

**STATEMENT OF WORK
DESIGN/ BUILD
REPAIR INTERIOR AND HVAC B1816**

Project Number VLSB 26-2501

~~7 July 2025~~ ~~1 Dec 2025~~ **9 Jan 2026**

1. Introduction:

1.1 The Base Bid (CLIN 001) establishes the requirements for the renovation of Building 1816 Missile Maintenance Shop. The building currently has explosion proof fixtures; however, explosion proof fixtures and conduit are not required per the Wing Explosion Safety Office.

- B1816 will require new interior finishes as well as repairs to the mechanical, electrical, and plumbing systems
- The facility is located in the munitions yard and will require escorted access within the compound.

2. Base Bid (CLIN 001):

Building 1816, originally constructed in 1980, is the missile maintenance shop. Several renovations and additions have taken place since 1980. Recently, the roof over bays 1 and 4 and office 1 were replaced, to include awnings over exterior doors.

2.1 Convert fuel oil heating system to natural gas

2.1.1 Demolish and dispose of the following:

- Below grade 1000 gallon con-vault (fuel tank), fuel, and all fuel lines in their entirety.
- Blow back lines to the tank before removing the fuel
- Remove all bollards around the tank
- Remove oil fired boiler, piping, and all accessories

2.1.2 Provide and install the following:

- Install a natural gas line to B1819 along with natural gas lines and valves for future connections to B1815 and B1817. See attached drawing "Existing Utilities and Proposed Gas Service" for a schematic route of new 4" main gas line and 2" supply lines
- Install two capped stubouts with valves, risers, concrete donuts and associated components for future gas connections to B1815 and B1817. All lines shall have tracer wire installed.
- Install a gas regulator, meter (Roots series B3), and emergency shutoff on the new gas line to serve B1816

Any asphalt or concrete surfaces disturbed by the removal or installation shall be repaired to original condition and repaired using like materials.

All disturbed areas shall be compacted, graded, and seeded.

2.1.3 Provide the Government a SC Department of Environmental Services (SCDES) underground storage tank closure report

- Soil samples shall be taken at the tank removal site, every 20' along the piping path and at every turn. A report shall be provided to the Government
- If additional soil excavation/remediation is required due to contaminated soils a separate contract will be issued to mitigate the contaminated soil

2.2 **Bays 1 through Bay 5**

- Remove and replace 10 personnel doors, frames, and hardware as noted on attached drawings. Retain Best Cores for reuse. Doors shall be insulated steel doors with "extra heavy duty" hardware. Doors and frames shall receive heavy duty copper flexible bonding straps connected to the facilities existing grounding system.
 - Install new hasp locks (door & frame), continuous hinges, closers, lever handles and locks to accept the existing Best Cores. Hasp locks shall be securely bolted to the doors and frames with tamper proof carriage bolts
 - Provide full height reinforcing on existing frames for hinge installation.
 - New doors and frames shall be primed and painted with 2 coats of high-quality exterior semi-gloss acrylic paint with rust inhibitors and a UV resistant additive.
- Remove high bay lighting and exit lights and install new high bay LED lights and LED exit lights utilizing existing conduit and wiring.
- Each bay is wired with (2) sets of specialized outlets (see as-builts) The contractor shall re-pull conductors from the corresponding panel to the specified outlet within the set that is first in line. Conductors shall be copper and meet the NEC for size and type. Once power is complete to the first set of outlets, the contractor shall test the "daisy chained" outlets that are fed from the same circuit. If the second set of outlets is not operational, the contractor shall remove the non-operational plugs and terminate within the existing box. For all non-operational outlets, provide an engraved phenolic plate stating "NON-OPERATIONAL"
- Each set of outlets includes one of each of the following:
 - 208v, 60Hz
 - 480v, 60 Hz
 - 120v, 60 Hz
 - 208v, 400 Hz
 - *DC outlet is existing but not required. The outlet and conductors shall be removed and the opening shall be covered by a steel plate and labeled as noted above.*
- Remove all heating fan coil units and components and install new gas fired unit heaters, power, natural gas connections and accessories. Provide isolation valves at each unit. Only metallic piping shall be used for natural gas distribution within the building envelope.

- *Bay 5 does not have heating fan coil units and will not receive new heaters. The existing system serving Bay 5 shall remain in place.*
- Remove all pneumatic controls and components and install basic control and devices
 - Install basic components as required for control, ie, programable thermostats, relays and contactors, temperature sensors with mechanical controllers and dampers.
 - Document setpoints and calibration settings.
 - Place thermostats to avoid windows, doors, direct airflow or heat producing equipment.

2.3 **Bay 2**

In addition to the work stated previously, work in bay 2 shall include:

- Install one dedicated 240 V/30 Amp circuit with a NEMA 6-30R outlet in a FS box for use with the government furnished/contractor installed air compressor.
- Installation shall be performed using contractor provided power cord as distributed by CH Power.

