

## SECTION 01500

### CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

#### 1.01 TEMPORARY UTILITIES

- A. Sanitary Facilities: Provide and maintain self-contained portable sanitary facilities for the Contractor's, subcontractor's, Engineer's, and Owner's use. Facilities shall comply with applicable regulations and shall be serviced, cleaned, and disinfected frequently.
- B. Temporary Water, Power, and Telephone Service:
  - 1. Water and Power: Limited water and electrical service will be available at the project site for the Contractor's use. No charge will be made for this use provided utilities are not wasted. The Contractor shall provide temporary connection and distribution systems and remove them at the end of its work.
    - a. Water: The Contractor may make a single 3/4-inch pipe size connection to the Owner's existing potable water system. The Owner's water may be used to serve temporary offices and hose bibs. Use shall be limited to sanitary use, tool clean up, intermittent concrete cure spraying, and similar minor uses. The Contractor shall provide water for other uses, such as dust control and compaction, by trucking water to the site or making other arrangement. The temporary connection to the Owner's water system shall be at a location approved by the Engineer and shall conform to requirements for a backflow prevention.
    - b. Power: The Contractor may also make connections to the existing electrical system at 120 volts. The Contractor may use reasonable amounts of power for loads not exceeding 20 amps from existing electric service at no charge, but shall provide temporary connection, distribution, ground fault protection, and overcurrent protection. The Contractor shall provide a "whisper quiet" electric generator or separate electric service, at the Contractor's expense, for all loads over 20 amps, including services to the Contractor's office, and any temporary structures requiring electrical service.
  - 2. Telephone: Provide separate temporary telephone service and facsimile line service for the Contractor's and Engineer's field offices. Owner will pay periodic charges for the telephone service and facsimile line service to the Engineer's office.
- C. Temporary Heat: Provide temporary heat for enclosed spaces for the proper installation of finishes such as floor coverings, wall coverings, woodwork, and painting and to protect all work and moisture sensitive electrical equipment against injury, dampness and cold. Fuel, equipment, and installation shall comply with all applicable codes and regulations. Salamander heaters or other space heaters using kerosene are not permitted. Use permanent heating system after revisions have been completed, provided Contractor replaces or cleans filters on Completion.
- D. Temporary Ventilation: Provide equipment to ventilate enclosed areas to facilitate curing concrete, to dissipate humidity and to prevent accumulation of dust, fumes, or gases. Utilize existing and new ventilation equipment and supplement with temporary fans to maintain clean air and safe conditions for construction operations. Replace or clean filters on existing or new equipment on completion.

- E. Dissipation of Hazardous Fumes Prior to Completion and Occupancy by Owner: Provide high capacity fans and heaters or use existing or new equipment to provide 100% fresh air at 90°F for several days to dissipate hazardous fumes from new construction materials such as paint, adhesives, carpet and wall coverings.
- F. Temporary Lighting: Provide and maintain lighting for construction operations to achieve a minimum lighting level of 20-foot candles for rough work and 60-foot candles for finish work.
- G. Temporary Fire Protection:
  - 1. Provide and maintain fire protection equipment, including extinguishers, fire hoses, and other equipment required by law, insurance carriers, or necessary for proper fire protection during the course of the work.
  - 2. Use fire protection equipment only for fighting fires.
  - 3. Locate fire extinguishers in field offices, storage sheds, tool houses, temporary buildings, and throughout the construction site. In the area under construction, provide at least one fire extinguisher for each 5,000 square feet of enclosed space and locate fire extinguishers not over 100 feet apart.

#### 1.02 TEMPORARY CONSTRUCTION

- A. The Contractor is solely and exclusively responsible for the design, construction, and maintenance of all temporary construction including forms, falsework, shoring, scaffolding, stairs, ladders and all other similar items. See General Conditions paragraphs 5.3 and 5.20 through 5.28 and Section 01040.
- B. Construct adequate and safe forms and falsework, to rigidly support partially completed structures. Provide temporary bridges and decking to maintain vehicular and pedestrian access. Design and construct temporary forms, falsework, bridges, and decking in accordance with applicable regulations and codes.

