FORM BF-1

State of Michigan Department of Military and Veterans Affairs Construction & Facilities Office Reserve Forces Service Center 3423 N. Martin Luther King Blvd. Rm. 321 DATE ISSUED: file Code: Project No: File No: State Unit: June 28, 2023 1340 26A8023010 511/23337.AGY Dept. of Military and Veterans Affairs Lansing, Michigan 48906-2934

SUBJECT:

BID OPENING:

Renovate Armory -Detroit Light Guard Armory Detroit, MI July 12, 2023 - 2:00PM

ADDENDUM NO. 1

TO: All Bidders

SUBJECT: This Addendum is issued to revise and clarify the following:

- 1. Please see the new issued drawing Sheet P4, dated 28 June 2023. This drawing is issued to add additional plumbing and associated work.
- 2. Please Remove the Specification Section 221116 as listed in the Original Specification Document and insert this New Specification Section 221116 Addendum 1. This will Add the New Piping needed for the New Plumbing Drawing P4.
- Replace the "Bid Schedule" page and Page 01-1 in the original specification document, "26A8023010 Renovate Armory DLG Main Specs", with the new "Renovate Armory DLG Bid Schedule Addendum 1" and "Renovate Armory DLG Page 01-1 Addendum 1" respectively.
- 4. All kitchen equipment, in the second floor existing kitchen shall be removed and become the property of the contractor.
- 5. The Davis-Bacon Act wage rates apply and are listed in Appendix IV of the Specifications.
- 6. As Noted on Drawing Sheet A3, there are no Additional Plumbing Drawing Sheets for the Plumbing Work in this location. The contractors and subcontractors will need to coordinate the new plumbing work in this area with the drawing A3.
- 7. There is now a Contingency Allowance for Abatement of \$30,000. Please see the attached updated Bid Schedule that will need to be submitted at Bid Time. The Asbestos and Lead Based Paint Building Survey is in Appendix II of the Specifications for you use. The Contractor is responsible for all Abatement needed in completing the scope of the contract.
- 8. Details shown on the contract drawings stating they are drawn to a Scale, can be Scaled to determine dimension sizes and quantities.
- 9. Coordinate drawing details for a particular location with the Finish Schedule provided for each of these locations. Example of this would be the note on detail 13/A7b where it is noted to be Quarry Tile or VCT flooring. The Finish Schedule for the location of each of these states what flooring type to be installed.
- 10. Regarding the work involved with the Existing and New Benches Noted on drawings Sheets A11 and A12; the contractor shall install (3) of the existing 9' Benches and associated existing supports in the new locations, the 4th of the existing 9' benches, shall be cut and edges routed to obtain the new 4' and 5' bench specified, providing 3 new specified supports. The existing, approximately 6'-6" bench shall be cut and edges routed and installed in the location showing the new 5' bench, using the existing supports.

ACKNOWLEDGEMENT: Two copies of this Addendum, properly signed in the space provided below, shall be returned with the Bidder's proposal.

FIRM NAME

BIDDER'S SIGNATURE

Karrie A. Baker

For Brian Bushnell Design Manager Construction & Facilities Management Office

FIRM NAME

TELEPHONE NUMBER and E-MAIL ADDRESS

BID SCHEDULE

Base Bid Schedule - The Bidder will complete the Work and accept as full payment, for the Work items listed, the following Unit Prices and/or Item Bid Prices, as applicable:

Base Bid	Bid	Description	Unit	Item Bid
Item No.	Quantity		Price	Price
1	200 gal	Pump and remove the liquid from the coal pit (See drawing sheet A2), transport and dispose of the liquid in accordance with all State of Michigan liquid industrial byproduct regulations, federal and local regulations.		
2	Lump Sum	Abatement Allowance	\$30,000	\$30,000
-				
3	Lump Sum		\$150,000	\$150,000
TOTAL (This amount should equal the Base Bid amount on the Bid Summary Form)				\$

Base Bid (Sum of Item Bid Prices for all Base Bid Items):

(use words)

Dollars \$

(in figures)

SECTION 01010 SUMMARY OF WORK

1. General

1.1 General information covering the "Scope of Work" is specified on the Invitation to Bid. Additional information is as follows:

(a). None.