2.4 **Bay 4**

In addition to the work stated previously, work in bay 4 shall include:

- Remove and replace the existing fluorescent fixtures in the hallway with 2x4 LED troffer fixtures.

2.5 **OFFICE AREAS**

- Contractor shall perform asbestos testing in areas where work shall occur.
- The contractor shall use the existing asbestos survey to estimate the abatement.
- The contractor shall remove any remaining flooring and cove base and install new flooring and 6" vinyl cove base as identified on the attached drawings
- Remove the door between the test equipment room and the equipment supply room. and install a new wood (stained) or hollow metal (painted) dutch-door complete with hardware. The frame shall remain.
- Demolish doors 116, 117, 122 and 123 and install new hollow metal doors in the existing frames. Door 122 shall be an exterior insulated hollow metal door.
 - Door 116 shall have push/ pull hardware with closer
 - Door 117 shall have a new lever handle with privacy lock and closer
 - Doors 122 and 123 shall receive new hardware to match existing.
- Replace/ install drywall sections as noted on attached plan. 2 of the 3 areas shall receive furring strips to be attached to existing CMU walls followed by 1 layer of ½" gypsum board. Repair walls in restrooms where light fixtures will be removed.
- All gypsum within the area was installed with trim at each joint. Trim shall be removed, and all joints shall be taped and finished.

- The contractor shall provide a level 3 finish for all walls identified on the attached plan. (Filling holes, light skimming, and sanding)
- Paint all walls and doors identified on attached drawings. All walls, doors, and door frames shall be cleaned and prepped before receiving 1 coat of primer, and 2 coats of semigloss paint
- Demolish toilet partitions hand dryers, toilets, urinals, sinks and all accessories in both restrooms.
 - Install new High Density Polyethylene (HDPE), overhead braced/ floor anchored partitions with stainless steel heavy duty hardware.
 - Install new wall mounted sinks, toilets, and urinals and all associated fixtures and accessories in each restroom. Retain and reuse toilet paper and paper towel dispenser. Coordinate with CE for final placement
- Demolish electric water heater and install a new 208/240V electric water heater to include flexible hoses. Match all characteristics of the existing unit. Reuse existing wiring and conduit. Rework as necessary to route to new electric disconnect and flexible watertight conduit from disconnect to water heater.
- Demolish all light fixtures, vanity lights (to include track lighting in women's restroom) exit lights, ceiling grid, and tiles as noted on attached drawings. Contractor shall provide temporary support for all ceiling mounted equipment to include communications wiring above ceiling grid.
 - Install 2x2 ceiling grid with Armstrong Fine Fissured square edge tiles or approved equal. Grid and installation shall meet seismic zone D.
 - Install new LED lighting in all spaces receiving new ceilings and in room 188, "Paint and Wash". Ensure the new light levels and distribution meet the requirements of UFC 3-530-01 and the Illumination Engineering Society (IES).
 - Add new 2x2 LED troffer fixtures in restrooms. Do not reinstall vanity or track lighting.
- GENERAL NOTE FOR ALL HVAC SYSTEMS: Contractor shall select a unit matching characteristic of the existing units and shall be compatible to the existing electrical infrastructure to include wiring breakers, and other installed components.
- HVAC System 1 - Remove roof mounted package unit on Office 1 and install a new roof mounted package unit.
 - Contractor to make any necessary repairs to the roof should the existing penetration need to be adjusted for new equipment.
- HVAC System 2- Remove above ceiling air handler in Office 1. Install a new DX split system with ground mounted condenser and above ceiling air handler. Roof top condenser was removed prior to roof replacement. See drawings for schematic condenser location.
 - Re-route the electrical conduit to the new location of the condenser. Re-pull all conductors from panel to new location. Provide new NEMA 3R, non-fusible disconnect at the new location in accordance with the NEC and manufactures requirements.
- HVAC System 3 - Remove ground mounted condenser and above ceiling air handler in office 2 and install DX split system new condenser and air handler in existing location. See drawings for existing condenser location.

- The following shall be accomplished for HVAC systems 1,2 & 3:
 - Remove all insulation from the supply and return ducts. Clean the interior of all supply and return ductwork, reseal the metal duct and re-insulate the ductwork.
 - Install in-line manual volume dampers, new supply and return grilles
 - Provide a post-construction Duct Air Leakage Test (DALT). Leakage measurement shall be made across the entire system, including the manufacturer's air handler enclosure, with all register boots taped or sealed with a test pressure of 0.1 inches w.g. (25 Pa)
 - System shall meet have a total leakage of less than or equal to 4 cfm per 100 square feet of conditioned floor area
- Remove all pneumatic controls and components.
 - Install basic components as required for control, ie, programable thermostats, relays and contactors, temperature sensors with mechanical controllers and dampers.
 - Document setpoints and calibration settings.
 - Place thermostats to avoid windows, doors, direct airflow or heat producing equipment.
- Test and balance HVAC systems 1, 2, & 3 and provide TAB report to the government.
- Replace the existing restroom exhaust fan (located on the roof) with a new fan matching all characteristics.
- Connect Government furnished Hertz converter, ITW GSE 2400, (see nameplate in attachments) in mechanical room. Contractor shall clean and reuse an existing equipment pad.
- Install new stainless steels covers for all switches, outlets or exposed boxes.