#### 1.03 BARRICADES, FENCES AND ENCLOSURES

- A. See General Conditions paragraphs 5.3 and 5.20 through 5.28 and Section 01040.
- B. Barricades: Provide temporary guardrails, ladders, stairs, guards, and barricades to protect persons in accordance with applicable regulations, including WASDOT and OSHA.
- C. Fences:
  - 1. Existing fences enclose the present facilities site. The fences are for the protection and security of the present operating facilities. If it is necessary for the Contractor to remove some of the fences for installation of new work, the Contractor shall provide equivalent temporary protection and security. Replace fencing removed by the Contractor with new fencing of equivalent quality prior to completion.
- D. Enclosures:
  - 1. Provide protective dust covering at doors and other openings to contain dust within the construction area.
  - 2. Provide temporary partitions to prevent dust and moisture from entering Owner-occupied areas and to prevent damage to existing materials and

equipment. Temporary partitions shall be of non-combustible construction such as metal studs and gypsum board.

3. Provide temporary watertight closures for openings in exterior surfaces as required to protect interiors from weather, moisture, humidity and extreme temperature.

#### 1.04 PROTECTION OF INSTALLED WORK

- A. Provide temporary and removable protection for installed products. Control activity in immediate work area to minimize damage.
- B. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by covering surfaces with non-staining, heavy-duty, reinforced, moisture-resistant kraft building paper with joints continuously taped with waterproof tape.
- C. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is unavoidable, provide adequate protection to prevent damage to waterproof membranes and comply with recommendations for protection of the waterproofing or roofing material manufacturer.
- D. Provide heavy planking to protect curbs, gutters, culverts, paving, and similar surfaces from damage by heavy equipment or vehicles.

#### 1.05 SECURITY

- A. Provide security and facilities to protect the Work, and existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.
- B. Employ the services of a licensed security firm to patrol the site during non-working hours.

#### 1.06 ACCESS ROADS AND PARKING AREAS

- A. Access Roads: Construct and maintain temporary access roads to serve the construction area]. Use only access roads designated on the Drawings.
- B. Parking:
  1. Construct temporary gravel surfaced parking areas for construction personnel where shown on the Drawings in the Contractor's storage areas.
  2. Construct temporary graveled surface parking for 3 vehicles adjacent to the Engineer's site office.

#### 1.07 TEMPORARY CONTROLS

- A. Cleaning:
  1. During Construction: Maintain the site and all work in a clean orderly fashion free of waste debris and rubbish. Store debris in covered containers. Pick up and remove debris daily if required, but not less frequently than weekly. Burning debris on site is not permitted. Remove debris from permanently closed spaces prior to enclosing them. Clean mud from vehicles before leaving the site.
  2. If work under this Contract creates dusty, dirty or unsightly conditions in adjacent areas, the Contractor shall immediately cleanup the affected areas.

- B. Dust Control: Employ measures to prevent the creation of dust, which may produce damage or nuisance to property or persons. Be responsible for all damage resulting from dust produced by construction operations. Periodically wet down unpaved areas where vehicles are operated. See Earthwork specification sections.
- C. Erosion and Sediment Control: Employ measures to prevent erosion and trap any sediment created by construction operations before it leaves the site. Prevent sediment from entering streams or other water bodies.
- D. Noise Control: Comply with regulations limiting construction noise levels. Use whisper quite air compressors. Use jackhammers with exhaust mufflers. Prevent noise disturbance to the public and adjacent property owners.
- E. Pest and Rodent Control: Avoid creating conditions conducive to pests and rodents. Comply with regulations governing the use of chemicals to control pests and rodents.
- F. Water Control: Maintain excavations free of water. Protect site from puddling or running water See Earthwork specification section.