- 1.2 The Agency will provide the following Work:
 - (a) State Salvage: The State reserves the right to salvage certain items and equipment and those salvaged items will be identified to the Bidder at the time of their inspection of the proposed Work. The State will remove salvaged items before commencement of the Work.
 - (b) Moving Furnishings and Equipment: The Contractor must give timely notice to the State Agency representative identified in the pre-construction meeting of all furnishings, window covering and movable equipment that will interfere with the Work or which the Contractor cannot protect with coverings of paper, plastic, drop cloths or clean tarpaulin. The Contractor must furnish, install, maintain, and remove all coverings used to protect furnishings, window coverings and movable equipment.

END OF SECTION 01010

SECTION 01020 ALLOWANCES

1. Allowances

1.1 Cash Allowances:

- (a) Bidders must include in their Base Proposal Sum an allowance of \$0. The base bid shall include bonds and insurance on the value of the allowance.
- (b) Monies in the allowance will be used only if directed in writing by the Project Director and Professional.
- (c) Payments under a Cash Allowance must be on actual cost and <u>exclude</u> cost for supervision, handling, unloading, storage, installation, testing, fee, premiums for bond and insurance, etc.
- (c) Unused allowances will be deducted from the contract amount through contract change order.

1.2 **Provisional/Contingency Allowances:**

- (a) Bidders must include in their Base Proposal Sum a contingency allowance of <u>\$150,000</u> and an abatement allowance of <u>\$30,000</u>. The base bid shall include bonds and insurance on the value of the allowance.
- (b) Monies will be used in the contingency allowance only if directed in writing by the Project Director and Professional.
- (c) Payments under a Provisionary Allowance will include not only the purchase/furnished cost of the materials and equipment involved, but also all related labor costs, subcontract costs, construction equipment costs, general conditions costs and Fee, provided they are calculated in accordance with the requirements of the contract documents.
- (c) Unused allowances will be deducted from the contract amount through contract change order.

END OF SECTION 01020

SECTION 01025 MEASUREMENT AND PAYMENT

1. **Schedule of Values**: Unless noted otherwise, before mobilization and start of construction, the Contractor must submit a Schedule of Values to the Professional for review and approval, of the various tasks that must be performed to complete all the Work. The schedule must show each task and the corresponding value of the task, including separate monies allocated for General Condition items and Project close-out. The aggregate total value for all tasks must be equal to the total Contract sum.

END OF SECTION 01025

SECTION 01030 ALTERNATES

- 1. **Use of Alternates**: Determination of the lowest three Bidders shall be based on the sum of the Base Bid and any additive and deductive Alternates the Owner accepts, in the order in which they are listed only. The Owner will accept an Alternate only if all other previously listed Alternates are also accepted unless acceptance by the Owner of Alternates in a different order does not affect determination of the lowest three bidders in any way.
- 2. **Execution:** (a) Coordinate pertinent related Work and modify surrounding work as required to complete the Project for each alternate.
 - (b) Description of Alternates: N/A

SECTION 221116 - DOMESTIC WATER PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. This section includes domestic water piping inside the building as indicated.

1.2 SUBMITTALS

- A. Product Data: For transition fittings and dielectric fittings.
- B. System purging and disinfecting activities report.

PART 2 - PRODUCTS

- 2.1 PIPING MATERIALS
 - A. Comply with requirements in "Piping Schedule" Article for applications of pipe, tube, fitting materials, and joining methods for specific services, service locations, and pipe sizes.
 - B. Potable-water piping and components shall comply with NSF 14 and NSF 61 Annex G. Plastic piping components shall be marked with "NSF-pw."
- 2.2 COPPER TUBE AND FITTINGS
 - A. Hard Copper Tube: ASTM B 88, Type L and ASTM B 88, Type M water tube, drawn temper.
 - B. Cast-Copper, Solder-Joint Fittings: ASME B16.18, pressure fittings.
 - C. Wrought-Copper, Solder-Joint Fittings: ASME B16.22, wrought-copper pressure fittings.
 - D. Bronze Flanges: ASME B16.24, Class 150, with solder-joint ends.
 - E. Copper Unions:
 - 1. MSS SP-123.
 - 2. Cast-copper-alloy, hexagonal-stock body.
 - 3. Ball-and-socket, metal-to-metal seating surfaces.
 - 4. Solder-joint or threaded ends.

