipment feeders and associated panels (with modifications) to feed the new equipment. Do we run new feeders to keep the existing equipment online until the switchover?

 That should not be necessary since the back-up units should be running at the time of demo and replacement.
- 26. Where do we get power for the new feeders assuming we leave the existing AHUs online? The existing AHUs will not be online for this, the temp units will be in operation.
- 27. Where do we get power to feed the new VSD (and any new pumps or drives) if the existing feeders are insufficient? (M208)
 The existing VFDs are 125HP. The new VFDs are 125 HP. The 6 fans at 20HP technically note as 6 amps more than a single 125HP motor per the NEC, but the feeder should be 3/0 and that is good for the additional amperage. If it is found that the feeder is not 3/0, notify the Engineer at that time and we can discuss it with the project team. Assume the feeders may be reused.
- 28. Per General Notes F. on M000 drawing please clarify which mechanical and plumbing items will need to be field painted.
 - No items are required to be field painted for this project.

- 29. Will it be acceptable to use a complete "knock-down" AHU in lieu of a semi-modular AHU to facilitate delivery, clearances, etc.?

 Yes.
- 30. Will the project be able done during normal working hours? With the exception of the shutodowns and crane lifts, do you foresee anything needing to be done after hours? Work can be done during normal working hours, however, any noisy activity or anything with strong smells should be planned for after hours.
- 31. There isn't really any steam or chilled water piping shown on the drawings. Should it be assumed that all existing piping is sized correctly and in the proper locations? For sizing, yes. We did check the sizing. For the locations, no. For the base, the locations will be fairly close, but for the alternates, piping modifications will be required. It will depend on the AHU manufacturer's lay-out as to the exact locations of the coil connections. We are assuming minor extensions from the pipe per note 1 on drawing 208.
- 32. The drawings show the plenum boxes on the roof to remain after construction but doesn't say anything about the temporary flex duct or intermediate supports. I realize the flex will be turned over to the Owner at the completion of the project but should the intermediate supports be demoed/removed or left in place?

 Please refer to note 4 on M209. The plenums will remain in place and capped. Note 1 calls for the flex to be turned over to the owner. The plenums will likely be reused for future phases.
- 33. Is this roof under any existing warranty? If so, please provide the name of the roofing subcontracting. If not, is there a preferred roofing subcontractor?

 Yes; the existing warranty is with Competition Roofing.
- 34. We would like to have additional access to walk the site on Thursday, 4/14/16, afternoon. Please confirm if this is acceptable and what our next steps need to be.
 Unfortunately, we had the second walk through on Monday, April 11, 2016 at 10:00AM CST.
- 35. Are there any other approved AHU manufacturers for this project?

 Yes. ClimateCraft is also an approved AHU manufacturer. Also see the responses to questions 20 and 21.
- 36. Drawing M400 Air Handling Unit Schedule specifies 2" 85% Final Filters. Specification 23 41 00 paragraph 2.03 C. requires 12" deep 85% final filters. Please confirm the filter depth. They should be 12" deep.
- 37. Is a drain pan required under the air handler heat pipe coil?
 Yes. Condensate will not be often, but there are conditions where condensation can occur, so it is required.

- 38. Please confirm that the heat recovery bypass damper is open during winter conditions to prevent cooling in the hot deck. Under what winter conditions is the bypass damper open? Correct; the bypass damper is closed if outside air is less than 60 degrees.
- 39. Specification 23 73 23 Air Handling Units, paragraph 2.03 A. Please confirm that York Custom polyurethane sealant is approved.

 Gasketing is required per the specifications.
- 40. Specification 23 73 23 Air Handling Units, paragraph 3.02 B. requires factory deflection test. Because the unit is shipped without joint sealant for ease of disassembly, a factory deflection test cannot be conducted. Please confirm that a field deflection test is acceptable. Field deflection test is acceptable.
- 41. Is internal steam, chilled water, condensate or heat pipe piping insulated? Components downstream of cooling coils get wet due to the air pressure drop of saturated air. Consequently, the pipe insulation gets wet. Please consider accepting non-insulted pipe installed over the drain pan.

 Internal steam must be insulated for safety. Condensate and chilled water is not insulated as long as the piping is over a drain pan.
- 42. Is the energy recovery coil schedule on page M400 based upon a manufacturer's data? It was loosely based off of Heatpipe. The efficiency was lowered somewhat to ensure it would not be a single vendor able to provide the coils.
- 43. Please consider issuing the specified energy recovery coil selection output. I was not given an output, but a velocity and DT from the rep.
- 44. Drawing M400 UV lights are required on the cooling coils. Please issue a specification or indicated acceptable manufacturers.

AHU manufacturer's standard is acceptable.

END OF ADDENDUM 2