End of Base Bid

3. SCHEDULE:

The contractor is expected to have all materials on hand prior to starting work in each phase.

3.1 Phasing:

- B1816 is an occupied facility., however, the user will vacate the area in which work is occurring.
- Work in the bays shall occur in 2 phases. Bays 1, 2 and 3 can occur simultaneously and Bays 4 and 5 can occur simultaneously. However, these two phases cannot overlap or occur at the same time.
 - Work may occur in the office areas during either phase.
- The contractor shall install natural gas to the facility, prior to removing the fuel oil system to reduce the amount of time heat is down.
- While temporary heating and cooling systems are not required, the contractor shall be responsible for adequately ventilating office areas to prevent mold growth.

- During winter work, the contractor shall be responsible for preventing fire suppression lines from freezing.

4. DESIGN:

- For complete information on a design build submittal, see Appendix A
- The government is requesting minimal design services for this requirement. Each requirement below shall be provided as a 95% submittal.
- The contractor must submit a Basis of Design for the items below. A life safety plan is **not** needed as the facility layout remains unchanged. The contractor must still adhere to all relevant UFC (Unified Facilities Criteria) requirements regarding munitions occupancy classification.
- The government recommends including material submittals with the 95% design submissions to expedite approvals and delivery.
- Specifications (located on drawings)/ design considerations are only required as noted below. Some disciplines will not require specifications.

Natural Gas:

- The contractor shall verify the existing line size and verify the proposed 4" and 2" lines are sufficient to serve the equipment within B1816.
- The design shall provide the intended path with connection points, valves, and capped stubouts locations relative to the existing utilities.
- Provide specifications for all natural gas components.

Electrical:

- During the design process, the contractor shall review the conduit size, wire size and lighting locations and select a replacement high bay LED light to allow minimal new conduit and wiring while meeting the light level requirements and distribution as specified in UFC 3-530-01.
- Provide calculations for circuits serving bay heaters. Identify the panels feeding the circuits
- Provide a design for the complete installation of the Frequency Converter (GFE) including conduit runs and conductor installation to the existing panels.
- Provide new panel schedules and an updated one-line diagram for the facility

HVAC

- Provide specifications and engineered drawings for the heaters. Ensure UFC requirements are met for heating bays.
- Show gas lines and sizes entering the bay and serving the heaters as well as heater placement.
- Show location of relocated unit

5. Shop Drawings and Material Submittals:

5.1 The following shop drawings and material submittals are required for approval:

- Natural gas meter and regulator
- All light fixtures with photometrics
- Personnel doors and hardware schedules
- Dutch door and hardware
- Paint and Primer products
- Ceiling Grid and Tiles
- Toilet partitions
- Plumbing fixtures and accessories
- Water Heater
- HVAC Equipment
- Duct Insulation, dampers, grilles
- DALT Test report
- T&B report

5.2 AS-Builts

5.2.1 In addition to the standard as builts as identified in Appendix A, ensure the following is provided:

- An as-built shall be provided identifying the sets of specialty outlets and identify them as operational or non-operational. If any wiring was re-routed from the original design, the new locations shall be shown.
- Identify dedicated circuit and shut off in Bay 2 along with location of GFE (air compressor).

5.3 DESIGN SCHEDULE

BASE BID:

Design - 98 calendar days

- 95% Design – 50 calendar days
- 95% Design – 14 calendar days for Government review

Material Delivery – 90 Calendar days

Construction – 112 Calendar days for both phases

- 21 calendar days prior to final inspection request: close-out documents shall be submitted
- Government review of close-out documents: 14 calendar days

6. Warranty:

Contractor shall furnish a one-year Contractor's warranty against defects in material, workmanship, and watertightness, starting on the beneficial occupancy date.

7. Minimum Unified Facility Criteria (UFC) (additional UFC's may apply)

- 1-200-01 – DoD Building Code, Change 4
- 3-101-01 – Architecture, Change 4
- 3-110-03 – Roofing, Change 5
- 3-190-06 – Protective Coatings and Paints
- 3-410-02 – HVAC Systems, Change 9
- 3-410-02 – DDC HVAC and Building Control Systems, Change 2
- 3-430-05 – NG and LPG Distribution Pipelines
- 3-530-01 – Interior and Exterior Lighting Systems, Change 1