2.3 DUCTILE-IRON PIPE AND FITTINGS

- A. Mechanical-Joint, Ductile-Iron Pipe:
 - 1. AWWA C151/A21.51, with mechanical-joint bell and plain spigot end unless grooved or flanged ends are indicated.
 - 2. Glands, Gaskets, and Bolts: AWWA C111/A21.11, ductile- or gray-iron glands, rubber gaskets, and steel bolts.
- B. Standard-Pattern, Mechanical-Joint Fittings:
 - 1. AWWA C110/A21.10, ductile or gray iron.

- 2. Glands, Gaskets, and Bolts: AWWA C111/A21.11, ductile- or gray-iron glands, rubber gaskets, and steel bolts.
- C. Appurtenances for Grooved-End, Ductile-Iron Pipe Domestic Water:
 - 1. Source Limitations: Obtain appurtenances for grooved-end, ductile-iron pipe from single manufacturer.
 - 2. Fittings for Grooved-End, Ductile-Iron Pipe: ASTM A47/A47M, malleable-iron castings or ASTM A536, ductile-iron castings with dimensions that match pipe.
 - 3. Mechanical Couplings for Grooved-End, Ductile-Iron-Piping:
 - a. AWWA C606 for ductile-iron-pipe dimensions.
 - b. Ferrous housing sections.
 - c. EPDM-rubber gaskets suitable for hot and cold water.
 - d. Bolts and nuts.

2.4 PIPING JOINING MATERIALS

- A. Pipe-Flange Gasket Materials:
 - 1. AWWA C110/A21.10, rubber, flat face, 1/8 inch thick or ASME B16.21, nonmetallic and asbestos free unless otherwise indicated.
 - 2. Full-face or ring type unless otherwise indicated.
- B. Metal, Pipe-Flange Bolts and Nuts: ASME B18.2.1, carbon steel unless otherwise indicated.
- C. Solder Filler Metals: ASTM B 32, lead-free alloys.
- D. Flux: ASTM B 813, water flushable.
- E. Brazing Filler Metals: AWS A5.8, BCuP Series, copper-phosphorus alloys for general-duty brazing unless otherwise indicated.
- F. Plastic, Pipe-Flange Gaskets, Bolts, and Nuts: Type and material recommended by piping

2.5 VALVES

- A. Valves, General:
 - 1. Refer to Part 3 "Valve Applications" Article and Drawings for applications of valves.
 - 2. Valve Pressure and Temperature Ratings Not less than indicated and as required for system pressures and temperatures.
 - 3. Sizes -Same size as upstream pipe, unless otherwise indicated.
 - 4. Extended Valve Stems Where insulation is indicated.
- B. Ball Valves Two-Piece, Full-Port, Bronze Ball Valves with Bronze Trim.
 - 1. Standard: MSS SP-110.
 - 2. SWP Rating: 150 psig.
 - 3. CWP Rating: 600 psig.
 - 4. Body Design: Two piece.
 - 5. Body Material: Bronze.
 - 6. Ends: Threaded.
 - 7. Seats: PTFE or TFE.
 - 8. Stem: Bronze.
 - 9. Ball: Chrome-plated brass.

