

**Design/Bid/Build Scope of Work –  
Grand Junction Mechanics Building**

**Project #22774  
July 10, 2019**

**Project Location:**

606 South 9<sup>th</sup> Street, Grand Junction, CO 81501

**Project Description:**

Qualified General Contractors are invited to bid on the construction of a new 15,000 square foot masonry building on an existing CDOT site in Grand Junction, CO. This 13 bay building shall have one 25 foot x 60 foot wash bay, eight 20 foot x 60 foot bays for a mechanics shop, administrative space, restrooms and a Structural trades work area and four 20 foot x 50 foot bays for Telecom and ITS work area. There will be a 585 square foot mezzanine with stairs in the Telecom work area for offices and equipment. The building shall have a shed-style roof as shown on the drawings and canopies over the man doors. The building shall be fully sprinklered.

**Scope of Services:**

The following documents will be distributed at the mandatory pre-bid meeting: Architectural drawings and specifications by contracted architect Intergroup Architects; Civil and Structural drawings and specifications by contracted engineer Richard Weingart Consultants, Inc.; Mechanical, Plumbing and Electrical drawings and specifications by contracted engineer MEP Engineering, Inc. and a geotechnical report prepared by Ground Engineering.

The Scope of Work, Bid Drawings and Specification should all be referenced during bidding and any contradictory information should be brought to the attention of CDOT; misunderstanding of any of the Bid Drawings, Specification and/or Scope of Work will not be grounds for change orders after the bid question period.

The Contractor is responsible for obtaining (and paying for) Permits from the State Electrical and State Plumbing Inspector. By statute, local building permits are not required. Code reviews (including a framing, stair and insulation inspection) and one final code review inspection shall be paid for by CDOT. Any additional code review inspections due to the original inspection not passing will be paid for by the Contractor.

CDOT requires that the geotechnical engineer of record who provided the Geotechnical Report, Ground Engineering, perform the independent excavation and compaction observation and all testing required, as specified. The Contractor is to contract, at its cost, with the geotechnical engineer of record for all testing, including sub-grade testing, concrete testing, and observation costs. Ground Engineering's contact information is: Amy Crandall, [amy.crandall@groundeng.com](mailto:amy.crandall@groundeng.com), 303-991-6915

This site falls under the jurisdiction of the Grand Junction Fire Department. Fire alarm and sprinkler drawings shall be required to be submitted as a deferred submittal to the Fire Department and CDOT for review and approval. A final inspection by the Fire Department is required and shall be coordinated and paid for by the Contractor.

Refer to the Project Drawings, Specification, Contract and General Conditions for additional details and requirements of the project.

### **Site Work:**

Prior to any site disturbing activities, the Contractor will be responsible for locating all utilities. The Contractor shall notify the Utility Notification Center of Colorado (UNCC) to conduct locates for buried utilities. A private locating service shall also be contacted to mark any privately-owned buried utilities that were not identified by the UNCC One-Call system.

1. The existing buildings and foundations shall be demolished by CDOT's demo contractor prior to the project's notice to proceed. Utilities will be cut and capped.
2. This site is an active CDOT site with multiple buildings that shall remain operational during construction. The contractor is to coordinate with CDOT any activities that might affect site operations, utilities or access to the site.
3. The existing site is paved. The contractor shall remove existing pavement and concrete drain pans as shown in the drawings for the new building. All earthwork, backfill, and compaction shall be placed and performed in strict accordance with the Specification and Division 200, including but not limited to section 206, and Division 700 of the current edition of the CDOT Standard Specifications for Road and Bridge Construction and the geotechnical engineer recommendations. Contractor shall install new asphalt paving and concrete drain pans that tie into the existing paving and drain pans.
4. Provide striping, a concrete wheel stop and accessible signage for the one new accessible parking space.
5. Existing chain link fence is to remain, except at the meter pit. Provide new fence around the meter pit for City access to meter.
6. Provide new 6-inch diameter fire line, fire hydrant and fire department connection at the building. Provide new 2-inch diameter service water line. Pits, meters and taps to be installed by City. Provide new 6-inch sanitary sewer line. City to install manhole and stubout and contractor to install lines and connect to the stubout. Coordinate with City of Grand Junction for traffic permits, scheduling of work and inspections. Tap fees and connection fees shall be paid by Owner.
7. Xcel to provide new transformer on pad and electrical upgrade, paid for by CDOT.
8. Provide new 2-inch underground conduits from the existing communication lines to the demark inside of the building. Existing conduit extends from the Store Room building.

