

**ADDENDUM # 1**  
**McLaughlin Youth Center Air Handling Unit Upgrades**  
**ANC 15-04C**

This addendum forms a part of the Contract Documents and modifies the original Project Documents dated 6/10/2014. In case of conflicts between this Addendum and previously issued documents, this Addendum shall take precedence.

This addendum consists of 9 annotated pages.

Additionally, please find attached:

Specification Section 15200, Water Distribution

Sketches: None

Sheets: 0 pages

**CONTRACTOR QUESTIONS/CLARIFICATIONS:**

1. **QUESTION:** The type of glycol isn't called out, please clarify. **ANSWER:** Spec Section 15120, paragraph 2.15 defines the glycol for the project.
2. **QUESTION:** Is fire alarm testing required after relocate of horn strobe and pull station?  
**ANSWER:** Drawing E0.1, General Note 6 states fire alarm system shall be testing IAW NFPA 72.
3. **QUESTION:** Who maintains the fire alarm system? **ANSWER:** Drawing E0.1, General Note 6 states who maintains the fire alarm system.
4. **QUESTION:** Is the conduit serving panel 11A on Sheet E3.1 routed through the crawlspace or on the roof? **ANSWER:** The basis of design is shown on Sheet E0.1, Detail 1, Note 1 and states to route the conduit through the crawlspace.

**GENERAL INFORMATION:**

- AD1-1. The existing roof above where the condensing units are being installed under Additive Alternate #2 is an IRMA roof installed in 1993. No roof warranty is in place. Below is an excerpt from those drawings on the roof construction. Area of construction is "Building B". Contractor is to assume that there is no asbestos in the roof but is to complete a materials test prior to construction to verify.

INSULATION THICKNESS SCHEDULE	
<u>BASE BID</u>	
BUILDING B	3'
UPPER GYM CORRIDOR	1'
LOWER GYM CORRIDOR	3'
<u>ADDITIVE ALTERNATE NO. 1</u>	
HIGH BUILDING C	1 1/2'
<u>ADDITIVE ALTERNATE NO. 2</u>	
HIGH GYM	1'
LOW GYM	2'

  

### **SPECIFICATIONS:**

AD1-2. Section 01005, Paragraph 1.8.F – **ADD** the following subparagraph:

- “1. Contractor shall protect staging area from damage during construction including, but not limited to, protecting concrete curbs.
2. Remove sod and vegetation from damaged, diseased or rutted lawn areas. Do not bury into soil. Remove turf and topsoil containing foreign materials resulting from Contractor’s operations, including oil drippings, fuel spills, stone, gravel, and other construction materials, and replace with new topsoil. Hydro-seed with grass-seed mix approved by Project Manager.
3. Maintain turf for not less than 90 days, and longer as required to establish a turf cover of 95 percent. Maintain turf by watering, weeding, mowing, trimming and other operations such as rolling, re-grading and replanting as required to establish a smooth turf, free of eroded or bare areas.”

AD1-3. Section 15180, Paragraph 2.1.B - **REPLACE** “Type K” with “Type L”.

AD1-4. **ADD** Section 15200, Water Distribution

### **DRAWINGS**

AD1-5. General – **CHANGE** the sheet number for the sheet entitled, “MECHANICAL DIAGRAMS” to M5.1.

AD1-6. Sheet A100, Detail 2 – **CHANGE** the distance from the edge of wall to access door from “18’-3”” to “APPROXIMATELY 30’-0”, FIELD COORDINATE”.

AD1-7. Sheet A100, Detail 4 – **CHANGE** the verbiage “DUCT ROUTED” to “PIPING ROUTED”.

AD1-8. Sheet M3.1 – **DELETE** Access Door callout and location. Final access door location to be field verified.

- AD1-9. Sheet M1.2, Heat Exchanger Schedule – **CHANGE** Hot Side flow to 39.0 GPM, hot side pressure drop to 1 PSI, Cold Side pressure drop to 1 PSI, Basis of Design to “TACO TFP10X20-100”.
- AD1-10. Sheet M1.2, Expansion Tank Schedule – **CHANGE** Basis of Design to “TACO CBX42-125”.
- AD1-11. Sheet E2.1 – **DELETE** Access Door callout and location. Final access door location to be field verified.

**ATTACHMENTS:**

SPECIFICATIONS: Section 15200, Water Distribution

SHEETS: None.

**END OF ADDENDUM #1**

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PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Domestic water piping, above grade.
2. Unions and flanges.
3. Pipe hangers and supports.
4. Insulation.

1.2 REFERENCES

A. American Society of Mechanical Engineers:

1. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings.
2. ASME B16.22 - Wrought Copper and Copper Alloy Solder Joint Pressure Fittings.
3. ASME B16.26 - Cast Copper Alloy Fittings for Flared Copper Tubes.

B. American Society of Sanitary Engineering:

1. ASSE 1010 - Performance Requirements for Water Hammer Arresters.

C. ASTM International:

1. ASTM B32 - Standard Specification for Solder Metal.
2. ASTM B42 - Standard Specification for Seamless Copper Pipe, Standard Sizes.
3. ASTM B88 - Standard Specification for Seamless Copper Water Tube.
4. ASTM B584 - Standard Specification for Copper Alloy Sand Castings for General Applications.
5. ASTM F708 - Standard Practice for Design and Installation of Rigid Pipe Hangers.
6. ASTM F1476 - Standard Specification for Performance of Gasketed Mechanical Couplings for Use in Piping Applications.