- 10. Port: Full.
- C. Bronze Gate Valves.
 - 1. Class 125, NRS Bronze Gate Valves:
 - 2. Standard: MSS SP-80, Type 1.
 - 3. CWP Rating: 200 psig.
 - 4. Body Material: ASTM B 62, bronze with integral seat and screw-in bonnet.
 - 5. Ends: Threaded.
 - 6. Stem: Bronze.
 - 7. Disc: Solid wedge; bronze.
 - 8. Packing: Asbestos free.
 - 9. Handwheel: Malleable iron.
- D. Drain Valves.
 - 1. Ball-Valve-Type, Hose-End Drain Valves:
 - 2. Standard: MSS SP-110 for standard-port, two-piece ball valves.
 - 3. Pressure Rating: 400-psig minimum CWP.
 - 4. Size: NPS 3/4.
 - 5. Body: Copper alloy.
 - 6. Ball: Chrome-plated brass.
 - 7. Seats and Seals: Replaceable.
 - 8. Handle: Vinyl-covered steel.
 - 9. Inlet: Threaded or solder joint.
 - 10. Outlet: Threaded, short nipple with garden-hose thread complying with ASME B1.20.7 and cap with brass chain.

PART 3 - EXECUTION

3.1 VALVE APPLICATIONS

- A. Drawings indicate valve types to be used. Where specific valves types are not indicated, the following requirements apply:
 - 1. Shutoff Duty: Use bronze ball or gate valves for piping NPS 2 and smaller.
 - 2. Drain Duty: Hose-end drain valves.

3.2 PIPING INSTALLATION

- A. Drawing plans, schematics, and diagrams indicate general location and arrangement of domestic water piping. Indicated locations and arrangements are used to size pipe and calculate friction loss, expansion, and other design considerations. Install piping as indicated unless deviations to layout are approved on coordination drawings.
- B. Install copper tubing under building slab according to CDA's "Copper Tube Handbook."
- C. Install ductile-iron piping under building slab with restrained joints according to AWWA C600 and AWWA M41.
- D. Install shutoff valve, hose-end drain valve, strainer, pressure gage, and test tee with valve inside the building at each domestic water-service entrance.
- E. Install shutoff valve immediately upstream of each dielectric fitting.

- F. Install water-pressure-reducing valves downstream from shutoff valves.
- G. Install domestic water piping level with 0.25 percent slope downward toward drain and plumb.
- H. Install piping concealed from view and protected from physical contact by building occupants unless otherwise indicated and except in equipment rooms and service areas.
- I. Install piping indicated to be exposed and piping in equipment rooms and service areas at right angles or parallel to building walls. Diagonal runs are prohibited unless specifically indicated otherwise.
- J. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal, and coordinate with other services occupying that space.
- K. Install piping to permit valve servicing.
- L. Install nipples, unions, special fittings, and valves with pressure ratings the same as or higher than the system pressure rating used in applications below unless otherwise indicated.
- M. Install piping free of sags and bends.
- N. Install fittings for changes in direction and branch connections.
- O. Install unions in copper tubing at final connection to each piece of equipment, machine, and specialty.
- P. Install pressure gages on suction and discharge piping for each plumbing pump and packaged booster pump.
- Q. Install sleeves for piping penetrations of walls, ceilings, and floors.
- R. Install sleeve seals for piping penetrations of concrete walls and slabs.
- S. Install escutcheons for piping penetrations of walls, ceilings, and floors.

3.3 JOINT CONSTRUCTION

- A. Ream ends of pipes and tubes and remove burrs. Bevel plain ends of steel pipe.
- B. Remove scale, slag, dirt, and debris from inside and outside of pipes, tubes, and fittings before assembly.
- C. Threaded Joints: Thread pipe with tapered pipe threads according to ASME B1.20.1. Cut threads full and clean using sharp dies. Ream threaded pipe ends to remove burrs and restore full ID. Join pipe fittings and valves as follows:
 - 1. Apply appropriate tape or thread compound to external pipe threads.
 - 2. Damaged Threads: Do not use pipe or pipe fittings with threads that are corroded or damaged.
- D. Soldered Joints for Copper Tubing: Apply ASTM B 813, water-flushable flux to end of tube. Join copper tube and fittings according to ASTM B 828 or CDA's "Copper Tube Handbook."

- E. Joints for Dissimilar-Material Piping: Make joints using adapters compatible with materials of both piping systems.
- F. Flanged Joints: Select appropriate asbestos-free, nonmetallic gasket material in size, type, and thickness suitable for domestic water service. Join flanges with gasket and bolts according to ASME B31.9.