### **Stormwater Quality Permit:**

9. Because the area of disturbance for the site is less than an acre, a construction Storm Water Quality Permit with Colorado Department of Public Health and Environment (CDPHE) is NOT required. Contractor is required to follow the requirements included on the 8-tab Notebook for Storm Water Management, which will be provide at the pre-construction meeting.

### **Concrete Masonry Unit (CMU) Structure:**

10. Provide a 265 foot 4 inch wide by 60 foot deep single-wythe load-bearing concrete masonry unit (CMU) building. The building shall step back to a 50 foot depth for four of the bays. There shall be a second floor mezzanine at one end of the building for office space.
11. The exterior load bearing walls shall be 8 inch CMU blocks at the south wall and west wall, 12 inch CMU blocks at the north wall and east wall and 8 inch double wythe pilasters, totaling 16 inches, at the north wall between the garage doors. The CMU shall be predominantly smooth face with split face bands per the architectural elevations. The CMU shall be partially grouted with insulated cells. There shall also be CMU pilasters in the mechanic's bays to support the trolley hoist.
12. The building shall have a shed style standing seam roof supported by galvanized metal deck and open web roof joists. The roof steps at Gridline H, and an expansion joint is required at the roof and walls at this location. The roof shall be an insulated metal roof system in accordance with the architectural drawings and the Energy Comcheck. The roof shall have a 1.5:12 roof slope.
13. The building envelope is required to comply with the 2013 ASHRAE 90.1 Energy Codes per the Energy Comcheck. The exterior CMU walls shall have furred walls throughout the building in both the maintenance and administrative areas except at the wash bay walls and the north wall with garage doors.
14. There shall be a shed-style canopy with a 2:12 slope over the main exterior man doors, for a total of four canopies, as shown on drawings. One door does not have a canopy as it would interfere with the operation of the garage door. Refer to the drawings for connection and flashing details.
15. The entire structure shall be accessible and meet all the provisions on ICC/ANSI A117.1, as required by 2015 IBC.

### **Concrete:**

16. The building foundation system includes drilled piers with grade beams. Refer to structural drawings and geotechnical report for details. The Drilled Pier unit cost should also be submitted with the bid form during the bidding process as a unit price of linear feet of caisson length, as both a deduct and addition to the 20-foot minimum length of caissons as described in the drawings.
17. The entire length of the building shall have a 6 inch thick concrete approach apron that extends 20 feet on the north side of the building. Reinforcing of slabs shall be as scheduled on the drawings and slope away from building to drain. The exterior concrete apron shall be broom finished and treated with penetrating siloxane sealant.
18. Interior slabs noted as Type S-1 shall be 8 inches thick and are in vehicle areas. Interior slabs noted as Type S-2 shall be 4 inches thick and are for administrative space. Slabs at

the vehicle areas, the approach apron, area drains and trench drains shall be capable of supporting the wheel load from an HS20-44 truck.

19. All rooms with floor drains shall slope to drain. Cross section slope shall not exceed ANSI cross slope. The mechanics bays shall have flat floors with trench drains by the garage doors. The floor shall slope at the trench drain only. The Structural trades work area, ITS area and Telecom area have a mixture of flat floor and floor that slopes to a floor drain. The entire wash bay floor slopes to a center trench drain. Refer to Structural and Architectural drawings for floor slope plans.
20. All interior concrete floors shall have sawn shrinkage control joints that will be filled with expansion joint filler strips and polyurethane sealant. The floors shall be float finished, cured and sealed with concrete sealer and finished as called out in the Specification.
21. Provide concrete pads for equipment, both interior and exterior. Provide a concrete pad for the waste oil tank, condensers, transformer, air compressor, pressure washer, parts washer and water heater. Thickness of the pads and reinforcement shall be as scheduled on the civil and structural drawings.
22. All interior and exterior vertical joints in foundation walls are to be sealed with a non-sag urethane sealant.

#### **Bollards:**

23. Install 10-inch diameter steel pipe post bollards in and around the building, at corners and at the overhead door for protection of the structure. Provide exterior bollards to protect tanks, gas meters or other equipment as shown on the drawings. Cast bollards into an isolated foundation and extend 42 inches above the top of the adjacent slab. The pipe bollards shall be filled with concrete and painted with the yellow Tnemec brand paint system as specified.
24. Interior plumbing and equipment in the vehicle areas shall be protected by 4 inch, bolt-down steel bollards with caps, painted safety yellow; see drawings and Specification for more details.

