



**ADDENDUM NO.1**  
**12/21/2021**

Worker Campsites  
Lake Poinsett Rec. Area & Oakwood Lakes State Park  
Poin210a & Oakw210b

Bid Opening Date: January 6, 2022  
Department of Game, Fish and Parks  
2nd Floor, Foss Building  
523 East Capitol  
Pierre, South Dakota 57501-3182

Owner: State of South Dakota  
Department of Game, Fish and Parks

Scope of this Addendum:

Adding technical specifications for Electrical Pedestals, Electrical, and Plumbing to the Project Manual.

The following becomes a part of the original plans and specifications, taking precedence over the items that may conflict. The bidder shall note receipt and make acknowledgment of the addendum on his bid form, incorporating its provisions in his bid.

Item No. 1: Section 16401 Electrical Pedestals  
Item No. 2: Section 16402 Electrical  
Item No. 3: Section 15400B Plumbing

Date 12/22/2021

*John Bechard*

John Bechard (Dec 22, 2021 09:34 CST)

Engineer  
Title

**SECTION 16401**  
**ELECTRICAL PEDESTALS**  
(11/5/2021)

**PART 1 - GENERAL**

1.1 DESCRIPTION

- A. Work included: Vibra-plowing, rock removal, road boring, conductor, RV pedestals and installation, necessary conduit, connecting devices.

1.2 QUALITY ASSURANCE

- A. Work must be under the supervision and direction of a licensed electrical contractor.
- B. A wiring certificate will be required for this work.

1.3 DESIGN (when applicable)

- A. All wiring shall be in conformance with the current National Electrical Code specifically, Article 551, Section B.
- B. Conductor size shall be calculated based on a minimum of 20 amps per pedestal and a maximum of a 5% voltage drop (6 volts) on the load the conductor sees, or the calculated loads, as indicated in Article 551-44 of the NEC, whichever is greater.

**PART 2 - PRODUCTS**

2.1 CONDUCTOR

- A. Conductor size shall be as indicated on plans or as indicated in 1.3 above.
- B. Insulation shall be suitable for application. Underground, direct burial, (UF) (USE) conductor in general, shall be used.

2.2 PEDESTALS

- A. 50 Amp pedestals shall have:
  - 2 - 15/20 Amp receptacles - protected by GFCI
  - 1 - 30 Amp receptacle
  - 1 - 50 Amp receptacle
- B. Model UO75CP6010 by Midwest or similar pedestals by Milbank, Eaton and Square D Mfg. are approved.

2.3 CONDUIT

- A. All above ground conduit shall be Sch. 80 PVC.

## 2.4 SERVICE EQUIPMENT

- A. Electrical Service equipment shall be adequately-sized frames to handle wire gauges specified with the project.
- B. Provide a type written electrical schedule as a waterproof sticker securely displayed on the interior of the panel door. Alternative methods of schedule display will be considered.

## **PART 3 - EXECUTION**

### 3.1 CONDUCTOR INSTALLATION

- A. Use equipment sized for the application. Trenching will not be allowed, vibra-plowing or directional boring will be allowed for conductor installation.
- B. Contractor is responsible for locating existing utilities made known. The contractor shall repair, with no expense to the owner utilities identified.
- C. Avoid disturbing trees and structures.
- D. Provide shoring and barricades as required by site conditions.
- E. Bury Depths: Electrical - 2' minimum (Secondary)
- F. Paved areas (concrete, asphalt) vibra-plowing is not allowed, these areas must be crossed by boring.

### 3.2 ROCK EXCAVATION

- A. Rock Excavation shall be defined as all masses which, in the opinion of the Engineer, cannot be excavated without blasting, drilling or the use of rippers or other specialized equipment and all detached rocks or boulders measuring more than two feet in their largest exposed face which are fastened in the trench due to their size.
- B. No rock excavation is anticipated but if encountered, a price will be negotiated and agreed upon before any rock excavation is accomplished.

### 3.3 PENETRATIONS

- A. Structures shall be penetrated through an exterior wall and sealed properly.

### 3.4 PEDESTAL INSTALLATION

- A. Pedestals shall be installed plumb. Soil shall be hand compacted around the pedestal.
- B. Pedestals shall be located in relation to the camp pad in accordance with the current NEC.

- C. Provide asphaltic coating to pedestal that is to be placed below grade.

**PART 4 – METHOD OF PAYMENT**

- 4.1 Conductor installation will be paid based on measured length of trench to the nearest foot plus 10' of termination length at each pedestal.

END OF SECTION

**SECTION 16402**  
**ELECTRICAL**

**PART 1 - GENERAL**

1.1 QUALITY ASSURANCE

- A. Work must be under the supervision and direction of a licensed electrical contractor.
- B. A wiring certificate will be required for this work.