3.4 VALVE INSTALLATION

- A. Install sectional valve close to main on each branch and riser serving 2 or more plumbing fixtures or equipment. Use gate or ball valves for piping NPS 2 and smaller.
- B. Install shutoff valve on each water supply to equipment and on each water supply to plumbing fixtures without supply stops. Use gate or ball valves for piping NPS 2 and smaller.
- C. Install drain valves for equipment, at base of each riser, at low points of horizontal piping, and where required to drain water piping.
 - 1. Install hose-end drain valves at low points in water mains, risers, and branches.
 - 2. Install stop-and-waste drain valves where indicated.

3.5 HANGER AND SUPPORT INSTALLATION

- A. Comply with requirements for pipe hanger, support products, and installation in Section 220529 "Hangers and Supports for Plumbing Piping and Equipment."
 - 1. Vertical Piping: MSS Type 8 or 42, clamps.
 - 2. Individual, Straight, Horizontal Piping Runs:
 - a. 100 Feet and Less: MSS Type 1, adjustable, steel clevis hangers.
 - b. Longer Than 100 Feet: MSS Type 43, adjustable roller hangers.
- B. Install hangers for copper tubing with the following maximum horizontal spacing and minimum rod diameters:
 - 1. NPS 3/4 and Smaller: 60 inches with 3/8-inch rod.
 - 2. NPS 1 and NPS 1-1/4: 72 inches with 3/8-inch rod.
 - 3. NPS 1-1/2 and NPS 2: 96 inches with 3/8-inch rod.
- C. Install supports for vertical copper tubing every 10 feet.
- D. Install hangers for steel piping with the following maximum horizontal spacing and minimum rod diameters:
 - 1. NPS 1-1/4 and Smaller: 84 inches with 3/8-inch rod.
 - 2. NPS 1-1/2: 108 inches with 3/8-inch rod.
 - 3. NPS 2: 10 feet with 3/8-inch rod.
 - 4. NPS 2-1/2: 11 feet with 1/2-inch rod.
 - 5. NPS 3 and NPS 3-1/2: 12 feet with 1/2-inch rod.
 - 6. NPS 4 and NPS 5: 12 feet with 5/8-inch rod.
 - 7. NPS 6: 12 feet with 3/4-inch rod.
- E. Install supports for vertical steel piping every 15 feet.

3.6 CONNECTIONS

- A. Drawings indicate general arrangement of piping, fittings, and specialties.
- B. When installing piping adjacent to equipment and machines, allow space for service and maintenance.
- C. Connect domestic water piping to water-service piping with shutoff valve; extend and connect to the following:
 - 1. Water Heaters: Cold-water inlet and hot-water outlet piping in sizes indicated, but not smaller than sizes of water heater connections.
 - 2. Plumbing Fixtures: Cold- and hot-water-supply piping in sizes indicated, but not smaller than that required by plumbing code.
 - 3. Equipment: Cold- and hot-water-supply piping as indicated, but not smaller than equipment connections. Provide shutoff valve and union for each connection.

3.7 IDENTIFICATION

A. Identify system components. Comply with requirements for identification materials and installation in Section 220553 "Identification for Plumbing Piping and Equipment."

3.8 FIELD QUALITY CONTROL

A. Perform the following tests and inspections:

- 1. Piping Inspections:
 - a. Do not enclose, cover, or put piping into operation until it has been inspected and approved by authorities having jurisdiction.
 - b. During installation, notify authorities having jurisdiction at least one day before inspection must be made. Perform tests specified below in presence of authorities having jurisdiction:
 - 1) Roughing-in Inspection: Arrange for inspection of piping before concealing or closing in after roughing in and before setting fixtures.
 - 2) Final Inspection: Arrange for authorities having jurisdiction to observe tests specified in "Piping Tests" Subparagraph below and to ensure compliance with requirements.
 - c. Reinspection: If authorities having jurisdiction find that piping will not pass tests or inspections, make required corrections and arrange for reinspection.
 - d. Reports: Prepare inspection reports and have them signed by authorities having jurisdiction.
- 2. Piping Tests:
 - a. Fill domestic water piping. Check components to determine that they are not air bound and that piping is full of water.
 - b. Test for leaks and defects in new piping and parts of existing piping that have been altered, extended, or repaired. If testing is performed in segments, submit a separate report for each test, complete with diagram of portion of piping tested.
 - c. Leave new, altered, extended, or replaced domestic water piping uncovered and unconcealed until it has been tested and approved. Expose work that was covered or concealed before it was tested.
 - d. Cap and subject piping to static water pressure of 50 psig above operating pressure, without exceeding pressure rating of piping system materials. Isolate test source