#### **Flooring:**

25. The concrete floor and curbs throughout the building shall be sealed with concrete sealer per the Specification.

#### **Walls:**

26. The exterior CMU walls shall have metal studs with batt insulation and a vapor barrier on the warm side of the wall. At the vehicle areas, provide FRP paneling up to 8 feet with gypsum board above. At the administrative areas provide gypsum board. The wash bay exterior walls and the exterior wall with the garage doors shall be exposed CMU with no furring and shall be painted with epoxy paint. Exterior wall assemblies are required to meet the Specification, Drawings and Building Envelope ComCheck.

27. Offices: The interior walls of the offices and restrooms shall be metal studs and have sound insulation. Extend walls to structure except in the office areas where there are drop ceilings. At these locations extend walls to 6 inches above ceiling. Note: All gypsum board walls shall have rubber base except restrooms.
28. Demising walls between the different work areas are CMU walls and shall be painted per the finish schedule.
29. All restroom walls shall have a minimum 4-foot high wainscot of 4 1/4 inch x 8 1/4 inch ceramic tile with bull nose cap and ceramic cove base with cement / tile backer board behind the tile. Above the tile on the walls and at the ceiling provide moisture- and mold-resistant gypsum board in the restrooms.
30. Vehicle bays: Furnish 4 foot x 8 foot x 5/8 inch sheets of plywood with field adhered fiber glass reinforced panels (FRP) on interior walled surface with gypsum board above, as shown on drawings. Install per manufacturer's recommendation. The overhead door wall (north wall) shall be exposed CMU, with no FRP or furring, and shall be painted per the finish schedule.

### **Overhead Doors:**

31. The mechanics bays, wash bay and the structural trades area shall have 16 foot wide by 16 foot high R-17 minimum insulated sectional overhead doors at each bay. The ITS work area and Telecom area shall have both a 16 foot by 16 foot door and a 12 foot by 14 foot door. The vehicle bay doors shall have one row of glass vision panels for visibility. The wash bay doors are to receive two rows of polycarbonate clear vision panels. The wash bay doors' steel is to be stainless, including door tracks and mounting hardware; all accessories and components in the wash bays shall be water resistant meeting NEMA 4X standards for wet environments as indicated in the Specification.
32. The guides for the overhead doors shall be high-lift. Each door operator shall be minimum 3/4 horsepower, jack-shaft type motor, with an emergency chain hoist, accessible from the floor, for emergency door opening. Length of pin on door rollers shall be a minimum 7 1/2 inches.
33. All overhead doors shall be operated via a hand-held remote device, provide 2 per operator, as well as a fixed NEMA 4X 3-button operator (all bays, including the wash bay will have water resistant operators). All components in wash bay must be NEMA 4X rated for wet environments, including all wiring and accessories. Wiring in the wash bay shall be installed inside NEMA 4X rated conduit.

### **Doors / Windows:**

34. Provide 3 foot by 7 foot insulated metal exterior doors with a half-panel, tempered insulated glass vision panel in each door. At exterior doors, provide 7 foot 4 inch high hollow metal masonry type frames. Note: Exterior doors have card access readers with lever handles. Coordinate electric strikes and door hardware. The contractor shall provide and install the card readers in accordance with the Door Hardware Specification.
35. Interior doors shall be a 3 foot by 7 foot sound-insulated, hollow metal door set in a hollow metal frame with specified hardware.

36. Doors into/out of wash bay are to have stainless steel hardware as specified.
37. The exterior of the building shall be fitted with fixed aluminum windows for office areas and fixed clerestory windows in the vehicle areas, located per drawings. Windows to be insulated with low-e glazing in compliance with the Energy ComCheck and Specification.
38. Three offices facing into the vehicle areas and one office facing the vestibule shall have fixed hollow metal frame windows with tempered glazing.

### **Ceilings:**

39. Offices: The ceiling in the administrative areas shall be lay-in acoustical tiles in a suspended grid ceiling. Provide gypsum board ceilings at the restrooms and the entry vestibule.
40. Mechanical rooms, storage rooms and vehicle areas shall be exposed to structure. The exposed structure shall be painted with dry-fall paint as indicated in the Specification.
41. Wash bay: Furnish and install corrugated FRP panel, as specified, on walls and ceiling, and install per manufacturer's specifications.

### **Casework / Shelving:**

42. Provide built in casework with countertop, backsplash and cabinets at the crew area and at the copy area provide casework with countertop and cabinets. Total depth of casework and countertop in these areas is not to exceed 24 inches to comply with ADA reach requirements for outlets.
43. Provide 30-inch deep countertops with grommets and plastic laminate supports at the crew area and trades work area. Provide 12-inch deep adjustable melamine shelving above the countertops as located on the plans.