#### 1.08 TRAFFIC REGULATION

- A. Conduct operations to offer the least possible obstruction and inconvenience to public traffic. Do not overload or damage paved or improved surfaces, sidewalks, curbs, or gutters.
- B. Provide temporary barricades, lights, flag persons, and other means to safely control pedestrian and vehicular traffic entering and leaving the project site and on the project site.

#### 1.09 PROJECT SIGN

- A. Provide an 8-foot-wide by 6-foot-high project sign using 3/4-inch exterior grade plywood and braced wood frame construction. Paint all surfaces with two coats of exterior house paint. Employ a professional sign painter to letter sign in accordance with Engineer's small scale design and color selection (two colors).
  1. List project title and names of Owner, Engineer, and Contractor.
  2. Erect the sign where directed by the Engineer. Locate bottom edge of the sign 8 feet above the ground. Maintain sign in good condition and remove it on project completion.

#### 1.10 FIELD OFFICES

- A. Contractor's Office at the Site: Maintain a suitable office at the site for the Contractor's Superintendent who shall be authorized to receive submittals, drawings, instructions, or other communications from the Engineer or the Owner.
  1. The Contractor may use existing Rooms designated by the Owner for office space.
- B. Engineer's Office at the Site:
  1. Office: Provide a trailer-type temporary structure for the Engineer's use as an office with the following features:

- a. All-metal frame, exterior, sides, and roof.
  - b. Size: 300 square feet minimum.
  - c. Number of Rooms: Two minimum and a toilet room.
  - d. Windows: Two minimum per office room with security guard screens.
  - e. Lighting: Interior fluorescent ceiling lights with 70-foot candles of uniform lighting at desk level. Outside lights above each door.
  - f. Heating, Ventilation, and Air Conditioning: Provide at least six air changes per hour in all rooms and provide air conditioning equipment capable of maintaining at least 70°F for heating and 78°F maximum for cooling.
  - g. Toilet room with flush toilet, chemical toilet - Monogram Industries Jetomatic; Pyrolet; or equal, washbasin, mirror, toilet paper, and paper towel dispensers.
  - h. Doors equipped with automatic retracting deadbolt locks. Provide four keys.
  - i. Provide staircase with stair handrail and landing with guardrail at entrances.
  - j. Electrical service, disconnect switch and a circuit breaker panel. Provide ground fault protected outlets.
  - k. One hundred fifteen (115) volt, 15 amp receptacles, spaced no more than 8 feet apart.
2. Equipment and Furnishings: Provide the following:
    - a. Two desks each with two drawer pedestals.
    - b. Two swivel chairs.
    - c. One 4-drawer filing cabinet.
    - d. One 12-stick plan holder.
    - e. Two desk lamps.
    - f. Two drafting tables and stools.
    - g. One paper towel dispenser.
    - h. One paper cup dispenser.
    - i. One bookcase, 4 feet wide and 3 feet high.
    - j. Two wastepaper baskets.
    - k. One first-aid kit
    - l. Two telephones, one with speaker.
    - m. One telephone answering machine.
    - n. One electrostatic copier machine with 8-1/2x11 and 11x17 automatic paper feed trays and 10 bin collator. Cannon NP2020, Sharp, or equal..
    - o. One 14A 60 BC dry chemical fire extinguishers
    - p. One plain paper facsimile machine.
  3. Utilities: Install sewer and potable water service, only if existing services are unattainable. Arrange and pay for telephone and electrical service. The Contractor shall pay for periodic water, sewer, and electrical charges.
  4. Installation and Removal: Install the Engineer's office at the location directed by the Engineer within 15 days after the Notice to Proceed. Provide rigid level supports and seismic and wind tie downs. Remove the Engineer's office no later than 30 days after recording of the Notice of Completion, but no earlier than the Notice of Completion.
  5. Maintenance: Maintain the Engineer's office in good repair. Provide daily cleaning and maintenance service. Replenish paper towels, paper cups, soap, toilet paper, and bottled water daily. Service, pump, and clean chemical toilets at least twice weekly. Service the copier and facsimile machine monthly or more frequently if needed.

END OF SECTION