and allow it to stand for four hours. Leaks and loss in test pressure constitute defects that must be repaired.

- e. Repair leaks and defects with new materials, and retest piping or portion thereof until satisfactory results are obtained.
- f. Prepare reports for tests and for corrective action required.
- B. Domestic water piping will be considered defective if it does not pass tests and inspections.
- C. Prepare test and inspection reports.

3.9 ADJUSTING

- A. Perform the following adjustments before operation:
 - 1. Close drain valves, hydrants, and hose bibbs.
 - 2. Open shutoff valves to fully open position.
 - 3. Open throttling valves to proper setting.
 - 4. Adjust balancing valves in hot-water-circulation return piping to provide adequate flow.
 - a. Manually adjust ball-type balancing valves in hot-water-circulation return piping to provide hot-water flow in each branch.
 - b. Adjust calibrated balancing valves to flows indicated.
 - 5. Remove plugs used during testing of piping and for temporary sealing of piping during installation.
 - 6. Remove and clean strainer screens. Close drain valves and replace drain plugs.
 - 7. Remove filter cartridges from housings and verify that cartridges are as specified for application where used and are clean and ready for use.
 - 8. Check plumbing specialties and verify proper settings, adjustments, and operation.

3.10 CLEANING

- A. Clean and disinfect potable domestic water piping as follows:
 - 1. Purge new piping and parts of existing piping that have been altered, extended, or repaired before using.
 - 2. Use purging and disinfecting procedures prescribed by authorities having jurisdiction; if methods are not prescribed, use procedures described in either AWWA C651 or AWWA C652 or follow procedures described below:
 - a. Flush piping system with clean, potable water until dirty water does not appear at outlets.
 - b. Fill and isolate system according to either of the following:
 - 1) Fill system or part thereof with water/chlorine solution with at least 50 ppm of chlorine. Isolate with valves and allow to stand for 24 hours.
 - 2) Fill system or part thereof with water/chlorine solution with at least 200 ppm of chlorine. Isolate and allow to stand for three hours.
 - c. Flush system with clean, potable water until no chlorine is in water coming from system after the standing time.
 - d. Repeat procedures if biological examination shows contamination.
 - e. Submit water samples in sterile bottles to authorities having jurisdiction.
- B. Prepare and submit reports of purging and disinfecting activities. Include copies of watersample approvals from authorities having jurisdiction.
- C. Clean interior of domestic water piping system. Remove dirt and debris as work progresses.

3.11 PIPING SCHEDULE

- A. Transition and special fittings with pressure ratings at least equal to piping rating may be used in applications below unless otherwise indicated.
- B. Flanges and unions may be used for aboveground piping joints unless otherwise indicated.
- C. Fitting Option: Extruded-tee connections and brazed joints may be used on aboveground copper tubing.
- D. Under-building-slab, domestic water, building-service piping, NPS 3 and smaller, shall be the following:
 - 1. Hard or soft copper tube, ASTM B 88, Type L; wrought-copper, solder-joint fittings; and brazed joints.
- E. Aboveground domestic water piping, NPS 2 and smaller, shall be one of the following:
 1. Hard copper tube, ASTM B 88, Type L; copper, solder-joint fittings; and brazed joints.
- F. Aboveground, domestic water-service piping, NPS 6 to NPS 12 (DN 150 to DN 300) is to be the following:
 - 1. Plain-end, ductile-iron pipe; grooved-joint, ductile-iron-pipe appurtenances; and grooved joints.

END OF SECTION 221116