### **Heating, Cooling and Ventilation:**

44. Vehicle bays: Provide polyethylene fabric supply ducts with make up air units for evaporative cooling and exhaust in the vehicle and work areas along with wall-mounted exhaust fans. The wash bay shall have a NEMA 4X rated exhaust fan and a supply louver. Exhaust fans in vehicle areas shall be tied to carbon monoxide / nitrogen dioxide (CO/NO<sub>2</sub>) detectors. Provide a waterproof enclosure for detector in wash bay.
45. At the mechanics bays provide fume exhaust extractors with drum style hose reels for each vehicle bay. Coordinate mounting height of equipment, heaters and lighting in mechanics bays.
46. Provide 56 inch (26 inch blades) ceiling fans in each vehicle bay including mechanics bays, Structural trades work area, ITS work area and Telecom work area. There are no fans in the wash bays.

47. Vehicle Bays: Provide infrared, low-intensity, gas-fired tube heaters, suspended from the roof with runs coordinated within areas shown on drawings. Radiant tube heaters in wash bay shall be rated for wet environments.
48. The administrative areas shall have gas-fired furnaces and air conditioning condensing units. Provide supply and return grilles and ducting as shown in the drawings. All exterior piping to have hard cover UV protection over the insulation, as specified. The restrooms, storage rooms and vestibule shall have electric baseboard or unit heaters for supplemental heating where shown in the drawings.

### **Plumbing:**

49. Provide trench drains at each bay in the mechanics bay and a trench drain in the wash bay per the drawings. The trench drain is a pre-fabricated trench set into the floor slab. It is 12 inches wide and slopes to a catch basin. The grates for the trench drain shall be HS20-44 rated. Provide catch basin with lift-out sediment tray filter per Specification and Drawings. Provide area drains at the trades work area, ITS work area and Telecom work area. Connect all drains to the sand-oil interceptor.
50. Provide floor drains in the restrooms, by the air compressor, the emergency shower and the fire riser room.
51. The building is to be fully sprinklered. The drawings and specifications indicate a basis for design and required zoning; fire protection drawings and installation shall be design-build by the contractor and drawings shall be submitted to CDOT and the Fire Department as a deferred submittal for review and approval.
52. There are freeze-proof exterior hose bibs and interior hose bibs located as shown on the drawings.
53. Domestic water will be conveyed by a new 2-inch service line. Wastewater from the building will be conveyed via 6-inch sanitary sewer line to the City's sanitary sewer line as shown on the Civil Drawings. Provide a 2,000 gallon sand oil interceptor for connection to the floor drains.
54. Provide and install one gas-fired water heater to supply all fixtures requiring hot water.
55. The restrooms shall include plumbing fixtures and accessories as shown on the drawings. The restrooms and all devices / accessories shall meet all the provisions on ICC/ANSI A117.1.
56. Provide a utility hand sink and mop sink with a mop holder in the mechanics bays and ITS work area. Provide a kitchen sink in the crew area and a water stub out for an owner provided refrigerator.
57. Provide and install one high-low accessible drinking fountain in the administrative area.
58. Provide and install an emergency shower/eyewash station in the mechanics bay.

59. Provide code required backflow preventors, gas and water connections for the owner provided pressure washer and parts washer. Provide venting for the pressure washer, with flue damper, and brace back to roof.

### **Specialty Equipment:**

60. Refer to the equipment schedule in the drawings for owner provided equipment and responsibilities of the contractor for installation. The owner shall provide and contractor shall install the following: air compressor, two-post lift, pressure washer and part washer. Installation of these items should be coordinated with the owner to meet required building inspections and scheduling. The owner shall provide and install the following items after substantial completion: grinder, lathe, mill, press, portable welder and filter crusher.
61. Provide and install a 5-ton crane bridge and hoist in the mechanics bay. The hoist shall be installed on a crane runway beam that sits on masonry pilasters as shown in the structural drawings.
62. Provide a 20-inch x 20-inch opening in both the interior wall and exterior wall of the Telecom area for an owner provided data port. In addition, provide a galvanized pipe for owner mounted microwave dish and a sealed opening in the roof for owner provided cabling as shown in the structural drawings.
63. Contractor to provide and install a waste oil collection system for the mechanics bay. New components to be provided include the following:
  - a. A low-profile collection basin with handle that can be quick-coupled to a compressed air, waste pipe system.
  - b. An air-operated diaphragm pump that is hand activated to push waste oil to an exterior waste oil collection tank.
64. Provide and install one 500-gallon, double-walled, steel waste oil storage tank, located outside the building on a concrete pad.
65. Provide a flammable storage cabinet in the mechanics bay.