**PART 2 - PRODUCTS**

2.1 CONDUCTOR

- A. Conductor size shall be as indicated on plans or as allowed by code.
- B. Insulation shall be suitable for application.

2.2 WIRING DEVICES

- A. Duplex receptacle outlets shall be 20 AMP, 125 Volt, 3 Wire, grounding type, commercial grade.
- B. Receptacle outlets shall be equipped with galvanized steel plates.
- C. Switches shall be 20 AMP. Commercial grade 120/277 Volt, toggle type.

2.4 RACEWAY

- A. Provide rigid galvanized or sherardized steel conduit or electrical metallic tubing with compression or set-screw type fittings, for all concealed or exposed wiring.
- B. Provide one-piece boxes, of galvanized or sherardized steel and sufficient size to contain enclosed wires without crowding.

2.5 CONDUCTORS (600V & Below)

- A. For line voltages, provide 600V insulated copper wire and cable, NEC standard of types specified, with UL label, and color coded as required.

2.6 FIXTURES

- A. Provided as shown on the drawings and fixture schedule.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION OF RACEWAYS AND FITTINGS**

- A. All wiring shall be run in conduit.
- B. Where conduit is installed concealed in walls or above the ceiling, or exposed in work areas, provide electrical metallic tubing with compression fittings.
- C. Flexible conduit may be used for connection of mechanical equipment provided length does not exceed two feet and a green ground wire is run inside the conduit.
- D. Conduits are to be run parallel to or at right angles with lines of the building.
- E. Conduits shall be sized for wire fill as per NEC Table 3A.

### **3.2 INSTALLATION OF CONDUCTORS - 600 VOLTS AND BELOW**

- A. All standard voltage wiring for secondary distribution and branch circuits shall be copper conductors insulated for 600 volts with Type THHN insulation, except as otherwise noted. All sizes #10 and larger shall be stranded conductors.
- B. The wire size for branch circuits shall be minimum #12.

END OF SECTION

**SECTION 15400B  
PLUMBING**

**PART 1 - GENERAL**

1.1 DESCRIPTION

- A. Work included: Provide plumbing where shown on the drawings, as specified herein, and as needed for a complete and proper installation.

1.2. QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.
- B. Codes and regulations:
  - 1. In addition to complying with the specified requirements, comply with pertinent regulations of governmental agencies having jurisdiction.
  - 2. In the event of conflict between or among specified requirements and pertinent regulations, the more stringent requirement will govern when so directed by the engineer.
  - 3. National Plumbing Code.
  - 4. National Fire Code.

1.3 SUBMITTALS

- A. Product data: Promptly after the Contractor has received the Owner's Notice to Proceed, submit:
  - 1. Manufacturer's specifications, catalog cuts, and other data needed to prove compliance with the specified requirements;
- B. Manuals:
  - 1. Prepare two Operation and Maintenance Manuals each with a complete set of equipment shop drawings used in the erection of the mechanical system. Provide testing, cleaning, and maintenance instructions, a list of materials for maintenance, parts lists, wiring diagrams, control diagrams, balance reports, and name and address of the authorized service organization.

## **PART 2 - PRODUCTS**

### **2.1 PIPE SCHEDULE**

#### **A. Drain, waste, and vent system:**

##### **1. For sanitary work below the floor and outside underground:**

- a. Sanitary waste and vent piping below grade shall be standard weight, coated cast iron solid pipe with cast iron caulk fittings or with preformed joints or schedule 40 P.V.C. or A.B.S. with solvent weld joints.

##### **2. Above ground:**

- a. Sanitary waste and vent piping shall be standard weight no-hub cast iron with stainless steel couplings, Schedule 40 P.V.C. or A.B.S. with solvent weld joints, or shall be "DWV" copper with sweat fittings.
- b. Vent stacks from sewer, soil, waste and drain pipes shall be extended at least 9" above the roof and shall be encased in galvanized iron telescoping jackets, having an air space of at least 1" between the outside surface of the pipe and the inside surface of the frost jacket.

#### **B. Water system (domestic piping):**

1. Above ground, provide Type "L" copper with sweated connections;
2. Below ground, provide Type "K" copper with flared fittings.

## **PART 3 - EXECUTION**

### **3.1 SURFACE CONDITIONS**

- A. Examine the areas and conditions under which work of this section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

### **3.2 PLUMBING SYSTEM LAYOUT**

- A. Lay out the plumbing system in careful coordination with the drawings, determining proper elevations for all components of the system and using only the minimum number of bends to produce a satisfactory functioning system.
- B. Follow the general layout shown on the drawings in all cases except where other work may interfere.
- C. Lay out the pipes to fall within partition, wall, or proof cavities, and to not require furring other than as shown on the drawings.