D. American Welding Society:

1. AWS A5.8 - Specification for Filler Metals for Brazing and Braze Welding.

E. American Water Works Association:

1. AWWA C651 - Disinfecting Water Mains.

F. Manufacturers Standardization Society of the Valve and Fittings Industry:

1. MSS SP 58 - Pipe Hangers and Supports - Materials, Design and Manufacturer.
2. MSS SP 69 - Pipe Hangers and Supports - Selection and Application.
3. MSS SP 80 - Bronze Gate, Globe, Angle and Check Valves.
4. MSS SP 89 - Pipe Hangers and Supports - Fabrication and Installation Practices.
5. MSS SP 110 - Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

### 1.3 SUBMITTALS

#### A. Product Data:

1. Piping: Submit list of materials provided. Catalog information not required.
2. Hangers and Supports: Submit list of materials provided. Catalog information not required.
3. Domestic Water Specialties: Submit manufacturers catalog information, component sizes, rough-in requirements, service sizes, and finishes.
4. Insulation: Submit list of materials and associated thicknesses provided. Catalog information not required.

### 1.4 CLOSEOUT SUBMITTALS

- A. Section 017700 - Closeout Procedures: Closeout procedures.
- B. Project Record Documents: Record actual locations of valves and equipment.

### 1.5 QUALITY ASSURANCE

- A. For drinking water service, provide valves complying with NSF 61.

### 1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years experience.
- B. Installer: Company specializing in performing Work of this section with minimum three years experience.

### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Section 012500 – Substitution Procedures: Product storage and handling requirements.
- B. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.

- C. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the Work, and isolating parts of completed system.

## 1.8 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

## PART 2 - PRODUCTS

### 2.1 DOMESTIC WATER PIPING, ABOVE GRADE

- A. Copper Tubing: ASTM B88, Type L, drawn.
  - 1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze.
  - 2. Joints: ASTM B32, Alloy Grade Sb5 tin-antimony, or Alloy Grade Sn95 tin-silver, lead free solder AWS A5.8 Classification BCuP-3 or BCuP-4 silver braze.

### 2.2 PIPE HANGERS AND SUPPORTS

- A. Plumbing Piping: Conform to ASME B31.9.
- B. Hangers for Pipe Sizes 1/2 to 1-1/2 inch: Malleable iron, adjustable swivel, split ring.
- C. Multiple or Trapeze Hangers: Steel channels with welded supports or spacers and hanger rods.
- D. Wall Support for Pipe Sizes 3 inches and Smaller: Cast iron hooks.
- E. Copper Pipe Support: Carbon steel ring, adjustable, copper plate.

### 2.3 PIPE INSULATION

- A. ASTM C547, molded glass fiber pipe insulation.
  - 1. Thermal Conductivity: 0.23 at 75 degrees F.
  - 2. Operating Temperature Range: 0 to 850 degrees F.
  - 3. Vapor Barrier Jacket: ASTM C1136, Type I, factory applied reinforced foil kraft with self-sealing adhesive joints.
  - 4. Jacket Temperature Limit: minus 20 to 150 degrees F.
  - 5. Thickness: 1 inch.
- B. PIPE INSULATION ACCESSORIES
  - 1. Vapor Retarder Lap Adhesive: Compatible with insulation.
  - 2. Covering Adhesive Mastic: Compatible with insulation.
  - 3. Piping 1-1/2 inches diameter and smaller: Galvanized steel insulation protection shield. MSS SP-69, Type 40. Length: Based on pipe size and insulation thickness.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Section 013100 – Project Management and Coordination: Coordination and project conditions.

3.2 PREPARATION

- A. Ream pipe and tube ends. Remove burrs.
- B. Remove scale and dirt, on inside and outside, before assembly.

3.3 INSTALLATION - ABOVE GROUND PIPING

- A. Install non-conducting dielectric connections wherever jointing dissimilar metals. Use dielectric nipples or flanges in place of dielectric unions.
- B. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.
- C. Group piping whenever practical at common elevations.
- D. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings.
- E. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc rich primer to welding.
- F. Install domestic water piping in accordance with ASME B31.9.

3.4 INSTALLATION INSULATION

- A. Insulation shall run continuously through hangers and be sealed at edges.

3.5 FIELD QUALITY CONTROL

- A. Test domestic water piping system in accordance with local authority having jurisdiction.

3.6 CLEANING

- A. Only piping that is modified needs to be cleaned. Contractor has option of installing valves and drains in order to accomplish this.
- B. Prior to starting work, verify system is complete, flushed and clean.

- C. Verify pH of water to be treated is between 7.4 and 7.6 by adding alkali (caustic soda or soda ash) or acid (hydrochloric).
- D. Inject disinfectant, free chlorine in liquid, powder and tablet or gas form, throughout system to obtain residual from 50 to 80 mg/L.
- E. Bleed water from outlets to obtain distribution and test for disinfectant residual at minimum 15 percent of outlets.
- F. Maintain disinfectant in system for 24 hours.
- G. When final disinfectant residual tests less than 25 mg/L, repeat treatment.
- H. Flush disinfectant from system until residual concentration is equal to incoming water or 1.0 mg/L.
- I. Take samples no sooner than 24 hours after flushing, from 10 percent of outlets and from water entry, and analyze in accordance with AWWA C651.

END OF SECTION



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