### **Electrical:**

66. Power distribution as follows: install new 120/208V, 3-phase, 300KVA electrical service from new utility transformer. Provide new panels in the mechanic building as shown on the drawings. Provide disconnects and hardwired connections for specialty equipment as shown in the drawings.
67. Install convenience receptacles as shown on the plans. All general use devices within the vehicle bays shall be GFCI protected and mounted at 44 inches above the floor.
68. Provide 20 amp GFCI receptacle in each restroom and at the crew area sink. Mount above the countertops at 44 inches above the floor. Provide above counter outlets at the countertop in the copy area.

69. Along the exterior of the building provide exterior rated 20 amp duplex (GFCI and weatherproof) receptacles as shown on the drawings.
70. All components and electrical devices within the wash bay to be NEMA 4X rated, including all wiring and accessories.

### **Lighting:**

71. Restrooms: Provide one (1) LED vanity fixture centered over mirror and recessed LED can lights in the rest of the space.
72. Each restroom shall have an occupancy sensor to operate the lights and fan with 10-minute delay. The single stall restrooms shall have a wall mounted sensor switch and the multi-stall restrooms shall have a ceiling mounted sensor with a manual override. Each office will have an occupancy sensor to operate lighting.
73. Vehicle Bays to have:
  - a. LED high bay luminaries, suspended from ceiling as scheduled.
  - b. Wall-mounted LED strips with acrylic lens, located on back wall.
  - c. Daylight harvesting / occupancy sensors to control high bay lighting with overrides.
74. Storage rooms and mechanic rooms shall have LED strip fixtures hung from the structure.
75. Exterior lighting: Photocell-controlled, night-sky compliant LED fixtures located on the building as shown on drawings.
76. Provide illuminated exit signs over egress doors and other emergency lighting as required by Chapter 10 of the 2015 IBC and the IFC.

### **Phones / Data:**

77. The contractor shall install the conduit, both underground and inside the building, boxes, covers, the demark panel and the demark cabinet. CDOT will have a separate contractor install cabling at CDOT's cost. Coordinate with CDOT for scheduling.
78. Communication Conduit: The existing buildings that are being demolished had communication cabling and conduit running from the existing Store Room to the building. The contractor shall pick up the conduit from this run and connect into the building and the mechanical room as shown on drawings; conduit is to be two inches in diameter and shall terminate at the demark telephone board. The installation of the conduit must follow the industry standard of using "Sweeps" and NOT elbows. The total amount of bends must not exceed 270 degrees. Should more bends be required, a pull box needs to be installed. Conduit shall have length identifying pull tape.
79. Demark: Contractor will provide and install:
  - d. Telephone backboard (extended demark) to be of industry standard specification, painted plywood and shall be located in the VSF Storage Room.
  - e. Demark cabinet per specifications mounted at 40 inches AFF on the wall adjacent to the plywood board for CDOT equipment.

80. Provide recessed boxes, covers and conduit at locations noted on the drawings for telephone/data drops. Where there is a drop ceiling, extend conduit in the wall to 6 inches above the ceiling. Where this is no ceiling extend conduit back to the demark. All low voltage cabling shall be inside conduit.
81. Provide J-Boxes with recessed conduit in vehicle bays for owner provided wireless access point. J-Boxes to be at 10 feet above finish floor; coordinate height with metal girts.
82. Conduit in the Telecom area is to homerun to the Telecom equipment room, not the demark. The only exception is that one conduit should run from the Telecom equipment room to the main demark for a phone line.

### **Life Safety:**

83. The entire facility shall be protected with a wet pipe sprinkler system, and shall have a fire pump room and fire department connection. The sprinkler system design shall be a deferred submittal.
84. The entire facility shall have the specified smoke and/or heat and carbon monoxide detection and alarms. Smoke and/or heat detection shall be provided, designed and installed to meet all NFPA requirements, including type, location, spacing and sound pressure requirements for detectors and annunciation devices such as horns and strobes. Combined carbon monoxide/nitrogen dioxide detector shall automatically engage the ventilation system to exhaust the harmful gas. An override switch shall be provided to allow the ventilation system to be turned on/off manually.
85. Provide specified recessed Fire Alarm Control Panel (FACP) installed at a location approved by the local Fire AHJ; Fire system is a deferred submittal. FACP is typically located at the vestibule in the Admin Area, as indicated on the drawings. Panel shall NOT be placed in the wash bay and shall not protrude more than 4 inches from the wall in order to meet ADA.
86. Provide hand-held fire extinguishers, one for every 1,500 square feet and located as determined by the local Fire AHJ. Extinguishers to be mounted to wall and labeled.
87. Install Knox-Box as specified, at the main entrance door; confirm location with the local Fire AHJ.

### **End of Scope of Work**