### 3.3 TRENCHING AND BACKFILLING

- A. When trenching crosses areas with all-weather paving, the contractor shall use horizontal boring methods to cross this area. The surfacing shall not be disturbed.
- B. Excavated materials shall be backfilled into trench and mounded in a manner lending to natural settlement compaction of trench.
- C. Mechanical trench compaction. (90%) shall be required in areas that are gravel surfaced.

### 3.4 INSTALLATION OF PIPING AND EQUIPMENT, GENERAL

#### A. General:

1. Proceed as rapidly as the building construction will permit.
2. Thoroughly clean items before installation. Cap pipe openings to exclude dirt until fixtures are installed and final connections have been made.
3. Cut pipe accurately, and work into place without springing, or forcing, properly clearing windows, doors and other openings. Excessive cutting or other weakening of the building will not be permitted.
4. Show no tool marks or threads on exposed plated, polished, or enameled connections from fixtures. Tape all finished surfaces to prevent damage during construction.
5. Make changes in directions with fittings; make changes in main sizes with eccentric reducing fittings. Unless otherwise noted, install water supply and return piping with straight side of eccentric fittings at top of the pipe.
6. Run horizontal sanitary and storm drainage piping at a uniform grade of 1/4" per ft., unless otherwise noted. Run horizontal water piping with an adequate pitch upwards in direction of flow to allow complete drainage.
7. Provide sufficient swing joint, ball joints, expansion loops, and devices necessary for a flexible piping system, whether or not shown on the drawings.
8. Support piping independently at pumps, coils, tanks, and similar locations, so that weight of pipe will not be supported by the equipment.
9. Pipe the drains from pump glands, drip pans, relief valves, air vents, and similar locations to spill over an open sight drain, floor drain, or other acceptable discharge point, and terminate with a plain end unthreaded pipe 6" above the drain.
10. Securely bolt all equipment, isolator, hangers, and similar items in place.

11. Support each item independently from other pipes. Do not use wire for hanging or strapping pipes.
12. Provide complete dielectric isolation between ferrous and non-ferrous metals.
13. Provide union and shut off valves suitably located to facilitate maintenance and removal of equipment and apparatus.

B. Equipment access:

1. Install piping, equipment, and accessories to permit access for maintenance. Relocate items as necessary to provide such access, and without additional cost to the Owner.
2. Provide access doors where valves, motors, or equipment requiring access for maintenance are located in walls or chases or above ceilings. Coordinate location of access doors with other trades as required.

### 3.5 SLEEVES AND OPENINGS

- A. Provide sleeves for each pipe passing through walls, partitions, floors, roofs, and ceilings.
1. Set pipe sleeves in place before concrete is placed.
  2. For uninsulated pipe, provide sleeves two pipe sizes larger than the pipe passing through, or provide a minimum of 1/2" clearance between inside and outside of the pipe.
- B. Caulk the space between sleeve and pipe or pipe covering, using a noncombustible, permanently plastic, waterproof, non-staining compound which leaves a smooth finished appearance, or pack with noncombustible rope, or fiberglass to within 1/2" of both wall faces, and provide the waterproof compound described above.

### 3.6 CLEANOUTS

- A. Provide cleanouts of same nominal size as the pipes they serve; except where cleanouts are required in pipes 4" and larger provide 4" cleanouts.
- B. Make cleanouts accessible.

### 3.7 VALVES

- A. Provide valves in water, air and gas systems. Locate and arrange so as to give complete regulation of apparatus, equipment, and fixtures.

### 3.8 DISINFECTION OF WATER SYSTEMS

- A. Before putting the water system into service, the entire system shall be sterilized with 50 ppm available chlorine solution. This solution shall remain in the system not less than 24 hours.

Following, the system shall be flushed with clean potable water until no chlorine remains in the water system.

### 3.9 TESTING, ADJUSTING AND CLEANING

#### A. Testing

1. All piping shall be tested during the construction period. All piping shall be subjected to an air or hydrostatic test before concealing or covering with insulation. Tests shall be as follows:
2. Water System - The water system shall be tested at 125 psig for not less than 8 hours without drop in pressure.
3. Drainage System - The entire drainage and venting system shall have all necessary openings plugged to permit the entire system to be filled with water to the level of the highest vent stack above the roof. The system shall hold this water for 30 minutes without drop. A portion of the system may be tested as above by installing a temporary stack at least 10 feet high.

### 3.10 GUARANTEE

- A. The contractor shall guarantee all materials, workmanship and the successful operation of all equipment and apparatus furnished and/or installed by him for a period of one year from date of final acceptance of the whole work, and shall guarantee to replace or repair at his own expense any part of the apparatus or material showing defect during this time--provided such defect is in the opinion of the engineer due to imperfect material and/or workmanship and not to carelessness or improper use.

END OF SECTION